Flyers Creek Wind Farm Pty Ltd

Flyers Creek WIND FARM

Environmental Assessment

APPENDIX C

C1 - Visual Assessment

C2 - Shadow Flicker

Appendix C1 – Visual Analysis

In support of Chapter 9, this Appendix provides the following:

- Photomontages of all representative viewpoints (Section C1.1)
- Visual catchment and zone of visual influence (Section C1.2)
- An assessment of visual impact at selected residences (Section C1.3)
- An assessment of impacts at Residences within five kilometres (Section C1.4 and Table C1)

C1.1 Photomontages of representative viewpoints

As discussed in Chapter 9, a series of photomontages presenting simulated views of the installed wind farm from representative viewing points have been produced. All of the photomontages are provided at the end of this appendix and are listed below.

- Plate C.1 – View Point 1 – Old Errowanbang Road looking east towards the school
- Plate C.2 – View Point 2 - Watersons Lane Intersection looking south
- Plate C.3 – View Point 3 – Browns Creek Road looking north west
- Plate C.4 – View Point 4 – Mandurama to Burnt Yards Road looking north east
- Plate C.5 – View Point 5 – At elevated location in Carcoar near the water tower
- Plate C.6 – View Point 6 – Dickinson Lane looking west
- Plate C.7 – View Point 7 – Beneree Road looking south
- Plate C.8a – View Point 8a – Near residence 77 and 78 view to south-west
- Plate C.8b – View Point 8b – Near residence 77 and 78 view to north
- Plate C.9 – View Point 9 – Residence 89 looking north west
- Plate C.10 – View Point 10 –Residence 25 looking south west
- Plate C.11 – View Point 11 – Residence 94 looking south
- Plate C.12 – View Point 12 – Residence 12 looking north east
- Plate C.13 – View Point 13 – Near residence 44 looking south east
- Plate C.14 – View Point 14 – Residence 17 looking east

C1.2 Figures for Visual catchment and zone of visual influence

Section 9.5 of the Environmental Assessment addressed the visual catchment of the wind farm. As discussed, the variation in visibility of different groupings of turbines within the wind farm when the effect of topography is taken into consideration is provided in Figures C.1 to C.5.

A map depicting the wind farm's zone of visual influence is shown in Figure C.6

Lighting for aviation safety purposes was discussed in Section 9.14 of the Environmental Assessment. Figure C.7 provides an analysis of the visibility of obstacle lighting, if they are included in the project, taking into account the standards specified by CASA.

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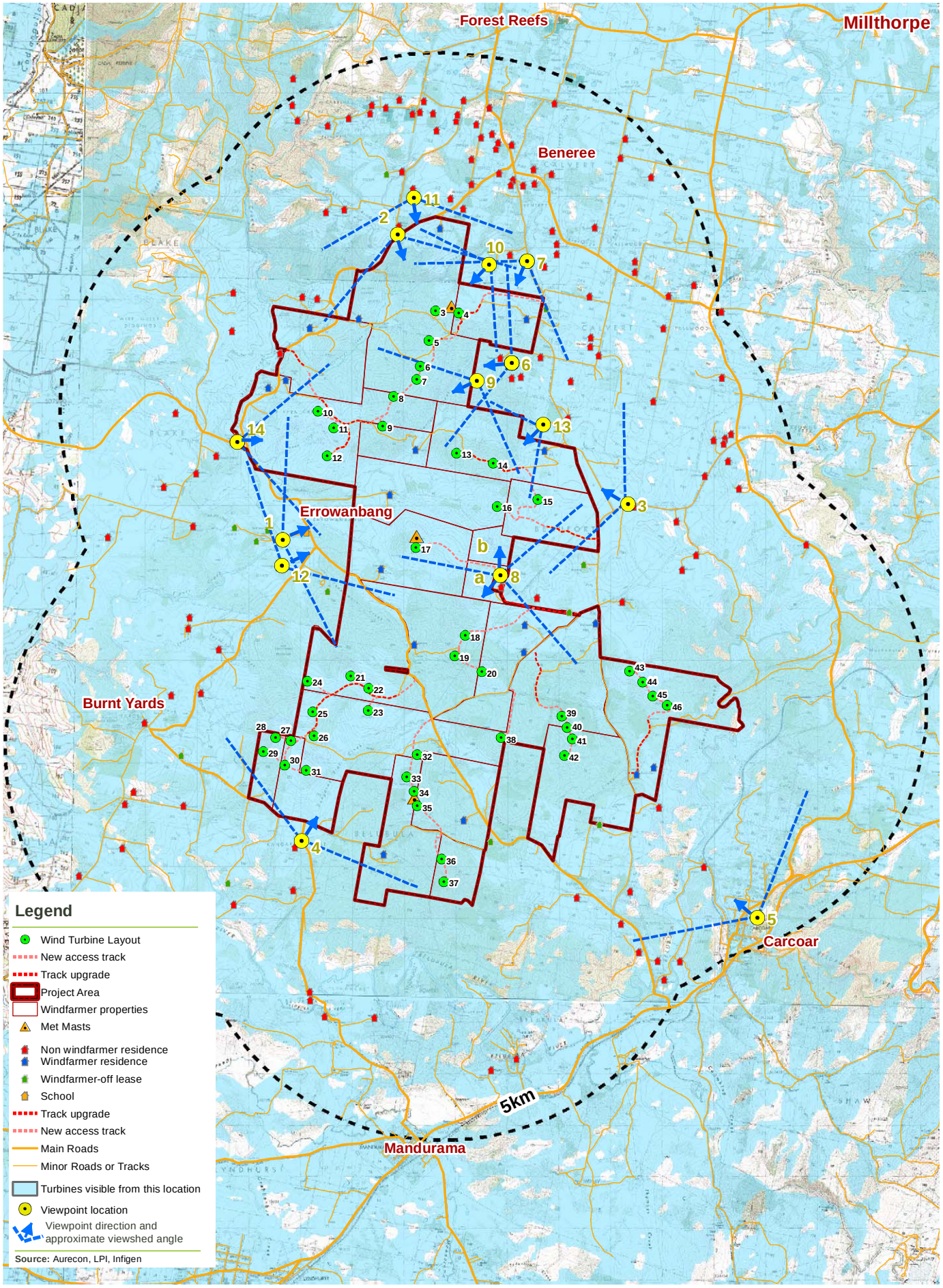

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0 1 2 kilometres

Flyers Creek Wind Farm **Environmental Assessment**

Projection: GDA 1994 MGA Zone 55

Notes: Visual analysis is based on a DTM built from a combination of best available contours.
The analysis is created from top of blade (150m) and attempts to show an indicative worst case and over states the visibility of the turbines.
No allowance is made for the screening of vegetation or other structures

FIGURE C1: Visual catchment (All turbines) with representative viewpoint locations

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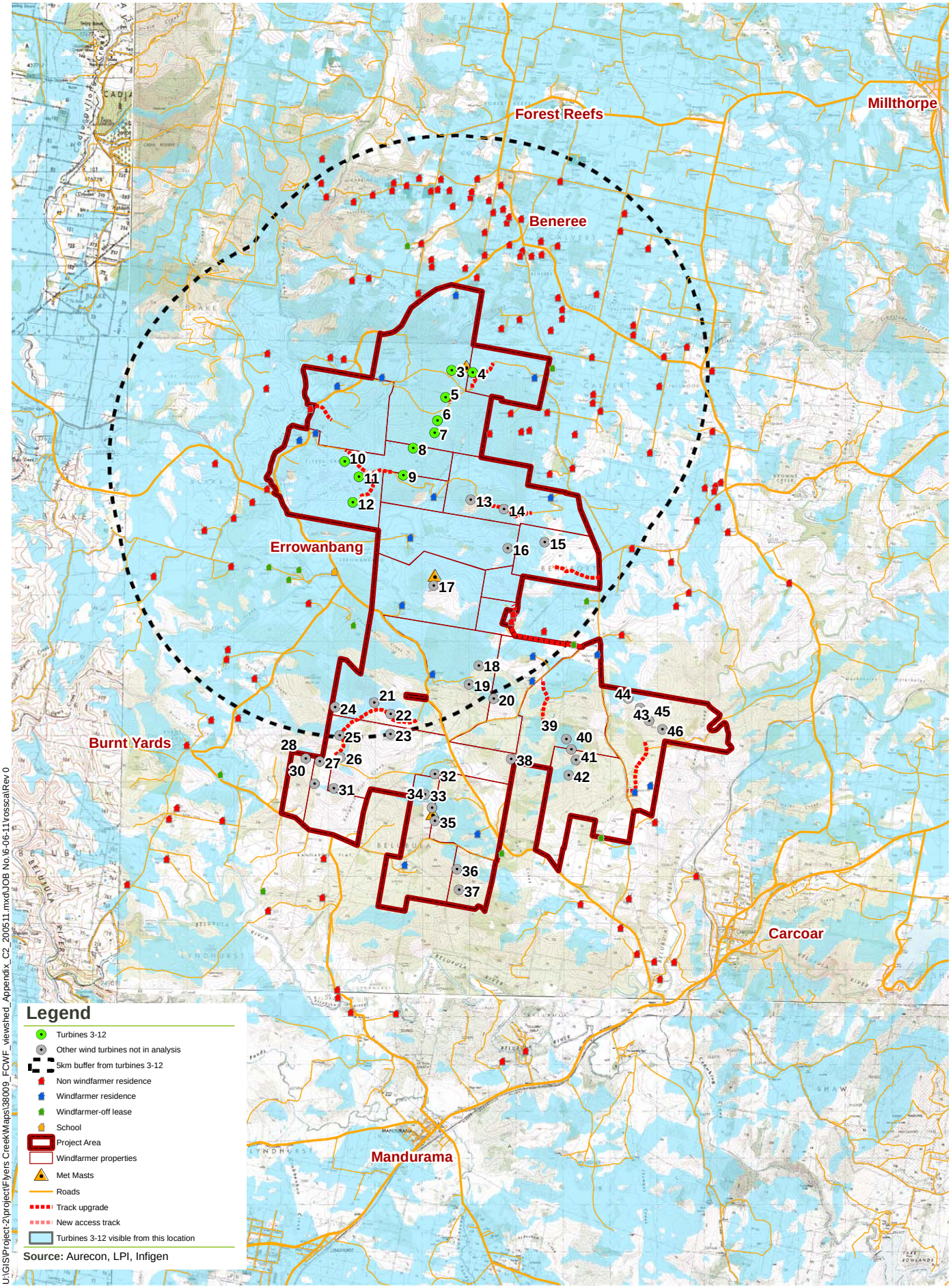

