L+R AIRPORT CONSULTING

BRISBANE
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27 October 2023
Our File Ref: B23312AL001
Contact: Bridget Wouts

Bankstown Airport Limited
c/- Director
Forge Venture Management
L2, 50 York Street
Sydney NSW 2000

Attention: Mark Handley

RE: LINK ROAD MIXED USE PRECINCT – BANKSTOWN AIRPORT
AIRPORT SAFEGUARDING ASSESSMENT – PRELIMINARY ASSESSMENT

L+R Airport Consulting were engaged by Bankstown Airport Limited (BAL) to undertake an airport safeguarding assessment at key design documentation stages through the Major Development Plan process as it relates to Bankstown Airport against the National Airports Safeguarding Framework (NASF) Guidelines. This assessment is based on the Preliminary Documentation stage.

1.0 Proposed Development

The proposed Link Road Mixed Use precinct includes warehouses, retail and office space and a childcare facility. Forge Venture Management provided the following SBA Architects preliminary sketches in PDF and CAD format for assessment.

- Drawing no. 22249/SK100/RevB Site / Ground Floor Plan
- Drawing no. 22249/SK101/RevB Level 1 Floor Plan
- Drawing no. 22249/SK200/RevA Warehouse Elevations
- Drawing no. 22249/SK201/RevA Retail Elevations
- Drawing no. 22249/SK202/RevA Child Care Elevations
- Drawing no. 22249/SK203/RevA Warehouse Elevations Option 2
- Drawing no. 22249/SK250/RevB Residential Interface – Sections
- Drawing no. 22249/SK500/RevA Warehouse Perspectives
- Drawing no. 22249/SK501/RevA Retail Perspectives
- Drawing no. 22249/SK502/RevA Child Care 3D Perspectives
- Drawing no. 22249/SK503/RevA Warehouse Perspectives Option 2

The CAD files, not geographically referenced, were adjusted to best fit MGA94 Zone 56 coordinates for the purposes of this assessment. Reference coordinates adopted for the assessment are shown on the attached Figures. Any changes to the position of the building layout may change the results of the assessment.

The proposed precinct including all warehouses, retail and office space and the childcare facility is to be developed to a maximum elevation at 24.8 m AHD.

2.0 Bankstown Airport Prescribed Airspace

The proposed Link Road Mixed Use Precinct is within the extents of prescribed airspace for Bankstown Airport as described in the following sections.

2.1 Obstacle Limitation Surfaces (OLS)

The proposed development lies within the extents of the existing and future Obstacle Limitation Surfaces (OLS) at Bankstown Airport.

2.1.1. Existing OLS

The proposed development is below the Bankstown Airport existing OLS inner horizontal surface as illustrated on Figure B23312/01.

The proposed development at a maximum elevation of 24.8 m AHD will not infringe the existing OLS inner horizontal surface at 51.0 m AHD.

The OLS inner horizontal surface remains the critical surface over the site whether assessed with Runway 11R/29L strip width of 80 m (as is published in the Bankstown Airport Master Plan 2019) or a 90 m runway strip (as is currently marked on the ground).

2.1.2. Future OLS

The proposed development is also within the extents of the Bankstown Airport Master Plan 2019 OLS which allows for Runway 11C/29C to be extended and provided with a precision instrument approach. The proposed development at a maximum elevation of 24.8 m AHD will not infringe the Bankstown Airport Master Plan 2019 OLS inner horizontal surface at 51.0 m AHD as illustrated on Figure B23312/02.

2.1.3. Helicopter Landing Sites

Bankstown Airport has a Main HLS located centrally to the runway environment and north of Runway 11L/29R. Aiming points are provided on Taxiway N2 and west of Taxiway N1. There is also an additional HLS being considered on the POLAIR apron on the northern side of the runways as illustrated in Figure B23312/03. All flight paths operate parallel to the runway centrelines so as not to cause traffic conflicts with fixed wing operations.

The proposed development is within the extents of the existing Taxiway N1 aiming point OLS. The proposed development at a maximum elevation of 24.8 m AHD would remain well below this OLS which is at 126.6 m AHD at the closest point of the development site.

The proposed development is outside the lateral extents of the Main HLS, Taxiway N2 Aiming Point and the police HLS OLS at Bankstown Airport.

2.2 PANS-OPS

The proposed development lies within the extents of the existing and future PANS-OPS airspace at Bankstown Airport.

2.2.1. Existing PANS-OPS

The proposed development lies within the extents of the existing Bankstown Airport PANS-OPS Runway 11C and 29C Standard Instrument Departure (SID) turn area (Area 3) as illustrated on Figure B23312/04.

The proposed development maximum elevation at 24.8 m AHD should remain below the SID Area 3 protection surface which we have estimated to be at a minimum of 88.5 m AHD. However, the proposed development must be submitted to Airservices Australia for formal assessment and confirmation of any impacts on its procedures and facilities.

2.2.2. Future PANS-OPS

The future Bankstown Airport prescribed airspace includes an ILS (precision) approach for Runway 11C.

The proposed development at a maximum 24.8 m AHD would remain below the future Runway 11C Basic ILS surface elevation estimated at approximately 62.2 m AHD, as illustrated on Figure B23312/05.

2.3 Plume Rise

Plume rise must also be considered in relation to penetration of the OLS and PANS-OPS airspace. Aircraft operations in various stages of flight may be affected by an exhaust plume of significant vertical velocity.

Any plume rise exceeding a velocity of 4.3 m/s at the point of emission in accordance with the *Airports (Protection of Airspace) Regulations 1996* is an activity that results in air turbulence and must not be carried out without an approval.

CASA has published an Advisory Circular *AC 139.E-02 v1.0 Plume Rise Assessments.* The proponent should complete CASA Form 1247 *Operational Assessment of a Proposed Plume Rise* with the relevant details once these are available and submit the form directly to CASA Office of Airspace Regulations in order to commence the assessment process.

3.0 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 a set of nine (9) guidelines, as below. Each has been summarised in relation to the proposed Link Road Mixed Use Precinct.

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 lies within the endorsed Bankstown Airport 2039 ANEF 20 to 25 Zone as illustrated on Figure B23312/06. Therefore, noise impacts will need to be considered.

AS2021:2015 provides building site acceptability based on ANEF zones. AS2021-2015 would classify:

- light industrial use (such as a warehouse) as 'acceptable' in less than 30 ANEF;
- commercial buildings (such as retail) as 'acceptable in less than 25 ANEF; and
- school, University or house as 'acceptable ' in less than 20 ANEF and 'conditionally acceptable' between 20 to 25 ANEF. For 'conditionally acceptable' land uses, consideration of aircraft noise attenuation is required in accordance with AS2021-2015.

Given the location of the site is in close proximity to busy runways, the proponent should consider the acoustic treatment of the proposed warehouses and retail spaces to ensure it is fit for the use of the intended occupant (i.e. office spaces within the warehouses and retail).

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 warehouse lies within the assessment trigger areas for Runways 11L, 11C and 11R as illustrated on Figure B23312/07.

For developments within the assessment trigger areas Guideline B then refers to the mitigation of risk by use of a 'height multiplier' (the 1:35 surface) determining that if buildings do not exceed the 1:35 surface they will not create unsafe wind effects. That is, the distance from the runway centreline or extended centreline to the closest point of the building should be more than 35 times the height (above runway level) of the building.

The proposed building at a maximum elevation of 24.8m AHD would infringe the 1 in 35 surface for Runways 11L, 11C and 11R by maximum of approximately 5.7 m as shown in Table 1 below. Therefore in accordance with Guideline B further assessment is required.

Table 1: Guideline B - 1 in 35 Surfaces

Runway Assessment Trigger Areas	Runway Threshold Elev.	Proposed Development		
		24.8		
		Distance	1in35 sfc	+abv / -blw
11L	6.8	430.00	19.09	+5.7
29R	Outside Assessment Trigger Area			
11C	6.1	540.00	21.53	+3.2
29C	Outside Assessment Trigger Area			
11R	5.7	645.00	24.13	+0.6
29L	Outside Assessment Trigger Area			

Threshold elevations as per the OLS survey March 2021

However, there are a number of existing buildings that lie between the proposed development and the extended runway. I will be for Bankstown Airport Limited in consultation with CASA to determine the appropriate further assessment required.

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.

The proposed development is an on-airport site and the site plan illustrates a warehouse, retail with office space and childcare facilities but otherwise no detail of landscaping, vegetation or other potential wildlife strike risks. The proposal when developed in detail must be submitted to BAL for review against the Bankstown Airport Wildlife Hazard Management Plan for approval.

3.4 Guideline D: Managing the Risk to Aviation Safety of Wind Turbine Installations (Wind Farms)/Wind Monitoring Towers

This Guideline provides general information and advice in relation to wind farms and turbines and their hazards to aviation. Guideline D is not relevant to the proposed Link Road Mixed Use Precinct as provided.

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 fixtures near airports. 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 designers and suppliers. The proposed development site is within the light control zones as illustrated on Figure B23312/08.

Lighting zones shown are for Runway 11C/29C only. Permanent lighting for Runway 11L/29R is no longer available but rather only portable lighting. As such lighting zones for Runway 11L/29R have not been included.

The proposed development is partially within light control Zone C and the remainder is within Zone D. Any lighting associated with the proposed development should therefore meet the restrictions associated with Zone C. Zone C allows for 150 cd intensity of light sources measured 3 degrees above the horizontal.

