

Environmental Impact Statement  
**Uungula Wind Farm**

Appendix R: Landscape and Visual Impact Assessment  
(Appendix F — I)

May 2020

Community Survey of Landscape Values

# APPENDIX F



**About the Project:**

Uungula Wind Farm is a proposed wind farm to be located between the localities of Wuuluman and Twelve Mile approximately 14 east of Wellington, NSW. The project would include up to 125 wind turbine generators and ancillary infrastructure with a generating capacity of approximately 400 MW (see map below). If approved the Project is likely to commence construction toward the end of 2020.

Further details are provided on the Project website: [www.uungulawindfarm.com.au](http://www.uungulawindfarm.com.au)

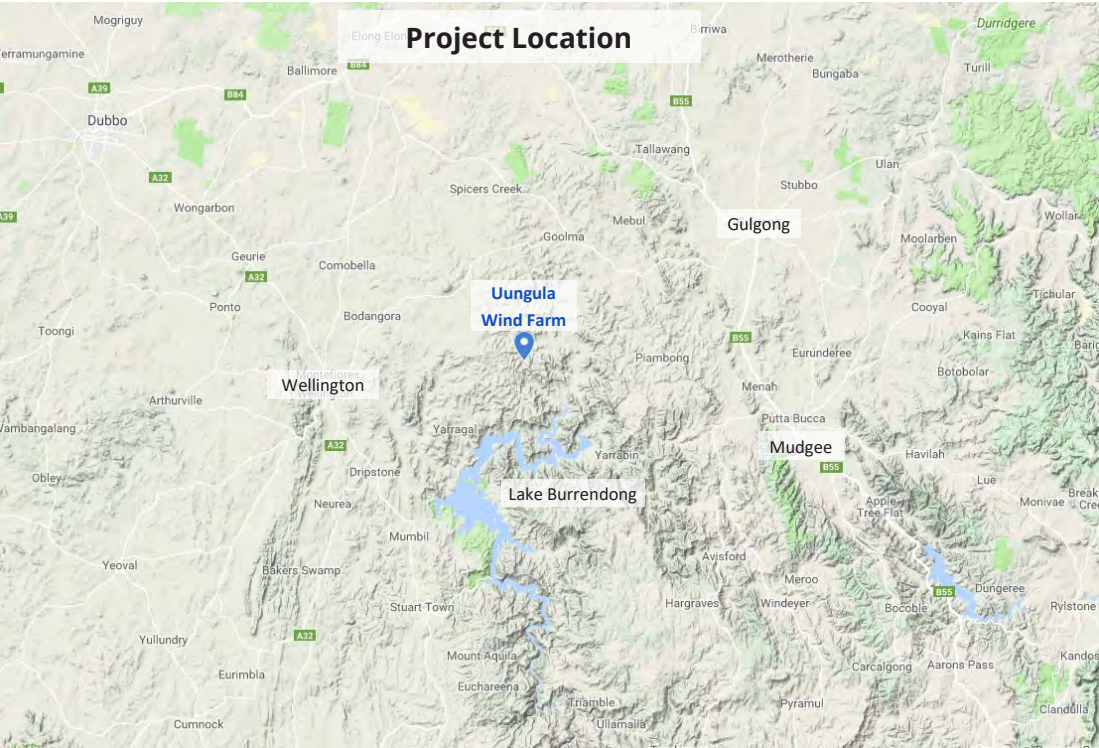
**Community Survey:**

An Environmental Impact Statement (EIS) is currently in preparation and is expected to be released for public exhibition in early 2019. As part of the Community

Consultation process, we are seeking feedback from the local community to understand the landscape features and scenic values of the region. The survey on the next page has been prepared as a simple questionnaire to seek your input. The information will be used to inform the wind farm design and the landscape and visual impact assessment within the EIS.

You can complete the survey by either filling out the attached form or visiting the Project website.

The survey has been prepared to address requirements of the *NSW Wind Energy Guideline* (2016) and the *Wind Energy: Visual Assessment Bulletin* prepared by the NSW Department of Planning and Environment. Further information can be found on the project website, or by contacting our development team using the details below.



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Sign up to the e-newsletter and find out more on the Uungula  
Wind Farm website:  
[www.uungulawindfarm.com.au](http://www.uungulawindfarm.com.au)

Name: \_\_\_\_\_

**Which location best describes where you live?**

- |   |                                      |
|---|--------------------------------------|
| <input type="checkbox"/> Twelve Mile      | <input type="checkbox"/> Wuuluman    |
| <input type="checkbox"/> Yarragal         | <input type="checkbox"/> Wellington  |
| <input type="checkbox"/> Piambong         | <input type="checkbox"/> Yarrabin    |
| <input type="checkbox"/> Lake Burrendong  | <input type="checkbox"/> Bodangora   |
| <input type="checkbox"/> Goolma           | <input type="checkbox"/> Mudgee      |
| <input type="checkbox"/> Elsewhere in NSW | <input type="checkbox"/> Outside NSW |

**What is your gender?**

- ☐ Female ☐ Male ☐ Prefer not to say

**What is your age group?**

- ☐ 18-29 ☐ 30-44 ☐ 45-60 ☐ 61+ ☐ Prefer not to say

**If you live close to the proposal, are you currently involved in the project?**

- ☐ Yes ☐ No ☐ I do not live close by

**What do you value most about the local area? (choose one or more)**

- |   |   |
|---|---|
| <input type="checkbox"/> Community                | <input type="checkbox"/> Local history    |
| <input type="checkbox"/> Views                    | <input type="checkbox"/> Recreation areas |
| <input type="checkbox"/> Farming                  | <input type="checkbox"/> Bushland areas   |
| <input type="checkbox"/> Employment opportunities |   |

