

APPENDIX B

Representative viewpoint map

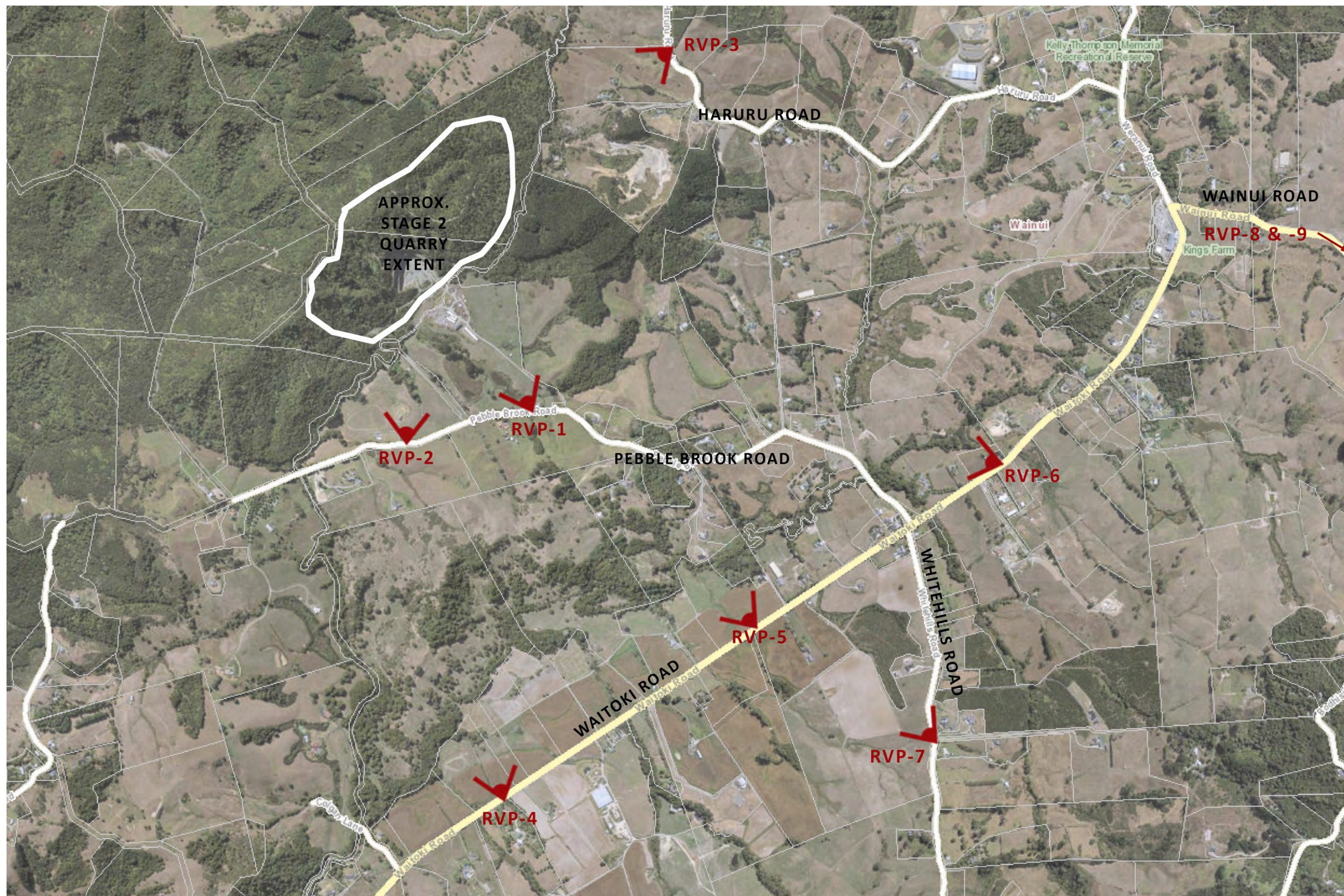


Figure 3: Representative viewpoint map

APPENDIX C

Representative viewpoint photographs



RVP-1 Pebble Brook Road adjacent to No. 162, looking north

Photography: Helen Mellsop, stitched from 3.5 portrait photographs taken at 50mm lens equivalent at 12.25pm on 04-10-23

