

7.0 Visual Impact (contd.)

7.5 Visual Impact Summary

7.5.1 Overview of nearby residences

There are 29 homesteads located within close proximity (within 5km) to the proposed wind turbines (refer to Figure 17). Residential properties are generally located along Taylors Creek Road, and Currandooley Road. As these properties are located on private property photo surveys were not taken from these viewpoints. Of the 29 properties located within the 5km radius, 16 are owned by wind farmers. The potential visual impact has been assessed from each of the remaining 13 residential properties which are not wind farmers.

Table 9 on the following page assesses the visual impact from these residences based on the distance from the proposed wind turbines taking into account topography, existing vegetation and screen planting. It is important to note these assessments have been undertaken with the aid of aerial photographs and topographic maps and are therefore provide a general assessment.

Three isolated homesteads (G05-G07) are located along Taylors Creek Road, all within 2km of the turn off to Western Leg Road. These properties are located within 2.5-4km from both the northern and central groups of proposed wind turbines. Each property has a dense strip of pine wind break planting along the boundary impeding views of the proposed wind farm.

Nine residences (G06-G17) are sited around the junction of Taylors Creek Road and Taylors Creek within the low-lying catchment area. The closest of these homesteads is located just over 2.6km from the central group of proposed turbines. Each of the homesteads have dense lineal strips of mature wind break planting along their western boundaries, to shield against strong westerly winds. As the proposed turbines are on low lying ground, and the screen planting is close to the house, it is unlikely that views of the proposed wind turbines would be significant from the homesteads. In addition to this, the existing Grose Hill Group of turbines are just over 1.2km from the homesteads. The existing wind turbines have a greater visual presence and therefore the more distant proposed wind turbines are unlikely to impact significantly on the existing landscape character.

Two isolated properties are located to the north of the study area one along Lake George Road (Roth) and another off Collector Road (Gundry). The topography between these residences and the proposed wind turbines is flat. Dense screen planting surrounding the property off Collector Road will screen views to the proposed wind turbines. A small rise in topography combined with existing vegetation surrounding the property off Lake George Road (Roth) will partially screen views from this residence.

