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1 May 2026

Our File Ref: B24101AL001Rev2

Contact: Bridget Wouts

Assistant Development Manager
EMKC Cubed Pty Ltd
Level 11, 37 York Street
Sydney NSW 2000

Attention: Pawan Lala

RE: AIRPORT SAFEGUARDING ASSESSMENT
230 MARTIN ROAD, BADGERYS CREEK, NSW

L+R Airport Consulting was engaged by EMKC Cubed Pty Ltd (EMKC³) to undertake an airport safeguarding assessment of the proposed development at 230 Martin Road, Badgerys Creek, NSW against the relevant National Airports Safeguarding Framework (NASF) Guidelines as they relate to the proposed Western Sydney International (Nancy-Bird Walton) Airport (WSI).

This airport safeguarding assessment is a desktop assessment based on publicly available planning information in relation to WSI.

1.0 Proposed Development

The proposed development at 230 Martin Road, Badgerys Creek includes two warehouses with offices, water tanks and rooftop solar panels on the western portion of the block. The eastern portion of the block is labelled as 'environment and recreation'. Plans provided also illustrate a proposed Filterra Basin on the eastern side of Warehouse 1 and tree planting on the eastern and western sides of the warehouses. The EMKC³ drawing set dated 21 April 2026 was provided for assessment.

The maximum elevation of the proposed development is the warehouse 2 ridge at 64.7 m AHD. Proposed warehouse 1 ridge is at 63.9 m AHD.

The proposed development site is within the Badgerys Creek Precinct within the Aerotropolis Boundary adjacent the north-eastern boundary of WSI as shown on [Figure 1](#) attached to this assessment.

The SSDA seeks consent for:

- § Site clearance works, including the removal of existing structures
- § Bulk earthworks and the installation and augmentation of utilities infrastructure and other services

- § Construction and operational use of two warehouse or distribution centres containing ancillary manufacturing use in the proposed Lot 1 building with associated parking, landscaping across the site and access
- § Other ancillary works including stormwater infrastructure (excluding works to be delivered by public authorities e.g., Park Edge Street and the Regional Stormwater Infrastructure basin) and delivery of the frontage upgrade of along Martin Road to facilitate access to the site.

Component	Details
Project Area	The site has a total area of 24.28 ha. Approximately 81,021 m ² will be affected by the project (excluding the potential park edge street which separates ENT land from ENZ).
Proposed Use	<u>Lot 1</u> Large format warehouse with ancillary office and manufacturing (including steel cutting) <u>Lot 2</u> Large format warehouse with ancillary office
Project Description	The project comprises: § Bulk earthworks and site preparation works. § Utility services and stormwater infrastructure (interim and ultimate scenarios) excluding the regional stormwater basin. § Subdivision of the existing allotment into three (3) new allotments. § Construction and operational use of two warehouse and distribution centres with ancillary office and manufacturing (Warehouse 1 only). Approval is sought for the fit-out of Warehouse 1. § Landscaping § Site Access
Subdivision	Proposed Lot 1: 4.19 ha Proposed Lot 2: 9.1ha Proposed Lot 3: 10.52 ha
Warehouse 1 (Lot 1)	Gross Floor Area (GFA): § Warehouse and distribution centre – 16,465m² § Ancillary office – 600m² § Amenities block - 37m² § Total – 17,102m² Maximum Building Height = 12.95m 24 loading docks Access:

Component	Details
	– Truck entry driveway in the northwest corner of the site – Combined car park entry / exit located to the south of the truck entry – Truck exit driveway located in southwest corner of Lot 1
Warehouse 2 (Lot 2)	GFA: – Warehouse and distribution centre – 18,564m² – Ancillary office building 2A – 600m² – Ancillary office building 2B - 504m² – Total – 19,668m² Maximum Building Height = 12.65m 18 loading docks Access: – Combined car park entry / exit driveway located opposite Office 2A – Truck entry / exit driveway located to the north of the car park entry / exit
Car Parking	<u>Lot 1</u> 86 spaces <u>Lot 2</u> 119 spaces
Landscaping	<u>Lot 1</u> 4,206m² <u>Lot 2</u> 3,412m²
Earthworks	Bulk cut and fill will be required to achieve flat pads for industrial development; access to the site from Martin Road; and flood immunity. The proposed surface grading will follow the existing site topography.
Infrastructure Upgrades	<u>Interim:</u> § The proposal includes provision for on-site stormwater detention that can appropriately service the site from a stormwater management perspective, until such a time as the regional stormwater basin is delivered by Sydney Water. § Noting the low traffic generation proposed, the proposal will have a negligible material impact to the performance of the external road network when compared to the existing site. Note: ongoing discussions with Council and investigations are currently being undertaken to determine whether the proposal will generate the requirement for pavement upgrades along a portion of Martin Road. § The proposal includes provision to upgrade the frontage of Martin Road to accommodate the future Collector Road in accordance with the Precinct Plan and

Component	Details
	Liverpool Aerotropolis 7.12 Contributions Plan (7.12 Plan) by means of a half-width upgrade for the length of the frontage only. § The proposal accommodates the possible future provision of a corridor for the future Park Edge Street – which is not a contributions road and will be delivered by the relevant roads authority (Council), subject to separate planning approval processes. Connections to the Park Edge Street will be provided by a future Riparian Street (contributions road) which is located in the property directly north providing a permeable and accessible solution to the future Park Edge Street. The subject proposal does not propose the dedication of land or carrying out of works for the future Park Edge Street. <u>Ultimate:</u> § The proposal will provide connection to the future regional stormwater basin once constructed by Sydney Water and the regional scheme is operational. § The proposal will utilise the future Collector Road and Eastern Ring Road for access to regional road network once delivered. § Ongoing discussions are required with Council (and adjacent landowners) to understand the full extent of upgrades required to Martin Road.
Employment opportunities	Construction: 60 FTE jobs Operational: 108 FTE jobs
Estimated Development Cost	\$108,866,194 (excluding GST) The Estimated Development Cost (EDC) has been calculated in accordance with DPHI's required form and is provided within the EDC Report located at Appendix T which also satisfies DPHI's requirements.
Staging/Phasing	The proposal will be constructed over a single construction phase. Note: staged construction certificates would be issued; however, the proposal does not constitute staged development pursuant to the Act.

2.0 Western Sydney International Airport

The *Western Sydney Airport – Airport Plan / September 2021* sets out the vision for the development and operation of the airport. The Airport Plan includes details of concept design and indicative airport layout and zoning as well as safeguarding information such as Australian Noise Exposure Concept (ANEC) contours and Obstacle Limitation Surfaces (OLS).

