



Yass Valley Wind Farm

Landscape and Visual Impact Assessment - Response to Secretary's Environmental Assessment Report

For: Yass Valley Wind Farm Pty Ltd

0092376 RPT3 Final

March 2015



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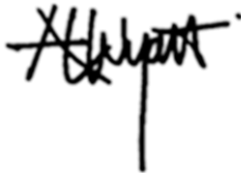
For: Yass Valley Wind Farm Pty Ltd

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March 2015

For and on behalf of
Environmental Resources Management Australia

Approved by: Allan Wyatt
Position: Partner
Signed:



Date: 19 March 2015

Contents

1	INTRODUCTION	1
1.1	Secretary's Environmental Assessment Report	1
1.2	Richard Lamb & Associates Report	3
1.3	Amendments to the wind farm layout	3
1.4	Report Structure	4
2	LVIA METHODOLOGY	5
2.1	Reference to guidelines	5
2.2	Photomontages	5
2.2.1	Base photos used within the photomontages	6
2.3	Landscape character types	6
2.4	Community input into landscape values	7
2.4.1	Landscape values in the public domain	7
2.4.2	Landscape values in the private domain	9
2.5	Recommended removal of wind turbines	9
2.6	Cumulative visual impact – dynamic effect	10
3	SUMMARY REASSESSMENT OF VISUAL IMPACT FROM PUBLICLY ACCESSIBLE VIEWPOINTS	11
4	VISUAL IMPACT FROM RESIDENCES	13
4.1	Impact from additional non-involved residences	13
4.1.1	Dwelling C27	14
4.1.2	Dwelling C68	16
4.1.3	Dwelling C04	19
4.1.4	Dwelling M13	21
4.1.5	Dwelling M32	23
4.1.6	Dwelling G31	25
4.1.7	Dwelling C06	27
4.1.8	Dwelling C60	30
4.1.9	Dwelling C75	32
4.1.10	Dwelling C41	34
4.1.11	Dwelling C08	37
4.2	Summary of impact from residences assessed	38
5	SUMMARY REASSESSMENT OF VISUAL IMPACT FROM CUMULATIVE VIEWPOINTS	41
6	RESPONSE TO COMMENTS RAISED BY DPE	42
7	RESPONSE TO COMMENTS RAISED BY RICHARD LAMB & ASSOCIATES ON DGR REQUIREMENTS	44
8	CONCLUSION	48

Annex

Annex A - Photomontages

Figures

Figure 2-1	Horizontal and Vertical field of view (Human Dimension and Interior Space, Julius Panero & Martin Zellnik, Witney Library of Design, 1979)	6
Figure 2-2	Wind farm acceptance in the landscape	8
Figure 2-3	Support for further wind farms at Mortlake (Quantum, 2010)	8
Figure 4-1	View north of Dwelling C27 from Illalong Road (651320E, 6154369S, 440m AHD)	14
Figure 4-2	View west of Dwelling C27 and its driveway from Illalong Road (651500E, 6154510S, 451m AHD)	14
Figure 4-3	Existing view from Illalong Road towards the proposed wind farm near Dwelling C27 (Source YVWF, 651493E, 6154498S, 451m AHD)	15
Figure 4-4	Photomontage Dwelling C27 - 60 degree field of view (Source YVWF)	15
Figure 4-5	View north of Dwelling C68 from Illalong Road (651143E, 6154285S, 442m AHD)	17
Figure 4-6	Existing view from Illalong Road towards the proposed wind farm near Dwelling C68 (Source YVWF, 651060E, 6154236SA, 443m AHD)	17
Figure 4-7	Photomontage Dwelling C68 - 60 degree field of view (Source YVWF)	18
Figure 4-8	View south of Dwelling C04 from driveway (634518E, 6153016S, 474m AHD)	19
Figure 4-9	View north-west from the Dwelling C04 garden entrance towards the proposed wind farm (641155E, 6150594S, 474m AHD)	20
Figure 4-10	Photomontage Dwelling C04 - 60 degree field of view (Source YVWF)	20
Figure 4-11	View east of Dwelling M13 and rear garden (650524E, 6145953S, 471m AHD)	21
Figure 4-12	View east of the Dwelling M13 (650528E, 6145979S, 470m AHD)	21
Figure 4-13	View north from the Dwelling M13 porch towards the proposed wind farm (650552E, 6145979S, 470m AHD)	22
Figure 4-14	View north-east from outside the entrance to Dwelling M13 (651778E, 6149456S, 497m AHD)	22
Figure 4-15	Photomontage near Dwelling M13- 60 degree field of view (Source YVWF)	22
Figure 4-16	View east of Dwelling M32 and sheds from driveway (634518E, 6153016S, 434m AHD)	23
Figure 4-17	View north-east from edge of Dwelling M32 garden towards the proposed wind farm (Source YVWF, 652131E, 6146649S, 492m AHD)	24
Figure 4-18	Photomontage Dwelling M32 - 60 degree field of view (Source YVWF)	24
Figure 4-19	View south-east of Dwelling G31 from driveway (651795E, 6153016S, 434m AHD)	25
Figure 4-20	View east of Dwelling G31 from driveway (634518E, 6153016S, 434m AHD)	25
Figure 4-21	View north-east from outside the Dwelling G31 garden towards the proposed wind farm (651778E, 6149456S, 497m AHD)	26
Figure 4-22	Photomontage from outside Dwelling G31 - 60 degree field of view (Source YVWF)	26
Figure 4-23	View south of Dwelling C06 from rear yard (645149E, 6147470S, 522m AHD)	27
Figure 4-24	View west of Dwelling C06 and garage (645169E, 6147442S, 520m AHD)	27
Figure 4-25	View north-east of Dwelling C06 from garden (645177E, 61474423S, 522m AHD)	28
Figure 4-26	Photomontage Dwelling C06 - 60 degree field of view (Source YVWF)	28
Figure 4-27	View north-east of Dwelling C06 from garden (634518E, 6153016S, 434m AHD)	29
Figure 4-28	Photomontage Dwelling C06 - 60 degree field of view (Source YVWF)	29
Figure 4-29	View south of Dwelling C60 (645436E, 6146841S, 499m AHD)	30
Figure 4-30	View north from Dwelling C60 front garden towards the proposed wind farm (645433E, 6146831S, 499m AHD)	30
Figure 4-31	View north-east of Dwelling C75 from driveway (643194E, 6147476S, 526m AHD)	32
Figure 4-32	View north from Dwelling C75 driveway towards the proposed wind farm (643192E, 6147476S, 526m AHD)	33
Figure 4-33	Photomontage Dwelling C75 - 60 degree field of view (Source YVWF)	33
Figure 4-34	View south-west the dwelling C41 from the garden (646839E, 6146826S, 490m AHD)	34

Figure 4-35	View south towards Dwelling C41 and associated buildings from the driveway (646821E, 6146858S, 489m AHD)	34
Figure 4-36	View west towards dwelling C41 from the garden (646835E, 6146812S, 488m AHD)	35
Figure 4-37	View east from Dwelling C41 garden (646835E, 6146812S, 488m AHD)	35
Figure 4-38	View north-west towards the Coppabella precinct from Dwelling C41 driveway (646821E, 6146858S, 489m AHD)	36
Figure 4-39	Photomontage Dwelling C41- 60 degree field of view (Source YVWF)	36
Figure 4-40	View west of DwellingC08 from the driveway (645806E, 6147073S, 494m AHD)	37

Tables

Table 3-1	Comparison summary assessment of publicly accessible viewpoints	11
Table 4-1	Number of dwellings within three kilometres of the wind turbines	13
Table 4-2	Comparison summary assessment of residential viewpoints	38
Table 5-1	Cumulative visual impact from sequential viewpoints	41
Table 6-1	Response to comments by DP&I on LVIA	42
Table 7-1	Response to RLA comments on LVIA Methodology based on DGR Requirements included in Table 1 of Appendix 1 of RLA Report	44
Table 7-2	Response to RLA comments on LVIA Methodology based on draft NSW Wind Farm Guidelines include in Table 2 of Appendix 1 of RLA Report	46

Glossary

YVWF	Yass Valley Wind Farm
LVIA	Landscape and Visual Impact Assessment
DPE	NSW Department of Planning and Environment (formerly Department of Planning & Infrastructure)
EA	Environmental Assessment Proposed Yass Valley Wind Farm (Nov 2009)
ERM LVIA	August 2009 Report (Appendix 1 to EA)
PPR	Preferred Project Report (November 2012)
ERM Submissions Report	Response to visual impact submissions November 2012 (Attachment 3 to PPR)
PPSR	Preferred Project and Submissions Report V4 Sep 2014 (and earlier revisions V1 July 2013, V2 Dec 2013, V3 May 2014)
ERM Submissions Report Rev2	Further response to visual impact submissions Apr 2014 (Attachment 5 to PPSR V4)
RLA Report	Richard Lamb & Associates YVWF Visual Impact Assessment Review of Adequacy (September 2013)
Secretary's Report	Secretary's Environmental Assessment Report prepared by DPE (January 2015)
Amended Layout	Current layout with 124 wind turbine locations (March 2015)

1

INTRODUCTION

The Yass Valley Wind Farm proposal is for the development of a wind farm in the Southern Tablelands region of NSW, approximately 30 km west of Yass and around 300 km west of Sydney.

An application for the wind farm proposal comprising of 182 wind turbines and associated infrastructure was lodged with the NSW Department of Planning and Environment (DPE) on 2 December 2008 by Yass Valley Wind Farm Pty Ltd (YVWF). Director General's Requirements were issued to YVWF on 12 January 2009 to guide the work required in assessing the proposed wind farm application.

ERM prepared the Landscape and Visual Impact Assessment (LVIA) component of the Environmental Assessment (EA) for the Coppabella Hills and the Marilba Hills precincts as well as the Carrolls Ridge precinct in July 2009. This assessment formed part of the EA as a Part 3A Major Project, under the New South Wales Environment Planning and Assessment Act 1979.

Submissions were received following exhibition of the EA. A Submissions Report was provided to DPE for review in November 2012 based on an amended wind farm comprising of 144 wind turbines (**Preferred Project**) spread within the Coppabella Hills and the Marilba Hills precincts together with associated infrastructure.

DPE in its preliminary review dated 23 January 2013 requested further information on the Yass Valley Wind Farm Preferred Project Report. A revised Preferred Project and Submissions report was submitted to DPE in July 2013 with subsequent revisions submitted in December 2013, May 2014 and September 2014.

1.1

Secretary's Environmental Assessment Report

In January 2015, DPE documented its assessment of the Yass Valley Wind Farm project in the Secretary's Report.

The Secretary's Report concludes with recommendation for the refusal to grant a permit for the wind farm development on the following grounds:

- 1. 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.*
- 2. 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.*
- 3. 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.*
- 4. Given the above, the proposal is not in the public interest and should be refused.*

It is noted that there are no landscape or visual impact issues raised in the grounds for refusal. However, several issues on the LVIA were raised within the Secretary's Report, which are based on findings from a peer review by Richard Lamb and Associates.

In September 2014, prior to the release of the Secretary's Report, a *Review of Adequacy of the LVIA and the Submissions Report* (RLA Report) was prepared by Richard Lamb and Associates for DPE.

The following are the key comments on the landscape and visual impact assessment from the DPE, which incorporate the comments raised in the RLA Report.

- *Preferred Project Report also deletes 10 turbines from the proposal due to potential biodiversity impacts within the Marilba precinct... the Applicant has not provided a revised visual assessment.*
- The Review of Adequacy findings, included and stated in the Secretary's Report:
 - *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;*
 - *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;*
 - *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;*
 - *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, which are also identified as being some of the most affected receivers;*
 - *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; and*
 - *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.*
- The RLA Report recommendations included and stated in the Secretary's Report:
 - *the need for more effective community consultation which may result in removal of turbines;*
 - *removal of a number of turbines in the Marilba precinct due to unacceptable visual impacts,*
 - *including the North-east Illalong Road area (turbines 110,111,112,114,115,116 and 122) and the Conroy's Gap and Black Ridge Hills area (turbines 131,133,134,136 and 100-106);*
 - *provision of more appropriate landscaping; and*
 - *appropriate colours (mid grey or blue grey) should be used for turbines.*
- *DPE's own observation that there are more scenic areas within the broad landscape that have not been identified or considered in the Applicant's assessment;*
- *community input in defining the value of local landscape elements has been minimal and insufficient to gain a reasonable understanding of these values and what may be appropriate in terms of impact.*
- *The RLA 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).*
- *DPE is also concerned about the oversimplification of the landscape values, the lack of community input into landscape values and lack of certainty and detail (in particular the various potential changes that could result from 3 landowners being incorrectly identified as being associated with the development).*

1.2

Richard Lamb & Associates Report

The comments from the *Review of Adequacy Report* by Richard Lamb and Associates dated September 2014 are cited in the Secretary's Report. The majority of the issues raised in the RLA Report are in relation to the community consultation. In particular, the RLA Report states:

- The LVIA should *involve community stakeholders in identifying landscape values (direct community involvement essential)*
- *Viewpoints selected for visual modelling of the wind farm should relate to an understanding of community values of the landscape (direct community involvement recommended)*
- The LVIA should *seek community input to describe impacts (direct community involvement essential)*
- The LVIA should *involve communities in negotiating and reviewing measures to avoid, minimise or mitigate landscape impacts. (direct community involvement essential)*
- *The removal of turbines is recommended in the Marilba Range precinct in the following specific areas and for the following reasons;*
 - *Turbines 110,111,112,114, 115, 116 and 122 should be removed north-east along the Illalong Road area due to the proximity to residences M42 and C89 and to protect an area of higher scenic quality.*
 - *Turbines 131, 133, 134, 136 and 100, 101,102,103, 104, 105 and 106 should be removed from the Conroy's Gap and Black Ridge Hills area 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."*

The RLA Report concedes that

there are different ways in which landscape assessments can be carried out and that there is no industry standard approach to that aspect of methodologies. We therefore consider that this deficiency is not so substantial as to render the entire LVIA inadequate. We note however that the critical question of whether the community values parts or all of the landscape proposed to contain the wind farm cannot be answered at this time.

While data has been gathered and obligations generally fulfilled, critical input required by the NSW Planning Guidelines – Windfarms, or alternatively the NAF Guidelines is missing. Throughout the analysis carried out above, the most consistent deficiency is with public participation and the establishment of community landscape values.

