
# Flyers Creek Wind Farm

## Preferred Project Report

## May 2013

# The Preferred Project Report

The proponent is seeking development consent for the construction and operation of the Flyers Creek wind energy facility and associated infrastructure in the Errowanbang district south of Orange, NSW.

After a thorough review of the submissions received, the proponent submits this Preferred Project report for the consideration of the NSW Department of Planning & Infrastructure.

There are two major changes to the project in response to the submissions received. They are:

1. Wind turbine #17 has been deleted from the project along with its electrical cabling and track access. The deletion of this turbine was in response to several submissions received, including those from residences numbered #77 and #78 in the Environment Impact Assessment. Deletion of this turbine substantially reduces the visual impact of the project from the backyards of these two residences. The view of the wind farm from their backyards will not include any wind turbines for a view angle of about 90 degrees looking due west. In addition, the construction traffic, which would have occurred close to their homes, will no longer be necessary.

2. The proposed route of the 132kV transmission line has been moved further west as a result of the submission by Newcrest Mining and further consultation with them. There is no discernible change to the community's amenity impact from this change as both the former, and revised, section of the transmission line route are on Cadia's property with no nearby residences.

   The ecological specialist engaged for this project, Kevin Mills & Associates, has conducted a preliminary review of the revised power line route and their assessment is attached to this report. The proponent is confident that there will be no native vegetation or heritage impacts along this preferred line route; however, should the project be approved, a heritage and native flora survey will be conducted of the new line route in the Preferred Project Report as documented in the revised Statement of Commitments in the Appendix.

   The heritage specialist engaged for this project, Austral Archaeology, has assessed the likelihood of significant cultural heritage items being located on the revised transmission line route. Their assessment is attached to this report. They conclude that the potential for heritage sites on the new line route to be "low". Should the FCWF receive planning approval, an on-site cultural heritage survey of the new line route will be conducted. In addition, it is worth noting that the proposed power line

route is relatively 'unconstrained' such that the line route can easily be adjusted to avoid any heritage sites in the unlikely event one is found during the survey.

The original Environment Assessment utilised the GE 2.5MW wind turbine as the "indicative" wind turbine for the project. It was clearly stated in the EA that this may not be the wind turbine selected for the project, and that a larger (or smaller) electrical generation capacity turbine might be selected. It was also stated several times in the EA that whichever turbine is selected, the wind turbine will have a total height (to the blade tip) of no more than 150 metres.

At the time the EA was being prepared, the GE wind turbine was a relatively new entrant to the market and it's technical characteristics were very well suited to the wind resource at Flyers Creek. These factors resulted in the GE turbine being selected as the indicative wind turbine for the project. However, in the meantime, other new turbine models have come onto the market which are also strong candidates---most of which have larger electrical nameplate capacities.

As documented in Sections 3(a), 5(a), 5(p) and 5(y) of the Response to Submissions, the amenity impact of a wind turbine is independent of its electrical generating capacity. It is not possible for an observer to know what the electrical generating capacity of a wind turbine is by looking at its size, or listening to it. For example, a 2.5MW turbine can be taller, and louder, than a 3.0MW wind turbine. Therefore, from a planning assessment perspective, the electrical generating capacity of a wind turbine is not really a relevant consideration.

The proponent would like to clarify that the electrical generation capacity of the Flyers Creek Wind Farm wind turbine will be between 2.0 and 3.5MW. However, no matter which turbine is selected, the height of the wind turbine will be no more than 150 metres, as originally specified in the EA. Should the GE wind turbine not be selected, a new noise analysis will be performed for the selected wind turbine and submitted to the Department of Planning & Infrastructure documenting full compliance with all of the noise requirements contained in the Director General's Requirements (DGRs).

The Preferred Project documentation is as follows and is attached as an Appendix to this report.

- Letter report from Austral Archaeology concerning the revised power line route
- Letter report from Kevin Mills & Associates concerning the revised power line route
- Revised Figure 1.4b from the EA, *Revised Wind Farm Layout on mapping*
- Revised Figure 1.5b from the EA, *Revised Wind Farm Layout on aerial photograph and contours*
- Revised Figure 1.6a from the EA, *Revised Complete Project Overview*
- Revised Figure 4.1b from the EA, *Revised Property Map*
- Revised Figure 4.2b from the EA, *Revised 132kV Electrical connection route – property map*
- Revised Table 4.1a from the EA, *Revised property details for land on which the wind farm is located*
- Revised Table 4.2a from the EA, *Revised Property details for land on which the 132 kV transmission line for grid connection is located*
- Revised Statement of Commitments (EA Chapter 19)

# Flyers Creek Wind Farm

# Preferred Project Report

# Appendix

31 January 2012

Mr Jonathan Upson
Senior Development Manager
Infigen Energy
Level 23,
HWT Tower, 40 City Road
Southbank, VIC 3006

By email
Dear Jonathan

**Re: Flyers Creek Wind Farm – Modification of Transmission Line Route**

Regarding your request for an assessment of the modified 132kV Transmission Line route for the Flyers Creek Wind Farm we would like to advise you of the following.

Our original assessment, *Aboriginal Archaeological & Cultural Heritage Assessment Flyers Creek Wind Farm* 2010 located no Aboriginal sites or objects within the area of impact of a proposed route and a proposed alternate route of the 132kV Transmission Line. It is further understood that the newly proposed route traverses an area immediately to the west of the previous study area in its northward progress.

Our detailed predictive modeling revealed a low to moderate likelihood of Aboriginal archaeological sites to be present within the survey envelope that contained the 132kV Transmission line route and this model was confirmed by our archaeological survey. Given the great similarity of landforms and topography, the newly proposed route is likely to conform to our original results. Briefly, there is a low to moderate potential for Aboriginal archaeological finds to be located within the newly proposed route. In particular, artefact scatters and scarred trees have a moderate likelihood of being present in areas of relatively undisturbed land. Our survey of the similar landforms with a similar land use history immediately to the east of the newly proposed route revealed a considerable degree of disturbance and a lack of archaeological material.

Although the disturbance of the area and the lack of sites or objects found nearby indicates that potential for sites is low, it is recommended that an additional Aboriginal archaeological and cultural heritage assessment be undertaken to further test the predictive model. In any case, an Aboriginal archaeological and cultural heritage assessment would recommend appropriate strategies to avoid harm to any sites that may be located during investigation.

Please do not hesitate to contact me if you wish to discuss any aspect of this submission.

Yours sincerely,

Justin McCarthy
Managing Director
Austral Archaeology Pty Ltd
m: 0418 843 773

**KMA**

**KEVIN MILLS & ASSOCIATES**
**ECOLOGICAL AND ENVIRONMENTAL CONSULTANTS**
ABN 346 816 238 93

Tel: (02) 4236 0620
Mobile: 0419 248 094

12 Hyam Place
Jamberoo NSW 2533

Jonathan Upson
Infigen Energy
By email - jonathan.upson@infigenenergy.com

19 December 2012

Dear Jonathan

**Flyers Creek Wind Farm – Modification of Transmission Line Route**

Further to your request for an assessment of the proposed modification in the Flyers Creek Wind farm transmission line around Cadia Mine, we are pleased to provide you with the following proposal for your consideration.

As you are aware, we investigated the original route of the line in 2011; that route was not far to the east of the currently proposed route.

The country traversed along that original route was grazing land with very scattered trees. Similar land is encountered along the modified route. We see from the aerial photograph showing the new route that trees are very sparse along the route; indeed almost the entire route is treeless. Observations previously in that general area indicated that the ground cover was dominated by exotic pasture species.

Some of the trees in the area may be remnants of the White Box - Yellow Box - Blakely's Red Gum listed endangered ecological community, although the condition of the community would be very poor. There is unlikely to be significant habitat for listed threatened species along the new route.

The only likely feature of importance along the new route is the presence of old trees that may provide habitat (hollows) for some native fauna. It is therefore recommended that a survey be carried out prior to the construction of the line to identify any trees that should be avoided, which should be easily accomplished due to the sparse number of trees along the modified route.

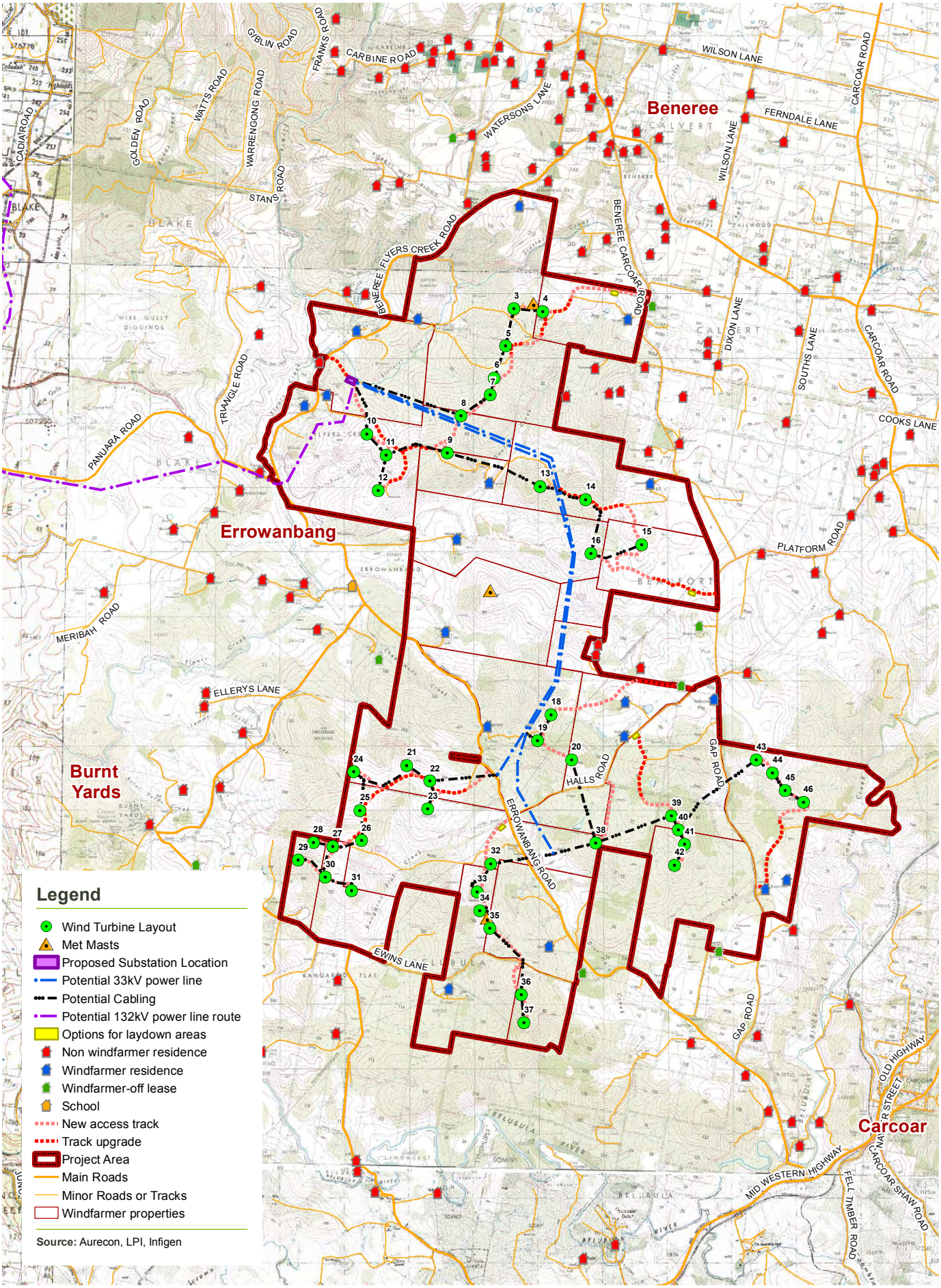
Please do not hesitate to contact me if we can be of further assistance.

