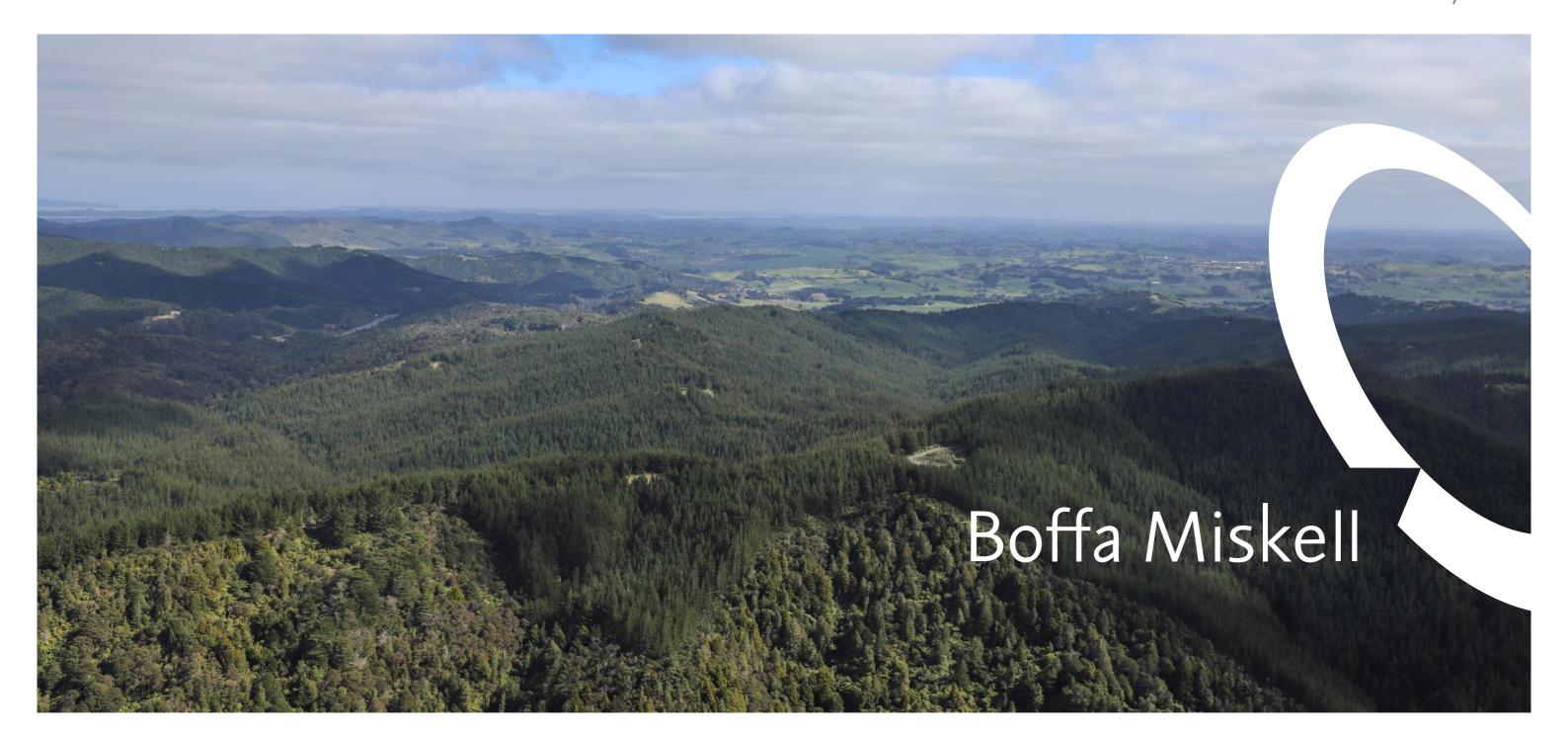
## Appendix 4: Part B, Visual Simulations

