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Urban Forest Tree Planting Showgate Reserve

PROJECT NUMBER: **BM230857**

Concept Design

PROJECT ADDRESS: 30 Showgate Avenue,
Sockburn,
Christchurch 8042

CLIENT: Christchurch City Council

CLIENT ADDRESS: 53 Hereford Street
Christchurch Central
Christchurch 8013
New Zealand

Boffa Miskell

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Tel: +64 3 366 8891
www.boffamiskell.co.nz

REV	DATE	DESCRIPTION
A	05.03.24	Concept Design

SHEET INDEX

100 Preliminary & General
100 Cover Sheet
200 Plans
200 Existing Site
210 Tree Height Capacities
300 Sections
300 Cross Section Studies of Potential Tree Heights
301 Cross Section Studies of Potential Tree Heights
400 Details
400 Shading Study - Summer - Morning
401 Shading Study - Summer - Afternoon
402 Shading Study - Winter - Morning
403 Shading Study - Winter - Afternoon
500 Planting
500 Planting Plan

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LEGEND

- Existing Canopy Cover
- Existing Lower Vegetation
- Existing Pathways and Features

Vegetation cover mapped based on CCC aerial photography dated 17 November 2023, with site visit to verify existing conditions.

Existing Specimen Trees - 60
Existing Canopy Cover - 2336.87 m² 25.9% Canopy coverage to existing site

0 m 7.5 m 15 m 30 m

REV	DATE	DESCRIPTION	APr
A	05.03.24	Concept Design	HCo

Urban Forest Tree Planting Showgate Reserve

Existing Site

Design	HCo	Scale	Date
Drawn	ARo	1:750 @ A1	14.12.2023
Check	GRo	1:1500 @ A3	

Concept Design

DRAWING NO. BM230857_200

REVISION A

U:\2023\BM230857_HCo_Urban_Forest_Tree_Planting_Assessment\CAD\Revit\BM230857_ShowgateReserve.rvt

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LEGEND

- 20m+ Tree Height Area
- 10 - 20m Tree Height Area
- 5 - 10m Tree Height Area

The Tree Height Capacity model is derived from the following rules, supplied by CCC:

- No tree shall intrude through the recession plane at maturity
- No tree shall be planted closer than 3.0m from a pathway
- No tree shall be planted closer than 5.0m from a sports field and no tree canopy drip line shall extend above a sports field
- Tree spacings shall be a minimum of 5.0m apart to allow for easy lawn mowing
- Min. 2m offset for low voltage power
- Min. 3m offset for 11kv power
- Min. 5m offset for 33-66kv
- Min. of 1m offset for all other services and hard paving not mentioned above

0m 3m 6m 12m

REV	DATE	DESCRIPTION	APr
A	05.03.24	Concept Design	HCo

Urban Forest Tree Planting Showgate Reserve

Tree Height Capacities

Design	HCo	Scale	Date
Drawn	ARo	1:300 @ A1	14.12.2023
Check	GRo	1:600 @ A3	

Concept Design

DRAWING NO. BM230857_210

REVISION A

U:\2023\BM230857_HCo_Urban_Forest_Tree_Planting_Assessment\CAD\Revit\BM230857_ShowgateReserve.rvt

