

URBAN DESIGN AND LANDSCAPE ASSESSMENT

APPENDICES

LIST OF APPENDICES FOR ESA AND MAIN SITE

Note Appendices are relevant to both the Main Site NoR and the East Side Area Nor.

Appendix A

WIAL Designation Planning prepared by Warren and Mahoney 30 August 2018.

Appendix B

Figure 6 Viewport Location Map from *Wellington International Airport: Visual Effects of Designation Outcomes*, prepared by Frank Boffa in Association with Boffa Miskell Ltd, December 2019.

Appendix C

Figure 1 Viewport Location Map *Additional material* prepared by Frank Boffa in Association with Boffa Miskell Ltd, October 2020.

Appendix D

Urban Structure: Wellington East, RSDL 2021.

Appendix E

Street Map: Wellington, On the World Maps, April 2021.

Visual Simulations and Photographs



FIGURE 6: Viewpoint Location Map

FIGURE 7: Indicative Mitigation Proposal

- VS 1-1A: View looking west from Walkway, Kekerenga St - Panorama (Existing and Proposed Views)
- VS 1-1B: View looking northeast from Walkway, Kekerenga St - Single 50mm Frame (Existing View)
- VS 1-1C: View looking northeast from Walkway, Kekerenga St - Single 50mm Frame (Proposed View)

- VS 1-2A: View looking northeast from Walkway, Kekerenga St - Panorama (Existing and Proposed Views)
- VS 1-2B: View northeast from Walkway, Kekerenga St - Single 50mm Frame (Existing View)
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- VS 2-1A: View looking south from Bunker Way, Strathmore - Panorama (Existing and Proposed Views)
- VS 2-1B: View looking south from Bunker Way, Strathmore - Single 50mm Frame (Existing View)
- VS 2-1C: View looking south from Bunker Way, Strathmore - Single 50mm Frame (Proposed View)

- VS 2-2A: View looking west from Bunker Way, Strathmore - Panorama (Existing and Proposed Views)
- VS 2-2B: View looking west from Bunker Way, Strathmore - Single 50mm Frame (Existing View)
- VS 2-2C: View looking west from Bunker Way, Strathmore - Single 50mm Frame (Proposed View)

- VS 3A: View from Townsend Road, Strathmore - Panorama (Existing and Proposed Views)
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- VS 4A: View from Wilberforce St, Strathmore - Panorama (Existing and Proposed Views)
- VS 4B: View from Wilberforce St, Strathmore - Single 50mm Frame (Existing View)
- VS 4C: View from Wilberforce St, Strathmore - Single 50mm Frame (Proposed View)

- VS 5A: View from Maranui Surf Club, Lyall Bay - Panorama (Existing and Proposed Views)
- VS 5B: View from Maranui Surf Club, Lyall Bay - Single 50mm Frame (Existing View)
- VS 5C: View from Maranui Surf Club, Lyall Bay - Single 50mm Frame (Proposed View)

- VS 6A: View from Hornsey Road, Melrose - Panorama (Existing and Proposed Views)
- VS 6B: View from Hornsey Road, Melrose - Single 50mm Frame (Existing View)
- VS 6C: View from Hornsey Road, Melrose - Single 50mm Frame (Proposed View)

- VS 7A: View looking south from 17 Bunker Way - Level 2 Deck (Existing and Proposed Views)
- VS 7B: View looking north from 17 Bunker Way - Level 2 Deck (Existing and Proposed Views)
- VP 7C: Photograph looking west from Level 2 Lounge (Existing View)
- VS 7D: View looking north from 17 Bunker Way - Level 3 Single Bedroom (Existing and Proposed Views)
- VP 7E: Photograph looking south from Level 3 Double Bedroom (Existing View)

- VS 8A: View looking south from 50c Ruakawa St - Deck (Existing and Proposed Views)
- VS 8B: View looking north from 50c Ruakawa St - Deck (Existing and Proposed Views)



- VIEWPOINT LOCATIONS**
- VS1: Walkway, Kekerenga Street
 - VS2: Bunker Way
 - VS3: Townsend Road
 - VS4: Wilberforce Street
 - VS5: Maranui Surf Club
 - VS6: Hornsey Road
 - VS7: 17 Bunker Way
 - VS8: 50c Ruakawa St

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0 250 m
1:10,000 @ A3
Data Sources: Boffa Miskell Limited, Wellington City Council (Imagery, 2017)
Projection: NZGD 2000 New Zealand Transverse Mercator

LEGEND

- Viewpoint
- Existing Terminal
- East side Designation Area

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)

VIEWPOINT LOCATIONS

VS10: Stewart Duff Drive





WIAL Designation Planning

30TH AUGUST 2018



Prepared for

WIAL DESIGNATION PLANNING

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On behalf of Warren and Mahoney
Architects Limited

Disclaimer

While Warren and Mahoney has endeavoured to summarise the Planning process in this document and appendices, the report format cannot represent the broad range and depth of information captured on the Diagrams, Drawings and Schedules. Approval of the specific issues contained in this report does not discharge the obligation of the client team to review the drawings and specifications in their entirety.

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WIAL DESIGNATION PLANNING

INTRODUCTION



Executive Summary

Wellington International Airport Limited are looking toward the future requirements of travel growth and passenger numbers increases. Growth numbers in the period towards 2037 indicate new requirements for built infrastructure including terminal expansions, passenger servicing, car parking, commercial and operational needs.

This report considers scenarios for urban trends and the changing needs of aviation at the airport and in the context of the Wellington City District Plan. The analysis reviews the relationship of central airport land development requirements in relation to suburban areas, green spaces and proximity of neighbouring housing and light commercial spaces.

Analysis is provided to assist in determining optimal urban design solutions which acknowledge requirements of the airport and airports neighbours. Typically this is with regard to the potential for building massing, building heights, architectural form and considers both visual and physical connections of the surrounding suburbs, recreation spaces, residential areas and commercial imperatives.

The methodology tests alternative development approaches to support the designation and the changing airport needs. Primarily this report focuses on the central airport buildings zone adjacent to the main terminal (WCDP airport precinct terminal area) and has been undertaken in the context of planning for an updated masterplan.

Potential outcomes are described which consider urban design principles to determine high and low massing of built form in relation to central airport function and connection to suburban scale growth. The options described by this report demonstrate a range of outcomes to provide for the expected future WIAL needs whilst also responding to the unique Wellington context.

The recommended approach looks to reorganise the buildable volume permitted under the existing approach whilst not increasing the overall allowable buildable volume. The result is a proposed approach that responds to desirable urban design site and operational needs.

1.0 Airport Hub Precedents



WIAL MASTERPLANNING

INTERNATIONAL PRECEDENTS



Amsterdam Schiphol Airport / Zuidas

Schiphol Airport is one of the hubs of international air travel and transport and one of the key drivers of the Dutch economy. The airport has the potential to expand its own air and ground activity around it and to provide an environment that attracts other businesses and leisure uses.

Qualities that are relevant to Wellington Airport are:

- Centralised development to create an economic hub attached to the Airport.
- In close proximity to surrounding community and amenity.





Western Sydney Airport

The group has proposed a mixed-use \$8 billion development, masterplanned by Woods Bagot. The proposal also includes an international convention and exhibition, commercial areas for large multinational companies, an innovation and incubation centre for start-up companies, retail spaces and residential areas.

Qualities that are relevant to Wellington Airport are:

- Plan to establish strong transport connections
- Developing infrastructure and amenity to support up to 10 million PAX.



WIAL MASTERPLANNING

INTERNATIONAL PRECEDENTS



New Orleans Airport

“The expansion of the North Terminal Project will change the landscape for economic growth in our city and across the region. It will create over 13,000 direct construction jobs and open the door for our airport to compete for more direct flights and more affordable fares.”

Qualities that are relevant to Wellington Airport are:

- In 2017 reported 12 million PAX which is comparable to the forecast growth for Wellington Airport.
- Developing plans to integrate parking, offices and hotels facilities to support capacity and growth of the airport.



WIAL MASTERPLANNING

NATIONAL PRECEDENTS



Auckland Airport

“Our airport of the future will also be a thriving hub for travel and business, and it will continue to contribute to the socio-economic health of our surrounding communities, the region and the whole of New Zealand. Our airport of the future will ensure that Auckland Airport can continue to connect Auckland to New Zealand, and New Zealand to the world.”

Qualities that are relevant to Wellington Airport are:

- Developing coherent precincts to centralise growth in services, capacity and recreation.
- Investing in a main terminal which is central to surrounding development.



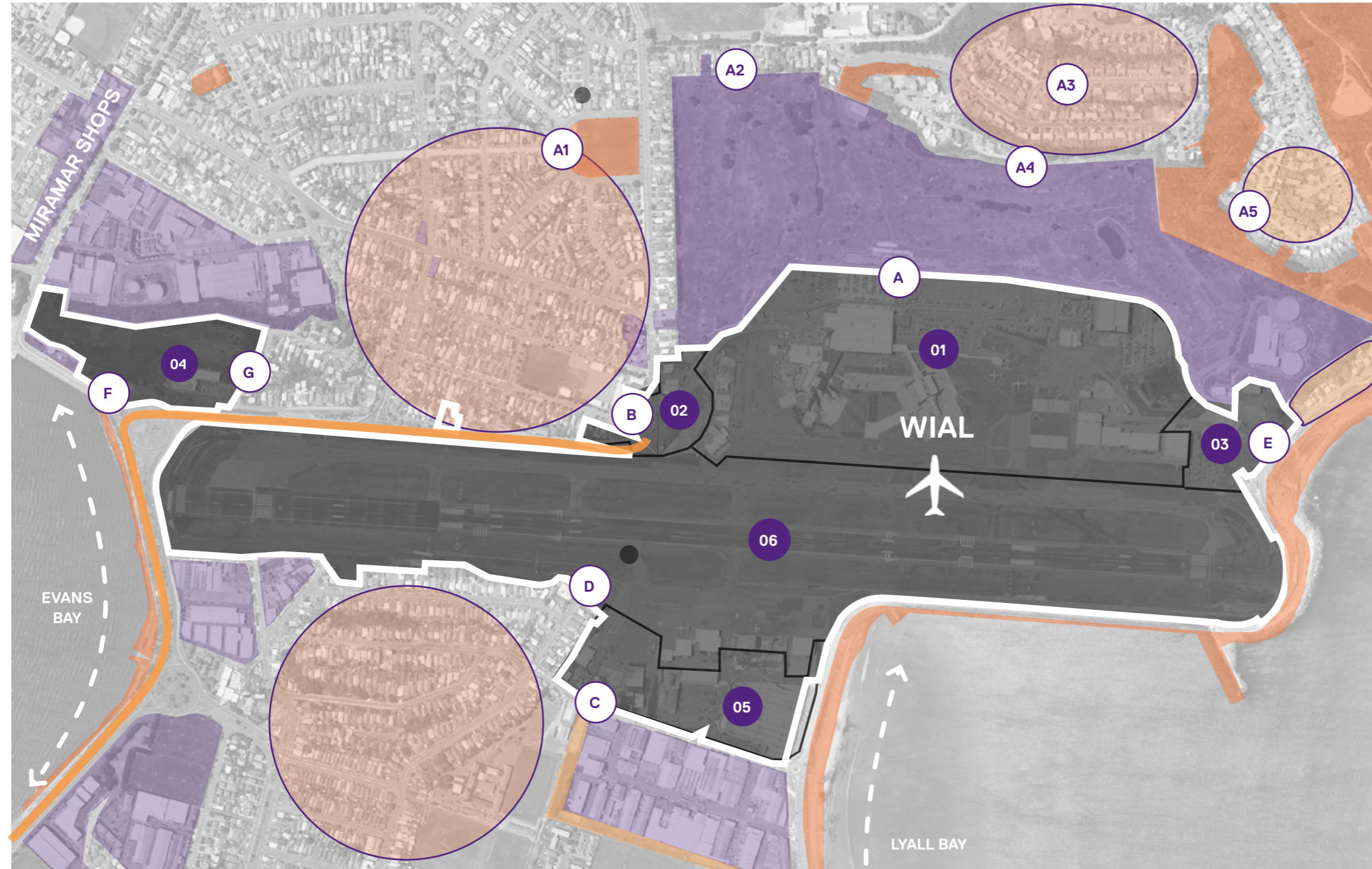
“The world’s top airports reflect the quality of life their cities offer. Airports are more than mere gateways to their cities, but integral to the experience of them.”

2.0 Wellington Airport Context



WIAL DESIGNATION PLANNING

DISTRICT PLAN DEVELOPMENT CONTEXT - AIRPORT PRECINCT



SIX DEFINED DEVELOPMENT AREAS

The Wellington Council District Plan (WCDP) permitted activity standards define development heights for the identified development areas. The characteristics and proposed building height for each area are detailed in section 4.0. Building height control is provided by the Airport's Obstacle Limitation Surfaces (OLS's) which is explained on page 12.

AIRPORT PRECINCT DEVELOPMENT AREAS

- | | |
|---------------------|-------------------|
| 01 Terminal Area | 04 Rongotai Ridge |
| 02 Broadway Area | 05 West Side |
| 03 South Coast Area | 06 Airside |

VISUAL ASSESSMENT LOCATIONS

- | | |
|-----------------|-----------------------------------|
| A Golf Course | E Stewart Duff Drive |
| B Broadway | F Cobham Drive |
| C Tirangi Road | G Wexford Road |
| D Coutts Street | Refer to Appendix for site images |

KEY

- | | |
|---------------------------------|--------------------|
| WIAL precinct (as per WCDP) | Park + recreation |
| Golf Course Recreation Precinct | Residential zones |
| Light commercial / Industrial | Transport corridor |

AIRPORT NEIGHBOURS

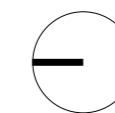
Wellington Airport is encompassed by residential dwellings, Miramar Links Golf Club and Lyall and Evans Bay. Residential areas and small suburban centre zones are located towards the north and east of the Airport main terminal zone. The Main transport corridor connects the city to the main Airport entrance.

LIGHT COMMERCIAL + RETAIL

Small commercial and retail hubs are dispersed around Wellington Airport offering a select range of services. The commercial and retail developments primarily cater to the surrounding community. These hubs have a potential to be developed with more connection to Wellington Airport to cater to wider range of people and services.

PARK + RECREATION

Public amenities of Lyall and Evans Bay, the surrounding hills with walking tracks and parks engage around and with the airport locality. These shared spaces offer vibrant and diverse activities in close proximity to Wellington Airport which is a unique quality.



SCALE BAR



WIAL DESIGNATION PLANNING

AVIATION AIR SPACE RESTRICTIONS - OLS

OBSTACLE LIMITATION SURFACE

The Obstacle limitation surface (OLS) imposes additional height restrictions in the vicinity of the airport in addition to the District Plan provisions. The OLS is in place to protect the airspace for the safe take off and landing of aircraft.

RUNWAY STRIP

Rectangular Area extending 60m beyond the ends of the runway and 150m on either side of the extended centreline.

The height is defined by the lowest level of the formed runway strip. West of the runway the ground slopes down significantly. Existing residential buildings along Bridge St are situated below the level of the runway.

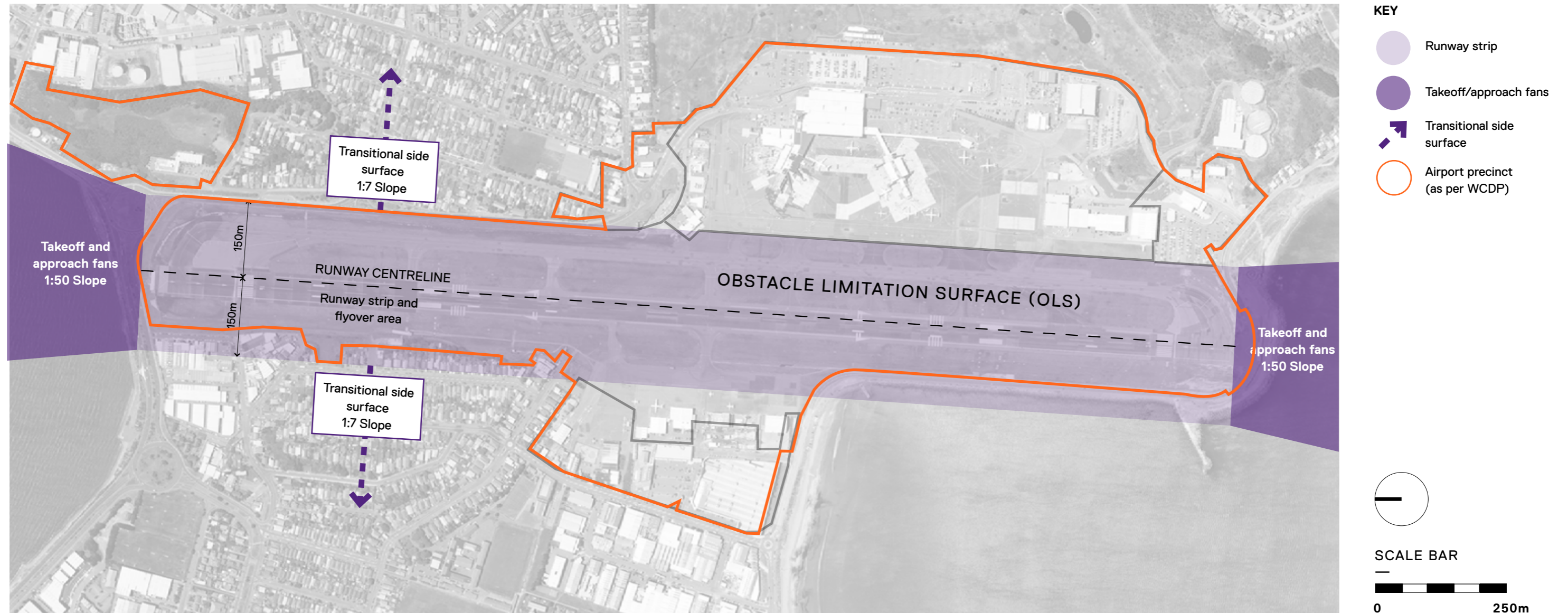
TAKEOFF AND APPROACH FANS

The fan rises from the ends of the runway and flyover area on a 1:50 slope.

There is no WIAL property or developable land covered by the takeoff and approach fans.

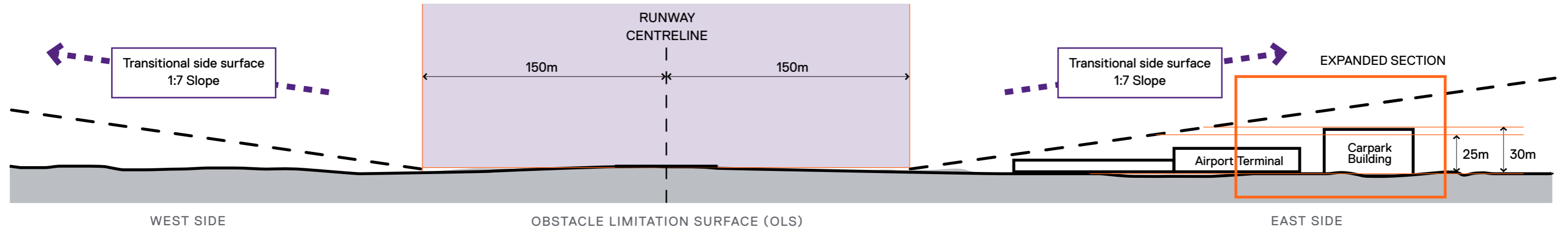
TRANSITIONAL SIDE SURFACE

The transitional surface rises at a gradient of 1 in 7 from the edge of the runway strip and flyover area. This surface covers almost all of the study area.

