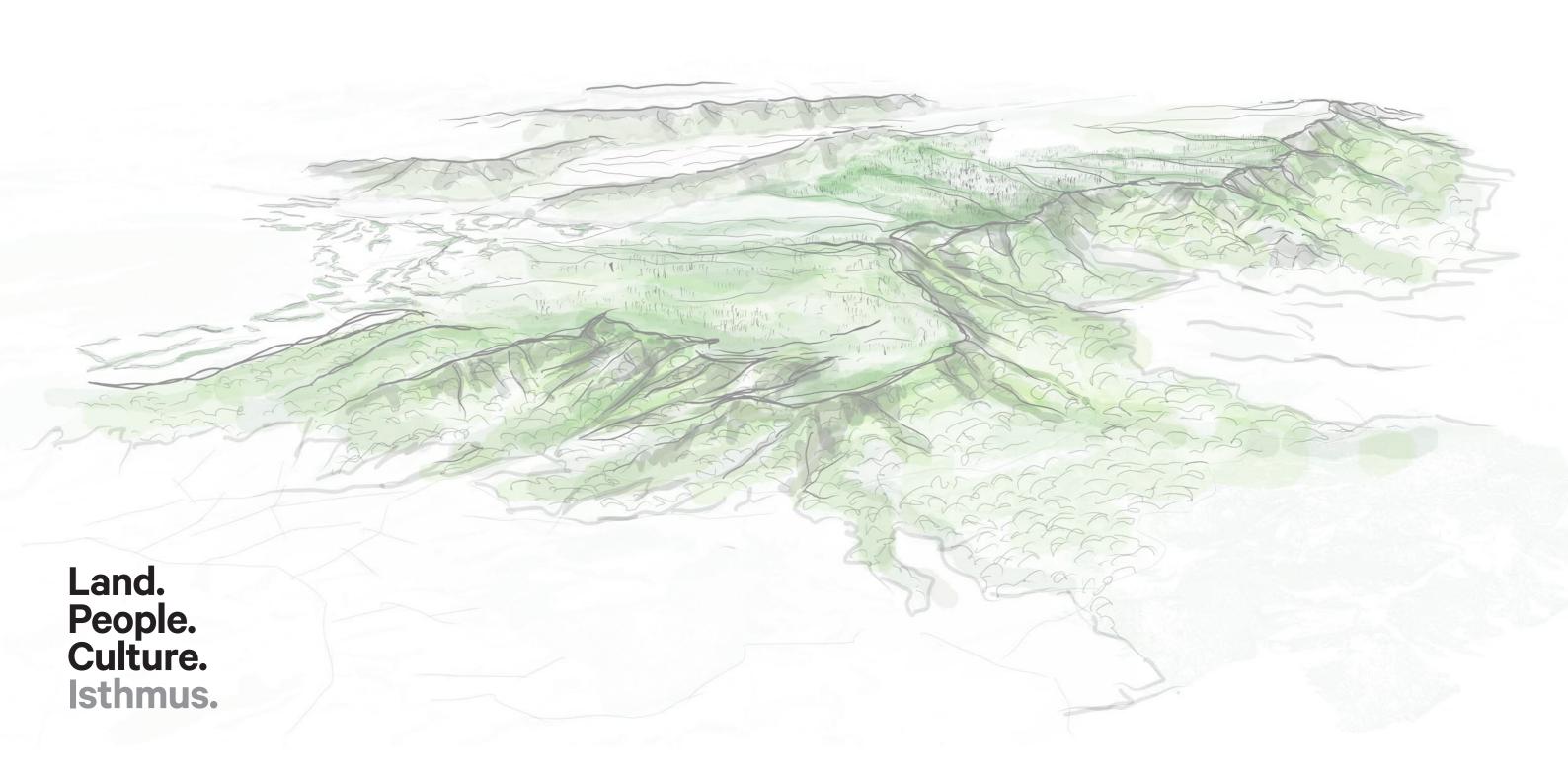
Isthmus.

Southland Windfarm Project. Contact Energy Ltd. Graphic Attachments. Rev H.



Isthmus.

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Final	В	AE	AA	24/04/24
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Final	D	AE	AA	04/07/24
Final	Е	AE	AA	11/09/24
Final	F	SF	AA	13/09/24
Final	G	AA	ВС	21/05/25
Final	Н	AA	ВС	14/08/25

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3

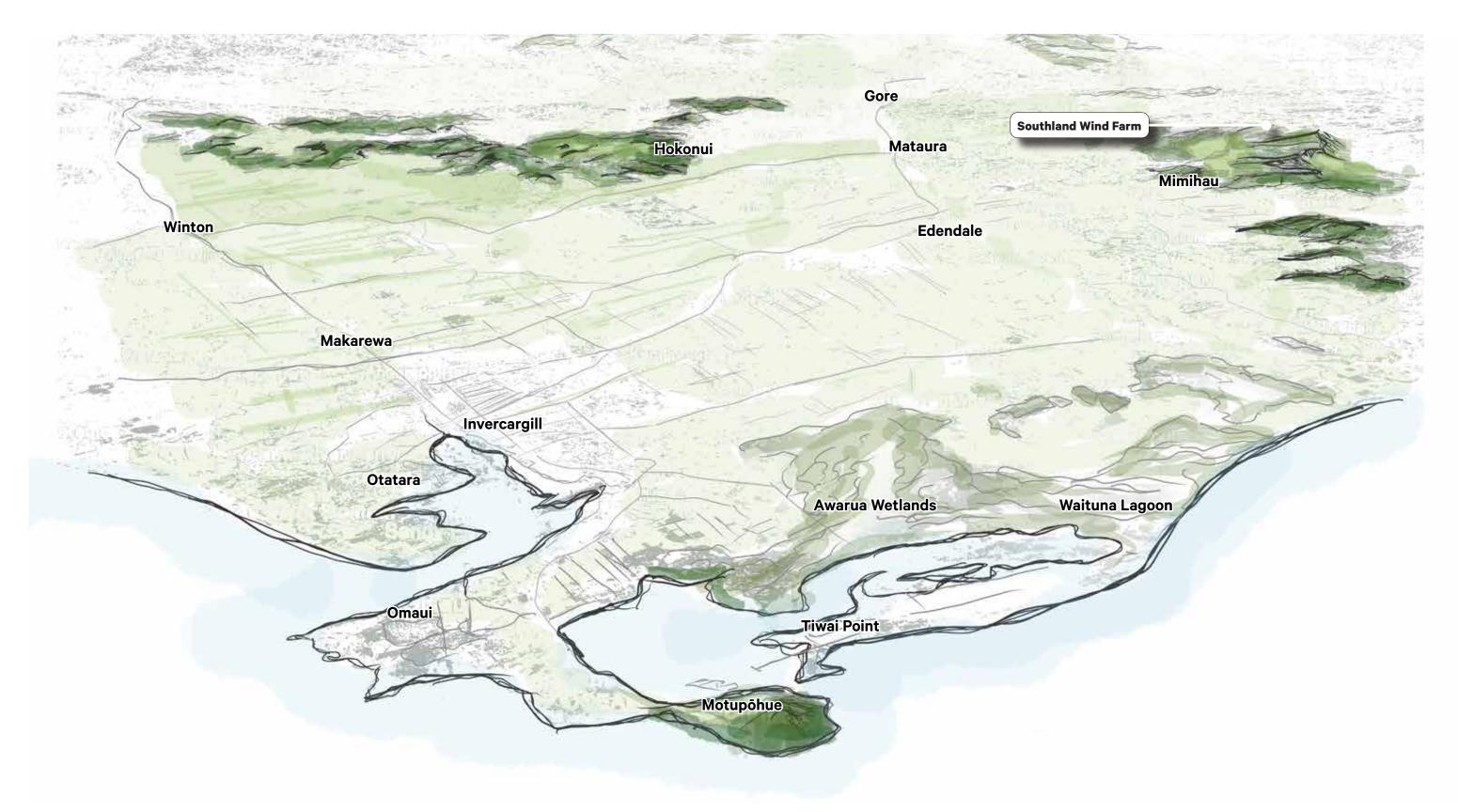
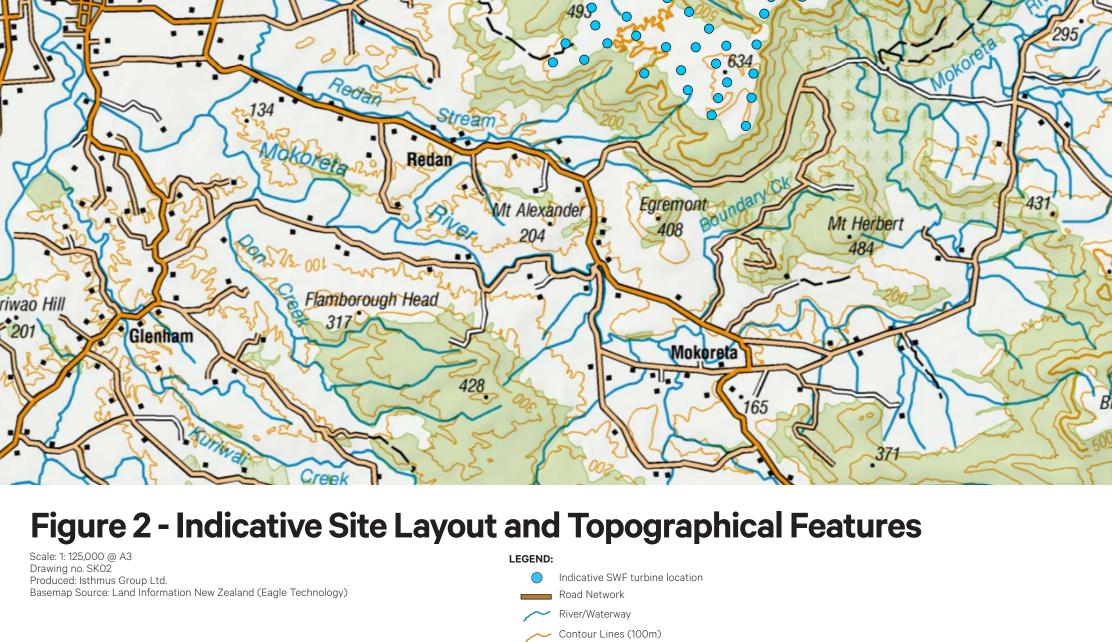


