

3 April 2024
Our File Ref: B22199AL001
Contact: Bridget Wouts

Project Manager
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Attention: Cameron Hay

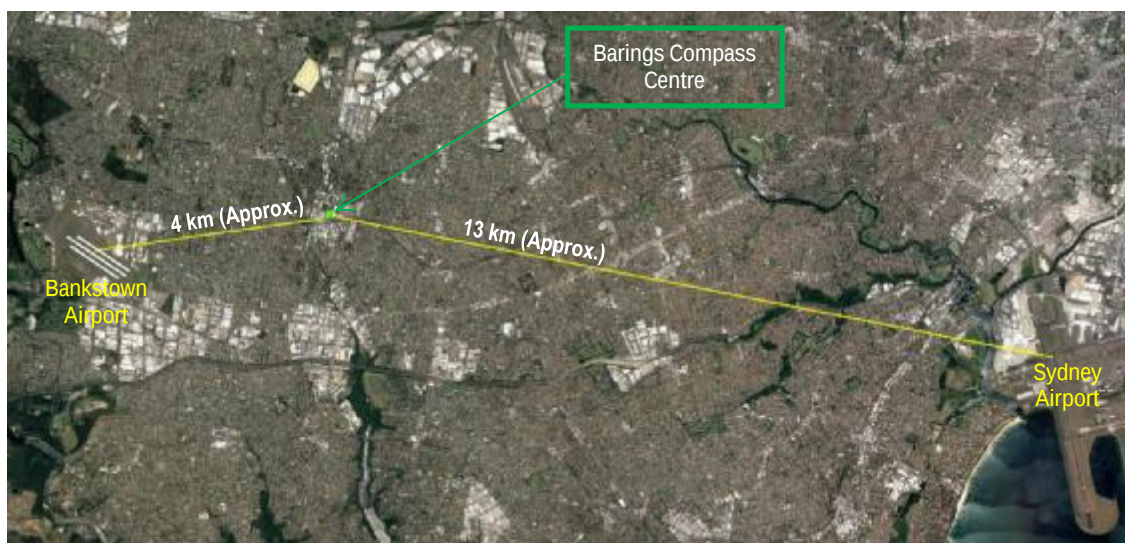
**RE: BARINGS COMPASS CENTRE DEVELOPMENT
AVIATION ASSESSMENT**

REHBEIN Airport Consulting (now known as L+R Airport Consulting) was engaged by Altis Property Partners (Altis) (now known as Barings) to review the airspace constraints associated with Bankstown Airport and Sydney Airport as they relate to the proposed Barings Compass Centre development in the Bankstown Central Business District (CBD).

1. PROPOSED BARINGS COMPASS CENTRE

The proposed Barings Compass Centre development is located at 83-99 North Terrace in the Bankstown CBD. The proposed development site is approximately 4 km east northeast of Bankstown Airport and 13 km west northwest of Sydney Airport as shown on **Image 1** below.

Image 1: Barings Compass Centre Location



Source: Google Earth Pro

Altis provided the PTW Architects Development Application drawing set Revision B dated 20.03.2024 documenting the maximum elevation of the proposed development at 107.95 m AHD. Altis wishes to seek an approval for a controlled activity under the *Airports (Protection of Airspace) Regulations 1996* for buildings to a maximum elevation of 108.0 m AHD across the site.

2. PRESCRIBED AIRSPACE

The proposed development site is within the lateral extents of the prescribed airspace associated with Bankstown Airport and Sydney Airport prescribed airspace.

2.1 Bankstown Airport Obstacle Limitation Surfaces (OLS)

2.1.1 Existing OLS

The proposed development site is within the extents of the Bankstown Airport OLS inner horizontal surface at 51.0 m AHD as illustrated on **Figure B22199/01**. The proposed development site at a maximum elevation of 107.95 m AHD would infringe the OLS inner horizontal by approximately 57 m.

2.2 Bankstown Airport PANS-OPS

A preliminary assessment of the proposed development against the PANS-OPS airspace associated with the existing published departure and approach charts (DAP 178 Effective 21 March 2024) as follows:

- SID Bankstown Nine Dep – RWY 11C/29C (Am 177);
- NDB RWY 11C (Am 178);
- NDB-A (Am 178); and
- RNP RWY 11C (Am 178).

The proposed development site is within the lateral extents of Bankstown Airport PANS-OPS protection surfaces for Instrument Departure and Approach Procedures:

- Circling A/B;
- Standard Instrument Departure (SID) Runway 11C & 29C;
- 25 NM MSA – ARP
- 25 NM MSA – NDB
- NDB Runway 11C;
- NDB-A; and
- RNAV-Z (GNSS) Runway 11C.

