



Pyrmont Peninsula Place Strategy

Aviation Assessment

NSW Department of Planning, Industry and Environment

29 September 2021

→ **The Power of Commitment**



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1. Introduction

1.1 Purpose of this report

The purpose of this report is to support the implementation of the Pymont Peninsula Place Strategy (PPPS) by providing an assessment of the impact of building heights on the surrounding airspace.

1.2 Scope and limitations

GHD has prepared this report for SJB Planning, and it may only be used and relied on by SJB Planning, for the purpose agreement between GHD and SJB Planning, as set out in section 1.1 of this report.

GHD otherwise disclaims responsibility to any person other than SJB Planning, arising in connection with this report. GHD also excludes implied warranties and conditions to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions, and recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions, and recommendations in this report are based on assumptions made by GHD described in this report (refer section 1.3 of this report). GHD disclaims liability arising from any of the assumptions being incorrect.

1.3 Assumptions

This report has been developed based on building location and height information provided by SJB Planning, which GHD has referenced in Section 4. GHD assumes these are the maximum building heights across the whole Pymont Peninsula Place Strategy site. GHD has used these building heights and locations to demonstrate reporting requirements that may be required for any site within Pymont Peninsula Place.

2. Regulations

Infrastructure within the vicinity of airports is subject to government regulations that maintain a safe operating environment for aircraft.

2.1 Airports Act 1996

The Airports Act 1996¹ establishes the regulatory arrangements that apply to airports formerly owned and operated on behalf of the Commonwealth by the Federal Airports Corporation, including Sydney Airport. Part 12 of the Airports Act 1996 details the legislation applicable to protecting the prescribed airspace defined by the regulations in the interests of safety, efficiency, or regularity. For this assessment, the development of the Pyrmont Peninsula Place Strategy is considered a controlled activity.

2.2 National Airports Safeguarding Framework

The National Airports Safeguarding Framework² aims to improve safety outcomes by ensuring aviation safety is considered in land use planning decisions through jurisdiction guidelines for safety-related issues and improving community amenity by minimising aircraft noise-sensitive developments near airports.

Guideline F – Managing the Risk of Intrusions into the Protected Operational Airspace of Airports provides guidance to address intrusions into the operational airspace by tall structures, such as buildings and cranes as trees in the vicinity of airports.

3. Sydney Airport Prescribed Airspace

Sydney Airport's prescribed airspace, as defined by the Airports Act 1996, includes the following surfaces:

Obstacle Limitation Surface

The obstacle limitation surface (OLS) is the airspace surrounding an airport that must be protected from obstacles to ensure aircraft flying in good weather during the initial and final stages of flight or in the vicinity of the airport can do so safely.

Procedures for Air Navigation Services – Aircraft Operations Surfaces

The Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS) surfaces states that the airspace surrounding an airport must be protected from obstacles to ensure aircraft flying in poor weather and guided solely by instruments can do so safely.

Other Surfaces

Other surfaces are defined to protect the integrity of ground-based air navigation signals, such as radar, and the visibility of airport safety lights, such as high-intensity approach lights. This infrastructure assists pilots to navigate safely in the vicinity of the airport and on approach to the runway.

GHD has included copies of Sydney Airport's prescribed airspace plans in Appendix A.

¹ Airports Act 1996 | Australian Government | Registered 15 January 2021 | <https://www.legislation.gov.au/Details/C2021C00019>

² National Airports Safeguarding Framework | Department of Infrastructure, Transport, Regional Development and Communications | https://www.infrastructure.gov.au/aviation/environmental/airport_safeguarding/nasf/nasf_principles_guidelines.aspx

4. Assessment of Pyrmont Peninsula Place Strategy

The Pyrmont Peninsula lies within the extents of the Sydney Airport Prescribed Airspace. All development in the area is required to comply with the requirements of the regulations and limitations in Sections 2 and 3 above. For the purposes of this report, The Star and UTS Key Sites (as identified by the Pyrmont Peninsula Place Strategy) have been identified as examples for a more detailed assessment concerning their respective anticipated maximum heights and potential impact on aviation constraints (noting that the heights detailed for The Star and UTS sites are as proposed in their master plans. These heights are not endorsed by DPIE, and future development outcomes on these sites will be determined through further development assessment processes).

