

# **Appendix C: Revised Visual Impact Assessment**

# Rye Park Wind Farm Modification 1

## **VISUAL IMPACT ASSESSMENT**

# **Response to Submissions Addendum A**

Prepared for:

# RYE PARK RENEWABLE ENERGY PTY LTD

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## **DOUCMENT CONTROL**

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## 1 Introduction

### 1.1 Introduction

This Mod 1 VIA Addendum A has been prepared to:

- respond to submissions received following the public exhibition of the Rye Park Wind Farm Modification 1
   Visual Impact Assessment (Mod 1 VIA)
- provide an updated photomontage (PM6) to illustrate the removal of 3 wind turbines (T32, T34 and T37)
   by the Proponent following submission of the Mod 1 VIA and
- provide additional details and mapping in accordance with the Wind Energy Visual Assessment Bulletin to
  illustrate the location and extent of the Mod 1 wind turbines which may be visible from non-associated
  dwellings.

Whilst the Mod 1 VIA Addendum A has addressed the Wind Energy Visual Assessment Bulletin, it has not applied the Multiple Wind Turbine Tool as described in the Bulletin. GBD notes that the Mod 1 wind turbine layout, as consented, has not been subject to any amendments other than the removal of wind turbines as noted in the consent conditions or removed by the Proponent (Refer Figures 1 and 2).

## 1.2 Amendments to Figures 1 and 2

Submission S-126141 included the statement that:

The VIA at Fig 1 and 2 contains a plan of the turbines which are to be deleted. However, this actually shows the difference between the Response to Submissions proposal and the modified proposal, rather than between the approved and modified proposal. Thus, it gives the impression of more turbines being deleted as part of the modification application than is actually the case.

Figures 1 and 2 have been amended to identify the separate extent and location of the 17 wind turbines removed by the Planning Assessment Commission and the 15 wind turbines removed from the approved layout by the Proponent. Figures 1 and 2 are included in Appendix A Figures.

## 1.3 Updated photomontage PM6 Rye Park Township

Following the preparation and public exhibition of the Rye Park Wind Farm Mod 1 VIA, the Proponent has removed an additional 3 approved wind turbines from the project to alleviate visual impacts on dwellings within a surrounding the Rye Park Township. These include wind turbines T32, T34 and T37 located in the cluster to the east of the Rye Park Township. The Proponent has removed a total of 7 wind turbines from the 10 wind turbines recommended for removal from the Rye Park Township cluster by the Independent Expert Review, September 2016.

Photomontages PM 6 from Kershaw Street, Rye Park have been amended to remove 3 approved wind turbines (T32, T34 and T37) from the Mod 1 layout photomontages. The updated photomontages are presented against the same view containing the approved wind turbine layout at a 120 degree and 45-degree field of view. An additional photomontage has been prepared to illustrate to Mod 1 layout against the Mod 1 Response to

Submission layout (excluding wind turbines T32, T34 and T37). Whilst the proposed Mod 1 wind turbines are visibly taller than the approved wind turbines, there is a clear reduction in overall quantity of visible wind turbines and an increased view distance toward visible wind turbines from dwellings and public view locations within the Rye Park Township.

As noted in the Mod 1 VIA, the original development application included a proposal for 109 wind turbines. The NSW Independent Planning Commission (IPC), formerly the NSW Planning Assessment Commission, recommended the exclusion of 17 wind turbines (an approximate 15.6% decrease). The development consent that was granted in May 2017 allows for up to 92 wind turbines, with a maximum tip height of 157m above ground level.

The Proponent seeks to modify the development consent to reduce the total number of wind turbines to 77 (a reduction of a further 15 wind turbines) and increase the maximum tip height to 200m. The 15 wind turbines proposed to be removed in the Mod 1 application are turbine numbers 6, 32, 34,35, 37, 38, 52, 53, 56, 77, 102, 103, 104, 140 and 149.

## 2 Proposed Mod 1 wind turbine potential visual effect

### 2.1 Introduction

The Mod 1 VIA considered the magnitude of visual change associated with the Mod 1 wind turbines against the consented RPWF wind turbines. This included identifying increases or decreases in numbers of wind turbine hubs and blade tips visible from residential dwelling viewpoints.

The viewer sensitivity at residential dwellings, and distance from the consented wind turbines was considered against the magnitude of visual change to determine if the degree of change (the delta) would change the visual RPWF LVIA 2016 visual impact rating.

The Mod 1 VIA also considered visual assessment criteria from the NSW Wind Energy Visual Assessment Bulletin, 2016 (Bulletin). These criteria were used to review and confirm the visual impacts determined in the RPWF LVIA 2016. The criteria included:

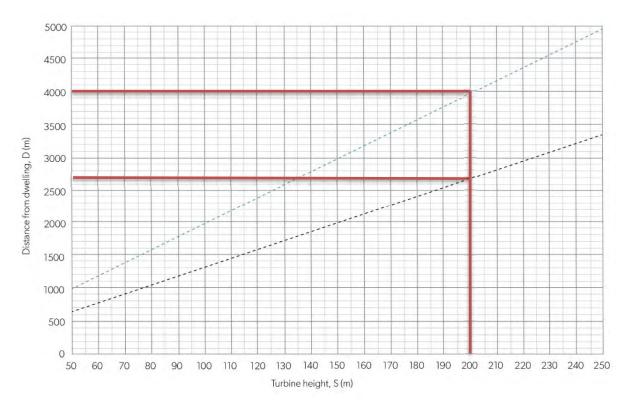
- category of receiver location and sensitivity levels as defined in the Guidelines (refer Visual Bulletin Appendix 1, Table 5 Viewer Sensitivity Classification)
- distance (and distance zones) as defined in the Guidelines (refer Visual Bulletin Appendix 1, Table 6 Visibility distance zones)
- visual influence zones (combining distance, sensitivity levels and landscape scenic quality) as defined in the Guidelines (refer Visual Bulletin Appendix 1, Table 8 Visual Influence Zones).
- potential magnitude of visual change between the consented RPWF and Mod 1 wind turbines (refer Table
   4 of this VIA report), and
- the presence of existing screening (e.g. tree planting) between the dwelling and the wind turbines (previously identified in the RPWF LVIA 2016).

The Mod 1 VIA Addendum A provides additional details and mapping to identify visual magnitude and the degree of visual change between the consented and Mod 1 wind turbines. The consented and Mod 1 wind turbine visibility maps (Figures 54 to 77) illustrate:

- Wind turbines not visible from dwellings
- · No change in wind turbine visibility toward hubs and blades for consented and Mod 1 wind turbines
- Mod 1 wind turbines with a hub (and blade) visible above consented wind turbine
- Mod 1 wind turbines with a blade visible above consented wind turbine and
- Wind turbines removed from the consented layout by the Proponent.

Wind turbines beyond dwellings have been illustrated in accordance with distance thresholds in the Bulletin and include a blue line threshold at 4km and a black line threshold at 2.7km as required for a proposed 200m wind turbine tip height (Refer Table 1).

Table 1 Visual magnitude thresholds



Source: The Visual Bulletin, 2016 (Figure 5 Visual magnitude thresholds for visual assessment)

The consented and Mod 1 visibility maps have been prepared from 24 dwellings located in proximity to approved wind turbines in the northern, north west and Rye Park Township clusters. Dwelling R63 has also been included as a representative location with views toward wind turbines in the Southern cluster.

The 24 dwellings were selected to provide individual and representative locations previously assessed as moderate, moderate high or high visual impact in the RPWF LVIA 2016 and/or the Independent Expert Review September 2016. The consented and Mod 1 visibility maps also considered some dwellings with a low visual impact to verify that potential visual impacts associated with the proposed Mod 1 wind turbines would not be subject to an unacceptable level of change.

GBD notes that a number of dwellings surrounding wind turbines in the northern and north western clusters are subject to host and/or neighbour agreements and include dwellings R02, R14, R16, R15, R20, R64, R131, R132, R128 and R131. Dwelling R01 noted with very high magnitude impacts in the Independent Expert Review is also subject to a neighbour agreement.

Table 2 presents information derived from the Bulletin (as included in the Mod 1 VIA) and further information on wind turbine visibility as presented in the consented and Mod 1 VIA visibility maps. In accordance with the Bulletin, the visibility maps have been prepared from the dwellings looking toward wind turbines indicating the extent of blue and black lines as required for a 200m tip height.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
R006 Non associated	Rural dwelling Level 2	1,347 Far foreground	VIZ1	Figure 54 illustrates that visual change between the consented RPWF wind turbines and the proposed Mod 1 wind turbines up to the blue would include +1 hub.  A total of 3 consented wind turbines are located below the black line with a further 8 wind turbines between the black and the blue lines. An increase to hub and blade height would be noticeable from the dwelling and curtilage. Wind turbines beyond the blue line would be largely screened by landform.  The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project.  The magnitude of visual change would be noticeable with limited tree screening between the dwelling and nearest consented wind turbine.  There would be minor change in the composition and contrast between the consented and proposed Mod 1 wind turbine structures.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				The visual change associated with the Mod 1 wind turbines would not cause a significant modification of the visual catchment. The Mod 1 wind turbines would be visually apparent and seen as major elements in the landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.  Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.  A neighbour agreement has been offered to the property owner.
R007 Non associated	Rural dwelling Level 2	1,401 Far foreground	VIZ1	Figure 55 illustrates that there would be no visual change in the number of hubs or tips between the consented RPWF wind turbines and the proposed Mod 1 wind turbines up to the blue line.  A total of 3 consented wind turbines are located below the black line with a further 7 wind turbines between the black and the blue lines. An increase to hub and blade height would be noticeable from the dwelling and curtilage. There is some potential for screening through existing tree cover beyond the dwelling. Wind turbines beyond the blue line would be partially screened by landform and tree cover.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project.  The magnitude of visual change would be partially limited by distance and tree cover surrounding and beyond the dwelling and nearest consented wind turbine. There would be limited change in the composition and contrast between the consented and proposed Mod 1 wind turbine structures with a reduction in the quantity of wind turbines where removed by the Proponent.  The visual change associated with the Mod 1 wind turbines would not cause a significant modification of the visual catchment. The Mod 1 wind turbines would be visually apparent and seen as major elements in the landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.  Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
R008 Non associated	Rural dwelling Level 2	1,533 Far foreground	VIZ1	Figure 56 illustrates that visual change between the consented RPWF wind turbines and the proposed Mod 1 wind turbines up to the blue would include +1 hub and +1 tip.  A total of 3 consented wind turbines are located below the black line with a further 4 wind turbines between the black and the blue lines. An increase to hub and blade height would be noticeable from the dwelling and curtilage with some potential for partial screening through existing tree cover beyond the dwelling. Wind turbines beyond the blue line would be largely screened by landform.  The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project.  The magnitude of visual change would be partially limited by distance and tree cover surrounding and beyond the dwelling and nearest consented wind turbine. There would be limited change in the composition and contrast between the consented and proposed Mod 1

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				wind turbine structures with a reduction in the quantity of wind turbines where removed by the Proponent.  The visual change associated with the Mod 1 wind turbines would not cause a significant modification of the visual catchment. The Mod 1 wind turbines would, where visible, be visually apparent and seen as major elements in the landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.  Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.  A neighbour agreement has been offered to the property owner.
R010 Non associated	Rural dwelling Level 2	1,833 Far foreground	VIZ1	Figure 57 illustrates that there would be no visual change in the number of hubs or tips between the consented RPWF wind turbines and the proposed Mod 1 wind turbines up to the blue line.  A total of 2 consented wind turbines are located below the black line with a further 3 wind turbines between the black and the blue lines. An

**Table 2** – Proposed Mod 1 wind turbine visual effects

increase to hub and blade height would be noticeable from the dwelling and curtilage; however, screening through existing tree cover extends around the dwelling. Wind turbines beyond the blue line would be largely screened by tree cover or restricted to views beyond the blue line.  The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project.  The magnitude of visual change would be partially limited by distance and tree cover surrounding and beyond the dwelling and nearest consented wind turbine. There would be limited change in the composition and contrast between the consented and proposed Mod 1 wind turbine structures with a reduction in the quantity of wind turbines where removed by the Proponent.  The visual change associated with the Mod 1 wind turbines would not cause a significant modification of the visual catchment. The Mod 1 wind	Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
					and curtilage; however, screening through existing tree cover extends around the dwelling. Wind turbines beyond the blue line would be largely screened by tree cover or restricted to views beyond the blue line.  The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project.  The magnitude of visual change would be partially limited by distance and tree cover surrounding and beyond the dwelling and nearest consented wind turbine. There would be limited change in the composition and contrast between the consented and proposed Mod 1 wind turbine structures with a reduction in the quantity of wind turbines where removed by the Proponent.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.  Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.
R011 Non associated	Rural dwelling Level 2	1,623 Far foreground	VIZ1	Figure 58 illustrates that visual change between the consented RPWF wind turbines and the proposed Mod 1 wind turbines up to the blue would include +1 hub and +1 tip.  A total of 15 consented wind turbines are located below the black line with a further 5 wind turbines between the black and the blue lines. An increase to hub and blade height would be noticeable from the dwelling and curtilage; however, screening through existing trees extends around the dwelling. Wind turbines beyond the blue line would be partially screened or restricted by tree cover.  The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				The magnitude of visual change would be partially limited by distance and tree cover surrounding and beyond the dwelling and nearest consented wind turbine. There would be limited change in the composition and contrast between the consented and proposed Mod 1 wind turbine structures with a reduction in the quantity of wind turbines where removed by the Proponent.  The visual change associated with the Mod 1 wind turbines would not cause a significant modification of the visual catchment. The Mod 1 wind turbines would be visually apparent and seen as major elements in the landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.  Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.  A neighbour agreement has been offered to the property owner.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
R018 Non associated	Rural dwelling Level 2	2,393 Near middleground	VIZ2	Figure 59 illustrates that there would be no visual change in the number of hubs or tips between the consented RPWF wind turbines and the proposed Mod 1 wind turbines up to the blue line.  Changes to wind turbine visibility would be limited to around 10 wind turbines beyond the blue line and at distances where tree cover is expected to provide some degree of screening.  A total of 3 wind turbines below the blue line have been removed by the Proponent following the submission of the Mod 1 Visual Impact Assessment and include wind turbines T32, T34 and T37.  The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project.  The magnitude of visual change would be partially limited by distance and tree cover surrounding and beyond the dwelling and nearest consented wind turbine. There would be limited change in the composition and contrast between the consented and proposed Mod 1

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				wind turbine structures with a reduction in the quantity of wind turbines where removed by the Proponent.  The visual change associated with the Mod 1 wind turbines would not cause a significant modification of the visual catchment. The Mod 1 wind turbines would be visually apparent and seen as major elements in the landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.  Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.  A neighbour agreement has been offered to the property owner.
R022 Non associated	Rural dwelling Level 2	2,394 Near middleground	VIZ2	Figure 60 illustrates that there would be no visual change in the number of hubs or tips between the consented RPWF wind turbines and the proposed Mod 1 wind turbines below the blue line.  A total of 3 consented wind turbines are located below the black line with a further 9 wind turbines between the black and the blue lines. An increase to hub and blade height would be noticeable from the dwelling and curtilage; however, screening through existing trees extends around

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				the dwelling. Wind turbines beyond the blue line would be partially
				screened or restricted by tree cover.
				A total of 3 wind turbines (1 below the black line and 2 between the
				black and blue line) have been removed by the Proponent following the
				submission of the Mod 1 Visual Impact Assessment and include wind
				turbines T32, T34 and T37.
				The wind turbine locations (and horizontal visual extent) are justified in
				accordance with the Development Approval and consent conditions for
				the Rye Park Wind Farm project.
				The magnitude of visual change would be partially limited by distance
				and tree cover surrounding and beyond the dwelling and nearest
				consented wind turbine. There would be limited change in the
				composition and contrast between the consented and proposed Mod 1
				wind turbine structures with a reduction in the quantity of wind
				turbines where removed by the Proponent.
				The visual change associated with the Mod 1 wind turbines would not
				cause a significant modification of the visual catchment. The Mod 1 wind

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Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				turbines would be visually apparent and seen as major elements in the landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.  Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.  A neighbour agreement has been offered to the property owner.
R026 Non associated	Rural dwelling Level 2	2,673 Near middleground	VIZ2	Figure 61 illustrates that visual change between the consented RPWF wind turbines and the proposed Mod 1 wind turbines up to the blue would include +1 tip up to the blue line.  One consented wind turbine is located below the black line with a further 5 wind turbines between the black and the blue lines. An increase to hub and blade height would be noticeable from the dwelling and curtilage; however, screening through existing trees extends around the dwelling. Wind turbines beyond the blue line and to the north east and south east of the dwelling would be partially screened or restricted by tree cover.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				A total of 3 wind turbines (between the black and blue line) have been removed by the Proponent following the submission of the Mod 1 Visual Impact Assessment and include wind turbines T32, T34 and T37.  The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project.  The magnitude of visual change would be partially limited by distance and tree cover surrounding and beyond the dwelling and nearest consented wind turbine. There would be limited change in the composition and contrast between the consented and proposed Mod 1 wind turbine structures with a reduction in the quantity of wind turbines where removed by the Proponent.  The visual change associated with the Mod 1 wind turbines would not cause a significant modification of the visual catchment. The Mod 1 wind turbines would be visually apparent and seen as major elements in the landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.
R029 Non associated	Rural dwelling Level 2	2,862 Near middleground	VIZ2	Figure 62 illustrates that there would be no visual change in the number of hubs or tips between the consented RPWF wind turbines and the proposed Mod 1 wind turbines up to the blue line.  Six consented wind turbines are located between the black and the blue lines. An increase to hub and blade height would be partially noticeable from the dwelling and curtilage; however, partial screening through scattered trees extends beyond the dwelling. Wind turbines beyond the blue line and to the north east and south east of the dwelling would be partially screened or restricted by tree cover.  A total of 3 wind turbines (between the black and blue line) have been removed by the Proponent following the submission of the Mod 1 Visual Impact Assessment and include wind turbines T32, T34 and T37.  The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				The magnitude of visual change would be partially limited by distance and tree cover surrounding and beyond the dwelling and nearest consented wind turbine. There would be limited change in the composition and contrast between the consented and proposed Mod 1 wind turbine structures with a reduction in the quantity of wind turbines where removed by the Proponent.  The visual change associated with the Mod 1 wind turbines would not cause a significant modification of the visual catchment. The Mod 1 wind turbines would be visually apparent and seen as major elements in the landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.  Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.
R038 Non associated	Rural dwelling Level 2	1,735 Far foreground	VIZ1	Figure 63 illustrates that there would be no visual change in the number of hubs or tips between the consented RPWF wind turbines and the proposed Mod 1 wind turbines up to the blue line.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				Ten consented wind turbines are located below the black line with a further 7 wind turbines between the black and the blue lines. An increase to hub and blade height would be noticeable from the dwelling and curtilage; however, some screening through existing trees extends beyond the dwelling.  The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project.  The magnitude of visual change would be partially limited by distance and tree cover surrounding and beyond the dwelling and nearest consented wind turbine. There would be limited change in the composition and contrast between the consented and proposed Mod 1 wind turbine structures with a reduction in the quantity of wind turbines where removed by the Proponent.  The visual change associated with the Mod 1 wind turbines would not
				cause a significant modification of the visual catchment. The Mod 1 wind turbines would be visually apparent and seen as major elements in the