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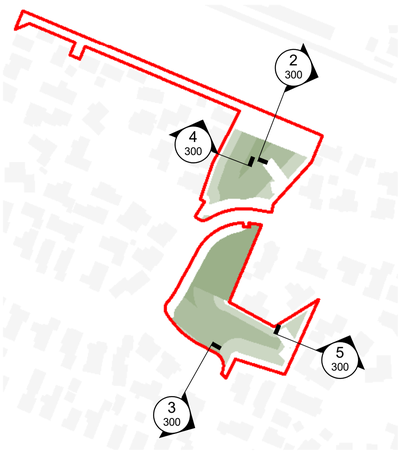
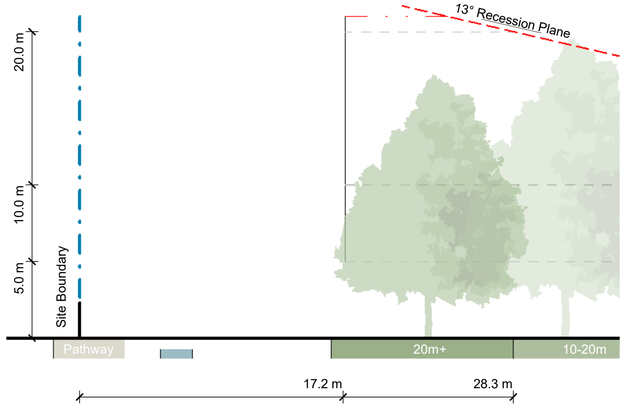
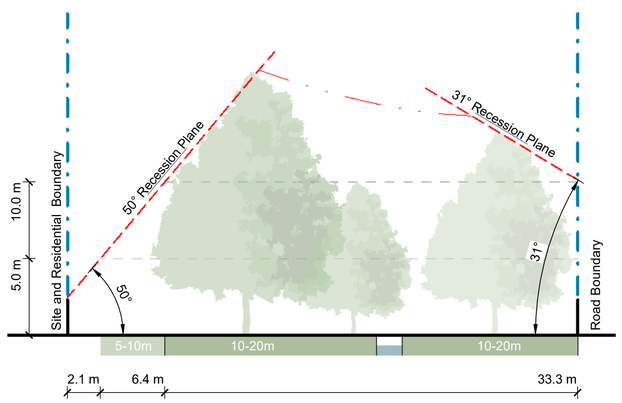


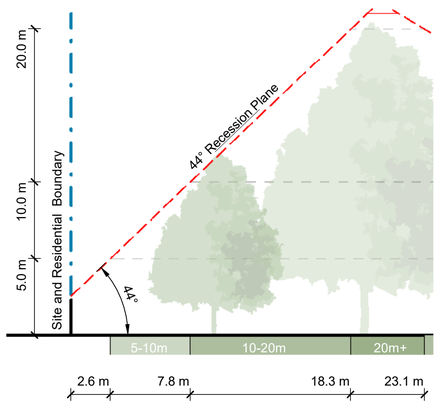
1 Sections - Boundary Plan
Scale: 1 : 2000



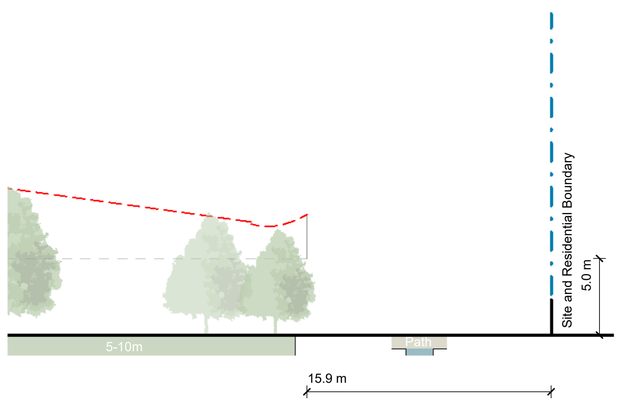
2 300 Section 1
Scale: 1 : 200



3 300 Section 2
Scale: 1 : 200



4 300 Section 3
Scale: 1 : 200



5 300 Section 4
Scale: 1 : 200

ORIGINAL IN COLOUR

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REV	DATE	DESCRIPTION
A	05.03.24	Concept Design

APr
HCo

Urban Forest Tree Planting Showgate Reserve

Cross Section Studies of Potential Tree Heights

Design	HCo	Scale	Date
Drawn	ARo	As Shown	14.12.2023
Check	GRo		

Concept Design

DRAWING NO. BM230857_300

REVISION A

U:\2023\BM230857_HCo_Urban_Forest_Tree_Planting_Assessment\CAD\Revit\BM230857_ShowgateReserve.rvt

