Kiwi Point Quarry Expansion

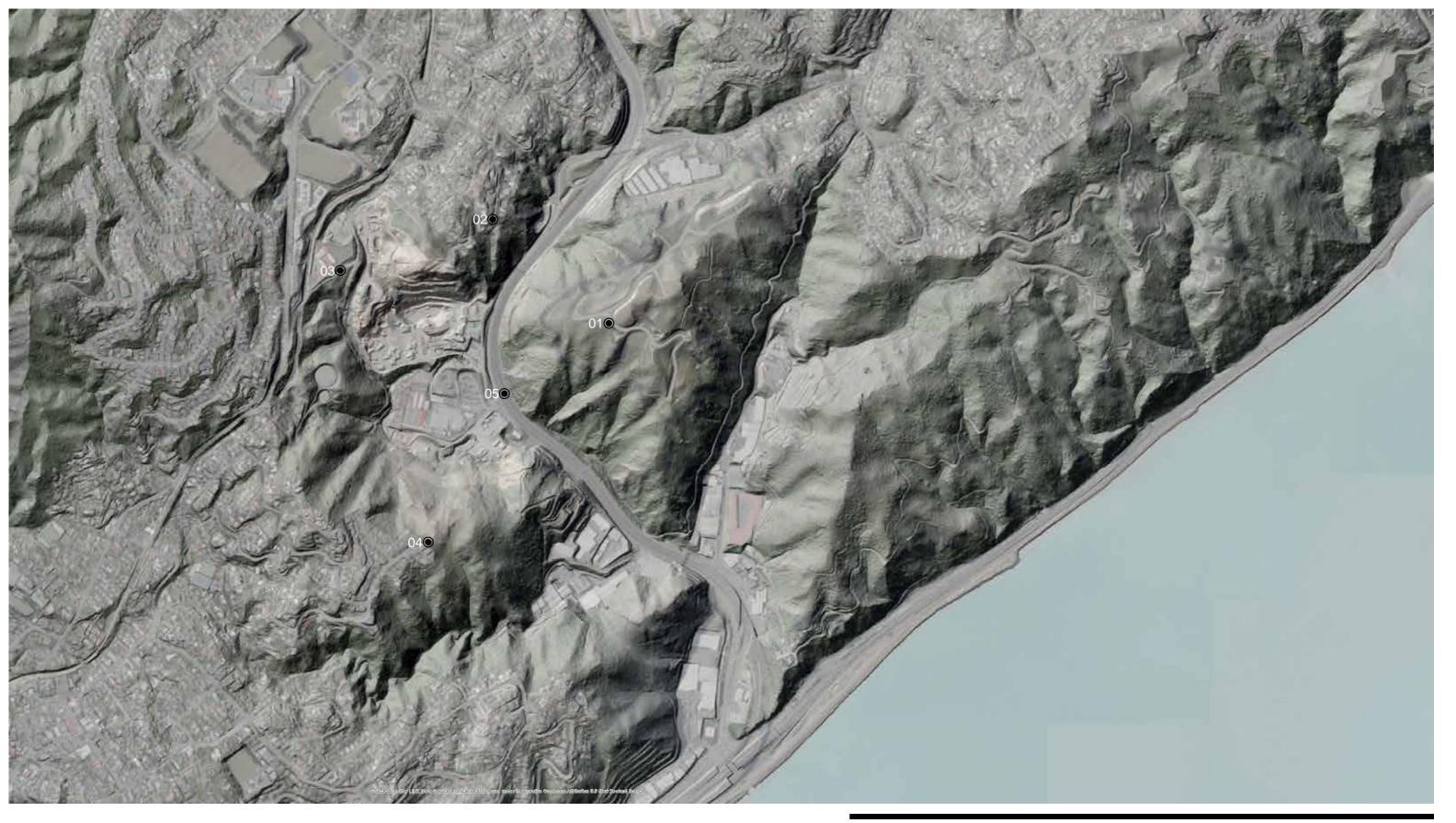
APPENDIX

July 2017

FOR INFORMATION ONLY

Isthmus.

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LEGEND



Ву Isthmus.

Client Wellington City Council

AKL 09 309 9442 | WTN 04 499 9832 www.isthmus.co.nz

Job Name

4/07/2017

Check

Date

Kiwi Point Quarry

1:10,000 Photo Locations 170620 @ A3

Job No. 3706 Drawing No. Revision 1.001

Issued For

W:\Jobs\3000 - 3999\3700 - 3799\3706 KiwiPoint Quarry\B File - Drawings\B1 - Working Drawings\06 GIS\mxd\Kiwi_Point_Quarry_Photo_Location_A3L.mxd COPYRIGHT ISTHMUS GROUP LIMITED®



Viewpoint 1 - Existing
Looking south west near the intersection of Grumman Lane and Spenmoor Street







Kiwi Point Quarry
Original Photo Alan England | 50mm | DSLR Nikon D800 | 11:26pm 20 June 2017 | N 5433431 E 1751619 (NZTM)
Reading distance for correct scale: 400mm | Viewpoint Elevation: 224m
Photomontages should be used as a guide to field observations.

Field of View: 55° per A3 page



Viewpoint 1 - Medium Development - Unmitigated Looking south west near the intersection of Grumman Lane and Spenmoor Street







Field of View: 55° per A3 page



Viewpoint 1 - Medium Development - Early Mitigation 1 year after quarrying
Looking south west near the intersection of Grumman Lane and Spenmoor Street







Field of View: 55° per A3 page



Viewpoint 1 - Medium Development - Mitigated 15 - 20 years after quarrying
Looking south west near the intersection of Grumman Lane and Spenmoor Street







Field of View: 55° per A3 page



Viewpoint 1 - Maximum Development - Unmitigated Looking south west near the intersection of Grumman Lane and Spenmoor Street





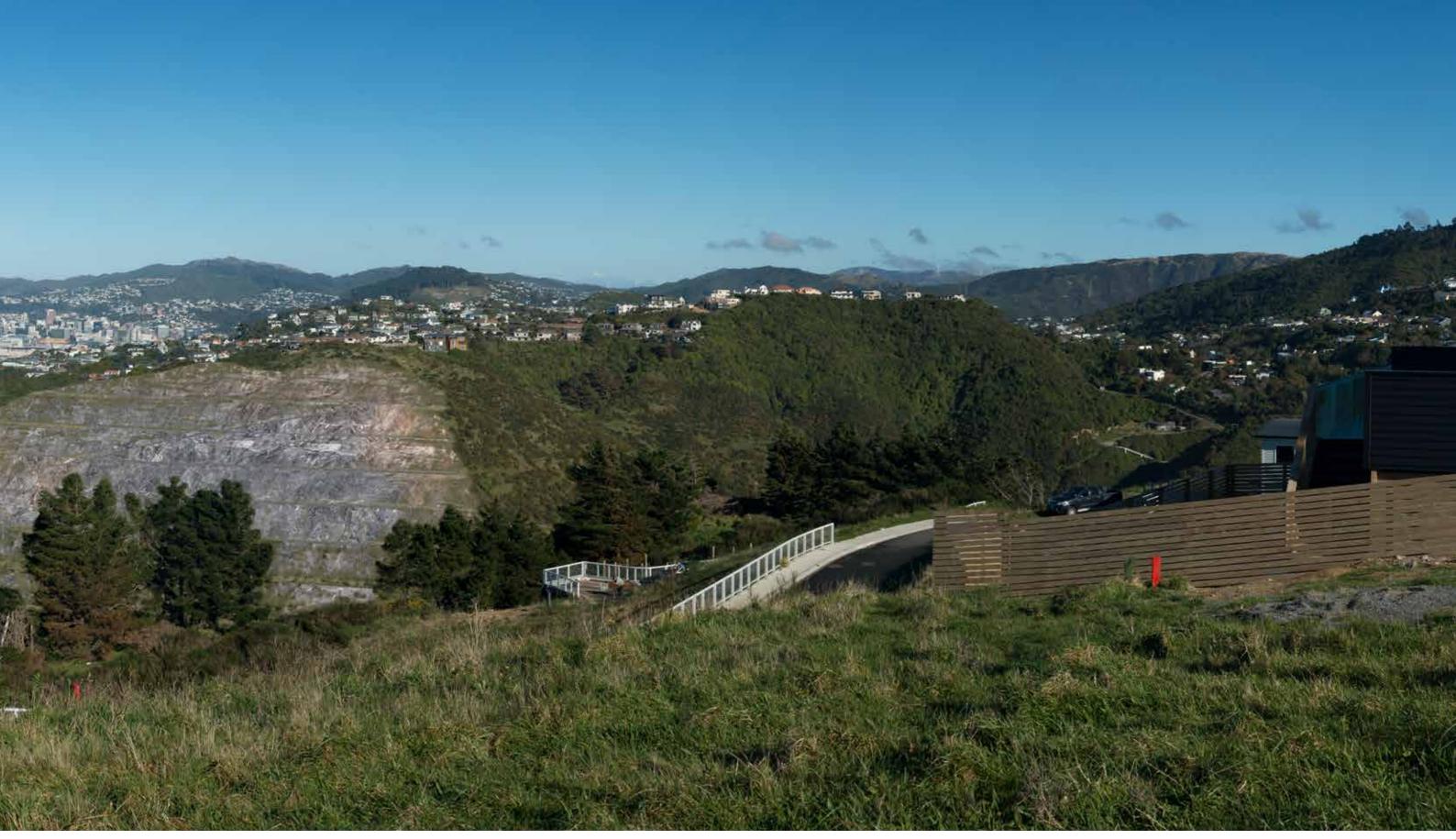


Field of View: 55° per A3 page



Viewpoint 1 - Maximum Development - Early Mitigation 1 year after quarrying
Looking south west near the intersection of Grumman Lane and Spenmoor Street