The NSW State Environmental Planning Policy (Precincts – Western Parkland City) 2021 (SEPP) *Part 4.3 Development controls – Airport safeguards* contains development controls that relate to Western Sydney International Airport. The development controls for Airport safeguards are shown on maps which can be accessed through the NSW ePlanning Spatial Viewer¹.

¹ <https://www.planningportal.nsw.gov.au/spatialviewer/>

WSI has also developed an online aviation safeguarding mapping tool which interprets some of the planning protection overlays referred to in the SEPP and can be accessed at <https://westernsydney.com.au/your-airport/airport-safeguarding-tool>. These controls include:

- § Obstacle limitation surfaces (OLS);
- § ANEC noise contours;
- § Windshear assessment zone;
- § Wildlife buffer zones;
- § Wind turbines;
- § Lighting;
- § Airspace operations; and
- § Public safety area.

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.

The National Airports Safeguarding Advisory Group (NASAG), comprising of Commonwealth, State and Territory Government planning and transport officials, the Australia Government Department of Defence, the Civil Aviation Safety Authority (CASA), Airservices Australia and the Australian Local Government Association (ALGA), has developed the National Airports Safeguarding Framework.

Commonwealth, State and Territory Ministers considered NASF at the Standing Council on Transport and Infrastructure meeting on 18 May 2012. Ministers agreed to the NASF, noting reservations from New South Wales on the format of Guideline A on measures for managing impacts of aircraft noise. The agreement represents a collective commitment from Governments to ensure that an appropriate balance is maintained between the social, economic and environmental needs of the community and the effective use of airport sites². All NASF Guidelines can be found at www.infrastructure.gov.au. The NASF currently consists of a set of nine Guidelines. Each has been summarised below for its relevance to the proposed development.

3.1 Guideline A: Measures for Managing Impacts of Aircraft Noise

The State Environmental Planning Policy (SEPP) (Precincts – Western Parkland City) 2021 includes aircraft noise under section 4.3 *Development controls – Airport safeguards*. The objective of this section is to:

² https://www.transportinfrastructurecouncil.gov.au/sites/default/files/SCOTI_2nd_Communique_FINAL.pdf

- § Prevent certain noise sensitive development on land near the airport;
- § Minimise the impact of aircraft noise for other noise sensitive development; and
- § Ensure that land use and development near the Airport do not hinder the 24 hour a day operation of the Airport.

The proposed development is within the WSI Australian Noise Exposure Concept (ANEC) as illustrated on [Figure 2](#) attached and is within the ANEF 20-25 zone.

In accordance with AS2021:2015 *Acoustics – Aircraft Noise Intrusion – Building Siting and Construction* (AS2021), 'Light industrial' buildings are acceptable in ANEF zones less than 30. However, due to the proximity to WSI, internal design noise levels within the offices spaces may consider the incorporation of noise control features.

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 this Guideline is initially determined by the location of a building within the assessment trigger area around the runway, that is:

- § 1,200 m or closer perpendicular to the runway centreline;
- § 900 m or closer in front of the runway threshold; and
- § 500 m closer from the runway threshold along the runway.

The proposed development at 230 Martin Road, Badgerys Creek is outside the assessment trigger areas as defined in Guideline B and illustrated on [Figure 3](#) attached.

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

Guideline C pertains to the way in which existing land use is managed in the vicinity of airports with respect to the attraction of wildlife, particularly birds. Guideline C establishes wildlife management areas of 3 km, 8 km and 13 km from an airport. The objective of the SEPP (Precincts – Western Parkland City) 2021 Section 4.19 *Wildlife hazards* is to regulate development on land surrounding the Airport where wildlife may present a risk to the operation of the Airport.

The proposed development is within the 3 km wildlife management area (Area A) as illustrated on [Figure 4](#) attached. Attachment 1 to Guideline C identifies 'warehouse (non-food storage)' as a Commercial Land Use as a Wildlife Attraction Risk of 'very low' and within Area A, the required action is 'monitor'. The airport operator and landowner should agree on action plans for 'monitoring', which could include:

- § Regular monitoring surveys;
- § Wildlife hazard assessments by qualified ornithologists or biologists;
- § Wildlife awareness and management training for relevant staff;
- § Establishment of bird population triggers;

- § Implementation of activities to reduce hazardous bird populations; and
- § Adoption of wildlife deterrent technologies to reduce hazardous bird populations.

Attachment 1 to Guideline C identifies various land use types under 'conservation' and 'recreation' with a wildlife attraction risk of 'high' or 'moderate' and for proposed uses within Area A the required action is 'mitigate'. Proposed development of this land use type should be assessed by a wildlife hazard expert and potential wildlife attractants be suitably mitigated either before the development is approved or as a condition of the approval. Where approved, information regarding the development should be provided to the relevant airport operator and it should be included in future monitoring activity undertaken by the relevant airport operator.

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

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

The development plans provided and listed above in [Section Error! Reference source not found.](#) do not indicate the installation of any wind turbines or wind monitoring towers.

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

The SEPP Section 4.21 *Lighting* objective is to safeguard Airport operations from the risk of lighting and reflectivity distractions for pilots.

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

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

The proposed development is outside the light control zones but within the 6 km radius as illustrated on attached [Figure 5](#). The Civil Aviation Safety Authority (CASA) has powers under the *Civil Aviation Act 1988* to regulate potential sources of distractions from lighting. Lights within 6 km radius of the airport are subject to the provisions of Regulation 94 of the *Civil Aviation Regulations 1988* (CAR 1988), under which CASA can require lights which may cause confusion, distraction or glare to pilots in the air, to be extinguished or modified.

Glare caused by reflective surfaces may also be a source of distraction to pilots. 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. Plans provided indicate that solar panels are allowed

for as roof-mounted panel arrays, whether as part of the initial construction or subsequently, the proponent will need to complete a solar glare hazard analysis to satisfy WSI and 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 Operational Airspace of Airports

Guideline F is intended to address the issue of intrusions into the operational airspace of airports by tall structures, such as buildings, cranes or activities that could cause air turbulence affecting aircraft in flight. As a leased federal airport, WSI airspace will be protected under the Airspace Protection Regulations.

3.6.1. Obstacle Limitation Surfaces (OLS)

The Obstacle Limitation Surfaces (OLS) are established as the protection for aircraft operating on visual flight procedures. It is a series of virtual surfaces around a runway, which establish the height limits for objects in and around an airport.

The proposed development is within the lateral extents of the WSI OLS identified in the SEPP (Precincts – Western Parkland City) 2021 Obstacle Limitation Surface Map and shown on attached [Figure 6](#).

The critical OLS surface over the proposed development site is the OLS inner horizontal at 125.5 m AHD. The proposed development at a maximum elevation of 64.7 m AHD would remain below the OLS inner horizontal surface.