The RLA Report also comments on the photomontage methodology

we consider that the images themselves are generally useful to show the horizontal extent of the landscape affected by the wind farm, but do not give a realistic impression of the relative scale of the turbines in the views. They are shown smaller than they would appear to a viewer's eye.

The RLA Report assesses the LVIA against the Director General Requirements and LVIA Methodology in the draft NSW Planning Guidelines: Wind Farms. These are appended in RLA Report and will be discussed later in the report.

The RLA Report makes unsupported criticisms of the LVIA methodology. These criticisms, if they are to have weight, should be substantiated by showing how a modified methodology, when implemented, will give different outcomes. The lack of substantiation for an amended methodology and therefore the unsupported conclusions that wind turbines should be removed is not an outcome from an appropriate process.

1.3

Amendments to the wind farm layout

DPE raised issues regarding the classification of the involved and non-involved owners. A review has been conducted by YVWF and based on a strict classification of involved and non-involved landowners within the wind farm site.

A revised wind farm layout has been prepared comprising of 124 wind turbines (**Amended Layout**) located on those properties that have a signed agreement or are in the process of signing an agreement with YVWF. This layout is based on the removal of wind turbines due to landowner classification and biodiversity requirements. It is understood that a small number of minor alterations to the locations of wind turbines have been made to avoid native vegetation removal.

1.4

Report Structure

This report addresses the following landscape and visual impact issues raised within the Secretary's Report as well as RLA Report:

1. Methodology
 - a Reference to guidelines;
 - b Photomontages;
 - c Landscape character types;
 - d Community input into landscape values;
 - e Recommended removal of wind turbines ;
 - f Cumulative visual impact-Dynamic effect
2. Summary reassessment of visual impact from publicly accessible viewpoints given the changes incorporated in Amended Layout;
3. Visual impact from residences:
 - a from additional non-involved residences as identified in the Secretary's Report;
 - b reassessment of visual impact from previously assessed residences;
4. Summary reassessment of visual impact from cumulative viewpoints given the changes incorporated in Amended Layout;
5. Response to comments raised by DPE; and
6. Response to comments raised by Richard Lamb & Associates.

Following, the release of the Secretary's Report, a further site visit was undertaken to assess the visual impact from those landowners that are now considered not involved in the project or those that have specifically raised issues.

Additional photomontages have been prepared from these residences. Where access could not be sought, prior to site visit, photographs and photomontages taken by YVWF on recent site visits have been used for reference.

2

LVIA METHODOLOGY

Several issues were raised in the Secretary's Report based in the findings of the RLA Report on LVIA methodology including:

- Reference to guidelines;
- Photomontage preparation;
- The landscape character types and community input into landscape values;
- Cumulative visual impact on the character change;

A response to the issues is provided below.

2.1

Reference to guidelines

As stated in the LVIA the methodology for the landscape and visual impact assessment is in part based upon guidelines and assessment frameworks for development of wind energy facilities as well as based upon methodologies adopted in past projects of over 30 wind farms in Australia and overseas. Specifically the LVIA and subsequent updates address the Director General Requirements for the project.

In developing a methodology for the proposed Yass Valley Wind Farm, the following guidelines were referred to as stated in LVIA page 1:

- The *Wind Farms and Landscape Values, National Assessment Framework*, AUSWEA 2007;
- the *Policy and Planning Guidelines for Development of Wind Energy Facilities in Victoria*, DSE 2003;

Since the original application, several draft guidelines have been released. These are:

- *The Draft National Wind Farm Development Guidelines*, Environment Protection and Heritage Council dated July 2010 ;
- the *NSW Planning Guidelines for Wind Farms*, Department of Planning and Infrastructure 2011;

Neither of these guidelines have been finalised and adopted. Nonetheless, the LVIA methodology is in accordance with all of the above documents.

2.2

Photomontages

Issues were raised regarding the photomontages highlighting that some were not perceptually accurate.

Chapter 5 of the ERM Submissions Report (Nov 2012) stated that

Enlarged A3 version of the revised photomontages comparing the EA Application and the Current Proposal are enclosed in Annex B. The same figures when scaled up to A0 sheets provide a more accurate representation of the scale of the development especially when a person holds them at arm's length.

Photomontages show:

- a wide panorama to illustrate the change to the views in the larger context – these are not perceptually accurate, but provide the overall context; and
- 60-degree views / montage. These are perceptually accurate and indicate the realistic scale of the development when printed in A0 drawings and viewed at arm's length.

Revised photomontages based on the Amended Layout have been prepared and are appended in Annex A. These are perceptually accurate when printed at A0. It is noted that the RLA Report has no alternative photomontages depicting a better or more perceptually accurate image. The claim that these are not accurate is unsubstantiated.

2.2.1

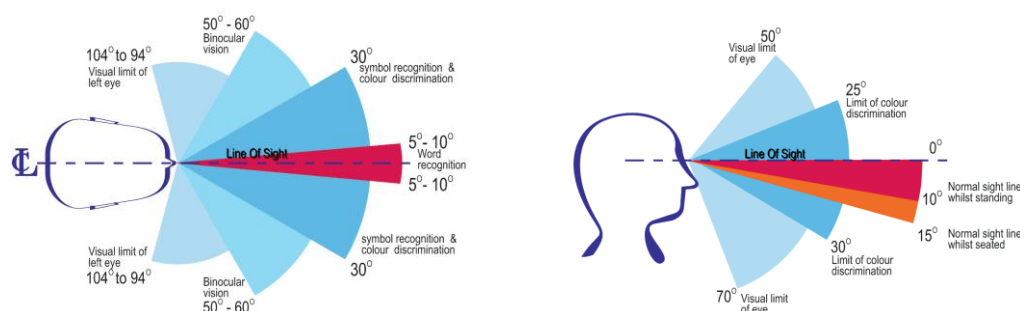
Base photos used within the photomontages

Photomontages are used to assist in evaluating the visual impact of the facilities from representative viewpoints. These photomontages are prepared using Computer programs that give accurate placement of the facilities.

Photomontages typically show the changes in a 60° horizontal field of view. The 60° horizontal field of view represents the central cone of view in which symbol recognition and colour discrimination can occur. When defining vertical field of view, either 10° or 15° can represent the central field of view of human vision as shown in Figure 2-1.

Figure 2-1

Horizontal and Vertical field of view (*Human Dimension and Interior Space, Julius Panero & Martin Zellnik, Witney Library of Design, 1979*)



Similar data can be found in the more recent publication entitled '*The Measure of Man and Woman, Revised Edition*', Henry Dreyfuss Associates, John Wiley & Sons, 2012.

The 60° horizontal field of view is important if the photomontage images represent the change in the landscape. The A3 photomontages, which are appended to this report in Annex A, include a 60° horizontal field of view. One of the sheets within the photomontage set shows a wireframe view of the computer model to illustrate how the photomontages were derived. Vertical 'poles' within this wireframe are merely points on the landscape such as a group of trees, a corner of an existing building etc., which allow the computer model (prepared in WindFarmer) and the photograph to be accurately aligned.

The proposed development is accurately located within the photograph and then the rest of the model is removed and the tower and the proposed landscape are rendered into the image. This gives a perceptually accurate result.

2.3

Landscape character types

The RLA Report raised issues that the landscape character types were ill defined. It also stated that the landscape character types did not take into account the additional scenic quality of Illalong Road, which in their view would justify a further landscape character type.

In reassessing the viewpoints, Illalong Road was visited and it was noted that the vegetation is along the road and this area does not represent a different landscape character type. The five distinct landscape character types were defined in the LVIA. These are:

- Landscape Unit 1 – "Gently Undulating and Flat Cleared Farmland";
- Landscape Unit 2 – "Steeplly Undulating Cleared Farmland";
- Landscape Unit 3 – "Forested Hills";

- *Landscape Unit 4 – “Rural Townships”; and*
- *Landscape Unit 5– “Recreation Resorts” Text*

Following a site inspection there is no need for defining additional character types. Once again, the claim that such is necessary is unsubstantiated.

2.4 Community input into landscape values

The RLA Report and the Secretary's Report raised issues that the landscape sensitivities could be better informed by an increased community engagement process.

The sensitivity ratings are based on visual assessment research, which have identified characteristics that communities value in the landscape. These are similar around the world. It is always possible to undertake a greater level of community engagement, however it is noted that the RLA Report does not provide any such example. It simply asserts that more should be done. There is no example of a different conclusion derived through community engagement.

2.4.1 Landscape values in the public domain

Community perception studies can provide supporting evidence for the landscape values within the viewshed from the public domain.

Perception studies can provide a “reality check” and that is how they have been used within the LVIA.

The studies were done by independent survey consultants and they selected the sample size to give a confidence rating of 95% to represent the wider population and the population of the Southern Tablelands area of NSW where relevant.

Perception studies continually show that the majority of respondents find the appearance of WTGs in a rural landscape acceptable. These studies have also shown that the majority of those surveyed supported the presence of wind turbines in scenic landscapes (refer to Figure 2-2). Studies undertaken from early 2000 by the Department of Natural Resources and Environment (Kanos & Quint, 2000) showed support for wind farms of 65-68% on coastal headlands adjacent to the Great Ocean Road one of Victoria's most scenic landscapes (bottom image Figure 2-2).

In later studies in less scenic landscapes, they continued to show that the level of acceptance of wind turbines increases. In some studies, this has increased from 65% to approximately 80% (top image of Figure 2-2). However, acceptance levels for wind turbines within one kilometre of a residence remained at the 65% level.

Therefore, the visual impact of wind turbines in a landscape is acceptable to the majority of respondents in scenic landscapes and in landscapes that are considered less attractive (Andrew Lothian, 2000 & 2005).

The CSIRO study entitled “Acceptance of rural wind farms in Australia” (2012) found, in part, that

“There is strong community support for the development of wind farms, including support from rural residents who do not seek media attention or political engagement to express their views. This finding contrasts with the level of opposition that may be assumed from the typically ‘conflict-orientated’ portrayal of wind farm proposals in the popular media. This media coverage frequently gives significant attention to legal challenges, political protests and vocal opponents including ‘Landscape Guardian’ and high profile individuals, but fails to balance this with coverage of middle ground views, or with equivalent attention to the potential benefits of wind farms.” (Summary: Acceptance of rural wind farms in Australia, Nina Hall, Peta Ashworth and Hayden Shaw, CSIRO Science into Society Group, 2012, p67).

This study has not been relied upon as a basis for the visual assessment, but its findings are similar to the community perception studies, and this CSIRO study also provides another independent "reality check" that confirms the findings presented within this LVIA.

Figure 2-2

Wind farm acceptance in the landscape

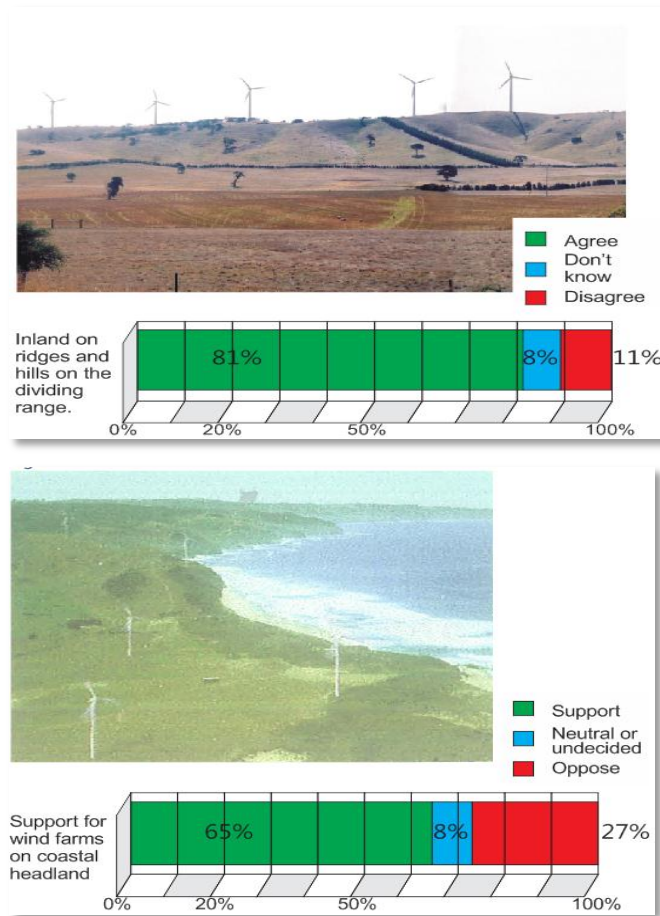
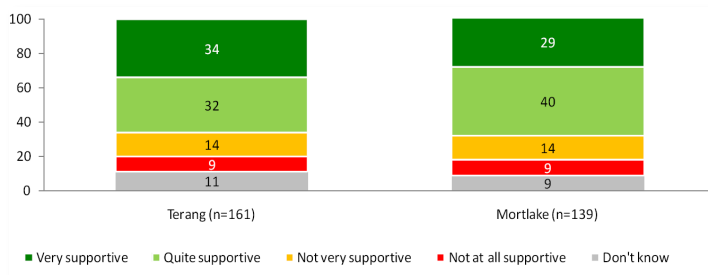


Figure 2-3

Support for further wind farms at Mortlake (Quantum, 2010)



It is recognised that this is a complex issue and the degree of visual impact depends on how the viewer perceives renewable energy, the wind turbines and the landscape. The presence of wind turbines will change the existing landscape character of this locality, however to postulate that these will cause irreplaceable damage to the landscape values and negatively impact the amenity of the area as perceived by visitors and residents is not substantiated on the basis of perception studies undertaken in Australia and overseas.

No other studies have been quoted in the RLA Report, which would contradict these findings.

For these reasons, the sensitivity ratings that have been used provide a reasonable basis for the assessment.

2.4.2

Landscape values in the private domain

It is noted that the LVIA supports the view that views from residential properties have a high level of sensitivity. The RLA Report recommended the removal of wind turbines because these could be visible, in whole or part, from residential properties. This seems to be based on the assumption that all residential viewers would dislike wind turbines and therefore, if visible, they should be removed.