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.  Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.  A neighbour agreement has been offered to the property owner.
R045 Non associated	Rural dwelling Level 2	1,728 Far foreground	VIZ1	Figure 64 illustrates that there would be no visual change in the number of hubs or tips between the consented RPWF wind turbines and the proposed Mod 1 wind turbines up to the blue line.  Three consented wind turbines are located below the black line with a further 2 wind turbines between the black and the blue lines. An increase to hub and blade height would be partially noticeable from the dwelling and curtilage; however, partial screening through tree cover extends around and beyond the dwelling. Wind turbines beyond the blue line and to the north east and south east of the dwelling would be partially screened or restricted by tree cover.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project.  The magnitude of visual change would be partially limited by distance and tree cover surrounding and beyond the dwelling and nearest consented wind turbine. There would be limited change in the composition and contrast between the consented and proposed Mod 1 wind turbine structures with a reduction in the quantity of wind turbines where removed by the Proponent.  The visual change associated with the Mod 1 wind turbines would not cause a significant modification of the visual catchment. The Mod 1 wind turbines would be visually apparent and seen as major elements in the landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.  Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.  A neighbour agreement has been offered to the property owner.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
R063 Non associated	Rural dwelling Level 2	1,905 Far foreground	VIZ1	Figure 65 illustrates that there would be no visual change in the number of hubs or tips between the consented RPWF wind turbines and the proposed Mod 1 wind turbines up to the blue line.  Four consented wind turbines are located below the black line with a further 7 wind turbines between the black and the blue lines. An increase to hub and blade height would be partially noticeable from the dwelling and curtilage; however, partial screening through tree cover extends beyond the dwelling. Wind turbines beyond the blue line and to the north of the dwelling would be partially screened or restricted by tree cover and landform.  The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project.  The magnitude of visual change would be partially limited by distance and tree cover surrounding and beyond the dwelling and nearest consented wind turbine. There would be limited change in the composition and contrast between the consented and proposed Mod 1

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				wind turbine structures with a reduction in the quantity of wind turbines where removed by the Proponent.  The visual change associated with the Mod 1 wind turbines would not cause a significant modification of the visual catchment. The Mod 1 wind turbines would be visually apparent and seen as major elements in the landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.  Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.  A neighbour agreement has been offered to the property owner.
R177 Non associated	Residential RU5 Level 1	3,831 Near middleground	VIZ2	Figure 66 illustrates that there would be no visual change in the number of hubs or tips between the consented RPWF wind turbines and the proposed Mod 1 wind turbines up to the blue line.  One wind turbine is located below the blue line with changes to wind turbine visibility would be limited to around 10 wind turbines beyond the

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				blue line with additional changes to wind turbines at distances where tree cover is expected to provide some degree of screening.  A total of 3 wind turbines below the blue line have been removed by the Proponent following the submission of the Mod 1 Visual Impact Assessment and include wind turbines T32, T34 and T37.  The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project.  The magnitude of visual change would be partially limited by distance and tree cover surrounding and beyond the dwelling and nearest consented wind turbine. There would be limited change in the composition and contrast between the consented and proposed Mod 1 wind turbine structures with a reduction in the quantity of wind turbines where removed by the Proponent.  The visual change associated with the Mod 1 wind turbines would not cause a significant modification of the visual catchment. The Mod 1 wind
				turbines would be visually apparent and seen as major elements in the

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.  Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.
R188 Non associated	Residential RU5 Level 1	3,574 Near middleground	VIZ2	Figure 67 illustrates that there would be no visual change in the number of hubs or tips between the consented RPWF wind turbines and the proposed Mod 1 wind turbines up to the blue line.  One wind turbine is located below the blue line with changes to wind turbine visibility would be limited to around 10 wind turbines beyond the blue line with additional changes to wind turbines at distances where tree cover is expected to provide some degree of screening.  A total of 3 wind turbines below the blue line have been removed by the Proponent following the submission of the Mod 1 Visual Impact Assessment and include wind turbines T32, T34 and T37.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project.  The magnitude of visual change would be partially limited by distance and tree cover surrounding and beyond the dwelling and nearest consented wind turbine. There would be limited change in the composition and contrast between the consented and proposed Mod 1 wind turbine structures with a reduction in the quantity of wind turbines where removed by the Proponent.  The visual change associated with the Mod 1 wind turbines would not cause a significant modification of the visual catchment. The Mod 1 wind turbines would be visually apparent and seen as major elements in the landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.  Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
R199 Non associated	Residential RU5 Level 1	3,719 Near middleground	VIZ2	Figure 68 illustrates that visual change between the consented RPWF wind turbines and the proposed Mod 1 wind turbines would include +1 hub up to the blue line.  One wind turbine is located below the blue line with a change to hub height visibility. Further changes to wind turbine visibility would be limited to around 10 wind turbines beyond the blue line; however, additional changes to wind turbines are at distances where tree cover across undulating landform is expected to provide some degree of screening.  A total of 3 wind turbines below the blue line have been removed by the Proponent following the submission of the Mod 1 Visual Impact Assessment and include wind turbines T32, T34 and T37.  The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project.  The magnitude of visual change would be partially limited by distance and tree cover surrounding and beyond the dwelling and nearest

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				consented wind turbine. There would be limited change in the composition and contrast between the consented and proposed Mod 1 wind turbine structures with a reduction in the quantity of wind turbines where removed by the Proponent.  The visual change associated with the Mod 1 wind turbines would not cause a significant modification of the visual catchment. The Mod 1 wind turbines would be visually apparent and seen as major elements in the landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.  Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.
R204 Non associated	Rural dwelling Level 2	2,899 Near middleground	VIZ2	Figure 69 illustrates that there would be no visual change in the number of hubs or tips between the consented RPWF wind turbines and the proposed Mod 1 wind turbines up to the blue line.  A total of 6 consented wind turbines are located between the black and the blue lines with no wind turbines below the black line. An increase to hub and blade height would be noticeable from the dwelling and

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				curtilage with some potential for partial screening through existing tree
				cover beyond the dwelling.
				A total of 3 wind turbines below the blue line have been removed by the
				Proponent following the submission of the Mod 1 Visual Impact
				Assessment and include wind turbines T32, T34 and T37.
				The wind turbine locations (and horizontal visual extent) are justified in
				accordance with the Development Approval and consent conditions for
				the Rye Park Wind Farm project.
				The magnitude of visual change would be partially limited by distance
				and tree cover surrounding and beyond the dwelling and nearest
				consented wind turbine. There would be limited change in the
				composition and contrast between the consented and proposed Mod 1
				wind turbine structures with a reduction in the quantity of wind
				turbines where removed by the Proponent.
				The visual change associated with the Mod 1 wind turbines would not
				cause a significant modification of the visual catchment. The Mod 1 wind
				turbines would be visually apparent and seen as major elements in the

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.  Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.
R230 Non associated	Residential RU5 Level 1	3,563 Near middleground	VIZ2	Figure 70 illustrates that visual change between the consented RPWF wind turbines and the proposed Mod 1 wind turbines would include +1 hub up to the blue line.  One wind turbine is located below the blue line with a change to hub height visibility. Further changes to wind turbine visibility would be limited to around 13 wind turbines beyond the blue line; however, additional changes to wind turbines are at distances where tree cover across undulating landform is expected to provide some degree of screening.  A total of 3 wind turbines below the blue line have been removed by the Proponent following the submission of the Mod 1 Visual Impact Assessment and include wind turbines T32, T34 and T37.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project.  The magnitude of visual change would be partially limited by distance and tree cover surrounding and beyond the dwelling and nearest consented wind turbine. There would be limited change in the composition and contrast between the consented and proposed Mod 1 wind turbine structures with a reduction in the quantity of wind turbines where removed by the Proponent.  The visual change associated with the Mod 1 wind turbines would not cause a significant modification of the visual catchment. The Mod 1 wind turbines would be visually apparent and seen as major elements in the landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.  Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
R266 Non associated	Rural dwelling Level 2	3,084 Near middleground	VIZ2	Figure 71 illustrates that there would be no visual change in the number of hubs or tips between the consented RPWF wind turbines and the proposed Mod 1 wind turbines up to the blue line.  A total of 5 consented wind turbines are located between the black and the blue lines with no wind turbines below the black line. An increase to hub and blade height would be noticeable from the dwelling and curtilage with some potential for partial screening through existing tree cover beyond the dwelling.  A total of 3 wind turbines below the blue line have been removed by the Proponent following the submission of the Mod 1 Visual Impact Assessment and include wind turbines T32, T34 and T37.  The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project.  The magnitude of visual change would be partially limited by distance and tree cover surrounding and beyond the dwelling and nearest consented wind turbine. There would be limited change in the

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				composition and contrast between the consented and proposed Mod 1 wind turbine structures with a reduction in the quantity of wind turbines where removed by the Proponent.  The visual change associated with the Mod 1 wind turbines would not cause a significant modification of the visual catchment. The Mod 1 wind turbines would be visually apparent and seen as major elements in the landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.  Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.
R267 Non associated	Rural dwelling Level 2	2,965 Near middleground	VIZ2	Figure 72 illustrates that there would be no visual change in the number of hubs or tips between the consented RPWF wind turbines and the proposed Mod 1 wind turbines up to the blue line.  A total of 8 consented wind turbines are located between the black and the blue lines with no wind turbines below the black line. An increase to hub and blade height would be noticeable from the dwelling and

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				curtilage with some potential for partial screening through existing tree
				cover beyond the dwelling.
				A total of 3 wind turbines below the blue line have been removed by the
				Proponent following the submission of the Mod 1 Visual Impact
				Assessment and include wind turbines T32, T34 and T37.
				The wind turbine locations (and horizontal visual extent) are justified in
				accordance with the Development Approval and consent conditions for
				the Rye Park Wind Farm project.
				The magnitude of visual change would be partially limited by distance
				and tree cover surrounding and beyond the dwelling and nearest
				consented wind turbine. There would be limited change in the
				composition and contrast between the consented and proposed Mod 1
				wind turbine structures with a reduction in the quantity of wind
				turbines where removed by the Proponent.
				The visual change associated with the Mod 1 wind turbines would not
				cause a significant modification of the visual catchment. The Mod 1 wind
				turbines would be visually apparent and seen as major elements in the

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.  Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.
R268 Non associated	Rural dwelling Level 2	2,854 Near middleground	VIZ2	Figure 73 illustrates that there would be no visual change in the number of hubs or tips between the consented RPWF wind turbines and the proposed Mod 1 wind turbines up to the blue line.  A total of 7 consented wind turbines are located between the black and the blue lines with no wind turbines below the black line. An increase to hub and blade height would be noticeable from the dwelling and curtilage with some potential for partial screening through existing tree cover beyond the dwelling.  A total of 3 wind turbines below the blue line have been removed by the Proponent following the submission of the Mod 1 Visual Impact Assessment and include wind turbines T32, T34 and T37.  Changes to wind turbine visibility would be limited to around 16 wind turbines beyond the blue line and at distances where tree cover is

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				expected to provide some degree of screening toward long distance views.  The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project.  The magnitude of visual change would be partially limited by distance and tree cover surrounding and beyond the dwelling and nearest consented wind turbine. There would be limited change in the composition and contrast between the consented and proposed Mod 1 wind turbine structures with a reduction in the quantity of wind turbines where removed by the Proponent.  The visual change associated with the Mod 1 wind turbines would not cause a significant modification of the visual catchment. The Mod 1 wind turbines would be visually apparent and seen as major elements in the landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.
R269 Non associated	Rural dwelling Level 2	3,546 Near middleground	VIZ2	Figure 74 illustrates that there would be no visual change in the number of hubs or tips between the consented RPWF wind turbines and the proposed Mod 1 wind turbines up to the blue line. One consented wind turbine (43) is located below the blue line.  A total of 3 wind turbines below the blue line have been removed by the Proponent following the submission of the Mod 1 VIA and include wind turbines T32, T34 and T37.  Changes to wind turbine visibility would be limited to around 16 wind turbines beyond the blue line and at distances where tree cover is expected to provide some degree of screening toward long distance views.  The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				The magnitude of visual change would be partially limited by distance and tree cover surrounding and beyond the dwelling and nearest consented wind turbine. There would be limited change in the composition and contrast between the consented and proposed Mod 1 wind turbine structures with a reduction in the quantity of wind turbines where removed by the Proponent.  The visual change associated with the Mod 1 wind turbines would not cause a significant modification of the visual catchment. The Mod 1 wind turbines would be visually apparent and seen as major elements in the landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.  Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.
R270 Non associated	Rural dwelling Level 2	3,509 Near middleground	VIZ2	Figure 75 illustrates that visual change between the consented RPWF wind turbines and the proposed Mod 1 wind turbines would include +1 hub between the black and the blue line.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				A total of 3 wind turbines below the blue line have been removed by the Proponent following the submission of the Mod 1 VIA and include wind turbines T32, T34 and T37.  Changes to wind turbine visibility would be limited to around 13 wind turbines beyond the blue line and at distances where tree cover is expected to provide some degree of screening toward long distance views.  The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project.  The magnitude of visual change would be partially limited by distance and tree cover surrounding and beyond the dwelling and nearest consented wind turbine. There would be limited change in the composition and contrast between the consented and proposed Mod 1 wind turbine structures with a reduction in the quantity of wind turbines where removed by the Proponent.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				The visual change associated with the Mod 1 wind turbines would not cause a significant modification of the visual catchment. The Mod 1 wind turbines would be visually apparent and seen as major elements in the landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.  Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.
R271 Non associated	Rural dwelling Level 2	4,035 Far middleground	VIZ2	Figure 76 illustrates that there would be no wind turbines below the black line or blue line.  A total of 3 wind turbines beyond the blue line have been removed by the Proponent following the submission of the Mod 1 VIA and include wind turbines T32, T34 and T37.  Changes to wind turbine visibility would be limited to around 15 wind turbines beyond the blue line and at distances where tree cover is expected to provide some degree of screening.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project.  The magnitude of visual change would be partially limited by distance and tree cover surrounding and beyond the dwelling and nearest consented wind turbine. There would be limited change in the composition and contrast between the consented and proposed Mod 1 wind turbine structures with a reduction in the quantity of wind turbines where removed by the Proponent.  The visual change associated with the Mod 1 wind turbines would not cause a significant modification of the visual catchment. The Mod 1 wind turbines would be visually apparent and seen as major elements in the landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.  Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
R280 Non associated	Rural dwelling Level 1	4,234 Far middleground	VIZ1	Figure 77 illustrates that there would be no wind turbines below the black line or blue line.  A total of 3 wind turbines beyond the blue line have been removed by the Proponent following the submission of the Mod 1 VIA and includes wind turbines T32, T34 and T37.  The wind turbine locations (and horizontal visual extent) are justified in accordance with the Development Approval and consent conditions for the Rye Park Wind Farm project.  The magnitude of visual change would be partially limited by distance and tree cover surrounding and beyond the dwelling and nearest consented wind turbine. There would be limited change in the composition and contrast between the consented and proposed Mod 1 wind turbine structures with a reduction in the quantity of wind turbines where removed by the Proponent.  The visual change associated with the Mod 1 wind turbines would not cause a significant modification of the visual catchment. The Mod 1 wind turbines would be visually apparent and seen as major elements in

**Table 2** – Proposed Mod 1 wind turbine visual effects

Receiver location (refer Figures 1 and 2)	Category of receiver location and viewer sensitivity level <sup>1</sup>	Approximate consented distance to proposed Mod 1 wind turbine (m) and Distance Zone <sup>2</sup>	Visual Influence Zone <sup>3</sup>	Magnitude of visual change - proposed Mod 1 (77-turbine layout and 200 m tip height) compared to consented turbine (92-turbine layout and 157 m tip height)
				the landscape as noted in the Bulletin; however, the visual change would not dominate the visual catchment associated with the consented wind farm.  Any visual mitigation measures and management options would be undertaken in accordance with the consent conditions.

<sup>&</sup>lt;sup>1</sup>Category of receiver location and viewer sensitivity level with regard to the NSW New South Wales State Government Wind Energy: Visual Assessment Bulletin December 2016

<sup>&</sup>lt;sup>2</sup> Distance zones with regard to the NSW New South Wales State Government Wind Energy: Visual Assessment Bulletin December 2016

<sup>&</sup>lt;sup>3</sup> Visual Influence Zones with regard to the NSW New South Wales State Government Wind Energy: Visual Assessment Bulletin December 2016

<sup>&</sup>lt;sup>4</sup>RPWF Visual Rating as determined by GBD (RPWF LVIA 2016)

#### 3 Conclusion

#### 3.1 Conclusion

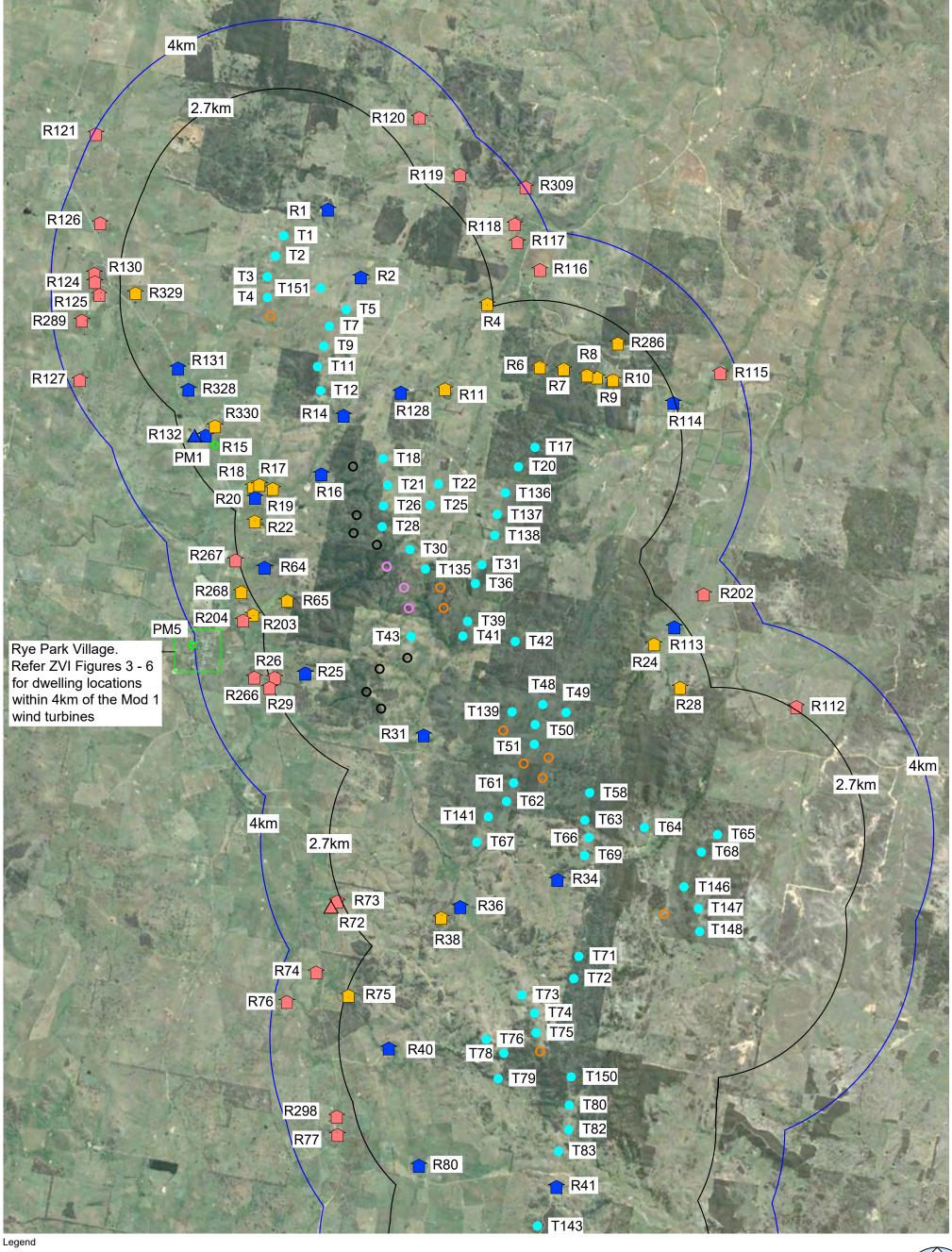
This Mod 1 VIA Addendum A has compared the consented Rye Park Wind Farm (RPWF) wind turbines against the proposed Mod 1 wind turbine layout and design and concludes that:

- the degree of visual change between the consented Rye Park Wind Farm wind turbines and the proposed Mod 1 wind turbines is considered compliant with the requirements of the Wind Energy Visual Assessment Bulletin to the extent that the Bulletin is applicable to the assessment and determination of a modification to a consented wind farm project
- the visibility mapping illustrates that changes to the consented wind turbine tip height would be discernible
  from some view locations where views extend toward the Mod 1 wind turbines, but would not cause a
  significant modification to the visual catchment of the consented project
- the visibility mapping illustrates that the number of visible wind turbine hubs and blade tips (as modelled)
  would be subject to marginal increases and decreases from dwellings within 4km of the consented wind
  turbines. For most dwellings changes to wind turbine visibility would occur beyond the 4km blue line
  threshold
- changes to the Mod 1 wind turbine are not considered to result in a significant modification to the visual catchment associated with the consented wind turbines
- the consented wind turbines would be a major element in the landscape and visually apparent in the landscape. The changes associated with the Mod 1 wind turbine would not dominate the visual catchment associated with the consented wind farm
- the proposed Mod 1 wind turbine is not considered to result in a magnitude of visual change that would significantly increase visual effects associated with the consented wind turbines. The amendment to tip of blade height would result in an increase in height of approximately half a rotor blade above the consented wind turbine design envelope
- whilst wind turbines T32, T34 and T37 have been removed to address visual impacts on the Rye Park Township, wind turbine T43 has been retained. This turbine is screened to hub height (and above from other view locations) from several dwellings in the Rye Park Township by a small rounded hill with tree cover to the west of the turbine location. GBD also note that the Proponent has removed a total of 7 wind turbines from the 10 wind turbines recommended for removal from the Rye Park Township cluster by the Independent Expert Review, September 2016.