- Star Casino Site
 - Northern Element – maximum height 110m AHD
 - 20-80 Pyrmont Street, Pyrmont
 - 55 Pirrama Street, Pyrmont
 - 5 Edward Street, Pyrmont
 - Southern Element – maximum height 140m AHD
 - 37-69 Union Street, Pyrmont
- UTS Site
 - Site 13-15 – maximum height 79m AHD
 - 622-646 Harris Street, Ultimo

GHD plotted the locations and heights provided by SJB Planning on 6th May 2021 against the OLS and PANS-OPS surfaces to determine any potential infringement. Our findings are summarised in Table 1 below.

Table 1 *Assessment of Aviation Height Constraints*

Site	Height of Site (m AHD)	Height of OLS at Site (m AHD) (approx.)	Height of PANS-OPS at Site (m AHD) (approx.)	Impact
Star Casino Site Northern Element	110	156	255	No impact of the proposed development on OLS or PANS-OPS
Star Casino Site Southern Element	140	156	255	No impact of the proposed development on OLS or PANS-OPS
UTS Site 13-15	79	148	270	No impact of the proposed development on OLS or PANS-OPS

The height limitation across all these sites for the radar terrain clearance is 244m AHD. All the sites are below this height limitation.

The outer horizontal surface of the OLS extends over the majority of the development site and lies at a constant 156m AHD. The Ultimo sub-precinct, and the southern section of the Wentworth Park sub-precinct, have the lowest height limitation as the site lies beneath the conical surface of the OLS. These height limitation bands are shown in Figure 1 below.

The Pyrmont Peninsula Place Strategy development key sites tabled above lie outside the extents of the Navigational Aids Protections Surfaces, the High Intensity Approach Lighting Light Plane Protection Surfaces, and the Precision Approach Path Indicator Light Plane Protection Surfaces. As such, there is no identified impact of these sites on the mentioned protection surfaces.

Figure 1 below shows the Pyrmont Peninsula sub-precincts locality in relation to the obstacle limitation surface, and the radar terrain clearance. Refer to Charts 2A and 2B PANS-OPS Protection Surfaces Combined Current IAL's and STAR's in Appendix A for the PANS-OPS plans as available from Sydney Airport.

