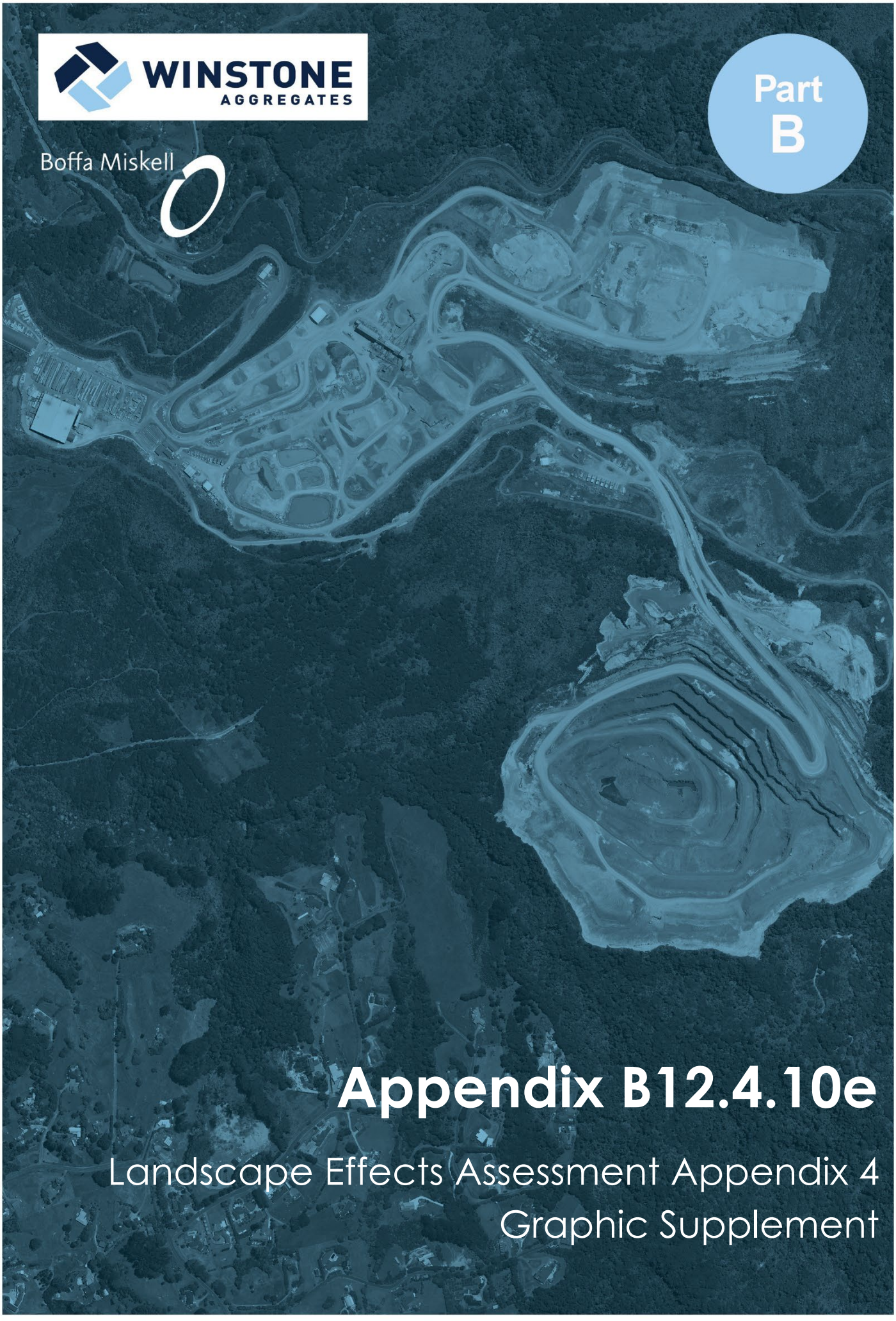
WINSTONE AGGREGATES

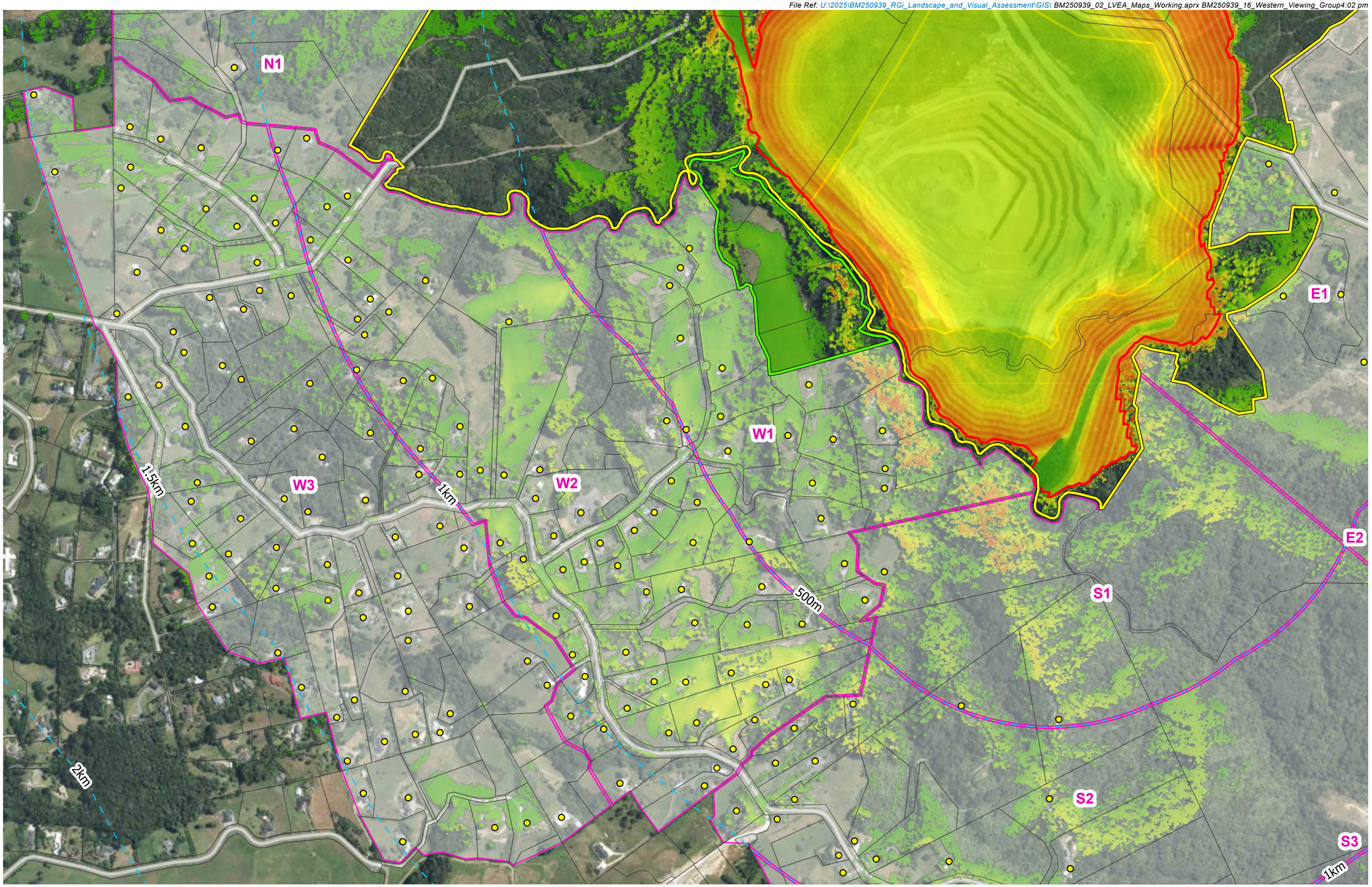
Boffa Miskell

Part B



Appendix B12.4.10e

Landscape Effects Assessment Appendix 4 Graphic Supplement



Boffa Miskell

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0 100 200 m

1:7,500 @ A3

Data Sources: LINZ (2025 Aerials, parcels, road, 2024 DEM/DSM), Boffa Miskell

Projection: NZGD 2000 New Zealand Transverse Mercator

LEGEND

- The Site
- Offset sites
- Consented Symonds Hill Pit Boundary
- Quarry Development Area
- Viewing Groups
- Visibility Offset
- Dwelling

Stage 8 Probable Visibility (above ground)

- High (198)
- Low (1)
- Roads

HUNUA QUARRY DEVELOPMENT

Western Viewing Group

Date: 18 February 2026 | Revision: 0

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Checked: AAn

Figure 30

VIEWPOINTS