Figure 1 - Site Context

Scale: Not to Scale Drawing no. SK01 Produced: Isthmus Group Ltd. Basemap Source: Google Earth



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• 123 Elevation in metres



1:125,000 @ A3

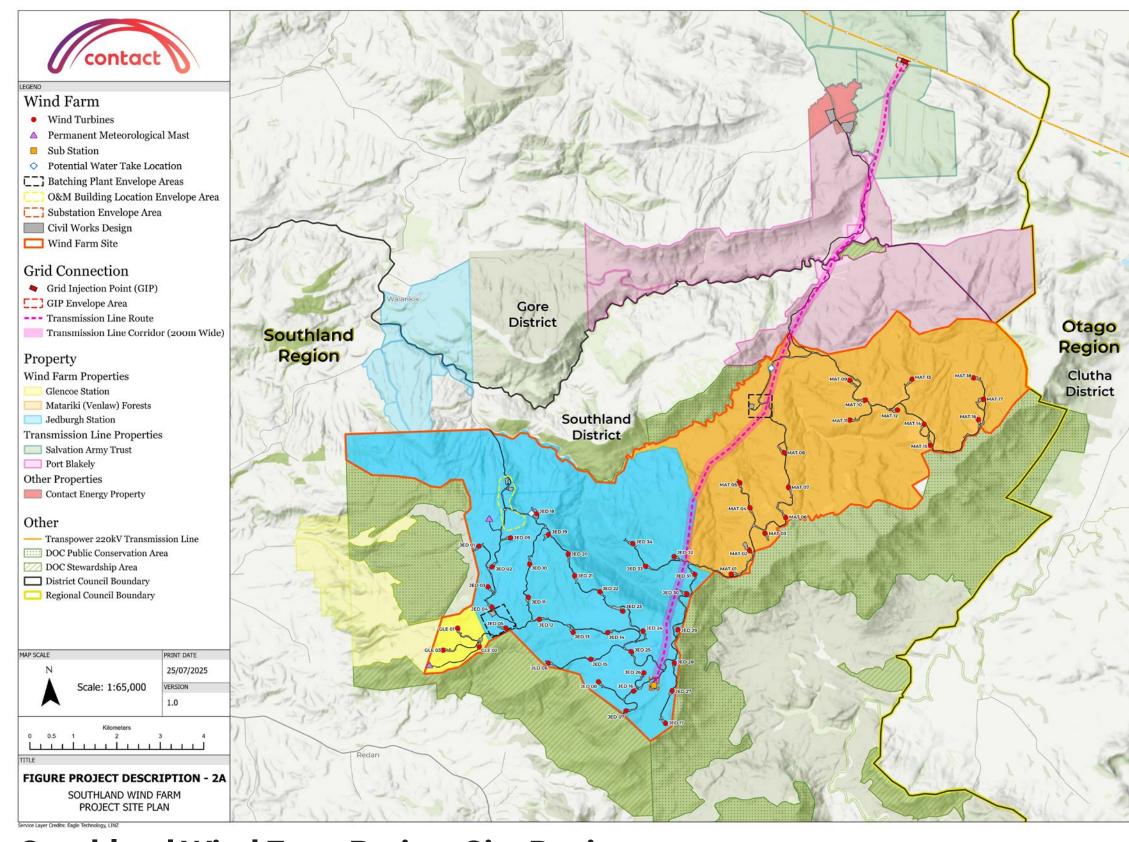


Figure 3 - Southland Wind Farm Project Site Design

Scale: NTS Drawing no. SK03 Produced: Contact Energy

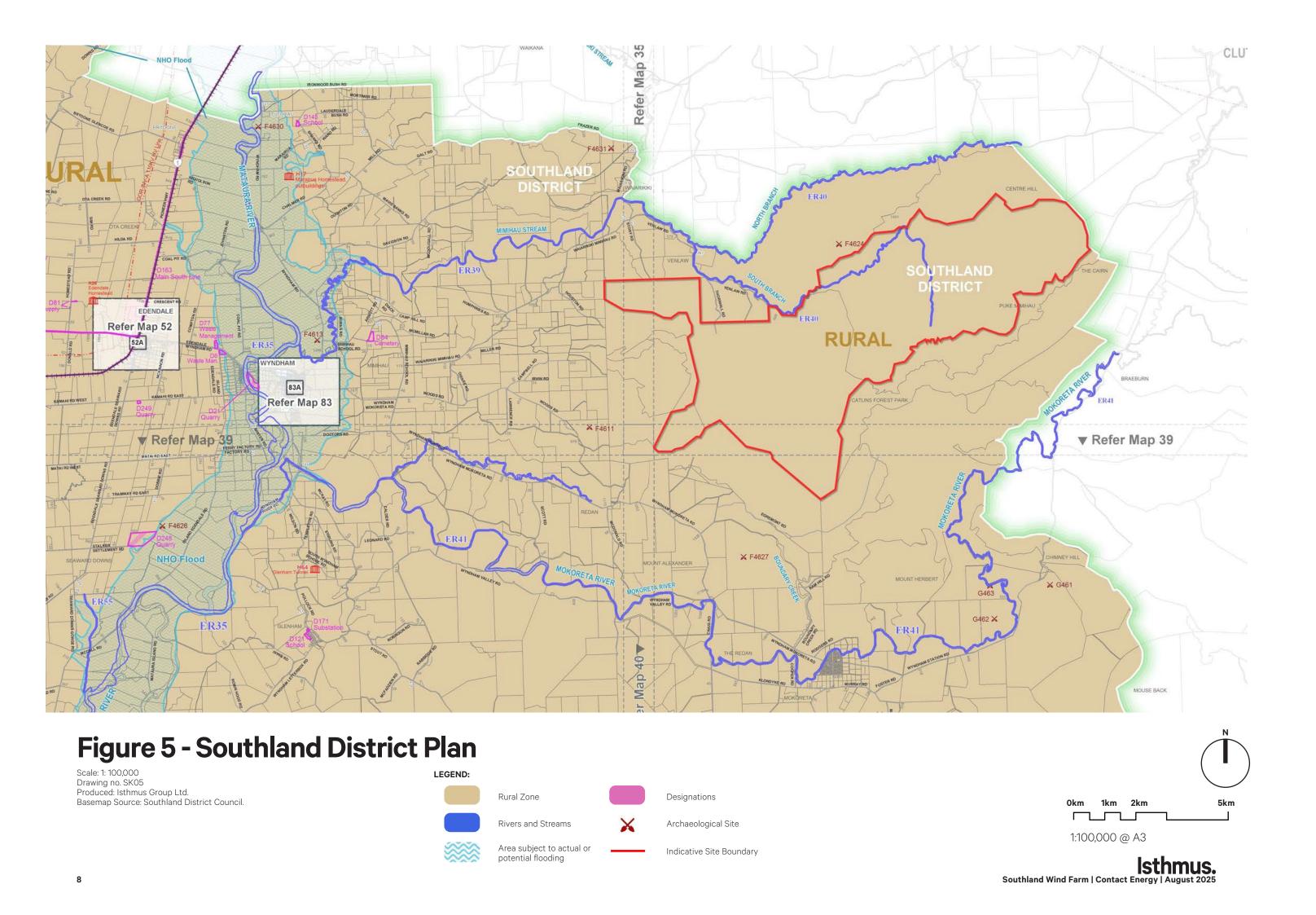












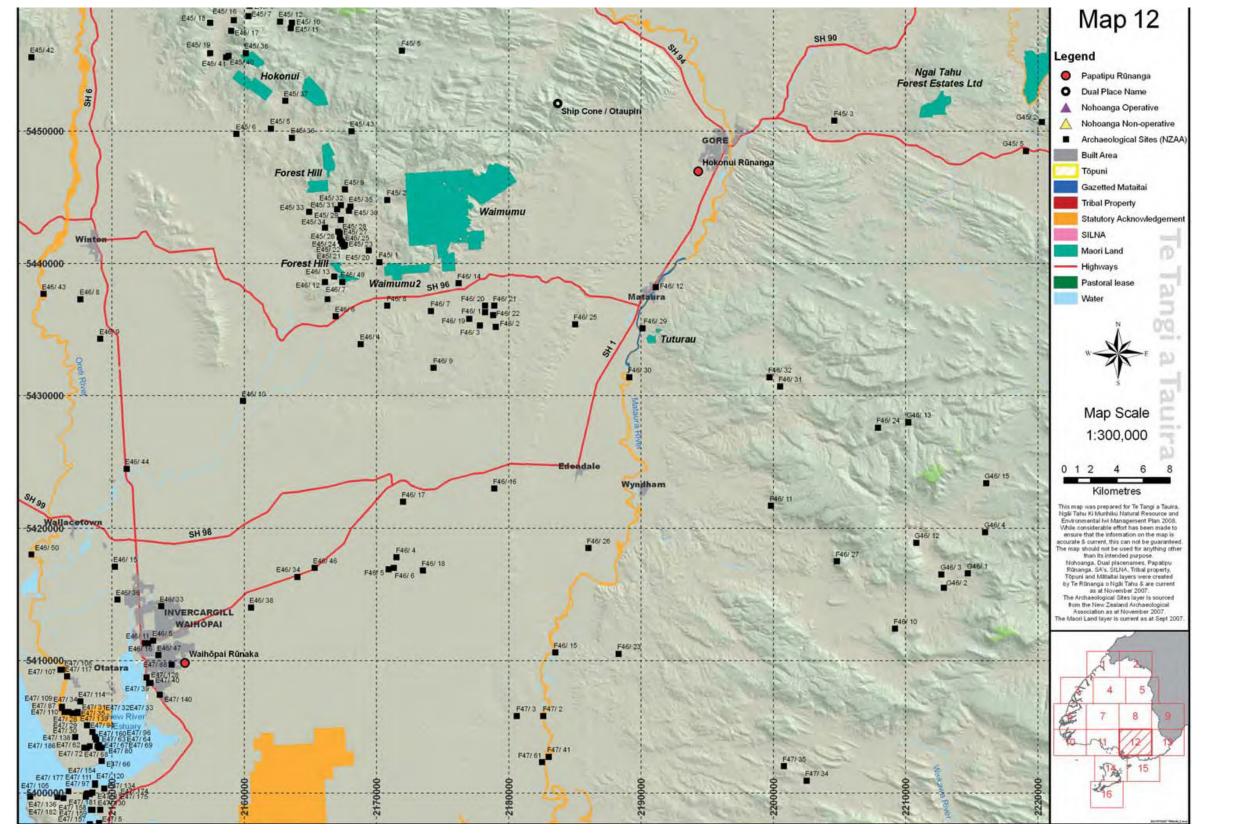
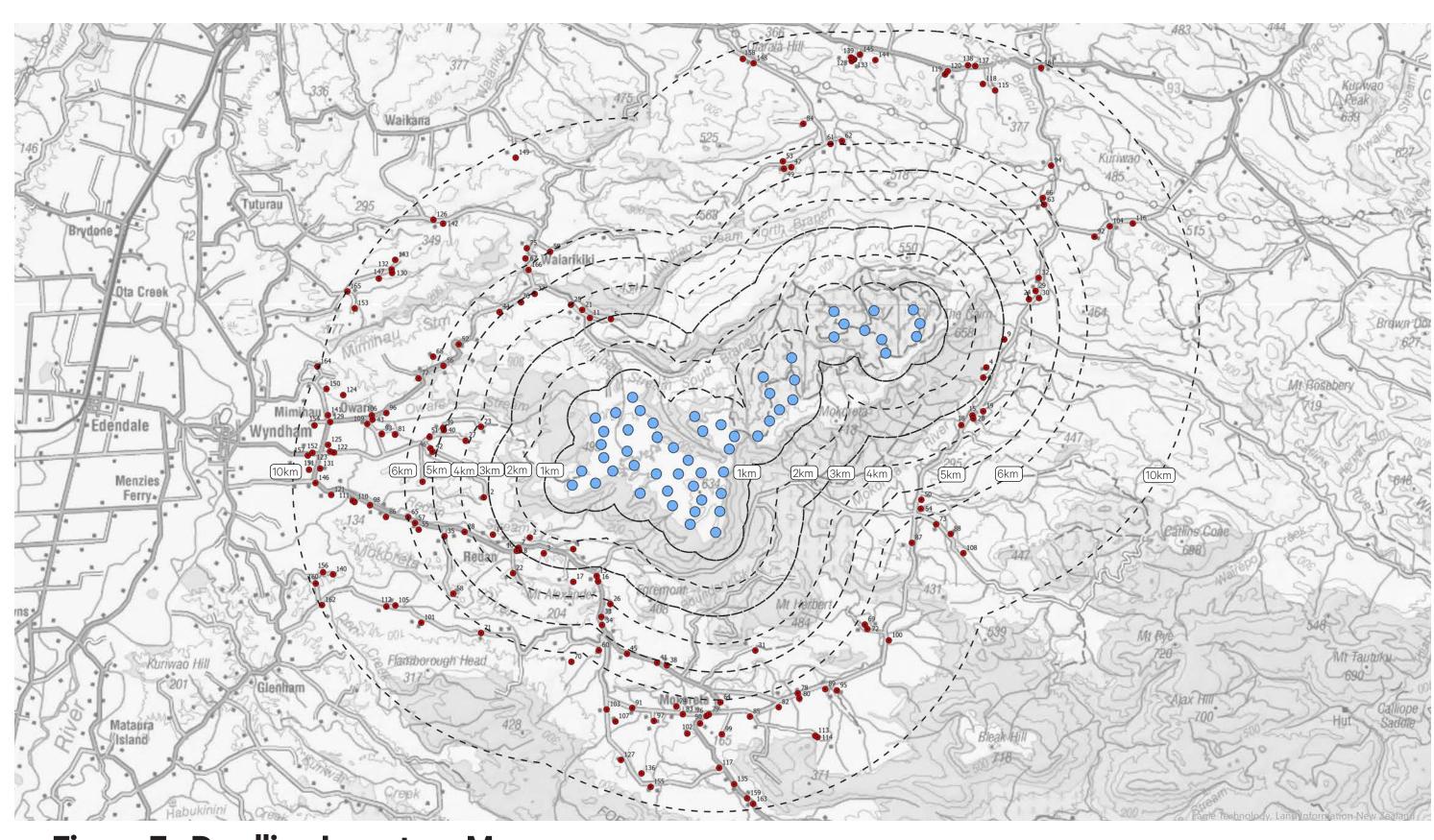


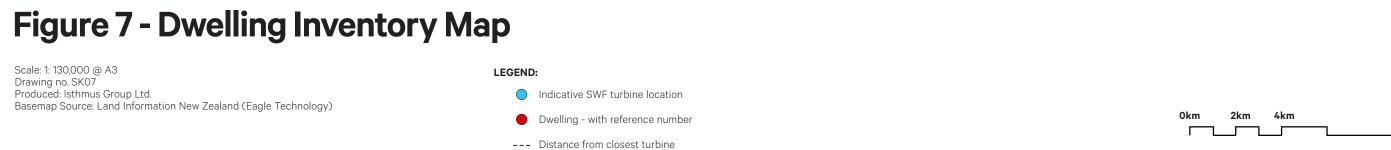
Figure 6 - Archaeological Sites

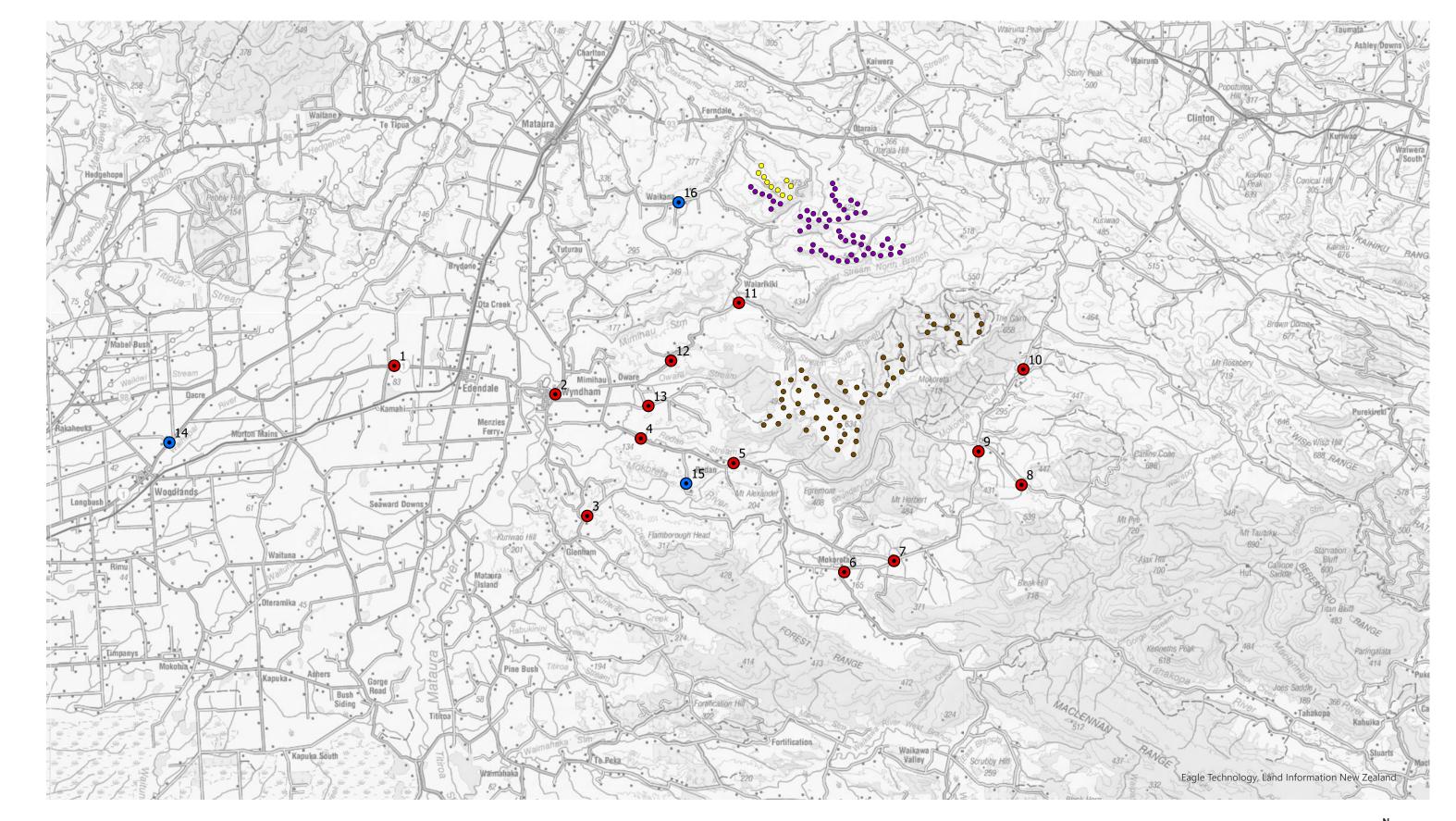
Scale: 1: 300,000 @ A3 Drawing no. SK06 Produced: Isthmus Group Ltd. Basemap Source: Te Tangi a Tauira - The Cry of the People. 0m 3km 6km 15km 1:300,000 @ A3

Isthmus. Southland Wind Farm | Contact Energy | August 2025 note:

This map directly reproduced from Te Tangi a Tauira - The Cry of the People - Ngāi Tahu ki Murihiku Natural Resources and Environmental Iwi Management Plan 2008. It provides recorded Archaeological Sites in the proposed wind farm area. The referenced sites, in proximity to the Southland Wind Farm site are detailed in Appendix B.









Scale: 1: 200,000 @ A3 Drawing no. SK08 Produced: Isthmus Group Ltd. Basemap Source: Arc GIS

O Kaiwera Downs Wind Farm (Stage 1) Turbines (under construction) Kaiwera Downs Wind Farm Consented Layout July 2023 Context Photo Location

Simulation Photo Location

1:200,000 @ A3

Isthmus.Southland Wind Farm | Contact Energy | August 2025

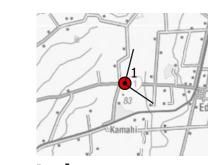
Southland Wind Farm | Contact Energy | August 2025



Figure 9 - Viewpoint 1 - Existing

Edendale - Woodlands Highway (SH1), near intersection with Scenic Reserve Road





Original Photo AE | 50mm | DSLR Nikon D810 | 1408hrs 04 May 2023 | 1271643E 4862959N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 80m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical

Isthmus.