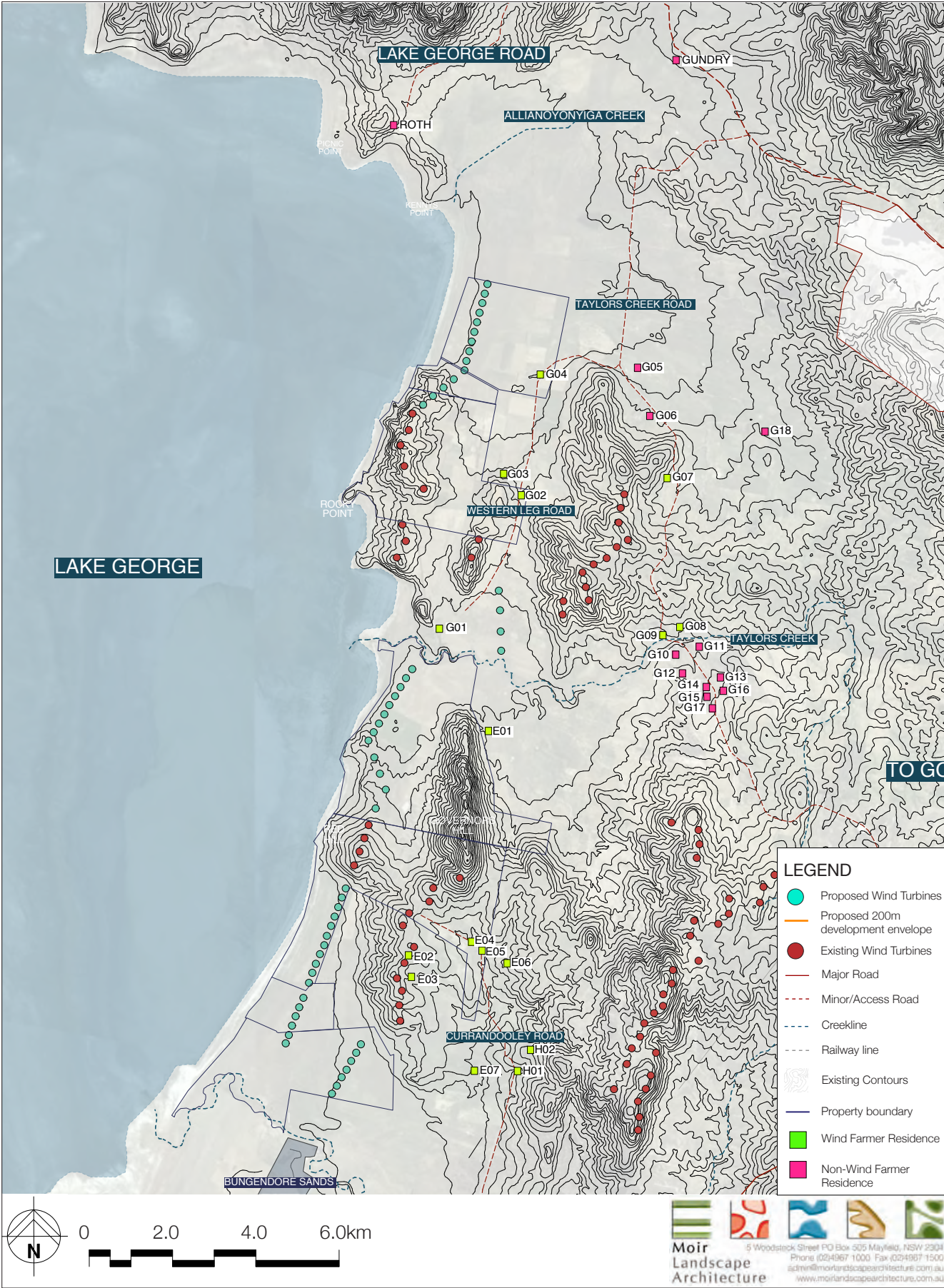


Figure 17: Residence within close proximity of the Site (5km Radius of proposed turbines).

7.0 Visual Impact (contd.)

RESIDENCE	DISTANCE TO NEAREST WTG	WIND FARMER	POTENTIAL VISUAL IMPACT	DESCRIPTION
E01- M Osborne	1.52km	YES	-	Capital I Wind Farmer
E02- L'Orizon A	1.33km	YES	-	Capital I Wind Farmer
E03- L'Orizon B	1.22km	YES	-	Capital I Wind Farmer
E04- Ellenden A	2.08km	YES	-	Capital II Wind Farmer
E05- Ellenden B	2.29km	YES	-	Capital I Wind Farmer
E06- Vacant	2.23km	YES	-	Capital I Wind Farmer
E07	1.83km	YES	-	Capital I Wind Farmer
G01- Panhandle	0.96km	YES	-	Capital II Wind Farmer
G02- Luckdale	0.97km	YES	-	Capital II Wind Farmer
G03- Kalingrah	1.27km	YES	-	Capital I Wind Farmer
G04- Lakoonna	1.24km	YES	-	Capital II Wind Farmer
G05	2.55km	NO	LOW	A dense band of wind break planting immediately south west of the residence. Some filtered views of the northern extent of proposed turbines may be visible.
G06- Widgemore	3.11km	NO	LOW	Surrounded by topography associated with Groses Hill. A dense band of wind break planting in the foreground of the residence to the north west.
G07- Euroka	2.85km	YES	-	Capital I Wind Farmer
G08- Sunnybrook 1	2.92km	YES	-	Capital I Wind Farmer
G09- Sunnybrook 2	2.72km	YES	-	Capital I Wind Farmer
G10- LaGranja	2.97km	NO	LOW	Potential views to central group of proposed turbines. These views would be filtered by existing foreground planting surrounding the residence.
G11	3.31km	NO	LOW	Screen planting in the foreground, roadside planting along Taylors Creek Road and topography will screen views of the proposed wind turbines.
G12- Narine Green	3.16km	NO	LOW	Topography impedes views to the majority of proposed wind turbines. The existing wind break planting to the south west of the residence will screen views.
G13	3.75km	NO	LOW	A combination of foreground wind break planting, roadside planting (associated with Taylors Creek Road) and topography screens views.
G14	3.61km	NO	LOW	A lineal band of existing vegetation in the foreground immediately west of the residence screen views towards the proposed wind turbines.
G15	3.66km	NO	LOW	A lineal band of existing vegetation in the foreground immediately west of the residence screen views towards the proposed wind turbines.
G16	3.53km	NO	MODERATE	Northern and southern groups of proposed turbines impeded by topography. Central group of turbines visible.
G17	3.77km	NO	MODERATE	Northern and southern groups of proposed turbines will be mostly screened by topography. Proposed central group will be visible.
G18- Torokina	4.56km	NO	LOW	Groses Hill topography in conjunction with a dense band of pine wind break planting immediately west of the property screen views to turbines.
Gundry	4.69km	NO	LOW	Dense foreground planting surrounding the residence in all directions eliminate views of the proposed turbines from the residence.
H01- Currandooley	2.50km	YES	-	Capital I Wind Farmer
H02- Currandooley	2.63km	YES	-	Capital I Wind Farmer
Roth	3.12km	NO	MODERATE	Minor ridgeline to the south of the residence associated with Kenny's Point & existing foreground vegetation partially screens views of the proposed turbines.

