

# SOUTHWEST WASTEWATER TREATMENT PLANT NOR PROJECT

LANDSCAPE AND VISUAL ASSESSMENT GRAPHIC SUPPLEMENT

AUGUST 2023



## SOUTHWEST WASTEWATER TREATMENT PLANT NOR PROJECT



## **FIGURES**

FIGURE 1: Auckland Unitary Plan Zoning

FIGURE 2: Viewpoint Locations

VISUAL SIMULATIONS

VP1: View from outside the entrance to 147 of McLarin Road (40 ° Single Frame)

VS2: View from 454 Glenbrook Beach Road (Existing 90° Panorama)

VS2A: View from 454 Glenbrook Beach Road

(Proposed Stage 1 & 2 Without Planting 90° Panorama Vs Proposed Stage 3 Without Planting 90° Panorama)

VS2B: View from 454 Glenbrook Beach Road

(Proposed Stage 1 & 2 With Planting 90° Panorama Vs Proposed Stage 3 With Planting 90° Panorama)

VS3: View from Glenbrook Beach Road at the South-Western corner of the site (Existing 90° Panorama)

VS3A: View from Glenbrook Beach Road at the South-Western corner of the site (Proposed Stage 1 & 2 Without Planting 90° Panorama Vs Proposed Stage 3 Without Planting 90° Panorama)

VS3B: View from Glenbrook Beach Road at the South-Western corner of the site (Proposed Stage 1 & 2 With Planting 90° Panorama Vs Proposed Stage 3 With Planting 90° Panorama)

VP4: View from entrance to 126 Glenbrook Beach Road (40 ° Single Frame)

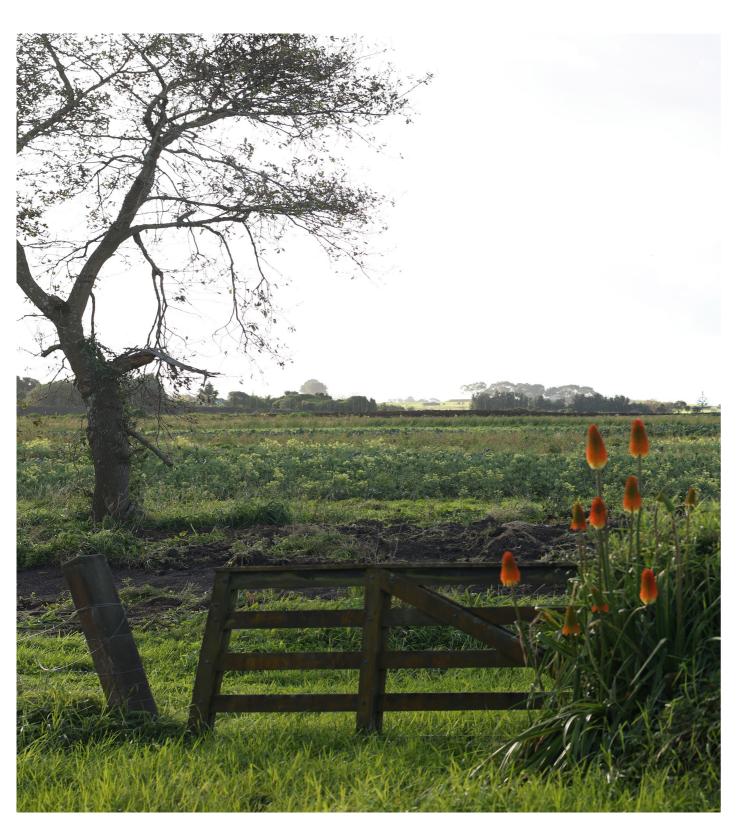
VP5: View from entrance to 131 Percy Millen Drive (40 ° Single Frame)

VS6A: View from Glenbrook Beach Road opposite the residential property at 339A Glenbrook Beach Road (Existing 90° Panorama)

VS6B: View from Glenbrook Beach Road opposite the residential property at 339A Glenbrook Beach Road (Proposed Stage 1 & 2 Without Planting 90° Panorama Vs Proposed Stage 3 Without Planting 90° Panorama)

