

# Wellington Airport Notice of Requirement Input Airport Master Planning Setout

24 September 2020

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AIRPORT





This report provides information for the Notice of Requirement associated with land adjacent to Wellington Airport.

The information includes the layout geometry for the proposed southern, eastern and northern boundary as planned for the Wellington Airport Master Plan.

The setout is at a Master Planning level of accuracy and will therefore be subject to enhancement and design within the extents of the boundaries proposed.

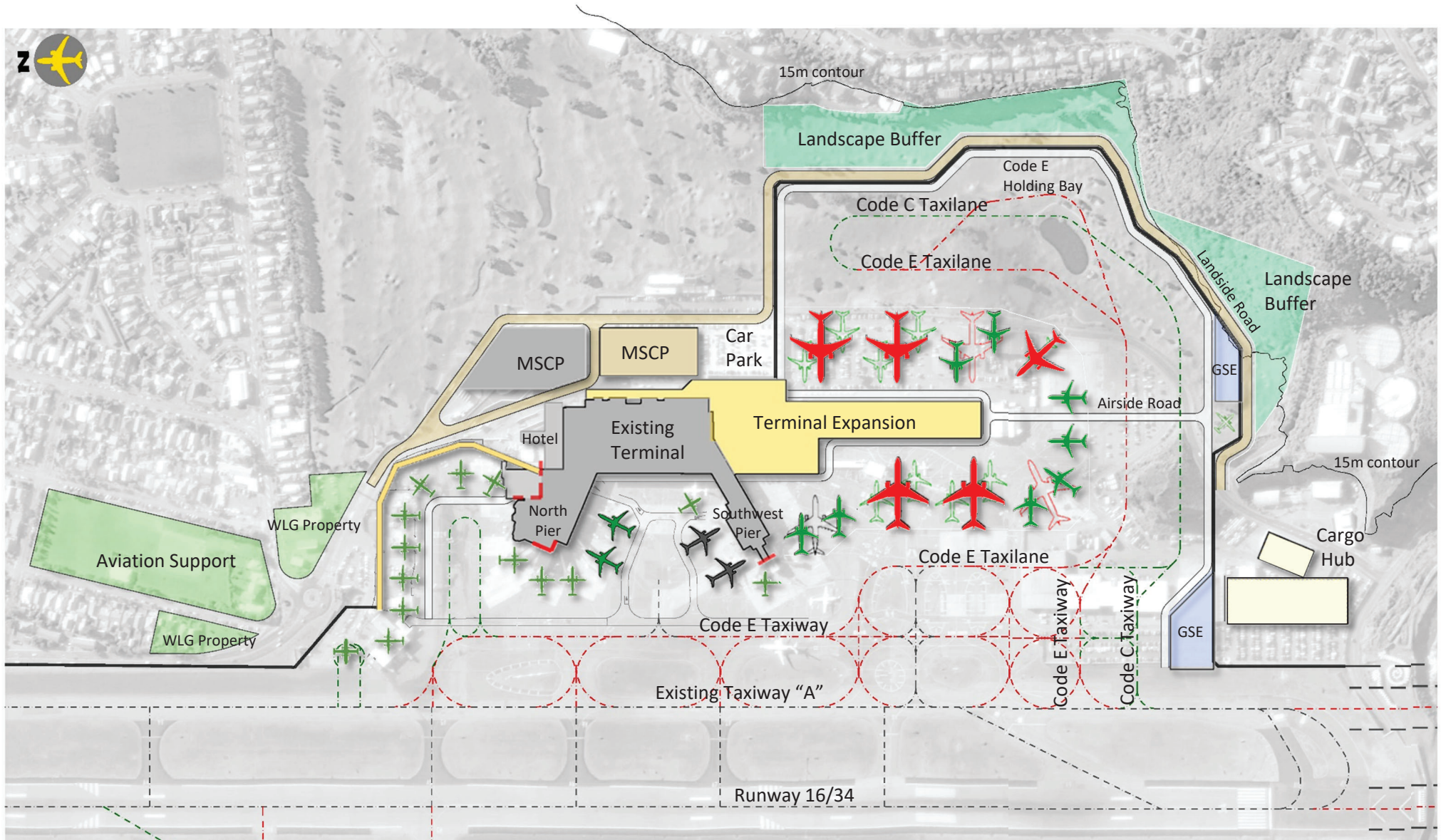
The contents of this report include:

1. Master Plan Setout Overview
2. Southern Boundary Extent
3. Eastern Boundary Extent
4. Northern Boundary Extent

WIAL advised that the 15m contour should be retained as a hard constraint for the airfield set out. This is reflected as a 15m contour line on the following drawings.