Viewpoint 1 is located on Hunua Road, approximately 535m northwest of the quarry development area, looking in a southeasterly direction towards the Hunua Quarry.

Viewpoint 2 is located on Hunua Road, approximately 485m north of the quarry development area, looking in a southeasterly direction towards the Hunua Quarry.

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Horizontal Field of View : 90°
Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance @ A3 is 20 cm

Data Sources: Photographs taken on 15th December 2025.

HUNUA QUARRY DEVELOPMENT

Viewpoints 1 - 2

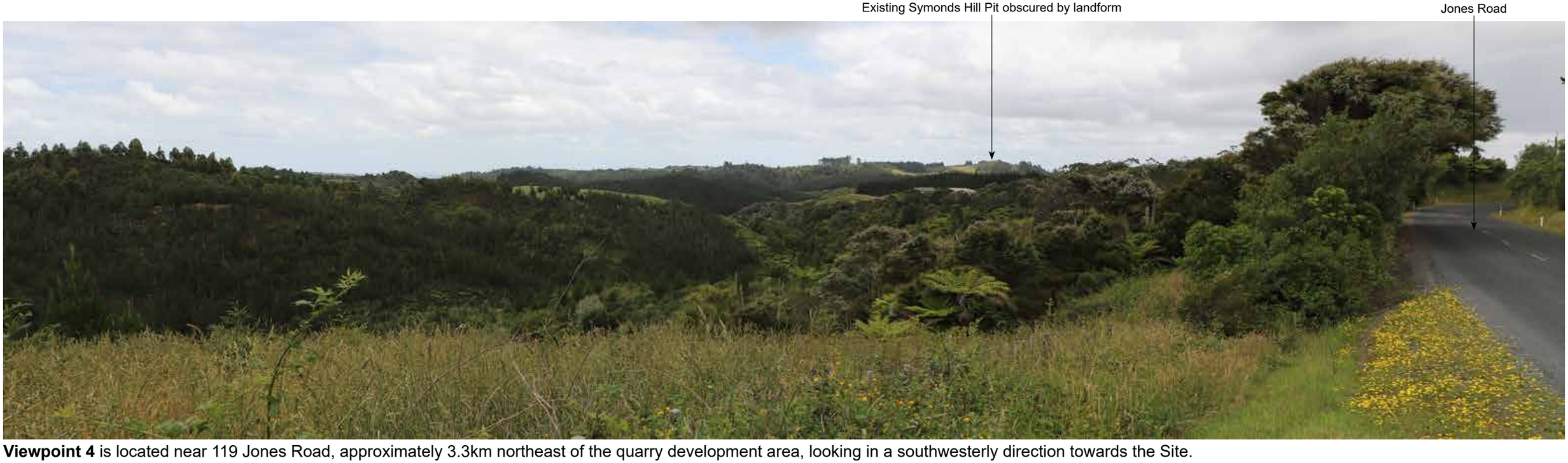
Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 32

Viewpoint 3 is located near the entrance to 151 Jones Road, approximately 3.4km northeast of the quarry development area, looking in a southwesterly direction towards the Site.