Figure 10 - Viewpoint 1 -Proposed

Edendale - Woodlands Highway (SH1), near intersection with Scenic Reserve Road



Original Photo AE | 50mm | DSLR Nikon D810 | 1408hrs 04 May 2023 | 1271643E 4862959N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 80m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical

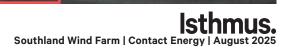


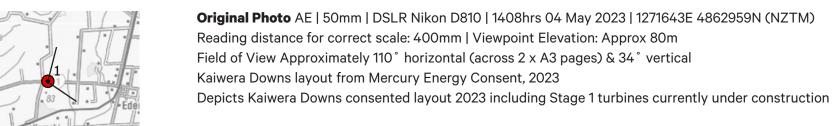
Figure 11 - Viewpoint 1 - Proposed

Including the Kaiwera Downs wind farm as consented July 2023

Edendale - Woodlands Highway (SH1), near intersection with Scenic Reserve Road







Isthmus.Southland Wind Farm | Contact Energy | August 2025



Figure 12 - Viewpoint 2 - Existing

Cardigan Road, Wyndham





Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 31m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical



Figure 13 - Viewpoint 2 - Proposed

Cardigan Road, Wyndham



Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 31m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical



Figure 14 - Viewpoint 2 - Proposed

Including the Kaiwera Downs wind farm as consented July 2023





Original Photo AE | 50mm | DSLR Nikon D810 | 1218hrs 04 May 2023 | 1280858E 4861332N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 31m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical Kaiwera Downs layout from Mercury Energy Consent, 2023

Depicts Kaiwera Downs consented layout 2023 including Stage 1 turbines currently under construction



Figure 15 - Viewpoint 3 - Existing

Wyndham Valley Road, near intersection with Wyndham – Letterbox Road





Original Photo AE | 50mm | DSLR Nikon D810 | 1228hrs 04 May 2023 | 1282683E 4854376N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 135m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical



Figure 16 - Viewpoint 3 -Proposed

Wyndham Valley Road, near intersection with Wyndham – Letterbox Road





Original Photo AE | 50mm | DSLR Nikon D810 | 1228hrs 04 May 2023 | 1282683E 4854376N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 135m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical



Figure 17 - Viewpoint 3 -**Proposed**

Including the Kaiwera Downs wind farm as consented July 2023

Wyndham Valley Road, near intersection with Wyndham – Letterbox Road 28





Original Photo AE | 50mm | DSLR Nikon D810 | 1228hrs 04 May 2023 | 1282683E 4854376N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 135m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical Kaiwera Downs layout from Mercury Energy Consent, 2023

Depicts Kaiwera Downs consented layout 2023 including Stage 1 turbines currently under construction



Figure 18 - Viewpoint 4 - Existing

Wyndham - Mokoreta Road, near Rapid No. 642



Original Photo AE | 50mm | DSLR Nikon D810 | 1126hrs 04 May 2023 | 1285751E 4858804N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 45m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical

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Figure 19 - Viewpoint 4 - Proposed

Wyndham - Mokoreta Road, near Rapid No. 642



Original Photo AE | 50mm | DSLR Nikon D810 | 1126hrs 04 May 2023 | 1285751E 4858804N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 45m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical

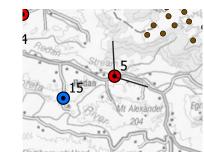
Isthmus.Southland Wind Farm | Contact Energy | August 2025



Figure 20 - Viewpoint 5 -**Existing**

Wyndham - Mokoreta Road, near Rapid No. 1232





Original Photo AE | 50mm | DSLR Nikon D810 | 1103hrs 04 May 2023 | 1291052E 4857391N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 78m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical

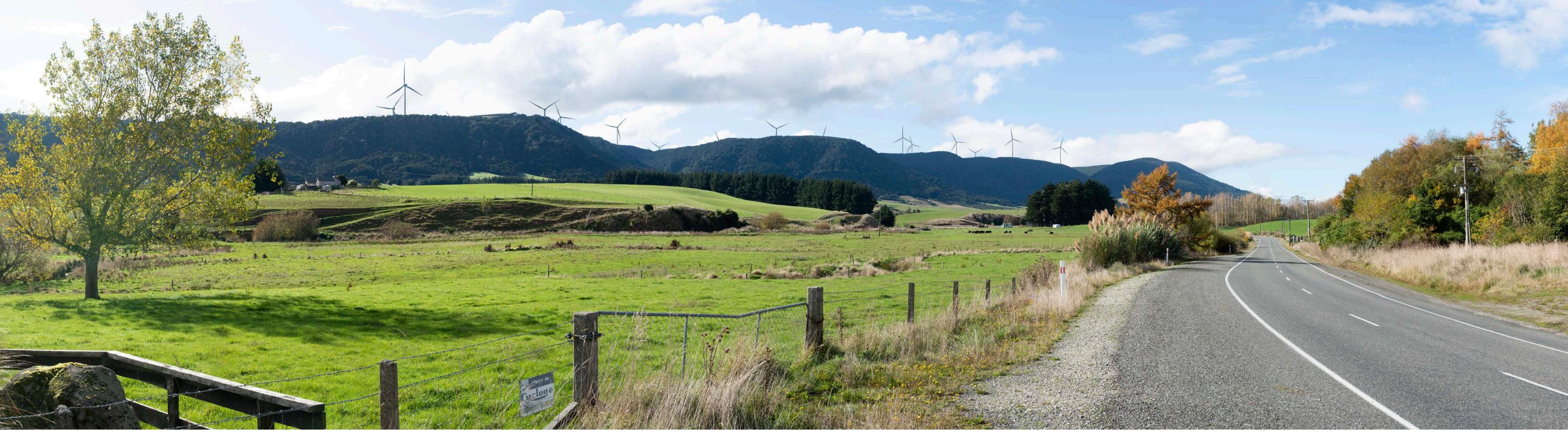
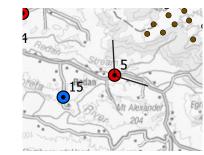


Figure 21 - Viewpoint 5 -**Proposed**

Wyndham - Mokoreta Road, near Rapid No. 1232





Original Photo AE | 50mm | DSLR Nikon D810 | 1103hrs 04 May 2023 | 1291052E 4857391N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 78m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical



Figure 22 - Viewpoint 6 - Existing

Mokoreta - Tahakopa Road, near Rapid No. 51



Original Photo AE | 50mm | DSLR Nikon D810 | 1049hrs 04 May 2023 | 1297385E 4851172N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 102m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical



Figure 23 - Viewpoint 6 -Proposed

Mokoreta - Tahakopa Road, near Rapid No. 51





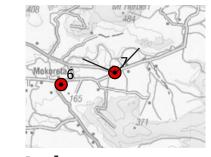
Original Photo AE | 50mm | DSLR Nikon D810 | 1049hrs 04 May 2023 | 1297385E 4851172N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 102m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical



Figure 24 - Viewpoint 7 - Existing

Corner of Wyndham Station Road and Foster Road





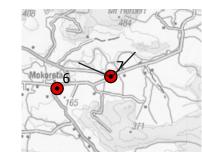
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Figure 25 - Viewpoint 7 - Proposed

Corner of Wyndham Station Road and Foster Road





Original Photo AE | 50mm | DSLR Nikon D810 | 0959hrs 04 May 2023 | 1300230E 4851806N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 108m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical

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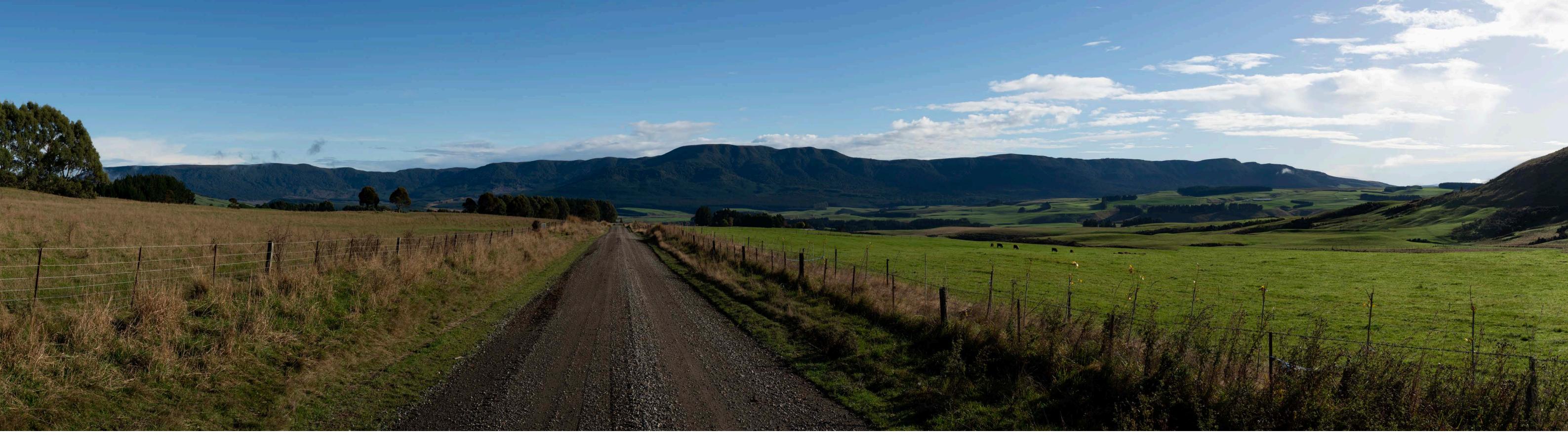
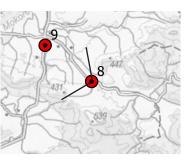


Figure 38 - Viewpoint 8 - Existing

Top of Morven Road





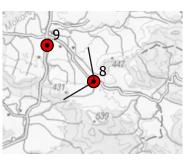
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Figure 38 - Viewpoint 8 - Proposed