VS6C: View from Glenbrook Beach Road opposite the residential property at 339A Glenbrook Beach Road (Proposed Stage 1 & 2 With Planting 90° Panorama Vs Proposed Stage 3 With Planting 90° Panorama)

## SOUTHWEST WASTEWATER TREATMENT PLANT NOR PROJECT



### VISUAL SIMULATIONS

VS7: View from the North-Western corner of site from Glenbrook Beach Road (Existing 90° Panorama)

VS7A: View from the North-Western corner of site from Glenbrook Beach Road

(Proposed Stage 1 & 2 Without Planting 90° Panorama Vs Proposed Stage 3 Without Planting 90° Panorama)

VS7B: View from the North-Western corner of site from Glenbrook Beach Road

( (Proposed Stage 1 & 2 With Planting 90° Panorama Vs Proposed Stage 3 With Planting 90° Panorama)

VS8: View from 393A Glenbrook Beach Road (Existing 90° Panorama)

VS8A: View from 393A Glenbrook Beach Road
(Proposed Stage 2 Without Planting 90° Panorama Vs Proposed Stage 2 Without Planting 90° Panorama)

VS8B: View from 393A Glenbrook Beach Road
(Proposed Stage 1 & 2 With Planting 90° Panorama Vs Proposed Stage 3 With Planting 90° Panorama)

VS9: View from 450 Glenbrook Beach Road (Existing 90° Panorama)

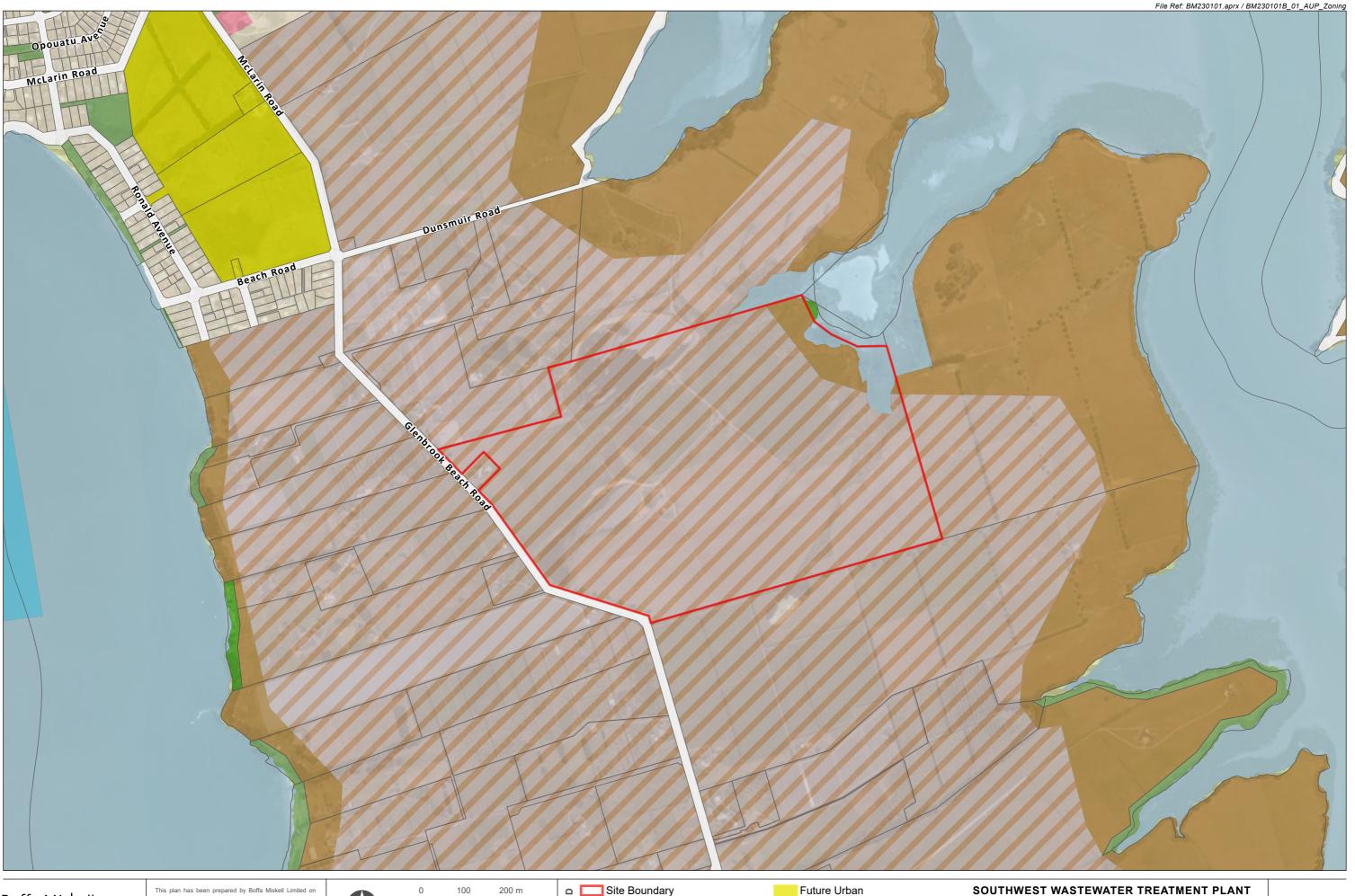
VS9A: View from 450 Glenbrook Beach Road