The proposed development site is not within the Visual Segment Surfaces (VSS).

REHBEIN Airport Consulting has reviewed the PANS-OPS over the proposed development site and estimated the lower PANS-OPS surfaces as shown on **Table 1** below and **Figures B22199/02 - 05**. The proposal must be sent to Airservices Australia for formal assessment and confirmation of any impacts on its procedures and facilities.

Table 1: PANS-OPS Surface Elevations

Bankstown Airport PANS-OPS		Proposed Development Site
Surface	Estimated Elevation	Maximum Elevation 107.95 m AHD
NDB-A final approach segment	108.2	Should remain below
Circling A & B	108.2	
SID Runway 11C/29C (Area 3)	142.6	
RNP Runway 11C missed approach segment	170	
NDB Runway 11C	Above SID	

2.3 Sydney Airport Prescribed Airspace

The proposed development site is within the declared Sydney Airport prescribed airspace. The limiting elevation is the Radar Lowest Sector Altitude (RLSALT) Surfaces (also known as Radar Terrain Clearance Chart or RTCC surfaces) at 152 m AHD, as shown on SACL drawing No FSS 6934 Sheet 7 (B1) available on the SACL website¹. This appears to be the lowest elevation of any of the Sydney Airport prescribed airspace over the site.

The RTCC is a critical tool for air traffic control to use when vectoring aircraft by radar, which is regular practice for routine operations at Sydney Airport. REHBEIN Airport Consulting understands from involvement with previous development proposals in the Sydney Basin that SACL is unlikely to support any penetration, even short-term, on the basis of the impact it would have on the ability of air traffic control to process aircraft safely and efficiently.

All other prescribed airspace surfaces published by Sydney Airport are either higher than the RLSALT and the OLS outer horizontal surface, or do not extend across the proposed development site.

Given the limiting elevations for the Bankstown Airport PANS-OPS airspace are much lower than either the Sydney Airport OLS or RLSALT elevations it is unlikely that there would be any potential for intrusions into Sydney Airport prescribed airspace. Nonetheless, it should be noted that any such intrusion would be very unlikely to be approved due to the impacts on Sydney Airport air transport operations.

2.4 Plume Rise

Plume rise is also a consideration in relation to penetration of the OLS and PANS-OPS. Aircraft in various stages of flight may be affected by exhaust plume of significant velocity. CASA has published an Advisory Circular *AC 139.E-02 v.1.0 Plume Rise Assessments*. The proponent may need to complete CASA Form 1247 *Application for Operational Assessment of a Proposed Plume Rise* with the relevant details once these are available and submit the form directly to CASA at the Office of Airspace Regulations (OAR) in order to commence the assessment process.

¹ <https://www.sydneyairport.com.au/corporate/planning-and-projects/airspace-protection-tile>

3. NATIONAL AIRPORTS SAFEGUARDING FRAMEWORK

The National Airports Safeguarding Framework (NASF) is a national land use planning framework that aims to:

- Improve community amenity by minimising aircraft noise-sensitive developments near airports including through the use of additional noise metrics and improved noise-disclosure mechanisms; and
- Improve safety outcomes by ensuring aviation safety requirements are recognised in land use planning decisions through guidelines being adopted by jurisdictions on various safety related issues.

All Guidelines can be found at www.infrastructure.gov.au.

NASF currently consists of nine (9) Guidelines, as follows. Each has been summarised for its relevance to the proposed development site.

3.1 Guideline A: Measures for Managing Impacts of Aircraft Noise

Guideline A can be used in the assessment of new development applications for noise sensitive uses.

The proposed development site is outside the extents of the Bankstown Airport and Sydney Airport approved Noise Exposure Forecast.

3.2 Guideline B: Managing the Risk of Building Generated Windshear and Turbulence at Airports

The purpose of this Guideline is to assist land use planners and airport operators in their planning and development processes to reduce the risk of building generated windshear and turbulence at airports near runways. Applicability of Guideline B is initially determined by the location of the 'assessment trigger area' around the runway, that is:

- 1200 m or closer perpendicular from the runway centreline (or extended runway centreline);
- 900 m or closer in front of runway threshold (towards the landside of the airport); and
- 500 m or closer from the runway threshold along the runway.

The proposed development site is approximately 4 km east northeast of Bankstown Airport and 13 km west northwest of Sydney Airport and therefore outside the windshear and turbulence assessment trigger areas.

3.3 Guideline C: Managing the Risk of Wildlife Strikes in the Vicinity of Airports

Guideline C pertains to the way in which existing land use is managed in the vicinity of airports with respect to the attraction of wildlife, particularly birds. Guideline C establishes buffer areas of 3 km, 8 km and 13 km of an airport.