Top of Morven Road





Original Photo AE | 50mm | DSLR Nikon D810 | 0931hrs 04 May 2023 | 1307522E 4856151N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 295m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical

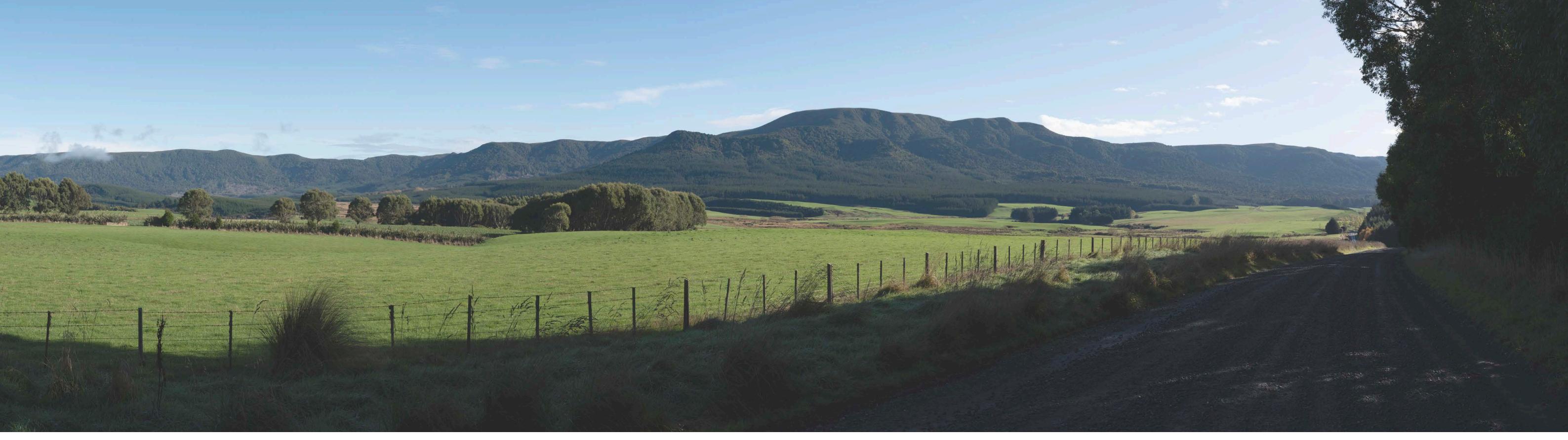
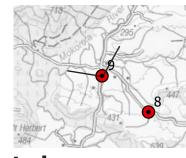


Figure 26 - Viewpoint 9 - Existing

Wyndham Station Road close to intersection with Morven Road





Original Photo AE | 50mm | DSLR Nikon D810 | 0939hrs 04 May 2023 | 1305063E 4858063N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 160m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical

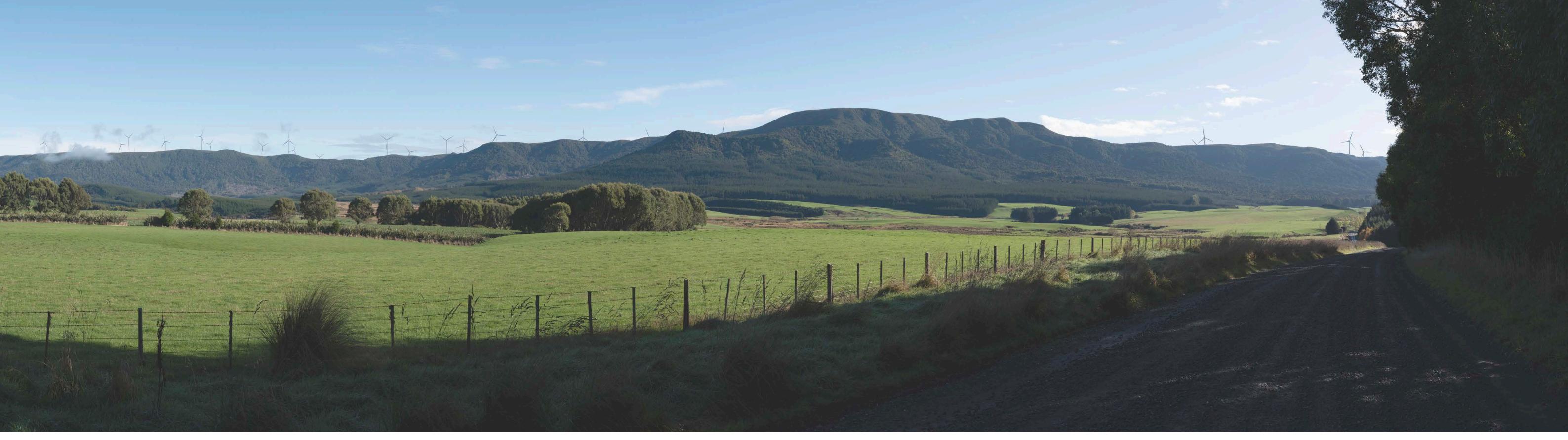
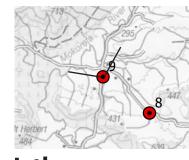


Figure 27 - Viewpoint 9 -Proposed

Wyndham Station Road close to intersection with Morven Road





Original Photo AE | 50mm | DSLR Nikon D810 | 0939hrs 04 May 2023 | 1305063E 4858063N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 160m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical

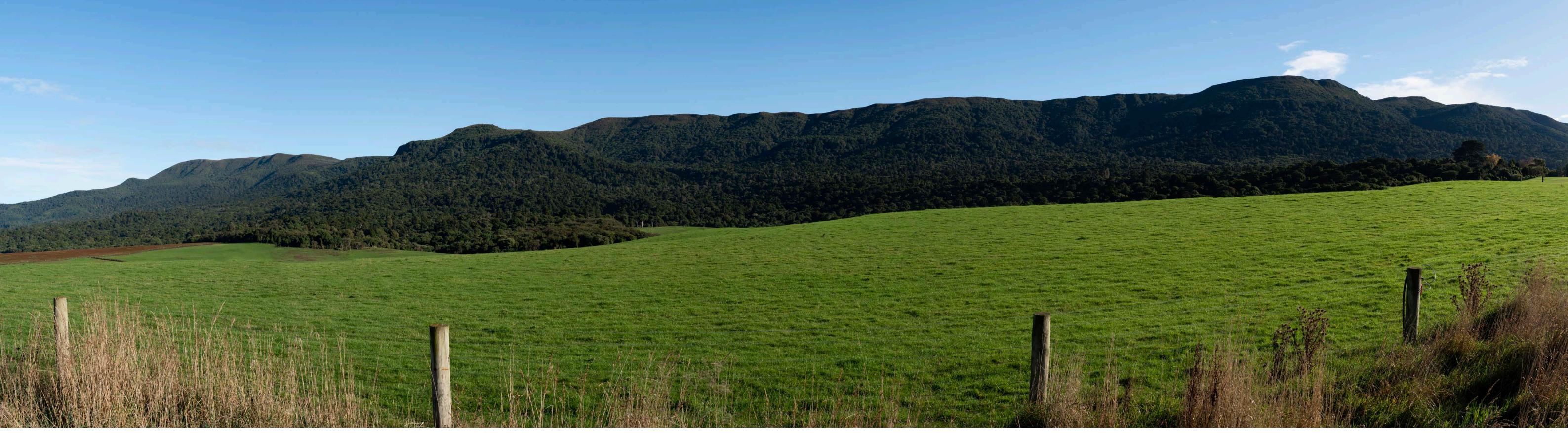
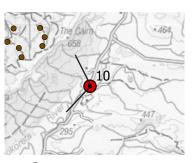


Figure 28 - Viewpoint 10 - Existing

Slopedown Road, near Rapid No. 1382





Original Photo AE | 50mm | DSLR Nikon D810 | 0911hrs 04 May 2023 | 1307626E 4862756N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 190m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical

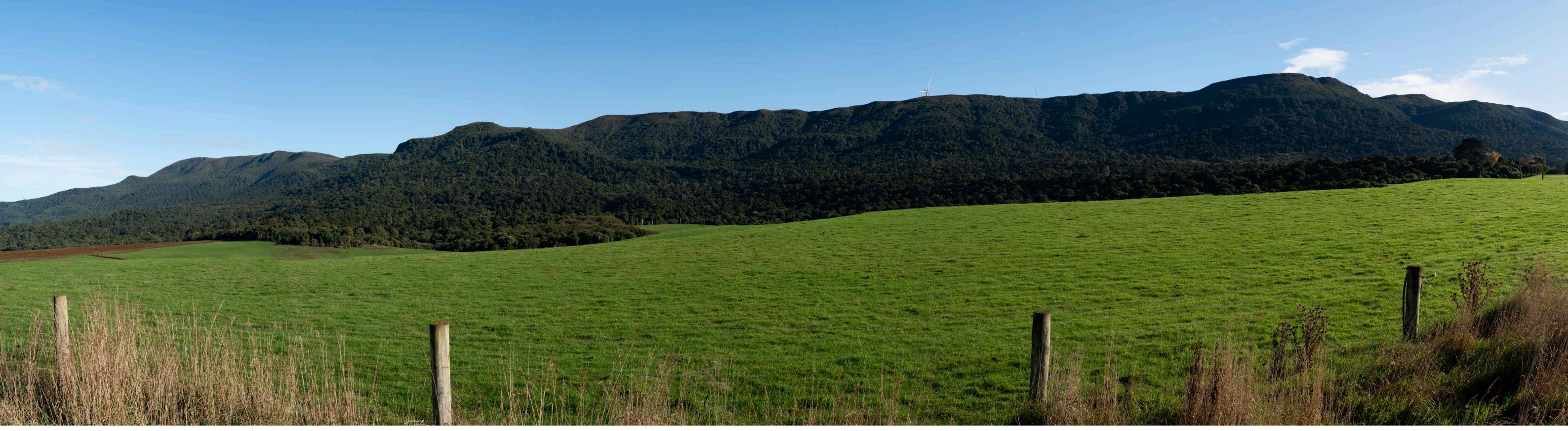


Figure 29 - Viewpoint 10 - Proposed

Slopedown Road, near Rapid No. 1382





Original Photo AE | 50mm | DSLR Nikon D810 | 0911hrs 04 May 2023 | 1307626E 4862756N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 190m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical