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Flyers Creek Wind Farm **Environmental Assessment**

Projection: GDA 1994 MGA Zone 55

FIGURE C.2: Visual Catchment for Turbines 3 to 12

Notes: Visual analysis is based on a DTM built from a combination of best available contours.
The analysis is created from top of blade (150m) and attempts to show an indicative worst case and over states the visibility of the turbines.
No allowance is made for the screening of vegetation or other structures

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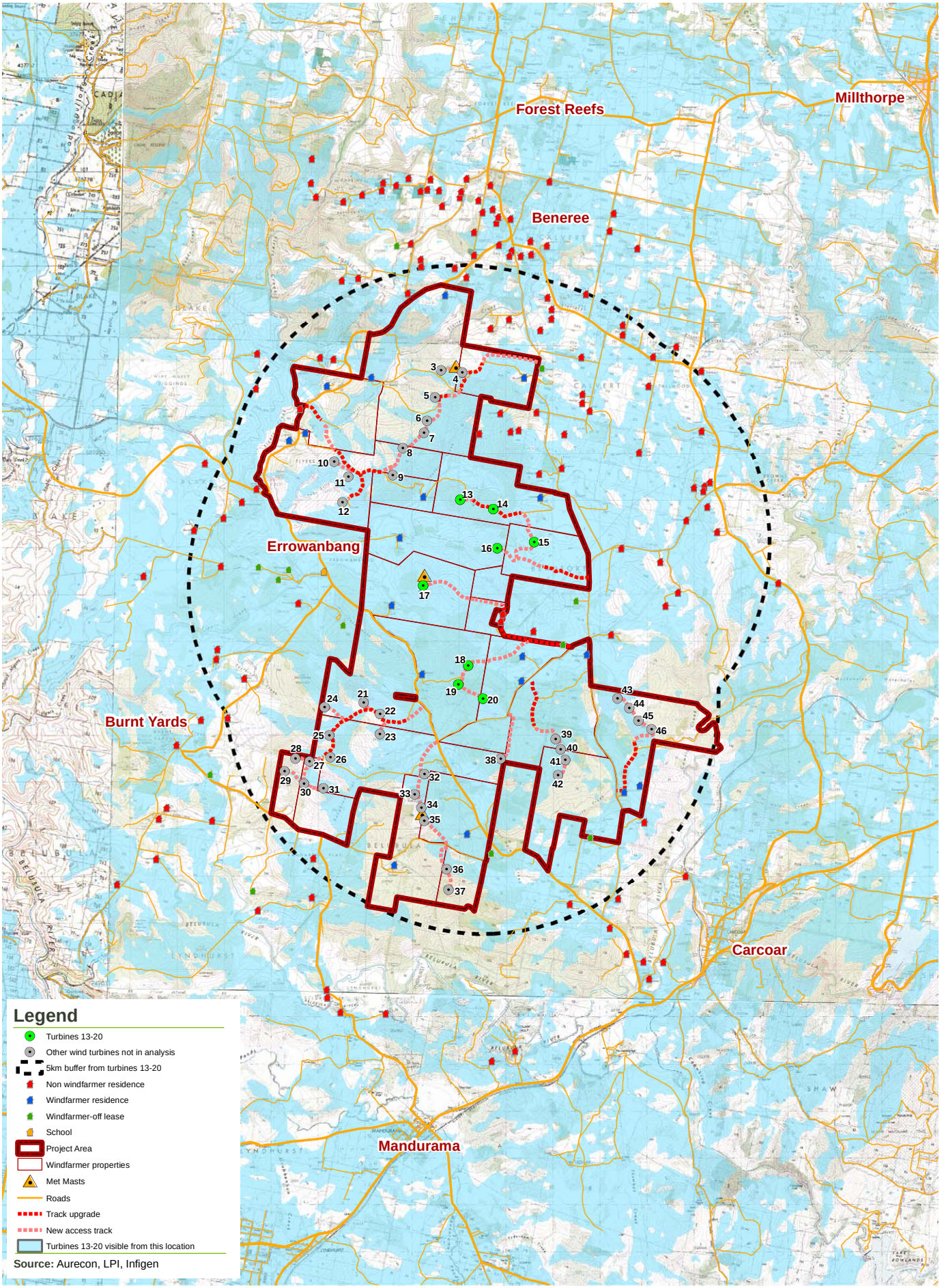

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0 1 2 Kilometers

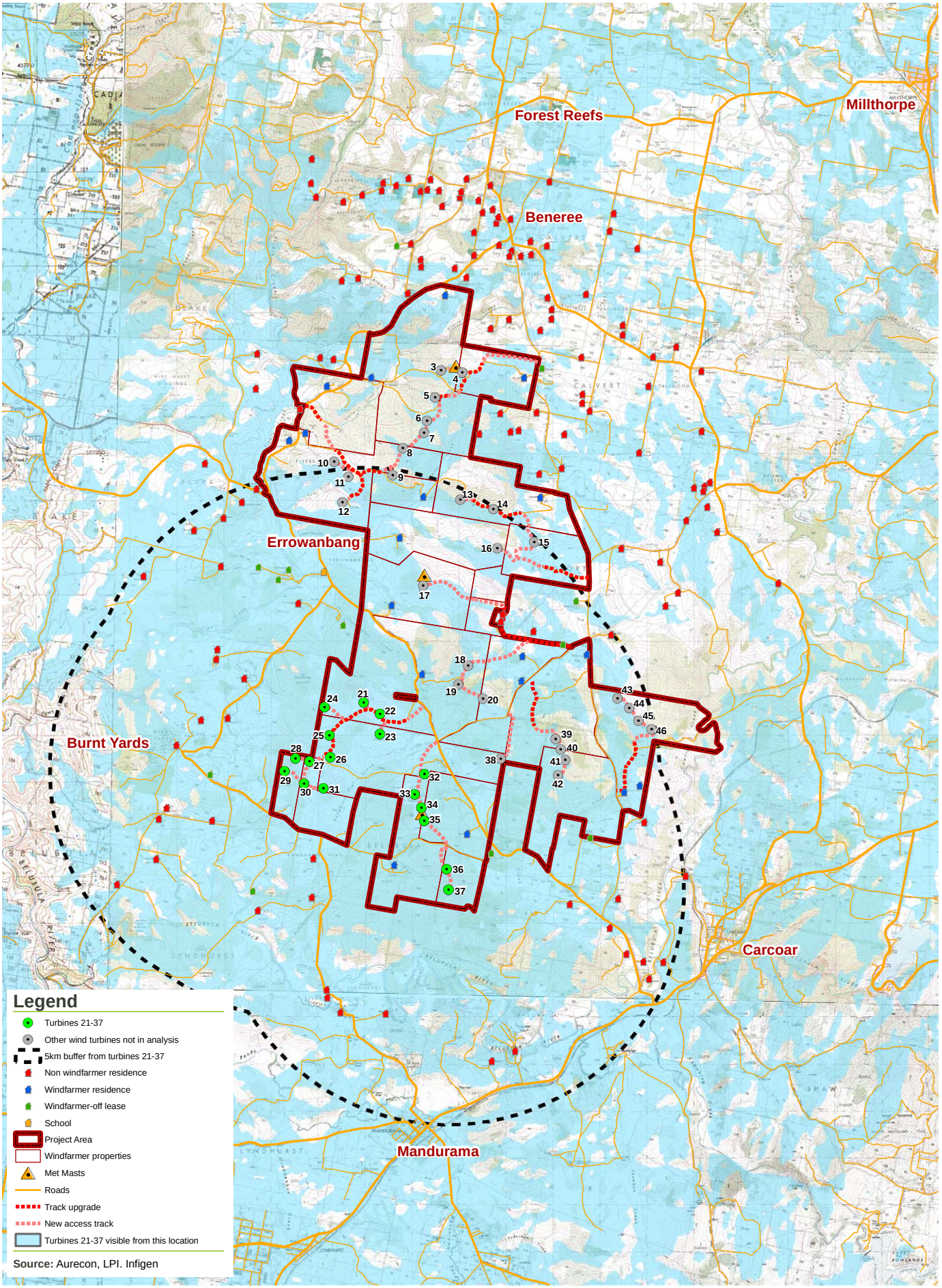
Flyers Creek Wind Farm **Environmental Assessment**

