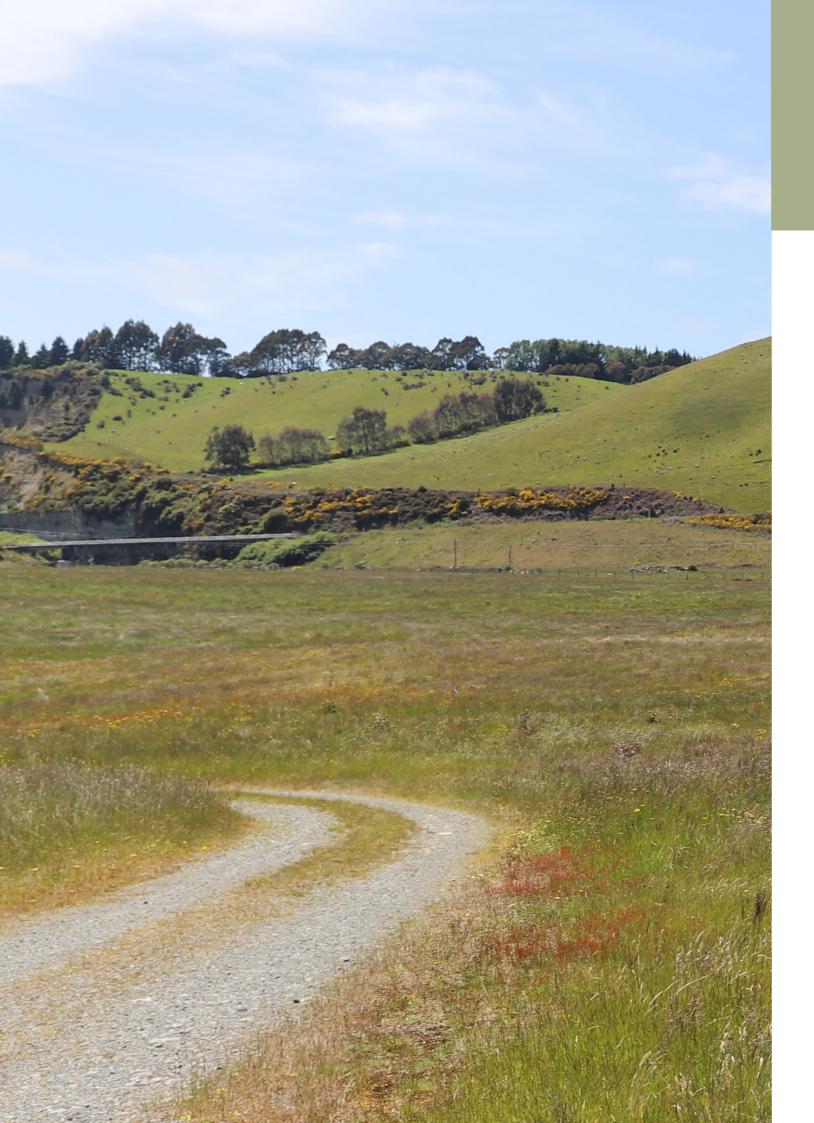


PROPOSED MANAPOURI LAKE CONTROL IMPROVEMENT PROJECT LANDSCAPE EFFECTS ASSESSMENT GRAPHIC SUPPLEMENT

NOVEMBER 2023

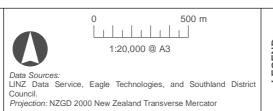




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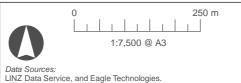




Site Context Date: 13 December 2022 | Revision: 0 Plan prepared for Meridian Energy by Boffa Miskell Limited Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: HWi | Checked: RGi