# Master Plan Setout Overview

The Wellington Airport Master Plan based on a demand scenario of 12 million passengers per annum (MPPA) is illustrated below:



The key drivers are based on a combination of regulatory requirements and airport planning and operational allowances. Key planning parameters are identified as follows:

ID	Description	Boundary affected	CAA NZ Minimum Standard (m)	Airbiz Preferred Dimension (m)	Master Plan Dimension Used (m)	Notes
<b>RUNWAY AND TAXIWAY</b>						
1	Runway to Taxiway A (Code 4E Non-instrument)	Eastern	107.5	107.5	107.5	The existing dimension (107.5m) is compliant for Non-Instrument Runway Operations. WIAL has a dispensation for Instrument operations on Taxiway A also.
2	Taxiway A to Taxiway B (Code E - E)	Eastern	76.0	76.0	76.0	The location of Taxiway B is such that should the dispensation noted above be removed, Taxiway B could provide Code E Instrument operations compliant with CAA standards.
3	Taxiway to Taxiway (Code E - E)	Eastern	76.0	76.0	76.0	New development
4	Taxilane to Taxilane (Code E – C)	Eastern, Southern and Northern	58.0	58.0	58.0	New development
5	Taxilane clearance (Code E)	Eastern, Southern and Northern	40.0	40.0	40.0	Minimum separation between aircraft and object (i.e. to road, fence, etc)



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ID	Description	Boundary affected	CAA NZ Minimum Standard (m)	Airbiz Preferred Dimension (m)	Master Plan Dimension Used (m)	Notes
<b>APRON AND AIRCRAFT PARKING STANDS</b>						
6	Code E (MARS)* stand depth	Eastern	n/a	n/a as depth is aircraft specific	90.0	Allowance for 77m long aircraft (i.e. B777-9) plus 13m tug zone
7	Code E (MARS)* stand width	Eastern, Southern and Northern	Based on meeting wingtip clearances	78.5	76.5	Compliant but below optimum to reflect constrained site requiring use of minimum wingtip clearances (refer below)
8	Code C turboprop stand depth – free manoeuvring	Southern	n/a	34.2	30.5m	Allowance for Q300/ATR-72 to reflect site constraints
9	Code C wingtip clearance	Eastern, Southern and Northern	4.5m	6.5m	4.5m	Reduced to reflect site constraints. 6.5m preferred for rear door apron boarding, GSE manoeuvring and bussing
10	Code E wingtip clearance	Eastern, Southern and Northern	7.5m	10m	7.5m	Reduced to reflect site constraints. 10m preferred for rear door apron boarding, GSE manoeuvring and bussing
11	Terminal Pier width reserve	Eastern	n/a	n/a	40m	Allowance for pier depth with lounges and catering for aircraft stands on both sides
12	Airside road width	Eastern and Southern	n/a	10m	8 - 10m	Allows for all GSE including freight, busses, etc.

\* MARS stand refers to Multi-Aircraft Ramp System – this type of stand provides the ability for 1 Code E (widebody) aircraft to be accommodated or 2 smaller Code C (narrowbody) aircraft on the same stand.

