Visual Impacts

Amber Pedersen – Burrendong SOS Representative.

Non-Compliance with EP&A Act in Use of 2024 Visual Technical Supplement

The Department's Assessment Report, Page 7 states:

- ***No.22*** *"While the new Energy Policy Framework does not strictly apply to this project, the Department has considered the approach prescribed in the Wind Energy Visual Technical Supplement (2024) in regard to visual magnitude in its assessment of the project against the visual performance objectives set out in the existing Wind Energy: Visual Assessment Bulletin from the 2016 Guideline.''*

The project must be reassessed under the Visual Assessment Bulletin, 2016.

Inadequate Visual Screening provisions for Non-Associated Dwellings Beyond 4.95 km – Visual screening should be provided out to 12km

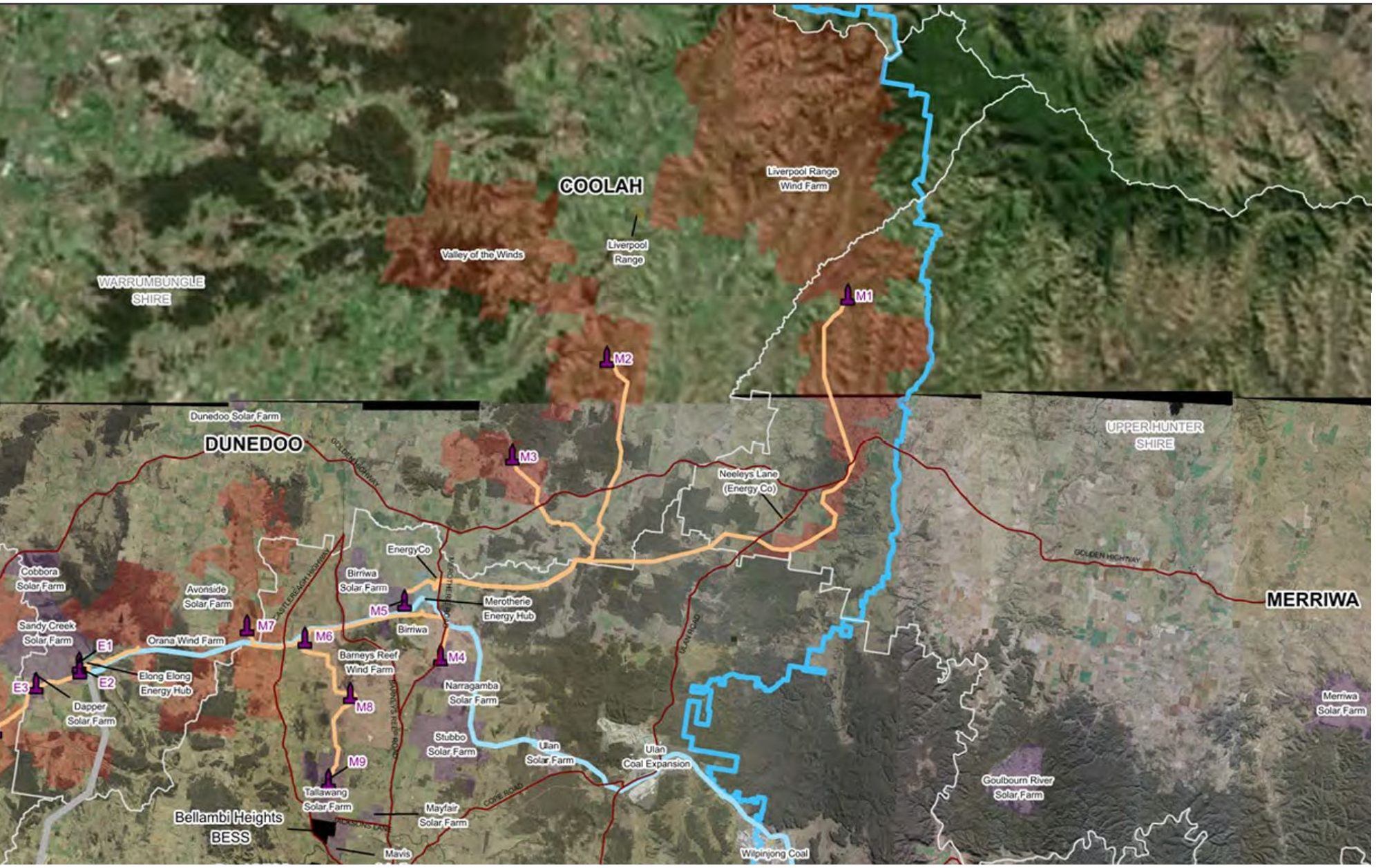
- Sullivan et al. (2012) study cited in the 2016 Visual Assessment Bulletin, found 120m high turbines under half the proposed 250m height triggered maximum visual impact ratings at a distance of 6.4km and up to 9.7 km away.
- VAB Table 2 states: "*the blue (3.35km) and black line (4.95km) in Figure 5 are not determinative of acceptability. Instead they provided a basis for the assessment to be undertaken".*
- Table 6 of the 2016 VAB confirms visual magnitude and influence impact can extend beyond 32 km.
- Cumulative visual impacts on landowners, forced to live within 'a modern day power station' – CWO REZ without their consultation or consent must be fairly ameliorated.

