

# KAPUNI GREEN HYDROGEN PROJECT

## Landscape and Visual Effects Assessment

APPENDIX 3  
Marae Locations

Prepared for Hiringa Energy by Boffa Miskell Ltd  
May 2021





# KAPUNI GREEN HYDROGEN PROJECT



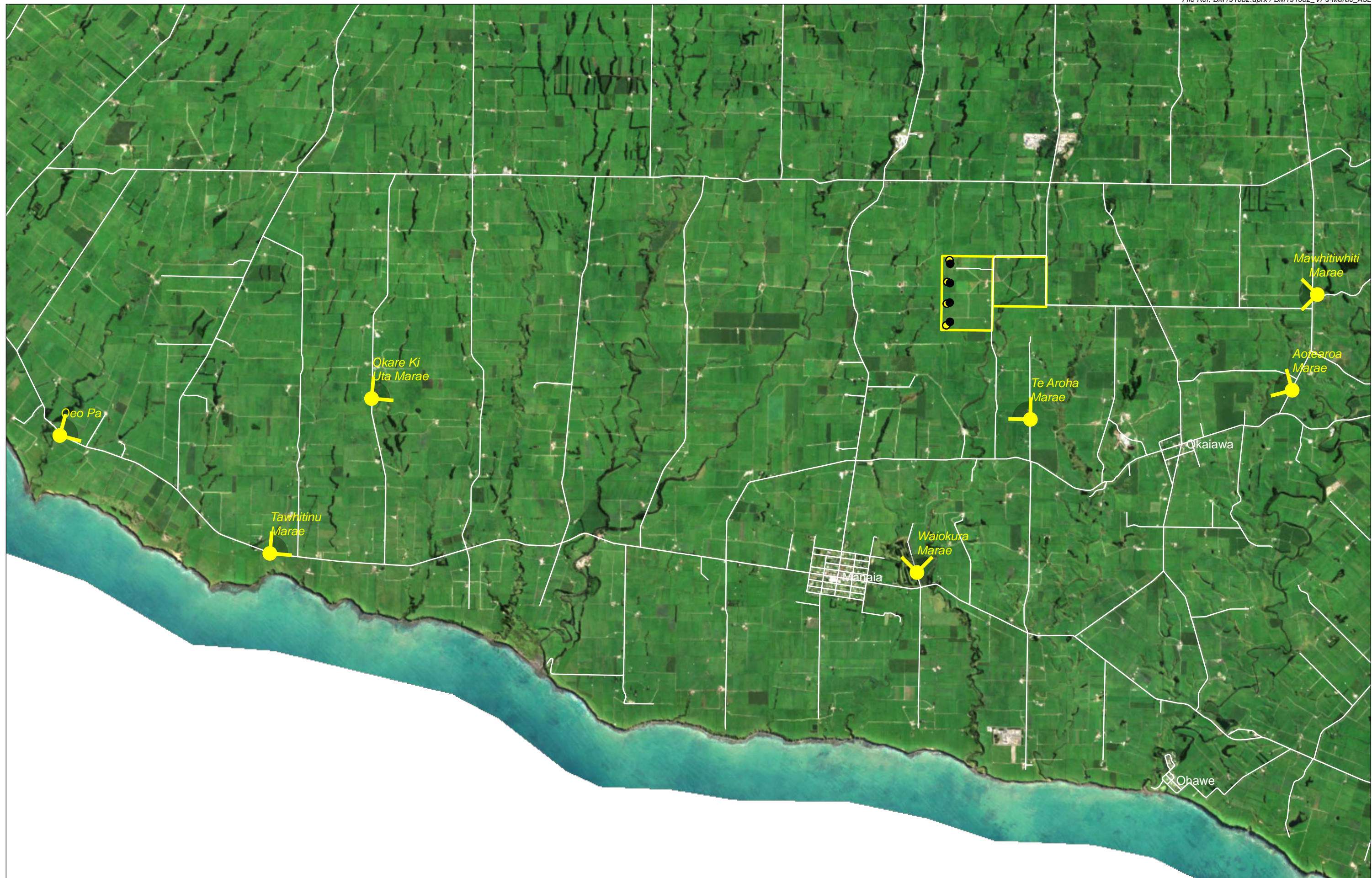
## VISUALISATIONS

FIGURE 22: Viewpoint Location Map

FIGURE 23: Visual Simulations - Process

H71-A:	Adjacent to Te Aroha Marae, Inaha Rd	- Panorama (Revised Layout)
H71-B:	Adjacent to Te Aroha Marae, Inaha Rd	- Single Frame (Revised Layout)
H109-A:	View from Aotearoa Marae, Hastings Rd	- Panorama (Revised Layout)
H109-B:	View from Aotearoa Marae, Hastings Rd	- Single Frame (Revised Layout)
H109-C:	View adjacent to Aotearoa Marae, Hastings Rd	- Single Frame (Revised Layout)
H111-A:	View from Waikura Marae, 27 Winks Road	- Panorama (Revised Layout)
