YASS VALLEY WIND FARM (SSD08_0246)

DETAILED SUBMISSION IN RESPONSE TO THE SECRETARY'S ENVIRONMENTAL ASSESSMENT REPORT

27 FEBRUARY 2015

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Executive Summary

This Submission responds to the Secretary's Environmental Assessment Report prepared by the NSW Department of Planning and Infrastructure (Department) dated January 2015 (Assessment Report). It supplements our Initial Response of 13 February 2015.

This Submission responds in detail to the three primary reasons given for refusal, namely project layout and assessment adequacy, aviation and biodiversity.

It also addresses other issues raised in the Assessment Report.

Most of the information presented in this Submission has already been provided to the Department and is contained in the documents referred to in our Initial Submission.

We have carried out additional work where issues are raised in the Assessment Report that have not been raised before. Our in-house assessment is presented in this Submission. We have commissioned independent experts to contribute in the areas of noise and visual impacts. Reports from the independent experts are expected to be presented to PAC by 26th March 2015.

We have carried out additional work in respect of the noise and visual impacts for the 3 landowners who have previously been "involved" and who are now "non-involved" landowners. Independent expert reports are expected to be presented to PAC by 26th March.

All of the assessment work presented in this Summary demonstrates that the environmental impacts of the proposed project have been assessed and mitigated. Remaining impacts are to be managed through conditions, and through the Statement of Commitments we provided in our Initial Response.

This Submission responds to the Assessment Report in detail and its conclusion sets out the basis on which Epuron considers the Project should be approved.

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1 Introduction

This Submission responds to the *Secretary's Environmental Assessment Report* prepared by the Department of Planning and Infrastructure (**Department**) dated January 2015 (**Assessment Report**).

Epuron has previously provided an initial response to the Assessment Report in its letter to the Planning Assessment Commission (**PAC**) dated 13 February 2015 (**Initial Response**) which:

- introduces Epuron's significant wind farm development experience in NSW;
- outlines a number of concerns in relation to the process carried out by the Department in considering the Project and delivering its Assessment Report;
- provides a number of additional documents previously sent to the Department which were not included in the information provided to PAC by the Department;
- provides a detailed Project Layout, Statement of Commitments, and set of wind turbine coordinates which form the basis of the assessment;
- provides a description of the constructability of the Project in various stages, and the constructability of separate precincts or wind turbine groups should PAC determine that some precincts should not be supported; and,
- responds to questions around the appropriate treatment of three landowners as "involved" or "non-involved".

This Submission supplement the Initial Response with Epuron's detailed response to the planning issues raised in the Assessment Report.

The majority of our comments in the Initial Response and in this Submission illustrate where issues raised in the Assessment Report have already been addressed.

There are some issues in the Assessment Report that have not been raised before by the Department. In order to provide the PAC with a complete response to the Assessment Report we have carried out additional work, which is presented in this Submission, and we have commissioned independent experts to review and report on issues as appropriate.

We believe that as a result the Assessment Report prematurely and incorrectly arrives at a "refusal" recommendation without the Project being properly and completely assessed by the Department.

Accordingly, we welcome the opportunity to provide PAC the additional analysis indicated as necessary in the Assessment Report to enable PAC to undertake an assessment of the benefits and impacts of the Project.

2 Issues Raised

The Assessment Report refers to three key issues as being the basis of refusal, involving:

- Project design and assessment adequacy
- Aviation
- Biodiversity

Sections 2.1 to 2.3 summarise these key issues and indicate where and how this Submission responds to those issues. Section 2.4 outlines a number of additional issues raised by the Department which are not considered by the Department to be grounds for refusal.

2.1 Key issue 1: Project Design and Assessment Adequacy

The draft Instrument of Refusal (attached to the Assessment Report) includes the following statement:

> ***"The Applicant's failure to demonstrate a consistent project design that can be wholly and feasibly constructed including the secure provision of interconnecting infrastructure and access across the site. This also includes the Applicant's failure to undertake an appropriate level of impact assessment of all aspects of the proposal."***

The Assessment Report lists a number of issues which relate to this issue which we summarise as follows:

- whether the Project layout is clearly defined;
- whether the Project is wholly and feasibly constructible (including whether all required landowners have signed long term land tenure agreements);
- whether some landowners have been incorrectly or inappropriately treated as "involved" landowners where a more appropriate treatment may be as "uninvolved" landowners; and
- whether the Applicant has undertaken an appropriate level of impact assessment of all aspects of the proposal.

The Assessment Report provides further detail to this point in a number of areas as outlined in Table 4 of Annexure A which also indicates the section within this document where the issue is addressed. These issues are addressed in section 4.

2.2 Key issue 2: Aviation

The draft Instrument of Refusal includes the following statement:

> ***"The Applicant's failure to demonstrate that the proposal will not have an adverse impact on either commercial or non-commercial aviation, including the safe operation of the Canberra and Albury airports."***

The Assessment Report lists a number of issues which relate to:

- assessment of possible impacts to aeronautical surveillance radar; and
- potential impacts to use of local airstrips which are primarily used for aerial agriculture (crop-dusting).

The Assessment Report provides further detail to this point in a number of areas as outlined in Table 5 of Annexure A which also indicates the section within this document where the issue is addressed. These issues are addressed in Section 5.

2.3 Key issue 3: Biodiversity

The draft Instrument of Refusal includes the following statement:

> ***"The development will result in unacceptable impacts on the biophysical environment as a result of inadequate avoidance of biodiversity, inadequate provision of mitigation measures, and a failure to adequately offset biodiversity impacts."***

The Assessment Report lists a number of issues which relate to:

- Avoidance of impacts to biodiversity;
- Mitigation of impacts which cannot be avoided; and
- Failure to adequately offset biodiversity impacts.

The Assessment Report provides further detail to this point in a number of areas as outlined in Table 6 of Annexure A which also indicates the section within this document where the issue is addressed. These issues are addressed in section 6.

2.4 Additional Issues

Section 5.4, 5.5 and 6 of the Assessment Report outline a number of additional issues, including some issues that have not previously been raised with Epuron. While these issues do not form the basis for the recommendation to refuse approval, Epuron considers it important to also address the concerns raised.

These issues include:

- visual impact assessment approach, including:
    - assessment at all non-associated residences;
    - provision of revised visual impact assessment after removing turbines;
    - acceptability of visual impacts at a number of specific properties;
    - approach to visual impact mitigation;
- traffic and transport impact assessment approach, including:
    - potential for impacts to local roads which are not fully mitigated through a dilapidation report, particularly along Illalong Rd;
    - concerns around the use of truck stop areas for access to the site;
    - concern that appropriately designed access and haulage routes to the site may not be available;
- approach to noise assessments including assessment at all non-associated residences; and
- adequacy of information in relation to potential impacts to Aboriginal Heritage.

The Assessment Report provides further detail to these points as outlined in Table 6 of Annexure A which also indicates the section within this document where the issue is addressed. These issues are addressed in sections 7, 8 and 9.

3 General response

3.1 Adequacy and scope of Assessment

Many of the issues raised in the Assessment Report arise from questions of adequacy of the assessment either in terms of the methodology used or in terms of the coverage or level of detail of the assessment. The Assessment Report has raised comments along these lines in relation to biodiversity, visual impact and aviation assessment as well as other areas.

Epuron's obligations in carrying out its assessment are to meet the DGRs, which were provided on 12th January 2009.

To the extent that these DGRs were unclear or silent with respect to the methodology, scope or level of detail required, Epuron has relied on good practice within the industry and/or the views of its independent expert consultants (in consultation with the Department and other relevant agencies), to determine the appropriate assessment methodology, scope and level of detail.

A full environmental impact assessment has been carried out, with appropriate input from specialists as required and consistent with good industry practice including that applied at other wind farms recently approved.

Assessment and conditions

The aim of environmental assessment is to demonstrate that the development is broadly achievable, and the impacts are reasonably understood, manageable and acceptable. It is not commercially pragmatic to carry out this assessment at a "design" level of detail as would typically be carried out prior to construction; nor is this required under the planning processes applied in NSW. This "design" level of detail is typically dealt with post approval and prior to construction, when the final construction layout is known.

This two stage approach appropriately manages both the environmental risks and the timing of the development assessment. It is a standard planning practice, applied for wind farms as well as other infrastructure, and is therefore consistent with the usual practice in NSW and the Model Conditions. It is the practice adopted for all recent wind farm determinations in NSW.

The environmental impact assessment for this Project was carried out in the full knowledge that further "pre-construction" work would be required post approval. This second stage of environmental assessment and mitigation of impacts is managed through processes outlined in the Statement of Commitments and the Consent Conditions. For example, the Statement of Commitments (SOC)[1] for this Project and the Department's Model Conditions both include requirements for the following to be completed based on the construction layout and prior to construction:

- Final noise assessment (SOC 6)
- Final offset plan (including detailed definition of offset areas) (SOC 18)
- Final aeronautical surveillance radar impact assessment including mitigation (SOC 28)
- Safety management system (SOC 109)
- Establishment of EMS (SOC 129) including environmental management plans for vegetation screening; biodiversity management; soil and water management; noise management; air quality management; and cultural heritage management
- Establishment of CEMP (SOC 128) including traffic management plans, consultation and complaints handling plan, and construction soil and water management plan

The assessments provided to the Department are considered appropriate for this stage of the development.

Department's Adequacy Review

[1] Statement of Commitments was provided as Annexure F to the Initial Response, 13 Feb 2015

The Department undertook adequacy reviews of our Environmental Assessment twice, prior to exhibition of the Environmental Assessment in 2009, and again prior to exhibition of the Preferred Project Report in 2012. This adequacy review is an integral part of the environmental assessment process,. For example, we note that under former section 75H of the Environmental Planning and Assessment Act which applied at the time, public exhibition of the EA is evidence of the Director General's satisfaction with the adequacy of the EA

In undertaking these reviews, the Department raised no issues regarding the adequacy of the assessment which were not addressed by Epuron prior to exhibiting the reports. This confirmation of adequacy of the assessment by the Department is an essential part of the development process.

Given the confirmation of adequacy given by the Department, and given that that the DGRs have not been amended since these two adequacy reviews, there are no grounds for now claiming that the approach, methodology, scope, or level of detail of the environmental assessment is in any way inadequate, and certainly not to the extent that this gives grounds for refusal.

3.2 Documents considered in the Assessment Report

The Assessment Report states clearly in Section 5:

> *"The Department has considered the following documents in assessing the proposal:*
>
> - *relevant environmental planning instruments, guidelines and policies;*
> - *the objects and relevant provisions of the Environmental Planning and Assessment Act;*
> - *the Environmental Assessment, submissions received, the Proponent's Submissions Report and various draft Preferred Project Reports; and*
> - *the Independent reviews commissioned by the Department to examine the Applicant's impact assessment on aviation and visual aspects of the proposal."*

The Assessment Report appears to exclude any detailed consideration of additional documents subsequently provided to the Department which amend the Project (i.e. Annexures C.1, C.3, C.4 and C5 to the Initial Letter). While it is noted that some sections of the Assessment Report refer to these supplementary documents in passing, key sections raise as concerns the issues that these supplementary documents directly address.

These documents go to the heart of the three key issues raised by the Department in its reasons for refusal. Yet, it appears that the bulk of the Assessment Report predates the provision of this information and therefore it was not fully considered before the Department formed its view.

These documents were provided at the request of the Department to issues raised by the Department itself, or by agencies such as OEH, and therefore these documents should have been included as part of the assessment. Further, these documents were written in response to issues (or detail of issues) not previously raised by the Department, including the provision by the Department of new assessment reports addressing visual, aeronautical and biodiversity impacts.

Further, we are now aware that these documents were not provided to relevant agencies for comment or consideration, including where the questions were raised by the Department as a result of agency input. OEH has verbally confirmed that they have not seen our response to the Department on the issue raised by them, and accordingly has had no opportunity to provide further comment or advice to the Department.

The documents also included a number of attempts to clarify what if any further information may be required, for example:

- An invitation to advise us if the Department has *'any further concerns or questions around the proposal, or if there is anything further we can do to expedite [its determination]';*
- An offer to *'discuss [the attached document] with [Department staff] to ensure we have adequately understood and addressed the issues raised';* and
- An offer to *finalise any outstanding requirements and reissue any documentation you require*.

Despite these offers and regular follow up no response was received from the Department. Accordingly, until the issue of the Assessment Report, Epuron was not aware that further information, or a consolidation of information provided, was required.

3.3 Applicability of Draft Wind Farm Planning Guidelines

As part of this submission Epuron would like to state its understanding of the applicability of the *Draft NSW Wind Farm Planning Guidelines* (**Draft Guidelines**) to the Yass Valley Wind Farm.

Background

On 10th April 2012 the Director General sent Epuron the Department's policy statement with respect to the Draft Guidelines. This letter outlined the applicability of the Draft Guidelines to wind farm projects at various stages of development, including the Yass Valley Wind Farm which at that time had been exhibited but not yet determined.

The policy attached to this letter states:

> ***3. Applications that have been exhibited but not yet determined***
>
> Proponents are encouraged to adopt relevant provisions of the guidelines in the assessment, operation and construction of projects.
> - It is recommended that proponents consider relevant provisions of the guidelines when responding to issues raised in submissions particularly in relation to noise, decommissioning and compliance provisions.
> - It is strongly recommended that proponents, if not done so already, immediately establish a Community Consultation Committee to provide for ongoing communication with the local community. Appendix C of the guidelines provides guidance on the establishment, membership and operation of the committee. The Department will assist proponents with the appointment of an independent committee chair and in the selection of members.
> - The Department will consider relevant provisions of the guidelines in developing conditions of consent where applications are recommended for approval.

Unlike other wind farms at other stages of development, this policy position does not apply the Draft Guidelines to the Yass Valley Wind Farm. No other policy has since been released; the Draft Guidelines have not since been finalised; and the Draft Guidelines have not been incorporated into any State Environmental Planning Policy or similarly binding instrument.

As a result, in Epuron's view the Yass Valley Wind Farm is not required to comply with the Draft Guidelines. We also note that the DGRs in relation to the Yass Valley Wind Farm were not amended to take into consideration any aspect of the Draft Guidelines.

In response to consultation of those guidelines, Epuron stated that some aspects of the Draft Guidelines were flawed in application and at law; unworkable; not based on science or developed with any scientific rigor; and would increase rather than reduce uncertainty. This was a view supported by a number of industry representatives in response to consultation regarding the Draft Guidelines, including a number of independent experts. There has been no Government response to the concerns raised.

Epuron has taken the relevant aspects of the Draft Guidelines into consideration through:

- considering the relevant provisions with respect to noise, visual impact assessment, decommissioning and other matters; and
- establishing a Community Consultation Committee in March 2013, including requesting the Department to assist in the appointment of an independent committee chair and in the selection of members (in accordance with the Guidelines) which the Department declined to do.

Department's Consideration

The Department has considered the Draft Guidelines as outlined in Appendix G of the Assessment Report.

Epuron contends that the analysis outlined in Appendix G is not relevant to the determination of this project. However, we acknowledge that a number of issues raised are common with relevant issues as outlined in the DGRs. Accordingly, we have addressed those issues in the context of the DGRs and as outlined in this report.

Applicability of "2km Rule"

For the avoidance of doubt, Epuron is under no obligation to enter into agreements, or seek consent of, landowners within 2km of a wind turbine. However, Epuron has consulted widely with landowners out to and

beyond 5km and has particularly consulted with all landowners within 2km of a wind turbine and carried out appropriate impact assessment in relation to these residences.

3.4 Constructability of Precincts - Coppabella Precinct

Section 4 of our Initial Response outlined our position with respect to the constructability of the individual project precincts. We also refer to Sections 4.2 and 4.3which address concerns about connectivity of infrastructure and whether individual landowners ultimately sign land agreements.

Further to these issues, we would like to respond to the conclusion in Section 5.1.4 of the Assessment Report which states as follows:

> *"The Department considers the western part of the site (the Coppabella precinct) may possibly be suitable … to support a wind farm development. However, the Department considers the Applicant has failed to adequately commit to a consistent project layout and footprint which ensures the proposal's environmental and social impacts can be appropriately evaluated by the Department and other stakeholders."*

Section 4 of the Initial Response indicates a number of reasons why the Coppabella precinct is not affected by the majority of concerns outlined in the Assessment Report. In particular this section notes why it is inappropriate to state that "*the Applicant has failed to adequately commit to a consistent project layout and footprint*" in relation to the Coppabella precinct.

While we acknowledge and appreciate the support for the Coppabella precinct, we fail to see why the Department has not therefore proposed a partial approval of the Project by recommending approval of the Coppabella precinct while recommending refusal of the remaining precincts.

3.5 Project Staging

Staging is referenced in the Assessment Report in the context of section 83B of the Act. We agree that the project application was made and should be assessed as a single project.

The likelihood of a staged construction process, or indeed the potential for individual precincts or turbines to be built subsequently to an initial stage, was stated in the original EA and has been consistently part of the development.

Further information was provided in the PPSR (Sept 2014) to outline the revised thinking on precincts and staging, and this was outlined in more detail in section 4 of the Initial Response.

The concepts around staging are consistent with the Model Conditions and the relevant conditions have been incorporated into SOC 94 - SOC 96.

4 Key Issue 1: Project Layout and Assessment Adequacy

4.1 Consistent Project Design

Background

A consistent project design that can be wholly and feasibly constructed

The Assessment Report has raised a number of concerns in relation to the "consistency" of project design. While the meaning of "consistency" is not absolutely clear in the Assessment Report, Epuron considers that it refers to both (i) whether or not current documents clearly and unambiguously outline the proposed Project Layout, and (ii) the extent to which this Project Layout has changed over time. Issues around "constructability" of this layout are discussed in section 4.2.

The Project Description was originally outlined in Chapter 3 of the EA. This chapter included the initial Project infrastructure layouts, as well as a general description of additional temporary and permanent infrastructure and equipment required. Not all equipment and temporary / permanent infrastructure was indicated on the maps, and the Department considered this adequate and allowed exhibition of the documents as outlined in Section 3.1 of this Submission.

Epuron acknowledges that since exhibition of the EA the Project Layout has been through a number of iterations. The most material changes to the Project Layout were prior to the exhibition of the PPR, where a small number of wind turbines were added (in response to requests from neighbouring landowners); some wind turbines were removed or relocated; and an optional new 330kV connection was proposed (see Chapter 2.3 of the PPR). Some additional infrastructure referred to in the documentation was specifically identified on the Project infrastructure maps. Epuron consulted the Department before making these changes. Again, the Department considered the information provided adequate and allowed exhibition of the documents as outlined in Section 3.1 of this Submission.

Since exhibition of the PPR, a total of 22 wind turbines have been removed, with corresponding changes to tracks and connection infrastructure. Minor relocations of wind turbines, tracks, powerlines, substations and connection infrastructure have also been undertaken to reduce impacts, particularly in relation to biodiversity. The changes are outlined in Annexure C.

The majority of changes have been in response to issues raised by the Department or various Agencies in submissions (e.g. OEH). Each wind turbine removal has been in direct response to issues raised by the Department and/or OEH. Unfortunately some agency submissions were substantially delayed (e.g. OEH comments received as late as November 2014). This resulted in a higher number of iterations than usual for a project of this nature.

Note, the changes to turbine layout in the Coppabella precinct since the publicly exhibited PPR are minimal, with only minor relocations to four turbines, access tracks, and an alternate substation location proposed.

Planning consideration

Whether the Project Layout has changed over its life is not of itself a valid planning consideration; indeed, the majority of Epuron's changes have been specifically to reduce impacts of the Project (as new information becomes available) while retaining its benefits, and this should clearly be supported.

It is common for the Department to re-exhibit documents which have been subject to material changes. The Proponent can at any time make changes which minimise the impacts of the project. If the number or extent of changes in the Project Layout were a key concern of the Department then it would typically re-exhibit the documents rather than finalising its Assessment Report with a recommendation for refusal.

We believe that as all changes made have minimised the impacts the Department has prematurely arrived at a "refusal" recommendation without properly assessing the Project.

Apparent inconsistencies in documentation

The Assessment Report raises a small number of apparent inconsistencies as outlined in Section 2.1.2:

> *2.1.2 …construction of up to 3 substations (however the Department notes inconsistencies between the layout as proposed in Figure 3 and other maps in the draft final Preferred Project Report dated September 2014).*

This comment has not been explained further, therefore we are not certain which inconsistencies are being referred to.

Attachment 19 of the PPSR shows indicative powerline configurations at a higher level of detail than the Project Layout maps. Due to the scale of the Project Layout map, to ensure the key features can be identified, 33kV powerlines were only shown for one 330kV Substation option. For clarity and to reflect the current layout we have updated Attachment 19 which is found in Annexure E.

To our knowledge, the Department has not indicated to Epuron any inconsistency in the definition of the project design which has not been subsequently resolved.

Substations and Switchyards

The final Project Layout includes various alternative for substation and switchyard locations. This is prudent as this infrastructure results in the risk of "single point failures" of the project - if a location identified is ultimately unacceptable for technical or commercial reasons the entire project would be at risk if suitable alternates have not been assessed. The final decision on locations will be based on engineering and environmental constraints and construction cost estimates, together with final input from TransGrid as appropriate.

Table 1 provides further clarity around the likely arrangements.

Table 1 - Alternate substation and switchyards

Precinct	Alternatives	Maximum requirement	Likely requirement
Coppabella	Two different 132kV switchyard locations have been assessed and only one switchyard is required.	1 switchyard	1 switchyard
	Two different substation locations (330kV/33kV or 132kV/33kV) have been assessed and only one substation location is required.	1 substation	1 substation
Conroy's Gap Extension	One 132kV switchyard location has been assessed. This switchyard is unlikely to be required unless the Conroy's Gap Extension Precinct proceeds before the Conroy's Gap Wind Farm is built.	1 switchyard	nil
	One 132kV substation location has been assessed.	1 substation	nil
Marilba	Two different 132kV switchyard locations have been assessed and only one switchyard is required.	1 switchyard	nil
330kV Connection (if required)	One 330kV switchyard location is proposed if the 330kV connection proceeds.	1 switchyard	1 switchyard (if required)
	Two further 330kV substation locations have been assessed within this precinct and only one will be required	1 substation	1 substation (if required)

Final Project Layout

As outlined in the Initial Letter, Epuron considers that the Project is clearly defined by the documents listed in page 5 of the Initial Letter. To remove any question of inconsistency, the Initial Letter included a consolidated Project infrastructure layout in Annexure E.1, and the final wind turbine coordinates as Annexure B.1. This provides for the development of **124 wind turbines** and associated infrastructure.