# Southern Boundary Layout

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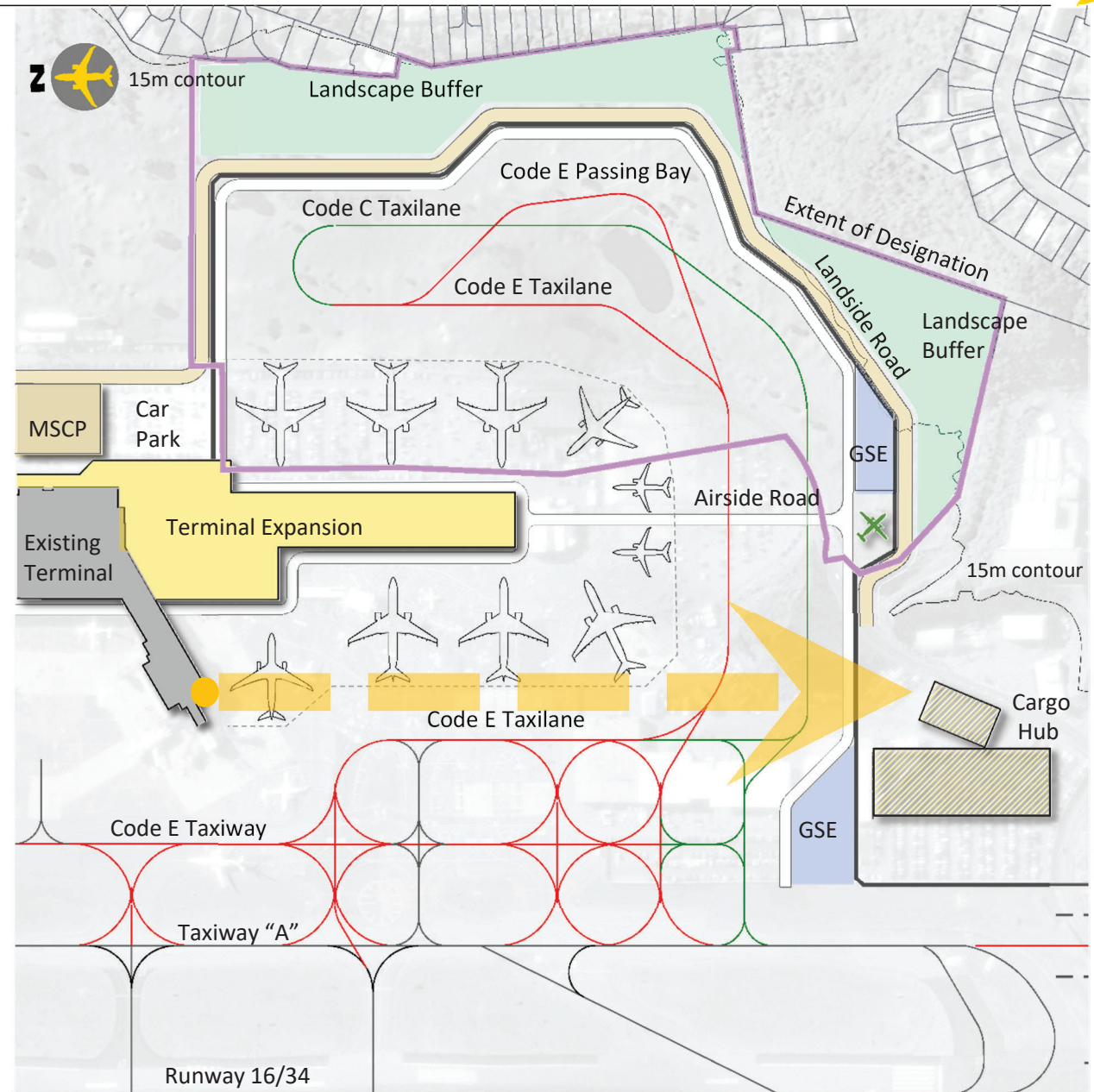
The southern extent is impacted by:

- The existing terminal building (south-west pier)
- the number of aircraft parked across the apron
- the dual taxilane system <sup>(1)</sup>
- the taxilane clearances
- remote stand parking requirements for Code C turboprops <sup>(2)</sup>
- additional area for operational requirements such as airside roads and GSE storage <sup>(3)</sup>
- Boundary fencing and buffer areas

(1) A dual taxilane system is required to provide two directional flows in and out of the cul-de-sac to the east of the terminal expansion. The configuration allows for simultaneous operations of 1 Code E and 1 Code C; or 2 Code C.

(2) This parking position for turboprops is required to satisfy the assessed demand requirements at 12 million passengers. The space required for the parking stand is the determining factor of the further southerly extent south of the airside road.

(3) GSE storage area requirements are calculated based on the stand demand and GSE storage area requirements per stand following International Air Transport Association (IATA) methodology. The dimensions for this area are flexible but have been adapted to suit the determining requirement from the turboprop parking position.