Yours sincerely

Dr Kevin Mills | Managing Director | Kevin Mills & Associates | ABN 346 816 238 93
12 Hyam Place | Jamberoo NSW 2533

Tel. (02) 4236 0620
Mob. 0429 848 094

Kevin Mills & Associates Pty Ltd ACN 003 441 610
*as trustee for* Kevin Mills & Associates Trust

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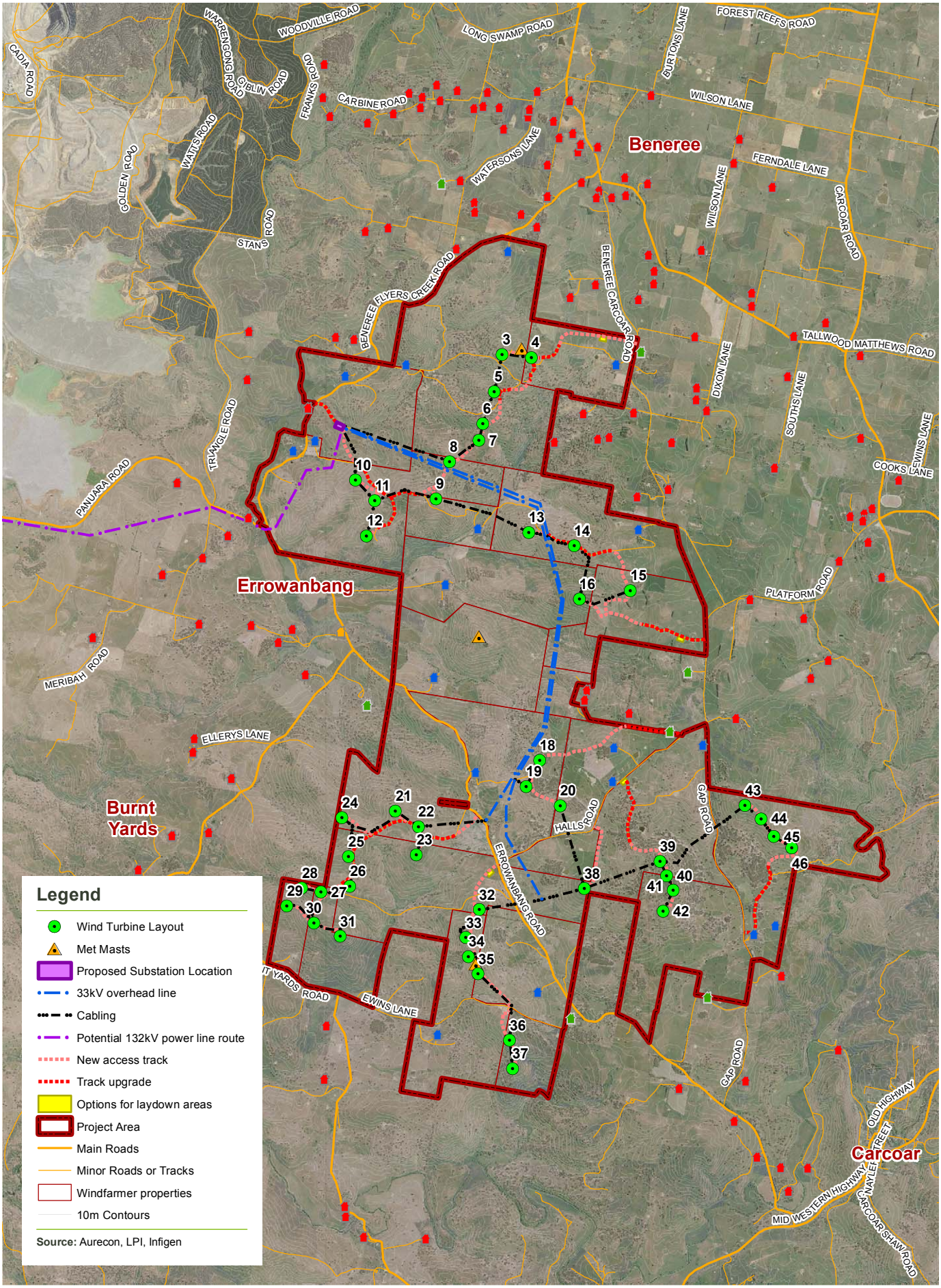
**Projection:** GDA 1994 MGA Zone 55

Flyers Creek Wind Farm **Environmental Assessment**

**FIGURE 1.4b:** Revised Wind Farm Layout on mapping

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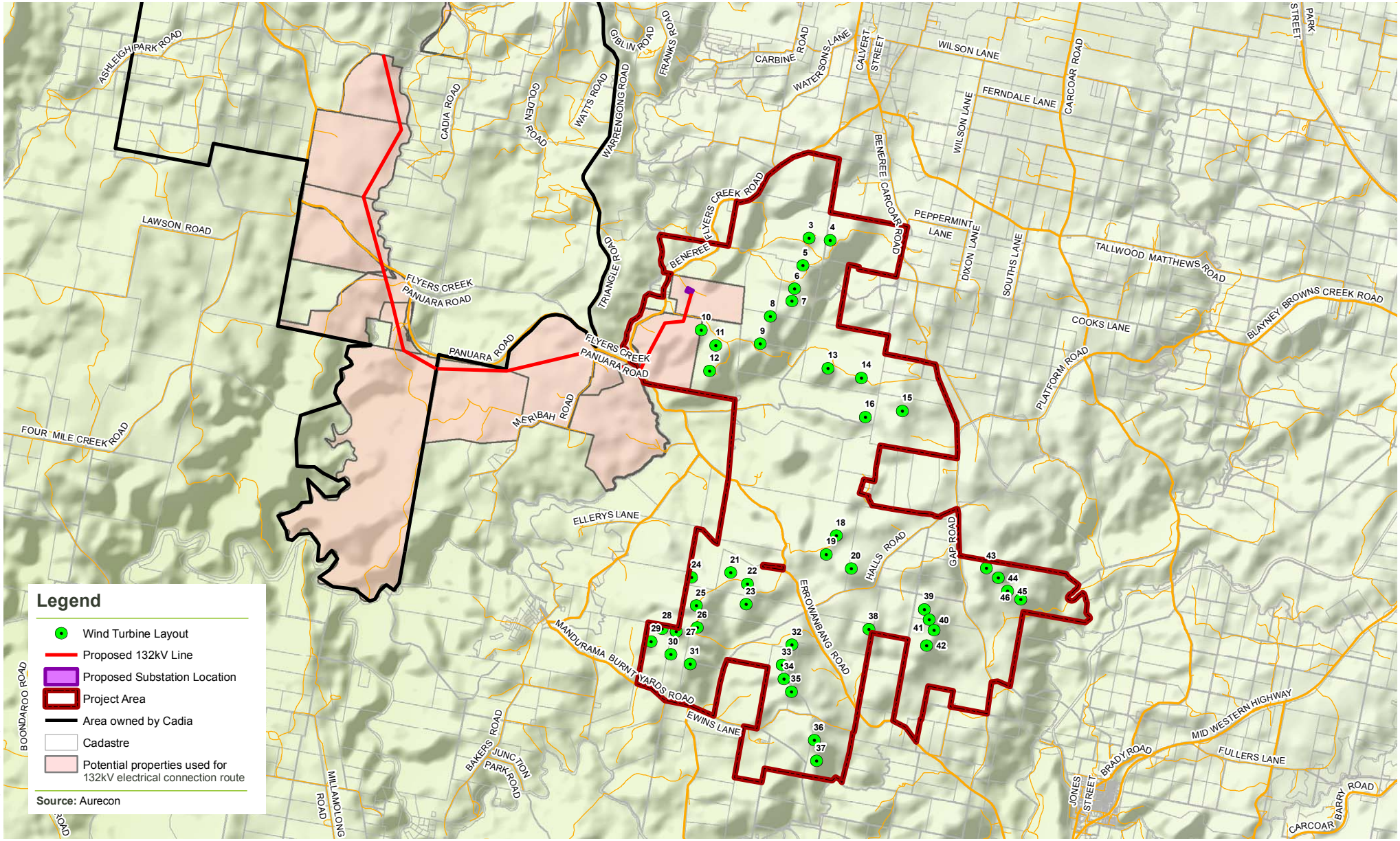
Flyers Creek Wind Farm **Environmental Assessment**

**Projection:** GDA 1994 MGA Zone 55

**FIGURE 1.5b:** Revised Wind Farm Layout on aerial photograph and contours

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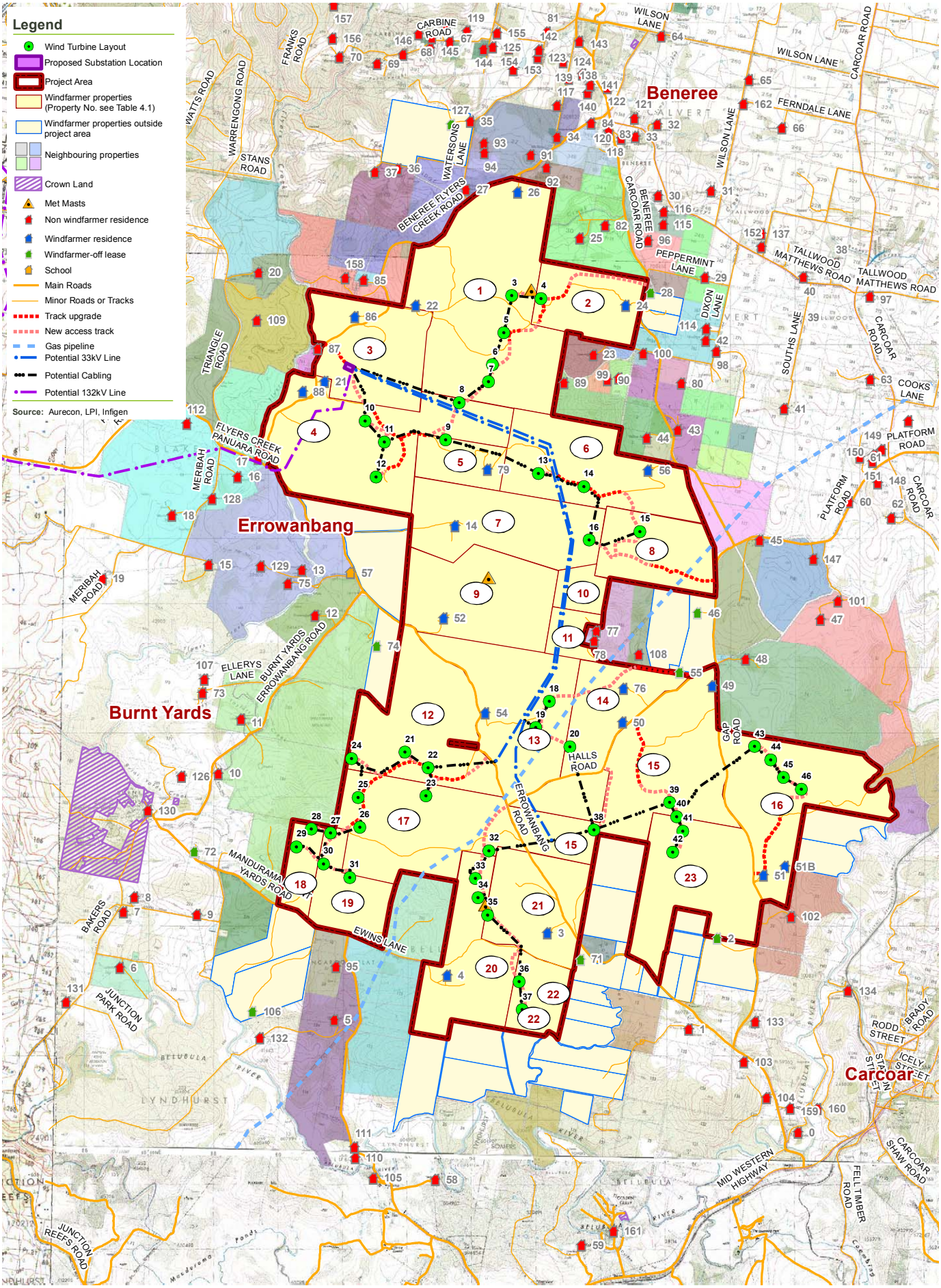
**Projection:** GDA 1994 MGA Zone 55