The design of lighting should take into consideration Guideline E to ensure there is no conflict from light fittings, coloured lights or glare caused by reflective surfaces and/or mitigation measures to be put in place. The lighting designer will need to ensure that the lights meet the requirements prescribed in the CASA *Part 139 (Aerodromes) Manual of Standards 2019.*

It should be noted that solar panel installation is a particular consideration in relation to glare/reflectivity affecting aircraft in various stages of flight as well as ATC operations. If any solar panels are proposed (such as roof-mounted array), whether as part of the initial construction or subsequently, the proponent may need to complete a solar glare hazard analysis to satisfy CASA that the safety of aircraft and ATC operations will not be affected.

3.6 Guideline F: Managing the Risk of Intrusions into the Protected 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 in the prescribed airspace.

This Guideline has been considered in this assessment of the proposed Link Road Mixed Use Precinct development throughout Section 2.0.

Guideline F should be considered for activities that could cause air turbulence and/or emissions of dust or other particulate matter.

Potential impacts during construction are discussed in Section 4.0.

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. The Guideline provides land use planning guidance to better protect CNS facilities which support the systems 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.

3.7.1. Existing CNS Facilities

The existing CNS facilities at Bankstown Airport include a Non-Directional Beacon (NDB) and a Precision Approach Path Indicator (PAPI). The proposed development has been assessed based on the guidance provided in NASF Guideline G for both facilities.

The proposed development is beyond the lateral limits of the obstacle assessment surfaces associated with Runway 11C/29C PAPI and the NDB.

The proposal should be submitted to Airservices Australia to ensure there is no impact on procedures and any other facilities (see Section 2.2.1).

3.7.2. Future CNS Facilities

The proposed development has been considered with respect to the guidance on Building Restricted Areas (BRA) for ILS installations provided in NASF Guideline G, for the scenario of a possible ILS installed on an extended Runway 11C/29C.

The proposed development is outside the lateral extents of the BRAs associated with a possible future ILS, as shown on Figure B23312/09.

3.8 Guideline H: Protecting Strategically Important Helicopter Landing sites (HLS)

Guideline H is not relevant to the proposed development. Guideline H defines such Strategic Helicopter Landing Sites as being areas not located on an aerodrome. The Bankstown Airport HLS are discussed under Section 2.1.3 above.

3.9 Guideline I: Managing the Risk in Public Safety Areas 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 requires and when development 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.

BAL has identified the PSAs at the end of each runway based on the Queensland state planning policy PSA Model, which Guideline I notes as providing an objective basis for a policy response through strategic and statutory planning processes. The proposed development is not within the PSAs as per the Bankstown Airport Master Plan 2019 and illustrated on Figure B23312/10.

4.0 CONSTRUCTION STAGE IMPACTS

Information in relation to the construction of the proposed development has not been provided. During construction, the construction sequencing and methodology should be considered carefully in relation to the OLS and PANS-OPS surfaces.

Penetrations of prescribed airspace by construction plant and equipment during construction constitute a controlled activity under the *Airports (Protection of Airspace) Regulations 1996*.

Construction activities on the site will need to be assessed and any penetrations of prescribed airspace will require approval under the Regulations.

5.0 CONCLUSION

L+R Airport Consulting has completed an aviation safeguarding assessment as it relates to Bankstown Airport against the NASF Guidelines for the proposed Link Road Mixed Use Precinct. The proposed development at a maximum elevation of 24.8 m AHD assessment is summarised below.

- Will not infringe the existing or Bankstown Airport Master Plan 2019 Obstacle Limitation Surfaces for Bankstown Airport;
- Will not infringe the HLS OLS at Bankstown Airport;
- Should not infringe the existing PANS-OPS Runway 11C and 29C SID, however must be submitted to Airservices Australia for formal assessment and confirmation of any impacts on procedures or facilities;
- Should not infringe the future PANS-OPS Runway 11C basic ILS transitional surface;
- Is within the current Bankstown Airport 2039 ANEF 20 to 25 zones. light industrial use (such as a warehouse) as ‘acceptable’ in less than 30 ANEF, commercial buildings as ‘acceptable in less than 25 ANEF; and school, University or house as ‘acceptable ‘ in less than 20 ANEF and ‘conditionally

acceptable' between 20 to 25 ANEF, however consideration of aircraft noise attenuation is required in accordance with AS2021-2015;

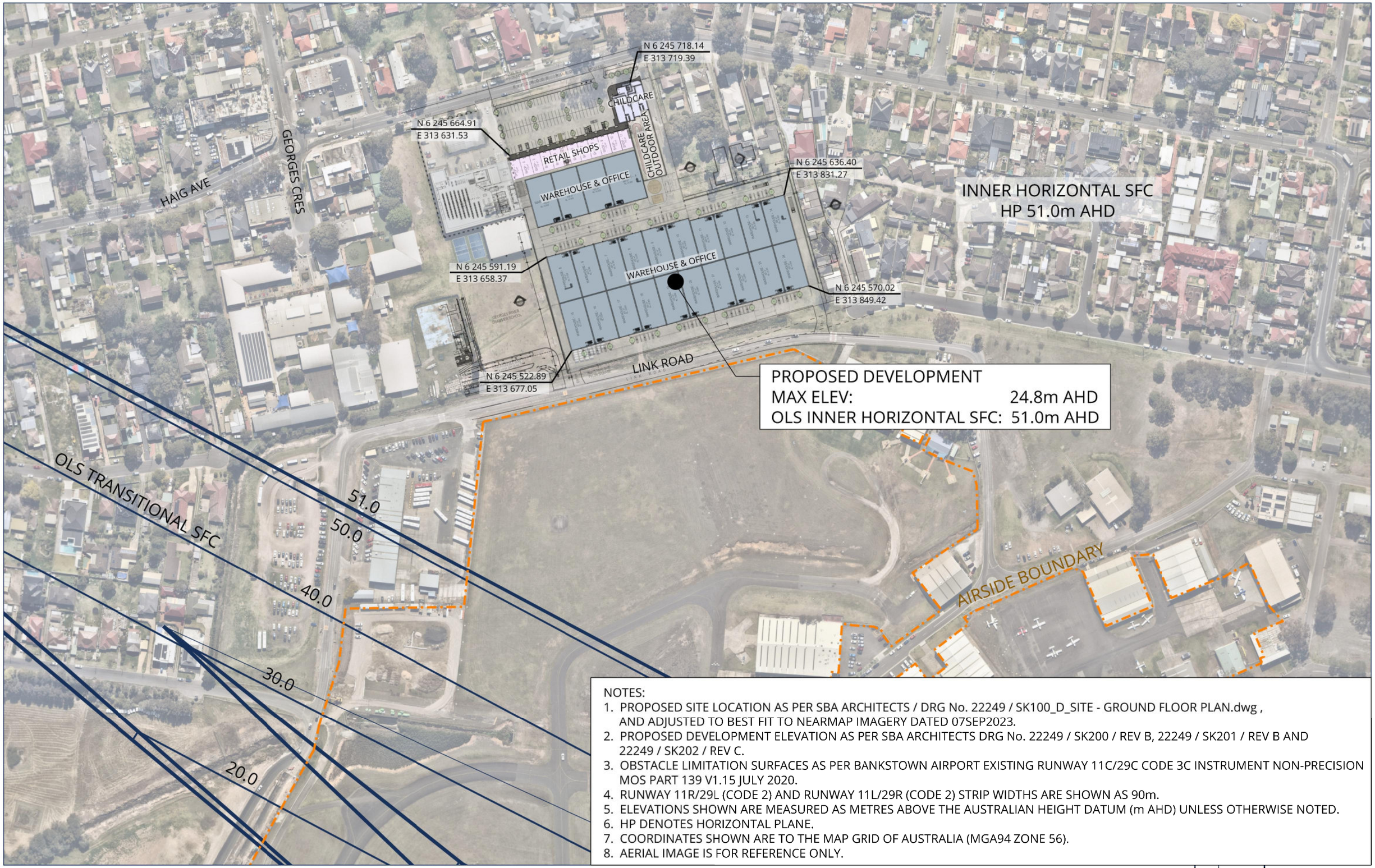
- Is within the Guideline B building generated windshear and turbulence assessment trigger areas for Runways 11L, 11C and 11R, and infringes the 1:35 slope for all three runways. However, due to the surrounding buildings between the proposed and the runways Bankstown Airport Limited may consult with CASA to determine the appropriate additional assessment;
- Is within the light control Zones C and D and should therefore meet the restrictions associated with Zone C. Zone C allows for 150 cd intensity of light sources measured 3 degrees above the horizontal. The lighting designer will need to ensure that the lights meet all requirements prescribed in the CASA *Part 139 (Aerodromes) Manual of Standards 2019*;
- Is outside the lateral protection areas associated with the Non-Directional Beacon (NDB) , the Runway 11C/29C PAPI as per NASF Guideline G;
- Is outside the BRAs for a possible future ILS;
- Is not within the PSAs as per the Bankstown Airport Master Plan 2019; and
- Construction sequencing and methodology must be considered in relation to the OLS and PANS-OPS surfaces. Penetrations of prescribed airspace by construction plan and equipment during construction constitute a controlled activity under the *Airports (Protection of Airspace) Regulations 1996*.

For further information in relation to this matter please do not hesitate to contact the undersigned.