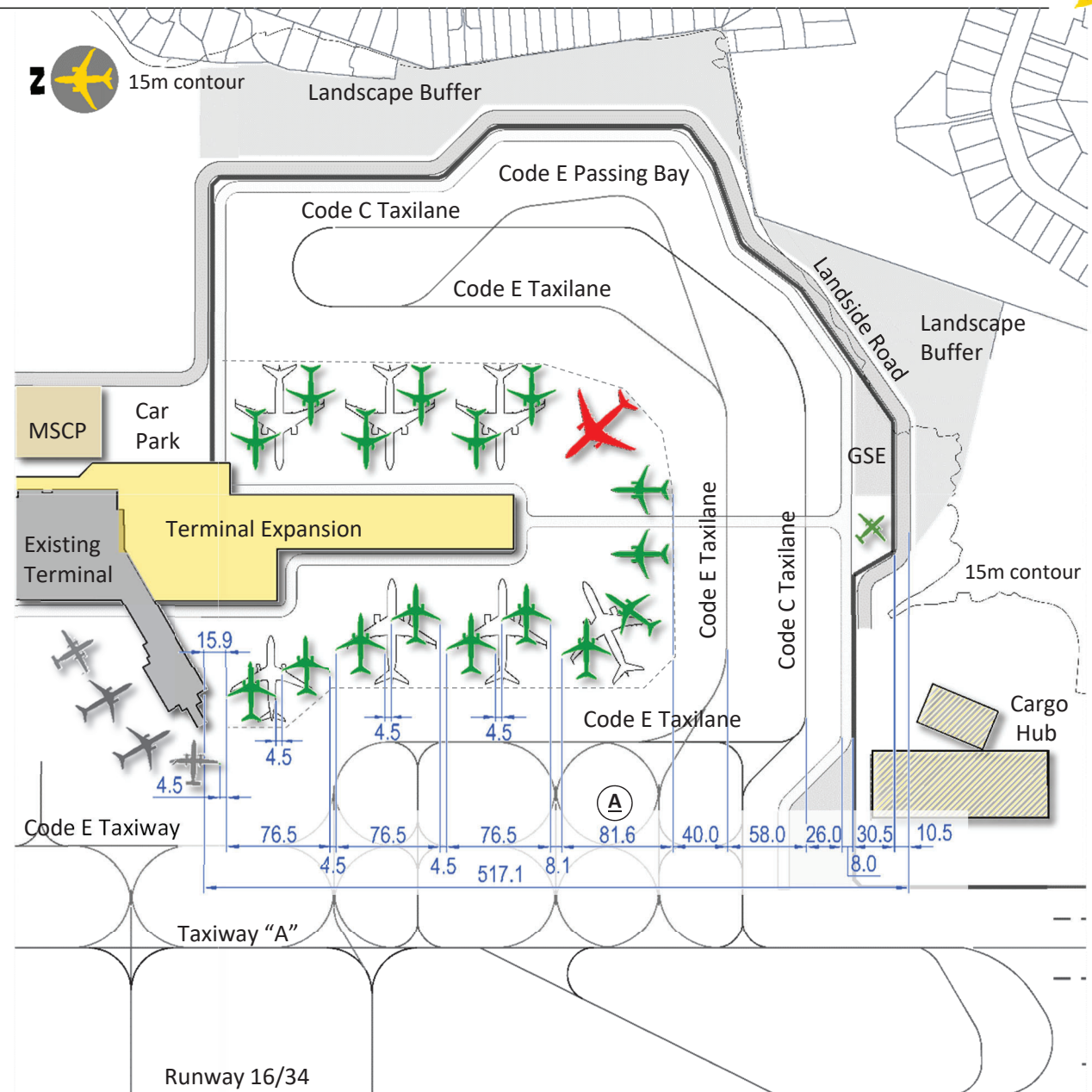
# Southern Boundary Extent

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The dimensions defining the southern boundary extents are illustrated opposite.

