



Yiribana Logistics Estate West

Aeronautical Impact Assessment Report

B – December 2022

PREPARED FOR
The GPT Group

PRESENTED BY
Landrum & Brown Worldwide Australia Pty Ltd



Version and Use Information:

Version Letter	Date	Author(s)	Approver	Comments
A	1 December 2022	L Wang	I Guy	Draft
B	2 December 2022	L Wang	I Guy	Final

This document has been prepared using reasonable skill and care and is for use solely by the party (the Client) who commissioned it and with whom we have a contractual relationship. This document may contain confidential information and proprietary intellectual property.

This document should not be used for any purpose, other than the project, scope and / or purpose for which it was commissioned. We accept no responsibility for any consequences of this document being used or relied upon by any party, other than the Client, or for its use for purposes other than that for which it was commissioned.

We accept no responsibility for any error or omission within this document that arises from an error or omission in data supplied to us by other parties including the Client.

No person, other than the Client, may rely on the content, information or any views expressed in this document. We accept no duty of care, responsibility or liability to any recipient of this document other than the Client. No representation, warranty or undertaking, express or implied, is made and no responsibility or liability is accepted by us to any party other than the Client or any Recipient(s), as to the accuracy or completeness of the information contained in this document. We disclaim all and any liability whether arising in tort, contract or otherwise which we might otherwise have to any party other than the Client, in respect of this document, or any information contained in it. This document is not intended for use to support or inform any public or private securities offerings including any related memorandum or prospectus for any securities offering or stock exchange listing or announcement.

We may not have independently or fully verified the data, information or statements provided to us as the basis for this document in order to determine the accuracy, completeness, and / or sufficiency of same.

Information and opinions are current only as of the date of this document and we accept no responsibility for updating such information or opinion. It should, therefore, not be assumed that any such information or opinion continues to be accurate subsequent to the date of the document. This is especially true in the case of any forecasts presented in this document. Such forecasts were prepared using, and are reliant upon, the data, information or statements supplied to us. Some of the assumptions used to develop the forecasts may not be realized and unanticipated events and circumstances may occur. Differences between forecasts and actuality may be material. While we consider that the information and opinions given in this document are sound all parties must rely on their own skill and judgement when making use of it.

Through receipt of this document you agree to be bound by this disclaimer. This disclaimer and any issues, disputes or claims arising out of or in connection with it shall be governed by, and construed in accordance with, the laws prevailing for the contract between us and the Client who commissioned it.

Contents	Page
1 Executive Summary	1
1.1 Aeronautical Impediments to the Proposed Development	1
1.2 Basis of L&B's Opinion	1
1.2.1 Key Assessment Input Information	1
1.3 Conclusions: National Airports Safeguarding Framework (NASF)	2
1.4 Conclusions: State and Local Planning Requirements	3
1.4.1 NSW State Environmental Planning Policy (Western Parkland City) 2021	3
1.4.2 NSW State Environmental Planning Policy (Industry and Employment) 2021	4
1.4.3 NSW Penrith Local Environmental Plan (LEP) 2010	4
2 Introduction	5
3 Location and Proposed Form of the Proposed Development	9
3.1 Location	9
4 NASF Requirements and Assessment	10
4.1 Introduction to NASF	10
4.2 Guideline A: Measures for Managing Impacts of Aircraft Noise	10
4.2.1 Requirements	10
4.2.2 Assessment and Conclusions	11
4.3 Guideline B: Managing the Risk of Building Generated Windshear and Turbulence at Airports	16
4.3.1 Requirements	18
4.3.2 Assessment and Conclusions	20
4.4 Guideline C: Managing the Risk of Wildlife Strikes in the Vicinity of Airports	21
4.4.1 Requirements	21
4.4.2 Assessment and Conclusions	22
4.5 Guideline D: Managing the Risk of Wind Turbine Farms as Physical Obstacles to Air Navigation	22

4.6	Guideline E: Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports	22
4.6.1	Requirements	23
4.6.2	Assessment and Conclusions	24
4.7	Guideline F: Managing the Risk of Intrusions into the Protected Airspace of Airports	26
4.7.1	Requirements	26
4.7.2	Assessment and Conclusions	29
4.8	NASF Guideline G: Protecting Aviation Facilities – Communication, Navigation and Surveillance (CNS)	31
4.8.1	Requirements	31
4.8.2	Assessment and Conclusions	33
4.9	NASF Guideline H: Protecting Strategically Important Helicopter Landing Sites (HLS)	36
4.9.1	Requirements	36
4.9.2	Assessment and Conclusions	37
4.10	NASF Guideline I – Public Safety Areas (PSAs)	37
4.10.1	Requirements	37
4.10.2	Assessment and Conclusions	39
5	NSW State Environment Planning Policy (Western Parkland City) 2021	41
5.1	Clause 4.17: Aircraft Noise	41
5.1.1	Requirement	41
5.1.2	Assessment and Conclusions	42
5.2	Clause 4.18: Building Generated Wind Shear and Turbulence	42
5.2.1	Requirement	42
5.2.2	Assessment and Conclusions	42
5.3	Clause 4.19: Wildlife Hazards	43
5.3.1	Requirement	43
5.3.2	Assessment and Conclusions	43
5.4	Clause 4.20: Wind Turbines	44
5.4.1	Requirement	44

5.4.2	Assessment and Conclusions	44
5.5	Clause 4.21: Lighting	44
5.5.1	Requirement	44
5.5.2	Assessment and Conclusions	45
5.6	Clause 4.22: Airspace Operations	45
5.6.1	Requirement	45
5.6.2	Assessment and Conclusions	46
5.7	Clause 4.23: Public Safety Area	47
5.7.1	Requirement	47
5.7.2	Assessment and Conclusions	48
6	NSW State Environmental Planning Policy (Industry and Employment) 2021	49
6.1	Clause 2.36 Development in areas subject to aircraft noise	49
6.1.1	Requirement	49
6.1.2	Assessment and Conclusions	50
6.2	Clause 2.37: Airspace operations	50
6.2.1	Requirement	50
6.2.2	Assessment and Conclusions	51
6.3	Clause 2.38: Development of land adjacent to Airport	51
6.3.1	Requirement	51
6.3.2	Assessment and Conclusions	52
7	Penrith Local Environmental Plan (LEP) 2010	53
7.1	Clause 7.9: Development of land in the flight paths of the site reserved for the proposed Second Sydney Airport (SWZ).	53
7.1.1	Requirement	53
7.1.2	Assessment and Conclusions	53
8	Summary of Conclusions and Actions	55

8.1	Conclusions: National Airports Safeguarding Framework (NASF)	55
8.2	Conclusions: State and Local Planning Requirements	56
8.2.1	NSW State Environmental Planning Policy (Western Parkland City) 2021	56
8.2.2	NSW State Environmental Planning Policy (Industry and Employment) 2021	57
8.2.3	NSW Penrith Local Environmental Plan (LEP) 2010	57
Appendix A – State Environmental Planning Policy Maps		58

List of Tables

Page

Table 1: Building Type Acceptability Table (AS2021-2015)	12
Table 2: Northern Gateway Industrial Estate Development (SSDA 01) Proposed Building Site ANEC Inclusion Contour	15
Table 3 Summary of BRA for CNS Facilities (Guideline G).....	33
Table 4 Surveillance System Clearance Plane	36

List of Figures

Page

Figure 1 Yiribana Logistics Estate West (Source: The GTP Group: 2146_MP02_B_DA_Masterplan)	5
Figure 2 Yiribana Logistics Estate West – Warehouse 1B Elevations (Source: The GTP Group: 2146_DA220_A_Warehouse 1B Elevations)	6
Figure 3 Yiribana Logistics Estate West – Warehouse 1A Elevations (Source: The GTP Group: 2146_DA220_A_Warehouse 1A Elevations)	7
Figure 4: Location of Proposed Development (Source: L&B CAD & Google Map).....	9
Figure 5: ANEC Stage 1 (Yr 2030), (Source environmental Impact Statement 2016).....	13
Figure 6: ANEC One Runway (Yr 2050), (Source environmental Impact Statement 2016).....	14
Figure 7: ANEC One Runway (Yr 2050) (Source environmental Impact Statement 2016).....	15
Figure 8: Assessment Methodology (Guideline B – May 2018)	17
Figure 9: Assessment Trigger Area (Guideline B – May 2018).....	18
Figure 10: 1:35 Slope Diagrams (Guideline B – May 2018).....	18
Figure 11: BWD Check Table (Guideline B – May 2018).....	19
Figure 12: Approximate Location of Proposed Development against Assessment Trigger Area (L&B CAD & Google Map)	20
Figure 13: Wildlife Control Zones and Mitigations (Guideline C – October 2014).....	21
Figure 14: Lighting Control Zones (Guideline E – October 2014) with added explanatory table (L&B).....	24
Figure 15 Airport Safeguarding Tool / Western Sydney Airport - Lighting Intensity (Source: L&B CAD & Google Map)	25
Figure 16 Isometric view of OLS.....	27
Figure 17 an example of a PANS-OPS chart	28
Figure 18 Western Sydney airport OLS surface and proposed development location (Source: L&B CAD & Google Map).....	29
Figure 19 Two dimensional representation three dimensional zones in BRA (Guideline G)	32
Figure 20 Primary and Secondary Surveillance Radar Area	35
Figure 21 Referral Trigger for SHLS (Guideline H)	37
Figure 22 Example of PSA showing inner area and outer area	38
Figure 23 General guidance for new/proposed developments on compatible and incompatible activities within PSA risk contours.....	39
Figure 24 Western Sydney Airport Public Safety Area (PSA) (Source: L&B drawing & Google Map).....	40

1 Executive Summary

Landrum & Brown (L&B) have reviewed the proposed development for compliance with relevant national (federal) and / or local regulations as shown below for the purposes of preparing this Aeronautical Impact Assessment (AIA).

L&B's review has reached the conclusions set out in the following pages. Full information on the assessment approach leading to the development of the conclusions is contained within the body of this report.

Name of Proposed Development:	Yiribana Logistics Estate West
Location / Address of Proposed Development:	771-781 Mamre Rd, Kemps Creek, NSW
Name of Developer / Project Proponent:	The GTP Group

1.1 Aeronautical Impediments to the Proposed Development

In L&B's opinion the following aeronautical / action related impediments exist in relation to the proposed development:

- No Action required.

In L&B's opinion the developer should undertake the following actions upon receipt of this report:

- No Action required.

1.2 Basis of L&B's Opinion

L&B's review as presented in this report has been based on information provided by the developer / project proponent as set out in this report. Should the proposed development alter from that set out in this report then the findings of the report may be subject to change. Particular attention should be paid to any changes in size, scale, nature and location of the proposed development.

1.2.1 Key Assessment Input Information

In addition to the location information shown above the following key inputs from the Developer / Project Proponent were relied upon in undertaking the assessment described in this report.

Development Height (m AHD):

54.6 m AHD, It is assumed that any plant will be no more than **2 m** higher than the height of the nominal building resulting in a height, for permanent objects, of **56.6 m AHD**.

Temporary Height (m AHD) incl. Craneage etc.:	Temporary craneage will be required to operate at 20m higher than the permanent objects. A height of 76.6 m AHD is used for assessment against the various airspace requirements.
Proposed Development's Function / Purpose:	It is assumed that all buildings on the site will be of light industrial nature.
Additional Information:	<p>It is assumed that all buildings will not include any facilities that emit smoke, dust or other plumes into the atmosphere.</p> <p>We would note that WSA Co have verbally advised that the published levels for both runways will be amended as a result of design and construction changes. The northern runway (23R/05L will be raised slightly and the southern runway (23L/05R) lowered. Until information is made available, and incorporated into published information and / or requirements we are unable to take account of this potential change.</p>

1.3 Conclusions: National Airports Safeguarding Framework (NASF)

Assessment Principle	Conclusion / Action	Reference Page / Section
NASF Guideline A: Measures for Managing Impacts of Aircraft Noise	No impact.	Page: 11 Section: 4.2.2
NASF Guideline B: Managing the Risk of Building Generated Windshear and Turbulence at Airports	No impact.	Page: 20 Section: 4.3.2
NASF Guideline C: Managing the Risk of Wildlife Strikes in the Vicinity of Airports	No impact.	Page: 22 Section: 4.4.2
NASF Guideline D: Managing the Risk of Wind Turbine Farms as Physical Obstacles to Air Navigation	No impact.	Page: 22 Section: 4.5
NASF Guideline E: Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports	No impact.	Page: 24 Section: 4.6.2

NASF Guideline F: Managing the Risk of Intrusions into the Protected Airspace of Airports	No impact.	Page: 29 Section: 4.7.2
NASF Guideline G: Protecting Aviation Facilities – Communication, Navigation and Surveillance (CNS)	No impact.	Page: 33 Section: 4.8.2
NASF Guideline H: Protecting Strategically Important Helicopter Landing Sites (HLS)	No impact.	Page: 37 Section: 4.9.2
NASF Guideline I: Public Safety Areas (PSAs)	No impact.	Page: 39 Section: 4.10.2

1.4 Conclusions: State and Local Planning Requirements

1.4.1 NSW State Environmental Planning Policy (Western Parkland City) 2021

Assessment Principle	Conclusion / Action	Reference Page / Section
Clause 4.17: Aircraft Noise	No impact.	Page: 42 Section: 5.1.2
Clause 4.18: Building Windshear and Turbulence	No impact.	Page: 42 Section: 5.2.2
Clause 4.19: Wildlife Hazards	No impact.	Page: 43 Section: 5.3.2
Clause 4.20: Wind Turbines	No impact.	Page: 44 Section: 5.4.2

Clause 4.21: Lighting	No impact.	Page: 45 Section: 5.5.2
Clause 4.22: Airspace Operations	No impact.	Page: 46 Section: 5.6.2
Clause 4.23: Public Safety	No impact.	Page: 48 Section: 5.7.2

1.4.2 NSW State Environmental Planning Policy (Industry and Employment) 2021

Assessment Principle	Conclusion / Action	Reference Page / Section
Clause 2.36: Development in areas subject to aircraft noise	No impact.	Page: 50 Section: 6.1.2
Clause 2.37: Airspace Operations	No impact.	Page: 51 Section: 6.2.2
Clause 2.38: Development of land adjacent to Airport	No impact.	Page: 52 Section: 6.3.2

1.4.3 NSW Penrith Local Environmental Plan (LEP) 2010

Assessment Principle	Conclusion / Action	Reference Page / Section
Clause 7.9: Development of land in the flight paths of the site reserved for the proposed Second Sydney Airport (SWZ)	No impact.	Page: 53 Section: 7.1.2

2 Introduction

The GTP Group has asked L&B Worldwide Australia Pty Ltd (L&B / Landrum & Brown) to prepare an Aeronautical Impact Assessment (AIA) report for the proposed development; Yiribana Logistics Estate West at 771-781 Mamre Rd, Kemps Creek, NSW. Shown in Figure 1.

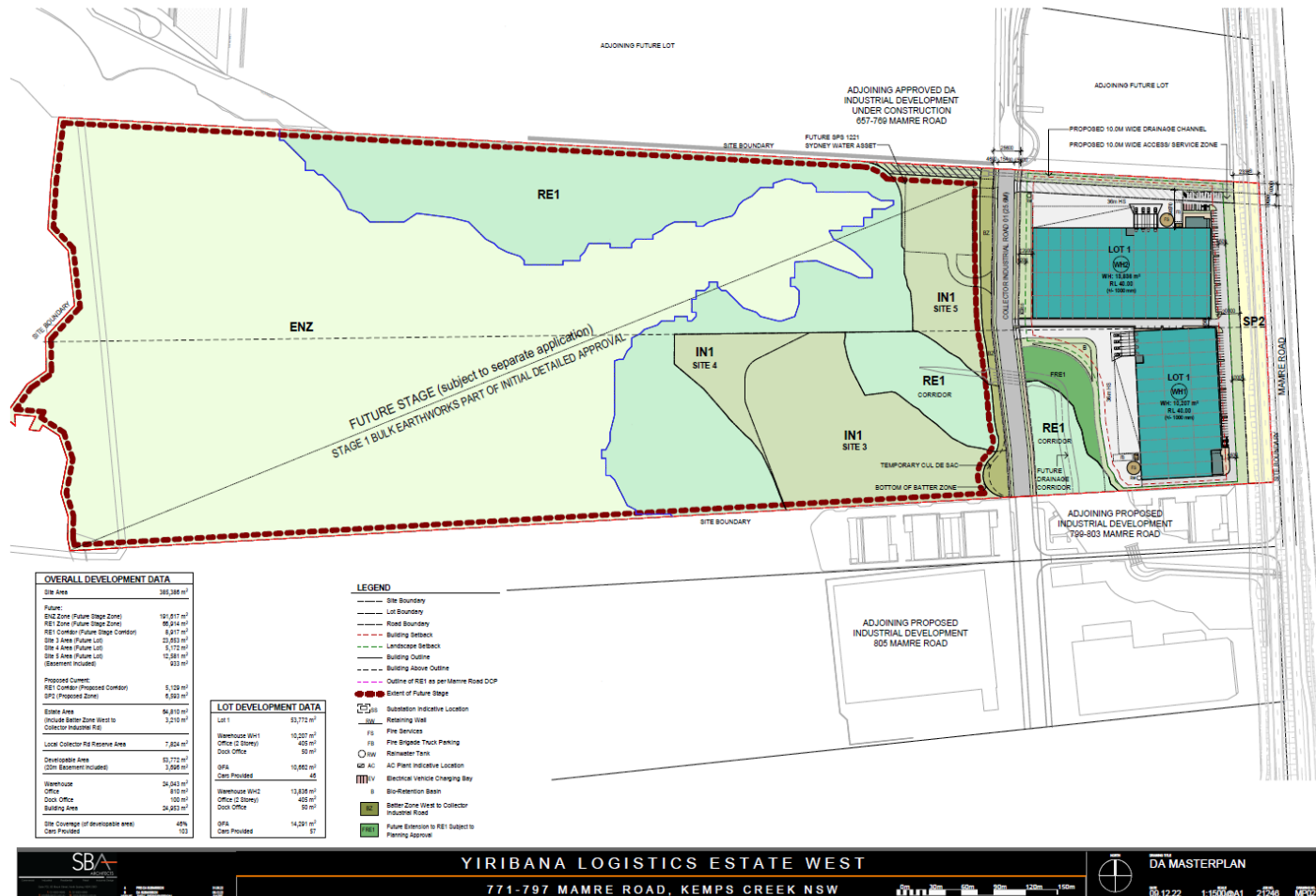


Figure 1 Yiribana Logistics Estate West (Source: The GTP Group: 2146_MP02_B_DA_Masterplan)

This building's maximum height is **54.6 m AHD** shown in Figure 2 and Figure 3. It is assumed that any plant will be no more than **2m** higher than the height of the virtual building resulting in a height, for permanent objects, of **56.6 m AHD**. In addition, temporary craneage will be required to operate at 20m higher than the permanent objects. Thus, a height of **76.6 m AHD** is used for assessment against the various airspace requirements.