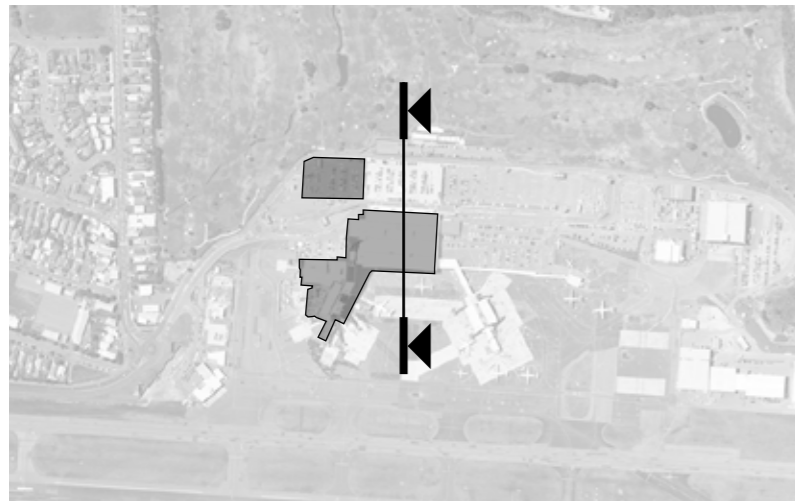


WIAL DESIGNATION PLANNING

TERMINAL AREA HEIGHT RESTRICTIONS - CURRENT WCDP AND OLS

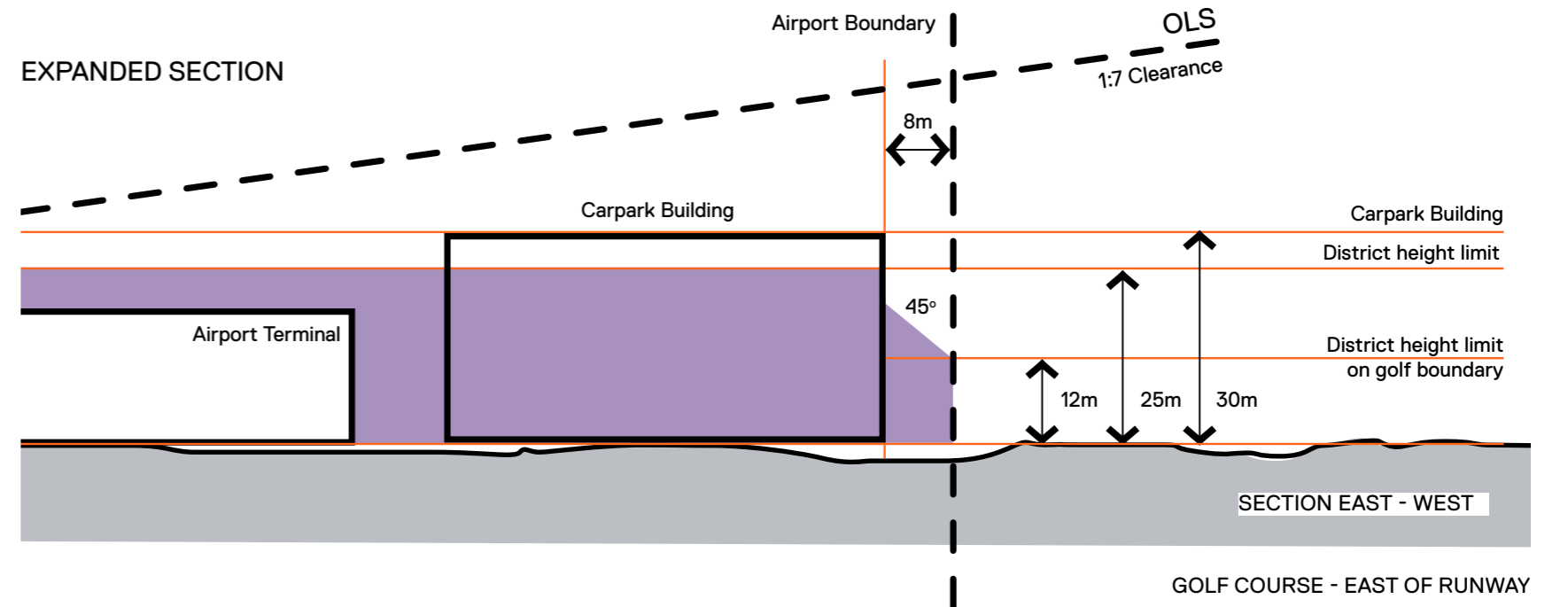


SECTION WEST - EAST



KEY

Buildable area
- Current



3.0 Urban Design Principles

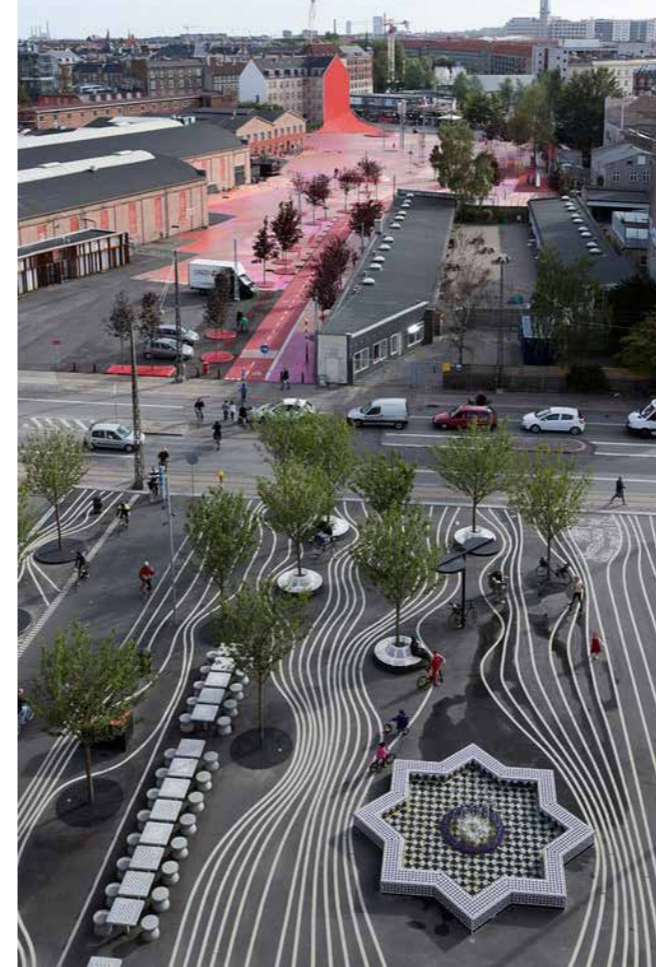


WIAL DESIGNATION PLANNING

GUIDING URBAN DESIGN PRINCIPLES

Urban design addresses form and function to enhance aesthetics, land use and resilience to create community and place. The following Urban design principles aided in the development and evaluation of designation solutions.

- 01 - Urban Structure
- 02 - Density + Mix
- 03 - Urban Grain
- 04 - Height + Massing
- 05 - Public Realm
- 06 - Streetscape + Landscape
- 07 - Facade + Interface
- 08 - Energy / Resource / Land Efficiency
- 09 - Details + Materials



01 - Urban Structure

Urban Structure refers to an identifiable, unified precinct with enhanced connections to surrounding neighbourhoods and networks. The urban structure must lay the foundation for a **safe and inclusive environment** that supports a high level of pedestrian activity and delivers a dynamic multi-layered precinct. The WIAL guidelines will reinforce the connections of the precinct to the surrounding context, establish strong north-south and east-west axis, redefine site entries, and create movement hierarchy for pedestrians, bicycles, and vehicles.



02 - Density + Mix

A rich layering of land uses will promote social diversity and create a **lively community to live, learn, and work**. A positive relationship between the public and private domain is established when façades are of a human scale, distances between key spaces are walkable, buildings are of a moderate mass, pathways connect different spaces and neighbourhoods and the quality of landscape softens perceptions.

WIAL DESIGNATION PLANNING

GUIDING URBAN DESIGN PRINCIPLES



03 - Urban Grain

Urban grain refers to the **overall pattern, block sizes and building pattern** within a city and describes the interrelationship between these elements. Key connections must be established.



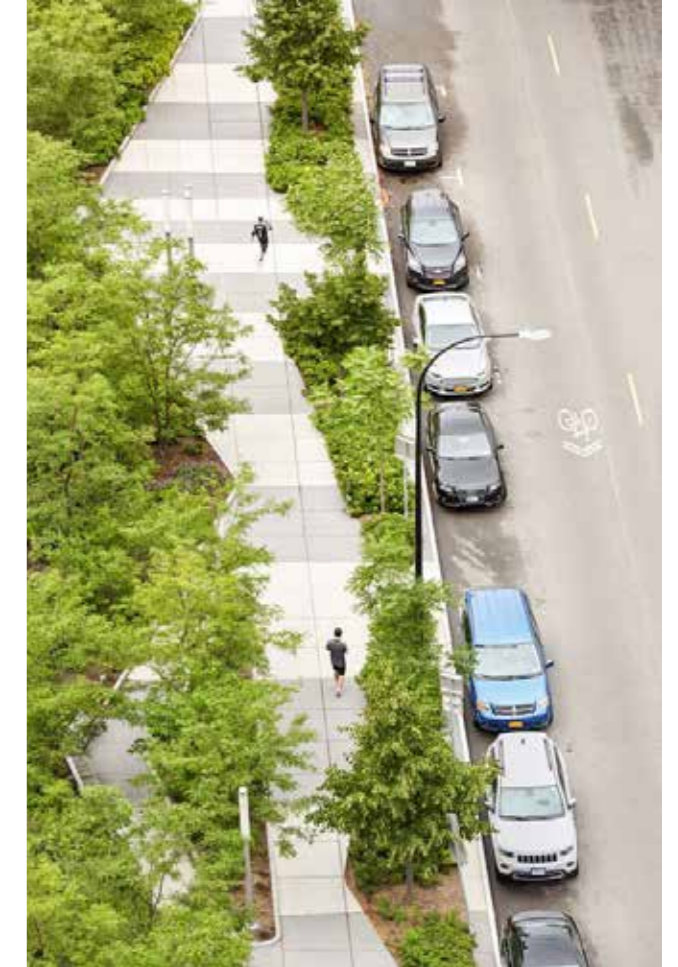
04 - Height + Massing

The Design must **not develop in isolation** but must be considered from a range of viewing points. Angles must take into consideration view sharing of neighbouring buildings and most importantly **reinforce the identity of the Airport** within its larger city context.



05 - Public Realm

The quality of the Public Realm is vital to creating an environment where people want to **visit, work and stay**. The Design must keep people in mind, connect people and places and facilitate **commerce and recreation**. Movement through the Public Realm should be easy, pleasurable, innovative, intuitive and create more accessible and enjoyable routes for all. Pedestrian streets will make the most of opportunities to refocus the street as space, create visual interest and amenity and most of all encourage social interaction.



06 - Streetscape + Landscape

Streetscape and landscape refers to the design of public spaces such as streets, open spaces and pathways and includes landscaping, microclimate, shading and planting. The streetscape and landscape needs to **communicate the Precinct as a whole**. The elements must create a distinctive place that retains its character when activity is absent and accommodates **all people in their diversity**.

WIAL DESIGNATION PLANNING

GUIDING URBAN DESIGN PRINCIPLES



07 - Façade + Interface

Façade and interface refers to the relationship of buildings to the site, street and neighbouring buildings and architectural expression of their facades.



08 - Energy / Resource / Land Efficiency

Energy, resource and land use efficiency is crucial and the design must demonstrate a World's Best Practice approach. The principal of long life, loose fit and low energy will drive all aspects of the design. The design must productively use the land, maximise daylight, and reduce the need for artificial lighting and heating by orientating the building towards the north. The Sustainability Guide defines principles and performance levels to achieve World's Best Practice sustainability for WIAL.



09 - Details + Materials

Details and materials refer to the close up appearance of objects and surfaces and selection of materials in terms of **detail, craftsmanship, texture, colour, durability, sustainability and treatment**. It contributes to human comfort, safety and enjoyment of the public and private realm.

WIAL DESIGNATION PLANNING

ANALYSIS - WELLINGTON AIRPORT

Carpark Development

Building with the 25 meter permitted activity height restriction for the multi-level carpark building carpark could have produced a standard concrete car parking block which is visually hard.

By allowing an extra 10 meters to the building height a better architectural output was achieved. The final design is Integrated into the site with a soft facade treatment, improving the visual quality of the site.



	URBAN PRINCIPLES	
✓	1. Urban Structure;	✓✓
✓	2. Density and Mix;	✓✓
✓	3. Urban Grain;	✓✓✓
✓	4. Height and Massing;	✓✓✓
✓	5. Public Realm;	✓✓✓
✓	6. Streetscape and Landscape;	✓✓
✓	7. Facade and Interface;	✓✓✓
✓	8. Energy and Resource Efficiency;	✓✓
✓	9. Details and Materials;	✓✓✓



Higher Development

A higher building height on the site could achieve a higher visual quality and permeability than adhering to the current height designation.

Building to the existing permitted activity height of 25 meters could form a visual wall which detracts from the site. A balanced increase in building height in this location would retain view shafts and allow a higher quality amenity on the site.



	URBAN PRINCIPLES	
✓	1. Urban Structure;	✓✓
✓	2. Density and Mix;	✓✓✓
✓	3. Urban Grain;	✓✓✓
✓	4. Height and Massing;	✓✓✓
✓	5. Public Realm;	✓✓✓
✓	6. Streetscape and Landscape;	✓✓
✓	7. Facade and Interface;	✓✓✓
✓	8. Energy and Resource Efficiency;	✓✓
✓	9. Details and Materials;	✓✓



“Quality urban design sees buildings, places and spaces not as isolated elements but as part of the whole town or city”

4.0 Designation Development

- Terminal Area



WIAL DESIGNATION PLANNING

TERMINAL AREA - CURRENT





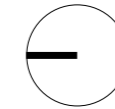
01 TERMINAL AREA

This area is bounded by the Miramar Golf Club which is largely an open space, except at the club facilities immediately to the east.

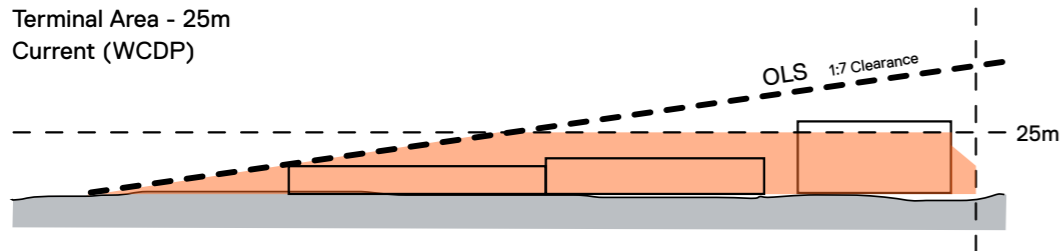
On the east boundary that is shared with the golf course there is a recession plane that restricts buildings within 8 metres from the boundary to have a maximum height of 12m. Beyond this setback, buildings related to the primary function of the airport can be up to 25m in height.

KEY

-  Airport precinct development areas
-  Buildable area - Current

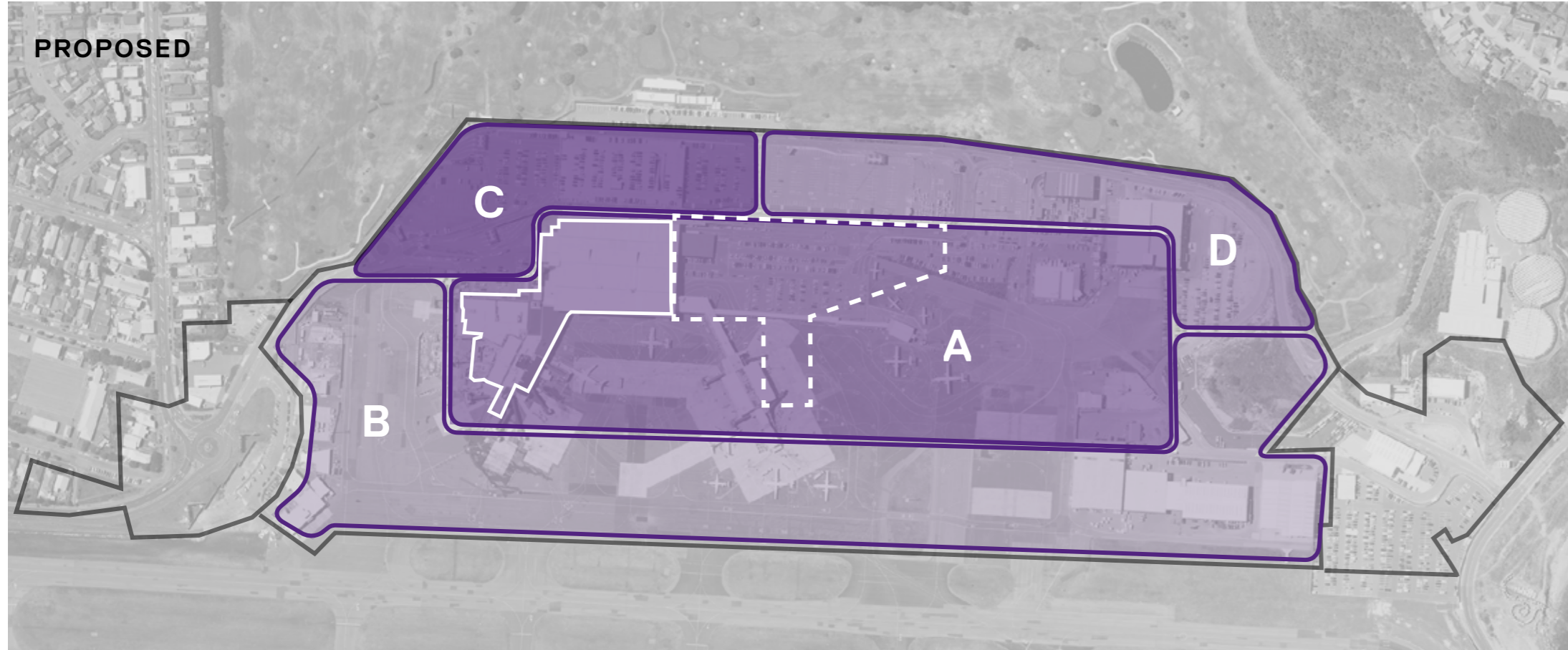


Terminal Area - 25m
Current (WCDP)



WIAL DESIGNATION PLANNING



TERMINAL AREA - PROPOSED SUB-AREAS

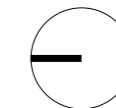


PROPOSED TERMINAL SUB-AREAS

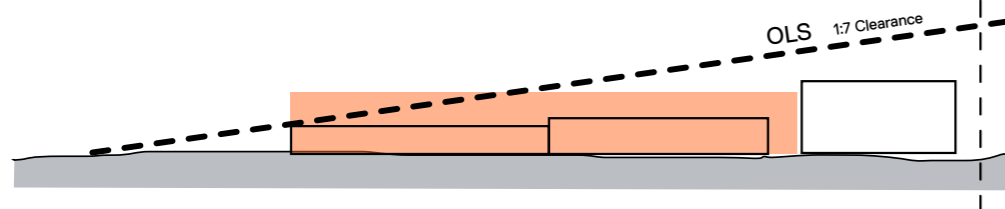
A refined scenario identifying higher density and lower density provides for future development opportunities based on urban design principles and the airports centralised operational requirements. This area is a centralised location to core airport business, and higher sub-areas are spatially located away from neighbouring precincts to provide appropriately scaled height transitions.

