

7.0 Visual Impact (contd.)

7.2 Viewpoint Analysis

This part of the visual assessment considers the likely impact that development would have on the existing landscape character and visual amenity by selecting prominent sites, otherwise referred to as viewpoints.

7.2.1 Viewpoint Selection Process

Viewpoints are selected to illustrate a combination of the following:

- Present landscape character types.
- Areas of high landscape or scenic value.
- Visual composition (eg. focused or panoramic views, simple or complex landscape pattern).
- Range of distances.
- Varying aspects.
- Various elevations.
- Various extent of wind farm visibility (full and partial visibility).
- Sequential along specific routes.

Viewpoints have been carefully selected to be representative of the range of views within the study area. The selection of viewpoints is informed by ZVI and topographical maps, field work observations and other relevant influences such as access, landscape character and the popularity of vantage points.

A total of 32 viewpoints were taken as apart of the field work process. Of these 32 viewpoints, 18 have been selected for inclusion in the report. The viewpoints which have been included represent the areas from where the development would appear most prominent, either based on the degree of exposure or the number of people likely to be affected.

It is important to note that viewpoints for this study have been taken only from accessible public land, however this does incorporate viewpoints adjacent to residences potentially affected by the development.

7.2.2 Process of Viewpoint Analysis

Once the viewpoint had been selected, panoramic photographs were taken at eye level from the viewpoints towards the site. Photographs were taken with a Canon 40D digital SLR through a 50mm fixed focal lens (Equivalent to 80mm on 35mm).

The visual impact of the viewpoint was then assessed both on site and with the topographic and aerial information to ensure accuracy. Viewpoint photographs and analysis is included the following pages. The findings of each viewpoint analysis have been quantified and are summarised in tables 7 and 8.