H111-B:	View from Waikura Marae, 27 Winks Road	- Single Frame (Revised Layout)
H112:	View from Mawhitiwhiti Marae, 7 Omahuru Rd	- Wireframe & Google Earth Street View (Revised Layout)
H113:	View from Oeo Pa, 2915 South Road	- Wireframe & Google Earth Street View (Revised Layout)
H114:	View from Okare Ki Uta Marae, Taikatu Rd	- Wireframe & Google Earth Street View (Revised Layout)
H115:	View from Tawhitinu Marae, 2453 South Road	- Wireframe & Google Earth Street View (Revised Layout)





LEGEND



viewpoints



Site Boundary

● Original Layout

● Revised Layout

KAPUNI GREEN HYDROGEN PROJECT

Viewpoint Locations (Marae)

Date: 12 May 2021 | Revision: 0

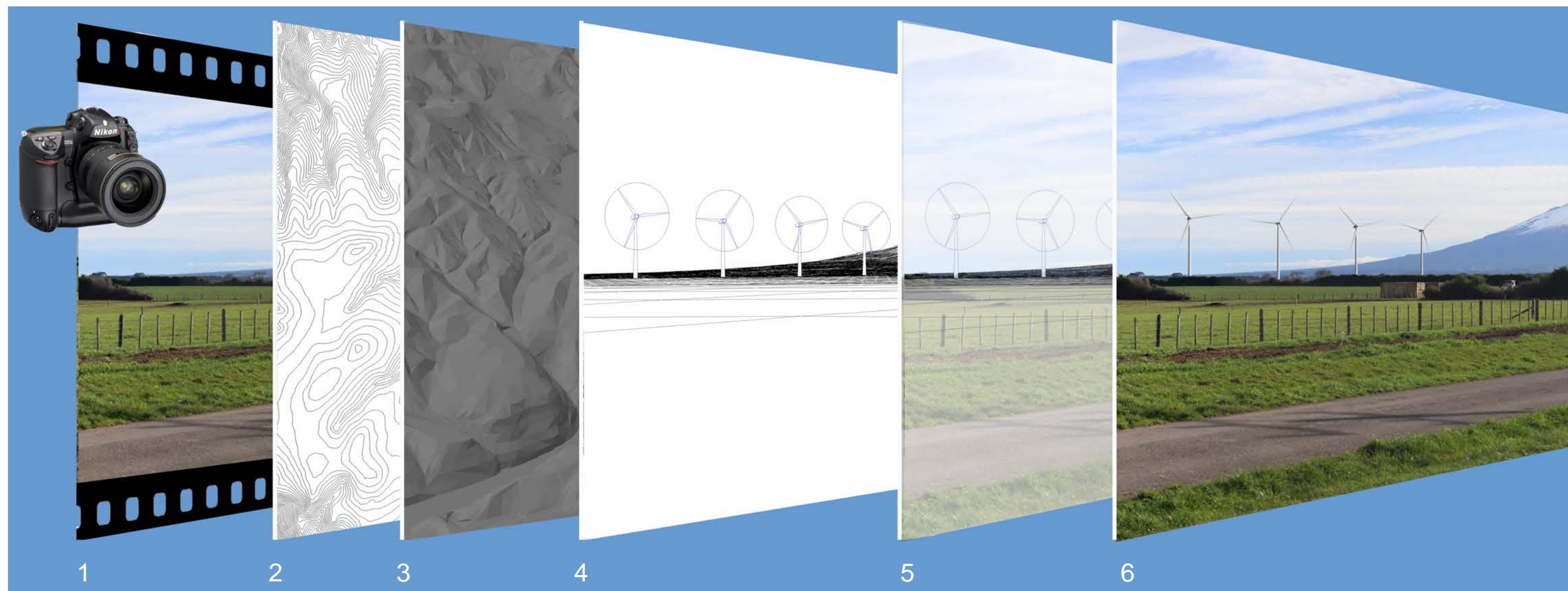
Plan prepared for Hiringa Energy by Boffa Miskell Limited

