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AVIATION CONSULTING

Aviation Safeguarding Assessment

Burrah Park - Concept Plan and Stage 1

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V2 FINAL	08/10/2024	Amin Hamzavian	Concept Plan GFA updated in Section 2

Contents

1

Executive Summary

Executive Summary

This Aviation Safeguarding Assessment has been prepared by Avlaw Consulting Pty Ltd (Avlaw) to supplement a State Significant Development Application (SSDA) for a Warehouse and Logistics Estate at 1953-2109 Elizaeth Drive, Badgerys Creek (the site). The site is legally described as Lot 1 in Deposited Plan 1306448.

Concept approval is being sought for the site and HBB is also seeking specific approval for built structures to be constructed on Lots 1.1, 1.2 and 3.1 i.e. Stage 1 (the lots). As requested by HBB, Avlaw have documented the findings of its assessment of the built and temporary structures against all relevant aviation restrictions at the site and the lots separately within this document.

The scope of Avlaw's engagement has been defined by applicable guidelines contained in the National Airports Safeguarding Framework (NASF) which are in place to protect aircraft operations against hazards with the potential to adversely impact the safety, regularity or efficiency of aviation operations. In doing so, this by default addresses the Western Sydney Aerotropolis Plan (2020) and Western Parkland City SEPP, both of which are specifically mentioned (in addition to the NASF) in the aviation-related site-specific SEARs copied below:

Airport Safeguarding – including a risk assessment of the proposed development on the Western Sydney Airport operations and addressing related matters in the Western Sydney Aerotropolis Plan and Western Parkland City SEPP and the National Airports Safeguarding Framework and associated guidelines, including (but not limit to) wildlife hazards, lighting and the prescribed airspace.

It is important to note that this report focuses on assessing the impacts of the built and temporary structures at the site and the lots in accordance with all applicable aviation legislation, regulations and guidelines. This means that activities and land uses outside the built structures are excluded from this assessment. Interested parties should refer to other consultant reports accompanying the SSDA including that produced by Eco Logical Australia and EMM Consulting which addresses wildlife hazards and associated management strategies related to wetlands, open water and landscaping as well as noise exposure respectively.

The proposed construction at the site and the lots will see multiple warehouses constructed up to 14.6m AGL, with ancillary features captured within this envelope. Crane activity is yet to be finalised, however is anticipated to consist of mobile cranes reaching a maximum of 40m AGL. Ground levels vary across the site, hence why elevations in reference to AHD are not cited.

With regards to Stage 1 development (i.e. the lots), Avlaw has concluded that the proposed built structures and indicative crane heights will not adversely impact the safety, efficiency and regularity of aircraft operations and should be supported by Western Sydney Airport, the Civil Aviation Safety Authority (CASA), Airservices Australia and the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (Department), collectively referred to herein as "aviation stakeholders".

With regards to the Concept Plan, the proposal is largely compliant with applicable aviation restrictions. Amendments to plans in the south-eastern corner of the site (i.e. built and temporary structure heights) are likely to be necessary following consultation with aviation stakeholders.

2

Introduction

Introduction

This report has been prepared to accompany an SSDA at 1953-2109 Elizabeth Drive, Badgerys Creek (**SSD-70316465**). The application seeks consent for a concept plan including future development lots and building footprints. The development also seeks consent for the Stage 1 works which will include bulk earthworks across the site, infrastructure delivery, road access/intersections, internal road construction, civil infrastructure and utilities, stormwater infrastructure works and the construction of three (3) warehouse buildings.

Specifically, development consent is sought for:

Concept Plan

Concept Masterplan for the Burrah Park comprising warehouse buildings, internal road network layout, building locations, GFA, car parking, concept landscaping, building heights, setbacks, signage strategy, public art strategy, design excellence strategy and Connection with Country framework.

- Developable area 131.45ha
- Total approximate GFA 63.00ha

Stage 1 – site preparation works

- Demolition and removal of existing structures and vegetation.
- Heritage salvage works (if applicable).
- Construction of roads, access infrastructure, including a signalised intersection with Elizabeth Drive.
- Dam de-watering and de-commissioning.
- Bulk earthworks, cut and fill, benching, battering and retaining walls.
- Lead in infrastructure, utilities and servicing.
- Stormwater infrastructure including construction of Sydney Water basins and Water Sensitive Urban Design (WSUD) elements.

Stage 1 – Development

- Construction and fit out of 3 warehouse buildings and ancillary office space.
- Stormwater management, fencing and landscaping.
- Internal road network, active transport network, public domain and open space.
- Subdivision, and
- Estate and on lot signage.
- Total approximate GFA 85,864sqm
    - Warehouse 1.1 – 26,860sqm
    - Warehouse 1.2 – 31,443sqm
    - Warehouse 3.1 – 27,561sqm

This report has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (**SEARs**) dated 22 May 2024 and issued for the SSDA (**SSD-70316465**). Specifically, this report has been prepared to respond to the SEARs requirement issued below.