Viewpoint 4 is located near 119 Jones Road, approximately 3.3km northeast of the quarry development area, looking in a southwesterly direction towards the Site.

Boffa Miskell

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Horizontal Field of View : 90°
Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance @ A3 is 20 cm

Data Sources: Photographs taken on 15th December 2025.

HUNUA QUARRY DEVELOPMENT

Viewpoints 3 - 4

Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 33

Viewpoint 5 is located near 353 Jones Road, approximately 2.2km northeast of the quarry development area, looking in a southwesterly direction towards the Site.

Viewpoint 6 is located on Middleton Road, approximately 720m east of the quarry development area, looking in a westerly direction towards the Site.

Boffa Miskell

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Horizontal Field of View : 90°
Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance @ A3 is 20 cm

Data Sources: Photographs taken on 15th December 2025.

HUNUA QUARRY DEVELOPMENT

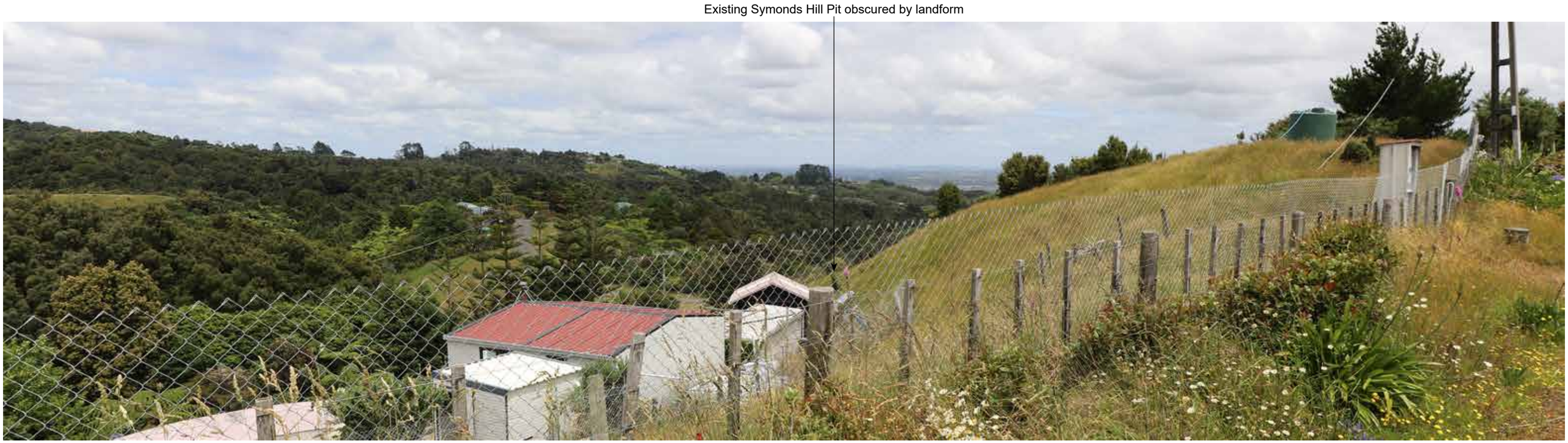
Viewpoints 5 - 6

Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 34



Viewpoint 7 is located near 163 Middleton Road, approximately 300m east of the quarry development area, looking in a southwesterly direction towards the Site.

Viewpoint 8 is located near the intersection of Ponga Road, Laurie Drive and Sonja Drive, approximately 1.7km south of the quarry development area, looking in a northerly direction towards the Site.

Boffa Miskell

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Horizontal Field of View : 90°
Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance @ A3 is 20 cm

Data Sources: Photographs taken on 15th December 2025.

HUNUA QUARRY DEVELOPMENT

Viewpoints 7 - 8

Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 35

Viewpoint 9 is located on Ponga Road, approximately 920m south of the quarry development area, looking in a northerly direction towards the Site.

Viewpoint 10 is located on Ponga Road near the intersection with Judge Richardson Drive, approximately 925m southwest of the quarry development area, looking in a northeasterly direction towards the Site.

Boffa Miskell

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Horizontal Field of View : 90°
Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance @ A3 is 20 cm

Data Sources: Photographs taken on 15th December 2025.