Project Manager: boyden.evans@boffamiskell.co.nz | Drawn: PMo | Checked: BEv

FIGURE

22





1 Site photographs were taken using a digital camera fitted with a 50mm focal length lens. The camera was mounted on a tripod and panoramic head and the photos taken in portrait mode. Multiple photos were digitally stitched together to form a series of 90° panoramas.

2 3D contour data was obtained for an area of 7.5km (north-south) x 185 km (east-west). This coverage was chosen to include Tongariro National Park, as it was necessary to be able to identify this feature in those viewpoints facing east.

3 Using Windfarm 5 software, a 3D digital terrain model was created from the contours.

4 Camera “viewpoints” were created for each location from which photographs were taken and simulations required. There are camera setups for both public (roadside) viewpoints and private (residential) viewpoints included in this supplement. Once created, the terrain model appears as a “wireframe” in each of the viewports.

5 Importing the photograph behind the wireframe, the two were registered together to create a match between the terrain model and the photograph.

6 The final step was to create a “rendered” version, which takes into account the date, time and weather conditions at the time of photography. Final images were assembled using desktop publishing software.





Rotors facing towards viewpoint (Revised Layout)

Distance to nearest turbine: 2.4 km





*Rotors facing towards viewpoint*

*Distance to nearest turbine: 2.4 km*





Rotors facing towards viewpoint (Revised Layout)

