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 GPG Renewable Development Engineer  
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 Canberra, ACT 2600

9 June 2021

By email: [gideon.roux@globalpower-generation.com.au](mailto:gideon.roux@globalpower-generation.com.au)

Dear Gideon,

**Ryan Corner Wind Farm proposed wind turbine modification and micro-siting amendment**

Further to a request from ERM Pty Ltd (email 14 January 2021), we have undertaken a review of the endorsed and proposed Ryan Corner Wind Farm wind turbines. We confirm that our review of potential visual impacts arising from revisions to the endorsed wind turbine design and proposed micro sited locations has included a review of the Endorsed Development Plans and proposed wind turbine illustrations/elevations as provided by ERM.

The proposed wind turbine amendments seek to make minor adjustments to the wind turbine tower height and rotor blade dimensions. These proposed amendments include:

- a 112 metre tower height and
- rotor blade diameter up to 136 metres.

The endorsed wind turbine tip height at 180 metres would remain unchanged. An overlay of the endorsed and proposed wind turbine is illustrated in **Figure 1**.

**Table 1** outlines the endorsed and revised wind turbine design criteria.

**Table 1: Endorsed and proposed wind turbine design criteria**

	Tower height	Rotor diameter	Tip height
Endorsed wind turbine	110m	140m	180m
Revised wind turbine	112m	136m	180m
Difference	+ 2m	- 4m	No change
Percentage difference	+ 1.8%	- 2.8%	No change

The endorsed wind turbine swept path of 15,386 m<sup>2</sup> will be reduced to 14,519 m<sup>2</sup> (a reduction of 867 m<sup>2</sup> and percentage difference of - 5.6%).

In consideration of the above, and as illustrated in **Figure 1**, it is highly unlikely that the proposed wind turbine will result in any increased degree of visibility or additional visual impacts to surrounding key significant view locations.

We understand that 14 Ryan Corner wind turbines are proposed to be micro-sited and include wind turbines B8, B10, B15, B16, B17, B18, B20, B21, B22, B25, B31, B43, B63 and B70. We also understand that wind turbine micro-siting has been undertaken within the allowable 100m distance from the endorsed wind turbine locations.

We confirm that our assessment of potential adverse change in landscape and visual impacts through micro-siting has included a review of the:

- Ryan Corner Wind Farm General Layout figure prepared by Ryan Corner Wind Farm Development Pty Ltd 7 June 2021 (Ed 6)
- List of Coordinate Changes issued by Environmental Resources Management Australia Pty Ltd 7 June 2021 and
- Ryan Corner Wind Farm Landscape and Visual Impact Assessment, Environmental Resources Management Australia Pty Ltd, February 2017 (LVIA 2017).

Following a review of the above documentation and information we confirm that micro-siting the 14 Ryan Corner wind turbines will not result in any changes to the landscape or visual impacts as previously assessed and confirmed in the Ryan Corner LVIA 2017. The lack of change is primarily due to the scale of the wind turbines together with prevailing landscape characteristics including a generally level landform and scattered tree cover surrounding dwelling locations which provides a limited ability to result in changes to overall wind turbine visibility.

In accordance with your request, an assessment of potential visual effect has been prepared from the non-stakeholder dwellings RY113 at 377 Fingerboard Road, RY114 at 1960 Hamilton Port Fairy Road and RY115 at 53 St Helens Road, Yambuk (refer **Figures 2, 3 and 4** below). We have also undertaken an assessment of potential visual effect from non-stakeholder dwellings located along the Princes Highway (south east of Carrolls Road toward Yambuk).

Dwelling RY113 is located around 138m south west of Fingerboard Road and 295m west of non-stakeholder dwelling RY07. The general field of view from the dwelling toward the wind turbines extends to around 86 degrees and is defined by views between wind turbine B79 around 2.5km to the north west and wind turbine B8 around 3.1km to the north east of the dwelling. The closest wind turbine (B10) is located north north east of the dwelling at around 1.14km. There is no significant tree cover or screening immediately beyond the dwelling with views likely extending toward most wind turbines within the project site. The onsite substation is unlikely to be visible from the dwelling. Given the proximity of wind turbines to the dwelling, the number of wind turbines likely to be visible and a general lack of existing screening, the wind farm is considered to have a potential high visual effect on dwelling RY113. We understand that dwelling RY113 would be eligible for off-site landscape visual mitigation works in accordance with Condition 5 (a) of the Planning Permit. Screen

planting to the north west through to north east of the dwelling may provide some degree of visual mitigation in the mid to long term.