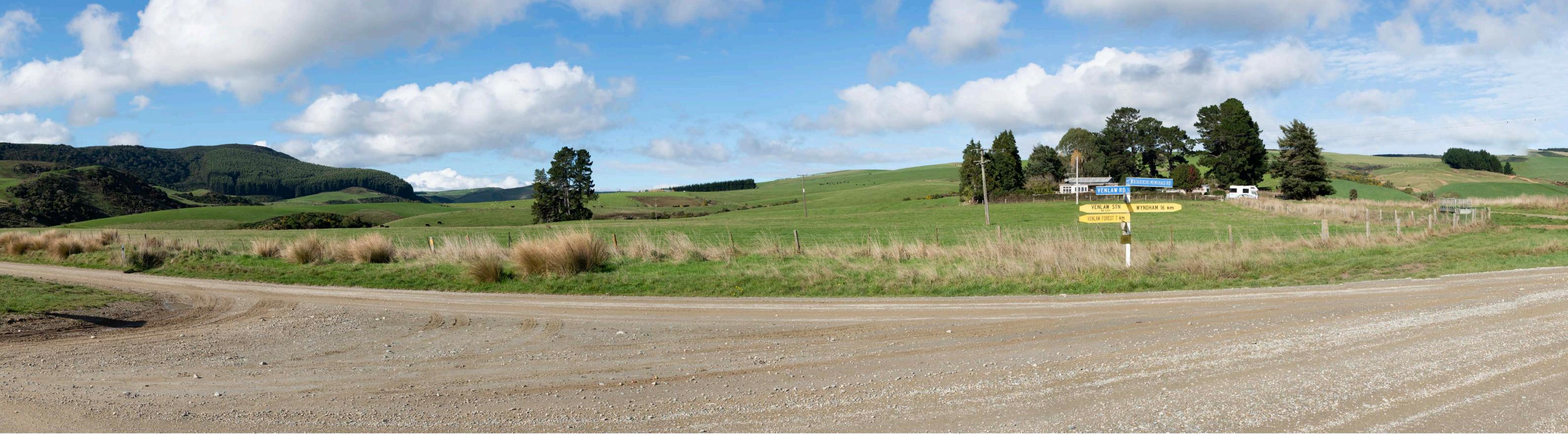
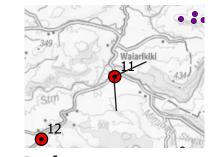


Figure 30 - Viewpoint 11 - Existing

Corner of Waiarikiki Mimihau Road and Venlaw Road





Original Photo AE | 50mm | DSLR Nikon D810 | 1204hrs 04 May 2023 | 1291357E 4866555N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 107m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical

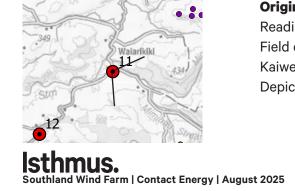


Figure 31 - Viewpoint 11 - Proposed

Including the Kaiwera Downs wind farm as consented July 2023

Corner of Waiarikiki Mimihau Road and Venlaw Road





Original Photo AE | 50mm | DSLR Nikon D810 | 1204hrs 04 May 2023 | 1291357E 4866555N (NZTM)
Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 107m
Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical
Kaiwera Downs layout from Mercury Energy Consent, 2023
Depicts Kaiwera Downs consented layout 2023 including Stage 1 turbines currently under construction



Figure 32 - Viewpoint 12 - Existing

Waiarikiki Mimihau Road, near Rapid No. 413



Original Photo AE | 50mm | DSLR Nikon D810 | 1153hrs 04 May 2023 | 1287478E 4863244N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 175m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical

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Figure 33 - Viewpoint 12 -Proposed

Waiarikiki Mimihau Road, near Rapid No. 413



Original Photo AE | 50mm | DSLR Nikon D810 | 1153hrs 04 May 2023 | 1287478E 4863244N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 175m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical

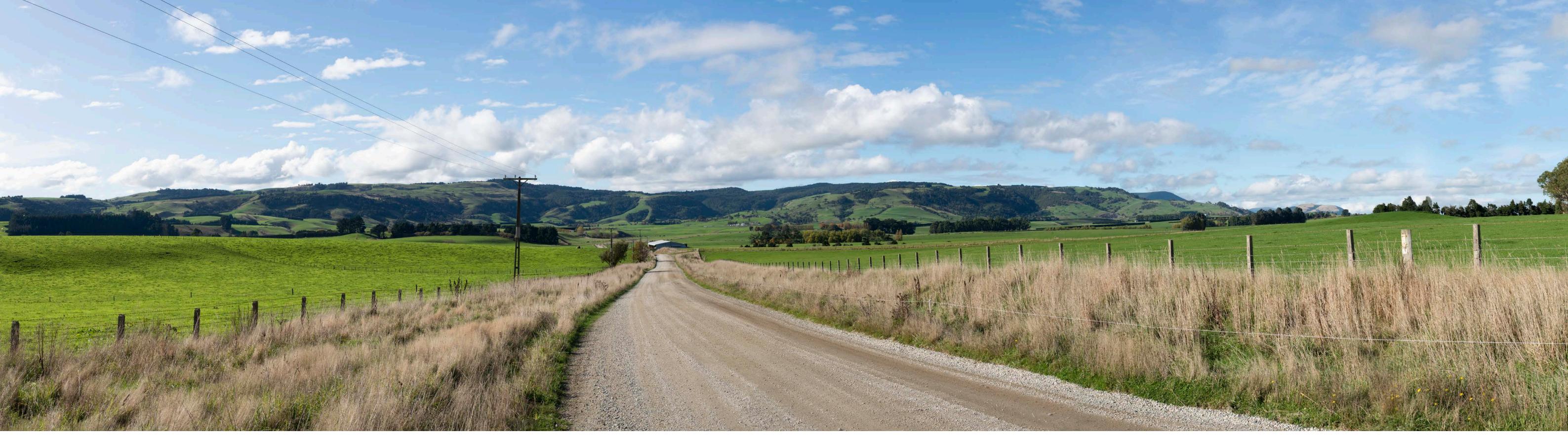


Figure 34 - Viewpoint 13 - Existing

Woods Road, near intersection with Oware Road



Original Photo AE | 50mm | DSLR Nikon D810 | 1147hrs 04 May 2023 | 1286180E 4860665N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 80m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical

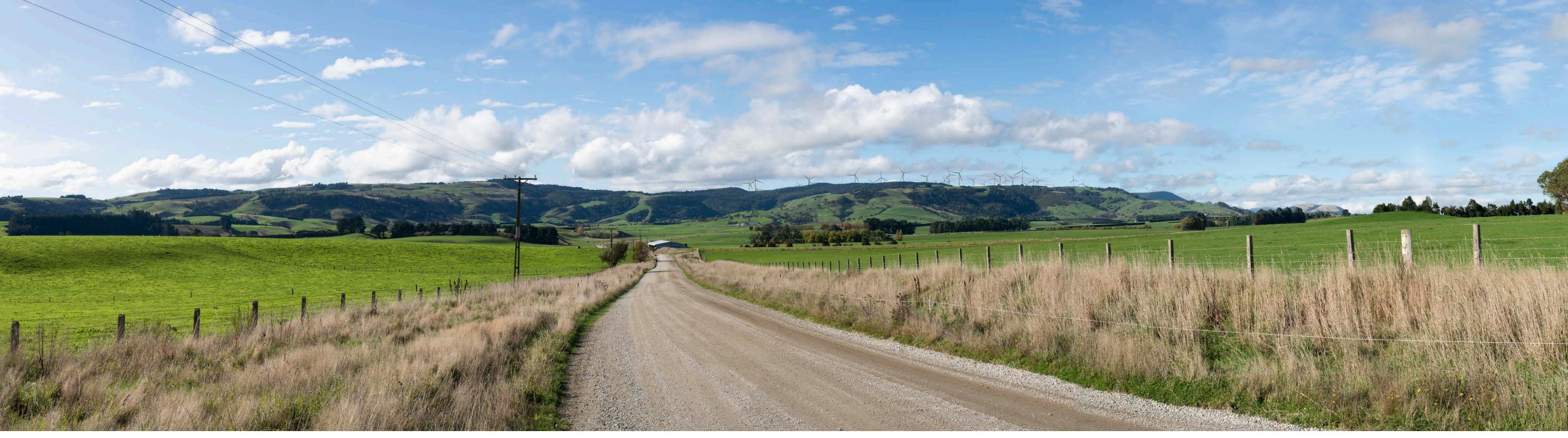


Figure 35 - Viewpoint 13 - Proposed

Woods Road, near intersection with Oware Road



Original Photo AE | 50mm | DSLR Nikon D810 | 1147hrs 04 May 2023 | 1286180E 4860665N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 80m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical

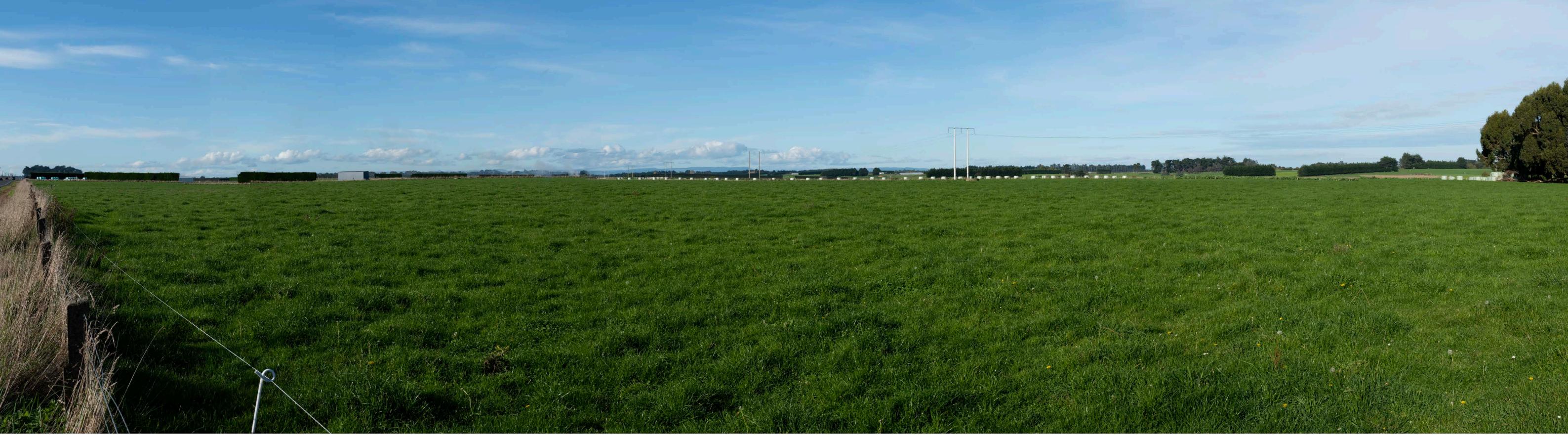


Figure 36 - Viewpoint 14 - Existing

Corner of Forbes Road and Edendale - Woodlands Highway (SH1)