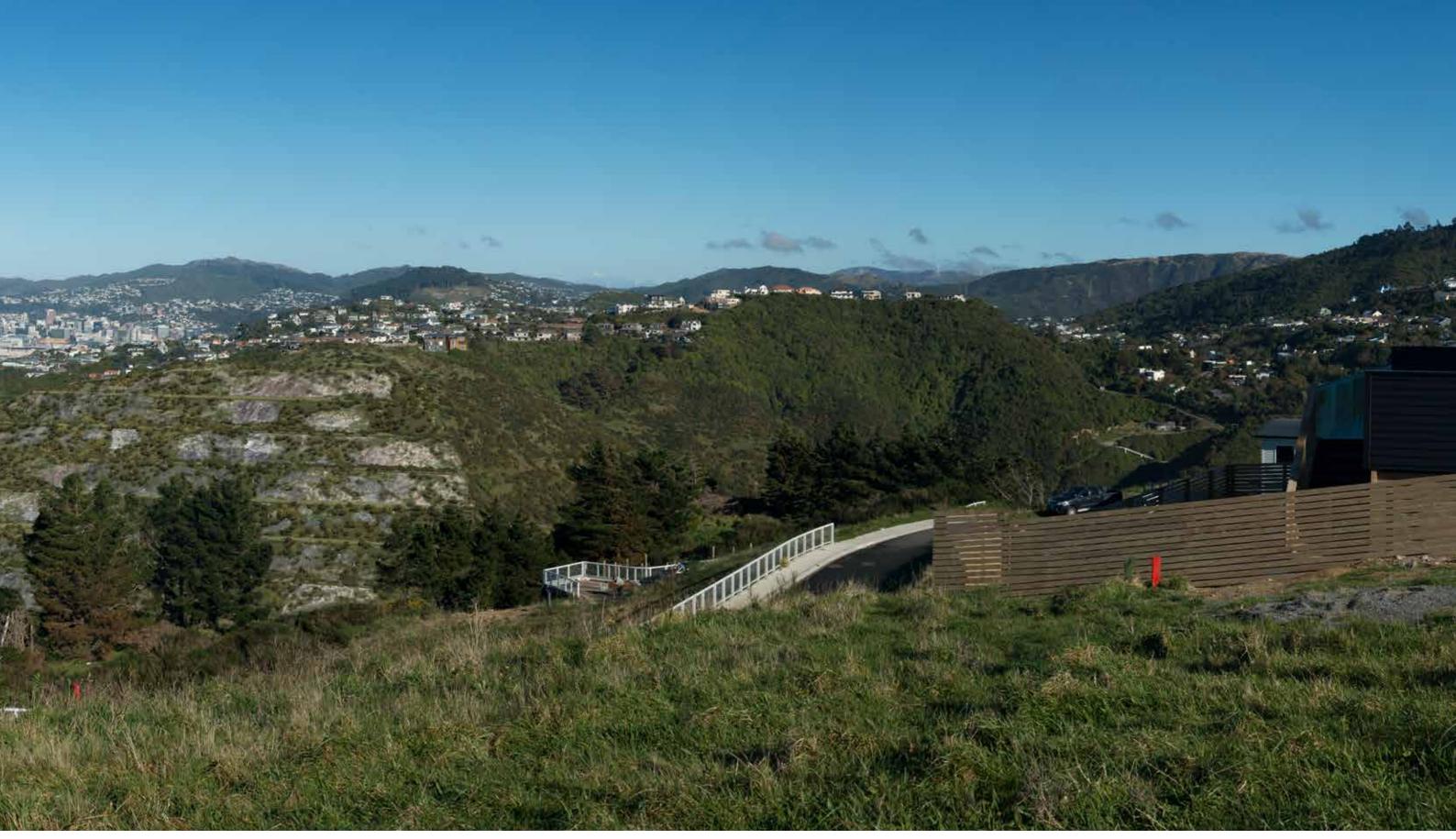


Field of View: 55° per A3 page



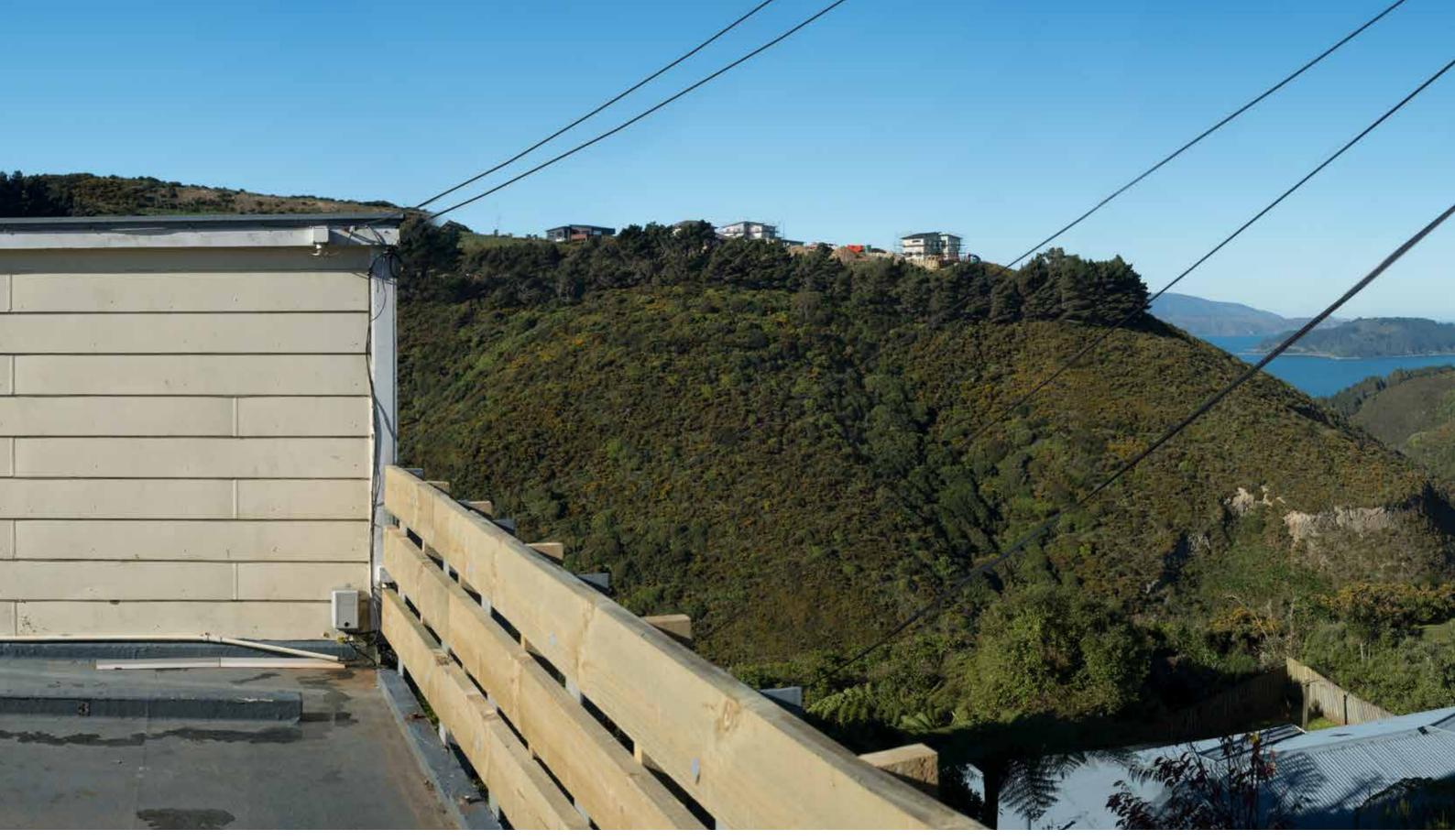
Viewpoint 1 - Maximum Development - Mitigated 15 - 20 years after quarrying
Looking south west near the intersection of Grumman Lane and Spenmoor Street



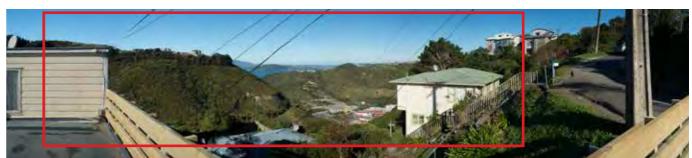




Field of View: 55° per A3 page



Viewpoint 2 - Existing
Looking south west outside 25 Kitchener Terrace

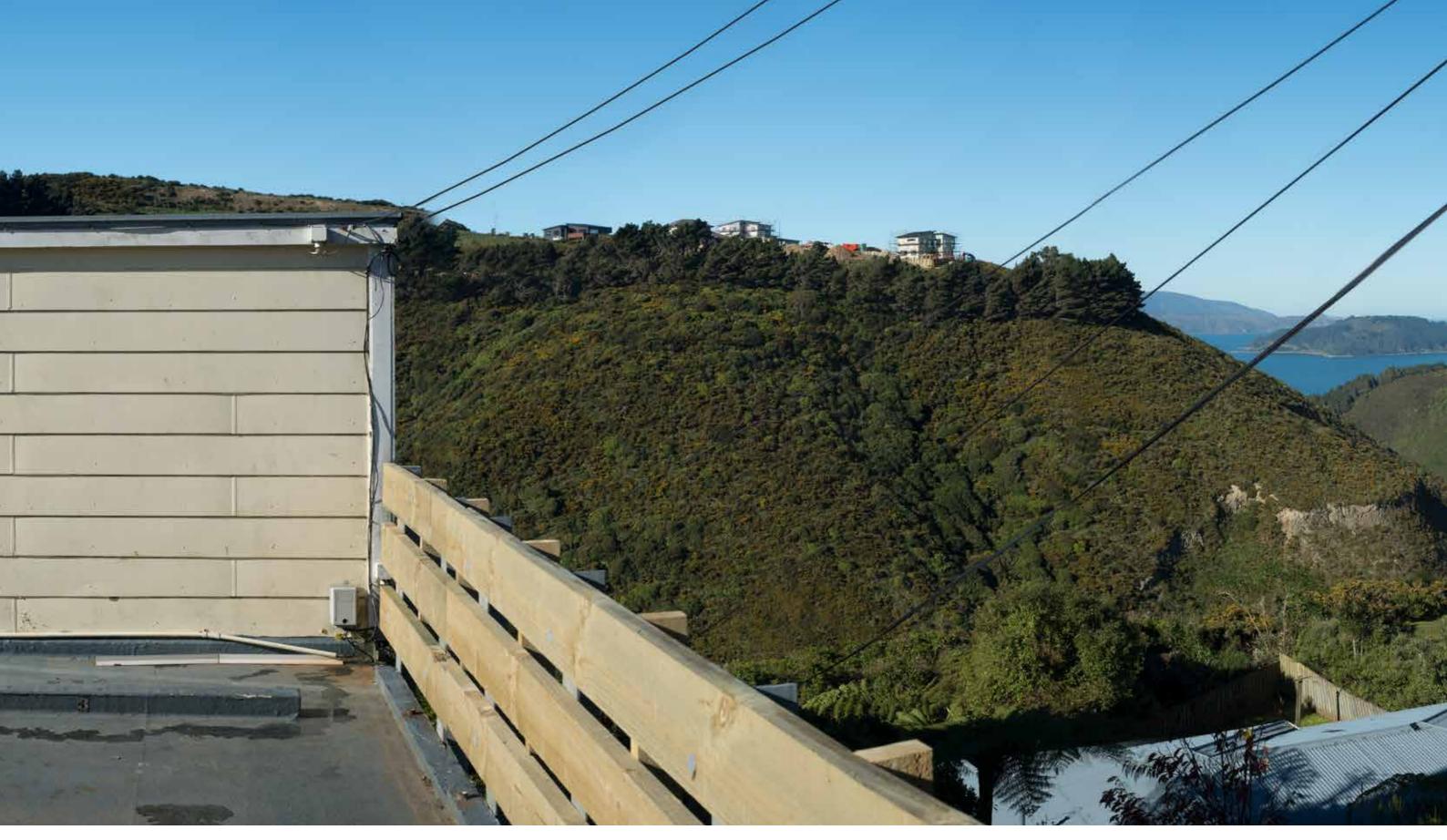






Kiwi Point Quarry
Original Photo Alan England | 50mm | DSLR Nikon D800 | 11:37pm 20 June 2017 | N 5433730 E 1751285 (NZTM)
Reading distance for correct scale: 400mm | Viewpoint Elevation: 176m
Photomontages should be used as a guide to field observations.

Field of View: 55° per A3 page



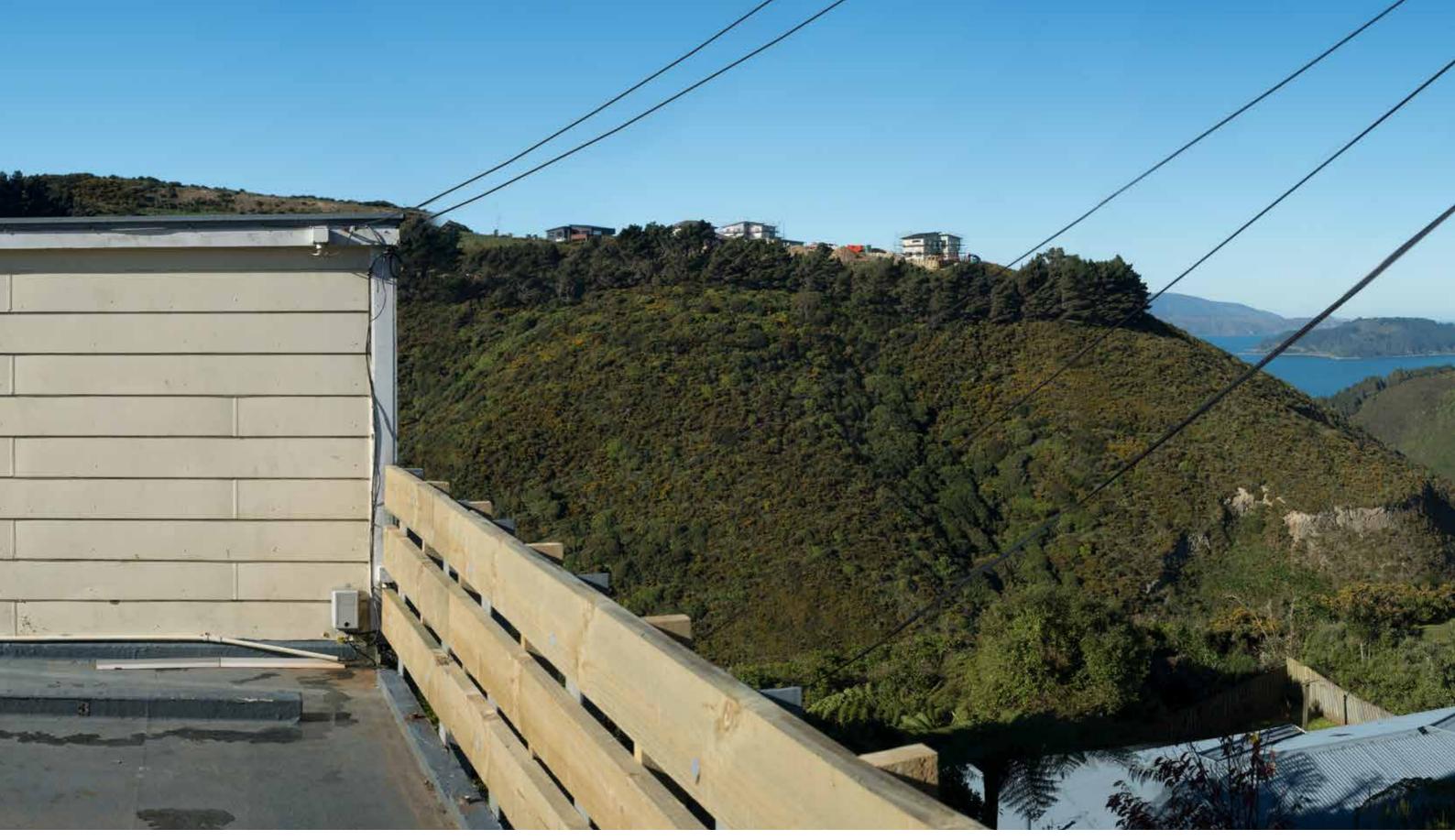
Viewpoint 2 - Medium Development - Unmitigated Looking south west outside 25 Kitchener Terrace







Field of View: 55° per A3 page



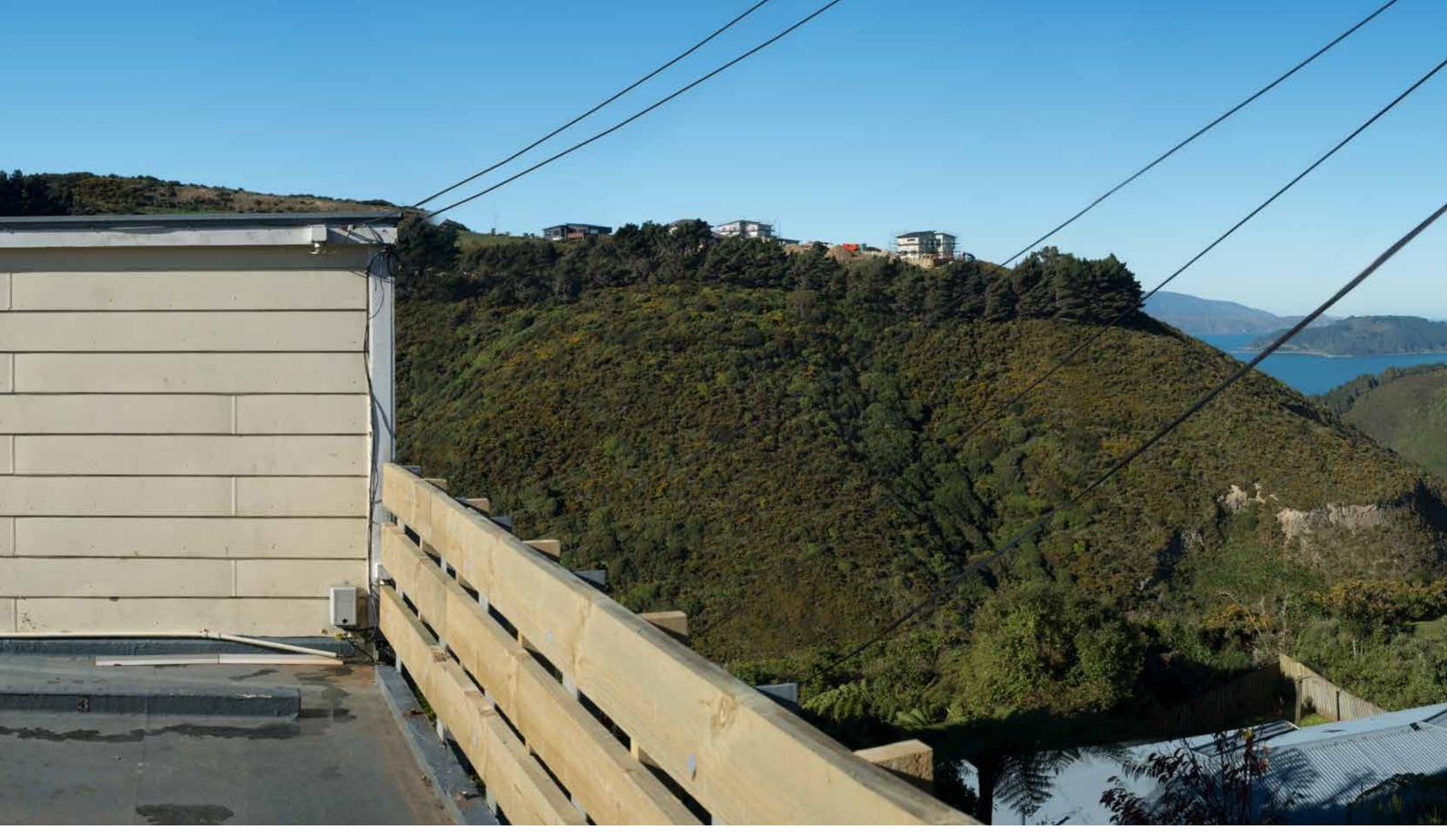
Viewpoint 2 - Medium Development - Early Mitigation 1 year after quarrying
Looking south west outside 25 Kitchener Terrace