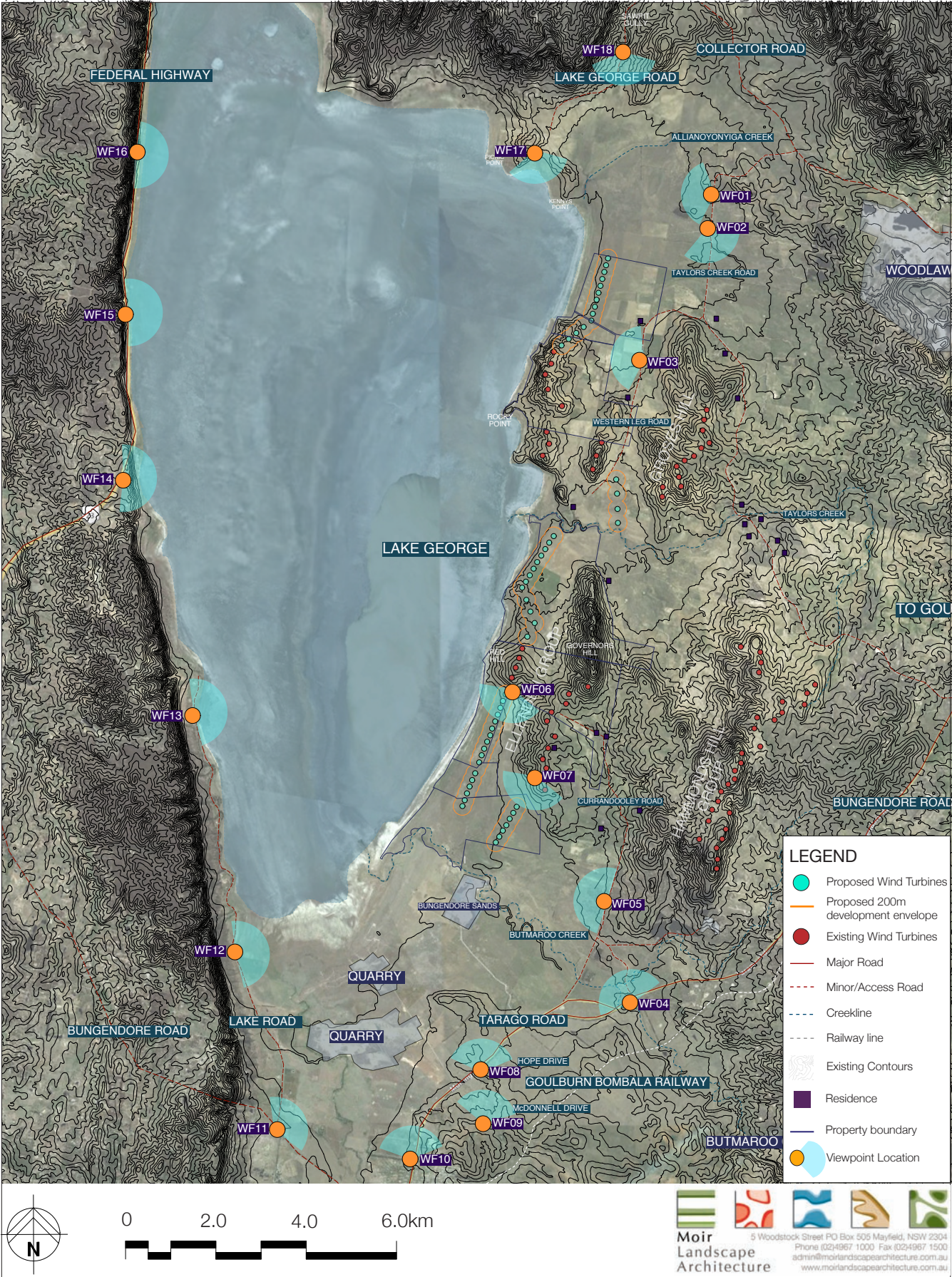


Figure 13: Assessment Viewpoint Locations.



Viewpoint WF02: View looking SW from Taylors Creek Road, approximately 3km SW of Collector Road.



Photograph cropped from Viewpoint WF02.

VIEWPOINT WF02		DESCRIPTION:	COMMENTS:
Location	Taylors Creek Road	Photograph taken looking down Taylors Creek Road approximately 3km south west of the Collector Road intersection. The photograph was taken from relatively flat topography looking in a SW direction across flat pastoral land which slopes gently towards Lake George. Existing wind turbines visible in the left of the photograph form part of the Grosses Hill Group. An existing homestead is visible towards the centre of the photograph. The escarpment of the Lake George Range is visible in the background in the centre of the photograph.	From this viewpoint the proposed northern group of wind turbines (14 in total) would be visible. The turbines would be seen as an expansion of the existing Groses Hill, continuing from the ridge line and along the shore of Lake George. The tips of the proposed central group of turbines are likely to be visible between the existing Groses Hill group of turbines. The existing wind break vegetation will provide a minor degree of visual screening.
Coordinates	S 35° 02.855' E 149° 32.076'		
Elevation	717m		The visual sensitivity and visual effect from this viewpoint have both been assessed as moderate, resulting in an overall visual impact of low. A photomontage has been prepared from this viewpoint and has been included as Photomontage 3 (Refer to Plate 3).
LCU	Taylors Creek Catchment		
Viewing Distance (to nearest proposed turbine)	2.2km		
Landuse	Unsealed Access Road		
Visual Sensitivity	Low		
Potential Visual impact	Moderate		



Viewpoint WF04: Property off Tarago Road



Photograph cropped from Viewpoint WF04.

VIEWPOINT WF04		DESCRIPTION:	COMMENTS:
Location	Tarago Road	View from the access road to the property 'Werriwa' off Tarago Road. In this area the landscape is typified by cleared pastoral land with a sparse coverage of native woodland along the ridge lines. The existing wind turbines sited along Governors Hill are visible in the background. 330kV power lines transverse the landscape and are visible in the middle ground of the photograph. From this viewpoint traveling south the landscape forms part of the Bungendore Plain, which is characterised by low rises and generally flat topography.	From this viewpoint the proposed southern turbines would be visible to the south west across relatively flat land associated with the Bungendore Plain. The northern and central group of turbines will be screened by natural topography. The visual sensitivity from this viewpoint has been assessed as low and the visual impact has been assessed as moderate resulting in an overall visual impact assessment of low.
Coordinates	S 35° 12.450' E 149° 29.837'		
Elevation	701m		
LCU	Tarago-Bungendore Road		
Viewing Distance (to nearest proposed turbine)	4.6km		
Landuse	Road		
Visual Sensitivity	Low		
Potential Visual impact	Moderate		



Viewpoint WF05: View across landing Strip off Currandooley Road towards Lake George.