Yours faithfully,
For and on behalf of
Lambert Rehbein (VIC) PTY LTD

B. WOUTS MPIA
PRINCIPAL CONSULTANT
AVIATION

Enc: Figures B23312/01 - 10
SBA Architects Drg No 22249/SK100/RevB
SBA Architects Drg No 22249/SK200/RevA
SBA Architects Drg No 22249/SK201/RevA
SBA Architects Drg No 22249/SK202/RevA



NOTES:

1. PROPOSED SITE LOCATION AS PER SBA ARCHITECTS / DRG No. 22249 / SK100_D_SITE - GROUND FLOOR PLAN.dwg , AND ADJUSTED TO BEST FIT TO NEARMAP IMAGERY DATED 07SEP2023.
2. PROPOSED DEVELOPMENT ELEVATION AS PER SBA ARCHITECTS DRG No. 22249 / SK200 / REV B, 22249 / SK201 / REV B AND 22249 / SK202 / REV C.
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. RUNWAY 11R/29L (CODE 2) AND RUNWAY 11L/29R (CODE 2) STRIP WIDTHS ARE SHOWN AS 90m.
5. ELEVATIONS SHOWN ARE MEASURED AS METRES ABOVE THE AUSTRALIAN HEIGHT DATUM (m AHD) UNLESS OTHERWISE NOTED.
6. HP DENOTES HORIZONTAL PLANE.
7. COORDINATES SHOWN ARE TO THE MAP GRID OF AUSTRALIA (MGA94 ZONE 56).
8. AERIAL IMAGE IS FOR REFERENCE ONLY.

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BANKSTOWN AIRPORT LIMITED

LINK ROAD MIXED USE PRECINCT - AVIATION ASSESSMENT

EXISTING OBSTACLE LIMITATION SURFACES - BANKSTOWN AIRPORT

NORTH

0 25 75 125m

1:2500@ A3

Rev.	Date
0	27.10.23

FIGURE:
B23312/01

Drawn: MK
Checked: BMW
Approved: BJH

PROPOSED DEVELOPMENT
MAX ELEV: 24.8m AHD
OLS INNER HORIZONTAL SFC: 51.0m AHD

INNER HORIZONTAL SFC
HP 51.0m AHD

N 6 245 718.14
E 313 719.39

N 6 245 664.91
E 313 631.53

N 6 245 636.40
E 313 831.27

N 6 245 591.19
E 313 658.37

N 6 245 570.02
E 313 849.42

N 6 245 522.89
E 313 677.05

CHILDCARE
CHILDCARE OUTDOOR AREA
RETAIL SHOPS
WAREHOUSE & OFFICE
WAREHOUSE & OFFICE
HAIG AVE
GEORGES CRES
LINK ROAD
HELIFLITE
AIRSIDE BOUNDARY

RWY 11C/29C TRANSITIONAL SFC
BASED ON 300m RWS

RWY 11C APPROACH SFC

51.0
50.0
40.0
30.0
20.0
10.0

NOTES:
1. PROPOSED SITE LOCATION AS PER SBA ARCHITECTS / DRG No. 22249 / SK100_D_SITE - GROUND FLOOR PLAN.dwg , AND ADJUSTED TO BEST FIT TO NEARMAP IMAGERY DATED 07SEP2023.
2. PROPOSED DEVELOPMENT ELEVATION AS PER SBA ARCHITECTS DRG No. 22249 / SK200 / REV B, 22249 / SK201 / REV B AND 22249 / SK202 / REV C.
3. OBSTACLE LIMITATION SURFACES AS PER BANKSTOWN AIRPORT MASTER PLAN 2019 WHICH INCLUDES AN EXTENSION FOR RUNWAY 11C/29C TO INSTRUMENT PRECISION 220m LONG AND WIDENING OF THE RUNWAY STRIP FROM 150 TO 300 METRES.
4. ELEVATIONS SHOWN ARE MEASURED AS METRES ABOVE THE AUSTRALIAN HEIGHT DATUM (m AHD) UNLESS OTHERWISE NOTED.
5. HP DENOTES HORIZONTAL PLANE.
6. COORDINATES SHOWN ARE TO THE MAP GRID OF AUSTRALIA (MGA94 ZONE 56).
7. AERIAL IMAGE IS FOR REFERENCE ONLY.

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BANKSTOWN AIRPORT LIMITED

LINK ROAD MIXED USE PRECINCT - AVIATION ASSESSMENT

FUTURE OBSTACLE LIMITATION SURFACES BANKSTOWN AIRPORT MASTER PLAN 2019

NORTH

0 25 75 125m
1:2500@ A3

Rev.	Date
0	27.10.23

FIGURE:
B23312/02

Drawn: MK
Checked: BMW
Approved: BJH

PROPOSED DEVELOPMENT
MAX ELEV: 24.8m AHD
N1 AIMING POINT OLS: 126.6m AHD

N6 245 718.14
E 313 719.39

N6 245 636.40
E 313 831.27

N6 245 664.91
E 313 631.53

N6 245 591.19
E 313 658.37

N6 245 522.89
E 313 677.05

N6 245 570.02
E 313 849.42

GEORGES CRES
BIRDWOOD ROAD
HAIG AVE
LINK ROAD
AIRPORT BOUNDARY
N1 AIMING POINT OLS
N2 AIMING POINT OLS
MAIN HLS OLS
POLICE HLS OLS CAT A DAY
BANKSTOWN AIRPORT
RWY 11C/29C
RWY 11L/29R

NOTES:
1. PROPOSED SITE LOCATION AS PER SBA ARCHITECTS / DRG No. 22249 / SK100_D_SITE - GROUND FLOOR PLAN.dwg , AND ADJUSTED TO BEST FIT TO NEARMAP IMAGERY DATED 07SEP2023.
2. PROPOSED DEVELOPMENT ELEVATION AS PER SBA ARCHITECTS DRG No. 22249 / SK200 / REV B, 22249 / SK201 / REV B AND 22249 / SK202 / REV C.
2. N1 & N2 AIMING POINT OLS ARE ASSUMED TO BE PARALLEL TO RWY CL. HOWEVER, PRIOR PERMISSION IS REQUIRED BY AERODROME OPERATOR.
3. MAIN HLS OLS AND POLICE HLS OLS ARE ASSUMED TO BE PARALLEL TO RWY CL.
4. ELEVATIONS SHOWN ARE MEASURED AS METRES ABOVE THE AUSTRALIAN HEIGHT DATUM (m AHD) UNLESS OTHERWISE NOTED.
6. COORDINATES SHOWN ARE TO THE MAP GRID OF AUSTRALIA (MGA94 ZONE 56).
7. AERIAL IMAGE IS FOR REFERENCE ONLY.

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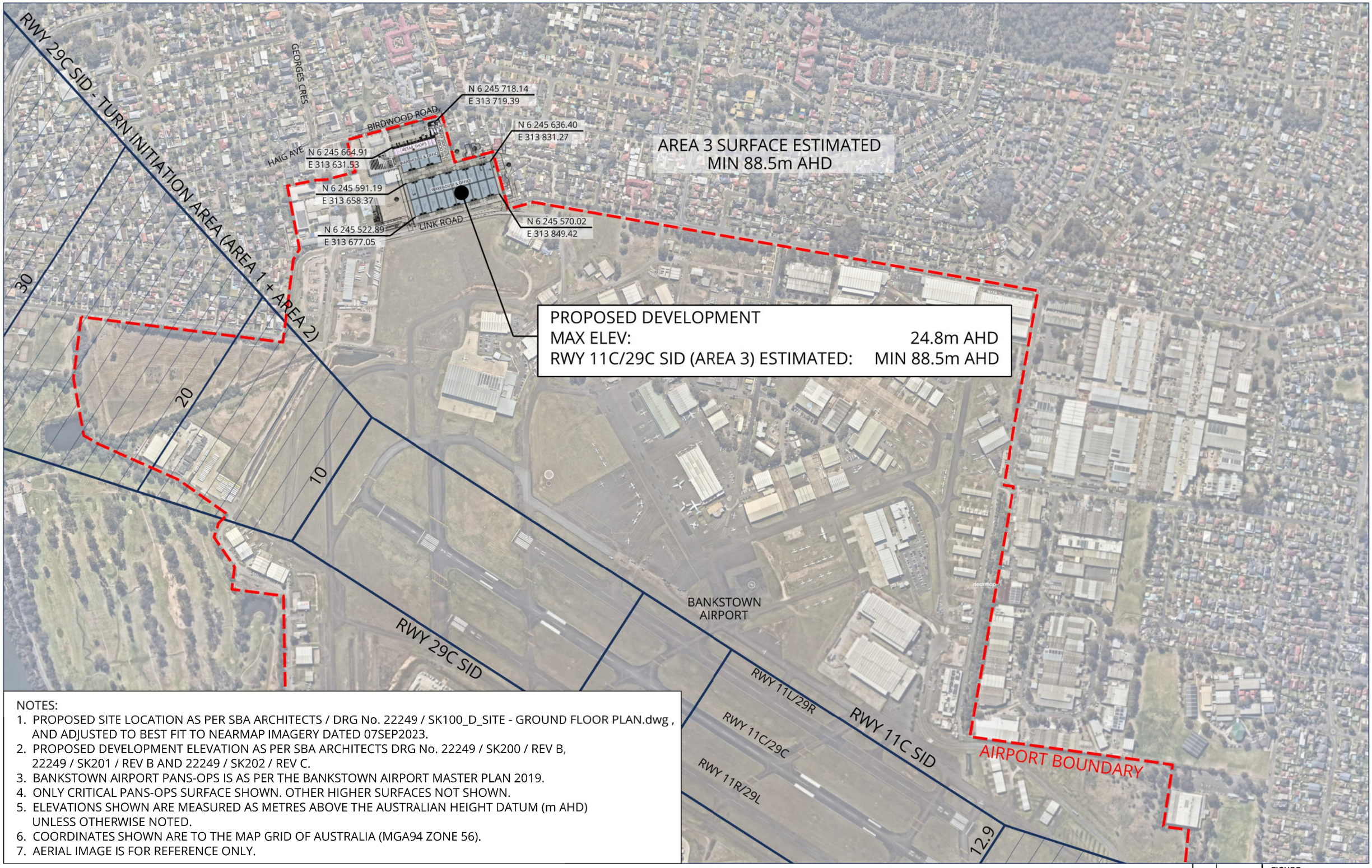
BANKSTOWN AIRPORT LIMITED
LINK ROAD MIXED USE PRECINCT - AVIATION ASSESSMENT