Field of View: 55° per A3 page



Viewpoint 2 - Medium Development - Mitigated 15 - 20 years after quarrying
Looking south west outside 25 Kitchener Terrace







Field of View: 55° per A3 page



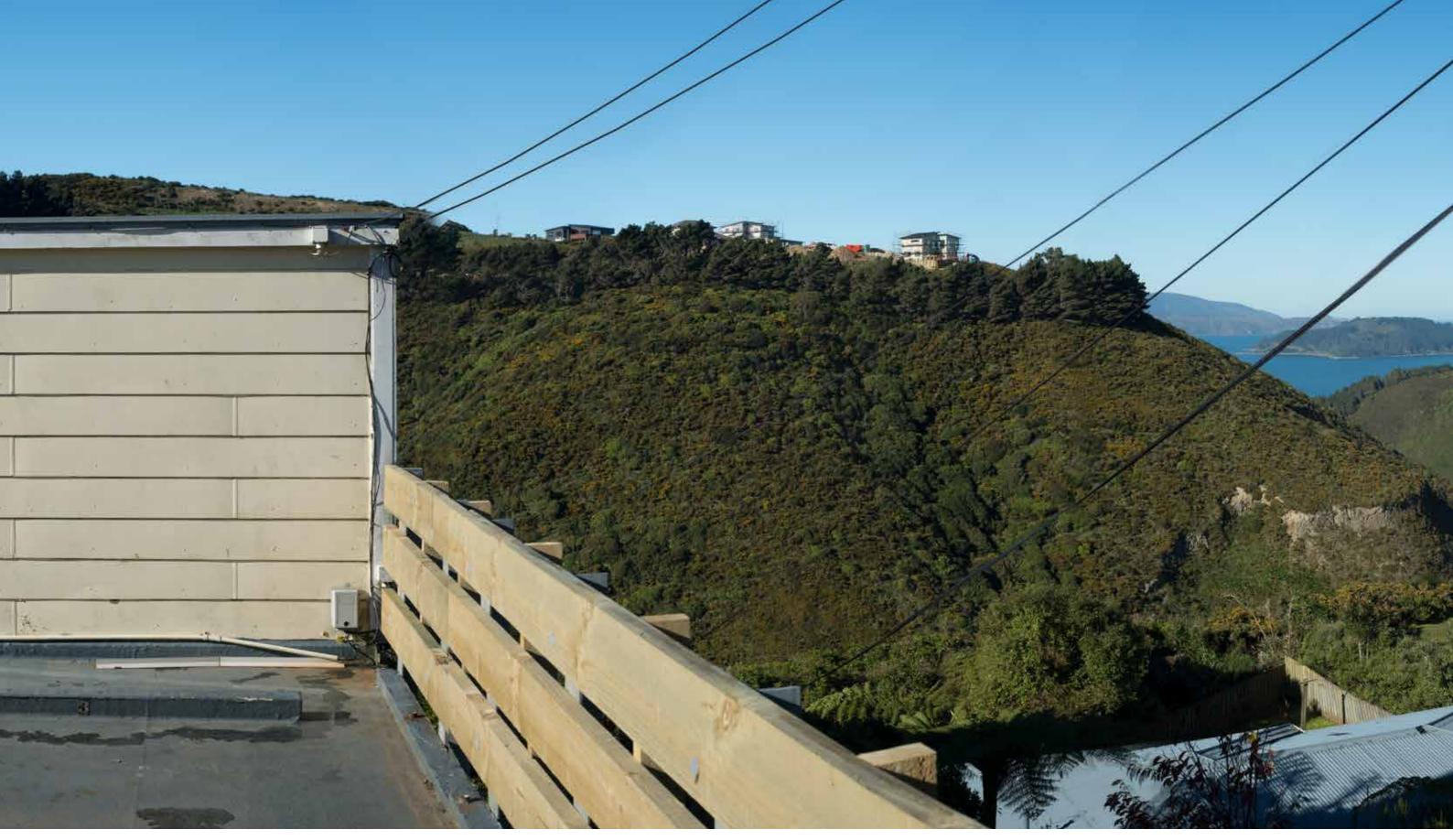
Viewpoint 2 - Maximum Development - Unmitigated Looking south west outside 25 Kitchener Terrace







Field of View: 55° per A3 page



Viewpoint 2 - Maximum Development - Early Mitigation 1 year after quarrying
Looking south west outside 25 Kitchener Terrace







Field of View: 55° per A3 page



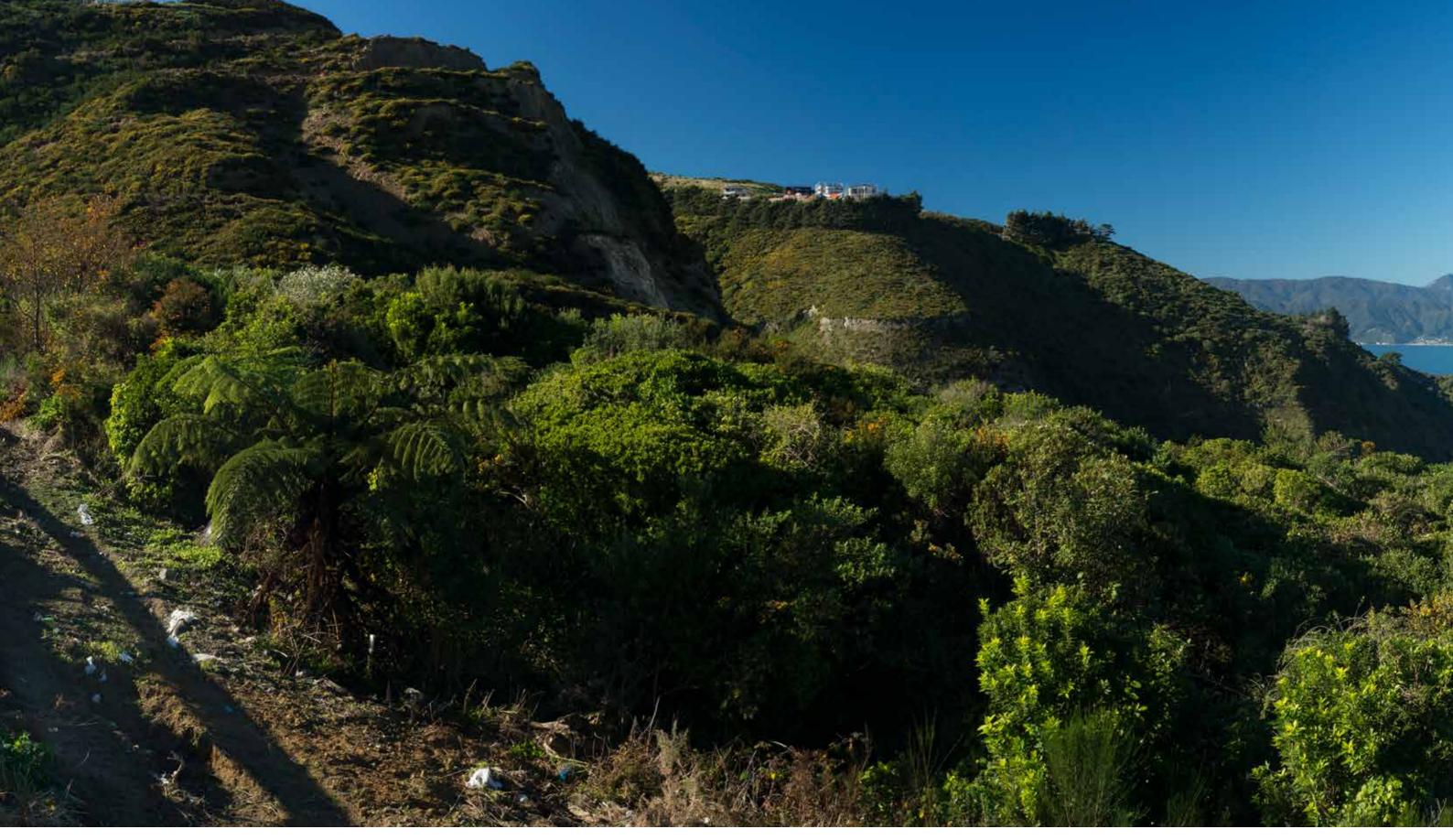
Viewpoint 2 - Maximum Development - Mitigated 15 - 20 years after quarrying Looking south west outside 25 Kitchener Terrace







Field of View: 55° per A3 page



Viewpoint 3 - Existing
Looking south east from Fraser Ave below Westmount School

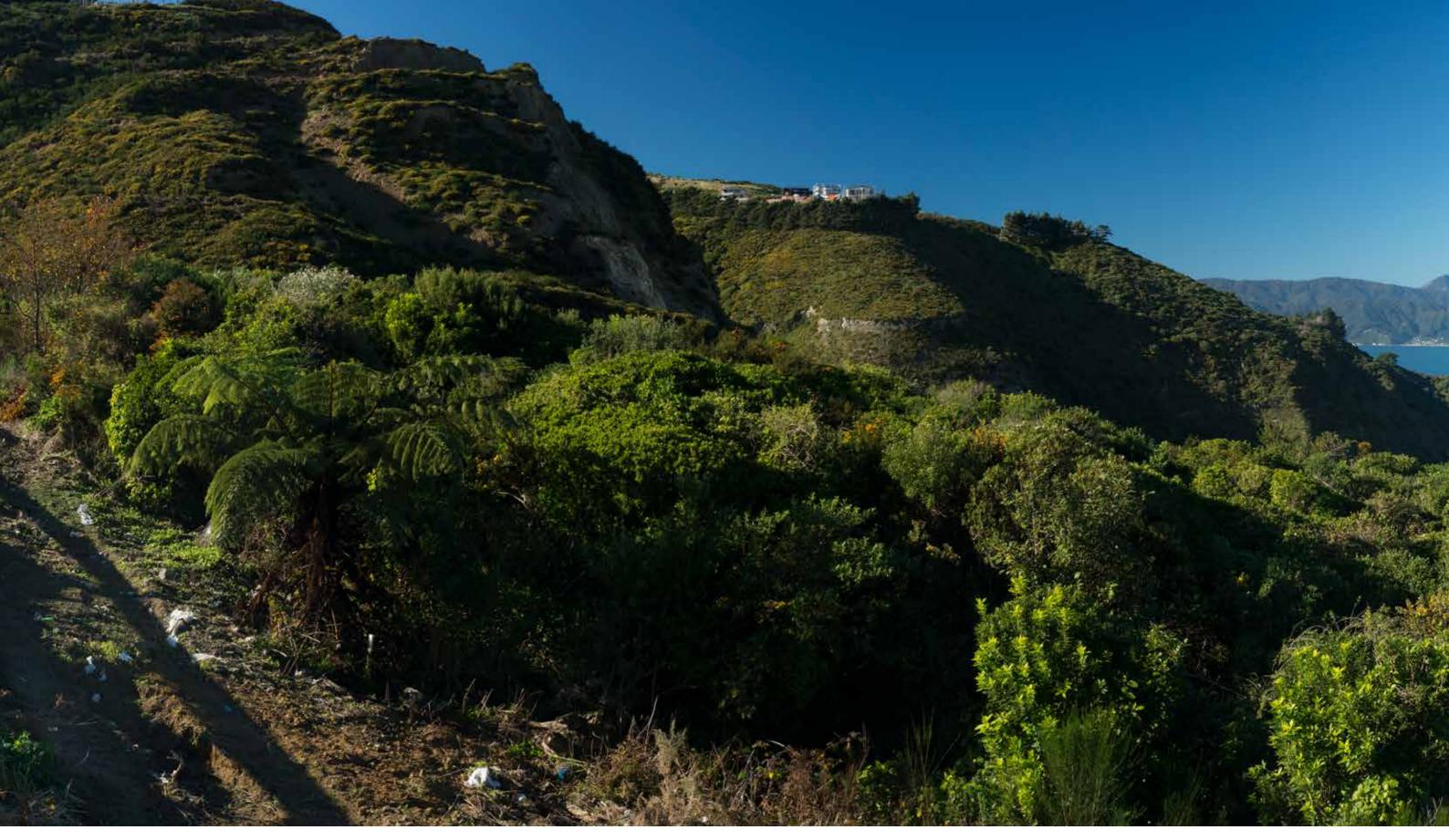






Kiwi Point Quarry
Original Photo Alan England | 50mm | DSLR Nikon D800 | 11:47pm 20 June 2017 | N 5433582 E 1750846 (NZTM)
Reading distance for correct scale: 400mm | Viewpoint Elevation: 145m
Photomontages should be used as a guide to field observations.

