

6.0 The Proposal

6.1 Proposed Wind Farm Layout

The proposed Capital II Wind Farm consisting of 55 wind turbines will be sited within 2km to the east of the shores of Lake George. The wind turbines are sited in a generally linear groups with even spacings between proposed turbines of approximately 157 metres. For the purpose of this VIA the layout of the proposed wind farm has been divided into three distinct groups, the northern group, central group and southern group of wind turbines, as shown on Figure 7.

It important to note the layout identified in Figure 7 is based on worst case scenario and each turbine has a development envelope of 200m.

Northern Group

The northern group of the wind farm consists of 14 wind turbines located along the north-eastern shore of Lake George to the west of Taylors Creek Road, and south of Allianoynyiga Creek. The group is spread over two properties. The northern part of the group consists of ten turbines sited in parallel with the shoreline of Lake George in a NNE direction. The remaining four turbines run south west towards the ridge currently occupied by the existing Grose Hill wind turbines.

Central Group

The central group of turbines is comprised of 17 wind turbines arranged in two groups. A lineal arrangement of 9 turbines are sited immediately south of Taylors Creek, running along the low lying topography on the shores of Lake George in a south west direction. Four additional turbines extend from the south of the row in a south eastern direction towards the ridge line of Red Hill to align with the existing Ellenden Group of wind turbines. A smaller group of four turbines is located adjacent Western Leg Road and runs in a south-north direction towards Taylors Creek, approximately 1.6km east of Lake George.

Southern Group

The southern group of turbines is the largest of the groups, being formed by 24 wind turbines. The group consists of two distinct groups. The larger of the two includes 17 turbines which extend from the existing turbines sited along the ridge line of Red Hill. The are arranged in a lineal formation in a south western direction. An additional 7 turbines are sited roughly 1km south-east.

The proposed Capital II Wind Farm is sited on comparatively low land when compared with the existing Capital One turbines. The existing wind turbines associated with Capital Wind Farm are generally sited on the ridges reaching heights ranging from 750m to 935m. The proposed wind turbines associated with Capital II Wind Farm are located on low lying land ranging from 680m (on the shores of Lake George) up to 710m (on Red Hill).

In addition to the wind turbines, associated infrastructure is included as part of the proposal. An overview of these additional components is included in Section 6.2 of this report.