Flyers Creek Wind Farm **Environmental Assessment**

**FIGURE 1.6a:** Revised Complete Project Overview

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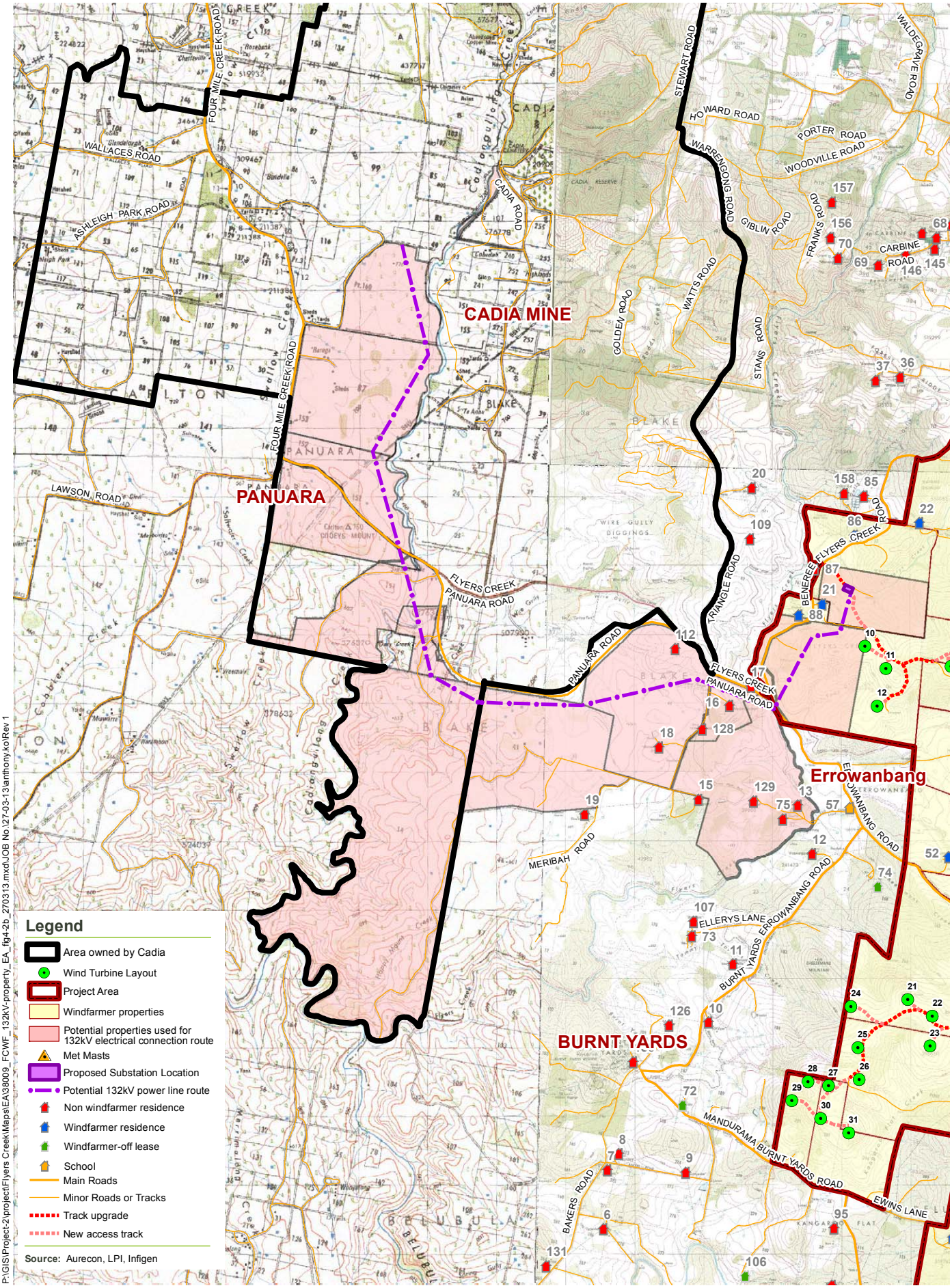
**Projection:** GDA 1994 MGA Zone 55

Flyers Creek Wind Farm **Environmental Assessment**

**FIGURE 4.1b:** Revised Property Map

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**Projection:** GDA 1994 MGA Zone 55

Flyers Creek Wind Farm **Environmental Assessment**

**FIGURE 4.2b:** Revised 132 kV Electrical connection route - property map

Table 4.1a – Revised property details for land on which the wind farm is located

| Property or Landowners | Land Title Details | | Turbine Numbers | Met Mast | Wind farm Ancillary Items |
|---|---|---|---|---|---|
| | Lot | DP | | | |
| Wind Farm Area 1 | 12 | 1063204 | | | |
| | 6 | 550053 | 3 | Northern | New track, track upgrade, 33kV UG Cabling |
| | 76 | 750358 | | | |
| | 53 | 750358 | 5, 6, 7 | | New track, track upgrade, 33kV UG Cabling |
| | 50 | 750358 | | | |
| Wind Farm Area 2 | 41 | 750367 | | | UG cabling and possible track |
| | 28 | 750367 | 4 | | Site office, New track, track upgrade, 33 kV UG Cabling |
| Wind Farm Area 3 | 8 | 750358 | | | Substation, 132 kV Line, 33kV Line, 33 kV UG Cabling, track upgrade |
| | 52 | 750358 | | | Nil |
| Wind Farm Area 4 | 62 | 750358 | 8 | | New track, 33 kV UG Cabling, 33kV Line |
| | 181 | 750358 | 10, 11, 12 | | Track upgrade, 33 kV UG Cabling, New Track |
| | 180 | 750358 | | | 132 kV line, New track |
| | 10 | 750358 | | | New track |
| Wind Farm Area 5 | 63 | 750358 | 9 | | 33 kV UG Cabling |
| Wind Farm Area 6 | 7 | 750358 | 13, 14 | | New track, track upgrade |
| | 66 | 750358 | | | New track, track upgrade |
| | 65 | 750358 | | | |
| Wind Farm Area 7 | 68 | 750358 | 16 | | 33 kV UG Cabling, 33 kV Line, New track |
| Wind Farm Area 8 | 67 | 750358 | 15 | | New track and track upgrade, 33 kV UG Cabling |
| Wind Farm Area 9 | 69 | 750358 | | Central | Central |
| Wind Farm Area 10 | 5 | 1031238 | | | 33 kV OH Line |
| Wind Farm Area 11 | 6 | 1031238 | | | 33 kV OH Line |
| Wind Farm Area 12 | 163 | 750358 | | | |
| | 427 | 1067009 | 21, 22, 24 | | New track, track upgrade, 33 kV UG Cabling |
| | 425 | 1067009 | | | |
| | 426 | 1067009 | | | |
| Wind Farm Area 13 | 162 | 750358 | 18, 19 | | New track, 33 kV Line |
| Wind Farm Area 14 | 161 | 750358 | 20 | | New track, 33 kV UG Cabling, 33 kV Line |

| Property | Land Title Details | | Turbine | Met | Wind farm |
|---|---|---|---|---|---|
| Wind Farm Area 15 | 208 | 750359 | 38 | | New track, 33 kV UG Cabling, 33 kV Line |
| | 72 | 750359 | | | Access track to T38 |
| | 66 | 750359 | 39, 40 | | Access tracks and UG cabling |
| | 1 | 1089162 | | | |
| | 2 | 1089162 | | | |
| | 1 | 1089147 | | | |
| | 2 | 1089147 | | | |
| | 3 | 1089147 | | | 33 kV UG Cabling |
| | 96 | 750358 | | | New track |
| | 95 | 750358 | | | New track |
| | 94 | 750358 | | | Track upgrade |
| Wind Farm Area 16 | 75 | 750358 | 43 to 46 | | New track, track upgrade, 33 kV UG cabling |
| Wind Farm Area 17 | 1 | 396680 | 23, 25 | | New track, track upgrade, 33 kV UG cabling |
| | 1 | 1079963 | 26, 31, 32 | | New track, track upgrade, 33 kV UG cabling |
| Wind Farm Area 18 | 201 | 750359 | 28, 29 | | New track, 33 kV UG cabling |
| Wind Farm Area 19 | 202 | 750359 | 27, 30 | | New track, 33 kV UG cabling |
| | 204 | 750359 | | | |
| Wind Farm Area 20 | 206 | 750359 | 33, 34 | Southern | New track, 33 kV UG cabling |
| | 2 | 519767 | | | |
| | 120 | 750359 | | | |
| | 1 | 519767 | | | |
| | 84 | 750359 | | | New track |
| Wind Farm Area 21 | 533 | 749105 | 35 | | New track, 33 kV UG cabling |
| | 1 | 1071270 | | | Nil |
| Wind Farm Area 22 | 83 | 750359 | 36, 37 | | New track, 33 kV UG cabling |
| Wind Farm Area 23 | 78 | 750359 | 41, 42 | | New track, 33 kV UG cabling |
| | 62 | 750359 | | | Nil |
| | 1 | 927568 | | | Nil |

**Table 4.2a – Revised Property details for land on which the 132 kV transmission line for grid connection is located**

| Property or Landowners | Land Title Details | | Length of transmission line | Other facility |
|---|---|---|---|---|
| | Lot | DP | | |
| Wind Farm area 3 | 8 | 750538 | 470 m | substation |
| Wind Farm area 4 | 180 | 750538 | 1,677 m | |
| Transmission Line area 1 | 51 | 39600 | 395 m | |
| | 52 | 39600 | 20 m | |
| Transmission Line area 2 | 20 | 1038104 | 2,441 m | |
| | 43 | 750362 | 1,486 m | |
| Transmission Line area 3 | 14 | 750362 | 375 m | |
| Transmission Line area 4 | 22 | 1038104 | 1,265 m | |
| Transmission Line area 5 | 201 | 1037198 | 578 m | |
| | 156 | 40039 | 1,712 m | |
| | 87 | 750369 | 1,790 m | |
| | PT160 | 750371 | 1,478 m | Switching Station |
| **Total length of transmission line** | | | **13.7 km** | |

# 19. Statement of Commitments

This chapter of the Environmental Assessment states the commitments made by Flyers Creek Wind Farm Pty Ltd (FCWFPL) to be integrated in the project to practicably manage the identified environmental issues and mitigate or avoid the potential environmental impacts.