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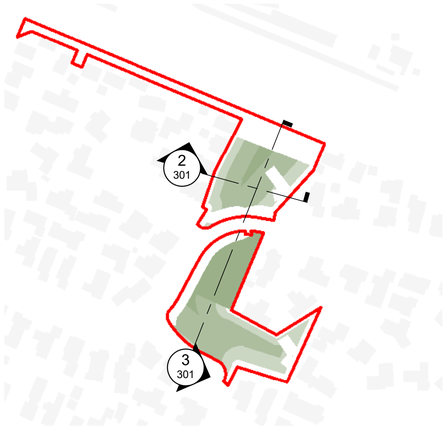
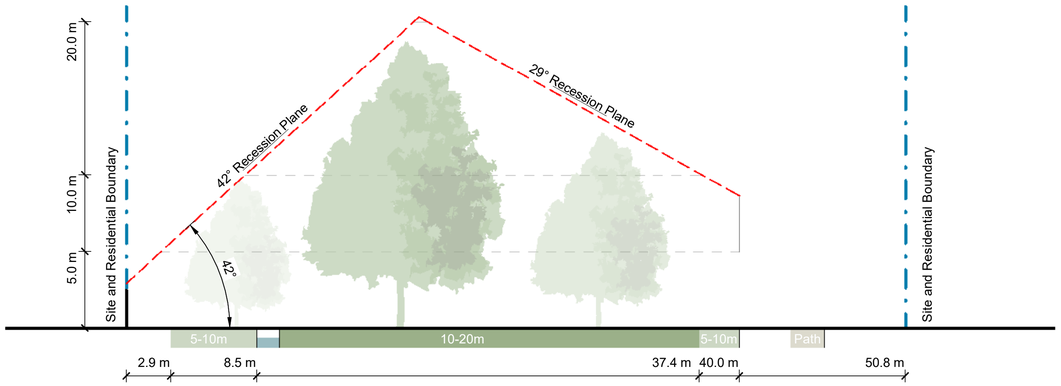
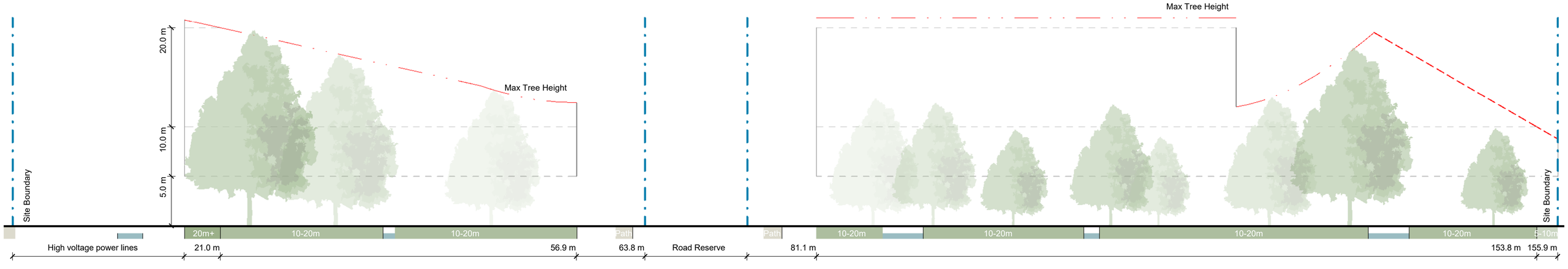


1 Sections - Cross Section Plan
Scale: 1 : 2000



2 Cross Section 1
Scale: 1 : 200



3 301 Cross Section 2
Scale: 1 : 200

ORIGINAL IN COLOUR

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REV	DATE	DESCRIPTION	
A	05.03.24	Concept Design	APr HCo

Urban Forest Tree Planting Showgate Reserve

Cross Section Studies of Potential Tree Heights

Design	HCo	Scale	Date
Drawn	ARo	As Shown	14.12.2023
Check	GRo		

Concept Design

DRAWING NO. BM230857_301

REVISION A

U:\2023\BM230857_HCo_Urban_Forest_Tree_Planting_Assessment\CAD\Revit\BM230857_ShowgateReserve.rvt

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1 Summer - 7:30am
Scale: 1 : 1200

