D

APPENDIX D

F Boffa Response

DRAFT

Wellington International Airport

Visual Effects of Designation Outcomes

Response to Request for Further Information

Prepared for Wellington International Airport Ltd

by Frank Boffa in Association with Boffa Miskell Ltd

October 2020

Section 42 Request for Further Information – Visual

1. Background

1.1 The following report and accompanying visual simulations have been prepared in response to a Wellington City Council (WCC) Section 42 Request dated 17 July 2020.

2. Item 8 – Additional Visual Simulations

The Council's landscape adviser has requested additional viewpoints for visual simulations. These are:

- From Strathmore Heights e.g., Kekerenga St near No. 24.
- From the Airport (Rydges) hotel upper floors.
- From the remaining golf course.
- From Stewart Duff Drive (approximately 190m from the Moa Point Road intersection) to demonstrate the visual impact of removing the small hill.
- Night views to demonstrate effect of lighting.

2.1 Strathmore Heights Streets

As noted in the original assessment there are few publicly accessible locations in the Strathmore area from where the visual effects of the Proposed Designation would be visible. A further inspection of the area confirms that while some partial views from within residential properties, including in the vicinity of 24 Kekerenga Street, may be possible, from public locations there are few, if any, from where the visual effects will be significant or impact on the elevated views, due to the elevation of the area, intervening vegetation and residential buildings.

2.2 The conclusion expressed in the original assessment stated in paragraph 8.1 that -

> *From the Strathmore Heights area views are unlikely to be adversely affected or compromised as any airport modifications will occur within the foreground view which tends to be looked over rather than into. The extensive views residents of this area enjoy are unlikely to be adversely affected. Visual effects from this general area are likely to be moderate to low overall.*

Accordingly, further visual simulations are not considered necessary.

3. Upper Floors of Rydges Hotel

3.1 As the Rydges Hotel is owned by the Airport Company, visual simulations are therefore not considered to be necessary.

4. The Remaining Golf Course

4.1 From the balance of the golf course beyond the designation, some views will be possible, however due to the position and orientation of the remaining holes and the low level of the course it is unlikely that views will be adversely affected. Existing contouring and planting also assists in screening views to activities and structures within the designation area from the remainder of the golf course in general.

5. From Stewart Duff Drive

5.1 As requested a simulation has been prepared from Stewart Duff Drive (Viewpoint 9). While the request suggested a viewpoint approximately 190m from the Moa Point Road, a location some 150m from the intersection was selected as being more appropriate and representative. Simulation 9A shows the existing and proposed views based on a 90° field of view, with simulation 9B showing the same view as a single frame 40° view.

5.2 As is evident, the simulations from this location expose more of the airport activities and in particular the apron area. While the removal of the existing hillock makes the airport activities more apparent, in the context of the area and view overall, the view (while different) is likely to be seen as an enhancement, with more open and expansive views over the airport and the background Strathmore Heights area.

6. Night Views

6.1 The following representative viewpoints were selected for night simulations –

VP2	Bunker Way (Strathmore)
VP4	Willberforce Street (Seatoun Heights)
VP5	Maranui Surf Club (Lyall Bay)
VP10	Lyall Bay Beach (east)

Viewpoints 2, 4 and 5 were locations from where simulations were previously prepared. Viewpoint 10 is a new location situated on the beach in the vicinity of the Spruce Goose Café.

6.2 All the additional simulations have been prepared in accordance with the NZILA Best Practice Guidelines. In addition the following steps were taken –

- Night photography utilising a number of photographs of varying exposures and aperture settings were taken, and the image that best matched the "human observation" selected.
- A location plan plus IES Profiles (technical specifications) of the proposed LED floodlights and streetlights was provided by LDP Ltd (Electrical & Illumination Engineers).
- 3D Lightpole models (containing the IES profiles) were added to the existing 3D model of the airport; Generic lighting was also added to the terminal extension, using the existing terminal lighting as a guide.
- Each viewpoint scene was rendered and these were superimposed into the existing night photographs; the completed scenes were sent to LDP for review and comment.
- LDP confirmed that the scenes were a fair and reasonable representation of the potential effects of night lighting.

6.3 From the Bunker Way viewpoint which is a combination of two previous viewpoints namely, VP2B and 2C, a single frame 40° horizontal view has been produced. While the extent of this single frame view cuts off part of the outer edges of the view, it effectively covers the designation modifications that would be most visible. In the night simulation the terminal building extension is clearly visible, whereas the apron lighting tends to be less visible due in part to nature of the LED downlights. Notwithstanding the visibility of the terminal building extension from this viewpoint, the use of a more opaque or tinted glass on the façade facing the Strathmore residential area could likely potentially significantly reduce visual effects at night.