Table 9: Visual impact assessment from residence within 5km of Wind Turbines.

7.0 Visual Impact (contd.)

7.5.2 Overview of visibility from areas surrounding the Site

In addition to the viewpoint assessment and zone of visual influence analysis, the following provides an overview of the potential visibility from other viewpoints and areas surrounding the site.

VISIBILITY FROM THE NORTH

The northern group of wind turbines are located on low-lying topography at the edge of Lake George. To the north of the Site, the landscape is generally characterised by a large expanse of rural grazing land which remains uninhabited for the most part.

The nearest publicly accessible land to the north of the Site is Lake George Road. The road runs down Sawpit Gully at the foot hills of Mount Baby. The topography is undulating along this road, altering views towards the proposed Site (northern and central groups). For the most part, views south from this road are hindered by the topography, however the proposed wind turbines will be visible from some parts of the road. A number of isolated properties are located along the road, from which the topography and existing vegetation generally prevent views towards the proposed wind turbines.

Further north, the Collector Road runs in a south east direction from Collector. Glimpse views of the Site (northern and parts of the central groups) will be visible between Lake George Road and Taylors Creek Road. These views will be fleeting due to the speed of travel and drivers direction of focus.

VISIBILITY FROM THE EAST

Due to the large lateral spread of the proposed Capital II wind farm, views to the Site vary greatly from the east. Overall views from the east are generally obstructed by the ridge lines associated with Hammonds Hill, Grose Hill and Ellenden.

The land to the east of the Site is defined by undulating rural land which is cleared for the most part. Wind break planting in the form of dense lineal bands of exotic pines are a feature of the landscape, which generally occur along property boundaries and along roadsides.

The closest publicly accessible land to the east of the wind farm is Taylors Creek Road and Currandooley Road. Both of these roads are minor access roads which provide access to homesteads and are currently utilised as maintenance roads for the Capital I Wind Farm.

A number of isolated properties are located to the east of the Site (refer to section 7.5.1 of this report). Views from these properties to the west are generally screened by dense wind break planting.

Further east from the Site the landscape is defined by the large ridge lines associated with the Great Dividing Range. These ridge lines form the extent of the visual catchment of the proposed

wind turbines, blocking any potential views from the east of the ranges.

VISIBILITY FROM THE SOUTH

The southern group of wind turbines are sited along the low-lying shore of Lake George, on the land identified as the Bungendore Plain LCU. The surrounding land to the south of the proposed wind farm is generally flat, cleared, grazing land which is largely uninhabited.

The nearest publicly accessible land to the south of the wind farm is the Targo/Bungendore Road which runs in a south west direction. The closest point of the Tarago/Bungendore Road to the Site is located approximately 3.5km south. Traveling in a northeasterly direction from Bungendore along Tarago Road, glimpse views to the proposed turbines will occur. The speed of travel in conjunction with the existing roadside planting and slight rises in topography on the roadside will buffer some views.

Goulburn Bombala Railway is located parallel to Tarago/Bungendore Road in a generally south westerly direction. It is likely passengers traveling along the railway will have views towards the proposed wind turbines. The railway line is bordered by dense screen planting in parts which will buffer views to both the existing and proposed wind farms.

Two separate rural residential estates are sited to the north east of the Bungendore town centre on slightly raised undulating topography. It is likely that views from these estates will reach the proposed viewpoints. Existing screen planting bounds the estates along Tarago Road, and will potentially impede views of the proposed wind turbines.

Isolated homesteads and rural properties are also located to the west of Tarago Road, just north of Bungendore. It is likely the wind turbines will be visible from a number of these properties which are located in excess of 5km south of the turbines. Existing exotic pine wind break planting along property boundaries in addition to the distance from the Site would reduce the potential visual impact from these properties.

VISIBILITY FROM THE WEST

The western edge of the Site is the most visually prominent. The wind turbines are sited at the foothills of the steep topography on the east of Lake George. Land to the west of the wind turbines is the open, flat expanse of Lake George, with the closest public viewing areas being the Federal Highway and associated rest areas (Badcoe VC Rest Area, Wheatley VC Rest Area and Weereewa Lookout).

Views from the Federal Highway are unimpeded. The highway is divided for its entire length along the edge of Lake George with a central median strip of frangible vegetation. The dense median planting forms a visual screen and restricts views to the east (towards the wind farm) for motorists traveling in a northbound direction. For vehicles traveling in a southbound direction, views towards the wind farm would be in excess of 8km and would be impeded by distance.