Distance to nearest turbine: 6.6 km





*Rotors facing towards viewpoint*

*Distance to nearest turbine: 6.6 km*





Rotors facing towards viewpoint

Distance to nearest turbine: 6.6 km





*Rotors facing towards viewpoint (Revised Layout)*

*Distance to nearest turbine: 4.7 km*

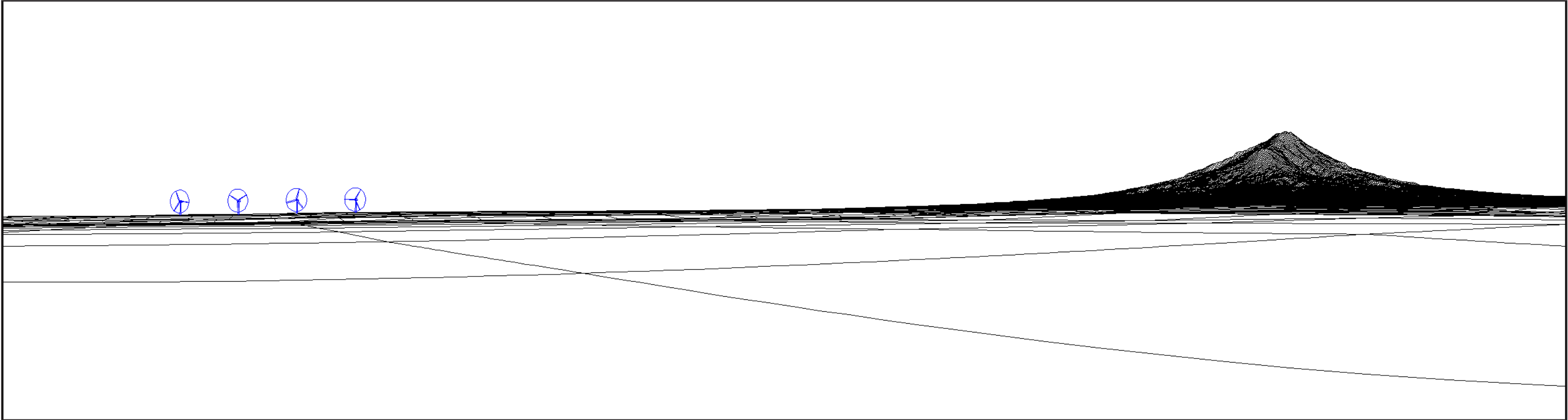




Rotors facing towards viewpoint

Distance to nearest turbine: 4.7 km





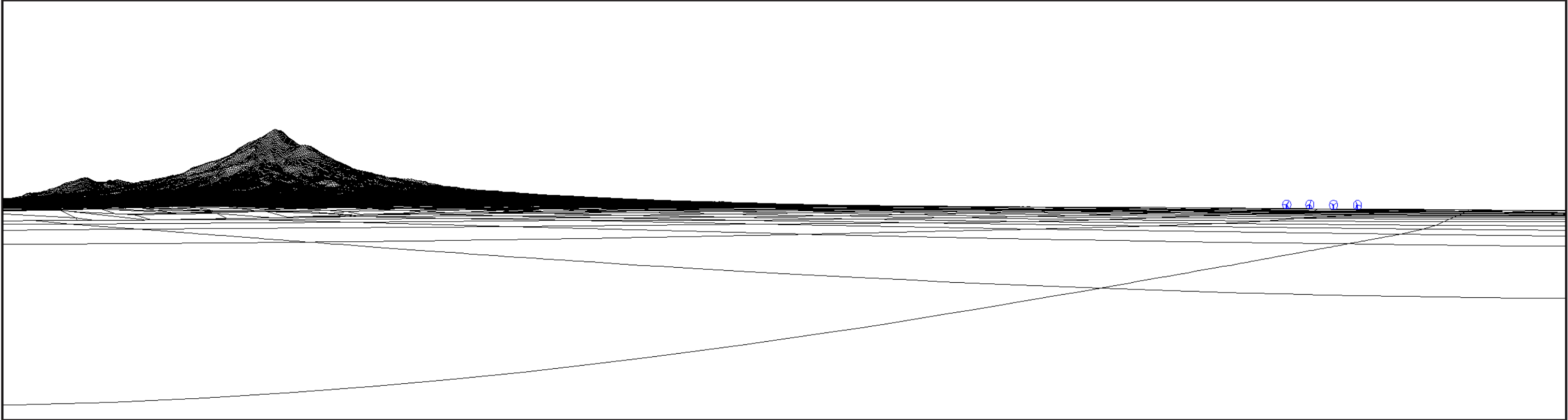
Rotors facing towards viewpoint (Revised Layout)