6.4 As noted in paragraph 8.3 of the original assessment, from the Bunker Way area in general, *"there will be no screening or blocking of views, particularly those more expansive views extending beyond the immediate foreground. Visual effects from this area are likely to be high to very high."* While the content and detail of the expansive views will largely be less apparent at night, the suggested mitigation in the form of more opaque or tinted glass on the eastern façade of the building would potentially reduce the visual impact of the structure at night.

6.5 From both Viewpoints 4 and 5, the night lighting of the terminal expansion relative to the existing apron area lighting in this area is less apparent, due largely to the use of LED lighting, which is becoming more prevalent than the traditional floodlighting. While the terminal and apron extension lighting will be visible, it will be less visible and obtrusive than the existing airport lighting overall. In terms of mitigation, the use of LED lighting throughout the apron area would contribute to a meaningful reduction in night light effects.

6.6 From the Lyall Bay viewpoint (VP10) in the vicinity of the Spruce Goose Café, the night light effects are clearly apparent, however, compared to the existing apron lighting which tends to be quite prominent, the effects of the extended area apron lighting using more targeted LED lighting would be reduced. In all the night simulations the use of targeted LED lighting significantly reduces the effects of the more traditional apron lighting.

6.7 In the context of reducing the visual effects of night lighting the following recommendations are made –

- Sometime before or at the time of implementing the terminal and apron expansions, the use of LED lighting be extended to include the area currently lit with the more traditional orange floodlighting.
- That the glass façade on the eastern side of the terminal expansion utilise a more tinted and/or opaque glass to reduce the potential night time effects on the Strathmore residential area and the Bunker Way area in particular.

7. <u>Item 9 – Master Plan Variations</u>

7.1 The information sought is more technical and relevant to site planning considerations rather than visual effects as such.

8. <u>Items 10 and 11 – Visual Effects of Cutting</u>

8.1 While the information sought is more of a technical nature and relative to more detailed engineering which at this time is not available.

8.2 Paragraphs 6.17 – 6.23 surface cover mitigation with specific reference to the high wall cut to the south-east. Of particular reference are paragraphs 6.21 and 6.22 which follow –

6.21 While the mitigation proposals have not at this stage been designed, images of how the retaining wall façade could be handled are shown in Figure 6. The concrete sculptured wall example uses images of a 14m retaining wall on the Peka Peka to MacKay's Expressway at Waikanae, and the colour panel example is an image of part of the façade of the new multi-storey carparking building at Wellington Airport. As previously noted, the illustrations shown, and the images depicted in the simulations are not specific designs for the surface treatment of the retaining wall, they are simply included at this stage to illustrate a possible approach that could be adopted and designed specifically for the retaining wall.

6.22 In visual terms, an outcome along the lines suggested would reduce the visual impact of the retaining wall. In addition, the inclusion of an expanded public walkway and viewing area, and more extensive mitigation planting would significantly enhance the buffer area, provide a meaningful public amenity, reduce the visual effects of the retaining wall and mitigate the overall effects of the proposed extension of the airport taxiway and aircraft operational area.

8.3 At this time and until further and more detailed investigations are carried out, it is not possible to expand on what is no more than a suggested approach to the mitigation of the visual effects of the high wall.

9. Item 12 – Contour and Property Lines

9.1 The incorporation of this material in the visual simulations and in particular VS 2-1B and VS 2-C is not feasible or indeed possible. The wall has been simulated in the correct location and to the heights provided by the engineers. Other than what is shown in Fig. 4 of the visual assessment, there is currently no additional material available to show more detail.

10. Item 13 – Grass and Hardstand Areas

10.1 These matters can be accommodated and incorporated in the visual simulations if there is any change to what is currently shown on the Master Plan. Should changes be made, they would have little or no effect on the Visual Effects Assessment overall.

Wellington International Airport

Additional Material
Visual Effects of Designation Outcomes
Prepared for Wellington International Airport Ltd

by Frank Boffa in association with Boffa Miskell Ltd
October 2020

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Visual Simulations

FIGURE 1: Viewpoint Location Map

VS 9A: View looking north from Stewart Duff Drive (Existing and Proposed Views)
VS 9B: View looking north from Stewart Duff Drive - Single 50mm Frame (Existing View)
VS 9C: View looking north from Stewart Duff Drive - Single 50mm Frame (Proposed View)

NIGHT SIMULATIONS

VS N2A: Day Views from Bunker Way, Strathmore (Existing and Proposed Views)
VS N2B: Night Views from Bunker Way, Strathmore (Existing and Proposed Views)

VS N4A: Day Views from Wilberforce St, Seatoun Heights (Existing and Proposed Views)
VS N4B: Night Views from Wilberforce St, Seatoun Heights (Existing and Proposed Views)

VS N5A: Day Views from Maranui Surf Club, Lyall Bay Parade (Existing and Proposed Views)
VS N5B: Night Views from Maranui Surf Club, Lyall Bay Parade (Existing and Proposed Views)