**What landscape features do you think have the most scenic value in the local area? (choose one or more)**

- |   |
|---|
| <input type="checkbox"/> Lake Burrendong            |
| <input type="checkbox"/> Wellington Caves           |
| <input type="checkbox"/> Mount Arthur Reserve       |
| <input type="checkbox"/> Bushland areas             |
| <input type="checkbox"/> Rocky hills and outcrops   |
| <input type="checkbox"/> Farmland and rolling hills |
| <input type="checkbox"/> Local rivers and creeks    |

**Do you support renewable energy investment in your region?**

- ☐ Yes ☐ No ☐ Indifferent

**What views or landscape characteristics in the region and local area are important to you? (feel free to draw on the map on the previous page)**

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**What impact do you think the Uungula Wind Farm would have on the character of the local landscape?**

Positive ☐ Neutral ☐ Negative ☐  
☐ I haven't decided

**Which statement best describes your visual relationship to the proposed wind farm (tick all that apply)**

- |  |
|--|
| <input type="checkbox"/> I may see the wind farm from my house   |
| <input type="checkbox"/> I may see the wind farm from my property  |
| <input type="checkbox"/> I may see the wind farm from where I work   |
| <input type="checkbox"/> I live in the area where the wind farm is located but do not believe I will see the wind farm |
| <input type="checkbox"/> I may see the wind farm from a place of recreation  |

**Please rank how much impact you believe the wind farm will have on the local area:**

- |   |
|---|
| <input type="checkbox"/> Low impact - the wind farm will impact few views and landscape areas         |
| <input type="checkbox"/> Medium impact - the wind farm will impact some views and landscape areas     |
| <input type="checkbox"/> High impact - the wind farm will change most local views and landscape areas |

**Do you think the proposed wind farm is well situated?**

- ☐ Yes ☐ No ☐ Indifferent

**Can you see the Bodangora Wind Farm from your house?**

- ☐ Yes ☐ No ☐ Unsure

Please post this form to:  
**Uungula Wind Farm**  
**CWP Renewables**  
**PO Box 1708**  
**Newcastle NSW 2300**

Table F1: Landscape Values identified in Community Consultation

Location	What views or landscape characteristics in the region and local area are important to you?
Twelve Mile	<ul style="list-style-type: none"><li>Lake Burrendong</li><li>Natural and Native landscape characteristics</li><li>Views of trees and hills</li><li>Unspoiled and relatively unchanged state of the grazing land</li><li>Peaceful hills, rivers and banks, quiet roads</li><li>I have a property on the upper stretches of Lake Burrendong and enjoy the farmland and bushland views of that valley and surrounding hills.</li><li>"The Wuuluman and Twelve Mile area is a unique landscape not found anywhere else in Australia. It has been identified as an endangered habitat called Grassy White Box Woodland to which a portion of our farm "Glenwood"" has been included in a Stewardship to protect and preserve this habitat. There are White Box trees which will be removed for the wind farm which could be up to 400 years old, these can not be replaced, not to mention the amount of rocks and soils which will be made bare. In summary there are view points from every hill top in the district which give unique perspectives looking in any direction ruined because of this ill conceived proposal."</li><li>I have a property that is on the upper reaches of Burrendong Dam and enjoy the views of the river valley and surrounding hillsides. You are proposing to put turbines on a hill adjoining my property and 1100m from where I plan to build a house.</li></ul>
Wuuluman	<ul style="list-style-type: none"><li>Surrounding hills and valleys are very important</li><li>All views including Burrendong Dam</li><li>Rolling Hills and farm land that are native and natural.</li><li>"This is an isolated grazing area which is beautiful but not seen by many people. Even the neighbours have very little view of the grazing area.</li><li>Our personal opinion is, we support renewable energy and we don't mind the look of wind towers.</li><li>Another very important aspect to us, is the installation of a road system that would help enormously during bushfire season (especially in light of the 2017 Wuuluman bushfire, where access was the biggest problem).</li><li>Another important aspect, is the financial gain to the broader community. Again, personally, it will give us the opportunity to bring young families back into the business and keep the expertise in our rural sector."</li><li>I just love the rolling slopes and plains, the hilly country that envelopes the Wuuluman district and the natural habitats of vegetation and trees that is a part of the area I live in.</li><li>Views that are not disrupted with man made wind towers</li></ul>
Piambong	<ul style="list-style-type: none"><li>Uninterrupted views of the hills</li><li>Although Wellington Caves and Mount Arthur Reserve are important scenic areas around Wellington they are somewhat removed from the immediate vicinity of Uungula Wind Farm. Commenting on the scenic value of the land in the vicinity of Twelve Mile, I value the vista of the rolling hills, the contrast of the rocky outcrops along the Cudgegong River valley. Both Twelve Mile Rd and Guroba Rd run along the picturesque Cudgegong River valley.</li><li>We are a 6 generation farming family and are now surrounded by the Bodangora wind farm. It has destroyed our landscape . As for renewable energy ,the removal of trees the roads in and out of the properties, the amount of cement needed this to me does not equal green solutions.</li></ul>
Yarragal	<ul style="list-style-type: none"><li>Dickerton ridge, The scenic views over the whole proposed wind farm area, of beautiful native Australian trees and the native wedge tailed eagles that circle the are.</li></ul>
Goolma	<ul style="list-style-type: none"><li>Personally I do not like the look of wind turbines and I think they spoil our beautiful landscape and countryside. I would rather look at rolling hills without having a turbine stuck on the top of them spoiling the view.</li></ul>
Elsewhere in NSW	<ul style="list-style-type: none"><li>Rolling hills and un disrupted views. from our property at Spicers creek we no longer have uninterrupted views . We are surrounded by the Bodangora wind turbines . I am sure it has decreased their value of our farm.</li></ul>