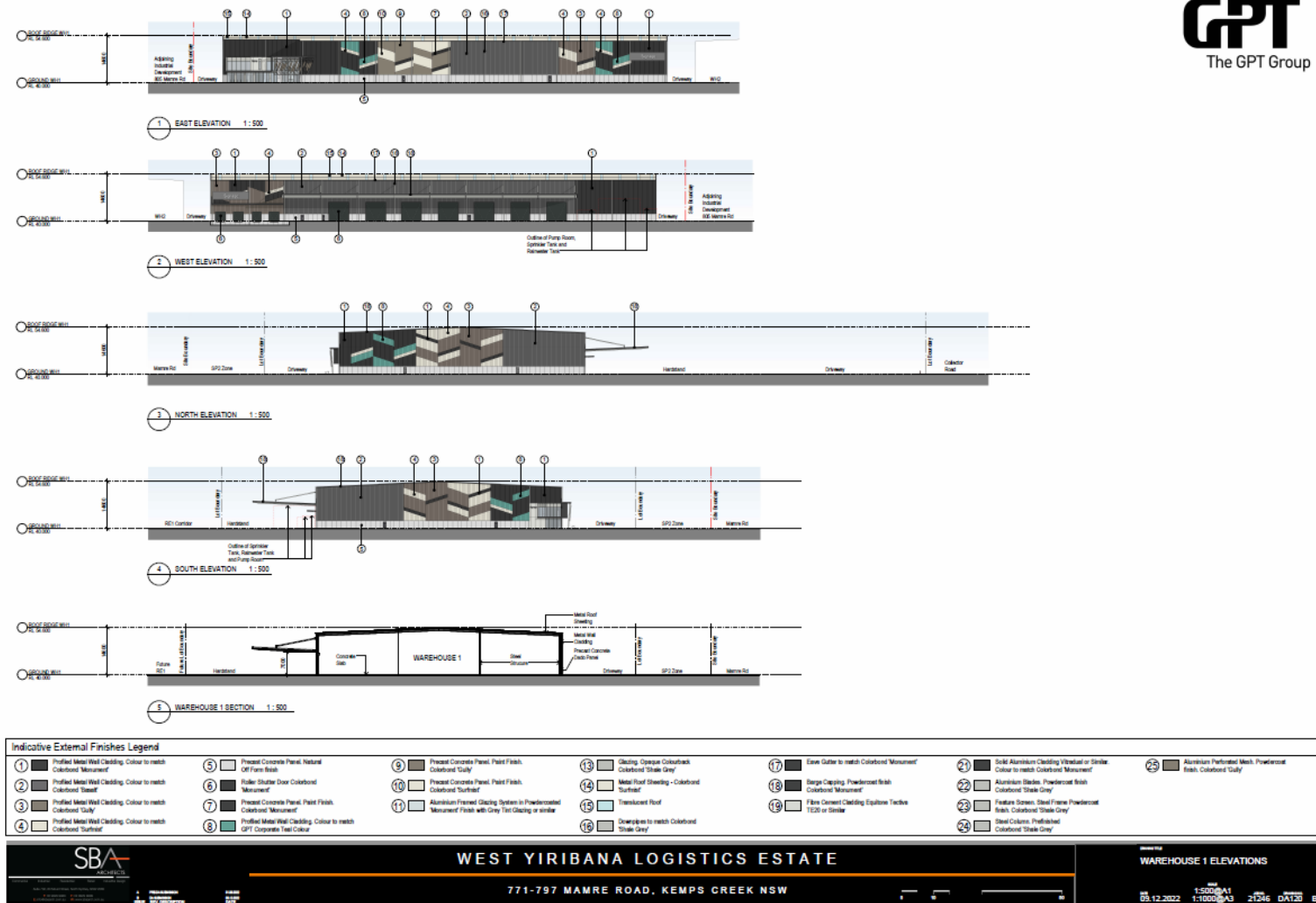


Figure 2 Yiribana Logistics Estate West – Warehouse 1 Elevations (Source: The GTP Group: 2146_DA120_B_Warehouse 1 Elevations)

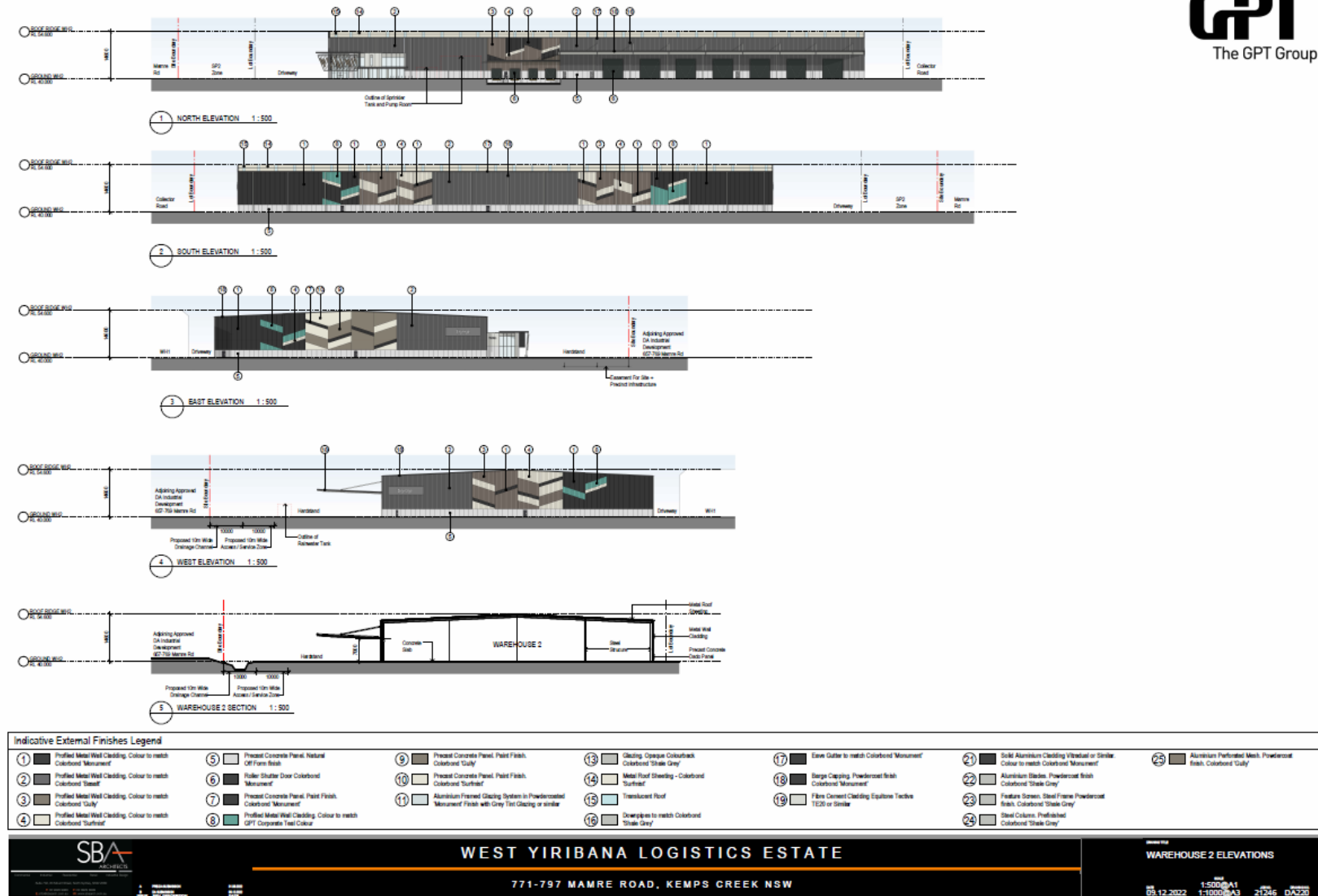


Figure 3 Yiribana Logistics Estate West – Warehouse 2 Elevations (Source: The GPT Group: 2146_DA220_B_Warehouse 2 Elevations)

It is also assumed that the development on the site will be categorised as “Light Industrial” in and will not include any facilities that emit smoke, dust or other plumes into the atmosphere.

The location, elevation and proposed form information for the proposed development are shown in Section 3.

This report considers:

- National Airports Safeguarding Framework Principles and Guidelines (NASF).
 - Guideline A: Measures for Managing Impacts of Aircraft Noise
 - Guideline B: Managing the Risk of Building Generated Windshear and Turbulence at Airports
 - Guideline C: Managing the Risk of Wildlife Strikes in the Vicinity of Airports
 - Guideline D: Managing the Risk of Wind Turbine Farms as Physical Obstacles to Air Navigation
 - Guideline E: Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports
 - Guideline F: Managing the Risk of Intrusions into the Protected Airspace of Airports
 - Guideline G: Protecting Aviation Facilities – Communication, Navigation and Surveillance (CNS)
 - Guideline H: Protecting Strategically Important Helicopter Landing Sites (HLS)
 - Guideline I: Public Safety Areas (PSAs)
- NSW State Environment Planning Policy (Western Parkland City) 2021:
 - Clause 4.17: Aircraft Noise
 - Clause 4.18: Building Generated Windshear and Turbulence
 - Clause 4.19: Wildlife Hazard
 - Clause 4.20: Wind Turbines
 - Clause 4.21: Lighting
 - Clause 4.22: Airspace Operations
 - Clause 4.23: Public Safety
- NSW State Environmental Planning Policy (Western Sydney Employment Area) 2021;
 - Clause 2.36: Development in areas subject to aircraft noise
 - Clause 2.37: Airspace Operations; and
 - Clause 2.38: Development of land adjacent to Airport
- Penrith Local Environmental Plan (LEP) 2010
 - Clause 7.9: Development of land in the flight paths of the site reserved for the proposed Second Sydney Airport (SWZ).

3 Location and Proposed Form of the Proposed Development

3.1 Location

The location of the proposed development is shown in Figure 4 below.

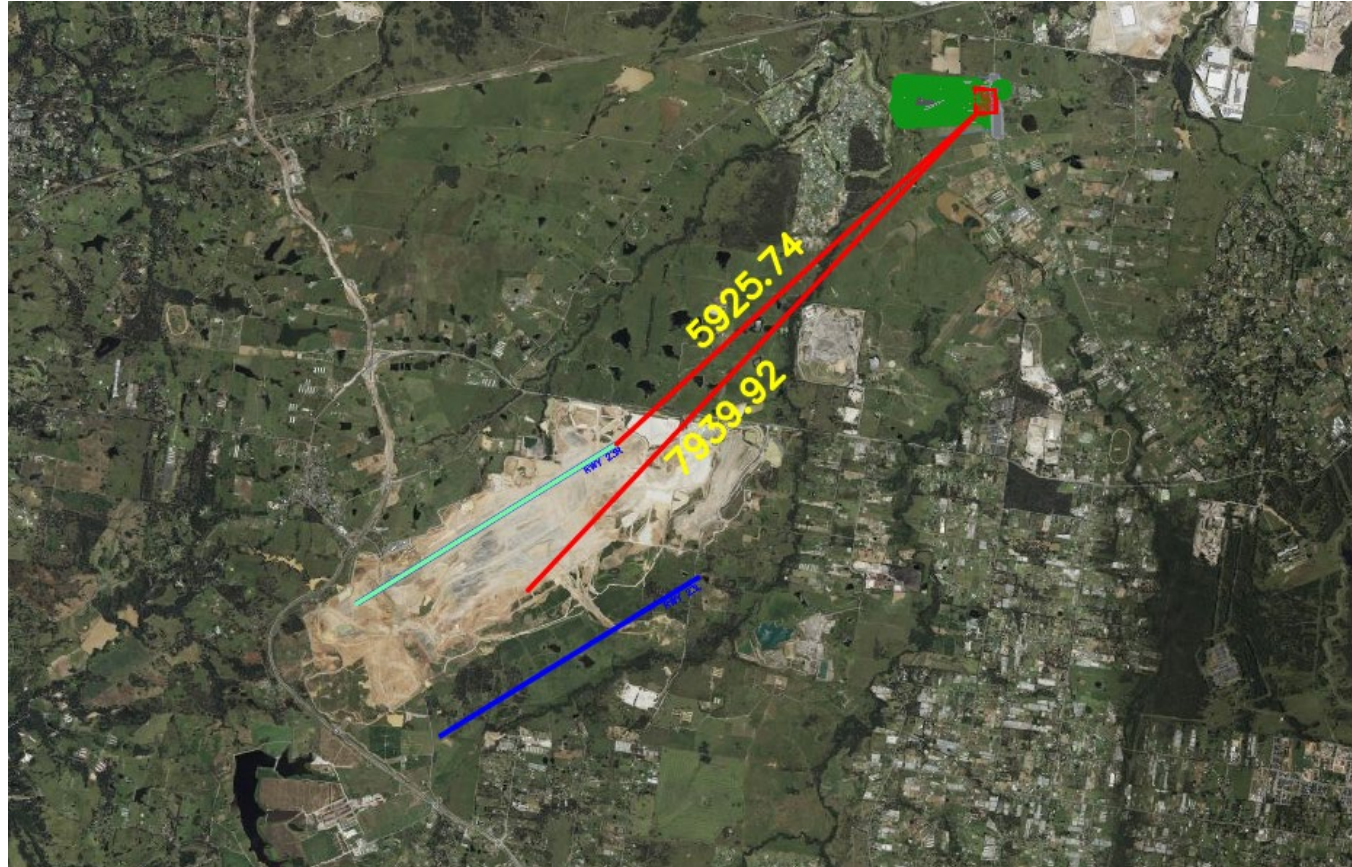


Figure 4: Location of Proposed Development (Source: L&B CAD & Google Map)

The site is located approximately 5.9 km and 7.9 km from the Western Sydney Airport runway 23 end and the airfield reference point (ARP), as shown in Figure 4.

4 NASF Requirements and Assessment

4.1 Introduction to NASF

The National Airports Safeguarding Framework (NASF) is issued by the Department of Infrastructure, Transport, Regional Development and Communications. The stated purpose of the NASF is to “enhance the current and future safety, viability and growth of aviation operations, by supporting and enabling:

- the implementation of best practice in relation to land use assessment and decision making in the vicinity of airports and strategic helicopter landing sites;
- assurance of community safety and amenity near airports and strategic helicopter landing sites;
- better understanding and recognition of aviation safety requirements and aircraft noise
- impacts in land use and related planning decisions;
- the provision of greater certainty and clarity for developers and land owners;
- improvements to regulatory certainty and efficiency; and
- the publication and dissemination of information on best practice in land use and related planning that supports the safe and efficient operation of airports and strategic helicopter landing sites.”

L&B uses the NASF to provide a baseline for the consideration of safeguarding issues in Australia under a common framework. This aligns with the Departments view that the NASF should “drive improvements in planning outcomes consistently across all jurisdictions, and contribute to the improvement of the safety and viability of aviation in Australia.”

The following sections set out the requirements under NASF and the impact assessment related to the proposed development.

4.2 Guideline A: Measures for Managing Impacts of Aircraft Noise

This guideline principally provides recommendations to local planning authorities on the implementation of noise policies within their legislative frameworks using principles set out in Australian Noise Exposure Forecast (ANEF) System and the Australian Standard AS 2021-2015 Acoustics – Aircraft Noise Intrusion – Building Siting and Construction (AS2021). The “requirements” set out below are extracted from those recommendations. Note: Any local implementation of noise requirements is covered under Section 4 of this document.

4.2.1 Requirements

4.2.1.1 *Greenfield Areas*

- No noise sensitive developments within a 20 ANEF where that land was previously rural or for non-urban purposes.

- Avoid noise sensitive development where ultimate capacity or long range noise modelling for the airport indicates either:
 - 20 or more daily events greater than 70 dB(A);
 - 50 or more daily events of greater than 65 dB(A); or
 - 100 events or more daily events of greater than 60 dB(A).
- Consider likely night-time aircraft movements (11pm to 6am) with 60 dB(A) or greater noise impact.

4.2.1.2 *Brownfield Areas (Urban Land)*

- Consider balance of aircraft noise impacts against strategic planning outcomes.
- Manage implications of aircraft noise through construction and / or disclosure processes to residents / occupants.
- Consider if new development improves existing noise issues through improved management of implications.
- Consider dB(A) level guidelines shown elsewhere.

4.2.1.3 *3.2.1.3 New Noise Sensitive Developments within Residential Areas*

- Physically reduce aircraft noise through construction and / or AS2021 processes)
- Ensure disclosure processes to residents / occupants if one or more of the criteria in shown in section 3.2.1.1 (Points 2 and 3) apply.

4.2.1.4 *3.2.1.4 Airports without an ANEF*

- Consider application of 3.2.1.1 requirements for the airport based on the following zones of influence;
 - Within 15 km of an international airport, major domestic airport, or major military aerodrome.
 - Within 10 km of a domestic airport with regular scheduled public transport services
 - Within 5 km of any other type of aerodrome for which an ANEF chart is unavailable.

4.2.2 **Assessment and Conclusions**

4.2.2.1 *Greenfield Areas*

Australian Standard AS 2021:2015 – Acoustics – Aircraft Noise Intrusion – Building Siting and Construction, provides guidance on the siting and construction of buildings in the vicinity of airports to minimise aircraft noise intrusion. It also describes the process that should be followed in producing ANEF charts for use in applying this standard,

The projected ANEF contours for Western Sydney Airport are described in the Western Sydney Airport Plan Section 2.3.3 and shown in Figure 5 to Figure 7 below.

DITRDC provides a Noise Modelling Tool on its Western Sydney Airport website. Table 1 and the associated figures shows the ANEC contour levels for each particular stage of development of the airport and the particular runway in use.

Building Type	Acceptable	Conditionally Acceptable	Unacceptable
House, home unit, flat, Caravan Park	< 20 ANEF	20 < 25 ANEF	> 25 ANEF
Hotel, motel, hostel	< 25 ANEF	25 < 30 ANEF	> 30 ANEF
School, university	< 20 ANEF	20 < 25 ANEF	> 25 ANEF
Hospital, nursing home	< 20 ANEF	20 < 25 ANEF	> 25 ANEF
Public building	< 20 ANEF	20 < 30 ANEF	> 30 ANEF
Commercial building	< 25 ANEF	25 < 35 ANEF	> 35 ANEF
Light industrial	< 30 ANEF	30 < 40 ANEF	> 40 ANEF
Other industrial	Acceptable in all ANEF zones		

Table 1: Building Type Acceptability Table (AS2021-2015)

The following noise contour diagrams are sourced environmental Impact Statement 2016.

Stage 1 (Year 2030)

Noise predictions for Stage 1 (2030) represent the anticipated noise exposure levels associated with an airport handling about 10 million annual passengers (similar to the size of Adelaide Airport). A single runway would be constructed initially. Refer to Figure 5.

"Prefer 05 Direction" refers to the primary mode of operation; i.e. prioritising the use of runway direction "05". This mode would result in the majority of departures to the north east and arrivals from the south west.