GBD considers the conclusions of the Mod 1 VIA are supported by the Mod 1 VIA Addendum A and specifically:

 the Proposed Modification is not considered to result in a magnitude of visual change that would significantly increase visual effects (and former visual impact ratings) associated with the Approved Project.

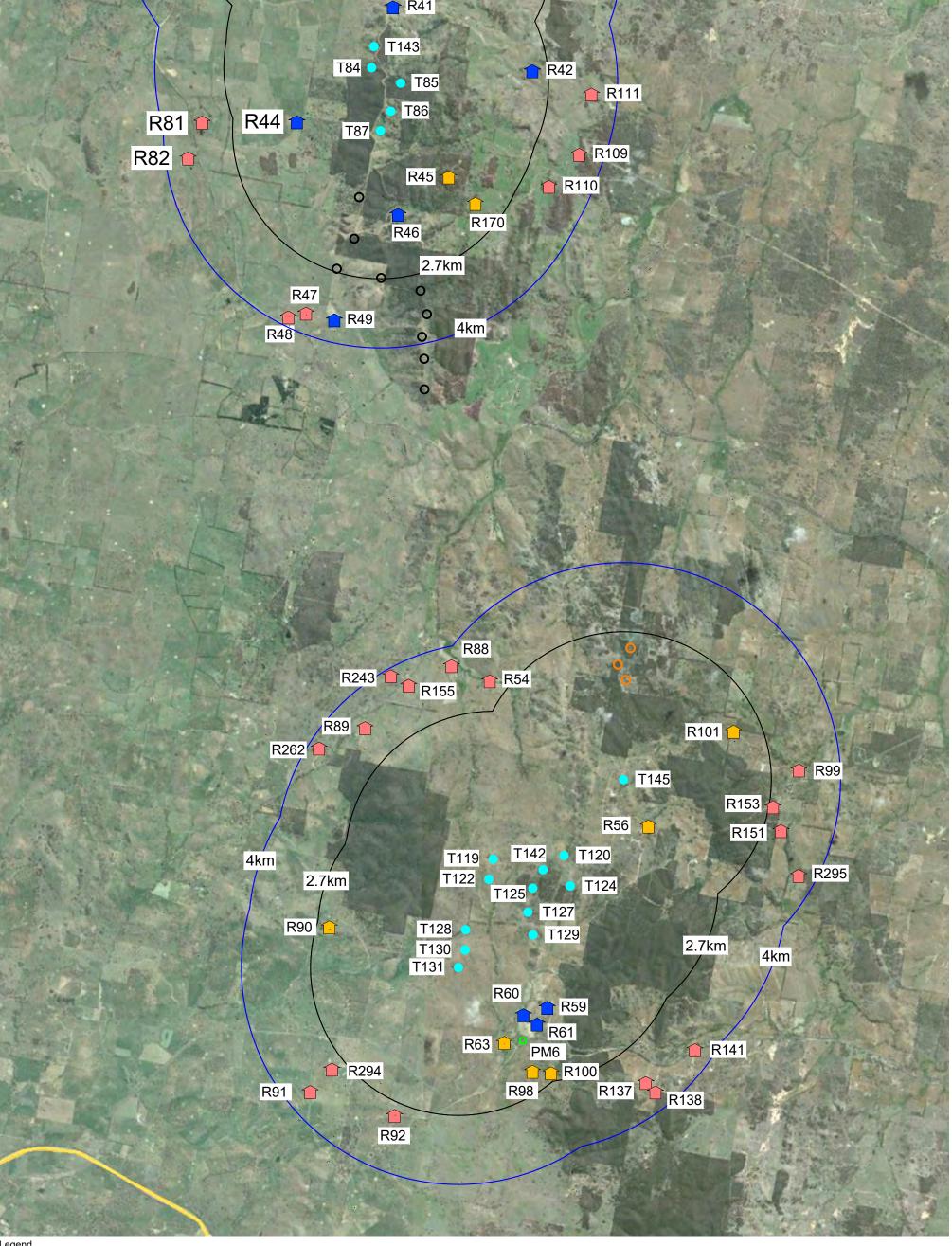
- given the Modified Project is not considered to result in any significant increase in magnitude of visual effect,
  and that the overall number of wind turbines has been reduced since the preparation of the Bango Wind
  Farm cumulative impact assessment, the VIA determined that the potential cumulative visual impact of the
  Modified Project will be no greater than the determination of cumulative visual impacts for the Approved
  Project.
- the peer review was satisfied with the methodology applied by GBD and stated the conclusions were well demonstrated and defended. It was concluded that the VIA reflected current best practice in visual assessment and responded appropriately to the assessment guidelines defined in the Bulletin.
- accordingly, the Modified Project will not impact with Conditions 2 4 of Schedule 3 of the Development
   Consent that relates to visual impact.



- Associated residential dwelling within 4km of wind turbine
- Non associated residential dwelling within 2.7km of wind turbine
- Non associated residential dwelling between 2.7km and 4km of wind turbine
- Δ Non residential structure
- Consented RPWF wind turbines (indicative location)
- Rye Park wind turbine removed by the Planning Assessment Commission (17 wind turbines)
- Rye Park wind turbine removed by the Proponent during the Modification Application (12 wind turbines)
- Rye Park wind turbine removed by the Proponent during the Response to Submissions (3 wind turbines)
- 2.7km distance from consented Rye Park wind turbine 4km distance from consented Rye Park wind turbine
- Photomontage locations PM1, PM5 and PM6



Figure 1 A Residential dwelling locations within 4km of consented RPWF wind turbines (north)



Legend

- Associated residential dwelling within 4km of wind turbine
- Non associated residential dwelling within 2.7km of wind turbine
- Non associated residential dwelling between 2.7km and 4km of wind turbine
- Non residential structure Δ
- Consented RPWF wind turbines (indicative location)
- Rye Park wind turbine removed by the Planning Assessment Commission (17 wind turbines)
- Rye Park wind turbine removed by the Proponent during the Modification Application (12 wind turbines)
- Rye Park wind turbine removed by the Proponent during the Response to Submissions (3 wind turbines)
- 2.7km distance from consented Rye Park wind turbine 4km distance from consented Rye Park wind turbine
- Photomontage locations PM1, PM5 and PM6



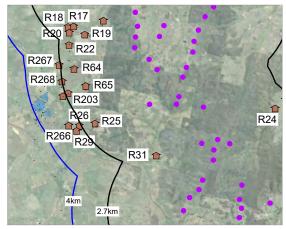
Figure 2 A Residential dwelling locations within 4km of consented wind turbines (south)



Photo location PM6 - View toward approved RPWF from Kershaw Street, Rye Park (157m tip height)



**Photo location PM6** - View toward **proposed Mod 1** wind turbine (Response to Submissions) layout from Kershaw Street, Rye Park (200m tip height) excluding turbines T32, T34 and T37.



Photomontage location plan

#### Legend



Approximate photo location and indicative view direction toward the Rye Park Wind

•

Consented Rye Park Wind Farm

Residential dwelling



### **General Notes: Photo location PM6**

Coordinates: Easting 674899, Northing 6178817

Elevation 567m AHD

Camera: Nikon D700, 50mm 1:1.4D Lens

Original Page Format - A1 Landscape

Photomontage PM6 is illustrated at a view angle of around 120 degrees which is within the general field of human vision.

### **Photomontage limitations**

A photomontage can never show exactly what the wind farm will look like in reality due to factors such as different lighting, weather and seasonal conditions which vary through time and the resolution of the image. Also a static image cannot convey turbine movement.

The images provided give a reasonable impression of the scale of the turbines and the distance to the turbines, but can never be 100% accurate.

The viewpoints illustrated are representative of views in this location, but cannot represent visibility at all locations.

Figure 45 PM6 120 degree view angle

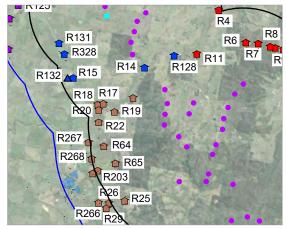
**GREEN BEAN DESIGN** 



Photo location PM6 - View toward approved RPWF wind turbine layout from Kershaw Street, Rye Park (157m tip height)



**Photo location PM6** - View toward **proposed Mod 1** wind turbine (Response to Submissions) layout from Kershaw Street, Rye Park (200m tip height) excluding turbines T32, T34 and T37



Photomontage location plan

#### Legend



Approximate photo location and indicative view direction toward the Rye Park Wind Farm site

•

Rye Park Wind Farm Mod 1 wind turbine layout

Residential dwelling



#### **General Notes: Photo location PM6**

Coordinates: Easting 674899, Northing 6178817

Elevation 567m AHD

Camera: Nikon D700, 50mm 1:1.4D Lens

Original Page Format - A1 Landscape

Photomontage PM6 is illustrated at a view angle of around 45 degrees which is within the central field of human vision.

100% accurate.

The viewpoints illustrated are representative of views in this location, but cannot represent visibility at all locations.

A photomontage can never show exactly what the wind farm will look like in reality due to factors such as different lighting, weather and

seasonal conditions which vary through time and the resolution of the image. Also a static

The images provided give a reasonable

impression of the scale of the turbines and

the distance to the turbines, but can never be

image cannot convey turbine movement.

Figure 45A PM6 45 degree view angle

**Photomontage limitations** 

**GREEN BEAN DESIGN** 

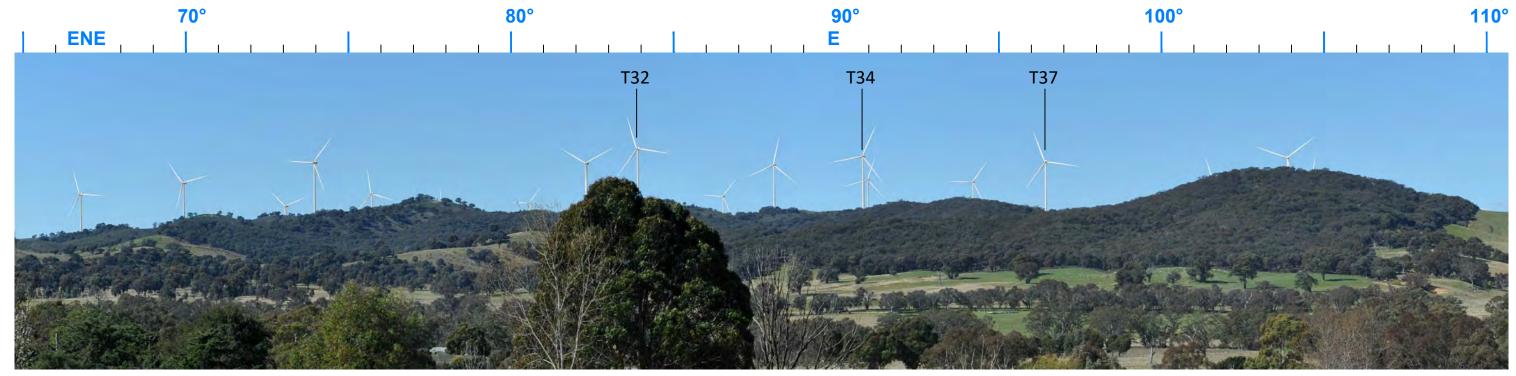
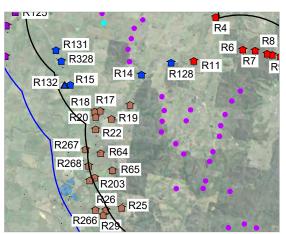


Photo location PM6 - View toward proposed Mod 1 wind turbine layout from Kershaw Street, Rye Park (200m tip height) including turbines T32, T34 and T37



Photo location PM6 - View toward proposed Mod 1 wind turbine (Response to Submissions) layout from Kershaw Street, Rye Park (200m tip height) excluding turbines T32, T34 and T37



Photomontage location plan

#### Legend

Approximate photo location and indicative view direction toward the Rye Park Wind Farm site

Rye Park Wind Farm Mod 1 wind turbine layout

Residential dwelling



#### **General Notes: Photo location PM6**

Coordinates: Easting 674899, Northing 6178817

Elevation 567m AHD

Camera: Nikon D700, 50mm 1:1.4D Lens

Original Page Format - A1 Landscape

Photomontage PM6 is illustrated at a view angle of around 45 degrees which is within the central field of

human vision.

### **Photomontage limitations**

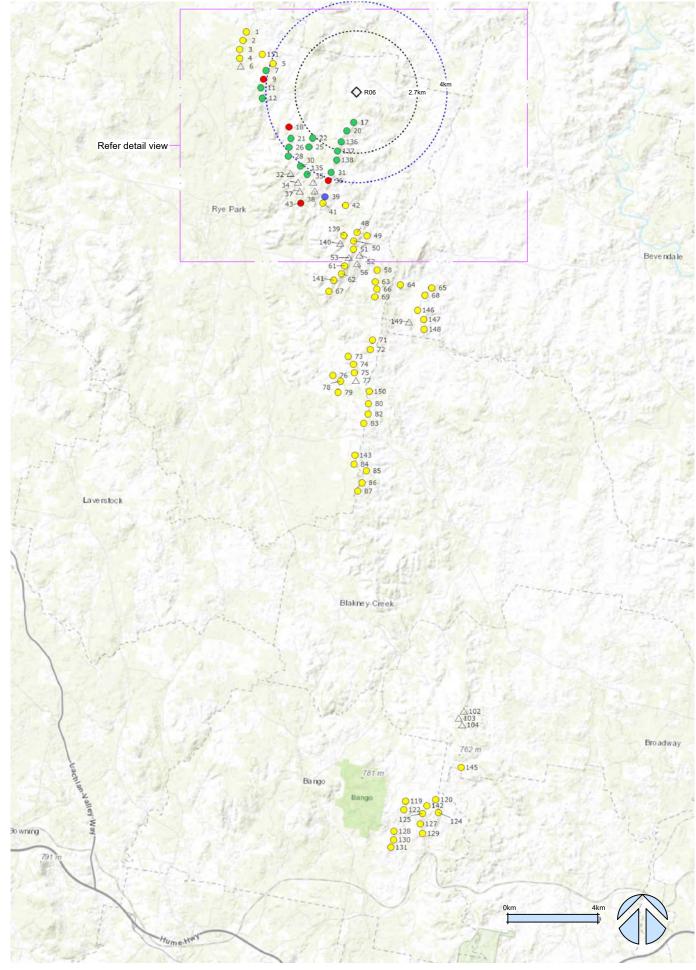
A photomontage can never show exactly what the wind farm will look like in reality due to factors such as different lighting, weather and seasonal conditions which vary through time and the resolution of the image. Also a static image cannot convey turbine movement.

The images provided give a reasonable impression of the scale of the turbines and the distance to the turbines, but can never be 100% accurate.

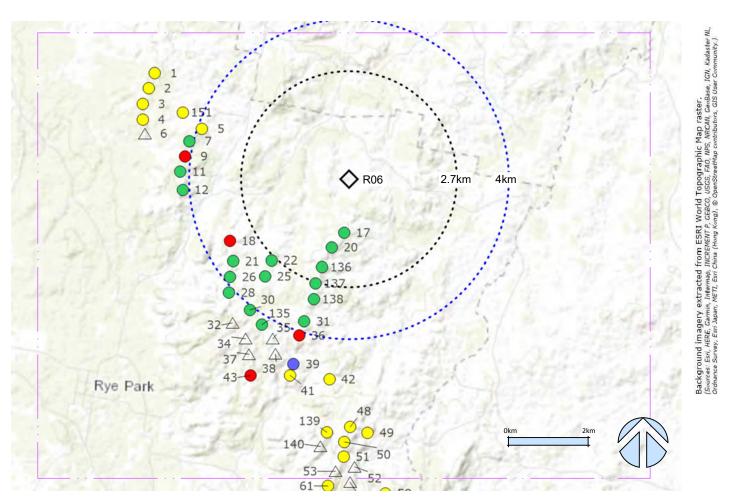
The viewpoints illustrated are representative of views in this location, but cannot represent visibility at all locations.