HUNUA QUARRY DEVELOPMENT

Viewpoints 9 - 10

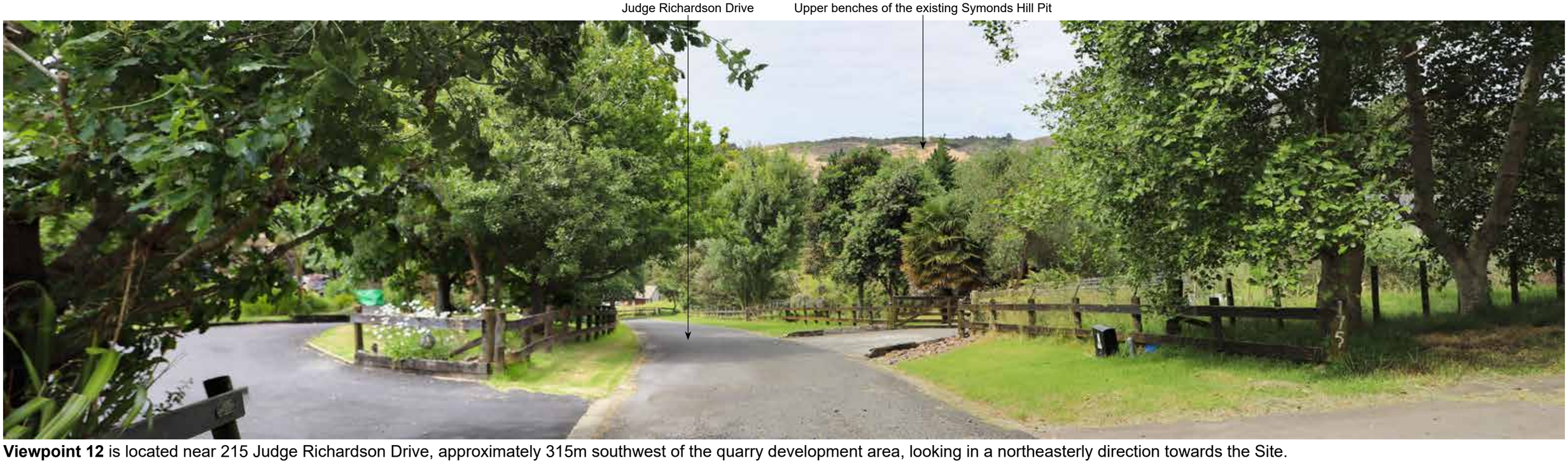
Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 36

Viewpoint 11 is located on Judge Richardson Drive, approximately 660m southwest of the quarry development area, looking in a northeasterly direction towards the Site.



Viewpoint 12 is located near 215 Judge Richardson Drive, approximately 315m southwest of the quarry development area, looking in a northeasterly direction towards the Site.

Boffa Miskell

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Horizontal Field of View : 90°
Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance @ A3 is 20 cm

Data Sources: Photographs taken on 15th December 2025.

HUNUA QUARRY DEVELOPMENT

Viewpoints 11 - 12

Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 37

Viewpoint 13 is located near 154 Judge Richardson Drive, approximately 450m southwest of the quarry development area, looking in a northeasterly direction towards the Site.

Viewpoint 14 is located near 144 Judge Richardson Drive, approximately 400m southwest of the quarry development area, looking in a northeasterly direction towards the Site.

Boffa Miskell

www.boffamiskell.co.nz

Horizontal Field of View : 90°
Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance @ A3 is 20 cm

Data Sources: Photographs taken on 15th December 2025.

HUNUA QUARRY DEVELOPMENT

Viewpoints 13 - 14

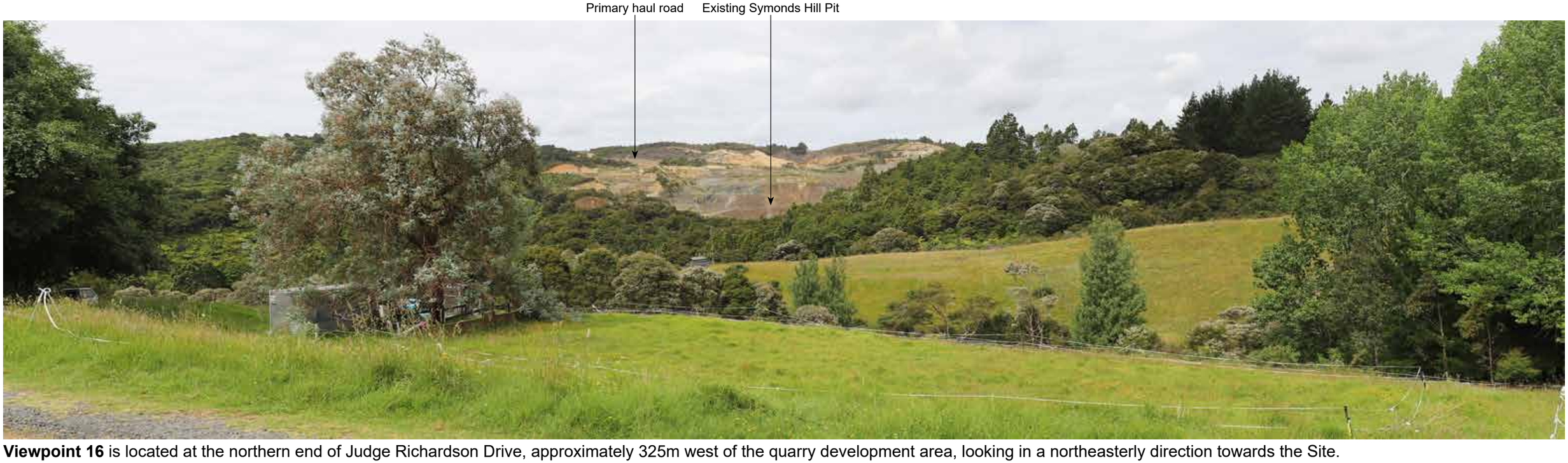
Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 38

Viewpoint 15 is located at the entrance to 108 Judge Richardson Drive, approximately 310m west of the quarry development area, looking in an easterly direction towards the Site.



Viewpoint 16 is located at the northern end of Judge Richardson Drive, approximately 325m west of the quarry development area, looking in a northeasterly direction towards the Site.

Boffa Miskell

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Horizontal Field of View : 90°
Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance @ A3 is 20 cm

Data Sources: Photographs taken on 15th December 2025.