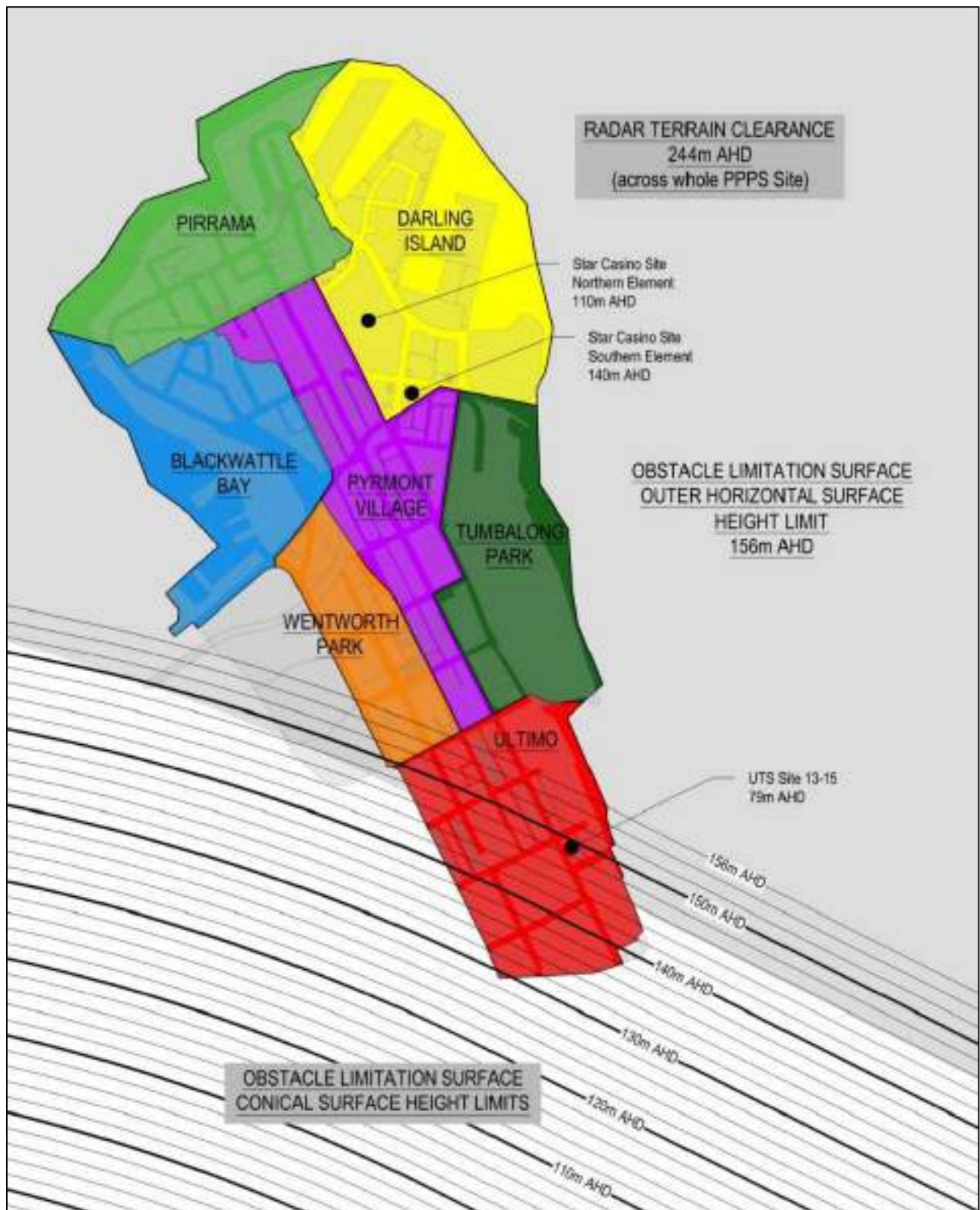


Figure 1 Pyrmont Peninsula Place sub-precincts with OLS and Radar Terrain Clearance

Table 2 below summarises the height limitations shown in Figure 1 and those associated with the PANS-OPS that apply to each sub-precinct within Pyrmont Peninsula Place.

Table 2 Aviation Height Constraints across Sub-Precincts

Sub-Precinct	Height of OLS over Sub-Precinct (m AHD) (approx.)	Applicable OLS Surface	Height of PANS-OPS over Sub-Precinct (m AHD) (approx.)	Height of Radar Terrain Clearance over Sub-Precinct (m AHD)
Pirrama	156	Outer Horizontal	249 – 276	244
Darling Island	156	Outer Horizontal	250 – 295	244
Blackwattle Bay	156	Outer Horizontal	249 – 260	244
Pymont Village	156	Outer Horizontal	240 – 270	244
Tumbalong Park	156	Outer Horizontal	249 – 290	244
Wentwork Park	149 – 156	Conical and Outer Horizontal	230 – 250	244
Ultimo	129 – 156	Conical and Outer Horizontal	229 – 280	244

5. Reporting of Tall Structures

5.1 CASA Advisory Circular 139-08

The Civil Aviation Safety Authority (CASA) Advisory Circular (AC) 139-08 (v2.0, 2018) Reporting of tall structures and hazardous plume sources³ details the requirements for reporting tall structures to either Airservices Australia or the Royal Australian Air Force (RAAF).

AC 139-08 Section 2.2 states that construction of tall structures where the top is 100m or more above ground level or affects the obstacle limitation surface of an aerodrome is to be reported by the owner, operator or controller to Airservices Australia for inclusion in the central database of tall structures. Further, RAAF must be notified of low-level structures with a height of 30m or more above ground level within 30km of an aerodrome.

For example, based on Google Earth, the local ground level at the Star Casino sites is approximately 10m AHD and the UTS sites is 8m AHD. In this instance, all the key sites included in this desktop study must be reported to RAAF.

As an example, Star Casino Site Southern Element must be reported to Airservices Australia as the proposed development stands over 100m above ground level.