KEY

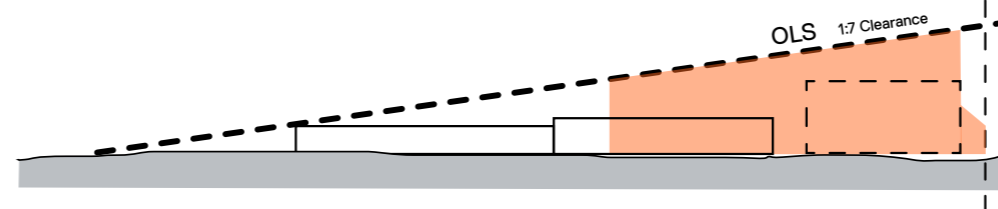
-  Terminal sub-areas - Proposed
-  Buildable area - Proposed



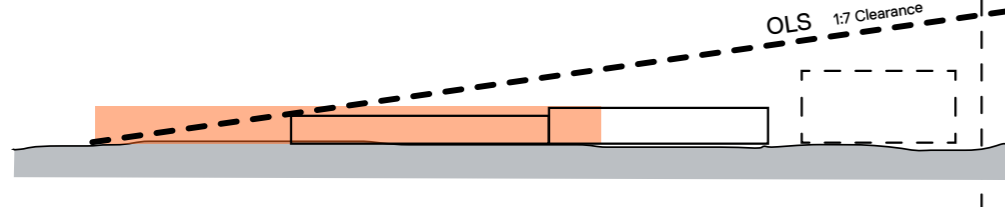
TERMINAL AREA A - 25m



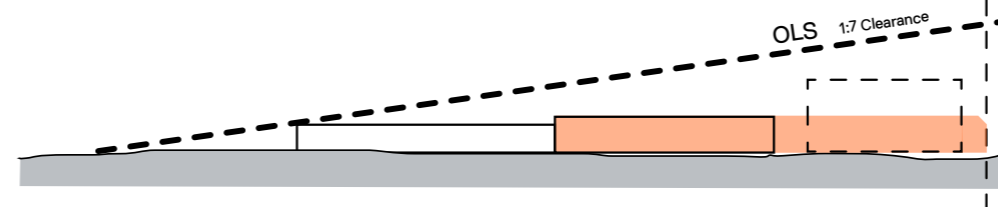
TERMINAL AREA C - OLS



TERMINAL AREA B - 15m

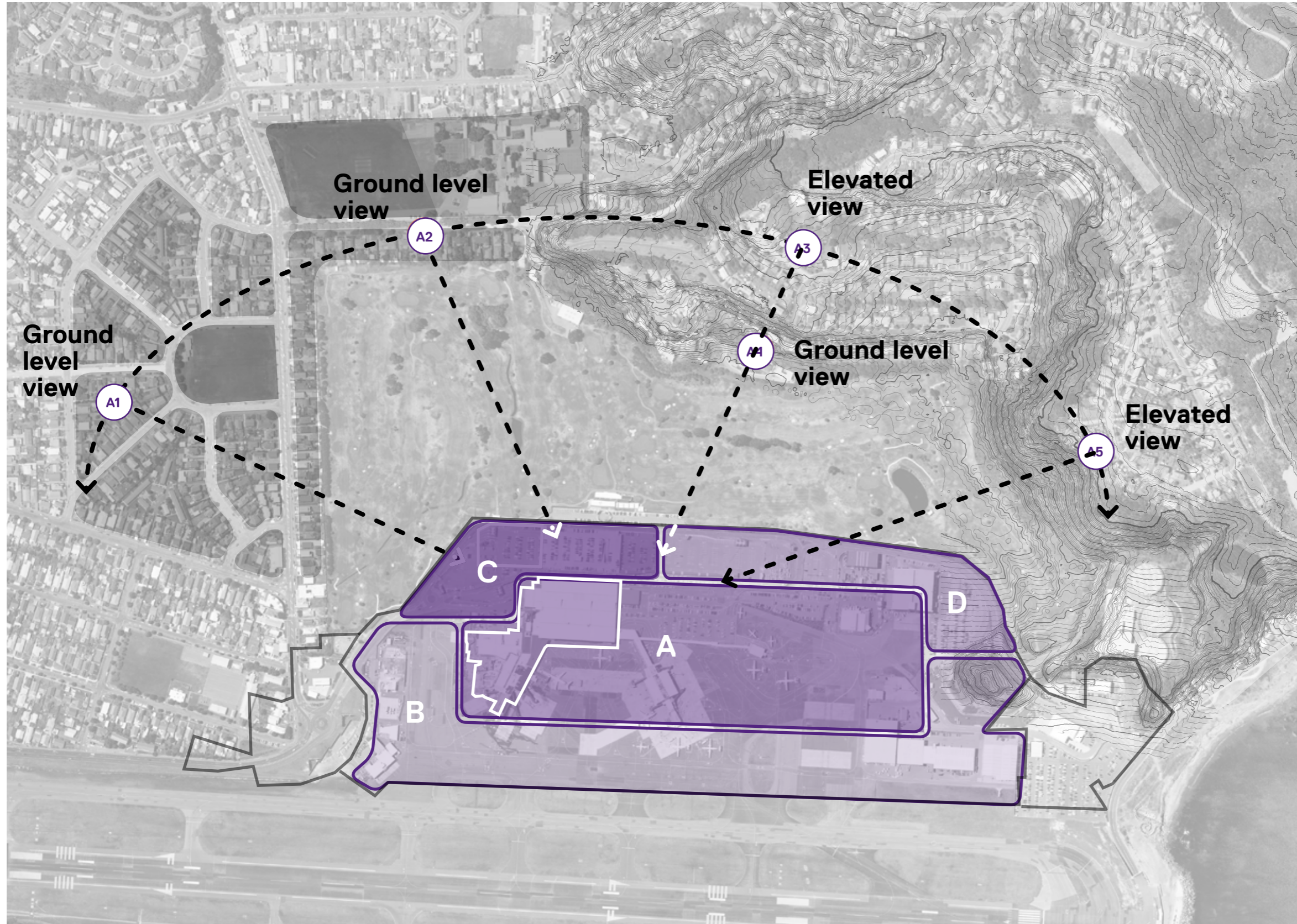


TERMINAL AREA D - 15m



WIAL DESIGNATION PLANNING

TERMINAL AREA - SUBURBAN VISUAL IMPACT ASSESSMENT



NEIGHBOURING VIEWS

The surrounding residential dwellings are located on site with a range of hillside elevations resulting in varying degrees of views. Residents on elevated sites have a higher line of sight beyond the Airport Developments. Sites are located distantly from the airport development area, where a permeable massing solutions will assist visual amenity.

KEY

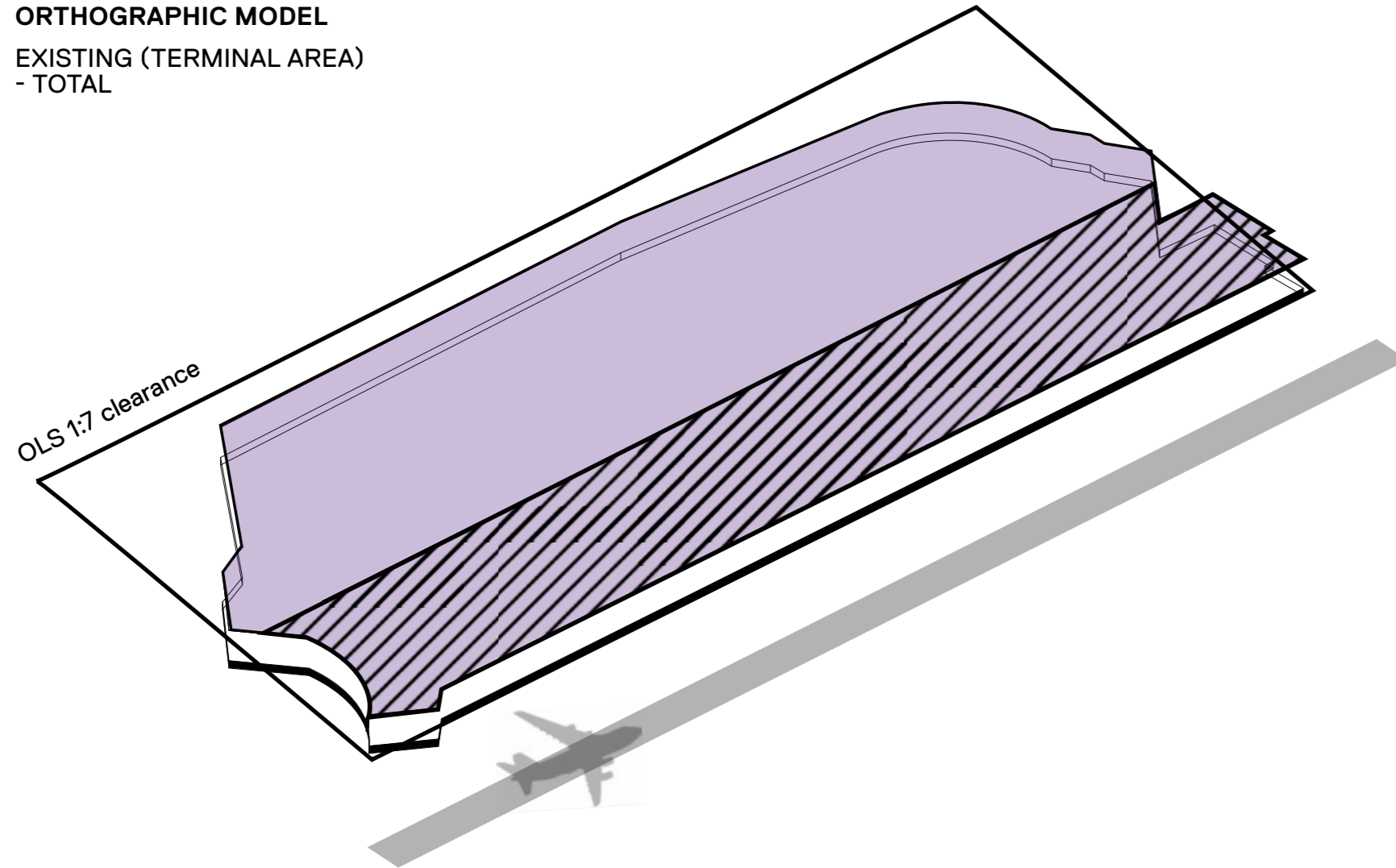
- DEVELOPMENT SUB-AREAS
- RESIDENTIAL VIEWS ASSESSED

WIAL DESIGNATION PLANNING

TERMINAL AREA MASSING ANALYSIS - EXISTING

ORTHOGRAPHIC MODEL

EXISTING (TERMINAL AREA)
- TOTAL



OLS INTERSECTION

Due to the OLS' intersection through the District Plans 25 meter height limit in the Terminal area, nearly a quarter of the buildable volume cannot be built to the 25m height. The proposed sub-areas aim to reorganise the terminal area so that the buildable volume can be utilised efficiently by the airport. The following pages establish the heights for the proposed sub-areas and investigate designation scenarios to create high quality buildable volumes within the Terminal Area site.

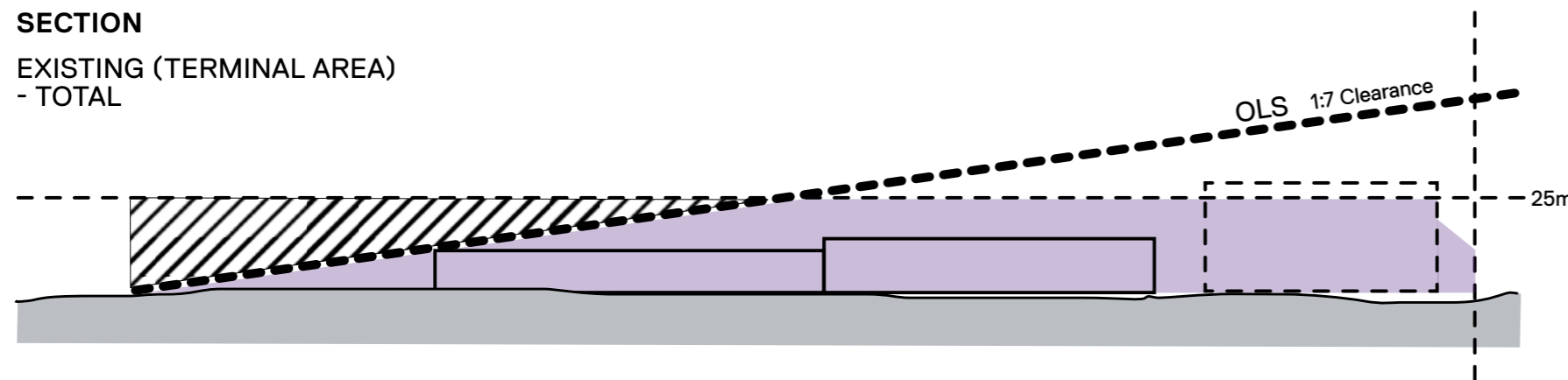
HEIGHT	VOLUME
25m Limit	8,000,000m ³
OLS Limited - Total	6,050,000m³

KEY

- Buildable area
- Current
- OLS intersection

SECTION

EXISTING (TERMINAL AREA)
- TOTAL





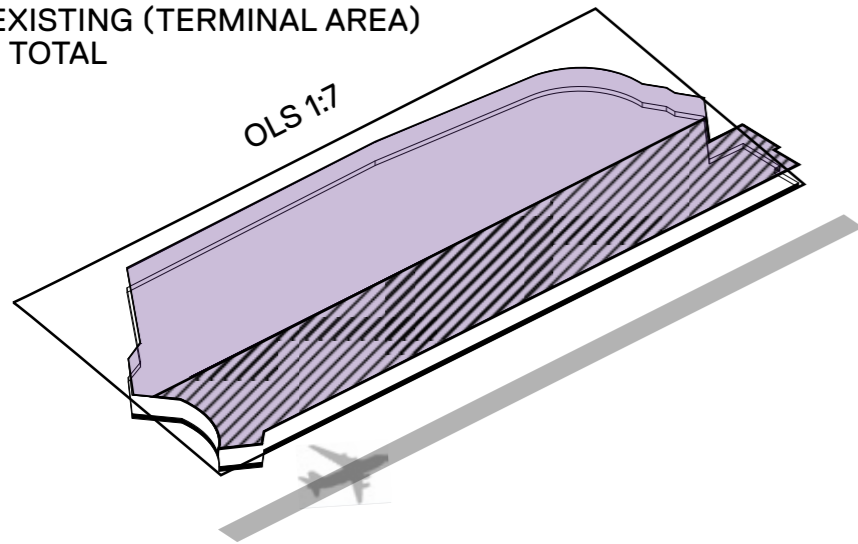
APPENDIX F (PART B)

(balance of) Warren and Mahoney
Report

WIAL DESIGNATION PLANNING

TERMINAL AREA MASSING ANALYSIS - EXISTING VS PROPOSED

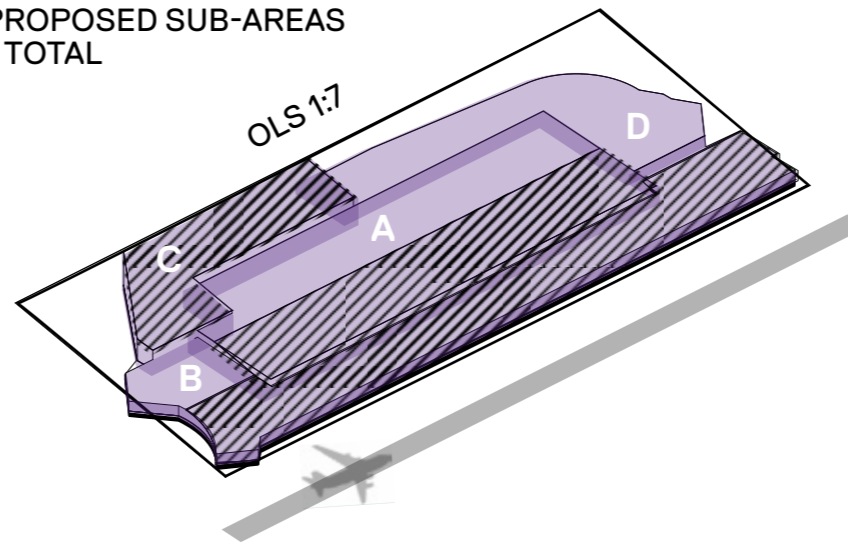
EXISTING (TERMINAL AREA)
- TOTAL



HEIGHT	VOLUME
25m Limit	8,000,000m ³
OLS Limited - Total	6,050,000m³

- KEY**
- Terminal area volume
 - OLS intersection

PROPOSED SUB-AREAS
- TOTAL



HEIGHT	VOLUME
Height Limit	7,200,000m ³
OLS Limited - Total	5,950,000m³

A

HEIGHT	VOLUME
25m Limit	3,350,000m ³
OLS Limited	2,770,000m ³

B

HEIGHT	VOLUME
15m Limit	1,420,000m ³
OLS Limited	770,000m ³

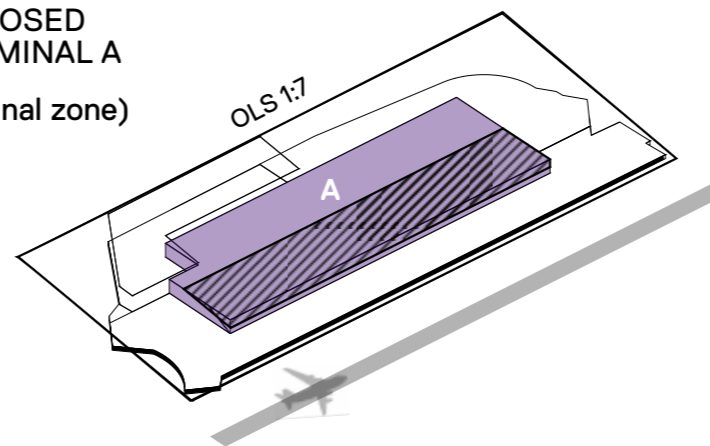
C

HEIGHT	VOLUME
OLS Limit	1,580,000m ³

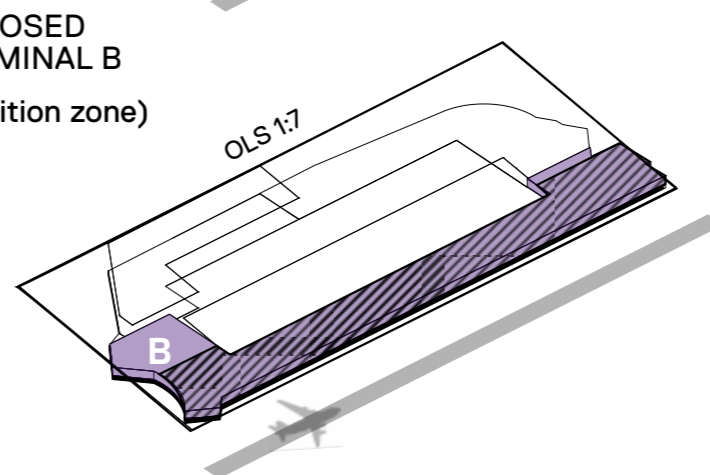
D

HEIGHT	VOLUME
15m Limit	830,000m ³

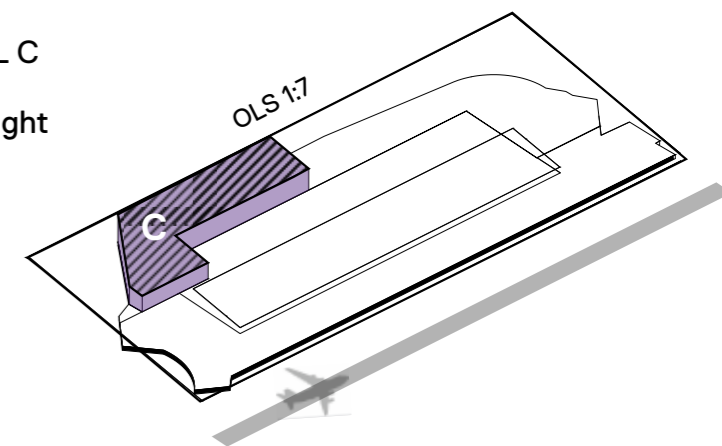
PROPOSED - TERMINAL A
(Terminal zone)



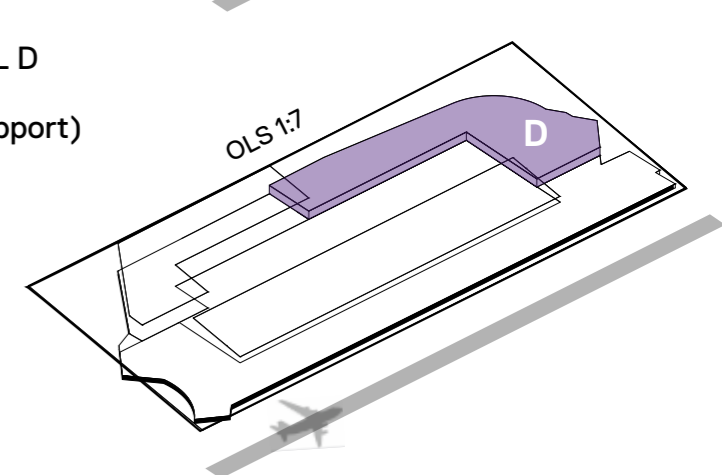
PROPOSED - TERMINAL B
(Transition zone)



PROPOSED - TERMINAL C
(Variable height zone)



PROPOSED - TERMINAL D
(Aviation support)