None of the further assessment included in this Submission has resulted in any changes to the final Project Layout. Accordingly, the Project Layout provided to PAC on 13 February 2015 stands.

4.2 Constructability

The Assessment Report questions whether the Project can be "*wholly and feasibly constructed*".

Section 3.4 and the Initial Response indicate the constructability of the Project either in whole or in part. These sections also refer to the ability of individual wind turbines or other infrastructure to be removed, either by PAC in determining the project or by the proponent in the construction phase. Clearly if key connecting infrastructure is removed then the related infrastructure which is dependent on that connection infrastructure would also be removed. This would presumably be considered by the relevant party.

Epuron has reviewed the final Project Layout and confirmed that all infrastructure is able to be built, subject to any further constraints identified in detailed design or ultimately applied as a result of the SOCs or consent conditions (including the various assessments and plans under those conditions and commitments).

In some cases various options have been retained to allow alternate locations for substations or switchyards or powerlines. It is unlikely that all powerlines, substations and switchyards outlined on the maps will be required. Likewise, in many cases multiple options exist for access tracks and it is unlikely all access tracks will be required.

Issues surrounding the security of land tenure are outlined in Section 4.3. Where suitable landowner agreements cannot ultimately be secured then the infrastructure on that land will not be built. If this results in some infrastructure being "stranded", either technically (e.g., through lack of access) or commercially (e.g. where a remaining turbine group is no longer viable) the Project would by necessity be scaled back to suit as set out in Table 2. This would result in a commensurate scaling back of impacts.

4.3 Land tenure

4.3.1 Landowner agreements

The Assessment Report questions whether sufficient land agreements are in place with respect to the Project.

Background

Landowner agreements for wind farms are required to provide secure land tenure over the life of the wind farm. These agreements are usually in the form of an option and lease arrangement, whereby the proponent secures an option to exercise a lease at any point during the option period. The option period would commonly be in the order of 5 years, followed by a lease period in the order of 30 years. Generally the option would only be exercised (and the lease commence) at or near the commencement of construction.

During the development phase, land arrangements are often made through simpler "development license" agreements which provide access and other rights in relation to development, but do not provide sufficient security of tenure or rights for the wind farm to be built. Sometimes the development phase is commenced on the basis of verbal agreements with the landowner, with written agreements to follow. While Epuron always seeks a written agreement, it is ultimately the landowner who decides whether to enter into any written agreement.

The nature of the long term agreements (lasting >30 years) is a significant commitment for most rural landowners. Not only do landowners need to consider their own requirements, but often they are also considering the requirements of family members who may inherit the farm during the lease period. Accordingly, landowners often require a high degree of certainty as to the project details prior to entering into these agreements. This applies to the commercial parameters but also to the detailed understanding of project infrastructure layouts on their land.

Some landowners require a greater level of certainty (in relation to commercial return and layouts) than others before they are willing to enter into wind farm agreements. Often this results in some landowners not being willing to enter into long term land agreements until after the development is approved as this (i) provides greater certainty that the project will proceed, and (ii) provides clarity as to what if any infrastructure is able to be built.

Current Land Tenure

As outlined in Epuron's response to the Department of 14 November 2014, the majority of land parcels are secured under long term land agreements. This response indicated that 8 landowners had not entered into long term landowner agreements.

Subsequent to that information:

- Two landowners have been removed from the Project (Landowner 8/9 and Landowner 16);
- One landowner has executed a long term land agreement (Landowner 26).

Commercial negotiations are continuing with the remaining 5 landowners who have all expressed and ongoing interest in the project and who are in general waiting for confirmation of development approval before finalising the commercial negotiations.

Planning obligations

Securing land tenure has always been a development risk and never a planning risk. The holding or otherwise of a land agreement is not required for the purpose of determining a development. However, Epuron acknowledges that it may raise questions in relation to:

- The constructability of a project if the agreement cannot subsequently be entered into; and
- The treatment of landowners as "involved" or "non-involved" when assessing impacts.

These issues are dealt with below and in section 4.3.2.

Constructability if tenure cannot be secured

Table 2 indicates the impact to the Project if appropriate tenure cannot be negotiated with individual landowners. These impacts are considered manageable and would not impact the remainder of the project other than as stated in this table and in Section 4 of the Initial Response (which considers broader impact on specific precincts).

Table 2- Impact if land tenure not secured

Landowner	**Project Constructability Impact**
Landowner 13 (330kV Connection precinct)	Reduction in wind farm capacity of 3 wind turbines (Coppabella Precinct). 330kV connection would not be possible and alternate 132kV connection would be used. See also Section 4 of the Initial Response.
Landowner 14 (330kV Connection precinct)	Nil. Alternate 330kV powerline connection available through Landowner 13.
Landowner 18 (Marilba Precinct)	Direct loss in project capacity of 11 wind turbines and loss of connectivity which would make the Marilba precinct unviable. See also Section 4 of the Initial Response.
Landowner 20 (Conroy's Gap Extension Precinct)	Loss in project capacity of 6 wind turbines from Conroy's Gap Extension precinct. Remaining wind turbines of this precinct could still be built.
Landowner 23-25 (330kV Connection precinct)	330kV connection would not be possible. Alternate 132kV connection would be used. See also Section 4 of the Initial Response.

None of the currently unsigned landowners materially impact the feasibility of the Coppabella Precinct. Minor impacts to the Conroy's Gap Extension precinct are possible, and material impacts to the Marilba precinct are possible. Loss of the 330kV Connection is unlikely to materially affect turbine numbers but could result in slightly higher transmission losses of power generated, effectively reducing output by up to a few percent.

4.3.2 "Involved" vs. "non-involved" landowners

The Assessment Report expresses concern over the identification and/or treatment of "involved" vs. "non-involved" landowners. The Department has not previously raised this concern with Epuron, and has not

previously questioned Epuron's assessment of the status of landowners. Accordingly, we take this opportunity to provide PAC the information required for it to properly assess this question.

Please also refer to section 4.3.1 regarding the normal practice for entering into agreements with landowners.

We note, all involved or uninvolved landowners may provide written submissions to the Department in response to public exhibitions, and involved landowners usually have a greater influence on and understanding of the Project through significantly greater consultation with Epuron. Accordingly it would be expected that any concerns of the relevant landowner would and could have been raised with the Department in responding to the public exhibition of the Project.

None of the landowners previously classified as "involved landowners" in the EA, PPR or PPSR have provided submissions in response to the exhibition which objects to the development as outlined.

"Involved" and "non-involved" landowners are treated differently in the assessment of noise and visual impacts. No other impacts are affected by their classification of "involved" or "non-involved".

The Assessment Report has specifically raised a question of the treatment of a number of landowners:

- Landowner 16 ("*Myrana*" property, residences C27 and C68) which was previously assessed as "involved" but has subsequently been removed from the project;
- Landowner 8/9 ("*Whitefields*" property, residence C04, uninhabited) which was previously assessed as "involved" but has subsequently been removed from the project; and
- Landowner 23-25 ("Bogolong" property, residences M13 and M32) which was previously assessed as "involved" and remains "involved".

Epuron has outlined its position in relation to the treatment of these landowners in Annexure D of the Initial Response. We note that this Annexure erroneously swapped comments related to Landowner 8/9 with comments related to Landowner 16; accordingly, the comments referring to Landowner 8/9 relate to Landowner 16, and those comments referring to Landowner 16 relate to Landowner 8/9.

At the time of removing Landowner 16 we sought and received confirmation from the Department that no additional assessment work was required as a result of the removal of that landowner. This advice was not in writing and we accept that this position has now changed.

Following the Department raising this issue in its Assessment Report, Epuron has decided to remove any doubt of the impacts to these properties by also assessing them as "uninvolved" landowners. Epuron has also undertaken an additional assessment of G31 as one option for connection of the transmission line would mean that this property may no longer be involved with the Project. Note this residence is derelict and uninhabited.

Noise Impacts

Epuron and its consultants Marshall Day Acoustics previously carried out noise impact assessment for both involved and non-involved landowners as set out in Section 9.1. This assessment was carried out on the basis that residences owned by Landowners 16, 8/9 and 23-25 are "involved", and was carried out prior to final layout changes.

Epuron has now carried out an assessment of the likely noise impacts at residences C27, C68, C04, M13, M32 and G31. The results of this assessment show each residence complies with the Noise Guidelines for "non-involved" landowners, although it appears residence C04 only marginally complies in the worst case assessment (based on the Vestas V90 wind turbine) and mitigation may be required for this wind turbine model to be used.

To confirm these conclusions, Epuron has engaged Marshall Day Acoustics to carry out a supplementary noise analysis at these residences and **will provide the results of that analysis to PAC on or before 26th March 2015**.

See also section 9.1 which addresses other issues related to noise impacts.

Visual Impacts

Epuron, in common with all other wind energy developers, works with "involved" landowners to demonstrate the potential visual impacts of wind farms and ensure they are well understood. The visual impact analysis described in the EA focuses on "non-involved" landowners.

Epuron previously carried out visual impact assessment for "non-involved" landowners. This assessment was carried out on the basis that residences owned by Landowners 16, 8/9 and 23-25 were at that time "involved" and therefore did not directly assess the visual impact at these residences.

Epuron has now prepared photomontages at residences C27, C68, C04, M13, M32 and G31 (derelict) based on the final layout. These photomontages are provided in Annexure F.

Epuron has engaged ERM (*Environmental Resources Management Australia Pty Ltd)* to carry out a further supplementary visual impact analysis at these residences and will provide the results of that analysis to PAC on or before 26th March 2015.

See also section 7 which addresses other issues related to landscape and visual impacts.

4.4 Assessment Adequacy

For assessment adequacy, please see an overview response in section 3.1 Adequacy and scope of Assessment, as well as a specific response related to key issues as outlined in:

- 5.2 Local aviation assessment - Adequacy of Assessment
- 6.1 Response to Biodiversity Issues
- 7.3 Response to Assessment Report and RLA Review- Assessment Methodology

5 Key Issue 2: Aviation

5.1 Background

The aviation impact assessment was carried out in the original EA and updated in the PPSR. The following key documents comprise the assessment:

- EA Section 7.7 and Appendix 5 – Communications and Aircraft Assessment (May 2009)
- Ambidji Aeronautical Impact Assessment (Nov 2010), included in PPSR V1 July 2013
- IDS Technical Report on potential ATC radar impacts (Nov 2011)*
- Osprey Aviation Impact Assessment (Aug 2013)*
- Copies of correspondence with surrounding landowners in relation to agricultural airstrips (Mar – May 2014) provided to Department and TAG;
- PPSR Section 7.9 and Attachment 12 – Response to aviation issues and updated map of all agricultural airstrips identified in the vicinity of the wind farm site
- Email *FW: Airservices Australia – Statement of Commitments Yass Valley Wind Farm* dated 16 September 2014

*Note, these documents were provided to AirServices as part of Epuron's ongoing consultation process but were not at the time deemed relevant to the determination of the Project, hence these documents were not provided to the Department.

This assessment work identified three the key aviation impact assessment issues as follows:

- safety of aircraft operators using local agricultural airstrips;
- commercial impacts to users, operators or owners of local agricultural airstrips, including nearby farmers who rely on aerial agricultural practices; and
- any potential for effects on aeronautical surveillance radar coverage or accuracy and the potential for impacts to regional commercial airports (particular Canberra and Albury airports).

The original aviation assessment was reviewed for adequacy by the Department prior to exhibition of the EA and determined to be adequate as outlined in Section 3.1.

No submissions were received in relation to aviation following exhibition of the EA other than the Department of Defence which raised no concerns in relation to aviation.

Following exhibition of the PPR, CASA and Department of Defence each responded and neither raised any objections in relation to aviation, however CASA provided some input to proposed consent conditions which have been adopted (see SOCs 27 & 28). One submission was received from a nearby landowner in relation to aviation impacts. AirServices subsequently provided feedback in relation to possible impacts to aeronautical surveillance radar coverage, requesting amongst other things a more detailed assessment prior to their assessment of the Project.

Following submission of the draft PPSR in May 2014, the Department engaged an independent aviation consultant, The Airport Group (TAG) to review the project aviation impact assessments and consultation. The TAG report was delivered to the Department on 15th September 2014 however it was not provided to Epuron for comment until 7th November 2014. At the request of the Department, Epuron gave an initial response on 14th November 2014 and at the time of release of the Assessment Report was still awaiting comments on this response (see Section 3.2).

5.2 Local aviation assessment

Adequacy of Assessment

The Assessment Report raises a number of questions around adequacy of the assessment to local aviation issues. This is despite the Department previously finding the assessment adequate as outlined in Section 3.1.

The TAG review questions the adequacy of assessment, recommending that:

- *all identifiable unregistered aerodromes/airstrips within 55.56km from the perimeter of the proposed wind farm be identified;* [Note, all aerodromes to this distance were identified in the Ambidji report]
- *all known and usable airstrips within 10km from the perimeter to the proposed wind farm be identified;* [Note, this has already been carried out, see Annexure F]
- *the nature of flying activities at all identified aerodromes and airstrips be listed;* [note, this has already been carried out] *and*
- *following the collation of the above information, a review of the potential impacts on these airstrips be undertaken.*

The TAG Review did not agree with a number of the methodologies used in the Applicant's assessment and how the subsequent value of these results was obtained. The Review further found that the consultation process and results of the impact assessment report were not accurate enough, including incomplete information supplied to the owners of airstrips, ineffective communication methods used with the owners of airstrips and that not all owners of airstrips were consulted during the assessment process.

The Assessment Report states that "*the consultation undertaken by the Applicant with the owners of the adjacent airstrips was inadequate as it was not undertaken by an expert in the field of aviation impact assessment*", and noted that "*To date, the Applicant has failed to satisfy the Department's request to update its aeronautical impact assessment report to adequately reflect the number of surrounding airstrips and the potential safety and operational impacts that the wind farm may have.*"

Epuron has contacted all owners of airstrips out to 10km of the wind farm and beyond to determine whether the airstrip was in use; how often it is used; and what was the nature of that use.

A map of the currently used airstrips, together with a table of these airstrips including their proximity to the nearest turbine, was provided to the Department in the PPSR. The related map was updated on 14th November 2014 to include Airstrip 24 as the relevant landowner had not previously advised Epuron of its location. The final list of all local airstrips is attached as Annexure F.

Epuron believes that the additional consultation (by phone, written and individual meetings) with has identified all of the surrounding airstrips that could potentially be impacted by the wind farm.

<u>Assessment of Local Aviation Impacts – Safety</u>

Ultimately, it is a pilot's responsibility to determine safety in relation to the aircraft they are operating. This includes consideration of the capabilities of the pilot and plane; local flying conditions; local obstacles; and the quality, orientation and design of local airstrips. Each pilot will make their own determination of the risks.

The Ambidji report notes:

- *Pilots operating at such private airstrips are responsible for ensuring that they are aware of the conditions on and surrounding unpublished landing sites;*
- *Agricultural pilots are required to survey and plan each operation to take into account terrain and obstacles – including wind turbines; and*
- *Given the planning environment the operations can be undertaken in relative safety.*

The TAG report notes:

- *The owners of the airstrips are responsible for the conduct of aviation activities at these locations. Consequently, there is no additional assessment required by the proponent within the regulations; and*
- *Furthermore these private airstrips are not required to be registered or reported to CASA and it is up to the pilot to obtain current information on that airstrip from the owner prior to flight planning; and*
- *although the findings in the Ambidji report appear to underestimate the impact on airstrips and aerial agricultural services, this underestimation does not appear to adversely affect the overall conclusion that the wind farm will not impact on the approach, circuit work or take-off of aircraft from any of the airstrip.*

Safety aspects at these local airstrips are therefore managed through provision of adequate and appropriate information about the wind farm (and specifically the wind turbine locations) to relevant parties as outlined in SOCs 27 and 107. This approach is consistent with the Model Conditions.

Notwithstanding the above, the TAG report recommended that Applicant more accurately identify and assess the impacts on surrounding agricultural airstrips. In particular, TAG suggested that:

- *existing assessments of nine airstrips be reviewed in relation to aircraft performance and departure gradients and being able to obtain sufficient obstacle clearance when departing those airstrips in order for safety to be maintained.*

TAG suggested that the aircraft using these airstrips may be impacted by the proposed wind turbines but didn't provide any analysis to support this.

In the context of their earlier statements, this recommendation is not appropriate or necessary for determination of the Project and the responsibility for this assessment lies with the aircraft operators.

It is relevant to note that neither CASA nor AirServices Australia have objected to the development.

Assessment of Local Aviation Impacts – Turbulence

A concern raised in submissions with respect to safety has been the possible impact on aircraft of down-wind turbulence caused by the wind farm.

Aerial agricultural operations are normally carried out at very low to low wind speeds, to reduce spray drift and uneven application of fertiliser or pesticide. Wind turbines only start operation when the wind has reached a minimum cut-in speed, typically in the range of 2.5 to 3.0 m/s, depending on the specific turbine model. Accordingly it is unlikely that the wind farm will be operating when aerial agricultural operations are underway.

The National Airports Safeguarding Advisory Group (NASAG), comprising of Commonwealth, State and Territory Government planning and transport officials, the Australian Government Department of Defence, the Civil Aviation Safety Authority (CASA), AirServices and the Australian Local Government Association (ALGA), has developed the National Airports Safeguarding Framework (the Framework). Guideline D of this Framework– '*Managing The Risk To Aviation Safety Of Wind Turbine Installations (Wind Farms)/Wind Monitoring Towers*' addresses turbulence caused by wind farms and states:

> *Wind farm operators should be aware that wind turbines may create turbulence which [is] noticeable up to 16 rotor diameters from the turbine. In the case of one of the larger wind turbines with a diameter of 125 metres, turbulence may be present two kilometres downstream.*

This finding has been challenged as being excessive, with other studies indicating that turbulence that is capable of posing a hazard to aviation will not be present at more than a few rotor diameters downwind of a turbine, where turbulence is found to reduce to ambient levels (Smedman et al, 2003).

The maximum proposed tip height for our project is 150m and typical rotor diameters in Australia are 80 – 112m. Based on the Framework, a rotor diameter of 112m would not cause turbulence noticeable at any landing strip in the vicinity of the Project. Epuron would not be opposed to a consent condition which required nearby turbines (those within 16 rotor diameters) to be switched off while local airstrips are in use.

The EA for the nearby Collector Wind Farm (June 2012) noted that "*crop spraying has been ongoing within 1km of the Cullerin Range Wind Farm with few impacts to operations*" and that "*The operator also indicated that the main cause of turbulence in the locality was topography rather than the wind farm*."

Annexure F indicates all airstrips located within 10km and confirms there are no active airstrips within 2km of a proposed wind turbine. There is one airstrip 2km from the nearest wind turbine and the orientation of this landing strip is such that it is ~3.2km to the nearest turbine in the direction of take-off or landing; this airstrip is owned by an involved landowner.

The nearest airstrips on land owned by non-involved land are:

- Airstrip 17 which is located 2.5km from the nearest turbine (77) and 3.5km from the nearest turbine located in line with the take-off/landing direction (79);
- Airstrip 14 which runs parallel to the wind turbines at a distance of 3.2km to the nearest turbine and therefore is unlikely to be affected; and,

- Airstrip 10 which runs parallel to the wind turbines at a distance of 3.6km from the nearest turbine (100) and therefore is unlikely to be affected; and,
- Airstrip 24 at a distance of 3.6km from the nearest turbine (13), or 5.5km from the nearest turbine located in line with the take-off/landing direction (73).

All of these airstrips are for day-time only use and no navigation aids are present.

Based on the assessment completed by Ambidji, experience at nearby operating wind farms, and the separation distance of at least 2km between each of the airstrips and the nearest proposed wind turbine locations, that there is unlikely to be any material impact on the ability of local pilots to safely operate aircraft and carry out normal operations from any of the airstrips in the vicinity of the Project.

Assessment of Local Aviation Impacts – Commercial Implications

In the unlikely event that a pilot chooses not to operate from any particular airstrip in the vicinity of the wind farm, or aerial application is impeded by the location of nearby wind turbines, it is possible that the costs of aerial agriculture could increase through additional flying hours, different aircraft requirements, or reduced coverage areas of fertilisers or sprays. These costs would typically be borne by the landowner involved.

Based on the results of the assessment of local airstrips, Epuron does not consider that any impacts are likely. Notwithstanding that, Epuron has committed to compensate the affected landowner for the additional costs of aerial agriculture as outlined in SOC 79.

A specific issue has been raised by the proponent of proposed airstrip 12a which has not yet been built. A development application for this proposed airstrip was submitted in February 2014 and approved by Yass Valley Council in April 2014. This was over 4 years after exhibition of the EA for this Project, and well after the approval of the Conroy's Gap Wind Farm which is in closer proximity to this proposed airstrip. The proponent of this strip was at the time aware of the wind farm proposals and has had every opportunity to consider the implications of these wind farms on its operations. However, it appears no consideration of the impact of this airstrip on the wind farm was undertaken by Council in approving the airstrip, and no formal environmental assessment was carried out by the proponent in developing this airstrip proposal. While the proponent of this airstrip has indicated interest in having larger (twin engine) aircraft use this strip, there is no evidence that this will or can occur or that the airstrip will even be built. No construction works have commenced and no commitment to or timetable for construction has been provided. The Proponent has had ongoing consultation with the proponent of this airstrip and will continue this consultation to ensure impacts of each development on the other are minimised.

5.3 Aeronautical surveillance radar assessment

Wind turbines can cause disturbance to the coverage and effectiveness of aeronautical surveillance radar which is commonly used for aircraft control. The potential for interference is well understood, with appropriate standards and procedures in place to assess and address this impact.