Table F1: Response to Community Consultation

Overview of Residences

# APPENDIX G



G1. LCU01: Wellington Residence Summary

Dwelling ID	Mitigation Required?	Nearest Viewpoint	Nearest Photomontage	Distance to nearest WTG	Visual Influence Zone (VIZ)	Dwelling Assessment Notes
Brookfield Road						
BRR001	No	VP02	-	> 5km (7.85km)	VIZ3	The Project will not be visible due to topography.
BRR002	No	N/A	-	> 5km (8.07km)	VIZ3	The Project will not be visible due to topography.
Cadonia Drive						
CAD001-005	No	VP01	-	> 5km (11.57-12.09km)	VIZ3	The Project will not be visible due to topography.
Cadia Place						
CADP001-006	No	N/A	-	> 5km (11.89 -12.18km)	VIZ3	The Project will not be visible due to topography.
Gillgerry Road						
GIL001	No	VP03	-	> 5km (7.26km)	VIZ3	The Project will not be visible due to topography.
GIL002	No	N/A	-	> 5km (6.18km)	VIZ3	The Project will not be visible due to topography.
Inverness (Accessed via Goolma Road)						
INV001	No	N/A	-	> 5km (10.60km)	VIZ3	Vegetation surrounds property, in excess of 10 kilometres to the nearest potentially visible WTG.
Twelve Mile Road						
TMR033	No	VP04	-	> 5km (6.26km)	VIZ3	Based on topography alone, distant views to the blade tips of a small number of WTGS may be available in excess of 8 kilometres to the east of this residence. Assessment of aerial photography indicates the residence is surrounded by dense vegetation which is likely to screen any potential views to towards the proposal.
TMR034	No	VP04	-	> 5km (6.56km)	VIZ3	Based on topography alone, distant views to the blade tips of approximately 30 WTGS may be available in excess of 8 kilometres to the east of this residence. Assessment of aerial photography indicates the residence is surrounded by vegetation which is likely to fragment potential views to the east towards the proposal.
TMR042	No	VP04	-	> 5km (5.78km)	VIZ3	Based on topography alone, views to the blade tips of up to 10 WTGS may be available in excess of 8 kilometres to the north east of this residence. Assessment of aerial photography indicates the residence is surrounded by vegetation which is likely to screen any potential views to the east towards the proposal.
TMR043*	No - Involved	VP04	-	> 5km (7.87km)	VIZ3	<i>Involved Landowner.</i> Residence is elevated with expansive views across the area. Distant views to approximately 50 WTGs would be available in the distance to the east.
TMR044	No	N/A	-	> 5km (10.33km)	VIZ3	The Project will not be visible due to topography.
TMR045	No	N/A	-	> 5km (11.12km)	VIZ3	The Project will not be visible due to topography.
TMR046	No	N/A	-	> 5km (11.13km)	VIZ3	The Project will not be visible due to topography.
TMR047	No	VP01	-	> 5km (12.26km)	VIZ3	The Project will not be visible due to topography.
TMR048	No	VP01	-	> 5km (12.44km)	VIZ3	The Project will not be visible due to topography.
TMR049	No	N/A	-	> 5km (12.08km)	VIZ3	The Project will not be visible due to topography.

LEGEND

- Wind Farm will not be visible due to topography.
- Wind Farm may be visible based on topography alone.