Approximate field of view 95° horizontal and 49° vertical

Approximate distance from closest part of Stage 2 quarry site: 560 metres



RVP-2 Pebble Brook Road, at entry to No. 220, looking north-east

Photography: Helen Mellsop, stitched from 4 portrait photographs taken at 50mm lens equivalent at 12.10am on 04-10-23

Approximate field of view 108° horizontal and 49° vertical

Approximate distance from closest part of Stage 2 quarry site: 370 metres



RVP-3 Haruru Road 235m north of entry to No. 782, looking south-west

Photography: Helen Mellsop, stitched from 3.5 portrait photographs taken at 50mm lens equivalent at 1.05pm on 04-10-23

Approximate field of view 95° horizontal and 49° vertical

Approximate distance from closest part of Stage 2 quarry site: 700 metres



RVP-4 Waitoki Road opposite No. 260, looking north

Photography: Helen Mellsop, taken at 50mm lens equivalent at 1.50pm on 04-10-23

Approximate field of view 39° horizontal and 27° vertical

Approx. distance from Stage 2 quarry site: 2 kilometres



RVP-5 Waitoki Road approx 150m west of entry to No. 342, looking north

Photography: Helen Mellsop, taken at 50mm lens equivalent at 1.52pm on 04-10-23

Approximate field of view 39° horizontal and 27° vertical

Approx. distance from Stage 2 quarry site: 1.9 kilometres



RVP-6 Wainui Hall, 439 Waitoki Road, looking north-west

Photography: Helen Mellsop, taken at 50mm lens equivalent at 1.35pm on 04-10-23

Approximate field of view 39° horizontal and 27° vertical

Approx. distance from Stage 2 quarry site: 2.2 kilometres



RVP-7 Whitehills Road adjacent No. 438, looking north-west

Photography: Helen Mellsop, stitched from 3.5 portrait photographs taken at 50mm lens equivalent at 1.40pm on 04-10-23