This is not supported by previous studies. Studies for residential viewing locations for the Ararat Wind Farm (ERM & Reark Pty Ltd, 2007) and Lal Lal Wind Farm (ERM & Reark Pty Ltd, 2006) as well as other studies in Victoria (Offer Sharp and Associates 2000 & 2002) have shown that between 68-71% of viewers are supportive of WTGs within 1 km of their dwelling. These acceptance levels are confirmed by similar studies for wind farms in New South Wales (Reark Pty Ltd 2008) and New Zealand (Charmain A Watts 2008) which showed similar levels of support.

The above studies indicate that acceptability of wind farms increases when the residence is further away. Acceptance levels of between 77-79% were rerecorded for wind turbines at distances greater than 3.0 km from a dwelling.

Apart from the acceptance aspect, when assessing a residential viewpoint it is necessary to examine issues such as direction of view, screening, topographic intervention etc. Once all these issues are understood, an assessment of the potential impact can be derived and sometimes this can be mitigated through landscape treatments.

This layered approach to the evaluation from residential properties is conspicuously lacking in the RLA Report. Therefore, if the RLA findings are to be given weight, it should be necessary to show a direct correlation between visibility and visual impact from residential locations. This has not been done.

Stakeholder consultation for the Project

Consultation activities have included the following:

- The community information day (open house) was on 10 December 2008;
- Information days undertaken on the LVIA and photomontages during the exhibition of EA between 13 Nov 2009 to 14 Dec 2009
- Preferred Project Report on public exhibition between 14 Dec 2012 to 1 Mar 2013;
- Multiple visits by YVWF to the non-involved landowners out to 5km from wind turbines as well as visits by ERM's landscape and visual impact consultant ;
- At the request of landowners, photomontages were prepared from several residences within 5km of the proposed wind farm and provided to the respective landowners for discussion purposes. One photomontage was prepared for a landowner whose residence is located approximately 6km from the nearest turbine.

2.5

Recommended removal of wind turbines

The RLA report recommends the removal of wind turbines and states:

- *Turbines 110,111,112,114, 115, 116 and 122 should be removed north-east along the Illalong Road area due to the proximity to residences M42 and C89 and to protect an area of higher scenic quality.*
- *Turbines 131, 133, 134, 136 and 100, 101,102,103, 104, 105 and 106 should be removed from the Conroy's Gap and Black Ridge Hills area 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.*

Based on the proximity of the residences to the nearest wind turbines and the Zone of Visual Influence (ZVI) mapping the RLA report makes the assumption of high visual impact and recommends the removal of wind turbines as a suitable measure to reduce visual impact. The RLA Report does not provide any supporting material such as photomontages or further ZVI to demonstrate how the level of visual impact is reduced from each of these residences with the removal of these wind turbines.

An assessment of visual impact on residences M8, M42, G14, M20 and M24 was provided in the ERM Submissions Report and has since been updated in Table 4-2 to reflect the changes to the number of wind turbines. In every instance, the residence was visited and the existing views from living areas considered in the assessment of visual impact. There have been no instances where the level of visual impact cannot be ameliorated by landscape mitigation. The presence of existing landscape planting or further landscape mitigation, if so is desired can effectively reduce the overall visual impact of the wind farm to a low to negligible level for residences at M8, M42, G14, M20 and M24. As such, the RLA recommended removal of wind turbines for reduction of visual impact is unsupported.

2.6 Cumulative visual impact – dynamic effect

The RLA Report and Secretary's Report raised issues that the assessment of cumulative visual impact based on the dynamic effect of moving through the region.

The RLA Report does not provide any example where the cumulative effect of the wind farms in the area will have increased the level of cumulative impact. It states that the number of wind farm applications have increased in this region. However, mere increase in the number of wind farms or wind farm applications does not necessarily indicate an increase in the level of cumulative visual impact for a person moving through this region.

In the ERM LVIA and subsequently in the ERM Submissions Report there were 14 viewpoints discussed specifically to illustrate the cumulative visual impact. These 14 viewpoints show sequential views to wind farms in the area particularly the approved Conroys Gap Wind Farm that is closest to the Yass valley Wind Farm proposal.

Further, the cumulative impact of Conroys Gap Wind Farm has been discussed and assessed from all public and residential viewpoints. Several photomontages have also been prepared to show the cumulative effect of the approved Conroys Gap Wind farm and proposed Yass Valley Wind Farm from sequential views. Together these adequately illustrate the dynamic effect of moving through the region for viewers in the locality and the resultant cumulative visual impact.

3 SUMMARY REASSESSMENT OF VISUAL IMPACT FROM PUBLICLY ACCESSIBLE VIEWPOINTS

A summary reassessment of visual impact for this report from publicly accessible viewpoints is listed in Table 3-1. Those viewpoints that have had an alteration to distances to nearest wind turbine have been highlighted in Table 3-1.

Table 3-1 Comparison summary assessment of publicly accessible viewpoints

vp	Dominant landscape units and sensitivity	Viewer numbers	Distance to nearest turbine (approx.) Preferred Project	Overall visual impact Preferred Project	Distance to nearest turbine (approx.) Amended Layout	Overall visual impact Amended Layout
1	4 - Medium	High	16.7 - NW (144)	Negligible	16.6 km - W (144)	Negligible
2	4 - Medium	High	16.4 - NW (144)	Nil	16.2 km - W (144)	Nil
3	1 - Low	High	12.6 - W (143)	Minor	12.6 km - W (143)	Minor
4	1 - Low	Low on Graces Flat Rd High on Hume Hwy	4.7 - SW (143)	Minor	4.7 km - SW (143)	Minor
5	2 & 1 - Medium	High	2.4 - SW (136)	Medium	2.4 km - SW (136)	Medium
6	2 - Medium	High	0.3 - SE (136)	Medium	0.3 km - E (136)	Medium
7	2 - Medium	High	1.2 - NW (93)	Medium	1.9 km - NW (83)	Medium
8	2 - Medium	Medium	5.6 - N (95)	Medium	6.4 km - NE (145)	Medium
9	5 & 2 - High -Medium	Medium	9.6 - N (145)	Minor	9.6 km - N (145)	Minor
10	2 & 3 - Medium	Medium	8.9 - NE (145)	Minor	8.9 km - N (145)	Minor
11	3 - High	Medium	10.8 - N (95)	Minor	11.7 km - NE (145)	Minor
12	3 - High	High	20.2 - NE (95)	Nil	21.5 km - NE (145)	Nil
13	3 - High	Low	5.4 - NE (145)	Minor	5.4 km - NE (145)	Minor
14	2 - Medium	High	4.1 - NW (76)	Medium	4.1 km - NW (76)	Medium
15	2 - Medium	Low	11.7 - NE (95)	Minor	12 km - N (77)	Minor
16	2 - Low	Low	1.4 - E (122)	Minor	1.4 km - E (111)	Minor
17	2 - Medium	High	2.3 - SW (112)	Medium	2.3 km - SW (112)	Medium
18	2 - Medium	High	1.8 - SW (100)	Medium	1.8 km - S (100)	Medium
19	2 - Medium	Low	23.6 - NW (145)	Negligible	23.5 km - NW (144)	Negligible
20	2 - Medium	Low	21.5 - NW (145)	Negligible	21.4 km - NW (144)	Negligible
21	2 - Medium	Low	18.7 - NW (145)	Nil	18.6 km - NW (144)	Nil
22	2 - Medium	High	14.6 - NW (145)	Nil	14.4 km - NW (144)	Nil
23	5 - High	Low	12.2 - NW (145)	Nil	12.1 km - NW (144)	Nil
24	2 - Medium	Low	3.2 - N (145)	Minor	3.2 km - N (144)	Minor
25	2 - Medium	High	1.9 - NE (95)	Minor	4 km - N (84)	Minor
26	2 - Medium	High	2.4 - NE (77)	Minor	2.4 km - NE (77)	Minor
27	1 - Low	Low	1.5 - NE (79)	Minor	1.5 km - NE (79)	Minor
28	2 - Medium	Low	3.1 - E (88)	Minor	3.1 km - E (88)	Minor
29	1 - Low	Medium	8.4 - SE (111)	Minor	8.4 km - S (111)	Minor
30	4 & 2 - Medium	Low	5.5 - SW (1)	Minor	5.5 km - SW (1)	Minor
31	2 - Medium	Low	4.9 - SW (129)	Minor	4.9 km - SW (129)	Minor
32	2 - Medium	Low	1.8 - SW (129)	Minor	1.8 km - SW (129)	Minor
33	2 - Medium	Low	3 - SE (69)	Minor	3 km - SE (69)	Minor
34	2 - Medium	High	8.8 - NE (41)	Minor	8.8 km - NE (41)	Minor

Table 3-1 compares the visual impact change between the Preferred Project (November 2012) and the Amended Layout (March 2015) from publicly accessible viewpoints.

Of the 34 viewpoints assessed, in 12 viewpoints the distance to the nearest wind turbines have changed.

In viewpoints VP01 and VP02 there is a minor reduction in distance to the nearest wind turbines due to micro siting of wind turbines to avoid vegetation.

In viewpoints VP07, 08, 11, 15, 19, 20, 21, 22, 23 and 25, the distance to nearest wind turbines have changed due to removal of wind turbines. For five viewpoints VP07, 08, 11, 15 and 25 the distance to nearest wind turbine has increased and therefore there will be a marginal reduction in the visual impact. However, in all cases the, the change in views is not of such an order that it would change the level of visual impact assessed in the Submissions Reports.

4 VISUAL IMPACT FROM RESIDENCES

The number of dwellings within 1.5 km, 2 km and 3 km of the wind turbines in the Amended Layout in comparison to the Preferred Project (2012) discussed in the ERM Submissions Report Rev2 are summarised in Table 4-1. The distance bands where there have been change to the number of residences is highlighted in red.

Table 4-1 *Number of dwellings within three kilometres of the wind turbines*

No	Number of dwellings within the distance ranges					
	0 km-1.5 km		1.5 km-2 km		2 km-3 km	
	Preferred Project	Amended Layout	Preferred Project	Amended Layout	Preferred Project	Amended Layout
Associated	8	5	9	9	6	5
Non-Associated	3 (G14, G16, M42)	4 (G14, C27, C68, M42)	3 (G11, M20, M24)	3 (G11, M20, M24)	24	25
Total	11	9	12	12	30	30

In all, there are now 51 dwellings within 3km of the Amended Layout as opposed to 53 dwellings within 3 km of the proposed wind turbines of the Preferred Project.

Of these 32 are now non-associated in comparison to 30 that were non-associated in the Preferred Project. There are now 21 dwellings within 2 km of the Amended Layout in comparison to 23 dwellings within 2 km of the Preferred Project layout.

The changes to the number of dwellings are because of the reduction in the turbine numbers and consequently smaller distance ranges as well as the reclassification of some of the previously associated landowners from the project.

4.1 Impact from additional non-involved residences

In response to Secretary's Report, a subsequent site visit was undertaken on 19th February 2015. Residences that are now considered non-involved as well as those residences where objections were raised in the Secretary's Report were visited.

A representative of ERM visited the 11 residences during the site visit on 19th February 2015. Where access was not available during this site visit, the nearest entry driveway locations was visited and photographed.

Where YVWF was able to gain access to residential properties prior to the site visit undertaken on 19th February 2015, photomontages have been prepared by YVWF from the residential area. These photomontages have been used as a basis for assessing the visual impact.

In other instances, where access was not permitted by residents or was not readily available, photographs were taken from near the entry driveway to the existing dwelling and photomontages were prepared by YVWF from this location.

4.1.1

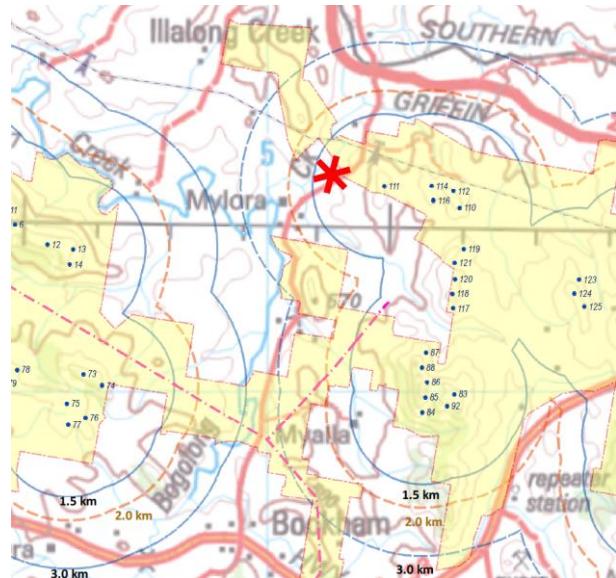
Dwelling C27

Dwelling C27 is located near the northern edge of the proposed wind farm. It is accessed from Illalong Road. Illalong Road is a sealed road. The resident was previously an involved landowner but has now been assessed as non-involved with the project. Access was not available to photograph views from the residence. Therefore, photographs of the house were taken near the driveway and along the line of sight to the nearest wind turbine in the east.

The nearest wind turbine (111) from the house is approximately 1.1 km to the east. The nearest wind turbine (111) from the driveway viewpoint is approximately 0.92 km to the east. The nearest wind turbines in the south-west are located over 5.6 km from the residence.



Source : Maps Six <https://maps.six.nsw.gov.au/#>



The dwelling has established planting within the garden areas as seen in the aerial. The dwelling is oriented in a south-east direction towards Illalong Road. Figure 4-1 shows the view north towards the dwelling from Illalong Road showing the existing vegetation near the residence. The southern aspect of the dwelling is open.

Figure 4-1 View north of Dwelling C27 from Illalong Road (651320E, 6154369S, 440m AHD)



Figure 4-2 shows the view west of the dwelling and its entry driveway.

Figure 4-2 View west of Dwelling C27 and its driveway from Illalong Road (651500E, 6154510S, 451m AHD)



The viewpoint in Figure 4-2 is located along the line of sight from the house in the west to the nearest wind turbines in the east. Dwelling C27 is located at a lower elevation (approx. 442 m AHD) to the viewpoint on Illalong Road (approx. 451 m AHD).