# Auckland Regional Landfill Proposed Facility

Part B Appendix 4: Visual Simulations May 2019



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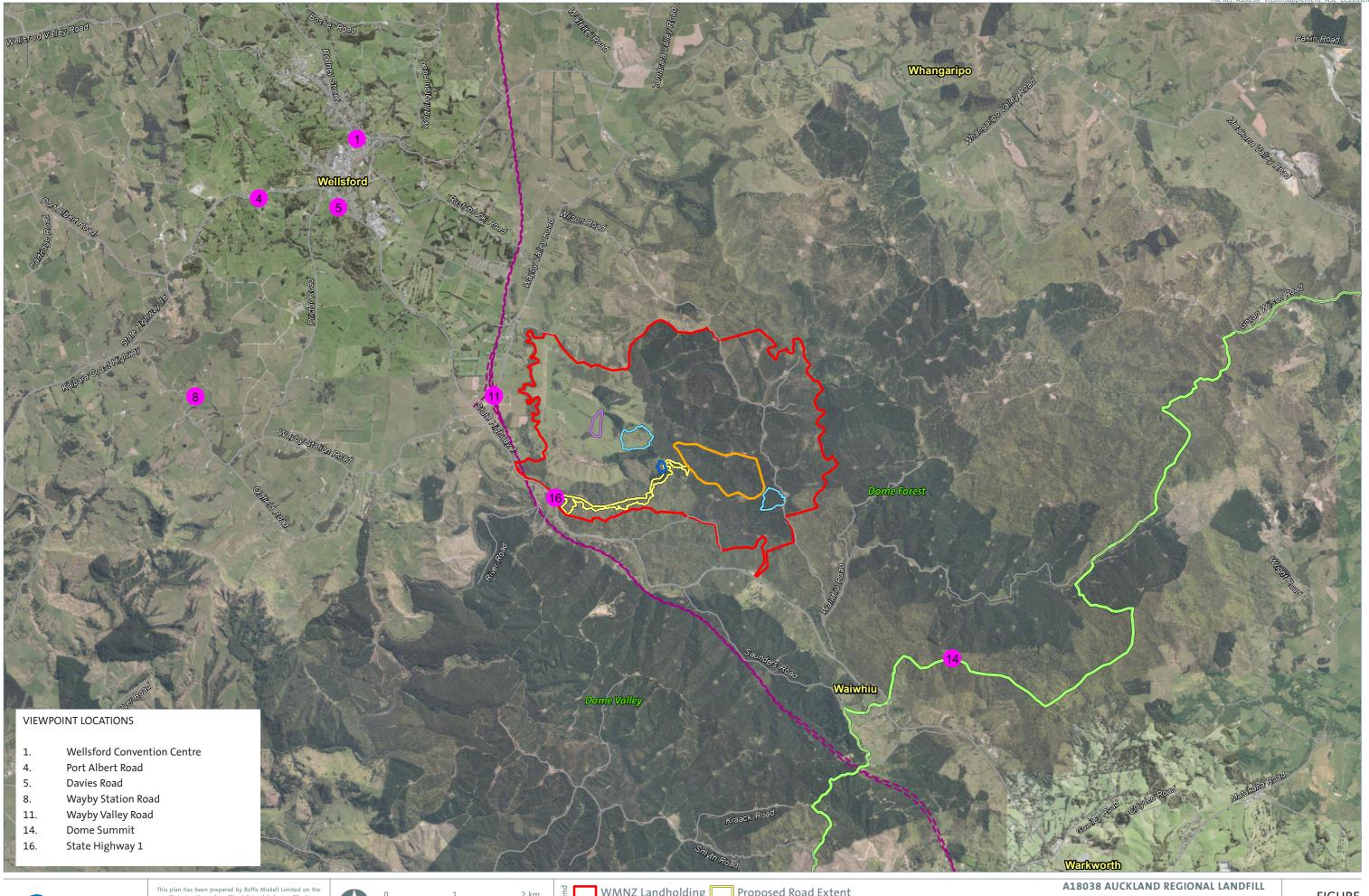
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FIGURE V2: Visual Simulation Methodology