Field of View: 55° per A3 page



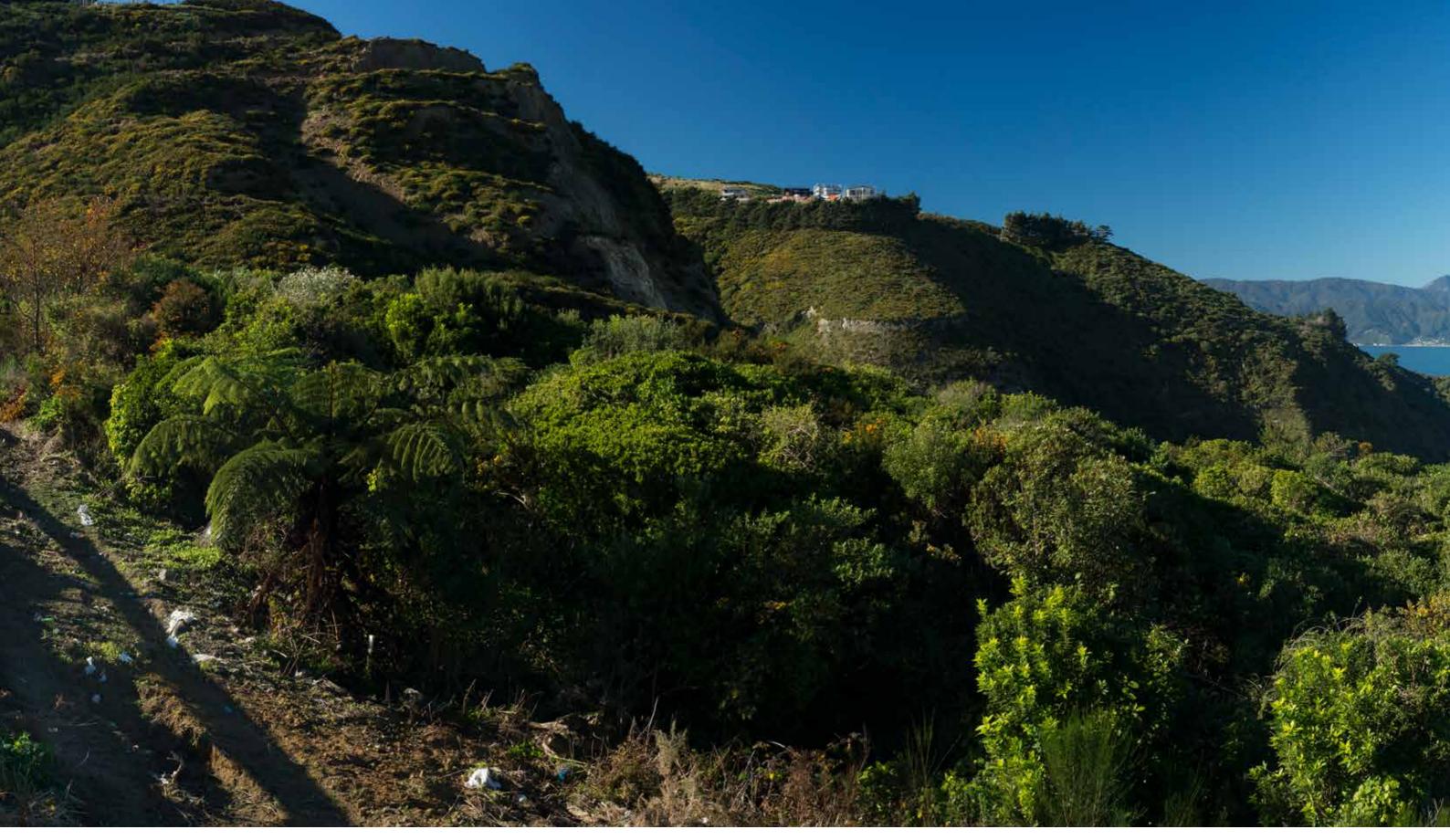
Viewpoint 3 - Medium Development - Unmitigated Looking south east from Fraser Ave below Westmount School







Field of View: 55° per A3 page



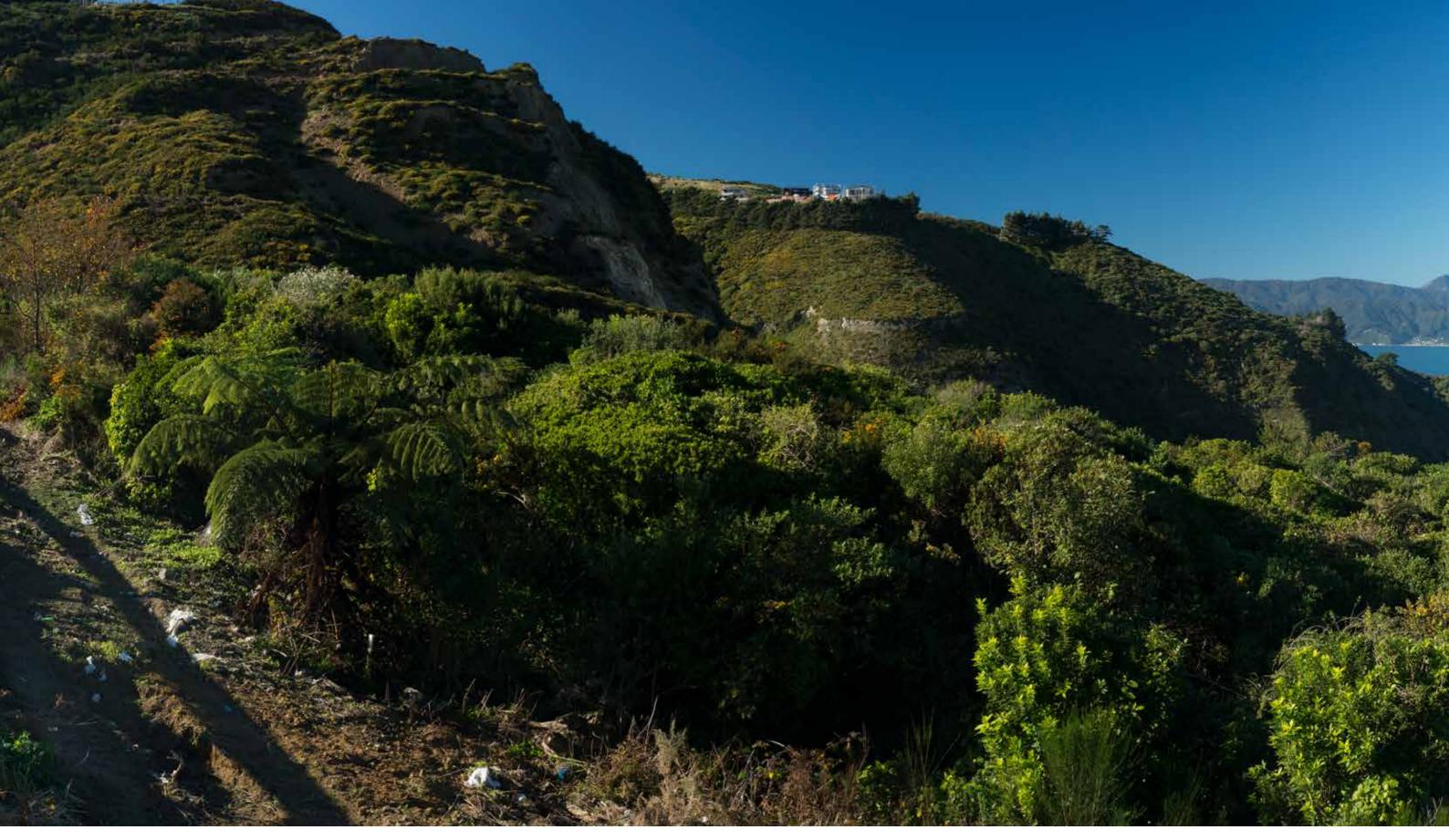
Viewpoint 3 - Medium Development - Early Mitigation 1 year after quarrying
Looking south east from Fraser Ave below Westmount School







Field of View: 55° per A3 page



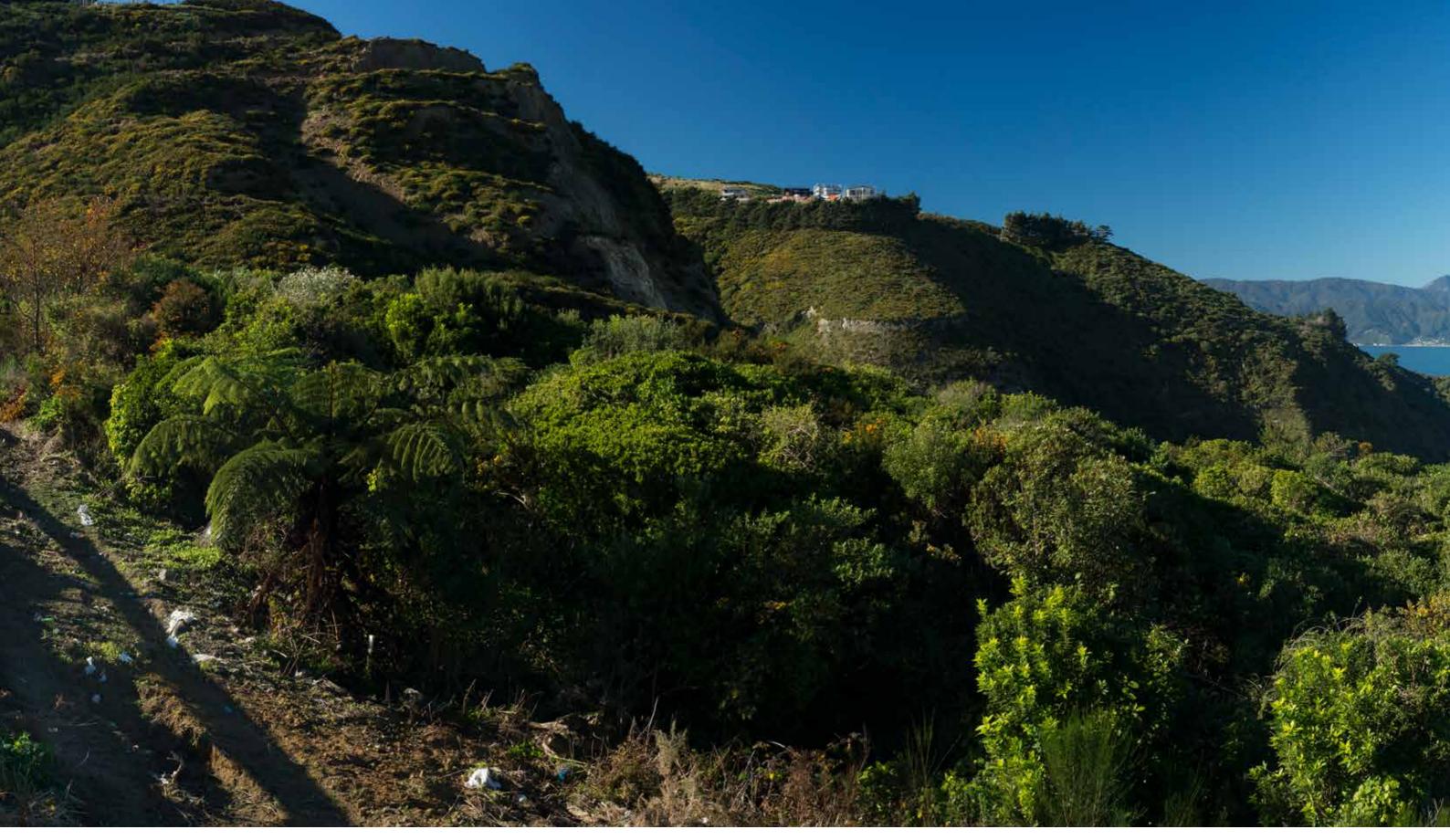
Viewpoint 3 - Medium Development - Mitigated 15 - 20 years after quarrying
Looking south east from Fraser Ave below Westmount School







Field of View: 55° per A3 page



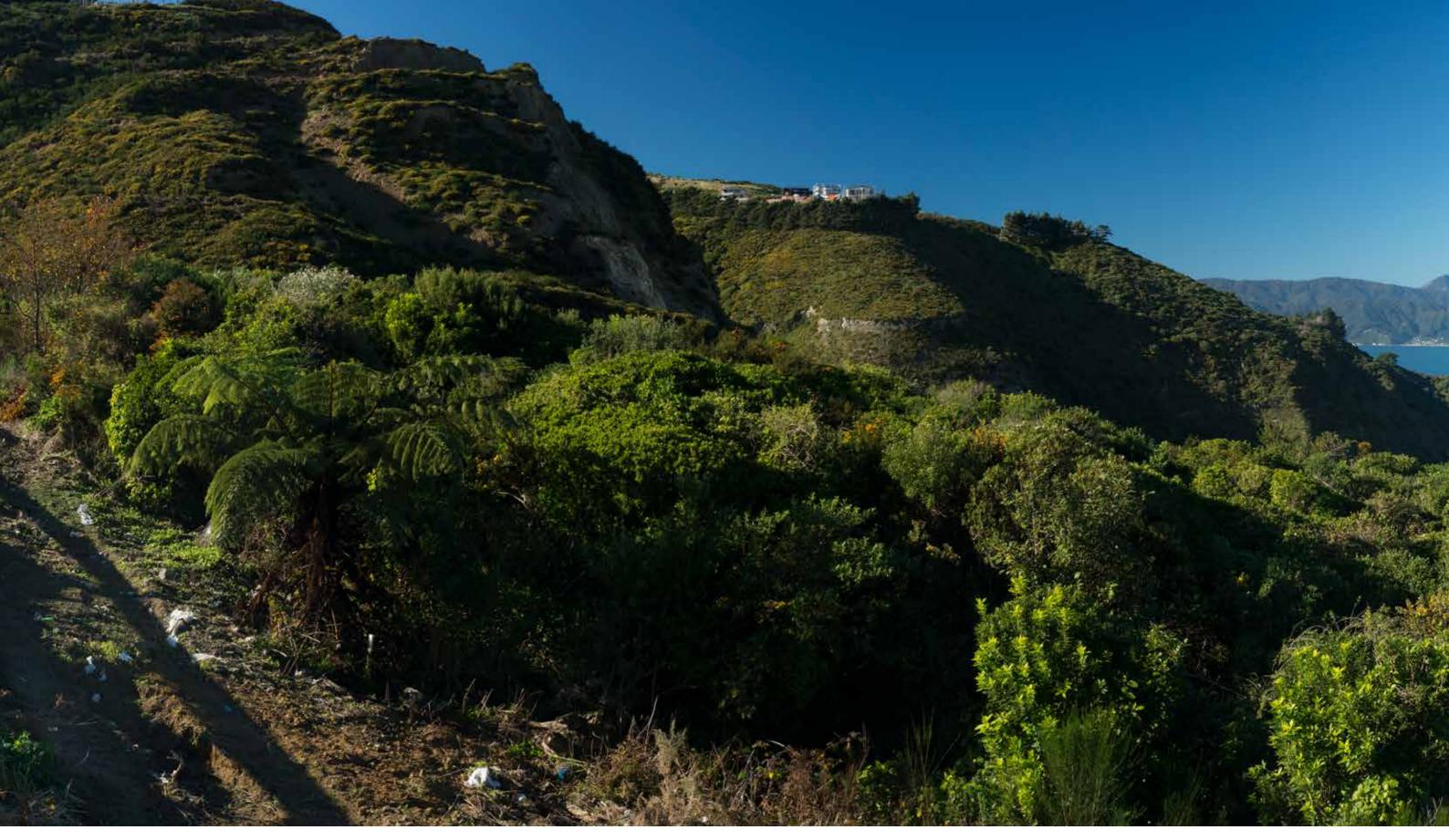
Viewpoint 3 - Maximum Development - Unmitigated Looking south east from Fraser Ave below Westmount School