*\*Involved Landowner*

Table G1: Summary of residences located within LCU01 Wellington

G2. LCU02: Bodangora Residence Summary

Dwelling ID	Mitigation Required?	Nearest Viewpoint	Nearest Photomontage	Distance to nearest WTG	Visual Influence Zone (VIZ)	Dwelling Assessment Notes
Goolma Road						
GOOR001	No	VP09	-	> 5km (8.73km)	VIZ3	Expansive views to the south towards the proposal. It is likely between 70-90 wind turbines will be visible along the ridge to the south (based on topography alone). Existing vegetation surrounding the residence will assist in fragmenting views to the turbines.
GOOR002	No	-	-	> 5km (8.87km)	VIZ3	Views are available to between 30-50 WTGs in the distance to the south (based on topography alone). Residence appears to be surrounded by screen planting which is likely to screen views and significantly reduce the number of visible WTGs from this location.
Twelve Mile Road						
TMR022	Yes	VP38	Photomontage 06	2.78km	VIZ2	<p>An assessment of this dwelling (based on topography alone) identified approximately 30 WTGs to be visible beyond the slightly sloping land to the south west. <b>Photomontage 06</b> (Appendix C) has been prepared to illustrate the potential visual impact from this residence. The photomontage illustrates existing scattered vegetation to the south of the dwelling will fragment views towards some WTGs.</p> <p><b>Mitigation:</b> TMR022 has been identified as requiring mitigation in accordance with the Bulletin. Refer to <b>Table H</b> in <b>Appendix H</b> for an overview of potential mitigation measure which would reduce the potential visual impact.</p>
TMR023	Yes	VP36	Photomontage 07	3.20km	VIZ2	<p>An assessment of this dwelling (based on topography alone) identified approximately 30 WTGs to be visible to the south east. A site inspection identified vegetation in the foreground would screen the majority of the visible WTGs from this residence. <b>Photomontage 07</b> (Appendix C) has been prepared to illustrate the potential visual impact from this residence. It illustrates existing vegetation significantly reduces views toward the Project.</p> <p><b>Mitigation:</b> TMR023 has been identified as requiring mitigation in accordance with the Bulletin. Refer to <b>Table H</b> in <b>Appendix H</b> for an overview of potential mitigation measure which would reduce the potential visual impact.</p>
TMR024*	No - Involved	-	-	3.03km	VIZ2	<b>Involved landowner.</b> Approximately 30 WTGs would be visible to the south east of this residence. Existing buildings and vegetation may screen views.
TMR025*	No - Involved	-	-	3.40km	VIZ2	<b>Involved landowner.</b> Approximately 30 WTGs would be visible to the south east of this residence. Existing buildings and vegetation may screen views.
TMR026*	No - Involved	VP07	-	3.54km	VIZ2	<b>Involved landowner.</b> 25 WTGs would be visible beyond the hills to the south east of this residence. Vegetation associated with TMR025 may obstruct views to some WTGs.
TMR027*	No - Involved	VP07	Wireframe 01	4.04km	VIZ3	<b>Involved landowner.</b> Approximately 30 WTGs would be visible to the south east of this residence. Existing buildings and vegetation may screen views.
TMR029*	No - Involved	VP06	Photomontage 14	4.80km	VIZ3	<b>Involved landowner.</b> The tips of up to 10 WTGS may be visible to the east of this residence (based on topography alone). Existing scattered vegetation is likely to fragment views to the WTGs from this residence.
TMR030	No	-	-	> 5km (5.26km)	VIZ3	Approximately 10 WTGs would be visible beyond the ridge in the distance to the east. Existing vegetation may assist in screening views to some WTGs from this residence.
TMR031	Yes	VP37	Photomontage 08	3.08km	VIZ2	<p>An assessment from this dwelling (based on topography alone) identified approximately 30 WTGs to be visible to the south east. Photomontage 08 was prepared to illustrate the proposed visual impact from the dwelling. The assessment found vegetation in the foreground would significantly reduce potential views to the Project with approximately 5 WTGs visible through gaps in vegetation.</p> <p><b>Mitigation:</b> TMR031 has been identified as requiring mitigation in accordance with the Bulletin. Refer to Table H in Appendix H for an overview of potential mitigation measures which would further reduce the potential visual impact.</p>
TMR032	No	VP05	-	>5km (5.56km)	VIZ3	Up to 25 WTGs (mostly blade tips) would be visible beyond the ridge in the distance to the east. Scattered vegetation to the east may fragment views.
TMR036	Consider	VP08	Wireframe 04	4.62km	VIZ3	<p>Approximately 15 WTGs would be visible in the distance beyond the rise in topography to the south east (refer to Wire frame 04). Vegetation surrounding the residence is likely to reduce the number of visible WTGs.</p> <p><b>Mitigation:</b> TMR036 required mitigation measures be considered in accordance with the Bulletin. Refer to <b>Table H</b> in <b>Appendix H</b> for an overview of potential mitigation measure which would reduce the potential visual impact.</p>

LEGEND

Wind Farm will not be visible due to topography.

Wind Farm may be visible based on topography alone.

**Mitigation Required**  
*Note: Based on non-involved residence within 3.35km of nearest WTG  
Refer to dwelling assessment notes.*

**Screening to be considered**  
*Note: Based on residence within 3.35 - 5.0km of nearest WTG  
Refer to dwelling assessment notes.*

\*Involved Landowner

Table G2: Summary of residences located within LCU02 Bodangora

G3. LCU03: Spicers Creek Residence Summary

Dwelling ID	Mitigation Required?	Nearest Viewpoint	Nearest Photomontage	Distance to nearest WTG	Visual Influence Zone (VIZ)	Dwelling Assessment Notes
Gunnegalderie Road						
GUNR001	No	VP10	-	> 5km (7.95km)	VIZ2	Up to 70 wind turbines are visible on the distant ridgeline to the south east (based on topography alone). Vegetation surrounds residence and may assist in screening the proposal.
GUNR002	No	VP10	-	> 5km (7.79km)	VIZ2	Topographic mapping indicates up to 70 wind turbines could be visible to the south east, however farm buildings and vegetation on the south eastern side of the residence would obstruct views to a significant number of the potentially visible WTGs.
GUNR003	No	VP11	-	> 5km (7.47km)	VIZ2	Views of up to 50 WTGs would be available to the south of the residence (based on topography alone) in the distance. Existing vegetation to the south of the residence is likely to screen views to the majority of WTGs from the residence.
GUNR004	No	VP11	-	> 5km (7.62km)	VIZ2	Up to 70 WTGs would be visible on the ridge in the distance to the south. Existing plantings to the south of the residence and associated with GUN003 may assist in fragmenting the views.
Twelve Mile Road						
TMR018	No	VP16	-	> 5km (5.59km)	VIZ2	The Project will not be visible due to topography.
TMR019	No	VP15	-	.> 5km (5.59km)	VIZ2	The tips of 6 WTGs visible in the distance to the south west (based on topography) It is likely vegetation to the south of the residence will screen views to the proposed turbines.
TMR020	No	VP40	-	> 5km (5.77km)	VIZ2	Blade tips of approximately 10 WTGs visible beyond ridgeline to the south. It is likely a combination of farm buildings and vegetation associated with the creekline which runs south of the residence would screen views to the south from this residence.
TMR021	No	VP39	Photomontage 05	> 5km (5.35km)	VIZ2	Approx. 30 WTGs would be visible to the south. Existing vegetation and sheds associated with the property may screen views to the proposal from the residence.
TMR041	No	VP15	-	> 5km (5.77km)	VIZ2	The Project will not be visible due to topography.
Uamby Road						
UAM005	No	N/A	-	> 5km (10.20km)	VIZ3	Views to approx. 10 WTGs may be available in the distance to the south.
UAM006	No	VP13	-	> 5km (8.08km)	VIZ3	The Project will not be visible due to topography.