Photograph cropped from Viewpoint WF05.

VIEWPOINT WF05		DESCRIPTION:	COMMENTS:
Location	Currandooley Road, Landing Strip	View looking west from Currandooley Road adjacent to a rural landing strip. The existing Ellenden Group of wind turbines are visible on the right-hand side of the photograph. Bungendore Sands Quarry is partially visible in the background distance and the southern extent of woodland. The landscape is typically cleared grazing land within a low-lying, flat topography. A sparse coverage of remnant woodland vegetation occurs in clumps through the landscape. Views from this point extend across Lake George to the Lake George Range which is visible in the background.	From this viewpoint the proposed southern extent of the wind turbines will be visible. The southern extent of the proposed wind farm is located directly behind the landing strip on the low-lying land on the perimeter of Lake George. Views to the central and northern group of wind turbines will be obstructed from this point through a combination of topography and vegetation. The visual sensitivity from this viewpoint has been assessed as low, and the visual impact has been assessed as high resulting in an overall visual impact assessment of moderate.
Coordinates	S 35° 11.138' E 149° 29.516'		
Elevation	694m		
LCU	Bungendore Rural Plain		
Viewing Distance (to nearest proposed turbine)	2.8km		
Land Use	Rural Access Road		
Visual Sensitivity	Low		
Potential Visual impact	Moderate		A photomontage of the proposed development has been prepared from this viewpoint and is included in this report as Photomontage 4 (Refer to Plate 4).



Viewpoint WF06: 180° view from Red Hill.

VIEWPOINT WF06		DESCRIPTION:	COMMENTS:
Location	Red Hill	180 degree view from the existing group of turbines located on Red Hill looking south down Lake George towards Bungendore. The existing turbine furthest to the right is Turbine 20 and the turbine in the central foreground of the photograph is Turbine 21. The Governors Hill turbines are visible on the left hand side of the photograph and in the background beyond these the Hammond's Hill group are also observable. The proposed southern extent of wind turbines are located on the plain in the middle ground of the photograph at the base of the hills. The hills partially visible in the background of the photograph form part of the Lake George Range.	The proposed extension of the Capital Wind Farm will be significant from this viewpoint. All proposed wind turbines will be visible. The visual sensitivity from this viewpoint is assessed as low and the visual impact as moderate. The overall visual impact from this viewpoint has been assessed as low.
Coordinates	S 35° 08.577' E 149° 28.206'		
Elevation	774m		
LCU	Groses Hill		
Viewing Distance (to nearest proposed turbine)	0.2km		
Landuse	Existing wind farm		
Visual Sensitivity	Low		
Potential Visual impact	Low		



Viewpoint WF08: Corner of Bungendore Road & Hope Drive



Photograph cropped from Viewpoint WF08.

VIEWPOINT WF08		DESCRIPTION:	COMMENTS:
Location	Tarago Road & Hope Drive	View looking north from the entry to Hope Drive off Tarago Road. From this viewpoint looking east up Tarago Road the existing Hammonds Hill wind turbines are visible in the background. From this point the southern group of turbines affiliated with the proposed wind farm will be visible. Exotic pine planting on the perimeter of Tarago Road can be seen on the right hand side of the photograph. These Pine plantings provides a visual buffer for residents on Hope Drive.	From this viewpoint the southern group of wind turbines will be visible, yet buffered by existing topography and vegetation. Views to the northern and central groups of turbines will be impeded by topography and distance. The visual sensitivity and visual effect from this viewpoint has been assessed as low, resulting in an overall visual impact of low. A photomontage has been developed from this viewpoint and is included as Photomontage 5 (Refer to Plate 5).
Coordinates	S 35° 13.183' E 149° 27.785'		
Elevation	719m		
LCU	Bungendore Rural Plain		
Viewing Distance (to nearest proposed turbine)	5.0km		
Landuse	Local road		
Visual Sensitivity	Low		
Potential Visual impact	Low		



Viewpoint WF09: Top of McDonnell Road



Photograph cropped from Viewpoint WF09.