Projection: GDA 1994 MGA Zone 55

FIGURE C.3: Visual catchment for Turbines 13 to 20

Notes: Visual analysis is based on a DTM built from a combination of best available contours.
The analysis is created from top of blade (150m) and attempts to show an indicative worst case and over states the visibility of the turbines.
No allowance is made for the screening of vegetation or other structures

aurecon



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0 1 2 Kilometers

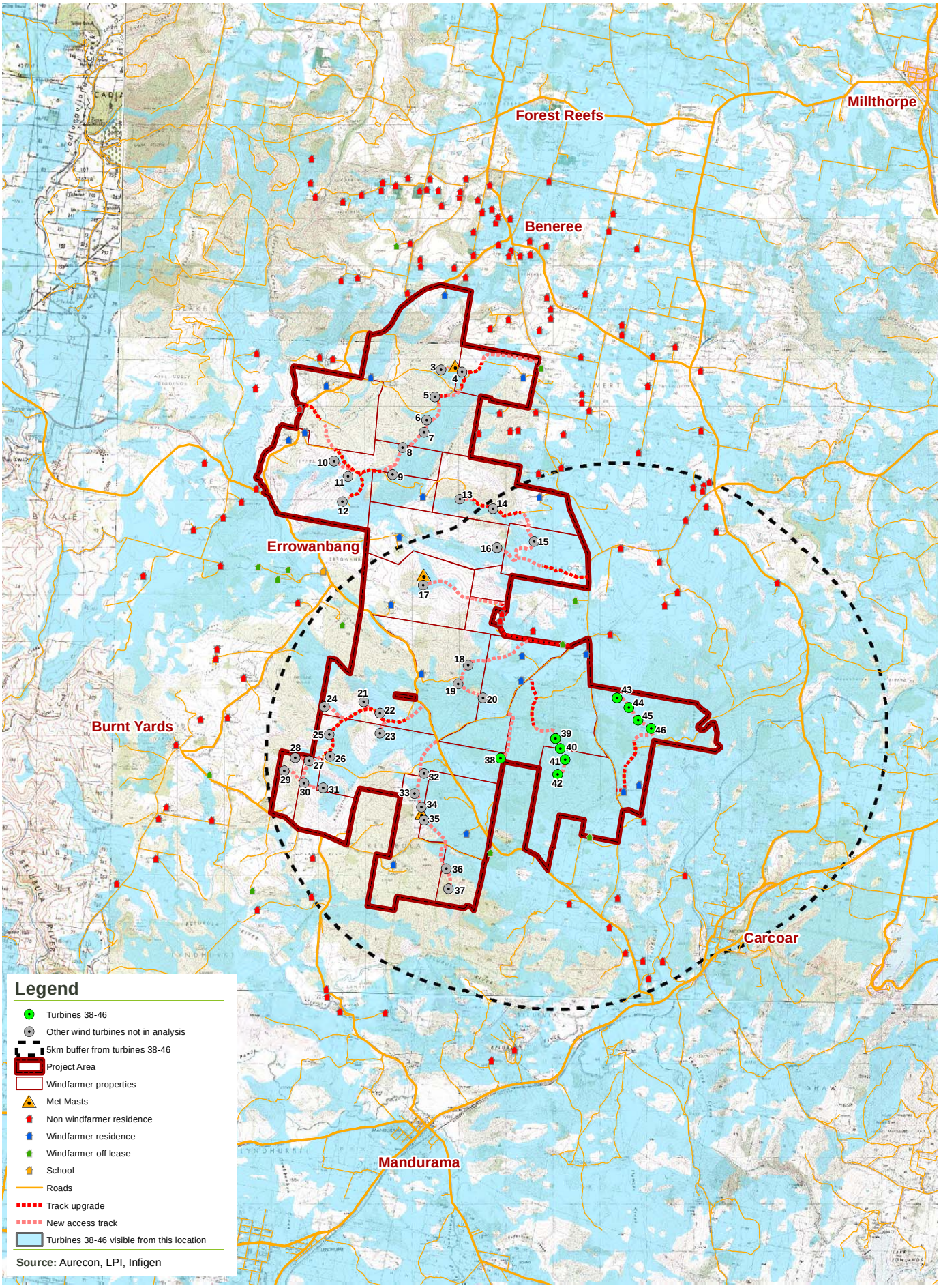
Flyers Creek Wind Farm **Environmental Assessment**

Projection: GDA 1994 MGA Zone 55

FIGURE C.4: Visual Catchment for Turbines 21 to 37

Notes: Visual analysis is based on a DTM built from a combination of best available contours.
The analysis is created from top of blade (150m) and attempts to show an indicative worst case and over states the visibility of the turbines.
No allowance is made for the screening of vegetation or other structures

aurecon



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0 1 2 Kilometers

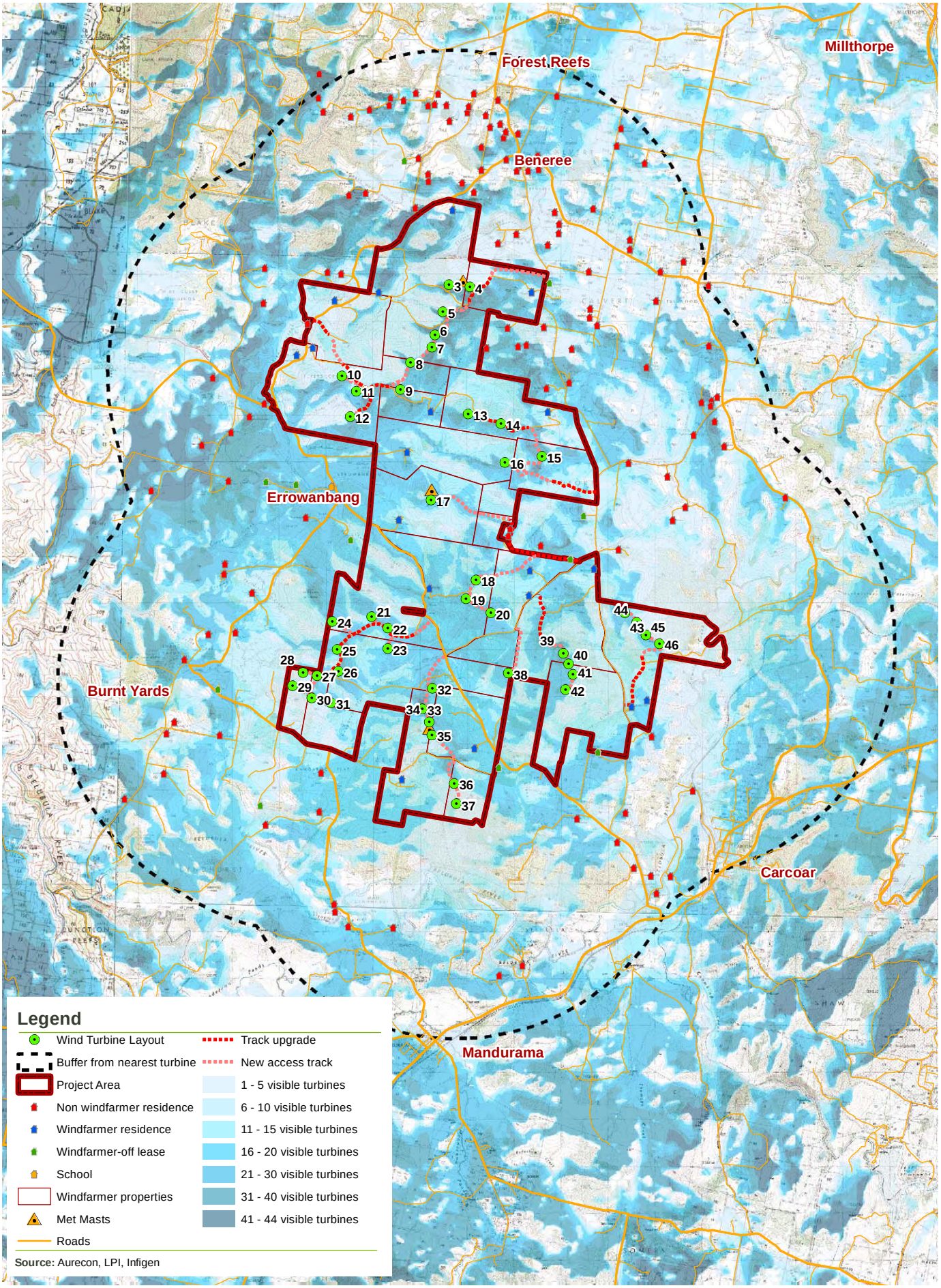
Flyers Creek Wind Farm **Environmental Assessment**

Projection: GDA 1994 MGA Zone 55

FIGURE C.5: Visual Catchment for Turbines 38 to 46

Notes: Visual analysis is based on a DTM built from a combination of best available contours.
The analysis is created from top of blade (150m) and attempts to show an indicative worst case and over states the visibility of the turbines.
No allowance is made for the screening of vegetation or other structures

aurecon



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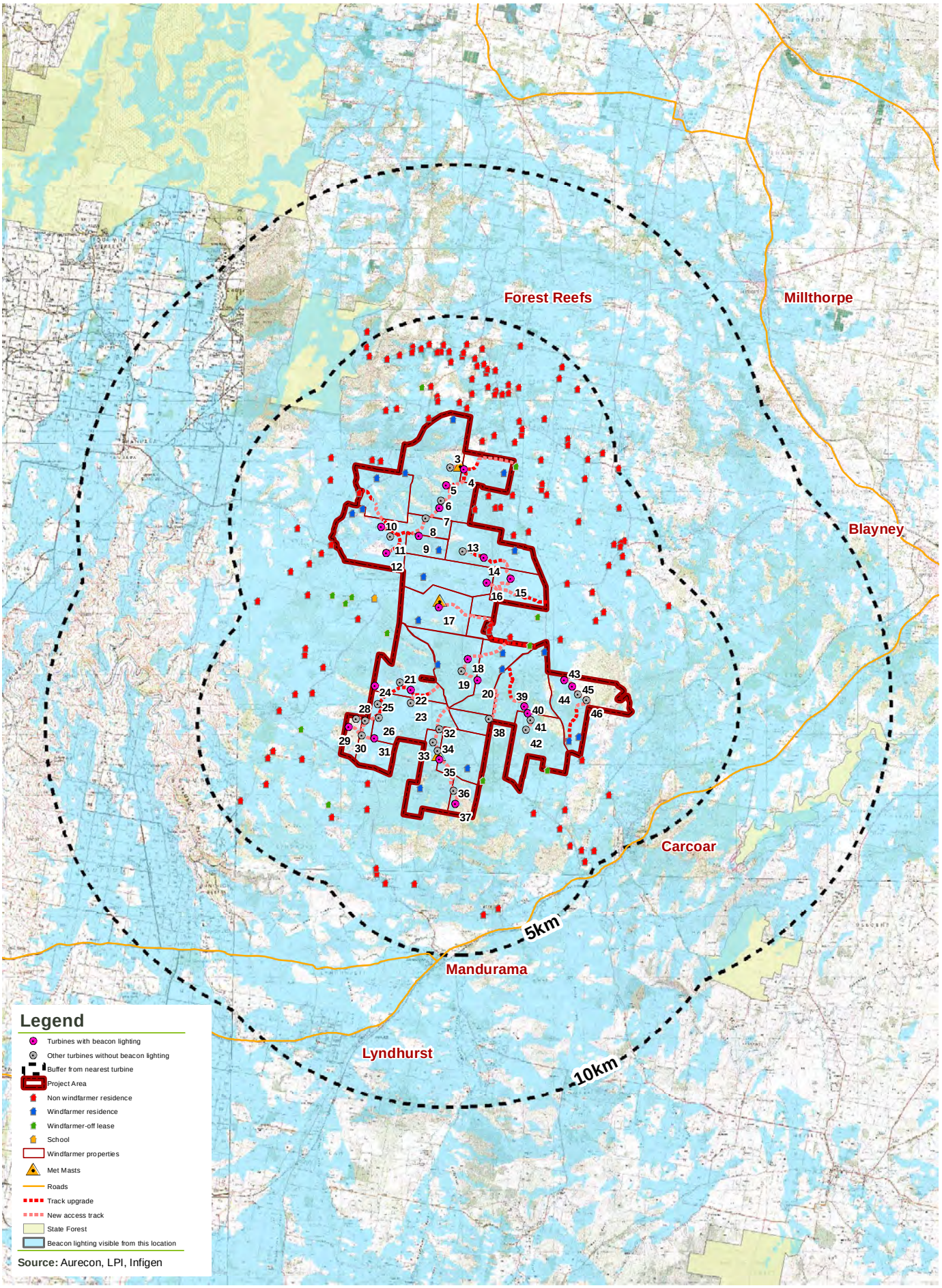
Flyers Creek Wind Farm **Environmental Assessment**