Approximate field of view 95° horizontal and 49° vertical

Approximate distance from closest part of Stage 2 quarry site: 2.6 kilometres



RVP-8 Wainui Road at intersection with Joblin Road, looking west

Photography: Helen Mellsop, taken at 50mm lens equivalent at 1.55pm on 04-10-23

Approximate field of view 39° horizontal and 27° vertical

Approx. distance from Stage 2 quarry site: 4 kilometres



RVP-9 Wainui Road at intersection with Argent Lane, looking west

Photography: Helen Mellsop, taken at 50mm lens equivalent at 2.00pm on 04-10-23

Approximate field of view 39° horizontal and 27° vertical

Approx. distance from Stage 2 quarry site: 7 kilometres

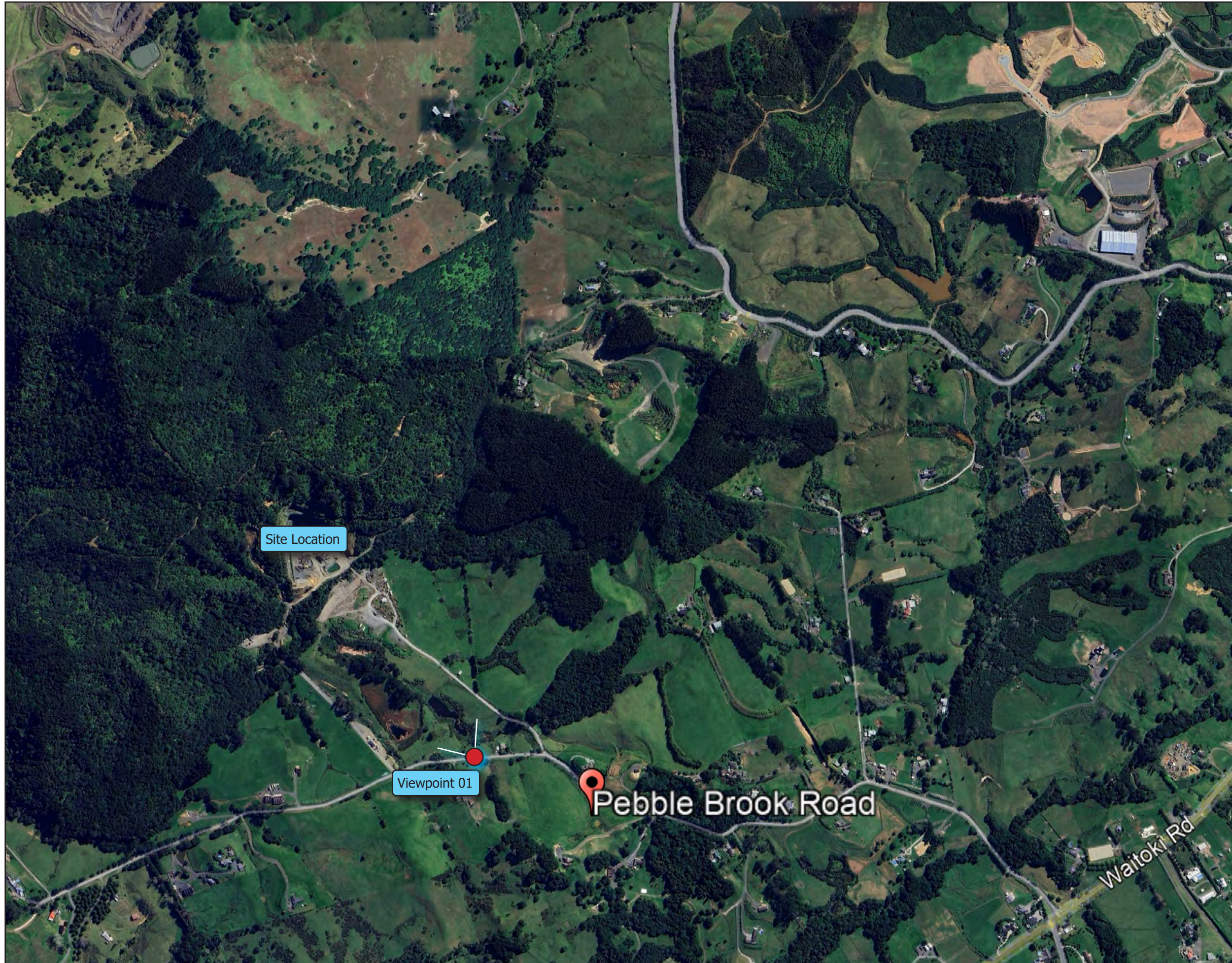
APPENDIX D

Visual simulations from RVP-1

Viewpoint Location Map

Kings Quarry Limited
Pebble Brook Road

- Viewpoint 01
Pebble Brook Road
(E)1740003.982 (N)5947457.615



Date Printed : 02-11-2023



Viewpoint 01 - Existing



Viewpoint 01 - Proposed - Stage 01



Viewpoint 01 - Proposed - Stage 02 - Year 10



Viewpoint 01 - Proposed - Stage 02 - Year 20



Easting: 1740003.982
Northing: 5947457.615
Elevation : 61.544m
Height of Camera : 1.5m
Orientation of View : NW
Date of Photography : 04 Oct 2023
Time of Photography : 12:22pm

Kings Quarry Limited - Pebble Brook Road
Viewpoint 01 - Pebble Brook Road

NOTES: All photos were taken by Virtual View with a Canon 5Dmk2 and a 50mm lens.
Photo positions were surveyed by Virtual View.
Photo background edited in lieu of proposed tree removal.
Dashed white line indicates cropped viewpoint portion.