HUNUA QUARRY DEVELOPMENT

Viewpoints 15 - 16

Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 39

Viewpoint 17 is located on Coal Mine Road, approximately 930m west of the quarry development area, looking in an easterly direction towards the Site.

Viewpoint 18 is located on Kauri View Road, approximately 1.2km west of the quarry development area, looking in an easterly direction towards the Site.

Boffa Miskell

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Horizontal Field of View : 90°
Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance @ A3 is 20 cm

Data Sources: Photographs taken on 15th December 2025.

HUNUA QUARRY DEVELOPMENT

Viewpoints 17 - 18

Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 40

Viewpoint 19 is located on Coal Mine Road near the intersection with Kauri View Road, approximately 1km west of the quarry development area, looking in an easterly direction towards the Site.

Viewpoint 20 is located at East Reserve on East Street, approximately 4.5km southwest of the quarry development area, looking in a northeasterly direction towards the Site.

Boffa Miskell

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Horizontal Field of View : 90°
Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance @ A3 is 20 cm

Data Sources: Photographs taken on 15th December 2025.

HUNUA QUARRY DEVELOPMENT

Viewpoints 19 - 20

Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 41

Viewpoint 21 is located at the intersection of Sutton Road and railway, approximately 3.8km southwest of the quarry development area, looking in an easterly direction towards the Site.

Viewpoint 22 is located opposite to Park Estate Home & Hospital on Great South Road, approximately 4.7km west of the quarry development area, looking in an easterly direction towards the Site.

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Horizontal Field of View : 90°
Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance @ A3 is 20 cm

Data Sources: Photographs taken on 15th December 2025.

HUNUA QUARRY DEVELOPMENT

Viewpoints 21 - 22

Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 42

Viewpoint 23 is located on Redmount Place, approximately 2km northwest of the quarry development area, looking in a southeasterly direction towards the Site.

Viewpoint 24 is located on Red Hill Road, approximately 1.9km northwest of the quarry development area, looking in a southeasterly direction towards the Site.

Boffa Miskell

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Horizontal Field of View : 90°
Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance @ A3 is 20 cm

Data Sources: Photographs taken on 15th December 2025.