The following commitments include measures in relation to the overall project environmental management and also for specific measures to address particular environmental impacts. The proponent will ensure that each phase of the project integrates the commitments listed below together with, or as updated, to address the Minister's Conditions of Approval.

The various measures will be applied to the following phases as indicated in the respective sections of the Statement of Commitments:

- Final design and pre-construction planning
- Construction Environmental Management Plan (including site restoration)
- Operational Environmental Management Plan
- Decommissioning and Site Restoration, if applicable

Implementation of the commitments and the performance of the project's environmental management system will be subject to periodic reviews and corrective action, if required.

**Note: This document was amended in May 2013 to add the commitment to undertake native flora and heritage surveys of the new transmission line route described in the Preferred Project Report.**

**Table 19.1 – Statement of Commitments**

| Issue or Section No. | Commitment | Responsible Party | Timing |
|---|---|---|---|
| General Conditions Responsibility | | | |
| Scope of Development | FCWFPL will carry out the development generally in accordance with the information contained in this EA and in compliance with the Minister's Project Approval Conditions. | FCWFPL | Ongoing |
| Minimising harm to the Environment | FCWFPL will implement all practicable measures to prevent and minimise any harm to the environment that may result from the construction, commissioning, operation, maintenance and decommissioning of the development. | FCWFPL | Ongoing |
| Statutory requirements | FCWFPL will ensure compliance with all relevant environmental requirements and ensure that all necessary approvals and as relevant, licences and permits, are obtained and are kept up to date as required throughout the life of the development. Copies of these documents will be maintained at the Site Office and EMPs will include measures to ensure compliance. | FCWFPL | Ongoing |
| Administrative Conditions | | | |
| Compliance | FCWFPL will notify in writing the Director-General of the start of the Project's Construction and Operation phases. Such notification must be provided at least two weeks before the relevant start date unless otherwise agreed to by the Director-General. | FCWFPL | Project start mid 2012<br>(at least four weeks before the relevant start date) |
| | FCWFPL will bring to the Director-General's attention any matter that may require further assessment by the Director-General. | FCWFPL | As required |
| | FCWFPL will comply with any requirements of the Director-General arising from the Director-General's assessment of:<br>(a) any reports, plans or correspondence that are submitted to satisfy the Conditions of Approval; and<br>(b) the implementation of any actions or measures contained in such reports, plans or correspondence. | FCWFPL | As required |
| Pre Construction Compliance Report | FCWFPL will submit a **Pre-Construction Compliance Report** to the Director-General. The Pre-Construction Compliance Report will include:<br>(a) details of how the Conditions of Approval required to be addressed before Construction were complied with;<br>(b) the time when each relevant Condition of Approval was complied with, including dates of submission of any required reports and/or approval dates; and<br>(c) details of any approvals or licences required to be issued by Relevant Government Departments before Construction commences. | FCWFPL | Two weeks before Construction commences<br>(or within any other time agreed to by the Director-General |

| Issue or Section No. | Commitment | Responsible Party | Timing |
|---|---|---|---|
| Pre Operation Compliance Report | FCWFPL will submit a **Pre-Operation Compliance Report** to the Director-General. The Pre-Operation Compliance Report must include:<br>(a) details of how the Conditions of Approval required to be addressed before Operation were complied with;<br>(b) the time when each relevant Condition of Approval was complied with, including dates of submission of any required reports and/or approval dates; and<br>(c) details of any approvals or licences issued by relevant Government Departments for the Project's Operation. | FCWFPL | Two weeks before Operation commences<br>(or within any other time agreed to by the Director-General). |
| Construction Compliance Reports | FCWFPL will provide the Director-General with Construction Compliance Reports.<br>(a) The Environmental Management representative (EMR) must review the Construction Compliance Reports before they are submitted to the Director-General and bring to the Director-General's attention any shortcomings. | FCWFPL<br>EMR | See below |
| First Report | First – six months after Construction and be submitted a maximum of six weeks after expiry of that period (or at any other time interval agreed to by the Director General). | FCWFPL<br>EMR | 6 months after construction commences |
| Second and subsequent reports | The second, and subsequent, **Construction Compliance Reports** will be submitted at maximum intervals of six months from the date of submission of the first Construction Compliance Report (or at any other time interval agreed to by the Director General) for the duration of Construction. | FCWFPL<br>EMR | Maximum of 6 monthly after first report |
| Report format | The Construction Compliance Reports will include information on:<br>(a) compliance with the CEMP and the Conditions of Approval;<br>(b) compliance with any approvals or any licences issued by relevant Government Departments for Construction;<br>(c) the implementation and effectiveness of environmental controls. The assessment of effectiveness will be based on a comparison of actual impacts against performance criteria identified in the CEMP;<br>(d) environmental monitoring results, presented as a results summary and analysis;<br>(e) the number and details of any complaints, including a summary of main areas of complaint, action taken, response given and intended strategies to reduce recurring complaints;<br>(f) details of any review and amendments to the Construction Environmental Management Plan (CEMP) resulting from Construction during the reporting period; and<br>(g) any other matter relating to compliance with the Conditions of Approval or as requested by the Director-General.<br>The Construction Compliance Reports will be made publicly available. | | |

| Issue or Section No. | Commitment | Responsible Party | Timing |
|---|---|---|---|
| Environmental Impact Audit Reports | | | |
| Environmental Impact Audit Report – Construction | An **Environmental Impact Audit Report – Construction** will be prepared and submitted to the Director-General. The Environmental Impact Audit Report – Construction will also be submitted to other government departments upon the request of the Director-General.<br>The Environmental Impact Audit Report – Construction will:<br>(a) identify the major environmental controls used during Construction and assess their effectiveness;<br>(b) summarise the main environmental management plans and processes implemented during Construction and assess their effectiveness;<br>(c) identify any innovations in Construction methodology used to improve environmental management; and<br>(d) discuss the lessons learnt during Construction, including recommendations for future Projects. | FCWFPL | Maximum three months after Construction is complete<br>(or within any other time agreed to by the Director-General). |
| Environmental Impact Audit Report – Operation | An **Environmental Impact Audit Report – Operation** will be submitted to the Director-General. The Environmental Impact Audit Report - Operation must also be submitted to other government departments upon the request of the Director-General.<br>The Environmental Impact Audit Report - Operation will:<br>(a) be certified by an independent person at the Proponent's expense. The certifier must be advised to the Director-General before the Environmental Impact Audit Report – Operation is prepared;<br>(b) compare the Operation impact predictions made in the EA, Submissions Report and any supplementary studies with the actual impacts;<br>(c) assess the effectiveness of implemented mitigation measures and safeguards;<br>(d) assess compliance with the systems for operation maintenance and monitoring;<br>(e) discuss the results of consultation with the local community particularly any feedback or complaints; and<br>(f) be made publicly available. | FCWFPL | Maximum 24 months after the Project begins Operation<br>Any additional periods that the Director-General may require |

| Issue or Section No. | Commitment | Responsible Party | Timing |
|---|---|---|---|
| Environmental Management | | | |
| Construction Environmental Management Plan (CEMP) | A **CEMP** will be prepared and implemented in accordance with all relevant Acts and Regulations.<br>(a) FCWFPL will obtain the Director-General's Approval for the CEMP before Construction commences or within any other time agreed to by the Director-General.<br>(b) The CEMP must be reviewed by the EMR before FCWFPL seeks the Director-General's approval for the CEMP. The EMR must bring to the Director-General's attention any shortcomings.<br>(c) FCWFPL will ensure that the relevant mitigation measures identified in this EA are incorporated into the CEMP or the relevant Sub Plan.<br>(d) The CEMP will be prepared in accordance with the Department's publication entitled Guideline for the Preparation of Environmental Management Plans (2004). | FCWFPL<br>EMR | Approval required before construction commences |
| Operation Environmental Management Plan (OEMP) | An **OEMP** will be prepared by and implemented in accordance with these Conditions and all relevant Acts and Regulations.<br>(a) FCWFPL will obtain the approval of the Director-General for the OEMP before Operation commences or within any other time agreed to by the Director-General.<br>(b) FCWFPL will ensure that the mitigation measures identified in this EA are incorporated into the OEMP or the relevant Sub Plan.<br>(c) The OEMP must be prepared in accordance with the Department's publication entitled Guideline for the Preparation of Environmental Management Plans (2004). | FCWFPL | Approval required before operation commences |
| Environmental Management Representative | FCWFPL will request the Director-General's Approval for the appointment of an Environmental Management Representative (EMR) In its request FCWFPL will provide the following information, the:<br>(a) qualifications and experience of the EMR including demonstration of general compliance with relevant Australian Standards for environmental auditors;<br>(b) authority and independence (from the Proponent or its contractors) of the EMR including details of the Proponent's internal reporting structure; and<br>(c) resourcing of the EMR role. The EMR will be available:<br>(i) for sufficient time to undertake the EMR role. This timing shall be agreed between FCWFPL and the EMR and advised to the Director-General in the request for approval;<br>(ii) at any other time requested by the Director-General;<br>(iii) during any Construction activities identified in the CEMP to require the EMR's attendance; and<br>(iv) for the duration of Construction. | FCWFPL | Approval required at least eight weeks before Construction commences<br>(or within any other time agreed to by the Director-General). |

| Issue or Section No. | Commitment | Responsible Party | Timing |
|---|---|---|---|
| Revoking the Environmental Management Representative | The Director-General may at any time immediately revoke the approval of an EMR appointment by providing written notice to FCWFPL. Interim arrangements for EMR responsibility following the revocation must be agreed in writing between the Director-General and FCWFPL.<br>The Director-General may at any time conduct an audit of any actions undertaken by the EMR.<br>FCWFPL will:<br>(a) facilitate and assist the Director-General in any such audit; and<br>(b) include in the conditions of the EMR's appointment the need to facilitate and assist the Director-General in any such audit. | Department of Planning | If required |
| Environmental Management Representative Responsibilities | The EMR is authorised to:<br>(a) consider and advise the Director-General and FCWFPL on matters specified in the Conditions of Approval and compliance with such;<br>(b) determine whether work falls within the definition of Construction where clarification is requested by FCWFPL;<br>(c) review the CEMP;<br>(d) periodically monitor FCWFPL's activities to evaluate compliance with the CEMP. Periodic monitoring must involve site inspections of active work sites at least fortnightly;<br>(e) provide a written report to FCWFPL of any non-compliance with the CEMP observed or identified by the EMR. Non compliance must be managed as identified in the CEMP;<br>(f) Issue a recommendation to FCWFPL to stop work immediately if in the view of the EMR an unacceptable impact on the environment is occurring or is likely to occur. The stop work recommendation may be limited to specific activities causing an impact if the EMR can easily identify those activities. The EMR may also recommend that FCWFPL initiate reasonable actions to avoid or minimise adverse impacts; | EMR | |
| Environmental Management Representative Responsibilities (cont) | (g) review corrective and preventative actions to monitor the implementation of recommendations made from audits and site inspections;<br>(h) certify that minor revisions to the CEMP are consistent with the approved CEMP; and<br>(i) provide regular (as agreed with the Director-General) reports to the Director-General on matters relevant to carrying out the EMR role including notifying the Director-General of any stop work recommendations.<br>The EMR must immediately advise FCWFPL and the Director-General of any incidents relevant to these Conditions resulting from Construction that were not dealt with expediently or adequately by FCWFPL. | EMR | |