Table 6. Visibility distance zones [14]

Distance of view	Distance zone	Relative Visual Magnitude and Influence
0 – 500 m	Near Foreground (NF)	Zone of Greatest Visual Influence
500 m – 1 km	Mid Foreground (MF)	
1 – 2 km	Far Foreground (FF)	
2 – 4 km	Near Middleground (NM)	
4 – 8 km	Far Middleground (FM)	
8 – 12 km	Near Background (NB)	
12 – 20 km	Mid Background (MB)	
20 – 32+ km	Far Background (FB)	Zone of Least Visual Influence

14 Based on visibility research conducted by Sullivan et. al. (2012), Bishop (2002), Shang and Bishop (1999) and others.

Cumulative Visual Impacts

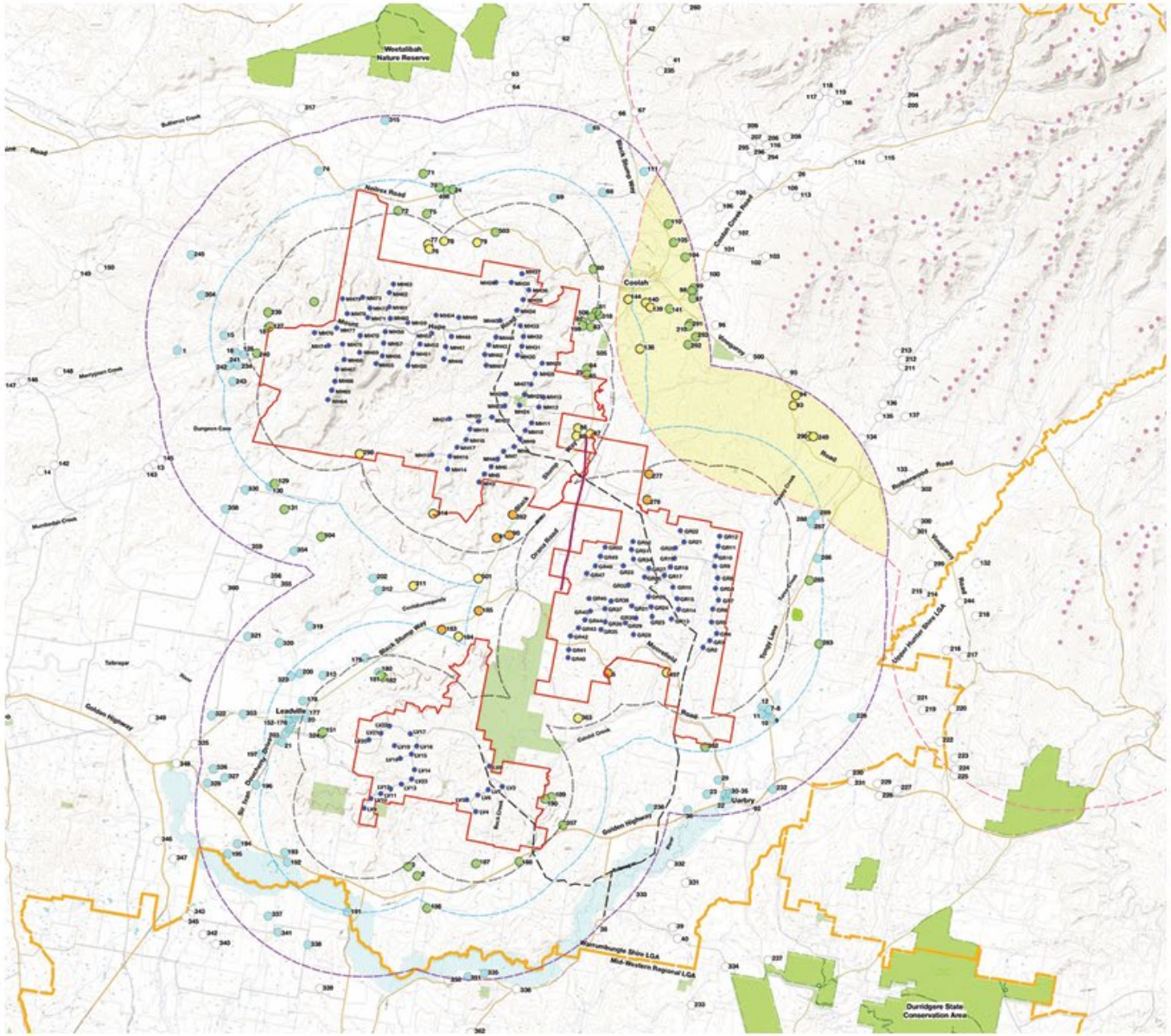


State Significant Projects

- Electricity Generation - Solar
- Electricity Generation - Solar - ON HOLD
- Electricity Generation - Wind
- Electricity Generation - Wind - ON HOLD
- Hydro Project
- Coal Mining
- Minerals Mining
- EnergyCo
- Accommodation Camp
- Battery Energy Storage (BESS)
- 10 km From Mudgee Clock Tower
- REZ Area
- Energy Co Switching Station

Transmission Study Corridor

- 330 kV
- 500 kV
- Southern Extension
- Proposed Rail Line
- Primary Road
- Inland Lake
- LGA Boundary



Multiple Wind Turbine Tool
Valley of the Winds Wind Farm

LEGEND:

- Project Boundary
- LGA Boundary
- Proposed HV transmission line
- MH77 Proposed 250 m Valley of the Winds (VoW) Turbine Location
- Liverpool Range Wind Farm (LRWF) Turbine Location (Modified Layout)
- 8000m from Valley of the Winds wind turbine
- 8000m from Liverpool Range Wind Farm wind turbine
- Major roads / highways
- Minor roads
- Dwellings within 8,000 m of LRWF and the VoW Project
  Refer to Cumulative Visual Impact Assessment: Section 11.0
- Dwelling in excess of 8 kilometres
- One 60° Sector (60°)
- Up to two (2) 60° Sectors (120°)
- Up to three (3) 60° Sectors (180°)
- Up to four (4) 60° Sectors (240°)

Note:

Preliminary Assessment Tool 2: Multiple Wind Turbine Tool is based on a 2D Assessment alone and does not take into account topography, vegetation or other screening factors which may reduce the potential for viewing multiple turbines.

For detailed assessment of Non-participating Dwellings identified refer to *Appendix E.*

N

0 2 4 6 8 10km

***Figure 12** Preliminary Assessment Tool 2: Multiple Wind Turbine (Map Source: Six Maps)*

Cumulative visual impacts on landowners

- Coolah township is 5km and 4km from the TWO projects (total of 316 turbines) surrounding it - TILT's Liverpool Range 185 x 215m turbines to the NE of town and ACEN's Valley of the Winds 131 x 250m turbines to the E, SE, S, SW of town.