Figure 1





Projection: NZGD 2000 New Zealand Transverse Mercator

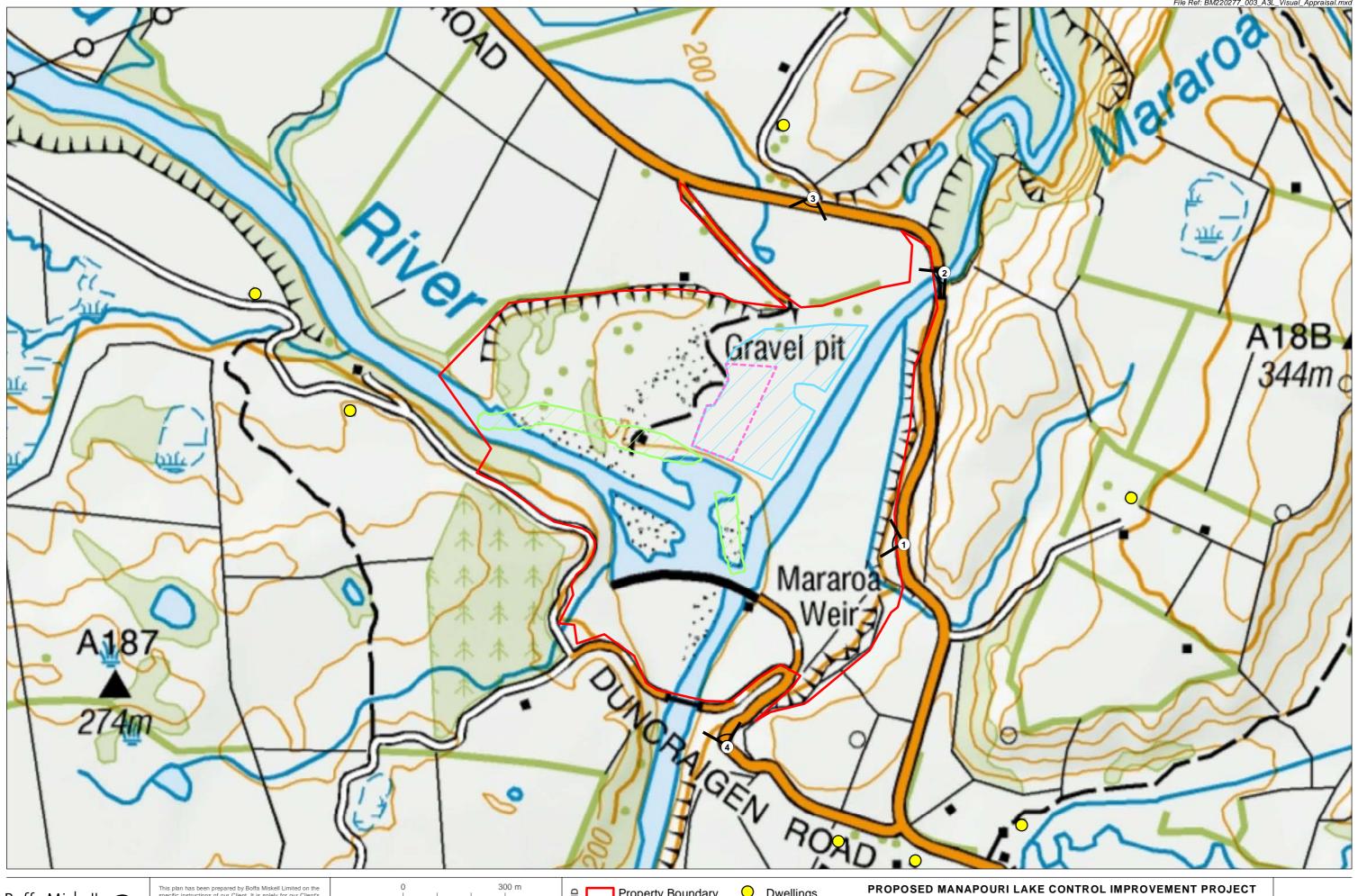
Property Boundary
Gravel Stockpile Cell
Excavation Footprint
Spoil Disposal Area
Site Appraisal Photographs A - D

Boundary
Stockpile Cell
on Footprint
sposal Area

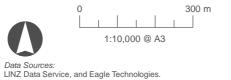
PROPOSED MANAPOURI LAKE CONTROL IMPROVEMENT PROJECT
Site Appraisal
Date: 24 October 2023 | Revision: 1
Plan prepared for Meridian Energy by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: HWi | Checked: RGi

Figure 2







Projection: NZGD 2000 New Zealand Transverse Mercator

Property Boundary
Gravel Stockpile Cell
Excavation Footprint
Spoil Disposal Area

O Dwellings PROPOSED MANAP

Visual Appraisal Photographs (1 - 4)

otographs (1 - 4)

Pate: 24 Oatobar 2023 | Patricipa 1

Date: 24 October 2023 | Revision: 1
Plan prepared for Meridian Energy by Boffa Miskell Limited

Figure 3



Site Appraisal Photograph A: View looking west towards Lake Manapouri.