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 ${\it Data \ Sources:} \ {\it LINZ \ Aerials, Tonkin + Taylor, BML}$ 

Proiection: NZGD 2000 New Zealand Transverse Mercator

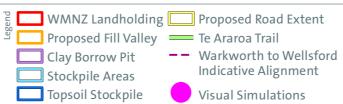


Figure V1: Viewpoint Location Plan

Date: 10 May 2019 | Revision: A
Plan prepared by Boffa Miskell Limited
Project Manager: Tom Lines | Drawn: SGa | Checked: TLi

FIGURE

V1

#### VISUAL SIMULATIONS - METHODOLOGY

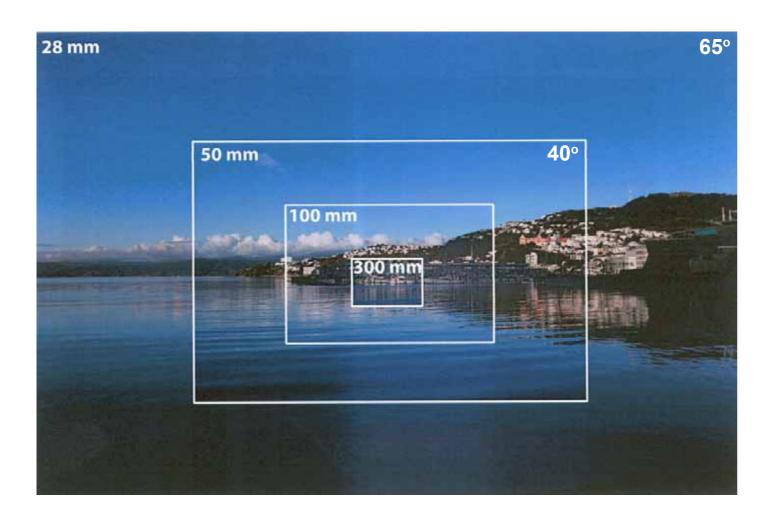
#### SITE VISIT & PHOTOGRAPHY

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 by either hand held GPS or GPS units built in to the cameras.

#### 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.

As can be seen below (derived from Figure 9 of the NZILA BPG), a photo taken with a 28mm lens will provide a horizontal field of view of 65°. Using a 50mm lens will provide a "cropped" (40°) version of the same view. The same effect can also be achieved by taking multiple 50mm photos in portrait mode, and using digital stitching software to merge and crop to 90°, 65° or 40°.



#### **COMPOSITING**

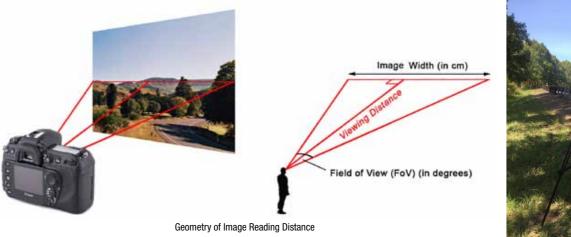
Virtual camera views were then created in 3D modelling software, and a combination of 3D contour data and 3D engineering drawings turned on in each of these views. These were then matched to the corresponding photographic panorama, using identifiable features in the landscape and the characteristics of the camera to match the two together. The visualisations were then assembled using graphic design software.

#### **VIEWING**

Views which have a field of view of 40° should be viewed from a distance of 55 cm when printed at A3. Views which have a field of view of 65° should be viewed from a distance of 31.5cm when printed at A3. Views which have a field of view of 90° 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 (reproduced below). 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.