7.0 Visual Impact (contd.)

There are three rest areas located along the Federal Highway, on the shore of Lake George. These rest areas have expansive views over Lake George to the proposed wind farm. The existing Capital I Wind Farm is visible on a clear day from these rest areas. The proposed addition of Capital II Wind Farm would increase the potential noticability from the west.

A minor access road (Lake Road) extends along the south eastern edge of Lake George providing access to several homesteads. Homesteads along this road are the nearest to the Site from the west, at a distance of over 5km from the Site. Theoretically, the wind turbines will be visible from these properties. Local influences such as vegetation and the orientation of the house would determine the visibility.

VISIBILITY FROM BUNGENDORE/TARAGO

Bungendore and Tarago are the towns closest to the proposed development. The distance from the Site (approximately 15.7km) in addition to the undulating topography of the areas results in the views of the proposed wind turbines being obstructed from Tarago.

A combination of topography and vegetation would provide complete screening of the study area from the northern sections of Bungendore Roads, towards Tarago. Glimpse views of the existing wind turbines are visible when traveling south down Bungendore/Tarago Road approximately 4km out of Tarago. As the proposed turbines are sited at a lower elevation, views of Capital II Wind Farm will be minimal along the Bungendore/Tarago Road when compared with the existing turbines.

The nearest proposed wind turbines are located over 8km north of the Bungendore town centre. Bungendore is located on the flat topography to the south of the Site. Views from the town centre to the proposed wind turbines are hindered by a combination of buildings, vegetation, slight rises in topography and the distance from the Site.

7.5.3 Impact Summary

Wind turbines create a strong contrast in the landscape as a result of their large scale and lack of visual integration. The visual effects of the wind turbines are lessened as the distance of the vantage point from the Site is lengthened.

As mentioned through the report, the proposed wind turbines are located on low lying topography which resultantly lessens their visual impact. Although the wind turbines proposed are quite tall (approximately 157m in height) compared to the existing wind turbines (which have a vertical span of 120m) they are sited considerably lower than the existing Capital I wind turbines. Resultantly, it is likely that in their context the proposed turbines will have a lower visual effect.

The highest visual impact of the proposed development is felt within a 2km radius of the wind farm. Due to the large scale and significant contrast to the rural landscape, the proposed turbines

become a dominant feature of the landscape when viewed within a close proximity. As the distance between the viewer and the proposed development increases the visual impact decreases.

The topography surrounding the wind turbines significantly alters the visibility of the proposed development from different vantage points. The northern and southern groups of wind turbines are sited on the low-lying flat topography on the shores of Lake George and the area surrounding is open. Areas surrounding the southern and northern groups are likely to have the biggest visual impact. The central group of turbines are enclosed by the steep ridgelines to the north, east and south which obstruct views from most public viewpoints.

The most significant impact associated with the proposal is from the west where unimpeded views span across the open flat expanse of Lake George. Three rest areas are located on the western edge of Lake George, each with views of the existing Capital I Wind Farm. Although from this viewpoint the entire wind farm will be visible, the viewpoints are over 8km from the wind farm and as a result their visibility will be hindered by distance.

A number of isolated residential properties associated with Currandooley and Taylors Creek Road are located close to the Site. The visual impact from each homestead varies depending on the orientation of the house and local landscape features (eg. wind break planting, topography etc.). Views to the proposed wind farm are also likely to be visible from rural residential estates to the north east of Bungendore.

Dense wind break planting of exotic pines is a character of the landscape. Wind break planting predominately occurs around homesteads, along property and paddock boundaries and along roadsides. When planting in the foreground of the viewpoint, wind break planting screens views towards the proposed wind farm.

The highest visual impact is likely to be felt from flat areas to the north and south where views to the proposed turbines are unimpeded by topography.

8.0 Shadow Flicker, Reflectivity & Nightlighting

8.1 Shadow Flicker

Shadow flicker is a visual effect that occurs when rotating turbines cause intermittent shadowing as the blades momentarily block the sun’s path. The effect will occur under circumstances where the turbine location is such that at certain times of the day the sun’s rays pass through the swept area of the rotating blades and affect the viewpoint. The effect is diminished by distance between the turbine and the viewpoint. Shadowing is reduced by increased cloud cover and is dependent on the angle of the sun’s rays. (Connel Wagner, 2006)

Moir Landscape Architecture engaged Garrad Hassan Pacific Pty Ltd to undertake a Shadow Flicker Assessment for the proposed Capital II Wind Farm. The zones where there is potential for shadow flicker to occur have been assessed using WindFarmer software. The shadow flicker assessment was undertaken using both the existing Capital I and proposed Capital II Wind turbines to illustrate the cumulative impacts. The report was based on a proposal for CWF 2 that consisted of 53 turbines, however the current proposal consists of 55 turbines. Whilst the Garrad Hassan report has not been updated the Shadow Flicker diagram has been to incorporate the two additional turbines. The two additional turbines are located at the northern extent of the middle group and do not impact on any of the receptors

The analysis is based on worst case scenario with the proposed 55 wind turbines (of Capital II) at a height of 157m.