VS N10A: Day Views from Lyall Bay Beach East (Existing and Proposed Views)
VS N10B: Night Views from Lyall Bay Beach East (Existing and Proposed Views)

Viewpoints 9 & 10 are in addition to the original assessment (December 2019)
Viewpoints 2,4 & 5 have been prepared in response to the Council's Request for Further Information (July 2020)

File Ref: BM19495_VPs_A3L.mxd

VIEWPOINT LOCATIONS

VS10: Stewart Duff Drive

Boffa Miskell

www.boffamiskell.co.nz

0 250 m

1:10,000 @ A3

Data Sources: Boffa Miskell Limited, Wellington City Council (Imagery, 2017) Sourced from the LINZ Data Service and licensed for re-use

Projection: NZGD 2000 New Zealand Transverse Mercator

LEGEND

Viewpoint

East side Designation Area

WIAL - DESIGNATION OUTCOMES

Viewpoint Location Map

Date: 19 October 2020 | Revision: 0

Plan prepared for WIAL by Boffa Miskell Limited

Project Manager: pen.moore@boffamiskell.co.nz | Drawn: HHu | Checked: PMo

FIGURE

1

Extent of Single Frame View

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

NZTM Easting : 1 751 452 mE
NZTM Northing : 5 422 472 mN
Elevation/Eye Height : 6.5m / 1.7m
Date of Photography : 3:30pm 17 August 2020 NZST

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

Distance to existing Terminal: 670m

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WIAL - DESIGNATION OUTCOMES

View looking north from Stewart Duff Drive

Date: August 2020 | Revision: 0

Plan prepared for WIAL by Boffa Miskell Limited

Project Manager: pen.moore@boffamiskell.co.nz | Drawn: PMo | Checked: FBo

VS

9A

Existing View

Boffa Miskell

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Viewpoint Details

NZTM Easting	: 1 751 452 mE	Horizontal Field of View	: 40°
NZTM Northing	: 5 422 472 mN	Vertical Field of View	: 30°
Elevation/Eye Height	: 6.5m / 1.7m	Projection	: Rectilinear
Date of Photography	: 3:30pm 17 August 2020 NZST	Image Reading Distance @ A3 is 50 cm	

Distance to existing Terminal: 670m

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WIAL - DESIGNATION OUTCOMES

View looking north from Stewart Duff Drive - Single Frame

Date: August 2020 | Revision: 0

Plan prepared for WIAL by Boffa Miskell Limited

Project Manager: pen.moore@boffamiskell.co.nz | Drawn: PMo | Checked: FBo

VS

9B

Proposed View

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Viewpoint Details

NZTM Easting	: 1 751 452 mE
NZTM Northing	: 5 422 472 mN
Elevation/Eye Height	: 6.5m / 1.7m
Date of Photography	: 3:30pm 17 August 2020 NZST

Horizontal Field of View	: 40°
Vertical Field of View	: 30°
Projection	: Rectilinear
Image Reading Distance @ A3 is 50 cm	

