Figure 32 - Viewpoint 16 - Existing

View from Sulphur Beach Reserve looking South East.

Original Photo | Stitched image | DSLR Nikon D810 50mm lens | AE | 1150hrs 25 September 2025 | 1756160E 5923340N (NZTM) | Viewpoint Elevation 12m
Field of view | Approximately 110˚ horizontal and 34˚ vertical field of view
Scale | Print images across 2 x A3 pages for correct scale at 400m reading distance | Use scale bar to adjust sizing on screen for correct scale at 400m reading distance

5cm

Figure 33 - Viewpoint 16 - Proposed

View from Sulphur Beach Reserve looking South East.

Original Photo | Stitched image | DSLR Nikon D810 50mm lens | AE | 1150hrs 25 September 2025 | 1756160E 5923340N (NZTM) | Viewpoint Elevation 12m
Field of view | Approximately 110˚ horizontal and 34˚ vertical field of view
Scale | Print images across 2 x A3 pages for correct scale at 400m reading distance | Use scale bar to adjust sizing on screen for correct scale at 400m reading distance

5cm

Figure 34 - Viewpoint 17 - Existing

View from Harbour View Beach Reserve (Te Atatu) looking east.

Original Photo | Stitched image | DSLR Nikon D810 50mm lens | MJ | 1232hrs 20 October 2025 | 1748169E 5921588N (NZTM) | Viewpoint Elevation 3m
Field of view | Approximately 110˚ horizontal and 34˚ vertical field of view
Scale | Print images across 2 x A3 pages for correct scale at 400m reading distance | Use scale bar to adjust sizing on screen for correct scale at 400m reading distance

5cm

Figure 35 - Viewpoint 17 - Proposed

View from Harbour View Beach Reserve (Te Atatu) looking east.

Original Photo | Stitched image | DSLR Nikon D810 50mm lens | MJ | 1232hrs 20 October 2025 | 1748169E 5921588N (NZTM) | Viewpoint Elevation 3m
Field of view | Approximately 110˚ horizontal and 34˚ vertical field of view
Scale | Print images across 2 x A3 pages for correct scale at 400m reading distance | Use scale bar to adjust sizing on screen for correct scale at 400m reading distance

5cm

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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 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 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 reasons:
  - 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.

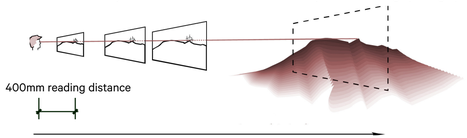

Figure 01: The relationship between reading distance and real life scale.

Figure 3 - Methodology

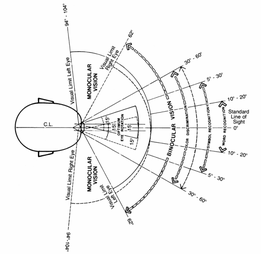

Figure 02: Binocular vision is approximately 124°. Field of view is approximately 110° across 2 x A3 pages at correct scale image for 400mm reading distance (vertical field of view is approximately 33°)

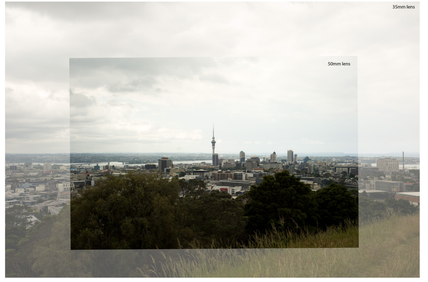

Figure 03: Comparison of 35mm lens and 50mm lens

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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Land.
People.
Culture.
Isthmus.

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