Original Photo AE | 50mm | DSLR Nikon D810 | 1355hrs 04 May 2023 | 1258778E 4858573N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 44m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical

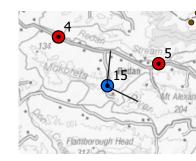
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Figure 37 - Viewpoint 15 - Existing

Crest of Scott Road





Original Photo AE | 50mm | DSLR Nikon D810 | 1115hrs 04 May 2023 | 1288339E 4856228N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 146m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical



Figure 39 - Viewpoint 16 - Existing

1086 Crawford Road





Original Photo AE | 50mm | DSLR Nikon D810 | 1259hrs 04 May 2023 | 1297910E 4872296N (NZTM) Reading distance for correct scale: 400mm | Viewpoint Elevation: Approx 177m Field of View Approximately 110° horizontal (across 2 x A3 pages) & 34° vertical



Figure 40 - Context Map



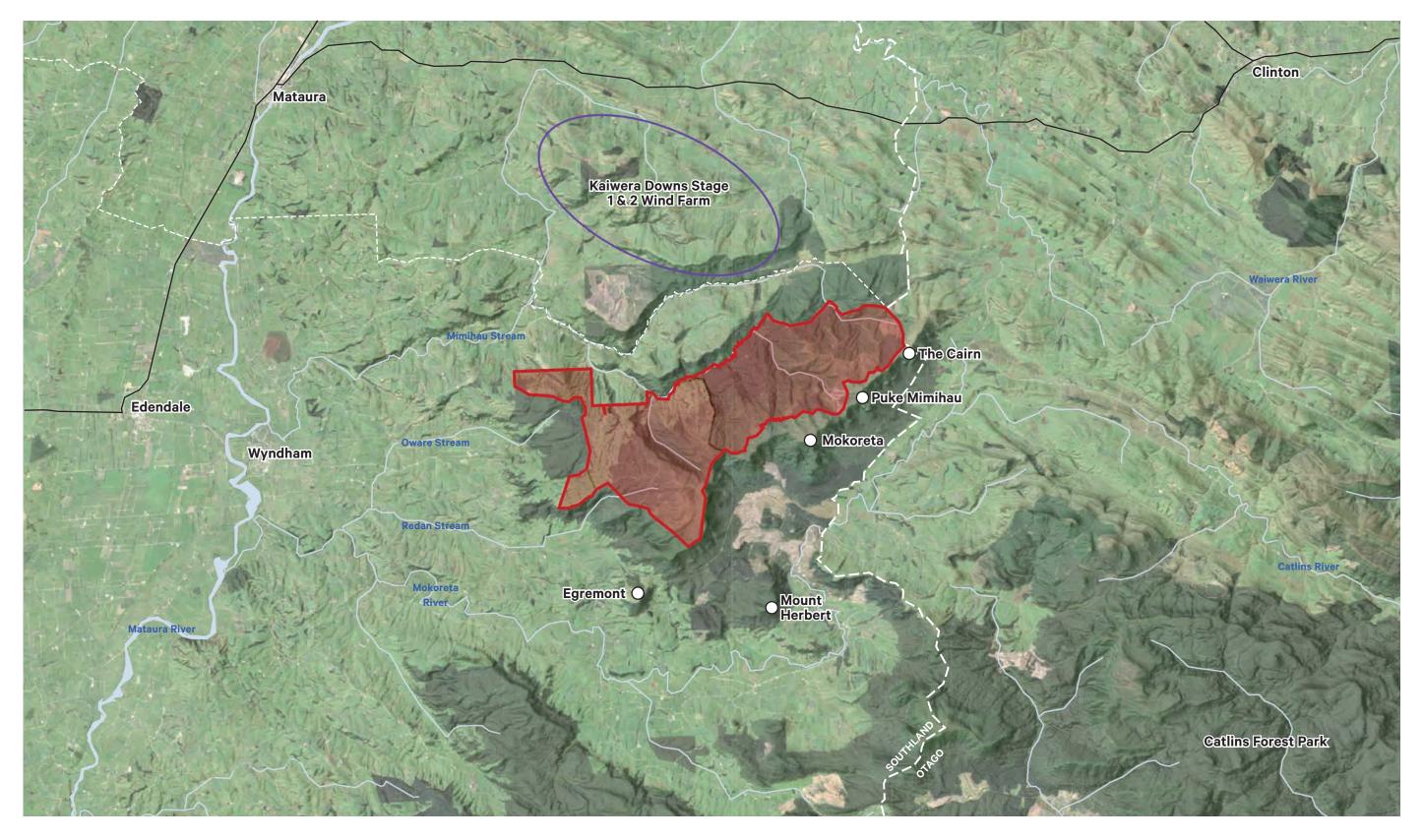


Figure 41 - Local Context Map



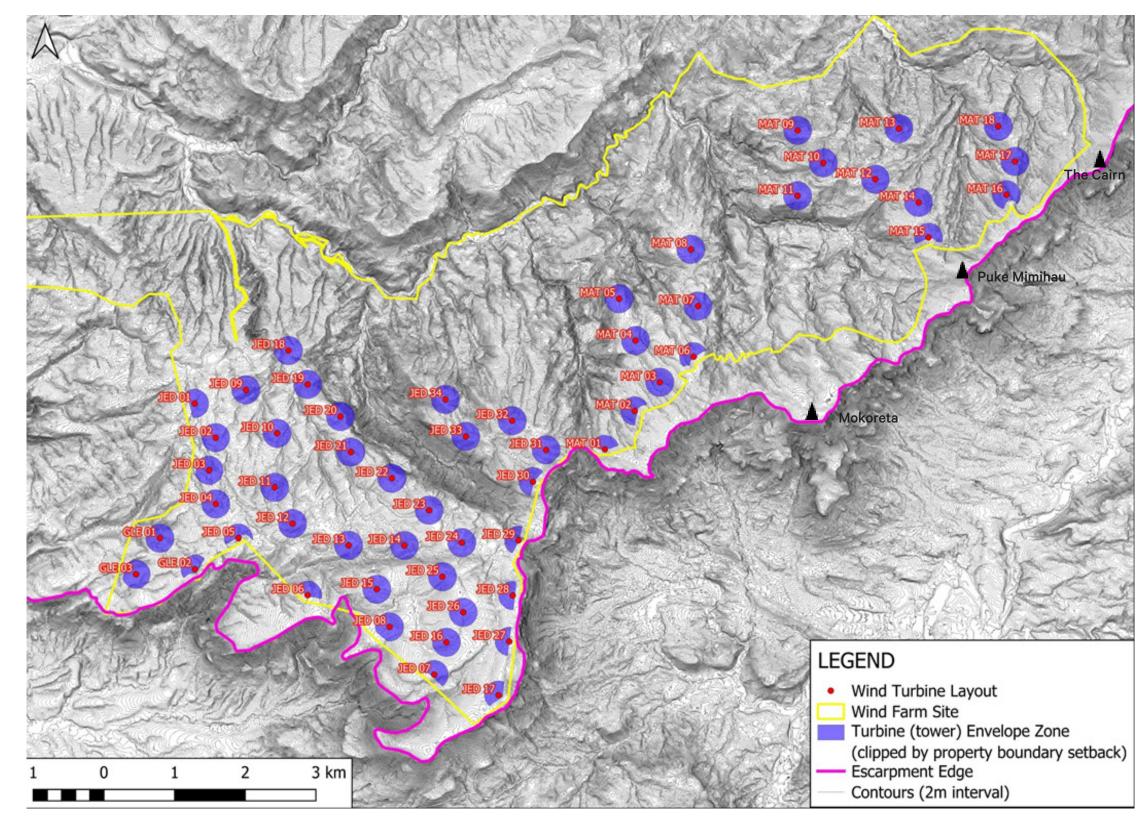


Figure 42 - Escarpment Edge & Property Boundary with Contour Base Map

NB - As indicated - the Pink line marks the Escarpment Edge rather than the crest of the ridge