Field of View: 55° per A3 page



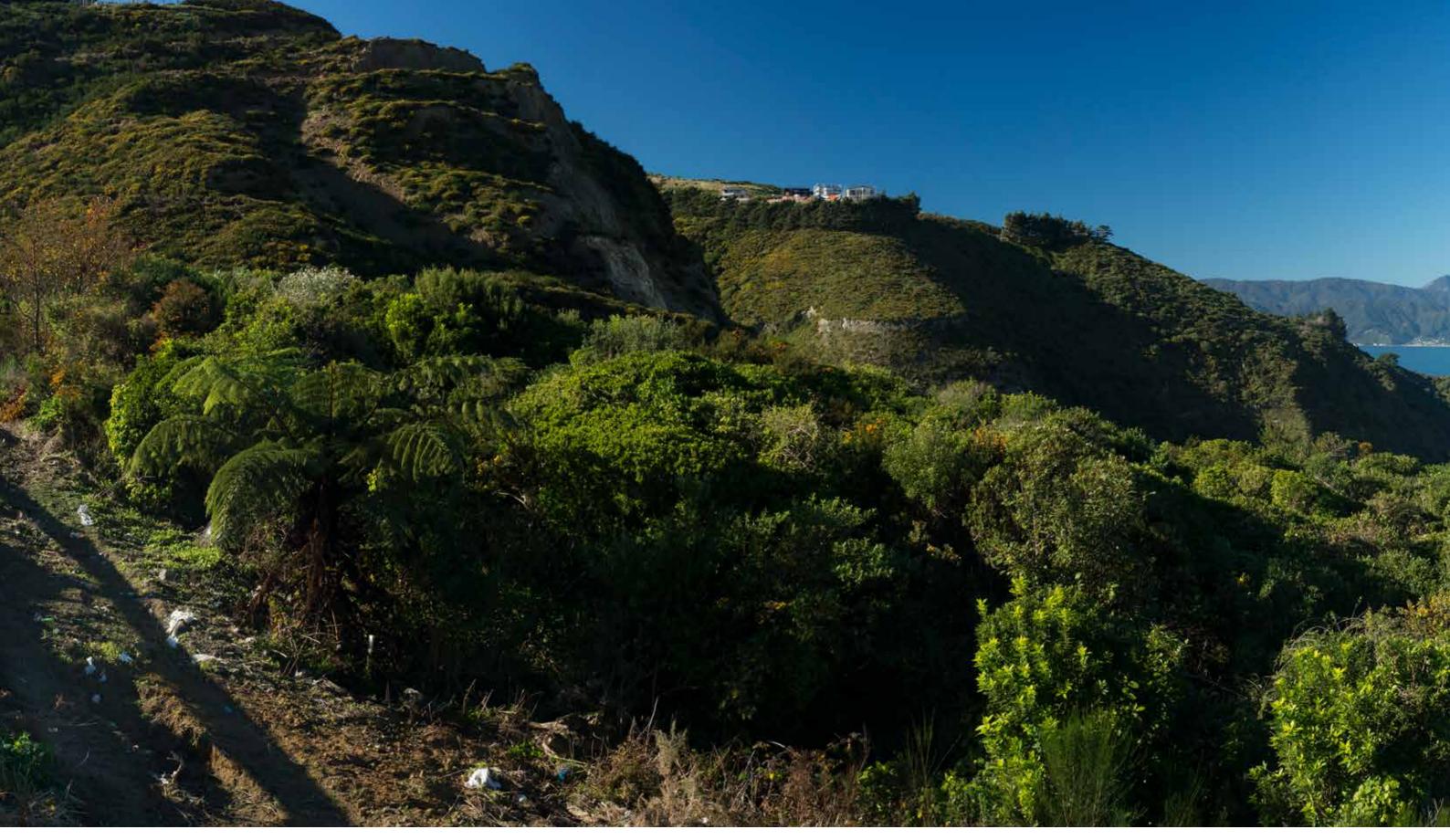
Viewpoint 3 - Maximum Development - Early Mitigation 1 year after quarrying
Looking south east from Fraser Ave below Westmount School







Field of View: 55° per A3 page



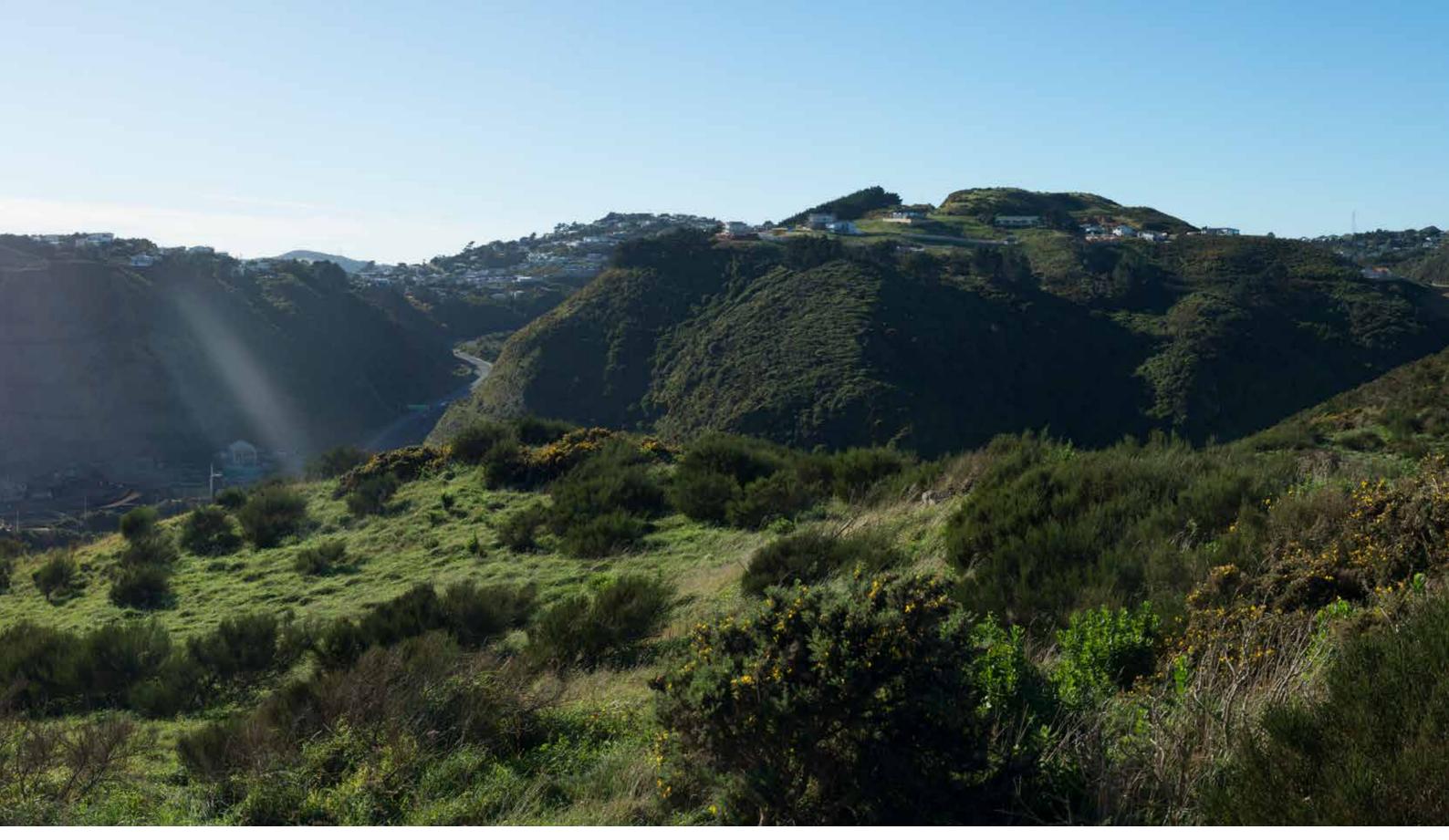
Viewpoint 3 - Maximum development - Mitigated 15 - 20 years after quarrying
Looking south east from Fraser Ave below Westmount School







Field of View: 55° per A3 page



Viewpoint 4 - Existing
Looking north from reserve below Shastri Terrace

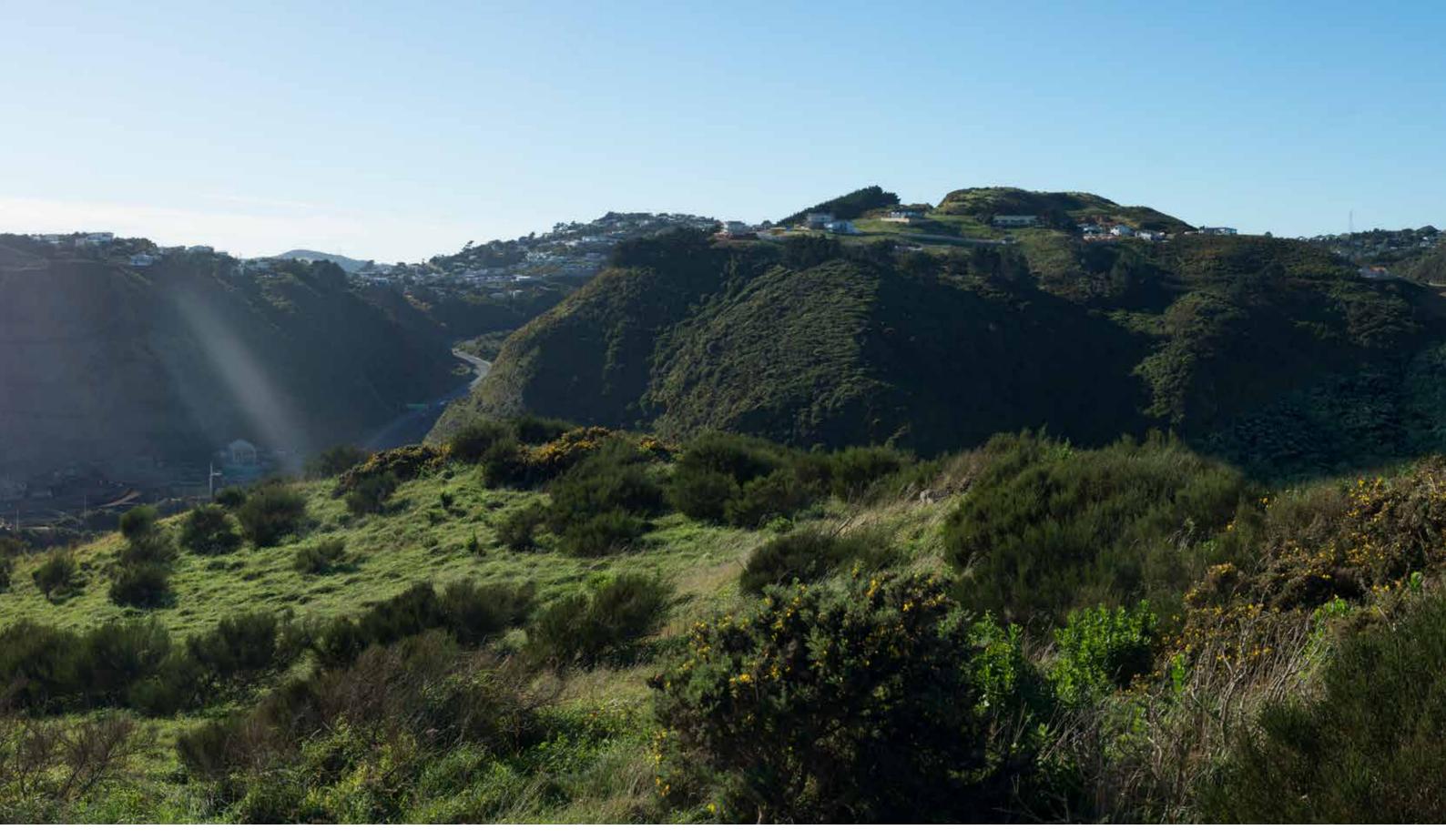






Kiwi Point Quarry
Original Photo Alan England | 50mm | DSLR Nikon D800 | 13:21pm 20 June 2017 | N 5432801 E 1751098 (NZTM)
Reading distance for correct scale: 400mm | Viewpoint Elevation: 183m
Photomontages should be used as a guide to field observations.