Projection: GDA 1994 MGA Zone 55

FIGURE C.6: Zone of Visual Influence

Notes: Visual analysis is based on a DTM built from a combination of best available contours.
The analysis is created from top of hub (100m) and attempts to show an indicative worst case and over states the visibility of the turbines.
No allowance is made for the screening of vegetation or other structures

aurecon



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0 2 4 Kilometers

Flyers Creek Wind Farm **Environmental Assessment**

Projection: GDA 1994 MGA Zone 55

FIGURE C.7: Visual Catchment for obstacle lighting

Notes: Visual analysis is based on a DTM built from a combination of best available contours.
The analysis is created from top of hub (100m) with a +/- 7 degree vertical view angle to replicate the proposed obstacle lighting. The analysis attempts to show an indicative worst case.
No allowance is made for the screening of vegetation or other structures

C1.3 Assessment of Visual Impact at Residences

Viewpoint selection from nearby residences was based on proximity, visual impact, and the owners' desire to have the visual amenity from the residence included in the assessment. As indicated in Section 9.7, of the 12 land owners approached, six desired to have photomontages of the views from their residences included in the Environmental Assessment. Visibility assessment results for the six residences are provided in the table below and representative viewpoints from the residences who desired to have a photomontage created are provided in Plates C.9 to C.14.

Visibility assessment results – residential viewpoints

Note: A turbine is regarded as being visible even if it is only partially visible. Only the turbines visible from the particular viewpoint within the photomontage have been taken into account in the table below.

Ref No.	Viewpoint Location (Figure 9.1)	No. of turbines visible in the photomontage [(1)]			Nearest turbine		Turbine View Angle
		1 – 3 km	3 – 5 km	> 5 km	No.	Dist – km	degrees
9	Residence 89	6	6	18	7	1.2	103
10	Residence 25	3	0	0	4	1.1	17
11	Residence 94	3	6	32	3	2.2	46
12	Residence 12	2	6	3	12	2.3	44
13	Near Residence 44	4	7	12	14	1.3	95
14	Residence 17	4	1	0	10	1.7	52

Note: [(1)] 0-3 kilometres is considered foreground, 3-5 kilometres mid-ground and more than five kilometres background.

An assessment of the visual impact for the View Points 1 to 8 was provided in Section 9.10.1. The visual impact of the residences has been assessed using the same methodology applied to the assessment of representative views. In order to provide a more realistic representation, viewpoints from residences are presented with a horizontal view angle of 124° which is the typical horizontal field of view for human beings (EPHC, 2010).

In the case of residences the assessment has assumed the number of viewers is limited to the residents and their guests. While not diminishing the potential effect on individuals, which has been considered to be important in this assessment as it relates to where people live, the overall rating of the impact has taken into consideration the number of people who would be likely to experience the views from these locations.

There are generally few trees on the ridges on which the wind farm is located and, therefore, little to reduce or soften its image. Other objects in the line of sight between the wind farm and viewpoints such as residences, trees, topography or other features may reduce the visible portion of the wind farm relative to the computer generated visibility using the Windfarmer terrain model. Many local residences are surrounded by trees to provide a degree of shelter. These trees may partially or completely obstruct views of the wind farm from the residence. In some of these cases, more expansive views of the wind farm may be available beyond these tree screens, within short distances from the residences. For many of the viewpoints, the wind turbines are silhouetted against sky and when cloud cover is present it may reduce the level of visual impact when compared to that of clear sky.

Plate C.9 – View Point 9 – Residence 89 looking north-west

The visual impact from the residence for this photomontage has been assessed as being moderate to high.

The residence at View Point 9 (residence 89) is understood to have been located to take advantage of the expansive district views. There is a strong focal point in the landscape, a valley that draws the eye to distant views. The view to the north-west is assessed as having high to moderate scenic quality. View Point 9 has been oriented to be centred on the main focal point of views from this location.

Based on the windfarmer analysis a total of 40 wind turbines are visible or partially visible from this location. Within the view presented in the photomontage, six wind turbines are visible in the foreground, a further six are visible in the mid-ground and 18 are located in the background.

The wind turbines are dispersed through the landscape, and while highly visible and adding a new significant element to the landscape, they will not significantly block the existing views of the valley and beyond.

While there would be some opportunity to establish landscape planting to soften the impact of the wind turbines closer to the residence (some not presented in this view). This is likely to be undesirable for the majority of visible turbines due to the scenic quality of the view.

Plate C.10 – View Point 10 –Residence 25 looking south west

The visual impact from this viewpoint is considered low to moderate, as while the visible turbines are within three kilometres, only three are visible, and one is partially obstructed by an intervening ridge line.

The landscape depicted is assessed as having low to moderate scenic quality with a number of introduced features that provides some diversity. The effect of the additional elements in the landscape, whilst highly visible, is diminished by this diversity in the landscape and other vertical elements in the foreground views.

Plate C.11 – View Point 11 – Residence 94 looking south

View Point 11 (Residence 94) has been assessed as moderate visual impact as the three wind turbines, located between 2.2 and three kilometres from the viewpoint, are classed as highly visible. The distribution of turbines within the landscape and the diversity within the landscape are also considered. The scenic quality from this location is also assessed as being moderate due to the variety in the landscape and the pleasing patterns created by the various elements in the near and far fields.

While the three closest turbines will be prevalent vertical elements in the landscape that may attract the attention of the viewer at this location, this impact is lessened to some degree by other the existing features in the landscape and the distant views that include a patchwork of trees and cleared areas throughout the landscape. Thirty two of the turbines which are theoretically visible are located greater than five kilometres away which reduces their visual impact further. The near field garden setting and trees also lessens the impact of the three closest turbines. It is unlikely that further landscape planting would enhance the views as the district views are a significant scenic feature from this location.

Plate C.12 – View Point 12 – Residence 12 looking north east

View Point 12 (Residence 12) has been assessed as having a moderate visual impact. There are two wind turbines located between 2.3 and three kilometres from the viewpoint which are classed as highly visible. The scenic quality from this location is also assessed as being moderate due to the variety in the landscape and the pleasing patterns created by the various elements in the near and far fields.

The two closest turbines will be evident vertical element in the landscape that may attract the attention of the viewer at this location; this impact may be heightened to some degree by the framing of the view by the existing vegetation in the foreground at the residence which has the effect of focusing the

viewer towards the turbines and the distant views. However, the existing features in the landscape and the distant views that include a patchwork of trees and cleared areas throughout the landscape have the effect of lessening the impact. Of the remaining nine turbines, six are located between three and five kilometres and three are greater than five kilometres, which reduces their visual impact further. While some further landscape planting may enhance the views by screening the nearest turbines it is unlikely that this would be desirable as the district views are a scenic feature from this location.

Plate C.13 – View Point 13 – Near residence 44 looking south east

View Point 13 (Near residence 44) has been estimated to have a low visual impact from the residence as current vegetation plantings and a large shed effectively screen the residence from the entire wind farm. The view requested by the land owner, depicted in the photomontage, is actually from the farm property nearby the residence, but does not depict the view from the residence. As shown in Table 9.6, four of the 23 visible turbines are within three kilometres of the viewpoint and therefore classed as highly visible, the closest being 1.3 kilometres away. The available topography and vegetation within the view field reduces the visibility of one of these turbines such that only the top half turbine is visible. The rural landscape would is assessed to have a low to moderate scenic quality. The near field vegetation also lessens the impact created by the two closest turbines at this location. For the remaining visible turbines located further away, views are mostly limited to only the rotors due to landscape features and, whilst being discernable, are unlikely to significantly affect the view.

Plate C.14 – View Point 14 – Residence 17 looking east

View Point 14 (Residence 17) has been assessed to have a low to moderate visual impact. As shown in Table 9.5, four of the five visible turbines are within three kilometres of the viewpoint and are therefore classed as highly visible. The topography and vegetation within the view field significantly reduces the visibility of these turbines such that only the top portions of the turbines are visible. The rural landscape is assessed to have a low scenic quality due to the dominance of the nearby ridge that has low visual diversity.

The visual impact created by the turbines could be significantly diminished by landscape treatment on the intervening ridge line, if this was acceptable to the landowner. For the remaining two visible turbines located further away, only the very top of the rotors are visible and some screening is provided by the existing vegetation.