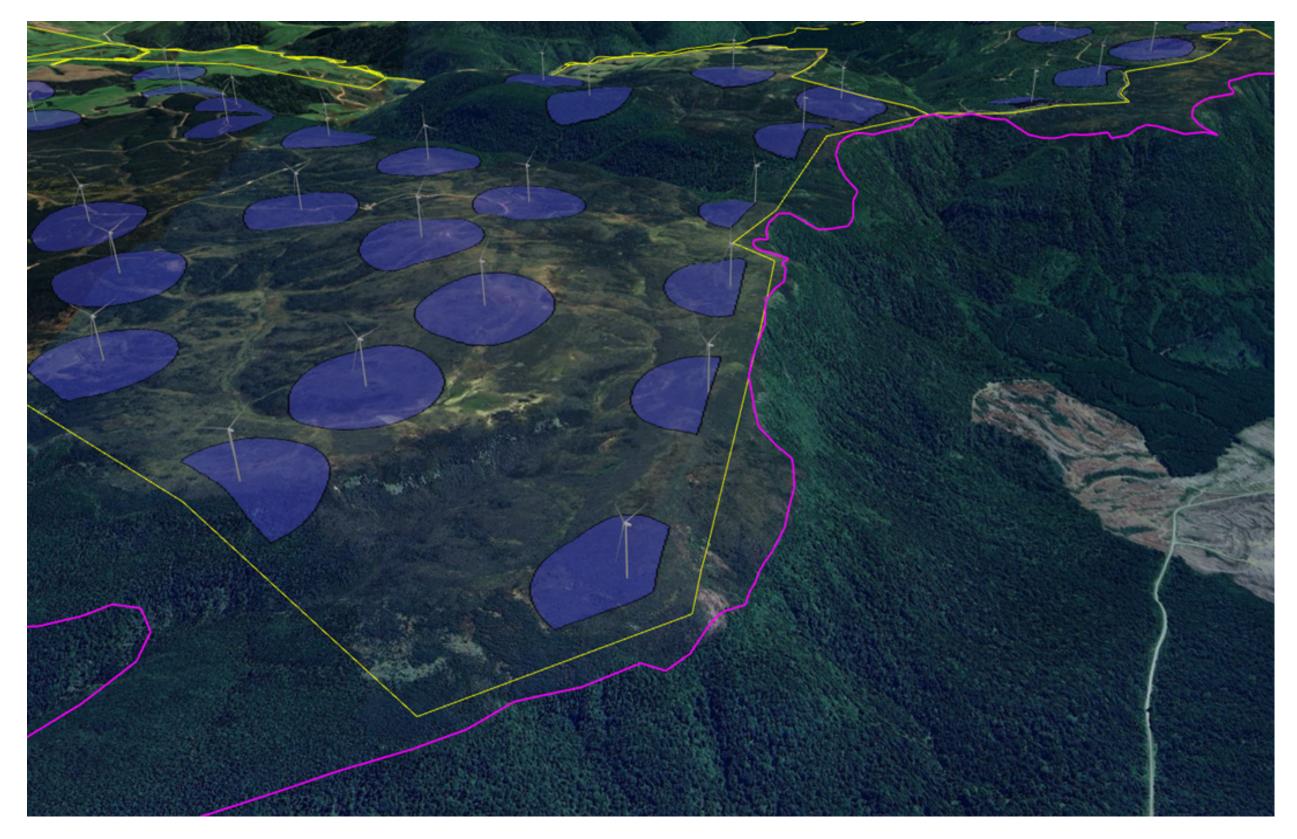


Figure 43 - Turbine Locations - Jedburgh Station Plateau Indicative turbine envelope zones, property boundary and escarpment demarcation

NB - As indicated - the Pink line marks the Escarpment Edge rather than the crest of the ridge



Figure 44 - Turbine Locations - Matariki Forest
Indicative turbine envelope zones, property boundary and escarpment demarcation

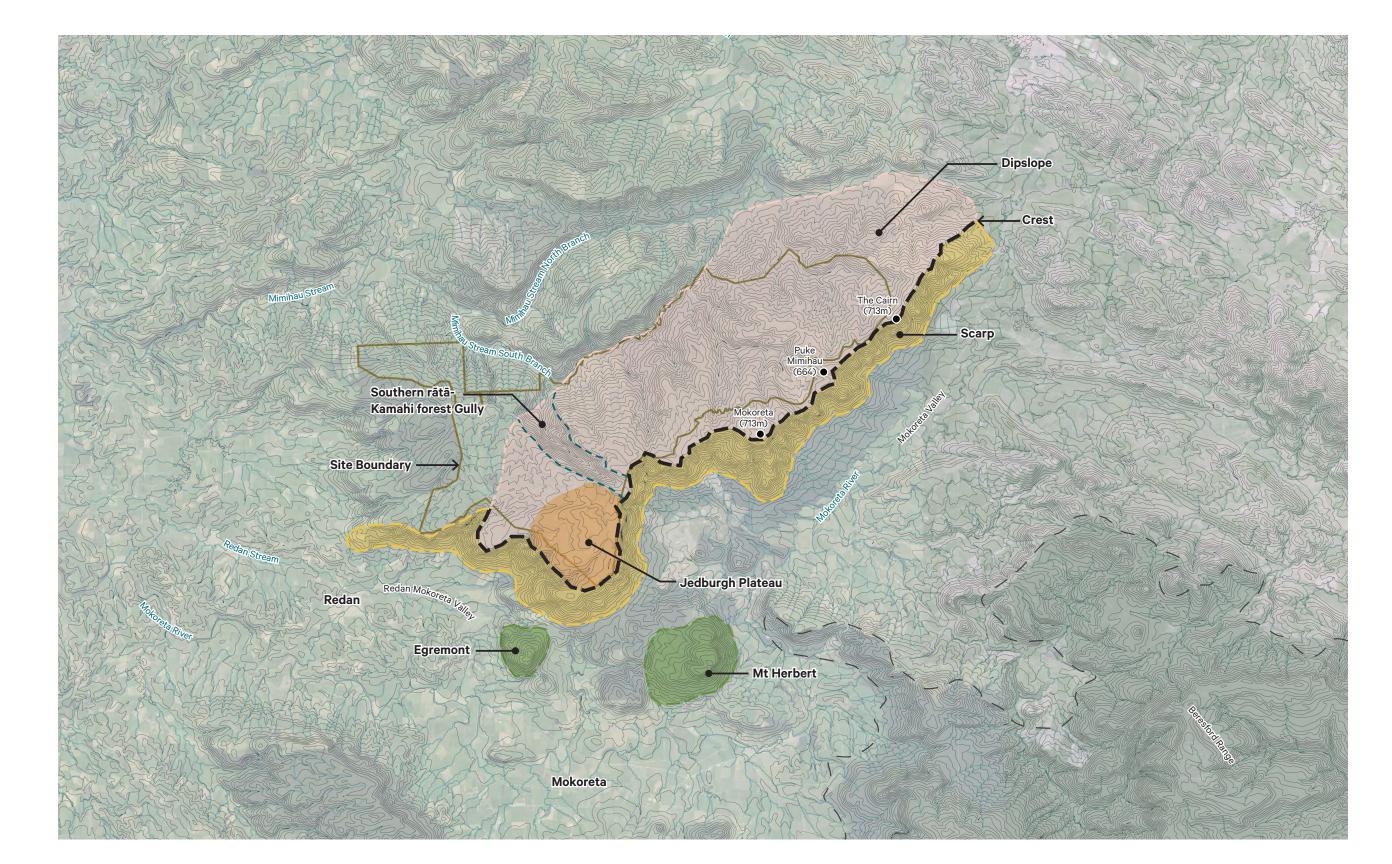


Figure 45 - Landform Diagram

Scale: NTS Drawing no. SK13 Produced: Isthmus

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NB - As indicated - the Pink line marks the Escarpment Edge rather than the crest of the ridge

80

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Photosimulation Methodology Statement

- Photos were taken with a 50mm fixed lens on DSLR camera. Locations were fixed using a handheld GPS unit with accuracy of 5m. These points were cross referenced using GIS information. Reference points in the landscape, such as trees and existing structures were also located to assist referencing of photo to digital
- A sequence of photos was taken from each viewpoint and stitched to form panoramas. Photos were overlapped by approximately 30% and edges cropped prior to stitching to eliminate edge distortion.
- A digital model was created. Computer images were generated within the digital scene from the same locations as the photos. The image was overlaid and aligned with the photo using key reference points and visual matching. (Photos were imported in RAW format to avoid degradation of the image, requiring resizing to match the computer image).
- The wire-frame was then switched off leaving the proposed activity in its correct location and scale relative to the photo. Lower parts of the proposed activity were erased using Photoshop software where they would be behind foreground items.
- The time and weather when the photo was taken was entered to the program in order to replicate lighting conditions.
- The completed photomontage is presented over two pages:
- The photos are produced to replicate correct scale at the nominated reading distance (in this case 400mm).
- Each photomontage is printed across two facing pages to illustrate a field of view of approximately 110° at a reading distance of 400mm. This approximates the field of human binocular vision. (But not peripheral vision which extends to approximately 200°)

Notes on use of Photosimulations:

- The Photosimulations are a useful tool but they cannot not precisely reproduce real life for the following
 - 2D Photography flattens an image compared to binocular vision.
 - Photography is static, whereas the human vision can scan and remember information.
 - Photographs are passive, whereas the eye seeks out detail.
 - The human eye can see more contrast than can be reproduced through photography.

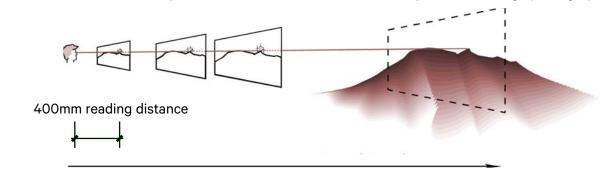


Figure 01: The relationship between reading distance and real life scale.

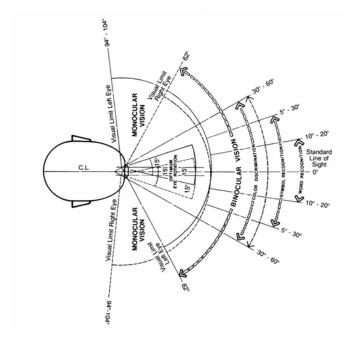


Figure 02: Binocular vision is approximately 124°. Field of view is approximately 110° across 2 x A3 pages at correct scale image for 400mm reading distance (vertical field of view is approximately 33°)

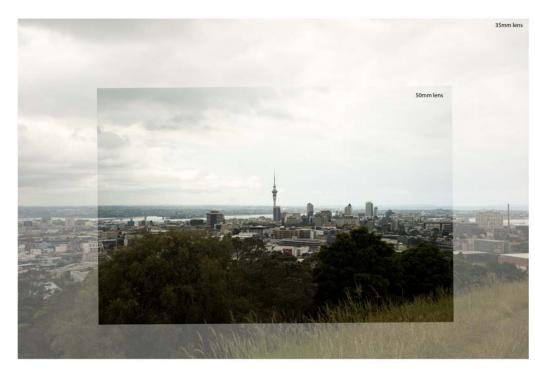


Figure 03: Comparison of 35mm lens and 50mm lens

Two images from the same location. With 35mm and 50mm lenses perspective is influenced by field of view, not by lens focal length. The overlaid portion is identical.



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