The EMKC³ drawings 100471 DA05/900 & 901/Rev D - Proposed Elevations illustrate new vegetation standing higher than the proposed warehouses. When the landscaping plans are available in detail, the proponent must be mindful that vegetation must be managed to remain below the OLS inner horizontal surface at 125.5 m AHD and in accordance with the landscape species list provided in Appendix B of the Aerotropolis DCP (refer [Section 3.3](#)).

Plume rise is also a consideration in relation to penetration of the OLS. Aircraft in various stages of flight may be affected by exhaust plume of significant velocity. CASA has published an Advisory Circular AC-139-5v.3.0 *Plume Rise Assessments*. The proponent may need to complete CASA Form 1247 *Application for Operational Assessment of a Proposed Plume Rise* with the relevant details once these are available, and submit the form directly to CASA at the Office of Airspace Regulations (OAR) in order to commence the assessment process.

3.6.2. PANS-OPS Airspace

PANS-OPS Airspace is associated with instrument flight procedures and other requirements for aircraft operating under Instrument Flight Rules, such as will be the case for the majority of Western Sydney Airport aircraft operations. Flight procedures and the respective PANS-OPS airspace protection are not yet published for the airport. It is assumed that the OLS will provide adequate planning protection to the required airspace for instrument flight procedures at Western Sydney.

The proposed development at a maximum of 64.7 m AHD would not be expected to be any more restrictive to the PANS-OPS airspace than the existing obstacle environment around which the Western Sydney International Airport flight procedures will need to be designed.

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

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

The SEPP Section 4.23A *Operation of certain air transport facilities* objective is to regulate development that may impact the operation of air transport facilities. A *Building Restricted Area Map* is included to ensure that development in these areas would not adversely impact the operation of communication and air traffic control facilities or structures associated with the airport.

The proposed development is outside the Building Restricted Areas as shown in [Figure 7](#).

3.8 Guideline H: Protecting Strategically Important Helicopter Landing Sites

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

A SHLS is that as identified as being of strategic importance as well as associated with a hospital, elevated in a populated area and/or subject to instrument flight procedures. The flight path protection areas extend 3.5 km from the SHLS and as illustrated on attached [Figure 8](#). The proposed development does not appear to be within 3.5 km of any hospitals.

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

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

The proposed development is outside the PSAs as defined by the SEPP Public Safety Area map and illustrated on attached [Figure 9](#).

4.0 Conclusion

The proposed development at 230 Martin Road, Badgerys Creek has been reviewed against the National Airports Safeguarding Framework Guidelines in relation to the Western Sydney International Airport (WSI), with reference to the NSW Planning Portal Spatial Viewer and the NSW State Environment Planning Policy (Precincts – Western Parkland City) 2021 *Part 4.3 Development controls – Airport safeguards*.

The assessment against each NASF Guideline is summarised below:

- § Guideline A: Situated within the ANEC 20 to 25 zone. Under *AS 2021:2015 Acoustics – Aircraft Noise Intrusion – Building Siting and Construction*, Light industrial buildings are acceptable in ANEF zones less than 30;
- § Guideline B: Outside the windshear and turbulence assessment trigger areas;
- § Guideline C: Within wildlife management area, Area A, 'warehouse (non-food storage)' is identified as a Commercial Land Use with a Wildlife Attraction Risk of 'very low' and the required action is 'monitor'. 'Conservation' and 'Recreation' are identified with a wildlife attraction risk of 'high' or 'moderate' and for proposed land uses within Area A the required action is 'mitigate'. Proposed development of this land use type should be assessed by a wildlife hazard expert and potential wildlife attractants be suitably mitigated either before the development is approved or as a condition of the approval. Where approved, information regarding the development should be provided to the relevant airport operator and it should be included in future monitoring activity undertaken by the relevant airport operator;
- § Guideline D: No wind turbines or wind monitoring towers are proposed;
- § Guideline E: Outside the light control zones but within the 6 km radius. Lights within 6 km radius of the airport are subject to the provisions of Regulation 94 of the *Civil Aviation Regulations 1988* (CAR 1988). Solar panel installation is a particular consideration in relation to glare/reflectivity. Solar Panel installation whether as part of the initial construction or subsequently, will need a solar glare hazard analysis to satisfy WSI and CASA that the safety of aircraft and ATC operations will not be affected;
- § Guideline F: within the OLS inner horizontal at 125.5 m AHD as defined by the SEPP. The proposed development at a maximum elevation of 64.7 m AHD would not infringe the OLS. All vegetation proposed must also be kept below the OLS;
- § Guideline F: PANS-OPS airspace protections are not yet published for the airport. It is assumed that the OLS will provide adequate planning protection to the required airspace for instrument flight procedures at Western Sydney. The proposed development is not considered to be any more restrictive to the PANS-OPS airspace than the existing obstacle environment around which the Western Sydney International Airport flight procedures will need to be designed;
- § Guideline G: Outside the Building Restricted Area Map as defined in the SEPP;
- § Guideline H: Beyond 3.5 km from surrounding major hospital sites; and
- § Guideline I: Outside the WSI Public Safety Areas as defined by the SEPP.