VIEWPOINT WF09		DESCRIPTION:	COMMENTS:
Location	McDonnell Drive	View from the highest point of McDonnell Drive looking northeast towards the proposed Capital II Wind Farm. McDonnell Drive is characterised by rural residential properties with a gently undulating landscape of cleared paddocks with a sparse covering of trees. The lineal planting of Pine trees in the background of the photograph align with the southern edge of Tarago Road. Housing associated with Hope Drive can be seen in the middle ground of the photograph, with the turbines associated with Hammonds Hill in the background. The blades of existing Ellenden Group turbines are visible to the left of Hammonds Hill.	From this viewpoint the tips of the proposed southern group of turbines will be visible. The central and northern groups of turbines will be obstructed by topography. A combination of the undulating topography, dense wind break planting and the low lying ground level of the proposed turbines will obscure views of the southern turbines from this viewpoint. The visual sensitivity of this viewpoint has been assessed as moderate and the visual impact as low which results in an overall visual impact of low.
Coordinates	S 35° 13.736' E 149° 27.637'		
Elevation	723m		
LCU	Bungendore Rural Plain		
Viewing Distance (to nearest proposed turbine)	6.2km		
Landuse	Rural residential estate		
Visual Sensitivity	Moderate		
Potential Visual impact	Low		



Viewpoint WF10: Tarago Road- Opposite tip



Photograph cropped from Viewpoint WF10.

VIEWPOINT WF10		DESCRIPTION:	COMMENTS:
Location	Tarago Road	Photograph taken in a northerly direction from the roadside of Tarago Road opposite the entry road to Bungendore Tip. The landscape of this area is typified by open rural land with dense planting along the roadside and surrounding homesteads. Rural residential properties are sited throughout the landscape. In the background left of the photograph is the escarpment of the Lake George Range. Looking north east along Tarago Road existing wind turbines of Hammond Hill are visible in the background.	From this viewpoint the proposed extension of the Capital Wind Farm will be visible. The tips of the southern group of wind turbines will be visible, yet obstructed by existing vegetation and topography. The visual sensitivity of this viewpoint has been assessed as low, and the visual effect of the additional wind turbines has been assessed as low. The overall potential visual impact of the proposal from this viewpoint has been assessed as low.
Coordinates	S 35° 14.268' E 149° 26.643'		
Elevation	705m		
LCU	Bungendore Rural Plain		
Viewing Distance (to nearest proposed turbine)	7.5km		
Landuse	Local Road		
Visual Sensitivity	Low		
Potential Visual impact	Low		



Viewpoint WF11: Beginning of Lake Road off Bungendore Road



Photograph cropped from Viewpoint WF11.

VIEWPOINT WF11		DESCRIPTION:	COMMENTS:
Location	Corner of Lake Road & Bungendore Road	View north east from Lake Road, approximately 500m from Bungendore Road. Lake Road is an unsealed access road which provides access to isolated rural residential properties. The road runs along the south western perimeter of Lake George at the foot hills of the Lake George Range. The landscape is typical of the Bungendore Plain LCU, with cleared grazing land and bands of wind break planting. Views exist towards the existing Capital I wind turbines along the ridge lines in the distance.	The southern group of proposed Capital II turbines will be potentially noticeable from Lake Road, due to the flat topography of the foreground. As the proposed wind turbines are sited along the low lying topography views will be insignificant, appearing as small lines on the horizon. Views to both the central and northern groups of turbines will be screened through a combination of distance, topography and existing vegetation.
Coordinates	S 35° 13.787' E 149° 24.705'		
Elevation	711m		
LCU	Bungendore Rural Plain		
Viewing Distance (to nearest proposed turbine)	7.6km		
Landuse	Rural access road		
Visual Sensitivity	Low		
Potential Visual impact	Low		



Viewpoint WF12: View across Lake George from Lake Road.