C1.4 Impacts at Residences within five kilometres

As discussed in Section 9.10.2 of the Environmental Assessment, the potential visibility of the wind farm for all the residences within five kilometres of the wind farm has been assessed in terms of the visibility criteria and key screening factors. Table C1 provides a listing of indicative visibility parameters.

In preparing Table C1, the visibility rating has been determined for each residence using the rating classes shown in Table 9.5 of the Environmental Assessment, which takes into account the number and distance to potentially visible turbines. This is provided in the "**Visibility Rating to nearest turbine**" column. In many cases, the visibility rating was assessed as being high, mainly due to the large viewfield angle and distances to the closest turbines. This information is provided together with the approximate number of potentially visible turbines (estimated by the WindFarmer software).

After the simple initial visibility class determination, a visual impact assessment considered the visibility rating, the number and distance to potentially visible turbines, a review of the local terrain and the aspect of the particular viewpoint and the impression of the extent of tree screening, generally gained from observation of the residence setting from a nearby roadside vantage point or from aerial photographs. These results are shown in the "**Impact Assessment**" column.

The classifications are somewhat qualitative, but it does serve to estimate the visual impact for the respective residences and enables comparison between them.

Number of visible turbines estimated by WindFarmer

It is important to note that the Windfarmer software, in most cases, overestimates the number of turbines predicted to be visible and therefore provides a "worst case" scenario. The reasons for this overestimation are as follows:

- While topography, such as intervening hills, is taken into account, visual screening from trees and other buildings, such as sheds, cannot be taken into account by the Windfarmer computer program. At many residences, this screening is significant and could block views from the residence to the majority of turbines.
- If the Windfarmer computer program determines that only a blade tip is visible, it counts the turbine as being "visible" even when, it's quite likely that blade tips several kilometres away would likely not be noticeable or possible to distinguish.
- The distance from the residence to the theoretically visible turbines is not considered. The computer program will count (part of) a turbine over 10 kilometres away as "visible" even though it is very unlikely that a turbine at this distance would have any measureable visual amenity impact on the viewer.
- Windfarmer estimates the number of turbines which could potentially be visible within a 360° view from the viewpoint location based on the available topographic information. The viewpoints shown in the photomontages are limited to a specific viewfield angle (eg 103° for viewpoint 9).

As one example, Windfarmer has estimated that 10 wind turbines could be visible from residence 17 within the view angle of the photomontage (shown in Plate C.14) However, only 5 turbines are apparent in the photomontage primarily due to the vegetative screening which Windfarmer cannot take into account. Therefore, it is clear that significant overestimation of visible turbines from particular viewpoints is possible due to inherent limitations in the process.

Table C1 – Review of Indicative visibility for viewpoints from neighbouring residences within 5 km of the wind farm site

Notes:
(1) W / N – Wind farmer / Neighbour (wind farmers are shaded). Also includes WFOL – wind farmer off lease
(2) The number of visible or partially visible turbines is provided by the "Windfarmer" software, which takes into account the topography of the area, but not screening from vegetation or other buildings. A turbine is regarded as being visible even if it is only partially visible. Two measures of turbine visibility are provided - Tips or Hubs visible.
(3) Viewfield angle: lateral field of view of visible turbines
(4) Elevation angle: angle from horizontal to hub height of nearest turbine
(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)
(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial
(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
< 1 km distance from Wind Farm													
3	Glen Ayr	W	27	21	36	0.9	215	11	H	P	4	The residences are all windfarmers. The visual impact assessed were Moderate or Moderate to High for these residences due to closest turbine being less than 1 km away and the elevation of turbines above the residence (mostly above 10°). Some tree screening is present at many of the residences that will reduce the visibility of parts of the wind farm. Residence 21 has the least number of visible turbines of this group of residences.	M-H
21	Rembo	W	8	5	10	0.9	150	11	H	P	1		M
50	Nullawonga	W	18	14	20	0.9	266	10	H	N	8		M
52	Carramar	W	18	14	17	0.8	250	13	H	N	1		M
54	Hillcrest	W	33	32	18	0.8	286	9	H	P	8		M-H
79	House	W	28	23	13	0.8	305	14	H	P	6		M-H
1 to < 2.0 km distance from Wind Farm													
2	Haverton	W	28	22	42	1.5	136	7	H	N	5	The visual impact is assessed as Moderate due to close distance to turbine 42, wide view angle, moderate elevation above residence and some screening being present.	M
4	Lochewen	W	15	12	35	1.1	165	13	H	P	4	The visual impact is assessed as Moderate due to close distance to turbines 33-37, wide viewfield angle and elevation above residence; however there is some mitigation due to some tree screening being present.	M

Notes:

(1) W / N – Wind farmer / Neighbour (wind farmers are shaded). Also includes WFOL – wind farmer off lease

(2) The number of visible or partially visible turbines is provided by the "Windfarmer" software, which takes into account the topography of the area, but not screening from vegetation or other buildings. A turbine is regarded as being visible even if it is only partially visible. Two measures of turbine visibility are provided - Tips or Hubs visible.

(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
9	Sunnyview	N	24	20	29	1.9	90	6	H	P	4	Wind farm is at 1.9 km to the north-east of the residence with a view angel of 90°. The visual impact is assessed as being Moderate to Low due to significant tree screening on all sides of the residence which will limit the wind farm visibility.	M-L
10	Hill View	N	22	22	29	1.7	120	7	H	Y	1	Close views of the wind farm to the east and more distant views to the north. The visual impact is assessed as Moderate due to the screening by extensive tree plantings.	M
11	Rhondda Villa	N	23	16	24	1.8	145	7	H	P	1	Close views of the wind farm to east and south-east. The visual impact is assessed as Moderate due to partial screening that will limit some of the wind farm visibility.	M
13	Old Errowanbang	W	38	28	12	1.8	170	6	H	P	1	Close wind farm views to the north-east; however, great majority of turbines are over 3 km away. The visual impact is assessed as Moderate due to elevated viewpoint above the wind farm, wide view angle and mitigation by some tree screening.	M
14	Willow Park	W	32	28	17	1.1	270	9	H	Y	1	Visibility is high due to close distance to turbines, viewangle and elevation above residence. Screening by trees on ridges may limit some of the wind farm visibility.	M

Notes:

(1) W / N – Wind farmer / Neighbour (wind farmers are shaded). Also includes WFOL – wind farmer off lease

(2) The number of visible or partially visible turbines is provided by the "Windfarmer" software, which takes into account the topography of the area, but not screening from vegetation or other buildings. A turbine is regarded as being visible even if it is only partially visible. Two measures of turbine visibility are provided - Tips or Hubs visible.

(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
17	Triangle Park	N	35	26	10	1.8	140	7	H	Y	1	Some clear views to parts of the northern group of turbines. The visual impact is assessed as Moderate to Low due to low position in narrow valley with tree screening that limits visibility of parts of the wind farm. See Section C1.3 above for more details.	M-L
22	Wallaby	W	34	22	5	1.4	215	8	H	P	2	Visibility is Moderate to Low due to partial to full screening by trees and shrubs surrounding the residence.	M-L
23	Towradgee	N	34	33	4	1.2	170	9	H	P	6	The visual impact is assessed as Moderate due to close distance to turbines, viewfield angle and elevation above residence. Partial screening is available which will limit visibility of some parts of the wind farm. Residence is close to, and visible, in Plate C.6.	M
24	Windella	W	17	11	4	1.3	120	6	H	P	6	The visual impact is assessed as Moderate due to northerly aspect of the residence away from nearest turbines. There is some tree screening which could limit some visibility	M

Notes:

(1) W / N – Wind farmer / Neighbour (wind farmers are shaded). Also includes WFOL – wind farmer off lease

(2) The number of visible or partially visible turbines is provided by the "Windfarmer" software, which takes into account the topography of the area, but not screening from vegetation or other buildings. A turbine is regarded as being visible even if it is only partially visible. Two measures of turbine visibility are provided - Tips or Hubs visible.

(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
25	Bromley	N	4	3	4	1.1	110	7	H	N	7	The visual impact is assessed as Moderate to Low due to the east, north and westerly aspects for the house and trees on southern side. Only three turbines are likely to be visible but the closest is at 1.1 kilometres. See Section C1.3 for more details.	M-L
26	Thrushley	W	27	23	3	1.6	82	3	H	P	2	The visual impact is assessed as Low due to screening by topography and trees.	L
27	Willow Creek East	N	43	41	3	1.8	72	3	H	P	2	The visual impact is assessed as High to Moderate due to elevated position of residence and limited screening. Removal of Turbines 1 and 2 has reduced impact for this location.	H-M
28	Hillview	WFOL	30	27	4	1.7	110	4	H	P	7	The visual impact is assessed as Moderate due to significant tree and shrub screening around the residence that will limit views to the wind farm.	M
43	Bellevue	N	44	36	15	1.7	152	2	H	P	6	The visual impact is assessed as Moderate to Low due to significant topographic and tree screening for the residence.	M-L
44	Willow Dale	N	41	40	14	1.2	150	2	H	P	6	The visual impact is assessed as Low due to significant topographic and tree screening for the residence. See Section C1.3 for more details.	L

Notes:

(1) W / N – Wind farmer / Neighbour (wind farmers are shaded). Also includes WFOL – wind farmer off lease

(2) The number of visible or partially visible turbines is provided by the "Windfarmer" software, which takes into account the topography of the area, but not screening from vegetation or other buildings. A turbine is regarded as being visible even if it is only partially visible. Two measures of turbine visibility are provided - Tips or Hubs visible.