"Prefer 23 Direction" refers to the primary mode of operation; i.e. prioritising the use of runway direction "23". This mode would result in the majority of departures to the south west and arrivals from the north east.

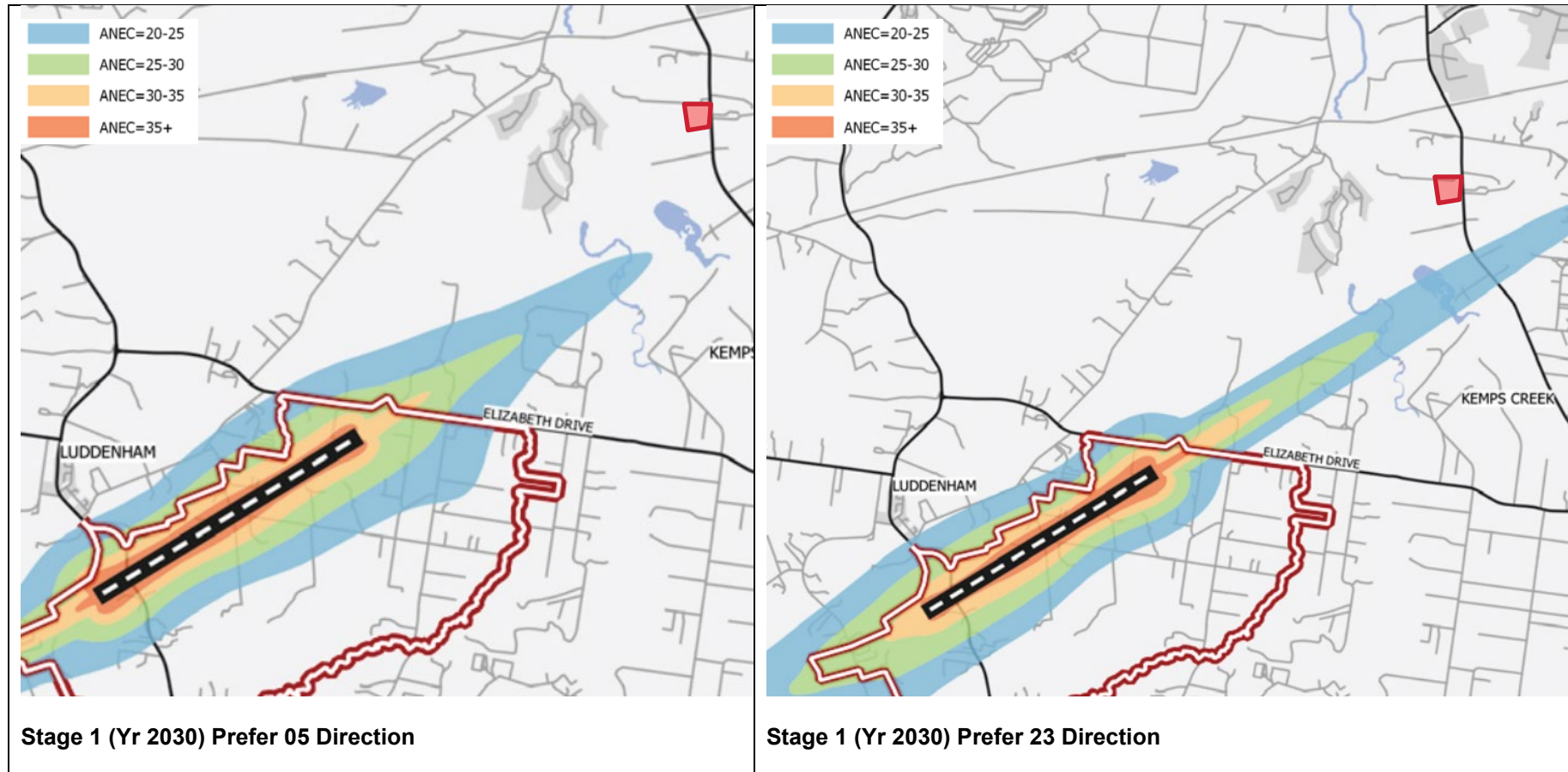


Figure 5: ANEC Stage 1 (Yr 2030), (Source environmental Impact Statement 2016)

Stage 1 Additional Capacity (One Runway Year 2050)

Noise predictions for the year 2050 consider the anticipated growth of SWZ. This scenario considers noise exposure levels at a time when the initial single runway would likely be approaching its capacity (approximately 37 million annual passengers). Refer to Figure 6.

"Prefer 05 Direction" refers to the primary mode of operation; i.e. prioritising the use of runway direction "05". This mode would result in the majority of departures to the north east and arrivals from the south west.

"Prefer 23 Direction" refers to the primary mode of operation; i.e. prioritising the use of runway direction "23". This mode would result in the majority of departures to the south west and arrivals from the north east.

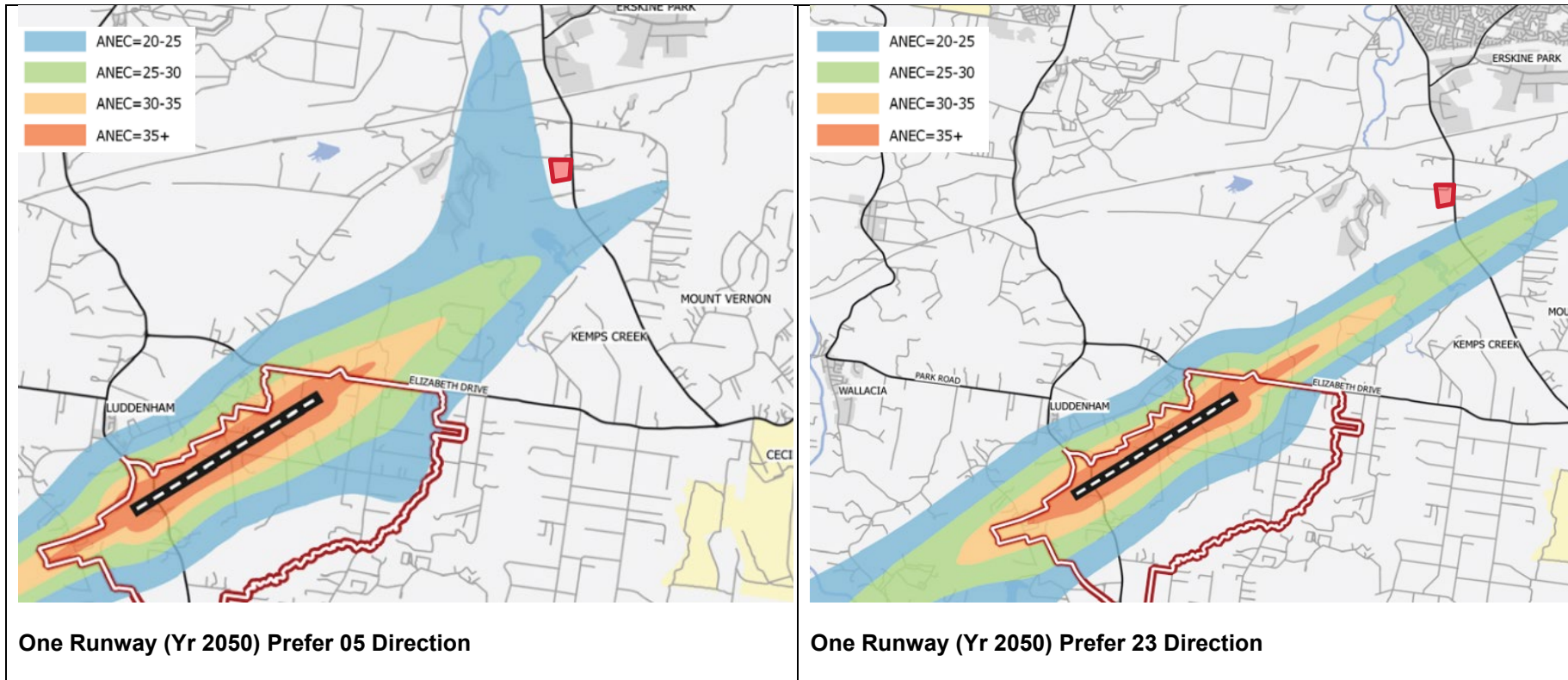


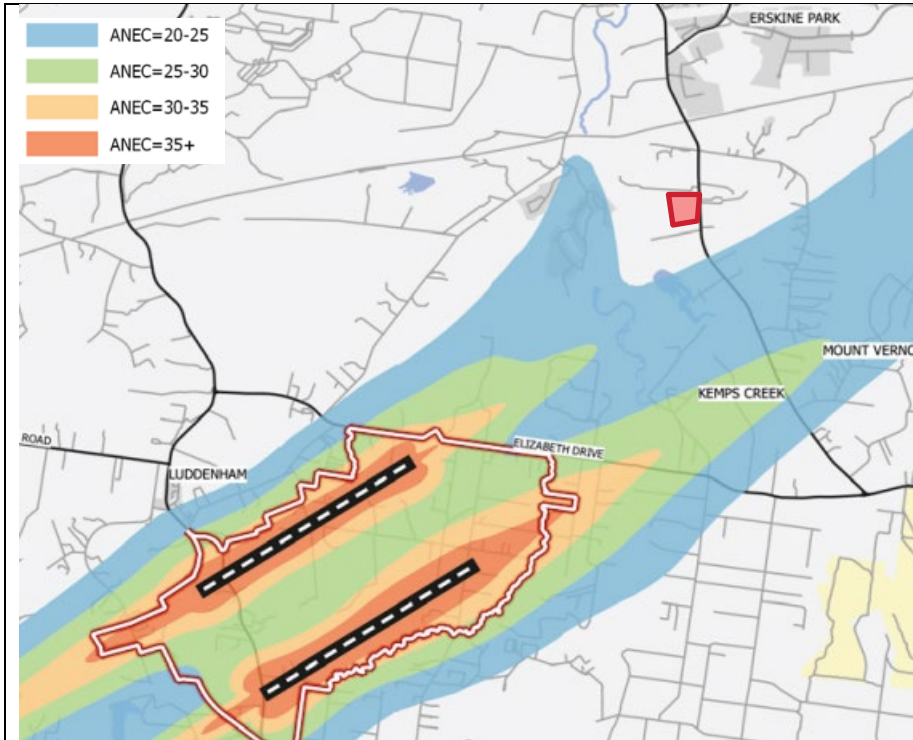
Figure 6: ANEC One Runway (Yr 2050), (Source environmental Impact Statement 2016)

Long term (Year 2063)

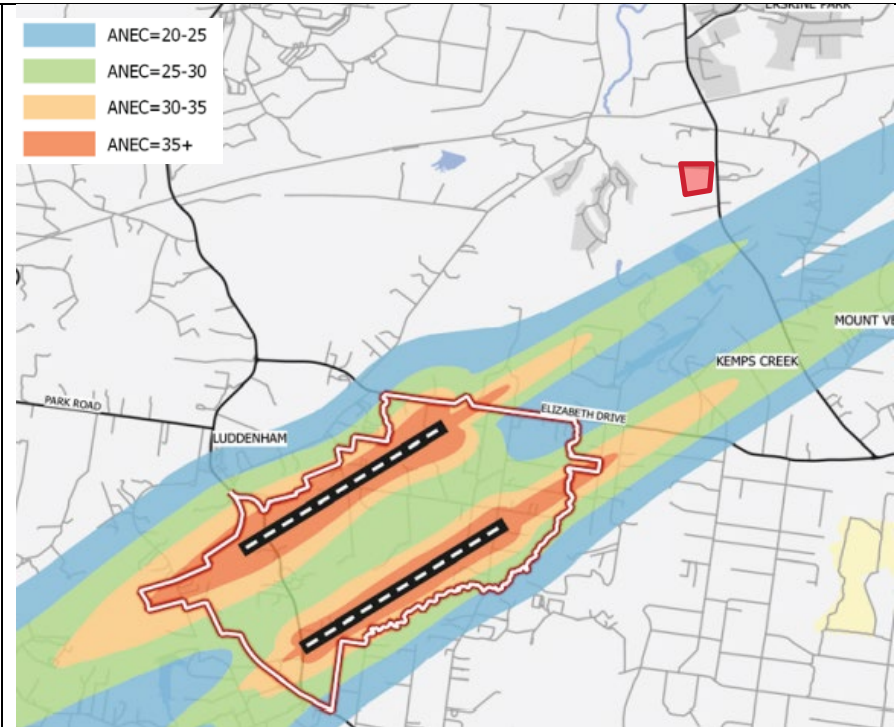
Noise predictions for the long term development (approx. year 2063). The long term development would operate with two runways. Refer to Figure 7.

"Prefer 05 Direction" refers to the primary mode of operation; i.e. prioritising the use of Runways "05L" (left) (northern runway) and "05R" (right) (southern runway). This mode would result in the majority of departures to the north east and arrivals from the south west.

"Prefer 23 Direction" refers to the primary mode of operation; i.e. prioritising the use of runway directions "23L" (left) (northern runway) and "23R" (right) (southern runway). This mode would result in the majority of departures to the south west and arrivals from the north east.



Long Term (Yr 2063) Prefer 05 Direction



Long Term (Yr 2063) Prefer 23 Direction

Figure 7: ANEC One Runway (Yr 2050) (Source environmental Impact Statement 2016)

Based on above analysis, the development site falls outside ANEC contour. Refer to Table 2.

Airport Runway Development Stages	Prefer 05 Direction	Prefer 23 Direction
Stage 1 (Year 2030)	Outside the ANEC Zone	Outside the ANEC Zone
Stage 1 Additional Capacity (One Runway Year 2050)	Outside the ANEC Zone	Outside the ANEC Zone
Long term (Year 2063)	Outside the ANEC Zone	Outside the ANEC Zone

Table 2: Northern Gateway Industrial Estate Development (SSDA 01) Proposed Building Site ANEC Inclusion Contour

Conclusion:	The development site is outside all the ANEF zones.
--------------------	---

4.2.2.2 *Brownfield Areas (Urban Land)*

The proposed development site is not classified as a Brownfield Area.

Conclusion:	No action required.
--------------------	---------------------

4.2.2.3 *New Noise Sensitive Developments within Residential Areas*

The proposed development site is not classified as a Residential Area.

Conclusion:	No action required.
--------------------	---------------------

4.2.2.4 *Airports without an ANEF*

DITRDC provides a Noise Modelling Tool on its Western Sydney Airport website. Therefore this requirement does not apply.

Conclusion:	No action required.
--------------------	---------------------

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

This guideline principally provides recommendations for a risk based approach to the consideration of influences on the wind conditions on runways. The “requirements” set out below are extracted from those recommendations. Note: Any local implementation of wind related requirements is covered under Section 4 of this document.

Guideline B sets out a clear process map for the assessment of the risk presented by development. This is replicated below. L&B assessment methodology follows the process map.

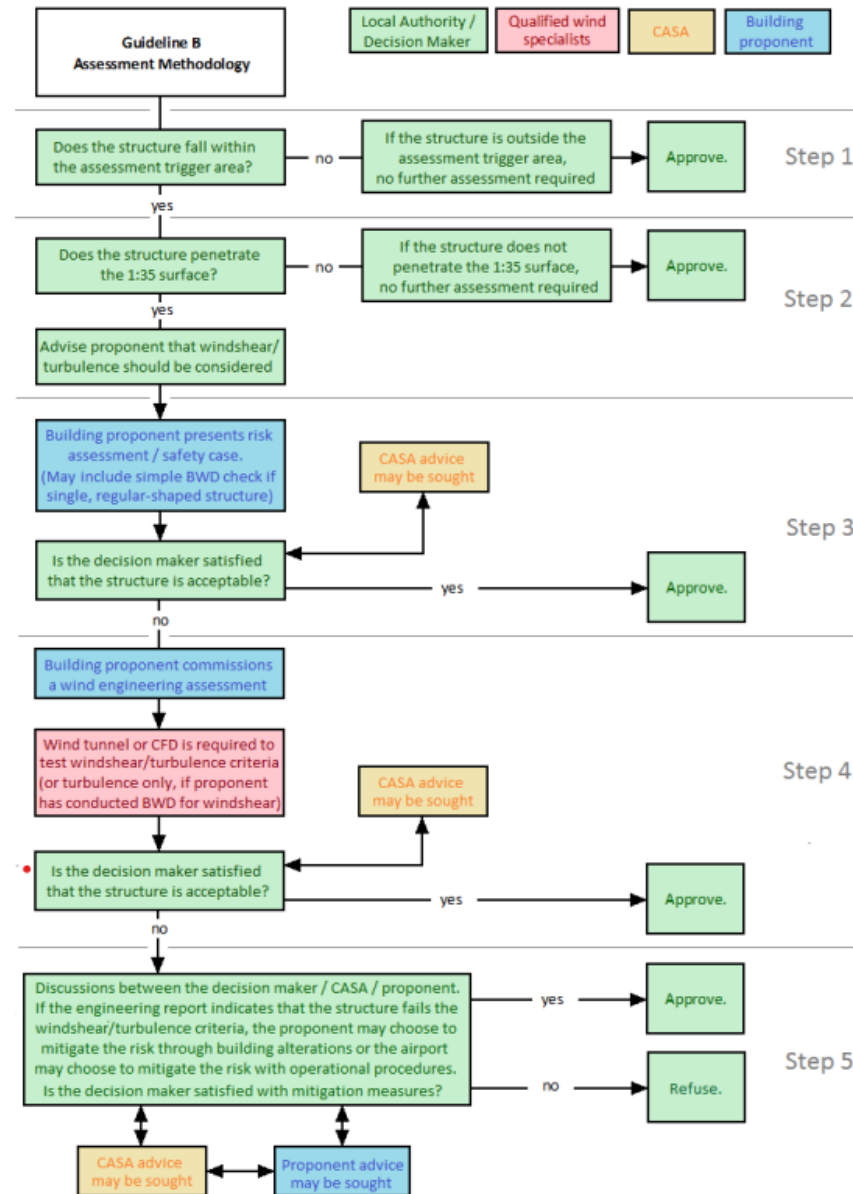


Figure 8: Assessment Methodology (Guideline B – May 2018)

4.3.1 Requirements

4.3.1.1 Step 1: Assessment Trigger Area

- Buildings falling within the “Assessment Trigger Area” shown below must be considered.

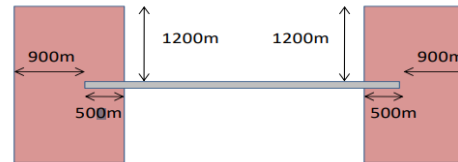


Figure 9: Assessment Trigger Area (Guideline B – May 2018)

4.3.1.2 Step 2: Building Height Assessment

- Buildings within the Assessment Trigger Area must be considered for any infringement of a 1:35 slope from the centreline (or extended centreline) of the applicable runway. Diagrams of the 1:35 slope and its application are shown below.