(Proposed Stage 1 & 2 Without Planting 90° Panorama Vs Proposed Stage 3 Without Planting 90° Panorama)

VS9B: View from 450 Glenbrook Beach Road

(Proposed Stage 1 & 2 With Planting 90° Panorama Vs Proposed Stage 3 With Planting 90° Panorama)

FIGURE 3: Visual Simulations - Methodology

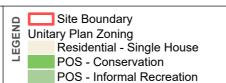






Data Sources: Eagle Technology, Land Information New Zealand, GEBCO, Community maps contributors, LINZ (Parcels, Roads, Addresses), Auckland Council

Projection: NZGD 2000 New Zealand Transverse Mercator



Business - Neighbourhood Centre

Future Urban Mixed Rural Rural - Rural Coastal

Coastal - General Coastal Marine Coastal - Mooring

Auckland Unitary Plan Zoning

Date: 09 June 2023 | Revision: 0 Plan prepared by Boffa Miskell Limited Coastal - Coastal Transition Project Manager: Tom.Lines@boffamiskell.co.nz | Drawn: SGa | Checked: OMa

Figure 1





Data Sources: Eagle Technology, Land Information New Zealand, GEBCO, Community maps contributors, LINZ (Parcels, Roads, Addresses), Auckland Council

Projection: NZGD 2000 New Zealand Transverse Mercator



SOUTHWEST WASTEWATER TREATMENT PLANT

Viewpoint Locations

Date: 06 July 2023 | Revision: 0
Plan prepared by Boffa Miskell Limited
Project Manager: Tom.Lines@boffamiskell.co.nz | Drawn: SGa | Checked: OMa





Date of Photography: 13:46pm 6 June 2023 NZST

SOUTHWEST WASTEWATER TREATMENT PLANT View from outside the entrance to 147 of McIarin Road
(Single Frame)

Date: July 6 2023 Revision: 0





NZTM Easting : 1 753 086 mE NZTM Northing : 5 885 413 mN

Ground Elevation : 12.9m Date of Photography: 3:37pm 20 June 2023 NZST Horizontal Field of View : 90° Vertical Field of View : 30° Projection : Rectilinear Image Reading Distance : 20cm

## SOUTHWEST WASTEWATER TREATMENT PLANT View from 454 Glenbrook Beach Road (Panorama)



Proposed View Stage 1 & 2 Without Planting



Proposed View Stage 3 Without Planting



NZTM Easting : 1 753 086 mE NZTM Northing : 5 885 413 mN Ground Elevation : 12.9m

Date of Photography: 3:37pm 20 June 2023 NZST

Horizontal Field of View Vertical Field of View Projection : Rectilinear Image Reading Distance : 20cm