(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
45	Castle Hill	N	30	17	15	1.9	145	3	H	P	6	The visual impact is assessed as Moderate due to partial screening by trees and topography.	M
46	Bulwarra	WFOL	43	39	15	1.5	182	3	H	Y	8	The visual impact is assessed as Moderate to Low due to substantial tree screening which is close to the residence.	M-L
48	Fairbanks	N	8	4	43	1.4	172	6	H	Y	3	The visual impact is assessed as Moderate to Low due to limited number of turbines potentially visible, low position of the residence and presence of trees that will reduce the visibility of the wind farm further.	M-L
49	Wattlecomb	W	26	20	43	1.1	196	7	H	P	8	The visual impact is assessed as Moderate due to presence of some screening trees around the residence.	M
51	Beulah Park	W	19	16	46	1.4	135	6	H	P	5	The visual impact is assessed as Moderate due to vegetation screening at residence location.	M
51B	Beulah Park B	W	21	18	46	1.2	125	7	H	N	5	The visual impact is assessed as Moderate to High due to elevation of residence on ridge and limited screening around relatively new residence.	M-H
55	House	W	28	25	43	1.6	213	4	H	Y	8	The visual impact is assessed as Moderate to Low due to substantive existing trees surrounding residence.	M-L

Notes:

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(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
56	Cooramilla	W	18	15	15	1.0	175	5	H	Y	6	The visual impact is assessed as Moderate to Low due to the residence being low set on the north-eastern side of the hill with aspect away from the wind farm and there being substantial tree and shrub screening at the residence.	M-L
57	School	Sch	33	29	12	1.5	195	8	H	Y	1	Some views to the wind farm site are screened by trees and this will reduce the visibility rating to Moderate.	M
71	Platt	W	22	20	36	1.0	171	12	H	P	4	The visual impact is assessed as Moderate due to mature trees surrounding the residence and screening some views to the wind farm.	M
72	Harris	WFOL	32	28	29	1.6	100	6	H	N	4	The visual impact is assessed as Moderate-High due to the elevated position of the residence however this is likely to be moderated by screening at eastern end of residences by tanks and trees.	M-H
74	Green	W	25	20	21	1.6	215	8	H	P	1	The visual impact is assessed as Moderate due to residence setting and aspect.	M
76	Roweth	W	41	28	18	1.2	254	4	H	Y	8	The visual impact is assessed as Low due to the northerly aspect of residence and substantial tree screening surrounding residence	L

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(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
77	House	N	31	31	18	1.3	256	5	H	P	8	The visual impact is assessed as Moderate to Low due to some tree and landscape screening and minor topographic fluctuations. Photomontage 8a demonstrates that only 3 turbines are prevalent in the primary view. See Section 9.10 for more details.	M-L
78	House	N	33	30	18	1.2	255	5	H	N	8	The visual impact is assessed as Moderate to Low due to some tree screening and minor topographic fluctuations near the residence not fully represented by Windfarmer software. See Section 9.10 for more details.	M-L
82	House (empty)	N	3	2	4	1.5	95	6	H	P	7	The visual impact is assessed as Moderate to Low due to northerly aspect of the residence away from nearest turbines and some tree screening which could limit some wind farm visibility.	M-L
86	House	W	10	8	10	1.6	142	6	H	Y	2	The visual impact is assessed as Low despite close distance and wide turbine viewfield angle. Up to 10 turbines may be visible but available screening is likely to reduce the number of visible turbines.	L

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(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
87	House	N	10	6	10	1.3	137	8	H	Y	2	The visual impact is assessed as Low due to the few potentially visible turbines being screened by existing vegetation surrounding the residence.	L
88	McKenzie	W	10	9	10	1.1	145	10	H	Y	1	The visual impact is assessed as Moderate to Low due to the low number of turbines potentially visible being screened by mature trees close to the residence.	M-L
89	House	N	40	39	6	1.2	198	5	H	N	6	The visual impact is assessed as High to Moderate due to close distance to turbines wide viewfield angle and elevation of some turbines above residence. Many of the turbines are potentially visible and there is little screening at this residence which is located on a cleared knoll. See Section C1.3 above for more details.	H-M
90	House	N	36	33	4	1.6	170	5	H	P	6	The visual impact is assessed as Moderate due to close distance to some turbines and wide viewfield angle. Existing screening by large trees likely to reduce the number of visible turbines.	M

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(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
95	House	N	20	19	31	1.4	130	9	H	N	4	The visual impact is assessed as Moderate due to close distance to some turbines, wide viewfield angle and elevation of turbines above residence. Topography will reduce the number of complete visible turbines. Turbine 31 has been relocated to the north to reduce its impact at this location. See Section 9.10 for more details.	M
96	House	N	37	32	4	1.9	110	3	H	Y	7	The visual impact is assessed as Moderate due to partial screening by topography and trees which will reduce the number of visible turbines.	M
99	House	N	43	41	4	1.7	158	3	H	P	6	The visual impact is assessed as Moderate due to close distance to turbines, very wide viewfield angle and elevation of the residence on hill with views to much of the wind farm site. However existing screening will reduce the number of visible turbines.	M
100	House	N	10	10	4	1.8	140	4	H	Y	6	The visual impact is assessed as Low due to only a few turbines likely to be visible due to existing screening around residence.	L

Notes:

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(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
108	House	N	43	35	18	1.6	232	4	H	Y	8	The visual impact is assessed as Moderate to Low. While some turbines are close and overall viewfield angle (without screening) is large there is significant existing screening that will reduce views to parts of the wind farm.	M-L
2 to < 3 km distance from Wind Farm													
154	Hillcrest	WFOL	28	21	37	2.6	108	3	H	P	5	The visual impact is assessed as Moderate to Low mainly westerly aspect from residence and available vegetation screening and structures that are likely to reduce the visibility further.	M
5	Glenarvon	N	24	19	31	2.2	105	6	H	P	4	The visual impact is assessed as Moderate due to some vegetation screening that will limit views to parts of the wind farm.	M
7	Glendale	N	11	6	29	2.9	90	5	M	Y	4	The visual impact is assessed as Low due to extensive existing screening at the residence limiting views to much of the wind farm.	L
8	Rockdale	N	0	0	29	2.6	90	5	Nil	N	4	The visual impact is assessed as Low to Nil. No turbines are indicated to be visible from this residence so even without screening the visibility will be low or Nil.	L to Nil

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(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

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Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
12	Errowanbang	N	29	25	24	2.3	180	6	H	Y	1	The visual impact is assessed as Moderate Some screening exists but viewfield focuses viewer on the closer turbines of which only two are within 3 km. See Section C1.3 for more details.	M
15	Stockton	N	42	42	12	2.9	130	3	H	Y	1	The visual impact is assessed as Moderate due to the wide viewfield angle being broken up by extensive vegetation screening at the residence.	M
16	Meribah Cottage	N	43	40	12	2.1	135	4	H	Y	1	The visual impact is assessed as Moderate due to elevated location of the residence and aspect toward the wind farm but the wide viewfield angle being broken up by extensive vegetation screening at the residence.	M
20	North West	N	35	26	10	2.8	93	3	H	Y	2	The visual impact is assessed as Low due to the wide viewfield angle being broken up by extensive vegetation screening at the residence	L
29	Fairview	N	16	9	4	2.6	105	2	H	Y	7	The visual impact is assessed as Low due to topography near the residence and existing tree screening that will reduce the visibility of the closest parts of the wind farm.	L

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(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

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(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
30	Vermont	N	11	3	4	2.4	90	3	M	P	7	The visual impact is assessed as Moderate to Low to due to very few turbines being visible and with partial screening by existing trees	M-L
33	Dogwind	N	29	16	4	2.9	75	3	M	P	7	The visual impact is assessed as Moderate to Low due to existing trees providing at least partial screening.	M-L
34	Westerham	N	3	2	4	2.5	67	2	M	P	2	The visual impact is assessed as Low due to partial to full screening of the wind farm by topography and vegetation.	L
35	Timaru	N	2	0	3	2.8	50	2	M	P	2	The visual impact is assessed as Low with only two turbines indicated to be partly visible and screening due to topography and vegetation further reducing wind farm visibility.	L
36	Willow Creek	N	44	44	3	2.6	45	2	H	Y	2	The visual impact is assessed as Moderate due to significant screening vegetation.	M
37	Braithwaite	N	44	44	3	2.8	60	2	H	P	2	The visual impact is assessed as Moderate due to some screening vegetation. Many turbines likely to be visible but with partial screening and with distance the visibility will be lower.	M

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(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

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(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
41	Crenvor	N	42	31	15	2.9	115	2	H	P	3	The visual impact is assessed as Moderate to Low due to indicated partial screening by vegetation and topography.	M-L
42	Euronga	N	30	21	4	2.6	118	2	H	N	6	The visual impact is assessed as Moderate due to partial screening by topography and to a lesser extent vegetation.	M
47	Weston	N	27	16	43	2.2	130	4	H	P	3	The visual impact is assessed as Moderate to Low due to partial to full screening by vegetation	M-L
73	Braeburn	N	30	26	28	2.5	130	6	H	N	1	The visual impact is assessed as Moderate with some partial screening by vegetation.	M
75	Harries	WFOL	38	32	12	2.1	165	5	H	P	1	The visual impact is assessed as Moderate despite elevated location of residence with aspect to wind farm but with partial screening by vegetation	M
80	House	N	43	36	14	2.2	137	0	H	N	6	The visual impact is assessed as Moderate despite wide viewfield angle and potentially large number of visible turbines. The elevated residence location and limited vegetative screening at the residence means that much of the wind farm may be visible but some of the closer ones, particularly those to the west of the residence are likely to be screened by topography and vegetation.	M

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(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
81	House	N	16	10	4	2.9	114	2	H	P	6	The visual impact is assessed as Low due to distance and partial screening at the residence	L
83	House	N	28	18	4	2.8	71	2	H	P	7	The visual impact is assessed as Low due to partial screening at the residence	L
84	House	N	18	13	4	2.8	70	2	H	P	7	The visual impact is assessed as Moderate to Low due to partial screening at the residence	M-L
85	House	N	24	13	10	2.1	115	4	H	N	2	The visual impact is assessed as Moderate to Low. While portions of up to 24 turbines are potentially visible, the views of complete turbines will be reduced by vegetation and intervening topography.	M-L
91	House	N	44	43	3	2.2	73	1	H	Y	2	The visual impact is assessed as Moderate to Low due to many of the potentially visible turbines not being visible at the residence due to northerly aspect (northern side of hill) and mature trees on ridge to south of the residence.	M-L
92	House	N	44	42	4	2.1	80	2	H	Y	2	The visual impact is assessed as Low due to substantial screening to the south of the residence	L