2 Summer - 9:00am
Scale: 1 : 1200

3 Summer - 10:30am
Scale: 1 : 1200

4 Summer - 12:00pm
Scale: 1 : 1200

ORIGINAL IN COLOUR

Boffa Miskell

Printed 5/03/2024 7:28:42 PM

LEGEND
- Proposed Shading
- Existing Shading

0 m 12 m 24 m 48 m

REV	DATE	DESCRIPTION	
A	05.03.24	Concept Design	APr HCo

Urban Forest Tree Planting Showgate Reserve

Shading Study - Summer - Morning

Design	HCo	Scale	Date
Drawn	APr	1:1200 @ A1	05.03.2024
Check	GRo	1:2400 @ A3	

Concept Design

DRAWING NO. BM230857_400

REVISION A

U:\2023\BM230857_HCo_Urban_Forest_Tree_Planting_Assessment\CAD\Revit\BM230857_ShowgateReserve.rvt

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1 Summer - 1:30pm
Scale: 1 : 1200

2 Summer - 3:00pm
Scale: 1 : 1200

3 Summer - 4:30pm
Scale: 1 : 1200

4 Summer - 6:00pm
Scale: 1 : 1200

ORIGINAL IN COLOUR

Boffa Miskell

Printed 5/03/2024 7:28:45 PM

LEGEND
- Proposed Shading
- Existing Shading

0 m 12 m 24 m 48 m

REV	DATE	DESCRIPTION	
A	05.03.24	Concept Design	APr HCo

Urban Forest Tree Planting Showgate Reserve

Shading Study - Summer - Afternoon

Design	HCo	Scale	Date
Drawn	APr	1:1200 @ A1	05.03.2024
Check	GRo	1:2400 @ A3	

Concept Design

DRAWING NO. BM230857_401

REVISION A

U:\2023\BM230857_HCo_Urban_Forest_Tree_Planting_Assessment\CAD\Revit\BM230857_ShowgateReserve.rvt