- Green aircraft are Code C (narrowbody)
- Red aircraft are Code E (widebody)
- Outline aircraft represent MARS stands (refer note on page 5)



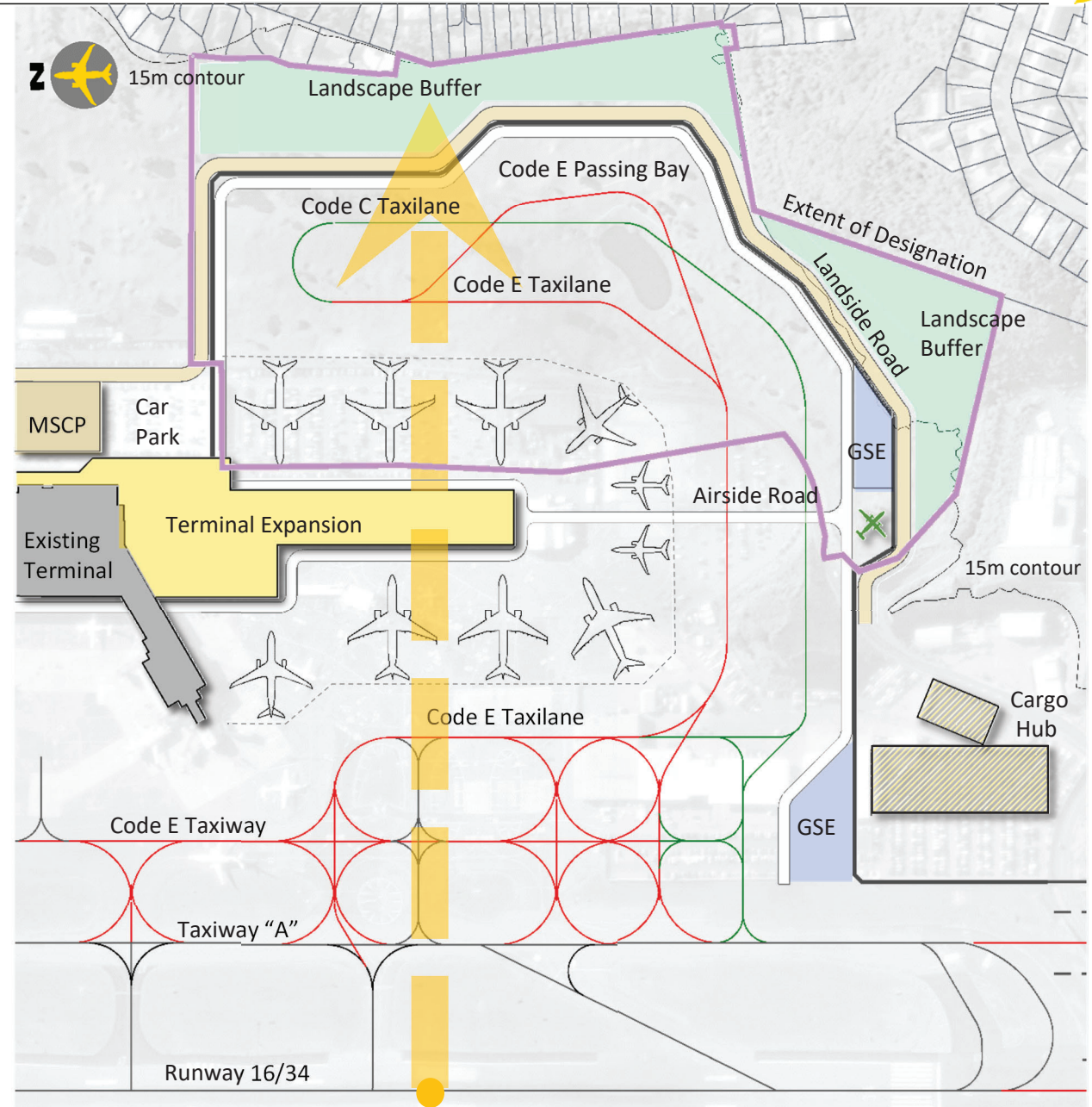
**A** Stand width (81.6m) and associated wingtip clearance (8.1m) are larger than those prescribed in items 7 (76.5m) and 9 (4.5m) on page 5 due to the operational/manoeuvring complexity of this stand which requires more space.

# Eastern Boundary Layout

The eastern extent is impacted by:

- The runway to taxiway system
- The taxiways and taxilane system <sup>(1)</sup>
- The apron depth on both sides of the terminal pier
- The terminal pier width
- The taxilane clearances
- Allowance for airside roads
- Boundary fencing and buffer areas

(1) The dual taxilane system is required to be continued to the east of the terminal expansion to service the cul-de-sac. The configuration allows for simultaneous operations of 1 Code E and 1 Code C; or 2 Code C. However, in addition space for a passing bay is protected to allow for the movement of 2 Code E aircraft in the cul-de-sac.