HUNUA QUARRY DEVELOPMENT

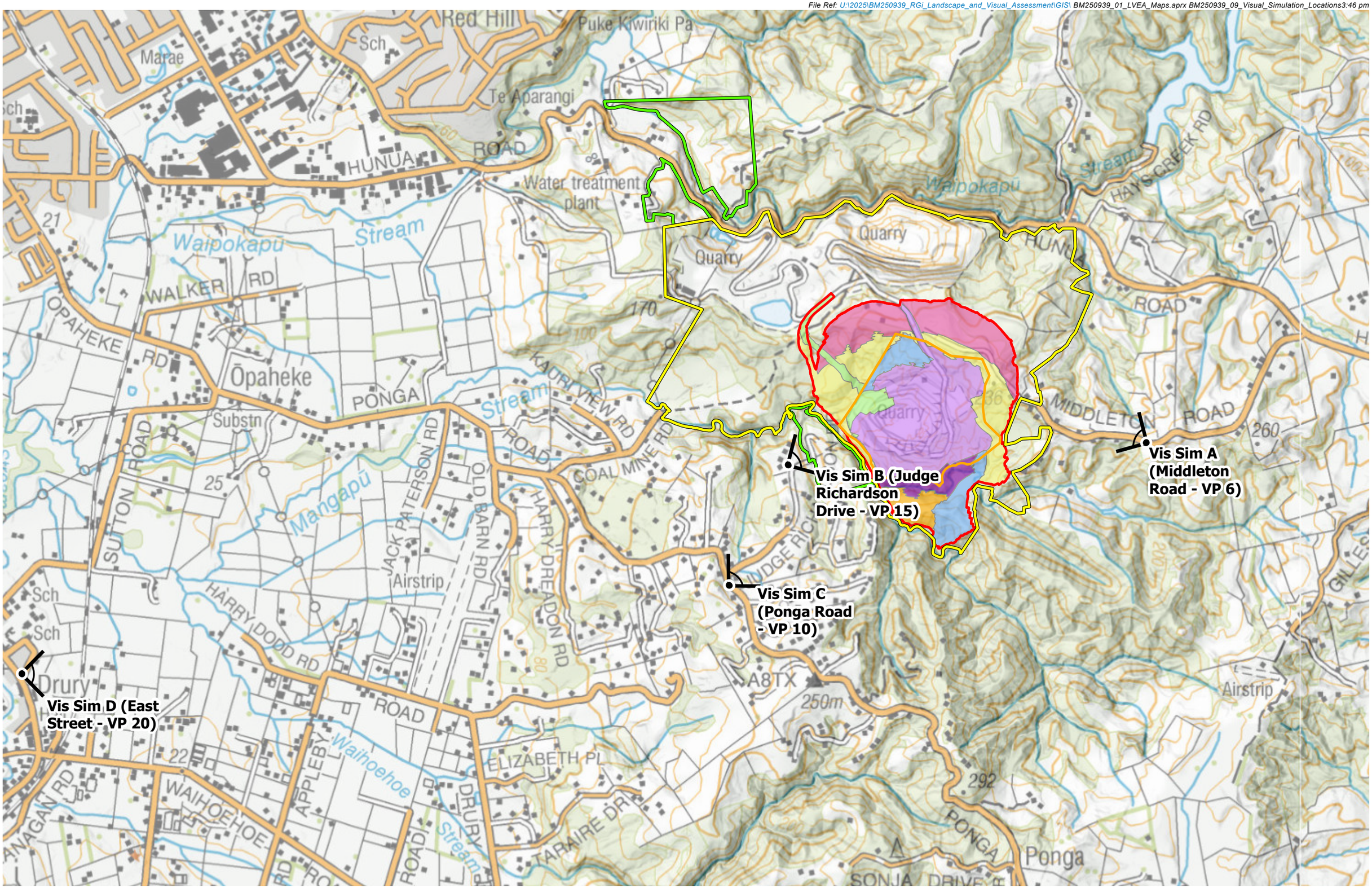
Viewpoints 23 - 24

Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 43



Boffa Miskell

www.boffamiskell.co.nz

0 250 500 m

1:18,000 @ A3

Data Sources: LINZ (Topo 50), Winstone Aggregates, BML

Projection: NZGD 2000 New Zealand Transverse Mercator

LEGEND

- The Site
- Offset sites
- Consented Symonds Hill Pit Boundary
- Quarry Development Area
- Visual Simulation Locations (Vis Sim)

Expansion Stages

- Stage 0
- Stage 1
- Stage 2
- Stage 3
- Stage 4
- Stage 7
- Stage 8

HUNUA QUARRY DEVELOPMENT

Visual Simulation Locations

Date: 18 February 2026 | Revision: 0

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SGa | Checked: AAn

Figure 44

Visual Simulation A: 111 Middleton Road (existing view)

Visual Simulation A: 111 Middleton Road (Stage 7 view)

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

NZTM Easting	: 1779197 mE	Horizontal Field of View	: 90°
NZTM Northing	: 5893482 mN	Vertical Field of View	: 30°
Elevation / Eye Height	: 113.4m / 1.6m	Projection	: Rectilinear
Date of Photography	: 12:29pm 18 December 2025 NZDT	Image Reading Distance @ A3	is 20 cm

Data Sources: Photography - BML; 3D Model - Rodney Aggregates (WHQ_Development_Loq_Pit_Design_Stg1, Stg2, Stg3, Whangaripo_Ext_LoQ_Design_Surface_05-08-25.dxf)

HUNUA QUARRY DEVELOPMENT

Visual Simulation A (111 Middleton Road)

Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 45

Visual Simulation A (Stage 8 view - without mitigation)

Visual Simulation A (Stage 8 view - with rehabilitation planting on benches)

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

NZTM Easting	: 1779197 mE	Horizontal Field of View	: 90°
NZTM Northing	: 5893482 mN	Vertical Field of View	: 30°
Elevation / Eye Height	: 113.4m / 1.6m	Projection	: Rectilinear
Date of Photography	: 12:29pm 18 December 2025 NZDT	Image Reading Distance @ A3 is	20 cm

Data Sources: Photography - BML; 3D Model - Rodney Aggregates (WHQ_Development_Loq_Pit_Design_Stg1, Stg2, Stg3, Whangaripo_Ext_LoQ_Design_Surface_05-08-25.dxf)

HUNUA QUARRY DEVELOPMENT

Visual Simulation A (111 Middleton Road)

Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 46

Visual Simulation B (existing view)

Visual Simulation B (Stage 2 view - with mitigation planting on the Judge Richardson Drive offset site)

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

NZTM Easting	: 1777343 mE	Horizontal Field of View	: 90°
NZTM Northing	: 5893375 mN	Vertical Field of View	: 30°
Elevation / Eye Height	: 104.8m / 1.6m	Projection	: Rectilinear
Date of Photography	: 12:11pm 18 December 2025 NZDT	Image Reading Distance @ A3 is	20 cm

Data Sources: Photography - BML; 3D Model - Rodney Aggregates (WHQ_Development_Loq_Pit_Design_Stg1, Stg2, Stg3, Whangaripo_Ext_LoQ_Design_Surface_05-08-25.dxf)

HUNUA QUARRY DEVELOPMENT

Visual Simulation B (80 Judge Richardson Drive)

Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 47

Visual Simulation B (Stage 7 view - with mitigation planting on the Judge Richardson Drive offset site)

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

NZTM Easting : 1777343 mE
NZTM Northing : 5893375 mN
Elevation / Eye Height: 104.8m / 1.6m
Date of Photography : 12:11pm 18 December 2025 NZDT

Horizontal Field of View : 90°
Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance @ A3 is 20 cm

Data Sources: Photography - BML; 3D Model - Rodney Aggregates (WHQ_Development_Loq_Pit_Design_Stg1, Stg2, Stg3, Whangaripo_Ext_LoQ_Design_Surface_05-08-25.dxf)

HUNUA QUARRY DEVELOPMENT

Visual Simulation B (80 Judge Richardson Drive)

Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 48

Visual Simulation B (Stage 8 view wihtout mitigation)

Visual Simulation B (Stage 8 view - with mitigation planting on the Judge Richardson Drive offset site and rehabilitation planting on benches)

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

NZTM Easting	: 1777343 mE	Horizontal Field of View	: 90°
NZTM Northing	: 5893375 mN	Vertical Field of View	: 30°
Elevation / Eye Height	: 104.8m / 1.6m	Projection	: Rectilinear
Date of Photography	: 12:11pm 18 December 2025 NZDT	Image Reading Distance @ A3 is	20 cm

Data Sources: Photography - BML; 3D Model - Rodney Aggregates (WHQ_Development_Loq_Pit_Design_Stg1, Stg2, Stg3, Whangaripo_Ext_LoQ_Design_Surface_05-08-25.dxf)

HUNUA QUARRY DEVELOPMENT

Visual Simulation B (80 Judge Richardson Drive)

Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 49

Visual Simulation C (existing view)

Visual Simulation C (Stage 8 view - without mitigation planting)