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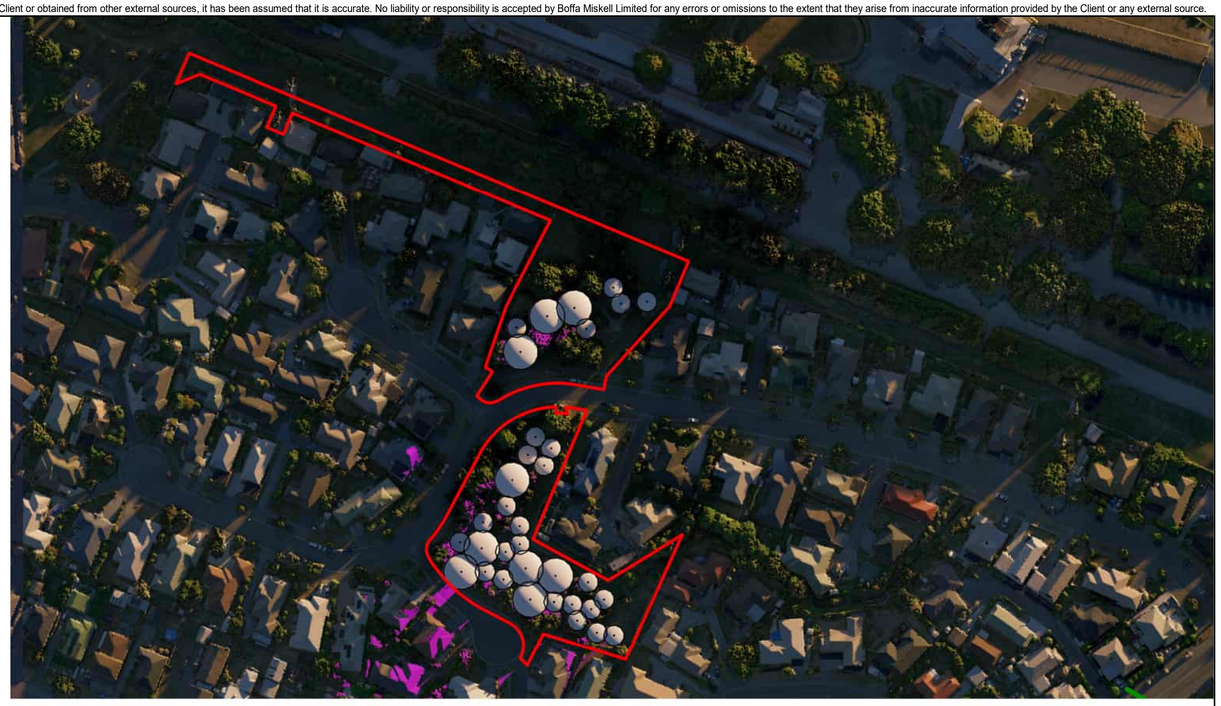
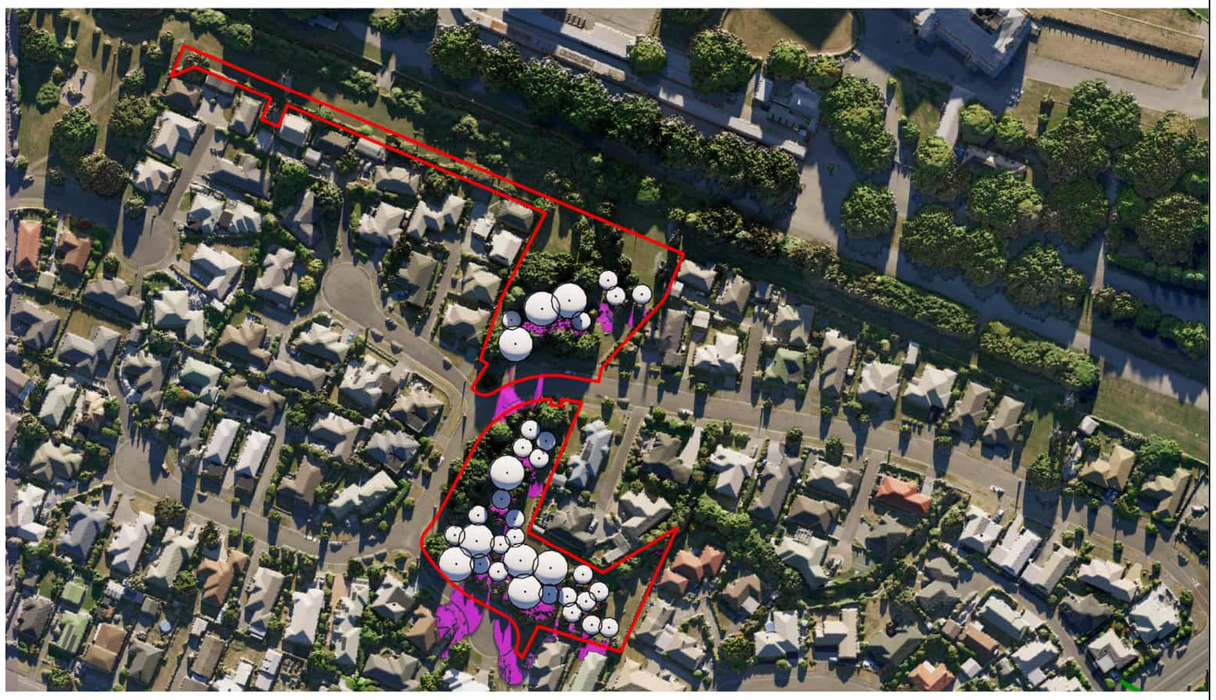
1 Winter - 7:30am
Scale: 1 : 1200



2 Winter - 9:00am
Scale: 1 : 1200

3 Winter - 10:30am
Scale: 1 : 1200



4 Winter - 12:00pm
Scale: 1 : 1200

ORIGINAL IN COLOUR

Boffa Miskell

LEGEND
- Proposed Shading
- Existing Shading

0 m 12 m 24 m 48 m

REV	DATE	DESCRIPTION	
A	05.03.24	Concept Design	APr HCo

Urban Forest Tree Planting Showgate Reserve

Shading Study - Winter - Morning

Design	HCo	Scale	Date
Drawn	APr	1:1200 @ A1	05.03.2024
Check	GRo	1:2400 @ A3	

Concept Design

DRAWING NO. BM230857_402

REVISION A

Printed 5/03/2024 7:28:47 PM

U:\2023\BM230857_HCo_Urban_Forest_Tree_Planting_Assessment\CAD\Revit\BM230857_ShowgateReserve.rvt