Site Appraisal Photograph B: View from top of scarp looking south towards Manapōuri Lake Control structure.



Horizontal Field of View Vertical Field of View

Projection : Rectilinear Image Reading Distance @ A3 is 20 cm

PROPOSED MANAPOURI LAKE CONTROL IMPROVEMENT PROJECT Site Appraisal Photographs A & B



Site Appraisal Photograph C: View looking north from the Manapōuri Lake Control structure.



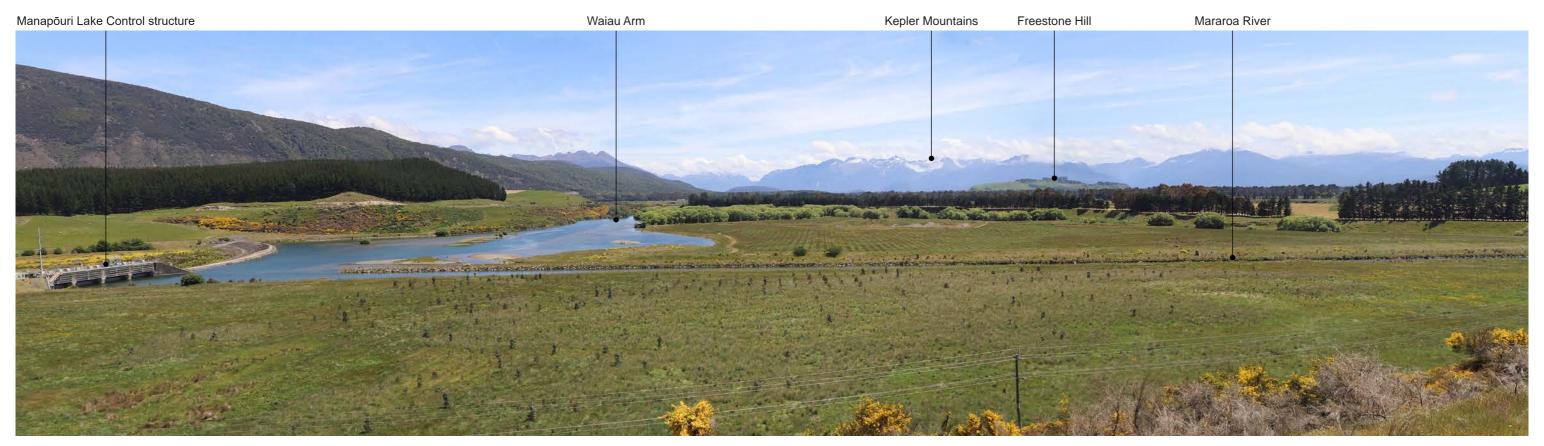
Site Appraisal Photograph D: View looking south-east along Waiau Arm towards the confluence with the Mararoa River.



Horizontal Field of View : 9
Vertical Field of View : 3

Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance @ A3 is 20 cm

PROPOSED MANAPOURI LAKE CONTROL IMPROVEMENT PROJECT Site Appraisal Photographs C & D



Visual Appraisal Photograph 1: View from Weir Road Scenic Lookout.



Visual Appraisal Photograph 2: View from Weir Road Bridge across the Mararoa River.



Horizontal Field of View : 90° Vertical Field of View : 30°

Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance @ A3 is 20 cm

PROPOSED MANAPOURI LAKE CONTROL IMPROVEMENT PROJECT Visual Appraisal Photographs 1 & 2

Date: August 2023 Revision: 1

Plan prepared for Meridian Energy by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: HWi | Checked: RGi



Visual Appraisal Photograph 3: View from Weir Road looking south towards Site.