Version info: 0001
Date Printed: 02-11-2023





Viewpoint 01 - Proposed - Stage 02 - Year 30



Viewpoint 01 - Proposed - Stage 02 - Year 50



Easting: 1740003.982
Northing: 5947457.615
Elevation : 61.544m
Height of Camera : 1.5m
Orientation of View : NW
Date of Photography : 04 Oct 2023
Time of Photography : 12:22pm

Kings Quarry Limited - Pebble Brook Road
Viewpoint 01 - Pebble Brook Road

NOTES: All photos were taken by Virtual View with a Canon 5Dmk2 and a 50mm lens.
Photo positions were surveyed by Virtual View.
Photo background edited in lieu of proposed tree removal.
Dashed white line indicates cropped viewpoint portion.

Version info: 0001
Date Printed: 02-11-2023





Viewpoint 01a - Existing

IMAGE TO BE VIEWED AT 50cm FROM EYE FOR CORRECT VIEWING SCALE WHEN PRINTED AT A3



Easting: 1740003.982
Northing: 5947457.615
Elevation : 61.544m
Height of Camera : 1.5m
Orientation of View : NW
Date of Photography : 04 Oct 2023
Time of Photography : 12:22pm

Kings Quarry Limited - Pebble Brook Road
Viewpoint 01 - Pebble Brook Road

NOTES: All photos were taken by Virtual View with a Canon 5Dmk2 and a 50mm lens.
Photo positions were surveyed by Virtual View.
Photo background edited in lieu of proposed tree removal.

Version info: 0001
Date Printed: 02-11-2023





Viewpoint 01a - Proposed - Stage 01

IMAGE TO BE VIEWED AT 50cm FROM EYE FOR CORRECT VIEWING SCALE WHEN PRINTED AT A3



Viewpoint 01a - Proposed - Stage 02 - Year 10

IMAGE TO BE VIEWED AT 50cm FROM EYE FOR CORRECT VIEWING SCALE WHEN PRINTED AT A3



Easting: 1740003.982
Northing: 5947457.615
Elevation : 61.544m
Height of Camera : 1.5m
Orientation of View : NW
Date of Photography : 04 Oct 2023
Time of Photography : 12:22pm

Kings Quarry Limited - Pebble Brook Road
Viewpoint 01 - Pebble Brook Road

NOTES: All photos were taken by Virtual View with a Canon
5Dmk2 and a 50mm lens.
Photo positions were surveyed by Virtual View.
Photo background edited in lieu of proposed tree removal.

Version info: 0001
Date Printed: 02-11-2023





Viewpoint 01a - Proposed - Stage 02 - Year 20

IMAGE TO BE VIEWED AT 50cm FROM EYE FOR CORRECT VIEWING SCALE WHEN PRINTED AT A3



VIRTUALVIEW
3D VISUALISATION SPECIALISTS

Easting: 1740003.982
Northing: 5947457.615
Elevation : 61.544m
Height of Camera : 1.5m
Orientation of View : NW
Date of Photography : 04 Oct 2023
Time of Photography : 12:22pm

Kings Quarry Limited - Pebble Brook Road
Viewpoint 01 - Pebble Brook Road

NOTES: All photos were taken by Virtual View with a Canon 5Dmk2 and a 50mm lens.
Photo positions were surveyed by Virtual View.
Photo background edited in lieu of proposed tree removal.

Version info: 0001
Date Printed: 02-11-2023





Viewpoint 01a - Proposed - Stage 02 - Year 30

IMAGE TO BE VIEWED AT 50cm FROM EYE FOR CORRECT VIEWING SCALE WHEN PRINTED AT A3



VIRTUALVIEW
3D VISUALISATION SPECIALISTS

Easting: 1740003.982
Northing: 5947457.615
Elevation : 61.544m
Height of Camera : 1.5m
Orientation of View : NW
Date of Photography : 04 Oct 2023
Time of Photography : 12:22pm

Kings Quarry Limited - Pebble Brook Road
Viewpoint 01 - Pebble Brook Road

NOTES: All photos were taken by Virtual View with a Canon 5Dmk2 and a 50mm lens.
Photo positions were surveyed by Virtual View.
Photo background edited in lieu of proposed tree removal.