Appendix A includes the full shadow flicker report as provided by Garrad Hassan Pacific Pty Ltd.

8.1.1 Shadow Flicker Impacts

Overall the shadow flicker effects caused by the proposed Capital II Wind Farm are minimal due to the location of the wind turbines in relation to nearby residential properties. It is unlikely that shadow flicker will negatively impact upon nearby residences. Figure 17 shows the extent of the shadow flicker.

The analyses found that seven homesteads are likely to be affected by shadow flicker. Of these seven homesteads, five are located within the shadow flicker zone currently established by the Capital I Wind Farm. Two properties will be affected by the extent of shadow flicker associated with the proposed turbines. (Refer to table 10 on the following page)

The two properties likely to be affected by the shadow flicker produced by Capital II Wind Farm are both wind farmers. In the unlikely event that residents experience an annoying level of shadow flicker, then it is recommended to plant screening vegetation which effectively eliminates any impact.

No public roads or public areas will be affected by the shadow flicker as a result of the extension of Capital Wind Farm.

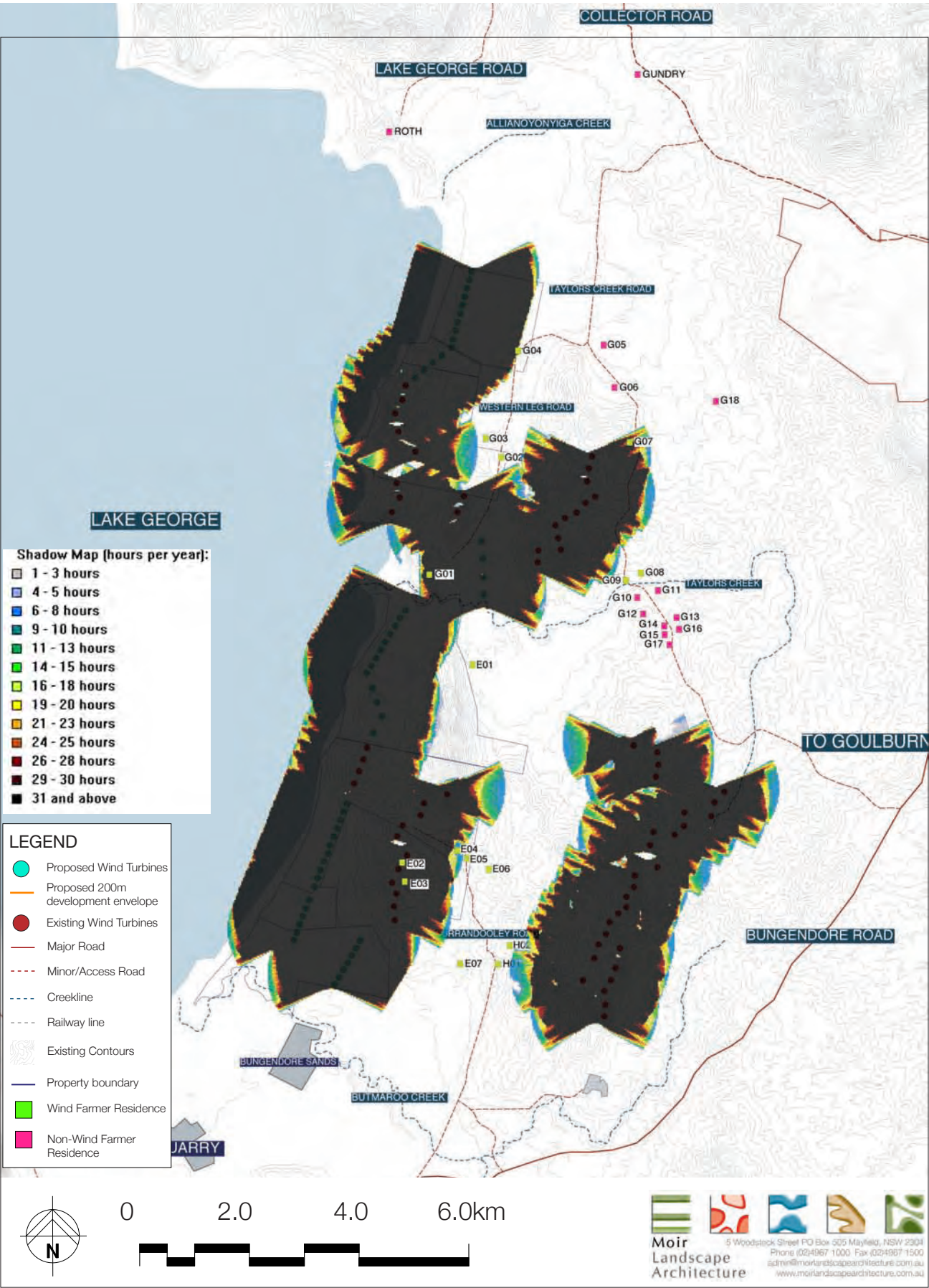


Figure 18: Shadow Flicker diagram (Based on assessment by Garrad Hassan, 2010).

8.0 Shadow Flicker, Reflectivity & Nightlighting (contd.)

RESIDENCE	HOURS AFFECTED PER YEAR	WIND FARM	WIND FARMER
E02- L'Orizon A	31 and above	Capital I Wind Farm	YES
E03- L'Orizon B	31 and above	Capital I Wind Farm	YES
E04- Ellenden A	11-13 hours	Capital I Wind Farm	YES
E05- Ellenden B	1-3 hours	Capital I Wind Farm	YES
G01- Panhandle	31 and above	Capital II Wind Farm	YES
G04- Lakoona	29-30 hours	Capital II Wind Farm	YES
G07- Euroka	24-25	Capital I Wind Farm	YES

Table 10: Residences affected by Shadow Flicker.

8.2 Blade Glint & Reflectivity

Blade Glint refers to the regular reflection off one or more rotating blades. This can be a temporary effect at any particular location, though the vast bulk of any glint occurs where the viewer is located above the altitude of the turbine hub. The occurrence of blade glint depends on a number of conditions including the orientation of the nacelle, angle of the blade, and the angle of the sun. (Aurecon, 2009)

At present there are no formal regulations or guidelines in NSW pertaining to Blade Glint. However the Victorian Wind Farm Guidelines proposes the following recommendations for managing blade glint.

- Evaluation Blades should be finished with a surface treatment of low reflectivity to ensure that glint is minimised.
- Blade glint can be effectively and cost effectively managed through the use of matt coatings on the turbine blades and, if so done, is not considered to be a visual impact.