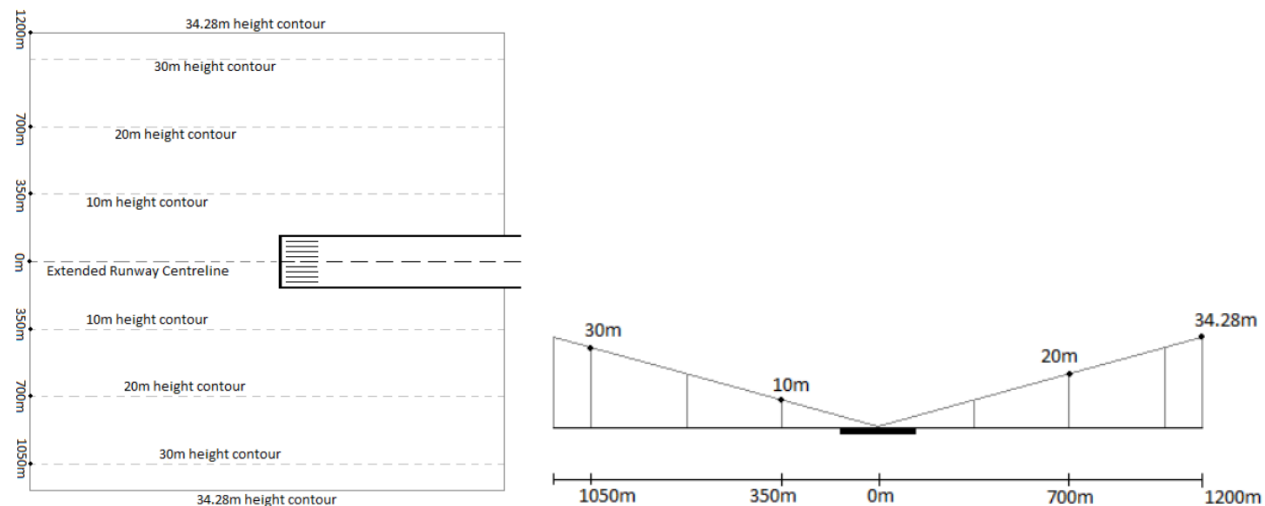


Figure 10: 1:35 Slope Diagrams (Guideline B – May 2018)

4.3.1.3 Step 3: Risk Assessment / Safety Case (incl BWD Check)

- Buildings that infringe the 1:35 slope should be risk assessed and a safety case prepared.
- Initial consideration should be through use of the building-induced wind speed deficit (BWD) approach as outlined in Guideline B. This approach uses wind rose information combined with building size and location in conjunction with the table below.

BWD	1	2	W/H Ratios =		
			4	6	8
0.48 V _H	1.7 H	3.4 H	6.5 H	9.5 H	12.5 H
0.35 V _H	2.2 H	4.2 H	8 H	11.5 H	15 H
0.22 V _H	3 H	5.5 H	10 H	14 H	18 H
0.11 V _H	5 H	9 H	17 H	24.5 H	32 H

Figure 11: BWD Check Table (Guideline B – May 2018)

- The criteria to be considered using BWD are;
 - 7 knots (3.6 m/s) parallel to the runway centreline (or extended runway centreline) at heights below 61m AGL. Any speed deficit change of 7 knots or greater must take place over a distance of at least 100m. The “7 knot along-wind windshear criterion”.
 - 6 knots (3.1 m/s) perpendicular to the runway centreline (or extended runway centreline) at heights below 61m AGL. Any speed deficit change of 6 knots or greater must take place over a distance of at least 100m. The “6 knot across-wind windshear criterion”.
- Further consideration, after BWD, should include; wind directions, wind speeds, runway operating modes, shielding from surrounding buildings and features.
- Turbulence criteria set in Guideline B is not assessable via the BWD approach which may result in Step 3 approach being deemed unacceptable by approving authorities.

4.3.1.4 Step 4: Wind Engineering Assessment

- Proposed development (buildings) that are not able to be evaluated via the process outlined in Step 3, or where approval authorities require further study, should be assessed using wind tunnel or computational fluid dynamics (CFD) modelling. Note: L&B favours the CFD approach.

4.3.1.5 Step 5: Modifications and Mitigations

- Should the proposed development (building) be proven in Step 4 not to meet the requirements of Guideline B then the proponent and approving authorities may wish to discuss modifications to the proposed development and / or operational mitigations.

4.3.2 Assessment and Conclusions

4.3.2.1 Step 1: Assessment Trigger Area

The asterisk (*) shown in the diagram below indicates the approximate location of the proposed development in the context of the Assessment Trigger Area.
Note: Where the proposed development is well outside the trigger area the distance and location of the asterisk is indicative only.



Figure 12: Approximate Location of Proposed Development against Assessment Trigger Area (L&B CAD & Google Map)

The development site is located outside of the Windshear Assessment Trigger Area and will not have any impact on turbulence at Western Sydney Airport, as shown on Figure 12.

Conclusion:

The Development Site will be located well beyond the airport boundary and will not have risk of generating windshear and turbulence at airport.

The building and the cranes will not have an impact upon airport.

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

This guideline principally provides recommendations to local planning authorities on the implementation of policies to limit the impact of (generally flying) wildlife on aircraft operations within their legislative frameworks using principles set out in International Civil Aviation Organisation (ICAO) documentation. The “requirements” set out below are extracted from those recommendations. Note: Any local implementation of wildlife requirements is covered under Section 4 of this document.

4.4.1 Requirements

- Proposed development should not increase the risk of wildlife strikes at airports. Land uses that present a risk of attracting wildlife should be controlled (and mitigated) within 3km, 8km and 13km of an airport as set out below.

Land Use	Wildlife Attraction Risk	Actions for Existing Developments			Actions for Proposed Developments/ Changes to Existing Developments		
		3 km radius (Area A)	8 km radius (Area B)	13 km radius (Area C)	3 km radius (Area A)	8 km radius (Area B)	13 km radius (Area C)
Agriculture							
Turf farm	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Piggery	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Fruit tree farm	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Fish processing /packing plant	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Cattle /dairy farm	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Poultry farm	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Forestry	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action
Plant nursery	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action
Conservation							
Wildlife sanctuary / conservation area - wetland	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Wildlife sanctuary / conservation area - dryland	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Recreation							
Showground	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Racetrack / horse riding school	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Golf course	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Sports facility (tennis, bowls, etc)	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Park / Playground	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Picnic / camping ground	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Commercial							
Food processing plant	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Warehouse (food storage)	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action
Fast food / drive-in / outdoor restaurant	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action
Shopping centre	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action
Office building	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Hotel / motel	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Car park	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Cinemas	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Warehouse (non-food storage)	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Petrol station	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Utilities							
Food / organic waste facility	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Putrescible waste facility - landfill	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Putrescible waste facility - transfer station	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Non-putrescible waste facility - landfill	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Non-putrescible waste facility - transfer station	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Sewage / wastewater treatment facility	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Potable water treatment facility	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action

Figure 13: Wildlife Control Zones and Mitigations (Guideline C – October 2014)

4.4.2 Assessment and Conclusions

The proposed development is 8 km from the ARP and is within Area B. Within the 8km zone there are no “incompatible” uses that would normally align with an industrial precinct of the type understood to be foreseen at the development site. Specific building / lot uses may need to ensure that any “mitigate” and “monitor” actions are included.

The nature of the proposed development site does not include large dams, large waterbodies, wastewater treatment plants, parks or biodiversity conservation sites. Any stormwater evaporation ponds required under DCP Stormwater Strategy will be covered with netting in accordance with DCP Stormwater requirements.

The land where the development site is planned to be located is currently farm allotments and open vegetation paddocks. The industrial estate will consume a significant amount of this grassland and farming activity, effectively reducing the amount of wildlife present in the area that could cause a hazard to overflying aircraft.

L&B understands that the developer is assessing the appropriate types of flora that will enhance the visual features of the estate without being an attractant for birds or bats and not encouraging fauna such as rats and mice, being recognised as food, that would attract birds to the site.

Conclusion:

The proposed development site will not impact the risk of wildlife strikes in the vicinity of Western Sydney Airport.

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

This guideline principally provides recommendations to local planning authorities and proponents of wind farm developments on the implementation of policies to limit the impact of such development on aircraft operations. The “requirements” set out below are extracted from those recommendations.

As the proposed development is not a wind farm nor includes a single wind turbine this Guideline does not apply. Requirements and assessment approach are therefore not included in this report.

Conclusion:

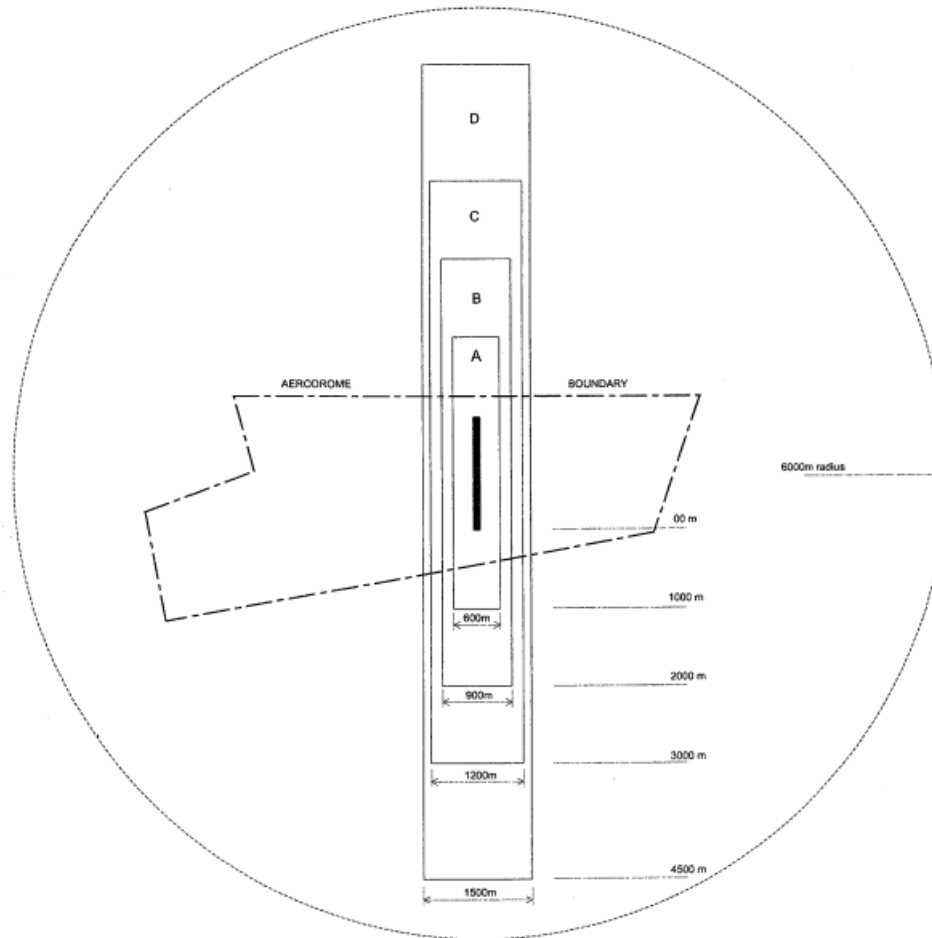
Proposed development is compliant. No action required.

4.6 Guideline E: Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports

This guideline principally provides recommendations to local planning authorities and airport operators on the implementation of policies to address the risk of distractions to pilots of aircraft from lighting and light fixtures near airports. The “requirements” set out below are extracted from those recommendations. Note: Any local implementation of lighting requirements is covered under Section 4 of this document.

4.6.1 Requirements

- In the context of this Guidelines proposed developments should include;
 - motorway/freeway lighting
 - sea container yards
 - wharves
 - refinery flare plumes
 - stadium flood lighting
 - construction lighting.
- Lighting within a 6km radius of the centre of each runway at an airport should be assessed under this Guideline. The diagram below shows the application of this radius and the four lighting control zones within it.



Lighting Zone Reference	Distance in m zone extends from runway end	Distance in m zone extends from runway centreline / extended centreline	Max 3° Upward Light Intensity (Candela)
A	1000	300 (600m total width)	0
B	2000	450 (900m total width)	50
C	3000	600 (1200m total width)	150
D	4500	750 (1500m total width)	450

Figure 14: Lighting Control Zones (Guideline E – October 2014) with added explanatory table (L&B)

- In addition, proponents should note that coloured lights should be considered and potentially referred to CASA for consideration.

4.6.2 Assessment and Conclusions

The proposed development is more than 6km from the centre of an applicable runway and therefore is not covered by Guideline E. Shown in Figure 15.

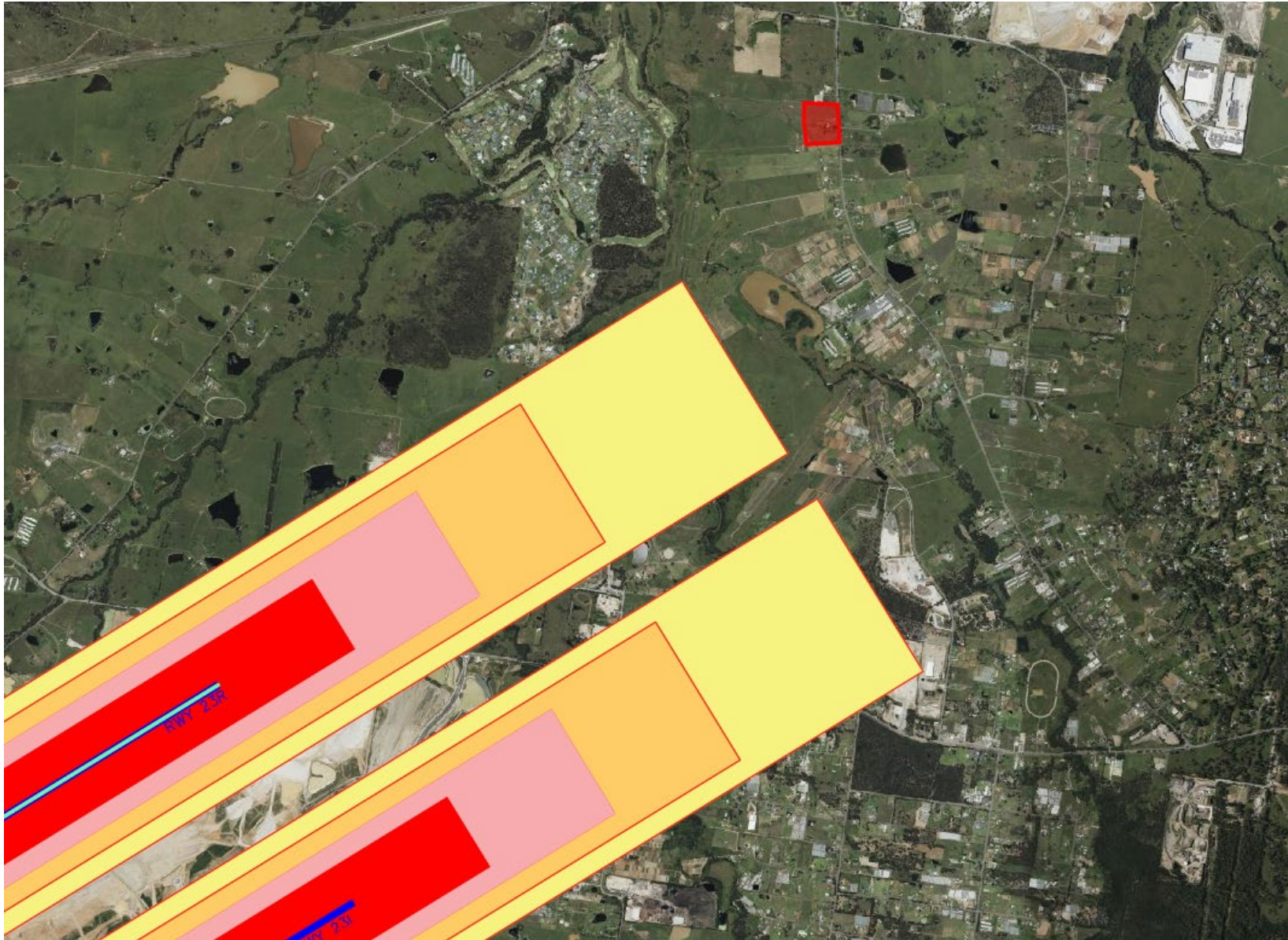


Figure 15 Airport Safeguarding Tool / Western Sydney Airport - Lighting Intensity (Source: L&B CAD & Google Map)

Conclusion:	The proponent need take no specific actions in respect of lighting.
--------------------	---

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

This document provides guidance to State/Territory and local government decision makers as well as airport operators to jointly address the issue of intrusions into the operational airspace of airports by tall structures, such as buildings and cranes, as well as trees in the vicinity of airports .

4.7.1 Requirements

- In the context of this Guidelines proposed developments should include;
 - Activities that could cause air turbulence, where the turbulence could affect the normal flight of aircraft operating in the prescribed airspace; and
 - Activities that could cause the emission of steam, other gas, smoke, dust or other particulate matter, where the smoke, dust or particulate matter could affect the ability of aircraft to operate in the prescribed airspace in accordance with Visual Flight Rules (VFR).

4.7.1.1 *Protection of visual operations – Obstacle limitation surfaces*

The first group of criteria are used to determine the obstacle limitation surfaces (OLS) for a runway. Criteria for determining these surfaces are established by the International Civil Aviation Organisation (ICAO). In Australia, CASA publishes these criteria in the Manual of Standards for Part 139 of the Civil Aviation Safety Regulations.

Structures, trees or other activities that intrude into the OLS could constitute obstacles to aircraft taking off or approaching to land. The OLS for an airport charts the volume and dimensions of operational airspace that should be kept free of obstacles to aircraft operations being conducted under VFR or during the visual stages of IFR operations.

It is important to note that the OLS does not prohibit all intrusions. The aim is to ensure that all objects that intrude into the OLS can be identified and assessed for their potential impact on aircraft operations. The assessment will enable a determination on whether the intrusion is permissible, and if so, a determination on whether any risk mitigation requirements should be imposed.

The requirements to protect operational airspace will be enforced most rigorously along the extended centrelines of runways in the approach and takeoff areas. This could extend up to 15 kilometres from the ends of runways at major airports. Other OLS surfaces that protect aircraft circling to land may also extend up to 15 kilometres from major airports.