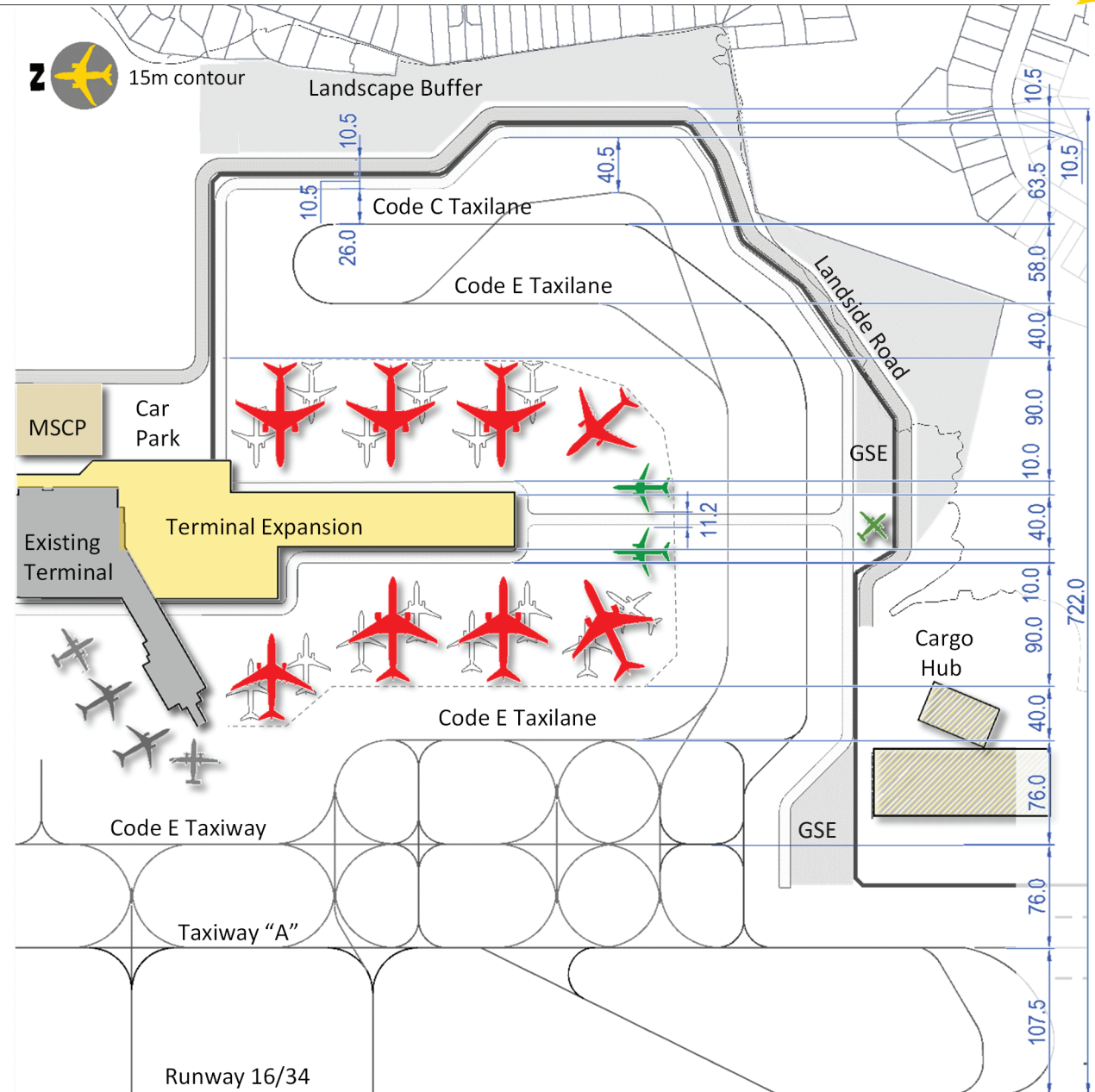




# Eastern Boundary Extent

The dimensions defining the eastern boundary extents are illustrated opposite.