## SOUTHWEST WASTEWATER TREATMENT PLANT View from 454 Glenbrook Beach Road (Panorama)

Project Manager: tom.lines@boffamiskell.co.nz | Drawn: AWe | Checked: OMa



Proposed View Stage 1 & 2 With Planting



Proposed View Stage 3 With Planting



NZTM Easting : 1 753 086 mE NZTM Northing : 5 885 413 mN Ground Elevation : 12.9m

Date of Photography: 3:37pm 20 June 2023 NZST

Horizontal Field of View Vertical Field of View

Projection : Rectilinear Image Reading Distance : 20cm

Stage 1 & Stage 2 visual simulation planting is modelled to show three years growth, this is the minimum time assumed before Stage 2 would be completed.

Stage 3 visual simulation planting is modelled to show 20 years growth (maturity) in line with the minimum period of time before construction of Stage 3 would be complete.

SOUTHWEST WASTEWATER TREATMENT PLANT View from 454 Glenbrook Beach Road (Panorama)

Date: July 6 2023 Revision: 0

Plan prepared by Boffa Miskell Limited Project Manager: tom.lines@boffamiskell.co.nz | Drawn: AWe | Checked: OMa





NZTM Easting : 1 753 081 mE NZTM Northing : 5 884 778 mN

Ground Elevation : 14.6m Date of Photography: 3:43pm 17 May 2023 NZST Horizontal Field of View : 90° Vertical Field of View : 30° Projection : Rectilinear Image Reading Distance : 20cm

SOUTHWEST WASTEWATER TREATMENT PLANT View from Glenbrook Beach Road, at the South-Western corner of the site (Panorama)

Date: July 6 2023 Revision: 0

VS3



Proposed View Stage 1 & 2 Without Planting



Proposed View Stage 3 Without Planting



NZTM Easting : 1 753 081 mE NZTM Northing : 5 884 778 mN Ground Elevation : 14.6m

Horizontal Field of View Vertical Field of View Projection : Rectilinear Image Reading Distance : 20cm Date of Photography: 3:43pm 17 May 2023 NZST

SOUTHWEST WASTEWATER TREATMENT PLANT View from Glenbrook Beach Road, at the South-Western corner of the site (Panorama)

Date: July 6 2023 Revision: 0

VS3A Plan prepared by Boffa Miskell Limited



Proposed View Stage 1 & 2 With Planting



Proposed View Stage 3 With Planting



NZTM Easting : 1 753 081 mE NZTM Northing : 5 884 778 mN Ground Elevation : 14.6m Date of Photography: 3:43pm 17 May 2023 NZST Horizontal Field of View Vertical Field of View

: Rectilinear Image Reading Distance : 20cm

Stage 1 & Stage 2 visual simulation planting is modelled to show three years growth, this is the minimum time assumed before Stage 2 would be completed.

Stage 3 visual simulation planting is modelled to show 20 years growth (maturity) in line with the minimum period of time before construction of Stage 3 would be complete.

SOUTHWEST WASTEWATER TREATMENT PLANT View from Glenbrook Beach Road, at the South-Western corner of the site (Panorama) Date: July 6 2023 Revision: 0

VIEWPOINT VS3B





Date of Photography: 15:37pm 6 June 2023 NZST

## SOUTHWEST WASTEWATER TREATMENT PLANT

View from entrance to 126 Glenbrook Beach Road (Single Frame)