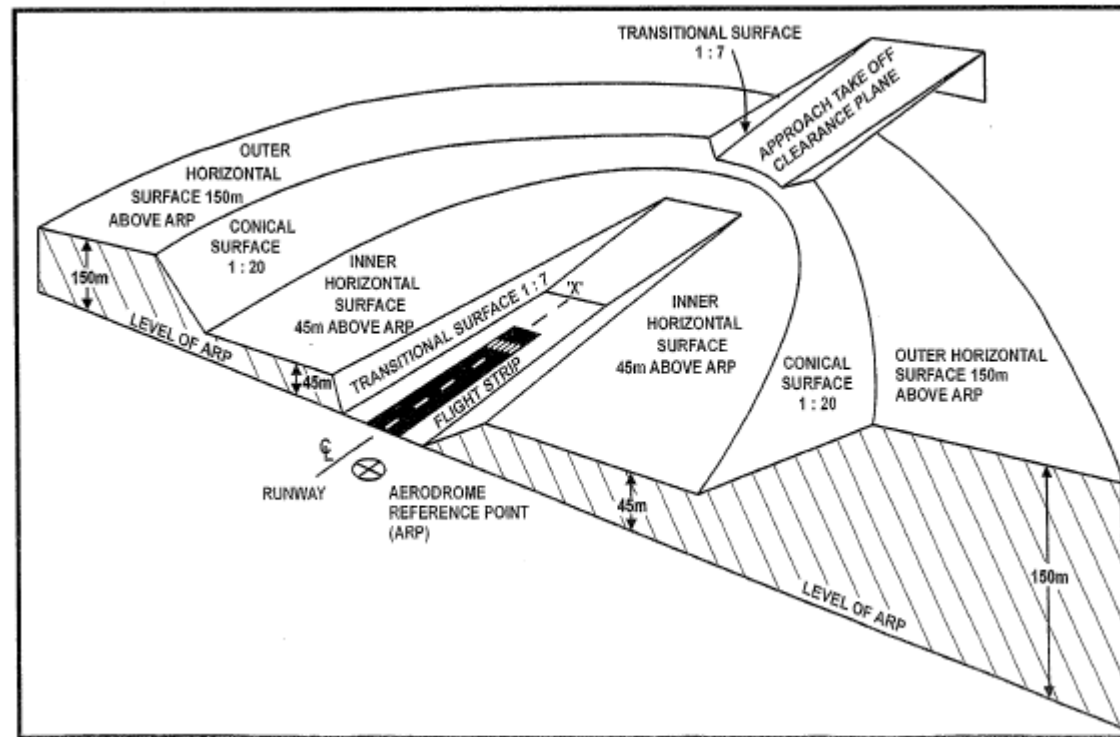


Figure 16 Isometric view of OLS

4.7.1.2 Protection of instrument operations – Procedures for Air Navigation Services – Operations (PANS-OPS) Surfaces

A second group of criteria is used to determine the volumes and dimensions of airspace required to protect the safety of IFR operations. Under IFR operations, pilots fly aircraft relying on instruments for navigation. Airspace protection for IFR operations cannot allow for any long-term penetrations.

ICAO established these criteria which are published in a document titled 'Procedures for Air Navigation Services – Operations (PANS-OPS)'. The surfaces determined by using the criteria in the PANS-OPS publication are called PANS-OPS surfaces.

The PANS-OPS surfaces are used in the construction of take-off, landing and approach procedures based entirely on navigation with sole reference to aircraft instruments. They are designed to protect aircraft from colliding with obstacles when flying on instruments. Minimum safe altitudes are established for each segment of an instrument procedure.

If it is agreed by all stakeholders that a long-term penetration of the PANS-OPS surfaces is essential, the PANS-OPS surfaces must be raised so they are clear of the development causing the penetration. However, this may also have operational penalties for airport operations and could have community impacts, such as re-design of flight paths that increase the population exposed to high levels of aircraft noise.

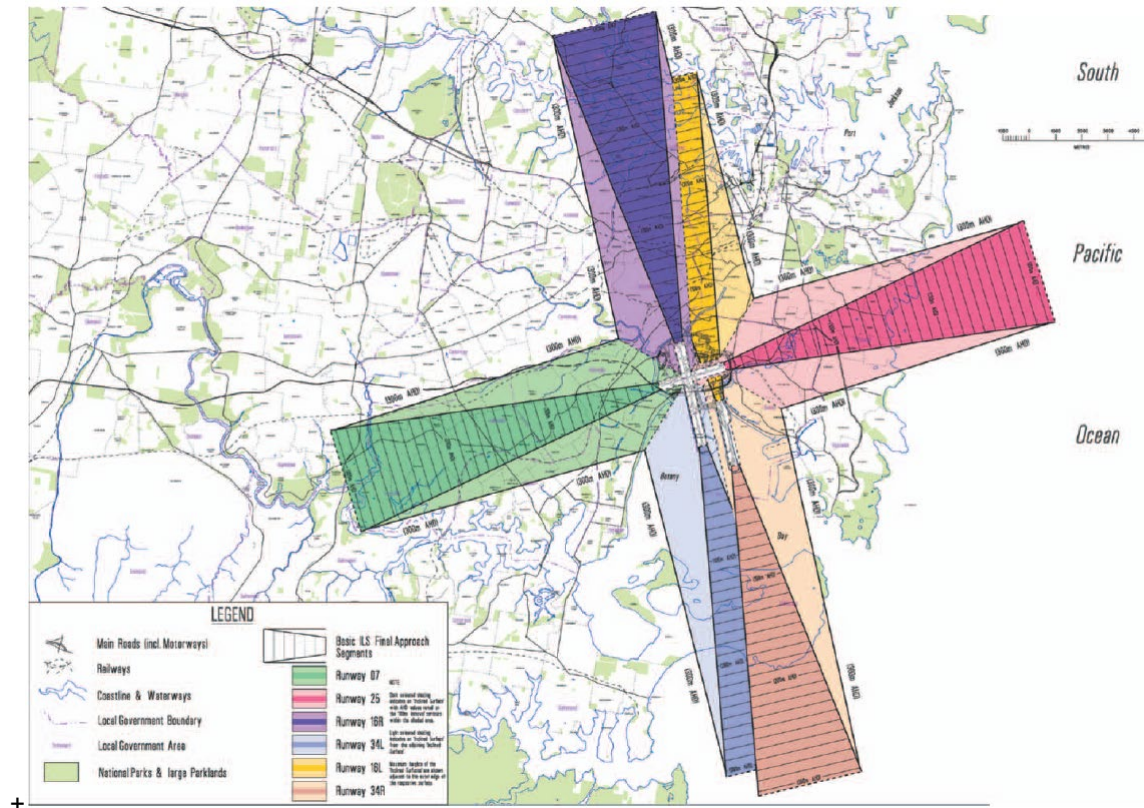


Figure 17 an example of a PANS-OPS chart

4.7.1.3 Roof Top Exhaust Plumes

Part 139 of the Civil Aviation Safety Regulations 1988 (CASR 1988) provides that CASA may determine that a gaseous efflux having a velocity in excess of 4.3 m/s is, or will be, a hazard to aircraft operations because of the velocity of the efflux. In this case, any exhaust plume with a velocity in excess of 4.3 m/s from any vent on top of the building is unlikely to reach the height of the lowest PANS OPS or OLS.

4.7.2 Assessment and Conclusions

4.7.2.1 Obstacle limitation surfaces

The proposed development is within 15km of the centre of airport, it is located beneath the Approach Surface and Conical Surface with the lowest height of **197.8 m AHD**.

Figure 18 shows Western Sydney airport Obstacle Limitation Surface Map and the location of the proposed development.

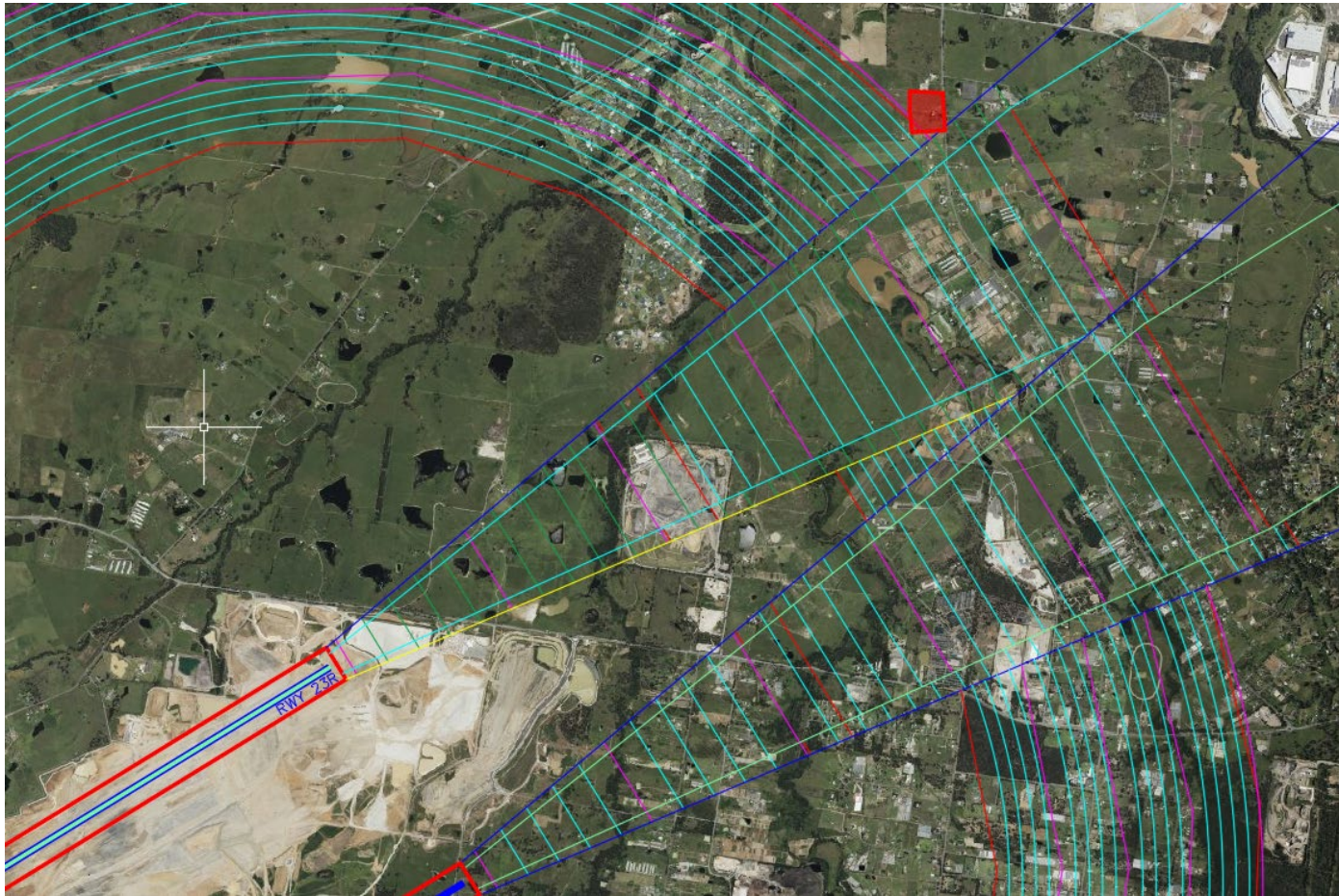


Figure 18 Western Sydney airport OLS surface and proposed development location (Source: L&B CAD & Google Map)

Conclusion:

With maximum building heights projected to be beneath **76.6m AHD**.

The proposed development does not infringe the OLS of aerodrome. No action is required.

4.7.2.2 Operations (PANS-OPS) Surfaces

Certified aerodromes have flight protection (PANS-OPS) surfaces associated with them. The PANS OPS surfaces associated with a 25 nm Minimum Safe Altitude (MSA) include a 5 nm buffer and therefore exist out to a maximum of 55.5 km (30 nm) from an airport with instrument approach procedures.

The nearest certified aerodrome is 9 km away, within the 30nm (55.5 km) MSA.

The lowest Basic ILS surface is related to the Runway 23R ILS and is at a height of **207.5 m AHD**.

The SID procedures have PANS OPS surfaces determined by the Procedure Design Gradient (PDG) that is the minimum climb gradient that aircraft are required to perform to in order to ensure obstacle clearance during the initial climb after take-off.

The lowest SID PANS OPS surface above the development site is **195.2 m AHD**, based on an estimated turn height of 800 ft AMSL and PDG of 3.3%. Any increase in the turn height will increase the height of the associated PANS OPS surface.

Other instrument approach procedures will be promulgated for SWZ once construction of the first runway, Runway 05L/23R, nears completion. RNAV (GNSS) and RNP-AR (see Appendix C) approached are likely to be implemented for both runways. Given that the minimum obstacle clearance level between terrain/obstacles is 75 m for the final approach segment of an instrument approach, there is adequate clearance available above the Aldington South Estate Development site to not interfere with any future instrument approach procedures that may be implemented.

Calculating PANS-OPS surfaces is complex because of the highly technical nature of the design and interaction of procedures. The design of a full set of PANS-OPS for Stage 1 and long-term operations will be required following the formal flight path design before the start of operations. Once designed, the PANS-OPS will be protected under the Airspace Protection Regulations.

Note: PANS-OPS surfaces are subject to review before the final version.

The proposed development site is also within Bankstown Airport's MSA area, which is **762 m AHD (2500 ft)**.

The proposed development site's PANSOPA Height is need to lower than **207.5 m AHD**.

Conclusion:

With maximum building heights projected to be beneath **76.6m AHD**.

The proposed development does not infringe the PANS OPS of aerodrome. No action is required..

4.7.2.3 *Roof Top Exhaust Plumes*

Planned activity within the estate is not likely to produce such an exhaust plume.

Conclusion:	The building will not have an impact upon airport.
--------------------	--

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

To guideline provides land use planning information to enable protection of CNS facilities which support the systems and processes in place by Airservices Australia (Airservices), the Department of Defence (Defence) or other agencies under contract with the Australian Government, to safely manage the flow of aircraft into, out of and across Australian airspace.

4.8.1 Requirements

- To consider if the proposed development (or any part therefore) is within the Building Restricted Area (BRA) of any Airservices or Defence CNS equipment and what notification requirements exist. The full details for each type of CNS facility are extensive and are provided in Attachment 3 to Guideline G.
- CNS equipment provides one or more of the following;
 - Communications to or from aircraft; or
 - Communications to or from centres established for air traffic control; or
 - Navigational aids; or
 - Surveillance systems
- Generally, a BRA should be kept clear of permanent or temporary:
 - Obstructions (e.g. buildings, other structures or trees) to the 'line of sight' between transmitting and receiving devices;
 - Objects (e.g. wind turbines) which act as reflectors or deflect signals used by aviation facilities;
 - radio frequency interference;
 - Electromagnetic emissions (e.g. such as those emitted by arc welding associated with steel fabrication); or
 - Plume rises (as defined in the Airports (Protection of Airspace) Regulations 1996.

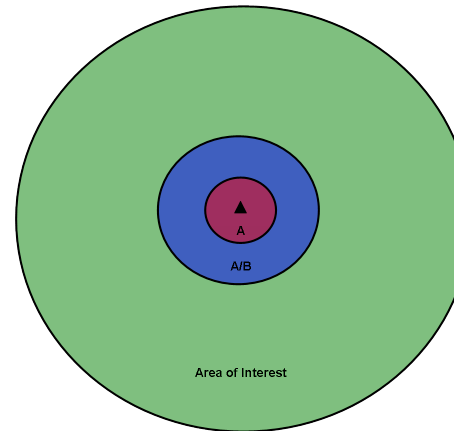


Figure 19 Two dimensional representation three dimensional zones in BRA (Guideline G)

Facility Type	Zone A (metre radius)	Zone A/B (metre radius)	Area of Interest (metre radius)
High Frequency (HF)	0 – 100	100 – 6000	6000 - 10000
Very High Frequency (VHF)	0 – 100	100 – 600	100 – 2000
Satellite Ground Station (SGS)	0 - 30	30 - 150	n/a
Non-Directional Beacon (NDB)	0 – 60	60 – 300	n/a
Distance Measuring Equipment (DME)	0 – 100	100 – 1500	n/a
VHF Omni-Directional Range (VOR)	0 – 100	100 – 1500	n/a
Conventional VHF Omni-Directional Range (CVOR)	0 – 200	200 – 1500	n/a
Doppler VHF Omni-Directional Range (DVOR) - Elevated	0 – 100	150 – 1500	n/a
Doppler VHF Omni-Directional Range (DVOR) – Ground Mounted	0 – 150	150 – 1500	n/a
Middle and Outer Marker	0 – 5	5 – 50	n/a
Glide path	n/a	n/a	n/a
Localiser	n/a	n/a	n/a
Automatic Dependent Surveillance Broadcast (ADS-B)	0 – 100	100 – 1500	n/a
Wide Area Multilateration (WAM)	0 - 100	100 - 1500	n/a
Primary Surveillance Radar (PSR)	0 – 500	500 – 4000	4000 – 15000
Secondary Surveillance Radar (SSR)	0 – 500	500 – 4000	4000 – 15000

Ground Based Augmentation System (GBAS) - RSMU	0-155	155-3000	n/a
GBAS - VDB	0-200	200-3000	n/a
Link Dishes	30m		
Radar Site Monitor – Type A	30m	0 – 500	n/a
Radar Site Monitor – Type B	70m	0 – 500	n/a

Table 3 Summary of BRA for CNS Facilities (Guideline G)

4.8.2 Assessment and Conclusions

4.8.2.1 Airport CNS Equipment

The closest part of the industrial estate at the development site is located approximately 6 km from the nearest of the navigation systems at the airport and is therefore beyond the BRA associated with all of them.

The systems shown above do not give rise to any CNS concerns or need for notification.

Conclusion:	No action in respect of CNS equipment at aerodromes is required.
--------------------	--

4.8.2.2 Non-Airport CNS System Identification

Primary and Secondary Surveillance Radar

There should no temporary or permanent obstructions should infringe on Zone A or Zone B. And any sharp discontinuity protruding into the area of interest such as single metal light towers, power pylons and city buildings, will impact on performance and should be avoided where possible.

If development is within Zone A, B and area of interested, they must be referred to Airservices Australia for assessment.

Zone A: If development is located:

- Within 500 metres of the antenna; and
- Above a horizontal plane located 4 metres below the base of the antenna.