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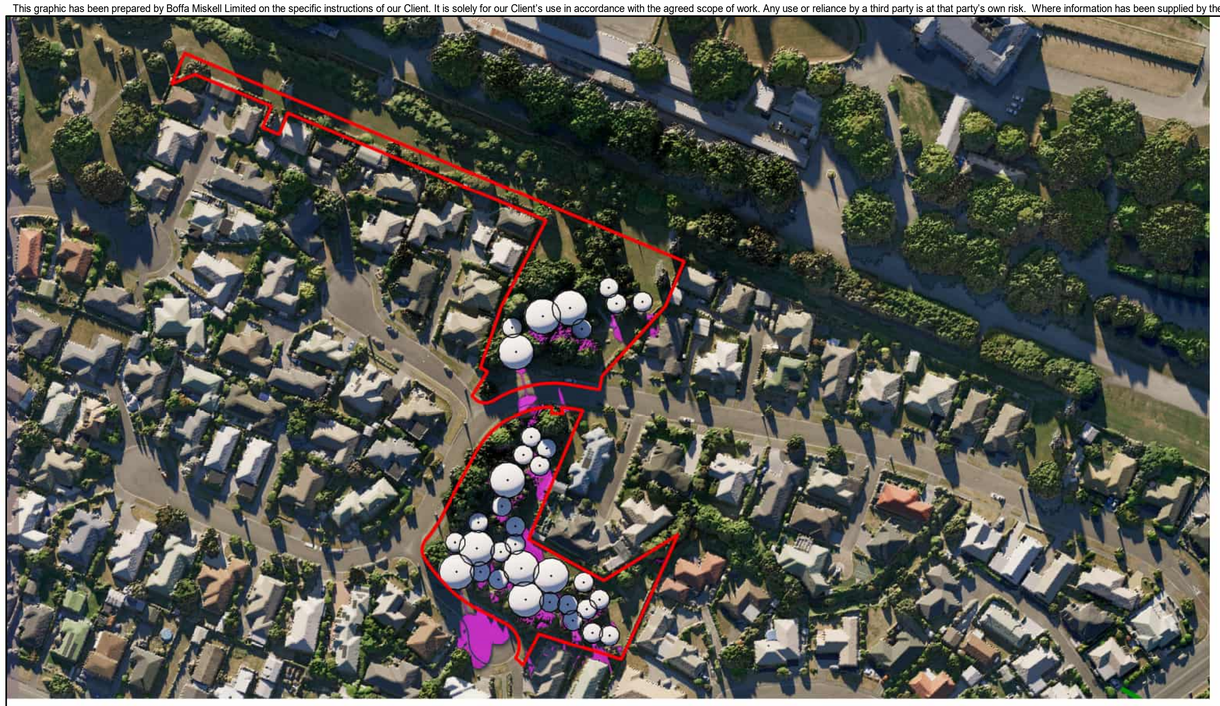
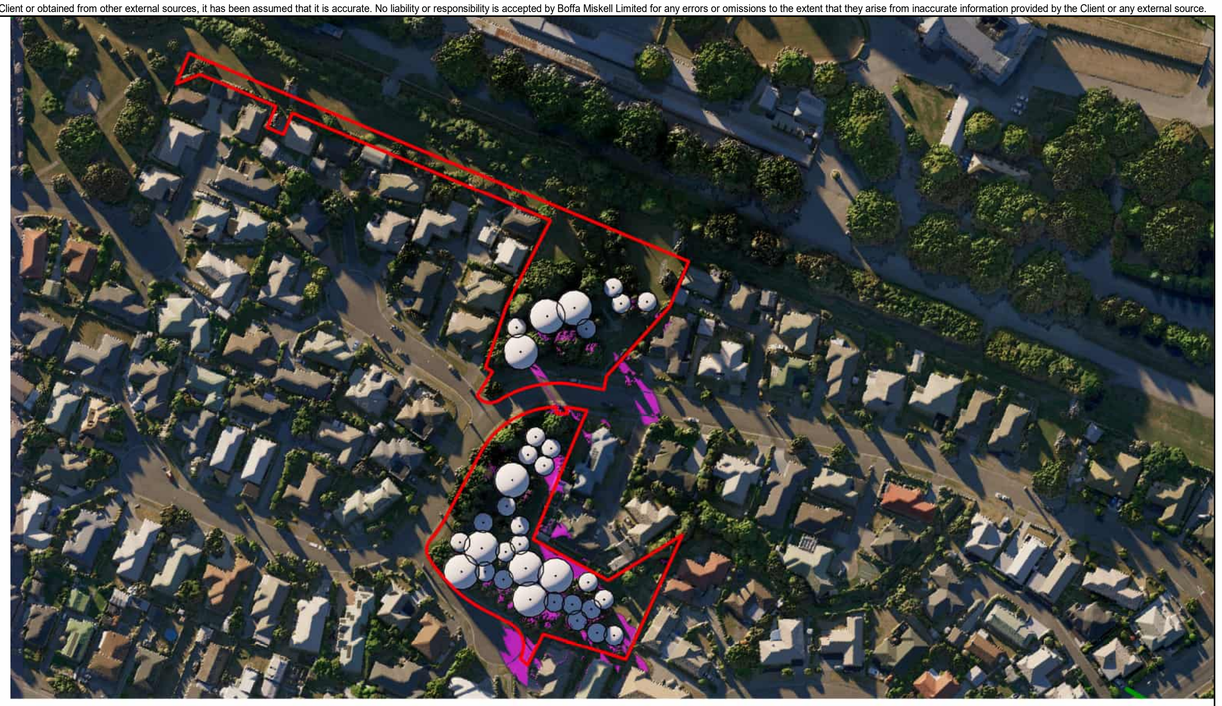