Reporting of tall structures is done via the Vertical Obstacle Notification Form on Airservices Australia's website at the following address:

<https://www.airservicesaustralia.com/industry-info/aeronautical-information-management/part-175/>

5.2 Sydney Airport Application

Any development site that infringes the OLS, Radar Terrain Clearance, or PANS-OPS, is required to be reported to Sydney Airport for their consideration and approval. This can be done via the Sydney Airport Application for Approval of Development Application form on their website at the following address:

<https://www.sydneyairport.com.au/corporate/planning-and-projects/airspace-protection-tile>

Sydney Airport will liaise with CASA, Airservices Australia and any relevant Building Authority to determine the satisfaction of the application.

³ CASA Advisory Circular 139-08 Reporting of tall structures and hazardous plume sources | v2.0 March 2018 | <https://www.casa.gov.au/files/139c08pdf>

6. Crane Usage

The use of cranes to construct the development could infringe on the obstacle limitation surface and the radar clearance surfaces. Crane use that infringes these surfaces are required to be reported to Sydney Airport for approval. Reporting can be done via the Sydney Airport Application for Approval of Crane Operation form on their website at the following address:

<https://www.sydneyairport.com.au/corporate/planning-and-projects/airspace-protection-tile>

The Application for Approval of Crane Operation form is to be submitted to Sydney Airport at least 28 days prior to commencement of crane operations.

7. Reporting Examples

The following outlines reporting requirements that would apply for the key sites as assessed in Section 4. These represent the reporting requirements that would be required for any site over Pyrmont Peninsula Place that may have the same impacts described in Sections 5 and 6 above.

Star Casino Site – Northern Element

RAAF will need to be notified as this site will stand over 30m above local ground level and is within 30km of Sydney Airport. Refer Section 5.1 for reporting form via Airservices Australia.

Star Casino Site – Southern Element

Airservices Australia will need to be notified as this site stands over 100m above local ground level. RAAF will also need to be notified as this site will stand over 30m above local ground level within 30km of Sydney Airport. Refer Section 5.1 for reporting form via Airservices Australia.

UTS Site 13-15

RAAF will need to be notified as this site will stand over 30m above local ground level and is within 30km of Sydney Airport. Refer Section 5.1 for reporting form via Airservices Australia.

8. Summary and Recommendations

This report outlines the height limitations that apply across the wider Pyrmont Peninsula Place Strategy site with respect to aviation constraints, and highlights impacts and reporting requirements of some example key sites within Pyrmont Peninsula.

The developer of the sites is responsible for reporting of these structures to the relevant parties. The following approval processes are required for all sites within the proposed Pyrmont Peninsula Place Strategy development to comply with the Airports Act 1996 and the National Airports Safeguarding Framework Guideline F.

Prescribed Airspace Infringement

Sites that infringe the prescribed airspace must be reported to Sydney Airport. Refer Figure 1, Table 2 and Section 5.2. Use of cranes that may infringe the prescribed airspace must be reported to Sydney Airport. Refer Section 6.