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

NZTM Easting	: 1777035 mE	Horizontal Field of View	: 90°
NZTM Northing	: 5892744 mN	Vertical Field of View	: 30°
Elevation / Eye Height	: 164.3m / 1.6m	Projection	: Rectilinear
Date of Photography	: 2:54pm 18 December 2025 NZDT	Image Reading Distance @ A3 is	20 cm

Data Sources: Photography - BML; 3D Model - Rodney Aggregates (WHQ_Development_Loq_Pit_Design_Stg1, Stg2, Stg3, Whangaripo_Ext_LoQ_Design_Surface_05-08-25.dxf)

HUNUA QUARRY DEVELOPMENT

Visual Simulation C (571 Ponga Road)

Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 50

Visual Simulation C (Stage 8 view - with rehabilitation planting on benches)

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

NZTM Easting	: 1777035 mE	Horizontal Field of View	: 90°
NZTM Northing	: 5892744 mN	Vertical Field of View	: 30°
Elevation / Eye Height	: 164.3m / 1.6m	Projection	: Rectilinear
Date of Photography	: 2:54pm 18 December 2025 NZDT	Image Reading Distance @ A3 is	20 cm

Data Sources: Photography - BML; 3D Model - Rodney Aggregates (WHQ_Development_Loq_Pit_Design_Stg1, Stg2, Stg3, Whangaripo_Ext_LoQ_Design_Surface_05-08-25.dxf)

HUNUA QUARRY DEVELOPMENT

Visual Simulation C (571 Ponga Road)

Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 51

Visual Simulation D (existing view)

Visual Simulation D (Stage 8 view - without mitigation planting)

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

NZTM Easting	: 1773364 mE	Horizontal Field of View	: 90°
NZTM Northing	: 589228 mN	Vertical Field of View	: 30°
Elevation / Eye Height	: 13.82m / 1.6m	Projection	: Rectilinear
Date of Photography	: 3:21pm 18 December 2025 NZDT	Image Reading Distance @ A3 is	20 cm

Data Sources: Photography - BML; 3D Model - Rodney Aggregates (WHQ_Development_Loq_Pit_Design_Stg1, Stg2, Stg3, Whangaripo_Ext_LoQ_Design_Surface_05-08-25.dxf)

HUNUA QUARRY DEVELOPMENT

Visual Simulation D (Great South Road/East Street)

Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 52

Visual Simulation D (Stage 8 view - with rehabilitation planting on benches)

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

NZTM Easting	: 1773364 mE	Horizontal Field of View	: 90°
NZTM Northing	: 589228 mN	Vertical Field of View	: 30°
Elevation / Eye Height	: 13.82m / 1.6m	Projection	: Rectilinear
Date of Photography	: 3:21pm 18 December 2025 NZDT	Image Reading Distance @ A3 is	20 cm

Data Sources: Photography - BML; 3D Model - Rodney Aggregates (WHQ_Development_Loq_Pit_Design_Stg1, Stg2, Stg3, Whangaripo_Ext_LoQ_Design_Surface_05-08-25.dxf)

HUNUA QUARRY DEVELOPMENT

Visual Simulation D (Great South Road/East Street)

Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 53

Visual Simulation D (existing view)

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

NZTM Easting	: 1773364 mE	Horizontal Field of View	: 40°
NZTM Northing	: 589228 mN	Vertical Field of View	: 25°
Elevation / Eye Height:	13.82m / 1.6m	Projection	: NA
Date of Photography	: 3:21pm 18 December 2025 NZDT	Image Reading Distance @ A3 is	50 cm

Data Sources: Photography - BML; 3D Model - Rodney Aggregates (WHQ_Development_Loq_Pit_Design_Stg1, Stg2, Stg3, Whangaripo_Ext_LoQ_Design_Surface_05-08-25.dxf)

HUNUA QUARRY DEVELOPMENT

Visual Simulation D (Great South Road/East Street)

Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 54

Visual Simulation D (Stage 8 view - without mitigation planting)

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

NZTM Easting	: 1773364 mE	Horizontal Field of View	: 40°
NZTM Northing	: 589228 mN	Vertical Field of View	: 25°
Elevation / Eye Height:	13.82m / 1.6m	Projection	: NA
Date of Photography	: 3:21pm 18 December 2025 NZDT	Image Reading Distance @ A3 is	50 cm

Data Sources: Photography - BML; 3D Model - Rodney Aggregates (WHQ_Development_Loq_Pit_Design_Stg1, Stg2, Stg3, Whangaripo_Ext_LoQ_Design_Surface_05-08-25.dxf)

HUNUA QUARRY DEVELOPMENT

Visual Simulation D (Great South Road/East Street)

Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 55

Visual Simulation D (Stage 8 view - with rehabilitation planting on benches)

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

NZTM Easting	: 1773364 mE	Horizontal Field of View	: 40°
NZTM Northing	: 589228 mN	Vertical Field of View	: 25°
Elevation / Eye Height	: 13.82m / 1.6m	Projection	: NA
Date of Photography	: 3:21pm 18 December 2025 NZDT	Image Reading Distance @ A3 is	50 cm

Data Sources: Photography - BML; 3D Model - Rodney Aggregates (WHQ_Development_Loq_Pit_Design_Stg1, Stg2, Stg3, Whangaripo_Ext_LoQ_Design_Surface_05-08-25.dxf)

HUNUA QUARRY DEVELOPMENT

Visual Simulation D (Great South Road/East Street)

Date: 13 March 2026 | Revision: 3

Plan prepared for Winstone Aggregates Ltd by Boffa Miskell Limited

Project Manager: Rhys.Girvan@boffamiskell.co.nz | Drawn: SCh | Reviewed: AAn

Figure 56

METHODOLOGY
TRIPOD BASED VISUAL SIMULATIONS

SITE VISIT & PHOTOGRAPHY

Site photographs were taken with a Canon EOS SLR camera fitted with a 50mm focal length lens. A series of photos were taken at predetermined viewpoints, situated on either public or private land depending on the client's requirements. The camera tripod was set up over either a known survey mark or an identifiable ground feature.