Version info: 0001
Date Printed: 02-11-2023





Viewpoint 01a - Proposed - Stage 02 - Year 50

IMAGE TO BE VIEWED AT 50cm FROM EYE FOR CORRECT VIEWING SCALE WHEN PRINTED AT A3



VIRTUALVIEW
3D VISUALISATION SPECIALISTS

Easting: 1740003.982
Northing: 5947457.615
Elevation : 61.544m
Height of Camera : 1.5m
Orientation of View : NW
Date of Photography : 04 Oct 2023
Time of Photography : 12:22pm

Kings Quarry Limited - Pebble Brook Road
Viewpoint 01 - Pebble Brook Road

NOTES: All photos were taken by Virtual View with a Canon 5Dmk2 and a 50mm lens.
Photo positions were surveyed by Virtual View.
Photo background edited in lieu of proposed tree removal.

Version info: 0001
Date Printed: 02-11-2023





Viewpoint 01b - Existing

IMAGE TO BE VIEWED AT 50cm FROM EYE FOR CORRECT VIEWING SCALE WHEN PRINTED AT A3

 VIRTUALVIEW 3D VISUALISATION SPECIALISTS	Easting: 1740003.982 Northing: 5947457.615 Elevation : 61.544m Height of Camera : 1.5m Orientation of View : NW Date of Photography : 04 Oct 2023 Time of Photography : 12:22pm	Kings Quarry Limited - Pebble Brook Road Viewpoint 01 - Pebble Brook Road	NOTES: All photos were taken by Virtual View with a Canon 5Dmk2 and a 50mm lens. Photo positions were surveyed by Virtual View. Photo background edited in lieu of proposed tree removal. Version info: 0001 Date Printed: 02-11-2023	 KINGS QUARRY
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Viewpoint 01b - Proposed - Stage 01

IMAGE TO BE VIEWED AT 50cm FROM EYE FOR CORRECT VIEWING SCALE WHEN PRINTED AT A3



Easting: 1740003.982
Northing: 5947457.615
Elevation : 61.544m
Height of Camera : 1.5m
Orientation of View : NW
Date of Photography : 04 Oct 2023
Time of Photography : 12:22pm

Kings Quarry Limited - Pebble Brook Road

Viewpoint 01 - Pebble Brook Road

NOTES: All photos were taken by Virtual View with a Canon
5Dmk2 and a 50mm lens.
Photo positions were surveyed by Virtual View.
Photo background edited in lieu of proposed tree removal.

Version info: 0001
Date Printed: 02-11-2023

KINGS QUARRY



Viewpoint 01b - Proposed - Stage 02 - Year 10

IMAGE TO BE VIEWED AT 50cm FROM EYE FOR CORRECT VIEWING SCALE WHEN PRINTED AT A3



Viewpoint 01b - Proposed - Stage 02 - Year 20

IMAGE TO BE VIEWED AT 50cm FROM EYE FOR CORRECT VIEWING SCALE WHEN PRINTED AT A3



Viewpoint 01b - Proposed - Stage 02 - Year 30

IMAGE TO BE VIEWED AT 50cm FROM EYE FOR CORRECT VIEWING SCALE WHEN PRINTED AT A3



VIRTUALVIEW
3D VISUALISATION SPECIALISTS

Easting: 1740003.982
Northing: 5947457.615
Elevation : 61.544m
Height of Camera : 1.5m
Orientation of View : NW
Date of Photography : 04 Oct 2023
Time of Photography : 12:22pm

Kings Quarry Limited - Pebble Brook Road
Viewpoint 01 - Pebble Brook Road

NOTES: All photos were taken by Virtual View with a Canon 5Dmk2 and a 50mm lens.
Photo positions were surveyed by Virtual View.
Photo background edited in lieu of proposed tree removal.