Implementation of these recommendations should result in the mitigation of any actual or perceived impact.

8.3 Nightlighting

Night lighting of the wind turbines would potentially result in the alteration of the night time landscape character of the region. There will be no external night lighting of infrastructure associated with the development, including the wind turbines, other than low intensity security lighting unless otherwise agreed by the Director General or required by CASA.

As night lighting will not be an used on the Capital II Wind Farm turbines it should not be percieved a visual issue for this development.

9.0 Mitigation Methods

9.1 Summary of Mitigation Methods

These recommendations seek to achieve a better visual integration of the proposal and the existing visual character at both, local and regional scales. The mitigation measures attempt to lessen the visual impact of the proposed wind farm extension whilst enhancing the visual character of the surrounding environment.

Mitigation measures are best considered as two separate phases. These include:

- primary measures that forms part of the development of design through an interactive process;
- secondary measures designed to specifically address the remaining (residual) negative (adverse) effects of the final development proposals. (The Landscape Institute et al 2008)

A range of methods for mitigating the visual impact of the proposed Capital II Wind Farm have been identified and are outlined in this section of the VIA. The recommendations seek to achieve a better visual integration of the proposed Capital II Wind Farm and retention of existing landscape character at both local, and regional scales.

It is important to note that the mitigation methods proposed in this report are made notwithstanding issues raised by other consultants (eg. engineering, ecology, geology etc.) When site planning the wind farm the design should consider some or all of the following mitigation strategies to lessen the visual impact of the proposal. This is by no means an exhaustive list, however the adoption of these recommendations will assist considerably in ensuring the proposal contributes positively to the visual quality and character of the area.

9.2 Wind Farm Design Considerations

The design of the proposed wind farm is a primary measure of mitigation. The general principles employed through the project design phase can significantly reduce the visual impact. These include the siting principles, access, layout and other principles which directly impact the appearance of the proposed development. General guidelines for the design development of the proposed wind farm have been outlined in the following section.