- Whilst the department says there are 8 projects within 20km of the site "consistent with the location of the project within a REZ" , it has to be noted that cumulative impact to residents cannot be ignored just because the government draws a line around their homes without consultation nor consent and said you now live in a "modern day power station" (as aptly described by EnergyCo).

- Cumulative effects should still be considered for each resident out to 12km of the project and if anything they should be afforded **increased** visual mitigation measures, given their residences and properties will be surrounded by 316 turbines compared to someone who lives outside of the REZ. This would be a far more appropriate mitigation measure than any funding received from a 'Voluntary Planning Agreement'

Department's Assessment Report Pp iii:

[redacted] The Department is satisfied that the project would not fundamentally change the broader landscape characteristics of the area or result in any significant visual impacts on the surrounding non-associated residences.

This statement does is not align with the recognised visual impacts of turbines on landscape values as outlined in the VAB, 2016 and is disingenuous and dismissive of the adverse massive impacts to local residents and the community. Especially farming families who live and work on their properties and will view up to 315 turbines daily without visual mitigation measures provided to their whole property, only to their residence.

Update Condition of Consent – B1 Visual Impact Mitigation

(amendment requests noted in red below)

For a period of 5 years from the commencement of construction **and 5 years after completion of construction of the wind turbines**, the owner of any ~~non-associated~~ residence within ~~4.95 km~~ **12km** of any wind turbine **and ancillary development** identified in the Final Layout Plan may ask the ~~**Applicant**~~ **Valley of the Winds Wind Farm Project Owner** to implement visual impact mitigation measures on their land to minimise the visual impacts of the development on their residence (including its curtilage). Upon receiving such a written request from the owner of these residences, the ~~**Applicant**~~ **Valley of the Winds Wind Farm Project Owner** must implement appropriate mitigation measures (such as landscaping, tree planting, vegetation screening, **earth mounding and building works (such as a sheds and water tanks)**) in consultation with the owner.