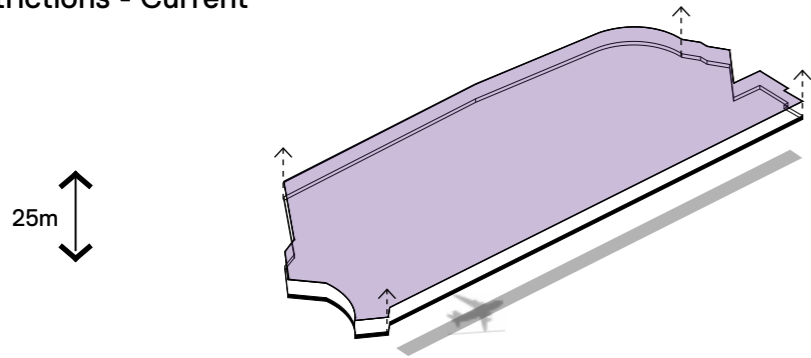


WIAL DESIGNATION PLANNING

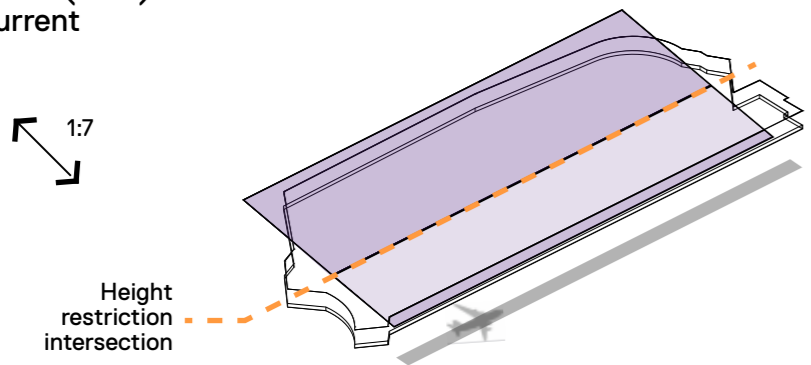
TERMINAL AREA - SCENARIO ANALYSIS

TERMINAL AREA - DEVELOPMENT AREA

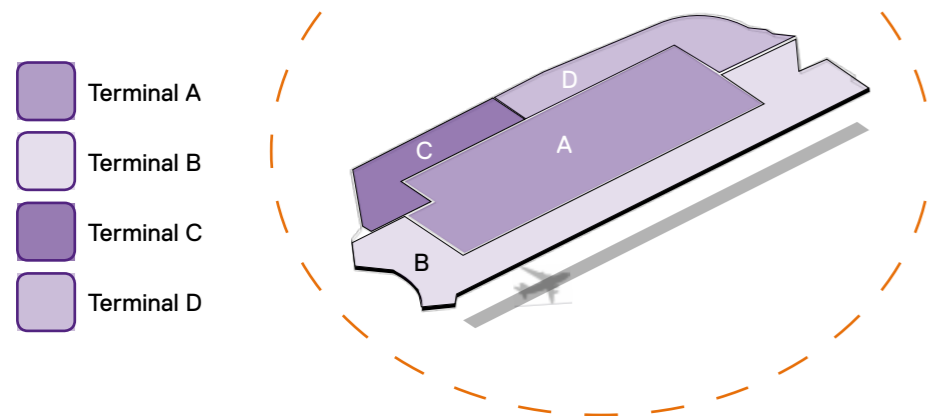
Terminal area height restrictions - Current



Obstacle limitation surface (OLS) - Current

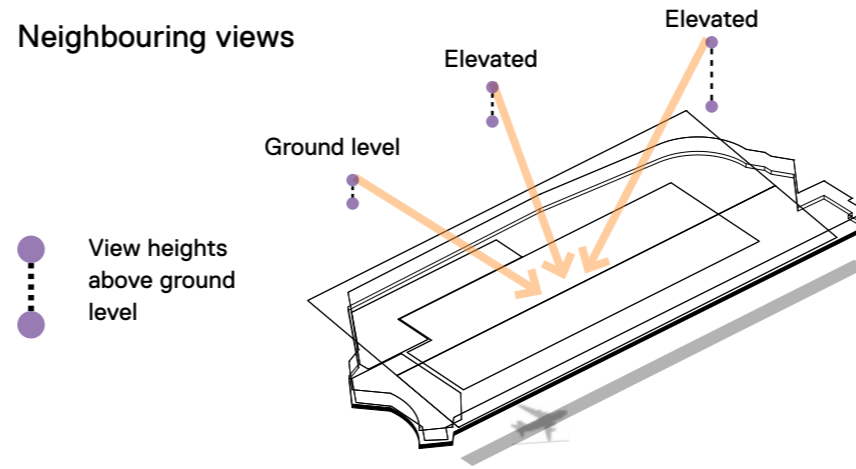


Terminal Area Development - Potential

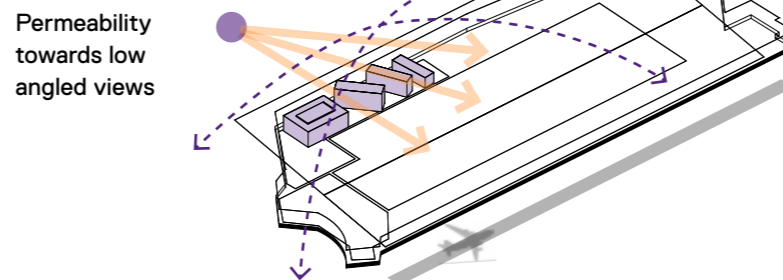


SITE CONTEXT - CONDITIONS

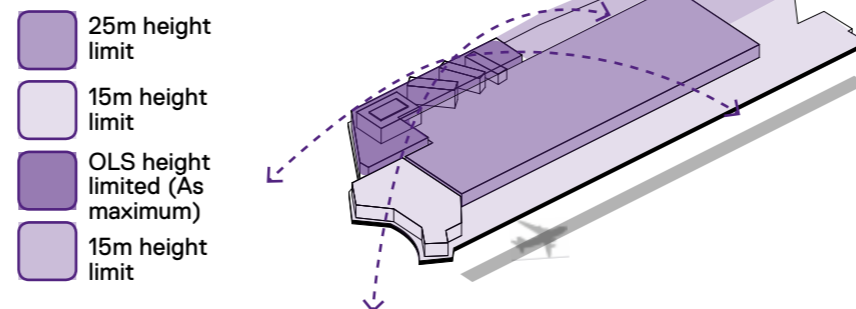
Neighbouring views



Development massing - reduce obstructions

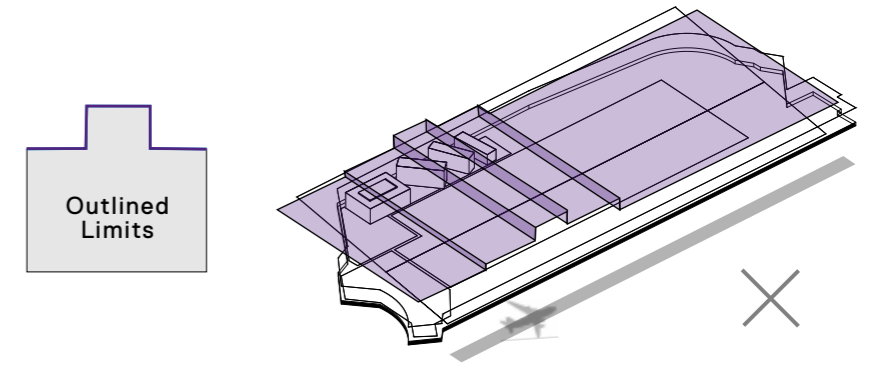


Desired Airport height limits - Higher density located in central area

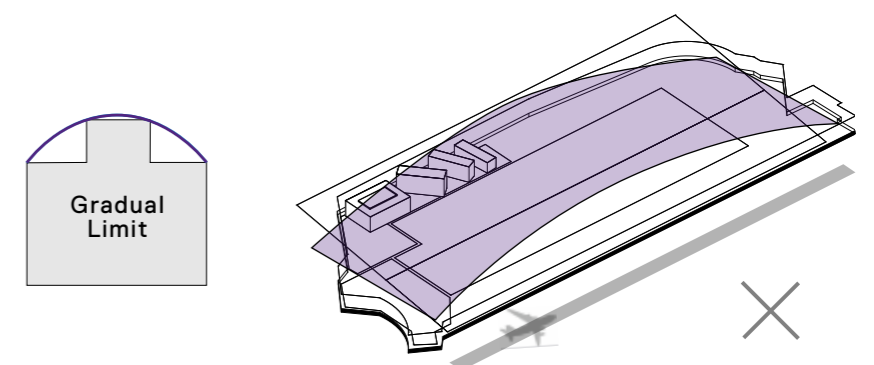


DESIGNATION SCENARIOS - MASS + PERMEABILITY

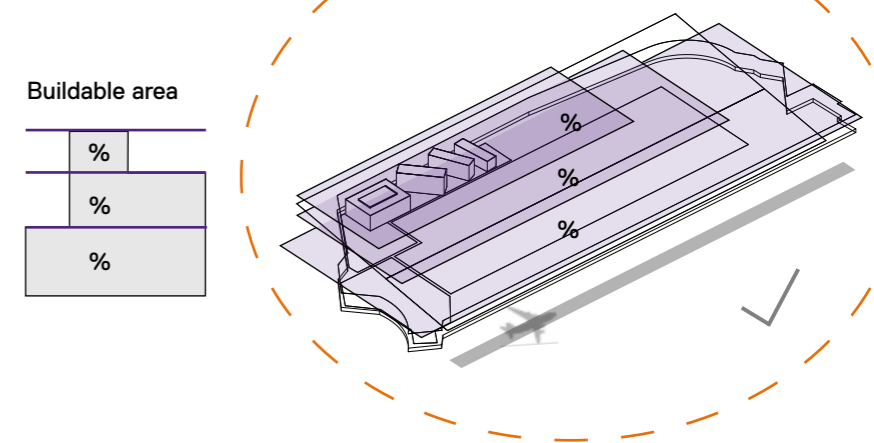
Varying height option



Gradient change option

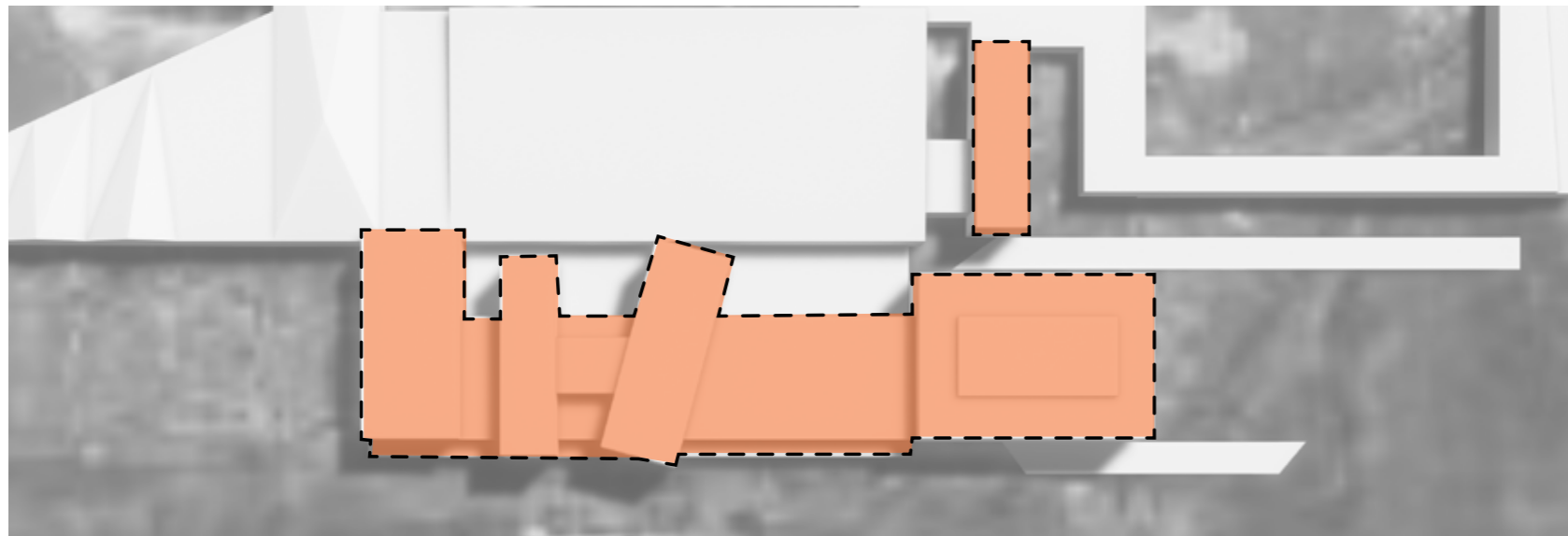
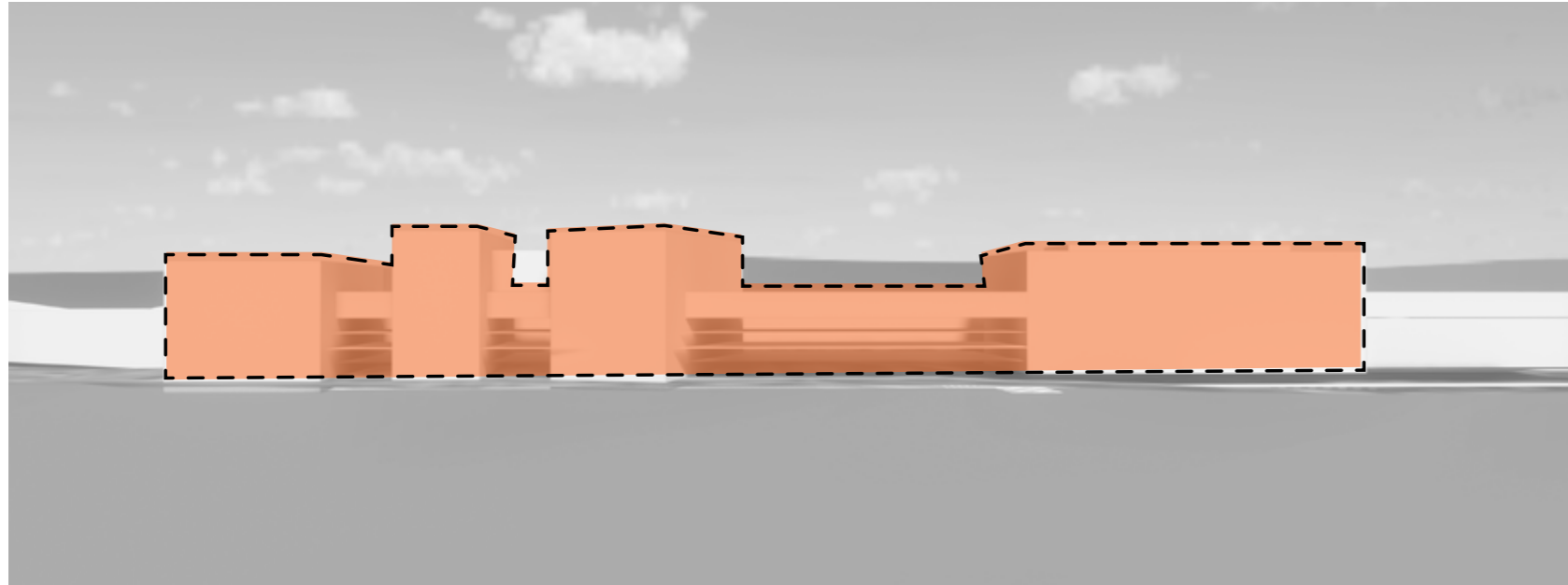


Percentage option



WIAL DESIGNATION PLANNING

TERMINAL AREA C - MASSING EXAMPLE

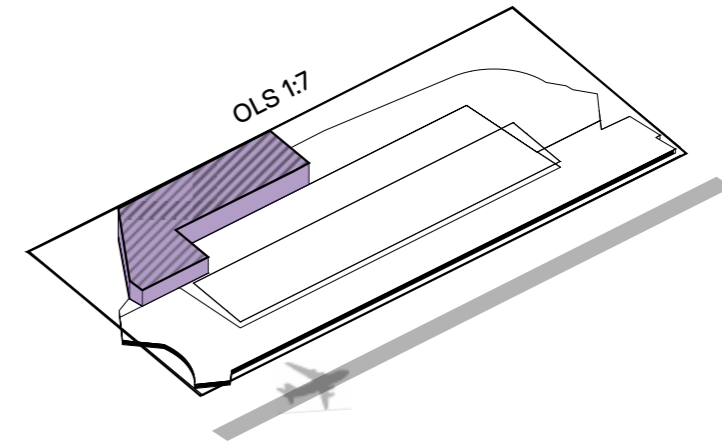


TERMINAL AREA C SCENARIOS

This concept massing example has a volume of around 530,000m³ within Terminal Area C, including the existing hotel + carpark. The following scenarios consider options for alternative massing designation / Refer Height, Gradient, Percentage, and Transferable Volume options.

PROPOSED - TERMINAL AREA C

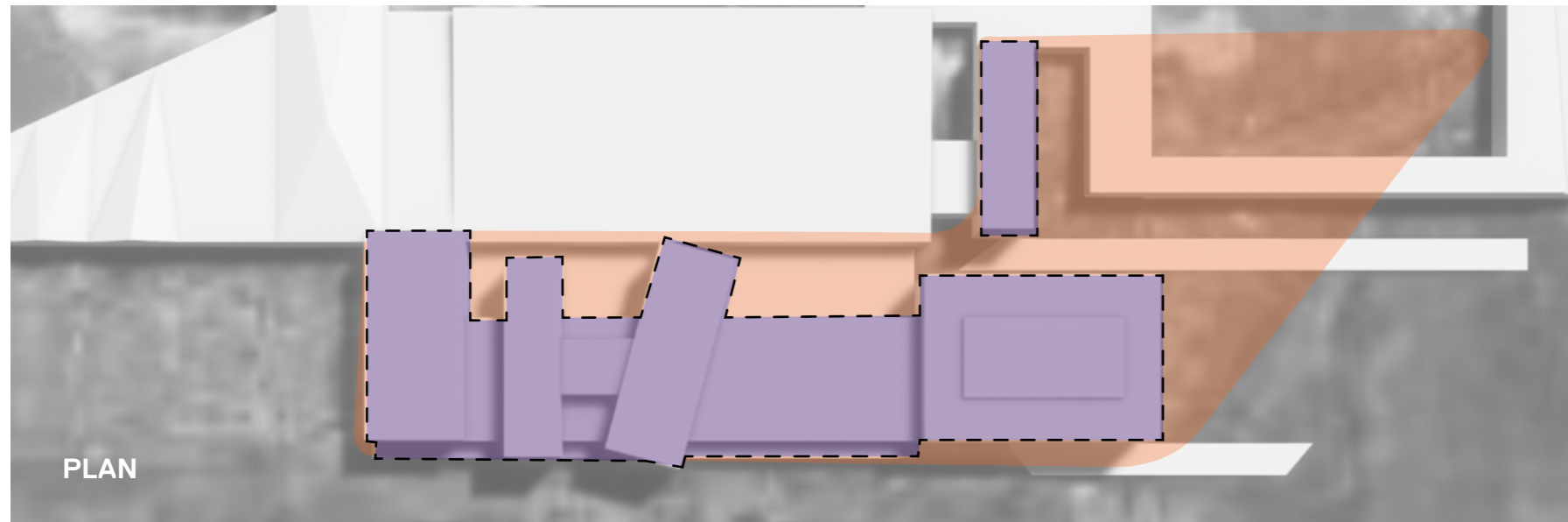
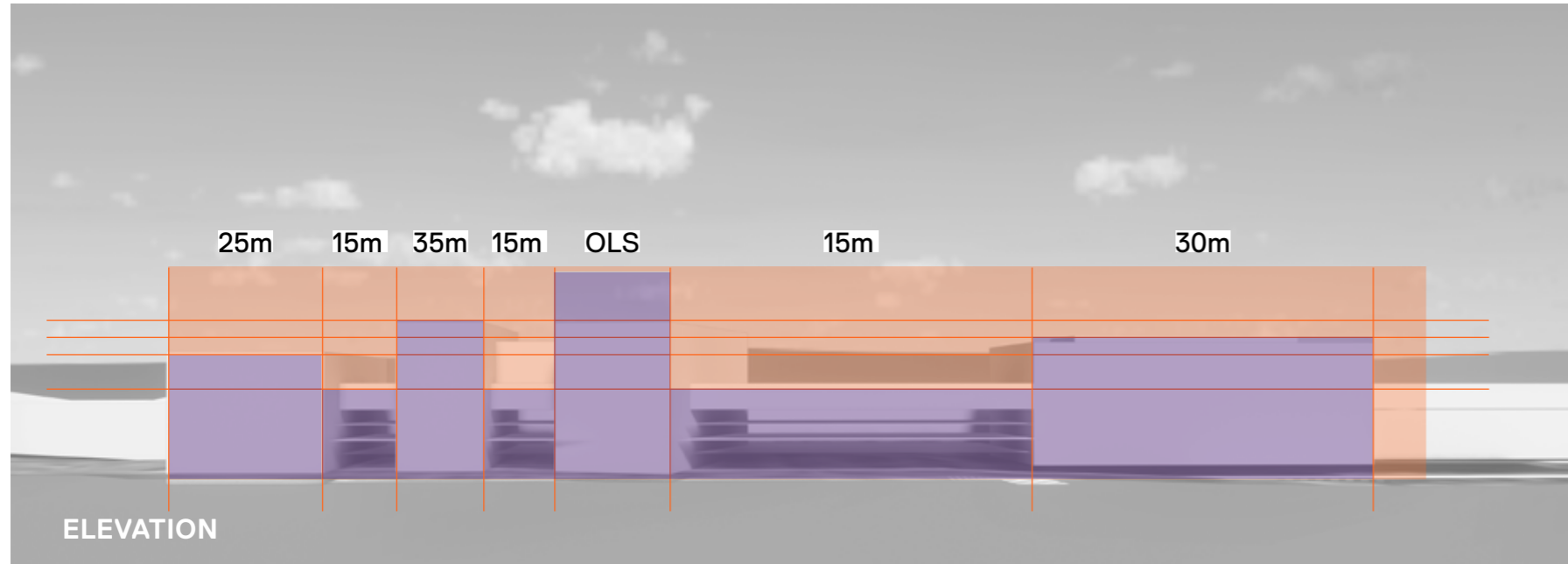
(Variable height
zone)



WIAL DESIGNATION PLANNING

TERMINAL AREA - WHAT ARE OPTIMAL DESIGNATION SOLUTIONS?