9.2.1 Wind Turbines Layout and Size

The layout and size of the wind farm is the significant factor in the visual impact on the landscape. According to Stanton (1995) the intrusiveness of a wind plant is not directly proportional to the number of turbines in an array, and instead, more a factor of design feature. For example, large wind plants (defined as more than 70 turbines) may appear less dominating than a smaller project when the large wind plant is subdivided into several visually comprehensible units.

It is suggested that fewer and more widely spaced turbines present a more pleasing appearance than tightly packed arrays. (URBIS, 2009)

The following principles should guide the design process of the wind farm:

- Controlling the location of different turbine types, densities and layout geometry to minimise the visual impacts.
- The lines of turbines should reflect the contours of the natural landscape as best as possible.
- Ensure the turbines are evenly spaced to give a regular pattern creating a better balance within the landscape.

9.2.2 Wind Turbine Design and Colouring

Turbine design and colouring are an important factor. The wind turbines proposed for Capital II Wind Farm are consistent in their design with the existing turbines of Capital I Wind Farm. The turbines have a matte white finish and consist of three blades which is consistent with the existing turbines. It is understood that wind turbines with three blades are generally more balanced than turbines with only two blades (Arkesteijn and Westra, 1991).

The important factors to achieving a visual consistency through the landscape includes:

- Uniformity in the colour, design, rotational speed, height and rotor diameter.
- The use of simple muted colours and nonreflective materials to reduce distant visibility and avoid drawing the eye.
- Blades, nacelle and tower to appear as the same colour.
- Prohibit lighting except where required for the safety of aircraft to minimise the contrast between the wind farm and existing night time landscape of the area.

9.2.3 Associated Infrastructure

The following section outlines principles to assist in reducing the visual impact of the associated infrastructure.

ACCESS ROADS

- Existing access roads associated with Capital I Wind Farm will be utilised as much as possible to reduce the need for new roads.
- Allow for the provision for down sizing roads or restoring roads to existing condition following construction.
- Where possible utilise or upgrade existing roads, trails or tracks to provide access to the proposed turbines.
- Any new roads must minimise cut and fill and avoid the loss of vegetation.

9.0 Mitigation Methods (contd.)

TRANSMISSION LINES

- Where possible underground cabling is to be used to connect wind turbines to the electricity grid.
- Utilise existing transmission lines where possible.
- The route for any proposed overhead transmission lines should be chosen to reduce visibility from surrounding areas.

GENERAL PRINCIPLES

- No above ground infrastructure apart from the turbine itself and the transformer at the base of the turbine.
- Avoid the use of brand names logos etc.
- Avoidance of unnecessary lighting, signage on fences logos etc.
- Consideration should be given to controlling the type and colour of building materials used especially with the use of light, highly reflective cladding and brick and tile materials which contrast dramatically with the landscape character.
- Any proposed buildings to be sympathetic to existing architectural elements in the landscape.
- Minimise cut and fill throughout the construction process

9.3 Landscaping and Visual Screening

Visual screen planting is a beneficial mitigation method used to assist in the reduction of the wind farms visual impact. Dense wind break screen planting around homesteads and along property boundaries and roadsides forms apart of the existing visual character of the Bungendore/Lake George region. General guidelines to adhere to when planning for landscaping and visual screening include:

- Planting should remain in keeping with existing landscape character.
- Species selection is to be typical of the area.
- Planting layout should avoid screening views of the broader landscape.
- Avoid the clearing of existing vegetation. Where appropriate reinstate any lost vegetation.
- Allow natural vegetation to regrow over any areas of disturbance.

In order to achieve visual screen planting between the intrusive element visual screen planting is to be undertaken. The existing character of the landscape allows for a variety of methods of visual screening which will remain in keeping with the landscape character.

Foreground visual planting is to be undertaken in areas of high visual sensitivity, such as close to residences and other areas requiring amelioration. Due to the large scale nature of the wind turbines, the most effective method of visual mitigation is through off-site screen planting. This is best undertaken close to the viewpoint. Locations of recommended foreground visual screening are shown in Figure 20 and examples of screen planting in place are demonstrated in Figures 22 and 24.

In circumstances where residences are subject to a high level of visual impact, screen planting is proposed. In order to achieve visual screening planting between the intrusive element and the homestead, tree planting should be undertaken in consultation with the relevant landowners to ensure that desirable views are not inadvertently eroded or lost in the effort to mitigate views of the turbines.