LEGEND

Wind Farm will not be visible due to topography.

Wind Farm may be visible based on topography alone.

\*Involved Landowner

Table G3: Summary of residences located within LCU03 Spicers Creek



G4. LCU04: Wuuluman Residence Summary

Dwelling ID	Mitigation Required?	Nearest Viewpoint	Nearest Photomontage	Distance to nearest WTG	Visual Influence Zone (VIZ)	Dwelling Assessment Notes
Burren Creek Road						
BCR001	No	N/A	-	> 5km (6.01km)	VIZ2	The Project will not be visible due to topography.
BCR003	No	N/A	-	> 5km (7.26km)	VIZ2	Approximately 10 WTGs could be noticeable based on topography alone from this residence. Riparian vegetation associated with Macquarie River is likely to screen views to the proposal from this location.
Illgingerry Road						
ILG002*	No - Involved	VP28	-	2.16km	VIZ2	<b>Involved Landowner.</b> Based on topography alone it is likely approx. 70-90 WTGs would be visible to the east. Scattered vegetation and buildings would assist in fragmenting views to the WTGs from this residence.
Uungula Road						
UUN002*	No - Involved	N/A	-	2.6km	VIZ2	<b>Involved landowner.</b>
UUN014*	No - Involved	N/A	-	5.3km	VIZ2	<b>Involved landowner.</b>
Wuuluman Road						
WUU001	Consider	VP46	Photomontage 18	4.17km	VIZ2	An assessment of this residence identified views towards up to 90 proposed WTGs are likely to be available due to the elevated position of this residence. <b>Photomontage 18</b> was prepared to illustrate the potential visual appearance of the Project from this dwelling.  <b>Mitigation:</b> WUU001 has been identified as requiring a consideration of screen planting in accordance with the Bulletin. Refer to <b>Table H</b> in <b>Appendix H</b> for an overview of potential mitigation measures which would further reduce the potential visual impact.
WUU002*	No - Involved	VP27	-	1.74km	VIZ1	<b>Involved landowner.</b>
WUU005	Yes - Mitigation	VP25	Photomontage 14	3.17km	VIZ2	An assessment of this dwelling (based on topography alone) identified up to 25 WTGs may be visible to the north east. Existing vegetation and sheds are likely to obstruct views from the dwelling. A photomontage from nearby the residence (Photomontage 14) was prepared to illutstrate the potential views towards the Project from this location. The photomotage indicated existing vegetation screens the majority of views to the Project.  <b>Mitigation:</b> WUU005 has been identified as requiring mitigation in accordance with the Bulletin. Refer to <b>Table H</b> in <b>Appendix H</b> for an overview of potential mitigation measures which would further reduce the potential visual impact.
WUU006	See dwelling assessment notes.	VP24	-	3.57km	VIZ2	An assessment of this dwelling identified the tips of three WTG would be visible to the north east (based on topography alone), however they are likely to be screened by vegetation associated with Wuuluman Creek.  <b>Note:</b> WUU006 was to ‘consider screening’ based on the distance to the nearest WTG. Further assessment has identified existing vegetation would screen views to the Project and therefore further mitigation is not required.
WUU007	Yes - Mitigation	VP26	-	2.22km	VIZ2	An assessment based on topography alone found the blades of 4 WTGs are likely to be visible beyond the rise to the east, a further nine WTGs may be visible to the north east in the distance. Scattered vegetation and shed may obstruct views.  <b>Mitigation:</b> WUU007 has been identified as requiring mitigation in accordance with the Bulletin. Refer to <b>Table H</b> in <b>Appendix H</b> for an overview of potential mitigation measures which would further reduce the potential visual impact.
WUU008	See dwelling assessment notes.	VP45	Photomontage 16	2.26km	VIZ2	An assessment of this dwelling identified three WTGs are likely to be visible on the hill to the east and the blades of up to six WTGs may be visible in the distance. Vegetation surrounds residence and is likely to obstruct views.  <b>Note:</b> WUU008 was identified as requiring mitigation based on the distance to the nearest WTG. Further assessment has identified existing vegetation would screen views to the Project and therefore further mitigation is not required.
WUU009	Consider	N/A	-	4.19km	VIZ2	As assessment of WUU009 identified blades of up to 10 WTGs are likely to be visible to the NNE (based on topography alone). Existing vegetation surrounding homestead may fragment views.  <b>Mitigation:</b> WUU009 required mitigation measures be considered in accordance with the Bulletin. Refer to <b>Table H</b> in <b>Appendix H</b> for an overview of potential mitigation measure which would reduce the potential visual impact.
WUU010	No	N/A	-	> 5km (6.25km)	VIZ2	The Project will not be visible due to topography.
WUU011	No	VP23	-	> 5km (6.57km)	VIZ2	The Project will not be visible due to topography.

LEGEND

Wind Farm will not be visible due to topography.

**Mitigation Required**  
Based on non-involved residence within 3.35km of nearest WTG. Refer to dwelling assessment notes.

Wind Farm may be visible based on topography alone.

