

## **Section 5: Adverse Effects**

What are the anticipated and known adverse effects of the project on the environment.

## 1.1 Ruarangi

The following matters have been identified as anticipated and known effects for Ruarangi:

Landscape and visual – A section of the Wind Farm envelope forms part of an Outstanding Natural Landscape Area to the north and west of the site. No development activities including turbine placement, access roads, earthworks or grid connection infrastructure will overlap with the Outstanding Natural Landscape Area overlay.

s 9(2)(b)(ii)

. Both areas are protected under the Reserves Act 1977 s 9(2)(b)(ii)

are also recognised as an Outstanding Natural Area. No development activities including turbine placement, access roads, earthworks or grid connection infrastructure will occur within these land parcels. Importantly, access for the wind farm development and laydown areas will be on the western edge of the development envelope away from these effects.

Cultural/archaeological effects – Several iwi/hapū have interests in the area, as identified in Section 4. We are aware of potential archaeological sites of interest on Kauri Forestry Limited Partnership land. Ongoing consultation with iwi/hapū will ascertain the extent and importance of these sites. The default position of Aquila is to avoid these areas for development and provide appropriate setbacks/buffer distances for all construction phase activities. Turbine placement will be on exposed ridges that are not anticipated to overlap with any known site of interest.

**Ecology (flora and fauna)** – The site is in proximity to dense indigenous and exotic vegetation. No turbines will be placed within dense vegetation and existing access tracks and ridgelines for access will be utilised where possible. Results from the avifauna assessment will determine demonstrable effects of the wind farm development and provide recommendations utilizing the avoid, remedy, mitigate hierarchy.

**Surface Water** – Several waterways intersect the site. The turbines are to be placed at a higher topography. Construction phase stormwater will be managed to ensure any effects on waterways are minimised. Carefully drafted resource consent conditions and a detailed Erosion and Sediment Control Plan will be important tools to manage anticipated environmental effects. It is not anticipated that the operation phase of the wind farm will have any effect on waterways.

**Noise** – Isolated residential dwellings are located within 1200m of some proposed turbine locations. If the noise assessment identifies that turbine noise will be an issue for dwellings outside the wind farm envelope, the positioning of the turbines can be altered to ensure noise standards are met at 20m from the nearest façade of the identified residential dwellings. Resource consent conditions will ensure that noise standards are adhered to.

**Geotechnical and Natural Hazards** – Landslides, inferred landslides, settlement, foundation conditions, and regional seismicity have all been explored. Further engineering geological mapping will determine whether any of the proposed turbines require shifting on the site.

Construction impacts – access, laydown, earthworks, and civil engineering have already been included in the project planning. A suggested route for internal site roads has been produced making use of existing access tracks already available. § 9(2)(b)(ii)

Based on this assessment, the information received and subject to any required route and/or infrastructure modifications, it is anticipated that the wind farm components can be transported from s 9(2)(b)(ii) on the route recommended.