However, the effect on radar coverage is highly dependent on the location, height, materials use and design details of each individual wind turbine. Accordingly, a final radar impact assessment must be carried out based on the final design "for construction" drawings of the project, and based on the actual wind turbine model that will be used. The final design study is also extensive and expensive due to the level of detailed engineering required.

The Assessment Report considers that the Applicant has failed to demonstrate the level of risk to the integrity of the operation of the Mt Majura PSR/SSR Air Traffic Control radar and Mt Bobbara SSR Air Traffic Control radar. A photo of the nearby Mt Bobbara radar is in Figure 1 - Mt Bobbara Radar (L) with adjacent mobile tower (R)

Figure 1 - Mt Bobbara Radar (L) with adjacent mobile tower (R)

Epuron has engaged three different consultants to undertake radar impact analyses covering different aspects of the issue. These radar investigations have clearly indicated that:

- it is possible that the wind turbines related to the Project may impact on the operation of the Mt Majura PSR/SSR Air Traffic Control radar and/or Mt Bobbara SSR Air Traffic Control radars;
- as a result, a final radar impact assessment should be carried out in consultation with AirServices and prior to construction to determine what if any mitigation is required;
- mitigation options are available should they be required (including modifications to radar software or hardware; modification to operating procedures; or removal or relocation of specific wind turbines); and,
- the cost of any mitigation required would be commercially feasible in the context of the Project capital investment.

AirServices agree that a more detailed design investigation is required prior to construction of the wind farm, and has provided Epuron with details of the scope of that more detailed assessment. To carry out the design study to AirServices' satisfaction requires the final turbine locations, height, design and materials to be known. These details can only be determined once the final wind turbine manufacturer and model is chosen, and this can only occur after project approvals have been granted.

As part of this work AirServices also requested a significant update of the IDS Report. However, Epuron considers that it is premature to carry out this work until the final design details are known, as otherwise it would need to be repeated and at significant expense.

Epuron has actively engaged with AirServices in this respect and through these discussions have arrived at the following position:

- Airservices have clearly stated a number of times that they require a final aeronautical surveillance radar impact assessment to be completed (and any impacts mitigated to their satisfaction and at the cost of the proponent) before they can support the Project;
- AirServices therefore cannot support the Project at this stage, however they have not objected to the Project;
- AirServices have clearly stated that they do not wish to carry out an assessment until the layout and specific turbine model has been finalised as they do not want to assess the impacts twice;
- Epuron is not in a position to finalise the selection of the turbine model until after the DA has been determined, and therefore cannot finalise this assessment at this stage;

- Accordingly, Epuron has committed to carry out this assessment post development consent and prior to construction, and has committed to carry out any mitigation required at its cost (see SOC 28);
- AirServices has however expressed concern that the Department and the NSW Government may not enforce such a SOC or any related consent conditions and accordingly, while not objecting to the project, they do not want to support the project.

This issue applies to all wind farm developments.

The adjacent Conroy's Gap Wind Farm provides a useful reference for this issue. At Epuron's request, AirServices Australia prepared a "Surveillance Impact Report" for that project which assessed these same issues. Note, the Conroy's Gap Wind Farm is immediately adjacent to the project, and the turbines are generally located at higher elevation therefore are more likely to be within the surveillance areas of the nearby radar. The AirServices report concluded:

- *The Wind Farm will have an adverse effect on the surveillance capability of the Mount Bobbara radar;*
- *The effects will be in an operationally sensitive area, however critical areas are unlikely to be impacted;*
- *If effects in critical areas to become apparent, mitigation strategies, although not ideal, are available to reduce the operational impact;* and
- *The total effort expected to be spent on determining the effects of the wind farm is two and a half man months of specialist effort. If radar optimisation is necessary a further one and a half man months of effort would be required.*

This report clearly indicates the capability of the radar assessment to be carried out, and the effects mitigated, and at a reasonable cost. There is no reason to consider any mitigation costs would be orders of magnitude higher in relation to the Yass project when compared with Conroy's Gap.

Statement of Commitments – SOC 28

The normal approach to resolving this issue, as set out in the Model Conditions, is to carry out the detailed site assessment based on final design details post approvals and prior to construction. In many cases no assessment is carried out prior to development consent, and this has in the past been deemed adequate by the Department. This approach is consistent with recent wind farm approvals at Bodangora, Collector and Flyers Creek wind farms, and consistent with the Model Conditions.

While this approach results in some risk that the subsequent assessment identifies impacts that cannot be resolved, this risk has been demonstrated to be small, and is ultimately a commercial risk to the proponent.

The Assessment Report has not stated why this industry standard approach cannot be applied to this wind farm. No justification has been included in the Assessment Report to explain why this industry standard approach cannot be considered reasonable in relation to this Project.

The wording of SOC 28 was provided by Epuron to the Department on 16th September 2014 with a specific request for confirmation that this would be an acceptable approach to this issue, however no response was provided by the Department.

Epuron considers that this risk has been adequately and thoroughly assessed at a level of detail commensurate with the stage of development; that the risks are understood; that any impacts are reasonably likely to be able to be mitigated; and that adequate commitments are set out via SOC 28 to manage this issue.

6 Key Issue 3: Biodiversity

6.1 Background

The Yass Valley Wind Farm site is primarily used for agriculture and grazing. While by far the majority of the site has been cleared, remnant native vegetation occurs on site including protected habitats such as Box Gum Woodland. A number of threatened flora and fauna species or habitats (EEC) can also be sound on site as is common in the region.

The Biodiversity Assessment was carried out in the original EA and updated in the PPR and PPSR. In addition, the following key documents comprise the assessment:

- Environmental Assessment lodged November 2009 - Chapter 7.4 and 7.5; Appendix 3.1 and 3.2
- Preferred Project Report lodged November 2012 – Chapter 3.3; Attachment 1
- Preferred Project & Submissions Report September 2014 –
    - Chapter 7.3 – Ecology Assessment
    - Attachment 1 – Hollow Bearing Tree methodology and desktop assessment
    - Attachment 2 – Further Response to OEH
- Correspondence to Chris Wilson dated 14 November 2014 with relocation of four wind turbines and final maps of wind farm layout and agricultural landing strips
- Final project layout

The biodiversity assessment has been assisted through use of ecology experts NGH Environmental (NGH).

Adequacy of biodiversity assessment

The Biodiversity Assessment and the Supplementary Ecology Report were each reviewed by the Department prior to exhibition, and the Department found these documents to be adequate for public exhibition and submission (see section 3.1).

Ongoing consultation with OEH

OEH provided a submission to the Department after the exhibition of the EA, and Epuron addressed these concerns in providing its PPR which was exhibited in late 2012 / early 2013.

In response to the exhibition of the PPR, OEH made a submission to the Department dated 4 March 2013 which provided '*recommended conditions for inclusion in the final approva*l'. This submission noted that the proponent had addressed many of the issues raised in OEH's 2010 submission including: recalculation of permanent loss of Box Gum Woodland Endangered Ecological Community (BGW EEC), mapping of the proposed transmission easement and provision of greater detail on hollow-bearing trees (HBTs).

Despite the above submission, the Department sought comment from OEH on several further occasions. OEH has provided comment and advice since the PPR including:

3 March 2013	OEH comments on the PPR and conditions of consent provided to DPE
29 August 2013	OEH comments on PPSR (July 2013) - Letter + 4 page attachment
20 November 2013	Site visit to clarify OEH concerns
24 February 2014	OEH comments on revised PPSR (Dec 2013) Letter + 9 page table
4 June 2014	Meeting with DPE, OEH, Epuron
17/18 June 2014	Site visit with OEH and Epuron to sample pasture and HBTs
July – August 2014	Epuron provides updated mapping, HBT counts and impacts calculations to OEH
22 August 2014	OEH Assessment Report sent to DPE

5 November 2014	OEH Assessment Report provided to Epuron
14 November 2014	Epuron response to OEH Assessment sent to DPE

After reaching a landing with OEH on most of these issues, Epuron lodged the final PPSR on 8 September 2014. This report included a reduction in the number of wind turbines to 134 (compared with 148 in the PPR) by removing a number of turbines (10) that OEH had expressed a direct concern over. Many other items of infrastructure were relocated to increase buffer distances to sensitive vegetation or habitat. A summary of changes can be found in Annexure C and the majority of these changes were as a direct result of, or impacted by, biodiversity considerations.

OEH provided its response to the PPSR to the Department (dated 22nd August 2014) with a relatively small number of outstanding issues. However, the Department withheld this response from the proponent until 5th November 2014 which has materially hampered our ability to resolve the outstanding issues with OEH. Despite holding up provision of this report by almost three months, the Department then provided Epuron approximately one week to respond, and with such a short time window Epuron was unable to give full consideration to all issues raised or engage its biodiversity consultants to review the issues. However, Epuron provided a draft response by this date as requested.

This response included a request that the Department advise Epuron if any additional information may be required. Despite repeated requests for this confirmation, Epuron received no response to the information requested and on Wednesday 4 February 2015 became aware of the release of the Secretary's Environmental Assessment Report with the recommendation for refusal.

Changing assessment requirements

As the development progressed, it became apparent that OEH's internal view around appropriate treatment of biodiversity assessment had materially changed over the assessment period. To further complicate this, staff changes over the longer development period meant inconsistent responses were received to issues, and it has been difficult to clearly determine how to approach the assessment as a result. This has led to considerable ongoing challenges as OEH has struggled with whether to apply the previous approach (effectively grandfathering the Project) or current approach (which would require very considerable rework with marginal benefit).

This has affected a number of aspects, including the appropriate classifications to apply (especially in vegetation maps), the mechanisms for determining appropriate offset areas, the appropriate buffer distances or assessment approaches to hollow bearing trees etc. Accordingly, there is a level of inconsistency between the various documents which reflect the "state of play' at the time they were written. While we accept that it would be easier for all parties if these documents were brought to a consistent standard, this involves very considerable rework including redoing site surveys and the marginal gains achieved are not in our view warranted.

For the avoidance of doubt, in determining the appropriate offset management plans going forward, Epuron will work with OEH to determine a consistent approach to mapping areas (i) required to be offset, and (ii) to be used as offsets to ensure no unforeseen discrepancies occur.

In some instances, OEH has challenged the expert views of Epuron's consultants, but been unable or unwilling to provide an alternate position. For example, OEH has expressed concern over offset areas are located "in the vicinity" of wind turbines, but has not been willing to give guidance as to how close "in the vicinity" means, and as a result Epuron is not able to confidently determine the appropriate buffer around turbines before finalising its offset requirements. We anticipate this can be effectively resolved though close consultation as Epuron develops its Offsets Management Plan.

Assessment Report

Epuron's response to this document does not appear to have been considered at all as part of the Assessment Report. Indeed, after release of the Assessment Report, Epuron contacted OEH who advised that the Department had not provided them with our submission or requested any further comment from them in relation to it. This is fundamental as:

- Epuron's submission specifically addressed the key concerns raised by OEH in relation to Hollow Bearing Trees by relocating the four wind turbines OEH identified as being problematic;

- Epuron specifically agreed to all of the wording changes OEH proposed to Epuron's Statement of Commitments; and
- Epuron accepted all other points raised by OEH.

Accordingly we consider that the biodiversity issues raised by OEH have been fully addressed but this has not been considered in the Assessment Report.

Notwithstanding its release in February, the Assessment Report appears to have been written well before Epuron's response to OEH comments. Given how material the biodiversity issues are to the recommendation to refuse outlined in the Assessment Report this is a very serious omission.

Status

Epuron has now fully integrated those comments into our SOCs in relation to both biodiversity and heritage as outlined in the Initial Response (see SOCs 11-26, 104, 105).

Since the most recent OEH comments, a number of turbine removals and a small number of minor turbine relocations have occurred as follows:

- *Coppabella Precinct*: removal of turbines 20-24, 26-28; relocation of turbine 56 by 87m in response to OEH concerns around HBTs;
- *Conroy's Gap Extension Precinct*: relocation of turbines 144, 145, 148 by 56 to 330m in response to OEH concerns around HBTs; and,
- *Marilba Precinct*: removal of 2 turbines (115, 122); relocation of turbines 83, 101, 102, 120 by 29m to 175m generally in response to OEH concerns around HBTs.

The background to these changes is outlined in Annexure C.

As these changes were carried out within areas previously surveyed, and carried out specifically to reduce HBT impacts, Epuron considers these changes have net environmental benefits from a biodiversity perspective.

6.2 Response to Biodiversity Issues

6.2.1 EPBC Approval

The Assessment Report incorrectly states:

> *"The Applicant has made two separate referrals of the project under the Commonwealth's Environment Protection and Biodiversity Conservation Act 1999(EPBC Act). It was determined that both parts are controlled actions and would have, or are likely to have, a significant impact on matters of national environmental significance that are protected under Part 3 of the EPBC Act.*
>
> *The Applicant received Commonwealth approval, with conditions, under the EPBC Act for one part of the project on 5 November 2014. The Applicant had previously withdrawn the other referral in 2013."*

Both Yass Valley Wind Farm and Conroy's Gap Wind Farm Stage 2 were approved with conditions on 5 November 2014. The referral was made in two separate parts to accommodate the potential staging of the construction of the Yass Valley Wind Farm under consideration by the NSW Planning and Assessment Commission.

The relevant conditions are available on the EPBC website and in summary are as follows.

> *The Approval holder must:*
>
> 1. *Submit for the Minister's approval a Biodiversity Management Plan before commencement of the action.*
> 2. *Undertake an analysis of local movement patterns of the Superb Parrot as a guide to micro-siting turbines to minimise impacts.*
> 3. *Submit an Offset Management Strategy for the Minister's approval that provides for the ongoing protection of Box Gum Woodland, Golden Sun Moth, Superb Parrot, Regent Honeyeater and the Swift Parrot.*

4. *Prepare an Offset Management Plan which must detail the final offset areas and management actions through a legally binding conservation covenant in force within 2 years of the commencement of the action. The OMP must include a detailed description of management actions designed to protect and improve the ecological quality of Box Gum Woodland and habitat of threatened species including:*
    - *Golden Sun Moth*
    - *Superb Parrot*
    - *Swift Parrot*
    - *Regent Honeyeater*
    - *Yass Daisy (for Conroy's Gap Wind Farm – Stage 2)*
5. *Advise the Department in writing of the actual date of commencement of the action.*

These conditions are as anticipated for this project and obligations regarding offsets are consistent with what we would expect to carry out in consultation with OEH.

6.2.2 Constraints mapping

OEH has expressed concern over how areas of "high" biodiversity constraint had been determined. In reviewing data and from site visits OEH considered that a number of additional areas should be included as high constraint.

Approach

In the main ecology assessment undertaken for the project, NGH took the approach directed in the Guidelines prescribed in DGRs. The site is very large at 14,110 hectares, so the main ridgelines with access to them were highlighted and a layered methodology devised for the site which included the normal practices of random meander, targeting sampling and searches and a range of focused efforts across the potential areas of impact. This resulted in vegetation mapping and the mapping of threatened species and threatened species habitat across a wide area of interest for the wind farm totalling almost 8,000 hectares. From this field survey, assessment work and vegetation mapping, areas of high constraint were identified.

OEH queried a number of identified areas and as a result OEH, Epuron and NGH worked together to share information and the values attributed to each identified area so that all parties had a consistent approach and understanding of the attribution of high constraint. The areas identified to Epuron by OEH were incorporated into the revised high constraints areas mapped.

It is understood that OEH's preferred approach would be to add buffers around high constraint areas and include the buffers within the definition of "high constraint areas". OEH considers this would be a more complete reflection of the environmental values across the site. Epuron does not support this approach as this would artificially reduce medium and low impact areas and potentially lead to double counting and confusion. The issue of buffers has therefore been dealt with separately by targeting appropriate buffers around the area identified as high constraint.

Both sides acknowledge that there is considerable discretion left to the assessor in allocating constraint classifications which can also lead to inconsistencies. Over the assessment period NGH has used a number of ecologists to carry out the site investigation, and depending on the timing of that investigation slightly different approach were used in response to changes in OEH thinking. This has led to some inconsistency in the charactisation of different areas, and attempts were made to bring the site mapping up to an internally consistent approach which was also consistent with the new assessment methodology being employed by OEH.

While some uncertainty in this mapping remains, Epuron is confident that the characterisation of impacts is valid, and that the SOCs include appropriate mechanisms for reassessing characterisation where warranted to ensure that offset levels are appropriate and consistent with the new bio-banking methodology.

Layout and buffers

Epuron initially developed the wind farm layout avoiding, minimising, mitigating and offsetting infrastructure in high constraint areas. It was not always pragmatic to avoid infrastructure in these areas, and therefore an offset strategy has been developed to address affected areas. Further micro-siting post-approval will also be used to minimise impacts in high constraint areas.

Rather than including buffer areas in the high constraints mapping the layout aimed to locate wind turbines 50m or more from the edge of constraints such as woodland areas. This was successful for 117 of the 124 wind turbine locations. Seven wind turbine locations are within 50m of high constraint areas of which one is located on the edge of a high constraint area. It is anticipated that the seven locations may be able to be micro-sited further away from the high constraints area and if not then impacts would be mitigated and included in the offset plan when final locations and turbines to be built are known.

Addressing areas of concern:

Through an iterative process, the high constraints mapping has been updated to incorporate further areas of concern to OEH.

- Ten wind turbine locations within the key area of concern to OEH were removed from the project as a result of this exercise.
- Following advice from DPE that OEH had highlighted four further wind turbine locations as having significant potential impacts, wind turbines 102, 56, 145 and 148 were relocated away from areas of high constraint.

The constraints mapping used for determination of final equipment locations and offsets will be determined in close consultation with OEH to ensure consistent approaches are used for both impacts and offsets, and that the classifications applied are acceptable to OEH.

SOC 11 addresses this concern and the drafting of this SOC is as per OEH requirements.

Survey extents

The Assessment Report identified that following the various layout revisions some infrastructure is located outside of existing survey areas. Annexure G identifies the areas where relocations resulted in infrastructure being located outside of previously surveyed areas.

- *Area 1* – indicates a small (90m) section of underground cabling located adjacent to the survey area; Epuron has reviewed this area and, while it appears to be consistent with the surrounding areas, this would be confirmed prior to construction. If this route is unsuitable the previous alignment would be used.
- *Area 2* – indicates a moderate (760m long) section of underground cabling located outside of the survey area; Epuron has reviewed this area and, while it appears to be consistent with the surrounding areas, this would be confirmed prior to construction.
- *Area 3* – indicates two small (300m long) sections of existing access track located outside of the survey area; Epuron has reviewed this area and, while it appears to be consistent with the surrounding areas, this would be confirmed prior to construction. Alternate access options exist if these track sections are not suitable.
- *Area 4* - indicates a small (300m) section of underground cabling located adjacent to the survey area; Epuron has reviewed this area and, while it appears to be consistent with the surrounding areas, this would be confirmed prior to construction. If this route is unsuitable the previous alignment would be used.
- *Area 5* - indicates an alternate alignment of the 330kV powerline corridor (1.8km) located adjacent to the survey area; Epuron has reviewed this area and, while it appears to be consistent with the surrounding areas, this would be confirmed prior to construction. If this route is unsuitable the previous alignment would be used.
- *Area 6* – indicates an additional 1.1km access track which generally follows the alignment of an existing track. This area has been visited by NGH but not specifically mapped; however NGH raised no concerns in relation to its use.

All other infrastructure is located within areas of existing survey work. However, the level of detail of this work would be reviewed as part of the CEMP and additional survey work undertaken if required.

While acknowledging that further site survey is required, Epuron does not consider that the lack of survey in these area is material to the assessment of Project impacts and relocation of this infrastructure could (if required) be carried out in accordance with the SOCs relevant to micrositing.

6.2.3 Impacts on Hollow Bearing Trees

The key concerns with impacts to hollow-bearing trees (HBTs) are:

- direct impacts - removal of trees with hollows and
- indirect impacts - to species (typically birds / bats) using trees with hollows.

The key responses to those concerns are to minimise the removal of HBTs (to avoid direct impacts) and to relocate turbines away from HBTs (to avoid indirect impacts) and offset both direct and residual indirect impacts.

Direct Impacts to HBTs

There are a very small number of areas of high constraint where there is no alternative but to put through a connecting track and electrical cabling. These tracks and electrical connection infrastructure have been highlighted to OEH and will be minimised and offset accordingly and are accounted for in the table referenced by SOC 11.

HBTs adjacent to turbines:

The question of the appropriate buffer distance to situate turbines away from adjacent woodland and forest is not definitive. Epuron, NGH and OEH determined that for this purpose of this assessment it was appropriate to target a 50m buffer from all wind turbines, and to increase this to a 100m buffer where the vegetation is up-slope of the relevant wind turbine. This approach was used to identify the potential number of impacted HBTs.

There are 7 turbine locations within 50m where this has not been possible, but there is a reasonable prospect of reducing impacts through micro-siting and by including HBTs in the offset strategy. It was not presumed that no impacts to HBTs were permissible, but rather, that they should be avoided in the first instance, and where this was not possible minimal impacts should be mitigated and offset.

Addressing areas of concern:

Epuron initially developed its site layout by focussing on direct impacts. As development proceeded it became increasingly clear that OEH's primary concern was in relation to indirect impacts. This has led to significant layout changes to accommodate this concern.

The key location of concern to OEH was a wooded area on the southern part of the Marilba precinct. Epuron voluntarily withdrew ten wind turbine locations from the proposal in the area of greatest concern and it is understood that this demonstrated avoidance of impacts addressed the most significant area of impacts from proximity to woodland.

During the site visits a further turbine location was identified to be of concern to OEH and this turbine 102 was relocated away from the edge of a woodland area.

In conjunction with OEH a desktop sampling methodology was agreed upon which used aerial imagery to assist in determining the number of HBTs in proximity to wind turbine locations. While not a perfect system this enabled rapid identification and preliminary assessment of turbine locations across the site, and was deemed appropriate at this stage of the development process.