Distance to nearest turbine: 6.9 km



Source: Google Earth Street View





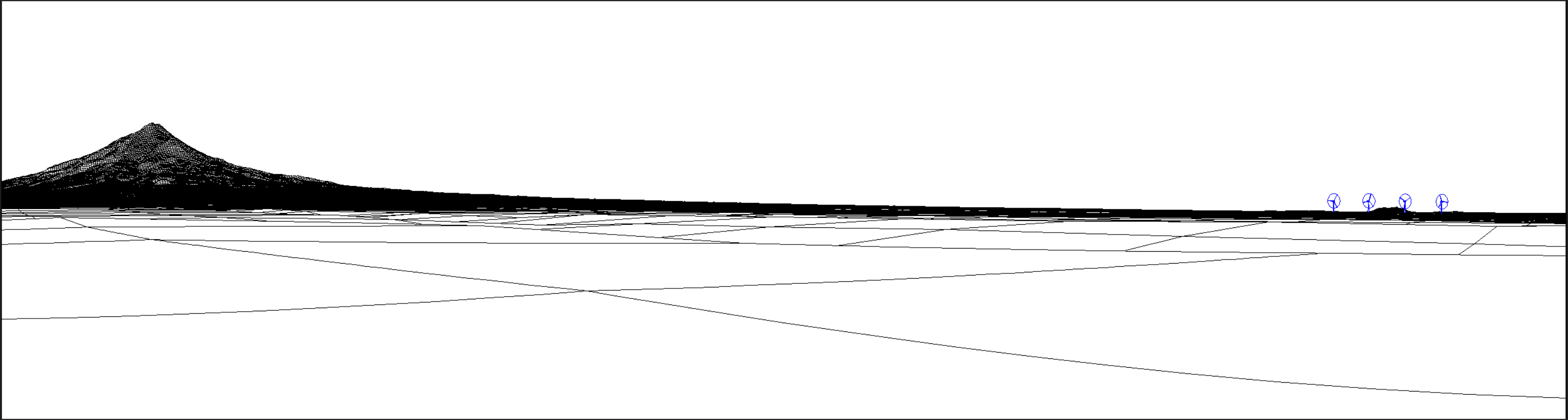
Rotors facing towards viewpoint (Revised Layout)

Distance to nearest turbine: 16.8 km



Source: Google Earth Street View





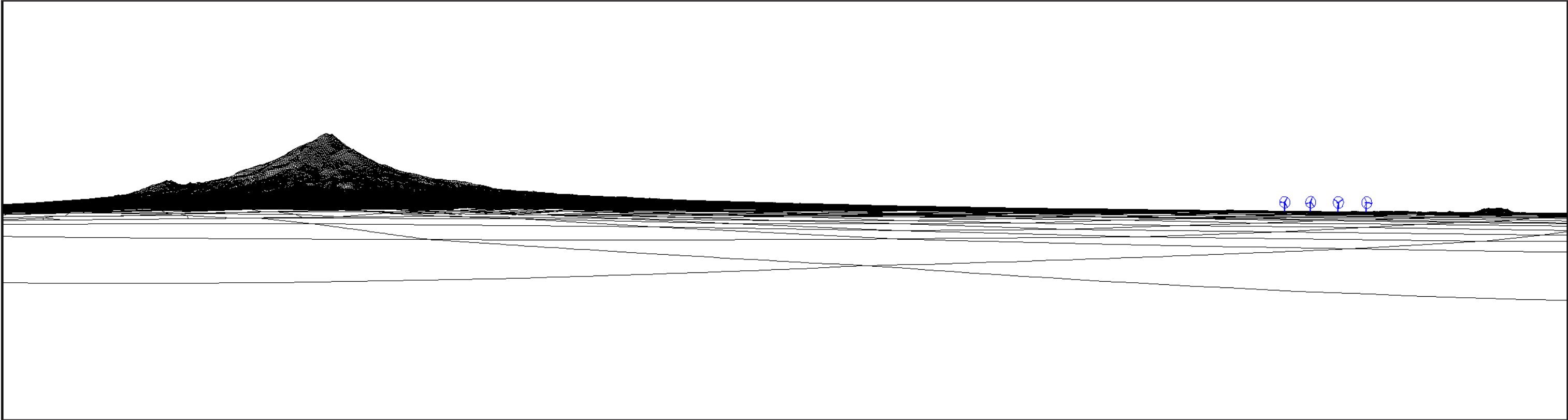
Rotors facing towards viewpoint (Revised Layout)

Distance to nearest turbine: 10.9 km



Source: Google Earth Street View





Rotors facing towards viewpoint (Revised Layout)

Distance to nearest turbine: 13.4 km



Source: Google Earth Street View