Figure 45B PM6 45 degree view angle

**GREEN BEAN DESIGN** 



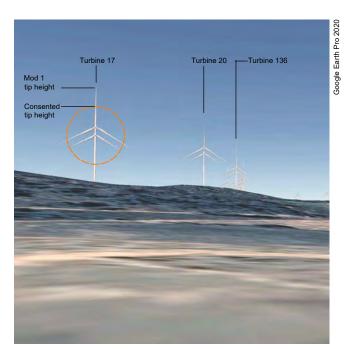
Dwelling R06 comparison of consented and Mod 1 wind turbine visibility



Dwelling R06 detail view







Dwelling R06 Google 3D wind turbine model consented and Mod 1

### Legend

Comparison of turbine visibility for Modified vs Approved layouts

turbine not visible (in either layout)

no change in visibility of hub and tip (visible turbine)

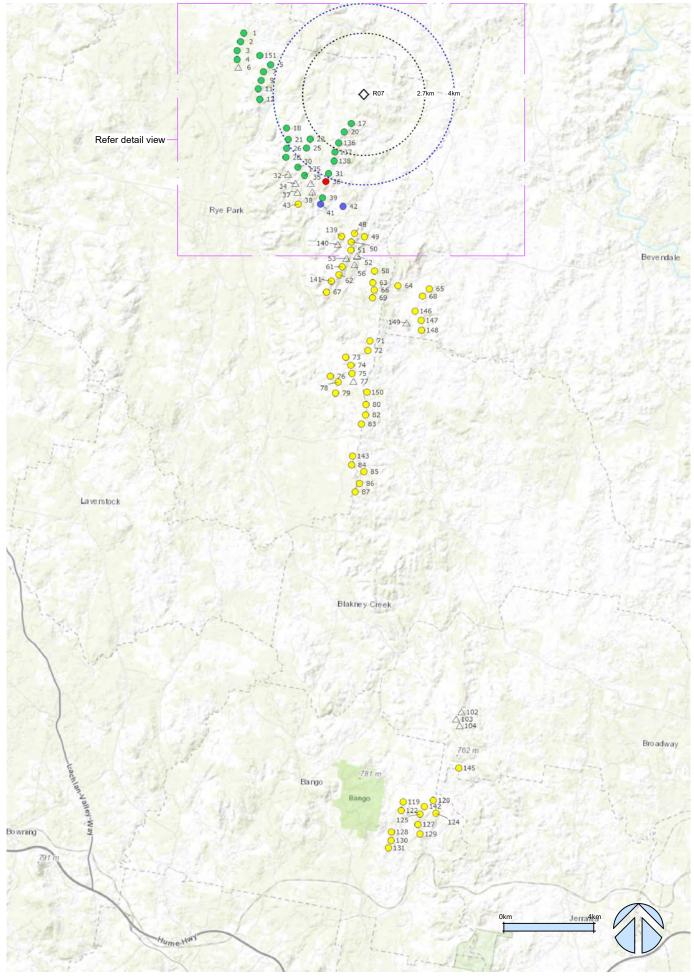
additional hub (and tip) visible

additional tip (no hub) visible

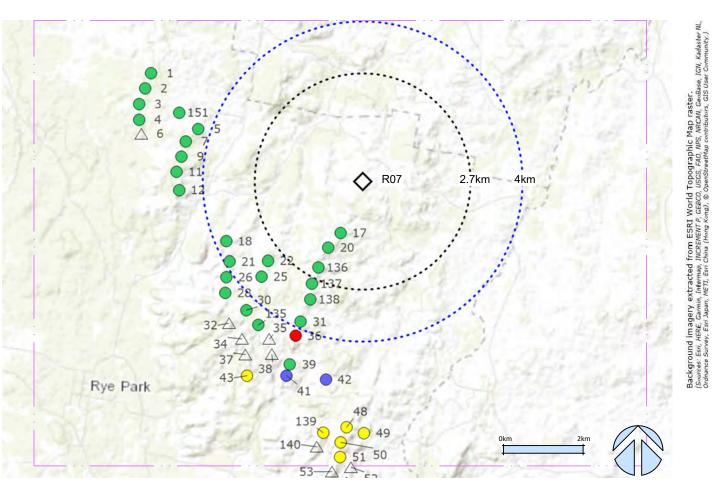
removed turbine (from Approved layout)

Figure 54
Residential dwelling R06
Consented and Mod 1 wind turbine visibility



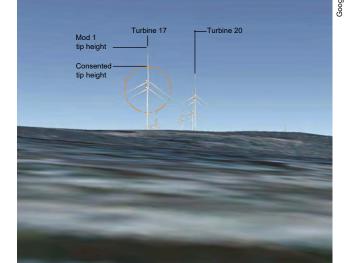


Dwelling R07 comparison of consented and Mod 1 wind turbine visibility



Dwelling R07 detail view





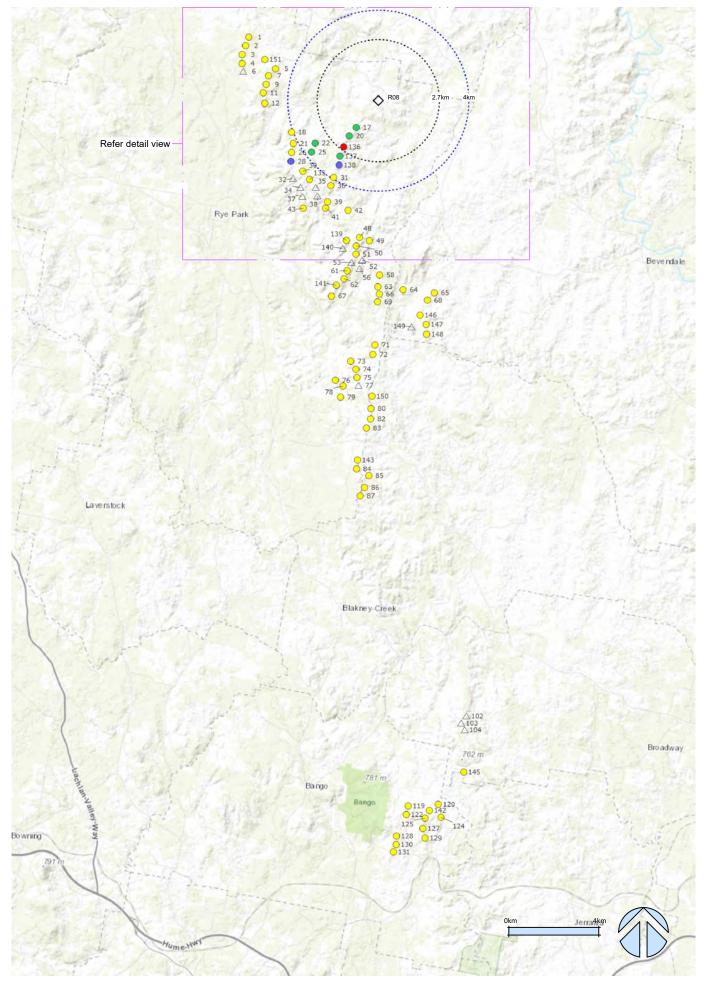
Dwelling R07 Google 3D wind turbine model consented and Mod 1

### Legend

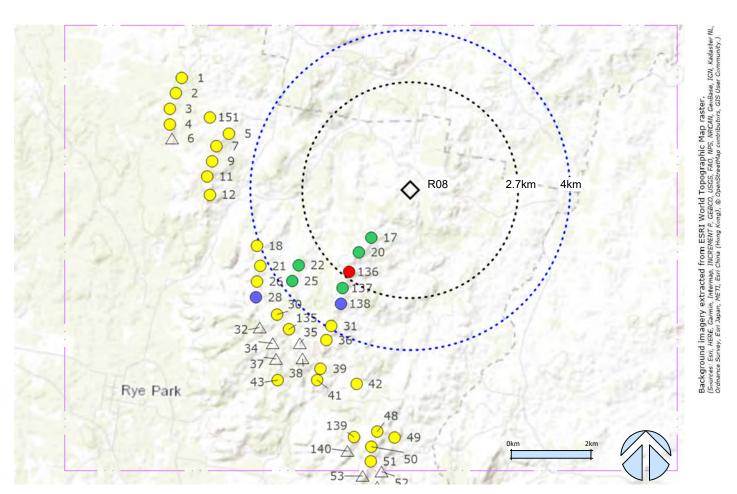
♦ Residential dwelling
 Distance buffer from dwelling
 2.7 km
 4.0 km
 Comparison of turbine visibility for Modified vs Approved layouts
 in action of turbine visibility for Modified vs Approved layout)
 and turbine not visible (in either layout)
 no change in visibility of hub and tip (visible turbine)
 additional hub (and tip) visible
 additional tip (no hub) visible
 removed turbine (from Approved layout)

Figure 55
Residential dwelling R07
Consented and Mod 1 wind turbine visibility





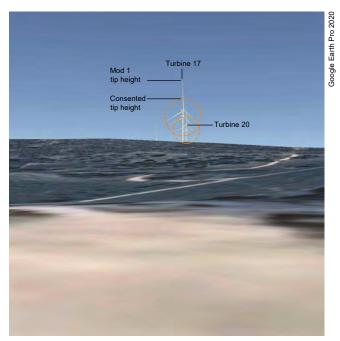
Dwelling R08 comparison of consented and Mod 1 wind turbine visibility



Dwelling R08 detail view



Dwelling R08 aerial image



Dwelling R08 Google 3D wind turbine model consented and Mod 1

### Legend

Comparison of turbine visibility for Modified vs Approved layouts

Ustance buffer from dwelling

2.7 km

no change in visibility of hub and tip (visible turbine)

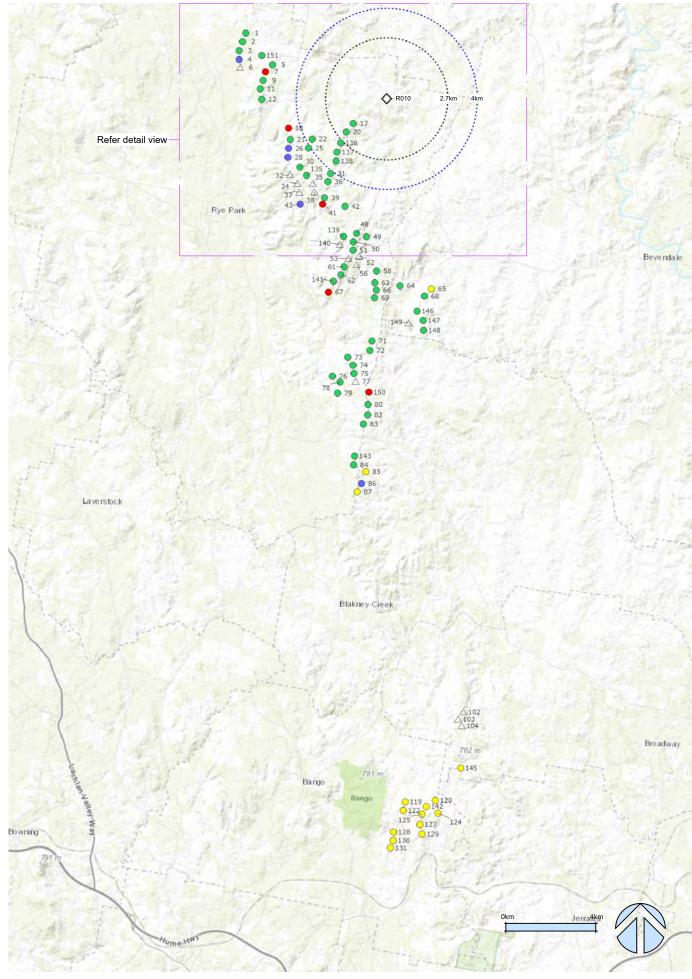
additional hub (and tip) visible

additional tip (no hub) visible

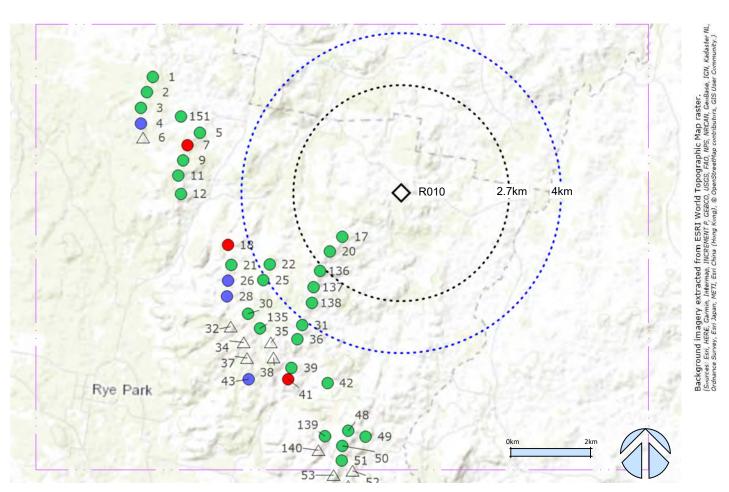
removed turbine (from Approved layout)

Figure 56
Residential dwelling R08
Consented and Mod 1 wind turbine visibility





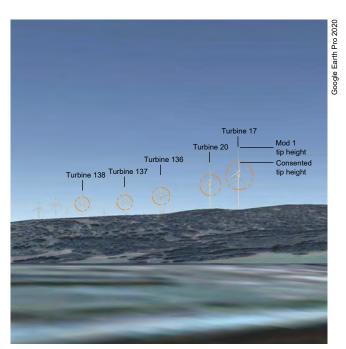
Dwelling R010 comparison of consented and Mod 1 wind turbine visibility



Dwelling R010 detail view



Dwelling R010 aerial image



Dwelling R10 Google 3D wind turbine model consented and Mod 1

### Legend

Comparison of turbine visibility for Modified vs Approved layouts

turbine not visible (in either layout)

no change in visibility of hub and tip (visible turbine)

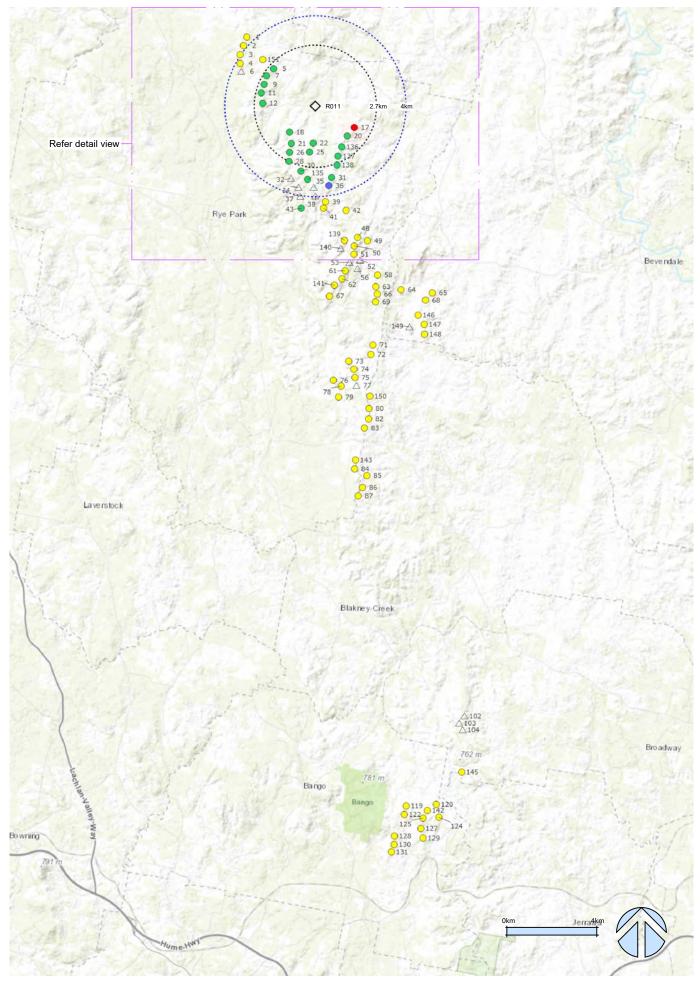
additional hub (and tip) visible

additional tip (no hub) visible

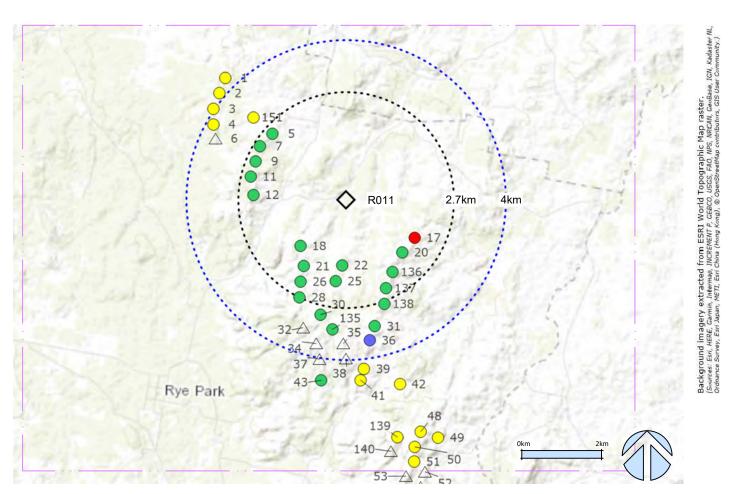
removed turbine (from Approved layout)

Figure 57
Residential dwelling R010
Consented and Mod 1 wind turbine visibility





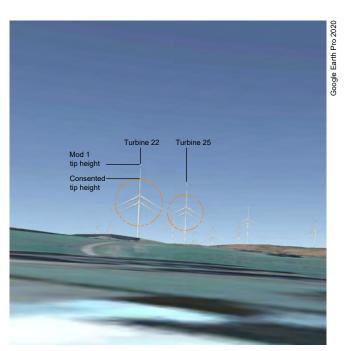
Dwelling R11 comparison of consented and Mod 1 wind turbine visibility



Dwelling R11 detail view



Dwelling R11 aerial image



Dwelling R11 Google 3D wind turbine model consented and Mod 1

### Legend

Comparison of turbine visibility for Modified vs Approved layouts

turbine not visible (in either layout)

no change in visibility of hub and tip (visible turbine)

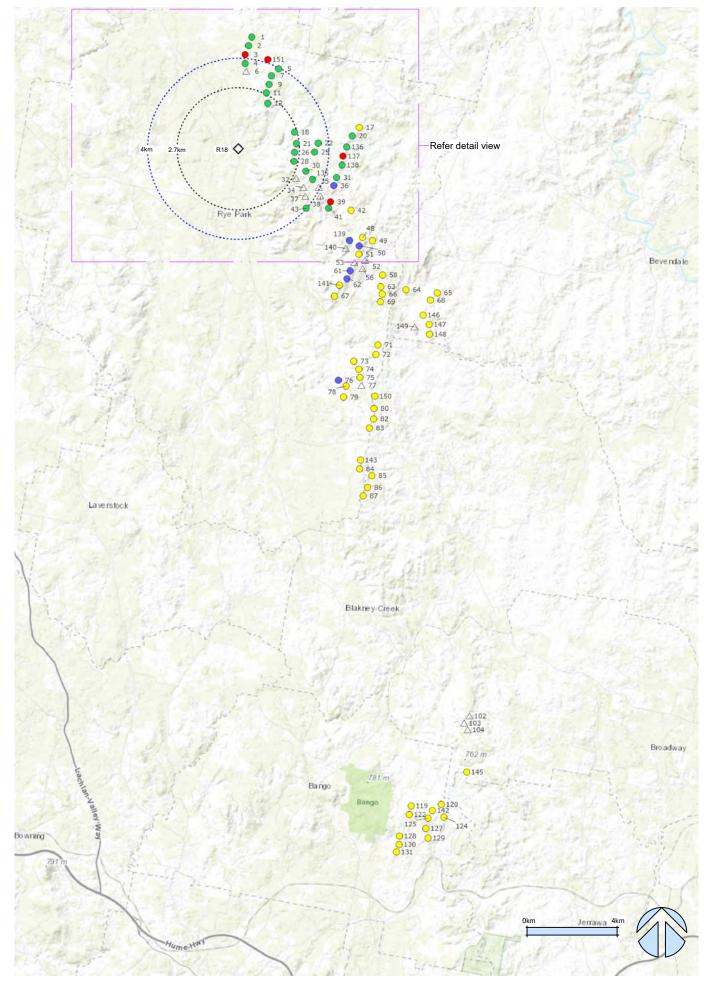
additional hub (and tip) visible

additional tip (no hub) visible

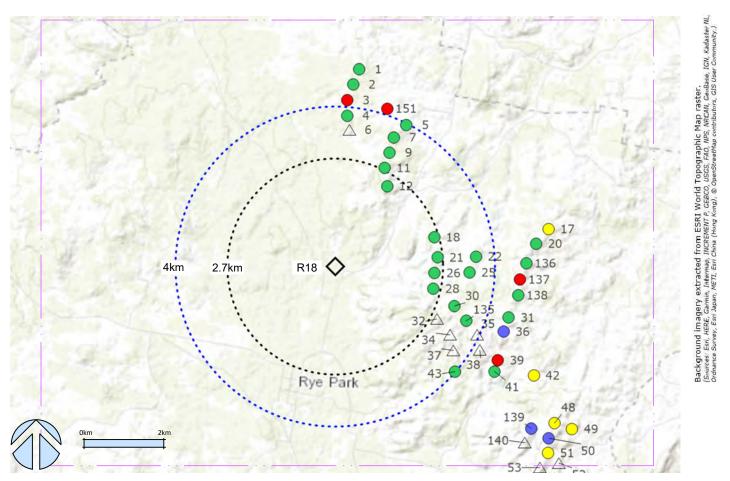
removed turbine (from Approved layout)