HELI OLS - BANKSTOWN AIRPORT

NORTH
0 60 180 300m
1:6000@ A3

Rev.	Date
0	27.10.23

FIGURE:
B23312/03
Drawn: MK
Checked: BMW
Approved: BJH



NOTES:

1. PROPOSED SITE LOCATION AS PER SBA ARCHITECTS / DRG No. 22249 / SK100_D_SITE - GROUND FLOOR PLAN.dwg , AND ADJUSTED TO BEST FIT TO NEARMAP IMAGERY DATED 07SEP2023.
2. PROPOSED DEVELOPMENT ELEVATION AS PER SBA ARCHITECTS DRG No. 22249 / SK200 / REV B, 22249 / SK201 / REV B AND 22249 / SK202 / REV C.
3. BANKSTOWN AIRPORT PANS-OPS IS AS PER THE BANKSTOWN AIRPORT MASTER PLAN 2019.
4. ONLY CRITICAL PANS-OPS SURFACE SHOWN. OTHER HIGHER SURFACES NOT SHOWN.
5. ELEVATIONS SHOWN ARE MEASURED AS METRES ABOVE THE AUSTRALIAN HEIGHT DATUM (m AHD) UNLESS OTHERWISE NOTED.
6. COORDINATES SHOWN ARE TO THE MAP GRID OF AUSTRALIA (MGA94 ZONE 56).
7. AERIAL IMAGE IS FOR REFERENCE ONLY.

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BANKSTOWN AIRPORT LIMITED

LINK ROAD MIXED USE PRECINCT - AVIATION ASSESSMENT

PANS-OPS SID BANKSTOWN EIGHT DEP RWY 11C & 29C

NORTH

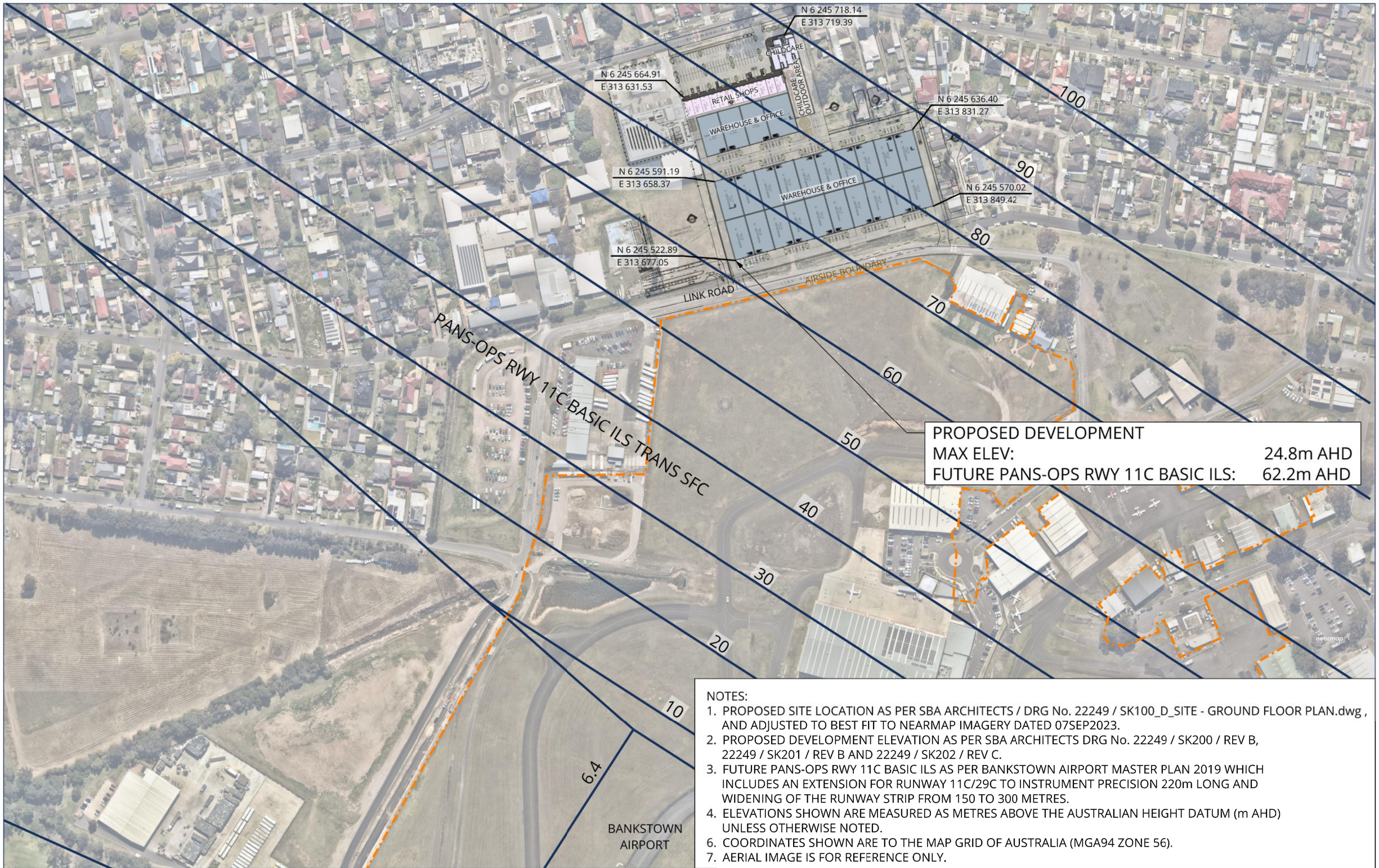
0 70 210 350m

1:7000@ A3

Rev.	Date
0	27.10.23

FIGURE:
B23312/04

Drawn: MK
Checked: BMW
Approved: BJH



PROPOSED DEVELOPMENT
MAX ELEV: 24.8m AHD
FUTURE PANS-OPS RWY 11C BASIC ILS: 62.2m AHD

NOTES:
1. PROPOSED SITE LOCATION AS PER SBA ARCHITECTS / DRG No. 22249 / SK100_D_SITE - GROUND FLOOR PLAN.dwg , AND ADJUSTED TO BEST FIT TO NEARMAP IMAGERY DATED 07SEP2023.
2. PROPOSED DEVELOPMENT ELEVATION AS PER SBA ARCHITECTS DRG No. 22249 / SK200 / REV B, 22249 / SK201 / REV B AND 22249 / SK202 / REV C.
3. FUTURE PANS-OPS RWY 11C BASIC ILS AS PER BANKSTOWN AIRPORT MASTER PLAN 2019 WHICH INCLUDES AN EXTENSION FOR RUNWAY 11C/29C TO INSTRUMENT PRECISION 220m LONG AND WIDENING OF THE RUNWAY STRIP FROM 150 TO 300 METRES.
4. ELEVATIONS SHOWN ARE MEASURED AS METRES ABOVE THE AUSTRALIAN HEIGHT DATUM (m AHD) UNLESS OTHERWISE NOTED.
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BANKSTOWN AIRPORT LIMITED