**Screening to be considered**  
Based on residence within 3.35 - 5.0km of nearest WTG  
Refer to dwelling assessment notes.

\*Involved Landowner

Table G4: Summary of residences located within LCU04 Wuuluman

G5. LCU05: Uungula Residence Summary

Dwelling ID	Mitigation Required?	Nearest Viewpoint	Nearest Photomontage	Distance to nearest WTG	Visual Influence Zone (VIZ)	Dwelling Assessment Notes
Uungula Road						
UUN001*	No - Involved	N/A	N/A	4.0km	VIZ2	<i>Involved Landowner.</i>
UUN003*	No - Involved	VP31	<i>Photomontage 09</i>	2.52km	VIZ2	<i>Involved Landowner.</i> Approximately 40 WTGs are visible to the east from this residence.
UUN004*	No - Involved	VP34	<i>Photomontage 11</i>	2.62km	VIZ2	<i>Involved Landowner.</i> An assessment of this residence identified up to 40 WTGs would be visible along the ridgeline in the foreground to the east. <i>Photomontage 11</i> was prepared from a clear section of road approximately 280 metres east of the dwelling and provides a representative view of the Project. The Multiple WTG tool (see Appendix B) identified views to WTGs within 3 sectors of the dwelling. It is likely vegetation associated with Wuuluman Creek to the east of the dwelling (as indicated on aerial imagery) may assist in fragmenting views and reduce the potential visual impact from this dwelling.
UUN005*	No - Involved	VP35	-	0.82km	VIZ1	<i>Involved Landowner.</i> Residence is located within the centre of the Site with 360° views towards WTGs. Existing vegetation may assist in screening some views towards WTGs.
UUN007	<i>See dwelling assessment notes.</i>	N/A	<i>Wire frame 02</i>	3.2 km	VIZ2	Topography screens views the majority of WTGs from this dwelling. Approximately 12 WTGs would be visible to the north west, based on topography alone. The nearest visible WTG is approximately 4 kilometres from the dwelling. Wire frame image 02 was prepared to illustrate a worst case scenario of visible WTGs. Aerial imagery indicates vegetation surrounding residence is likely to obstruct views to the Project.  <i>Note: Although identified for mitigation based on the distance to the Project, existing vegetation in aerial imagery is likely to sufficiently screen views to the Project.</i>
UUN008	<i>Consider</i>	VP43	<i>Photomontage 12</i>	3.8 km	VIZ2	Topography screens views to the majority of WTGs from this dwelling, however approximately 12 WTGs visible to the north west, in excess of 4km from this residence. Photomontage 12 was prepared from the residence and illustrates how vegetation associated with the Cudgegong River screens views to the majority of potentially visible WTGs.  <i>Mitigation:</i> UUN008 has been identified as requiring a consideration of screen planting in accordance with the Bulletin. Refer to <b>Table H</b> in <b>Appendix H</b> for an overview of potential mitigation measures which would further reduce the potential visual impact.
UUN013	No	N/A	-	4.4 km	VIZ2	The Project will not be visible due to topography.
Ilgingery Road						
ILG001*	No - Involved	VP32	<i>Photomontage 01</i>	1.38km	VIZ1	<i>Involved Landowner.</i> An assessment from this dwelling based on topography alone identified approximately 42 WTGs visible from the north east to the south in up to three 60° sectors (180°). Photomontage 01 was prepared from the entry to ILG001, approximately one kilometre south west of the dwelling. Aerial imagery illustrates existing vegetation and sheds to the north south and east of the dwelling may assist in obstructing views to some WTGs.
ILG003*	No - Involved	N/A	<i>Photomontage 10</i>	1.59km	VIZ1	<i>Involved Landowner</i>
ILG004*	No - Involved	N/A	<i>Photomontage 10</i>	1.44km	VIZ1	<i>Involved Landowner</i>
ILG005*	No - Involved	N/A	<i>Photomontage 10</i>	0.84km	VIZ1	<i>Involved Landowner</i>
ILG006	No (Derelict House)	N/A	N/A	0.80 km	VIZ1	Based on topography alone, up to 50 WTGs are likely to be visible. Note this is a derelict house and therefore there is no action required.
Twelve Mile Road						
TMR016	<i>Yes - Mitigation</i>	N/A	WF05	2.0 km	VIZ1	An assessment from this dwelling (based on topography alone) identified 14 WTGs and 6 WTG blade tips are likely to be visible to the east. Some existing vegetation shown on aerial imagery may fragment views to the Project. <i>Mitigation:</i> TMR016 has been identified as requiring mitigation in accordance with the Bulletin. Refer to <b>Table H</b> in <b>Appendix H</b> for an overview of potential mitigation measures which would further reduce the potential visual impact from this dwelling.

LEGEND

Wind Farm will not be visible due to topography.

Wind Farm may be visible based on topography alone.

**Mitigation Required**  
Based on non-involved residence within 3.35km of nearest WTG  
Refer to dwelling assessment notes.

**Screening to be considered**  
Based on residence within 3.35 - 5.0km of nearest WTG  
Refer to dwelling assessment notes.

