## **Private Plan Change** Landscape & Visual Assessment for Private Plan Change to the Waimakariri District Plan: Graphic Supplement

Prepared for Summerset Villages (Rangiora) Ltd 02 December 2019



### Document Quality Assurance

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Prepared by:	Corey Murray Visualisation Specialist Boffa Miskell Hannah Wilson Graduate Landscape Planner Boffa Miskell	
Reviewed by:	Bron Faulkner Senior Principal Landscape Planner Boffa Miskell	
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# Private Plan Change



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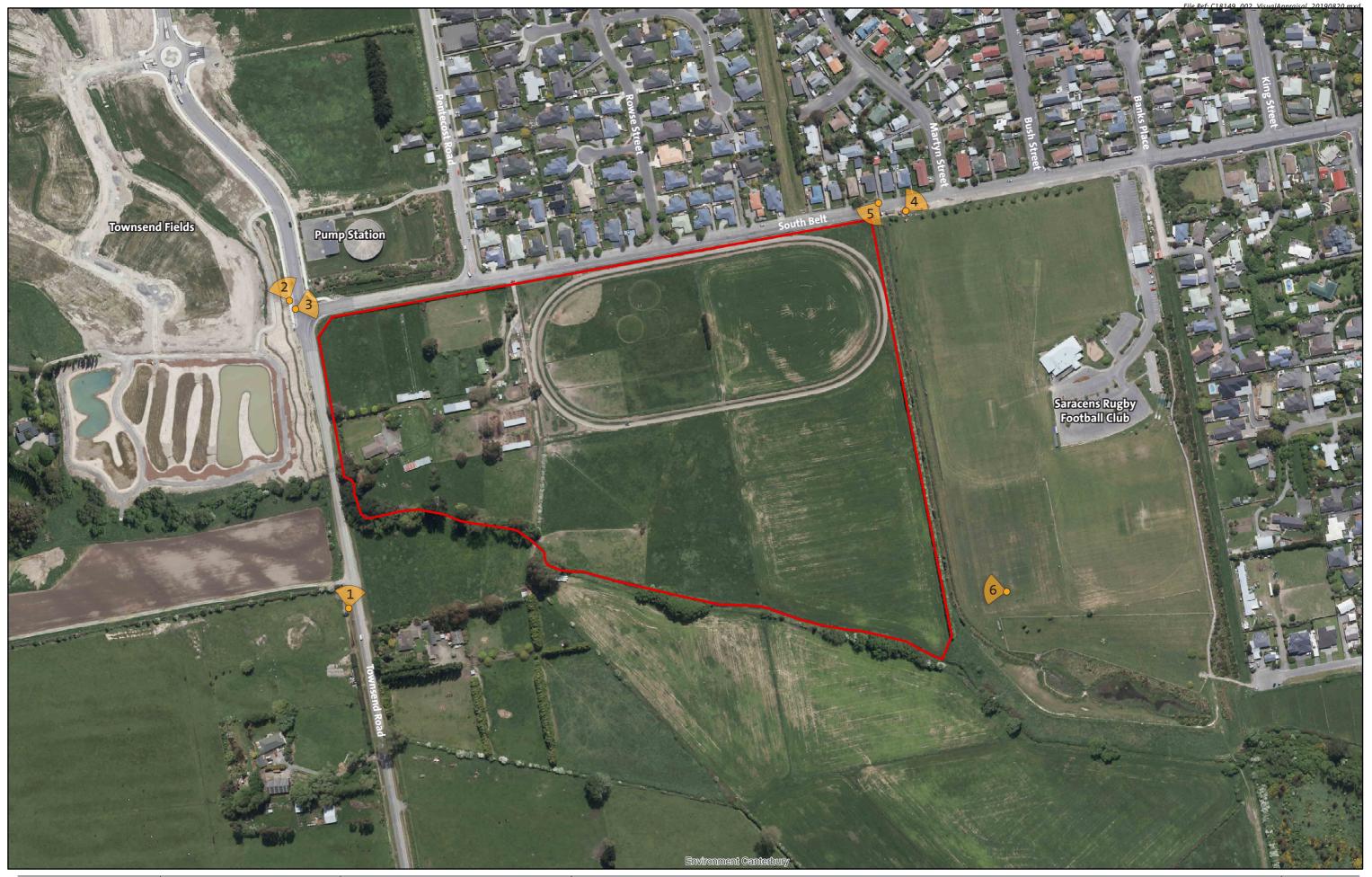
400 m

Site Boundary

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### PRIVATE PLAN CHANGE Site Location Plan

Figure 1 Page 1







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100 m

Site Boundary

Site Context Photograph Locations (1-8)

PRIVATE PLAN CHANGE Visual Appraisal Plan

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Site Context Photograph 1: View of Townsend Road looking north. The proposed site is out of view to the east.

Townsend Fields Development

New connection to Johns Road



Site Context Photograph 2: View looking north of the new Townsend Fields development and connection to Johns Road from South Belt.



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### PRIVATE PLAN CHANGE Site Context Photographs 1-2 Date: 02 December 2019 Revision: 2

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Site Context Photograph 3: View looking east from the intersection of Townsend Road and South Belt. The proposed site can be seen to the right of the image behind a hawthorn hedge.