The proposed development site is within the 8 km buffer area of Bankstown Airport and approximately 13 km from Sydney Airport.

3.4 Guideline D: Managing the Risk of Wind Turbine Farms as Physical Obstacles to Air Navigation

Guideline D provides guidance to State/Territory and local government decision makers, airport operators and developers of wind farms to jointly address the risk to civil aviation arising from development, presence and use of wind farms and wind monitoring towers.

The proposed development site does not include wind turbines.

3.5 Guideline E: Managing the Risk of Distraction to Pilots from Lighting in the Vicinity of Airports

NASF Guideline E provides guidance on the risk of distractions to pilots of aircraft from lighting and light fixture near airports. Advice for the guidance of designers and installation contractors is provided for situations where lights are to be installed within a 6 km radius (applied from the centre point of each runway) of a known aerodrome.

The *CASA Part 139 (Aerodromes) Manual of Standards 2019* Section 9.144: *Lights – requirements for zones* sets out the restrictions and degree of interference ground lights can cause as a pilot approaches and provides advice to lighting suppliers on the general requirements. The primary area is divided into four light control zones: A, B, C and D. These zones reflect the degree of interference ground lights can cause pilots as they approach.

The proposed development site is within the 6 km radius of Bankstown Airport. Lights within the 6 km radius will most likely be subject to the provisions of regulation 94 of the Civil Aviation Regulations 1988. This regulation allows CASA to authorise notice upon the owner of the place to remove or screen effectually the light where the light is likely to endanger the safety of aircraft, whether by reason of glare, or by causing confusion.

The proposed development site is outside the 6 km radius of Sydney Airport.

3.6 Guideline F: Managing the Risk of Intrusions into the Protected Operational Airspace of Airports

Guideline F is intended to address the issue of intrusions into the operational airspace of airports by tall structures, such as buildings, cranes or activities that could cause air turbulence affecting aircraft in flight.

This Guideline has been considered throughout **Section 2**.

3.7 Guideline G: Protecting Aviation Facilities – Communication, Navigation and Surveillance (CNS)

The purpose of Guideline G is to formalise the protection of CNS facilities in land use planning decisions. This Guideline provides land use planning guidance to better protect CNS facilities which support the system and processes in place by various agencies to safely manage the flow of aircraft into, out of and across Australian airspace. The Guideline also informs procedures which ensure development associated activities within Building Restricted Areas (BRA) of CNS facilities do not adversely affect the facility or cause interference for air traffic controllers or aircraft in transit.

The proposed development site must be submitted to Airservices Australia for any impacts to flight procedures or facilities which will be conducted as part of the controlled activity application assessment process.

3.8 Guideline H: Protecting Strategically Important Helicopter Landing Sites

Guideline H provides guidance to State/Territory and local government decision makers as well as the owners/operators of identified strategically important Helicopter Landing Sites (SHLS) for the ongoing operations and to ensure SHLS are not compromised by any proposed development. For the purposes of this Guideline, an SHLS is an area not located on an aerodrome.

Planning and responsible authorities should consider the proposed development against this Guideline.

3.9 Guideline I: Managing the Risk in Public Safety Zones at the Ends of Runways

Guideline I provides guidance on approaches for the application of Public Safety Areas (PSA) planning framework in Australian jurisdictions. The Guideline is intended to ensure there is no increase in risk from new development and assist land-use planners to better consider public safety when assessing development proposals, rezoning and the development of strategic land use plans.

The Guideline acknowledges that the UK and Queensland approaches to the development of PSA contours are of most relevance to Australia. The dimensions of the Queensland PSA template were determined with reference to the UK methodology for determining third party risk.

The proposed development site is beyond the extent of the Queensland approach which extends 1,000 m from the end of each runway.

4. CONCLUSION

REHBEIN Airport Consulting has completed a review of the proposed Barings Compass Centre development in the Bankstown Central Business District (CBD) against the airspace constraints associated with Bankstown Airport and Sydney Airport.

3 April 2024

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The proposed development at a maximum elevation of 107.95 m AHD is summarised as follows:

- Will infringe the Bankstown Airport OLS inner horizontal surface at 51.0 m AHD.
- The proposal constitutes a controlled activity in relation to Bankstown Airport.
- Should remain below the Bankstown Airport PANS-OPS limiting surfaces which we estimate to be the NDB-A final approach segment and the Circling A/B both at approximately 108 m AHD.
- Within the declared Sydney Airport prescribed airspace. The limiting elevation is the Radar Lowest Sector Altitude (RLSALT) Surfaces (also known as Radar Terrain Clearance Chart or RTCC surfaces) at 152 m AHD.
- The proposal will be sent to Airservices Australia as part of the controlled activity application process, for formal assessment and confirmation of any impacts on its procedures and facilities.
- Any plume rise in excess of 4.3 m/s is also a consideration in relation to penetration of the OLS and PANS-OPS and will need to be submitted to CASA for assessment.