\*Involved Landowner

Table G5: Summary of residences located within LCU05 Uungula

G6. LCU06: Burrendong Residence Summary

Dwelling ID	Mitigation Required?	Nearest Viewpoint	Nearest Photomontage	Distance to nearest WTG	Visual Influence Zone (VIZ)	Dwelling Assessment Notes
Burrendong Dam Road						
BDR001	No	N/A	-	> 5km (9.7 km)	VIZ2	The Project will not be visible due to topography.
BDR002	No	N/A	-	> 5km (10.1 km)	VIZ2	Topographic mapping indicates between approximately 40 WTGs would be visible on the distant ranges to the north west. Aerial imagery indicates dense vegetation to the north west of the property. It is likely this would screen views toward the proposal.
Endacott Road						
ENC001	No	VP44	Photomontage 17	> 5km (7.6 km)	VIZ2	Cudgegong River Park includes a number of holiday cabins and camping accommodation. Up to 15 WTGs are likely to be visible to the north west based on topography alone. The number of visible WTGs will vary between individual cabins. Cabins are generally orientated towards the Cudgegong River, vegetation and buildings contain views within the park.
Yarrabin Road						
YARR011	No	N/A	-	> 5km (10.4 km)	VIZ2	The Project will not be visible due to topography.
YARR012	No	N/A	-	> 5km (10.1 km)	VIZ2	The Project will not be visible due to topography.
YARR013	No	VP22	-	> 5km (10.0 km)	VIZ2	The Project will not be visible due to topography.
YARR014	No	N/A	-	> 5km (11.3 km)	VIZ2	The Project will not be visible due to topography.
YARR016	No	N/A	-	> 5km (11.1 km)	VIZ2	The Project will not be visible due to topography.
YARR017	No	N/A	-	> 5km (9.0 km)	VIZ2	The Project will not be visible due to topography.

LEGEND

Wind Farm will not be visible due to topography.

Wind Farm may be visible based on topography alone.

\*Involved Landowner

Table G6: Summary of residences located within LCU06 Burrendong

G7. LCU07: Cudgegong Residence Summary

Dwelling ID	Mitigation Required?	Nearest Viewpoint	Nearest Photomontage	Distance to nearest WTG	Visual Influence Zone (VIZ)	Dwelling Assessment Notes
Uamby Road						
UAM005B	No	VP14	-	> 5km (9.67km)	VIZ3	Distant views to 6 turbine blades would be available on the ridge in the distance to the south, however due to distance these would be difficult to discern. Vegetation on the southern side of the residence is likely to screen views.
Uungula Road						
UUN009	No	VP42	-	> 5km (7.27km)	VIZ2	The Project will not be visible due to topography.
UUN010	No	N/A	-	> 5km (6.61km)	VIZ2	The Project will not be visible due to topography.
UUN011	No	VP41	-	> 5km (7.42km)	VIZ2	The Project will not be visible due to topography.
UUN012	No	VP41	-	> 5km (7.44km)	VIZ2	Views of up to 30 WTGs would be available on the distant ridge to the west (based on topography alone). Scattered vegetation in the foreground to the west of the residence may fragment views to the turbines resulting in them being difficult to discern from this residence.
Twelve Mile Road						
TMR008	No	N/A	-	> 5km (8.55km)	VIZ2	Up to 50 WTGs would be visible on the distant ridgeline to the west.
TMR009	No	N/A	-	> 5km (8.49km)	VIZ3	Residence is slightly elevated with expansive views to the west. Approximately 50 WTGs would be available on the distant ridge to the south west.
TMR010	No	VP17	Photomontage 02	> 5km (7.69km)	VIZ2	Views of approximately 25 WTGs would be available on the distant ridge to the west.
TMR011	No	VP17	Photomontage 02	> 5km (7.49km)	VIZ2	Based on topography alone it appears up to 45 WTGs would be visible on the ridgeline to the west. Vegetation surrounding the residence would assist in significantly reducing the number of visible WTGs from this residence.
TMR012	No	N/A	Photomontage 02	> 5km (7.24km)	VIZ2	Up to 35 WTGs would be visible on the ridgeline to the west. Vegetation immediately west of the residence may assist in screening views to the proposed WTGs.
TMR013	No	N/A	-	> 5km (6.89km)	VIZ2	Views to up to 25 WTGs would be available on the ridge to the west. Vegetation immediately west of the residence would assist in screening views to the proposed WTGs.
TMR014	No	N/A	-	> 5km (6.50km)	VIZ2	Up to 35 WTGs would be visible on the ridgeline to the west. Vegetation associated with the Cudgegong River may fragment views.
TMR015	No	N/A	-	> 5km (6.71km)	VIZ2	Approximately 20 WTGs are visible to the south west (based on topography alone). Existing vegetation is likely to fragment views from this residence.
TMR017	No	N/A	-	> 5km (7.42km)	VIZ2	Wind Farm will not be visible due to topography.
Yarrabin Road						
YARR001	No	VP41	-	> 5km (7.88km)	VIZ2	Approx 25 WTGs would be visible along the ridge to the west. Several blade tips are likely to be visible in the distance beyond the ridge to the south.
YARR002	No	VP18	-	> 5km (8.79km)	VIZ3	Distant views (in excess of 9kms) of several blade tips would be available in the distance to the south. It is possible vegetation associated with the property would screen these views.
YARR003	No	VP18	-	> 5km (8.39km)	VIZ3	Up to 20 WTGs are visible (based on topography alone) in the distance (in excess of 9 km) to the south west from this residence.
YARR004	No	VP19	-	> 5km (7.01km)	VIZ2	The Project will not be visible due to topography.
YARR005	No	VP20	Photomontage 03	> 5km (7.7km)	VIZ2	Topography screens views to WTGs to the west. Views toward approximately 20 WTGs are available to the south west. Sheds and vegetation may fragment views.
YARR006	No	VP20	Photomontage 03	> 5km (7.4km)	VIZ2	Topography screens views to WTGs to the west. Views toward approximately 25 WTGs are available to the south west. Sheds and vegetation may fragment views.
YARR007	No	VP21	Photomontage 04	> 5km (8.5km)	VIZ2	Views to approximately 40 WTGs would be visible on the distant ridge to the west.
YARR008	No	VP21	Photomontage 04	> 5km (8.2km)	VIZ2	Views of up to 15 WTGs would be available on the distant ridge to the west.
YARR009	No	VP21	Photomontage 04	> 5km (8.5km)	VIZ2	Approximately 30 WTGs would be visible in the distance to the west (in excess of 8km), likely to be fragmented by vegetation.
YARR010	No	VP21	Photomontage 04	> 5km (8.7km)	VIZ2	Approximately 30 WTGs would be visible in the distance to the west (in excess of 8km), Vegetation and sheds to the west of the residence may screen views.
YARR018	No	N/A	Wire frame 04	> 5km (6.3 km)	VIZ2	Elevated residence with expansive views across to ridge to the east. Approximately 50 WTGs would be visible on the ridgeline to the east of this residence.