Distance to existing Terminal: 670m

DRAFT

WIAL - DESIGNATION OUTCOMES

View looking north from Stewart Duff Drive - Single Frame

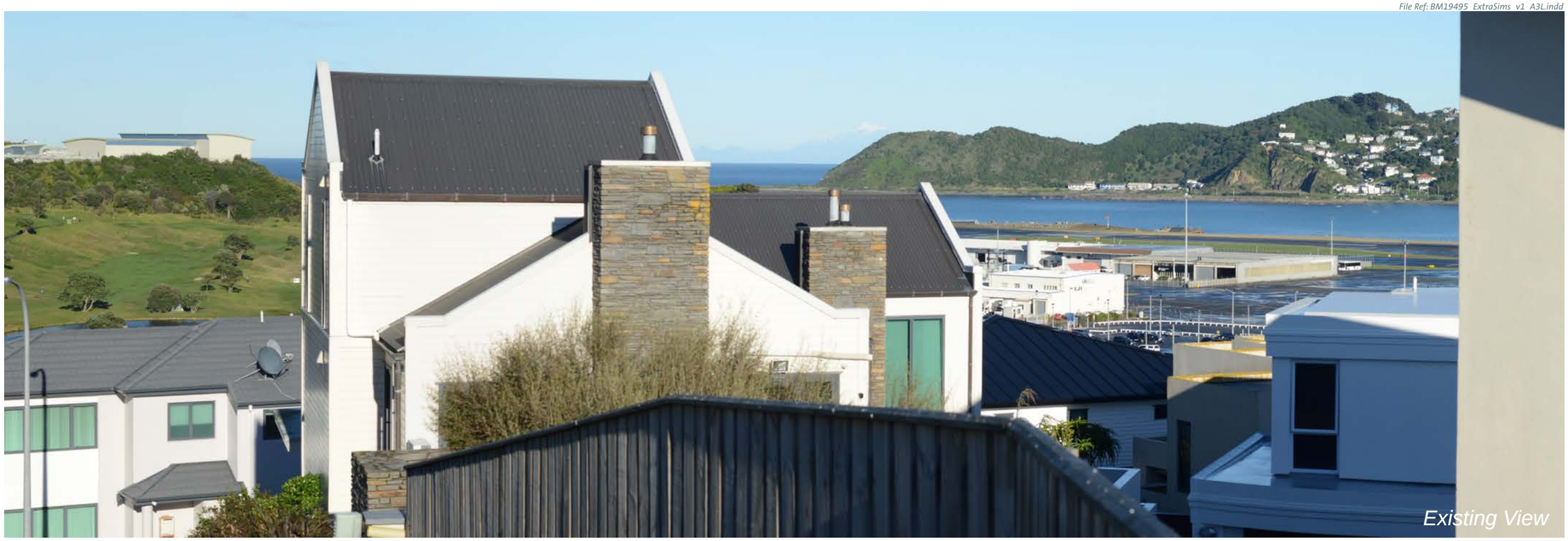
Date: August 2020 | Revision: 0

Plan prepared for WIAL by Boffa Miskell Limited

Project Manager: pen.moore@boffamiskell.co.nz | Drawn: PMo | Checked: FBo

VS

9C



Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

NZTM Easting : 1 752 019 mE
NZTM Northing : 5 423 027 mN
Elevation/Eye Height : 40m / 1.7m
Date of Photography : 9:35am 16 June 2019 NZST

Horizontal Field of View : 40°
Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance @ A3 is 50 cm

Distance to existing Terminal: 425m

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WIAL - DESIGNATION OUTCOMES

View from Bunker Way, Strathmore

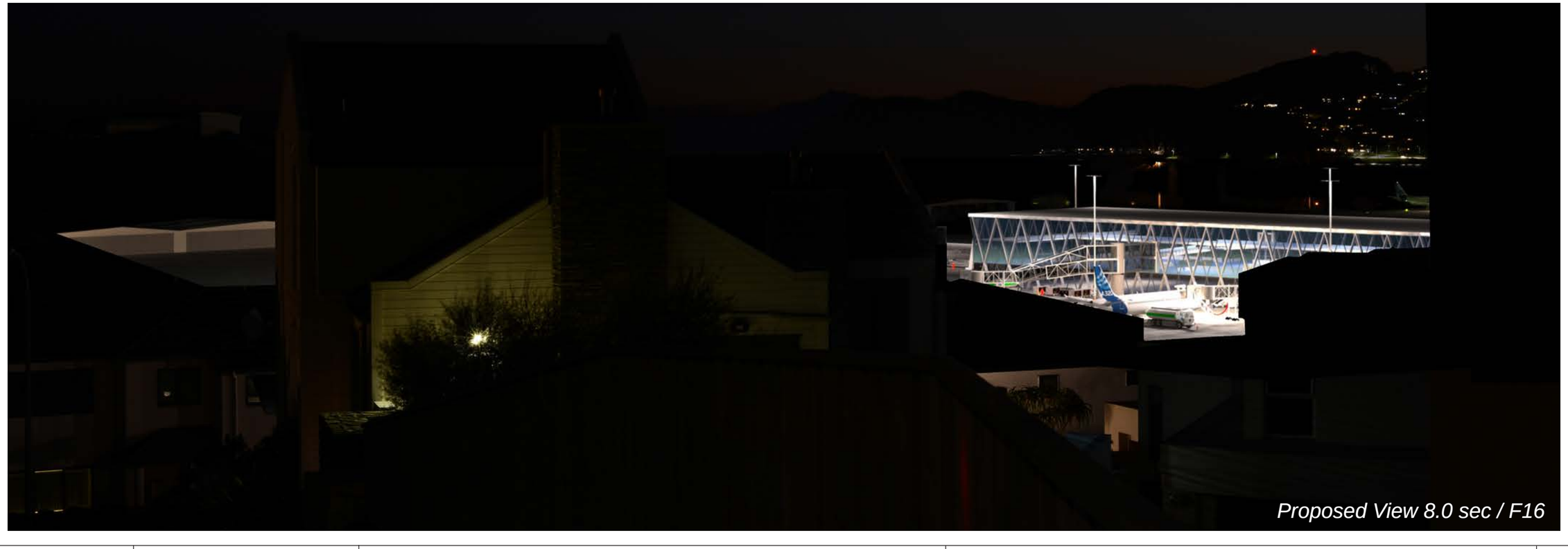
Date: August 2020 | Revision: 0

Plan prepared for WIAL by Boffa Miskell Limited

Project Manager: pen.moore@boffamiskell.co.nz | Drawn: PMo | Checked: FBo

VS

N2A



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Viewpoint Details

NZTM Easting : 1 752 019 mE
NZTM Northing : 5 423 027 mN
Elevation/Eye Height : 40m / 1.7m
Date of Photography : 7:15pm 20 Sept 2020 NZST