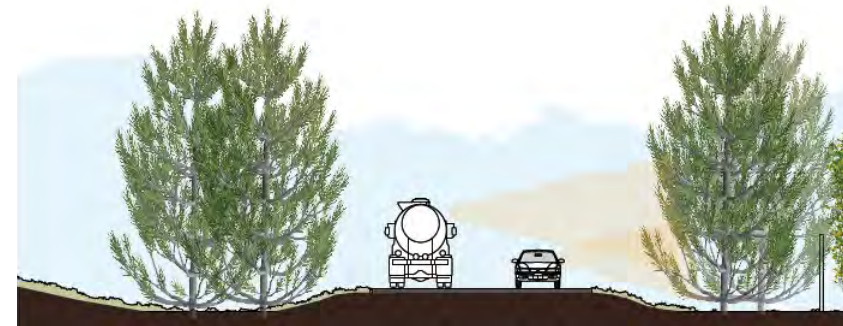


Figure 19: Roadside screen planting.



Exsiting Homestead foreground planting.



Existing screen planting along Tarago Road.

9.4 Visual opportunities

The proposed Capital II Wind Farm is a progressive development for renewable energy which, due to the relatively large scale and new technology, is bound to be of interest to viewers. Opportunities exist for the provision of education viewing areas at various locations around the site. The integration of a viewing area where visitors would be able to safely view the wind farm and surrounding renewable energy development would be a positive attribute to the development. Combined with interpretive signage these viewing areas would provide insight into the function, output and benefits of large scale wind farms.



Viewing Platform- Albany.



Informative Signage- Hopetoun WA.

9.0 Mitigation Methods (contd.)



Figure 20: Landscape Visual Impact Mitigation Principles.



Figure 21: Photomontage of proposed Wind Turbines from Taylors Creek Road.



Figure 22: Photomontage of proposed Wind Turbines from Taylors Creek Road with roadside screen planting.



Figure 23: Photomontage of proposed Wind Turbines from Taylors Creek Road.



Figure 24: Photomontage of proposed Wind Turbines from Taylors Creek Road with screen planting along the ridgeline.

10.0 Conclusion

The proposed development is an extension of the existing renewable energy source of Capital Wind Farm along the uninhabited rural land on the eastern shores of Lake George. Capital II Wind Farm would result in impacts on the existing surrounding environment in terms of landscape and scenic values. The proposed wind farm contrasts with the existing landscape character of the region which is typically rural, pastoral land.

With all visual impact assessments the objective is not to determine whether the proposed impact is visible or not visible, it is to determine how the proposal will impact on the existing visual amenity, landscape character and scenic quality. If there is a potential for a negative impact on these factors it must then be investigated if and how this impact can be mitigated to the extent that the impact is reduced to an acceptable level.

Although this VIA quantifies the visual impact of the proposed wind turbines, the overall visual impact of the wind farm will vary greatly depending on the individual viewers sensitivity to and acceptance of change. The sensitivity towards change varies greatly depending on the users connection with the landscape. For example visitors of the region traveling along the Federal Highway (especially tourists) may perceive the wind farm as an interesting feature of the landscape. This may contrast with a residents perception of the change who may be more critical of the development. Wind turbines have a simplicity in form especially when compared to transmission lines, towers and associated infrastructure, and can almost be considered a temporary installation in the landscape due to their modular construction.

In comparison to the existing turbines of Capital I Wind Farm, the proposed turbines are located on a much lower elevation and will therefore have a smaller zone of visual influence. The greatest visual effect is most likely to be felt from residents in the immediate vicinity of the wind farm. However in most instances, the homesteads have dense bands of vegetation protecting the house from strong westerly winds which will screens views of the proposed turbines.

From many vantage points within the local setting, a combination of the topography and local influences such as existing natural and introduced vegetation significantly reduce visibility.

The entire development will be visible from the Federal Highway, however the wind turbines are sited approximately 8km (at the nearest point) from the highway. This is considered to be a regional scale and the distance from the site obscures the views ultimately decreases any visual impact.

Amelioration methods incorporated into the design process in conjunction with landscape and visual screening will have a positive effect on reducing any visual impact of proposed wind farm. Through mitigation methods described it will be possible to significantly reduce the visual impact to an acceptable level at sensitivie viewpoints such as rural residential properties.

It is undeniable that the placement of additional wind turbines into the rural landscape will alter the existing landscape character of the area. However the existing Capital I Wind Farm has formed a precedent for change in the landscape, and has established a distinct ‘sustainable’ element

to the landscape character of the region. Considering the character of existing and proposed development in the region in addition to the suggested mitigation methods, the visual landscape of the region has the capacity to absorb the proposed development.

It is in the professional opinion of Moir Landscape Architecture Pty Ltd that the proposed development will visually integrate into the landscape resulting in a low visual impact on the existing landscape character and visual amenity.

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