LEGEND

Wind Farm will not be visible due to topography.

Wind Farm may be visible based on topography alone.

\*Involved Landowner

Table G7: Summary of residences located within LCU07 Cudgegong

OVERVIEW OF MITIGATION FOR RESIDENCES

# APPENDIX H



H1. Dwellings identified for mitigation

Residences Identified for Mitigation				Description	
Dwelling ID	Existing / Proposed Screening factors	Distance to nearest WTG	Visual Influence Zone (VIZ)	Overview of potential visibility	Mitigation Methods for consideration
TMR016	Screen Planting	2.0km	VIZ1	An assessment from this dwelling (based on topography alone) identified 14 WTGs and 6 WTG blade tips are likely to be visible to the east. Some existing vegetation shown on aerial imagery may fragment views to the Project.	Aerial imagery indicates some scattered vegetation to the east of the dwelling. Views to the Project may be fragmented by this vegetation. Screen planting may be implemented to reduce the potential visual impact from this dwelling.
TMR022	Supplementary Planting	2.78km	VIZ2	An assessment of this dwelling (based on topography alone) identified approximately 30 WTGs to be visible beyond the slightly sloping land to the south west.	Existing scattered vegetation to the south of the dwelling will fragment views towards some WTGs. Additional plantings in keeping with the existing character could be beneficial in screening views to WTGs whilst retaining views across the paddock associated with the property. TMR022 has been used as an example in Section 12 (Refer to Figure 23 and Images 23 & 24) in Section 12 of the LVIA.
TMR023	Supplementary Planting	3.20km	VIZ2	Approximately 30 WTGs to be visible to the south east. A site inspection identified vegetation in the foreground would screen the majority of the visible WTGs from this residence.	Vegetation in the foreground would screen the majority of the visible WTGs from this residence. Additional planting could be undertaken in keeping with the existing visual character if deemed necessary to further screen views.
TMR031	Supplementary Planting	3.08km	VIZ2	Approximately 30 WTGs would be visible to the south east. Vegetation in the foreground would fragment views to the proposal.	Existing vegetation in the foreground would significantly reduce potential views to the Project. A small number of WTGs may be visible through small gaps in the vegetation. Additional planting surrounding the house in keeping with the existing landscape character would further reduce the potential visual impact from TMR031.
TMR036	Supplementary Planting	4.62km	VIZ3	Approximately 15 WTGs would be visible in the distance beyond the rise in topography to the south east. Vegetation surrounding the residence is likely to reduce the number of visible WTGs.	Dwelling is surrounded by vegetation. It is unlikely the proposal would be visible, however if required supplementary planting could further obstruct views.
UUN008	Screen Planting	3.8km	VIZ2	Topography screens views to the majority of WTGs from this location. 12 WTGs visible to the north west, in excess of 4km from this residence.	Existing vegetation associated with Cudgegong River assists in screening views to the majority of WTGs from this dwelling. Additional planting to the north west of the dwelling could be implemented to further reduce the potential visual impact from this residence.
WUU001	Consider Screen Planting	4.17km	VIZ2	Views towards up to 90 proposed WTGs are likely to be available due to the elevated position of this residence.	The Project will be visible due to the expansive views across the landscape from this location. Screen planting could be undertaken however, this may obstruct desirable views across the landscape.
WUU005	Supplementary Planting	3.17km	VIZ2	Up to 25 WTGs may be visible to the north east. Existing vegetation and sheds may obstruct views from the dwelling.	It is likely existing sheds and vegetation associated with the property will screen views towards the proposal, however if required supplementary screen planting to the north east may be considered to further screen views.
WUU007	Screen Planting	2.22km	VIZ2	The blades of 4 WTGs are likely to be visible beyond the rise to the east, a further nine WTGs may be visible to the north east in the distance. Scattered vegetation and shed may obstruct views.	Existing vegetation is likely to screen some views from the dwelling towards the visible WTGs. Screen planting (towards the road) could be undertaken in keeping with the existing visual character if deemed necessary to further screen views.
WUU009	Supplementary Planting	4.19km	VIZ2	Blades of up to 10 WTGs are likely to be visible to the NNE. Existing vegetation surrounding homestead may fragment views.	Existing vegetation may obstruct views. Additional planting could sufficiently screen views to the WTGs from the residence.

LEGEND

Screen Planting

Supplementary Planting

Consider Screen Planting

Table H1: Overview of Mitigation Methods for Residences

Zone of Visual Influence (Based on Hub Height 166m)

# APPENDIX I