Dwelling RY114 is located around 282m north east of the Hamilton Port Fairy Road and the Riverside Road intersection and 510m east of non-stakeholder dwelling RY33. The general field of view from the dwelling toward the wind turbines extends to around 50 degrees and is defined by views between wind turbine B48 around 3.6km to the south west and wind turbine B21 around 5.7km to the south south east of the dwelling. The closest wind turbine (B43) is located south south west of the dwelling at around 1.6km. There is no significant tree cover or screening surrounding the dwelling with views likely extending toward some wind turbines within the project site. Tree cover between 200m and 250m south of the dwelling would provide some degree of screening toward the wind turbines, potentially screening lower portions (towers); however, views are likely to extend toward wind turbines (upper portions of towers, nacelles, and rotors) above the tree cover. The onsite substation would not be visible from the dwelling. Given the proximity of wind turbines to the dwelling, the number of wind turbines likely to be visible and a general lack of existing screening, the wind farm is considered to have a potential moderate to high visual effect on dwelling RY114. We understand that dwelling RY114 would be eligible for off-site landscape visual mitigation works in accordance with Condition 5 (a) of the Planning Permit. Screen planting to the south west through to south south east of the dwelling curtilage may provide some degree of visual mitigation in the mid to long term.

Dwelling RY115 is located directly off St Helens Road and immediately south of non-stakeholder dwelling RY104. The general field of view from the dwelling toward the wind turbines extends to around 67 degrees and is defined by wind turbines B48 around 5km to the north north east and wind turbine B10 around 4km to the east south east of the dwelling. The closest wind turbine (B70) is located north east of the dwelling at around 2km. There is some tree screen planting to the north of the dwelling and additional tree planting to the east of St Helens Road associated with dwelling RY105. Views from the dwelling and curtilage are likely to extend toward some wind turbines within the project site. The onsite substation is unlikely to be visible from the dwelling. Given the proximity of wind turbines to the dwelling, the number of wind turbines likely to be visible and a general lack of significant screening, the wind farm is considered to have a potential moderate visual effect on dwelling RY115. We understand that dwelling RY115 would be eligible for off-site landscape visual mitigation works in accordance with Condition 5 (a) of the Planning Permit. Screen planting to the north east through to south south east of the dwelling curtilage may provide some degree of visual mitigation in the mid to long term.

Dwellings located along the Princes Highway (south east of Carrolls Road extending north west toward Yambuk) have been assessed as a grouped location due to distance from wind turbines, general similarities in orientation and landscape context. A number of these dwellings, located beyond 2.5km from the wind turbines would be afforded some degree of screening through existing vegetation; however, where views extend toward wind turbines there would be a negligible degree of difference in overall visual effect between the

endorsed and revised wind turbines. Dwellings located along the Princes Highway are unlikely to have views toward the proposed substation.

We confirm that Andrew Homewood, Director and Principal Landscape Architect of Green Bean Design is an appropriately qualified expert in landscape and visual impact assessment. Andrew holds a Graduate Diploma in Landscape Management and a Bachelor of Science (Dual Honours) Degree in Landscape Design and Archaeology and has over 30 years' experience in landscape consulting. Andrew has prepared landscape and visual impact assessments for over 40 Australian renewable energy projects including wind farms across Victoria. Andrew has also been engaged to undertake wind farm peer reviews in Victoria and New South Wales.

If you require any further information in relation to this review, then please do not hesitate to contact us.

Yours sincerely,



Registered Landscape Architect, AILA, MEIANZ

Green Bean Design Pty Ltd

ABN: 86 603 575 702

Principal: Andrew Homewood Grad Dip LM, BSc (Dual Hons) Landscape Design and Archaeology, National Dip Hort.