Field of View: 55° per A3 page



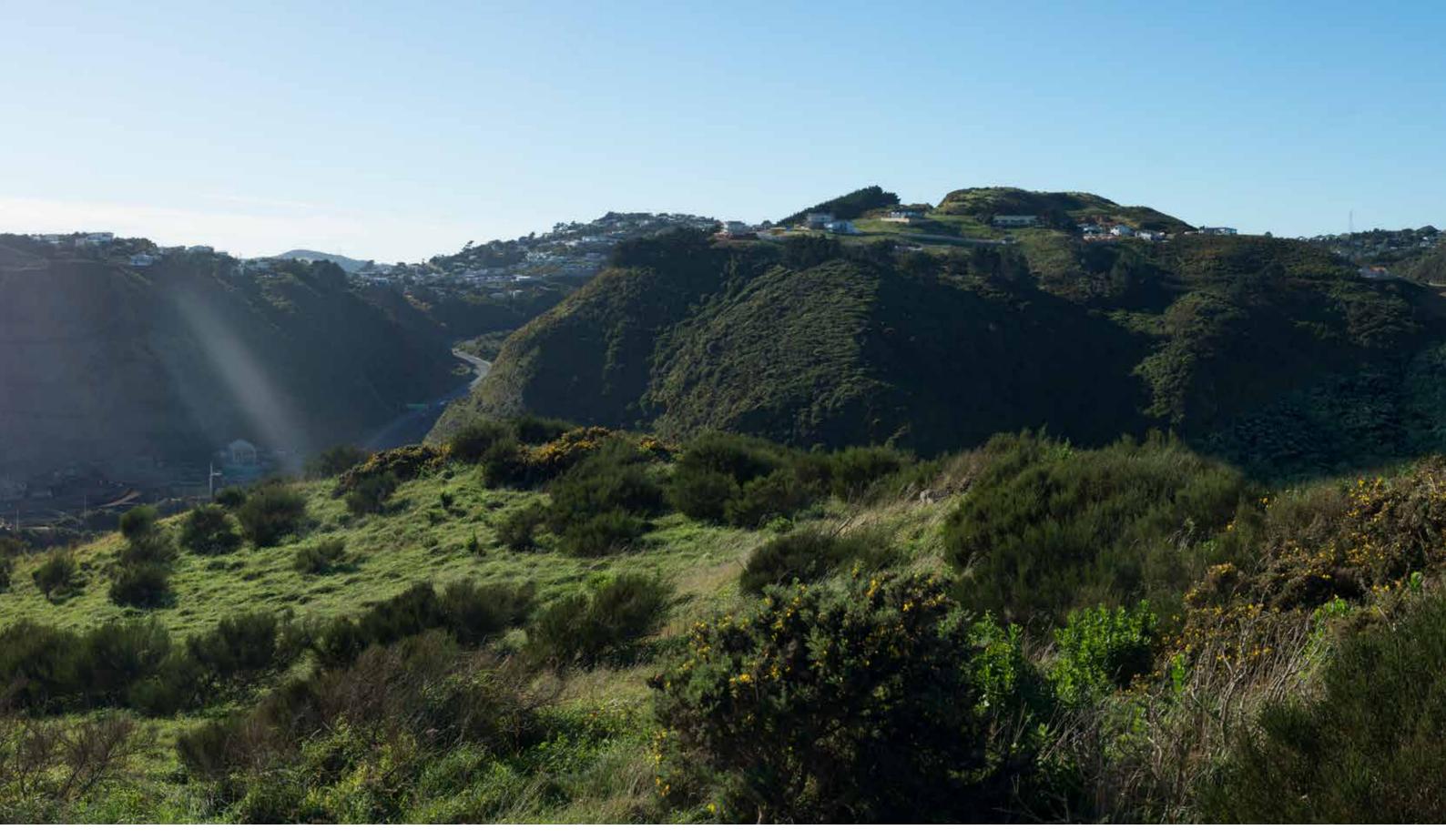
Viewpoint 4 - Medium Development - Unmitigated Looking north from reserve below Shastri Terrace







Field of View: 55° per A3 page



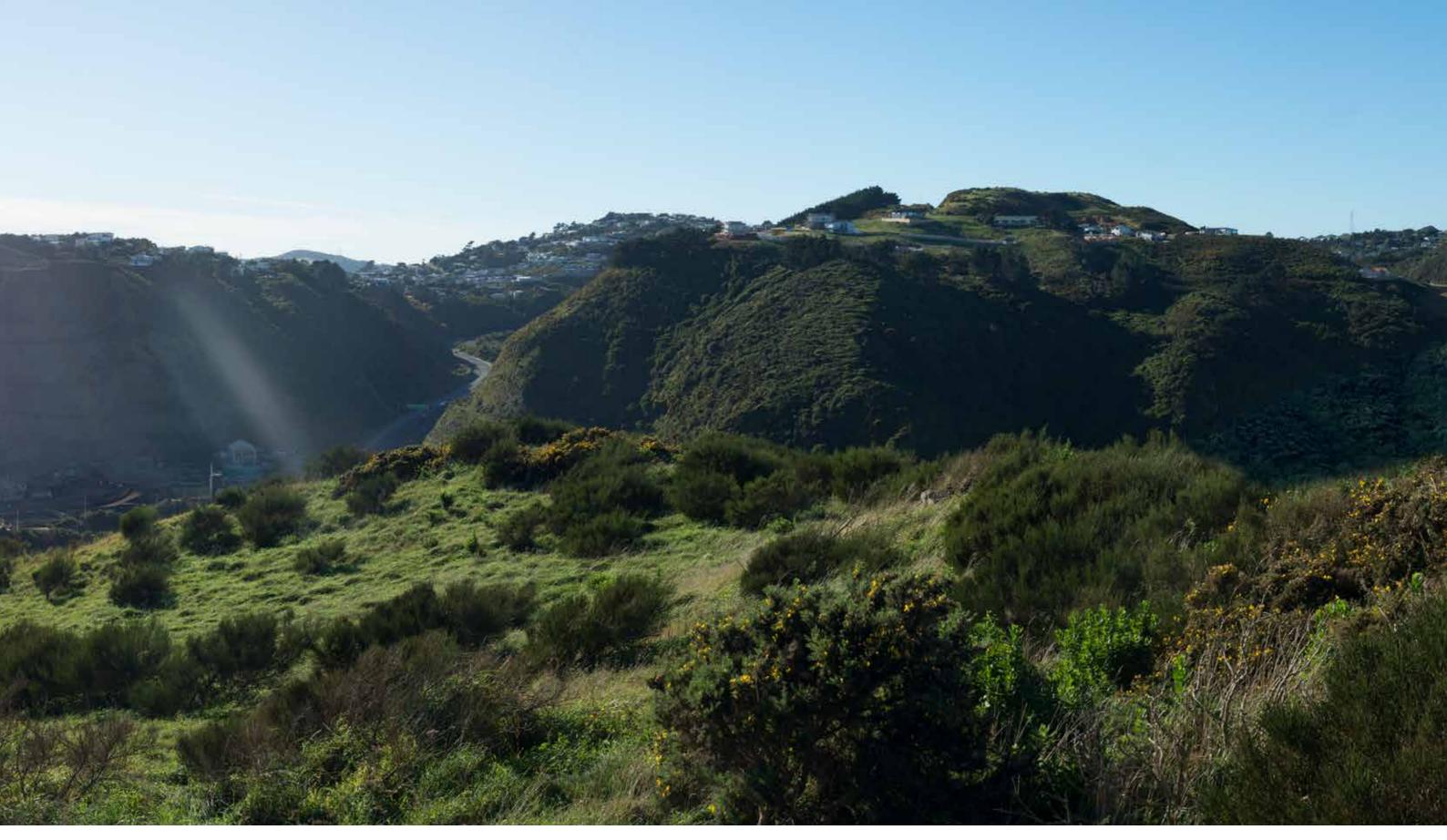
Viewpoint 4 - Medium Development - Early Mitigation 1 year after quarrying
Looking north from reserve below Shastri Terrace



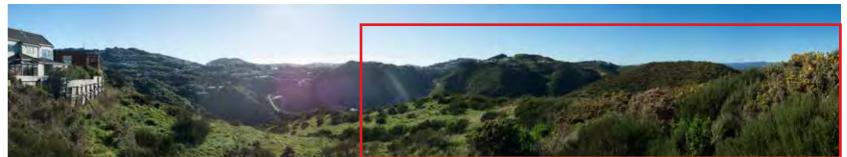




Field of View: 55° per A3 page



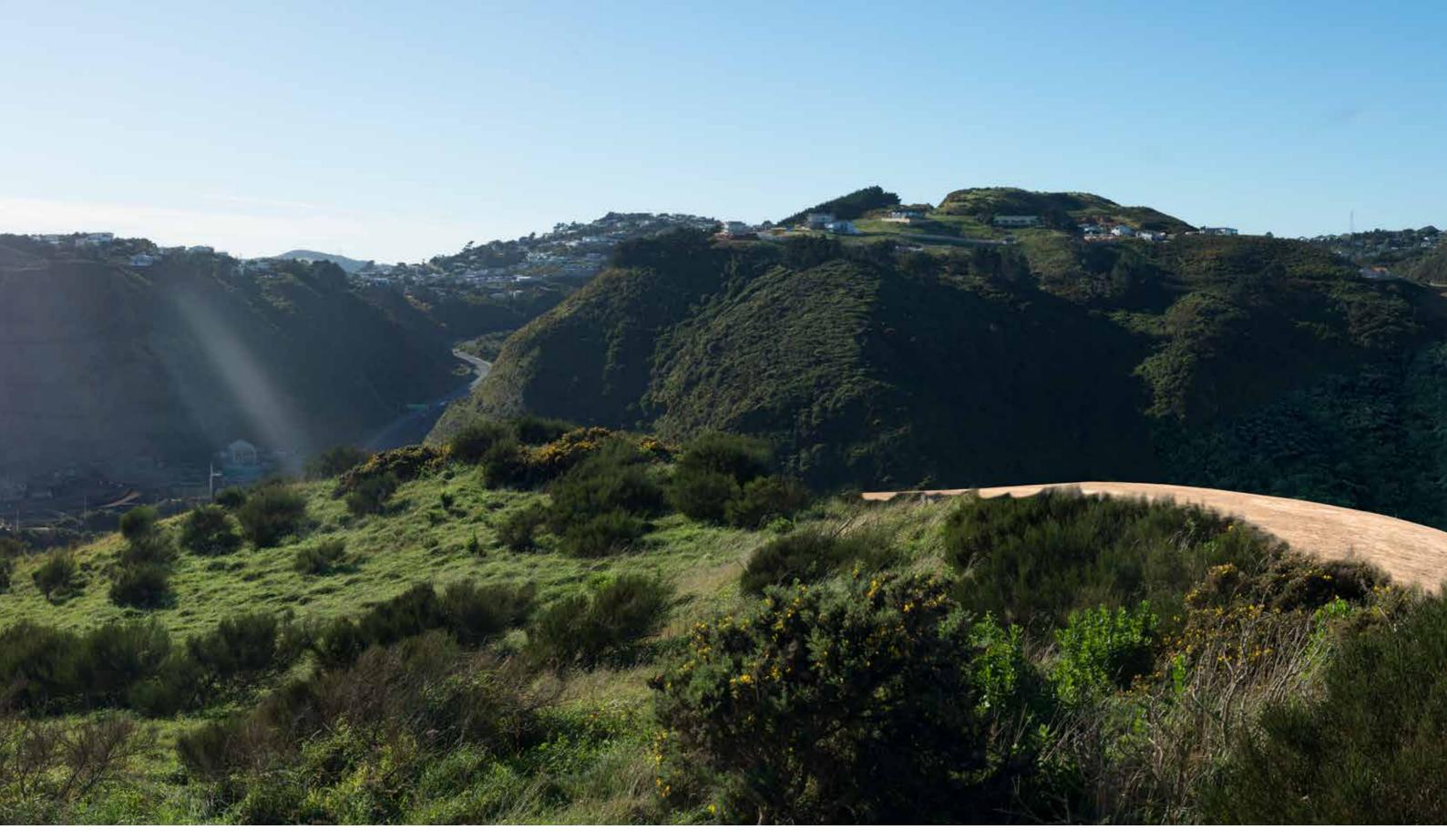
Viewpoint 4 - Medium Development- Mitigated 15 - 20 years after quarrying
Looking north from reserve below Shastri Terrace



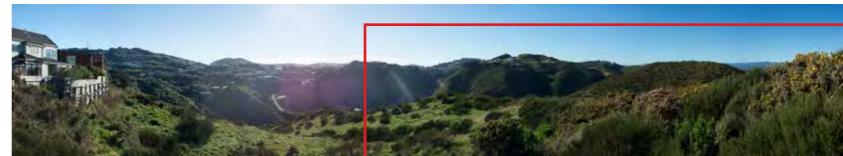




Field of View: 55° per A3 page



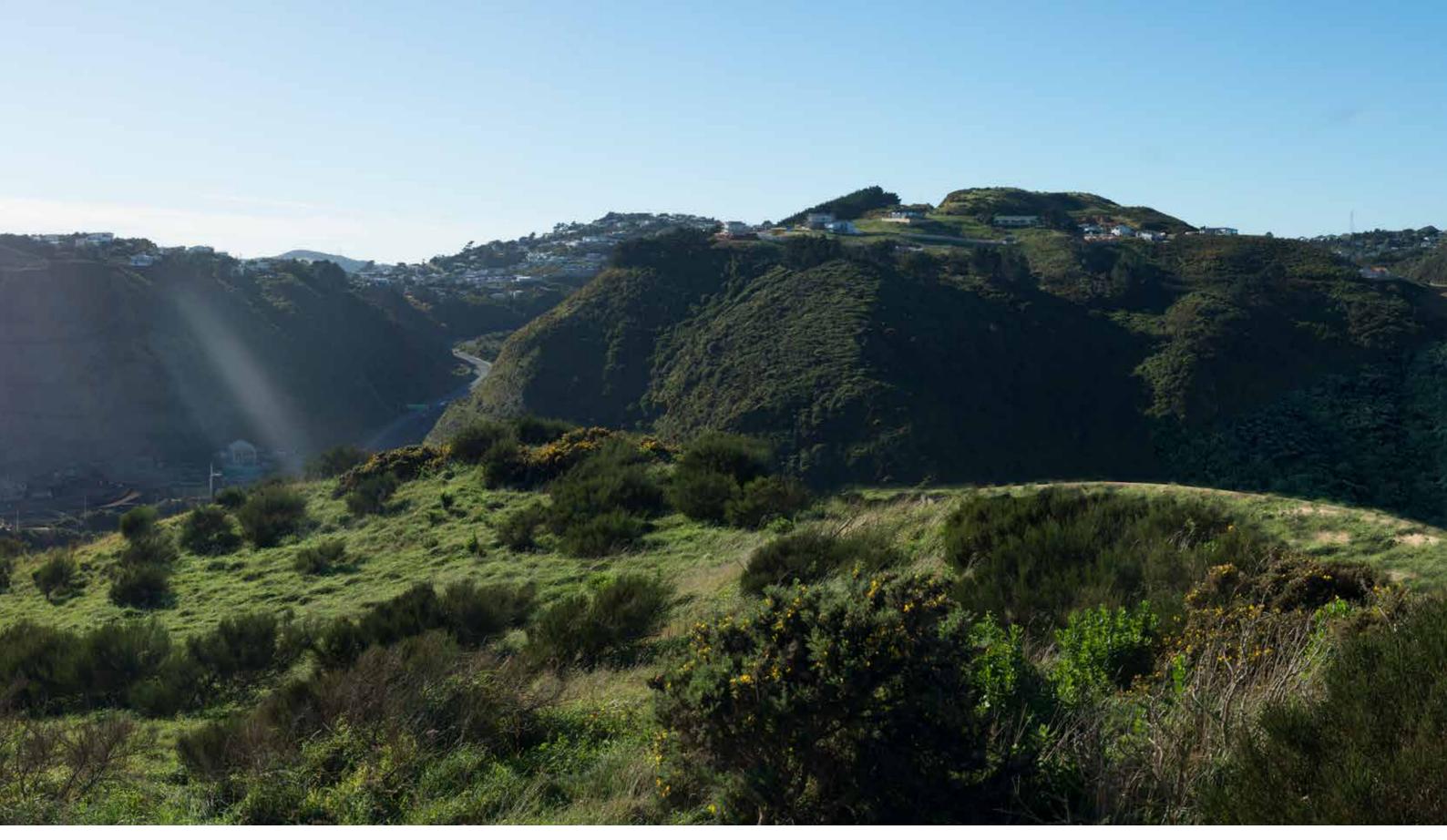
Viewpoint 4 - Maximum Development - Unmitigated Looking north from reserve below Shastri Terrace