Date of Photography: 12:47pm 20 June 2023 NZST

## SOUTHWEST WASTEWATER TREATMENT PLANT View from entrance to 131 Percy Millen Drive (Single Frame)

Project Manager: tom.lines@boffamiskell.co.nz | Drawn: AWe | Checked: OMa





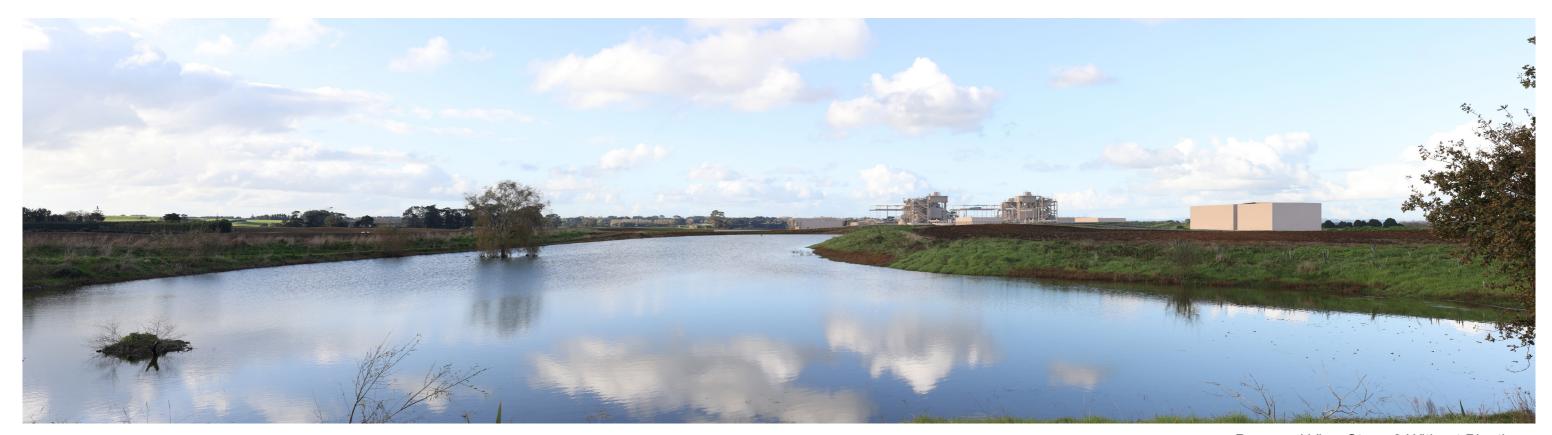
NZTM Easting : 1 753 311 mE NZTM Northing : 5 884 691 mN

Ground Elevation : 14.3m Date of Photography: 3:54pm 16 May 2023 NZST Horizontal Field of View : 90° Vertical Field of View : 30° Projection : Rectilinear Image Reading Distance : 20cm

SOUTHWEST WASTEWATER TREATMENT PLANT
View from Glenbrook Beach Road opposite the residential
property at 339A Glenbrook Beach Road (Panorama)



Proposed View Stage 1 & 2 Without Planting



Proposed View Stage 3 Without Planting



NZTM Easting : 1 753 311 mE NZTM Northing : 5 884 691 mN Ground Elevation : 14 3m

NZTM Northing : 5 884 691 mN

Ground Elevation : 14.3m

Date of Photography: 3:54pm 16 May 2023 NZST

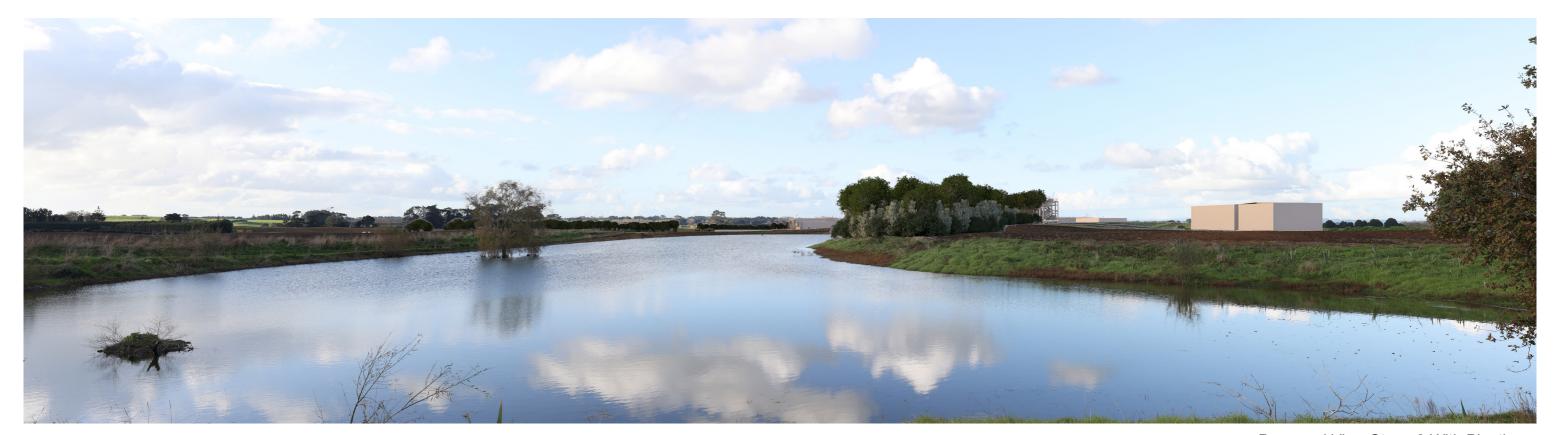
Horizontal Field of View : 90°
Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance : 20cm