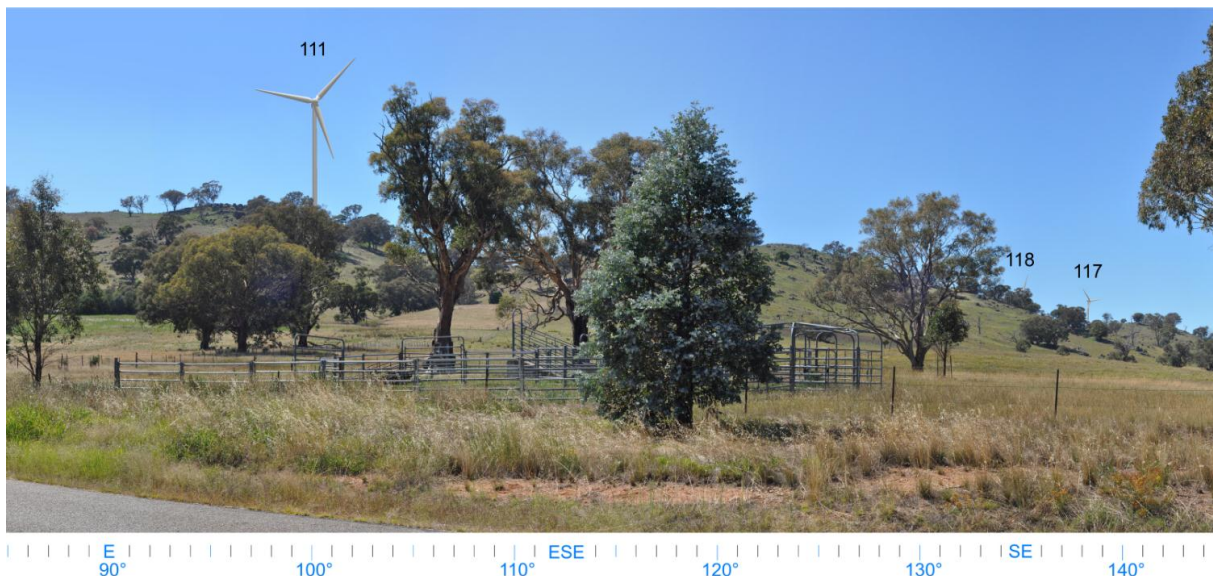
There is established planting along the driveway and garden areas that will filter views to the wind turbines from the residence.

Figure 4-3 shows the existing view from Illalong Road near the entry driveway to Dwelling C27 from a break in roadside vegetation. Figure 4-4 shows the photomontage from the same location.

Figure 4-3 Existing view from Illalong Road towards the proposed wind farm near Dwelling C27 (Source YVWF, 651493E, 6154498S, 451m AHD)



Figure 4-4 Photomontage Dwelling C27 - 60 degree field of view (Source YVWF)



Filtered views to the proposed wind turbines in the east may be available through established vegetation within the property as well as the roadside vegetation. Views west to proposed wind turbines within the Coppabella precinct will be screened by established vegetation as seen in Figure 4-1. Therefore, the overall visual impact of the proposed wind turbines is assessed to be **Medium**.

If desired, mitigation is possible through additional planting along the perimeter of the garden to the east. The planting can comprise of a mix of native and deciduous trees. Such foreground vegetation upon establishment will assist in filtering views to the wind turbines from the garden and therefore bring the overall visual impact to **Low**.

If the nearest wind turbine 111 is removed, then the visual impact on residence C27 would be further reduced and the nearest visible turbine will be 118. Wind turbine 118 is located approximately 3.3 km south-east of the viewpoints and approximately 3.5 km south-east of the residence.

As seen in Figure 4-4 several of the nearest visible wind turbines will only be partially visible behind the existing topography and vegetation. Wind turbines such as 116, 114, 112 and 110 that are nearer to the residence than wind turbine 118 are screened by intervening topography and vegetation.

With the removal of wind turbine 111 and given the intervening topography, vegetation and the greater distance to the nearest wind turbines, the overall visual impact is assessed as **Low** (unchanged). This assessment, on a conservative basis, is based on the views available from the road, as permission to access the property was not available. It is likely, given the existing vegetation within the property that the nearest wind turbine 111 is only partially visible from the front porch of the residence thus resulting in a lower impact than previously assessed.

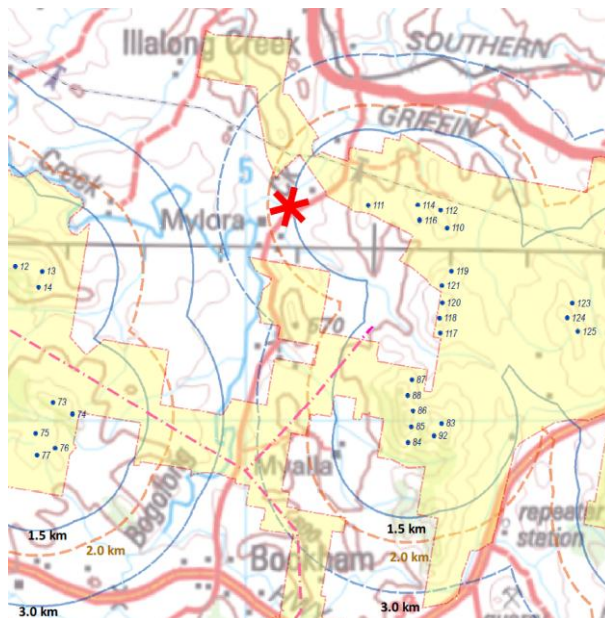
4.1.2 Dwelling C68

Dwelling C68 is located near the northern edge of the proposed wind farm, and is adjacent to Dwelling C27 and is accessed from Illalong Road. Access was not available to photograph views from the residence. Therefore, photographs of the house were taken near the driveway and along the line of sight to the nearest wind turbine in the east.

The nearest wind turbine (111) from the house is approximately 1.3 km to the east. The nearest wind turbine (111) from the driveway viewpoint is approximately 1.35 km to the east. The nearest wind turbines in the south-west are located over 5.3 km from the residence.



Source : Maps Six <https://maps.six.nsw.gov.au/#>



The dwelling has established planting along the west as seen in the aerial. The dwelling is oriented in a north-south direction with entrance from the north as seen in the aerial.

Figure 4-5 shows the view north towards the dwelling from Illalong Road showing the existing vegetation near the residence. The southern aspect of the dwelling is open. There are no windows to the east.

Figure 4-5 *View north of Dwelling C68 from Illalong Road (651143E, 6154285S, 442m AHD)*



The viewpoint in Figure 4-5 is located near the entry driveway to the house. Dwelling C68 is located at a similar elevation (approx. 442 m AHD) to the viewpoint on Illalong Road (approx. 443 m AHD).

Figure 4-6 shows the existing view from Illalong Road near the entry driveway to Dwelling C27 from a break in roadside vegetation. Figure 4-7 shows the photomontage from the same location.

Figure 4-6 *Existing view from Illalong Road towards the proposed wind farm near Dwelling C68 (Source YVWF, 651060E, 61542365A, 443m AHD)*



Figure 4-7 *Photomontage Dwelling C68 - 60 degree field of view (Source YVWF)*

Views west to proposed wind turbines within the Coppabella precinct will be screened by established vegetation as seen in Figure 4-5.

Given the dwelling has no windows facing east there will be no views east or north to the proposed wind turbines from living areas. Some views to the nearest wind turbines in the east will be available from the porch to the south similar to that shown in Figure 4-7 photomontage. Given the proximity, the nearest wind turbines will dominate the view from the southern porch.

Therefore, the overall visual impact of the proposed wind turbines to the east from the verandah is assessed as **High**.

Mitigation is possible through additional planting along the southern perimeter of the garden. The planting can comprise of a mix of native and deciduous trees. Such foreground vegetation will assist in filtering views to the wind turbines from the garden and therefore bring the overall visual impact to a **Low**.

If the nearest wind turbine 111 is removed then the visual impact to the residence C68 will be reduced and the nearest visible turbine will be 116. Wind turbine 116 is located approximately 2.3 km east of the viewpoint and approximately 2.3 km east of the residence.

As seen in Figure 4-4 several of the nearest visible wind turbines will only be partially visible behind the existing topography and vegetation. Wind turbines such as 116, 114, 112, 110 and 119 are partially screened by intervening topography and vegetation. Other turbines that are located over 3.2 km from the viewpoint such as 121, 120, 118 and 117 will also be visible.

With the removal of wind turbine 111 and given the intervening topography, vegetation and the greater distance to the nearest wind turbines, the overall visual impact on views from residence C68 is assessed as **Medium** (reduced from **High**). This assessment, on a conservative basis, is based on the views available from the road, as permission to access the property was not available. As previously discussed, further mitigation is possible through landscaping to the southern perimeter of the garden.

4.1.3

Dwelling C04

Dwelling C04 is located south of the Coppabella precinct of the proposed wind farm. It is accessed from Whitefields Road. Whitefields Road is an unsealed road. This residence has now been assessed as non-involved with the project. The dwelling was unoccupied on the day of the site visit.

The nearest wind turbine (50) from the house is approximately 2.3 km to the north-west.



Source : Maps Six <https://maps.six.nsw.gov.au/#>



The dwelling is located at an elevated location. As seen in the aerial, the dwelling is set with a garden area that has established planting comprising of native and exotic vegetation such as Nerium sp (Oleander) and Quercus sp. (Oak). The dwelling is oriented north towards Whitefields Road and the proposed wind farm.

Figure 4-8 shows the view south towards the dwelling from the entrance. There is established vegetation in the garden areas.

Figure 4-8

View south of Dwelling C04 from driveway (634518E, 6153016S, 474m AHD)



Figure 4-9 shows the view north-west from the garden entrance towards the proposed wind farm. Figure 4-10 shows the photomontage from the same location.

Figure 4-9 *View north-west from the Dwelling C04 garden entrance towards the proposed wind farm (641155E, 6150594S, 474m AHD)*

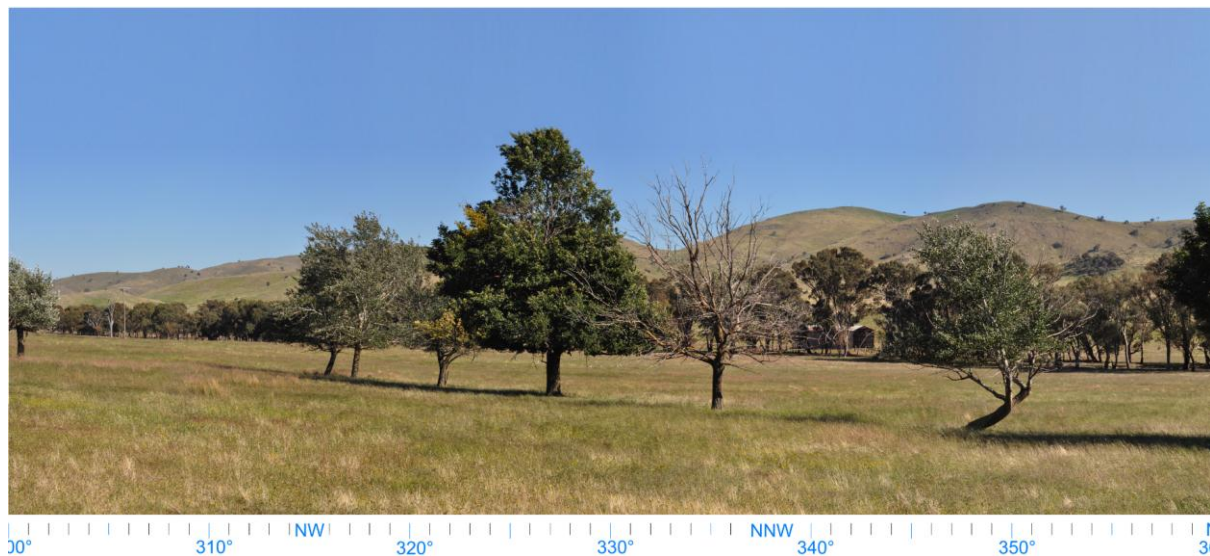


Figure 4-10 *Photomontage Dwelling C04 - 60 degree field of view (Source YVWF)*



Views to the nearest wind turbines to the north-west will be available from the entry porch. Views from the garden would be less than that shown in Figure 4-10 photomontage as the garden vegetation could partially screen views to the wind turbines.

Given the distance and intervening vegetation, the overall visual impact of the proposed wind turbines from C04 is assessed as **Medium**.

If desired, mitigation is possible through additional planting along the northern perimeter of the garden. The planting can comprise of a mix of native and deciduous trees or continue with the species that are already planted along the boundary. Such foreground vegetation can screen views to the wind turbines therefore bring the overall visual impact to a **Low**.

4.1.4

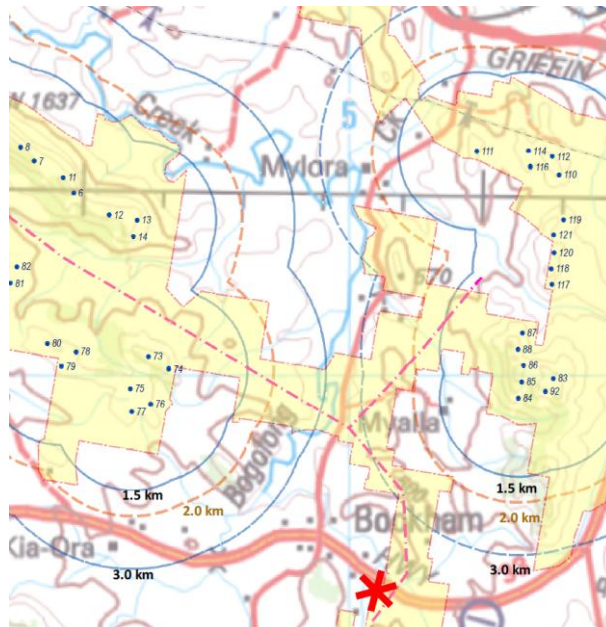
Dwelling M13

Dwelling M13 is located to the south of the proposed wind farm. It is accessed from a sealed service road parallel to the Hume Freeway at Bookham. The residence has now been assessed as non-involved with the project.

The nearest wind turbine (84) is approximately 4.5 km to the north-east.



Source : Maps Six <https://maps.six.nsw.gov.au/#>



The dwelling is located near the Hume Freeway. As seen in the aerial photo, the dwelling is set within a garden area that has established planting comprising of native and exotic vegetation such as *Eucalyptus* sp and *Cupressus* sp. (Oak). Figure 4-11 shows the view east towards the dwelling from the driveway near the car parking area. There is established vegetation in the rear garden areas as shown in Figure 4-11.