Positions were recorded using an EMLID Reach GPS Unit. The achievable accuracy for this is set out below:

DISTANCE FROM SITE	ACHIEVABLE ACCURACY	EQUIPMENT
Within 1 km (urban)	1-2 centimetres	EMLID Reach GPS
Within 1 km (rural)	1-2 metres	EMLID Reach GPS or Camera GPS
Beyond 1 km (urban or rural)	2-5 metres	Camera GPS

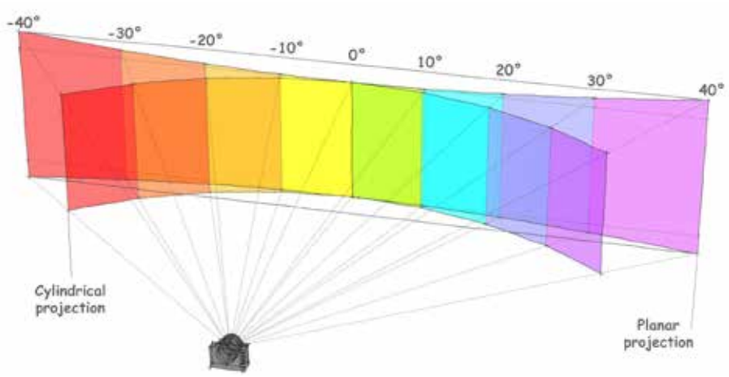
NZILA GUIDELINES AND FOCAL LENGTH

The visual simulations have been produced in accordance with the Tuia Pito Ora New Zealand Institute of Landscape Architects (NZILA) Best Practice Guide - Visual Simulations BPG 10.2 (published in 2010).

As stated in the BPG, the choice of lens makes no difference other than in the field of view and the resolution of the image. For instance, a photo taken with a 28mm lens provides a horizontal field of view (HFoV) of 65° in landscape mode, while a photo taken with a 50mm lens has a HFoV of 40°. It is essentially a cropped version of the same image.

PANORAMAS

90° panoramas were created by digitally stitching of multiple overlapping photos (taken in portrait mode). These were stitched using a "rectilinear" or "planar" projection, meaning they are saved to a single flat image, with an increasing amount of distortion at the edges. This is necessary to allow for the accurate registration of other digital files over the panorama.
Diagram courtesy of UK Landscape Institute Technical Guidance Note 06/19



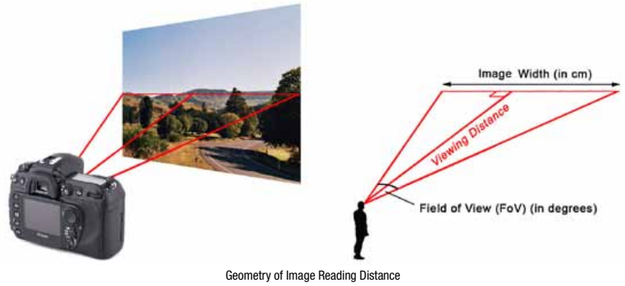
3D MODELLING

Virtual Cameras were created in 3DSMax software (1). LINZ point cloud (LIDAR) data was registered to match the panorama (2). A 3D model from the project engineers was then imported from DXF format (3). A rendering of this model was generated and superimposed over the panorama using Photoshop. The graphics were then assembled using graphic design software.

IMAGE READING DISTANCE

Image Reading Distance is the distance at which a print should be held from the eye to emulate a true relationship with the real world *(refer to Section 7 of the NZILA BPG)*.

Note that opening a digital (PDF) version on a computer and using the zoom tool allows closer inspection of the image, but is no longer representative of the view as it would appear in the "real world".



Geometry of Image Reading Distance

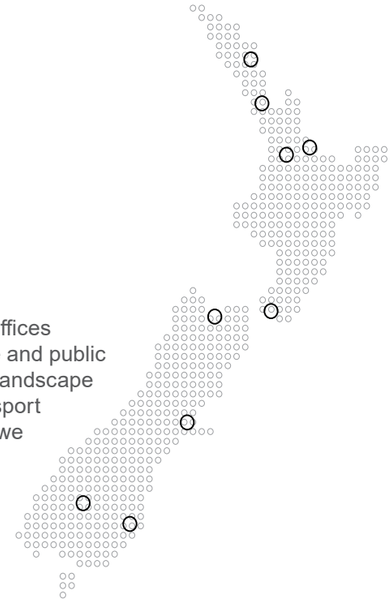
PRIVACY AND AI

Faces, house numbers and vehicle licence plates have been blurred or removed from images wherever practical. This is in accordance with the Privacy Act 2020.

AI enhancement tools may have been used to reinstate missing areas of sky or ground in the images. No other manipulation using AI has been used in the preparation of these images.

Together. Shaping Better Places.

Boffa Miskell is a leading New Zealand environmental consultancy with nine offices throughout Aotearoa. We work with a wide range of local, international private and public sector clients in the areas of planning, urban design, landscape architecture, landscape planning, ecology, biosecurity, Te Hīhiri (cultural advisory), engagement, transport advisory, climate change, graphics and mapping. Over the past five decades we have built a reputation for creativity, professionalism, innovation and excellence by understanding each project's interconnections with the wider environmental, social, cultural and economic context.



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