1 Winter - 1:30pm
Scale: 1 : 1200



2 Winter - 3:00pm
Scale: 1 : 1200

3 Winter - 4:30pm
Scale: 1 : 1200

4 Winter - 6:00pm
Scale: 1 : 1200

ORIGINAL IN COLOUR

Boffa Miskell

LEGEND
- Proposed Shading
- Existing Shading

0 m 12 m 24 m 48 m

REV	DATE	DESCRIPTION	
A	05.03.24	Concept Design	APr HCo

Urban Forest Tree Planting Showgate Reserve

Shading Study - Winter - Afternoon

Design	HCo	Scale	Date
Drawn	APr	1:1200 @ A1	05.03.2024
Check	GRo	1:2400 @ A3	

Concept Design

DRAWING NO. BM230857_403

REVISION A

Printed 5/03/2024 7:28:49 PM

U:\2023\BM230857_HCo_Urban_Forest_Tree_Planting_Assessment\CAD\Revit\BM230857_ShowgateReserve.rvt

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Existing Canopy Cover	-	2336.87 m²	25.9%	Canopy coverage to existing site
Proposed Canopy Coverage	-	2642.08 m²	29.3%	Proposed canopy coverage
Total Canoy Coverage	**-**	**4978.95 m²**	**55.2%**	**Total canopy coverage**

PLANTING SCHEDULE

Qty	Type	Tree Height
9	Medium Tree	Tree Height 10-15m
25	Small Tree	Tree Height 5-10m

0m 3m 6m 12m

REV	DATE	DESCRIPTION	APr
A	05.03.24	Concept Design	HCo

Urban Forest Tree Planting Showgate Reserve

Planting Plan

Design	HCo	Scale	Date
Drawn	ARo	1:300 @ A1	14.12.2023
Check	GRo	1:600 @ A3	

Concept Design

DRAWING NO. BM230857_500

REVISION A

Printed 5/03/2024 7:28:51 PM

U:\2023\BM230857_HCo_Urban_Forest_Tree_Planting_Assessment\CAD\Revit\BM230857_ShowgateReserve.rvt