For further information in relation to the above, please contact the undersigned.

Yours faithfully

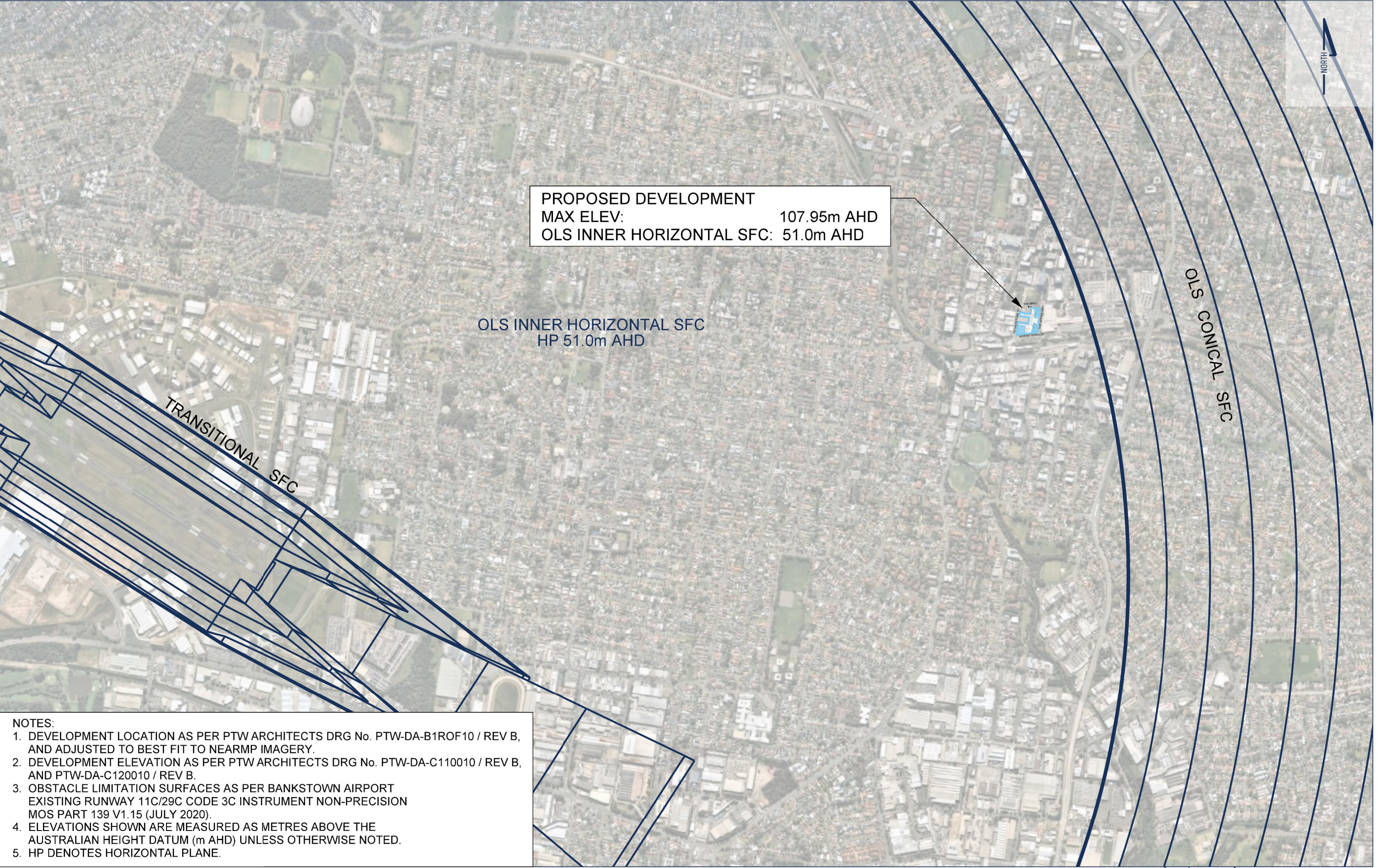
For and on behalf of

LAMBERT & REHBEIN (SEQ) PTY LTD

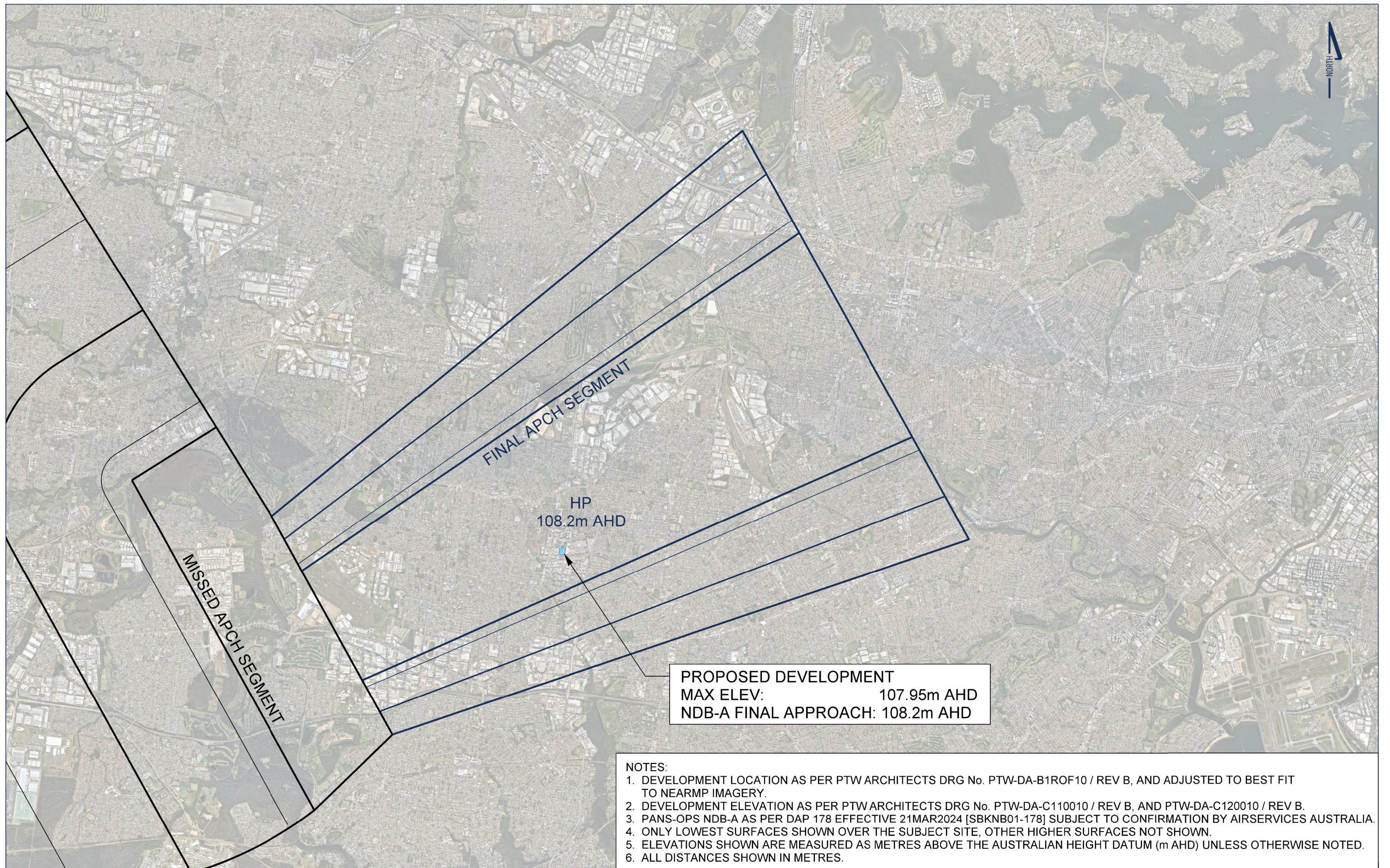