OEH note in their assessment report that: there have been a number of improvements made to the vegetation mapping products and the hollow-bearing tree assessment method since February 2014. The enhancement of this work has provided OEH with better insight about the quantum of impacts this project is likely to have.

In the OEH assessment report provided to Epuron on 5th November 2014, four turbine locations were assessed to be of ongoing concern as they had an relatively large number of HBTs in the vicinity. When Epuron was provided with the OEH report (Nov 2014) the location of these four turbines was reviewed, and a site visit was undertaken to ground-truth the initial estimates of HBTs in the vicinity. This approach is what Epuron expects to occur in the final micro-siting stage of site development, post approval and prior to construction.

This assessment confirmed that in general the desk-top approach has over-estimate the level of HBTs in the vicinity of trees, and also given guidance of the level of reduction in HBT impacts that could be expected through micro-siting. By way of example, the desktop survey approach identified 157 HBTs in the vicinity of these four turbines; the in-field assessment confirmed only 83 HBTs, and initial micro-siting has reduced this number of HBTs to only 28.

Epuron responded to the Department n 14th November providing this information, however this response has not to date been passed on by the Department to OEH. This response also noted that turbine 102 had already been relocated away from woodland, and the remaining three turbines were relocated away from HBTs and a further turbine location was relocated for consequential proximity reasons.

Mitigation

In addition to micrositing, and in discussion with OEH, NGH has proposed pre-clearing survey to determine the specific bird and bat species using the hollows in impacted HBTs. SOC 15 details the HBT surveys at each of the precincts.

It is considered that offsetting the current number of 320 HBTs within 100m of a wind turbine at suitable ratios using the calculator will be accommodated in offset areas across the site. However, as outlined above, it is highly likely that further post-approval assessment and micro-siting will materially reduce the number of HBTs impacted.

In line with the above OEH provided wording for the Statements of Commitment which have been included. See SOC 11 which states that" *all wind turbines must be sited to avoid high constraints and final impact areas will be equal to or less than those identified in the impacts table.*

In addition to SOC 11, SOCs 15, 18, 19 and 20 are worded in accordance with OEH drafting to address impacts to HBTs.

We note the consent conditions proposed in the Assessment Report in relation to Crookwell 3 Wind Farm released in February 2015:

> *C10 All feasible and reasonable effort shall be made to locate wind turbines at least 60 metres from adjacent hollow-bearing trees which have the potential to provide roost or nesting habitat for bird and bat species identified to be at risk of rotor collision during turbine operation.*

Epuron would be happy to comply with this same consent condition in relation to this Project.

6.2.4 Inadequate avoidance of biodiversity

The Assessment Report claims that Epuron has not sufficiently avoided impacts to biodiversity, however has not substantiated this claim or assessed the substantial measures that Epuron has already undertaken and is continuing to undertake.

Before addressing that point directly, we note that the Assessment Report fails to mention the substantial biodiversity benefits that Wind Farms offer. Direct benefits of this project will include substantial funding for and improvements to what is in effect degraded native vegetation which is currently being eaten by cows and sheep. Those agricultural practices will continue unless a level of destocking can occur and suitable funding can be put in pace to allow better protection of biodiversity on this land, such as occurs through the offsets packages and landowner rental from the wind turbines.. Far greater benefits are likely through the contribution to the reduction in global warming – there is a reason why the Royal Society for the Protection of Birds supports wind farm developments.

To address this issue more directly we would like to outline a number of points which clearly demonstrate Epuron's endeavours to avoid impacts:

- Epuron has engaged NGH Environmental to carry out no less than three separate biodiversity assessments of this project, at considerable expense, and involving hundreds of person-hours of field surveys, desktop assessment and analysis;
- the exhibited Environmental Assessment (November 2009) detailed 152 wind turbines, this was after removal of the ~30 turbines proposed for the Carrolls Ridge precinct as a direct result of biodiversity concerns;
- as the Department acknowledges, the locations of the majority of wind turbines and other infrastructure have been adjusted over time as new information about biodiversity impacts arises in an effort to minimise biodiversity impacts;
- this has included regularly redoing this work as new classifications of assessment are developed and new approaches considered

- every single wind turbine, access track, powerline and other piece of infrastructure has been individually considered in this regard;
- in response to OEH concerns a whole section of the wind farm was removed, including 10 wind turbines with a capital investment value in the order of $50 Million;
- a number of other turbines have also been removed, in almost all cases as a result of biodiversity impacts;
- this process is ongoing, and the final "for construction" layout will include further micro-siting to minimise biodiversity impacts as outlined in the SOCs

We do not claim that impacts resulting from this wind farm have been eliminated; that is the key reason why an offset strategy is in place. However Epuron has done its best to avoid biodiversity impacts while maintaining the clear benefits (including to biodiversity) that this wind farm offers.

6.2.5 Vegetation Impacts and Mitigation

Following discussions through 2014 between the Department and OEH it was agreed to visit the site to review areas which had been described in the biodiversity assessment as native pasture in poor to moderate condition. OEH's concern was that while Epuron's consultants had assigned this label to it because it contained poor diversity and was therefore not of conservation significance, the condition of areas of this native pasture should be sampled to see how it would be described under a biometric classification.

The biobanking assessment methodology was introduced well after the DGRs were issues for the project and so this methodology was not used in the original site surveys. The biodiversity assessment of the site adopted a five condition classification of: poor, poor to moderate, moderate, moderate to good and good in its assessment of vegetation condition.

Biometric classification, uses a different approach, allocating vegetation condition into one of two categories, low condition or moderate to good condition. If 50% of the pasture is native species, even if there is only one native species throughout the pasture making it of low conservation significance, it would fall into the moderate to good condition category and would then be considered derived grassland EEC and offset accordingly.

This change in assessment approach has a very material impact on the classification of a site of this nature. While the forested areas would be recognised as constraints under both systems, the very large areas of open farming land under one classification would be determined to be of "low significance", but under the other classification is considered to be EEC.

Following a site visit with OEH, areas of the native pasture were subsequently relabelled from poor to moderate, under the five category condition assessment, to moderate to good under the biometric classification. This moved these areas from a simple 1:1 offset ratio into EEC areas impacted and the impact calculations were updated.

As a direct result of this change in approach, the theoretical offset requirement has substantially increased even though the actual areas impacted on site have been materially reduced.

Given that the DGRs for this project do not require the bio-banking methodology, this has caused considerable uncertainty for this project. It is also questionable in our view that the bio-banking methodology has been suitably developed for this type of landscape as it does not contemplate the current and ongoing land use implications.

<u>Box-Gum woodlands</u>

Box-Gum Woodland assessments were also upgraded in line with the bio-banking assessment methodology and this significantly increased the calculation of the area of loss to include any area of native pastures described above with any number of native trees from one up. A paddock with one tree in it is theoretically classed as endangered box-gum woodland, even if that tree is dying.

OEH took the view that impacts remained acceptable in the areas visited on site which were to be redesignated from native pasture of low conservation significance to EEC. However, this redesignation does increase the quantum of offsets required.

While under the previous offset approach ratios were allocated to particular impacts, under the bio-banking assessment methodology currently in use across the site a range of factors would be calculated in determining the value of the impacted vegetation. Accordingly the areas previously labelled native pasture which are now referred to as derived grassland EEC would be allocated an offsetting ratio in line with their true condition and value.

While the total expected impact on native vegetation is estimated to be 225 ha with approximately 196 ha of this being Box Gum Woodland it should be stated that the impacts across the same project (previously 148 wind turbines, compared with 134 with turbines), to BGW EEC were previously calculated, before the reassessment under the bio-banking assessment methodology to be 35.56 ha. OEH noted that most of the impact to BGW is deemed to be in poor-moderate condition which corresponds to 'moderate to good' Biometric condition.

OEH state that they view this vegetation and EEC mapping sufficient for the development application.

Existing practices

Biodiversity advice provided since 2008 has consistently noted the historic degrading effects of agricultural practice to native vegetation condition and habitat value. Over the last seven years additional areas have been converted from grazing to cropping (effectively removing EEC in moderate to good condition under the biometric terminology). It must be understood that the alternative to the wind farm is a continuation of this practice, not protection of the remnant vegetation. In terms of the future values of this site, the wind farm offers a unique opportunity to implement broad-scale weed management, in-perpetuity protection of the best remnants and offset improvements that would be highly unlikely to be achievable under current management practices.

6.2.6 Offset Strategy

The Assessment Report expresses concern in relation to the offset strategy for the wind farm and in particular:

- the identification of suitable areas,
- the inclusion of hollow bearing tree quantities,
- the clear definition of high conservation habitat,
- the offset ratios (and methodology) and
- the Proponents ability to secure the land in perpetuity for the offsets.

Epuron's approach

Epuron has identified several areas of EEC in moderate to good condition within the site, which will not be cleared as part of the Project, as suitable offset areas. These areas, which are part of the assessed areas within the site boundary, include:

- Over 1,900 ha of Box Gum Woodland EEC
- Over 1,000 ha of derived grassland Box gum Woodland EEC
- Specific sites for Golden Sun Moth, Yass Daisy and CEEC and
- Numerous opportunities for securing offset for hollow bearing trees

The Proponent has committed to implementing offsets that seek to restore degraded sections of BGW and secure remaining areas in moderate to good condition and to achieve not a 'maintain or improve' biodiversity standard but a positive net environmental outcome for the project. Offset would be in perpetuity through a mechanism to be agreed with landowners and considered suitable by OEH.

See Statement of Commitment 18 which includes all wording requested by OEH to address the offset strategy.

The identification of suitable areas

The offset strategy was originally proposed in the Supplementary Ecology Report (December 2012) and identified a large number of suitable offset sites totalling 653 hectares across the site. This was more than adequate to offset the impacts calculated. Since that time a number of key aspects have been amended including:

- the site mapping has been updated to align with the biobanking assessment methodology,
- the number of wind turbines has reduced from 148 to 124 and
- OEH has provided wording suitable for consent conditions which address their requirements for the Offset Plan See SOC18.

OEH raised a concern that the areas identified for offsets were potentially too close to the wind farm infrastructure. In response, Epuron requested OEH to confirm a suitable buffer distance, however OEH was not willing to confirm a suitable number.

We note the suggested impact zone used in our HBT methodology, developed in consultation with OEH, of 50 – 100m depending on slope. We further note the recommendations in the Crookwell 3 Wind Farm Assessment Report that 60m is an appropriate buffer from HBTs.

Taking a precautionary approach, Epuron has currently considered a 300m buffer around wind turbines and 50m around powerlines to determine the extent of offset potential available on the site.

- Applying this to the offset areas mapped in the Offset Strategy provided in the Supplementary Ecology Report reduces the identified high quality offset by approximately 15%, still identifying greater than 430Ha of suitable high-quality offset land:

Type	**Original Offsets Area**	**Realigned Boundary**	**Turbine & Transmission reduction**
EEC	115	92.6	78.21
GSM	4	4	4
EEC, Hollows & Yass Daisy	85	85	85
Threatened species (intact woodland), Yass daisy	70	70	49.72
EEC, Threatened species (intact woodland)	287	181.8	146
EEC, CEEC, Yass daisy	92	70.45	68.77
Yass Daisy	2	2	1.25
Total	**655**	**505.85**	**432.95**

The site survey and assessment work carried out by NGH covered more than 8000Ha in the vicinity of the site, of which more than 5000Ha is located within the current site boundary. Looking only at the areas assessed and not at potentially suitable locations elsewhere within the site boundary:

- there is at least 3,000Ha of *Box-Gum Woodland* located on the site. If a 300m buffer is applied around wind turbines then at least 1,900Ha of BGW is available on site; and
- there is at least 2,200Ha of *Box-Gum woodland - derived grassland* located on the site. If a 300m buffer is applied around wind turbines then at least 1,100Ha is available for offsetting.

We acknowledge that the assessment of offsets would need to be redone as part of the Offset Management Plan to ensure consistent definitions are used between impact areas and offset areas. However, this analysis demonstrates that more than enough suitable habitat exists on site for the offset requirements identified.

OEH state in their assessment report (Aug 2014) that the high conservation value of <u>all vegetation</u> on site is beyond question. The entire site is 14,110Ha. While on site in November 2013 with the proponent's ecology consultant OEH identified a number of further areas within the site, at a greater distance from turbines, which they advised would be suitable for offsets. There is little doubt that suitable offset sites can be found for all vegetation and species habitat from within the site boundary.

<u>Hollow bearing tree quantities,</u>

Pre-clearance surveys were discussed between OEH and NGH environmental and the proposed approach that would be detailed with the Biodiversity Management Plan is to:

- Avoid all high constraint trees

- Inventory all hollow-bearing trees proposed to be removed – moderate constraint trees can be removed with felling protocols to minimise harm to resident fauna and offsetting as agreed with OEH

Statement of Commitment 20 which directs the Biodiversity Management Plan includes the commitment for specific additional survey work which would be used to microsite infrastructure, where practical, and offset impacts, where they cannot be avoided with target features / species including Hollow Bearing Trees

See also SOCs 11 and 15 - 19

Clear definition of high conservation habitat

Statement of Commitment 18 specifically articulates that t*he Offset Plan would: Clearly define classifications used including "high conservation habitat";*

Offset ratios (and methodology)

The Department has expressed concern about offset ratios, however, OEH does not recommend offset ratios but recommends the use of the Biobanking methodology to ascertain precise offset requirements. Statement of Commitment 18 specifically notes that the offset plan would: *Where appropriate, use a metric such as Biobanking to ascertain independent and reliable figures required for offsetting.*

Proponents ability to secure the land in perpetuity for the offsets

Securing the consent of landowners for infrastructure projects has always been the task of the developer. This wind farm has a large number of committed landowners all of whom intend to host infrastructure and all of whom understand that suitable land is required to offset impacts. These landowners have indicated their willingness to provide suitable areas and mechanisms when details are confirmed in line with the offset strategy and offset plan.

SOC 18 states that the Offset Plan would:

- Outline the mechanisms for protecting and funding management of offset areas.

SOCs 104 and 105 are also included from the standard and model conditions (B5, B6) which include:

- Land offsets shall be consistent with the Principles for the use of Biodiversity Offsets in NSW. Any land offset shall be enduring and be secured by a conservation mechanism which protects and manages the land in perpetuity.

See also by way of precedent or example the Director General's Environmental Assessment Report for Collector Wind Farm:

- *(Page 42) The Proponent has identified several areas of EEC in moderate to good condition within the site which will not be cleared as part of the Project, as suitable offsets subject to the requirements of the landowners.*
- *(Page 43) The Proponent would also consider areas outside the Project site as part of the offset package consistent with OEH's selection criteria for conservation reserves in the region and in consultation with OEH. The Biodiversity Offset strategy would be developed in accordance with Draft Principles for the use of Biodiversity offsets in NSW prior to construction and in consultation with OEH and would explore:*
    - *Other options for offsets including third party biodiversity management actions and research;*
    - *More detailed assessment of biodiversity impacts and determination of offset criteria;*
    - *Mechanisms to deliver the offset, including management arrangement with landowners and coordination with statutory agencies and offset agents in the area; and*
    - *Monitoring, evaluation and reporting.*

We note that there is no difference in approach between Epuron and the proponent of Collector Wind Farm – areas are identified within the site, they have not yet been locked into agreements, further areas would be considered and explored including the appropriate mechanisms for delivering the offsets and all work would be undertaken in consultation with OEH.

6.2.7 Consolidation of Assessment Work

There is frequent mention throughout the Secretary's Assessment Report on the iterative process the wind farm has followed and that the additional information provided on biodiversity has not been consolidated into a single report.

Epuron has been provided with consent conditions by agencies on a number of occasions throughout the planning process. There has been an attempt to lodge the Preferred Project and Submissions Report with DPE on four separate occasions since the exhibition of the Preferred Project Report. On each occasion the document has not been accepted for assessment and DPE has requested that Epuron provide further information or further address concerns raised or provide a response to a new concern.

All documents provided which form part of the assessment have been listed and included in the most recent PPSR, with the exception of a letter to the Department dated 14 November 2014 responding to OEH's most recent concerns. Epuron has continued to clarify since whether further information would be requested by the Department and received no response.

While we acknowledge some minor discrepancies between versions and report may well still exist, we do not believe these are at all material to assessment of the wind farm, particularly in the light of:

- *the strong Statement of Commitments outlined by the Proponent in relation to biodiversity; and*
- *The acceptance of all of OEH's remaining points outlined in their letter to the Department dated 22 August 2014.*

6.2.8 OEH Response

OEH provide helpful detail about the rationale for their assessment in their assessment report dated August 2014. However, it is important to note that their position does not appear to be that reflected by the Department in the Assessment Report.

In the OEH assessment report under the heading *Results of the Assessment* it is stated:

> *OEH's assessment has found that there have been a number of improvements made to the vegetation mapping products and the hollow-bearing tree assessment method since February 2014. There has also been useful clarification provided around the proponent's definition of what is considered 'high constraint' and transmission line impacts. The enhancement of this work has provided OEH with better insight about the quantum of impacts this project is likely to have.*
>
> *OEH's main concerns from the assessment are:*
>
> - *The proximity of some turbines to high constraint or woodland areas with high number of hollow-bearing trees*
> - *The reliability of the infrastructure mapping*
> - *The lack of detail and nomination of specific sites in the Offset Strategy.*

In response to the three main outstanding concerns expressed by OEH Epuron notes the following.

1. *The proximity of some turbines to high constraint or woodland areas with high number of hollow bearing trees.*

OEH acknowledges that 10 key wind turbine locations on Marilba have been removed. These were the main areas of concern to OEH in relation to proximity to woodland. A further four wind turbines have been relocated away from woodland edges or hollow bearing trees reducing the potential for impacts to Hollow Bearing Trees.

> Epuron recognises that there are some wind turbines in proximity to high constraint woodland and has identified 7 turbine locations within 50m of high constraints. They are Wind turbines: 10, 13, 57, 59, 77, 137 and 138. It is anticipated that these turbines can be micrositing to improved locations at the detailed design stage. It was not felt appropriate to undertake a further movement of wind turbines at this stage as micrositing is a task appropriately done at the detailed design stage to ensure all impacts are assessed simultaneously. In addition, detailed design will identify the detail of the numbers of hollow bearing trees at each location and at each potential new location. This will guide and inform the detailed design process.

2. *The reliability of the infrastructure mapping*

OEH noted that at the high resolution that they were looking at mapping some of the tracks did not quite reach the wind turbine they serviced. This is because the mapping is produced to been seen at significantly lower resolution – generally a maximum of A1 and to zoom in to the resolution of searching tree canopies revealed that the tracks sometimes stopped short. This deficiency has been easily remedied in the GIS mapping with no change to any of the infrastructure.

3. *The lack of detail and nomination of specific sites in the Offset Strategy.*

   Up until August 2014 OEH and Epuron have been undertaking desktop and site sampling work to ensure that each party's understanding of the assessment methodology and mapping products is consistent. This is key to understanding both the value of the site and the expectations of the Biobanking methodology which is likely to be used in the offset plan. As noted in the OEH assessment report this has provided OEH with better insight about the quantum of impacts of the project.

   During the on-going discussions with OEH the Offset strategy was on the agenda for discussion at all times but due to time constraints the mapping took precendence and the discussion on the offset strategy was not completed. OEH have provided in Attachment 1 to their assessment report details of the "core requirements that OEH want to see included, or changed, in the Offset Strategy. The inclusions or changes required have all been accepted and are included in SOC 18.

While DPE has continued to press for amendments to the infrastructure and additional work to be undertaken pre-approval, the assessment report from OEH notes it has been able to quantify the impacts and provide consent conditions that would satisfy it.

It is important to note that OEH appropriately considers the vegetation on the Yass Valley Wind Farm site to have high conservation value, given that the predominant vegetation type is a listed EEC and a highly cleared vegetation type. OEH noted on site that the site is agricultural land under private ownership and their ability to influence land management practices is minimal. NGH environmental note that the land use pattern sees increasing areas of this potentially high conservation land relegated further from cleared grazing land to cropping land, removal all residual conservation potential.

Epuron contends that while the impacts associated with the wind farm are not insignificant, they are quantified and further quantifiable post approval and the positive net environmental outcome to which Epuron has committed for this project provides a significant improvement opportunity for the cleared and fragmented Box Gum Woodland endangered ecological community across this site and for a number of threatened species associated with this EEC.

Working with OEH Epuron contends that significant environmental benefits are likely to flow from the approval of the Yass Valley Wind Farm and conversely the continued clearing and fragmentation of dwindling EEC is inevitable without the financial commitment to biodiversity outcomes associated with this renewable energy project.

7 Landscape and Visual Impacts

7.1 Background

The Landscape and Visual Impact Assessment (**LVIA**) was carried out in the original EA and updated in the PPR and PPSR. In addition, the following key documents comprise the assessment:

- EA Appendix 1 - ERM LVIA (Nov 2009)
- PPSR V1 – Attachment 3 – ERM Supplementary LVIA
- PPSR V2 – Attachment 5 – ERM Letter in response to Department queries
- PPSR V3 – Attachment 6 – Desktop assessment of all non-involved residences within 8.5km

Relevant LVIA documents were assessed by the Department on two occasions prior to exhibition as outlined in 3.1 and the Department found these documents to be adequate.

In mid 2014 following provision of V3 of the PPSR, the Department engaged Richard Lamb and Associates to carry out a review of the LVIA (**RLA Review**). We note that this consultant has limited experience in assessing proposed wind farms (a specialised area of visual impact assessment) and, while they have not to our knowledge carried out a wind farm assessment, they have previously carried out a small number of peer reviews of wind farm assessments on behalf of the Department.

The RLA Review was provided to the Department 15 September 2014, however was not provided to Epuron for response until 5 Nov 2014. The Department requested an initial response to this document within a matter of days, and Epuron was able to provide a draft response on 14 November 2014. This did not give Epuron sufficient time to engage its LVIA expert to assist in the response, and only enabled a very brief draft response to be provided. Epuron's response included a request that the Department advise Epuron what if any additional information may be required. Epuron has received no response or feedback since, and the first knowledge it had that any aspect of the LVIA was considered inadequate was when the Assessment Report was released in late January 2015.