Zone B: If development is located:

- Within 4000 metres of the antenna; and
- The development will cross the zone boundary (defined as an elevation angle of 0.5° measured from 8 metres below the height of the radar antenna)

Area of interest: If development is located:

- Within 15 km of the antenna; and
- The height of the development will cross the zone boundary (defined as an angle of elevation of 0.25° measured from the height of the antenna)

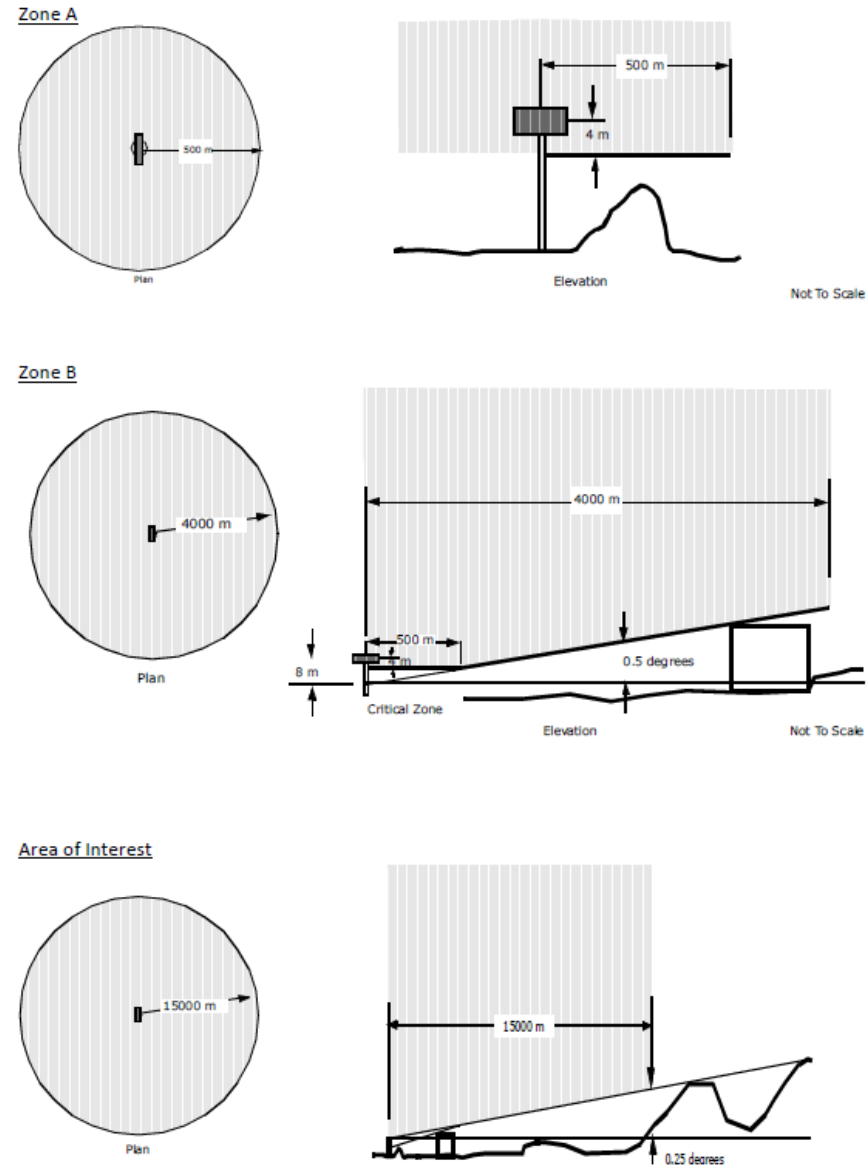


Figure 20 Primary and Secondary Surveillance Radar Area

The nearest PSR and SSR is located at Cecil Park. The proposed development site is within 15km Area of Interest area. The antenna elevation at Cecil Park is assumed 180 m (150 m elevation + assume 30m tower height). The height of development will be beneath **208.8m AHD**.

Surveillance System	Distance from development	Antenna Elevation (AHD)	Clearance Plane Elevation at development site Distance x Tan 0.25° + TAR elevation
Cecil Park TAR	6603 m	180 m	208.8 m AHD

Table 4 Surveillance System Clearance Plane

The systems shown above do not give rise to any CNS concerns or need for notification.

Conclusion:	No action in respect of CNS equipment at aerodromes is required.
--------------------	--

4.9 NASF Guideline H: Protecting Strategically Important Helicopter Landing Sites (HLS)

The purpose of this document is to protect important Helicopter Landing Sites (HLS) from infringements. An HLS is a specific nominated area (not located on an aerodrome) wholly or partly used for the arrival or departure of helicopters for strategically important purposes.

4.9.1 Requirements

- Development that infringes the height limits of the HLS are not permitted.
- Any development that exceeds the heights shown in Figure 21, which is consistent with the highest level of HLS classification (Performance Class 1), must be referred to the asset owner and CASA.
- Any development within the Referral Trigger zone or above 100m height (above ground level) needs to be light with a steady low intensity light.
- Windshear and turbulence impact on HLS should be considered. (L&B uses the wind turbulence information from Guideline B for this purpose.)

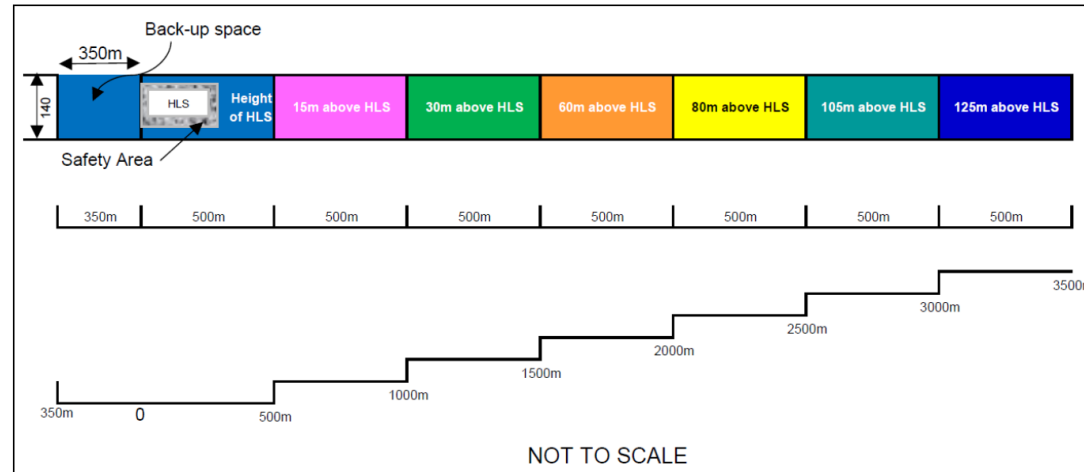


Figure 21 Referral Trigger for SHLS (Guideline H)

4.9.2 Assessment and Conclusions

The proposed development is located more than 3.5km from any relevant helicopter landing sites.

Conclusion:	No action in respect of HLS is required.
--------------------	--

4.10 NASF Guideline I – Public Safety Areas (PSAs)

Guideline I provides guidance to Australian Government, state, territory and local government decision makers on the assessment and treatment of potential increases in risk to public safety which could result from an aircraft incident or development proposal in areas near the end of an airport runway. Guideline informs a more consistent approach to the application of Public Safety Areas (PSAs) at and near Australian airports.

4.10.1 Requirements

This Guideline suggests a balanced approach with the PSA made up of two different areas:

- Outer area = 1 in 100,000 (1×10^{-5}) risk level per year

This identifies the area (or risk contour) within which, any person living or working for a period of a year, has approximately a 1 in 100,000 chance per year of being killed as a result of an aircraft incident (see Figure 22).

- Inner area = 1 in 10,000 (1×10^{-4}) risk level per year

This identifies the higher risk area (or risk contour) immediately adjoining the end of the runway within which, any person living or working for a period of a year, has approximately a 1 in 10,000 chance per year of being killed as a result of an aircraft incident (see Figure 22).

The dimensions of the two areas are dependent on a range of airport specific factors (such as forecasts about the numbers and types of aircraft movements).

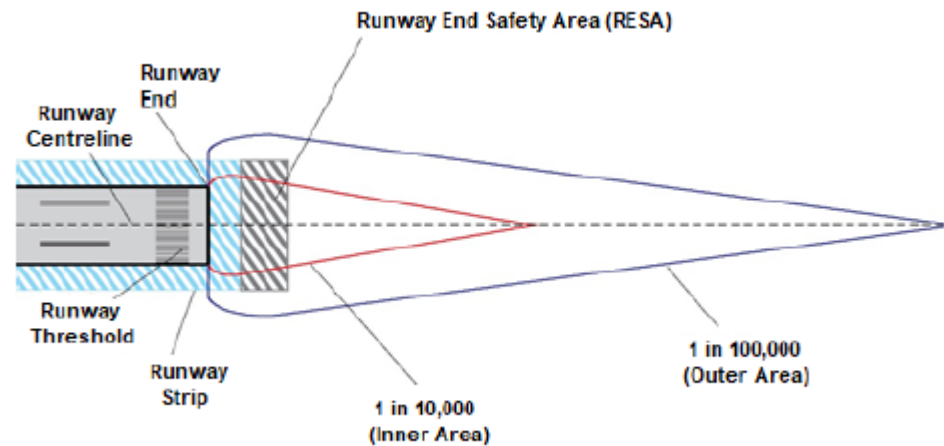


Figure 22 Example of PSA showing inner area and outer area

As a general guide, the types of new or changed development considered compatible and incompatible within the outer (1 in 100,000) and inner (1 in 10,000) areas include those listed in Figure 23.

PSA	COMPATIBLE USES	INCOMPATIBLE USES/ACTIVITIES
OUTER AREA - 1 in 100,000	<ul style="list-style-type: none"> • Long stay and employee car parking (where the minimum stay is expected to be in excess of six hours) • Shorter stay car parking (with a safety case – depends on intensity of use) • Built development for the purpose of housing plant or machinery and would require no people on site on a regular basis, such as electricity switching stations or installations associated with the supply or treatment of water • Golf courses, but not club houses (provided appropriate mitigation measures are in place to reduce wildlife attraction risk - see NASF Guideline C) • Open storage and types of warehouses with a very small number of people on site. The planning authority could consider imposing conditions to prevent future intensification of the use of the site and limit the number of people to be present on the site • Developments which require few or no people on site on a regular basis such as buildings housing plant or machinery • Low intensity public open space 	<ul style="list-style-type: none"> • Accommodation activities: This includes dwelling houses, multiple dwellings, resort complexes, tourist park, hostels, retirement villages or other residential care buildings • Community activities: educational establishment, community centres, hospitals, theatres, child-care and playgrounds, detention facilities, place of worship • Recreation activities: This includes parks, outdoor recreation and sport, major sport and entertainment facilities • Entertainment and centre activities: Shopping centres, service stations, showrooms, markets, hotels, theatres, tourist attraction, garden centres • Industrial and commercial uses involving large numbers of workers or customers: Intensive uses such as high impact, medium and low impact industry, warehousing, services industry • Manufacture or bulk storage of flammable, explosive or noxious materials • Public passenger transport infrastructure: This includes bus, train and light rail stations
INNER AREA – 1 in 10,000	<ul style="list-style-type: none"> • Long stay and employee car parking (where the minimum stay is expected to be in excess of six hours) • Built development for the purpose of housing plant or machinery and would require no people on site on a regular basis, such as electricity switching stations or installations associated with the supply or treatment of water • Golf courses, but not club houses (provided appropriate mitigation measures are in place to reduce wildlife attraction risk - see NASF Guideline C) 	<ul style="list-style-type: none"> • Accommodation activities: This includes dwelling houses, multiple dwellings, resort complexes, tourist park, hostels, retirement villages or other residential care buildings • Community activities: educational establishment, community centres, hospitals, theatres, child-care and playgrounds, detention facilities, place of worship • Recreation activities: This includes parks, outdoor recreation and sport, major sport and entertainment facilities • Entertainment and centre activities: Shopping centres, service stations, showrooms, markets, hotels, theatres, tourist attraction, garden centres • Industrial and commercial uses involving large numbers of workers or customers: Intensive uses such as high impact, medium and low impact industry, warehousing, services industry • Manufacture or bulk storage of flammable, explosive or noxious materials • Public passenger transport infrastructure: This includes bus, train and light rail stations

Figure 23 General guidance for new/proposed developments on compatible and incompatible activities within PSA risk contours

4.10.2 Assessment and Conclusions

The proposed development is outside PSAs associated with runways 23R at Western Sydney Airport, shown in Figure 24.



Figure 24 Western Sydney Airport Public Safety Area (PSA) (Source: L&B drawing & Google Map)

Conclusion:

No action in respect of PSAs.

5 NSW State Environment Planning Policy (Western Parkland City) 2021

The report assesses the site against the relevant clauses (19 to 25 inclusive) of the NSW State Environmental Planning Policy (Western Sydney Aerotropolis) 2020, Part 3 Development Controls – Airport Safeguarding

Additional diagrams are included in the Appendix A.

5.1 Clause 4.17: Aircraft Noise

5.1.1 Requirement

The objectives of this clause are:

- to prevent certain noise sensitive development on land near the Airport, and
- to minimise the impact of aircraft noise for other noise sensitive development, and
- to ensure that land use and development near the Airport do not hinder or have other adverse impacts on the ongoing, safe and efficient 24 hours a day operation of the Airport.

Development consent must not be granted to noise sensitive development if the development is to be located on land that is in an ANEF or ANEC contour of 20 or greater.

Subsection applies despite the following:

- Part 2, Divisions 7 and 8 of State Environmental Planning Policy (Affordable Rental Housing) 2009,
- Chapter 3 of State Environmental Planning Policy (Housing for Seniors or People with Disability) 2004,
- State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017.

Despite subsection, development consent may be granted to development for the purposes of dwelling houses on land that is in an ANEF or ANEC contour of 20 or greater if:

- Immediately before the commencement of this Chapter:
 - There were no dwellings on the land, and
 - Development for the purposes of dwelling houses was permitted on the land, and
- The consent authority is satisfied that the development will meet the indoor design sound levels.

Subsection does not apply to development for the purposes of subdivision of land in an ANEF or ANEC contour of 20 or greater if the development application was made before 1 October 2020.

5.1.2 Assessment and Conclusions

The development Site is located inside ANEF and ANEC Zones.

Conclusion:	<p>The development site is considered as 'Light Industrial' and is acceptable within all the ANEF zones as per the Australian Standard AS 2021:2015 Acoustics - Aircraft Noise.</p> <p>Covered under Item 4.2 Guideline A: Measures for Managing Impacts of Aircraft Noise</p>
--------------------	--

5.2 Clause 4.18: Building Generated Wind Shear and Turbulence

5.2.1 Requirement

The objective of this clause is to safeguard Airport operations from wind shear and turbulence generated by buildings.

Development consent must not be granted to the following development unless the consent authority has consulted the relevant Commonwealth body

- development on land shown on the Lighting Intensity and Wind Shear Map,
- development that penetrates the 1:35 surface

Development consent must not be granted to the development unless the consent authority has consulted the relevant Commonwealth body.

- For the purposes of this section, development penetrates the 1:35 surface if the distance from the runway centreline to the closest point of the building is less than or equal to 35 times the height above runway level of the building.

5.2.2 Assessment and Conclusions

The development site is located outside of the Windshear Assessment Trigger Area and will not have any impact on turbulence at Western Sydney Airport.

Conclusion:	<p>The Development Site will be located well beyond the airport boundary and will not have risk of generating windshear and turbulence at airport.</p> <p>The building and the cranes will not have an impact upon airport.</p> <p>Covered under Item 4.3 Guideline B: Managing the Risk of Building Generated Windshear and Turbulence at Airports</p>
--------------------	---

5.3 Clause 4.19: Wildlife Hazards

5.3.1 Requirement

The objective of this clause is to regulate development on land surrounding the Airport where wildlife may present a risk to the operation of the Airport.

Development consent must not be granted to relevant development on land in the 13 km wildlife buffer zone unless the consent authority—

- Has consulted the relevant Commonwealth body, and
- Has considered a written assessment of the wildlife that is likely to be present on the land and the risk of the wildlife to the operation of the Airport provided by the applicant, which includes:
 - Species, size, quantity, flock behaviour and the particular times of day or year when the wildlife is likely to be present, and
 - Whether any of the wildlife is a threatened species, and
 - A description of how the assessment was carried out, and
- Is satisfied that the development will mitigate the risk of wildlife to the operation of the Airport, including, for example, measures relating to:
 - Waste management, landscaping, grass, fencing, stormwater or water areas, or
 - The dispersal of wildlife from the land by the removal of food or the use of spikes, wire or nets.

Despite subsection, development for the following purposes is prohibited on land in the 3 km wildlife buffer zone:

- Livestock processing industries,
- Turf farming,
- Waste or resource management facilities that consist of outdoor processing, storage or handling of organic or putrescible waste.

5.3.2 Assessment and Conclusions

The proposed development is 8 km from the ARP and is within Area B. Within the 8km zone there are no “incompatible” uses that would normally align with an industrial precinct of the type understood to be foreseen at development site. Specific building / lot uses may need to ensure that any “mitigate” and “monitor” actions are included.

Conclusion:

The proposed development site will not impact the risk of wildlife strikes in the vicinity of Western Sydney Airport.

Covered under Item 4.4 Guideline C: Managing the Risk of Wildlife Strikes in the Vicinity of Airports

5.4 Clause 4.20: Wind Turbines

5.4.1 Requirement

The objective of this clause is to regulate the construction of wind turbines and wind monitoring towers on land within 30 kilometers of the Airport.

Development for the following purposes is prohibited on land in the 3 km zone

- Electricity generating works comprising a wind turbine, wind monitoring towers that are not ancillary or incidental to the Airport.
- Wind monitoring towers that are not ancillary or incidental to the Airport.

Development consent must not be granted to development for the purposes of a large wind monitoring tower in the 3–30 km zone unless the consent authority has consulted the relevant Commonwealth body.

Development consent must not be granted to development for the purposes of a electricity generating works comprising a wind turbine on land in the 3–30 km zone unless the consent authority:

- Has consulted the relevant Commonwealth body, and
- Has considered a written assessment of the risk of the development to the safe operation of the Airport provided by the applicant, and
- Is satisfied that the development will adequately mitigate the risk to the safe operation of the Airport.

5.4.2 Assessment and Conclusions

As the proposed development is not a wind farm nor includes a single wind turbine this Guideline does not apply. Requirements and assessment approach are therefore not included in this report.

Conclusion:	Proposed development is compliant. No action required. Covered under Item 4.5 Guideline D: Managing the Risk of Wind Turbine Farms as Physical Obstacles to Air Navigation
--------------------	---

5.5 Clause 4.21: Lighting

5.5.1 Requirement

The objective of this clause is to safeguard Airport operations from the risk of lighting and reflectivity distractions for pilots.

Development consent must not be granted to development for the following purposes on land shown on the Lighting Intensity and Wind Shear Map unless the consent authority has consulted the relevant Commonwealth body

- installation and operation of external lighting (whether coloured or white lighting) in connection with development for the following purposes
 - classified roads,
 - freight transport facilities,
 - heavy industrial storage establishments,
 - recreation facilities (major),
 - recreation facilities (outdoor),
- installation and operation of external lighting in connection with construction works that is likely to be obtrusive or create light spill outside the land on which the construction works are carried out.

5.5.2 Assessment and Conclusions

The proposed development is more than 6km from the centre of an applicable runway and therefore is not covered by Guideline E.

Conclusion:	The proponent need take no specific actions in respect of lighting. Covered under Item 4.6 Guideline E: Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports
--------------------	--

5.6 Clause 4.22: Airspace Operations

5.6.1 Requirement

The objectives of this clause are:

- to provide for the effective and ongoing operation of the Airport by ensuring that its operation is not compromised by development that penetrates the prescribed airspace for the Airport, and
- to protect the community from undue risk from the operation of the Airport.

This section applies to development on land shown on the Obstacle Limitation Surface Map that is a controlled activity within the meaning of Part 12, Division 4 of the Airports Act 1996 of the Commonwealth.

Development consent must not be granted to development to which this section applies unless:

- The consent authority has consulted the relevant Commonwealth body, and
- The relevant Commonwealth body advises the consent authority that:
 - The development will penetrate the prescribed airspace but it does not object to the development, or
 - The development will not penetrate the prescribed airspace.