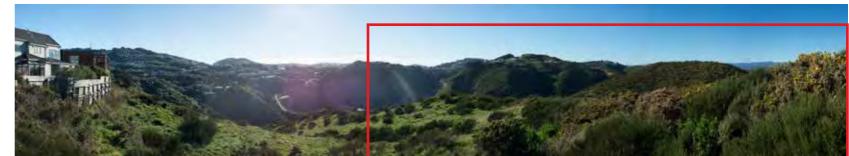




Field of View: 55° per A3 page



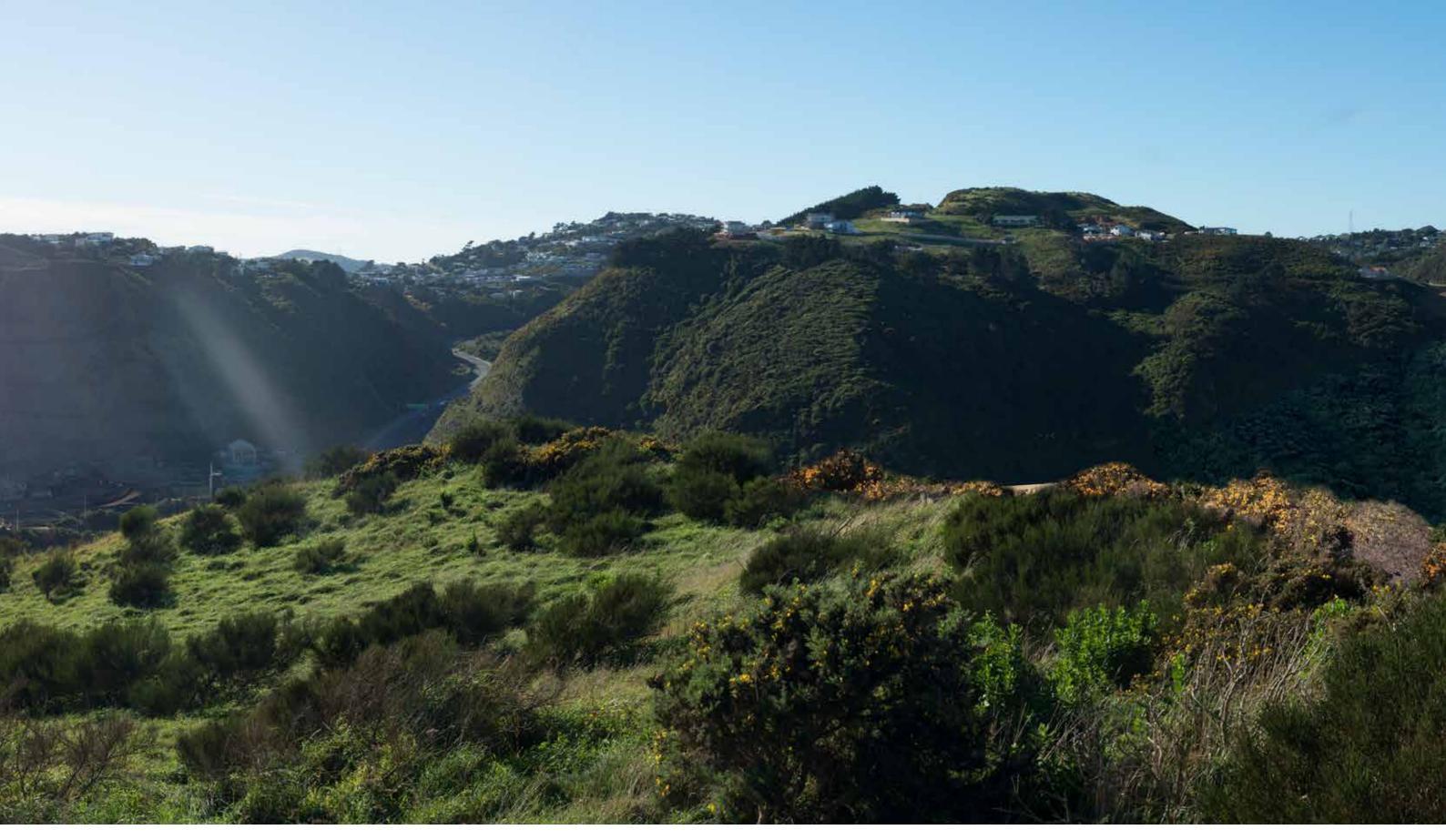
Viewpoint 4 - Maximum Development - Early Mitigation 1 year after quarrying
Looking north from reserve below Shastri Terrace







Field of View: 55° per A3 page



Viewpoint 4 - Maximum Development - Mitigated 15 - 20 years after quarrying
Looking north from reserve below Shastri Terrace







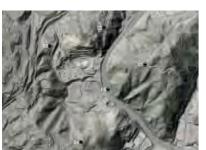
Field of View: 55° per A3 page



Viewpoint 5 - Existing
Looking south from SH1







Kiwi Point Quarry
Original Photo Lisa Rimmer | 50mm | DSLR Nikon D700 | 14:56pm 29 June 2017 | N 5433356 E 1751302 (NZTM)
Reading distance for correct scale: 400mm | Viewpoint Elevation: 84m
Photomontages should be used as a guide to field observations.

Field of View: 55° per A3 page

50mm



Viewpoint 5 - Medium Development - Unmitigated Looking south from SH1





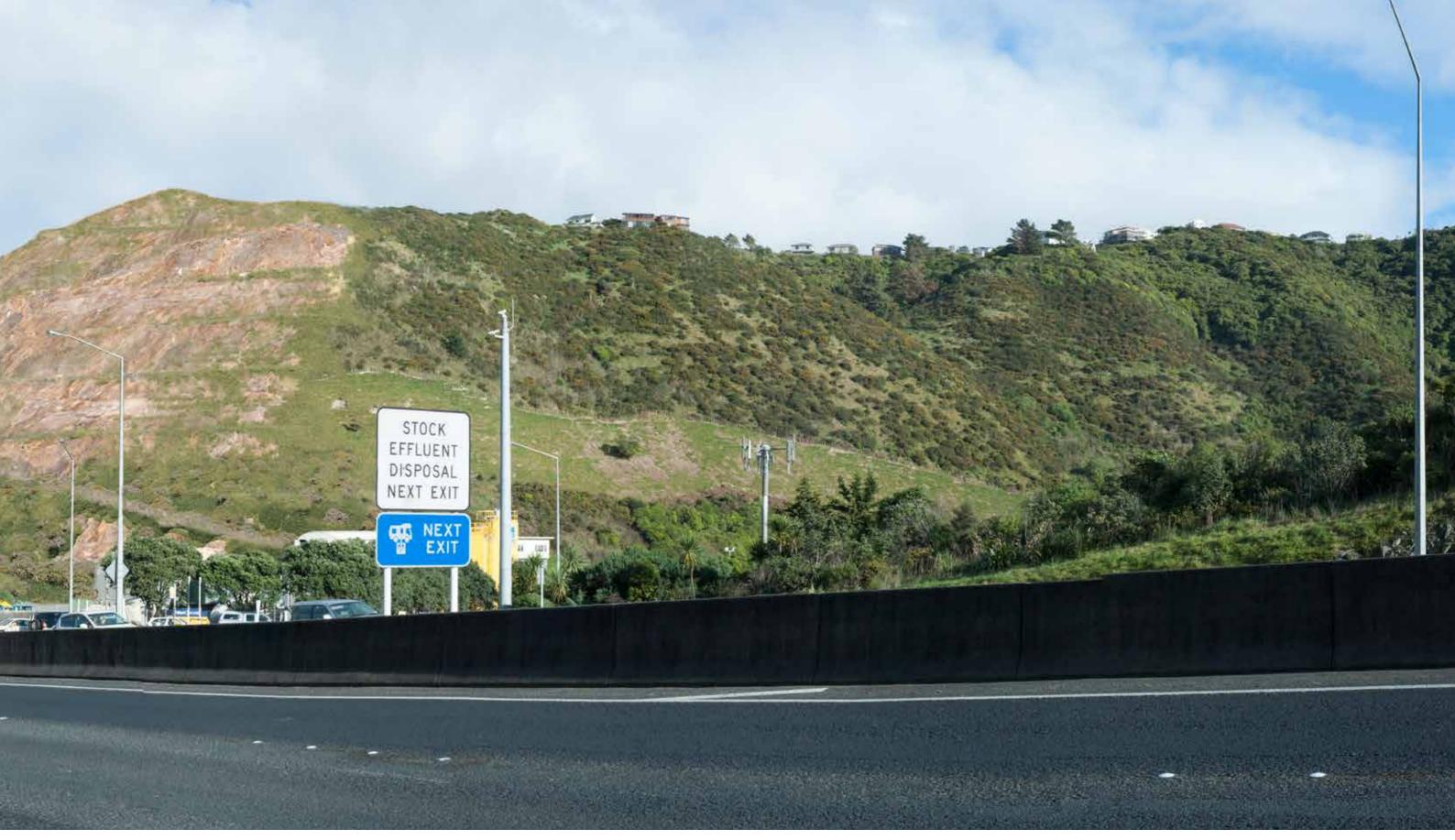


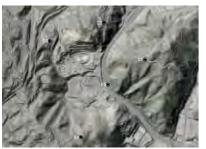
Field of View: 55° per A3 page



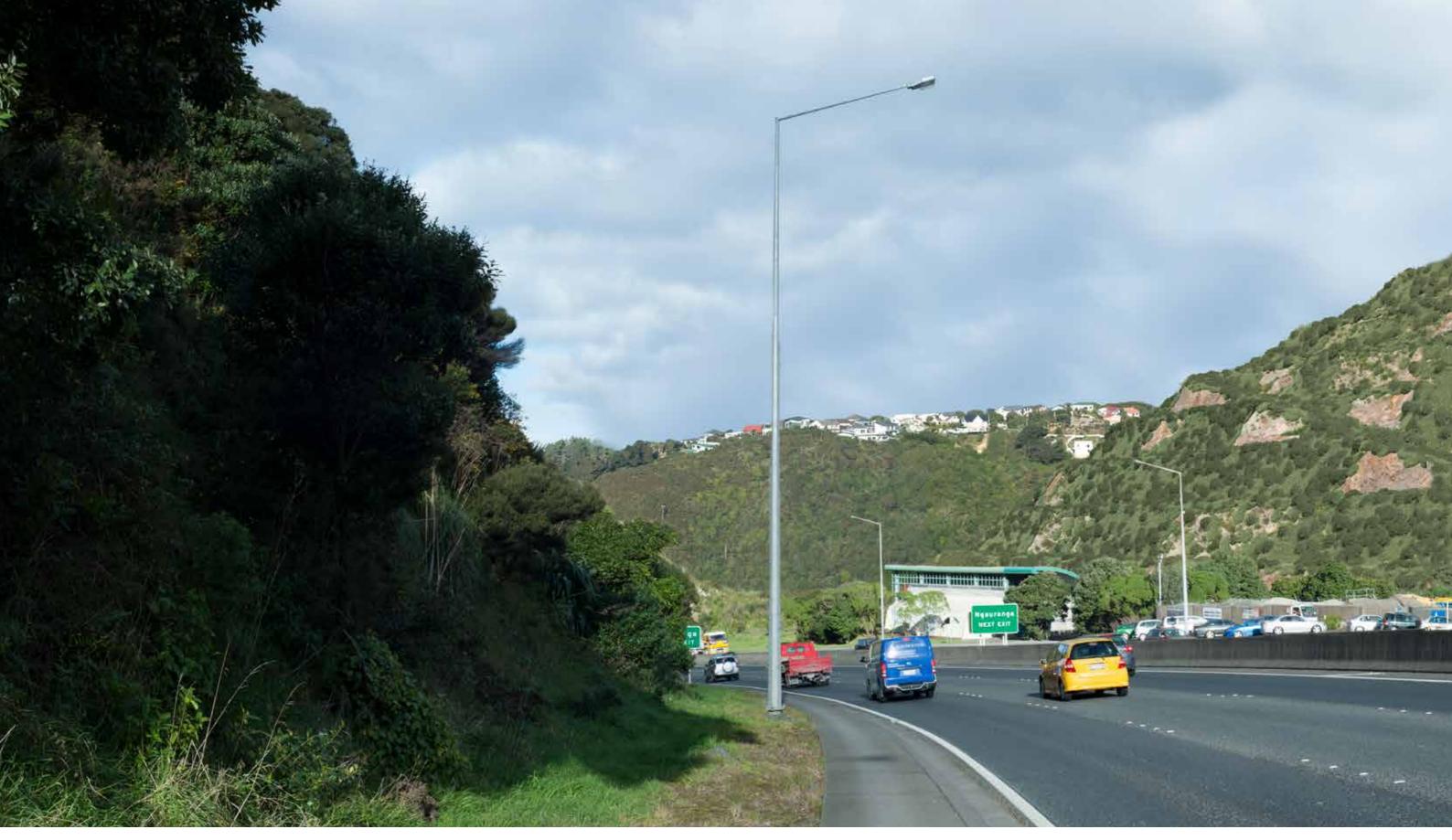
Viewpoint 5 - Medium Development - Early Mitigation 1 year after quarrying
Looking south from SH1