Since the most recent LVIA, a number of turbine removals and a small number of minor turbine relocations have occurred as follows:

- *Coppabella Precinct*: removal of turbines 20-24, 26-28; relocation of turbine 56 by 87m;
- *Conroy's Gap Extension Precinct*: relocation of turbines 144, 145, 148 by 56 to 330m; and,
- *Marilba Precinct*: removal of 12 turbines (89-91, 93-99, 115, 122); relocation of turbines 83, 101, 102, 120 by 29m to 175m.

The background to these changes is outlined in section 4.1 and Annexure C

Further, the Assessment Report has raised the new issue of the appropriate treatment of some landowners as "involved" vs "non-involved". This treatment affects the methodology applied for visual assessment of properties as set out in Section 4.3.2.

Section 7.2 outlines the additional assessment work attached to this report, and also outlines the scope of additional analysis currently underway by Epuron's LVIA consultants.

Epuron's response to the Assessment Report and RLA Review are outlined in Section 7.3.

7.2 Supplementary Visual Impact Assessment

Epuron has on a number of occasions asked the Department whether any further information or analysis was required to finalise the Visual Impact Assessment in the context of the wind turbine alterations carried out in response to other issues (principally biodiversity and landowner changes). Despite the Department earlier confirming this would not be necessary (on the basis that these changes would lead to a reduction in impacts) the Assessment Report and RLA Review in a number of places refer to incomplete or inadequate assessment which is attributable to these changes.

In addition, as set out in Section 4.3.2, the Department has outlined a requirement for additional assessment work to be carried out in relation to some residences which were previously assessed as "involved" Epuron has therefore undertaken additional analysis work to provide further explanation of questions raised in the Assessment Report or RLA Review, or to provide supplementary information in response to new issues raised in those report. This includes updates to existing analysis to reflect the final wind farm layout.

Please find attached:

- A revised shadow flicker analysis for the final 124 turbine layout (Annexure H);
- A revised *Zone of Visual Influence Map* which has been updated to reflect the final 124 turbine Project Layout (Annexure I);
- Supplementary photomontages (Annexure J) taken in the vicinity of:
    - residences C04, C27, C68, M13, M32, G31 which were previously assessed as "involved" and now being assessed as "non-involved";
    - residences C75, C06, C41 in response to concerns expressed in section 5.4.3 of the Assessment Report about lack of photomontages in this area; and,
    - C67 in response to concerns expressed in section 5.4.3 of the Assessment Report about failure to update this photomontage following deletion of turbines.

All the attached analysis demonstrates acceptable levels of visual impacts at the locations in question.

In addition to the in-house analysis, Epuron has engaged ERM (*Environmental Resources Management Australia Pty Ltd)* to carry out a further supplementary visual impact analysis to respond to some of the more technical issues raised in the Assessment Report and RLA Review. This analysis will focus on:

- new issues identified in the Assessment Report which were not previously requested by the Department;
- a response to the concerns raised in the Assessment Report and RLA Review in relation to methodology and coverage; and,
- a final assessment of the project impacts.

A final set of all photomontages will be provided with the further supplementary visual impact analysis which will reflect the final 124 turbine Project Layout.

Epuron anticipates the additional visual impact analysis by ERM will be provided to PAC on or before **26th March 2015**.

7.3 Response to Assessment Report and RLA Review

Assessment Methodology

The author of the ERM visual impact assessment, Allan Wyatt, has completed visual impact assessments for more than 30 wind farms and has worked in this field or more than 25 years. ERM (and Allan Wyatt) in particular) are considered preeminent experts in their field and have regularly appeared in court and tribunal proceedings in relation to visual impact assessment of wind farms, including as court appointed experts. The methodology used by ERM has evolved over time and been updated by incorporating ground-truthing to verify the methodologies used; re-visiting specific locations to reassess findings; and reviewing wind farm developments that have been constructed.

We consider the experience of ERM to be materially greater than RLA in the assessment of wind farms and we value their professional judgement highly. Some aspects of the RLA Review (such as the recommendation that we paint the turbines grey or blue, and the failure to consider Zone of Visual Influence maps when considering impacts) demonstrate, in our view, a lack of experience in assessing wind farm developments on the part of RLA.

The RLA Review raised questions over both the methodology and findings of the Proponent's visual impact assessment.

The methodology used by ERM for characterisation of the landscape relies on the professional view of the landscape architect as well as incorporating perception studies carried out in the region and many years of

research from around Australia and from overseas. The suggestion that there was no public participation in establishing landscape values in the Yass Valley is not correct – in addition to the background survey work ERM attended the open house event and undertook a number of site visits in relation to the development where the views of local residents were sought. Further, ERM reviewed the public submissions made with respect to the project which related to visual impact assessment and visited and met with a number of landowners in the vicinity while undertaking their assessment.

The methodology adopted by ERM is in accordance with the DGRs, in accordance with best practice for assessing the visual impact of wind farms, and consistent with the approach taken in relation to the majority of wind farm assessments in NSW.

Further, the visual impact assessment was accepted by the Department in its various adequacy reviews as set out in Section 3.1 and we cannot see any justification for challenging the methodology at this stage of the assessment process.

Specific findings

The RLA Review recommends the removal of a number of turbines but without any detailed analysis or visual assessment results to support those recommendations. The RLA Review appears to rely on the premise that if the turbines can be seen from a residence that the visual impact is unacceptable. Further, the report unreasonably focuses on a small number of objectors and appears to weight the opinion of individuals excessively relative to an expert assessment of impacts, or the carrying capacity of the changing landscape to support those impacts.

The RLA Review also fails to take into proper account the various photomontages, ZVI assessment, existing screening etc at the various locations and in some cases is recommending removal of turbines on visual impact grounds where those turbines cannot be seen from that particular residential viewpoint.

We accept a small number of objectors will not be happy with the appearance of the wind farm. On the other hand, a number of locals will be very happy to see the wind farm, and this is not taken into appropriate consideration in the methodology undertaken by RLA.

Given the divergence of opinion on wind farms, and the obvious environmental benefits of wind turbines, we do not consider removal of turbines to be an appropriate response to visual impacts unless other mitigation options are not practical. This is particularly so where the turbine locations have been carefully considered and determined to be acceptable by a highly experienced visual impact consultant in a manner which is consistent with best industry practice and which has been accepted by the Department. In most cases landscape treatments will reduce the impacts to acceptable levels as has been demonstrated in the ERM assessment.

Further, the rejection of landscaping treatment as an appropriate form of mitigation is contrary to good industry practice. While Epuron would take appropriate actions in response to consent conditions requiring acquisition of highly affected parcels, we contend that no such parcels exist in relation to this site which cannot reasonably be mitigated through landscape treatments, and therefore acquisition is not the most appropriate form of mitigation.

We have engaged ERM to provide a detailed response to the issues raised in the RLA Review and the Assessment Report as outlined in Section 7.2.

In the interim we provide the following initial comments to the RLA Review and Assessment Report.

1. In relation to the previous reference "C39", this reference is not a house and nor is there any existing planning approval to build a house at this location. Therefore has been removed from the maps and references for some time. Accordingly this is not a valid consideration for removal of wind turbines.
2. We note the comment in the Assessment Report that "*While the removal of these (10) turbines is likely to reduce visual impacts on some sensitive receivers, the Applicant has not provided a revised visual assessment.*". This outcome was in response to confirmation by the Department that an additional assessment was not required due to the obvious reduction in impacts from what had previously been assessed by our consultants as "acceptable".
3. We note the comment in the RLA Review to use "*appropriate colours (mid grey or blue grey)*" for wind turbines. This statement is unjustified, is not supported by any wind farm LVIA specialist that Epuron has ever worked with, and would likely be globally unprecedented. Dark colours such as this would

remove the clean aesthetic that most community members appreciate when viewing wind farms, and would likely increase (rather than reduce) visual impacts.

4. We acknowledge the RLA recommendation to remove certain wind turbines, supported by the Department. We do not consider this recommendation is justified and our brief response to these recommendations is outlined in Table 3 and more detailed response will be provided by ERM in their assessment.

5. Annexure J provides an index of new photomontages currently in preparation and based on the final Project Layout. Where stated, these photomontages will be provided with the supplementary visual impact assessment response.

6. We have provided in Annexure J new photomontages for residences C75, C06, C41 and C67 in response to questions raised about these photomontages in the report. We have also provided new photomontages for previously 'non-involved" residences C04, C27, C68, M13, M32, G31 (derelict). All photomontages in Annexure J were prepared on the basis of the final Project Layout.

Table 3 - Initial response to RLA Recommendations

RLA recommendation to remove turbines	**Epuron response**
Turbines 110, 111, 112, 114, 115, 116 and 122 should be removed … due to the proximity to residences M42 and C89 and to protect an area of higher scenic quality.	The overall visual impact on the living areas at M42 was assessed as "low to negligible". The scenery is typical for the area with no unique features. The majority of these turbines are not visible from the residence due to the location of a hill immediately behind (to the south of) the residence. See attached photomontages. C89 is not an existing residence and nor is there any planning approval for a residence in this location. Any future residence could be designed to take into consideration the location of turbines and the majority of views from this location could still be accessed without any turbines being visible if that is the wish of any future landowner. Screening would provide additional mitigation if required.
Remove the seven turbines in the immediate visual catchment of Gap Range at Crisp Galleries (M8) (Turbines 100 – 106)	M8 and Crisp Galleries is 2.4km from the nearest turbine location, well outside of the 2km zone indicated in the Draft Guidelines. ERM assessed the visual impact at this location as negligible due to the screening by existing vegetation adjacent to this residence. See aerial map of property below. This screening was not taken into account in the RLA Review. 
Turbines 131, 133, 134, 136 and 100, 101, 102, 103, 104, 105 and 106 should be removed due to the close proximity to existing residences G14, M20 and M24 and proposed residential and tourist expansions at Crisp Galleries and also in relation to the scenic value of Conroy's Gap and potential cumulative impacts on users of the Hume Highway.	• G14 is 1.4km to the nearest wind turbine. Turbines within 2km are 106, 131, 133, 134 and 136. Screening planting can reduce the visual impact to a low level. Epuron has discussed visual and other amenity issues with the landowner on a number of occasions. To our understanding the landowner has not made any submission to the Department opposing the project on visual or any other grounds. (Note final box below re turbine 136). • M20 is 1.9km to the nearest wind turbine. Only wind turbine 100 is within 2km. Screening planting could reduce the visual impact to medium to low. Epuron has spoken with the landowners who have not objected to the wind farm. • M24 is 1.9km to the nearest wind turbine. Only turbine 100 is within 2km. Due to boundary vegetation the visual impact is medium and would be low with screening planting. Epuron has spoken with the landowners who have who have not objected to the wind farm. • The proposed ecovillage expansion at Crisp Galleries is more than 2km from the nearest wind

	turbine. The landowners have been aware of the wind farm for more than five years and the wind farm was proposed before any development plans commenced at the Crisp Galleries. The wind farm and proposed ecovillage expansion are not inconsistent land uses. Given the wind farm was under development prior to the proposed ecovillage expansion it is reasonable that the second development must consider the first development. The ecovillage expansion can be designed taking into consideration the views to the wind farm. Screening would provide additional mitigation if required. • Removal of these 11 turbines will have limited if any impact on the cumulative visual impact on users of the Hume Highway. Cumulative impact was assessed as low from the locations identified in the Supplementary LVIA. • There is a limited view of turbines north and south of the highway from Conroy's Gap due to high embankment on either side of the highway • RTA has not expressed any concern in relation to the views from the Hume Highway • One turbine (136) is relatively close to Hume Hwy (175m to centreline). The next nearest turbines are ~470m to centreline. This is consistent with the nearest turbines to the Hume Hwy at Cullerin Wind Farm, also ~470m to the centreline. • Accordingly, we do not believe there is justification for removal of any turbines, however given its closer proximity to the Hume Highway Epuron would not object to removal of 136 if DPE considered this was justified.

8 Traffic and Transport

8.1 Background

A Traffic Impact Assessment was prepared by Bega Duo Designs in December 2008 and included as part of the project Environmental Assessment (Appendix 6). The report was prepared in accordance with the requirements of the DGRs and conformed to the *Guide to Traffic Generating Developments* as recommended by the NSW Roads and Traffic Authority (now RMS).

The report provided a technical appraisal of the traffic and safety implications arising from the proposal and recommended measures for the minimisation of traffic impacts during construction and operation of the wind farm. The report concluded that the "*Adoption of all the safeguards for minimising traffic impacts outlined in this study should reduce community disruption and the risk of traffic accidents to an acceptable level and minimise structural and environmental damage*".

At the request of the Department, a Supplementary Traffic Impact Study was prepared and included in the PPSR V2 (Dec 2013). The supplementary report provided additional information and supported the conclusions of the original report.

8.2 Response to issues raised

8.2.1 Access points

The Department has expressed some concern in relation to the location of primary and secondary access points and whether these had been adequately assessed. For the avoidance of doubt, these are clearly indicated on the final Project Layout provided with the Initial Response. No access points are located on the property owned by Landowner 16, alternate access is available both to the north and the south of this property.

The transport route and two access points to the Marilba West precinct off Illalong Road were assessed by Bega Duo Designs in the Supplementary Traffic Impact Study and found to be acceptable. The subsequent change of the northern access point from a secondary access point to a primary access point is not material as the full route along Illalong Road to the southern access point had already been assessed and the overall impact to Illalong Road is unchanged.

Although there have been some minor realignment of the internal site access tracks for the Marilba West precinct, this is on private property within the wind farm site and the location of the access point off the Hume Highway remains unchanged. A swept path diagram for this primary access point (labelled as Hume Highway/Old Hume Highway intersection) was included in Attachment 15 (PPSR V4).

8.2.2 RMS (RTA) Submission

Many of the issues raised in the Assessment Report relate to issues raised by the RTA (now RMS) in their submission dated 18th December 2009 in response to the exhibition of the EA. A second submission was also provided by RMS dated 1st March 13 in response to the exhibition of the PPR; this substantially referred to the earlier response.

RMS summarised their comments in their 2009 submission by stating that "*Based on compliance with the submitted documentation, the RTA raise no objection to the development as proposed, subject to the following comments being included as conditions in the development consent:".*

Epuron responded by updating its SOCs to reflect these comments in the PPR (see SOCs 34 - 38).

In particular, SOC 34 includes the statement that "*The Traffic Management Plan and other mitigation measures will be implemented in accordance with the processed outlined in the RTA now RMS) submission dated 16 December 2009*".

In response to the exhibition of the PPR, including these revised conditions, RMS stated amongst other things:

> *The Statement of Commitments in section 10.2 of the Environmental Assessment, together with the commitments contained in the responses in this Preferred Project Report will ensure that the proposed*

Yass Valley Wind Farm can be constructed while minimising any residual impacts to the existing environment.

It is noteworthy that the preparation of a detailed Traffic Management Plan, a more detailed Traffic lmpact Study and a road dilapidation report as identified in the response to submissions by Epuron may, if undertaken in consultation with the Roads and Maritime Services (RMS) and the Yass Valley Council, appropriately address the traffic related issues outlined in the previous correspondence from the RTA.

Note, the SOCs include these obligations (see in particular SOCs 34, 37).

RMS is clearly comfortable that the concerns it raised in 2009 have been addressed or can be addressed post approval by way of the Traffic Impact Study and Traffic Management Plan proposed in the SOCs.

Accordingly, the concerns raised in the Assessment Report in relation to RMS appear to be without merit.

Access via truck parking bay

One question not directly addressed by way of the SOCs was in relation to the use of the truck parking bay for site access in relation to Conroy's Gap. This access point has subsequently been downgraded to a secondary access point, with the majority of access to this area of the site via Paynes Road.

We note that while RMS expressed concern about use of this access point, they also indicated that access would be acceptable subject to development of a plan of management to address this issue. This would be included in the Traffic Management Plan referred to in SOC 34, however Epuron would be happy to a specific consent condition to directly specific this requirement.

8.2.3 Yass Valley Council Submission

There are two roads within the Yass Valley Council's road network that have been proposed to be used for heavy vehicle access:

- Illlalong Road (approx. 4.4km south from Burley Griffin Way) for access to up to 17 turbine locations related to the Marilba precinct
- Paynes Road (approx. 4.2km between the Hume Highway and residence G10) for access to 18 turbine locations related to the Conroy's Gap Extension precinct.

The Council's response to the PPR (dated 21 March 2013) acknowledged that the PPR had considered and responded to the issues raised in the earlier submission to the EA and requested that "*the Proponent complete a more detailed Traffic Impact Study in consultation with the Council prior to the commencement of construction*", as well as listing a number of requirements for this study.

The proponent has committed to completing this more detailed assessment in consultation with the Council (see SOC 34) prior to construction, and in doing so will address the following specific issues raised by Council:

1. Ensure that the condition of the proposed access roads and road user safety are not compromised
2. Detailed review of safety on all proposed transport roads to identify potential hazards along the length of each road
3. Undertake a structural assessment of the existing pavements and where these pavements not to the required standard bring them up to the required standard for the proposed use
4. Review the standard of all unsealed roads and upgrade to suit the proposed use
5. Undertake a structural assessment of all bridges and major drainage structures along the proposed route and where the capacity is inadequate, undertake improvement works to increase the capacity
6. Adequately address the location and standard of the proposed access points off the road network, and comply with the sight distance requirements of "Austroads Guide to Road Design"; and
7. Review the proposed controls for safety and asset protection impacts, including upgrade works where required

Epuron considers that all of the traffic and transport issues raised can be adequately addressed through its compliance with SOCs 34 – 38.

We note two further issues raised by the Department in relation to roads owned by Yass Valley Council.

Illalong Road and bridge (box culvert).

The wooden bridge on Illalong Road located approx. 3.1km south of Burley Griffin Way has undergone a significant upgrade since the original Traffic Impact Study in 2008, being replaced with a concrete box culvert structure. While it is anticipated the maximum loading of this structure would well exceed the designated 10 tonne load limit on Illalong Road, this has not yet been confirmed.

We note that Councils has advised the 10 tonne limit on Illalong Road is an administrative limit and a permit would be required to exceed this limit; we understand this permit is likely to be granted.

Epuron has already committed to carrying out a structural assessment of this bridge (and Illalong Road itself) prior to construction to confirm it is structurally adequate for purpose, this would be implemented in the Traffic Management Plan (SOC 34). Yass Valley Council has indicated it is comfortable that this assessment is carried out prior to construction as part of the Traffic Management Plan; accordingly there is no clear need to carry it out prior to determination and before final haulage contractor, actual turbine loads, vehicle design considerations etc can be fully taken into account.

We accept that this interpretation of SOC 34 may be unclear; accordingly we are not opposed to a consent condition which specifically confirms the obligation to carry out this assessment prior to construction.

Road dilapidation

Council has expressed a concern that road dilapidation resulting from the wind farm may not become apparent until well after construction has completed.

Epuron has already committed to "*repair any damage resulting from the construction traffic (except that resulting from normal wear and tear) as required during and after completion of construction at the Proponents cost*" (SOC 37, emphasis added). We consider that this fully addresses Council concerns and will incorporate appropriate strategies and design consideration, in cooperation with Council, as part of the Traffic Management Plan and well prior to construction. This may include modifying or sealing the road (at the Proponents cost) if this is determined to be appropriate.

9 Additional issues raised

9.1 Noise Impacts

9.1.1 Background

In accordance with the procedures set out in the Noise Guidelines, higher noise limits are applied to "Involved" landowners than "non-involved" landowners:

- health-based limits (as set out in the *Guidelines for Community Noise* published by the World Health Organisation, April 1999) are applied to "involved" landowners unless a specific lower limit is agreed with that landowner; and
- amenity-based limits are applied to "non-involved" landowners in accordance with the Noise Guidelines.

The amenity based limits result in a lower noise level compared with the health-based limits set by the world Health Organisation. While the limits outlined in the Noise Guidelines establish overall limits, it is common for noise effects to be below (often well below) these limits.

Epuron previously carried out noise impact assessment for both involved and non-involved landowners - treatment of landowners 16, 8/9 and 23-25 are described in 4.3.2.

9.1.2 Further Noise Analysis to be provided

A number of layout changes have occurred since the most reason noise analysis. The majority of these changes are removal or relocation in turbines, and as a result it is anticipated that the overall impacts would be less than the current assessment level. As this was determined to be acceptable Epuron anticipates the current layout will have no difficulty in meeting the noise requirements.

To confirm this, Epuron has engaged Marshall Day Acoustics to carry out a supplementary noise analysis at residences described in 4.3.2, as well as to provide a review with respect to the changes since previous assessment. This review will also address some issues raised in the Assessment Report. Epuron **will provide a copy of the results of that analysis to PAC on or before 26th March 2015**.

9.1.3 Noise Issues Raised in Assessment Report

The Department considered that there were a number of outstanding noise assessment issues but also noted that these could be addressed through the implementation of best practice and mitigation measures.

The Department expressed concern that background noise levels at receivers M42 and C74 were not undertaken by a qualified noise specialist. The Noise Guidelines do not specify any particular qualifications for the persons undertaking background noise measurements. Epuron's engineers have the necessary capability and experience with the deployment of noise measuring and logging equipment as well as a thorough understanding of the requirements of the noise guidelines as they relate to the measurement and collection of background noise data.

The assessment indicates that the low frequency noise criteria specified in the draft *NSW Planning Guidelines: Wind Farms* will be met for the REPower MM92 turbine, however the night time criteria will be exceeded at 5 non-associated receivers for the Vestas V90 turbine. A detailed response to this issue is set out in section 7.2.5.1 of the PPSR V4 including that the marginal exceedances for the worst case turbine can be mitigated using the outlined strategies. Epuron also notes that compliance with this aspect of the draft *NSW Planning Guidelines: Wind Farms* is not required.

The Department noted that the Applicant's assessment concludes that the predicted noise levels from the substation(s) are likely to be approximately 31dB(A) at the closest receiver. However, this will need to be revisited once final locations for the substations are confirmed. Epuron has accepted and committed to (See SoC 6) updating the operational noise assessment to incorporate final infrastructure layout and equipment selection prior to the commencement of construction.