| Issue or Section No. | Commitment | Responsible Party | Timing |
|---|---|---|---|
| Community and Consultation | | | |
| Advice of Construction Activities | FCWFPL will ensure that the local community and businesses are advised of Construction activities that could cause disruption. Methods to disseminate this information will be identified in the CEMP. Information to be provided will include:<br>(a) details of any traffic disruptions and controls;<br>(b) construction of temporary detours; and<br>(c) work approved to be undertaken outside standard Construction hours, in particular noisy works, before such works are undertaken. | FCWFPL | As required |
| Establishment of a Project Internet Site | FCWFPL will establish a **Project internet site** before Construction commences and maintain the internet site until Construction ends. This internet site will contain:<br>(a) periodic updates of work progress, consultation activities and planned work schedules. The site will indicate the date of the last update and the frequency of the internet site updates;<br>(b) a description of relevant approval authorities and their areas of responsibility;<br>(c) a list of project reports and plans that are publicly available and details of how these can be accessed;<br>(d) contact names and phone numbers of relevant communications staff; and<br>(e) the 24 hour toll-free complaints contact telephone number.<br>Updates of work progress, construction activities and planned work schedules will be provided where significant changes in noise or traffic impacts are expected and will be reviewed progressively by FCWFPL. | FCWFPL | Before Construction commences |
| Complaints Management | Prior to the commencement of Construction, FCWFPL will ensure that the following is available for the construction and operation period:<br>(a) a postal address to which written complaints may be sent;<br>(b) an e-mail address to which electronic complaints may be transmitted; and<br>(c) a 24-hour telephone contact line. | FCWFPL | Before Construction commences and available during operation |

| Issue or Section No. | Commitment | Responsible Party | Timing |
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| Complaints Management | FCWFPL will keep a legible record of all complaints received in an up-to-date Complaints Register. The Complaints Register will record, but not necessarily be limited to:<br>(a) the date and time, where relevant, of the complaint;<br>(b) the means by which the complaint was made (telephone, mail or e-mail);<br>(c) any personal details of the complainant that were provided, or if no details were provided, a note to that effect;<br>(d) the nature of the complaint;<br>(e) any action(s) taken by FCWFPL in relation to the complaint, including any follow-up contact with the complainant; and<br>(f) if no action was taken by FCWFPL in relation to the complaint, the reason(s) why no action was taken.<br>The Complaints Register will be made available for inspection on request of the Director-General. The record of a complaint must be kept for at least four years after the complaint was made. | FCWFPL | During Construction and available during operation |
| Flora and Fauna Management | | | |
| Flora and Fauna Management Sub Plan | A **Flora and Fauna Management Sub Plan** will be prepared by FCWFPL as a sub plan of the CEMP. This sub plan will include:<br>(a) plans showing sensitive terrestrial vegetation communities; important flora and fauna habitat areas; locations where threatened species, populations or ecological communities were recorded; and limits of areas to be cleared;<br>(b) methods to manage impacts on flora and fauna species (terrestrial and aquatic) and their habitat which may be directly or indirectly affected by the Project. These will include:<br>(i) procedures for vegetation clearing, soil management and managing other habitat damage during Construction;<br>(ii) methods to protect vegetation both retained within, and also adjoining, the Project from damage during Construction;<br>(iii) a habitat tree management program including fauna recovery procedures and habitat maintenance (e.g. relocating hollows or installing nesting boxes);<br>(iv) where possible, and where consistent with DECC or DPI requirements, strategies for re-using in rehabilitation works individuals of any threatened plant species that would be otherwise be destroyed by the Project;<br>(v) performance criteria against which to measure the success of the methods | FCWFPL | Approval required before Construction commences |

| Issue or Section No. | Commitment | Responsible Party | Timing |
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| Flora and Fauna Management Sub Plan (continued) | (c) rehabilitation details including:<br>(i) identification of locally native species to be used in rehabilitation and landscaping works, including flora species suitable as a food resource for threatened fauna species;<br>(ii) methods to remediate affected aquatic habitats;<br>(iii) the source of all seed or tube stock to be used in rehabilitation and landscaping works including the identification of seed sources within the Project. Seed of locally native species within the Project will be collected before Construction commences to provide seed stock for revegetation;<br>(iv) methods to re-use topsoil (and where relevant subsoils) and cleared vegetation;<br>(v) measures for the management and maintenance of all preserved, planted and rehabilitated vegetation;<br>(d) a Weed Management Strategy including:<br>(i) identification of weeds within the Project and adjoining areas;<br>(ii) methods to treat and re-use weed infested topsoil;<br>(iii) strategies to control the spread of weeds during Construction;<br>(e) a program for reporting on the effectiveness of flora and fauna management measures against the identified performance criteria. Management methods must be reviewed where found to be ineffective;<br>(f) the mitigation measures in Chapter 10 of the EA. This includes the following: | FCWFPL | Approval required before Construction commences |

| Issue or Section No. | Commitment | Responsible Party | Timing |
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| Flora and Fauna Site Specific Requirements (Chapter 10) | • Specific areas where clearing is to be carefully planned and managed including pre-clearing reviews, monitoring and review include the following locations:<br>– Turbine site 3 – avoid scattered trees<br>– Access track and cable routes between Turbines 4 and 6 – avoid scattered trees<br>– Vicinity of Turbine 9 – avoid scattered trees<br>– Access route to Turbine 16 – follow edge of trees<br>– Siting of Turbines 18 and 19 and associated tracks – avoid scattered trees<br>– Cable route for Turbine 20 to avoid clumps of remnant woodland<br>– Turbine site 33 – minimise clearing of trees<br>– Access track to Turbine 39 – minimise clearing of scattered trees<br>– Turbine site 39 – avoid nearby cluster of trees<br>– Cable route Turbine 39 to Turbine 43 to follow route that minimises clearing<br>– 33kV overhead line to avoid tree clearance wherever practicable, proposed route to be pegged and reviewed by ecologist (east of substation, in vicinity of Turbines 18 and 19, southern end to reach point of connection with underground cable circuits<br>• Where the crossing of small creeks is necessary for track and cable routes, the crossings will be designed to avoid erosion and the movement of soil into watercourses. The main risk area for erosion is for the cable route between turbine 39 and Turbine 43 and consideration may be given to having this section of underground cable replaced by a section of overhead transmission line.<br>• A native flora survey will be conducted of the new transmission line route documented in the Preferred Project Report. | FCWFPL / Contractor | Before and during Construction, as required |
| Flora and Fauna Mitigation Measures (Chapter 10) | In addition to the site specific measures identified above, the proponent will adopt the following measures that are of a more general nature to ensure that impacts on the site's ecological values are minimised.<br>• Clearing of scattered trees or woodland will be avoided wherever possible. Where avoidance is not possible, clearing and lopping will be kept to the bare minimum to maximise conservation of the woodland.<br>• A soil and water management plan will be prepared for the project, in consultation with the Department of Planning and Department of Environment and Climate Change.<br>• Targeted monitoring in 2011, at the time of the year when Eastern Bentwing Bats migrate from the breeding caves (March-April), with detectors at relevant turbine locations to confirm that this species is not present in significant numbers at the wind farm site.<br>• The EMR will be appointed for the construction phase of the project who will ensure that appropriate environmental safeguards are implemented to ensure the mitigation measures set out here are implemented. | FCWFPL<br>Contractor<br>FCWFPL<br>EMR | <br>On going throughout construction<br>Before construction commences<br>Before construction commences |

| Issue or Section No. | Commitment | Responsible Party | Timing |
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| Flora and Fauna Mitigation Measures<br><br>(Chapter 10) | • A targeted survey of the Superb Parrot will be undertaken in the breeding season (September to December) by a qualified biologist prior to construction commencing. The method provided in Appendix D will be employed in this survey. In addition, should nesting sites be identified, the targeted surveys will be expanded to include forage areas and flight paths. | FCWFPL | Before construction commences |
| | • To reduce the potential impact on birds of prey: | Contractor, EMR, Land owners | Ongoing through operation of the wind farm |
| | – the towers will be smooth, with no perching sites | Contractor, Land owners | |
| | – dead animals, eg sheep carcasses and road kills, will be removed as soon as practical within a 200 metre radius of each turbine | Land owners | |
| | – lambing should be avoided in paddocks containing turbines | | |
| | – no lights, other than safety lights for aircraft (if required), will be installed on the turbines in case they attract owls. Lighting at the substation facilities will also be minimised due to its proximity to turbine sites | | |
| | – no buildings, poles or other structures apart from meteorological masts should be constructed within 200 metres of a turbine because they provide perching opportunities for birds of prey | | |
| | – any dead trees near turbines will be removed for the same reason | | |
| | – no trees should be planted near turbines | FCWFPL | |
| | • An avifauna impact monitoring program will be implemented once the project is operational. The monitoring program will be developed through reference to the Australian Wind Energy Association (AWEA) July 2005 report 'Wind Farms and Birds: Interim Standards for Risk Assessment' and relevant specialists. Prior to its implementation, the proposed monitoring program will be submitted to the DECCW. | FCWFPL | |
| | • Should the proposed monitoring reveal substantial evidence of bird or bat strike, FCWFPL will engage an appropriate specialist to assess the incidences and identify practical and effective mitigation measures. | | |
| | • No large dams should be constructed on wind farmer properties within a one kilometre radius of a turbine; large dams could attract flocks of waterfowl and thereby increase their susceptibility to blade-strike. | Contractor, Land owners | |
| | • The exact location of the turbines and access tracks will be micro-sited in conjunction with the EMR during the construction phase of the project to avoid unnecessary impacts on native vegetation, flora and fauna. All turbine sites should avoid the need to clear large mature trees. | FCWFPL, EMR, Contractor | |
| | • In the event that treed vegetation cannot be avoided above the threshold requiring an offset, a suitable offset metric and a suitable offset strategy will be determined in consultation with DECCW. This strategy should demonstrate that appropriate offset options are available (e.g. suitable woodlands on/off site or suitable land is available on site that could be fenced off and used for planting of appropriate native species. | FCWFPL<br><br>FCWFPL | |
| | • Security of tenure and financial arrangements for the conservation management of proposed offsets, should they be required, will be undertaken once the offsets have been determined. | EMR | |
| | • The EMR will ensure that barriers are erected around sensitive vegetation to be retained and which may be impacted by construction works at nearby turbine sites or access tracks | | |