Horizontal Field of View : 40°
Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance @ A3 is 50 cm

Distance to existing Terminal: 425m

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WIAL - DESIGNATION OUTCOMES

View from Bunker Way, Strathmore

Date: August 2020 | Revision: 0

Plan prepared for WIAL by Boffa Miskell Limited

Project Manager: pen.moore@boffamiskell.co.nz | Drawn: PMo | Checked: FBo

VS

N2B

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Viewpoint Details

NZTM Easting : 1 752 522 mE
NZTM Northing : 5 424 081 mN
Elevation/Eye Height : 54m / 1.7m
Date of Photography : 10:10am 16 June 2019 NZST

Horizontal Field of View : 40°
Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance @ A3 is 50 cm

Distance to existing Terminal: 1325m

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WIAL - DESIGNATION OUTCOMES

View from Wilberforce St, Seatoun Heights

Date: August 2020 | Revision: 0

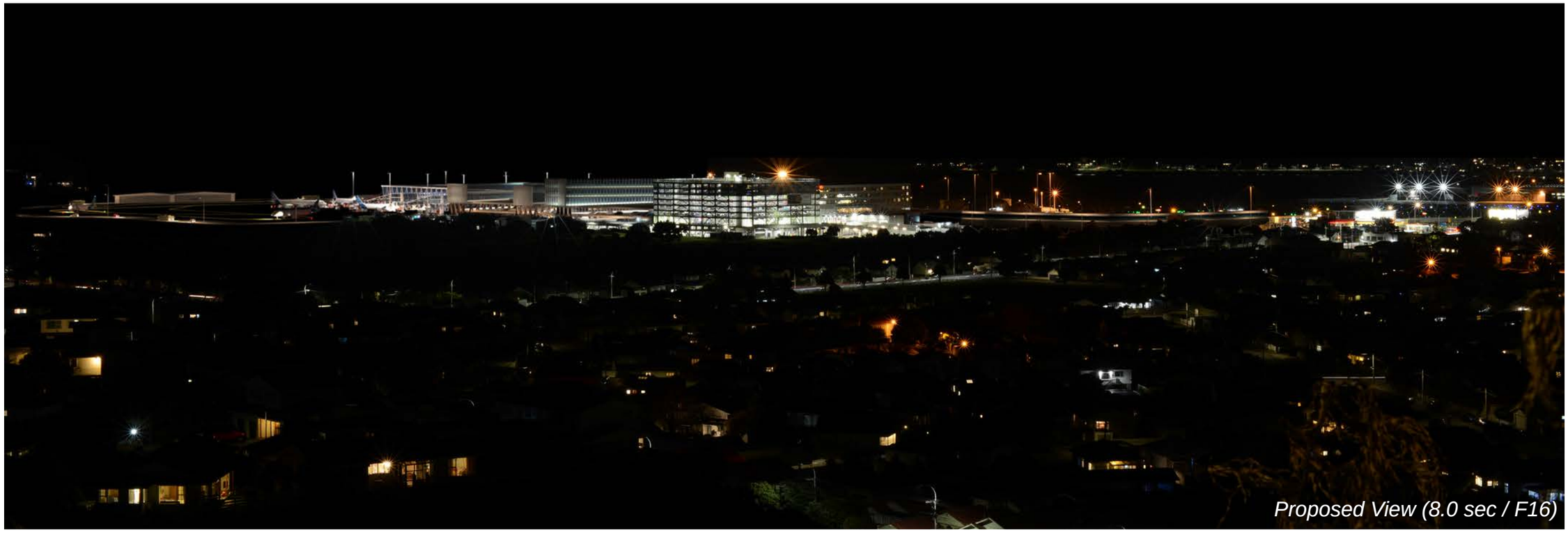
Plan prepared for WIAL by Boffa Miskell Limited

Project Manager: pen.moore@boffamiskell.co.nz | Drawn: PMo | Checked: FBo

VS

N4A

Existing View (8.0 sec / F16)



Proposed View (8.0 sec / F16)

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

NZTM Easting : 1 752 522 mE
NZTM Northing : 5 424 081 mN
Elevation/Eye Height : 54m / 1.7m
Date of Photography : 7:00pm 16 Sept 2020 NZST

Horizontal Field of View : 40°
Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance @ A3 is 50 cm