Field of View: 55° per A3 page



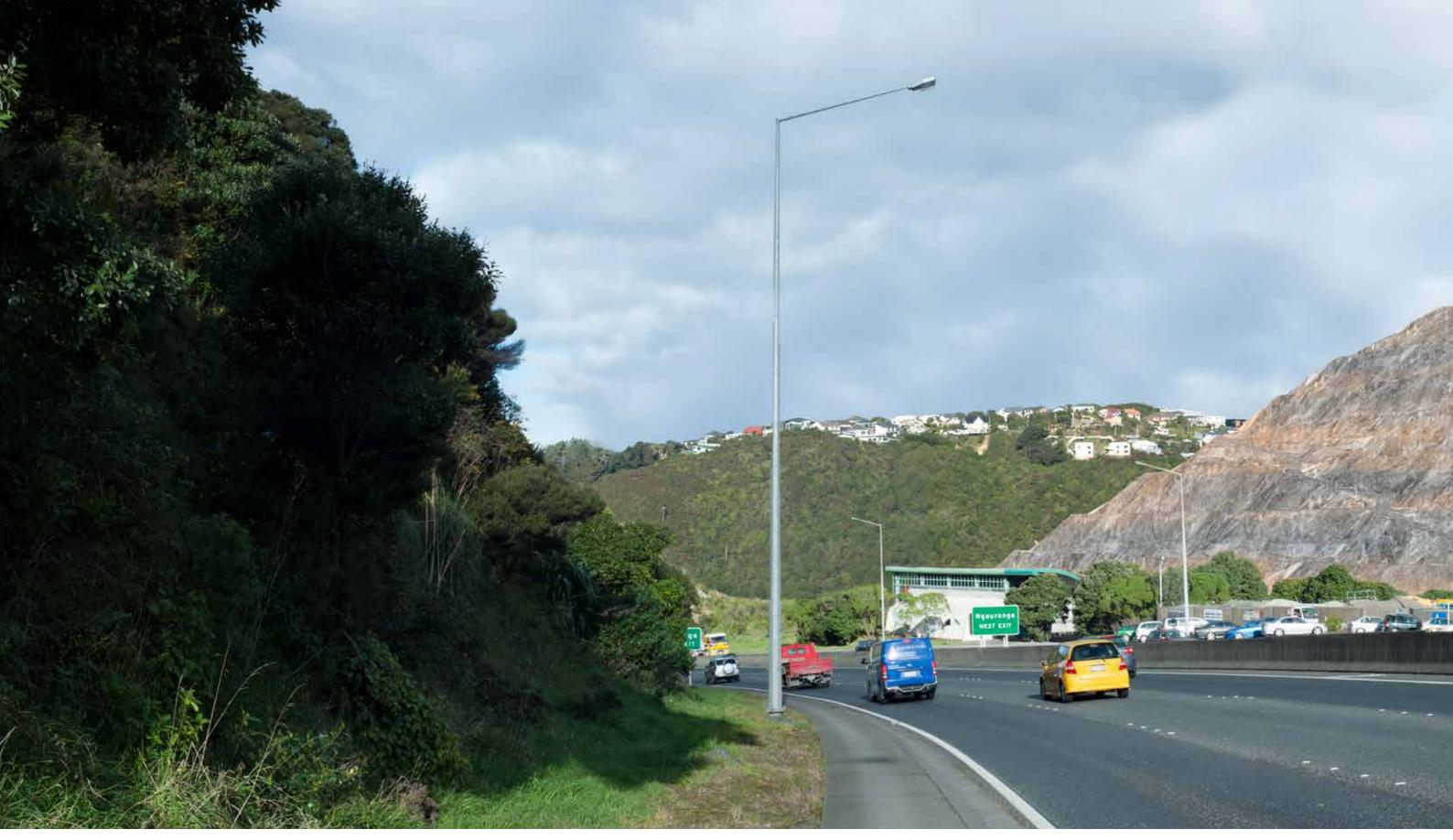
Viewpoint 5 - Medium Development - Mitigated 15 - 20 years after quarrying Looking south from SH1







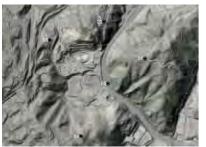
Field of View: 55° per A3 page



Viewpoint 5 - Maximum Development - Unmitigated Looking south from SH1





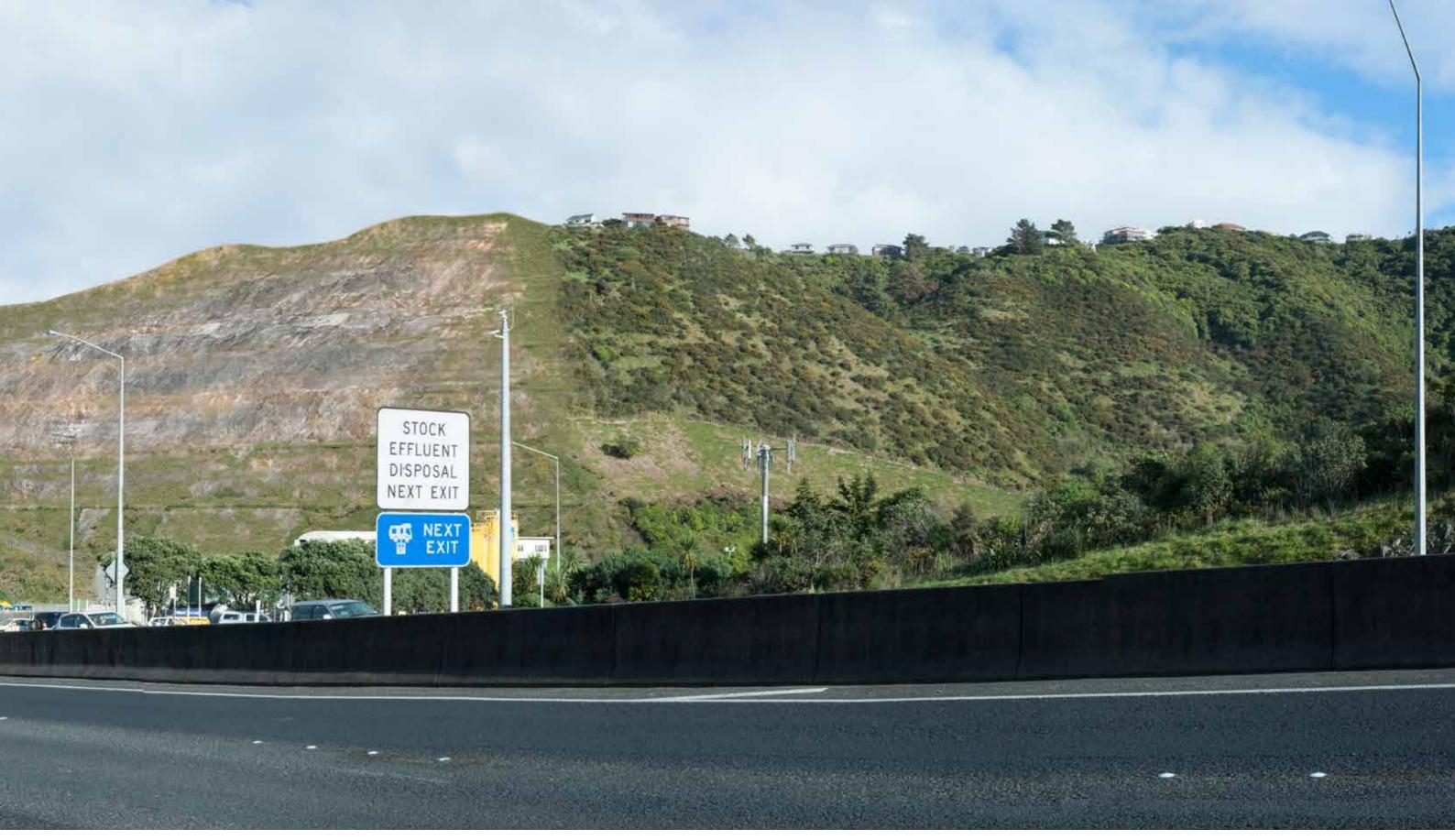


Field of View: 55° per A3 page



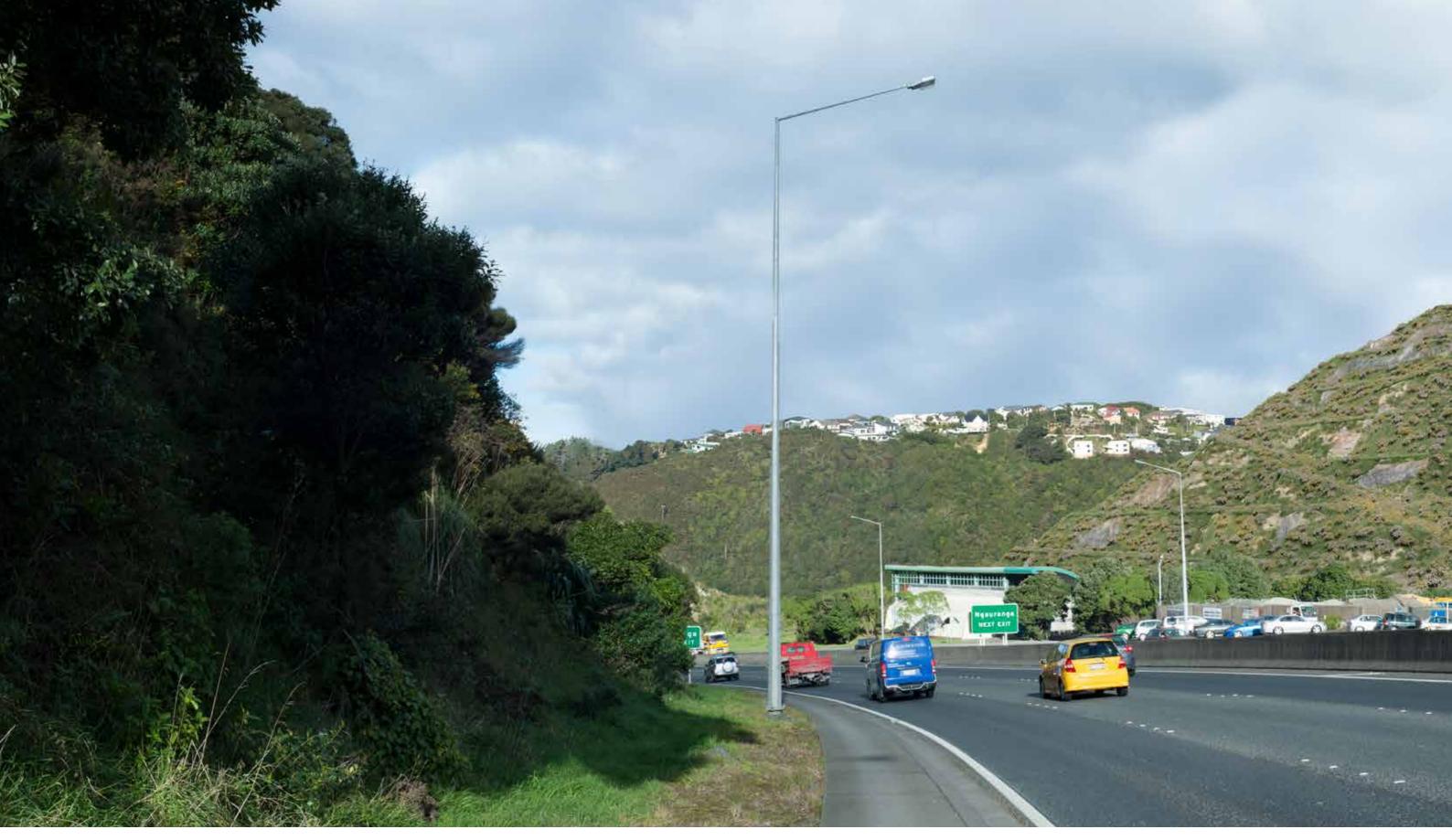
Viewpoint 5 - Maximum Development - Early Mitigation 1 year after quarrying
Looking south from SH1







Field of View: 55° per A3 page



Viewpoint 5 - Maximum development - Mitigated 15 - 20 years after quarrying Looking south from SH1







Field of View: 55° per A3 page

Printing Instructions

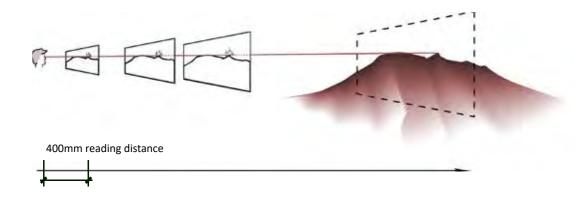
- Full bleed on double sided A3
- No scaling (100%)
- Min 100gsm paper

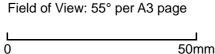
Photosimulation Methodology Statement

- Photos were taken with a fixed lens on DSLR camera. Locations were fixed using a handheld GPS unit with accuracy of 5m. Reference points in the landscape were also located to assist referencing of photo to digital terrain model.
- 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 terrain model was created incorporating 3D models of the proposed development. Computer images were generated
 within the digital model from the same locations as the photos. The image was overlaid and aligned with the photo using 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 digital terrain was then switched off leaving the proposed development in its correct location and scale relative to the photo. Lower parts of the proposed development were erased using Photoshop software where they would be behind foreground topography or vegetation.
- The time and weather when the photo was taken was entered to the programme in order to replicate lighting conditions.
- The completed photomontage is presented over two pages:
 - o The photos are produced to replicate correct scale at the nominated reading distance (in this case 400mm).
 - o 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 reasons:
 - o 2D Photography flattens an image compared to binocular vision.
 - o Photography is static, whereas the human vision can scan and remember information.
 - o Photographs are passive, whereas the eye seeks out detail.
 - o The human eye can see more contrast than can be reproduced through photography.
 - o Physical resolution of photography and printing is less than that of the human eye.





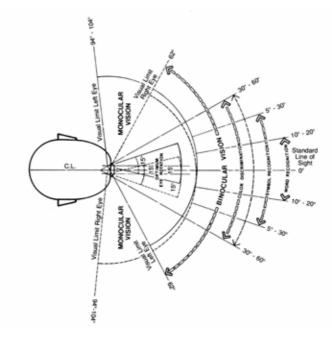


Figure 02: Binocular vision is approximately 124°. Field of view is approximately 110° across 2 x A3 pages at correct scale image for 400mm reading distance (vertical field of view is approximately 33°)

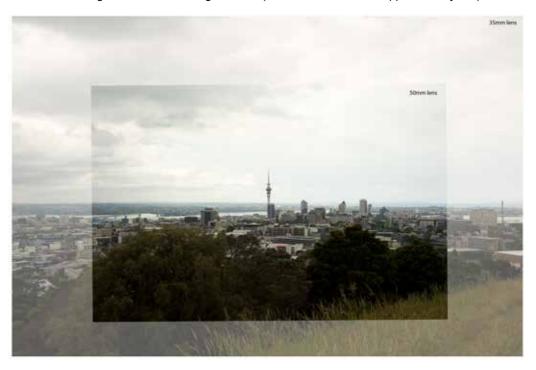


Figure 03: Comparison of 35mm lens and 50mm lens

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.