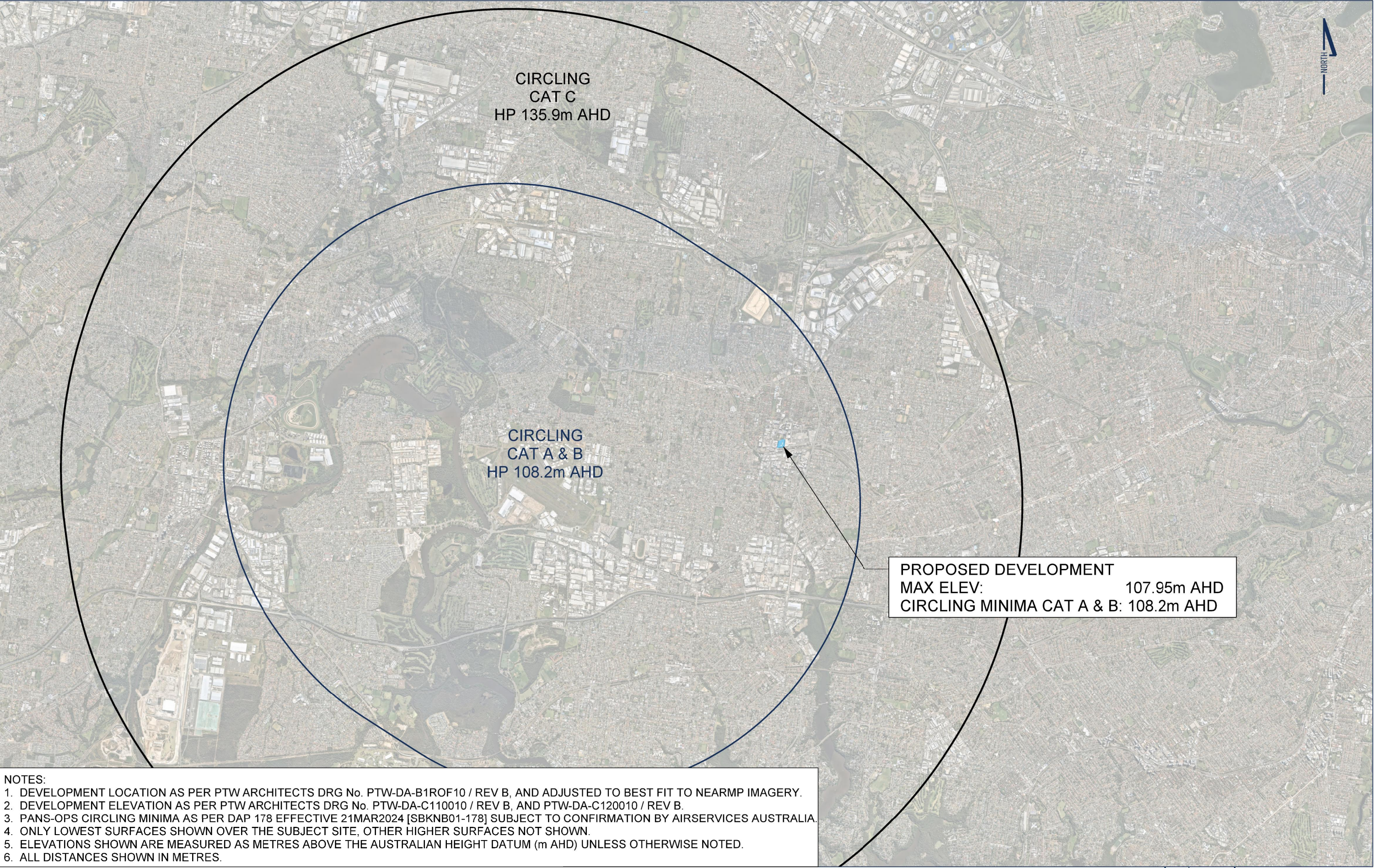
BRIDGET WOUTS MPIA
PRINCIPAL CONSULTANT

Enc: B22199/01 - 05

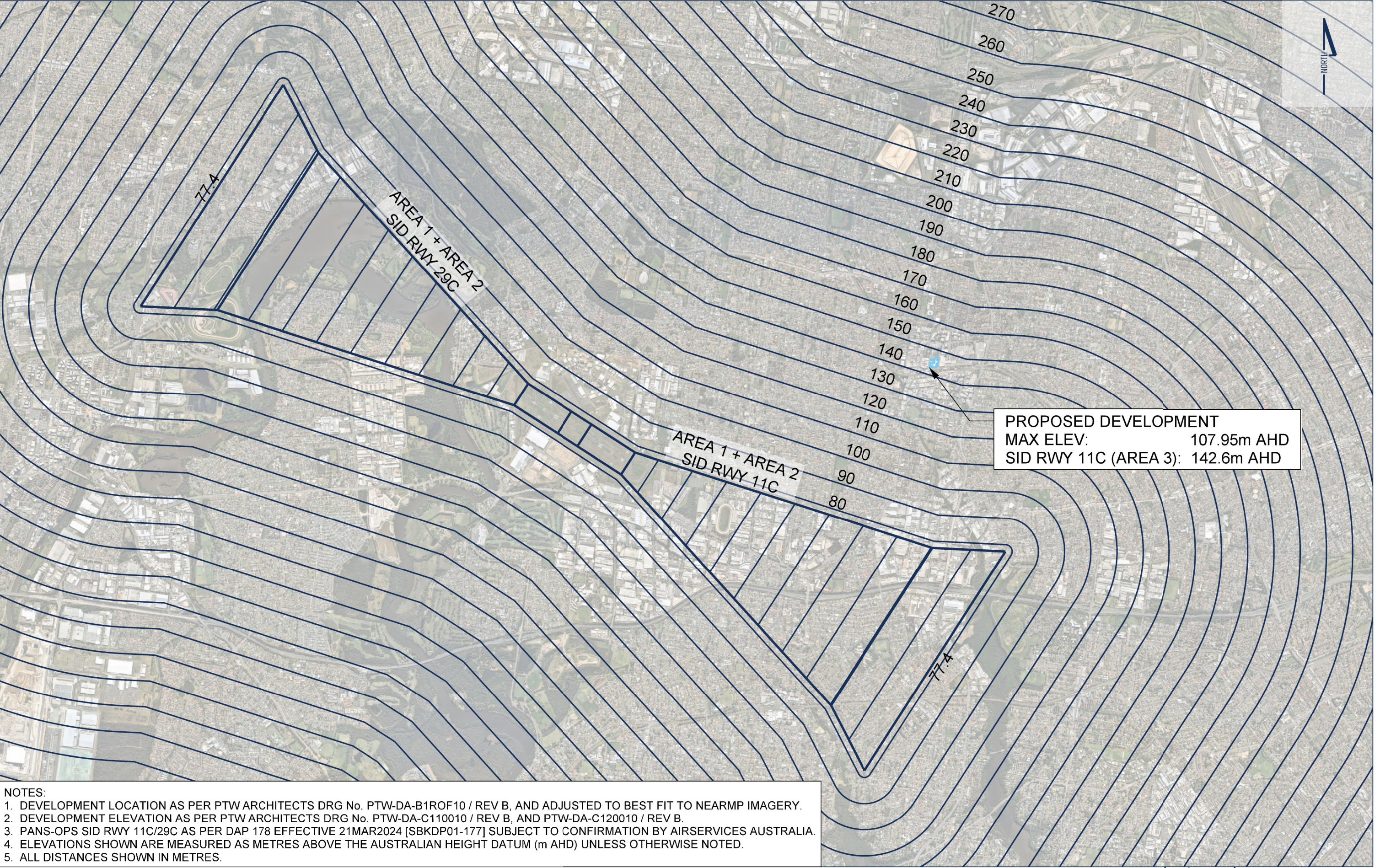


- NOTES:
- 1. DEVELOPMENT LOCATION AS PER PTW ARCHITECTS DRG No. PTW-DA-B1ROF10 / REV B, AND ADJUSTED TO BEST FIT TO NEARMP IMAGERY.
 - 2. DEVELOPMENT ELEVATION AS PER PTW ARCHITECTS DRG No. PTW-DA-C110010 / REV B, AND PTW-DA-C120010 / REV B.
 - 3. OBSTACLE LIMITATION SURFACES AS PER BANKSTOWN AIRPORT EXISTING RUNWAY 11C/29C CODE 3C INSTRUMENT NON-PRECISION MOS PART 139 V1.15 (JULY 2020).
 - 4. ELEVATIONS SHOWN ARE MEASURED AS METRES ABOVE THE AUSTRALIAN HEIGHT DATUM (m AHD) UNLESS OTHERWISE NOTED.
 - 5. HP DENOTES HORIZONTAL PLANE.