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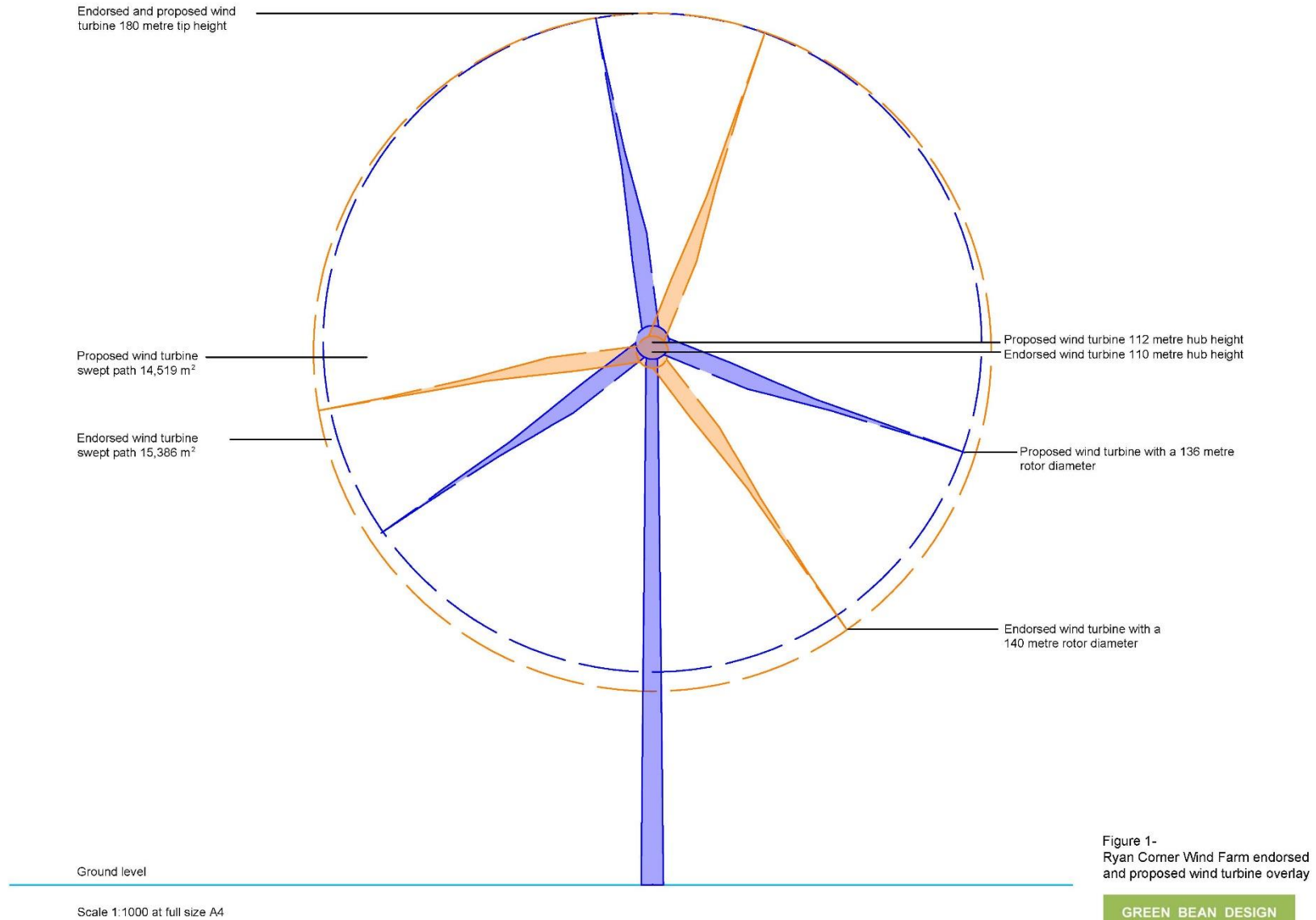