LINK ROAD MIXED USE PRECINCT - AVIATION ASSESSMENT

FUTURE PANS-OPS RWY 11C BASIC ILS BANKSTOWN AIRPORT

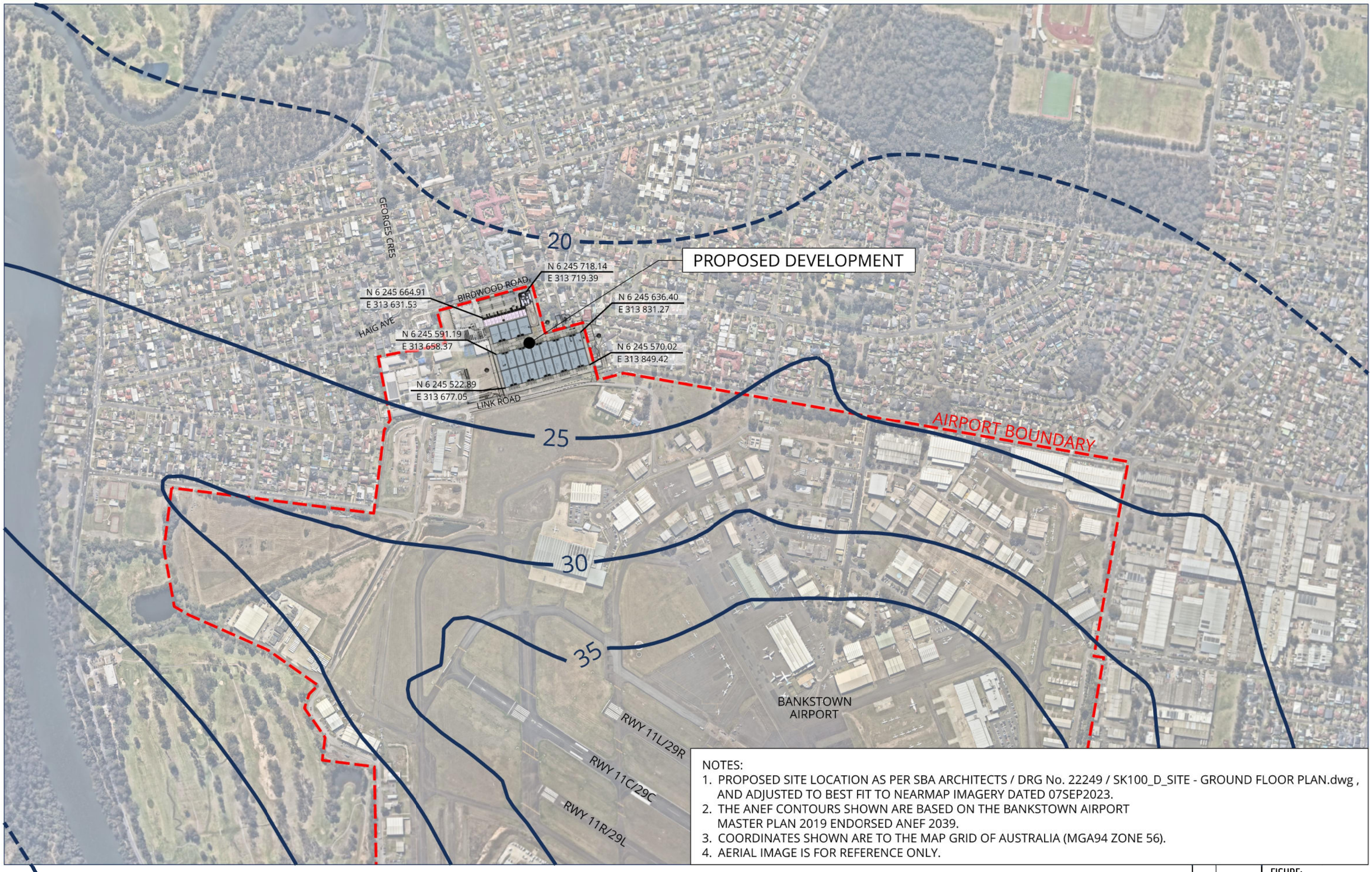
NORTH

0 30 90 150m
1:3000@ A3

Rev.	Date
0	27.10.23

FIGURE:
B23312/05

Drawn: MK
Checked: BMW
Approved: BJH



NOTES:
1. PROPOSED SITE LOCATION AS PER SBA ARCHITECTS / DRG No. 22249 / SK100_D_SITE - GROUND FLOOR PLAN.dwg , AND ADJUSTED TO BEST FIT TO NEARMAP IMAGERY DATED 07SEP2023.
2. THE ANEF CONTOURS SHOWN ARE BASED ON THE BANKSTOWN AIRPORT MASTER PLAN 2019 ENDORSED ANEF 2039.
3. COORDINATES SHOWN ARE TO THE MAP GRID OF AUSTRALIA (MGA94 ZONE 56).
4. AERIAL IMAGE IS FOR REFERENCE ONLY.

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BANKSTOWN AIRPORT LIMITED

LINK ROAD MIXED USE PRECINCT - AVIATION ASSESSMENT

NASF GUIDELINE A - BANKSTOWN AIRPORT ENDORSED ANEF 2039

NORTH

0 70 210 350m

1:7000@ A3

Rev.	Date
0	27.10.23

FIGURE:
B23312/06

Drawn: MK
Checked: BMW
Approved: BJH

PROPOSED DEVELOPMENT
MAX ELEV: 24.8m AHD

AIRPORT BOUNDARY

BANKSTOWN AIRPORT

540m APPROX.
645m APPROX.
430m APPROX.

900m
500m
500m
900m
1200m

7
6.1
6.8
5.7
6.8
10.2
8.0

RWY 11L/29R
RWY 11C/29C
RWY 11R/29L

NOTES:
1. PROPOSED SITE LOCATION AS PER SBA ARCHITECTS / DRG No. 22249 / SK100_D_SITE - GROUND FLOOR PLAN.dwg , AND ADJUSTED TO BEST FIT TO NEARMAP IMAGERY DATED 07SEP2023.
2. PROPOSED DEVELOPMENT ELEVATION AS PER SBA ARCHITECTS DRG No. 22249 / SK200 / REV B, 22249 / SK201 / REV B AND 22249 / SK202 / REV C.
3. ASSESSMENT TRIGGER AREAS ARE BASED ON RUNWAY THRESHOLDS INCLUDING PERMANENTLY DISPLACED THRESHOLD WHERE APPLICABLE (PARTS OF RELEVANT TRIGGER AREAS SHOWN).
4. AERIAL IMAGE IS FOR REFERENCE ONLY.

Runway Assessment Trigger Areas	Runway Threshold Elev.	Proposed Development		
		24.8		
		Distance	1:35 sfc	+abv/-blw
11L	6.8	430	19.1	5.7
29R	Outside Assessment Trigger Area			
11C	6.1	540	21.5	3.3
29C	Outside Assessment Trigger Area			
11R	5.7	645	24.1	0.7
29L	Outside Assessment Trigger Area			

Threshold elevations as per the OLS survey March 2021

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LINK ROAD MIXED USE PRECINCT - AVIATION ASSESSMENT

NASF GUIDELINE B - BUILDING GENERATED WINDSHEAR & TURBULENCE - BANKSTOWN AIRPORT

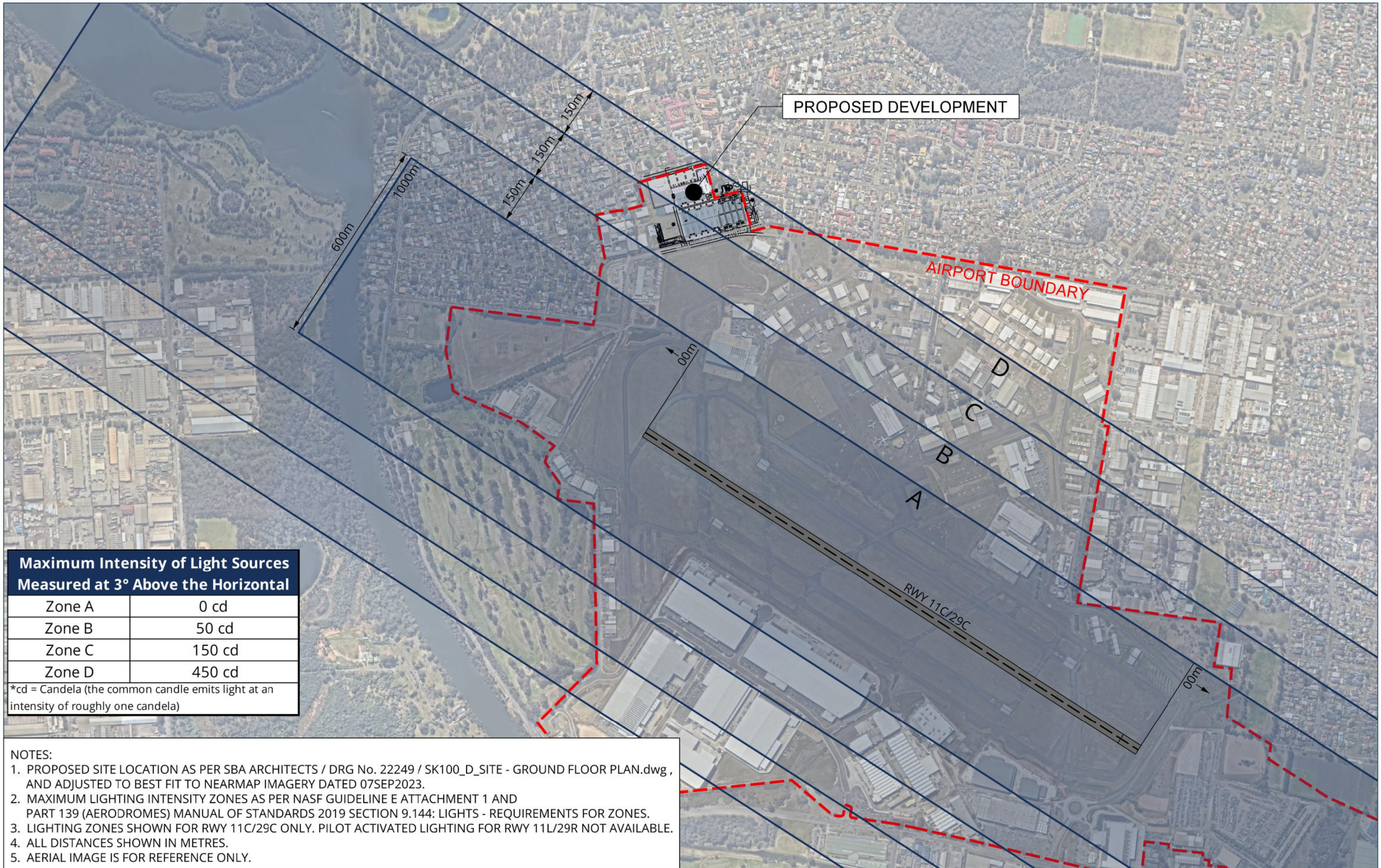
NORTH

0 120 360 600m
1:12000@ A3

Rev.	Date
0	27.10.23

FIGURE:
B23312/07

Drawn: MK
Checked: BMW
Approved: BJH



Maximum Intensity of Light Sources Measured at 3° Above the Horizontal	
Zone A	0 cd
Zone B	50 cd
Zone C	150 cd
Zone D	450 cd

*cd = Candela (the common candle emits light at an intensity of roughly one candela)

NOTES:
1. PROPOSED SITE LOCATION AS PER SBA ARCHITECTS / DRG No. 22249 / SK100_D_SITE - GROUND FLOOR PLAN.dwg , AND ADJUSTED TO BEST FIT TO NEARMAP IMAGERY DATED 07SEP2023.
2. MAXIMUM LIGHTING INTENSITY ZONES AS PER NASF GUIDELINE E ATTACHMENT 1 AND PART 139 (AERODROMES) MANUAL OF STANDARDS 2019 SECTION 9.144: LIGHTS - REQUIREMENTS FOR ZONES.
3. LIGHTING ZONES SHOWN FOR RWY 11C/29C ONLY. PILOT ACTIVATED LIGHTING FOR RWY 11L/29R NOT AVAILABLE.
4. ALL DISTANCES SHOWN IN METRES.
5. AERIAL IMAGE IS FOR REFERENCE ONLY.