SOUTHWEST WASTEWATER TREATMENT PLANT
View from Glenbrook Beach Road opposite the residential
property at 339A Glenbrook Beach Road (Panorama)

Date: July 6 2023 Revision: 0 VS6A



Proposed View Stage 1 & 2 With Planting



Proposed View Stage 3 With Planting



NZTM Easting : 1 753 311 mE NZTM Northing : 5 884 691 mN Ground Elevation : 14.3m

Horizontal Field of View Vertical Field of View Date of Photography: 3:54pm 16 May 2023 NZST

Projection : Rectilinear Image Reading Distance : 20cm

Stage 1 & Stage 2 visual simulation planting is modelled to show three years growth, this is the minimum time assumed before Stage 2 would be completed.

Stage 3 visual simulation planting is modelled to show 20 years growth (maturity) in line with the minimum period of time before construction of Stage 3 would be complete.

SOUTHWEST WASTEWATER TREATMENT PLANT View from Glenbrook Beach Road opposite the residential property at 339A Glenbrook Beach Road (Panorama)

Date: July 6 2023 Revision: 0

Plan prepared by Boffa Miskell Limited

Project Manager: tom.lines@boffamiskell.co.nz | Drawn: AWe | Checked: OMa

VS6B





NZTM Easting : 1 752 831 mE NZTM Northing : 5 854 082 mN

Ground Elevation : 14.8m Date of Photography: 3:42pm 16 May 2023 NZST Horizontal Field of View : 90° Vertical Field of View Projection : Rectilinear Image Reading Distance : 20cm

SOUTHWEST WASTEWATER TREATMENT PLANT View from the North-Western corner of site from Glenbrook Beach Road (Panorama)



Proposed View Stage 1 & 2 Without Planting



Proposed View Stage 3 Without Planting



NZTM Easting : 1 752 831 mE NZTM Northing : 5 854 082 mN

Ground Elevation : 14.8m Date of Photography: 3:42pm 16 May 2023 NZST Horizontal Field of View : 90° Vertical Field of View Projection : Rectilinear Image Reading Distance : 20cm

SOUTHWEST WASTEWATER TREATMENT PLANT View from the North-Western corner of site from Glenbrook Beach Road (Panorama)

Date: July 6 2023 Revision: 0

Plan prepared by Boffa Miskell Limited Project Manager: tom.lines@boffamiskell.co.nz | Drawn: AWe | Checked: OMa



Proposed View Stage 1 & 2 With Planting



Proposed View Stage 3 With Planting



NZTM Easting : 1 752 831 mE NZTM Northing : 5 854 082 mN Ground Elevation : 14.8m

Date of Photography: 3:42pm 16 May 2023 NZST

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

Projection : Rectilinear Image Reading Distance : 20cm

Stage 1 & Stage 2 visual simulation planting is modelled to show three years growth, this is the minimum time assumed before Stage 2 would be completed.

Stage 3 visual simulation planting is modelled to show 20 years growth (maturity) in line with the minimum period of time before construction of Stage 3 would be complete.