Figure 4-11 View east of Dwelling M13 and rear garden (650524E, 6145953S, 471m AHD)



Figure 4-12 shows the view of the residence from garden. Hume Freeway is to the left screened behind the existing vegetation.

Figure 4-12 View east of the Dwelling M13 (650528E, 6145979S, 470m AHD)



Figure 4-13 shows the view north from the porch towards the proposed wind farm.

Figure 4-13 *View north from the Dwelling M13 porch towards the proposed wind farm (650552E, 6145979S, 470m AHD)*



Given the distance to the proposed wind turbines and the intervening vegetation, the proposed wind farm will not be visible from the dwelling and its surrounds. The overall visual impact of the proposed wind turbines is assessed as **Nil**.

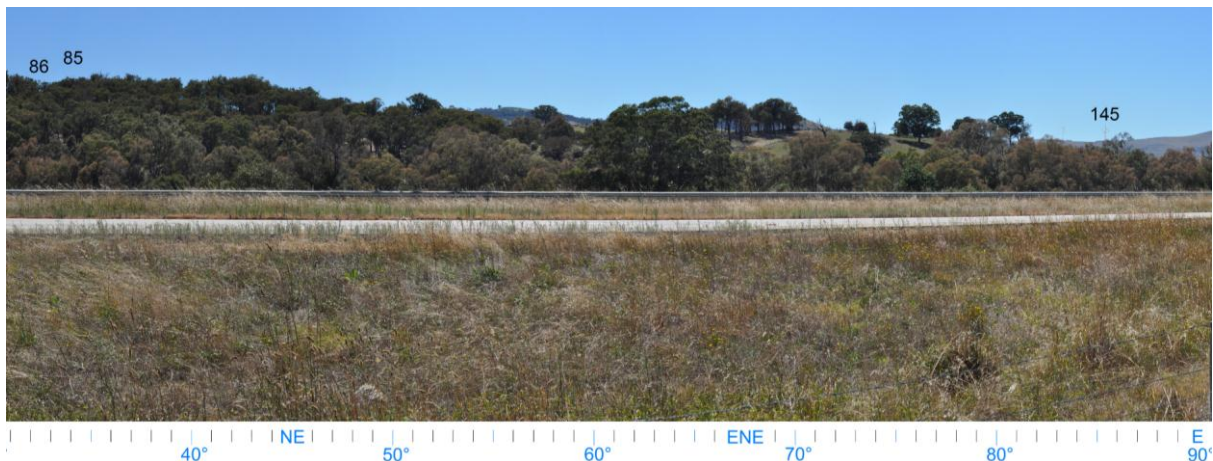
Figure 4-14 shows the view north-east towards the proposed wind farm from outside the entrance to the house next to the Hume Freeway.

Figure 4-14 *View north-east from outside the entrance to Dwelling M13 (651778E, 6149456S, 497m AHD)*



Figure 4-15 shows the photomontage from outside the screening vegetation.

Figure 4-15 *Photomontage near Dwelling M13- 60 degree field of view (Source YVWF)*

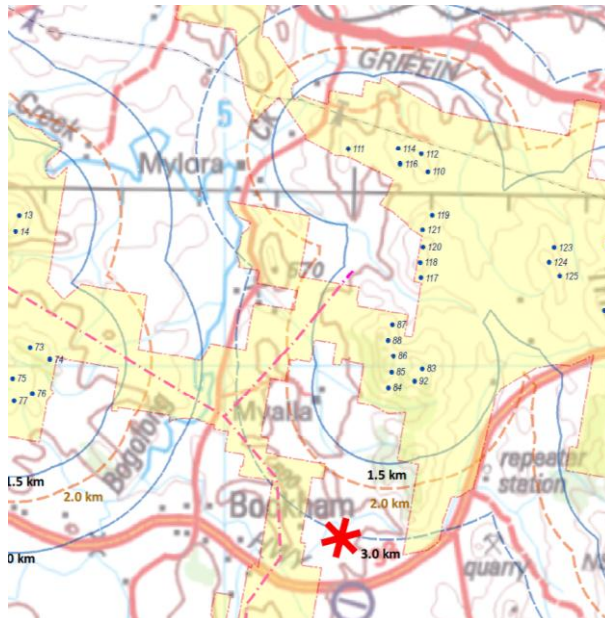


Existing topography and vegetation will screen views to the proposed wind turbines. While these views are available from locations beyond the house demesne, such locations are infrequently visited and therefore are not representative of the visual impact from the dwelling.

4.1.5 Dwelling M32

Dwelling M32 is located south of the proposed wind farm, and is accessed from the Hume Freeway.

The nearest wind turbine (84) from the house is approximately 3.1 km to the north.



Source : Maps Six <https://maps.six.nsw.gov.au/#>

The dwelling is oriented in a north-east direction with its entrance from the north. The dwelling has established planting of trees such as Cypress to the south the west as well as to the north as seen in the aerial. Some exotic planting of Oak trees also occur outside the garden.

Figure 4-16 shows the view north-west towards the dwelling from driveway. The southern aspect of the dwelling is open.

Figure 4-16 View east of Dwelling M32 and sheds from driveway (634518E, 6153016S, 434m AHD)



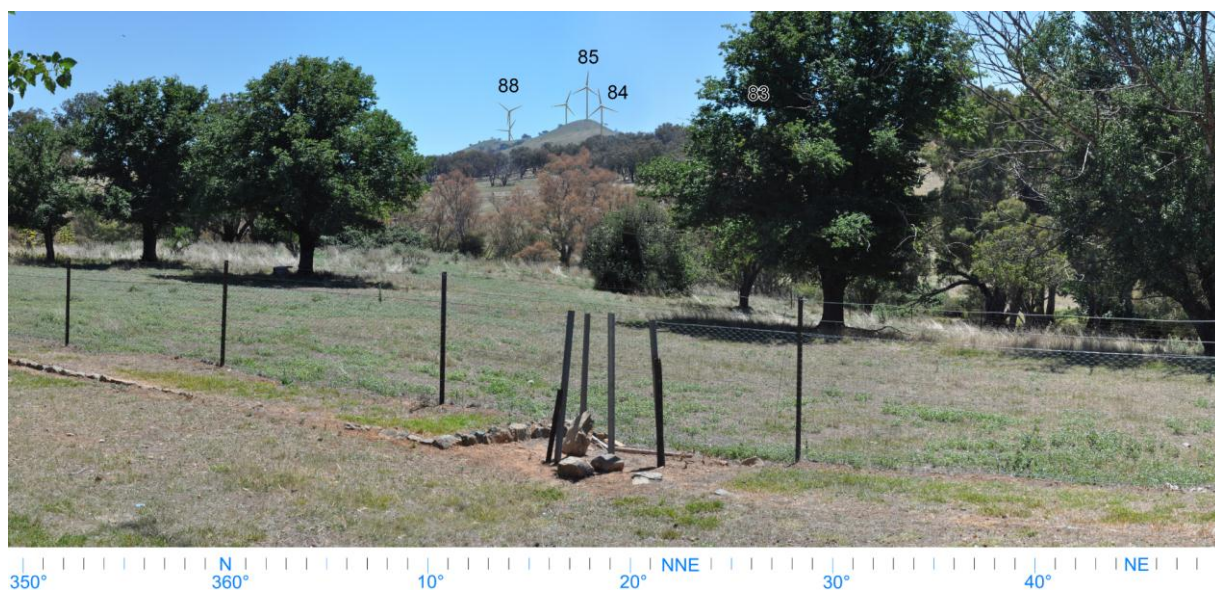
Figure 4-17 shows the view north-east from edge of garden towards the proposed wind farm.

Figure 4-17 View north-east from edge of Dwelling M32 garden towards the proposed wind farm (Source YVWF, 652131E, 6146649S, 492m AHD)



Figure 4-18 shows the photomontage.

Figure 4-18 Photomontage Dwelling M32 - 60 degree field of view (Source YVWF)



The proposed wind farm will be partially visible through gaps in vegetation as seen in Figure 4-18.

Given the distance, the nearest wind turbines will not dominate the views from the dwelling. Therefore, the overall visual impact of the proposed wind turbines from living areas is assessed as **Medium**.

Mitigation is possible through additional supplementary planting along the eastern perimeter of the garden. The planting can comprise of a mix of native and deciduous trees. Such foreground vegetation will screen and filter views to the wind turbines from the garden and therefore bring the overall visual impact to a **Low to Negligible** level.

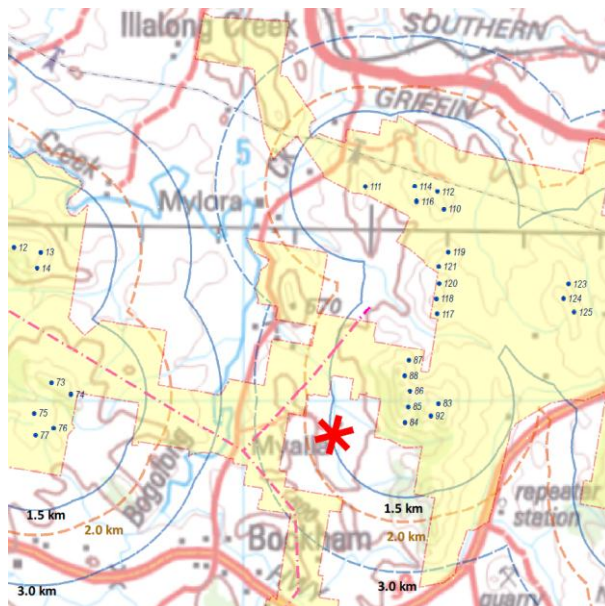
4.1.6 Dwelling G31

Dwelling G31 is located west of the Marilba precinct of the proposed wind farm. It is accessed from Campbells Road. Campbells Road is an unsealed road. The residence has now been assessed as non-involved with the project. The dwelling is not currently habitable. Access was not available to the dwelling.

The nearest wind turbine (84) from the house is approximately 1.4 km to the east.



Source : Maps Six <https://maps.six.nsw.gov.au/#>



As seen in the aerial and in Figure 4-19 and Figure 4-20, the dwelling is set with a garden area that has established and mature planting comprising of native and exotic vegetation such as Eucalyptus sp and Pinus sp. (Pines) in all directions.

Figure 4-19 View south-east of Dwelling G31 from driveway (651795E, 6153016S, 434m AHD)



The entrance to the dwelling is oriented west towards Campbells Road away from the proposed wind farm.

Figure 4-20 View east of Dwelling G31 from driveway (634518E, 6153016S, 434m AHD)



Assuming the house was fit for habitation, established vegetation within the garden areas will effectively screen views to wind turbines. Therefore, the overall visual impact of the proposed wind turbines from living areas within the house and from the garden will be **Negligible**.

Figure 4-21 shows the view north-east towards the proposed wind farm from outside the garden.

Figure 4-21 *View north-east from outside the Dwelling G31 garden towards the proposed wind farm (651778E, 6149456S, 497m AHD)*



Figure 4-22 shows the photomontage from outside the garden.

Figure 4-22 *Photomontage from outside Dwelling G31 - 60 degree field of view (Source YVWF)*



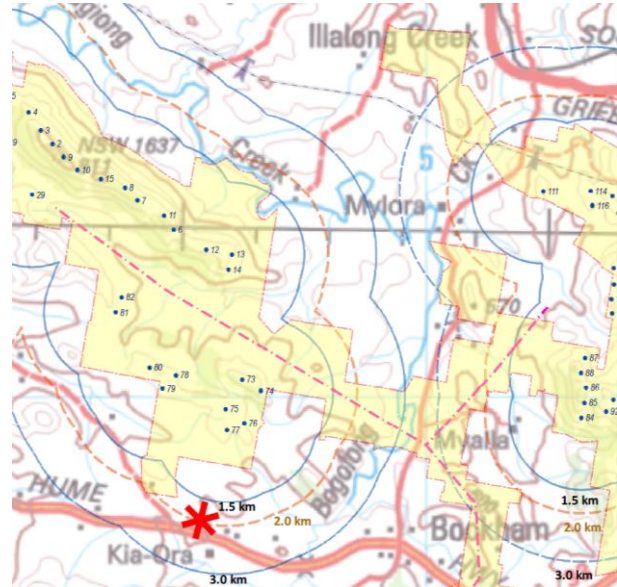
While these views are available from locations beyond the house demesne, such locations are infrequently visited and therefore are not representative of the visual impact from the dwelling.

4.1.7

Dwelling C06

Dwelling C06 is located south of the Coppabella precinct of the proposed wind farm. It is accessed from the Hume Freeway.

The nearest wind turbine (77) from the house is approximately 2.3 km to the north.



Source : Maps Six <https://maps.six.nsw.gov.au/#>

Dwelling C06 is on a rise and set within a garden. The dwellings has porch to all sides. Figure 4-23 shows the view south

Figure 4-23 View south of Dwelling C06 from rear yard (645149E, 6147470S, 522m AHD)



Figure 4-24 shows the view west to the dwelling.

Figure 4-24 View west of Dwelling C06 and garage (645169E, 6147442S, 520m AHD)



Figure 4-25 shows the view north-east from the garden towards the proposed wind farm.

Figure 4-25 View north-east of Dwelling C06 from garden (645177E, 61474423S, 522m AHD)



Figure 4-26 shows the wireframe photomontage to nearest wind turbines.

Figure 4-26 Photomontage Dwelling C06 - 60 degree field of view (Source YVWF)



The nearest wind turbines will be screened from the dwelling due to intervening vegetation.

Figure 4-27 shows the view east from the same location.

Figure 4-27 View north-east of Dwelling C06 from garden (634518E, 6153016S, 434m AHD)



Figure 4-28 shows the photomontage.