Distance to existing Terminal: 1325m

DRAFT

WIAL - DESIGNATION OUTCOMES

View from Wilberforce St, Seatoun Heights

Date: August 2020 | Revision: 0

Plan prepared for WIAL by Boffa Miskell Limited

Project Manager: pen.moore@boffamiskell.co.nz | Drawn: PMo | Checked: FBo

VS

N4B

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Viewpoint Details

NZTM Easting : 1 750 203 mE
NZTM Northing : 5 423 104 mN
Elevation/Eye Height : 3m / 1.7m
Date of Photography : 16 Sept 2020 NZST

Horizontal Field of View : 40°
Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance @ A3 is 50 cm

Distance to existing Terminal: 1400m

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WIAL - DESIGNATION OUTCOMES

View from Maranui Surf Club, Lyall Bay

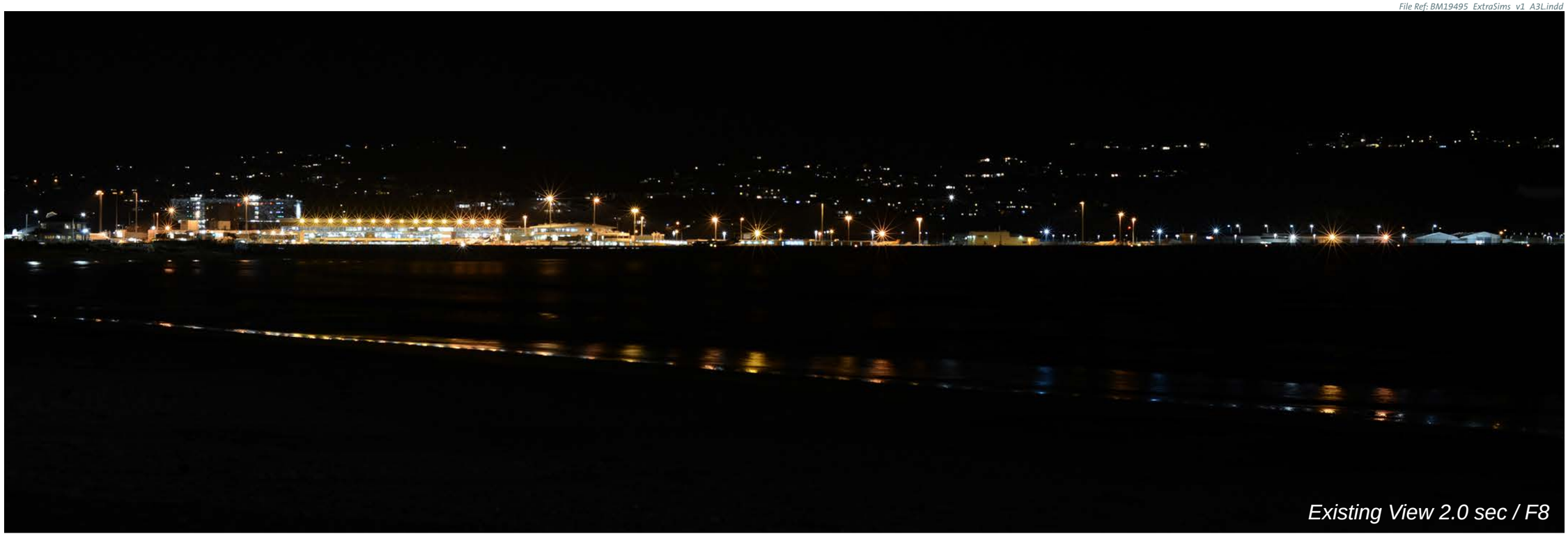
Date: August 2020 | Revision: 0

Plan prepared for WIAL by Boffa Miskell Limited

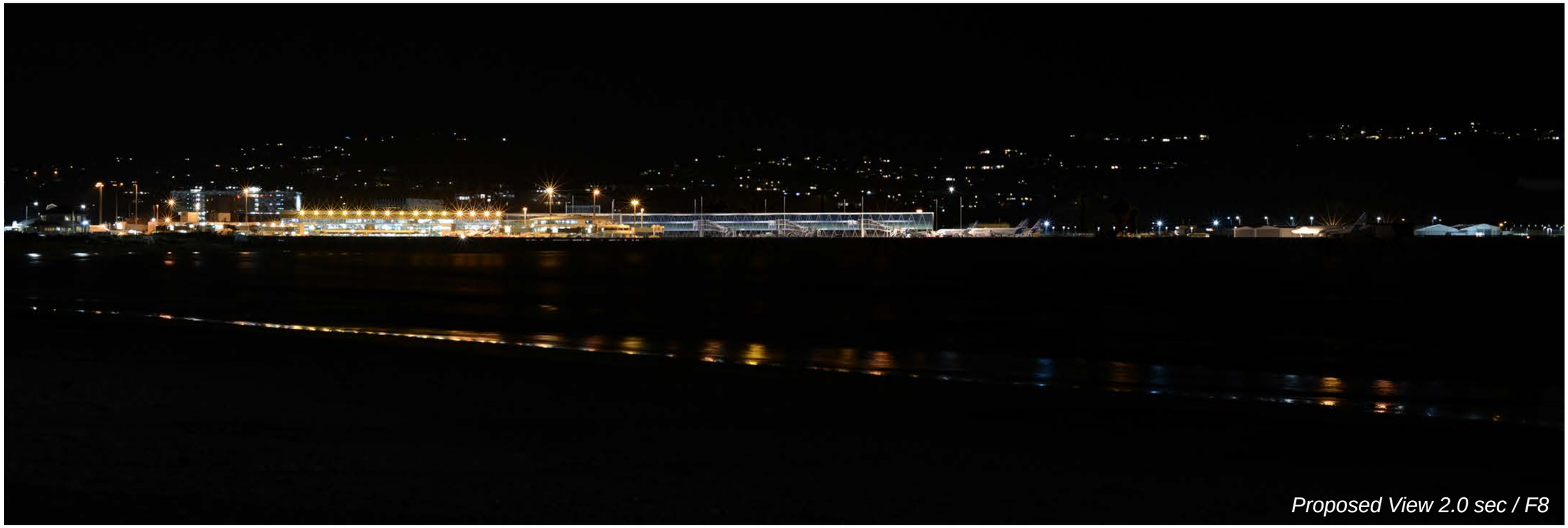
Project Manager: pen.moore@boffamiskell.co.nz | Drawn: PMo | Checked: FBo

VS

N5A



Existing View 2.0 sec / F8



Proposed View 2.0 sec / F8

Boffa Miskell

www.boffamiskell.co.nz

Viewpoint Details

NZTM Easting	: 1 750 203 mE	Horizontal Field of View	: 40°
NZTM Northing	: 5 423 104 mN	Vertical Field of View	: 30°
Elevation/Eye Height	: 3m / 1.7m	Projection	: Rectilinear
Date of Photography	: 7:20pm 16 Sept 2020 NZST	Image Reading Distance @ A3 is 50 cm	

Distance to existing Terminal: 1400m

DRAFT

WIAL - DESIGNATION OUTCOMES

View from Maranui Surf Club, Lyall Bay

Date: August 2020 | Revision: 0

Plan prepared for WIAL by Boffa Miskell Limited

Project Manager: pen.moore@boffamiskell.co.nz | Drawn: PMo | Checked: FBo

VS

N5B

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Viewpoint Details

NZTM Easting : 1 750 960 mE
NZTM Northing : 5 423 195 mN
Elevation/Eye Height : 2m / 1.7m
Date of Photography : 12:20pm 26 Sept 2020 NZST

Horizontal Field of View : 40°
Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance @ A3 is 50 cm