Site Context Photograph 4: View looking north-east along South Belt demonstrating the character of the street.



### PRIVATE PLAN CHANGE Site Context Photographs 3-4 Date: 02 December 2019 Revision: 2

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Site Context Photograph 5: View of the north-eastern corner of the Proposed Site neighbouring the Saracens Rugby Football Grounds and a walkway.



Site Context Photograph 6: View along the eastern boundary of the Proposed Site from the Saracens Rugby Football Grounds.



### PRIVATE PLAN CHANGE Site Context Photographs 5-6 Date: 02 December 2019 Revision: 2

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100 m

Site Boundary

Visual Simulation Viewpoint

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**PRIVATE PLAN CHANGE** Visual Simulation Viewpoints

Figure 6 Page 6







NZTM Easting : 388 391 mE NZTM Northing : 829 798 mN Elevation/Eye Height :24.7m / 1.5m

Date of Photography : 1:32pm, 29 July2019 NZST

Data Sources:

Horizontal Field of View : 90° Vertical Field of View : 27° Projection : Rectilinear Image Reading Distance @ A3 is 20 cm

### Existing View

Baseline: Current zoning. Residential 4b zoning

PRIVATE PLAN CHANGE Viewpoint 1: Townsend Road Date: 02 December 2019 Revision: 2 Plan prepared for Summerset Villages (Rangiora) Ltd by Boffa Miskell Limited Project Manager: stephanie.styles@boffamiskell.co.nz | Drawn: CMu | Checked: BFa

Figure 7 Page 7



Scenario 1: proposed Residential 2 zoning –across whole site (modified ground levels as for retirement village scenario)



Scenario 2: proposed Residential 2 zoning -on northwest corner of site and retirement village on balance area



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Horizontal Field of View : 90 Vertical Field of View : 27° Projection : Rectilinear Image Reading Distance @ A3 is 20 cm

Data Sources:

PRIVATE PLAN CHANGE Viewpoint 1: Townsend Road Date: 02 December 2019 Revision: 2 Plan prepared for Summerset Villages (Rangiora) Ltd by Boffa Miskell Limited Project Manager: stephanie.styles@boffamiskell.co.nz | Drawn: CMu | Checked: BFa

Figure 8 Page 8







MP2K Easting : 388 469 mE MP2K Northing : 830 098 mN Elevation/Eye Height : 25.99m / 1.5m Date of Photography : 1:45pm, 29 July 2019 NZST

Data Sources:

Horizontal Field of View : 90° Vertical Field of View : 27° Projection : Rectilinear Image Reading Distance @ A3 is 20 cm

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Existing View

Baseline: Current zoning. Residential 4b zoning

PRIVATE PLAN CHANGE Viewpoint 2: Pentecost Road Date: 02 December 2019 Revision: 2

Figure 9 Page 9



Scenario 1: proposed Residential 2 zoning –across whole site (modified ground levels as for retirement village scenario)



Horizontal Field of View

Image Reading Distance @ A3 is 20 cm

Vertical Field of View

Projection

: 90°

: 27°

: Rectilinear

Scenario 2: proposed Residential 2 zoning -on northwest corner of site and retirement village on balance area



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Data Sources:

MP2K Easting

: 388 469 mE

Date of Photography : 1:45pm, 29 July 2019 NZST

MP2K Northing : 830 098 mN

Elevation/Eye Height : 25.99m / 1.5m

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PRIVATE PLAN CHANGE Viewpoint 2: Pentecost Road Date: 02 December 2019 Revision: 2 Plan prepared for Summerset Villages (Rangiora) Ltd by Boffa Miskell Limited

Figure 10 Page 10





Baseline : Current zoning. Residential 4b zoning



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NZTM Easting : 388 668 mE NZTM Northing : 830 135 mN Elevation/Eye Height : 24.98m / 1.5m Date of Photography : 1:55pm, 29 July 2019 NZST

Data Sources:

Horizontal Field of View : 90° Vertical Field of View : 27° Projection : Rectilinear Image Reading Distance @ A3 is 20 cm

PRIVATE PLAN CHANGE Viewpoint 3: Corner of Rowse Street and Southbelt Road Date: 02 December 2019 Revision: 2 Plan prepared for Summerset Villages (Rangiora) Ltd by Boffa Miskell Limited

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Existing View

Figure 11 Page 11



Scenario 1: proposed Residential 2 zoning –across whole site (modified ground levels as for retirement village scenario)



Scenario 2: proposed Residential 2 zoning –on northwest corner of site and retirement village on balance area



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NZTM Easting : 388 668 mE NZTM Northing : 830 135 mN Elevation/Eye Height : 24.98m / 1.5m Date of Photography :1:55pm, 29 July 2019 NZST

Data Sources:

Horizontal Field of View : 90° Vertical Field of View : 27° Projection : Rectilinear Image Reading Distance @ A3 is 20 cm