Structures Over 30m Above Ground Level

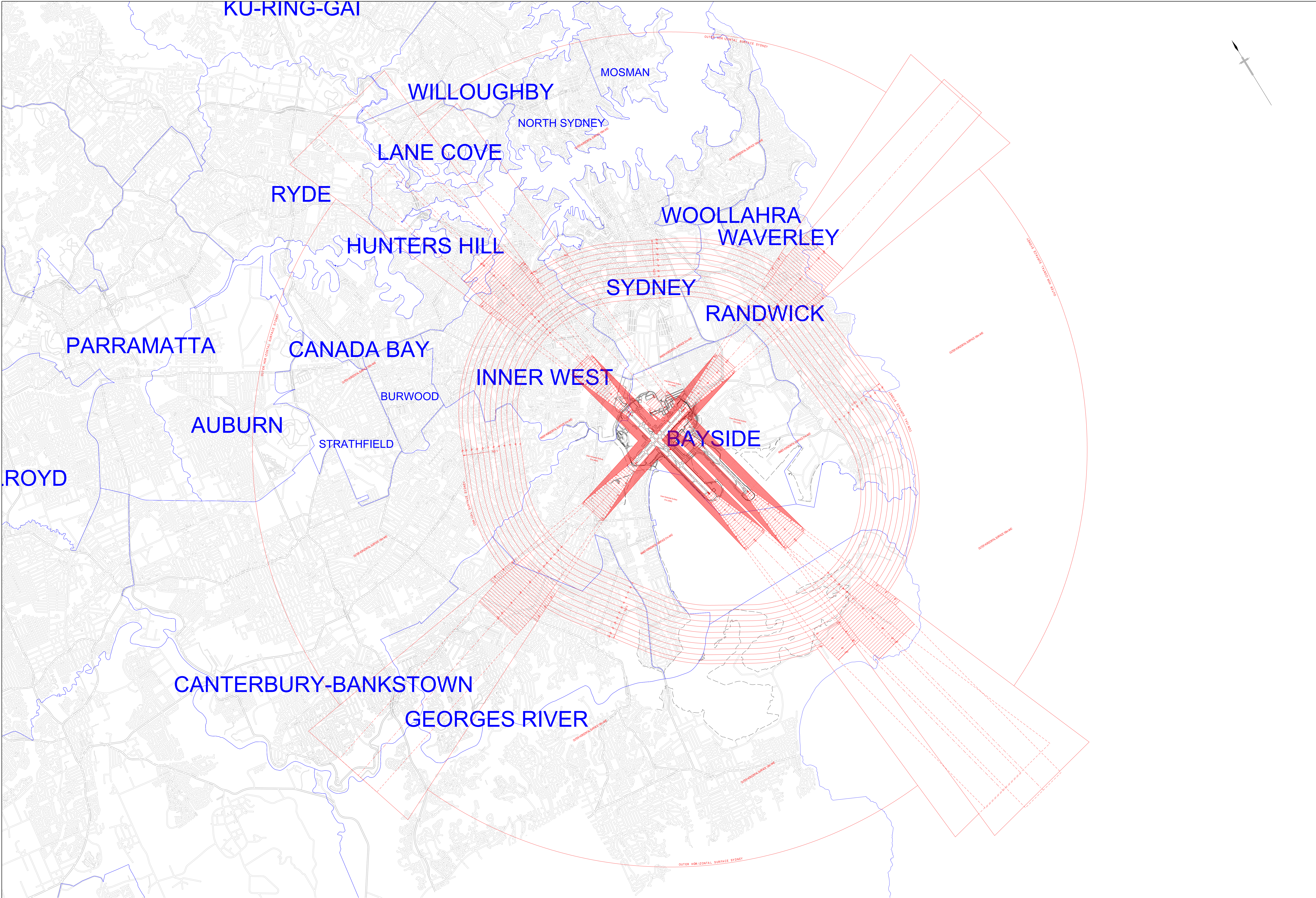
Structures with a height over 30m above ground level must be reported to RAAF. Refer Section 5.1.

Structures Over 100m Above Ground Level

Structures with a height over 100m above ground level must be reported to Airservices Australia. Refer Section 5.1.

Appendix A

Sydney Airport Prescribed Airspace Plans



WARNING
Underground Services, if shown on this plan, are those known to exist and are shown by indication only. The exact location should be ascertained prior to excavation work. Services & Detail not within Airport boundaries should be checked with the relevant Authority to determine currency.

Origin of Coordinates: Universal Transverse Mercator MGA94 Zone 56
TS10951 E 334059.750 N 6245948.127
Lat S33° 54'49.7758" Long E151°12'18.06374"
TS04138 E 337457.696 N 6239144.879
Lat S33°59'04.92331" Long E151°14'25.11771"
A.D.P. (Aerodrome Datum Point)
- Geographical Coordinates Lat S33°56'45.60078" Long E151°10'37.59888"
All coordinates shown are based on GDA94 / WGS84
- MGA94 Coordinates E 331542.904 N 6242334.670

	PNB	Amended to reflect changes to MOS Part 139 August 2020		05/02/21	5
	PNB	Runway 07 Takeoff height amended		11/09/18	4
	PNB	Prescribed Airspace declared by DIRD		20/03/15	3
c13242	SD	General update		01/10/07	2
c3788	SD			01/07/96	1



SYDNEY AIRPORT PRESCRIBED AIRSPACE
OBSTACLE LIMITATION SURFACES

1:50000
FSS 6934
1 B1

NOTE: ALL DIMENSIONS ARE IN METRES UNLESS SPECIFIED OTHERWISE