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(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
93	House	N	6	3	3	2.4	56	2	M	Y	2	The visual impact is assessed as Low due to northerly aspect and substantial number of trees to the south of the residence.	L
94	House	N	40	39	3	2.2	56	2	M	P	2	The visual impact is assessed as Moderate due to viewfield angle, distance and position of the residence on ridgeline with southerly aspect and limited existing screening. See Section C1.3 for more details.	M
98	House	N	42	30	4	2.8	120	2	H	N	6	The visual impact is assessed as Moderate to Low due to extensive screening on western side of Dickinson Lane adjacent to residence.	M-L
101	House	N	6	4	43	2.6	120	4	H	Y	3	The visual impact is assessed as Low due to vegetation screening at the residence	L
102	Shed and Silo	N	27	20	46	2.0	105	5	H	N	5	The visual impact is assessed as Moderate to Low due to aspect. While a significant part of the wind farm may be visible from this location it is indicated that there is no residence at this site.	M-L
106	House	N	16	13	31	2.5	80	6	H	P	4	The visual impact is assessed as Low due to limited number of potentially visible turbines, distance and the vegetation screening surrounding the residence.	L

Notes:

(1) W / N – Wind farmer / Neighbour (wind farmers are shaded). Also includes WFOL – wind farmer off lease

(2) The number of visible or partially visible turbines is provided by the "Windfarmer" software, which takes into account the topography of the area, but not screening from vegetation or other buildings. A turbine is regarded as being visible even if it is only partially visible. Two measures of turbine visibility are provided - Tips or Hubs visible.

(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
107	House	N	33	28	28	2.6	130	5	H	P	1	The visual impact is assessed as Moderate to Low due to screening by vegetation surrounding the residence	M-L
109	House	N	44	41	10	2.3	118	4	H	N	1	The visual impact is assessed as Moderate due to only 2 turbines being within 3 km. The residence is on an elevated location with easterly aspect and little vegetation that would serve to screen views to the wind farm.	M
112	Carinya Park	N	44	41	10	2.8	115	4	H	N	1	The visual impact is assessed as Moderate-Low due to only 1 turbine being within 3 km. Many turbines are visible and there is no screening at the residence. However, there is a low intervening ridge between the residence and the wind farm which will lower the visual impact.	M-L
114	House	N	15	5	4	2.6	112	2	H	P	7	The visual impact is assessed as Low due to topography and vegetation screening at the residence.	L

Notes:

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(2) The number of visible or partially visible turbines is provided by the "Windfarmer" software, which takes into account the topography of the area, but not screening from vegetation or other buildings. A turbine is regarded as being visible even if it is only partially visible. Two measures of turbine visibility are provided - Tips or Hubs visible.

(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
115	House	N	6	3	4	2.2	90	3	H	N	7	The visual impact is assessed as Moderate as the number of visible turbines is low and the viewfield angle may be less than indicated due to some topographic and visual screening. The residence has no screening but trees could be used to screen the few visible turbines if the landowner wished to limit views to the wind farm	M
116	House	N	12	7	4	2.3	90	3	H	N	7	The visual impact is assessed as Moderate to Low. The residence is elevated and does not appear to have existing vegetation screening and could have direct views to the northern parts of the wind farm. There is potential for screening the views to the wind farm.	M-L
118	House	N	26	17	4	2.7	78	3	M	N	2	The visual impact is assessed as Moderate but may be less if trees at further distances from the residence provide visual screening.	M
120	House	N	29	18	4	2.8	78	3	M	P	2	The visual impact is assessed as Low due to existing screening by vegetation near the residence which will reduce the wind farm visibility.	L
126	Abandoned mine workings	N	31	24	29	2.1	120	6	H	N	4	The visual impact is assessed as Nil as the location is a former mine site rather than a residence.	Nil

Notes:

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(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
127	House	N	6	2	3	2.8	48	2	M	N	2	The visual impact is assessed as Moderate to Low due to low number of potentially visible turbines, the northerly aspect and the likelihood that some of these will be screened by vegetation near the residence.	M-L
128	House	N	42	35	12	2.6	130	3	M	P	1	The visual impact is assessed as Moderate to Low due to partial screening at the residence by large trees that are likely to restrict some of the views to the wind farm	M-L
129	Woolshed	N	41	35	12	2.3	153	5	H	N	1	The visual impact is assessed as Moderate due to viewfield angle and number of turbines visible. This location is understood to be a woolshed and not a residence. It does not appear to have existing screening.	M
130	House	N	32	26	29	2.4	95	6	H	N	4	The visual impact is assessed as Moderate to Low due to depressed situation of residence and likely constraints on views to the wind farm. The residence appears to be vacant.	M-L
132	House	N	23	16	31	2.9	80	5	M	P	4	The visual impact is assessed as Moderate to Low due to available screening at the residence that is likely to reduce visibility of parts of the wind farm.	M-L

Notes:

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(2) The number of visible or partially visible turbines is provided by the "Windfarmer" software, which takes into account the topography of the area, but not screening from vegetation or other buildings. A turbine is regarded as being visible even if it is only partially visible. Two measures of turbine visibility are provided - Tips or Hubs visible.

(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
133	House	N	24	21	42	2.9	95	4	H	P	5	The visual impact is assessed as Moderate due to the residence having an aspect towards Carcoar and Mt Macquarie rather than the wind farm and vegetation screening being likely to reduce the viewfield angle for visible parts of the wind farm.	M
147	House	N	5	4	15	2.7	127	2	H	N	3	The visual impact is assessed as Low. The high viewfield overstates the visible part of the wind farm and westerly views are limited by topography. Vegetation screening is expected to further reduce visibility of the potentially visible turbines.	L
158	House	N	37	27	3	2.2	84	6	H	P	2	The visual impact is assessed as Moderate with up to 27 turbine hubs being potentially visible and with the elevated residence, easterly aspect and little vegetation to reduce the wind farm visibility. Visibility on the ridges between the residence and the turbine sites will provide some mitigation. The deletion of Turbine 2 has reduced the visual impact at this location.	M

Notes:

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(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
3 to < 4 km distance from Wind Farm													
6	Tettenhall	N	30	24	29	3.3	75	4	M	P	4	The visual impact is assessed as Moderate. Partial screening by vegetation may reduce the wind farm visibility but the existing vegetation does not appear to be well developed and may only be low level screening.	M
18	Meribah	N	43	41	12	3.2	115	3	H	Y	1	The visual impact is assessed as Moderate to Low due to distance to the turbines, extent of paddocks and remnant woodland in foreground to mid-ground and potential for screening of parts of the wind farm by existing vegetation.	M-L
31	Strathfield	N	41	36	4	3.1	85	2	M	Y	7	The visual impact is assessed as Low. Many of the potentially visible turbines are likely to be screened by the substantive vegetation surrounding the residence.	L
32	Loloma	N	30	19	4	3.2	73	2	M	Y	7	The visual impact is assessed as Low due to substantive screening close to the residence location,	L

Notes:

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(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
58	Ridge End	N	26	19	37	3.0	70	5	M	P	4	The visual impact is assessed as Moderate to Low. The residence appears to be associated with significant amount of vegetation that may provide some screening for views of the wind farm to the north of the residence.	M-L
59	House	N	29	28	37	3.8	65	3	M	Y	4	The visual impact is assessed as Moderate to Low. Some potentially visible turbines are likely to be screened by existing vegetation located close to the residence.	M-L
60	Carradowns	N	28	15	15	3.3	113	2	M	Y	3	The visual impact is assessed as Moderate to Low due to topography and vegetative screening surrounding the residence.	M-L
61	Caithness	N	44	39	15	3.6	106	1	M	Y	3	The visual impact is assessed as Low due to topographic and vegetation screening.	L
62	Tralee	N	11	8	15	3.9	103	1	M	P	3	The visual impact is assessed as Low due to easterly aspect of residence and topographic and vegetation screening.	L

Notes:

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(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
103	House	N	17	11	42	3.4	90	4	M	N	5	The visual impact is assessed as Moderate to Low due to the situation of residence in valleys with ridges to the north which have trees that are not considered by the computations for number of visible turbines. It is expected that actual visibility will be less than is indicated in the figures shown to the left.	M-L
105	House or Shed	N	22	19	37	3.5	65	4	M	Y	4	The visual impact is assessed as Moderate to Low. The site may not have a residence and may be a Shed only on southern side of Belubula River with northerly aspect. Existing trees are likely to provide screening of parts of the wind farm.	M-L
110	House	N	20	17	37	3.5	65	4	M	N	4	The visual impact is assessed as Low to Nil. House is northern side of Belubula River and with southerly aspect away for the wind farm. Given the location on a south facing slope the wind farm visibility will be Low or Nil.	L-Nil
111	House	N	20	17	37	3.4	65	4	M	P	4	The visual impact is assessed as Moderate to Low. Residence is at top of slope on northern side of Belubula River. Some tree screening is indicated that is likely to reduce the number of potentially visible turbines.	M-L

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(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
117	House	N	44	43	4	3.0	63	1	M	P	2	The visual impact is assessed as Moderate to Low due to its position on an elevated topographic feature but with other topographic features and mature vegetation providing at least partial screening of some parts of the wind farm	M-L
119	House	N	27	11	3	4.2	45	1	M	N	2	The visual impact is assessed as Moderate to Low. Low ridge to the south of the residence will be likely to limit views to the wind farm. No screening at the residence but trees on intervening ridgeline will have some screening effect.	M-L
121	House	N	31	20	4	3.1	72	2	M	Y	2	The visual impact is assessed as Low. Significant screening by mature trees at the residence is likely to significantly reduce the wind farm visibility.	L
122	House	N	34	36	4	3.4	68	2	M	N	2	The visual impact is assessed as Moderate to Low. There is no screening indicated at the residence but local topographic variations and mature trees on intervening ridgelines are likely to reduce wind farm visibility.	M-L
123	House	N	5	2	4	3.6	53	2	M	N	2	The visual impact is assessed as Moderate to Low. Only five turbines potentially visible but may be less with vegetation screening on intervening ridgelines.	M-L