The content of this Aeronautical Impact Assessment clearly shows that the Aldington South Estate Development site does not penetrate the prescribed airspace for Western Sydney Airport, or any other airport.

It should be noted that whilst the runway locations have been planned, and hence the Obstacle Limitation Surfaces can be drawn, the Instrument Landing System (Basic ILS) PANS OPS surfaces have been issued in a provisional format only for WSA there is still the possibility that they may change slightly as the airport construction program progresses and consequently, the airport's Prescribed Airspace may also change slightly.

WSA data used to determine the probable Prescribed Airspace above the Aldington South Estate Development site was derived from information published on WSA's website - <https://westernsydney.com.au/>

Major reports referenced are:

- Western Sydney Airport – Airport Plan 2016;
- Western Sydney Aerotropolis State Environmental Planning Policy 2020 (SEPP 2020);
- Airservices Australia – Western Sydney Airport Preliminary Airspace Management Analysis – 10 April 2015.

5.6.2 Assessment and Conclusions

The proposed development is within 15km of the centre of airport, it is located beneath the Approach Surface and Conical Surface with the lowest height of **197.8 m AHD**.

The lowest Basic ILS surface is related to the Runway 23R ILS and is at a height of **207.5 m AHD**.

The lowest SID PANS OPS surface above the development site is **195.2 m AHD**, based on an estimated turn height of 800 ft AMSL and PDG of 3.3%. Any increase in the turn height will increase the height of the associated PANS OPS surface.

The proposed development site is also within Bankstown Airport's MSA area, which is **762 m AHD (2500 ft)**.

Conclusion:

With maximum building heights projected to be beneath **76.6m AHD**.

The proposed development does not infringe the OLS and PANS OPS of aerodrome. No action is required.

Covered under Item 4.7 Guideline F: Managing the Risk of Intrusions into the Protected Airspace of Airports

5.7 Clause 4.23: Public Safety Area

5.7.1 Requirement

The objective of this clause is to regulate development on land on which there is an appreciable risk to public safety from the operation of the Airport.

Development for the following purposes is prohibited on land shown as the “public safety area” on the Public Safety Area Map:

- Camping grounds;
- Caravan parks;
- Cemeteries;
- Centre-based child care facilities;
- Commercial premises;
- Community facilities;
- Correctional centres;
- Crematoria;
- Eco-tourist facilities;
- Education establishments;
- Entertainment facilities;
- Function centres;
- Funeral homes;
- Health services facilities;
- Heavy industrial storage establishments;
- Industrial retail outlets;
- Industrial training facilities;
- Industries;
- Information and education facilities;
- Passenger transport facilities;
- Places of public worship;
- Recreation areas;
- Recreation facilities (indoor);
- Recreation facilities (major);
- Recreation facilities (outdoor);
- Registered clubs;
- Residential accommodation;

- Tourist and visitor accommodation

Development consent must not be granted to development for a purpose not specified in subclause (2) on land shown as the “public safety area” on the Public Safety Area Map unless the consent authority.

- has considered a written assessment of the risk of the development to persons provided by the applicant, which includes
 - the risk to persons on the land in the event of an emergency or other incident at or around the Airport, including an incident involving an aircraft landing or taking off from the Airport, and
 - the likely number of people who will use or otherwise be present on the land, and
 - the compatibility of the development with the risk, including in relation to the number of people who will use or otherwise be present on the land, and
- is satisfied that the development will adequately mitigate the risk to persons on the land, including by limiting the number of people or vehicles.

5.7.2 Assessment and Conclusions

The development Site is located outside the designated PSAs associated with the runways at SWZ

Conclusion:

The development site is not within PSAs area, no action required.

Covered under Item 4.10 NASF Guideline I – Public Safety Areas (PSAs)

6 NSW State Environmental Planning Policy (Industry and Employment) 2021

The report assesses the site against the relevant clauses (2.36 to 2.38) of the NSW State Environmental Planning Policy (Industry and Employment) 2021.

6.1 Clause 2.36 Development in areas subject to aircraft noise

6.1.1 Requirement

The objects of this clause are as follows:

- to prevent certain noise sensitive developments from being located near the Airport and its flight paths,
- to assist in minimising the impact of aircraft noise from the Airport and its flight paths by requiring appropriate noise attenuation measures in noise sensitive buildings,
- to ensure that land use and development in the vicinity of the Airport do not hinder, or have other adverse impacts on, the ongoing, safe and efficient operation of the Airport.

This section applies to development:

- on land that is
 - in the vicinity of the Airport and its flight paths, and
 - in either an ANEF contour of 20 or greater or an ANEC contour of 20 or greater, and
- that the consent authority considers is likely to be adversely affected by aircraft noise.

Before determining a development application for development to which this section applies, the consent authority

- must consider whether the development will result in an increase in the number of dwellings or people affected by aircraft noise, and
- must consider the location of the development in relation to the criteria set out in Table 2.1 (Building Site Acceptability Based on ANEF Zones) in AS 2021:2015, and
- must be satisfied that the development will meet the indoor design sound levels set out in Table 3.3 (Indoor Design Sound Levels for Determination of Aircraft Noise Reduction) in AS 2021:2015.

Despite another provision of this Chapter, development consent must not be granted to development on land to which this section applies for the purposes of a place of public worship, a centre-based child care facility or a TAFE establishment or for residential development.

In this section, ANEC contour means a contour on the Australian Noise Exposure Concept Map for the Airport, published on the Department's website. ANEF contour means a noise exposure contour shown as an ANEF contour on the Noise Exposure Forecast Contour Map for the Airport prepared by the Department of the Commonwealth responsible for airports. AS 2021:2015 means AS 2021:2015, *Acoustics—Aircraft noise intrusion—Building siting and construction*.

For the purposes of this section, a reference to ANEF in AS 2021:2015 is taken to include a reference to ANEC.

6.1.2 Assessment and Conclusions

The development Site is located inside ANEF and ANEC Zones.

Conclusion:	<p>The development site is considered as 'Other Industrial' and is acceptable within all the ANEF zones as per the Australian Standard AS 2021:2015 Acoustics - Aircraft Noise.</p> <p>Covered under Item 4.2 Guideline A: Measures for Managing Impacts of Aircraft Noise</p>
--------------------	--

6.2 Clause 2.37: Airspace operations

6.2.1 Requirement

The objectives of this clause are as follows:

- to provide for the effective and ongoing operation of the Airport by ensuring that such operation is not compromised by proposed development that penetrates the prescribed airspace for the Airport,
- to protect the community from undue risk from that operation.

If a development application is received and the consent authority is satisfied that the proposed development will penetrate the prescribed airspace, before granting development consent, the consent authority must consult with the relevant Commonwealth body about the application.

The consent authority may grant development consent for the development if the relevant Commonwealth body advises that:

- the development will penetrate the prescribed airspace, but it has no objection to its construction, or
- the development will not penetrate the prescribed airspace.

To avoid doubt, the consent authority must not grant development consent for the development if the relevant Commonwealth body advises that the development will penetrate the prescribed airspace and should not be constructed.

In this clause, OLS and PANS-OPS surface have the same meanings as in the Airports (Protection of Airspace) Regulations 1996 of the Commonwealth.

Prescribed airspace means the airspace:

- above any part of either an OLS or a PAN-OPS surface for the Airport, and
- declared under regulation 5 of the Airports (Protection of Airspace) Regulations 1996 of the Commonwealth relating to the Airport, under section 181(1) of the Airports Act 1996 of the Commonwealth.

Relevant Commonwealth body means:

- the airport-operator company for the Airport (within the meaning of the Airports Act 1996 of the Commonwealth), or
- if there is no airport-operator company for the Airport—the Secretary of the body, under Commonwealth legislation, that is responsible for development approvals for development that penetrates the prescribed airspace.

6.2.2 Assessment and Conclusions

The proposed development is within 15km of the centre of airport, it is located beneath the Approach Surface and Conical Surface with the lowest height of **197.8 m AHD**.

The lowest Basic ILS surface is related to the Runway 23R ILS and is at a height of **207.5 m AHD**.

The lowest SID PANS OPS surface above the development site is **195.2 m AHD**, based on an estimated turn height of 800 ft AMSL and PDG of 3.3%. Any increase in the turn height will increase the height of the associated PANS OPS surface.

The proposed development site is also within Bankstown Airport's MSA area, which is **762 m AHD (2500 ft)**.

Conclusion:

With maximum building heights projected to be beneath **76.6m AHD**.

The proposed development does not infringe the OLS and PANS OPS of aerodrome. No action is required.

Covered under Item 4.7 Guideline F: Managing the Risk of Intrusions into the Protected Airspace of Airports

6.3 Clause 2.38: Development of land adjacent to Airport

6.3.1 Requirement

The objectives of this clause are as follows:

- to provide for the effective and ongoing operation of the Airport by ensuring that such operation is not compromised by proposed development in close proximity to the Airport,

- to protect the community from undue risk from that operation.

This clause applies to development on land, any part of which is less than 13 kilometres from a boundary of the Airport.

The consent authority must not grant consent for development to which this clause applies unless the consent authority is satisfied that the proposed development will not attract birds or animals of a kind and in numbers that are likely to increase the hazards of operating an aircraft.

6.3.2 Assessment and Conclusions

The development Site is located within 13 km from boundary of the Airport. Detail analysis reference to Item 4 NASF Requirements and Assessment and 5 NSW State Environment Planning Policy (Western Parkland City) 2021

Conclusion:	The development Site is located within 13 km from boundary of the Airport. Covered under Item 4 NASF Requirements and Assessment and 5 NSW State Environment Planning Policy (Western Parkland City) 2021
--------------------	--

7 Penrith Local Environmental Plan (LEP) 2010

7.1 Clause 7.9: Development of land in the flight paths of the site reserved for the proposed Second Sydney Airport (SWZ).

7.1.1 Requirement

The objective of this clause is to ensure that development in the vicinity of the proposed Badgery's Creek airport site:

- has regard to the use or potential future use of the site as an airport, and
- does not hinder or have any other adverse impact on the development or operation of an airport on that site.

This clause applies to development that:

- is on land that:
 - is near the proposed Badgery's Creek airport site, and
 - is in an ANEF contour of 20 or greater, and
- the consent authority considers is likely to be adversely affected by aircraft noise.

Before determining a development application for development to which this clause applies, the consent authority:

- must consider whether the development will result in an increase in the number of dwellings or people affected by aircraft noise, and
- must consider the location of the development in relation to the criteria set out in Table 2.1 (Building Site Acceptability Based on ANEF Zones) in AS 2021—2000, and
- must be satisfied that the development will meet AS 2021—2000 with respect to interior noise levels for the purposes of:
 - if the development will be in an ANEF contour of 20 or greater—centre-based childcare facilities, educational establishments, entertainment facilities, hospitals, places of public worship, public administration buildings or residential accommodation, and
 - if the development will be in an ANEF contour of 25 or greater—commercial premises, hostels or hotel or motel accommodation.

7.1.2 Assessment and Conclusions

The development Site is located inside ANEF and ANEC Zones.

Conclusion:

The development site is considered as 'Other Industrial' and is acceptable within all the ANEF zones as per the Australian Standard AS 2021:2015 Acoustics - Aircraft Noise.

	Covered under Item 4.2 Guideline A: Measures for Managing Impacts of Aircraft Noise
--	---

8 Summary of Conclusions and Actions

8.1 Conclusions: National Airports Safeguarding Framework (NASF)

Assessment Principle	Conclusion / Action	Reference Page / Section
NASF Guideline A: Measures for Managing Impacts of Aircraft Noise	No impact.	Page: 11 Section: 4.2.2
NASF Guideline B: Managing the Risk of Building Generated Windshear and Turbulence at Airports	No impact.	Page: 20 Section: 4.3.2
NASF Guideline C: Managing the Risk of Wildlife Strikes in the Vicinity of Airports	No impact.	Page: 22 Section: 4.4.2
NASF Guideline D: Managing the Risk of Wind Turbine Farms as Physical Obstacles to Air Navigation	No impact.	Page: 22 Section: 4.5
NASF Guideline E: Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports	No impact.	Page: 24 Section: 4.6.2
NASF Guideline F: Managing the Risk of Intrusions into the Protected Airspace of Airports	No impact.	Page: 29 Section: 4.7.2
NASF Guideline G: Protecting Aviation Facilities – Communication, Navigation and Surveillance (CNS)	No impact.	Page: 33 Section: 4.8.2
NASF Guideline H: Protecting Strategically Important Helicopter Landing Sites (HLS)	No impact.	Page: 37 Section: 4.9.2

NASF Guideline I: Public Safety Areas (PSAs)	No impact.	Page: 39 Section: 4.10.2
--	------------	-----------------------------

8.2 Conclusions: State and Local Planning Requirements

8.2.1 NSW State Environmental Planning Policy (Western Parkland City) 2021

Assessment Principle	Conclusion / Action	Reference Page / Section
Clause 4.17: Aircraft Noise	No impact.	Page: 42 Section: 5.1.2
Clause 4.18: Building Windshear and Turbulence	No impact.	Page: 42 Section: 5.2.2
Clause 4.19: Wildlife Hazards	No impact.	Page: 43 Section: 5.3.2
Clause 4.20: Wind Turbines	No impact.	Page: 44 Section: 5.4.2
Clause 4.21: Lighting	No impact.	Page: 45 Section: 5.5.2
Clause 4.22: Airspace Operations	No impact.	Page: 46 Section: 5.6.2
Clause 4.23: Public Safety	No impact.	Page: 48 Section: 5.7.2

8.2.2 NSW State Environmental Planning Policy (Industry and Employment) 2021

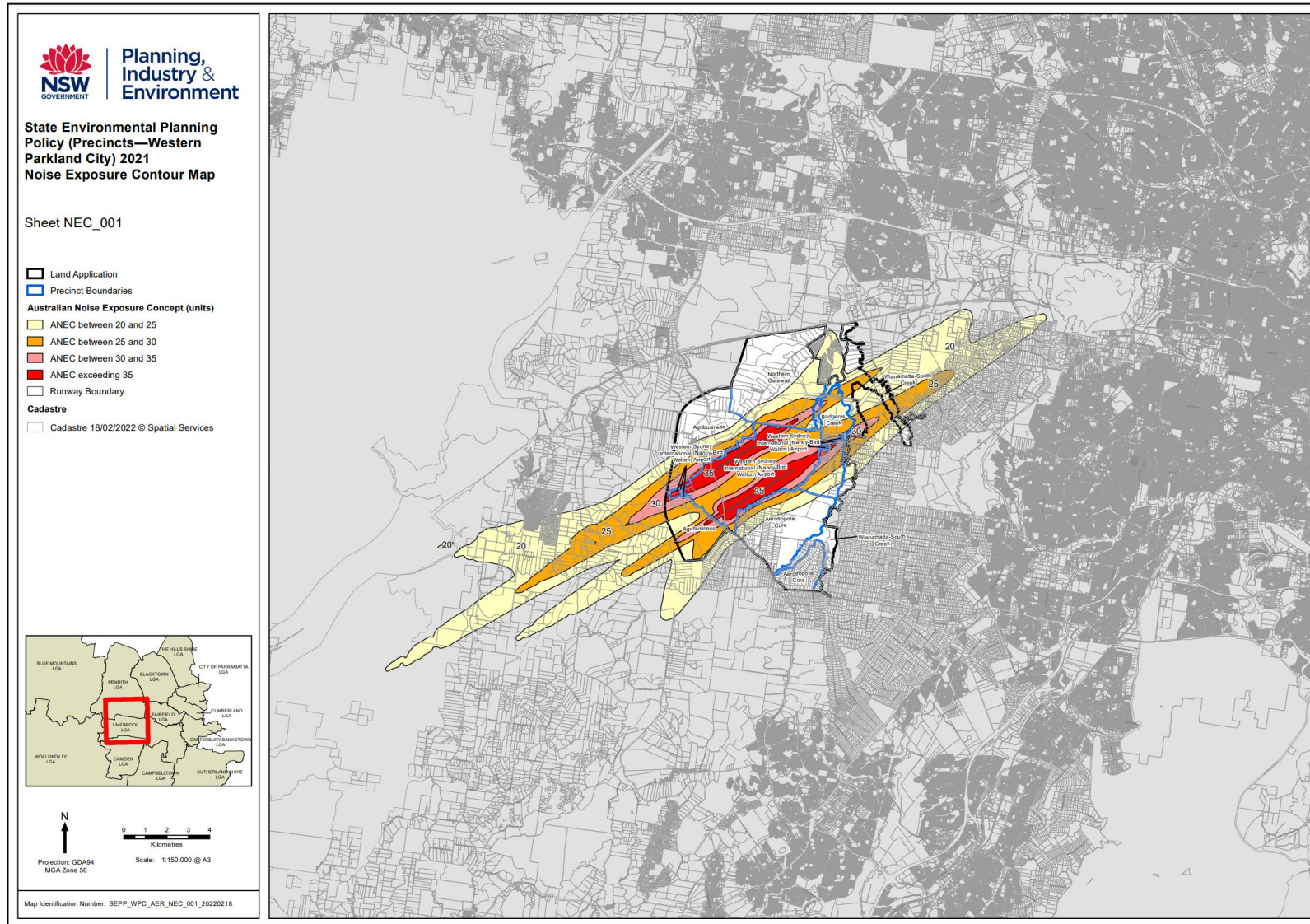
Assessment Principle	Conclusion / Action	Reference Page / Section
Clause 2.36: Development in areas subject to aircraft noise	No impact.	Page: 50 Section: 6.1.2
Clause 2.37: Airspace Operations	No impact.	Page: 51 Section: 6.2.2
Clause 2.38: Development of land adjacent to Airport	No impact.	Page: 52 Section: 6.3.2