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LINK ROAD MIXED USE PRECINCT - AVIATION ASSESSMENT

NASF GUIDELINE E - MAXIMUM LIGHTING INTENSITY ZONES - BANKSTOWN AIRPORT

NORTH

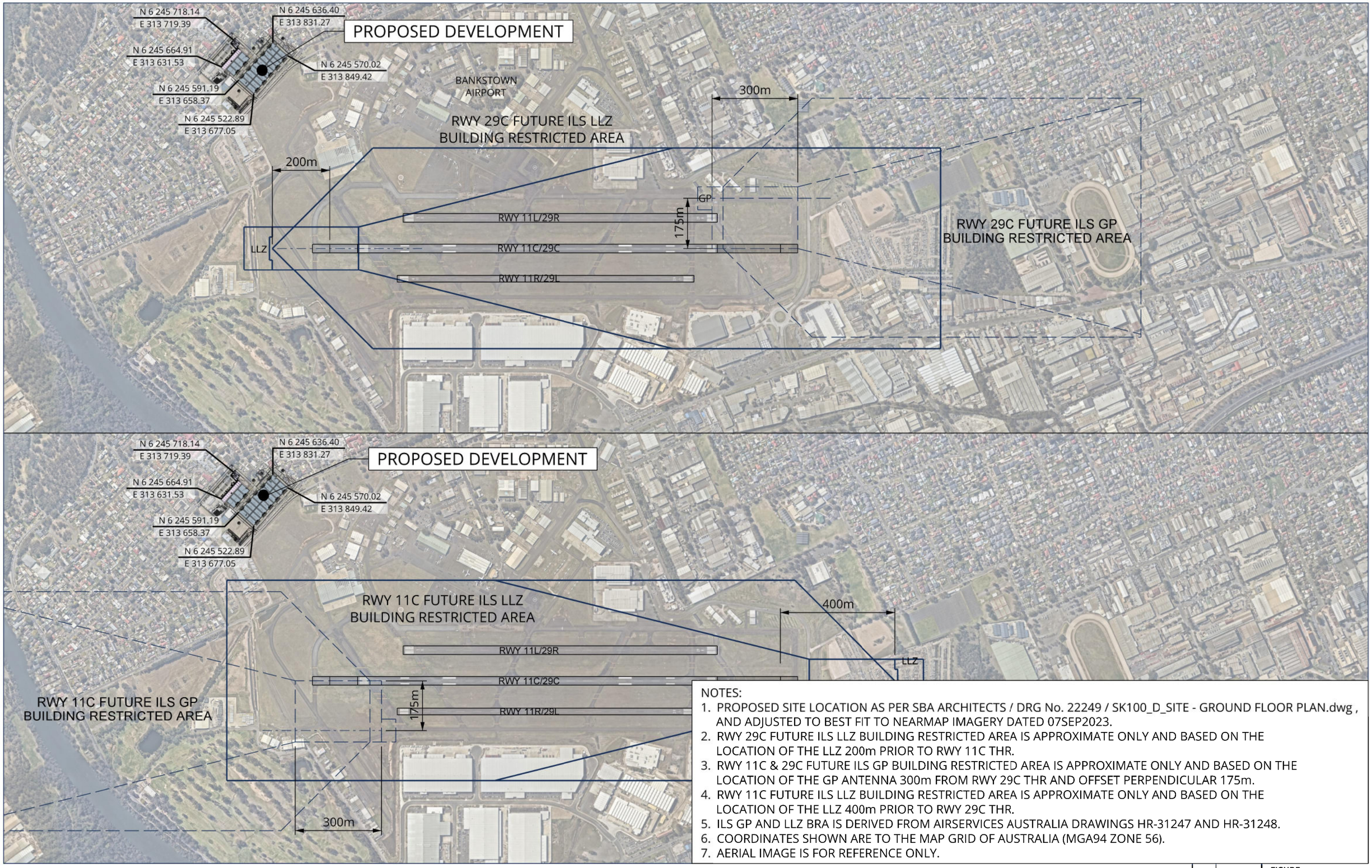
0 100 300 500m

1:10000@ A3

Rev.	Date
0	27.10.23

FIGURE:
B23312/08

Drawn: MK
Checked: BMW
Approved: BJH



NOTES:

1. PROPOSED SITE LOCATION AS PER SBA ARCHITECTS / DRG No. 22249 / SK100_D_SITE - GROUND FLOOR PLAN.dwg , AND ADJUSTED TO BEST FIT TO NEARMAP IMAGERY DATED 07SEP2023.
2. RWY 29C FUTURE ILS LLZ BUILDING RESTRICTED AREA IS APPROXIMATE ONLY AND BASED ON THE LOCATION OF THE LLZ 200m PRIOR TO RWY 11C THR.
3. RWY 11C & 29C FUTURE ILS GP BUILDING RESTRICTED AREA IS APPROXIMATE ONLY AND BASED ON THE LOCATION OF THE GP ANTENNA 300m FROM RWY 29C THR AND OFFSET PERPENDICULAR 175m.
4. RWY 11C FUTURE ILS LLZ BUILDING RESTRICTED AREA IS APPROXIMATE ONLY AND BASED ON THE LOCATION OF THE LLZ 400m PRIOR TO RWY 29C THR.
5. ILS GP AND LLZ BRA IS DERIVED FROM AIRSERVICES AUSTRALIA DRAWINGS HR-31247 AND HR-31248.
6. COORDINATES SHOWN ARE TO THE MAP GRID OF AUSTRALIA (MGA94 ZONE 56).
7. AERIAL IMAGE IS FOR REFERENCE ONLY.

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LINK ROAD MIXED USE PRECINCT - AVIATION ASSESSMENT

FUTURE ILS BUILDING RESTRICTED AREAS - BANKSTOWN AIRPORT

HUNON

0 120 360 600m

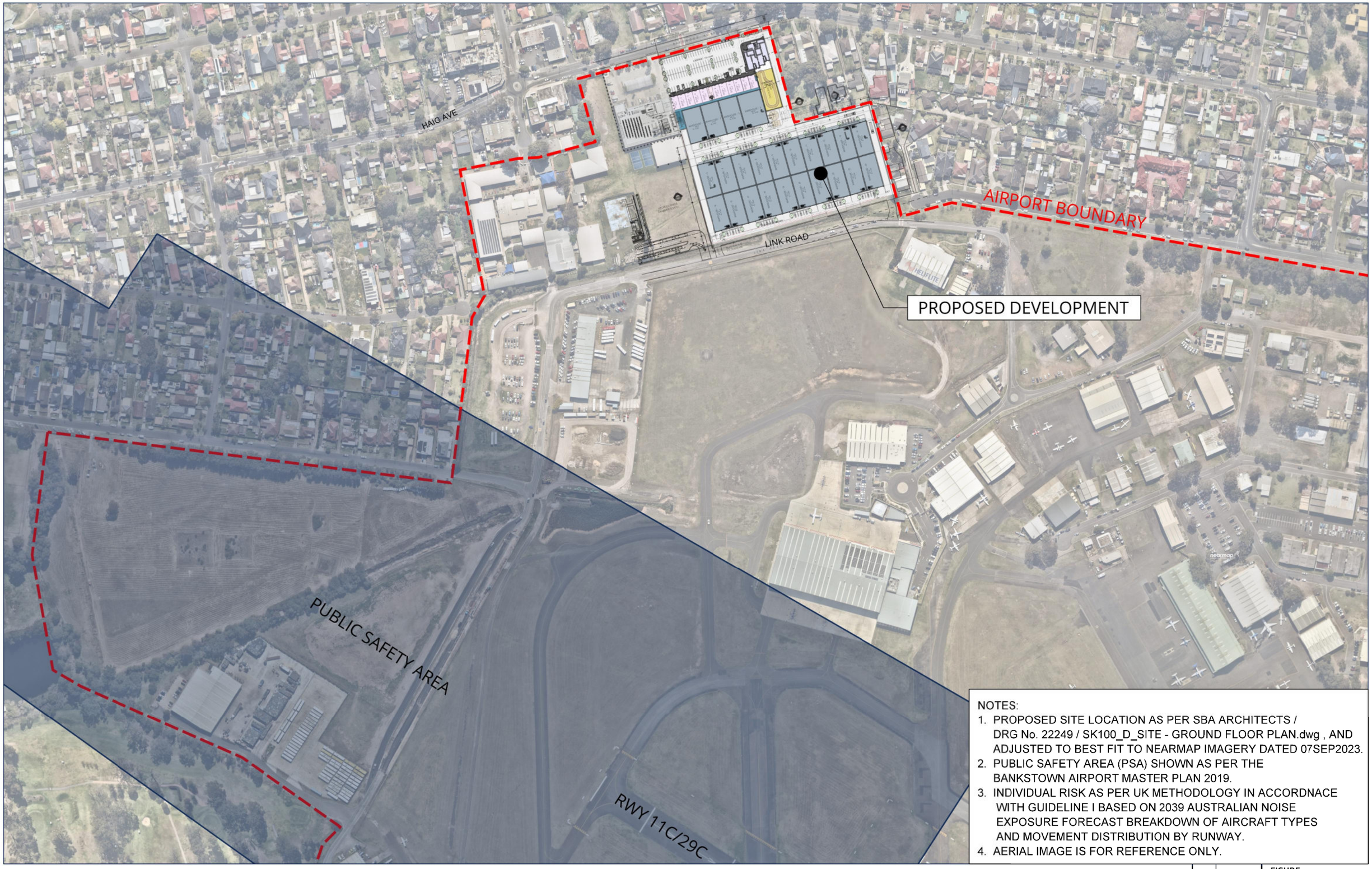
1:12000@ A3

Rev.	Date
0	27.10.23

FIGURE:

B23312/09

Drawn: MK
Checked: BMW
Approved: BJH



NOTES:
1. PROPOSED SITE LOCATION AS PER SBA ARCHITECTS / DRG No. 22249 / SK100_D_SITE - GROUND FLOOR PLAN.dwg , AND ADJUSTED TO BEST FIT TO NEARMAP IMAGERY DATED 07SEP2023.
2. PUBLIC SAFETY AREA (PSA) SHOWN AS PER THE BANKSTOWN AIRPORT MASTER PLAN 2019.
3. INDIVIDUAL RISK AS PER UK METHODOLOGY IN ACCORDNACE WITH GUIDELINE I BASED ON 2039 AUSTRALIAN NOISE EXPOSURE FORECAST BREAKDOWN OF AIRCRAFT TYPES AND MOVEMENT DISTRIBUTION BY RUNWAY.
4. AERIAL IMAGE IS FOR REFERENCE ONLY.