View from the North-Western corner of site from Glenbrook Beach Road (Panorama)

Date: July 6 2023 Revision: 0 VS7B

VIEWPOINT

Plan prepared by Boffa Miskell Limited





NZTM Easting : 1 752 982 mE NZTM Northing : 5 884 783 mN

Ground Elevation : 14.8m Date of Photography: 2:12pm 20 June 2023 NZST Horizontal Field of View : 90° Vertical Field of View : 30° Projection : Rectilinear Image Reading Distance : 20cm

## SOUTHWEST WASTEWATER TREATMENT PLANT View from 393A Glenbrook Beach Road (Panorama)



Proposed View Stage 1 & 2 Without Planting



Proposed View Stage 3 Without Planting



NZTM Easting NZTM Northing : 5 884 783 mN Ground Elevation : 14.8m

Date of Photography: 2:12pm 20 June 2023 NZST

Horizontal Field of View Vertical Field of View Projection : Rectilinear Image Reading Distance : 20cm

SOUTHWEST WASTEWATER TREATMENT PLANT View from 393A Glenbrook Beach Road (Panorama)

Date: July 6 2023 Revision: 0

VS8A



Proposed View Stage 1 & 2 With Planting



Proposed View Stage 3 With Planting



NZTM Easting NZTM Northing : 5 884 783 mN Ground Elevation : 14.8m

Date of Photography: 2:12pm 20 June 2023 NZST

Horizontal Field of View

Image Reading Distance : 20cm

Stage 1 & Stage 2 visual simulation planting is modelled to show three years growth, this is the minimum time assumed before Stage 2 would be completed.

Stage 3 visual simulation planting is modelled to show 20 years growth (maturity) in line with the minimum period of time before construction of Stage 3 would be complete.

SOUTHWEST WASTEWATER TREATMENT PLANT View from 393A Glenbrook Beach Road (Panorama)

Date: July 6 2023 Revision: 0

Plan prepared by Boffa Miskell Limited





NZTM Easting : 1 753 130 mE NZTM Northing : 5 885 293 mN Ground Elevation : 11.8m

Date of Photography: 2:30pm 20 June 2023 NZST

Horizontal Field of View : 90° Vertical Field of View : 30° Projection : Rectilinear Image Reading Distance : 20cm

## SOUTHWEST WASTEWATER TREATMENT PLANT

Plan prepared by Boffa Miskell Limited Project Manager: tom.lines@boffamiskell.co.nz | Drawn: AWe | Checked: OMa VS9



Proposed View Stage 1 & 2 Without Planting



Proposed View Stage 3 Without Planting



NZTM Easting : 1 753 130 mE NZTM Northing : 5 885 293 mN

Ground Elevation : 11.8m Date of Photography: 2:30pm 20 June 2023 NZST

Horizontal Field of View : 90° Vertical Field of View Projection : Rectilinear Image Reading Distance : 20cm

## SOUTHWEST WASTEWATER TREATMENT PLANT

View from 450 Glenbrook Beach Road (Panorama)

Date: July 6 2023 Revision: 0

VS9A



Proposed View Stage 1 & 2 With Planting



Proposed View Stage 3 With Planting



NZTM Easting : 1 753 130 mE NZTM Northing : 5 885 293 mN Ground Elevation : 11.8m

Date of Photography: 2:30pm 20 June 2023 NZST

Horizontal Field of View Vertical Field of View

Projection : Rectilinear Image Reading Distance : 20cm

Stage 1 & Stage 2 visual simulation planting is modelled to show three years growth, this is the minimum time assumed before Stage 2 would be completed.

Stage 3 visual simulation planting is modelled to show 20 years growth (maturity) in line with the minimum period of time before construction of Stage 3 would be complete.