Figure 4-28 Photomontage Dwelling C06 - 60 degree field of view (Source YVWF)



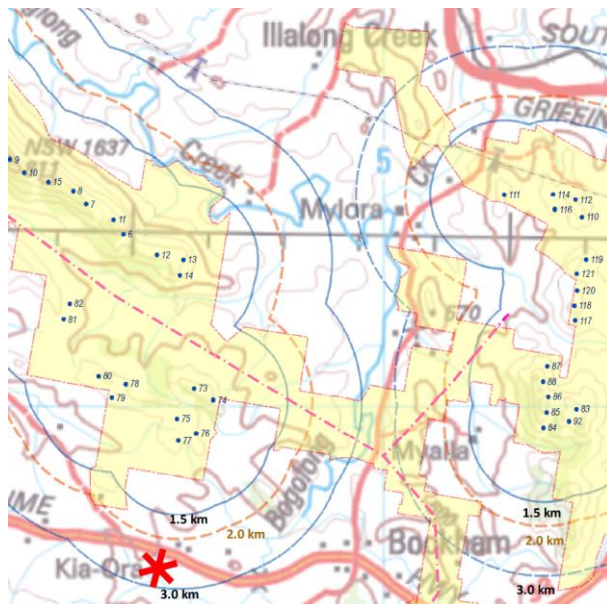
The nearest visible turbine will be over 8 km away from the dwelling. Given this distance, the overall visual impact is assessed as **Low**.

4.1.8

Dwelling C60

Dwelling C60 is located south of the proposed wind farm, and is accessed from the Hume Freeway.

The nearest wind turbine (77) from the house is approximately 2.5 km to the north.



Source : Maps Six <https://maps.six.nsw.gov.au/#>

The dwelling is oriented north towards the proposed wind farm. The garden associated with the dwelling has an open aspect to the north. Hedgerows are planted to the northeast and north-west directions as seen in the aerial. Figure 4-29 shows the view south towards the dwelling.

Figure 4-29 View south of Dwelling C60 (645436E, 6146841S, 499m AHD)



Figure 4-30 shows the view north from front garden towards the proposed wind farm.

Figure 4-30 View north from Dwelling C60 front garden towards the proposed wind farm (645433E, 6146831S, 499m AHD)



The proposed wind farm will be partially visible through gaps in vegetation as seen in Figure 4-30. The nearest wind turbines will be screened by intervening vegetation. Therefore, the overall visual impact of the proposed wind turbines is assessed as **Low**.

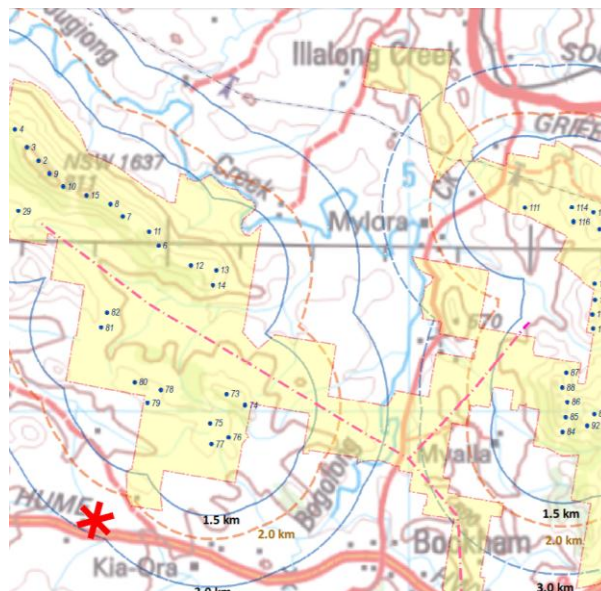
Mitigation is possible through additional supplementary planting along the eastern perimeter of the garden. The planting can comprise of a mix of native and deciduous trees. Such foreground vegetation will screen and filter views to the wind turbines from the garden and therefore bring the overall visual impact to a **Negligible** level

4.1.9

Dwelling C75

Dwelling C75 is located south of the proposed wind farm, and is accessed from the Hume Freeway. Access was not available to photograph views from the residence. Therefore, photographs of the house were taken near the driveway and along the line of sight to the nearest wind turbine in the north.

The nearest wind turbine (79) from the house is approximately 2.8 km to the north. The nearest wind turbine (79) from the driveway viewpoint is approximately 3.0 km to the north.



Source : Maps Six <https://maps.six.nsw.gov.au/#>

The dwelling is oriented north towards the proposed wind farm. The garden associated with the dwelling has some planting to the north. Some established planting is visible to the east of the dwelling as seen in Figure 4-31.

Figure 4-31 View north-east of Dwelling C75 from driveway (643194E, 6147476S, 526m AHD)



Figure 4-32 shows the view north from the driveway towards the proposed wind farm.

Figure 4-32 View north from Dwelling C75 driveway towards the proposed wind farm (643192E, 6147476S, 526m AHD)



Figure 4-33 shows the photomontage.

Figure 4-33 Photomontage Dwelling C75 - 60 degree field of view (Source YVWF)



As seen in Figure 4-33, the proposed wind turbines are partially screened by topography as well as vegetation.

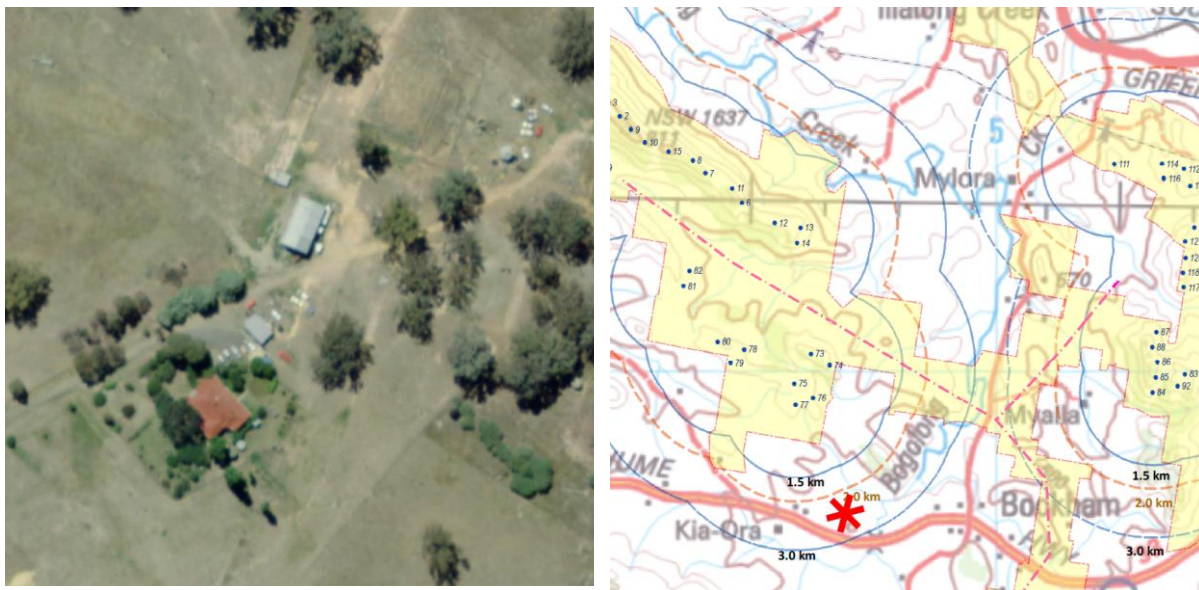
Given the intervening topography of the hill to the north of the dwelling, the nearest wind turbines that are to the north will also be potentially screened from view. Established vegetation near the house, particularly to the east will also filter and screen views to the proposed wind turbines from the dwelling. Therefore, the overall visual impact of the proposed wind turbines is assessed as **Medium to Low**.

Mitigation is possible through additional supplementary planting along the eastern perimeter of the garden. The planting can comprise of a mix of native and deciduous trees. Such foreground vegetation will screen and filter views to the wind turbines and therefore bring the overall visual impact to a **Low to Negligible** level.

4.1.10

Dwelling C41

Dwelling C41 is located south of the proposed wind farm, and is accessed from the Hume Freeway. The nearest wind turbine (77) from the house is approximately 2.7 km to the north-west.



Source : Maps Six <https://maps.six.nsw.gov.au/#>

The garden associated with the dwelling has established planting in most directions except to the south-east as seen in the aerial. Figure 4-34 shows the view south-west to the dwelling C41 from the garden

Figure 4-34 View south-west the dwelling C41 from the garden (646839E, 6146826S, 490m AHD)



Figure 4-35 shows the view north towards the dwelling and associated buildings from the driveway.

Figure 4-35 View south towards Dwelling C41 and associated buildings from the driveway (646821E, 6146858.S, 489m AHD)



Vegetation will screen and filter views to the proposed wind turbines. Therefore, the overall visual impact from living areas of the dwelling is assessed as **Low**.

Figure 4-36 shows the view west to the dwelling from the garden.

Figure 4-36 View west towards dwelling C41 from the garden (646835E, 6146812S, 488m AHD)



Figure 4-37 shows the view east from the garden towards the Marilba Precinct.

Figure 4-37 View east from Dwelling C41 garden (646835E, 6146812S, 488m AHD)



The nearest wind turbines are over 6.9km north-east of this location and will not dominate the view. Therefore, the overall visual impact from living areas of the dwelling is assessed as **Low**.

Figure 4-38 shows the view north-west towards the Coppabella precinct from the driveway.

Figure 4-38 View north-west towards the Coppabella precinct from Dwelling C41 driveway (646821E, 6146858S, 489m AHD)



Figure 4-39 shows the photomontage

Figure 4-39 Photomontage Dwelling C41- 60 degree field of view (Source YVWF)



Views to the nearest wind turbines in the north-west will be available from the driveway but not the dwelling and garden areas. As shown in Figure 4-10 photomontage the garden vegetation would partially screen views to the wind turbines.

Given the distance and intervening vegetation, the overall visual impact of the proposed wind turbines from the driveway is assessed as **Medium**.

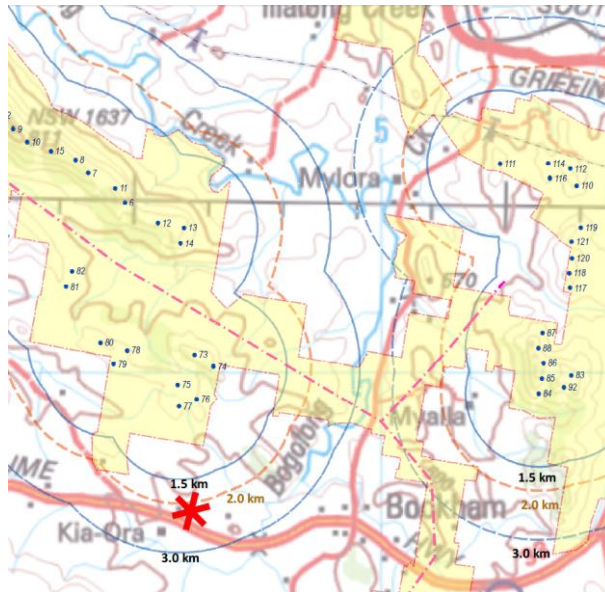
If desired, mitigation is possible through additional planting along the driveway. The planting can comprise of a mix of native and deciduous trees or continue with the species that are already planted along the boundary. Such foreground vegetation can screen views to the wind turbines and therefore bring the overall visual impact from the driveway to Low.

4.1.11

Dwelling C08

Dwelling C08 is located south of the proposed wind farm. It is adjacent to Dwelling C41 and is accessed from Hume Freeway through a common driveway. It is currently owned by the resident at Dwelling C41 and is rented.

The nearest wind turbine (77) from the house is approximately 2.2 km to the north.



Source : Maps Six <https://maps.six.nsw.gov.au/#>

The dwelling is oriented to the south towards the Hume Freeway. There is established planting to the south and west as seen in the aerial. Existing sheds to the north limit views towards the proposed wind farm as seen in Figure 4-40.

Figure 4-40

View west of DwellingC08 from the driveway (645806E, 6147073S, 494m AHD)



Given the intervening vegetation and built-form, the overall visual impact of the proposed wind farm on the living areas of dwelling C08 is assessed as **Low to Negligible**.

4.2 Summary of impact from residences assessed

In all 18 residential viewpoints were assessed for visual impact in the EA and Submissions Report combined in addition to the township locations of Bookham and Goondah. An additional 11 viewpoints have been assessed. The total number of residential viewpoints assessed is now 29.

Table 4-2 compares the visual impact change between the Preferred Project and Amended Layout from the residential viewpoints. Those viewpoints that have had an alteration in the assessed level of visual impact are highlighted.