PRIVATE PLAN CHANGE Viewpoint 3: Corner of Rowse Street and Southbelt Road Date: 02 December 2019 Revision: 2 Plan prepared for Summerset Villages (Rangiora) Ltd by Boffa Miskell Limited

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Figure 12 Page 12







NZTM Easting : 389 009 mE NZTM Northing : 829 982 mN Elevation/Eye Height : 22.62m / 1.5m Date of Photography : 2:13pm, 29 July 2019 NZST

Data Sources:

Horizontal Field of View : 90° Vertical Field of View : 27° Projection : Rectilinear Image Reading Distance @ A3 is 20 cm

Existing View

Baseline : Current zoning. Residential 4b zoning

PRIVATE PLAN CHANGE Viewpoint 4: Southbrook Park Date: 02 December 2019 Revision: 2 Plan prepared for Summerset Villages (Rangiora) Ltd by Boffa Miskell Limited Project Manager: stephanie.styles@boffamiskell.co.nz | Drawn: CMu | Checked: BFa

Figure 13 Page 13



Scenario 1: proposed Residential 2 zoning –across whole site (modified ground levels as for retirement village scenario)



: 90°

: 27°

: Rectilinear

Scenario 2: proposed Residential 2 zoning -on northwest corner of site and retirement village on balance area



PRIVATE PLAN CHANGE Viewpoint 4: Southbrook Park Date: 02 December 2019 Revision: 2 Plan prepared for Summerset Villages (Rangiora) Ltd by Boffa Miskell Limited Project Manager: stephanie.styles@boffamiskell.co.nz | Drawn: CMu | Checked: BFa

Figure 14 Page 14



Summerset Retirement Village - Casebrook, Cavendish Road, Christchurch



Village main entrance - Casebrook, Cavendish Road, Christchurch



Summerset Retirement Village - Avonhead, Hawthornden Road, Christchurch



Summerset Retirement Village - Avonhead, Hawthornden Road, Christchurch

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### PRIVATE PLAN CHANGE

Summerset Village Built Examples

Figure 15 Page 15

### VISUAL SIMULATIONS - METHODOLOGY

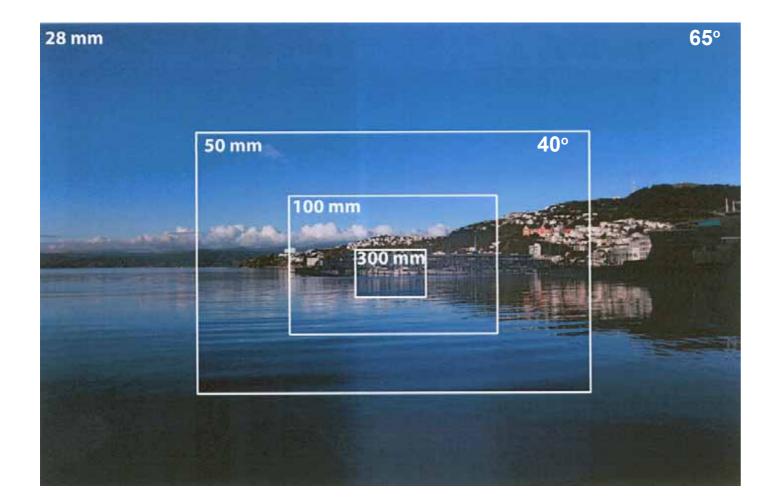
### SITE VISIT & PHOTOGRAPHY

Site photographs were taken with a Canon digital SLR camera fitted with a 28mm focal length lens, mounted on a tripod and panoramic head. A series of photos were taken at predetermined viewpoints, situated on public land. The horizontal location of each viewpoint was fixed by hand held GPS and then verified on high resolution aerial photography. The verified location was then cross-referenced with Light Detection and Ranging (LiDAR) data to determine viewpoint elevation.

### 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 of different focal lengths capture images with differing fields of view. To understand how illusions are created by different lens sizes, one must understand depth of field and how "Focal Length" and "Field of View" are related. As can be seen below (derived from Fig 9 of the NZILA BPG), a photo taken with a 28mm lens will provide a horizontal field of view of 65°. In this case, a series of 6 overlapping 28mm photos (taken in Portrait orientation) were merged to create a 90° panoramic image using specialised photo stitching software.



### MODELLING

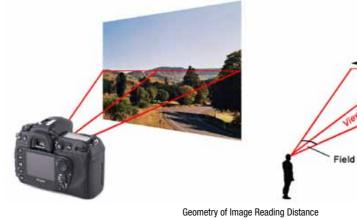
To create the various scenarios, subdivision layouts and building footprints were drafted in Computer Aided Design software and imported into 3D Modelling software. House models were then overlaid on to each building footprint. Elevations were given to each house models based on the levels at the center of the building footprint, using existing ground surface for the Baseline Scenario and proposed ground surface for Scenarios 1 and 2.

### 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.

### RECOMMENDED IMAGE READING DISTANCE

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.





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nage Width (in cm

Field of View (FoV) (in degrees)



### PRIVATE PLAN CHANGE Visual Simulation Methodology Date: 2 December 2019 Revision: 2

Figure 16 Page 16

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Dunedin 03 470 0460