| Issue or Section No. | Commitment | Responsible Party | Timing |
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| Flora and Fauna Mitigation Measures (continued)<br><br>(Chapter 10) | • Rock outcrops will be avoided where practicable. Where there is a need to disturb rock outcrop the disturbed rock will be relocated and similar rocky habitat reconstructed nearby. Where batters are constructed using rock then these will be left in this form to provide reptile habitat and locations where rocky scrub can develop<br><br>• Measures must be incorporated in the Project Environmental Management Plan to restrict the introduction of weeds to the wind farm site and for post construction weed control measures to be applied for all areas disturbed by the project.<br><br>• FCWFPL will consult with the landowners involved with the project to identify a suitable area of woodland that could be fenced off for the duration of the project.<br><br>• The EMR appointed for the construction phase of the project, will ensure that appropriate environmental safeguards are implemented including the mitigation measures set out here.<br><br>• Once the project layout has been confirmed, an ecologist if necessary, will revisit the site to ensure that impacts on areas of high conservation value are minimised. Barriers will be installed where necessary to avoid movements beyond defined work areas. | Contractor<br><br>FCWFPL, EMR<br><br>FCWFPL, Land owners<br><br>EMR | |
| Cultural Heritage Sub-plan | | | |
| Cultural Heritage Sub Plan | A **Cultural Heritage Management Sub Plan** will be prepared by FCWFPL as part of the CEMP. The sub plan must incorporate the mitigation measures identified in Chapter 10 of the EA, | FCWFPL | Before construction commences |
| Cultural Heritage Mitigation Measures<br><br>(Chapter 11) | Mitigation measures identified in Chapter 10 includes the following:<br><br>• The layout of the proposed wind farm infrastructure will be slightly modified to avoid disturbing the two high significance PADs identified within the site area. Temporary fencing of these PAD areas will be undertaken during construction. Should the alternative sites be in areas that have not been previously assessed, then additional investigation by an archaeological specialist and Aboriginal stakeholders will be undertaken to confirm suitability of these locations. Alternatively a program of test excavation and reporting can be undertaken to clarify the archaeological potential of PADs located within the study area.<br><br>• The layout of cables and/or tracks will be slightly modified to avoid the surface artefacts FCWF-S-01 to 04 and FCWF-IF-01 to 03. In the unlikely event this is impractical, salvage through collection and relocation of surface artefacts will be completed for any of the sites FCWF-S-01 to 04 and FCWF-IF-01 to 03 impacted by development of the wind farm project. Any salvage will be undertaken in accordance with DECCW procedures including consultation<br><br>• The development and implementation of a care and control of artefacts strategy, devised through consultation with Aboriginal stakeholders, is recommended for all collected and excavated archaeological material retrieved during the abovementioned surface collection, testing and/or salvage excavation works. This strategy shall be agreed and finalised with the Aboriginal stakeholders prior to any archaeological site works commencing. | FCWFPL and Contractor | During construction and as required |

| Issue or Section No. | Commitment | Responsible Party | Timing |
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| Cultural Heritage Mitigation Measures (continued)<br><br>(Chapter 11) | • If additional unrecorded Aboriginal archaeological material is encountered during development, works shall cease immediately to allow an archaeologist to make an assessment of the finds, as all Aboriginal artefacts (known and unknown) are protected under the *NP&W Act 1974* and *Amendment Act 2010*. DECCW will be notified immediately of any such finds as per these Acts.<br><br>• As required by the *NSW Heritage Act 1977* (amended), in the event that historic relics are encountered, works shall cease immediately to allow an archaeologist to make an assessment of the finds. The archaeologist may need to consult with the Heritage Branch Department of Planning concerning the significance of any historic cultural material encountered. Access to Aboriginal archaeological information will be restricted in the event that this report and the full Austral Aboriginal Archaeological and Cultural Heritage Assessment is to go on public exhibition. Consultation with Austral Archaeology Pty Ltd, and the registered Aboriginal stakeholders will be undertaken to determine the appropriate level of public release.<br><br>• Copies of the finalised report shall be provided by the client to the Aboriginal stakeholder groups and the individual stakeholders. Austral Archaeology Pty Ltd will provide a copy of the finalised report to NSW DECCW. Completed site cards shall be provided to the DECCW AHIMS Registrar as per the *NP&W Act 1974* and *Amendment Act 2010*.<br><br>• Consultation with relevant stakeholders will be continued during any subsequent stages of planning and implementation. The mitigation measures that are relevant to matters potentially affecting indigenous heritage aspects will be incorporated in the project Environmental Management Plan (EMP).<br><br>• A cultural heritage survey will be conducted of the new transmission line route documented in the Preferred Project Report. | | |
| Non Indigenous Heritage Mitigation Measures | • Where the wind farm construction works are in close proximity (less than 100 metres) to any identified items of non-Aboriginal heritage significance, a temporary fence will be constructed around the item for the duration of the construction works to avoid disturbance of the particular feature. Items to be protected from damage by the project include the Calvert Trig Station site and its associated reference marks. These will be protected by fencing erected by the contractor prior to any works at Turbine site 4. The fencing will be maintained for the duration of the construction works and if required by Lands Department following completion of construction works. Such fencing would be at least 5 metres in each direction from the Trig Station or any reference marks in its vicinity and no construction activities will occur within the fenced area. Site monitoring will routinely ensure that the fence around this survey facility is secure.<br><br>• FCWFPL will, prior to commencement of construction, arrange for the preparation of a photographic record of any former mining structures that could be disturbed. This includes the former mining shaft site and footing in the vicinity of Turbines 5 and 6 and the access track and the remains of the old hut on the ridgeline near the shaft. No works will occur within 20 metres of these sites. | Contractor<br><br>FCWFPL | Before construction commences<br><br>Before construction commences |

| Issue or Section No. | Commitment | Responsible Party | Timing |
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| Noise Management | | | |
| Construction Noise Management Sub Plan | A **Construction Noise Management sub plan** will be implemented as part of the Project CEMP for the construction stage of the project to mitigate potential adverse noise impacts that could affect nearby residents. Key components of the construction noise management sub-plan will include the mitigation measures identified in Chapter 12.<br><br>Prior to commencement of construction, neighbours to the wind farm site will be informed of the construction works, the nature and duration of components of the construction phase, the potential impacts and contact details for registering complaints or enquiries | FCWFPL<br><br>FCWFPL | Before construction commences<br><br>Before construction commences |
| Work hours | Construction activities associated with the Development, including heavy vehicles entering and exiting the Site, will only be carried out between 7:00 am and 6:00 pm, Monday to Friday inclusive, and between 7:00 am and 1:00 pm on Saturdays if inaudible at neighbouring occupied residences and 8:00 am to 1:00 pm if audible. The following activities may be carried out in association with Construction outside of these hours:<br><br>(a) any works that do not cause noise emissions to be audible at any nearby residences not located on the Premises<br><br>(b) the delivery of materials as requested by Police or other authorities for safety reasons<br><br>(c) emergency work to avoid the loss of lives, property and/or to prevent environmental harm<br><br>(d) completion of a concrete pour that extends beyond normal working hours due to unforeseen delays<br><br>(e) conduct of some lifting operations to install turbine components during periods of low wind speed for safety reasons<br><br>Any work undertaken outside the specified construction hours, other than those specified in (a) – (e) above, will not be undertaken without prior approval of the Department of Planning<br><br>All vehicles to have the required noise control devices suitable for use on public roads. | FCWFPL and Contractor | During Construction |
| Blasting | Blasting operations will be avoided where practicable but if required will only take place between 9:00 am and 5:00 pm Monday to Friday inclusive and between 9:00 am and 1:00 pm Saturday; and at such other times or frequency as may be approved by the DECC and will comply with the following<br><br>(a) The air-blast overpressure level from blasting when assessed at the closest occupied residential sites surrounding the wind farm will not exceed 115 dB(A) (Lin Peak) for more than 5% of the total number of blasts during each reporting period; and 120 dB(A) (Lin Peak) at any time<br><br>(b) The ground vibration peak particle velocity from blasting operations when assessed at the closest occupied residential sites surrounding the wind will not exceed 5 mm/s for more than 5% of the total number of blasts carried out on the Site during each reporting period; and 10 mm/s at any time. | FCWFPL and Contractor | During Construction |
| Complaints | Should any instances of elevated noise levels arising from construction works impact surrounding relevant receivers as indicated by receipt of complaints, then the matter will be investigated by the proponent and where practicable measures will be implemented to reduce the impact. A response will be provided to the complainant as to the findings and any modifications to reduce the impact. | FCWFPL | As required |

| Issue or Section No. | Commitment | Responsible Party | Timing |
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| Operational Noise Management Sub Plan | To ensure that the noise impacts of the operations phase comply with the applicable noise criteria as outlined in the Environmental Assessment, the proponent will select equipment and a project layout that enables compliance with the relevant criteria. The proponent will also integrate the following measures in the project's **Operational Noise Management Sub Plan** included in the Operations Environmental Management Plan (OEMP): | | |
| | Prior to commencement of construction, the proponent will develop a noise compliance assessment protocol to be implemented following commissioning of the wind farm. The protocol will be developed by an acoustic engineer and in consultation with the Department of Planning | FCWFPL | Before construction commences |
| | Prior to commissioning of the wind farm, neighbours to the wind farm will be provided with details of the commissioning and contact details in the event that disturbance occurs at their neighbouring residence | FCWFPL | Before commissioning of the wind farm commences |
| | Within three months of commissioning of the wind farm compliance checks will be undertaken for the closest relevant receiver residences to confirm that wind farm noise levels do not exceed criteria at this location and verify reliability of predictions. If complaints are received in the first month of operation then the assessment must be implemented within two weeks, or as soon as practical, of a complaint being received | FCWFPL | Within three months of commissioning |
| | If the measured noise levels exceeds predictions, compliance checks will also be undertaken at relevant receiver residences to confirm that wind farm noise levels do not exceed criteria at these locations | FCWFPL | |
| Complaints | If complaints in respect of noise impact are received from more distant relevant receivers following the wind farm commissioning then these complaints will also be investigated and if warranted compliance checks will also be undertaken for these residences where the initial investigation has indicated that the complaint may relate to an exceedance of criteria | FCWFPL | As required |
| Compliance assessment | Prior to the compliance assessment and if the complaint can be reasonably judged to be related to exceedance of relevant criteria then the proponent will modify the operation of the wind farm to reduce the noise levels experienced at the affected residence while the investigation is being undertaken and/or will undertake noise testing at the affected residence. | FCWFPL | If required |
| | Where the compliance assessment identifies exceedance of criteria for specific wind speeds or under certain atmospheric conditions then the proponent will limit the operation of the contributing turbines and provide a plan to the Department of Planning indicating how compliance will be ensured for the operation where exceedance occurs | FCWFPL | If required |
| | Subject to Department of Planning approval of the plan for mitigation of a confirmed exceedance, FCWFPL will implement the necessary measures to achieve compliance and demonstrate the effectiveness of the measures implemented and that compliance has been achieved | FCWFPL | As required |
| | If agreeable to an owner of a relevant receiver residence, FCWFPL may provide improvements to the affected residence in place of or in addition to modification to the wind farm operation to reduce the impact for the specific neighbour | FCWFPL | If required |