Table 4-2 Comparison summary assessment of residential viewpoints

House ID (EA VP#)	Distance and direction to (nearest turbine) Preferred Project	Overall visual impact Preferred Project	Distance and direction to (nearest turbine) Amended Layout	Overall visual impact Amended Layout
G14 (R1)	1.4 km - SW (136)	Low – without screening Existing screening	1.4 km - SW (136)	No change - As assessed previously
M04 (R2)	2.1 km - SW (100)	Low – without landscape mitigation Screening may not be appropriate	2.1 km - SW (100)	No change - As assessed previously
M22 (R3)	2.5 km - S (114)	Low – without landscape mitigation Screening may not be appropriate	2.5 km - S (114)	No change - As assessed previously
C83 (R4)	9.9 km - SW (129)	Negligible – without landscape mitigation Extensive existing screening	9.9 km - SW (129)	No change - As assessed previously
C39 (R5)	4.3 km - SE (69)	Medium - without landscape mitigation	4.3 km - SE (69)	No change - As assessed previously Should additional tree planting be undertaken either in the foreground or on the hills in the middle distance the impact would be reduced to low to negligible.
G27 (R6)	No turbines to the south. 7.7 km - N (95)	Not applicable Existing screening	8.3 km - NE (145)	Negligible - Existing screening and lower impact due to greater distance to nearest wind turbines
M8 (R7)	2.3 km – SW (136)	Negligible – Existing vegetation around gallery Medium – Bamboo garden without mitigation Low – Proposed eco village site	2.3 km – SW (136)	No change - As assessed previously Existing planting screens views to the wind turbines from many locations within this garden. As additional planting matures, the level of visual impact will reduce to a Low to Negligible. As discussed previously in EA Report “The landscape that has been undertaken at this property to date, has established a series of external “rooms.” If such a landscape theme was continued around this location, then the wind turbines could easily be screened from view.”
C41 (R8)	2.7 km – NW (77)	Low - without landscape mitigation	2.7 km – NW (77)	No change - As assessed previously

House ID (EA VP#)	Distance and direction to (nearest turbine) Preferred Project	Overall visual impact Preferred Project	Distance and direction to (nearest turbine) Amended Layout	Overall visual impact Amended Layout
C42 (R9)	3.5 km – NW (76)	Medium - without landscape mitigation	3.5 km – NW (76)	No change - As assessed previously EA Report, "additional planting, supplementing that which the owner has commenced, could readily screen the turbines from view, if the owner felt this was desirable." The overall visual impact would be Low to Negligible with this planting.
G11	1.7 km-W (143)	Low – Existing vegetation and orientation of residence	1.7 km-W (143)	No change - As assessed previously
G16	1.1 km-W (96)	Nil - from living areas Medium to Low - from driveway with landscape mitigation	2.6 km - NW (92)	Nil - As assessed previously
M20	1.8 km-SW (100)	High - from living areas Medium to Low - with landscape mitigation	1.8 km-SW (100)	No change - As assessed previously
M24	1.9 km-SW (100)	Low - from living areas Low - with landscape mitigation	1.9 km-SW (100)	No change - As assessed previously
M42	1.1 km-S (114)	Nil - from living areas Low - from driveway with landscape mitigation	1.1 km-S (114)	No change - As assessed previously
C01	2.7 km-NE (63)	Nil - from living areas Low - from driveway	2.7 km-NE (63)	No change - As assessed previously
C37	2.5 km-SE (126)	Nil	2.5 km-SE (126)	No change - As assessed previously
C67	3.3 km-NW (74)	Medium - from living areas High - from garden without landscape mitigation	3.3 km-NW (74)	No change - As assessed previously Should additional tree planting be undertaken in the foreground the impact would be reduced to Medium to Low.
G29	2.5 km-N (95)	Medium - from living areas Medium to Low - with landscape mitigation	4.5 km - E (145)	Increased distance to wind turbine Medium to Low- from living areas Low - with landscape mitigation
Goondah	2.3 km-S (100)	Low to Negligible	2.3 km-S (100)	No change - As assessed previously
Bookham	3.8 km-NE (95)	Low to Negligible	4.5 km - NE (84)	Low to Negligible
Additional viewpoints based on site visit on 19 February 2015				
C27		Not assessed	1.1 km - E (111) Road Viewpoint - 0.92 km - E (111)	Medium - from living areas Low - with landscape mitigation
C68		Not assessed	1.3 km - E (111) Road Viewpoint – 1.35 km - E (111)	High- from living areas Low - with landscape mitigation
C04		Not assessed	2.8 km - N (50)	Medium - from living areas Low - with landscape mitigation
M13		Not assessed	4.5 km - NE (84)	Nil – Existing screening vegetation
M32		Not assessed	3.1 km - N (84)	Medium - from living areas Low to Negligible- with landscape mitigation
G31		Not assessed	1.4 km - NE (84)	Negligible - Existing screening vegetation

House ID (EA VP#)	Distance and direction to (nearest turbine) Preferred Project	Overall visual impact Preferred Project	Distance and direction to (nearest turbine) Amended Layout	Overall visual impact Amended Layout
C06		Not assessed	2.3 km - N (76)	Low - -- Existing vegetation screens nearest wind turbines from view
C60		Not assessed	2.5 km - N (77)	Low - from living areas due to existing vegetation Negligible - with additional landscape mitigation
C75		Not assessed	2.8 km - N (79) Road Viewpoint – 3.0 km - N (79)	Medium to Low- from living areas Low to Negligible- with landscape mitigation
C41		Not assessed	2.7 km - NW (77)	Low- from living areas Medium to low from driveway Low - with landscape mitigation
C08		Not assessed	2.2 km - N (77)	Low to negligible – limited views from living areas and existing screening

Of the 20 viewpoints reviewed previously, four viewpoints G27, G16, G29 and Bookham have an increased distance to the nearest wind turbine and are therefore likely to have a marginal reduction the level of visual impact.

The distance to the nearest wind turbines from residence G29 is increased by nearly 2 km and therefore, the level of overall visual impact is likely to reduce from Medium to Medium to Low.

5 SUMMARY REASSESSMENT OF VISUAL IMPACT FROM CUMULATIVE VIEWPOINTS

Given the reduction in the overall number of wind turbines associated with the YVWF, there will be a negligible alteration to the level of cumulative impact from sequential viewpoint locations. Table 5-1 lists the viewpoints and the distance and direction to nearest proposed wind turbines at Yass Valley and the nearest approved wind turbines at Conroys Gap. Viewpoints where the nearest wind turbine of YVWF is altered it is highlighted in blue.

Table 5-1 Cumulative visual impact from sequential viewpoints

Viewpoint	Distance to proposed wind turbines (YVWF) Preferred Project	Distance to nearest turbine (approx.) Amended Layout	Distance to approved wind turbines (CGWF)	Assessment of cumulative visual impact of approved CGWF and proposed YVWF
SEQUENTIAL VIEWPOINTS				
SVP-01	8.7 km - NE (41)	8.8 km - NE (41)	25.9 km - E (R12)	Negligible
SVP-02	5.5 km - NE (41)	5.5 km - NE (41)	22.2 km - E (R2)	Negligible
SVP-03&04	4.3 km - E (95)	4.5 km - NW (76)	8.1 km - E (R2)	Low (Given the distance YVWF and CGWF will appear contiguous and indistinguishable)
SVP-05	9.4 km - NW (1)	9.4 km - SW (1)	20 km - SE (R1)	Negligible (Given the distance CGWF will have negligible impact)
SVP-06	2.3 km - S (100)	2.3 km - S (100)	8.5 km - S (R1)	Low (Given the distance YVWF and CGWF will appear contiguous and indistinguishable)
SVP-07	6 km - SW (143)	6 km - SW (143)	8 km - SW (R5)	Low (Given the distance YVWF and CGWF will appear contiguous and indistinguishable)
SVP-08	4.8 km - NW (143)	4.8 km - W (143)	5.6 km - W (R5)	Low (Given the distance YVWF and CGWF will appear contiguous and indistinguishable)
SVP-09	8.9 km - NE (145)	8.9 km - N (145)	2.1 km - NE (S14)	Medium (The nearest approved wind turbines at CGWF can dominate the view)
SVP-10	13.2 km - NE (95)	14.4 km - NE (145)	8.9 km - NE (S14)	Negligible (Given the distance CGWF will have negligible impact)
SVP-11	6.2 km - SE (111)	6.2 km - S (111)	15.3 km - SE (R1)	Negligible (Given the distance YVWF will have negligible impact)
CUMULATIVE VIEWPOINTS				
CVP1	5.2 km - SW (143)	5.2 km - SW (143)	7.3 km - SE (R5)	Low
CVP2	3.2 km - SW (136)	3.2 km - SW (136)	5.9 km - SW (R1)	Low
CVP3	0.9 km - W (96)	2.5 km - N (92)	3.0 km - E (R1)	Low
CVP4	2.0 km - NE (95)	4.0 km - N (84)	5.2 km - E (R2)	Low

Of the 14 viewpoints listed in Table 5-1, four viewpoints SVP03/04 and SVP10, CVP03 and CVP04, the distance to the nearest wind turbines at YVWF will be increased due to the reduction in the number of wind turbines. However, there will be no change in the assessment of cumulative visual impact from the above viewpoints because of no net change in the inter-wind farm separation.

6

RESPONSE TO COMMENTS RAISED BY DPE

A response to comments raised by DPE on the landscape and visual impact assessment is provided in Table 6-1.

Table 6-1 *Response to comments by DP&I on LVIA*

Item	DPE Comments	Response
1	<i>Preferred Project Report also deletes 10 turbines from the proposal due to potential biodiversity impacts within the Marilba precinct... the Applicant has not provided a revised visual assessment.</i>	- An assessment of visual impact based on the Amended Layout has been provided in Chapter 2, 4 & 5 of this report. - There has been a reduction in the overall number of wind turbines, which would result in a small reduction in the overall visual impact of the project.
2	<i>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;</i> <i>the evaluation of landscape values relied too heavily on professional judgment and took little account of the community's values of the landscape;</i> <i>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;</i>	Refer Section 2.3 and 2.4.
3	<i>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;</i>	Refer Section 2.6.
4	<i>impacts should have been considered to 10km rather than 8.5km;</i>	- The assessed viewshed of the wind farm extends up to 17km from the nearest wind turbines. The LVIA addresses impact from public viewpoints located at varying distances and ZVIs. - Refer LVIA and Submissions Report.
5	<i>there was an under representation of public viewpoints, including locations closest to roads and townships;</i>	- In all 48 viewpoints are discussed in the LVIA and Submissions Report. - In addition the communities of Bookham and Goondah are also discussed - Refer to the LVIA and Submissions Report.
6	<i>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;</i>	- The removal of the 10 wind turbines was due to biodiversity concerns; - The level of visual impact has already been discussed within the LVIA and Submissions Report, which were deemed adequate for exhibition. - There will be a marginal reduction in the visual impact due to the wind turbine reduction as listed in Chapter 3, 4 and 5.
7	<i>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;</i>	Refer Section 2.2.

Item	DPE Comments	Response
8	<i>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, which are also identified as being some of the most affected receivers;</i>	Refer Section 4.1.
9	<i>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; and</i>	Refer Section 2.2.
10	<i>mitigation options, including for areas within the more turbine dominant 2 km area, were limited to landscaping where turbine removal or acquisition would have been more appropriate</i>	- Mitigation of views can be successfully undertaken through careful planting near the foreground of a house if desired. The screening effect of existing vegetation is well illustrated in several residential viewpoints such as G31. - Refer LVIA and Submissions Report.
11	<i>the need for more effective community consultation which may result in removal of turbines;</i>	Refer Section 2.4.
12	<i>removal of a number of turbines in the Marilba precinct due to unacceptable visual impacts, including the North-east Illalong Road area (turbines 110,111,112,114,115,116 and 122) and the Conroy's Gap and Black Ridge Hills area (turbines 131,133,134,136 and 100-106);</i>	Refer Section 2.5.
13	<i>provision of more appropriate landscaping; and</i>	Mitigation options are discussed where appropriate.
14	<i>Appropriate colours (mid grey or blue grey) should be used for turbines.</i>	The proposed wind farm will comply with the NSW Department of Planning & Environment's standard model conditions of approval and conditions for recently approved wind farms state that the "wind turbines shall be painted matt off-white/grey."
15	<i>Department's own inspection that there are more scenic areas within the broad landscape that have not been identified or considered in the Applicant's assessment;</i>	Refer Section 2.3.
16	<i>Community input in defining the value of local landscape elements has been minimal and insufficient to gain a reasonable understanding of these values and what may be appropriate in terms of impact.</i>	Refer Section 2.4.
17	<i>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).</i>	Refer Section 4.1 where additional residential viewpoints in this area have now been assessed in this report.
18	<i>The Department is also concerned about the oversimplification of the landscape values, the lack of community input into landscape values and lack of certainty and detail (in particular the various potential changes that could result from 3 landowners being incorrectly identified as being associated with the development).</i>	- Refer Section 2.4. - It is understood that the status of some landowners has changed recently and this has now been assessed in this report.

7

**RESPONSE TO COMMENTS RAISED BY RICHARD LAMB & ASSOCIATES ON
DGR REQUIREMENTS**

A response to issues raised in the RLA Report on the landscape and visual impact assessment is provided in Table 7-1 and

Table 7-1 *Response to RLA comments on LVIA Methodology based on DGR Requirements included in Table 1 of Appendix 1 of RLA Report*

Item	Director General's Requirements	RLA Comment	Response
1	Provide a comprehensive assessment of the landscape character and values and any specific scenic or significant vistas of the area potentially affected by the project.	• Yes, basic assessment of Landscape Character was represented by landscape units (LU's). • LU's are not mapped to indicate their location or extent. • No assessment of community values is associated with the assessment of landscape character. • No assessment of individual scenic or significant vistas is made. • No assessment of variations in landscape character, specific scenic areas or significant vistas is made for the entire viewshed area.	• Refer Section 2.4.
2	Describe community and stakeholder values of the local and regional visual amenity and quality and perceptions of the project based on surveys and consultation.	• No community or stakeholder values are described. • Consultation has been limited. • Views not sought from the local community within 8.5km ZVI or wider view shed of 17km. • No regional community values and opinions in relation to the visual amenity sought; • Community perception of the project and levels of support are based on dated studies prepared prior to the recent proliferation of proposed, approved or operational wind farms in the vicinity. • Statistics from international perception studies are used to form general conclusions. • In our opinion, these are of limited relevance in the absence of community and stakeholder feedback. • There is no evidence to suggest that changes were made to the project based on public perceptions or survey results received in public submissions.	• Refer Section 2.4.
3	Assess the cumulative visual impacts of existing and approved wind farms.	• The cumulative visual impacts are considered in respect of the adjacent Conroy's Gap wind farm. • Other wind farms in the wider environment are discussed but discounted as not contributing to cumulative visual impacts. • The number of wind farms in the Southern Tablelands has increased by 88% since submission of the original EA and LVA. • The scale of the project spread across two precincts and LGAs creates potential for cumulative impacts to occur for local townships, roads and residences.	• Refer Section 2.6
4	Assess the impact of shadow 'flicker, blade 'glint'	• We note that shadow flicker has been addressed in section 8.10 Health and Safety of the EA • No comment	• No comments

Item	Director General's Requirements	RLA Comment	Response
	Night lighting from the wind farm.		
5	Identify the zone of visual influence (no less than 10km) and assess the visual impact of all project components of this landscape	- Impacts were considered from within an initial view shed of approximately 17km ZVIs were determined that included only areas 8.5km from the nearest turbine. - Both LVA reports discount visual impacts beyond 8.5km based on the "distance effect" despite ZVI maps and photomontages indicating that parts of many turbines will be visible beyond this distance.	- The wind turbines will be more apparent in views closer to the wind farm than those that are further away. - Impacts have been considered at various locations within the viewshed of the wind farm; - Refer to Chapter 3, 4 and 5 for assessments.
6	Include photomontages of the project taken from potentially affected neighbouring residences (including approved and not yet approved developments or subdivisions with residential rights) settlements and significant public viewpoints	- Seen Area Analysis and ZVI were used as the basis for the selection of viewpoints. - RLA comment that the perspective of some montages appears to be distorted. - Turbines are shown smaller than they would appear to the viewer's eye. - Photomontages include neighbouring residences and one proposed subdivision. We are not aware of any subdivisions in relation to townships, which may be approved, or yet to be approved which may require representation.	Refer Section 2.2.
7	Provide a clear description of proposed visual amenity mitigation and management measures.	- EA mitigation techniques include suggested fencing and hedgerows around perimeter areas of the individual residences within 5km of a turbine, if requested. - This technique is likely to be ineffective other than on specific views from residences, given the size and scale of the YVWF overall.	Foreground vegetation is effective in mitigating perceived impact of the wind farm. This is demonstrated in discussion the residential locations where existing vegetation is seen in view.
8	Relevant Guidelines for reference Best Practice Guidelines for the implementation of wind energy projects in Australia (Auswind 2006)	There is no reference to this document being used as a guideline.	- Refer Section 2.1. - ERM was a lead author of the National Assessment Framework.
	Wind Farms and Landscape Values: National Assessment Framework and Australian Council of National Trusts, June 2007	We note that the methodology followed in the LVA is claimed to be supported by "Wind Farms and Landscape Values: National Assessment Framework" It appears to reflect a simplification of the NAF guidelines with some parts missing	Refer Section 2.1.