Distance to existing Terminal: 600m

DRAFT

WIAL - DESIGNATION OUTCOMES

View from Lyall Bay Beach East

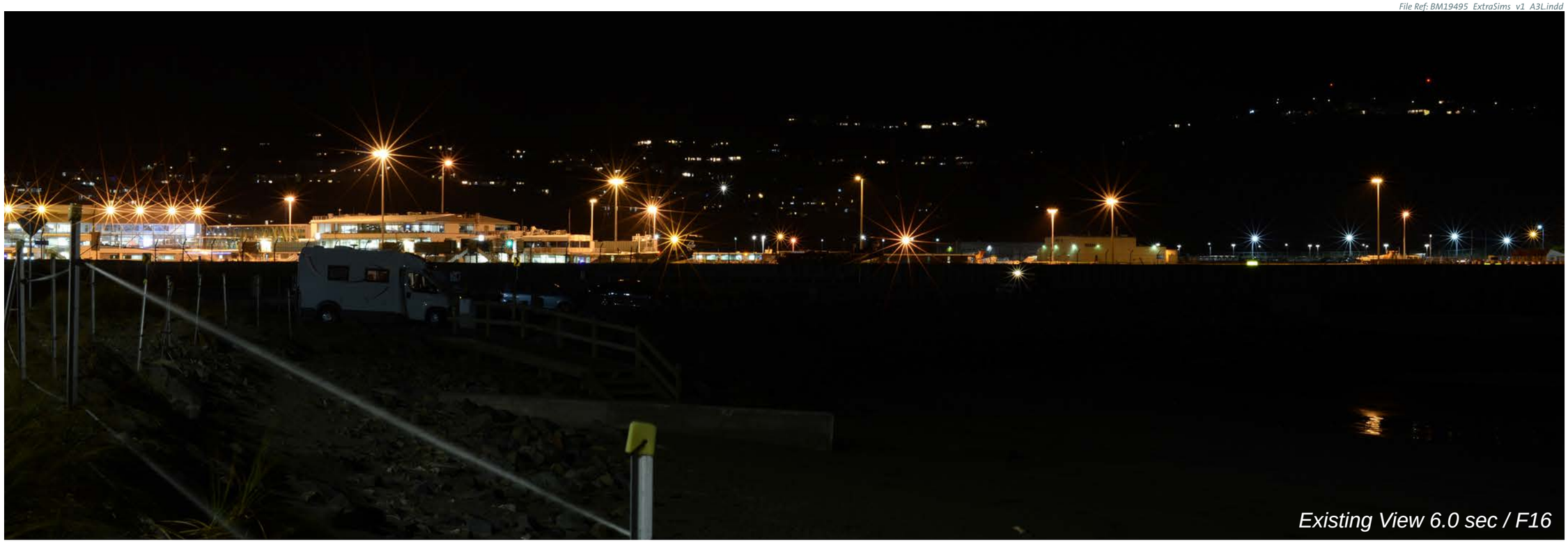
Date: August 2020 | Revision: 0

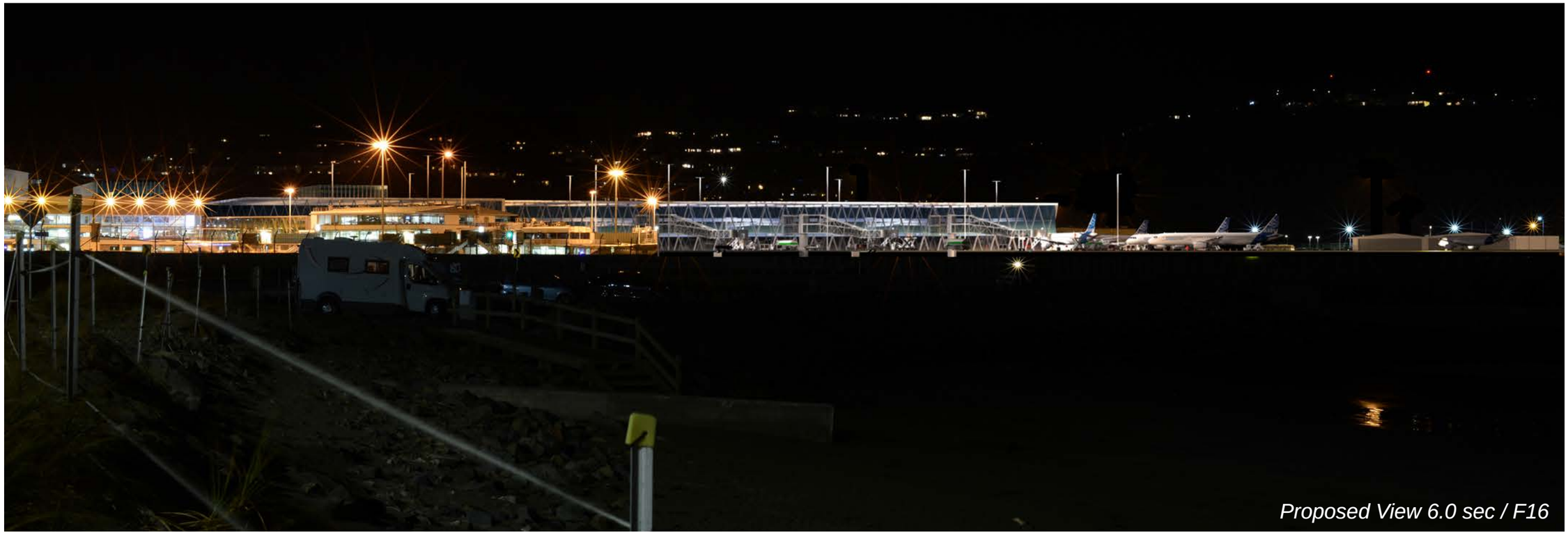
Plan prepared for WIAL by Boffa Miskell Limited

Project Manager: pen.moore@boffamiskell.co.nz | Drawn: PMo | Checked: FBo

VS

N10A





Boffa Miskell

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Viewpoint Details

NZTM Easting : 1 750 960 mE
NZTM Northing : 5 423 195 mN
Elevation/Eye Height : 2m / 1.7m
Date of Photography : 7:15pm 16 Sept 2020 NZST

Horizontal Field of View : 40°
Vertical Field of View : 30°
Projection : Rectilinear
Image Reading Distance @ A3 is 50 cm

Distance to existing Terminal: 600m

DRAFT

WIAL - DESIGNATION OUTCOMES

View from Lyall Bay Beach East

Date: August 2020 | Revision: 0

Plan prepared for WIAL by Boffa Miskell Limited

Project Manager: pen.moore@boffamiskell.co.nz | Drawn: PMo | Checked: FBo

VS

N10B