9.2 Additional Impacts

The Department considered that there were a number of outstanding assessment issues but also noted that these could be addressed through the implementation of best practice and mitigation measures.

Health impacts – Landowner 16

The Department noted that given the unknown acceptability of any noise impacts on Landowner 16, the Department is unable to determine whether the impacts of the group of turbines in close proximity to Landowner 16 are acceptable and whether any adverse health impacts are expected. As noted in section 9.1 the previous noise impact assessments included noise predictions for the residential receivers located on the Landowner 16 property and these are within the relevant criteria, even when Landowner 16 is considered non-involved. This will be verified by the supplementary Marshall Day Acoustics analysis outlined in section 9.1.

Health impacts – powerlines

In relation to the potential impact of magnetic fields from transmission lines the Department noted that it was unable to determine the acceptability of all the transmission and power lines given the final location of lines relating to those landowners that have potentially been misrepresented as 'associated' is unclear. Epuron's assessment considered the potential impact of magnetic fields on all residences, regardless of whether they might be associated or non-associated.

Archaeology and heritage

The Department noted that the Archaeological and Heritage Assessment field survey had not covered the entire wind farm site. As noted in Attachment 3 to the PPSR, the assessment methodology employed targeted field survey work consistent with the *Guidelines for Aboriginal Cultural Heritage Impact Assessment & Community Consultation* (2005). This approach has been accepted by OEH on other wind farm impact assessments and is supported by a commitment (SoC 24) for further heritage field surveys prior to construction of any impact areas not covered by the prior surveys.

The Department consider that there is insufficient information to establish the potential impacts to Aboriginal Heritage, and whether or not the impacts of the proposal are acceptable. Epuron believes this position is inconsistent with the Departments previous comments, including confirming adequacy of the EA and PPR archaeological and heritage assessments and the latest OEH comments (22 August 2014) which endorsed the proposed SoCs and Cultural Heritage Management Protocol as appropriate mitigation and management of any archaeological and heritage issues.

Bushfire risk and aerial fire fighting

The Department noted that the RFS did not raise any concerns about wind farm impacts on aerial bush fire fighting but suggested that any revised aviation impact assessment should include consultation with and consideration of any issues raised by the RFS. Epuron notes that it has, and continues to consult with the RFS about potential aviation related and other potential impacts of the wind farm on bush fire risks.

Water impacts

In relation to potential impacts water sources the Department noted that a quantification of impact on Jugiong Creek was not provided. The Jugiong Creek has highly variable flows and as a result it is not a preferred source of water for the construction of the wind farm. If any water was to be extracted from the Jugiong Creek, rather than the other potential sources assessed, then it would be done in a manner which did not impact on any other users of the water source.

10 Conclusion

The Yass Valley Wind Farm provides for the establishment of 124 utility scale wind turbines in NSW, along with the electricity connections and related infrastructure required to build, maintain and operate it over its life.

The Project offers significant benefits to NSW. In addition to the provision of renewable energy and reduction in greenhouse gas emissions, this Project will provide very significant regional investment, local and regional jobs in construction and operation, and ongoing economic benefits through landowner payments and the economic activity of employees and contractors. This is supported by the proposed establishment of a community fund of $2,500 p.a. per wind turbine, contributing up to $310,000 p.a. to the local community.

It is an environmentally good project which offers significant social and economic benefits to the local and regional community of NSW.

The project is notable for the very small number of objectors it has attracted. In particular:

- only 8 objections from members of the public were received during the exhibition of the Preferred Project Report; and
- no government agency objects to the Project.

It is located in a generally benign and relatively sparsely populated area of NSW which has a history of involvement with the power industry via the strong transmission line infrastructure available in this area.

The Assessment Report outlines three key reasons for refusal of the Project.

These reasons are rejected on the following basis:

1. the Department has made no clear case for refusal of the Project;
2. the issues raised in the Assessment Report have either (i) already been dealt with, or (ii) can easily be dealt with by way of consent conditions in a manner consistent with the Model Conditions typically applied by the Department; and consistent with other recent wind farm approvals in NSW;
3. The Project's impacts have been fully assessed over a period exceeding six years, relying on independent experts as appropriate, in accordance with the DGRs, and in consultation with all key stakeholders and agencies;
4. The adequacy of this assessment has been confirmed by the Department on two separate occasions;
5. The project is clearly defined with all project details outlined in the Project documents including the Project Layout provided to PAC in the Initial Response;
6. The impacts resulting from the final Project Layout are generally less than what was previously found to be acceptable; therefore the changes made have improved the overall environmental outcomes;
7. The Aeronautical impacts have been fully assessed to the extent possible at this stage of the development;
8. The approach to Aeronautical impact assessment is consistent with normal practice in NSW; consistent with AirServices requirements (including its requirement for a full aeronautical surveillance radar impact assessment once the final wind turbine locations and design details are known); consistent with the Model Conditions typically applied by the Department; and consistent with other recent wind farm approvals in NSW;
9. The Statement of Commitments addresses each of the outstanding points raised in relation to Aeronautical impacts including the requirement to mitigate (at the proponent's cost) any impacts to the effectiveness or coverage of aeronautical surveillance radar identified as a result of the final aeronautical surveillance radar impact assessment;
10. AirServices has not objected to its approval;

11. The biodiversity issues raised have been managed through avoidance, minimisation and mitigation (including the commitment to establish appropriate offsets to OEH's satisfaction) and through a strict set of conditions outlined in the Statement of Commitments;
12. This approach to biodiversity is consistent with normal practice in NSW; consistent with OEH's requirements (including in relation to use of bio-banking); consistent with the Model Conditions typically applied by the Department; and consistent with other recent wind farm approvals in NSW;
13. The Statement of Commitments addresses each of the points raised by OEH in their latest comments and, where drafting was provided by OEH, incorporates the OEH drafting;
14. OEH has not objected to the development, and EPBC approval has been granted for the entire development; and,
15. The additional concerns raised in the Assessment Report are of a minor nature (not of a scale considered by the Department to warrant refusal), and can be adequately dealt with via the Statement of Commitments and appropriate Consent Conditions.

While seeking approval for the entire development, Epuron has also demonstrated that it can be built in various stages or configurations, and therefore if PAC considers the impact of any element of the Project is unsatisfactory then the remaining elements of the Project are likely to remain both constructible and viable.

Based on its wealth of wind farm development experience, Epuron can see no reason why the project should not be approved in its entirety.

Accordingly we request that PAC approve the wind farm development.

Annexures

Annexure A. Abbreviations

Act	Environmental Planning and Assessment Act 1979
AirServices	AirServices Australia
Assessment Report	Secretary's Environmental Assessment Report prepared by the Department (Jan 2015)
Department	Department of Planning & Environment
DGRs	Director-General's Requirements issued 12th January 2009
Draft Guidelines	Draft NSW Wind Farm Planning Guidelines (Department, 2011)
EA	Environmental Assessment
Initial Response	letter from Epuron to PAC dated 13 February 2015.
Model Conditions	Department's document *Standard and Model Conditions – Wind Farms*
Noise Guidelines	South Australian EPA Environmental Noise Guidelines – Wind Farms (February 2003)
OEH	Office of the Environment and Heritage
PAC	Planning Assessment Commission
Part 3A	Part 3A of the Environmental Planning and Assessment Act 1979
PPR	draft Preferred Project Report
PPSR	Preferred Project and Submissions Report
Secretary	Secretary of the Department of Planning and Environment
SOCs	The Statement of Commitments included with the Initial Response

Annexure B. Issues raised in Assessment Report

Table 4 - Issues related to Project Layout and Assessment Adequacy

Assessment Report Section	Details	Response
Executive Summary, p (ii), para 3	*All of the amendments proposed in the final Preferred Project Report (September 2014) have not been adequately shown and assessed in the Applicant's documents. As a result, the final infrastructure layout, access routes and number of surrounding receivers affected by the proposal remains unclear*	See section 4.1
Executive Summary, p (ii), para 5	*The Department is of the view that the Applicant has failed to provide an appropriate level of information to support its application, and subsequently failed to fully demonstrate to a reasonable level the full impacts associated with the development of the wind farm and appropriate mitigation measures to achieve satisfactory environmental and social outcomes*	Department has previously determined to be adequate - See section 3.1
Executive Summary, p (ii), para 6	*The Department's assessment has considered all relevant documentation…*	
Executive Summary, p (ii), para 8	*The Applicant has submitted many iterations of the proposal design and at this stage, the proposal design includes infrastructure components on land which the Applicant has not successfully secured with some respective landowners, for the Applicant's use of their land for the proposal. This results in uncertainty in the final layout of the proposal, as some project elements may not be able to be accessed and any wind turbine electricity generated may not be able to be transferred to the grid.*	See section 4.1
Executive Summary, p (ii), para 8	*Additionally, the Applicant has not assessed the impacts of all aspects of the project infrastructure. Consequently, the Department considers there are unacceptable levels of uncertainty in evaluating the environmental impacts of the proposal.*	See sections 4 & 6
Executive Summary, p (ii), para 9	*The Department considers the Applicant has failed to adequately demonstrate that it has developed a consistent project layout and footprint which ensures the proposal's environmental and social impacts can be appropriately evaluated by the Department and other stakeholders. At this stage, the Department considers there are too many aspects of the project which have not been confirmed and committed to by the Applicant, which introduces an unacceptable level of risk in enabling the Department to properly assess the impacts of the proposal.*	See section 4.1 and SOCs
Executive Summary, p (ii), para 10	*Additionally, the Applicant has not reasonably assessed all of the impacts of the proposal on some landowners that are currently not-associated with the proposal, as the Applicant has nominated these to be associated landowners. The Department considers the lack of assessment of potential non-associated landowners to be a serious flaw in the Applicant's assessment.*	See sections 4.3 & 9
Executive Summary, p (iii), para 7	*The Department further suggests the Applicant's standard of documentation and level of community and stakeholder engagement has fallen well short of industry best practice expected by the Government and the community, and advocated by peak industry bodies such as the Clean Energy Council.*	The Department has no basis on which to make this claim, and does not attempt to substantiate it. See section 3.2
2.1.1, p 3, para 1 and 2.1.2, p3, para 1, pt 1	*…the construction and operation of a wind farm and associated electrical and civil infrastructure with a maximum of up to 134 wind turbines …* *…construction and operation of a wind farm consisting of up to 134 turbines*	The number of turbines outlined is incorrect and demonstrates that not all documentation provided to the Department has been considered in the Assessment Report. See section 3.2
2.1.2, p3, para 2, pt 5	*…construction of up to 3 substations (however the Department notes inconsistencies between the layout as proposed in Figure 3 and other maps in the draft final Preferred Project Report dated September 2014).*	See section 4.1

Assessment Report Section	Details	Response
2.1.2, p4, Figure 3	[Map sourced from draft PPR dated September 2014]	This map was out of date at the time the Assessment Report was delivered and demonstrates that not all documentation provided to the Department has been considered in the Assessment Report. See section 3.2
2.2.1, p6, para 2&4	*The amendments to the development were significant, and included the relocation of the majority of turbines and the addition of a north-west cluster of 12 turbines; an overall reduction in the number of turbines from 152 to 148; and the realignment of the main transmission line…* *Below is a brief summary of some of the main changes to the development as a result of all the draft Preferred Project Reports:* - *a reduction in the total number of turbines from 152 to 134;* - *the relocation of the majority of turbines including the addition of a north-west cluster of 12 turbines in new locations;* - *the realignment of the main external transmission line;* - *the inclusion of two on-site concrete batching plants;* - *the relocation of internal transmission lines, access roads plus the addition of alternate switchyards and substations; and* - *revised site access points.*	Notwithstanding these changes the Department subsequently determined the PPR to be adequate and placed it on exhibition. See section 4.1. The number of turbines outlined is incorrect and demonstrates that not all documentation provided to the Department has been considered in the Assessment Report. See section 3.2
2.2.1, p6, para 5&7 and p7 para 1	*The Department also notes that the Applicant in the final draft of the Preferred Project Report (dated September 2014) indicated that the Yass wind farm may be built in stages; that is, it may be developed as three separate wind farms (Coppabella, Marilba and Conroy's gap extension), with the latter linked to the approved Conroy's Gap wind farm. …* *The Department also notes that it is very late in the assessment process to change the proposal to a staged development application within the meaning of section 83B of the Act …* *Given the above, the Department is not supportive of the Applicant's recent requests regarding staging*	The project clearly included the concept of stages development when the EA was first exhibited. See section 3.4 of this document
3.5, p9, para 2	*… the Department considers that the Applicant has failed to meet the objects of the Act. In particular, the Department's assessment has found that the proposal's impacts are contrary to the principle of the protection of the environment and ecologically sustainable development.*	See section 3
3.6, p9, para 4	*… the Department's assessment of the ecological impacts of the proposal concluded that the proposal's impacts are contrary to the principle of conservation of biological diversity and ecological integrity.*	See section 6
3.8, p9, para 7	*It was determined that both parts are controlled actions and would have, or are likely to have, a significant impact on matters of national environmental significance that are protected under Part 3 of the EPBC Act.* *The Applicant received Commonwealth approval, with conditions, under the EPBC Act for one part of the project on 5 November 2014. The Applicant had previously withdrawn the other referral in 2013.*	This statement is both incorrect and misleading. See section 6.2.1
5.1.1, p15, para 4	*At this stage, the Applicant has failed to commit to a definitive project layout and assess the environmental and social impacts of a final layout.*	See sections 4.1 and 6.2 of this document.
5.1.1, p15, para 4	*Additionally, the Applicant has not been able to demonstrate that it can secure the land required to construct the whole project.*	See section 4.3
5.1.1, p15, para 4	*The Department considers the Applicant's proposal includes some aspects with a high level of uncertainty, and therefore in its current form, the level of risk this uncertainty presents is unacceptable.*	This issue is not clarified further, hence we assume it is addressed by responding to the other issues raised.

Assessment Report Section	Details	Response
5.1.1, p15, para 5	*A related issue is the correct nomination by the Applicant of whether a landowner is associated or involved in the project, as this implies the landowner agrees to host project infrastructure, or agrees to consequential impacts from hosting project infrastructure or agrees to be in close proximity to project infrastructure on neighbouring properties.* *It appears the Applicant has incorrectly identified some landowners as associated landowners or wishes to nominate some landowners as associated landowners without an agreement in place.* *…some impacts on previously identified associated landowners properties have not been assessed by the Applicant*	See section 4.3 of this document.
5.1.2, p15, para 7	*The Department received submissions from landowner 16 that they have requested the Applicant to remove proposed infrastructure from their property on numerous occasions. However, the Applicant repeatedly submitted plans which included infrastructure on the property of landowner 16, until the last plan from the Applicant (dated 25/11/14). The Department has also had communications with landowner 8/9 and landowner 23-25, who have stated they do not wish to host any wind farm infrastructure.*	See section 4.3
5.1.3, p16, para 4	*… the Applicant's response shows that it has not yet secured agreement with five landowners, five years after the EIS was originally exhibited. However, the Applicant wishes to include the five properties in the DA (and therefore retain project infrastructure on these properties).*	See section 4.3
5.1.3, p16, para 5	*The Applicant incorrectly identifying some landowners as associated when they are currently not-associated, causes two significant issues for the Department's assessment:* *1. ongoing confusion and uncertainty about the footprint of the proposal, which leads to outstanding issues in evaluating the impacts of the proposal; and* *2. no assessment has been provided by the Applicant of the visual impacts of the proposal on landowners that may become non-associated, if the Applicant fails to secure agreements with these landowners.*	See section 4.3
5.1.3, p16, para 5	*This issue also includes the Applicant's failure to assess visual impacts of the proposal on the landowner (landowner 16) that has recently been removed from the proposal.*	See sections 4.3.2
5.1.3, p17, para 2	*During the assessment of the proposal, 3 landowners advised the Department that they are not legally involved with the development, nor do they wish to be, and therefore all infrastructure as nominated within the Applicant's assessment on their respective properties should be deleted.*	See section 4.3
5.1.3, p17	*There are consequential impacts that would result from the Applicant's inability to develop the infrastructure outlined in Table 3 if the landowners do not wish to be an associated landowner.* *This results in uncertainty in the final project layout that the Applicant is seeking a Project Approval for. Additionally, it remains unclear how turbines on adjacent properties will be accessed and connected to the grid.*	See sections 4.2 & 4.3
5.1.3, p18, para 2	*The Department notes infrastructure is still proposed on the properties of 3 landowners not wishing to be involved in the project within the Applicant's assessment.*	See sections 4.2 & 4.3
5.1.3, p18, para 2	*Section 2.2 of the Applicant's final Preferred Project Report which purports to describe the changes that have occurred to the project since exhibition of the first draft Preferred Project Report (November 2012), also does not seem to accurately reflect the above changes.*	See section 4
5.1.3, p18, para 2	*The Department also notes the impacts of the new electrical connections and access tracks have not been adequately assessed and documented within the final Preferred Project Report. This should include impacts associated with approximately 1.5km-2km of new underground cabling, a new alternate substation location, a new alternate switchyard, new 300kV and 132kV overhead power line routes and revised primary access point and access track from the Hume Highway to turbine 118. The possible consequential environmental and social impacts of these changes to the project layout and the residual risks to the environment of these proposed changes are therefore unknown.*	See sections 6, 7 & 8

Assessment Report Section	Details	Response
5.1.3, p18, para 3	*Additionally, as infrastructure such as turbines were proposed to be sited on properties adjacent to properties 8/9 and 16, these project components may not be able to be accessed if properties 8/9 and 16 are no longer part of the Development Application. In the event these turbines could be accessed via alternate routes, the ability of reticulating electricity generated from the operation of these turbines to the grid continues to remain uncertain.*	See section 4.2
5.1.3, p18, para 5	*The Applicant recently submitted documentation to the Department (14 November 2014) which removed landowner 16 from the proposal. Although the document states that proposed infrastructure from this property has now been removed and alternate access has been provided to infrastructure surrounding this property, the Applicant has not provided a corresponding assessment of the potential impacts from newly proposed tracks, overhead reticulation and underground reticulation (as proposed on maps dated 25/11/2014).*	See sections 3.2 & 4
5.1.3, p18, para 5	*Additionally, the Applicant has not provided an assessment of the visual impacts of the turbines on landowner 16, as the Applicant previously nominated this landowner as associated.*	See section 4.3.2
5.1.3, p19, para 1	*Similarly, if the Applicant is unable to secure agreements with landowners 8/9 to become associated landowners, these landowners would become non-associated and the full visual impacts of the proposal should be assessed by the Applicant*	See above comment RE LVIA
5.1.3, p19, para 2	*The recent document from the Applicant (14 November 2014), together with the revised PPRs demonstrates a failure on the Applicant's part to consistently commit to the footprint of the whole project, consistent with the land it has secured for the proposed development.*	See sections 4.1 & 4.3
5.1.3, p19, para 2	*The Applicant has continually and iteratively amended the project (or provided various options) and has failed to commit to a consistent project layout and assess the full extent of impacts such that the Department, other government agencies and the local community can evaluate the environmental and social impacts of the proposal with confidence and in a transparent manner.*	See section 4
5.1.3, p19, para 2	*Additionally, it is the Department's position that the Applicant proposes to undertake an unacceptable amount of impact assessment work in the preconstruction phase, particularly in relation to aviation and biodiversity aspects.*	See sections 5 & 6
5.1.4, p19, para 3	*the Department considers the Applicant has failed to adequately commit to a consistent project layout and footprint which ensures the proposal's environmental and social impacts can be appropriately evaluated by the Department and other stakeholders.*	See section 4.1
5.1.4, p19, para 4	*At this point in time, the Department considers there are too many aspects of the project which have not been confirmed and committed to by the Applicant, which introduces an unacceptable level of risk in the ability of the Department to properly assess the impacts of the proposal.*	See section 4.1 and SOCs
5.1.4, p19, para 4	*the Applicant has not reasonably assessed all of the impacts of the proposal on nearby landowners that may become non-associated landowners, or in instances where the landowner is non-associated, however, was previously nominated by the Applicant as associated through the life of the proposal. . The Department considers the lack of assessment of potential non-associated landowners to be a serious flaw in the Applicant's assessment.*	See section 4.3.2