The mitigation measures must:

a) be reasonable and feasible;

b) be aimed at **removing** ~~**reducing**~~ the visibility of the wind turbines from the residence and its curtilage **within 6 months of installation (likely to require mature tree planting)** ~~**and commensurate with the level of visual impact on the residence**~~;

c) consider bushfire risk. **Prior to the installation of any vegetation screening, a Bushfire Risk Assessment Report must be prepared by a suitably qualified professional, at the cost of the Valley of the Wind Project Owner. The report must assess the bushfire risks associated with the proposed vegetation screening for the non-associated dwelling and demonstrate compliance with the requirements of Planning for Bushfire Protection 2019 (or the most current version). A copy of the Bushfire Risk Assessment Report must be provided to the non-associated landowner prior to commencement of any works related to vegetation screening.**

d) be implemented within ~~**12**~~ **6** months of receiving the written request, unless the Planning Secretary agrees otherwise.

e) Be appropriately maintained by the Applicant, subject to agreement with the owner. ***(Note this is generally in accordance with Bowmans Creek Wind Farm condition of consent)***

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

If visual impact mitigation screening is not feasible due to bushfire risk, topography, or other constraints — or if, in the view of a non-associated landowner, screening would unreasonably impact the (pre-project construction) landscape quality of views from their residences at its curtilage — *Condition X: Non-Associated Landowner Visual Impact Compensation Program will apply*.

Add Condition of Consent:
Non-Associated Landowner Visual Impact Compensation Program

Where visual screening is not feasible or achievable due to bushfire risk, topography, or other constraints, or would significantly impact valued residential views from a non-associated landowners residence and curtilage, a Visual Impact Compensation Program should be implemented.

Suggested condition details will be submitted to the IPC.

Lighting

193. ACEN's Aviation Impact Assessment (AIA) concluded that no obstacle night lighting would be required for the project to maintain an acceptable level of safety to aircrafts. However, CASA advised that the project is required to be obstacle lit and that 200 candela lighting would be appropriate considering the location of the project. ACEN prepared a lighting plan to accompany the Submissions Report. The Department's assessment of aviation safety is provided in **Section 6.6** below.

It is disingenuous to say lighting is not needed and then address it AFTER to EIS, when public comments are not open. Lighting was obviously going to be needed.

195. The Department notes that the visual impact assessment considered the worst-case views of the project during the day. The addition of lighting is unlikely to change the impact assessment rating.

Disagree. Flashing lights in a view that was completely dark e.g. Tongy Lane, is actually a significantly negative impact on the resident's enjoyment of their home and valued star gazing at night.

- No photomontage assessment was provided of the dark night sky for adequate visual impact assessment or comment.
- Surrounding landowners are still unclear how many lights are proposed per turbine and where on the turbines.
- Further information and public exhibition of this information is required.

Add Condition of Consent: B3.1 Installation and operation of an Aircraft Detection Lighting System (ADLS)

Note: This recommended condition aligns with the Response to Submissions Appendix 5 – Night Lighting Plan, Page 3 CASA advice dated 25 May 2022
QUOTE: "To minimise lighting impacts on local residents CASA would also recommend the installation of radar activated hazard lights"

B3.1 Installation and operation of an Aircraft Detection Lighting System (ADLS).

The wind farm must be equipped with an Aircraft Detection Lighting System (ADLS) or equivalent technology that ensures aviation obstruction lighting is activated **only** when aircraft are detected operating within proximity of the wind turbines, in accordance with relevant Civil Aviation Safety Authority (CASA) guidelines.

The lighting system must:

1. **Remain off** at all times **unless** triggered by an aircraft flying within a defined detection range of the turbines, as approved by CASA or relevant aviation authority.
2. Be calibrated to detect and respond to aircraft in a timely manner that ensures aviation safety while minimising unnecessary night-time lighting.
3. Automatically extinguish all aviation lights once the aircraft is no longer in the vicinity.

Details of the ADLS, including operational parameters, system specifications, and maintenance schedules, must be submitted to and approved by the consent authority (or other nominated regulator) prior to construction of the wind farm. Any modification or deactivation of the system requires prior written approval from the consent authority.

Add Condition of Consent: Prohibit mandatory Neighbour Agreements

- A condition of consent must stipulate that any non-associated landowner requesting visual screening or compensation does NOT have to sign neighbour agreement.