TERMINAL AREA C - HEIGHT SCENARIO



VARYING HEIGHT SCENARIO

This scenario designates specific locations to allow for increased buildable height. The example massing proposes stepped heights creating solid and void spatial qualities to enhance urban design solution.

PROS/CONS

- Restricts design flexibility by constraining possible building masses
- Allows specific view lines to be maintained
- Promotes permeability to the developable area

URBAN PRINCIPLES

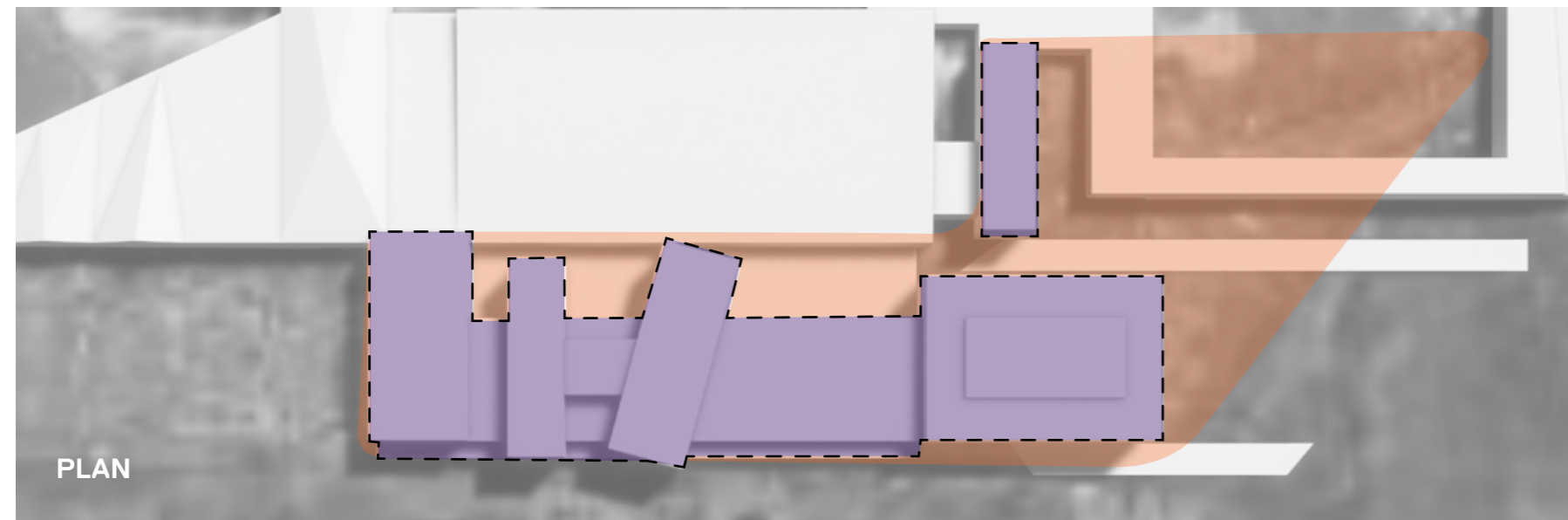
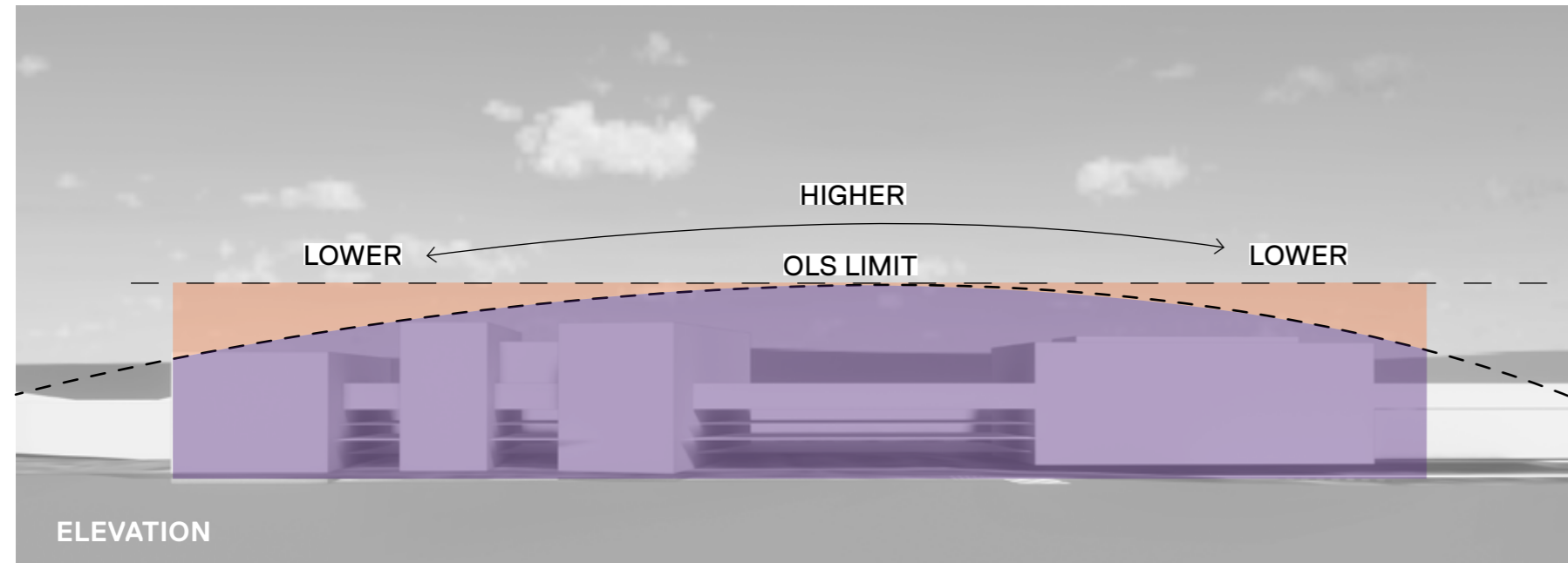
SCORE

1. Urban Structure;	✓✓✓
2. Density and Mix;	✓✓✓
3. Urban Grain;	✓✓✓
4. Height and Massing;	✓✓
5. Public Realm;	✓✓
6. Streetscape and Landscape;	✓✓
7. Facade and Interface;	✓✓✓
8. Energy and Resource Efficiency;	✓✓
9. Details and Materials;	✓✓

WIAL DESIGNATION PLANNING

TERMINAL AREA - WHAT ARE OPTIMAL DESIGNATION SOLUTIONS?

TERMINAL AREA C - GRADIENT SCENARIO



GRADIENT CHANGE SCENARIO

The example massing has a change in gradient to centralise the higher development, creating lower development towards the outer zones which relate to neighbouring residential areas.

PROS/CONS

- Retains design flexibility
- Views are not necessarily created within the zone.
- Constricts the built form to the center of the designation
- Designation is reduced towards the outer boundaries of zone C

URBAN PRINCIPLES

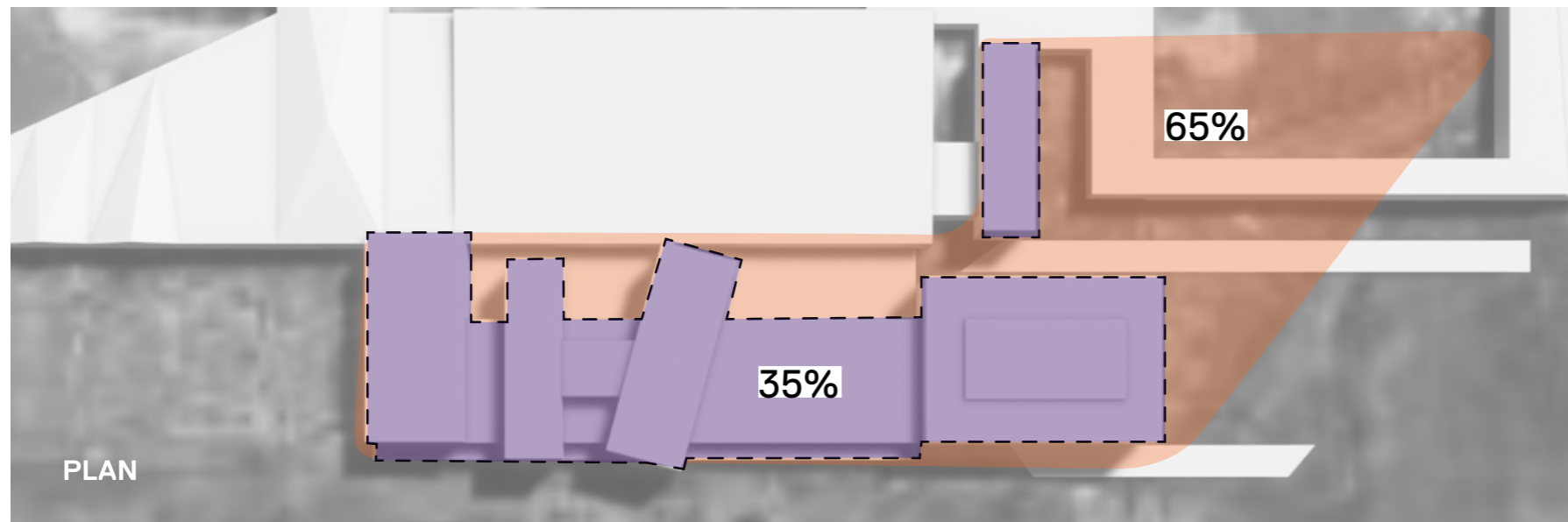
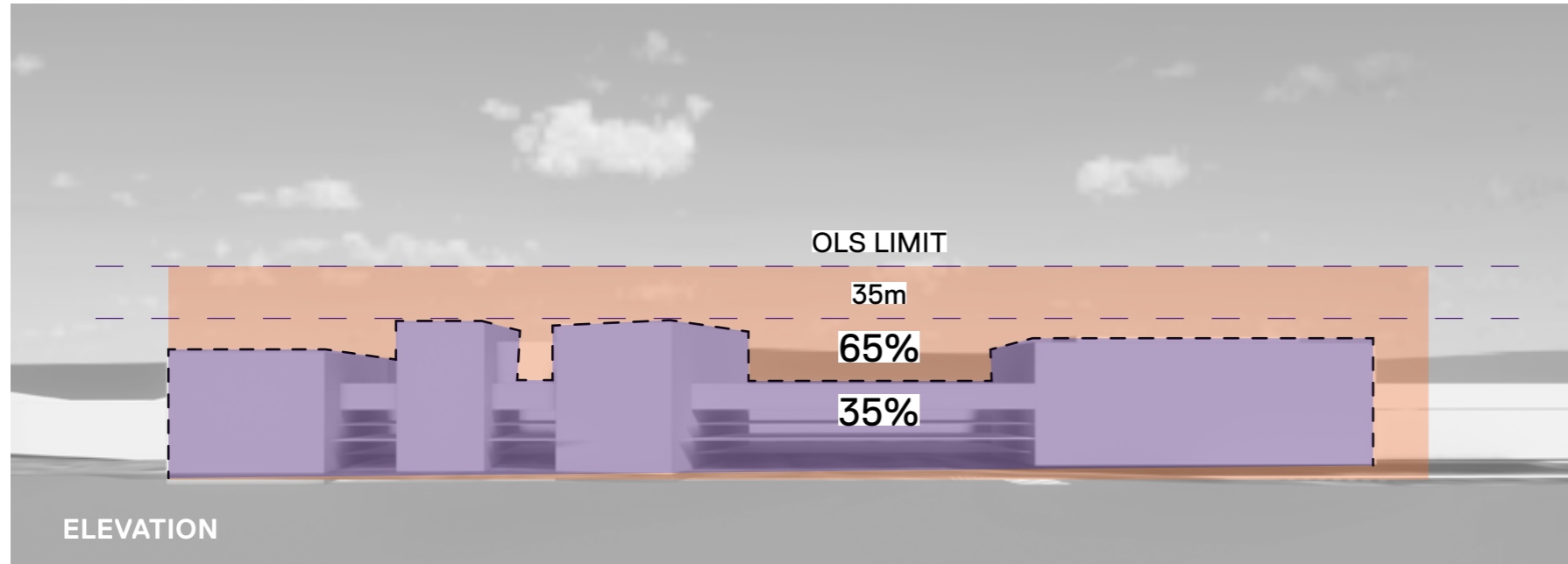
SCORE

1. Urban Structure;	✓✓
2. Density and Mix;	✓
3. Urban Grain;	✓✓
4. Height and Massing;	✓✓✓
5. Public Realm;	✓✓✓
6. Streetscape and Landscape;	✓✓✓
7. Facade and Interface;	✓✓
8. Energy and Resource Efficiency;	✓✓
9. Details and Materials;	✓✓

WIAL DESIGNATION PLANNING

TERMINAL AREA - WHAT ARE OPTIMAL DESIGNATION SOLUTIONS?

TERMINAL AREA C - PERCENTAGE SCENARIO



PERCENTAGE SCENARIO

This massing model has a buildable volume of approximately 1,580,000m³ (Refer to page 27) within Terminal Area C, including the existing hotel and carpark. For a percentage volume option this could consider a similar approach to the district plan for commercial city areas which suggest the notion of a 75% developable area within the height limit area. This mass test example indicates **35%** of the developable volume within the **OLS height limit**.

PROS/CONS

- Retains design flexibility
- Allows view zones to be incorporated
- May limit the requirements of airport commercial needs depending on final percentage % selected

URBAN PRINCIPLES

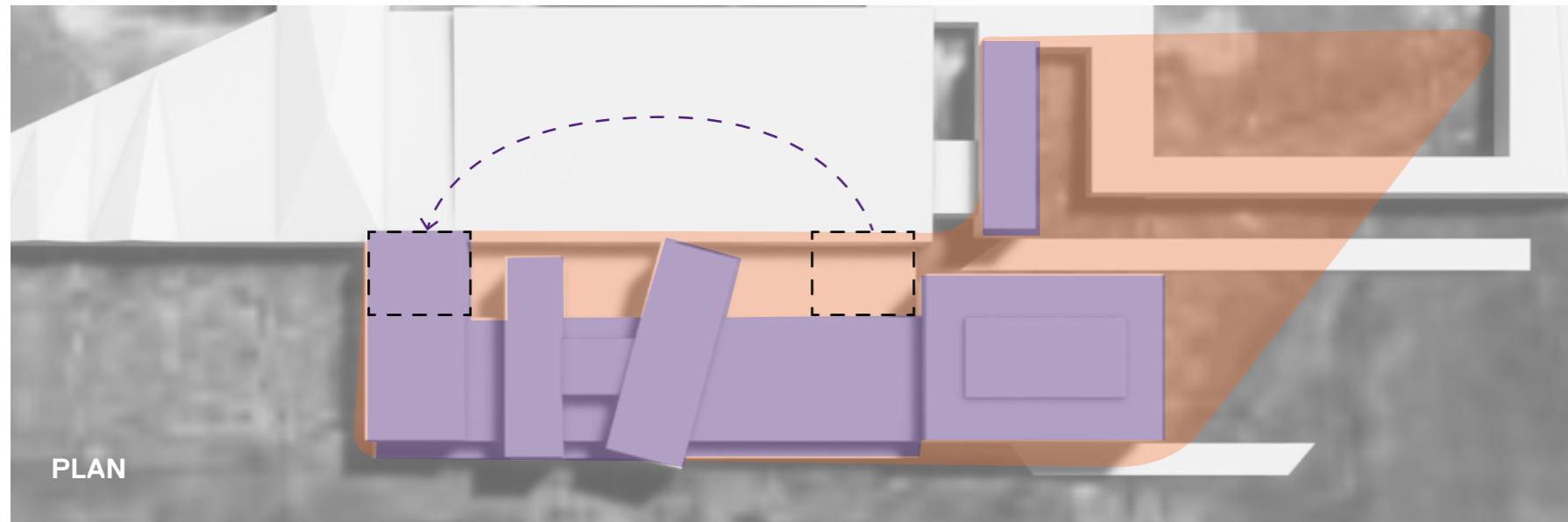
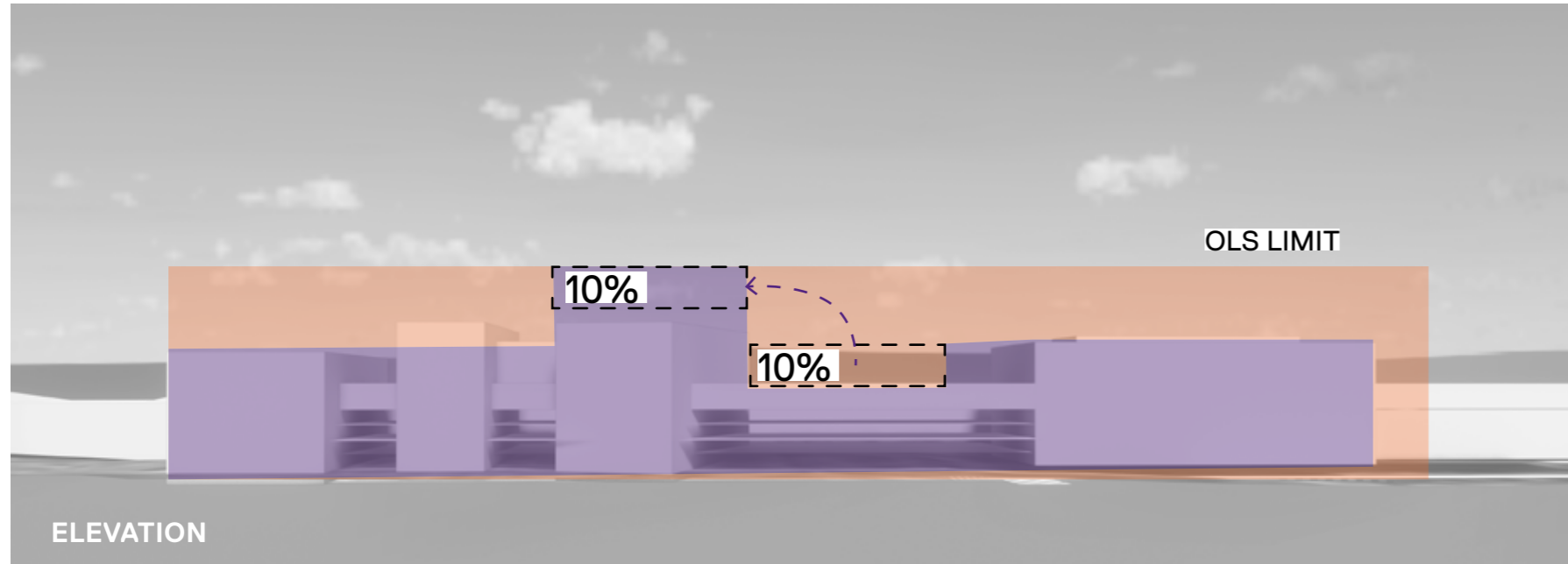
SCORE

1. Urban Structure;	✓✓
2. Density and Mix;	✓✓✓
3. Urban Grain;	✓✓✓
4. Height and Massing;	✓✓✓
5. Public Realm;	✓✓✓
6. Streetscape and Landscape;	✓✓✓
7. Facade and Interface;	✓✓✓
8. Energy and Resource Efficiency;	✓✓
9. Details and Materials;	✓✓

WIAL DESIGNATION PLANNING

TERMINAL AREA - TRANSFERABLE VOLUME RULE

TERMINAL AREA C - TRANSFERRABLE VOLUME



TRANSFERABLE VOLUME SCENARIO

The example massing has uses a total buildable volume within Terminal Area C. A mass of the same volume can be transferred above the 35 meter height limit to the OLS height limit, allowing the total buildable volume be consistent.