8.2.3 NSW Penrith Local Environmental Plan (LEP) 2010

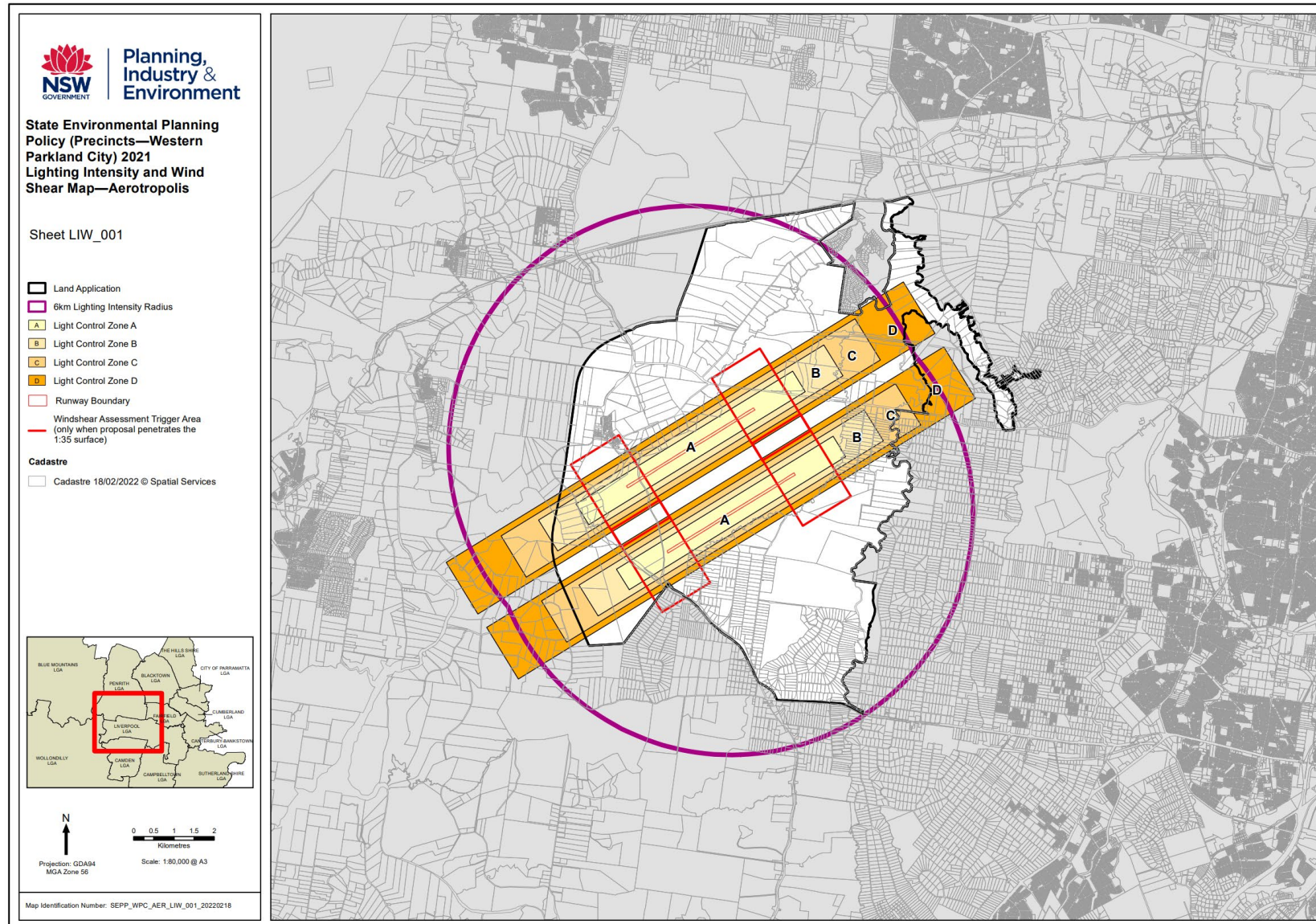
Assessment Principle	Conclusion / Action	Reference Page / Section
Clause 7.9: Development of land in the flight paths of the site reserved for the proposed Second Sydney Airport (SWZ)	No impact.	Page: 53 Section: 7.1.2

Appendix A – State Environmental Planning Policy Maps

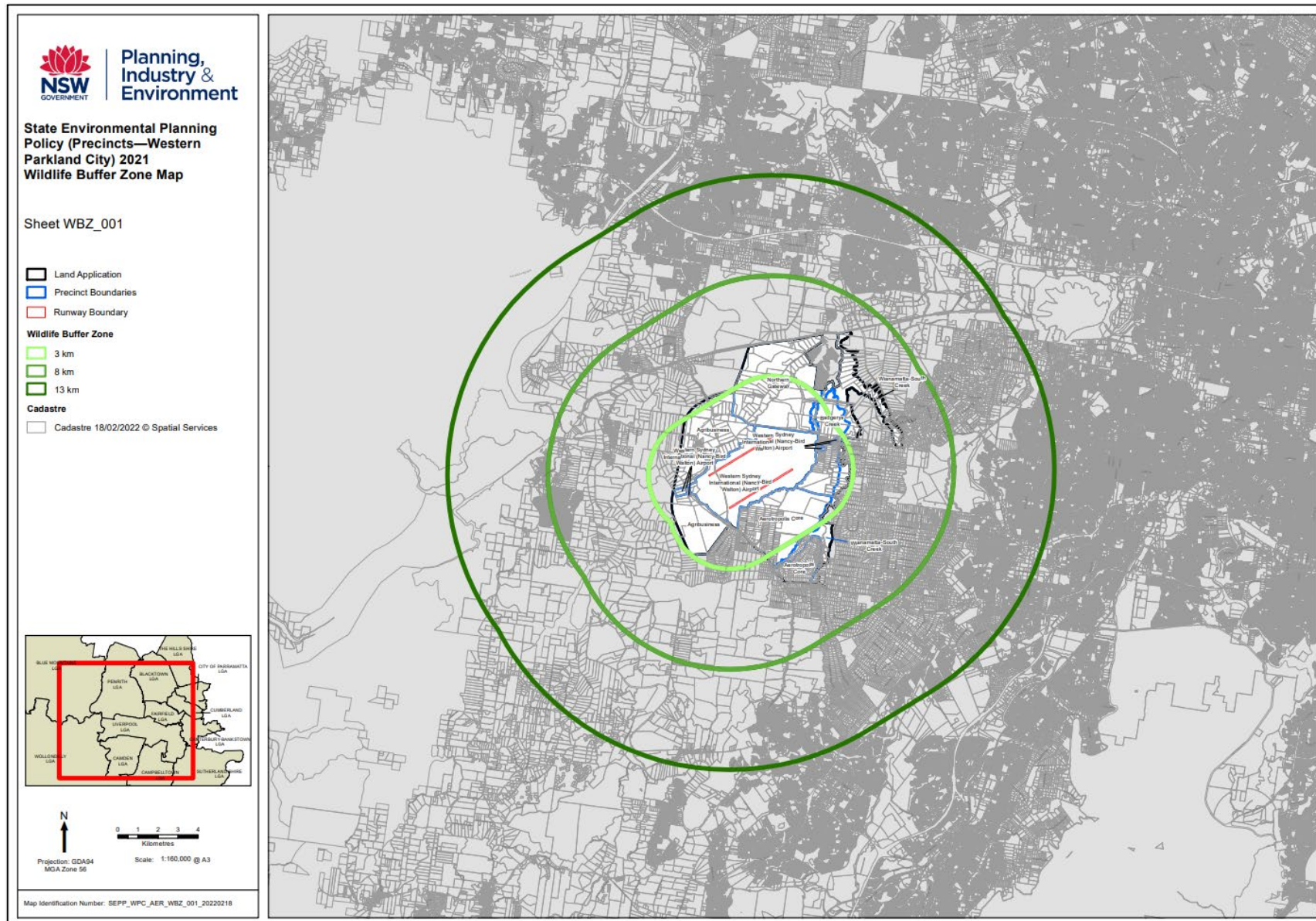
Noise Exposure Map (State Environmental Planning Policy (Precincts— Western Parkland City) 2021 Noise Exposure Contour Map)



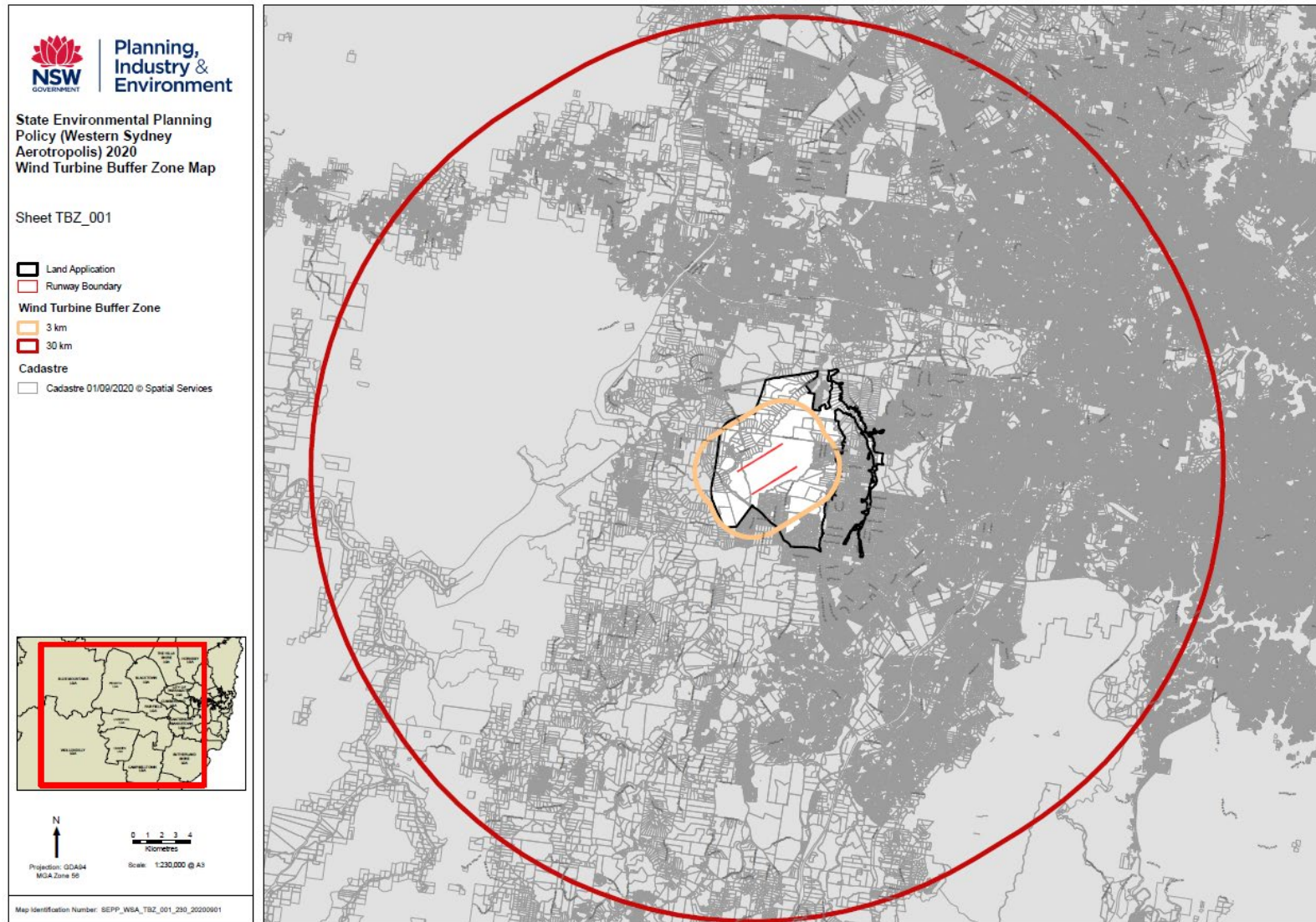
Lighting Intensity and Wind Shear Map (State Environmental Planning Policy (Precincts— Western Parkland City) 2021 Lighting Intensity and Wind Shear Map)



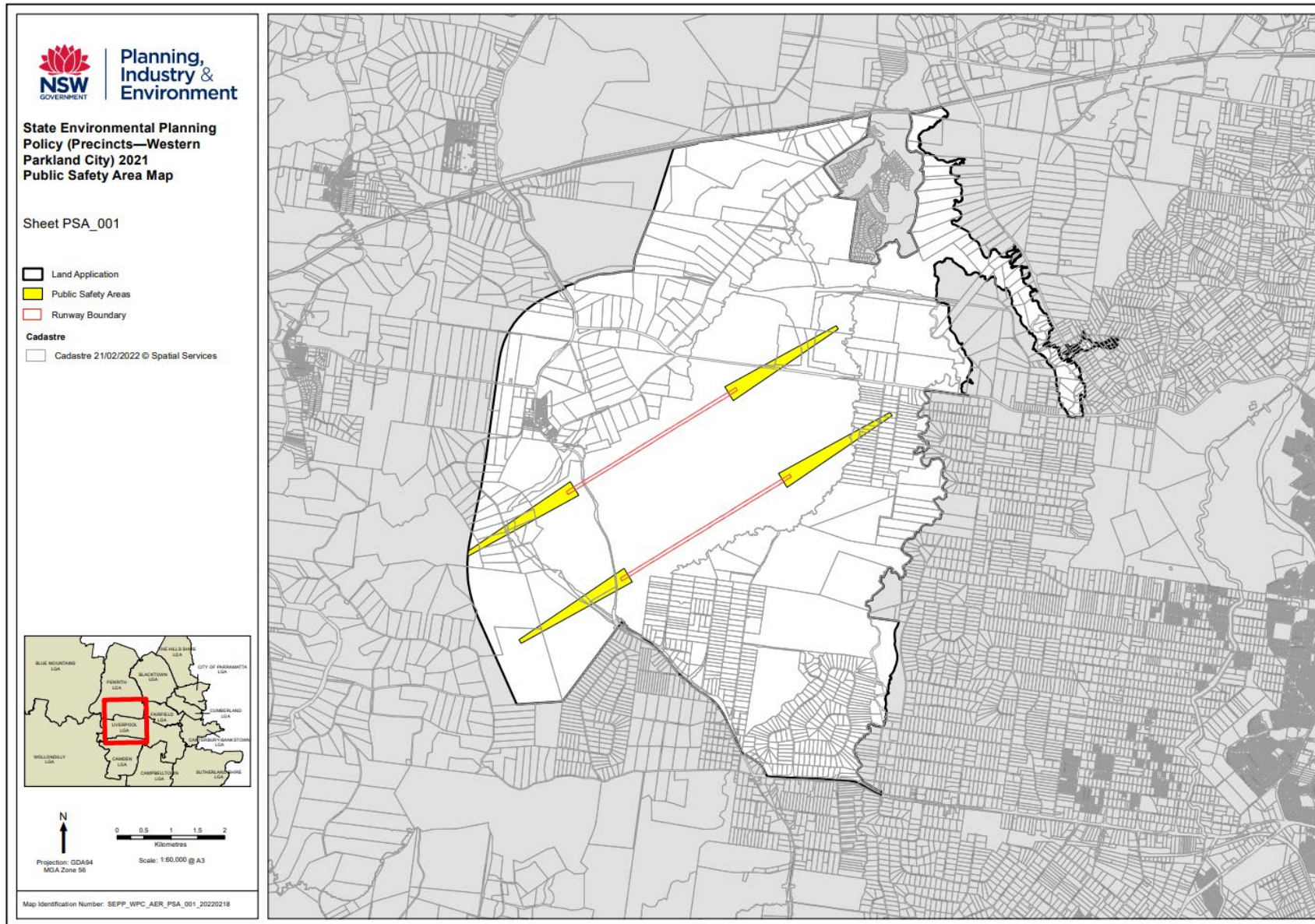
Wildlife Buffer Zone Map (State Environmental Planning Policy (Precincts— Western Parkland City) 2021 Wildlife Buffer Zone Map)



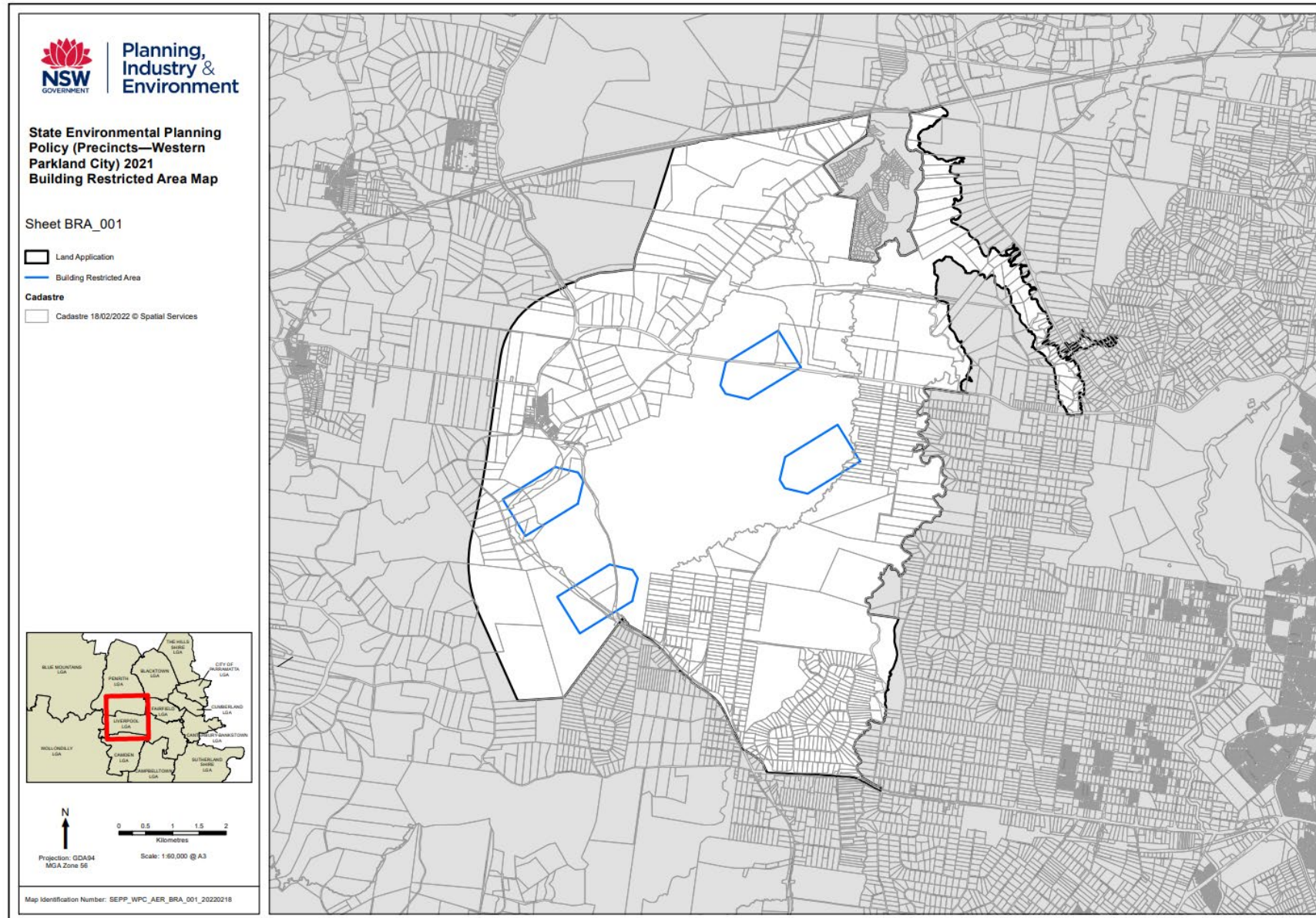
Wind Turbine Buffer Zone Map (NSW DPIE WAS SEPP 2020)



Public Safety Area Map (NSW State Environment Planning Policy (Western Parkland City) 2021 Public Safety Area Map)



Building Restricted Area Map (NSW State Environment Planning Policy (Western Parkland City) 2021 Building Restricted Area Map)



Obstacle Limitation Surface Map (NSW State Environment Planning Policy (Western Parkland City) 2021 Obstacle Limitation Surface Map)