<table>
<tr><th>Issue or Section No.</th><th>Commitment</th><th>Responsible Party</th><th>Timing</th></tr>
<tr><td>Operational Noise Levels<br><br>(hub height reference )</td><td>Noise crieria $_{LA90>10min}$ dB(A) developed in accordance with the SA EPA Guidelines relative to wind speed at reference central meteorological mast at 78.6 metres height
<table>
<tr><th rowspan="2">Relevant Receiver Location</th><th colspan="10">Wind Speed metres per second (Reference central met mast at 78.6 metres AGL)</th></tr>
<tr><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th><th>11</th><th>12</th></tr>
<tr><td>R012</td><td>35</td><td>35</td><td>35.5</td><td>36.5</td><td>38</td><td>39</td><td>40</td><td>41</td><td>41.5</td><td>42.5</td></tr>
<tr><td>R025</td><td>35</td><td>35</td><td>35</td><td>35</td><td>36</td><td>37</td><td>38</td><td>39</td><td>40</td><td>40.5</td></tr>
<tr><td>R027</td><td>35</td><td>35</td><td>35</td><td>35</td><td>35</td><td>36.5</td><td>37.5</td><td>39</td><td>40</td><td>41</td></tr>
<tr><td>R078</td><td>35</td><td>35</td><td>35</td><td>35</td><td>35</td><td>36</td><td>37.5</td><td>39.5</td><td>41</td><td>43.5</td></tr>
<tr><td>R089</td><td>39</td><td>40.5</td><td>41.5</td><td>43</td><td>44</td><td>45</td><td>46.5</td><td>47.5</td><td>48.5</td><td>50</td></tr>
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</table></td><td></td><td></td></tr>
<tr><td>Noise mitigation measures<br><br>(Chapter 12)</td><td>Additional <u>Design</u> mitigation measures provided in Chapter 11 of the EA includes:<ul><li>The management of potential noise impacts is seen as a key element of the project's environmental management plans and will be achieved through noise management sub-plans for the construction and operations phases.</li><li>The layout of the wind farm has considered the potential noise impacts of its operation and incorporates set backs from neighbouring residences to mitigate noise impacts.</li></ul></td><td></td><td></td></tr>
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| Issue or Section No. | Commitment | Responsible Party | Timing |
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| Noise mitigation measures<br><br>(Chapter 12) | • At the final design stage, FCWFPL also has the ability to vary the sites developed, the turbine model and, if required, the turbine operation to achieve a noise compliant array while optimising the utilisation of the wind energy resource at the site. Options available include:<br>– Using a turbine model and associated layout that will enable the wind farm to be operated in a manner that enables compliance with the SA EPA criteria.<br>– Selection of the turbine model with a different noise specification than the GE 2.5xl 2.5 MW turbine.<br>– If the GE 2.5xl 2.5 MW turbine were selected then modification of its operation to achieve compliance. | FCWFPL | |
| | • Should the turbine selected at the final design stage, have a higher noise specification than the GE 2.5xl-2.5 MW wind turbine used in the noise assessment described here, the proponent will undertake a new noise impact assessment, the results of which will be provided to the Department of Planning. Such a noise assessment will demonstrate full compliance with the EPA SA's *Wind Farms, Environmental Noise Guidelines: February 2003*. | FCWFPL | |
| | • FCWFPL is committed to ensuring that the installed wind farm complies with the criteria developed in accordance with the SA EPA guidelines. | FCWFPL | |

| Issue or Section No. | Commitment | Responsible Party | Timing |
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| Soil and Water Management Plan | | | |
| Soil and Water Management Sub Plan | As part of the CEMP, a **Soil and Water Management Sub Plan** will be prepared by FCWFPL in consultation with relevant government departments and Blayney Shire Council. The Sub Plan will:<br>(a) where relevant, be consistent with the RTA's Guidelines for the Control of Erosion and Sedimentation in Roadworks;<br>(b) identify the Construction activities that could cause soil erosion or discharge sediment or water pollutants from the site;<br>(c) describe management methods to minimise soil erosion or discharge of sediment or water pollutants from the site including a strategy to minimise the area of bare surfaces during Construction;<br>(d) describe the location and capacity of erosion and sediment control measures;<br>(e) identify the timing and conditions under which Construction stage controls will be decommissioned;<br>(f) identify how the effectiveness of the sediment and erosion control system will be monitored, reviewed and updated;<br>(g) include contingency plans to be implemented for events such as fuel spills; and<br>(h) Disturbed areas will be required to be stabilised in accordance with the following principles:<br>– temporary vegetation, mulch or other stabiliser will be applied to all disturbed areas, including soil stockpiles that remain exposed for a period of 30 days or more<br>– all temporary earth diversion banks and sediment basin embankments will be seeded and fertilised as soon as practicable after construction and take into account the growing seasons<br>– stabilisation of all batters will be commenced within ten days of completion of formation | | Before Construction commences |

| Issue or Section No. | Commitment | Responsible Party | Timing |
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| Soil and Water Management Sub Plan (continued) | – All temporary control measures will be removed when revegetation has established on formerly disturbed areas and will be disposed of in a satisfactory manner.<br>– Stockpile sites will be clearly identified and selected to be free from traffic and away from drainage lines and watercourses. They will be managed to minimise erosion and loss of topsoil.<br>(i) At the conclusion of construction, all temporary tracks and areas disturbed by construction work including cable routes and hardstand areas surrounding the wind turbines will be reinstated and revegetated. Follow up maintenance will be undertaken until the areas are satisfactorily stabilised and restored.<br>(j) An appropriately qualified soil scientist will be consulted according to a schedule identified in the Soil and Water Management Sub Plan to:<br>• undertake inspections of temporary and permanent erosion and sedimentation control devices;<br>• ensure that the most appropriate controls are being implemented;<br>• check that controls are being maintained in an efficient condition; and<br>• check that controls meet the requirements of any relevant approval condition.<br>• The results of these inspections and any follow-up actions will be reported in the Construction Compliance Reports.<br>(k) All erosion and sediment control devices will be maintained in satisfactory working order until such time as the disturbed areas have been stabilised to the satisfaction of FCWFPL and the respective landowners. Erosion and sediment devices will be inspected regularly after each rain period and during periods of prolonged heavy rain and any defects rectified promptly. | FCWFPL | Before Construction commences |
| Soil and Water Mitigation Measurements<br>(Chapter 7) | Mitigation measures provided in Chapter 7 of the EA includes:<br>• Divert surface runoff away from earthwork areas and soil stockpiles<br>• Reduce the energy of surface flows in areas of potential erosion<br>• Prevent sediment laden or contaminated water leaving the construction site<br>• Provide containment for sediment entrained in surface flows<br>• Reduce susceptibility of disturbed areas to erosion and include prompt revegetation of disturbed areas<br>• In the event of water courses being crossed, appropriate measures would be employed to ensure that the natural drainage of the watercourses are not impacted<br>• If any licenses or permits are required for extraction of water, these will be obtained by the proponent as required after consultation with the relevant authority. | FCWFPL | Before construction commences |

| Issue or Section No. | Commitment | Responsible Party | Timing |
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| | Typical erosion and sediment control measures to achieve these objectives include:<br>• Construction of drains and check dams<br>• Construction of diversion banks, perimeter banks and level spreader sills<br>• Use of sediment traps<br>• Sediment fences around stockpiles and areas of earthworks<br>• Stabilisation of temporary and permanent batters<br>• Straw bale and geotextile filter fabric sediment traps and filters<br>• Minimising periods that disturbed soil remains exposed with potential to be eroded | FCWFPL | Before construction commences |
| Fuel and Oil Management Plan | | | |
| Fuel and Oil Management Sub Plan | As part of the CEMP, a **Fuel and Oil Management Sub Plan** will be prepared by FCWFPL in consultation with relevant Government Departments and Blayney Shire Council. The Sub Plan will include mitigation measures such as:<br>(a) If oil filled generator transformers are used, containment measures will be incorporated to prevent any oil loss reaching local watercourses<br>(b) FCWFPL will require the design of the substation to incorporate provision for containment of any oil spillage or leakage from the 33 kV/132 kV transformers including secondary containment.<br>(c) In the case of areas of oil or fuel storage on-site, FCWFPL will provide sufficient containment to contain any spillage that may occur at the location. Such sites will be monitored periodically for integrity of containment and adequacy of handling procedures. For the substation, containment measures will also include a secondary containment dam down-slope of the substation. | FCWFPL | Before construction commences |
| Operational Management | Once operational,<br>(d) regular inspection of the transformers and associated turbine equipment will be carried out to ensure that they remain in good working condition and are leak free.<br>(e) Procedures for maintenance will be documented and followed by maintenance staff | FCWFPL | Ongoing as part of maintenance programme |
| Spoil and Fill Management | | | |
| Spoil and Fill Management | For the purposes of the development, FCWFPL will ensure any imported fill:<br>• will be Virgin Excavated Natural Material as defined in the Environment Protection Authority's guideline *Assessment, Classification and Management of Liquid and Non-Liquid Wastes*.<br>• will not introduce weeds that are not currently present at the locations where the fill be used. | FCWFPL | Ongoing during construction and as required |

| Issue or Section No. | Commitment | Responsible Party | Timing |
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| **Greenhouse and Energy Management Strategy** | | | |
| Greenhouse and Energy Management Strategy | A **Greenhouse and Energy Management Strategy** will be prepared by FCWFPL prior to construction commencing, to ensure the use of non-renewable *resources* from Construction and Operation is minimised. | FCWFPL | Before construction commences |
| **Traffic Management** | | | |
| Construction Traffic Management Sub Plan | As part of the CEMP, a **Construction Traffic and Transport Management Sub Plan** will be prepared by FCWFPL in consultation with Blayney Shire Council, the RTA and NSW Police. The sub plan will:<br>(a) identify designated transport routes for heavy vehicles to the Development Site;<br>(b) include measures to minimise traffic disruption in the vicinity of the development site;<br>(c) include measures to minimise disturbance from traffic noise;<br>(d) include measures to manage construction traffic to ensure the safety of:<br>(i) livestock and limit disruption to livestock movement;<br>(ii) school children and limit disruption to school bus timetables;<br>(e) include a community information program to inform the community of traffic disruptions resulting from the construction program; and<br>(f) prior notification to the community of construction works and potential impacts for the local community<br>(g) The site access from public roads will be via entrances constructed as agreed by FCWFPL, the property owners and Blayney Shire Council to ensure safe negotiation by large vehicles access and minimise disruption to local traffic. A lockable gate will be installed at a point set back from the road at each entrance point.<br>(h) The routing of access tracks will take into account the following considerations:<br>(i) minimise the length of tracks<br>(ii) locate along the routes of existing tracks where possible<br>(iii) locate where clearing of vegetation is minimised<br>(iv) construct with due regard to safety, erosion, sediment control and drainage<br>(v) position and design, as far as possible, to reduce visual impacts<br>(i) Concurrence with permit requirements for over-size and over-mass vehicles including the use of escort vehicles as required<br>(j) include the mitigation measures outlined in Chapter 13 of the EA as listed below. | FCWFPL | Before construction commences |