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

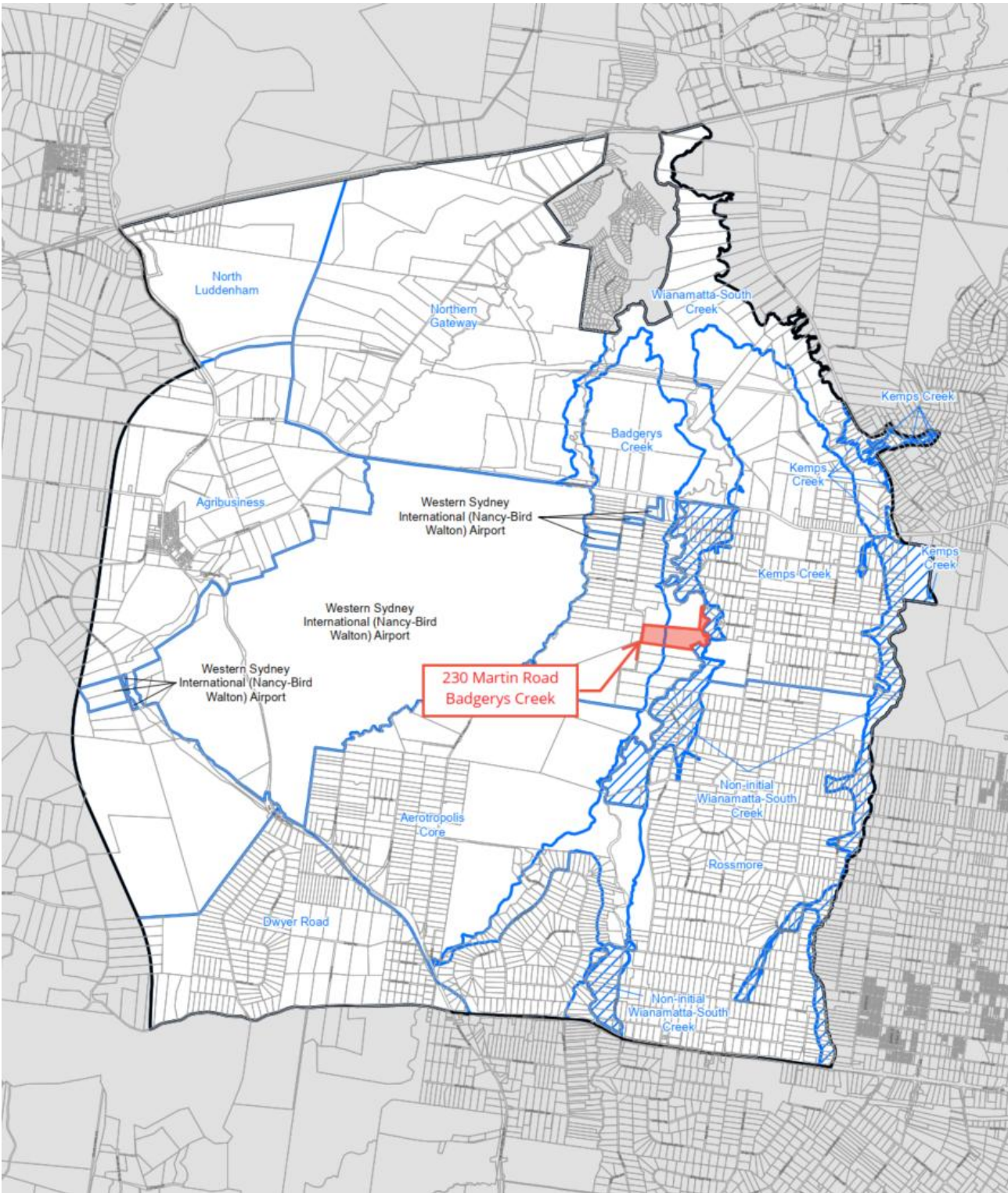
Yours faithfully,
For and on behalf of
LAMBERT & REHBEIN (SEQ) PTY LTD

A handwritten signature in black ink, appearing to read 'Bridget Wouts', with a stylized flourish at the end.