PROS/CONS

- Retains design flexibility
- Allows view zones to be incorporated
- Promotes permeability to the developable area

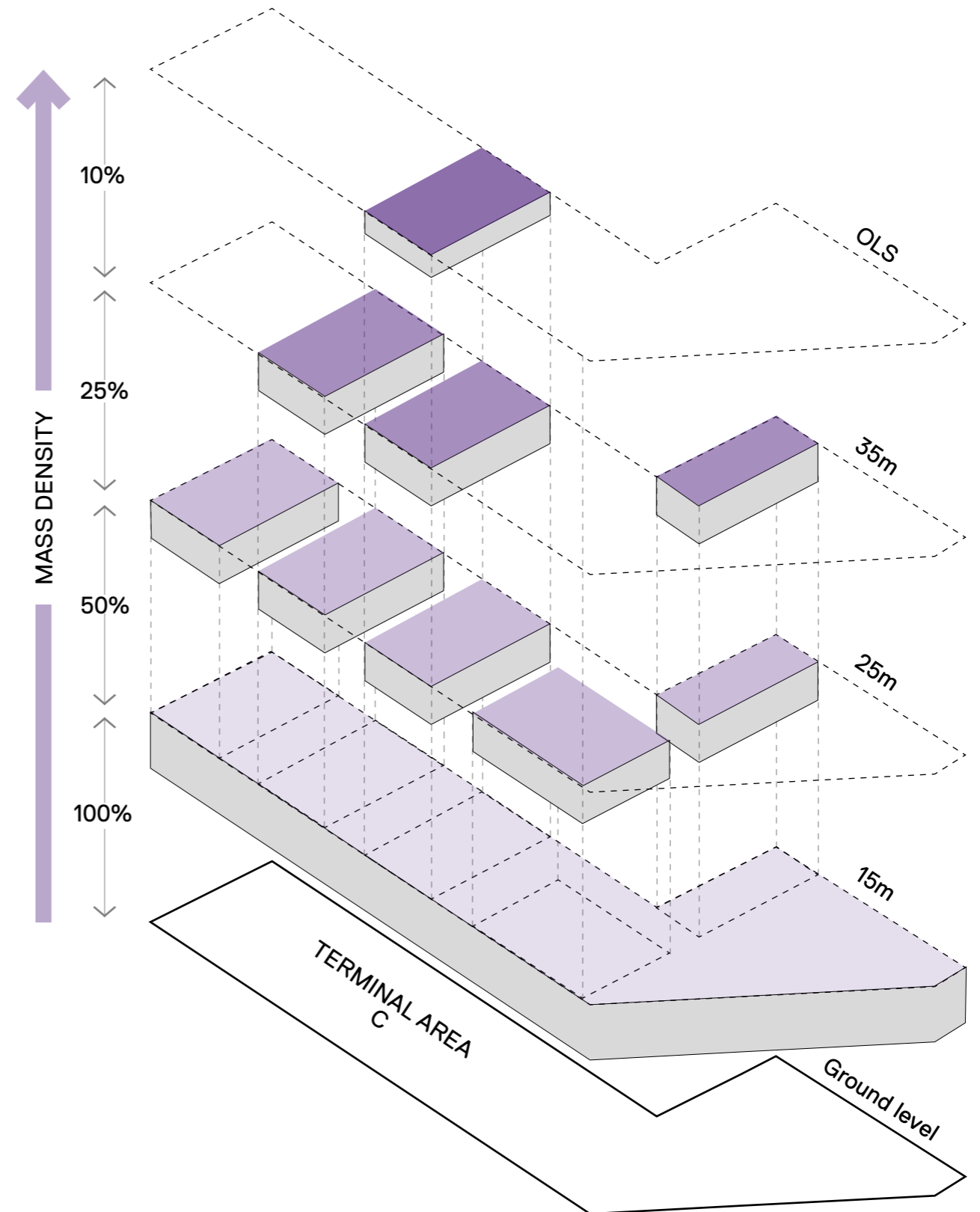
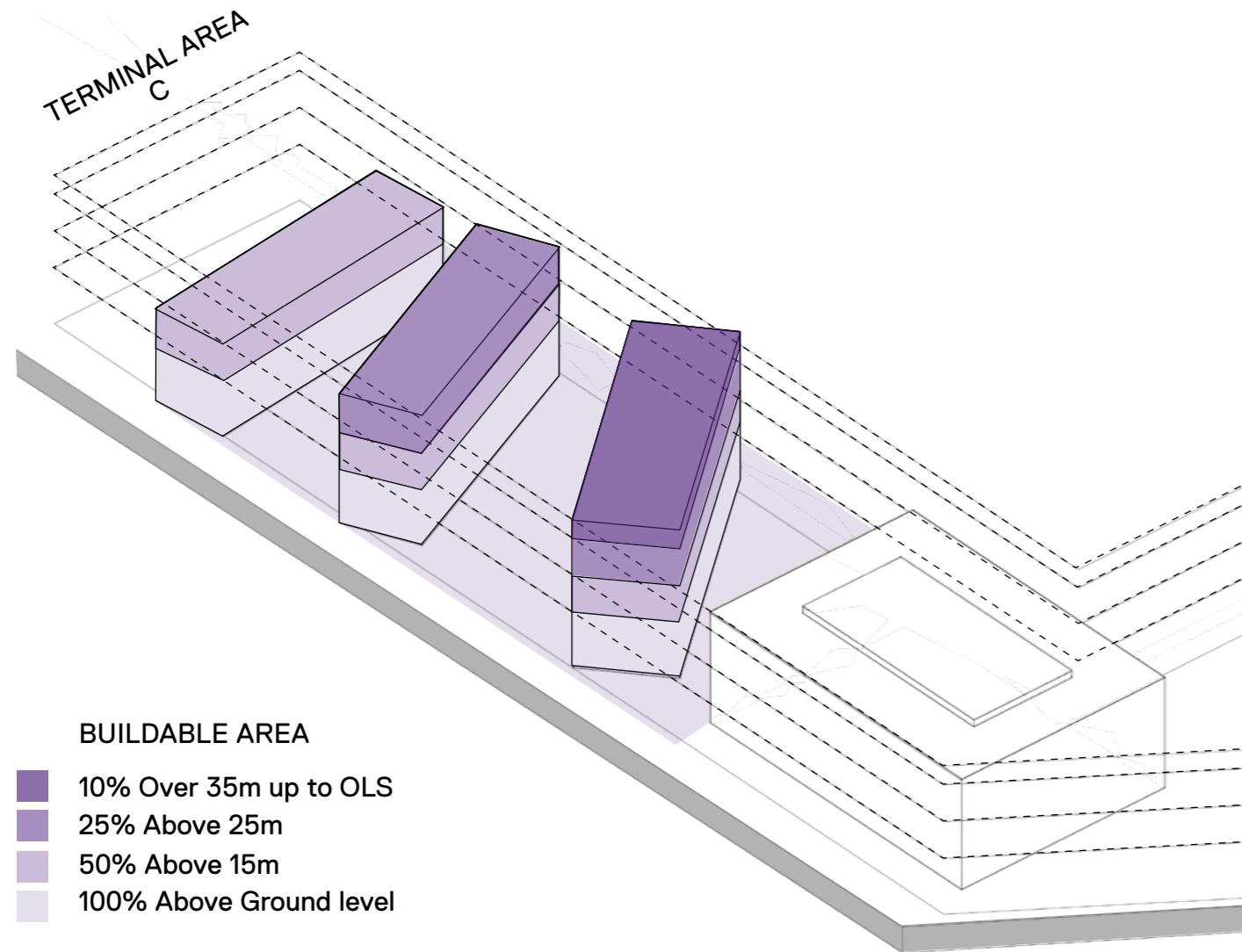
URBAN PRINCIPLES

SCORE

1. Urban Structure;	✓✓
2. Density and Mix;	✓
3. Urban Grain;	✓✓
4. Height and Massing;	✓✓✓
5. Public Realm;	✓✓✓
6. Streetscape and Landscape;	✓✓✓
7. Facade and Interface;	✓✓
8. Energy and Resource Efficiency;	✓✓
9. Details and Materials;	✓✓

WIAL DESIGNATION PLANNING

TERMINAL AREA - EXAMPLE MASSING: PERCENTAGE DESIGNATION (FURTHER DEVELOPED)



PERCENTAGE DESIGNATION OPTION

A percentage designation allows transition of mass density towards the skyline. This supports the urban principles while allowing the airport to utilise developable area, and supports a variable 'skyline' to promote permeability and reduce visual massing.



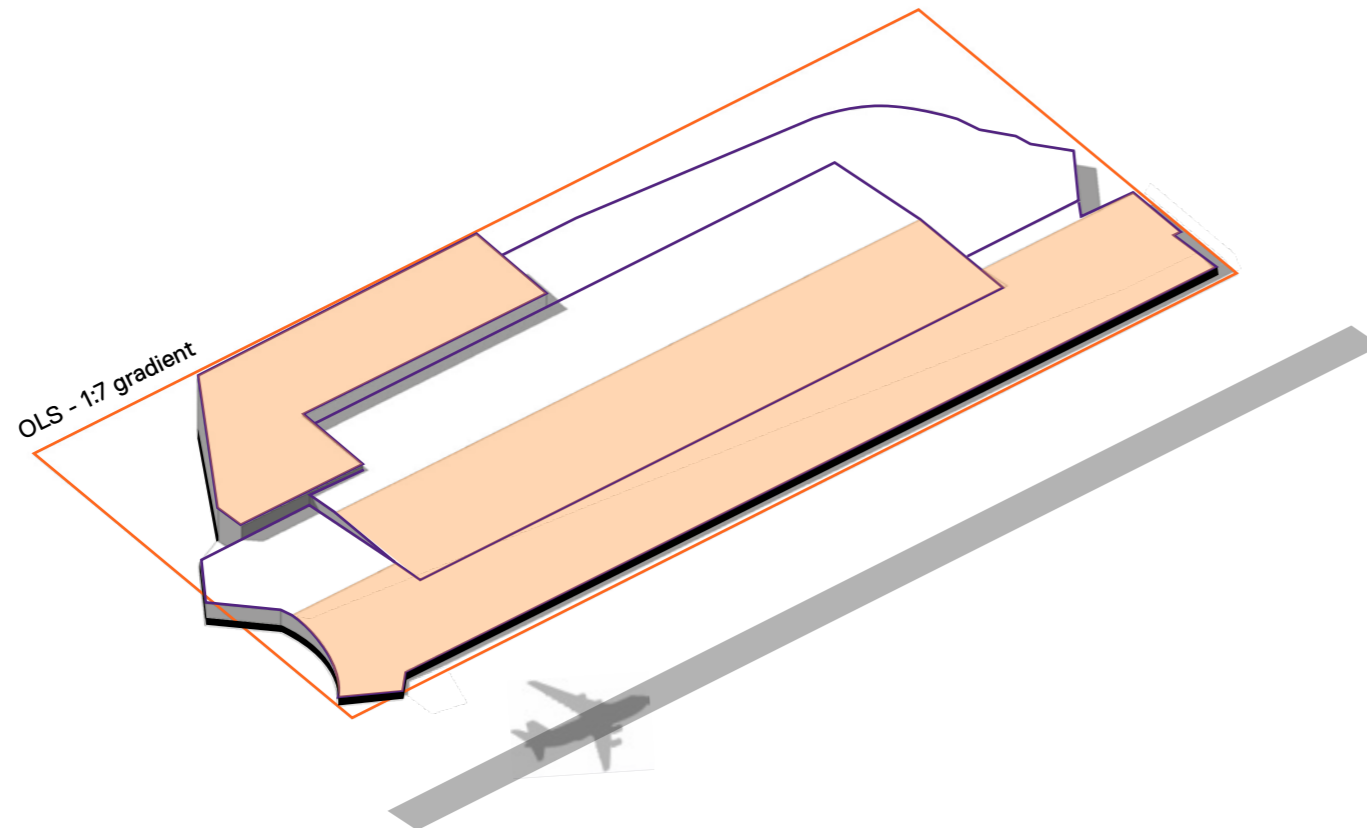
“Quality urban design encourages creative and innovative approaches. Creativity adds richness and diversity, and turns a functional place into a memorable place.”

5.0 Recommended Approach

Airport Locations	Page
Terminal Area	37
Terminal Area C	38
Broadway Area	40
West Side	41
Rongotai Ridge	42
South Coast Area	43

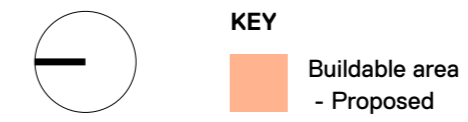
WIAL DESIGNATION PLANNING

RECOMMENDATION - TERMINAL AREA

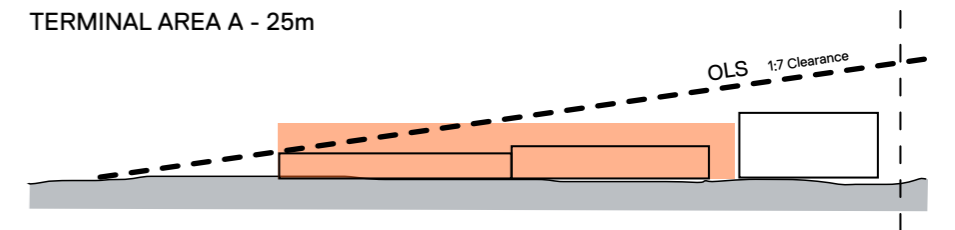


TERMINAL AREA SUB-AREAS

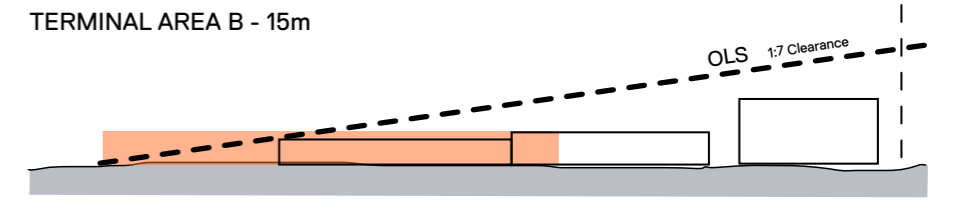
A zoned scenario identifying higher density and lower density provides for future development opportunities based on urban design principles and the airports centralised operational requirements. This Terminal Area is a centralised location to core airport business, and higher building areas are spatially located away from neighbouring precincts to provide appropriately scaled height transitions.



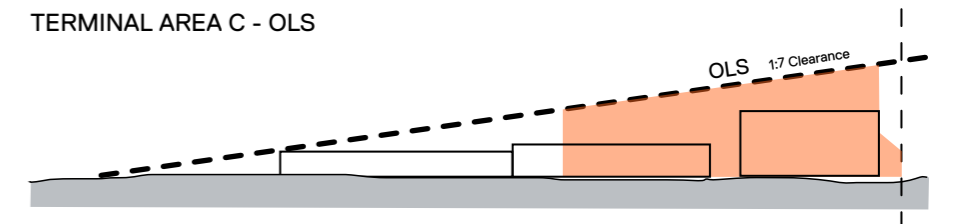
TERMINAL AREA A - 25m



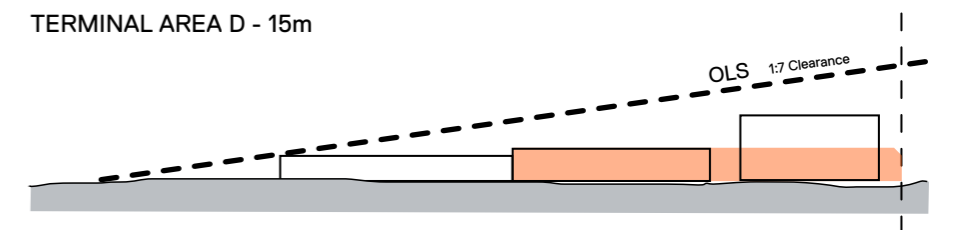
TERMINAL AREA B - 15m



TERMINAL AREA C - OLS



TERMINAL AREA D - 15m






WIAL DESIGNATION PLANNING

RECOMMENDATION - TERMINAL AREA ZONE C

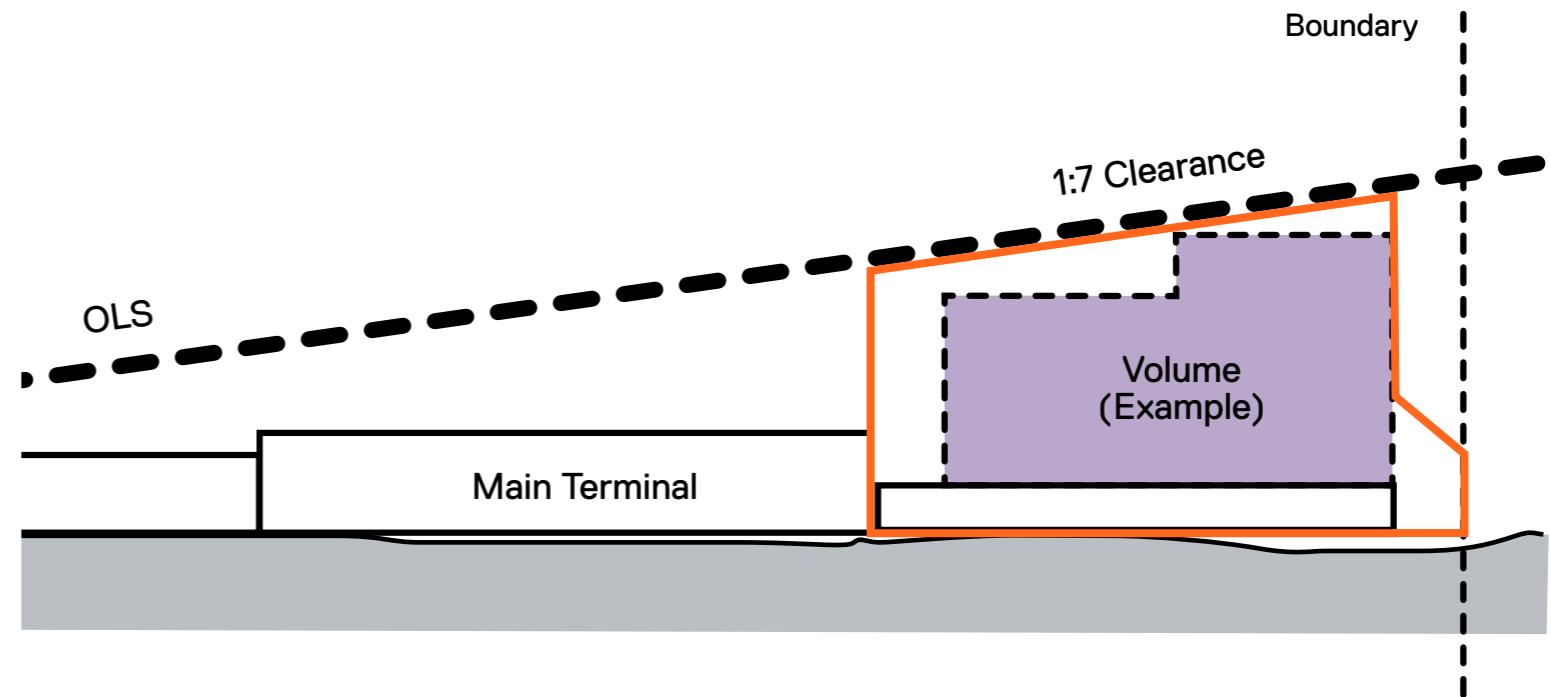
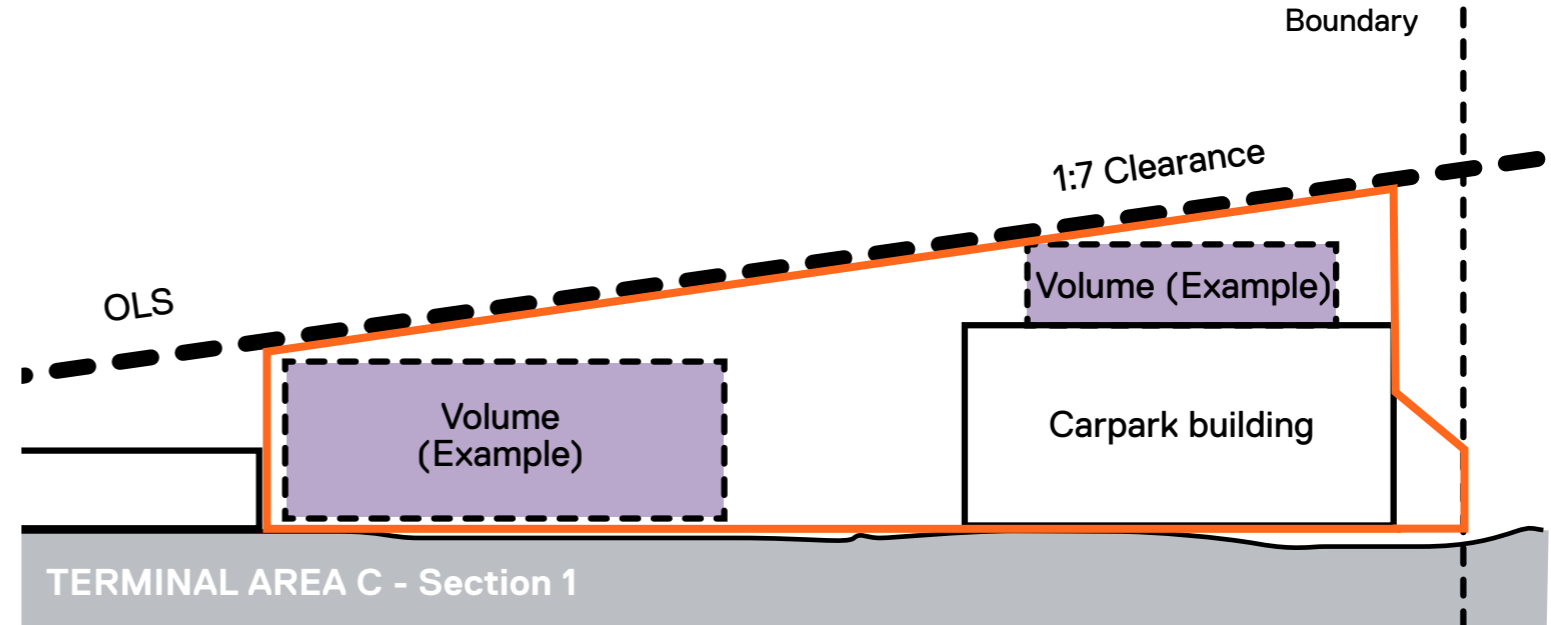
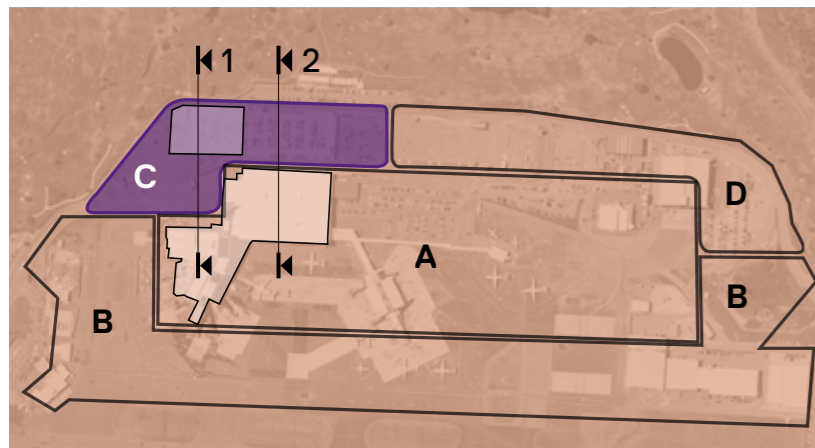
HYBRID DESIGNATION