Figure 1- Ryan Corner Wind Farm endorsed and proposed wind turbine overlay



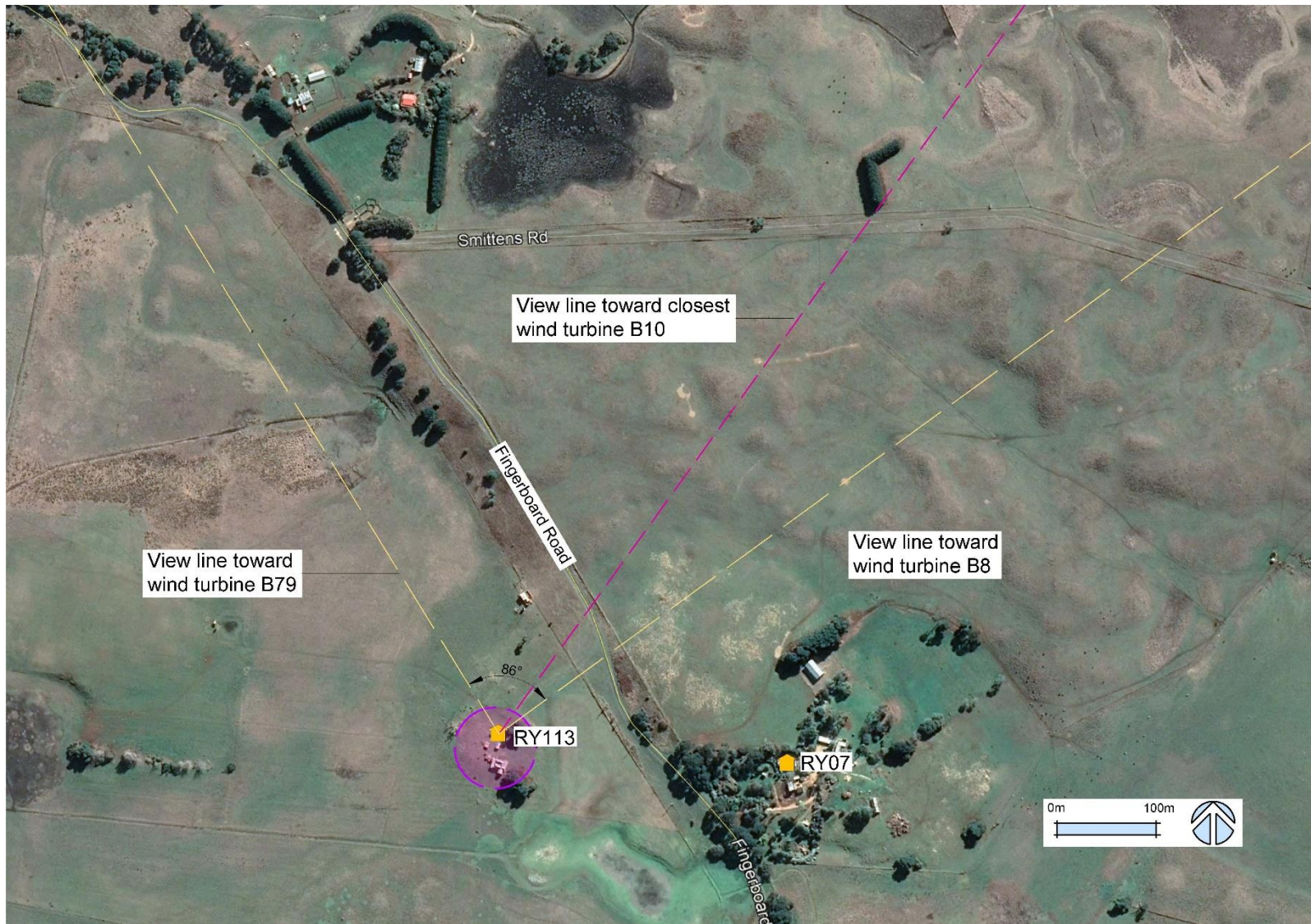


Figure 2 – Viewshed from non-stakeholder dwelling RY113 (377 Fingerboard Road)