B. WOUTS
PRINCIPAL CONSULTANT
AVIATION

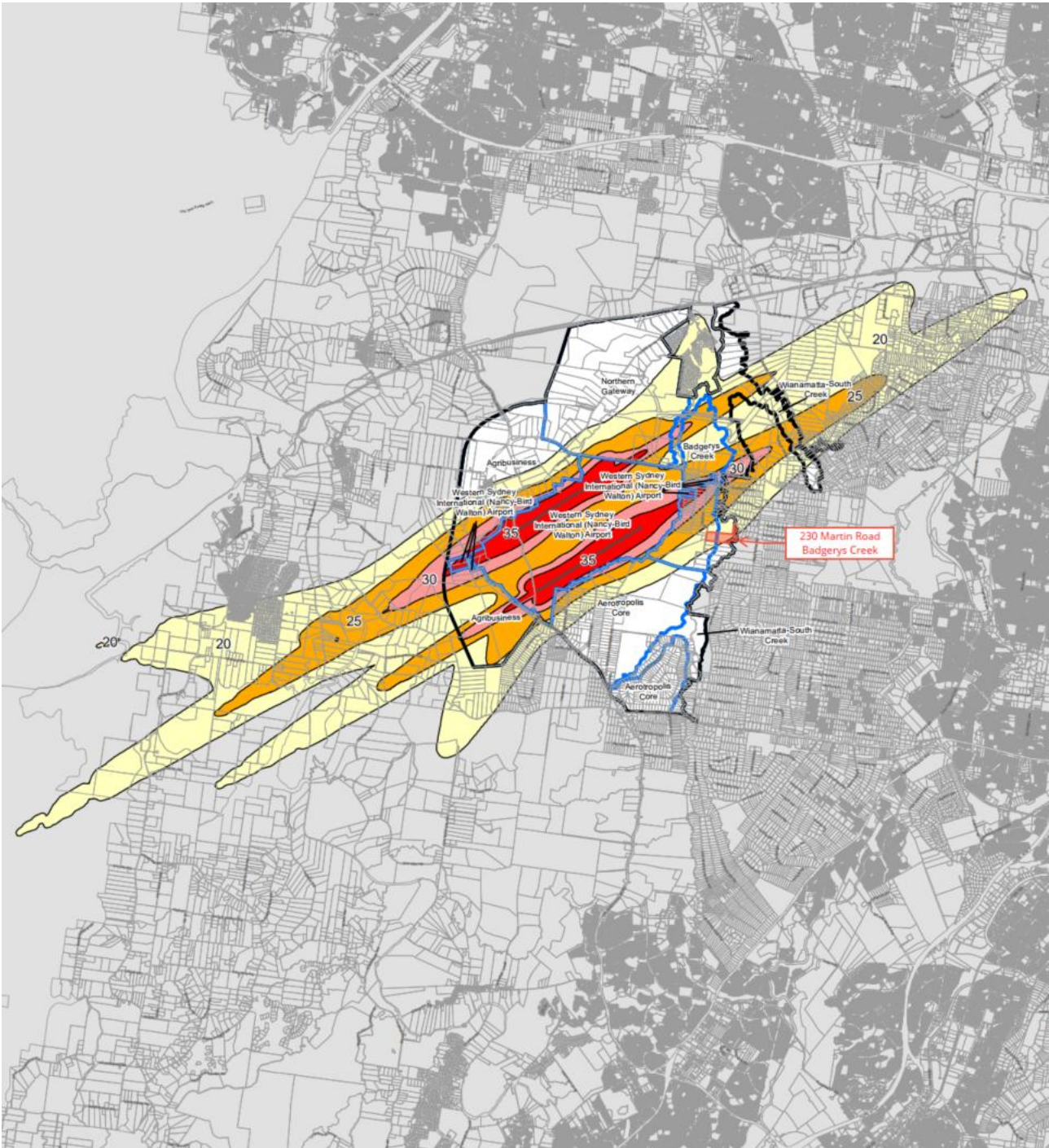
Enc: Figures 1 - 9

Figure 1: 230 Martin Road, Badgerys Creek



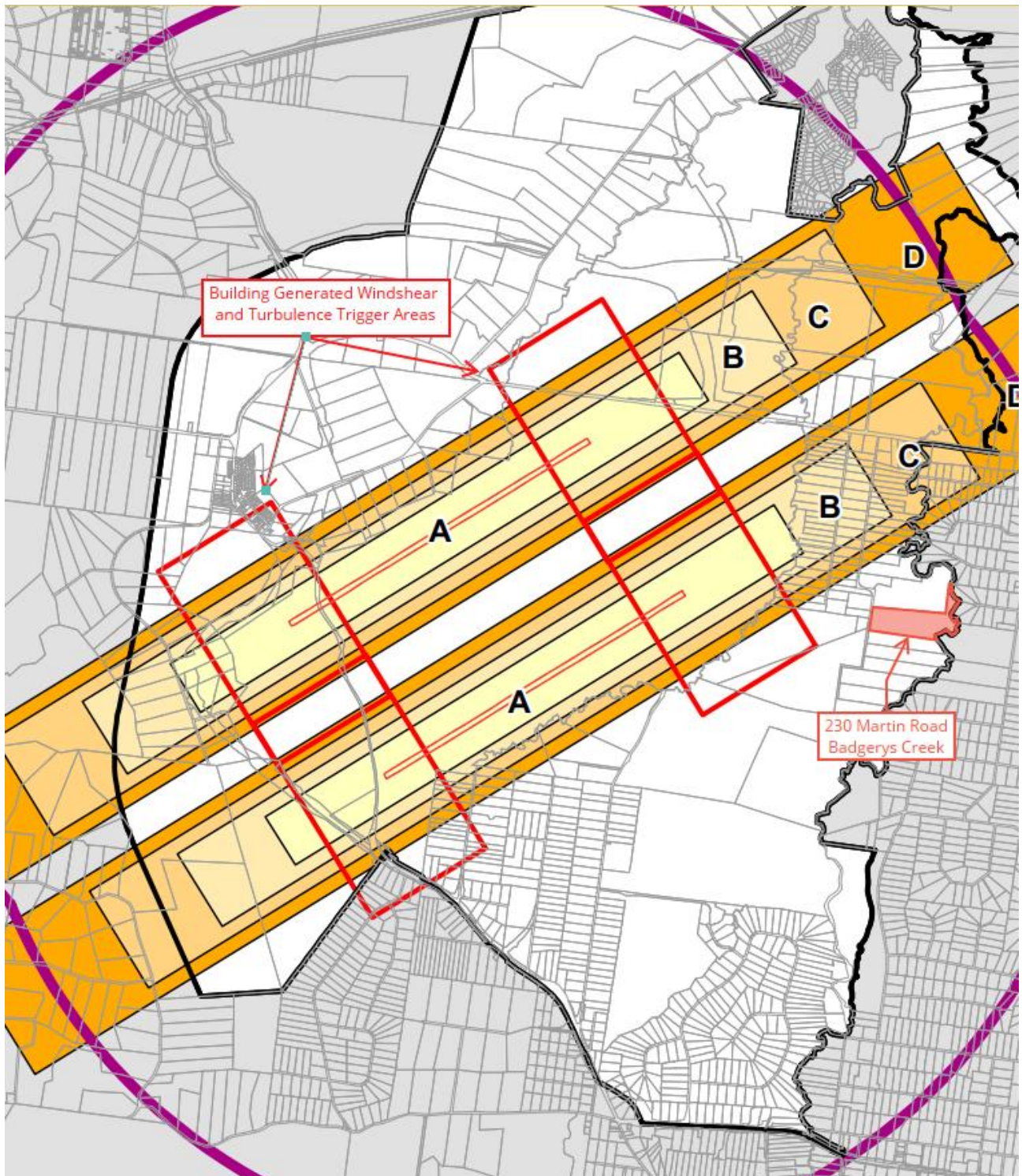
Source: Extract from NSW State Environmental Planning Policy (Precincts – Western Parkland City) 2021 Aerotropolis Boundary Map

Figure 2: WSI Noise Exposure Contours



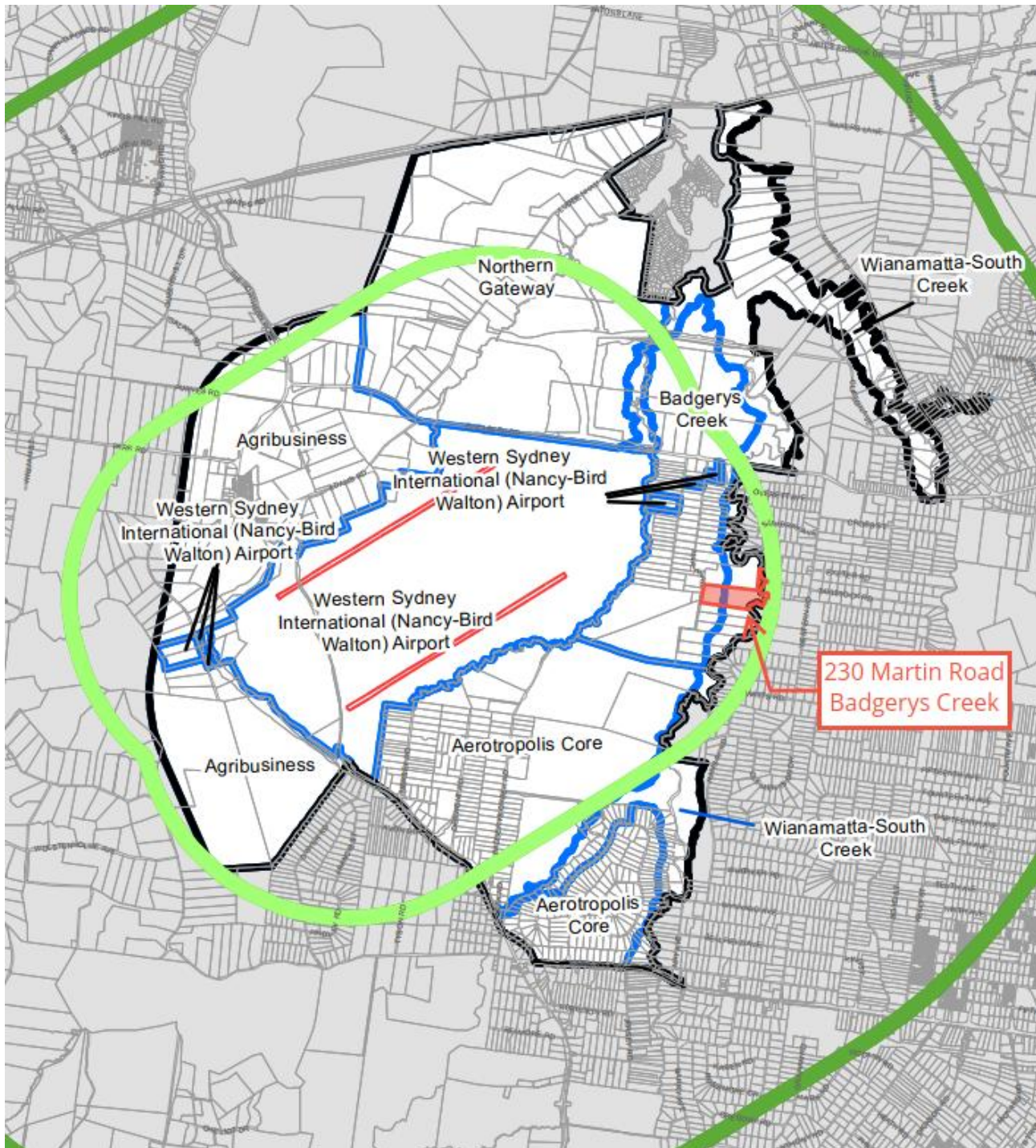
Source: Extract from NSW State Environmental Planning Policy (Precincts – Western Parkland City) 2021 Noise Exposure Contour Map