Table 7-2 *Response to RLA comments on LVIA Methodology based on draft NSW Wind Farm Guidelines include in Table 2 of Appendix 1 of RLA Report*

Item	Director General's Requirements	RLA Comment	Response
1.3 Key Matters (a) proximity of turbines	Photomontages showing specifically how turbines will appear from each non host residence within 2km	- Photomontages are prepared at locations outside residences, in fields or driveways etc. - No montages show views from internal or external living areas.	Location for photomontages is chosen to represent views from the house demesne as these are most frequented by the resident. Location determined in consultation with the resident when possible.
(b) Community Consultation	Formation of a community consultation committee early in the process.	Formed in Feb 2013 (Exhibition of EA in 2009 and exhibition of PPSR in Dec 2012)	No comments
(c) Visual Amenity	Visibility of the proposed development	Visual amenity has been addressed only in terms of landscape visual character units (LU's).	- The methodology for assessing of visibility is done quantitatively through the Seen Area Analysis as well as qualitatively by visiting public and private domains within the viewshed. - Numerous photomontages have also been prepared to illustrate the visibility and assist in the visual impact assessment.
	Locations and distances of potential views	Visual amenity includes consideration of the aesthetic value of the landscape for the community.	No comments
	Landscape values and their significance	No community values have been sought regarding landscape values or significance.	Refer Section 2.4
	Sensitivity of the landscape to change.	- Sensitivity appears to be based on expert opinion rather than community values. - No weighting is applied to the factors considered and no description about how sensitivity affects the overall visual impact rating.	Refer Section 2.4
1.3 (c) i	Description of Assessment Methodology for assessing impacts at neighbours houses within 2km	The methodology does not refer to or follow Draft NSW Wind Farm Guidelines 2011 or various of the NAF best practice guidelines	Refer Section 2.1.
1.3 (c) ii	Description of all relevant project components	No comments	No comments
1.3 (c) iii	Description of landscape key features	No, landscape features are not identified individually.	Refer to LVIA and Submissions Report
1.3 (c) iv	Description of visibility of the development	No comments	No comments
1.3 (c) v	Photomontages from; Residences within 2km	No comments	No comments
1.3 (c) v	Settlements	Photomontages prepared from the townships are limited.	- Photomontages have been prepared from numerous public and residential locations; - Revised photomontages have also been prepared in addition to montages from selected additional residential locations.

Item	Director General's Requirements	RLA Comment	Response
			Refer to LVIA and Submissions Report.
1.3 (c) v	Roads and significant public view points, Lookout points and walkways	- No significant viewpoints have been identified. - Views from local roads are selective. - Worst case scenarios are not always presented.	Refer Section 2.1.
1.3 (c) vi	Identification of Zone of Influence to 10km.	- ZVI's which exist (as shown on ZVI maps beyond 8.5km) were discounted. - Turbines are clearly visible in sLVA in photomontages from beyond this distance	Mere visibility of wind turbines does not indicate a high level of visual impact. The level of impact is balanced against other parameters such as screening of topography, vegetation and built form, orientation, landscape sensitivity, viewer numbers etc.
1.3 (c) vii	A description of the significance of the landscape values and character in a local and regional context	- No description of the significance of landscape values and character is included in either LVA or PPSR. - Visual landscape units are not linked to landscape values or character in a regional context.	Incorrect, Refer to LVIA Chapter 5.
1.3 (c) viii	A description of community and stakeholder values of the local and regional visual amenity and quality and perceptions of the project based on surveys and consultation	- No description of community or stakeholder values in respect of local or regional visual amenity and quality is included. - No assessment of perception of the project within the local community is presented. - Perceptions discussed relate to previous and overseas studies - Consultation in relation to landscape values is limited and ineffective	Incorrect, Refer to Section 2.4 and LVIA.
2.1(a) Documentation of effective community engagement	Describe how identified community issues have been addressed and how they informed the proposal as presented	- No discussion about the community's concerns in relation to visual amenity and values is included in either report. - There is no evidence to suggest that concerns raised in submissions have been addressed or used to inform subsequent changes to the project. - Visual impacts have been raised as a concern by the public in an initial public meeting (community feedback form) and in each set of submissions. - Some content of submissions recorded in the LVA and PPSR appear to be similar. This suggests that they have not been adequately addressed during the project design process.	Incorrect, Refer to Section 2.4 and LVIA.
2.1 (c)	Establish a Community Consultation Committee (CCC) to discuss community concerns and resolution of complaints.	There is no evidence that complaints have been resolved.	- Visits by YVWF as well as ERM representative to the involved and non-involved landowners in the area has been undertaken ; - At the request of landowners, photomontages were prepared from several residences near the proposed wind farm and provided to the respective landowners for discussion purposes.

8

CONCLUSION

The Secretary's Report and the RLA Report raise a number of landscape and visual impact issues. These issues are adequately addressed in the following reports:

- ERM LVIA August 2009;
- ERM Submissions Report November 2012;
- ERM Submissions Report Rev1 July 2013;
- ERM Submissions Report Rev2 April 2014; and
- This report.

The landscape and visual impact assessment within the EA and Submission Report Rev2 is supported by this response to issues raised in the Secretary's Report and RLA Report.

In addition to quantitative analysis of visibility using Seen Area Analysis, the qualitative assessment of visual impact is considered from 77 viewpoints. These include 34 public viewpoints, 14 sequential and cumulative viewpoints and 29 residential viewpoints. Of these 77 viewpoints, photomontages have been prepared from 44 locations to demonstrate the scale and impact of the development.

The overall level of visual impact of the proposed wind farm on the surrounding residents and communities remains acceptable. If so desired by the resident, foreground landscape planting is to be offered to residents within 5 km of the nearest wind turbine. Such landscape mitigation will provide adequate measure to ameliorate any perceived visual impacts.

The conclusions within the LVIA and Submissions Report are relevant to the overall visual impact of the Amended Layout and remain unchanged.

the proposed Yass Valley Wind Farm will have a generally low visual impact on its surrounds, and the site is a suitable landscape for the construction of a wind farm.

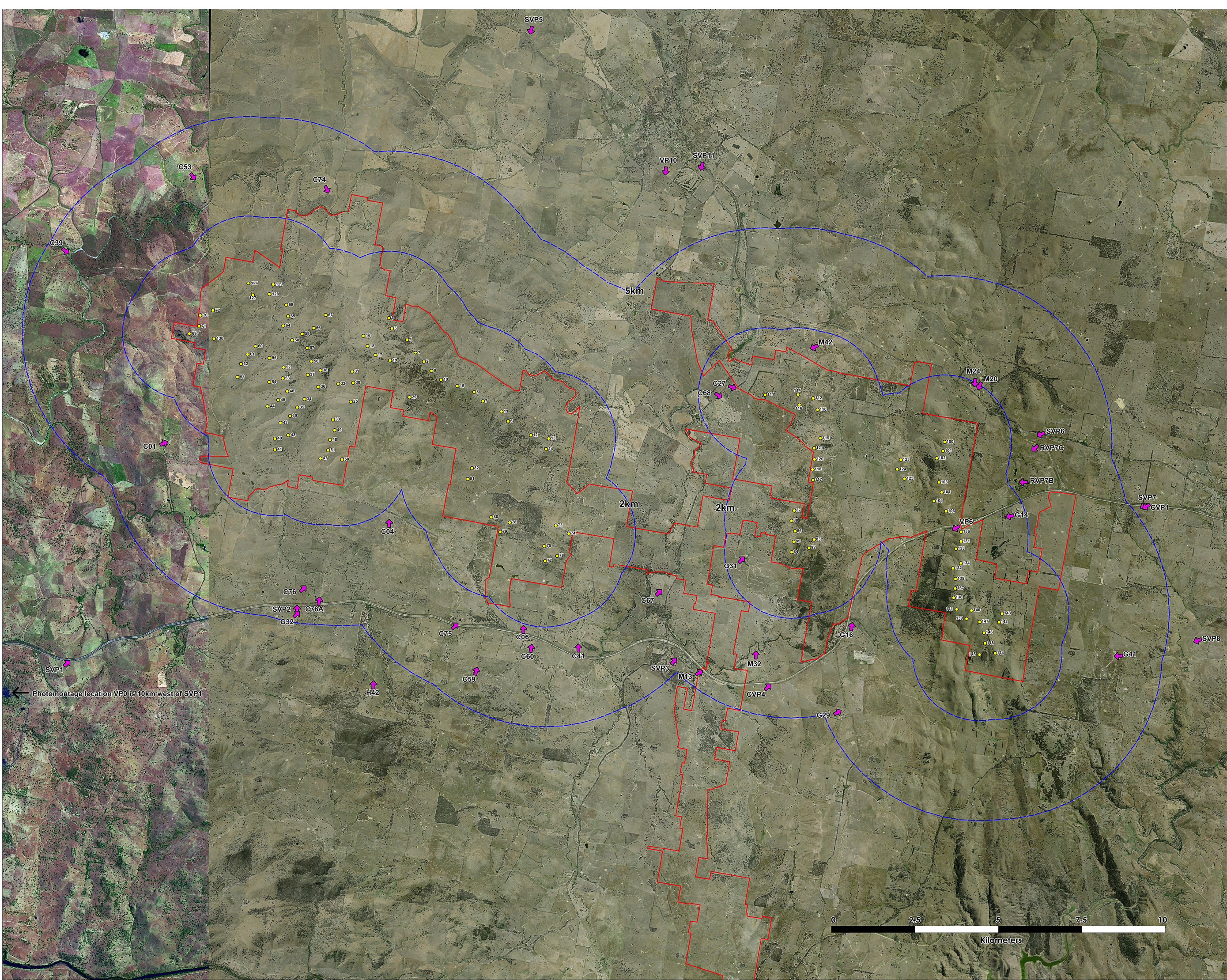
Annex A - PHOTOMONTAGES

Photomontage Index

Viewpoint ID	Viewpoint Type	Residential Viewpoint Land Title/ Location	EA Nov 2009	PPR Nov 2012	Landowner Request	PPSR V4 Sep 2014	PAC Submission Feb15	PAC Submission Mar15
C01	Residential	Bush				x		x
C04	Residential	Whitefields Pastoral Co Pty Ltd (Landowner 8)					x	x
C06	Residential	Hazell					x	x
C27	Residential	Garry (Landowner 16)					x	x
C39 / RVP5	Residential	Huften ("Naranghi")	x	x		x		x
C41 / RVP8	Residential	Painting ("Deepwater")					x	x
C53	Residential	Leask				x		x
C60	Residential	Hazell						x
C67	Residential	Robinson				x	x	x
C68	Residential	Garry (Landowner 16)					x	x
C74	Residential	Graham				x		x
C75	Residential	Gowland					x	x
C76	Residential	Delaway Holdings Pty Ltd ("Shepstone Park")			x			x
C76A	Residential	Delaway Holdings Pty Ltd ("Shepstone Park")			x			x
G14	Residential	Keith				x		x
G16	Residential	Howe				x		x
G29	Residential	Bogo Pty Ltd				x		x
G31	Residential	Eccles (Landowner 14)					x	x
G32	Residential	Bingley ("Athlone")			x			x
G41	Residential	Thompson			x			x
H42	Residential	Glover ("Talbragar")			x			x
M13	Residential	Julian (Landowner 25)					x	x
M20	Residential	O'Mara				x		x
M24	Residential	Bland & Minary				x		x
M32	Residential	Refax Pty Ltd (Landowner 23)					x	x
M42	Residential	Grogan				x		x
RVP7B / M8	Residential	Crisp - Future Bamboo Garden	x			x		x
RVP7C	Residential	Crisp - Future Eco Village	x			x		x
SVP1	Sequential	Hume Highway near Berremangra	x	x		x		x
SVP2	Sequential	Hume Highway near Berremangra	x	x		x		x
SVP3	Sequential	Bookham township	x			x		x
SVP5	Sequential	Burley Griffin Way north of Binalong	x			x		x
SVP6	Sequential	Burley Griffin Way near Goondah	x			x		x
SVP7	Sequential	Hume Highway east of Conroys Gap	x			x		x
SVP8	Sequential	Common Road near Black Range Road	x			x		x
SVP11	Sequential	Burley Griffin Way near Binalong	x			x		x
VP0	Public	Jugiong - Cnr of Hills and Parkes Streets for CCC			x			x
VP6	Public	Conroys Gap - Truck Parking Area	x			x		x
VP10	Public	Garry's Road, Binalong				x		x
C59	Public	Robinson's Road west of Bookham				x		x
CVP1	Cumulative	Hume Highway east of Conroy's Gap				x		x
CVP4	Cumulative	Hume Highway west of Conroy's Gap				x		x

Refer map "Photomontage Viewpoint Locations" on following page for the location of each of the 42 locations around the wind farm site.

Refer to attached DVD for high resolution.jpg images of each of the 42 photomontages.



LEGEND

- Proposed wind turbine
- Photomontage location
- Site perimeter
- Buffer

EPURON

PROJECT
Yass Valley Wind Farm

TITLE
Photomontage Viewpoint Locations

SCALE	DATE	DRAWN
1:50,000 at A1	25/03/15	VR



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