Figure 3 – Viewshed from non-stakeholder dwelling RY114 (1960 Hamilton Port Fairy Road)



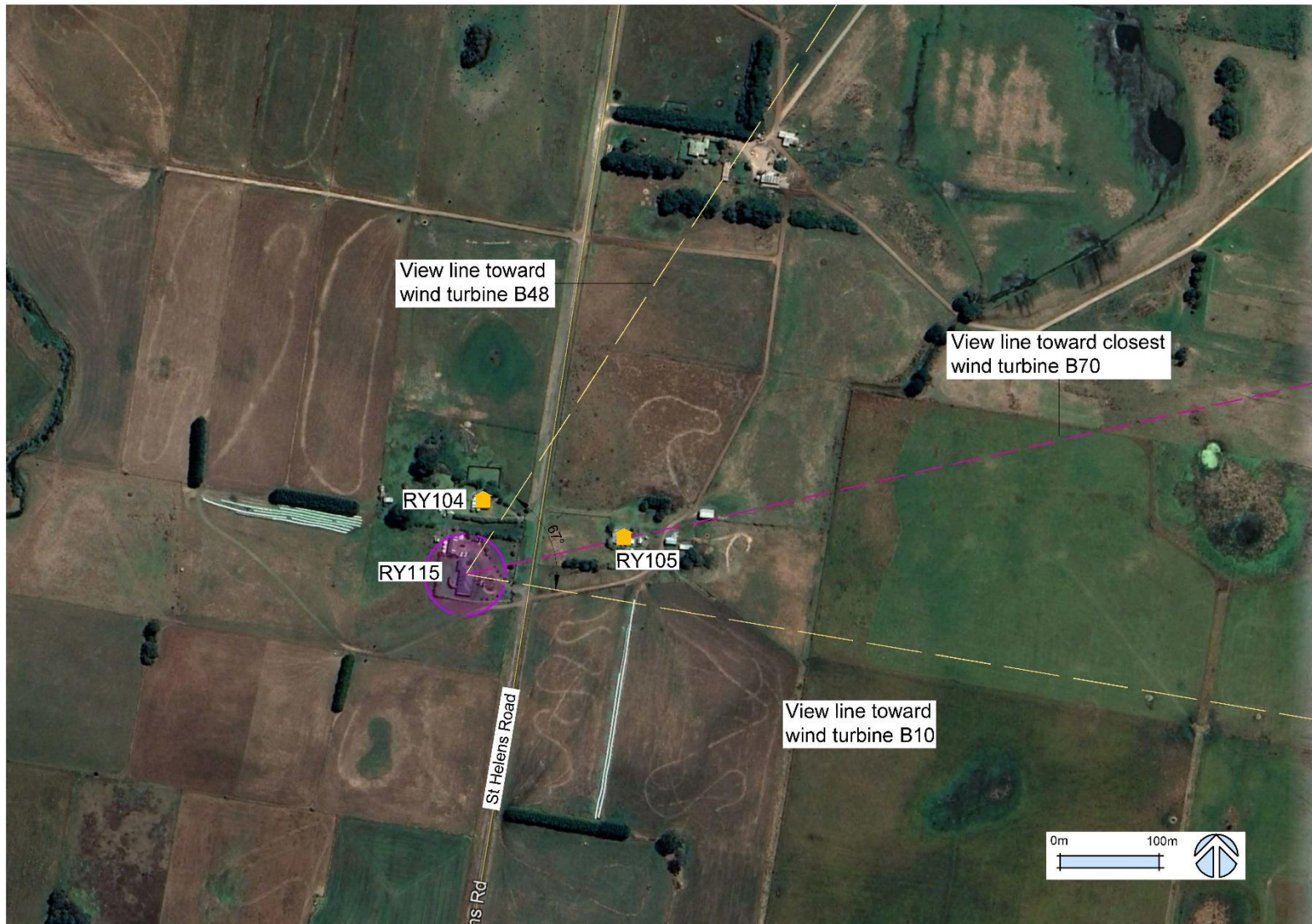


Figure 4 – Viewshed from non-stakeholder dwelling RY115 (53 St Helens Road Yambuk)