A hybrid designation option for Terminal Area C of 'transferrable height rule' (see page 32) and 'percentage designation' (see page 31) will enable high quality future development. This designation will achieve permeability, engage with the Urban Design Principles and the wider community.

KEY

-  POTENTIAL VOLUME
-  TERMINAL AREA C BOUNDARY
-  TERMINAL AREA C

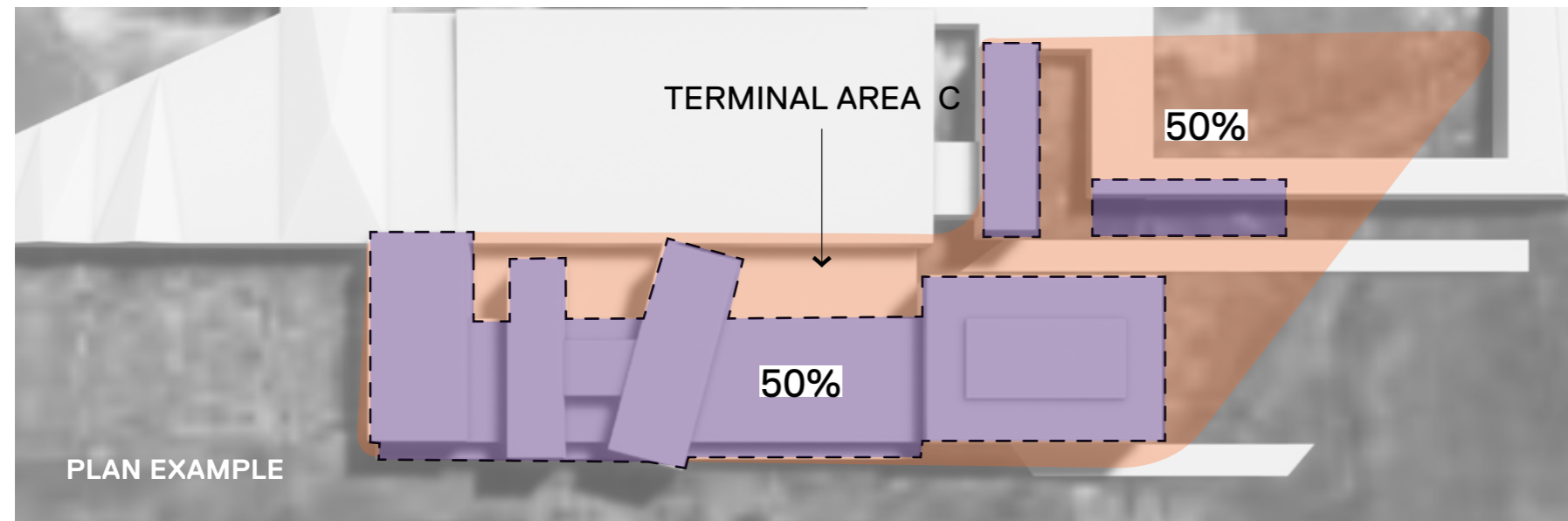
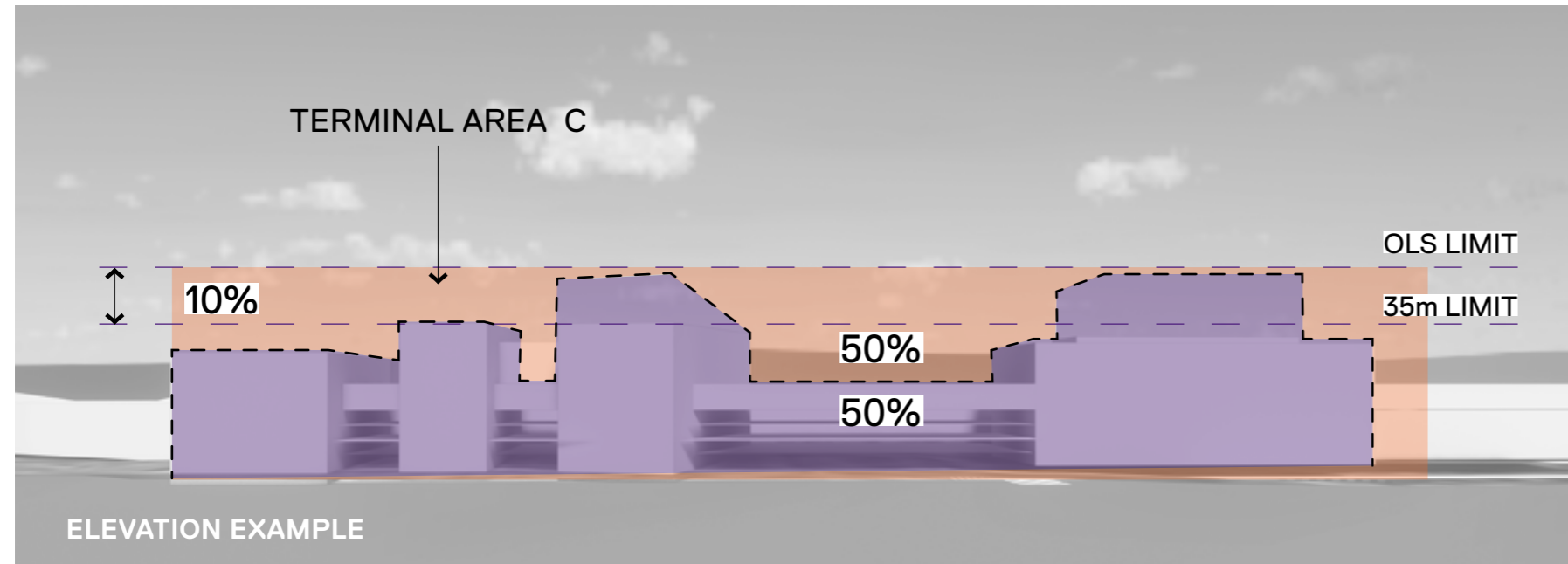
KEY - Terminal Area and section location



WIAL DESIGNATION PLANNING

RECOMMENDATION - TERMINAL AREA ZONE C

TERMINAL AREA C - PERCENTAGE DESIGNATION



DESIGNATION SOLUTION

Terminal Area C has a buildable volume up to the OLS of approximately 1,580,000m³ (Refer to page 27), including the existing hotel and carpark. A 50% total developable volume would be sufficient to facilitate the required growth of the airport and provide an outcome which incorporates the guiding Urban Design Principles.

50% developable volume within Terminal Area C, with an OLS height limit, would result in a buildable mass of around 790,000m³. In addition to the 50% developable volume the massing can transfer 10% of the developable volume above 35m. This will provide the massing with a permeable facade.

DESIGNATION OUTCOMES

- Retain design flexibility
- Allow view areas to be incorporated
- Promote permeability to the developable area
- Maximise land use efficiency

URBAN PRINCIPLES	SCORE
1. Urban Structure;	✓✓✓
2. Density and Mix;	✓✓✓
3. Urban Grain;	✓✓✓
4. Height and Massing;	✓✓✓
5. Public Realm;	✓✓✓
6. Streetscape and Landscape;	✓✓✓
7. Facade and Interface;	✓✓✓
8. Energy and Resource Efficiency;	✓✓
9. Details and Materials;	✓✓

WIAL DESIGNATION PLANNING

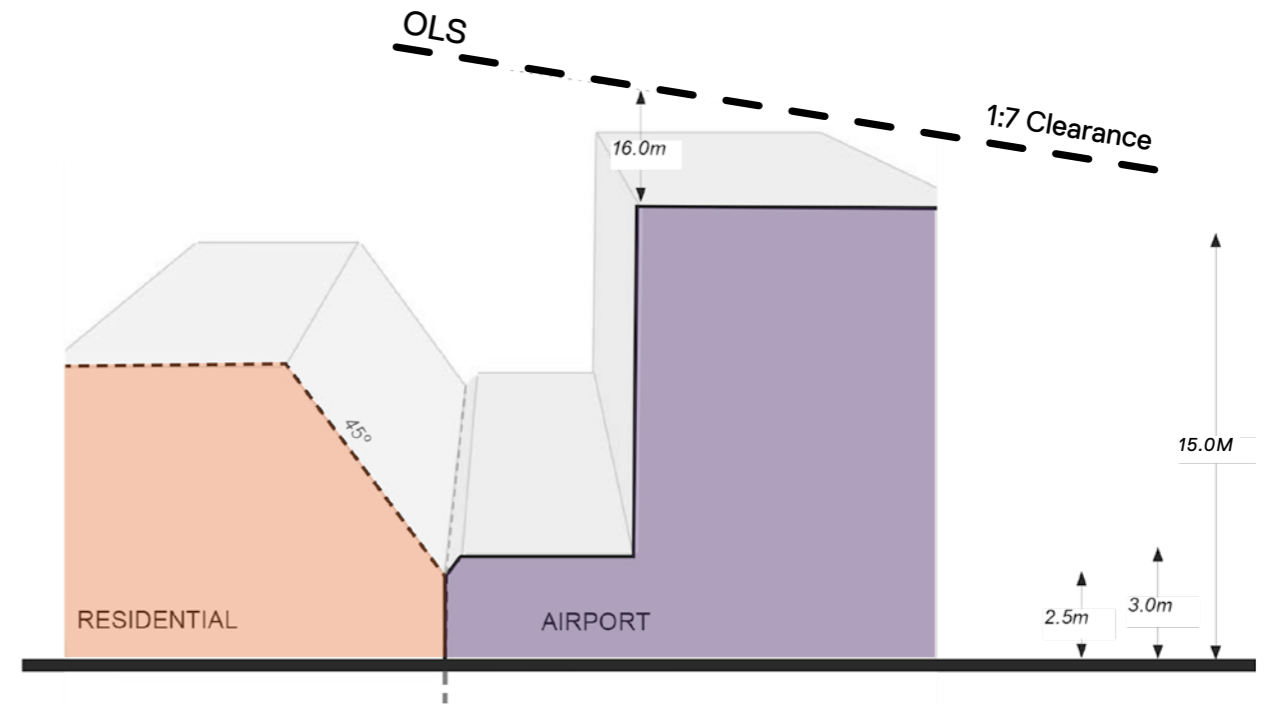
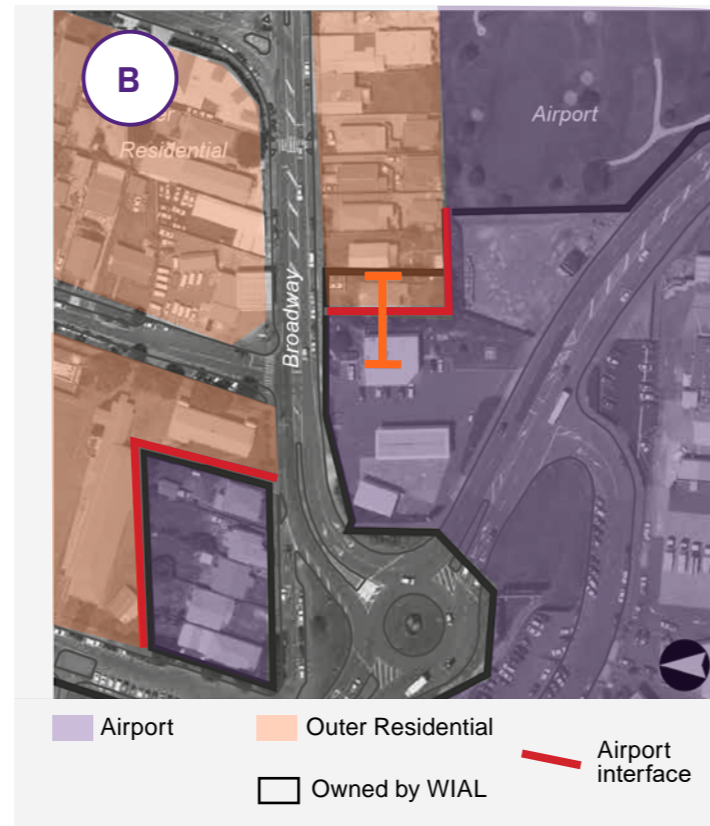
RECOMMENDATION - BROADWAY AREA

This area is at the entrance 'gateway' to the airport. The airport zoned land accommodates a Buger King building currently. The Airport Zone provisions currently allow buildings up to 12m high 5m back from the boundary. It is an area of 'transition' as the combined influences of transport infrastructure, airport activities, and commercial development.

The outlook is already compromised by the flat topography and transitional nature of the surrounding area.

DESIGNATION RECOMMENDATION

With WCDP - 12m building; 5m set back from residential boundary



Cross section shows the current maximum possible height according to the WCC District Plan with OLS

KEY - Assessment area location



WIAL DESIGNATION PLANNING

RECOMMENDATION - WEST SIDE AREA

This area consists mainly of general aviation and commercial uses and includes a new flight control tower. The area is mostly surrounded by commercial and industrial uses, except for the north side which borders a residential zone. The OLS significantly constrains the height of buildings and structures in this area. The streetscape in this area has a variable character. Walking and cycling activity is a consideration as to amenity given the entrance of the airport underpass at Coutts Street.

Within the West Side Development Area buildings are currently a permitted activity, up to a height of 15m for aircraft maintenance buildings (excluding provision for aircraft tail height) and 12m for other airport buildings. Where buildings adjoin a residential area, buildings must be no greater than 3m in height for a distance of 5m from the boundary. Due to the proximity to the runway and a minimal difference in elevation from the runway level, the OLS also puts a significant limit to the height of potential development to the east of the area (less than 2m).

It is proposed that the existing permitted height limits will be imposed on the designation as conditions within the West Side area. The proposed designation therefore does not result in any change of bulk and mass outcomes for this area.

There is an existing airport outlook for the residential properties here. The effect on the relative quality of outlook will depend on the form of development. Given existing commercial uses and OLS limitations to the east of the area the sensitivity to change can be expected to be relatively minor.

DESIGNATION RECOMMENDATION

Consistent with WCDP - 15m building height for operational and maintenance buildings; 12m for other buildings; set back from residential boundary.

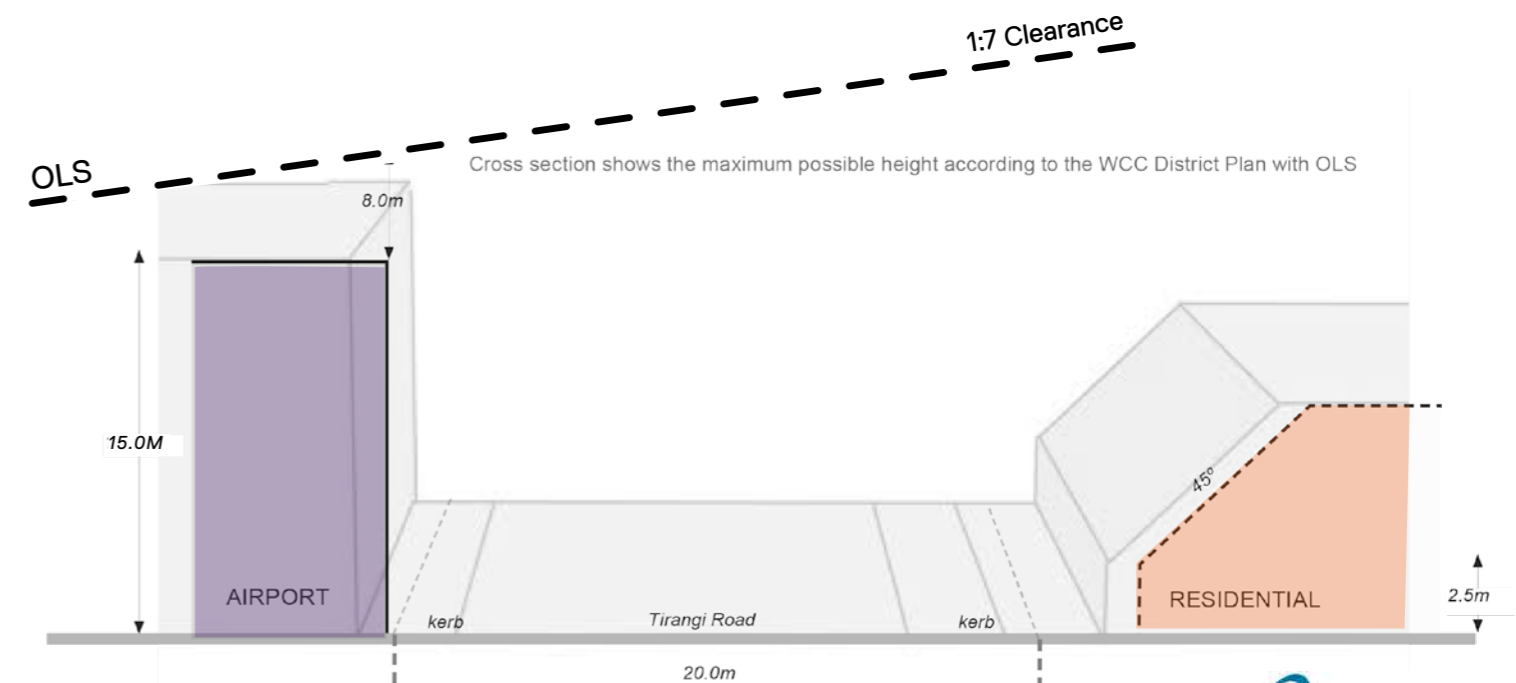
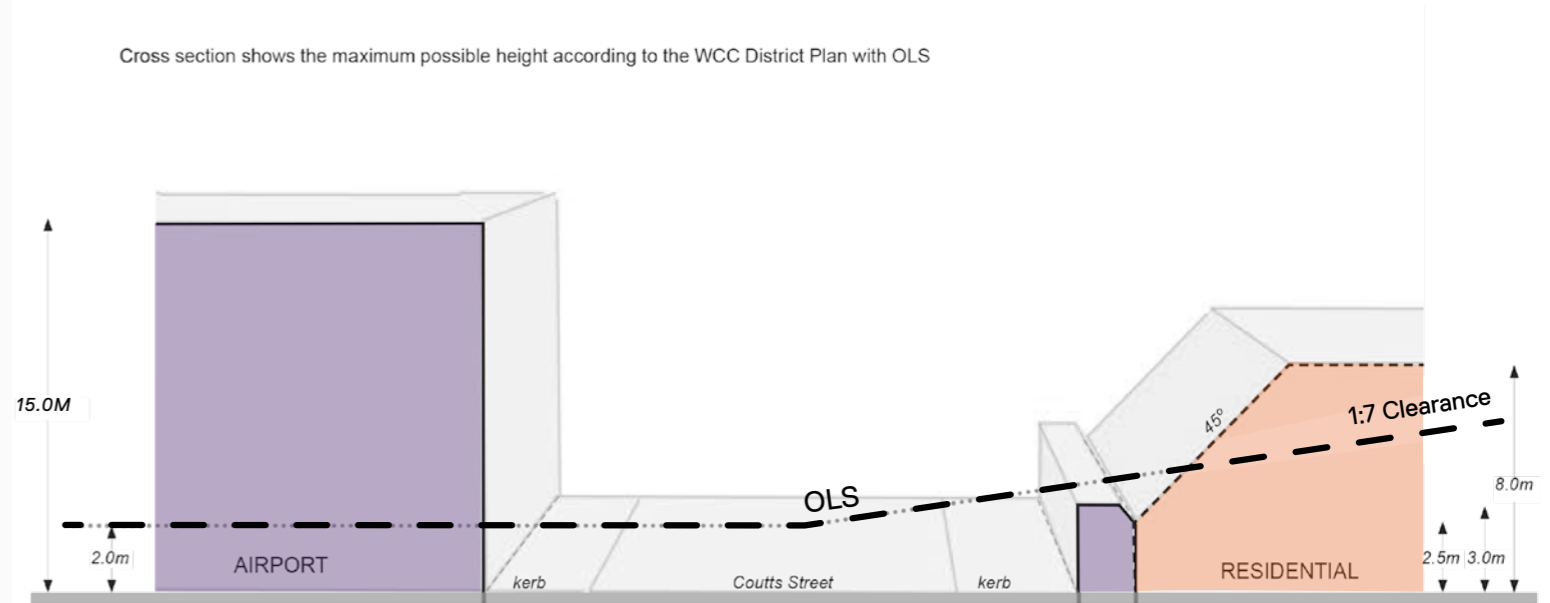
KEY - Assessment area location