Figure 58
Residential dwelling R11
Consented and Mod 1 wind turbine visibility





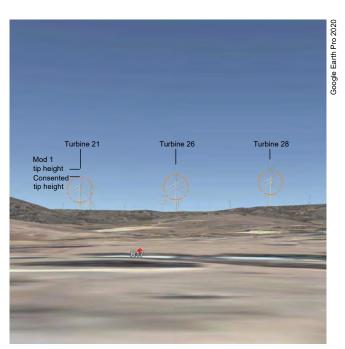
Dwelling R18 comparison of consented and Mod 1 wind turbine visibility



Dwelling R18 detail view



Dwelling R18 aerial image

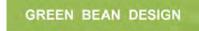


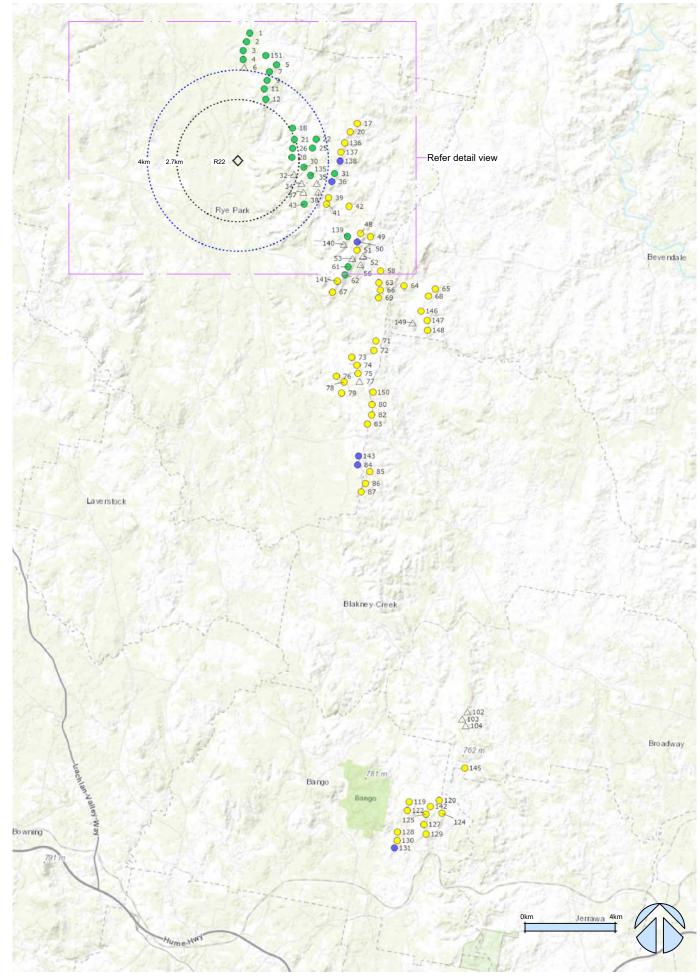
Dwelling R18 Google 3D wind turbine model consented and Mod 1

### Legend

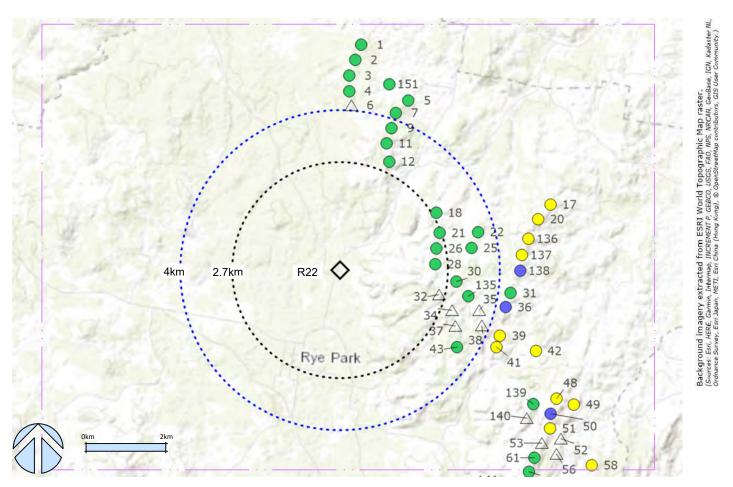
♦ Residential dwelling
 Distance buffer from dwelling
 2.7 km
 4.0 km
 additional hub (and tip) visible
 additional tip (no hub) visible
 removed turbine visibility for Modified vs Approved layouts
 turbine not visible (in either layout)
 no change in visibility of hub and tip (visible turbine)
 additional hub (and tip) visible
 removed turbine (from Approved layout)

Figure 59
Residential dwelling R18
Consented and Mod 1 wind turbine visibility

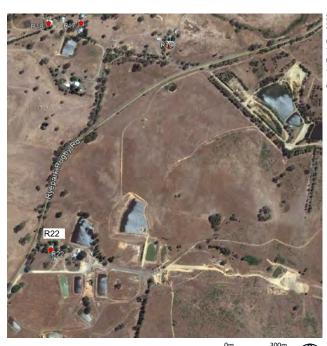




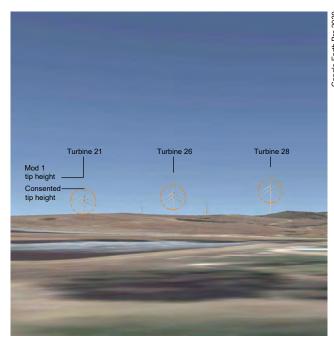
Dwelling R22 comparison of consented and Mod 1 wind turbine visibility



Dwelling R22 detail view



Dwelling R22 aerial image



Dwelling R22 Google 3D wind turbine model consented and Mod 1

### Legend

Comparison of turbine visibility for Modified vs Approved layouts

turbine not visible (in either layout)

no change in visibility of hub and tip (visible turbine)

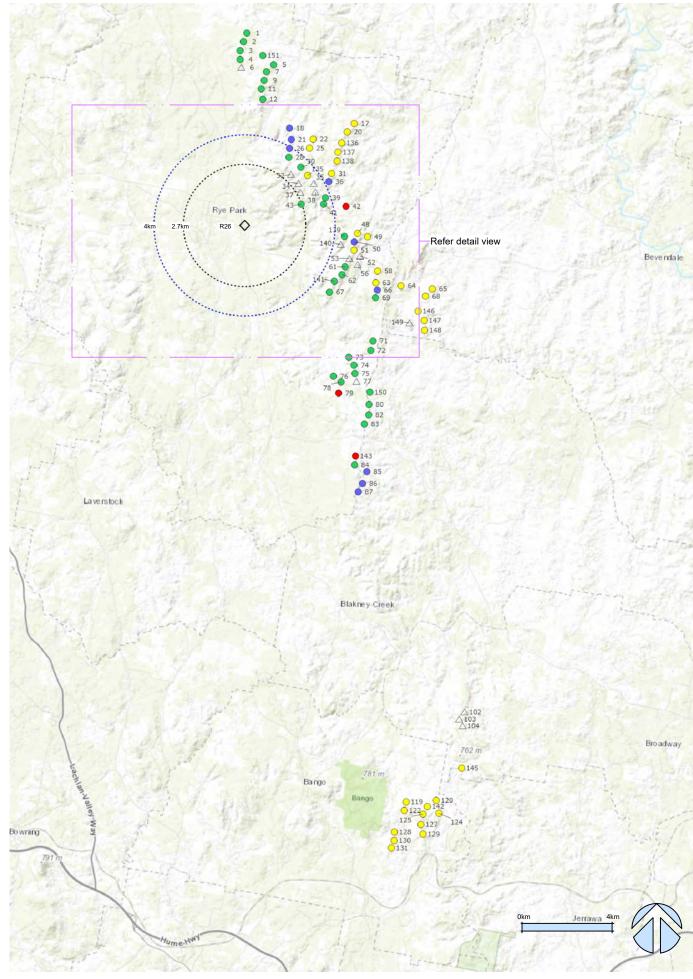
additional hub (and tip) visible

additional tip (no hub) visible

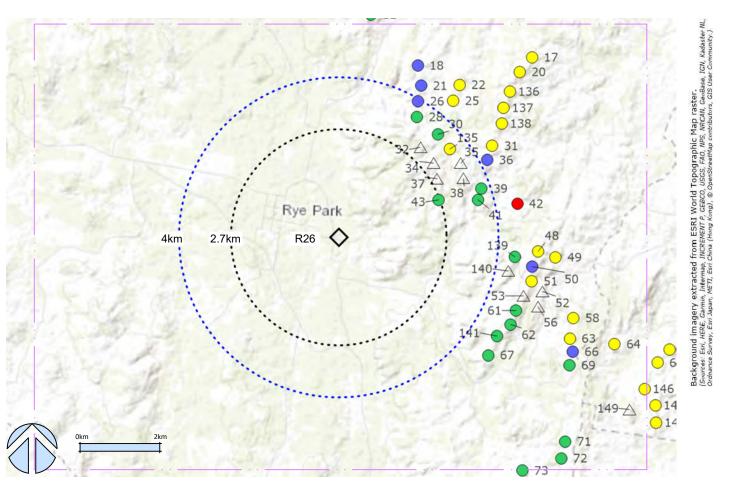
removed turbine (from Approved layout)

Figure 60
Residential dwelling R22
Consented and Mod 1 wind turbine visibility



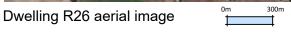


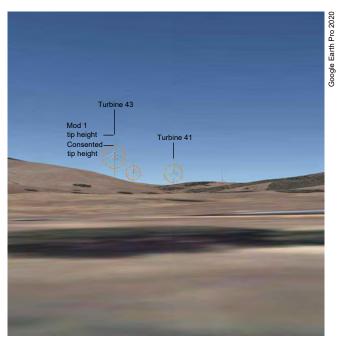
Dwelling R26 comparison of consented and Mod 1 wind turbine visibility



Dwelling R26 detail view







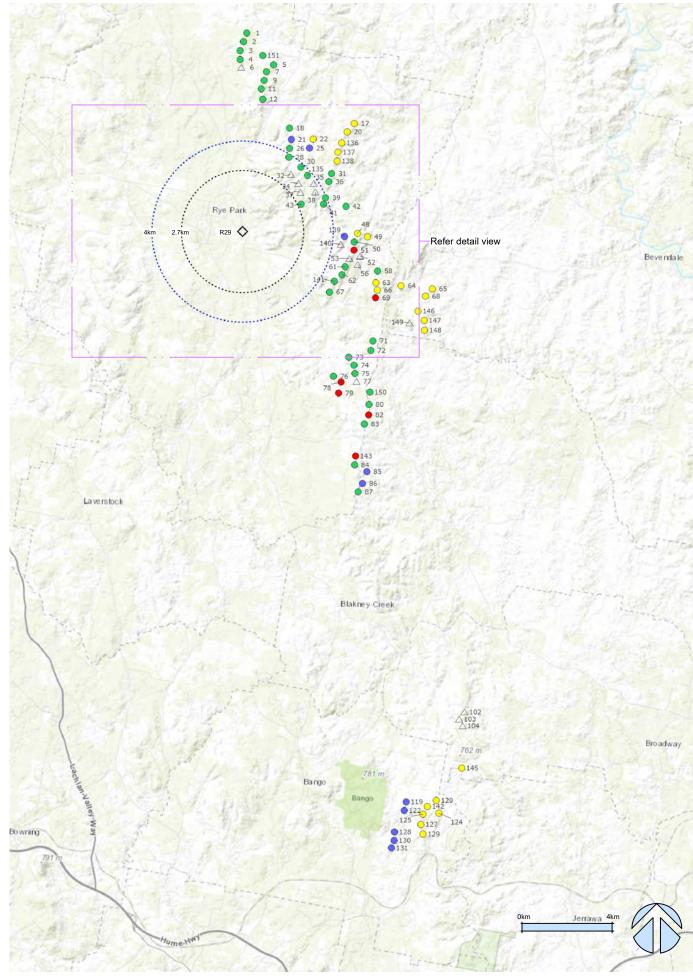
Dwelling R26 Google 3D wind turbine model consented and Mod 1

### Legend

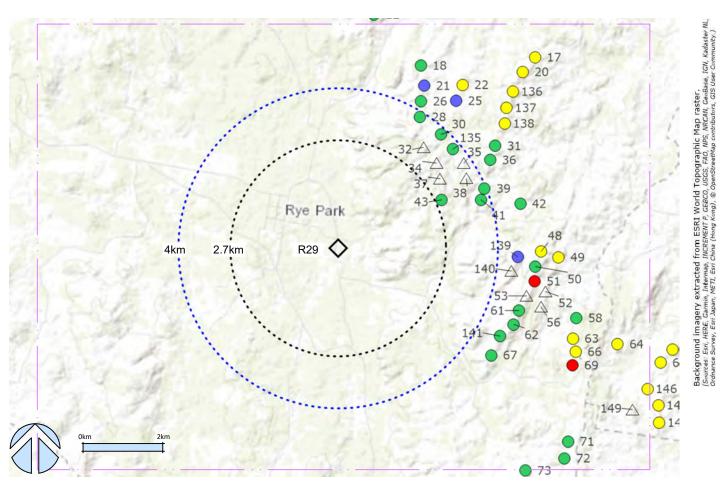
♦ Residential dwelling
 Distance buffer from dwelling
 2.7 km
 4.0 km
 Comparison of turbine visibility for Modified vs Approved layouts
 turbine not visible (in either layout)
 no change in visibility of hub and tip (visible turbine)
 additional hub (and tip) visible
 additional tip (no hub) visible
 removed turbine (from Approved layout)

Figure 61
Residential dwelling R26
Consented and Mod 1 wind turbine visibility

GREEN BEAN DESIGN



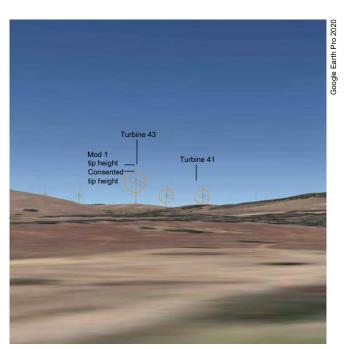
Dwelling R29 comparison of consented and Mod 1 wind turbine visibility



Dwelling R29 detail view



Dwelling R29 aerial image



Dwelling R29 Google 3D wind turbine model consented and Mod 1

### Legend

Comparison of turbine visibility for Modified vs Approved layouts

turbine not visible (in either layout)

no change in visibility of hub and tip (visible turbine)

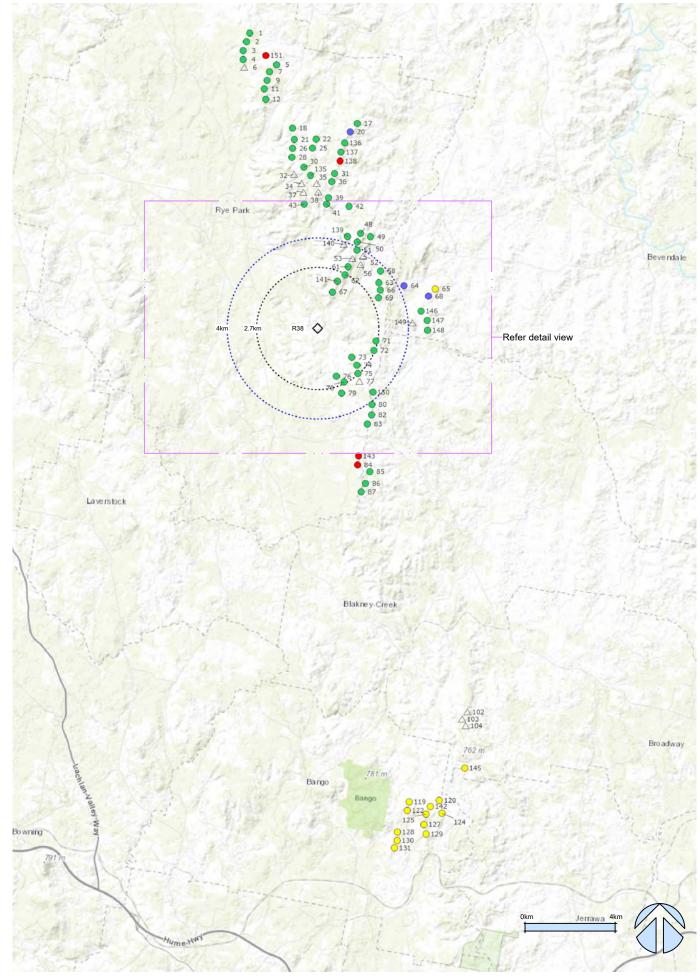
additional hub (and tip) visible

additional tip (no hub) visible

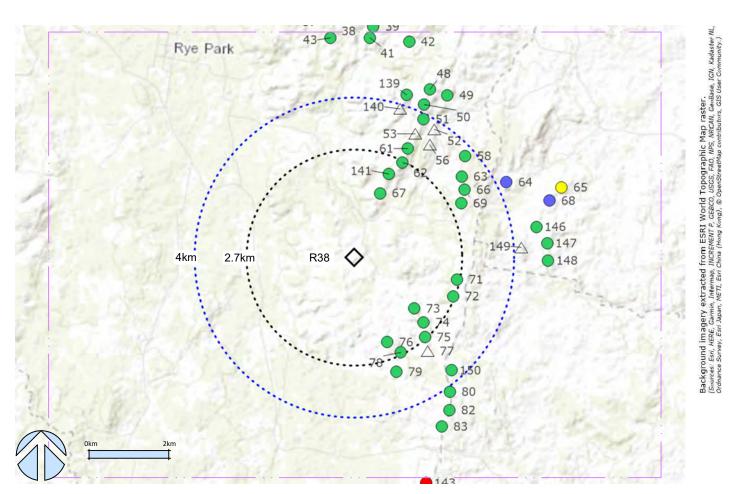
removed turbine (from Approved layout)

Figure 62
Residential dwelling R29
Consented and Mod 1 wind turbine visibility

GREEN BEAN DESIGN



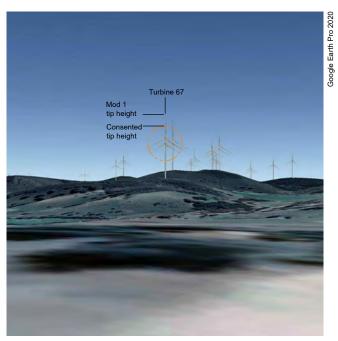
Dwelling R38 comparison of consented and Mod 1 wind turbine visibility



Dwelling R38 detail view



Dwelling R38 aerial image

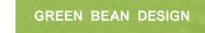


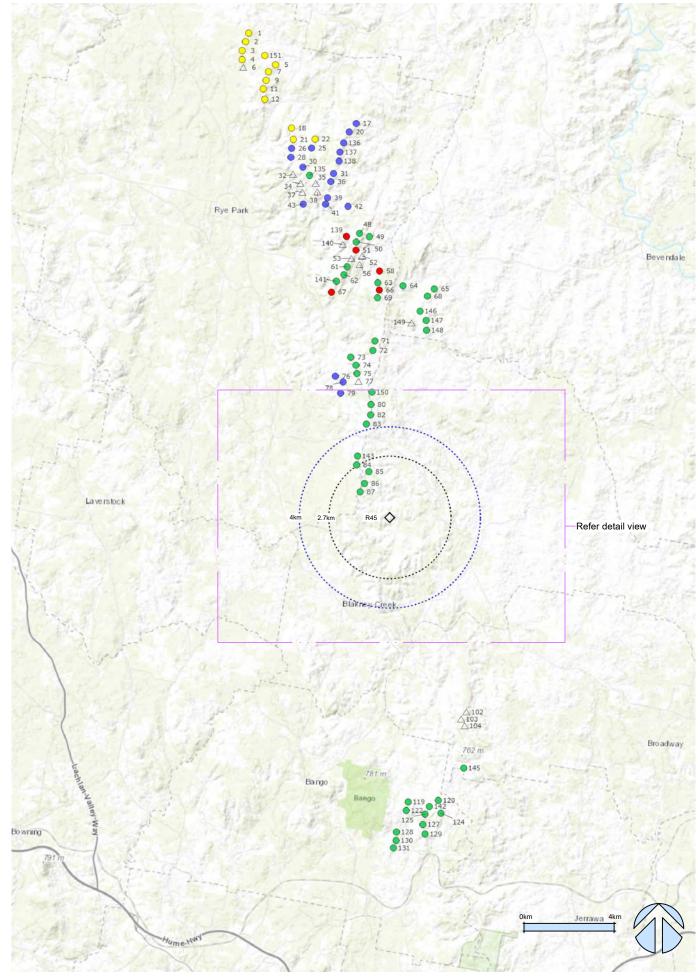
Dwelling R38 Google 3D wind turbine model consented and Mod 1