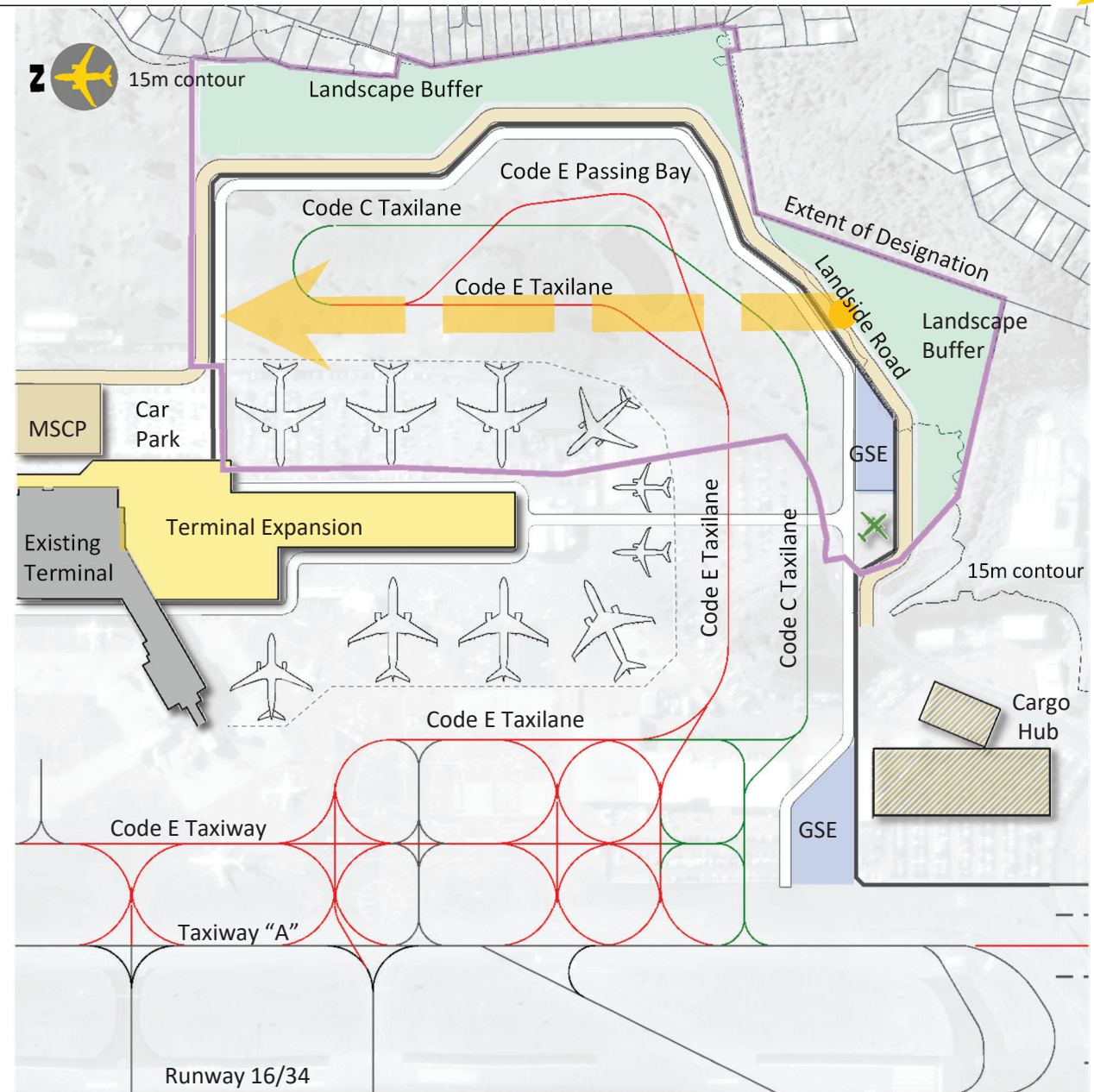
- Green aircraft are Code C (narrowbody)
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# Northern Boundary Layout

The northern extent is impacted by:

- The 15m contour (WIAL advised hard constraint)
- Landside boundary road reserve
- Boundary fencing and buffer areas
- Airside boundary road
- the dual taxilane system
- the taxilane clearances
- the number of aircraft parked across the apron





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