| Issue or Section No. | Commitment | Responsible Party | Timing |
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| Construction Traffic Mitigation Measures<br><br>(Chapter 13) | Mitigation measures provided in Chapter 13 of the EA include:<br>• implementation of a community information and awareness program ensuring details of the status of works and contact details for any complaints or enquiries are available<br>• General signposting of the access roads with appropriate heavy vehicle and construction warning signs<br>• Specific warning signs will be located adjacent to the entrances to the site to warn existing road users of entering and exiting traffic and this will be supported by the use of escort vehicles for RAVs where necessary<br>• The use of day warning notices where signs are activated on a specific day to warn local road users of construction activities will also be considered.<br>• Attention will be given to traffic control and warning signs where the geometry of the road dictates that a potential safety issue exists. On-site access will be restricted to defined tracks, to ensure environmental impact is minimised.<br>• Provision of traffic control personnel where large vehicles are required to execute difficult or potentially unsafe manoeuvres on public roads<br>• Restrictions on the timing of some large equipment and materials deliveries to site to mitigate specific local impacts. In particular the following measures may need to be adopted:<br>– restriction of traffic movements to avoid RAVs passing schools during the school zone periods and to avoid RAV movements conflicting with school bus operations<br>– local deliveries to the site during daylight hours only to mitigate safety problems on local roads and to reduce disturbance for residences near to the access roads<br>• Establishment of an inspection and maintenance program for the local road access network to ensure condition of roads are maintained in safe state<br>• Construction of access track routes in proximity to any environmentally sensitive areas to be guided by relevant specialists<br>• Maintenance program for on-site access tracks to ensure safe access<br>• Implementation of a proactive erosion and sediment control plan for on-site roads and laydown areas<br>• At the conclusion of the construction phase, any tracks not required for subsequent operation and maintenance of the wind farm will be restored and revegetated | FCWPL, Contractor and EMR | During construction and operation of the wind farm |

| Issue or Section No. | Commitment | Responsible Party | Timing |
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| Bushfire Risk Management | | | |
| Bushfire Risk Management Sub Plan | As part of the Construction and Operation EMPs, FCWFPL will prepare, in consultation with the Rural Fire Service, a **Bushfire Risk Management Sub Plan** based on the guidelines 'Planning for Bushfire Protection' (RFS, 2006 or its latest edition). The sub plan will include the following:<br>(a) details of the bushfire hazards and risks associated with the Development;<br>(b) mitigation measures including contingency plans;<br>(c) procedures and programs for liaison and regular drills with the Rural Fire Service;<br>(d) procedures for regular fire prevention inspections by the Rural Fire Service and implementation of any recommendations; and<br>(e) include the mitigation measures in Chapters 16 of the EA.<br>(f) During the construction phase the following measures will be implemented to manage any bushfire risk:<br>– The contractor will be required to comply with all relevant sections of the Bush Fires Act and the Fire Brigade Act and all Regulations thereto and will be required to liaise with the Rural Fire Service<br>– Where necessary, access tracks and work sites will be slashed to remove vegetation in excess of 100 mm high<br>– All construction vehicles will use diesel fuel<br>– A mobile 1,000 litre tanker unit complete with motor-driven pump, hose and nozzle will remain at the site during construction work<br>– Knapsack sprays and McLeod tools will be kept on hand at each actual work site<br>– In the event of welding, flame cutting or grinding being carried out in the open during periods of fire danger, an observer holding a knapsack spray will be on hand<br>– The contractor will be required to maintain the exhaust systems of all vehicles on site in sound condition and to avoid any build up of dry vegetation under vehicles<br>– The use of explosives will not be allowed during periods of high bushfire risk | FCWFPL | Before construction commences |

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| Bushfire Risk Management Sub Plan (continued) | (g) The potential fire risk associated with electrical failure will be managed by the following measures:<br>– Use of fully enclosed electrical equipment on turbine structures and padmount transformers<br>– Extensive use of underground cabling between turbines<br>– Design of any overhead lines in accordance with industry standards<br>– Exclusion of vegetation from within the substation enclosure<br>– Use of circuit breakers and fuses to interrupt any electrical fault<br>(h) Adoption of lightning protection measures described in Chapter 16 | | |
| Waste Management | | | |
| Waste Management and Re-use Sub Plan | As part of the CEMP and OEMP, FCWFPL will prepare a **Waste Management and Re-use Sub Plan** to address the management of wastes during the Construction and Operation stages respectively in accordance with the NSW Government's Waste Reduction and Purchasing Policy. The Sub Plan will identify requirements for:<br>(a) the application of the waste minimisation hierarchy principles of avoid/reduce/reuse/recycle/dispose;<br>(b) waste handling and storage;<br>(c) disposal of wastes. Specific details must be provided for cleared vegetation, contaminated materials, glass, metals and plastics, hydrocarbons (lubricants and fuels) and sanitary wastes; and<br>(d) Any waste material that is unable to be re-used, re-processed or recycled must be disposed at a facility approved to receive that type of waste; Surplus topsoil will be spread on the site to blend in with the natural landform and will be revegetated<br>(e) Surplus excavated material will be disposed of on the relevant property at one or more locations as agreed with the property owner. Disposal sites will be finished with topsoil and revegetated. Where feasible, existing erosion areas will be selected for backfill and treatment.<br>(f) Subject to the Council's agreement, it is proposed to dispose of packaging material, general construction debris and all other waste at the Blayney waste disposal area. Where feasible, recyclable items such as metals, glass or timber will be separated and directed to an appropriate local facility. Any putrescible general waste material will be stored in sealed containers until it is removed from site.<br>(g) Disposal of sullage from any of the contractor's pump out toilet facilities will be to the local Blayney treatment plant or other suitable facility as agreed with Council.<br>(h) Any waste oil arising from equipment servicing will be stored in sealed containers in a covered and bunded area until it can be removed off site to a suitable waste oil facility. | | |

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| Specific additional measures as indicated in specific sections of the Environmental Assessment | | | |
| Adjustments to design (Chapter 3) | FCWFPL's project design is based on the layout shown in Figure 1.4 and incorporates 44 turbines. The actual turbine model and number to be installed may vary slightly dependent on the final design site conditions. Micro-siting of individual turbine locations up to 100 metres is proposed, however any micrositing changes will be consistent with the project approval, otherwise a modification will be sought. Any such adjustment will take into account relevant sensitivities for the location and be subject to review by the EMR as to consistency with the Project Approval. The final design will be subject to Approval Authority review as part of the Construction Certificate Application process. | FCWFPL, EMR | As required but before construction commences on the particular sites |
| Cable routes (Chapter 3) | The cable routes will be generally between turbines and where practical will be located alongside access tracks to minimise site disturbance. | FCWFPL, Contractor | During construction |
| Facilities buildings (Chapter 3) | FCWFPL will require the design of the facilities and auxiliary services buildings to incorporate collection of roof drainage and have a small septic system or composting toilet that complies with Council requirements. | FCWFPL | Before construction commences on the facilities |
| Temporary Site Office (Chapter 3) | As part of the arrangements for construction, FCWFPL will confirm arrangements for the temporary construction site office. Options that have been considered for the location of the contractor's temporary site office are shown in Figure 1.4. | FCWFPL | Before construction commences on the site office |
| Concrete batch plant (Chapter 3) | If the project contractor wishes to install a temporary batch plant, the contractor will be required to select a suitable site distant from neighbouring residences, undertake environmental assessment and obtain landowner agreement and planning approval. | Contractor | If required |
| Access tracks (Chapter 3) | Permanent tracks will be located to achieve suitable grades on stable slopes and designed so that they will not exacerbate erosion at the site. As far as possible, their location will also be chosen to minimise visual impact from the surrounding countryside.<br><br>Earth batters on any tracks that are benched into slopes will be revegetated to prevent erosion and to reduce visibility of the constructed track. | Contractor, EMR | During construction |

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| Visual impact mitigation measures (Chapter 9) | Measures to further mitigate the visual impact that will be incorporated in the development will include:<br>• Clearing of woodland vegetation will be minimised<br>• Earthworks will be restored as soon as possible after construction<br>• Underground cables will be installed between turbines within each of the turbine groups. Use of overhead lines will be limited to the connection of the southern collector group to the substation and other areas where underground cables are impractical<br>• Cable trenches will be backfilled so that once restored they will have no visual impact. The choice of underground cables for the ridge top turbine locations instead of above ground transmission lines has been made to minimise the visual impact of the development.<br>• The colour of the turbines is that commonly chosen to create a more desirable visual outcome<br>• If necessary, and with agreement of the relevant neighbouring landowners, tree planting could be undertaken on some of the closer neighbouring properties (within three kilometres of the wind farm) to screen parts of the development. The preferred types of plants for screening are local native varieties but it may be necessary to plant non-natives that are fast growing where expediency is essential or where property owners would prefer non-natives.<br>• The design and location of ancillary works will incorporate measures to reduce their visual impact. Screening of certain ancillary works, if required, can utilise vegetation planting at the location of the ancillary works<br>• Access roads have been minimised and located to limit their visibility from neighbouring public areas and to minimise clearing of woodland. The construction methods will also aim to reduce the visibility of disturbed ground<br>• Lighting would not be used during daylight hours unless visibility is reduced | Contractor, EMR | During construction |
| Delivery vehicles (Chapter 13) | All vehicles delivering equipment, materials and personnel to the site during the construction stage will be registered vehicles that are required to maintain the necessary emission controls. | Contractor | During construction and operation |
| Telecommunication mitigation measures (Chapter 14) | The following mitigation measures are proposed in respect of potential impacts on existing communication services in the vicinity of the wind farm:<br>• Prior to construction FCWFPL will ensure that the final turbine layout is assessed in terms of their potential impact on fixed path radio links and the communications facility on Hope Hill. The design will ensure that these services are not disrupted or degraded. Where necessary, the relevant communication service operator will be contacted to confirm operational details. In particular, the siting of turbines will be undertaken with regard to the fixed path links passing through the wind farm site. | FCWFPL | Before construction commences |

| Issue or Section No. | Commitment | Responsible Party | Timing |
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| | • Due to the possibility of interference to television signals once the wind farm is operational; it is proposed that Flyers Creek Wind Farm investigate the status of television reception at residences immediately surrounding the wind farm following its commissioning should analogue TV transmission be ongoing.<br>• In the event that interference occurs as a result of the wind farm operation, then Flyers Creek Wind Farm Pty Ltd will rectify any interference that has been caused by the project development.<br>• Rectification of reception could initially include modifications to, or replacement of the aerials being used at the proponent's expense.<br>• In the event that the initial measures to rectify television reception are not satisfactory, other measures which could restore reception to the standard which existed prior to installation of the wind farm could include:<br>– the installation and maintenance of a parasitic antenna system;<br>– provision of a land line between the affected receiver and an antenna located in an area of favourable reception;<br>– installation of a digital set top box; or<br>– in the event of interference to local channels not being able to be satisfactorily overcome by other means, negotiating an arrangement for the installation and maintenance of a satellite receiving antenna. | FCWFPL | Following commissioning of the wind farm |
| Aviation safety (Chapter 16) | Prior to erection of the wind turbines, final details of the height and location of each wind turbine will be provided by FCWFPL to CASA, Department of Defence and AirServices Australia. Where location details are provided prior to construction commencing then the 'as constructed' details will also be provided prior to the completion of turbine erection. | FCWFPL | |