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LINK ROAD MIXED USE PRECINCT - AVIATION ASSESSMENT

NASF GUIDELINE I - PUBLIC SAFETY AREA - BANKSTOWN AIRPORT MP2019

NORTH

0 35 105 175m

1:3500@ A3

Rev.	Date
0	27.10.23

FIGURE: B23312/10

Drawn: MK
Checked: BMW
Approved: BJH

GROSS LETTABLE AREA SUMMARY

TYPE				TOTAL AREA
WAREHOUSE	OFFICE	CHILDCARE	SHOP	
15415 m²	2174 m²	807 m²	1210 m²	19606 m²

GROSS LETTABLE AREA INDUSTRIAL

DESCRIPTION / UNIT / TENANCY	TYPE WAREHOUSE	TYPE OFFICE	TOTAL AREA
1	700 m²	40 m²	740 m²
2	700 m²	40 m²	740 m²
3	700 m²	40 m²	740 m²
4	817 m²	40 m²	857 m²
5	636 m²	40 m²	676 m²
6	631 m²	40 m²	671 m²
7	631 m²	40 m²	671 m²
8	631 m²	40 m²	671 m²
9	631 m²	40 m²	671 m²
10	631 m²	40 m²	671 m²
11	595 m²	39 m²	634 m²
12	595 m²	40 m²	635 m²
13	595 m²	39 m²	634 m²
14	600 m²	40 m²	640 m²
15	637 m²	40 m²	677 m²
16	631 m²	40 m²	671 m²
17	631 m²	40 m²	671 m²
18	631 m²	40 m²	671 m²
19	631 m²	40 m²	671 m²
20	631 m²	40 m²	671 m²
21	631 m²	40 m²	671 m²
22	631 m²	40 m²	671 m²
23	631 m²	40 m²	671 m²
24	637 m²	40 m²	677 m²
TOTALS:	15415 m²	958 m²	16373 m²

GROSS LETTABLE AREA RETAIL

DESCRIPTION / UNIT / TENANCY	TYPE SHOP	TOTAL AREA
1	110 m²	110 m²
2	110 m²	110 m²
3	110 m²	110 m²
4	110 m²	110 m²
5	110 m²	110 m²
6	110 m²	110 m²
7	110 m²	110 m²
8	110 m²	110 m²
9	110 m²	110 m²
10	110 m²	110 m²
11	110 m²	110 m²
TOTALS:	1210 m²	1210 m²

GROSS LETTABLE AREA CHILDCARE

DESCRIPTION / UNIT / TENANCY	TYPE CHILDCARE	TOTAL AREA
1	807 m²	807 m²
TOTALS:	807 m²	807 m²

GROSS LETTABLE AREA OFFICE

DESCRIPTION / UNIT / TENANCY	TYPE OFFICE	TOTAL AREA
1	99 m²	99 m²
2	110 m²	110 m²
3	110 m²	110 m²
4	110 m²	110 m²
5	88 m²	88 m²
6	72 m²	72 m²
7	88 m²	88 m²
8	110 m²	110 m²
9	110 m²	110 m²
10	110 m²	110 m²
11	110 m²	110 m²
12	99 m²	99 m²
TOTALS:	1216 m²	1216 m²

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#	DESCRIPTION	DATE
B	LANDSCAPE SETBACK ADDED	26/09/23
A	PRELIMINARY ISSUE	13/09/23

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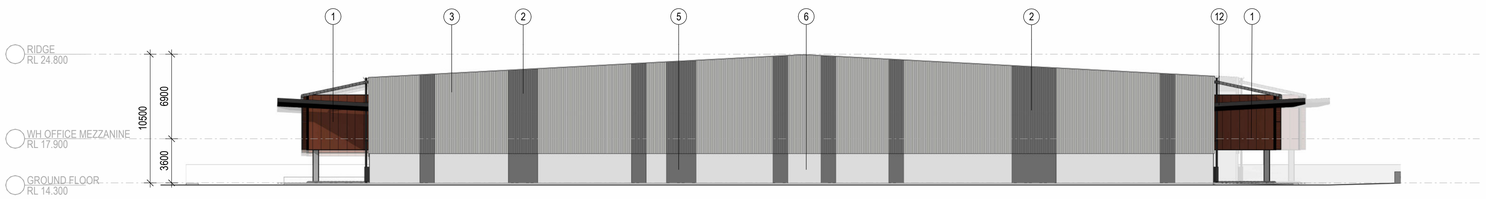
NORTH

TITLE
SITE / GROUND FLOOR PLAN

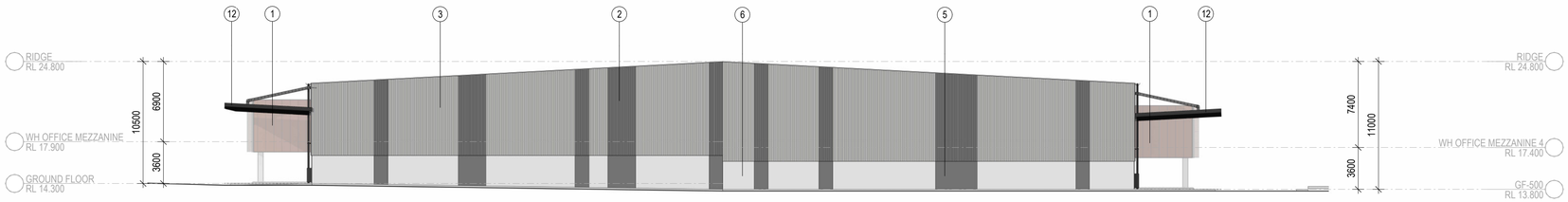
DATE	SCALE	PROJECT NO.	DWG NO.	REVISION
26/09/23		22249	SK100	B

1 WAREHOUSE NORTH ELEVATION 1 : 250



2 WAREHOUSE EAST ELEVATION 1 : 250

3 WAREHOUSE SOUTH ELEVATION 1 : 250



4 WAREHOUSE WEST ELEVATION 1 : 250

INDICATIVE EXTERNAL FINISHES *FINISHES SUBJECT TO AUTHORITY AND CLIENT APPROVAL*

1. METAL PROFILE CLADDING-KIPLOK 700-COLOBOND ARIES
2. METAL PROFILE CLADDING - TRIMDEK-COLORBOND BASALT
3. METAL PROFILE CLADDING - TRIMDEK - COLORBOND SHALE GREY
4. METAL DECK ROOFING - ZINCALUME - COLORBOND SURFMIST
5. PRECAST CONCRETE PANEL - PAINT FINISH COLORBOND BASALT
6. PRECAST CONCRETE PANEL - NATURAL FINISH
7. EXPANDED METAL MESH SCREEN - PAINT FINISH TO MATCH COLORBOND MONUMENT
8. ROLLER SHUTTER DOOR - PAINT FINISH TO MATCH COLORBOND BASLAT
9. GLAZING PANEL - LIGHT GREY TINT
10. SPANDREL PANEL - FINISH TO MATCH COLORBOND MONUMENT
11. ALUMINIUM WINDOW FRAMES - POWDERCOAT FINISH BLACK
12. DOWNPIPES, FASCIA & GUTTERS - POWDERCOAT FINISH TO MATCH COLORBOND MONUMENT
13. MASONRY BRICK WALL - BLONDE COLOUR
14. CHILDCARE ARTWORK WALL
15. METAL PROFILE CLADDING - KLIPLOK 700 - COLORBOND MONUMENT
16. MASONRY BRICK WALL - DARK COLOUR

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#	DESCRIPTION	DATE
A	CHILDCARE, RETAIL & WAREHOUSE ELEVATIONS	26/09/23