Table 5 - Issues related to Aviation Assessment

Assessment Report Section	Details	Response

Assessment Report Section	Details	Response
Executive Summary, p (iii), para 3	*The Department considers the Applicant has failed to demonstrate the level of risk to the integrity of the operation of the Mt Majura PSR/SSR Air Traffic Control radar and Mt Bobbara SSR Air Traffic Control radars, which are critical to the safe operation of Canberra and Albury Airports. In the event the level of risk is predicted to be unacceptable, the Applicant has also not demonstrated whether viable mitigation options could be implemented to lower the risk to a level acceptable to AirServices Australia. The Department considers there is too much uncertainty about the level of risk to both the operation of Canberra and Albury airports and does not support the Applicant's approach to undertake the key assessment work in the pre-construction phase of the project.*	See section 5
Executive Summary, p (iii), para 3	*The Department also considers the Applicant has not fully evaluated the level and nature of adverse impacts on local commercial and/or non-commercial aviation.*	See section 5.2
5.2.2, p20, para 1	*Airservices Australia has advised that it cannot support the Yass Valley Wind Farm as currently presented. Airservices has repeatedly requested that the Applicant undertake a full aeronautical assessment to determine the full impacts of the proposal on the operation of the Mt Majura PSR/SSR Air Traffic Control radar and Mt Bobbara SSR Air Traffic Control radar.*	See section 5.3
5.2.2, p20, para 4	*Submissions were also received with respect to the impact of the project on air safety, and in particular the impact on aerial spraying for agriculture and wake turbulence for local airstrips in the vicinity of the proposed wind farm*	See section 5.2
5.2.3, p20, para 7	*The Department has consulted with AirServices Australia and understands that AirServices Australia is unable to assess the potential impacts of the wind farm on the Mt Majura PSR/SSR Air Traffic Control radar and Mt Bobbara SSR Air Traffic Control radars without a detailed Aviation Impact Statement (undertaken in accordance with the EUROCONTROL Guidelines).*	See section 5.3
5.2.3, p21, para 1&2	*The Applicant however suggests undertaking the detailed impact assessment following the detailed design of each project stage to determine the final placement of wind turbines prior to construction. The Applicant's reasoning is that it will not be able to commit to the final design location and final design of the turbines until the completion of detailed engineering studies and a tender process for turbine selection.* *The Department acknowledges this creates a "catch-22" situation where the Applicant is unable to commit to detailed design specifications at this stage, however, these are required as input data into the Aviation Impact Statement to determine whether material impacts would potentially occur.*	This was not a suggestion of the Applicant but a requirement of AirServices – see section 5.3 The Assessment Report fails to consider applying appropriate consent conditions such as its Model Conditions to address this catch-22 – see Section ???
5.2.3, p21, para 5	*The [Airport Group] Review highlighted that the Applicant's impact studies did not accurately identify and assess the impacts on surrounding airstrips, and that in its view, some airstrips in the area will be affected. In this respect the review recommends that:* - *all identifiable unregistered aerodromes/airstrips within 55.56km from the perimeter of the proposed wind farm be identified;* - *all known and usable airstrips within 10km from the perimeter to the proposed wind farm be identified;* - *the nature of flying activities at all identified aerodromes and airstrips be listed; and* - *following the collation of the above information, a review of the potential impacts on these airstrips be undertaken.*	See section 5.2
5.2.3, p21 para 6	*The Review did not agree with a number of the methodologies used in the Applicant's assessment and how the subsequent value of these results was obtained. The Review further found that the consultation process and results of the impact assessment report were not accurate enough, including incomplete information supplied to the owners of airstrips, ineffective communication methods used with the owners of airstrips and that not all owners of airstrips were consulted during the assessment process.*	See section 5
5.2.3, p21 para 7	*In particular, the Review noted nine private airstrips in the vicinity of the wind farm proposal, where the aircraft may not achieve sufficient altitude before reaching the wind turbines. The Review found that impacts at these airstrips need to be fully understood, particularly in relation to aircraft performance and departure gradients.*	See section 5.2
5.2.3, p22 para 2	*The Review also highlighted that wind turbines generate turbulence and recommends a review of wind turbulence, inclusive of a single turbine and multiple turbines.*	See section 5.2

Assessment Report Section	Details	Response
5.2.3, p22 para 3-5	*The Department notes it repeatedly advised the Applicant that its aeronautical impact assessment did not identify and therefore undertake a risk assessment of all private airstrips surrounding the proposal, inclusive of agricultural aircraft movements.* *The Department requested the Applicant on a number of occasions to update its aeronautical impact assessment to identify and undertake a risk assessment of all surrounding airstrips. Part of the request was for the Applicant to undertake additional consultation with the owners/users of these airstrips, and any additional airstrips identified during this process, including an assessment on any impacts associated with take-off, landing and circling procedures.* *The Applicant was provided with a map of surrounding airstrips by a member of the Community Consultative Committee in March 2014 which indicated numerous airstrips (approximately 23) in proximity to the wind farm. At the request of the Department, the Applicant undertook additional consultation with the owners of the airstrips identified in this map.* *The Department believes this consultation was inadequate as it was not undertaken by an expert in the field of aviation impact assessment and did not seek to adequately inform the outcome of the proposal by taking into consideration any impacts of the wind farm on the surrounding airstrips. To date, the Applicant has failed to satisfy the Department's request to update its aeronautical impact assessment report to adequately reflect the number of surrounding airstrips and the potential safety and operational impacts that the wind farm may have.*	See section 5

Table 6 - Issues related to Biodiversity Assessment

Assessment Report Section	Details	Response
Executive Summary, p (iii), para 4	*the Applicant has not demonstrated a sufficient commitment to the avoidance of biodiversity impact.*	See sections 6.1 & 6.2
Executive Summary, p (iii), para 4	*Additionally, the Applicant's many iterations to the infrastructure design without adequate impact assessment has meant that there is residual risk that some biodiversity aspects of the proposal have not yet been assessed.*	See sections 6.1 & 6.2
Executive Summary, p (iii), para 4	*The Applicant has also failed to develop adequate mitigation measures, in particular, the Applicant has not demonstrated that it can design and secure an appropriate offset site to adequately offset the biodiversity impacts of the project.*	See sections 6.1 & 6.2
Executive Summary, p (iii), para 4	*Therefore, the Department concludes the development is likely to result in unacceptable impacts on the ecological environment.*	See sections 6.1 & 6.2
4.5, p13, para 9	*The Office of Environment and Heritage (OEH) provided numerous submissions during its review of the draft PPRs. In its latest submission, dated 22/8/14, the OEH raise outstanding concerns regarding the proximity of some turbines to high constraint or woodland areas with a high number of hollow bearing trees; the reliability of infrastructure mapping and the lack of detail and nomination of specific sites in the Offset Strategy. The OEH also recommends that all new unsurveyed areas of the project site be surveyed by a qualified Archaeologist.*	See sections 6.1 & 6.2

Assessment Report Section	Details	Response
5.3.3, p23, para 3	*The additional information provided by the Applicant has been provided in an ongoing, iterative process and has not been consolidated into a single report. The PPR dated September 2014 does not include the updated ecological information provided throughout 2014 and refers to an ecological report dated in 2013.*	The ecological assessments are addressed in a number of documents including: • Biodiversity assessments 2009, • Supplementary Ecology Report, 2012, Yass Daisy surveys 2009 and 2012, Offset Strategy, • HBT assessment, • final mapping See section 3.2and 6.1
5.3.3, p23, para 4&5	*OEH remain concerned that there are a number of inconsistencies with the constraints mapping produced by the Applicant , and it is unclear why certain areas have been identified as high, medium or low constraint, or not ranked at all.* *…both OEH and the Department remain concerned that the current constraints map is not an accurate reflection of the environmental values across the site.*	OEH has an improved understanding of the function of the constraints mapping and has provided updated wording for SOC 11 which prohibits the siting of wind turbines in high constraint areas. See section 6.2
5.3.3, p23, para 6	*Both the Department and OEH note there is one turbine that is still proposed within a high constraints area (turbine 138) and a number of other turbines are within 50m of a high constraint area.*	It is anticipated wind turbine 138 and the remaining 6 within 50m will be microsited away from the constraint. See section 6.2
5.3.3, p23, para 6	*OEH is concerned that placing turbines within close proximity of woodland areas is likely to limit the value of that habitat for many species and suggests a greater buffer between turbines and woodland areas is warranted.*	The issue of acceptable proximity to woodland areas is to be addressed through various SOCs including Additional targeted surveys (SOC15) and the Bird and Bat Adaptive Management Program (SOC 19) See section 6.2
5.3.3, p23, para 7	*the new electrical connections and access tracks (See section 2.2) have not been adequately assessed within the Applicant's biodiversity assessment. These project elements include approximately 1.5km-2km of new underground cabling, a new alternate substation location, a new alternate switchyard, new 300kV and 132kV overhead power line routes and revised primary access point and access track from the Hume Highway to turbine 118. The consequential environmental impacts on biodiversity values and whether these impacts can be managed to an acceptable level is therefore still unknown.*	Layout changes responding to DPE issues have been made within biodiversity assessed areas and either minimise or do not increase the calculated impacts. See section 6.2
5.3.3, p24, para 2	*the Department considers that as the constraints mapping used by the Applicant cannot be wholly relied upon, the justification for siting various infrastructure components including turbines, access tracks and reticulation lines is not supported.*	This is not the view of OEH – to not support the project on this basis underlines the lack of serious consideration of the project by the Department. See section 6.2.8
5.3.3, p24, para 2	*…OEH remains concerned the vegetation and endangered ecological mapping cannot be relied upon for selecting offset sites.*	OEH states that the vegetation and EEC mapping is sufficient for the development application. Conditions are provided for verification of offset sites. See section 6.2.5

Assessment Report Section	Details	Response
5.3.3, p24, para 4	*To estimate the hollow bearing tree resource, the Applicant settled upon a method that included analysing aerial imagery to identify tree canopies over 15m diameter, that are likely to contain hollows. The Department and OEH remain concerned regarding the veracity of this sampling method.*	OEH states that the HBT assessment method has been improved since February 2014 which has provided OEH with better insight about the quantum of impacts. OEH do not mention concern about the HBT methodology anywhere in their assessment report. See section 6.2.3
5.3.3, p24, para 4	*The Department also notes that the Applicant has not undertaken fauna surveys to determine which fauna species may be using the hollow bearing tree resources in the project area.*	Site specific pre-clearing surveys were discussed with OEH and found to be an acceptable approach. See 6.2.3
5.3.3, p24, para 6&7	*OEH has consistently recommended to the Applicant that the placement of turbines adjacent to woodland and forest remnants most likely to contain a high number of hollow bearing trees should be avoided. The applicant has not adhered to this approach for certain turbines, such as turbines 145, 56, 102 and 148, which together would account for over 33% of the hollow bearing trees to be impacted across the whole project. The Department therefore considers the Applicant has failed to make an appropriate attempt to avoid impacts to biodiversity.* *In November 2014, the Applicant undertook a site survey at these four turbine locations, and proposed the relocation of these four turbines (145, 56, 102 and 148) by up to 148m in an attempt to reduce impacts to hollow bearing trees. The Department acknowledges that these relocations are likely to result in the total number of hollow bearing trees being reduced from at least 449 to 320.*	DPE cite four turbines of concern and then notes that the proponent relocated these turbines to reduce impacts. It does not mention that the proponent removed ten turbines from the area of greatest concern to OEH on the Marilba precinct. Placement of wind turbines in the vicinity of hollow bearing trees has been avoided, with further mitigation possible in final micro-siting as set out in SOCs 1 and 15. It is not possible to avoid all impacts so the few areas where impacts remain these will be minimised and offset. See 6.2.3
5.3.3, p24, para 7	*… the Department considers the total quantity of hollow bearing trees to be impacted by the whole project is still significant and that the Applicant has failed to make an appropriate attempt to avoid impacts to biodiversity in the overall design of the wind farm.*	See section 6.2.3
5.3.3, p25, para 4	*The development is estimated to have a total expected impact of approximately 225ha on native vegetation, with approximately 196ha (or 8%) of this being Box Gum Woodland, which should be offset accordingly.*	See section 6.2.5
5.3.3, p25, para 4	*OEH has raised concerns with the Offset Strategy presented by the Applicant. The Offset strategy does not include hollow bearing tree quantities nor does it have specific offset sites nominated. Further, high conservation habitat is not clearly defined, the offset ratios (and methodology) are not supported, and there are other deficiencies in the offset strategy including the use of nest boxes to offset hollow bearing trees.*	All wording as recommended by OEH has been included in the relevant SOC 18 See section 6.2.6
5.3.3, p25, para 5	*The Applicant provided a map of potential offset sites in 2013, however none of these sites were considered suitable by OEH, as the proposed offset locations were adjacent to the turbines…* *Despite the Applicant providing several additional documents throughout 2014, none of these documents has included appropriate offset sites.*	OEH provided words for the consent condition. These are now SOC 18. OEH note the high conservation value of all vegetation on site. See 6.2.6
5.3.3, p25, para 5	*The Department considers the Applicant has not been able to demonstrate that it can secure landowner support for an appropriate offset area which will offset the biodiversity loss of the project.*	Securing landowner support for offset sites is a task for the proponent not the Department See 6.2.6
5.3.4, p25, para 6	*… the Department concludes that the Applicant has not made an adequate attempt to avoid impacts to hollow bearing resources. The impact is considered significant and unacceptable due to the over-cleared and fragmented landscape context in which these impacts would occur.*	10 turbines have been removed and a number of others have been relocated. OEH provided specific wording they wished to have changed or included in the Offset Strategy in their assessment and consent conditions. This is now SOC 18 See 6.2.6

Assessment Report Section	Details	Response
5.3.4, p26, para 2	*due to the various gaps in the Applicant's biodiversity assessment, the Department is unable to determine the acceptability of impacts on the regions biodiversity.*	OEH note in their assessment they have better insights about the quantum of impacts and state the impacts should be offset accordingly using ratios obtained with the Biobanking calculator. See SOC 18 and section 6.2.6
5.3.4, p26, para 2	*The Department's assessment has concluded that the development will result in unacceptable impacts on biodiversity, as a result of inadequate avoidance by the Applicants project design, inadequate provision of mitigation measures, and a failure to adequately and with certainty, offset the biodiversity impacts of the proposal.*	This assessment is not supported by the facts or the key agency. OEH appreciates the work done to date, continues to have concerns and had provided consent conditions yet again. See 6.

Table 7 – Additional issues

Assessment Report Section	Details	Response
<u>*Visual Impacts*</u>		
5.4.3, p26, para 6	*… the Applicant has failed to assess the visual impacts of the proposal at all non-associated residences.*	All properties within 2km have been assessed in detail with additional assessment out to 8.5km and beyond. See sections 7 and in particular 7.1. Additional "non-involved" properties are being assessed as set out in section 4.3.2 with the information to be provided through an additional visual impact report.
5.4.3, p26, para 6	*… some non-associated properties that are in proximity to the wind farm remain unassessed from a visual impact perspective.*	All properties within 2km have been assessed. See sections 7 and in particular 7.1. Additional "non-involved" properties are being assessed as set out in section 4.3.2 with the information to be provided through an additional visual impact report.
5.4.3, p27, para 1	*While the removal of these (10) turbines is likely to reduce visual impacts on some sensitive receivers, the Applicant has not provided a revised visual assessment.*	See section 7.3

Assessment Report Section	Details	Response
5.4.3, p27, para 3	*The Report found that a number of important issues had not been properly considered with some of the key points being:* - *the 5 landscape units used in the Applicant's assessment were not well defined, did not recognise more scenic features within the landscape, and this characterisation was too simplistic;* - *the evaluation of landscape values relied too heavily on professional judgement and took little account of the community's values of the landscape;* - *the lack of public participation and establishment of community landscape values was seen to be the most consistent deficiency with the assessment as the community values had not been appropriately weighted, in particular the size and scale of the proposal, and the cumulative impacts resulting from this scale;* - *consideration of cumulative effect of the wind farm took no account of the 'dynamic' effect of moving around the region where a number of wind farms are built or proposed;* - *impacts should have been considered at 10km rather than 8.5km;* - *there was an under representation of public viewpoints, including locations closest to roads and townships;* *…* - *the approach used in the preparation of photomontages of the public domain provided a useful means of demonstrating the horizontal effect of the landscape affected by the wind farm, but it did not give a realistic interpretation of the relative scale of the turbines in the views;* *…* - *concerns were also raised about technical aspects of photomontages for residential receivers, particularly that the horizontal field of view is oversized compared to the vertical, and that it varies between montages which could lead to misinterpretations;*	The assessment methodology has previously been accepted by the Department. See sections 3.1 and 7.1 . We do not accept that these questions point to a flaw in the assessment, but rather, an alternate approach. An additional response will be provided through an additional visual impact report.
5.4.3, p27, para 3, pt 7	- *it was noted that the proposed removal of 10 turbines would reduce impacts along the Hume Highway, but others in close proximity to the Highway would remain;*	See section 7.3
5.4.3, p27, para 3, pt 9	- *there is a lack of photomontages for an area along the Hume Highway to the west of Bookham, where there is a group of non-associated houses, including C75, C06, C08, C60 and C41*	See additional photomontages in Annexure J for C06, C75 and C41 which represent the west, centre and east of this group of residences.
5.4.3, p27, para 3, pt 11	- *mitigation options, including for areas within the more turbine dominant 2km area, were limited to landscaping where turbine removal or acquisition would have been more appropriate*	See section 7.3
5.4.3, p27, para 4, pt 1	*As a consequence, the Report made a number of recommendations including:* - *the need for more effective community consultation which may result in removal of turbines*	See section 7.3
5.4.3, p27, para 4, pt 2	*As a consequence, the Report made a number of recommendations including:* - *…* - *removal of a number of turbines in the Marilba precinct due to unacceptable visual impacts including the North East Illalong Road area (110, 111, 112, 114, 115, 116 & 122) and Conroy's Gap and Black Ridge Hills area (131, 133, 134, 136 & 100 – 106)*	See section 7.3
5.4.3, p27, para 4, pt 3	*As a consequence, the Report made a number of recommendations including:* - *…* - *provision of more appropriate landscaping*	See section 7.3
5.4.3, p27, para 4, pt 4	*As a consequence, the Report made a number of recommendations including:* - *…* - *appropriate colours (mid grey or blue grey) should be used for turbines.*	See section 7.3

Assessment Report Section	Details	Response
5.4.3, p28, para 2, pt 1	*G11 (Cole) – However, outside the immediate house curtilage, there are likely to be extensive, elevated and prominent views of both Yass Valley and Conroy's Gap turbines, and that the provision of additional landscaping would be required*	See section 7.3 and further LVIA report (to be provided)
5.4.3, p28, para 2, pt 2	*G14 (Keith) – this property would have extensive, elevated and prominent views of turbines to the west. The RLA Review recommends that the most prominent turbines (11) in the G14 view shed should be deleted. (131, 133, 134 136, & 100 to 106).*	See section 7.3 and further LVIA report (to be provided)
5.4.3, p28, para 2, pt 3	*M20 (O'Mara & Bland/Minary) – a number of turbines would be visible to the south west and the Applicant has concluded the impacts would be high. The independent Report recommends that a number of turbines be removed (the same turbines affecting G14 being 131,133,134,136 and 100-106) to address concerns related to this property as well as other properties including (G14, M24 and M8).*	See section 7.3 and further LVIA report (to be provided)
5.4.3, p28, para 2, pt 4	*M24 – this is located in close proximity to M20. The Applicant has concluded the impacts would be moderate. As indicated in relation to M20, the Department does not agree with the Applicant's conclusion and believes the impacts are unacceptably high due to the close proximity of existing residence M20 and the prominence of the turbines.*	See section 7.3 and further LVIA report (to be provided)
5.4.3, p28, para 2, pt 5	*M8 (Crisp Galleries) – There are a large number of in the backdrop to this property resulting in views from the property being dominated by the Proposal. A number of these turbines will also have an adverse impact on other properties including G14, M20 and M24 for the reasons identified above. On the basis of these cumulative impacts, the Department concludes that turbines 131, 133, 134, 136 and 100 – 106 are unacceptable, consistent with the recommendations of the independent report.*	See section 7.3 and further LVIA report (to be provided)
5.4.3, p29, pt 2	*M42 (Grogan) – the topography in the vicinity of the living area of this property provides some reduction in turbine visibility, and the Applicant has concluded the impacts would be moderate. The independent Report notes that due to the generally higher scenic nature of this locality and the proximity of another non associated dwelling within 2km (C89), it would be appropriate to remove a number of turbines (110,111,112,114,115,116 and 122). The Department considers that some of these (111,115 and 122) are unacceptable in any event because of issues relating to C27 (refer below).*	See section 7.3 and further LVIA report (to be provided)
5.4.3, p29, pt 2	*It should be noted that property C89 only appears on some of the Applicant's documentation, and is not discussed by the Applicant. Its status is unclear and needs to be resolved before any determination on the acceptability of turbines in this location;*	See section 7.3
5.4.3, p29, pt 3	*C27 (Garry) – this property had been identified as associated. However, information provided to the Department suggests this is not the case. Accordingly, it should be treated as a nonassociated property. Turbines 115 and 122 and all infrastructure located on this property by the Applicant would need to be removed, as the Department understands the infrastructure is not supported by the landowner. In addition, turbine 111 appears to be about 1km from the living area of this property. The Department has inspected this property and considers that turbine 111 is likely to be unreasonably dominating. No assessment has been carried out by the Applicant;*	See section 7.3 and further LVIA report (to be provided)
5.4.3, p29, pt 4	*C67 (Robinson) – this property is located further away from the turbines, with the closest being about 3.2km away. The Applicant considers there will be a medium to high impact. Although the turbines are at a greater distance than some other properties, this property is effectively in an amphitheatre, which means that it would be surrounded by turbines on three sides. In addition, the ridge to the north west of this property has a prominent and scenic rocky knoll that would be impacted by turbines (refer to Figure 7 and Figure 8). The deletion of 10 turbines by the Applicant will reduce some of the visual impacts. However, the Applicant has not updated its photomontages and it is not possible to clearly identify which turbines have been removed, and whether this impact is now acceptable. Regardless, the impacts to the north west remain a concern..*	See section 7.3 and further LVIA report (to be provided)
5.4.3, p30, pt 1	*The independent Report also raised concerns about a number of properties located along the Hume Highway to the west of Bookham (impacts of turbines 73, 74, 75, 76, 77 and 79). No specific assessment has been undertaken of these properties by the Applicant. The Report recommends further investigation of the impacts. It also notes that most of these turbines also affect C67. Should the impacts of these turbines on the Hume Highway properties be identified as unacceptable it would provide additional reason for their removal, with benefits for C67.*	See section 7.3 and further LVIA report (to be provided)