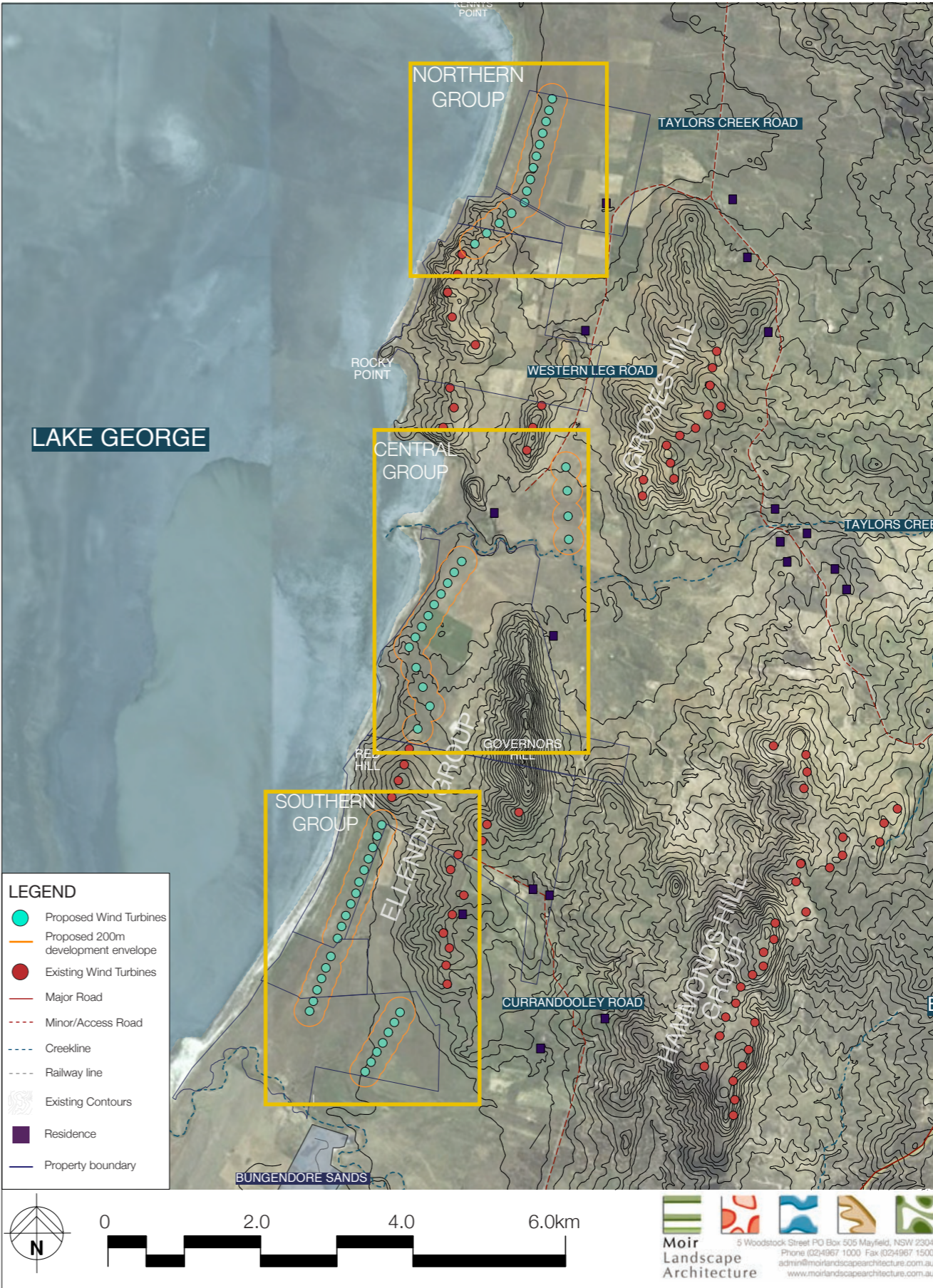


Figure 7: Proposed Wind Farm Layout.

6.0 The Proposal (contd.)

6.2 Wind Turbine Design

6.2.1 Wind Turbine Design

The wind turbines proposed for the development have an overall height of approximately 157m above ground level. Supporting towers taper from 6 metres diameter at the base to 3 metres at the top. The three blades are approximately 55m long from the hub to the tip and have a diameter of approximately 113.3m. (See Figure 8 and Table 6). Each wind turbine will have a generator transformer located at the base of the structure.

The proposed wind turbines of the Capital II Wind Farm are slightly taller than the existing Capital I Wind Turbines. However the overall appearance (colour, number of blades etc.) is consistent with the Capital I Wind Farm and as the proposed turbines are located on a significantly lower elevation to those associated with Capital I, the turbines will have a visual consistency.

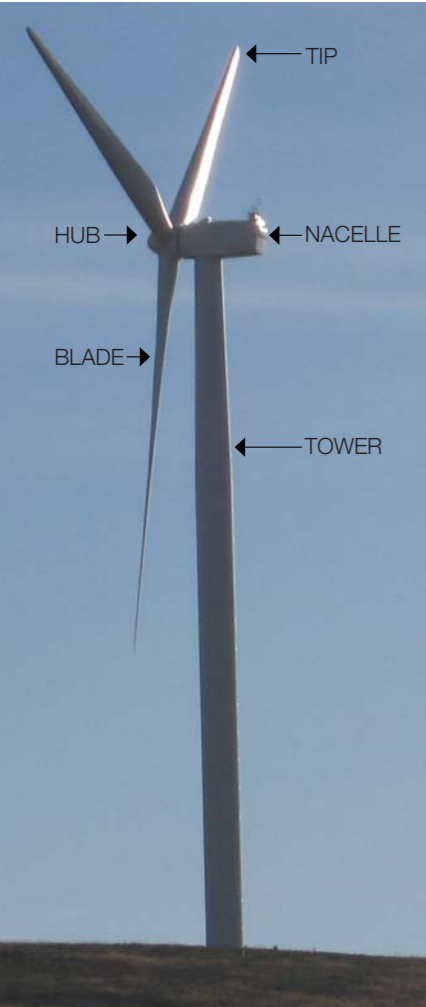


Figure 8: Wind Turbine.

COMPONENT	NUMBER/SIZE
Total number of Turbines	55
Hub Height	100m
Blade Length	55m
Number of Blades	3
Rotor Diameter	113.3m
Tower (Tapered tubular steel)	6m at base to 3m at tip
Overall height (to tip of blade)	157m
Nacelle	15m x 5m
Colour	Matte White
Swept Area	10205m2
Generator transformer	Located at the base of each turbine

Table 6: Details of Proposed Wind Turbines.

6.3 Associated Infrastructure

The visual character of the associated components proposed for the development of Capital II Wind Farm which may have a visual effect are outlined in this section of the VIA.

6.3.1 Access Roads

Proposed access roads consist of four additional roads, extending from existing access roads. These roads run along the base of the proposed wind turbines and are typically located on the flat topography of the Lake George shore, requiring minimal cut and fill. The roads are generally an extension of existing farm roads. Existing access tracks are at ground level and are generally not visible from surrounding viewpoints.

Gravel access roads will be installed to provide access to each tower and road length and width will be kept to a minimum. Following installation of the turbines it is envisaged that temporary access roads will be returned to grazing land or utilised as farm roads. Site entrances will be gated, signposted and set back from major roads.

6.3.2 Substation

The existing Capital electrical substation is located approximately 1.6km north of Tarago/ Bungendore Road at the foot of Hammonds Hill and comprises the main building, switchyard, fencing and associated infrastructure.

6.3.3 Connection to the Grid

Electrical works involve connection to the distribution network via an underground or overhead connection line, depending on the voltage of the transmission line it is proposed that Capital II Wind Farm will ultimately connect to the existing Capital I Wind Farm infrastructure.

Connection to the electricity grid is via a 33,000/330,000 volt substation located adjacent to the existing 330,000 volt transmission lines. Underground power and control cables connect the turbines within each group. A 12km section of overhead 33kv power line connects the Grose Hill, Ellenden and Hammonds Hill Groups to the substation.