Figure 3: WSI Building Generated Windshear and Turbulence Trigger Areas



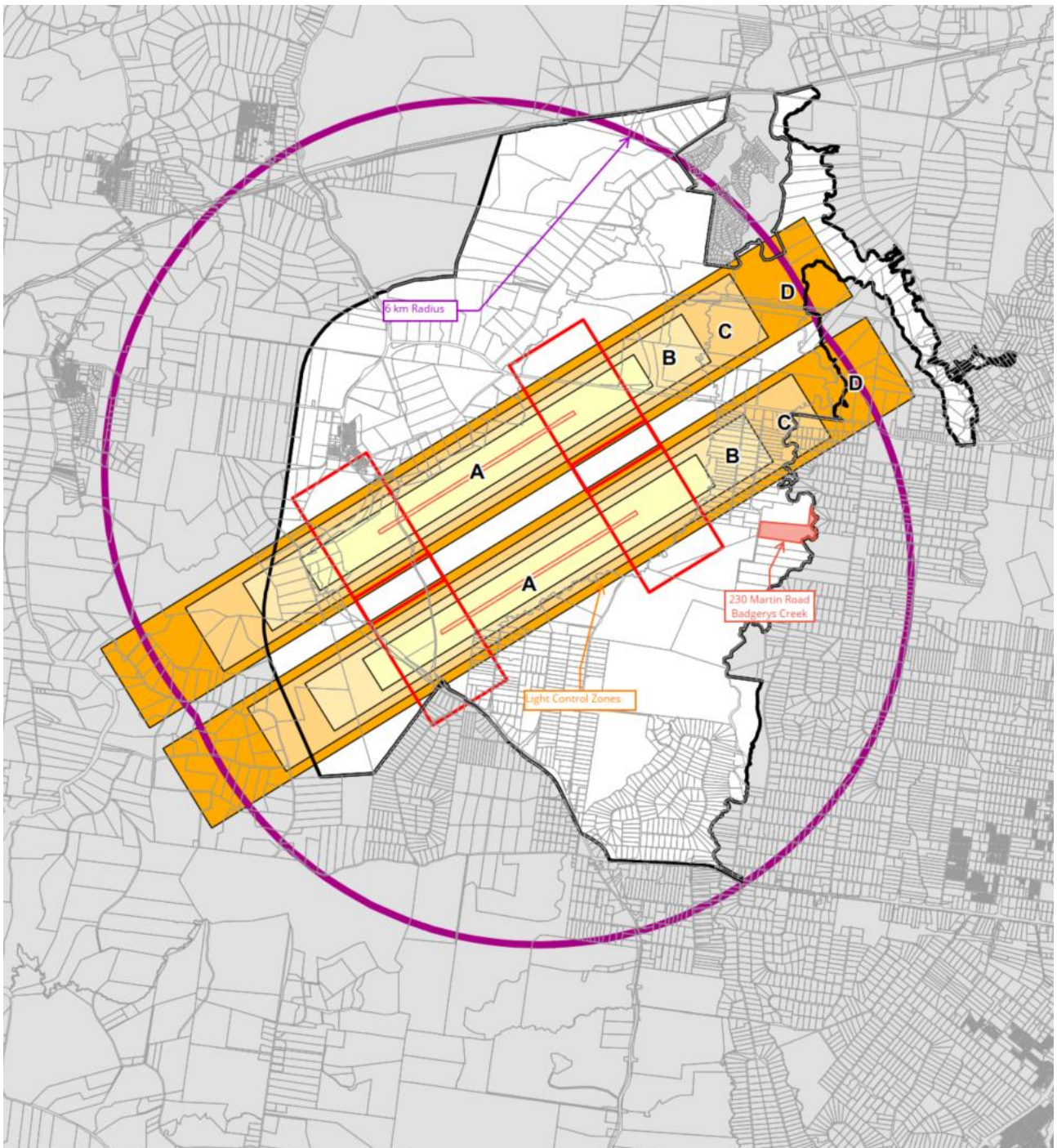
Source: Extract from NSW State Environmental Planning Policy (Precincts – Western Parkland City) 2021
Lighting Intensity and Wind Shear Map – Aerotropolis