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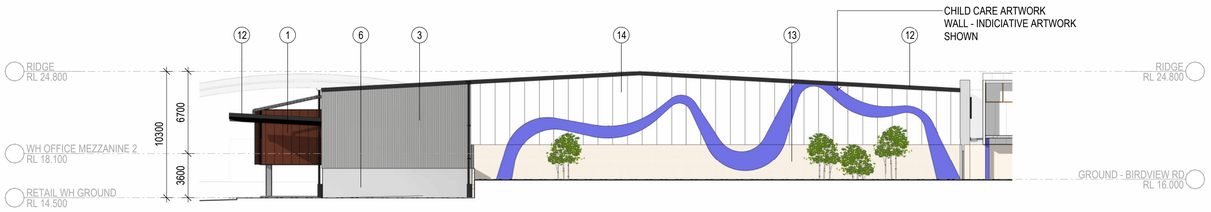
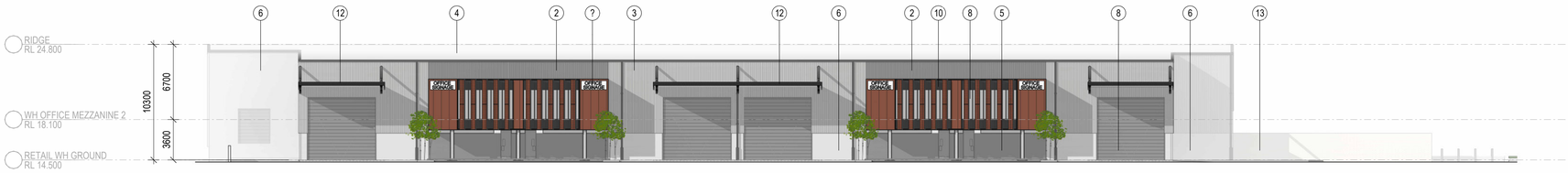
TITLE
WAREHOUSE ELEVATIONS

DATE	SCALE	PROJECT NO.	DWG NO.	REVISION
26/09/23	1:250 @ A1 1:500 @ A3	22249	SK200	A

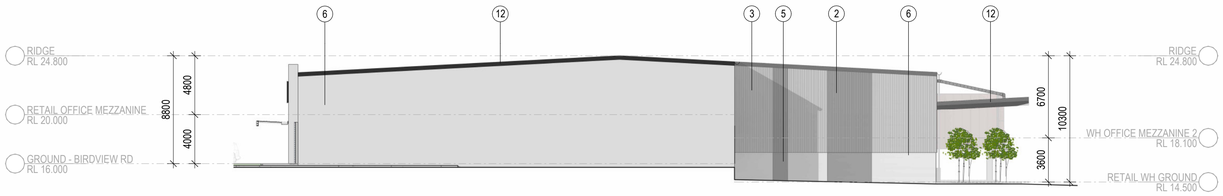
1 RETAIL NORTH ELEVATION 1 : 150



2 RETAIL EAST ELEVATION 1 : 250



3 RETAIL SOUTH ELEVATION 1 : 250



4 RETAIL WEST ELEVATION 1 : 250

INDICATIVE EXTERNAL FINISHES *FINISHES SUBJECT TO AUTHORITY AND CLIENT APPROVAL*

1. METAL PROFILE CLADDING-KIPLOK 700-COLOBOND ARIES
2. METAL PROFILE CLADDING - TRIMDEK-COLORBOND BASALT
3. METAL PROFILE CLADDING - TRIMDEK - COLORBOND SHALE GREY
4. METAL DECK ROOFING - ZINCALUME - COLORBOND SURFMIST
5. PRECAST CONCRETE PANEL - PAINT FINISH COLORBOND BASALT
6. PRECAST CONCRETE PANEL - NATURAL FINISH
7. EXPANDED METAL MESH SCREEN - PAINT FINISH TO MATCH COLORBOND MONUMENT
8. ROLLER SHUTTER DOOR - PAINT FINISH TO MATCH COLORBOND BASLAT
9. GLAZING PANEL - LIGHT GREY TINT
10. SPANDREL PANEL - FINISH TO MATCH COLORBOND MONUMENT
11. ALUMINIUM WINDOW FRAMES - POWDERCOAT FINISH BLACK
12. DOWNPIPES, FASCIA & GUTTERS - POWDERCOAT FINISH TO MATCH COLORBOND MONUMENT
13. MASONRY BRICK WALL - BLONDE COLOUR
14. CHILDCARE ARTWORK WALL
15. METAL PROFILE CLADDING - KLIPLOK 700 - COLORBOND MONUMENT
16. MASONRY BRICK WALL - DARK COLOUR

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#	DESCRIPTION	DATE
A	CHILDCARE, RETAIL & WAREHOUSE ELEVATIONS	26/09/23

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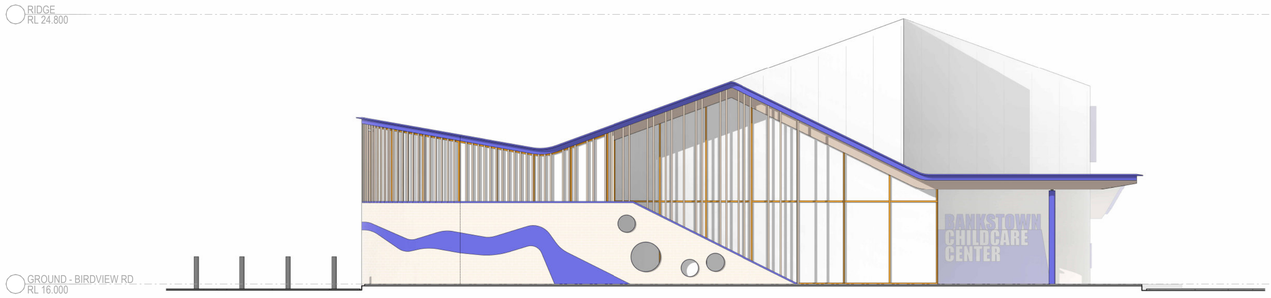
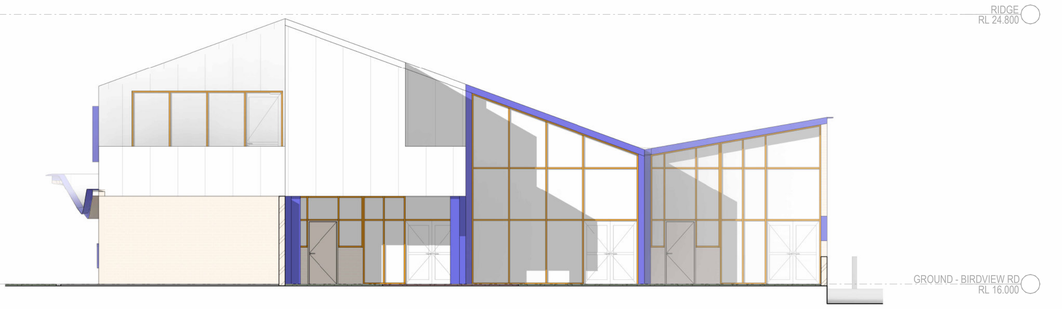
TITLE
RETAIL ELEVATIONS

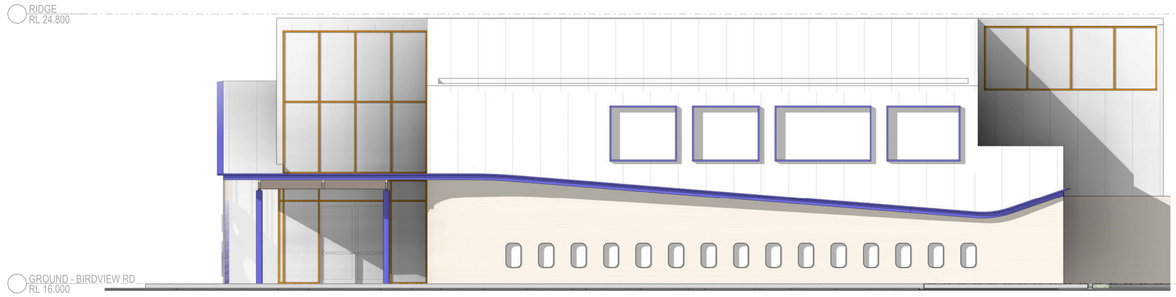
DATE	SCALE	PROJECT NO.	DWG NO.	REVISION
26/09/23	1:250 @ A1 1:500 @ A3	22249	SK201	A



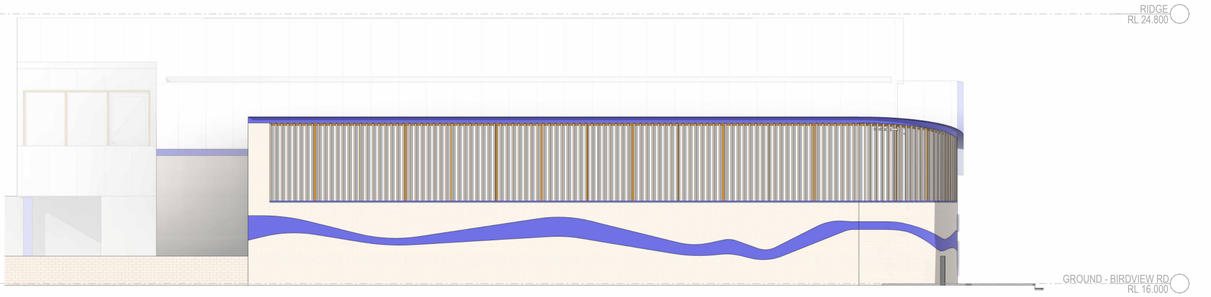
1 CHILDCARE NORTH ELEVATION 1 : 100



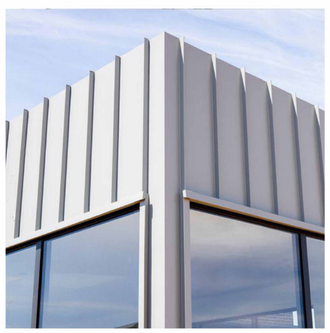
3 CHILDCARE SOUTH ELEVATION 1 : 100



2 CHILDCARE WEST ELEVATION 1 : 100



4 CHILDCARE EAST ELEVATION 1 : 100



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#	DESCRIPTION	DATE
A	CHILDCARE, RETAIL & WAREHOUSE ELEVATIONS	26/09/23

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TITLE
CHILD CARE ELEVATIONS

DATE	SCALE	PROJECT NO.	DWG NO.	REVISION
26/09/23	1:100 @ A1 1:200 @ A3	22249	SK202	A