Visual Appraisal Photograph 4: View from Duncraigen Road looking north towards Manapōuri Lake Control structure.

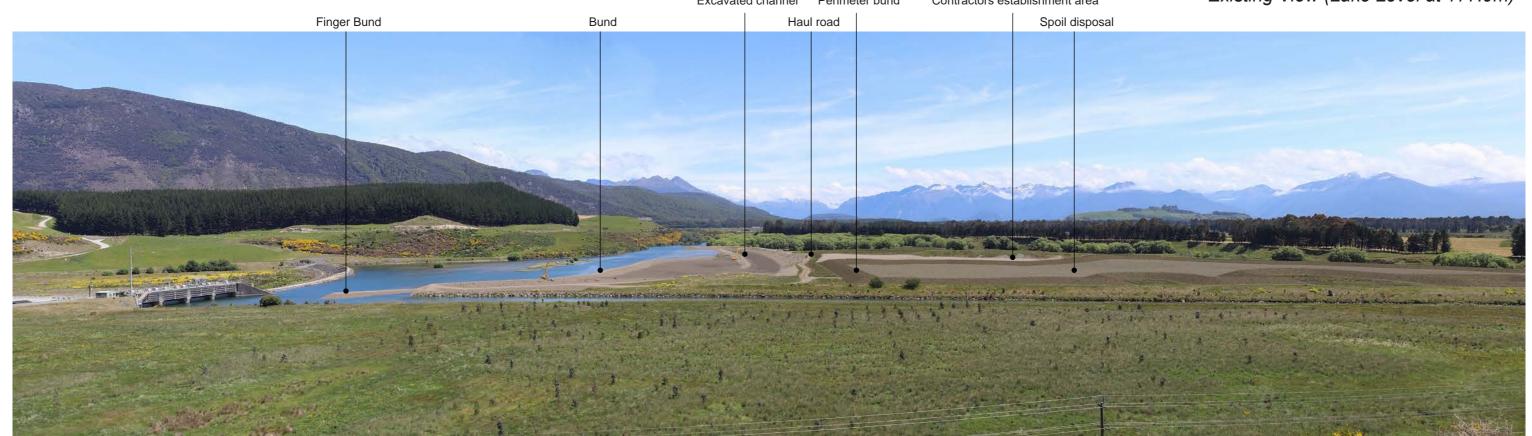


Horizontal Field of View Vertical Field of View

Projection : Rectilinear Image Reading Distance @ A3 is 20 cm

PROPOSED MANAPOURI LAKE CONTROL IMPROVEMENT PROJECT Visual Appraisal Photographs 3 & 4





Proposed View During Construction



NZTM Easting : 1 186 651.9 mE NZTM Northing : 4 935 038.0 mN Elevation/Eye Height :213.4m / 1.6m Date of Photography :11:57am 7 December 2022 NZDT

Horizontal Field of View : 90°

Vertical Field of View : 30°

Projection : Rectilinear

Image Reading Distance @ A3 is 20 cm

Data Sources:

PROPOSED MANAPOURI LAKE CONTROL IMPROVEMENT PROJECT VS1A: View from Weir Road Scenic Lookout (Panorama)

Date: August 2023 Revision: 1

Plan prepared for Meridian Energy by Boffa Miskell Limited

Project Manager: Scott.Hooson@boffamiskell.co.nz | Drawn: CMu | Checked: RGi

VS1A



Existing View (Lake Level at 177.9m)



Proposed View at Completion - Before Gravel Extraction



NZTM Easting : 1 186 651.9 mE
NZTM Northing : 4 935 038.0 mN
Elevation/Eye Height :213.4m / 1.6m
Date of Photography :11:57am 7 December 2022 NZDT

Horizontal Field of View : 90°

Vertical Field of View : 30°

Projection : Rectilinear

Image Reading Distance @ A3 is 20 cm

Data Sources:

PROPOSED MANAPOURI LAKE CONTROL IMPROVEMENT PROJECT VS1B: View from Weir Road Scenic Lookout (Panorama)