Figure 4: WSI Area A (0 - 3 km) Wildlife Management Area



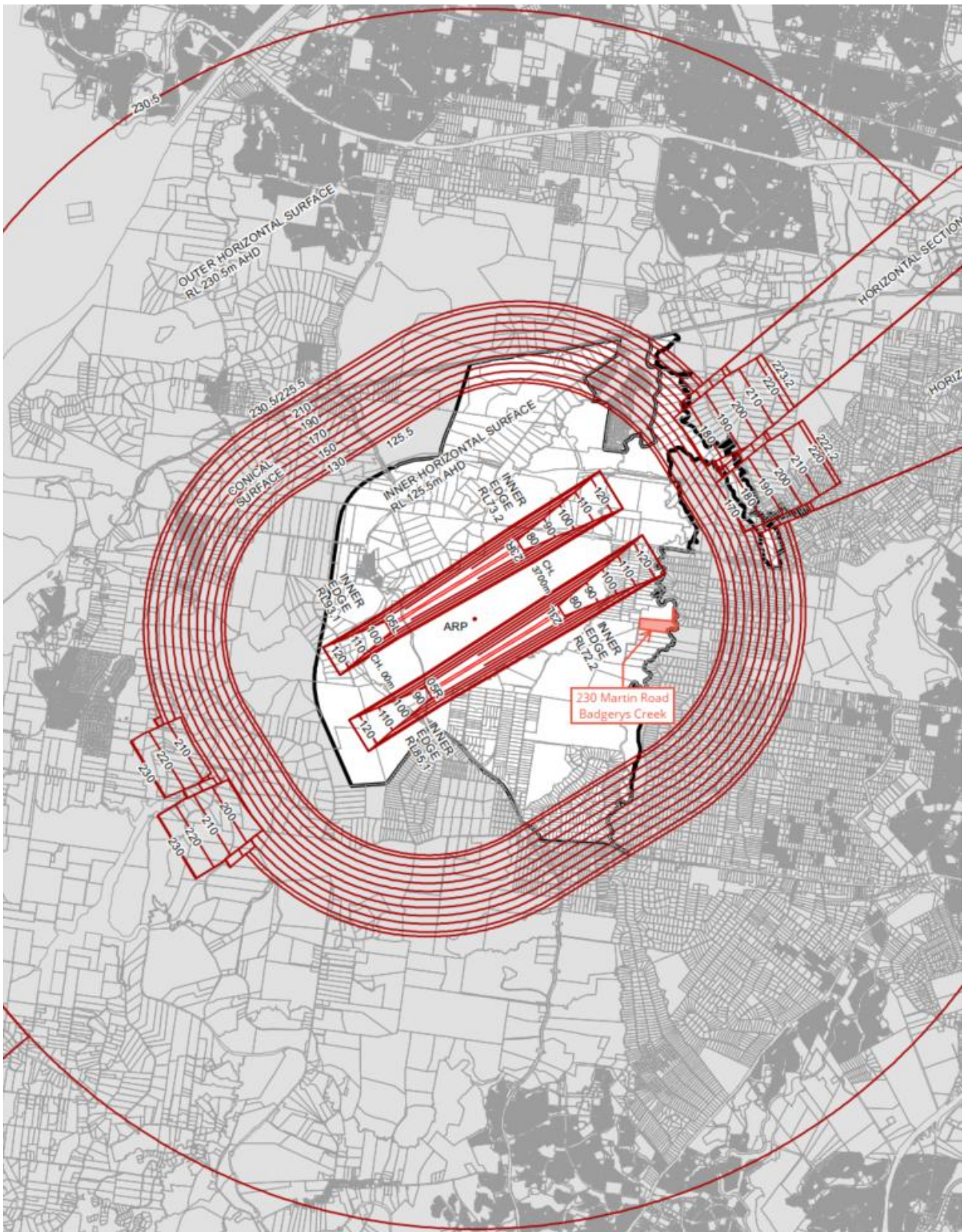
Source: Extract from NSW State Environmental Planning Policy (Precincts – Western Parkland City) 2021 Wildlife Buffer Zone Map

Figure 5: WSI Lighting Intensity



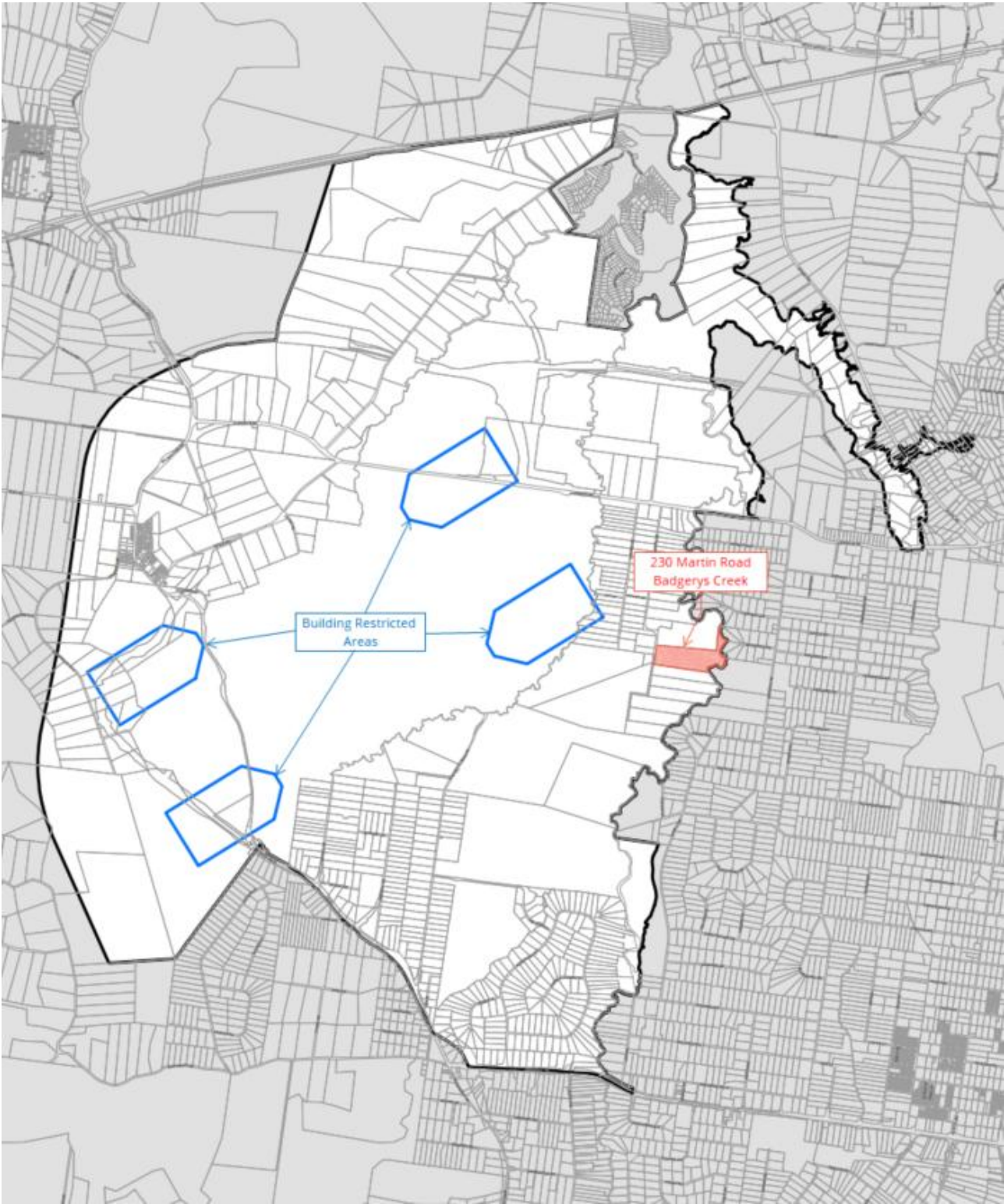
Source: Extract from NSW State Environmental Planning Policy (Precincts – Western Parkland City) 2021 Lighting Intensity and Wind Shear Map