Notes:

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(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
124	House	N	14	3	4	3.7	55	1	M	N	2	The visual impact is assessed as Moderate to Low. Only 14 turbines potentially visible but may be less with vegetation screening on intervening ridgelines.	M-L
125	House	N	32	18	4	3.7	45	2	M	P	2	The visual impact is assessed as Moderate to Low due to distance to turbines and vegetation screening near the residence.	M-L
134	House	N	8	8	46	3.2	78	5	M	P	5	The visual impact is assessed as Moderate to Low. The residence is located in the Cowriga Creek valley with views to the wind farm partly limited by topography. Vegetation near the residence may further reduce the wind farm visibility.	M-L
137	House	N	27	14	4	3.6	90	2	M	P	7	The visual impact is assessed as Moderate to Low. Due to distance, topography and partial screening by mature trees, the visibility will be less than indicated in the columns to the left.	M-L
138	House	N	28	17	4	3.4	60	1	M	P	2	The visual impact is assessed as Moderate to Low. Partial screening provided by vegetation is likely to reduce number of visible turbines.	M-L

Notes:

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(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
139	House	N	15	5	4	3.5	60	1	M	P	2	The visual impact is assessed as Low due to residence being on the northern side of a small hill. Visibility likely to be less than the computed values due to screening at the residence.	L
140	House	N	44	41	4	3.2	65	1	M	P	2	The visual impact is assessed as Moderate due to elevated location of residence. Screening at the residence will reduce visibility of the wind farm	M
141	House	N	34	24	4	3.4	64	1	M	P	2	The visual impact is assessed as Moderate to Low. Actual aspect of the residence setting and any screening at the residence will affect the actual visibility but at 3.4km to the closest turbine the visual impact will not be significant.	M-L
142	House	N	4	2	4	3.8	52	2	M	P	2	The visual impact is assessed as Low due to low number (4) of potentially visible turbines and likelihood that some of these may be screened by vegetation.	L
144	House	N	30	22	3	3.8	45	1	M	P	2	The residence is elevated on a ridgeline and is not expected to have much screening by vegetation; however, the distance to the turbines results in a Moderate to Low visibility rating.	M-L

Notes:

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(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
148	House	N	44	40	15	3.8	113	1	M	P	3	The visual impact is assessed as Moderate to Low. The distance from the turbines is such that the visibility has lesser significance.	M-L
150	House	N	31	29	15	3.8	102	1	M	Y	3	The visual impact is assessed as Low to Nil due to extensive topographic and vegetation screening in proximity of the residence location.	L-Nil
151	House	N	44	34	5	3.8	103	1	M	P	3	The visual impact is assessed as Low Screening near the residence location results in the low visibility of the wind farm	L
152	Tallwood Community Hall and RFS Building	N	25	14	44	3.5	90	1	M	P	7	The visual impact is assessed as Low to Moderate. There will be some screening due to scattered mature trees. There are no residents at this location.	L
153	House	N	3	2	3	3.4	40	2	M	N	2	The visual impact is assessed as Low. Only three turbines are potentially visible and this could be reduced by screening by scattered trees.	L
154	House	N	13	4	3	3.8	42	1	M	Y	2	The visual impact is assessed as Low to Nil due to northerly aspect for residence, away from wind farm and positioning below ridgeline with large mature trees to the south.	L-Nil

Notes:

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(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
155	House	N	3	2	3	4	38	1	M	N	2	The visual impact is assessed as Low to Nil due to position of residence on northerly facing slope, below the ridgeline and with little likelihood of any view to the wind farm.	L-Nil
161	House	N	24	16	37	3.7	65	5	M	Y	4	The visual impact is assessed as Moderate to Low. Some potentially visible turbines are likely to be screened by existing vegetation located close to the residence.	M-L
4 to >5 km distance from Wind Farm													
0	Stokefield	N	12	11	37	4.7	70	3	M	Y	5	The visual impact is assessed as Low due to relatively low elevation of residence with mature trees providing screening for the residence.	L
19	South Log	N	43	40	12	4.5	105	2	M	Y	1	The visual impact is assessed as Low due to topography, distance and currently available screening. Large trees surround residence location and will screen potentially visible turbines.	L
38	Carlingford	N	4	1	4	4.6	85	2	M	P	7	The visual impact is assessed as Low due to low number of potentially visible turbines, distance and with partial screening visibility is expected to be low.	L

Notes:

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(2) The number of visible or partially visible turbines is provided by the "Windfarmer" software, which takes into account the topography of the area, but not screening from vegetation or other buildings. A turbine is regarded as being visible even if it is only partially visible. Two measures of turbine visibility are provided - Tips or Hubs visible.

(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
39	Hillview	N	21	9	4	4.0	98	2	M	P	7	The visual impact is assessed as Moderate to Low due to view angle and slight elevation of turbines, topography, distance and currently available screening.	M-L
40	The Cottage	N	23	9	4	4.1	90	2	M	P	7	The visual impact is assessed as Low to Nil due to topographic setting and currently available screening vegetation that will significantly reduce the number of visible turbines.	L-Nil
63	Long View	N	34	32	15	4.3	94	1	M	P	3	The visual impact is assessed as Moderate due to elevated setting of residence with potential for extensive views. However there is potential for some vegetation screening either at the residence or on intervening ridgelines.	M-Low
64	Sunnyside	N	34	23	4	4.4	60	1	L	Y	7	The visual impact is assessed as Low due to distance and minor elevation of turbines above the residence. There are substantial mature trees at this residence location that are likely to significantly reduce views to the wind farm.	L
65	Greenbank	N	33	21	4	4.7	65	1	L	P	7	The visual impact is assessed as Low due to distance and minor elevation of turbines above the residence. There is vegetation screening at the residence.	L

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(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
66	Ferndale	N	33	17	4	4.6	72	1	L	N	7	The visual impact is assessed as Low due to distance and minor elevation of turbines above the residence. Residence location is slightly elevated and no indicated screening.	L
67	Karinya	N	41	34	3	4.0	40	1	M	N	2	The visual impact is assessed as Low. due to viewfield angle. Many turbines are potentially visible but the setting of many residences on Carbine Road and vegetation screening for these residences will limit visibility.	L
68	Mirraweena	N	42	40	3	4.2	40	1	M	N	2	The visual impact is assessed as Low. Many turbines potentially visible but due to local subtleties of topography there is expected to be limited views to the wind farm.	L
69	Narrawong	N	14	4	3	4.2	45	2	M	P	2	The visual impact is assessed as Moderate to Low. Screening is expected to reduce the number of visible turbines	M-L
70	Warrengong	N	17	12	3	4.6	45	2	M	Y	2	The visual impact is assessed as Low due to distance, limited view angle and minor elevation of turbines relative to the viewpoint. Screening may also reduce visibility	L
97	Roseleigh	N	2	1	4	5.0	85	1	M	P	7	The visual impact is assessed as Low to Nil. Only two turbines are potentially visible and existing screening may further reduce this.	L-Nil

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(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
104	House	N	8	8	37	4.0	75	3	M	P	5	The visual impact is assessed as Low due to low elevation of residence location, aspect to the east, away from wind farm and local screening that will limit direct views to the wind farm.	L
131	House	N	39	30	29	4.3	68	3	M	P	4	The visual impact is assessed as Low due to viewfield angle and minor elevation of turbines. Distance and some partial screening are likely to reduce the visibility of the wind farm.	L
136	House	N	31	20	43	4.1	82	2	M	Y	8	The visual impact is assessed as Moderate to Low due to screening at the residence location.	M-L
143	House	N	2	0	4	4.0	152	1	L	Y	2	The visual impact is assessed as Low to Nil. No turbines visible due to distance and substantive available screening.	L-Nil
145	House	N	42	41	3	4.0	35	1	L	N	2	The visual impact is assessed as Low to Moderate due to distance, topography, low view angle and minimal elevation of turbines relative to viewpoint. However residence location is elevated and there may be limited screening.	L-M

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(3) Viewfield angle: lateral field of view of visible turbines

(4) Elevation angle: angle from horizontal to hub height of nearest turbine

(5) Visibility rating of nearest turbine is shown as L / M / H – Low / Moderate / High (based on distance and view angle)

(6) Indicative screening by trees shown as Y / N / P – Yes / No / Partial

(7) Description of factors that have been considered in assessing visual impact

Ref No.	Location	Type of residence (1)	Approx. no. of potentially visible or partially visible turbines (2)		Nearest turbine	Distance to nearest turbine	Viewfield angle (3)	Elevation angle (4)	Visibility rating of nearest turbine (5)	Indicative screening by trees (6)	Nearest photo-montage to viewpoint	Basis for visual impact assessment. Takes into account the initial visibility rating and review of the indicative screening factors as indicated below (7)	Impact Assessment
		W / N	Tips	Hubs	Number	km	degrees	degrees	L / M / H	Y / N / P			
146	House	N	42	32	3	4.1	40	2	L	Y	2	The visual impact is assessed as Low due to distance, topography, low view angle and minimal elevation. At least partial screening by vegetation is expected.	L
149	House	N	17	10	15	4.0	115	1	M	N	3	The visual impact is assessed as Low to Nil due to position of residence behind a small hill and associated vegetation at locality. There may be no visible turbines.	L-Nil
156	House	N	44	39	3	4.9	42	2	L	P	2	The visual impact is assessed as Low due to distance, topographic setting of residence and available screening	L
157	House	N	44	44	3	5.3	40	1	L	P	2	The visual impact is assessed as Low due to distance, topographic setting and available screening	L
159	House east of Res 59	N	13	10	42	4.4	75	4	M	P	5	The visual impact is assessed as Low due to vegetation screening	L
160	House	N	21	16	42	4.6	70	4	M	P	5	The visual impact is assessed as Low due to vegetation screening	L
162	House	N	33	21	4	4.4	55	1	M	Y	7	The visual impact is assessed as Low due to distance and minor elevation of turbines above the residence. There is vegetation screening at the residence.	L