Version info: 0001
Date Printed: 02-11-2023





Viewpoint 01b - Proposed - Stage 02 - Year 50

IMAGE TO BE VIEWED AT 50cm FROM EYE FOR CORRECT VIEWING SCALE WHEN PRINTED AT A3

 VIRTUALVIEW 3D VISUALISATION SPECIALISTS	Easting: 1740003.982 Northing: 5947457.615 Elevation : 61.544m Height of Camera : 1.5m Orientation of View : NW Date of Photography : 04 Oct 2023 Time of Photography : 12:22pm	Kings Quarry Limited - Pebble Brook Road Viewpoint 01 - Pebble Brook Road	NOTES: All photos were taken by Virtual View with a Canon 5Dmk2 and a 50mm lens. Photo positions were surveyed by Virtual View. Photo background edited in lieu of proposed tree removal. Version info: 0001 Date Printed: 02-11-2023	
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Virtual View

Photo Simulation Methodology



VIRTUALVIEW
3D VISUALISATION SPECIALISTS

METHODOLOGY FOR THE PREPARATION OF A PHOTO SIMULATION

1. The main objective of a photo simulation is to provide an image that, as realistically as possible, conveys the modification or change of a proposed activity. The most appropriate technical methodology has been applied to ensure the accuracy of what is depicted, in terms of its relative position, elevation, scale, and appearance. Photo simulations can never replace the real experience of being at a location, but they are a useful tool to assist in the decision-making process.
2. To achieve a photo simulation, a 3D model is rendered into a series of 2-dimensional photographs.
3. Viewpoint locations were chosen by Helen Mellsop and taken by Virtual View Ltd. A full frame Canon 5D mk2 with a 50mm lens was used to take the photo panoramas from the designated positions.
4. The photo simulation positions, and corresponding reference points were survey marked by Virtual View Ltd using a Lecia GS18 RTK Rover.
5. The photos were then colour matched to ensure consistency throughout the image and manually stitched together to form a photo panoramic.
6. To achieve a photo simulation Virtual View Ltd firstly created a digital terrain model of the existing landform. A 3D model of the quarry stages was imported and integrated into the existing terrain model with textures added. Landscaping was then added to the model to supplied heights and locations.
7. A series of 3D computer cameras within the simulation software are then created. They were positioned accurately to the corresponding survey marked photo position from which the photos were taken. The camera used depicts a real-world camera, including matching the focal length of the 50mm lens.

8. To duplicate the view through the real-world camera, it was necessary to match the landform data and reference points to the respective physical objects in the photo – thus ensuring an accurate horizontal and vertical alignment.
9. A sunlight system was then created which uses light in a system that follows the geographically correct angle and movement of the sun over the earth at a given location. Location, date, time, and compass orientation can be chosen. The simulations Virtual View Ltd prepared, depict the proposed development at the same, time and date as specified, and are simulated to resemble the natural lighting.
10. Within the 3D software, the new image was then rendered containing the accurately positioned 3D model over top of the original photograph.
11. Existing foreground vegetation was overlaid using photo-editing software and was then checked against aerial photography from the site to ensure correct placement.
12. For the resulting photo simulations, the viewing scale is 50cm from the eye when printed at full scale A3. This scale produces an image that is 240mm high and was chosen as it is a comfortable distance to hold at approximately an arm's length, to appreciate what the view would be at scale in real life. (Refer to Figure 1 below for viewing scale).
13. Viewing on screen should be done tentatively as there are numerous variables such as screen size, zoom level and the application being used, that can affect the scale of what would be seen by the naked eye.
14. All photo simulations comply with the New Zealand Institute of Landscape Architects document: Visual Simulations Best Practice Guide 10.2.

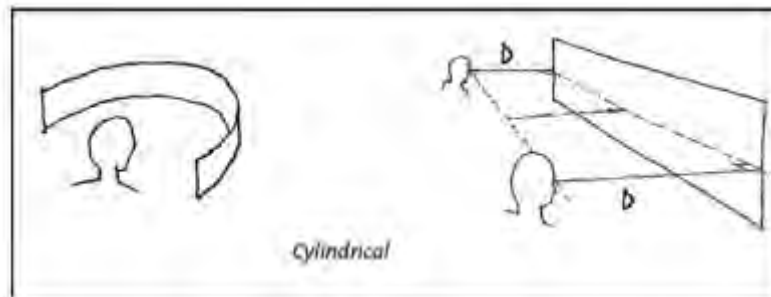


Figure 1: Viewing scale for Photo Simulations