### Legend

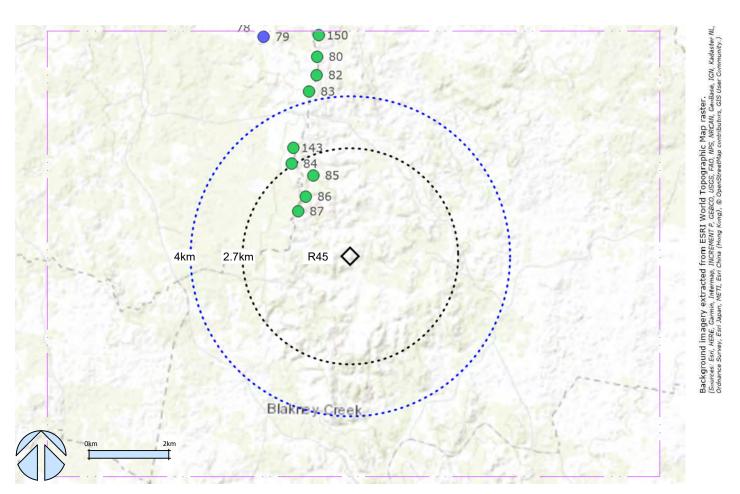
♦ Residential dwelling
 Distance buffer from dwelling
 2.7 km
 4.0 km
 Eadditional hub (and tip) visible
 additional tip (no hub) visible
 removed turbine (from Approved layout)

Figure 63
Residential dwelling R38
Consented and Mod 1 wind turbine visibility





Dwelling R45 comparison of consented and Mod 1 wind turbine visibility



Dwelling R45 detail view



Dwelling R45 Google 3D wind turbine model consented and Mod 1

### Legend

Comparison of turbine visibility for Modified vs Approved layouts

turbine not visible (in either layout)

no change in visibility of hub and tip (visible turbine)

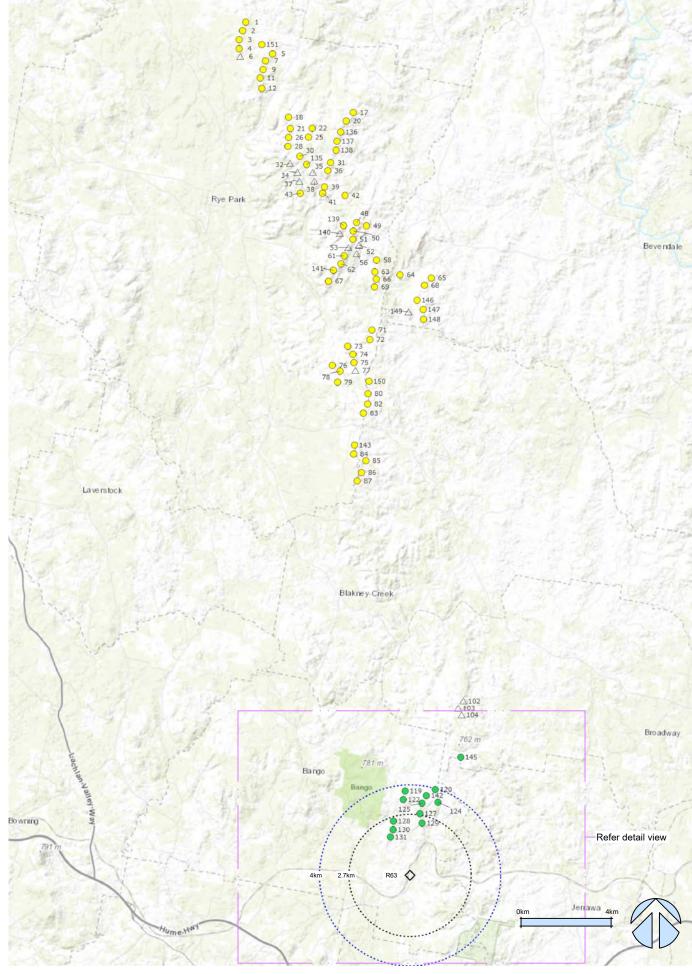
additional hub (and tip) visible

additional tip (no hub) visible

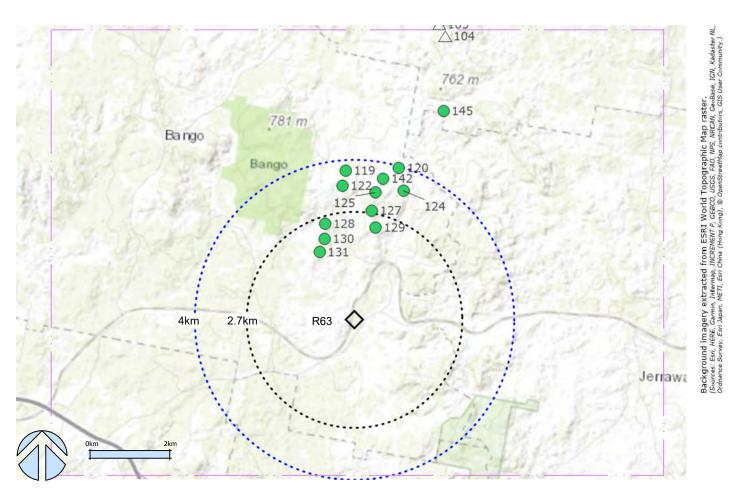
removed turbine (from Approved layout)

Figure 64
Residential dwelling R45
Consented and Mod 1 wind turbine visibility





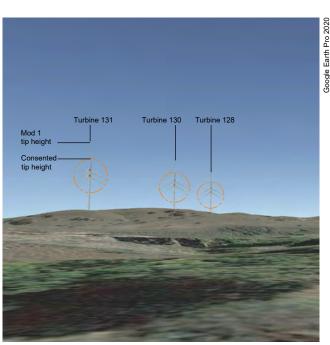
Dwelling R63 comparison of consented and Mod 1 wind turbine visibility



Dwelling R63 detail view



Dwelling R63 aerial image consented and Mod 1

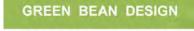


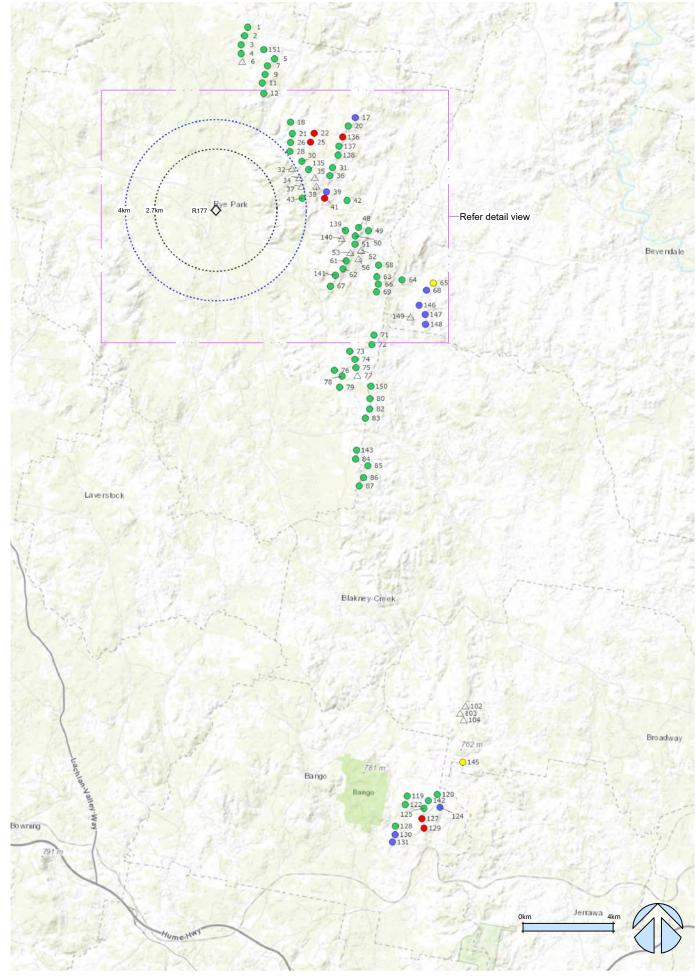
Dwelling R63 Google 3D wind turbine model

### Legend

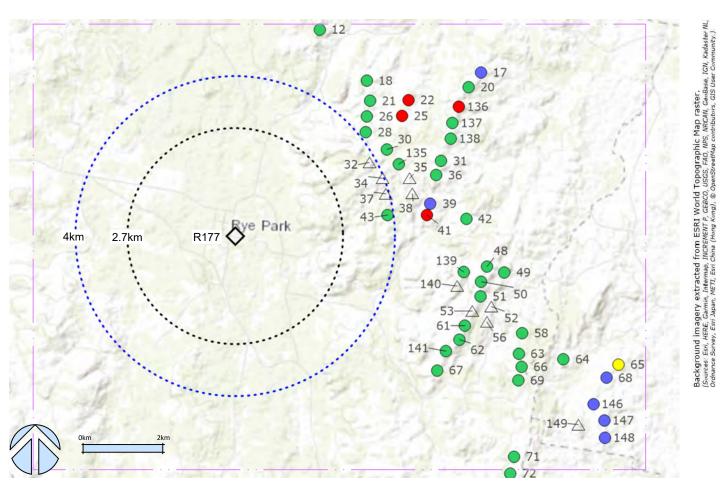
A Residential dwelling Comparison of turbine visibility for Modified vs Approved layouts turbine not visible (in either layout) Distance buffer from dwelling o no change in visibility of hub and tip (visible turbine) 2.7 km additional hub (and tip) visible 4.0 km additional tip (no hub) visible △ removed turbine (from Approved layout)

Residential dwelling R63 Consented and Mod 1 wind turbine visibility

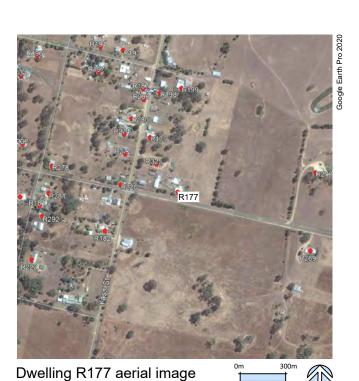




Dwelling R177 comparison of consented and Mod 1 wind turbine visibility



Dwelling R177 detail view



Turbine 28 Turbine 30 Turbine 135 Turbine 43

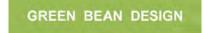
Mod 1
tip height —
Consented tip height

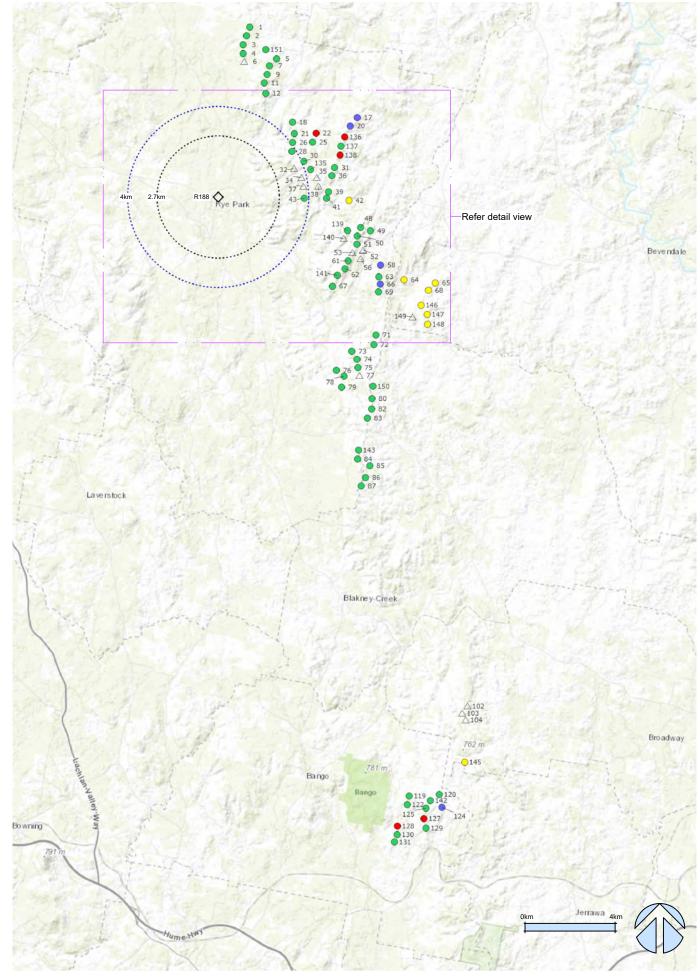
Dwelling R177 Google 3D wind turbine model consented and Mod 1

### Legend

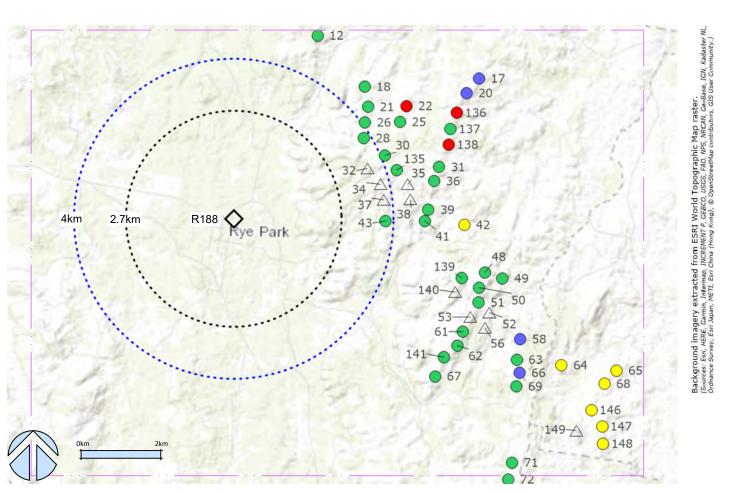
Residential dwelling
 Distance buffer from dwelling
 2.7 km
 4.0 km
 Comparison of turbine visibility for Modified vs Approved layouts
 turbine not visible (in either layout)
 no change in visibility of hub and tip (visible turbine)
 additional hub (and tip) visible
 additional tip (no hub) visible
 removed turbine (from Approved layout)

Figure 66
Residential dwelling R177
Consented and Mod 1 wind turbine visibility





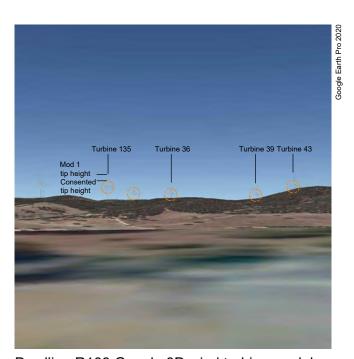
Dwelling R188 comparison of consented and Mod 1 wind turbine visibility



Dwelling R188 detail view



Dwelling R188 aerial image



Dwelling R188 Google 3D wind turbine model consented and Mod 1

### Legend

Comparison of turbine visibility for Modified vs Approved layouts

turbine not visible (in either layout)

no change in visibility of hub and tip (visible turbine)

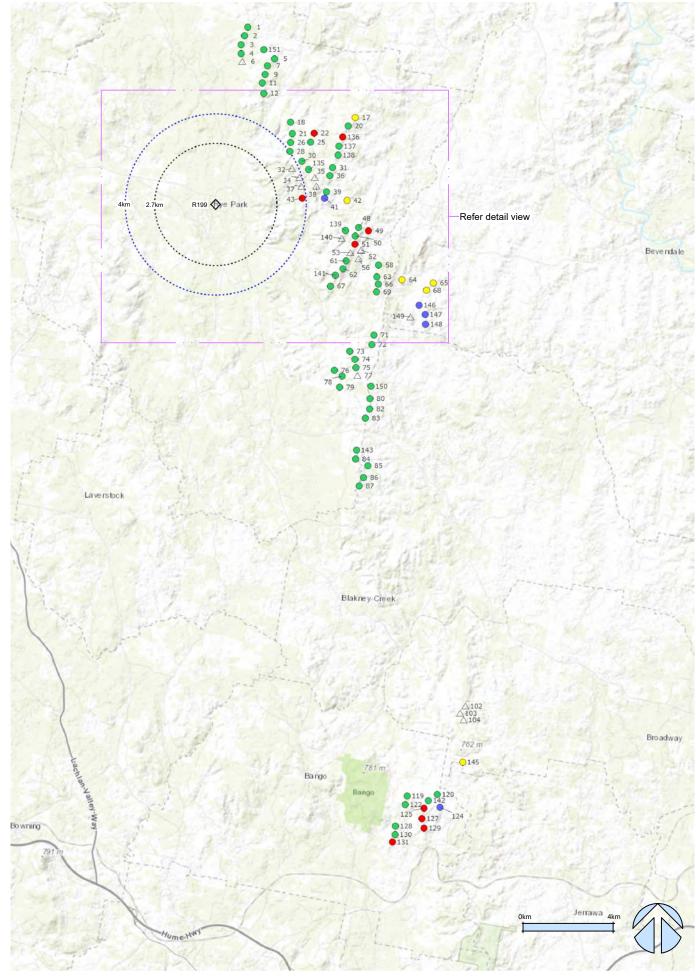
additional hub (and tip) visible

additional tip (no hub) visible

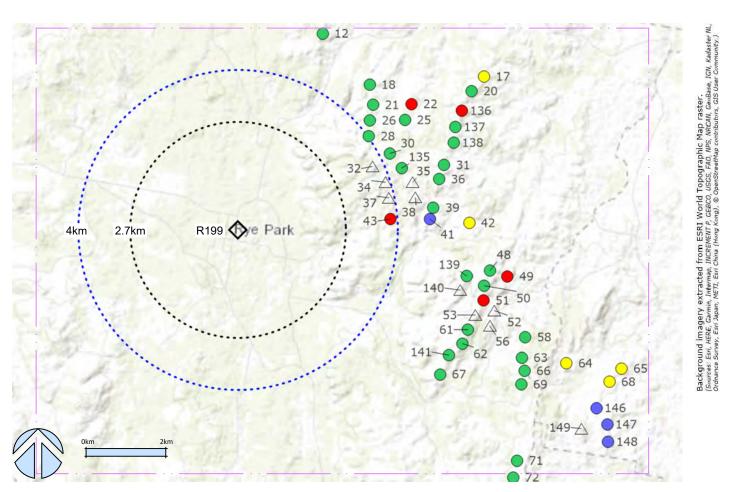
removed turbine (from Approved layout)

Figure 67
Residential dwelling R188
Consented and Mod 1 wind turbine visibility





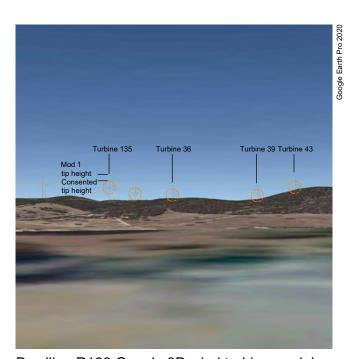
Dwelling R199 comparison of consented and Mod 1 wind turbine visibility