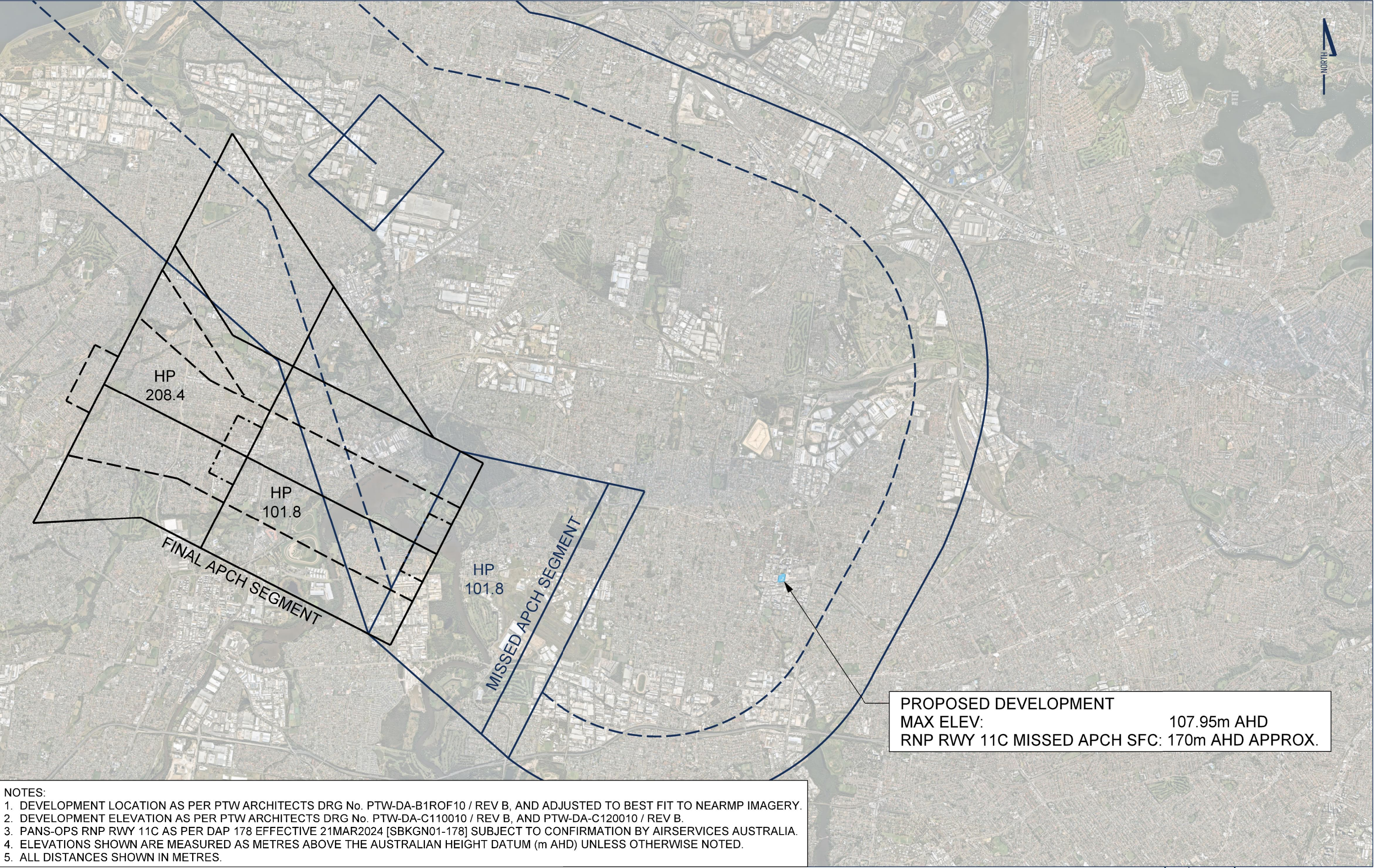




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 - 2. DEVELOPMENT ELEVATION AS PER PTW ARCHITECTS DRG No. PTW-DA-C110010 / REV B, AND PTW-DA-C120010 / REV B.
 - 3. PANS-OPS CIRCLING MINIMA AS PER DAP 178 EFFECTIVE 21MAR2024 [SBKNB01-178] SUBJECT TO CONFIRMATION BY AIRSERVICES AUSTRALIA.
 - 4. ONLY LOWEST SURFACES SHOWN OVER THE SUBJECT SITE, OTHER HIGHER SURFACES NOT SHOWN.
 - 5. ELEVATIONS SHOWN ARE MEASURED AS METRES ABOVE THE AUSTRALIAN HEIGHT DATUM (m AHD) UNLESS OTHERWISE NOTED.
 - 6. ALL DISTANCES SHOWN IN METRES.



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- 1. DEVELOPMENT LOCATION AS PER PTW ARCHITECTS DRG No. PTW-DA-B1ROF10 / REV B, AND ADJUSTED TO BEST FIT TO NEARMP IMAGERY.
 - 2. DEVELOPMENT ELEVATION AS PER PTW ARCHITECTS DRG No. PTW-DA-C110010 / REV B, AND PTW-DA-C120010 / REV B.
 - 3. PANS-OPS SID RWY 11C/29C AS PER DAP 178 EFFECTIVE 21MAR2024 [SBKDP01-177] SUBJECT TO CONFIRMATION BY AIRSERVICES AUSTRALIA.
 - 4. ELEVATIONS SHOWN ARE MEASURED AS METRES ABOVE THE AUSTRALIAN HEIGHT DATUM (m AHD) UNLESS OTHERWISE NOTED.
 - 5. ALL DISTANCES SHOWN IN METRES.



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1. DEVELOPMENT LOCATION AS PER PTW ARCHITECTS DRG No. PTW-DA-B1ROF10 / REV B, AND ADJUSTED TO BEST FIT TO NEARMP IMAGERY.
 2. DEVELOPMENT ELEVATION AS PER PTW ARCHITECTS DRG No. PTW-DA-C110010 / REV B, AND PTW-DA-C120010 / REV B.
 3. PANS-OPS RNP RWY 11C AS PER DAP 178 EFFECTIVE 21MAR2024 [SBKGN01-178] SUBJECT TO CONFIRMATION BY AIRSERVICES AUSTRALIA.
 4. ELEVATIONS SHOWN ARE MEASURED AS METRES ABOVE THE AUSTRALIAN HEIGHT DATUM (m AHD) UNLESS OTHERWISE NOTED.
 5. ALL DISTANCES SHOWN IN METRES.