Assessment Report Section	Details	Response
5.4.3, p30, para 1	*In summary, the Department agrees with the recommendations of the independent review that there are unacceptable visual impacts associated with the location of at least 18 turbines. There are also up to an additional 20 turbines that the Department has serious concerns with, but is unable to confidently identify the acceptability of these turbines given the lack of supporting analysis.*	We are concerned that the Assessment Report does not identify which turbines it "*holds serious concerns with*" or why. See section 7.3 and further LVIA report (to be provided)
5.4.3, p30, para 3	*The Department also notes that there is an overhead transmission line on the western boundary of receiver G11. As indicated above in relation to turbine impacts, further analysis is required regarding impacts on this property.*	See section 7.3 and further LVIA report (to be provided).
5.4.3, p30, para 4	*A number of substation locations have been identified, but final details have not been provided. ... However, the analysis of individual sites was limited to a brief description, and it is not possible to come to a definitive conclusion on how visually intrusive they could be.*	The report clearly identified that the substation locations can be effectively screened. Substations are located low in the landscape and therefore are not visually intrusive. No substation is closer than 1km to an uninvolved residence.
5.4.3, p30, para 5	*With regard to cumulative impacts, the independent Report has raised some concerns, noting that the Applicant's assessment does not fully address the cumulative impacts on the wider region being the number of other wind farms which could be passed in a relatively short space of time by a traveller. The Department agrees that the assessment did not fully consider the potential change in the region's landscape character.*	This concern raises a question of the appropriate level of detail which the Department has previously considered acceptable. The existing LVIA documents address cumulative impact and highway users pass irregularly and for a limited period of time which lessens any impact.
Traffic & Transport Impacts		
5.5.2, p31, para 5	*The primary and secondary access points into the Coppabella and Marilba precincts for the movement of construction vehicles are detailed in Figure 9 (which have been updated in Section 7 of the in the final Preferred Project Report but not reflected in the Applicant's Traffic Impact Study and associated traffic access route map). The Department is therefore unsure on the final location of some access points.*	See section 8.2.1
5.5.3, p31, para 6	*Yass Valley Council raised concerns relating to the impact construction traffic may have on the local road network. These concerns are:* - *that the local road network is unsuitable for the large numbers of heavy vehicles proposed and the increase in heavy vehicle movements will have a detrimental effect on the overall life of the road pavements and safety of the road network;* - *the undertaking of a dilapidation report, as proposed by Applicant, prior to the commencement of construction is an inappropriate method to address the overall reduction in pavement life and impact on bridges and drainage structures caused by the development;* - *Council may be left with a future liability as it is inappropriate to repair defects that appear during the construction period rather than addressing the overall deterioration of the roads; and* - *Council requests that a more detailed traffic impact study be undertaken, inclusive of the undertaking of structural assessments prior to construction of the project.*	See section 8.2

Assessment Report Section	Details	Response
5.5.3, p33, para 1	*Roads and Maritime Services also states that:* - *the assessment fails to quantify some major traffic issues relating to the haulage of the major components of the turbines and substations, which need to be finalised to allow for the proper assessment of the impacts on the road network;* - *it does not have a significant concern with the capacity of the Hume Highway to accommodate the construction traffic;* - *concern exists in relation to the impacts on the local road network and any impacts on the intersections with the Hume Highway and the Burley Griffin Way;* - *it does not agree with construction traffic passing through the rest areas on the Hume Highway to access the Marilba Hills Precinct, as this is inconsistent with the intent of the rest areas;* - *the source and transportation of the raw materials to be used in the concrete batch plants needs consideration; and* - *the method of installation of the proposed transmission line over the road reserve is unknown.*	See section 8.2.2
5.5.3, p33, para 4	*The Department notes that the primary access point into the Marilba West precinct and access track to service the construction of the 19 turbines is via the property of landowner 16. Landowner 16 is a property owner which is no longer an 'associated' residence (see Section 5.1 for further details). Given infrastructure associated with the development (including the access track) maybe removed from landowner 16's property, the access point to the precinct is uncertain.*	See section 8.2
5.5.4, p33, para 5, 6, 7	*The Report indicates that there may be 2 primary access points to access the Marilba West Precinct. The Department also notes that the Applicant's Traffic Impact Study has not assessed the impacts of these 2 access points into the Marilba West Precinct.* *A secondary access point into the Marilba West precinct is also proposed as indicated in the Applicant's Traffic Impact Study. …. It is noted in Section 7 of the final Preferred Project Report that this secondary access point may now be proposed as a primary access point. The use of this access point as a primary access point has not been assessed within the Applicant's Traffic Impact Study.* *For the Marilba East precinct, the primary access point will be from the Hume Highway, which will provide access to the site for the construction of 10 turbines and associated infrastructure. The Department notes that the location of the primary access point into the Marilba East precinct may have been changed in the final Preferred Project Report. This change has not been adequately reflected and assessed in the Applicant's Traffic Impact Study. Preliminary swept analysis has not been undertaken for this proposed access point.*	See section 8.2
5.5.4, p34, para 2	*The Department does not consider that the traffic impact study adequately addressed the potential upgrades that are required to determine whether the impacts of the development on the road network are acceptable.*	See section 8.2
5.5.4, p34, para 3	*Under these circumstances any impact of the heavy vehicles may be difficult to initially detect via dilapidation survey inspections. The Applicant has not provided sufficient assurance that this issue can be dealt with.*	Suitability of mitigation method (dilapidation surveys) to manage any responsibility (& cost) for impact to local roads, particularly Illalong Road See section 8.2
5.5.4, p34, para 6	*Whilst some swept path assessments were eventually provided, the Applicant has not provided any detail and/or recommendations on proposed intersection works, particularly at the proposed primary access points to the wind farm site along Whitefields Road, Illalong Road and into the Marilba East precinct from the Hume Highway*	See section 8.2
5.5.4, p 34, para 6, 7	*The Applicant has also failed to undertake the requested structural assessments of the existing bridges and major drainage structures…* *The Applicant states that a full detailed assessment will be undertaken post approval and prior to construction. However, the Department is concerned that there may be significant constraints that exist on the road network that have not been identified by the Applicant prior to determination.*	See section 8.2

Assessment Report Section	Details	Response
5.5.4, p 34, para 8	*The Department does not agree with the Applicant's suggestion that as Paynes Road is to be utilised for the Conroy's Gap Wind Farm, that additional improvements will be undertaken to accommodate the construction of this wind farm, and are not necessary for the construction of the Yass Valley Wind Farm. There is no certainty as to which wind farm would likely proceed to construction first, should the Yass Valley wind farm proceed.*	Use of Paynes Road has been approved under an existing DA and therefore additional assessment is not required. See section 8.2
5.5.4, p 35	*The Department also requested that the Applicant revise its Traffic Impact Study to account for vehicle weights and load allowances. The Applicant has not provided this information, stating that these would be determined by the transport contractor post approval and prior to construction.*	Estimated heavy vehicle weights will be provided in the Traffic Management Plan. See section 8.2
5.5.5, p35, para 3	*The Department is not satisfied there has been sufficient assessment by the Applicant on potential impacts/upgrades/site access points required for the project.*	See section 8.2
5.5.5, p35, para 3	*Further, the extent of any improvement measures required to ensure the roads are upgraded to the appropriate standard and/or the capacity of the bridges to accommodate the volume of heavy vehicles and ensure the safety of other road users is not known.*	This level of detail will be provided in the Traffic Management Plan. See section 8.2
<u>*Noise Impacts*</u>		
Section 6: Noise	*The Department notes that the background noise levels at receivers M42 and C74 have not been undertaken by a qualified noise specialist.*	See section 9.1.3
Section 6: Noise	*The noise assessment also provided low frequency noise predictions for both turbine options, and compared these predictions to the low frequency noise criteria within the Draft NSW Wind Farm Planning Guidelines of 65dB(C) and 60dB(C) for day and night time. The assessment indicates that the criteria will be met for the REPower MM92 turbine, however the night time criteria will be exceeded at 5 non-associated receivers for the Vestas V90 turbine.*	See section 9.1.3
Section 6: Noise	*The Department notes however that it is unable to determine if the noise levels at Landowners 8 and 9, Landowner 16 and Landowners 23, 24 and 25 would comply with the noise criteria, given the uncertainty over whether these properties are 'associated'*	See section 9.1 and 4.3.2
Section 6: Noise	*With respect to low frequency (20 hertz to 250 hertz) noise, the Applicant's noise assessment predicts that low frequency noise levels would exceed the night time low frequency noise criteria by up to 4dB(C) (as stipulated within the draft NSW Wind Farm Planning Guidelines) at 6 non-associated receivers for the Vestas V90 turbine.* *Again, the Department is unable to determine if exceedances would occur at Landowners 8 and 9, Landowner 16 and Landowners 23, 24 and 25.*	See section 9.1
Section 6: Noise	*Given exceedances have been predicted, and any additional exceedances are unknown, the Department does not support the use of the Vestas V90 turbine.*	See section 9.1.3
Section 6: Noise	*In addition to the turbines, two substation layout options are proposed. These are described in the Applicant's noise assessment, however the revised site layout plan in the Applicant's final Preferred Project Report suggests that all substations are now proposed. Option A involves locating one substation in each of the precincts (one with a 200MVA transformer and 300 MVA transformer). Option B involves locating a single substation with a 500MVA transformer in the centre of the two precincts.* *The Applicant's assessment concludes that the predicted noise levels from the substation(s) are likely to be approximately 31dB(A) at the closest receiver. However, this will need to be revisited once final locations for the substations are confirmed.*	See sections 4.1 & 9.1.3
Section 6: Noise	*The Department is generally satisfied with the Applicant's noise assessment, however considers the noise assessment would need to be revised with consideration of the Landowners nominated in Section 5.5 as being "non-associated" and to rectify other issues such as the properly establishing the background noise levels at receivers M42 and C74.*	See section 9.1.2
<u>Other Impacts</u>		
Section 6: Health	*The Department considers that, subject to the deletion of the Vestas V90 turbine model, noise emissions are expected to be below the recognised perception for acoustic energy for infrasound, and are therefore unlikely to pose an unacceptable risk of infrasound and low frequency noise impacts to surrounding receivers. However given the unknown acceptability of any noise impacts on Landowner 16, the Department is unable to determine whether the impacts of the group of turbines in*	*As noted earlier, there are no unknown noise impacts on Landowner 16* See section 9.2

	close proximity to Landowner 16 are acceptable and whether any adverse health impacts are expected.	
Section 6: Health	*However, the Department is unable to determine the acceptability of all the transmission and power lines given the final location of lines relating to those landowners that have potentially been misrepresented as 'associated' is unclear.*	See section 4.1 & 9.2
Section 6: Heritage	*OEH is not satisfied that the Applicant has surveyed the entire project area with respect to an assessment of heritage values. Given this assessment has not been completed, OEH has raised concerns that there is a reduced capacity to adequately consider all Aboriginal heritage values up front and thereby allow for appropriate consideration of management measures prior to proposed impacts.*	See section *9.2*
Section 6: Heritage	*Both OEH and the Department consider there is insufficient information to establish the potential impacts to Aboriginal Heritage, and whether or not the impacts of the proposal are acceptable.*	See section 9.2
Section 6: Bushfire	*the Department considers if any revised aviation impact assessment was prepared for the project, then it should include consultation with, and consideration of, any issues raised by the RFS.*	See section 9.2
Section 6: Water Sources	*A quantification of impact on Jugiong creek was not provided*	See section 9.2
Section 6: Water Sources	*The Department requested a hydrological assessment of on-site extraction of groundwater be undertaken, inclusive of drawdown and recovery pumping tests, to determine and validate any impacts on groundwater, should groundwater be the source of water during construction. The Applicant however did not undertake such an assessment, stating that the owner of the water supply will restrict the water supply to the wind farm to ensure there are no impacts on existing water use. This matter however, could be addressed by way of a condition.*	See section 9.2

Annexure C. Layout revisions since exhibition of Preferred Project Report

Date	Change	Impact of change
PPSR V1 (Jul 2013)	Deletion of turbine 113 and associated access track and cabling (northern end of Marilba) in response to submissions.	Reduced visual impact and reduced noise impact on new residence M42.
	Deletion of turbine 107, 108 & 109 and associated access tracks and cabling (western side of Marilba) in response to landowner requirements.	Reduced visual and noise impacts on residence C25.
	Minor relocation of turbines 110 and 144 on Marilba (Refer response to NSW Trade & Investment Crown Lands submission).	Avoidance of blade overhang over Crown roads.
	Minor relocation of turbines 101, 102 on Marilba in response to OEH submission.	Reduced impacts to native vegetation and increased buffer to hollow bearing trees.
	Minor relocation of turbines 9, 15, 80 on Coppabella (Refer response to NSW Trade & Investment Crown Lands submission)	Avoidance of blade overhang over Crown roads.
	330kV transmission line moved approximately 230m east at Hume Highway crossing in response to recommendations following additional biodiversity field survey.	Reduced visual impact for residence M13 and other Bookham residences and reduced biodiversity impact (Box Gum Woodland) on northern side of Hume Highway
	330kV switchyard and connecting powerline moved approximately 520 m west at grid connection point in response to recommendations following additional biodiversity field survey.	Reduced biodiversity impact (Box Gum Woodland derived grassland) at previous switchyard location.
	Minor relocation of tracks and underground cables in various areas	Avoidance of constraints and improved alignment; reduced cut and fill requirements; improved connectivity; reduction in impacts on farm management practices.
PPSR V2 (Dec 2013)	*No further infrastructure changes*	---
PPSR V3 (May 2014)	*No further infrastructure changes*	---
PPSR V4 (Sep 2014)	Deletion of turbines 89, 90, 91, 93, 94, 95, 96, 97, 98, 99 on Marilba and movement of wind turbine 83 into a location which reduces biodiversity impacts as a result. Provided in response to concerns of impacts to Hollow Bearing Trees raised in meeting with OEH.	Significant reduction in the potential for impacts to avifauna utilising treed areas (including hollow bearing trees) adjacent to the removed wind turbines. Reduction in visual and noise impacts to nearby residences (e.g. M48, G15, G16, G29, M13, M32).
	New access track connecting two ridges on Coppabella of approximately 1km in length to provide an alternate to the existing 3.7km track to the east of turbine 13 following feedback from landowner over potential erosion concerns.	Improved connectivity and potential for reduction in cut and fill of previous track layout. Reduced traffic movements during construction and operation. Reduction in overall project costs. Reduction in impact area required for access.
	Minor 330kV transmission line re-alignment on 330kV Connection to Coppabella in response to landowner requirements related to avoidance of new shearing shed.	Avoidance of interference to farming operations. No material change in impacts to biodiversity.
	Alternative 330kV substation location on Coppabella in response to further site	Potential to relocate to more level area reducing cut and fill requirements, and to

Date	Change	Impact of change
	investigations and feedback from construction contractors.	reduce impacts to native vegetation.
	Alternative 330kV corridor in 330kV Connection precinct near Illalong Rd in response to landowner feedback.	Increased constructability and avoidance of overhang of Campbells Rd.
	Minor relocations to 132kV powerline corridor in Coppabella Precinct in response to reclassification of biodiversity and feedback from construction contractors	Minimise biodiversity impacts (mod-high quality box gum woodland)
	Addition of alternate 132kV switchyard location on COP (south of original by 2.25km) in response to feedback from construction contractors	Potential to minimise cut and fill requirements of original location and to reduce number of creek crossings required for access
	Minor relocation of tracks and underground cables to suit changes highlighted above. Additional of access track in vicinity of substation near C25 to provide connectivity options.	Avoidance of constraints and improved alignment; reduced cut and fill requirements; improved connectivity; reduction in impacts on farm management practices.
13 November 2014 Landowner letter	Removal of all wind farm infrastructure on "Myrana" property including two turbines (115 & 122) and associated tracks and electrical cabling in response to landowner request.	Proportional reduction in key impacts (visual; noise; biodiversity; archaeological; traffic). Provision of certainty around layout where the relevant landowner was not willing to confirm ongoing involvement in the project.
14 November 2014 Response to DPE queries	Micro-siting of four turbines (56, 102, 145 & 148) and consequential adjustment to the location of one turbine (144) in response to OEH concerns. Note, historically this level of micro-siting would be carried out post-consent in accordance with SOCs.	Further reduction in the potential impact on Hollow Bearing Trees (HBTs).
Initial response to PAC (13 Feb 2015)	Removal of 8 turbines and associated tracks and electrical connections (Landowner 8 / 9) in response to Department comment in the Assessment Report and further feedback from landowner.	Proportional reduction in key impacts (visual; noise; biodiversity; archaeological; traffic). Provision of certainty around layout where the relevant landowner was not willing to confirm ongoing involvement in the project.

Annexure D. Map outlining changes since exhibition of Preferred Project Report

Annexure E. Updated Annexure 19 to the PPSR – Substation Details

Annexure F. List of local agricultural airstrips

Airstrip	Easting	Northing	Closest Turbine No.	Distance (km)	Landowner	Status	Comments
1	632,847	6,152,006	69	4.6	H&C Wilson	Not involved	Not in use
2	636,965	6,148,935	41	3.8	Koorynga P.L	Involved	Not in use
3	640,739	6,146,162	79	5.3	Glover	Not involved	
4	644,563	6,156,860	15	2.6	D&R Sykes	Involved	Not in use
5	644,891	6,160,237	1	5.2	P.C.R. P/L	Not involved	
6	648,114	6,158,866	11	6.0	Old Bundemar P/L	Not involved	
7	652,317	6,158,776	111	4.2	Bryjoi P/L	Not involved	
8	647,994	6,154,727	13	2.7	Nils Taube	Involved	Not in use
9	657,187	6,154,883	100	2.0	L Paton	Involved	
10	659,125	6,156,101	100	3.5	Lawrence & Owen	Not involved	
11	652,347	6,145,361	84	4.4	R Julian	Involved	
12	663,870	6,144,692	144	4.9	Yass Brahman Co P/L (McIntosh)	Not involved	
12a	663,435	6,144,964	144	3.8	Yass Brahman Co P/L (McIntosh)	Not involved	Proposed strip
13	655,654	6,137,343	145	9.6	Bertangles (Yass) P/L (Weir)	Not involved	
14	661,096	6,152,431	100	3.2	H Crisp	Not involved	Strip runs parallel to wind farm
15	658,809	6,144,219	145	2.2	J&K Payne	Involved	
16	636,470	6,150,170	41	2.8	Koorynga P.L	Involved	
17	645,698	6,146,772	77	2.5	Boziga P/L (P&E Shannon)	Not involved	
18	653,614	6,145,185	84	4.3	Bogo P/L	Not involved	Not in use
19	635,908	6,145,084	41	7.7	C Spittle	Not involved	
20	638,291	6,141,516	79	10.5	Ponds Creek Pastoral	Not involved	
21	645,657	6,139,856	77	9.5	A Armour	Not involved	
22	649,110	6,137,341	95	10.9	T Johnson	Not involved	
23	652,918	6,135,596	95	11.6	L Agnew	Not involved	
24	648,749	6,155,558	13	3.6	J Garry	Not involved	

Annexure G. Map of biodiversity assessment area

Annexure H. Updated Annexure 10 to the PPSR - Shadow Flicker Addendum Report

Annexure I. Updated Zone of Visual Influence

Annexure J. Updated Photomontages

Table 8 outlines the history and status of all photomontages, and also outlines which photomontages (i) are attached to this submission, or (ii) will be provided together with the updated visual impact analysis referred to in Section 7.

Table 8 - List of Photomontages

Code	Location / Title	EA (2009)	PPR (2012)	Landowner Request	PAC Submission Feb15	PAC Submission Mar15 with updated LVIA	Comment
C01	Bush residence		x			x	update to reflect new layout
C04	Shaw				x		new photomontage to address previously "involved" landowner
C06	Hazell				x		provided in response to request in Assessment Report
C27	Garry				x		New photomontage to address previously "involved" landowner
C53	Leask residence		x			x	update to reflect new layout
C59	Robinson's Road		x			x	update to reflect new layout
C67	Robinson residence		x		x		provided in response to request in Assessment Report
C68	Garry				x		new photomontage to address previously "involved" landowner
C74	Graham residence		x			x	update to reflect new layout
C75	Gowland				x		provided in response to request in Assessment Report
C76	"Shepstone Park" - Turnbull			x		x	update to reflect new layout
C76A	"Shepstone Park" - Turnbull			x		x	update to reflect new layout
CVP1	Hume Highway west of Conroy's Gap		x			x	update to reflect new layout
CVP4	Hume Highway east of Conroy's Gap		x			x	update to reflect new layout
G11	"Tannochbrae" - Cole			x	No	No	Permission to release photos denied by landower
G14	Keith residence		x			x	update to reflect new layout
G16	Howe residence		x			x	update to reflect new layout
G29	Bogo residence		x			x	update to reflect new layout
G31	Eccles (Dilapidated)				x		New photomontage to address previously "involved" landowner
G32	"Athlone" - Bingley			x		x	update to reflect new layout
G41	Thompson/Sullivan residence			x		x	update to reflect new layout
H42	"Talbragar" - Glover			x		x	update to reflect new layout
M13	Julian				x		New photomontage to address previously "involved" landowner
M20	O'Mara rental house		x			x	update to reflect new layout
M24	Bland residence		x			x	update to reflect new layout
M32	Julian				x		New photomontage to address previously "involved" landowner
M42	Grogan residence		x			x	update to reflect new layout
RVP5 / C39	"Naranghi" - Hufton	x	x			x	update to reflect new layout
RVP6 / G27	"Fairview"	x			No	No	not required - viewpoint towards Carrolls Ridge precinct deleted in 2009
RVP7B / M8	The Crisp Galleries - Future Bamboo Garden	x				x	update to reflect new layout
RVP7C	The Crisp Galleries - Future Eco Village	x				x	update to reflect new layout

Code	Location / Title	EA (2009)	PPR (2012)	Landowner Request	PAC Submission Feb15	PAC Submission Mar15 with updated LVIA	Comment
RVP8 / C41	"Deepwater" - Painting	x			x		provided in response to request in Assessment Report
SVP1	Coppabella Hills - Hume Highway	x	x			x	update to reflect new layout
SVP11	Coppabella and Marilba - Burley Griffin Way	x				x	update to reflect new layout
SVP12	Coppabella and Marilba - Burley Griffin Way		x			x	update to reflect new layout
SVP2		x	x			x	update to reflect new layout
SVP3	Marilba Precinct - Bookham	x				x	update to reflect new layout
SVP5	Coppabella and Marilba - Burley Griffin Way north of Binalong	x				x	update to reflect new layout
SVP6	Coppabella and Marilba - Burley Griffin Way near Goondah	x				x	update to reflect new layout
SVP7	Marilba Precinct - Hume Highway	x				x	update to reflect new layout
SVP8	Marilba Hills - Common Road	x				x	update to reflect new layout
VP0	Jugiong - Cnr of Hills and Parkes Streets for CCC			x		x	update to reflect new layout
VP10	Garry's road, Binalong		x			x	update to reflect new layout
VP6	Conroy's Gap - Truck Parking Area		x			x	update to reflect new layout