Dwelling R199 detail view



Dwelling R199 aerial image



Dwelling R199 Google 3D wind turbine model consented and Mod 1

### Legend

Comparison of turbine visibility for Modified vs Approved layouts

turbine not visible (in either layout)

no change in visibility of hub and tip (visible turbine)

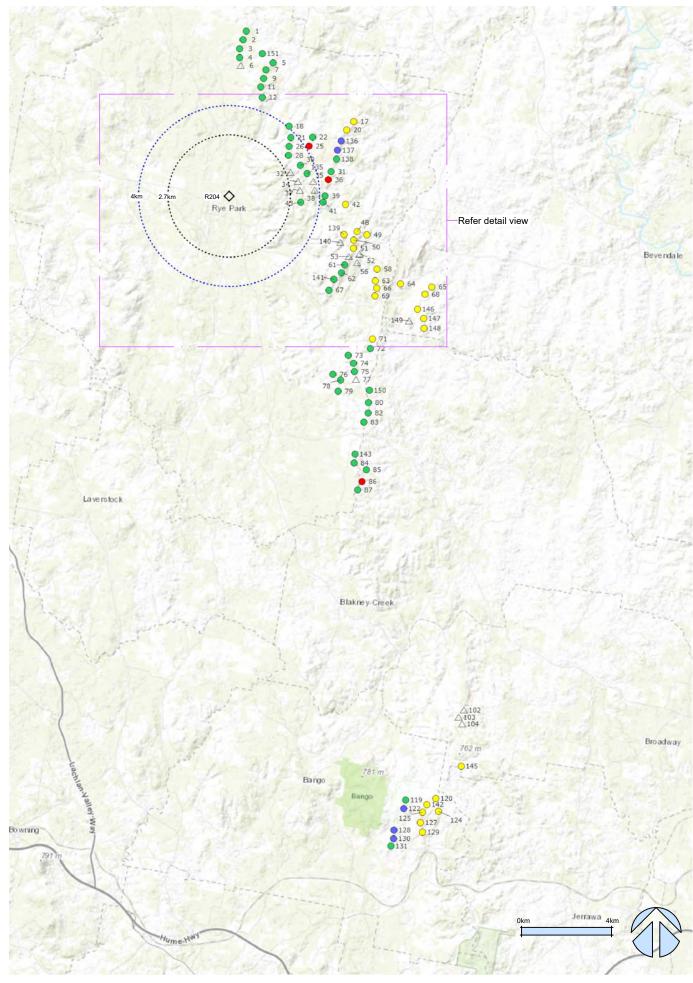
additional hub (and tip) visible

additional tip (no hub) visible

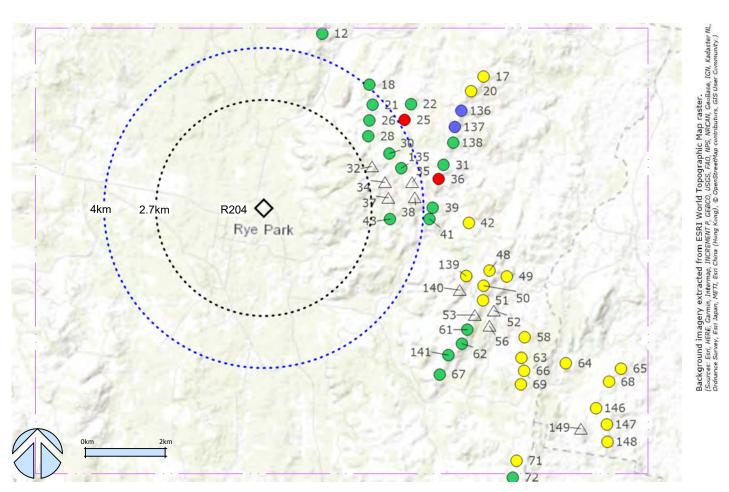
removed turbine (from Approved layout)

Figure 68
Residential dwelling R199
Consented and Mod 1 wind turbine visibility





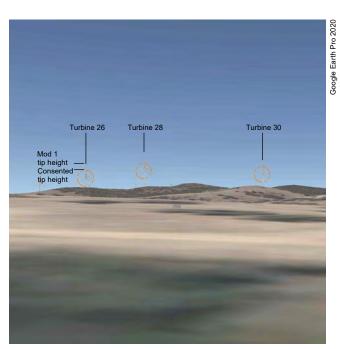
Dwelling R204 comparison of consented and Mod 1 wind turbine visibility



Dwelling R204 detail view



Dwelling R204 aerial image



Dwelling R204 Google 3D wind turbine model consented and Mod 1

### Legend

A Residential dwelling

Distance buffer from dwelling

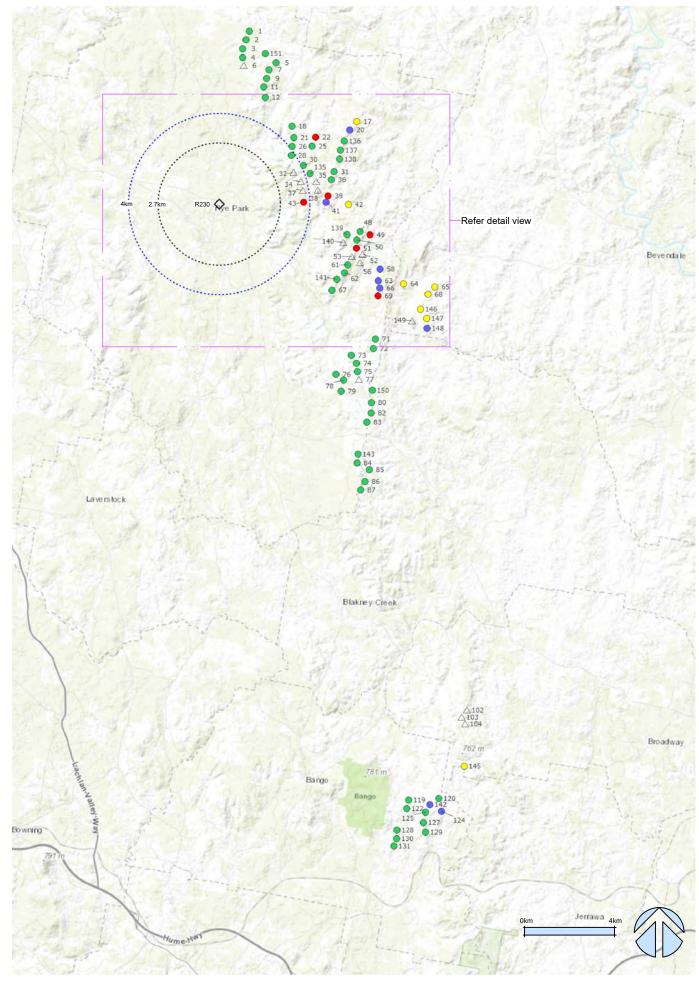
- 2.7 km
- 4.0 km

Comparison of turbine visibility for Modified vs Approved layouts

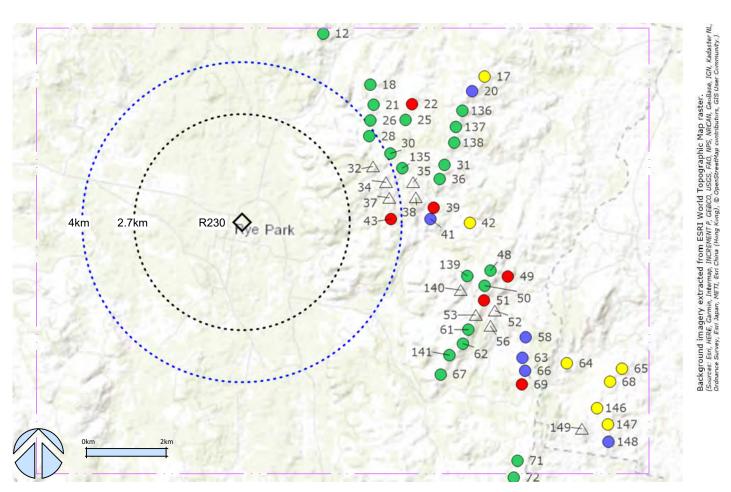
- turbine not visible (in either layout)
- no change in visibility of hub and tip (visible turbine)
- additional hub (and tip) visible
- additional tip (no hub) visible
- △ removed turbine (from Approved layout)

Figure 69
Residential dwelling R204
Consented and Mod 1 wind turbine visibility

GREEN BEAN DESIGN



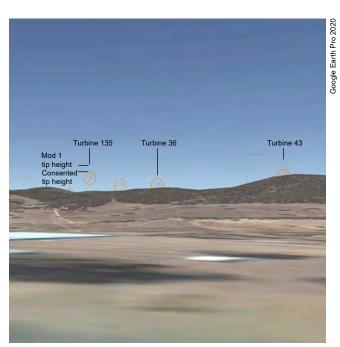
Dwelling R230 comparison of consented and Mod 1 wind turbine visibility



Dwelling R230 detail view



Dwelling R230 aerial image



Dwelling R230 Google 3D wind turbine model consented and Mod 1

### Legend

A Residential dwelling

Distance buffer from dwelling

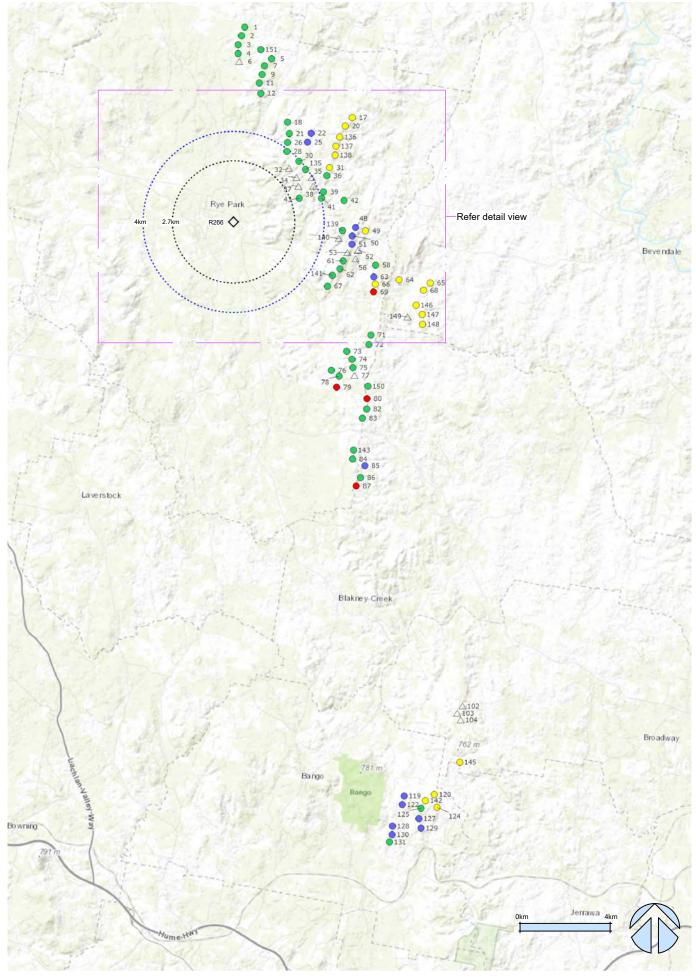
- 2.7 km
- 4.0 km

Comparison of turbine visibility for Modified vs Approved layouts

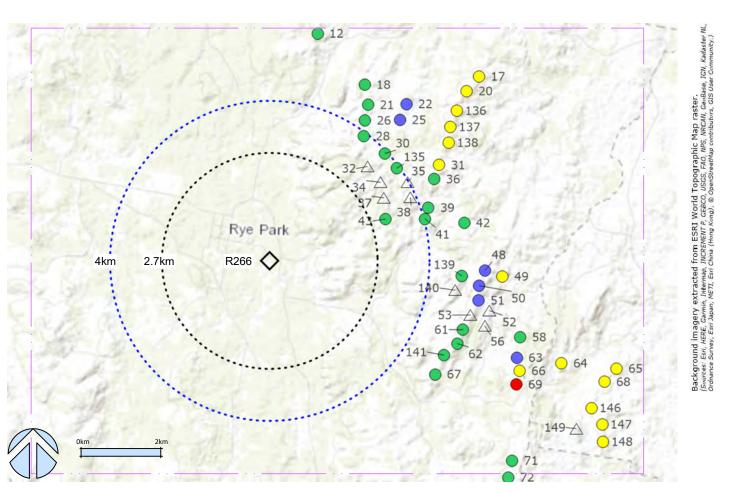
- turbine not visible (in either layout)
- no change in visibility of hub and tip (visible turbine)
- additional hub (and tip) visible
- additional tip (no hub) visible
- △ removed turbine (from Approved layout)

Figure 70
Residential dwelling R230
Consented and Mod 1 wind turbine visibility

GREEN BEAN DESIGN



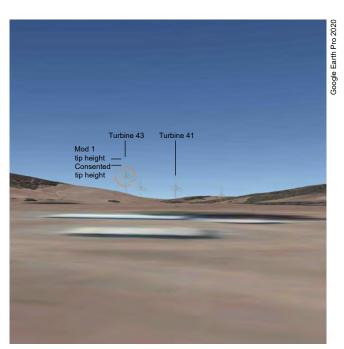
Dwelling R266 comparison of consented and Mod 1 wind turbine visibility



Dwelling R266 detail view



Dwelling R266 aerial image

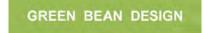


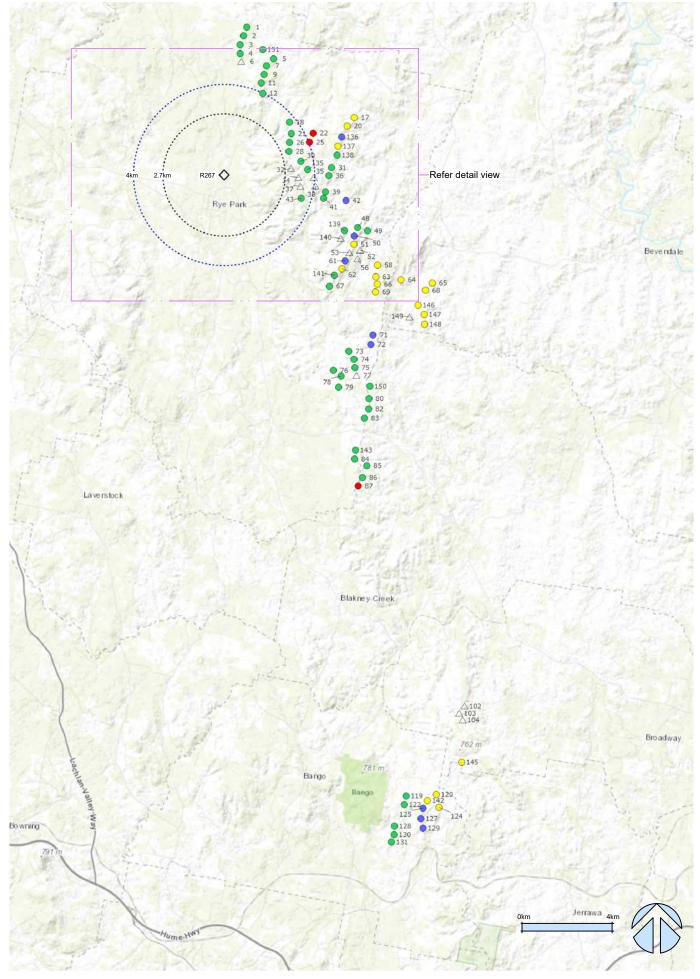
Dwelling R266 Google 3D wind turbine model consented and Mod 1

### Legend

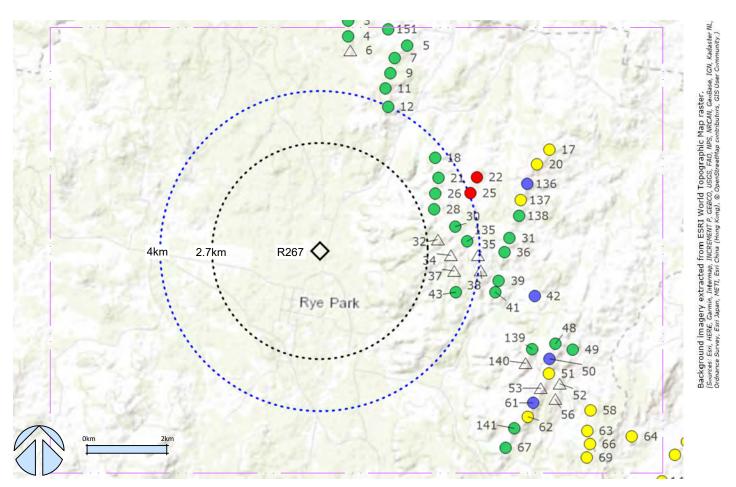
♦ Residential dwelling
 Distance buffer from dwelling
 2.7 km
 4.0 km
 additional hub (and tip) visible
 additional tip (no hub) visible
 removed turbine visibility for Modified vs Approved layouts
 turbine not visible (in either layout)
 no change in visibility of hub and tip (visible turbine)
 additional hub (and tip) visible
 removed turbine (from Approved layout)

Figure 71
Residential dwelling R266
Consented and Mod 1 wind turbine visibility





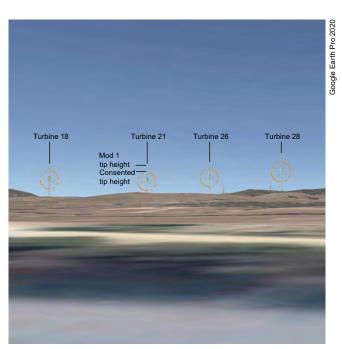
Dwelling R267 comparison of consented and Mod 1 wind turbine visibility



Dwelling R267 detail view



Dwelling R267 aerial image



Dwelling R267 Google 3D wind turbine model consented and Mod 1

### Legend

Comparison of turbine visibility for Modified vs Approved layouts

turbine not visible (in either layout)

no change in visibility of hub and tip (visible turbine)

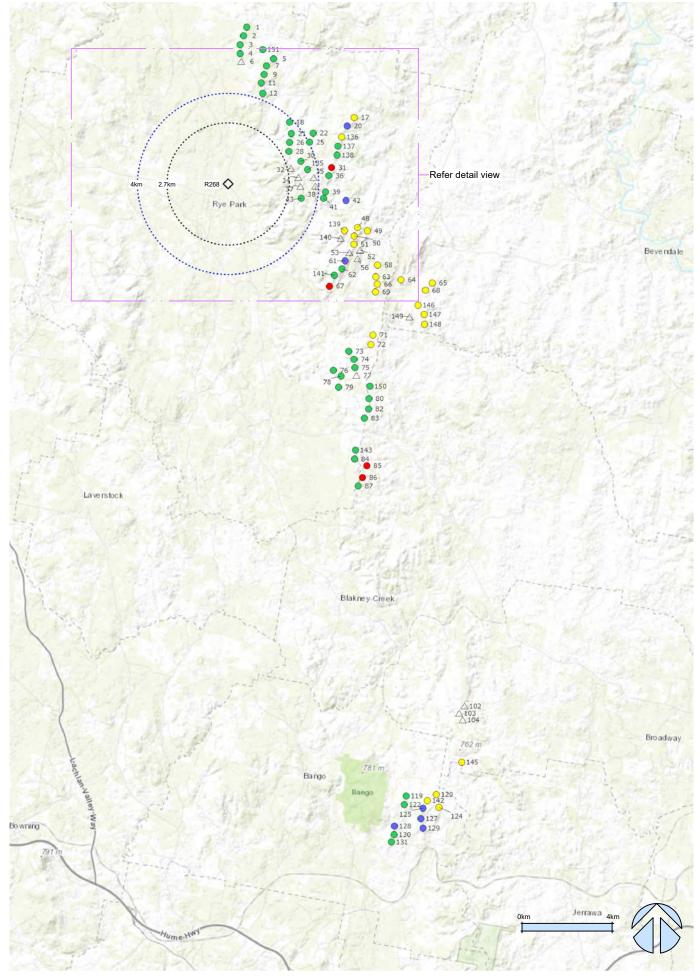
additional hub (and tip) visible

additional tip (no hub) visible

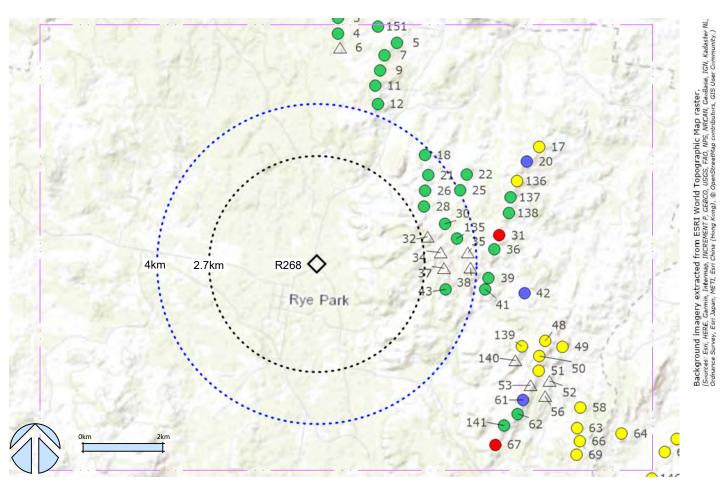
removed turbine (from Approved layout)