Date: August 2023 Revision: 1

VS1B

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Proposed View at Completion - During Gravel Extraction



Proposed View at Completion - After Gravel Extraction



NZTM Easting : 1 186 651.9 mE NZTM Northing : 4 935 038.0 mN Elevation/Eye Height :213.4m / 1.6m Date of Photography :11:57am 7 December 2022 NZDT Horizontal Field of View : 90° Vertical Field of View : 30° Projection : Rectilinear Image Reading Distance @ A3 is 20 cm

Data Sources:

PROPOSED MANAPOURI LAKE CONTROL IMPROVEMENT PROJECT VS1C & D: View from Weir Road Scenic Lookout (Panorama)

Date: August 2023 Revision: 1

VS1C & D





NZTM Easting : 1 186 651.9 mE

NZTM Northing : 4 935 038.0 mN

Elevation/Eye Height : 213.4m / 1.6m

Date of Photography : 11:57am 7 December 2022 NZDT

Horizontal Field of View : 40°
Vertical Field of View : 30°
Projection : NA
Image Reading Distance @ A3 is 50 cm

Data Sources:

PROPOSED MANAPOURI LAKE CONTROL IMPROVEMENT PROJECT

View from Weir Road Scenic Lookout (50mm)

Date: August 2023 Revision: 1

Plan prepared for Meridian Energy by Boffa Miskell Limited

Project Manager: Scott.Hooson@boffamiskell.co.nz | Drawn: CMu | Checked: RGi





NZTM Easting : 1 186 651.9 mE

NZTM Northing : 4 935 038.0 mN

Elevation/Eye Height : 213.4m / 1.6m

Date of Photography : 11:57am 7 December 2022 NZDT

Horizontal Field of View : 40°
Vertical Field of View : 30°
Projection : NA

ZDT Image Reading Distance @ A3 is 50 cm

Data Sources:

PROPOSED MANAPOURI LAKE CONTROL IMPROVEMENT PROJECT

VS1E: View from Weir Road Scenic Lookout (50mm)

Date: August 2023 Revision: 1

Plan prepared for Meridian Energy by Boffa Miskell Limited Project Manager: Scott.Hooson@boffamiskell.co.nz | Drawn: CMu | Checked: RGi



Visual Simulation 1E - 1: After construction when water level is within the high operating range (179.5m).



Visual Simulation 1E - 2: After construction when water level is within the high operating range (179m).



PROPOSED MANAPOURI LAKE CONTROL IMPROVEMENT PROJECT Visual Simulations at Highest and High Water Level



Visual Simulation 1E - 3: After construction when water level is the same as the day of site visit (177.9m).



Visual Simulation 1E - 4: After construction when water level is within the main operating range (177.59m).

Data Sources:



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NZTM Easting : 1 186 651.9 mE

NZTM Northing : 4 935 038.0 mN

Elevation/Eye Height : 213.4m / 1.6m

Date of Photography : 11:57am 7 December 2022 NZDT

Horizontal Field of View : 90° Vertical Field of View : 30° Projection : Rect

Projection : Rectilinear Image Reading Distance @ A3 is 20 cm

PROPOSED MANAPOURI LAKE CONTROL IMPROVEMENT PROJECT Visual Simulations at Site Visit and Main Operating Range



Visual Simulation 1E - 5: After construction when water level is within the low operating range (176.08m).



Visual Simulation 1E - 6: After construction when water level is within the low operating range (175.86m).



PROPOSED MANAPOURI LAKE CONTROL IMPROVEMENT PROJECT Visual Simulations at Low and Lowest Water Level

About Boffa Miskell

Boffa Miskell is a leading New Zealand professional services consultancy with offices in Auckland, Hamilton, Tauranga, Wellington, Christchurch, Dunedin and Queenstown. We work with a wide range of local and international private and public sector clients in the areas of planning, urban design, landscape architecture, landscape planning, ecology, biosecurity, cultural heritage, graphics and mapping. Over the past four decades we have built a reputation for professionalism, innovation and excellence. During this time we have been associated with a significant number of projects that have shaped New Zealand's environment.

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