LENS	HORIZ FoV 1	PAPER SIZE	ACTUAL IMAGE SIZE <sup>2</sup>	READING DISTANCE 3
		A4	277mm W x 185mm H	215mm
28mm	65°	A3	400mm W x 267mm H	315mm
		A2	574mm W x 383mm H	450mm
		A4	277mm W x 185mm H	380mm
50mm	40°	A3	400mm W x 267mm H	550mm
		A2	574mm W x 383mm H	790mm







Existing View



Post Closure



NZTM Easting : 1736 939 mE NZTM Northing : 5 982 573 mN Elevation/Eye Height: 86m / 1.6m

Date of Photography: 3:18pm 27/08/2018 NZST

Data sources: Photography - BML/ Contours ACC Rural 1m/ 5m 2008; 3D/ CAD Data - Tonkin & Taylor

Horizontal Field of View: 90° Optimum viewing distance @ A3: 20cm Projection: Rectilinear

**AUCKLAND REGIONAL LANDFILL - VISUAL SIMULATIONS** Viewpoint 1 - Wellsford Convention Centre



Existing View (Single Frame)



NZTM Easting : 1736 939 mE NZTM Northing : 5 982 573 mN Elevation/Eye Height: 86m / 1.6m

Data - Tonkin & Taylor

Horizontal Field of View: 40°

Date of Photography: 3:18pm 27/08/2018 NZST

Data sources: Photography - BML/ Contours ACC Rural 1m/ 5m 2008; 3D/ CAD

Optimum viewing distance @ A3: 55cm

**AUCKLAND REGIONAL LANDFILL - VISUAL SIMULATIONS** Viewpoint 1 - Wellsford Convention Centre

Project Manager: tom.lines@boffamiskell.co.nz | Drawn: JMa | Checked: TLi







NZTM Easting : 1736 939 mE NZTM Northing : 5 982 573 mN Elevation/Eye Height: 86m / 1.6m

Horizontal Field of View: 40°

Date of Photography: 3:18pm 27/08/2018 NZST

Optimum viewing distance @ A3: 55cm

**AUCKLAND REGIONAL LANDFILL - VISUAL SIMULATIONS** Viewpoint 1 - Wellsford Convention Centre

| Date: May 2019 | Revision: 3

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

**V**5



## **Existing View**



### Post Closure



These images have been prepared by Boffa Miskell Limited on 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 own risk. Where information has been supplied by the Client or obtained from other external sources, it has been assumed that it is accurate. No liability or responsibility is accepted by Boffa Miskell Limited for any errors or omissions to the extent that they arise from inaccurate information provided by the Client or any external source.

NZTM Easting : 1735 513 mE NZTM Northing : 5 981 704 mN Elevation/Eye Height : 90m / 1.6m

Date of Photography: 3:43pm 27/08/2018 NZST

Horizontal Field of View: 90° Optimum viewing distance @ A3: 20cm

Projection: Rectilinear

Data sources: Photography - BML/ Contours ACC Rural 1m/ 5m 2008; 3D/ CAD Data - Tonkin & Taylor AUCKLAND REGIONAL LANDFILL - VISUAL SIMULATIONS

Viewpoint 4 - Port Albert Road

Plan prepared by Boffa Miskell Limited

Project Manager: tom.lines@boffamiskell.co.nz | Drawn: JMa | Checked: TLi



Existing View (Single Frame)



NZTM Easting : 1735 513 mE NZTM Northing : 5 981 704 mN Elevation/Eye Height: 90m / 1.6m Date of Photography: 3:43pm 27/08/2018 NZST

Horizontal Field of View: 40° Optimum viewing distance @ A3: 55cm

Viewpoint 4 - Port Albert Road

**AUCKLAND REGIONAL LANDFILL - VISUAL SIMULATIONS** 

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







NZTM Easting : 1 735 513 mE NZTM Northing : 5 981 704 mN Elevation/Eye Height : 90m / 1.6m Date of Photography : 3:43pm 27/08/2018 NZST Horizontal Field of View: 40° Optimum viewing distance @ A3: 55cm

Optimum viewing distance @ A.

Data sources: Photography - BML/ Contours ACC Rural 1m/ 5m 2008; 3D/ CAD Data - Tonkin & Taylor AUCKLAND REGIONAL LANDFILL - VISUAL SIMULATIONS

Viewpoint 4 - Port Albert Road

Date: May 2019 Revision: 3

Plan prepared by Boffa Miskell Limited

Project Manager: tom.lines@boffamiskell.co.nz | Drawn: JMa | Checked: TLi