Figure 72
Residential dwelling R267
Consented and Mod 1 wind turbine visibility





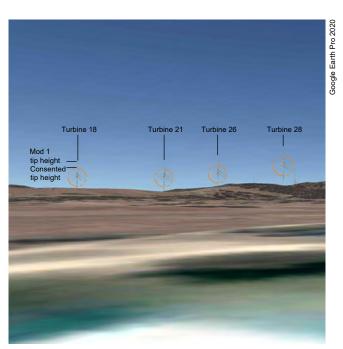
Dwelling R268 comparison of consented and Mod 1 wind turbine visibility



Dwelling R268 detail view



Dwelling R268 aerial image



Dwelling R268 Google 3D wind turbine model consented and Mod 1

### Legend

Comparison of turbine visibility for Modified vs Approved layouts

turbine not visible (in either layout)

no change in visibility of hub and tip (visible turbine)

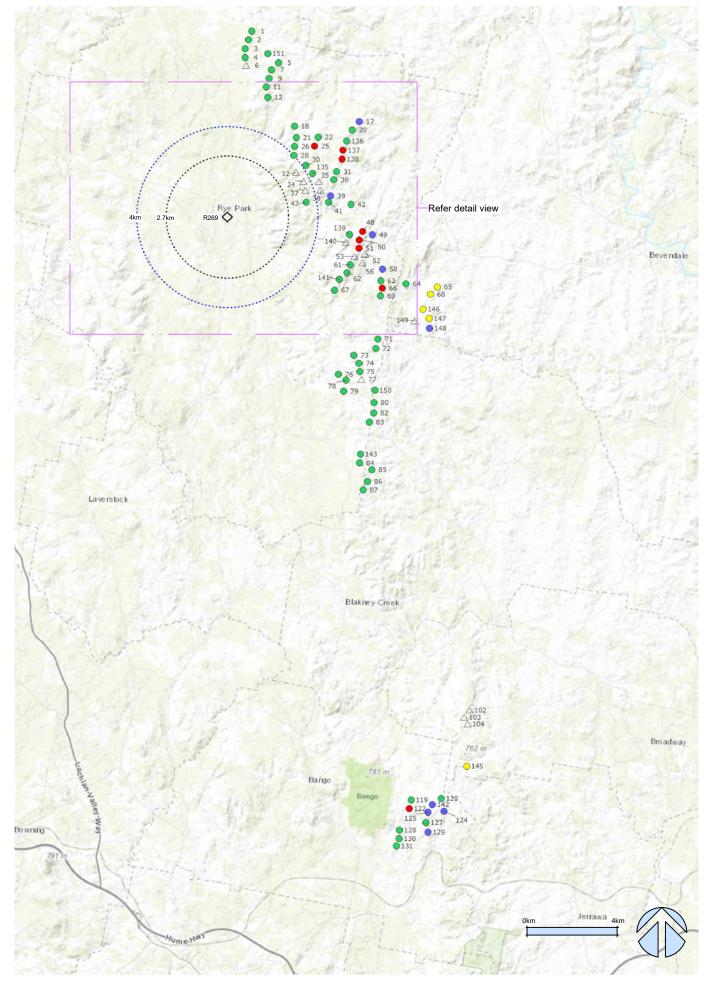
additional hub (and tip) visible

additional tip (no hub) visible

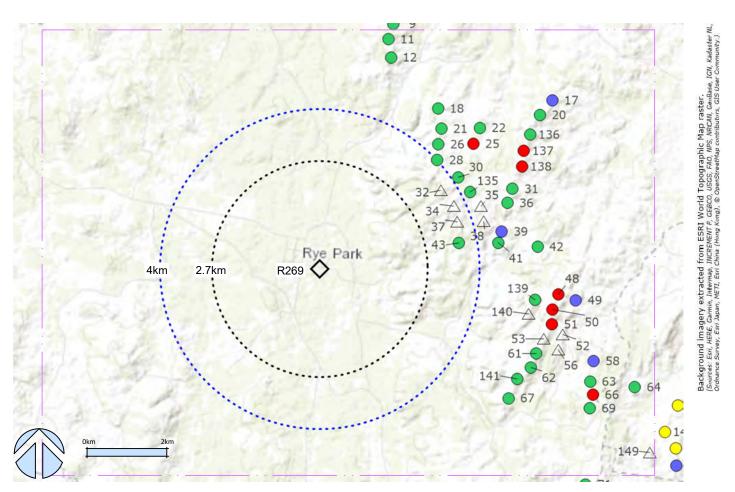
removed turbine (from Approved layout)

Figure 73
Residential dwelling R268
Consented and Mod 1 wind turbine visibility





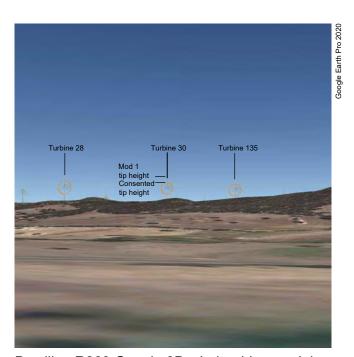
Dwelling R269 comparison of consented and Mod 1 wind turbine visibility



Dwelling R269 detail view



Dwelling R269 aerial image



Dwelling R269 Google 3D wind turbine model consented and Mod 1

### Legend

Comparison of turbine visibility for Modified vs Approved layouts

turbine not visible (in either layout)

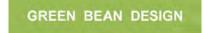
no change in visibility of hub and tip (visible turbine)

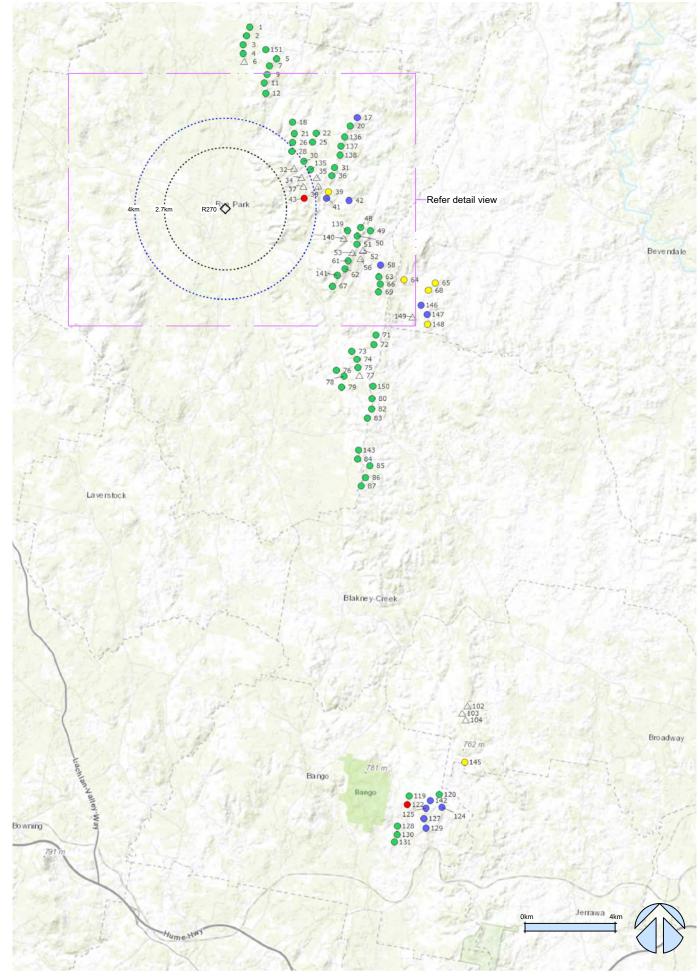
additional hub (and tip) visible

additional tip (no hub) visible

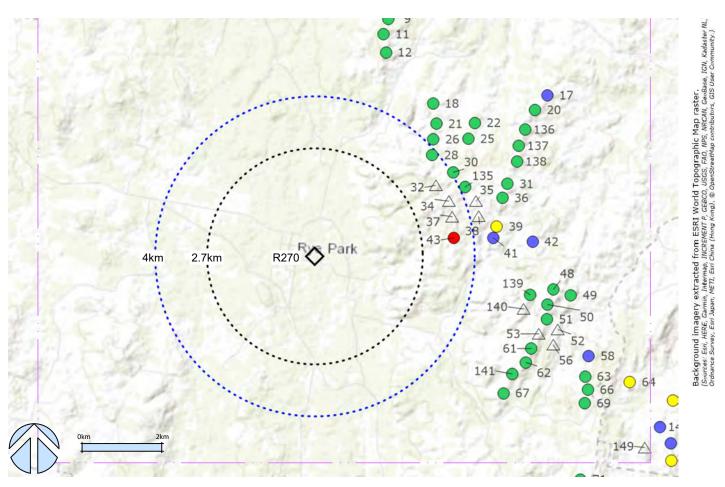
removed turbine (from Approved layout)

Figure 74
Residential dwelling R269
Consented and Mod 1 wind turbine visibility





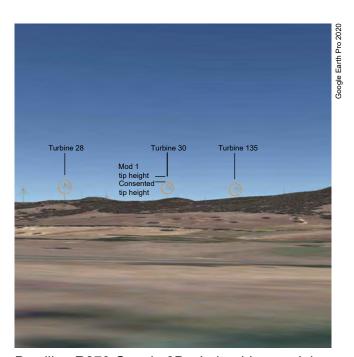
Dwelling R270 comparison of consented and Mod 1 wind turbine visibility



Dwelling R270 detail view



Dwelling R270 aerial image



Dwelling R270 Google 3D wind turbine model consented and Mod 1

### Legend

Comparison of turbine visibility for Modified vs Approved layouts

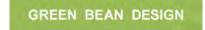
or turbine not visible (in either layout)

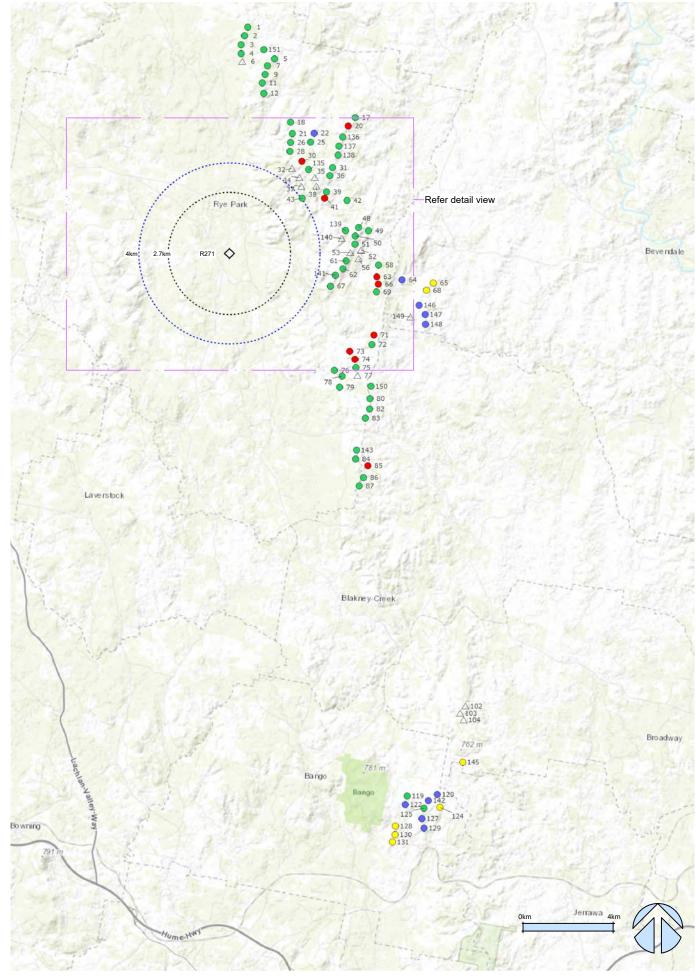
or 2.7 km

or 4.0 km

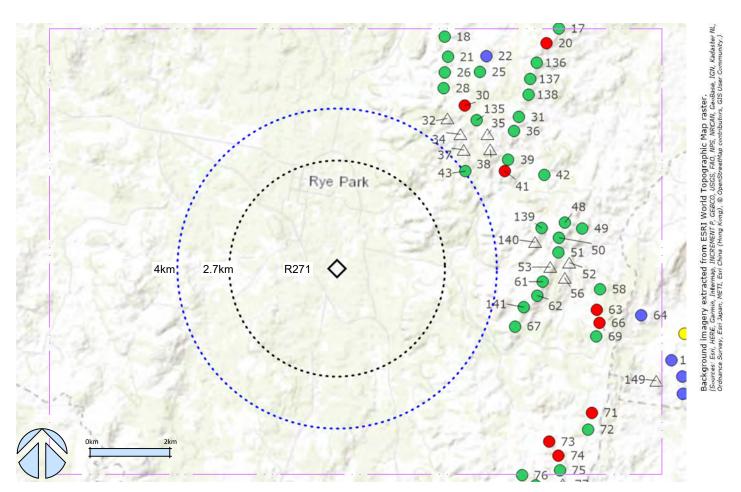
additional hub (and tip) visible
additional tip (no hub) visible
removed turbine (from Approved layout)

Figure 75
Residential dwelling R270
Consented and Mod 1 wind turbine visibility





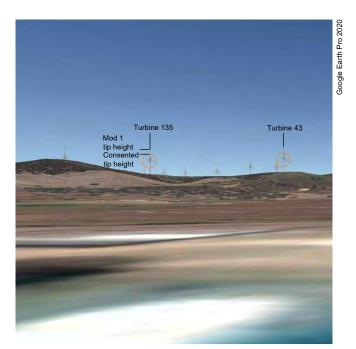
Dwelling R271 comparison of consented and Mod 1 wind turbine visibility



Dwelling R271 detail view



Dwelling R271 aerial image



Dwelling R271 Google 3D wind turbine model consented and Mod 1

### Legend

Comparison of turbine visibility for Modified vs Approved layouts

turbine not visible (in either layout)

no change in visibility of hub and tip (visible turbine)

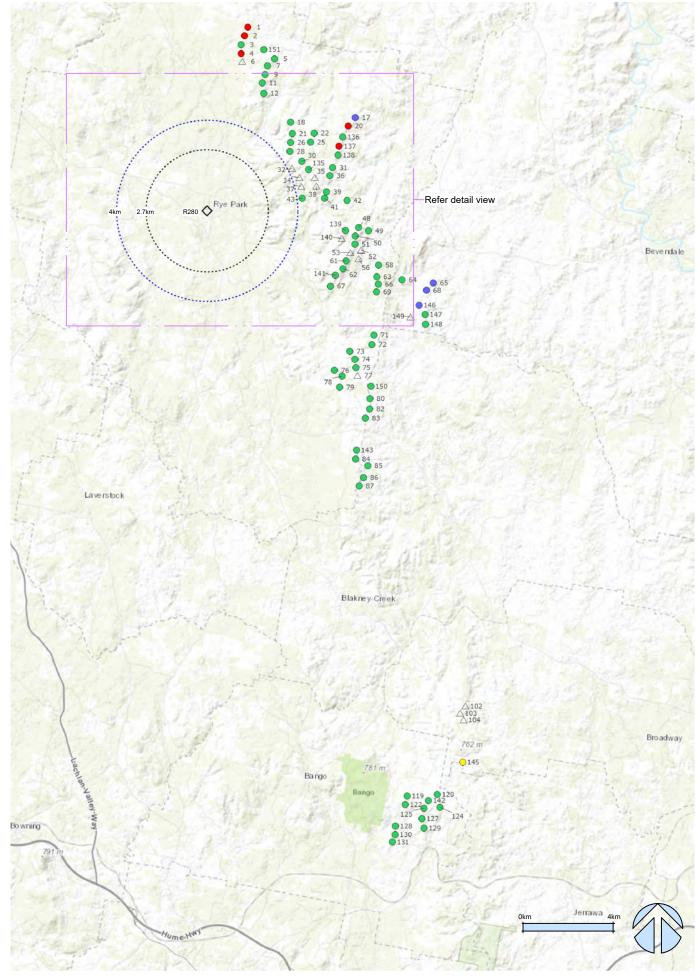
additional hub (and tip) visible

additional tip (no hub) visible

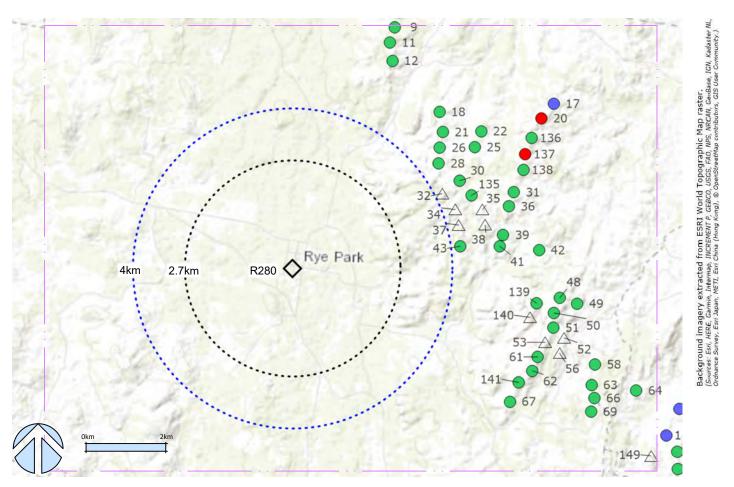
removed turbine (from Approved layout)

Figure 76
Residential dwelling R271
Consented and Mod 1 wind turbine visibility





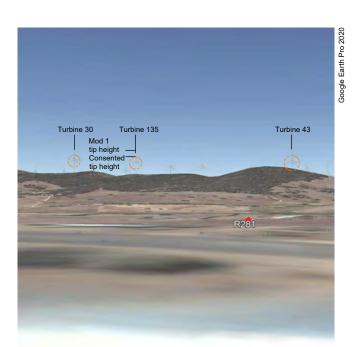
Dwelling R280 comparison of consented and Mod 1 wind turbine visibility



Dwelling R280 detail view



Dwelling R280 aerial image



Dwelling R280 Google 3D wind turbine model consented and Mod 1

### Legend

Comparison of turbine visibility for Modified vs Approved layouts

turbine not visible (in either layout)

no change in visibility of hub and tip (visible turbine)

additional hub (and tip) visible

additional tip (no hub) visible

removed turbine (from Approved layout)

Figure 77
Residential dwelling R280
Consented and Mod 1 wind turbine visibility