Figure 6: WSI Obstacle Limitation Surfaces



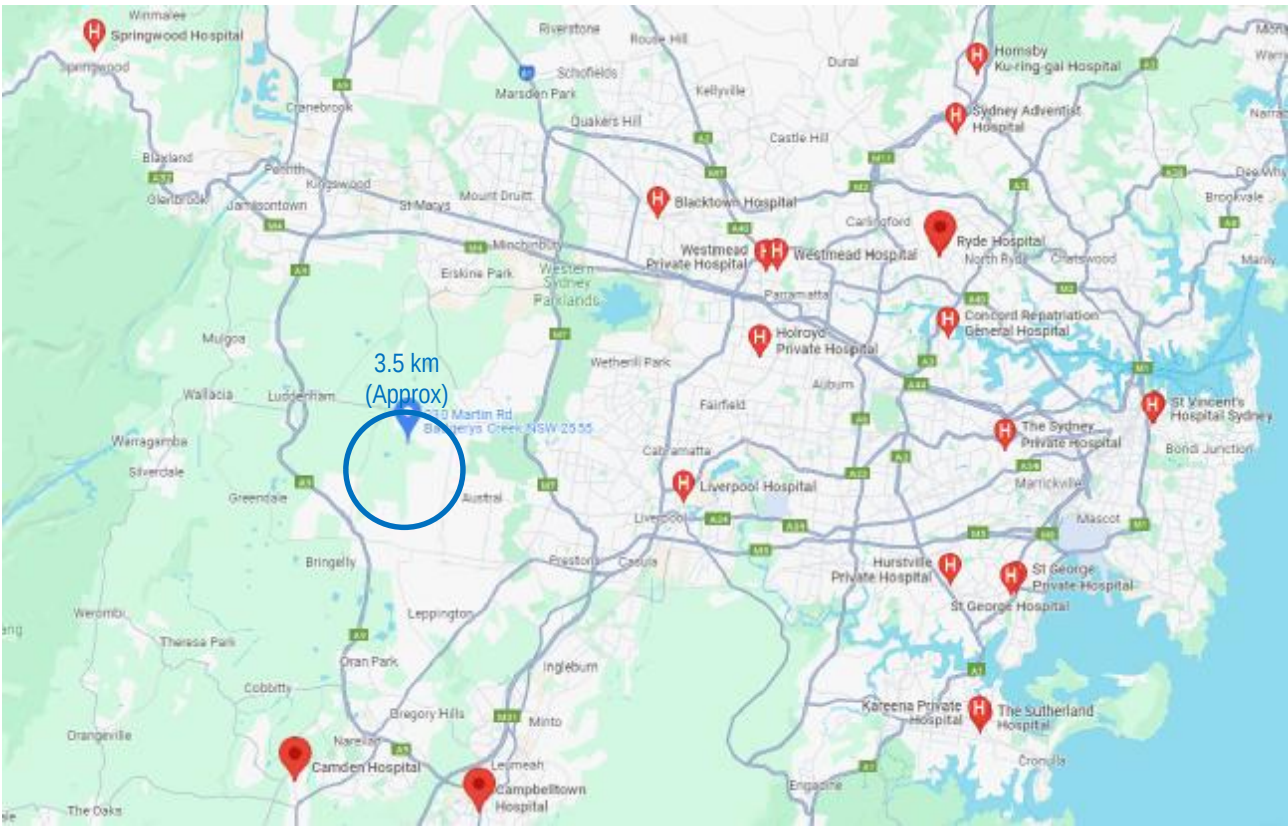
Source: Extract from NSW State Environmental Planning Policy (Precincts – Western Parkland City) 2021 Obstacle Limitation Surface Map

Figure 7: WSI Building Restricted Areas



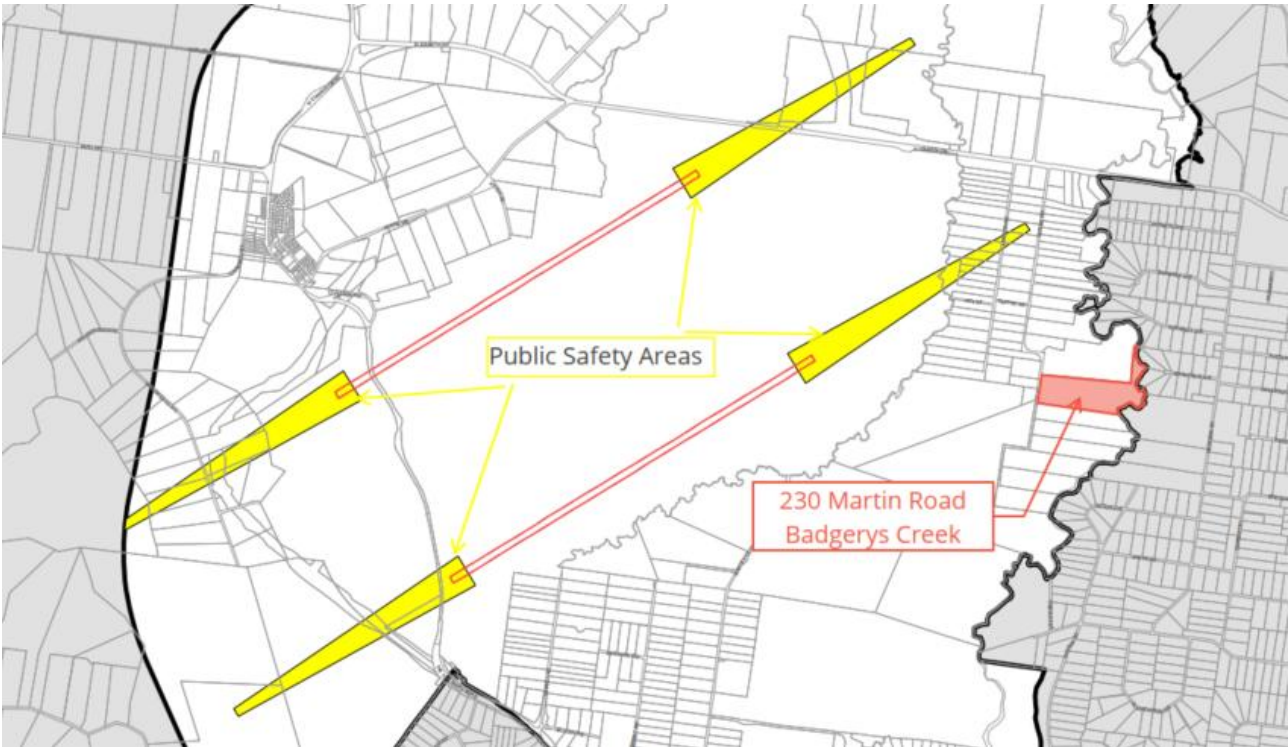
Source: Extract from NSW State Environmental Planning Policy (Precincts – Western Parkland City) 2021 Building Restricted Area Map

Figure 8: Surrounding Hospitals



Source: Google Maps

Figure 9: WSI Public Safety Areas



Source: Extract from NSW State Environmental Planning Policy (Precincts – Western Parkland City) 2021 Public Safety Area Map