## SOUTHWEST WASTEWATER TREATMENT PLANT View from 450 Glenbrook Beach Road (Panorama)

## **VISUALISATIONS - METHODOLOGY**

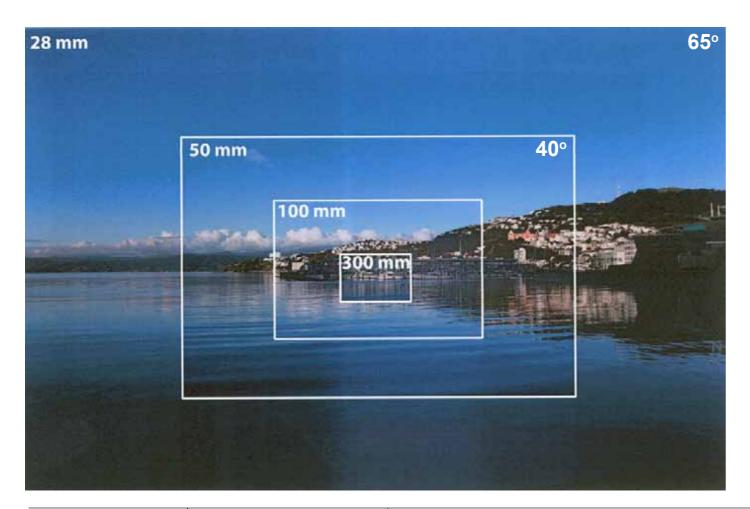
#### SITE VISIT & PHOTOGRAPHY

Site photographs were taken with a Canon digital SLR camera fitted with a 50mm focal length lens, mounted on a tripod and panoramic head. A series of photos were taken at predetermined viewpoints, situated on public land. The locations of each viewpoint were fixed using an EMLID Reach 2 GPS Rover Unit.

#### NZILA GUIDELINES & PANORAMA PREPARATION

The visualisations have been produced in accordance with the NZILA Best Practice Guidelines for Visual Simulations (BPG 10.2) and also adhere to Boffa Miskell's internal Visualisation Guidelines.

Camera lenses with different focal lengths capture images with differing fields of view. As can be seen below (derived from Fig 9 of the NZILA BPG), a photo taken with a 28mm lens provides a horizontal field of view of 65°. A 50mm lens will provide a cropped (40°) version of the same view. So panoramas can be created by taking multiple 28mm or 50mm photos (in "portrait" mode), and using digital stitching software to merge and crop to create a single panorama. The panoramas used in these visualisations have a field of view of 90°.

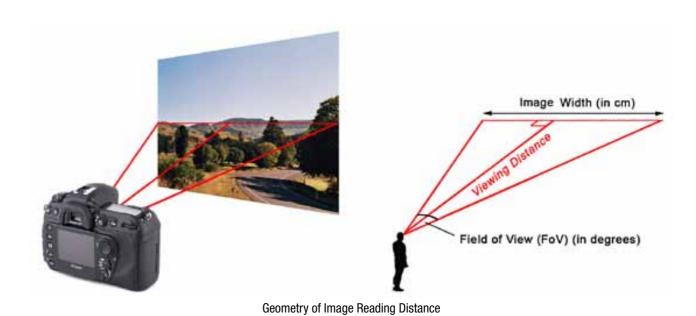


#### 3D MODELLING

Virtual camera views were then created in 3D modelling software, and 3D terrain data and architectural modelling were imported. These views were then registered over the corresponding photographic panorama, using identifiable features in the landscape and the characteristics of the camera to match the two together. The visualisations were then assembled using graphic design software.

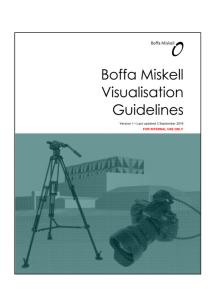
#### IMAGE READING DISTANCES

These visualisations have a field of view of 90° and so should be viewed from a distance of 20 cm when printed at A3. This will ensure that each simulation is viewed as if standing on-site at the actual camera location, and is in accordance with Section 7.11 of the NZILA BPG. Users are encouraged to print these pages on A3 transparency, go to the viewpoint and hold at the specified reading distance in order to verify the methodology.











This plan has been prepared by Boffa Miskell Limited o the specific instructions of our Client. It is solely for our Client's use in accordance with the agreed scope of work Any use or reliance by a third party is at that party's ow sumed that it is accurate. No liability or responsibility missions to the extent that they arise from inaccurate mation provided by the Client or any external source.

## SOUTHWEST WASTEWATER TREATMENT PLANT