Photograph cropped from Viewpoint WF12.

VIEWPOINT WF12		DESCRIPTION:	COMMENTS:
Location	Lake Road	View from Lake Road approximately 4.5km north of Bungendore Road. Lake Road runs along the south western edge of Lake George and is an unsealed access road utilised by isolated homesteads. The photograph was taken looking east across Lake George towards the proposed wind farm site. The topography of the area is flat and low lying, typical of the Lake George Plain. A steep rise in topography associated with the Lake George Range is visible in the far right of the photograph. The existing wind turbines of Capital Wind Farm are visible on the ridges of the hills in the background of the photograph.	From this viewpoint the proposed extension of the Capital Wind Farm will be visible. The southern and central group of the proposed wind farm will be visible from this point due to a lack of vegetation and the flat topography. The northern group of wind turbines are located approximately over 15km from this viewpoint and therefore the visibility will be obscured by distance. The visual sensitivity from this viewpoint has been assessed as low and the visual effect as moderate which results in an overall potential visual impact of low. A photomontage has been prepared from this viewpoint and is included in this report as Photomontage 6 (Refer to Plate 6).
Coordinates	S35° 11.716' E 149° 24.050'		
Elevation	683m		
LCU	Lake George Plain		
Viewing Distance (to nearest proposed turbine)	5.2km		
Landuse	Rural access road		
Visual Sensitivity	Low		
Potential Visual impact	Low		



Viewpoint WF13: View across Lake George from homestead at the end of Lake Road.



Photograph cropped from Viewpoint WF13.

VIEWPOINT WF13		DESCRIPTION:	COMMENTS:
Location	Lake Road	View from the entry to the property at the northern most point of Lake Road, looking east towards the study site. Lake Road is an unsealed access road which is utilised by a number of isolated rural homesteads. The proposed Site is located to the east, across the open, flat expanse of Lake George. The landscape is typically open grazing land with no visible alterations in topography. The existing wind turbines associated with the Capital I Wind Farm (Hammonds Hill Group and Ellenden Group) are visible along the ridge lines of hills in the centre of the photograph. Further north the existing turbines of the Groses Hill Group are only slightly visible, obscured by distance.	The proposed turbines of Capital II wind farm are sited on the low lying land adjacent the existing wind turbines. From this viewpoint all 55 turbines will be visible, however the northern group will be obscured by distance. The visual sensitivity from this viewpoint has been assessed as low and the visual effect as moderate. The overall potential visual impact from this viewpoint has been evaluated as being low.
Coordinates	S 35° 08.842' E 149° 23.470'		
Elevation	684m		
LCU	Lake George Plain		
Viewing Distance (to nearest proposed turbine)	5.7km		
Landuse	Isolated homestead		
Visual Sensitivity	Moderate		
Potential Visual impact	Low		



Viewpoint WF14: Weereewa Lookout



Photograph cropped from Viewpoint WF14.

VIEWPOINT WF14		DESCRIPTION:	COMMENTS:
Location	Federal Highway	This photograph was taken from the Weereewa Lookout, a high vantage point located centrally on the western shoreline of Lake George. This rest area is the southern most point of the section of the Federal Highway which extends along the edge of Lake George. It is at this point traveling north along the Federal Highway that the wind turbines become visible. The photograph is taken in a generally easterly direction across the flat, open expanse of Lake George towards the Site. Existing wind turbines associated with Capital I are visible along the ridge lines to the east of Lake George.	From this viewpoint the proposed Capital II wind turbines will be visible along the eastern Lake George shore. The wind turbines will be seen as an extension of the existing Capital I Wind Farm. From this lookout views of the proposed wind turbines will be obscured by distance. The visual sensitivity from this viewpoint has been assessed as low, with visual effect of the proposed development is assessed as moderate, this results in an overall potential visual impact of low.
Coordinates	S 35° 06.061' E 149° 22.517'		
Elevation	711m		
LCU	Lake George Plain		
Viewing Distance (to nearest proposed turbine)	8.9km		
Landuse	Rest Area		
Visual Sensitivity	Low		
Potential Visual impact	Low		