- Airport
- Outer Residential
- Owned by WIAL
- Airport interface



- Airport
- Outer Residential
- Business
- Owned by WIAL
- Airport interface



WIAL DESIGNATION PLANNING

RECOMMENDATION - RONGOTAI RIDGE AREA

The Rongotai Ridge area has a steep topography which differentiates it from other locations assessed in this report. Residential properties sit on the lower slope of Wexford Hill, and the Airport zoned land above and on the sloping land at the interface of the coast and hill.

The streetscape presents as a mix of larger scale open space (including unformed road reserve), car parking and commercial buildings and residential low scale buildings on the south side. The land at the base of the hill is prominent as it is on a busy roundabout intersection between Cobham Drive and Calabar Road. There is a popular lookout spot to the west above Calabar Road.

The District Plan provisions allow for development up to 12m in this area. The OLS constrains development on the top of the hill to a more residential scale. It is proposed that the existing permitted height limits will be imposed on the designation as conditions within the Rongotai Ridge area.

There are no privately owned areas adjacent to the airport zone at the base of the hill that would be particularly sensitive to development of this land.

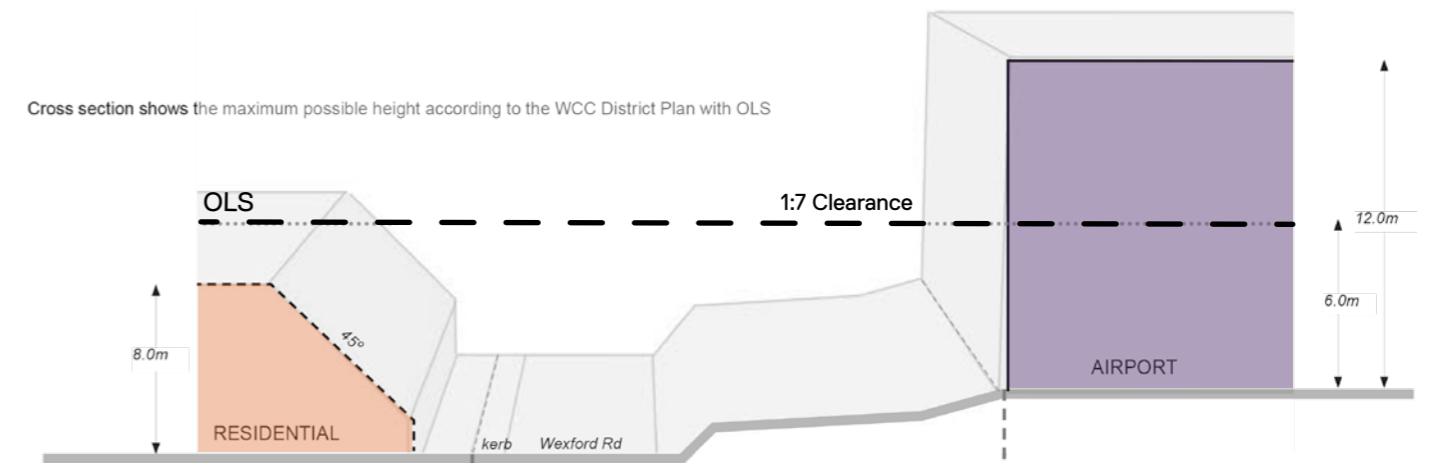
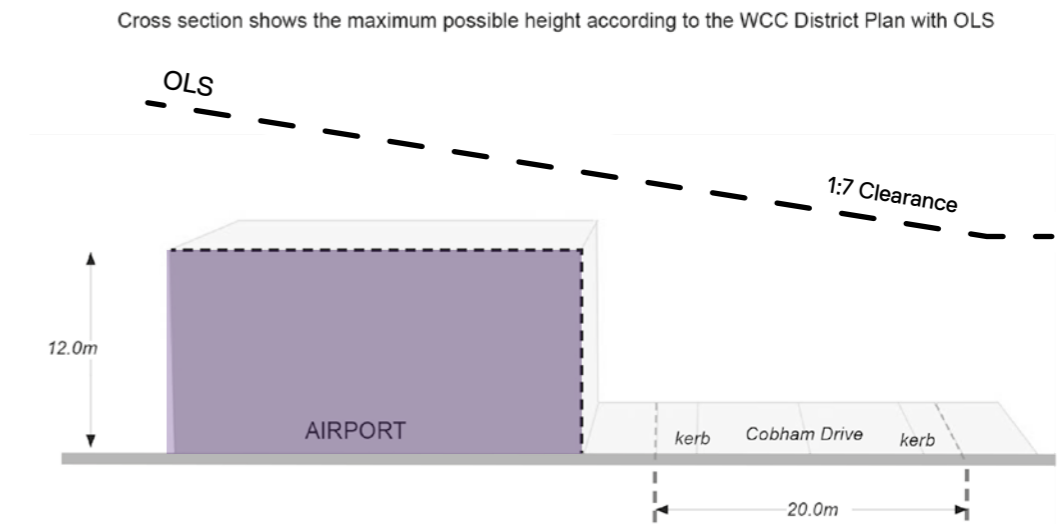
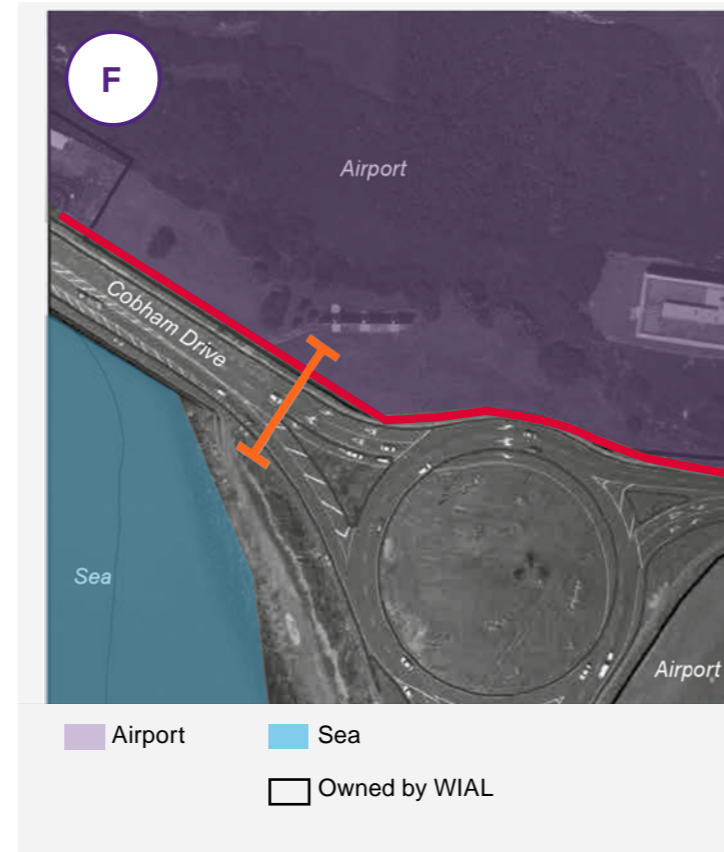
The primary consideration will be the visual effects from the public space of the road network and the landscape represented by Wexford Hill itself. The coastal edge is soon to benefit from a new cycleway and coastal path which will enhance the amenity offered to the public in this area.

The southern boundary that is opposite to Outer Residential zoning has a ground level that is approximately 3m higher than Wexford Road and the properties on the southern side. The lower land adjacent to Cobham Drive has potential for development and is highly visible from the coastal public land and roads.

DESIGNATION RECOMMENDATION

Consistent with WCDP - 12m building height

KEY - Assessment area location



WIAL DESIGNATION PLANNING

RECOMMENDATION - SOUTH COAST AREA

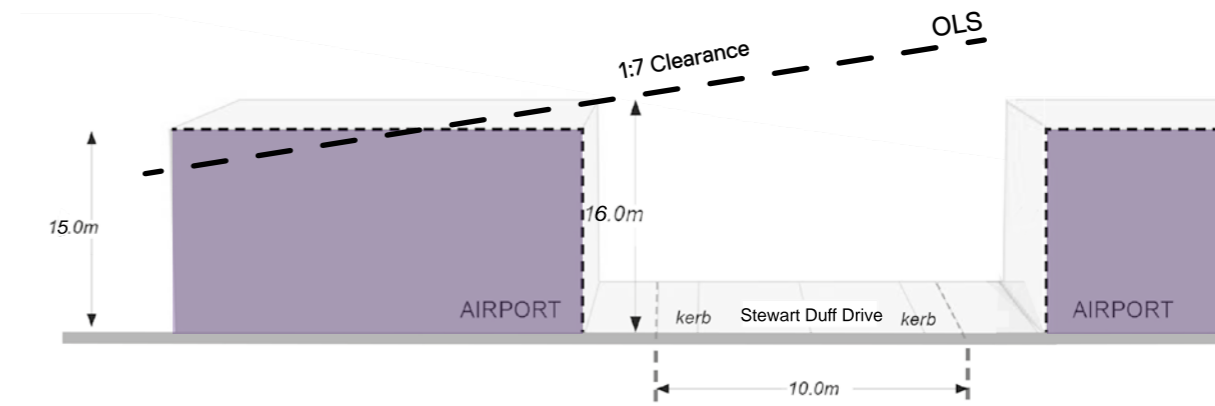
The South Coast Area is located at the south-eastern end of the airport, providing a secondary entrance to the airport. The area is used for a variety of purposes associated with the airport, and is adjacent to the Moa Point residential area and the south coast environmental area.

Within this area buildings are currently a permitted activity, up to a height of 15m. Achieving the maximum building height in this area is constrained by the OLS. It is proposed that the designation conditions for this area impose the same height limit as the existing permitted activity, consistent with the proposal for Terminal Area Zone B.

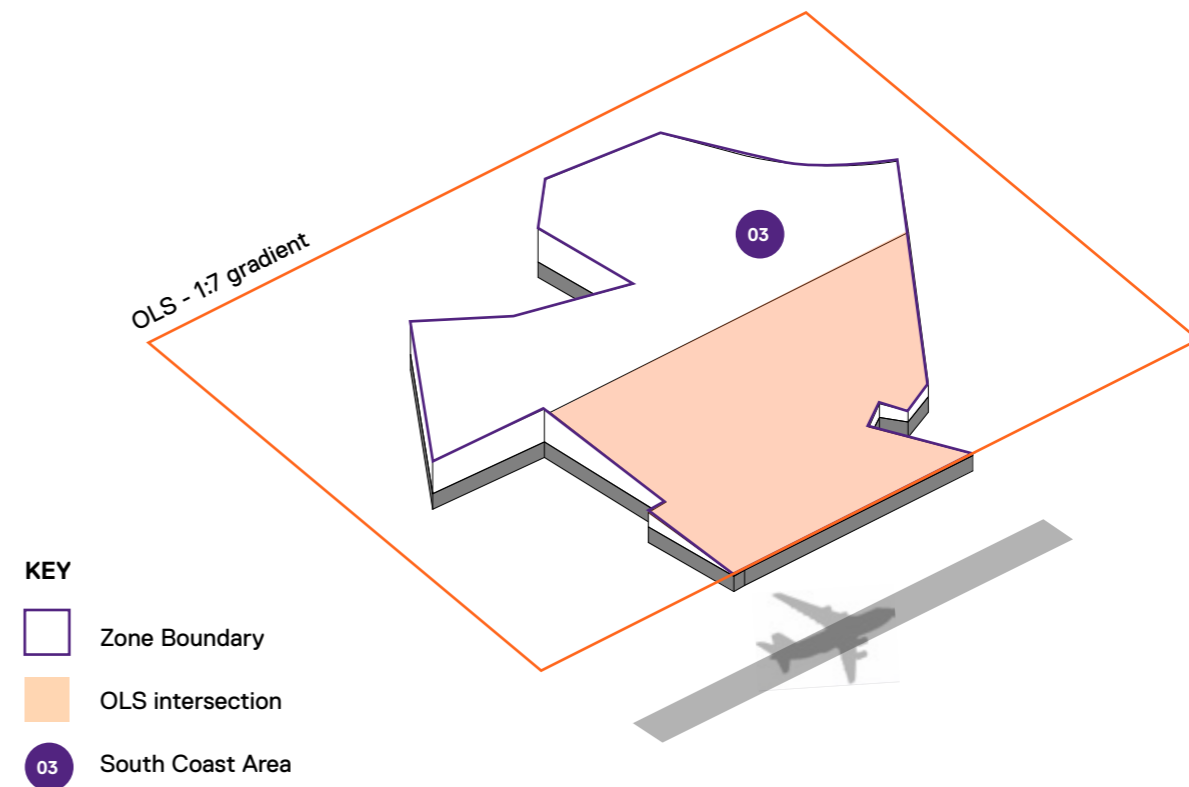
Other than the residential neighbour on Moa Point Road, there are no other privately owned areas adjacent to the airport zone. The key consideration for any development in this location will be the gateway to the airport and relationship with the natural character of the south coast.

DESIGNATION RECOMMENDATION

Consistent with WCDP - 15m building height; conditions to maintain buffer between the airport and coastal area.



KEY - Assessment area location



6.0 Appendix



WIAL DESIGNATION PLANNING

ASSESSMENT LOCATIONS - SITE IMAGES



Photo view looking west over to airport from Strathmore area



Photo view at boundary between residential and airport land on Broadway



Photo view Coutts Street with airport to the left. The cycleway to the airport underpass is visible



Photo view looking south along Tirangi Road

WIAL DESIGNATION PLANNING

ASSESSMENT LOCATIONS - SITE IMAGES



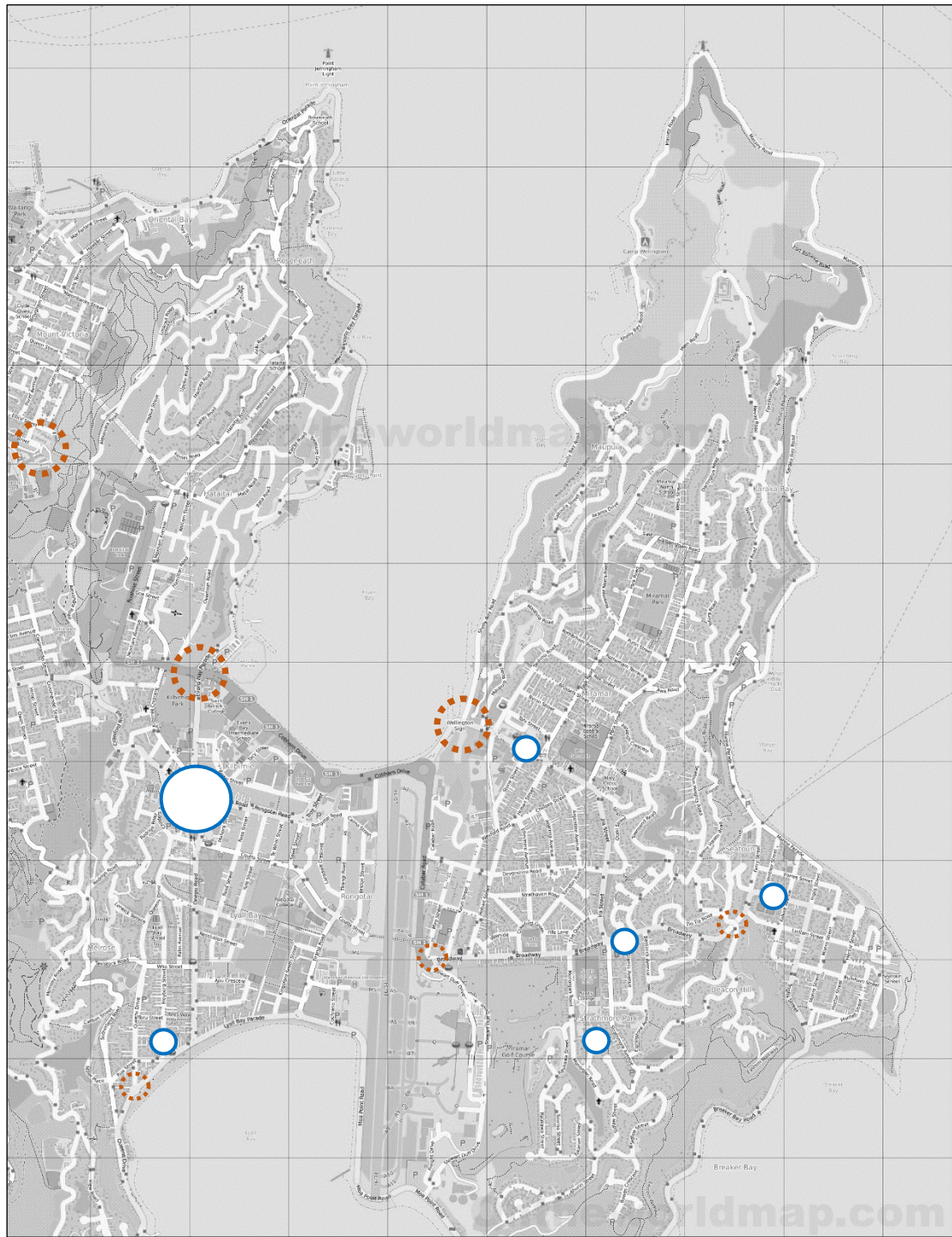
Photo view north from Moa Point Road towards Stewart Duff Drive







Photo view south from Cobham Drive towards Calabar Road



Photo view west along Wexford Road - the airport land is uphill to the right. The dashed red lines show approx road boundary



-  Subregional Town Centre
-  Local Centre
-  Major gateway
-  Minor Gateway