Item	Description of requirement	Section reference (this report)
Airport Safeguarding	Airport Safeguarding – including a risk assessment of the proposed development on the Western Sydney Airport operations and addressing related matters in the Western Sydney Aerotropolis Plan and Western Parkland City SEPP and the National Airports Safeguarding Framework and associated guidelines, including (but not limit to) wildlife hazards, lighting and the prescribed airspace.	Noise – Section 5.1 Windshear and Turbulence – Section 5.2 Windlife hazards – Section 5.3 Lighting – Section 5.4 Protected Airspace – Section 5.5 Aviation Facilities – Section 5.6 Helicopter Landing Sites – Section 5.7 Public Safety Areas – Section 5.8

Figure 1: Aviation-related SEARs

3

Regulatory Framework

Regulatory Framework

3.1 Airspace Height Controls

Protection of airspace surrounding an airport is a critical component of maintaining requisite safety standards that facilitate the efficient use of runways, whilst also managing the associated impacts of their use on other critical infrastructure (e.g. taxiways), the environment and the general public. As a signatory to the *Chicago Convention 1944*, Australia adopts International Civil Aviation Organisation (ICAO) Standards and Recommended Practices (SARPs) with respect to airspace which define sets of invisible surfaces above the ground around an airport. The airspace above these surfaces forms the airport's prescribed airspace.

With regards to WSA, at the time of writing, only the OLS has been "declared" by the Department and has therefore been enshrined in legislation as the airport's prescribed airspace. Once detailed airspace design is complete, other components of the airport's prescribed airspace including those related to Instrument Flight Procedures (IFP), also referred to as Procedures for Air Navigation Services - Aircraft Operations (PANS-OPS) will be declared and then also be considered as part of WSA's prescribed airspace.

In any case, development that infringes on the airport's prescribed airspace is called a controlled activity and can include, but is not limited to:

- permanent structures, such as buildings, intruding into the protected airspace;
- temporary structures such as cranes intruding into the protected airspace;
- or any activities causing intrusions into the protected airspace through glare from artificial light or reflected sunlight, air turbulence from stacks or vents, smoke, dust, steam or other gases or particulate matter.

3.2 Airspace Approval Process

Part 12 of the *Airports Act 1996* (Act) and the *Airports (Protection of Airspace) Regulations 1996* (Regulations) establish a framework for the protection of airspace at and around airports. The Act defines any activity resulting in an intrusion into an airport's prescribed airspace to be a "controlled activity" and requires that controlled activities cannot be carried out without approval.

With respect to WSA prior to the estimated opening in 2026, there are exemptions in the Regulations if the planned activity in the airport's OLS involves buildings, structures or things that penetrate the protected airspace but are:

- no taller than 10 metres above ground level;
- relates to temporary activities that penetrate the protected airspace, but do not continue for more than 12 months and will not result in a permanent airspace intrusion;
- or is authorised by the WSA, Airport Plan, herein referred to as the "Airport Plan".

Regulation 16A (3)(e) Exemption relating to "temporary buildings etc" that would include cranes, references the activity not being carried out after 31 December 2025. However, this exemption will not be sought as construction of Stage 1 is expected to commence in November 2026.

With respect to the Concept Plan and Stage 1, permanent and temporary penetrations of prescribed airspace are proposed and are discussed in more detail later in this report.

3.3 Other Aviation Approval Requirements

In addition to the controlled activity approval process detailed above at 3.2, there are a range of other aviation regulations, legislation and standards that proposed construction activities need to be assessed against in order to determine the extent to which they may impact the safety, regularity or efficiency of aircraft operations before they are permitted to commence. Although the administrative processes which relate to these other requirements are not captured within that described at 3.2 above, the same stakeholders are involved in the assessment processes against each of these other requirements:

- The airport operator closest to the site, in this case WSA:
- CASA;
- Airservices Australia; and
- The Department.

Depending on the outcomes of each of these stakeholders' assessments, various conditions may be attached to consents to construction or where an assessment is not favourable, an outright rejection or change to the proposed development may be stipulated. In the context of the Concept Plan and Stage 1, the additional requirements which are expected to be imposed on HBB are explained in section five (5).

4

Proposed Development

Proposed Development

4.1 Site description

The figures below show varying illustrations of the Concept Plan (the site) and the boundary of development which forms Stage 1 (the lots).

Figure 2: Satellite imagery showing boundary of the entire Concept Plan (the site) with WSA to the South

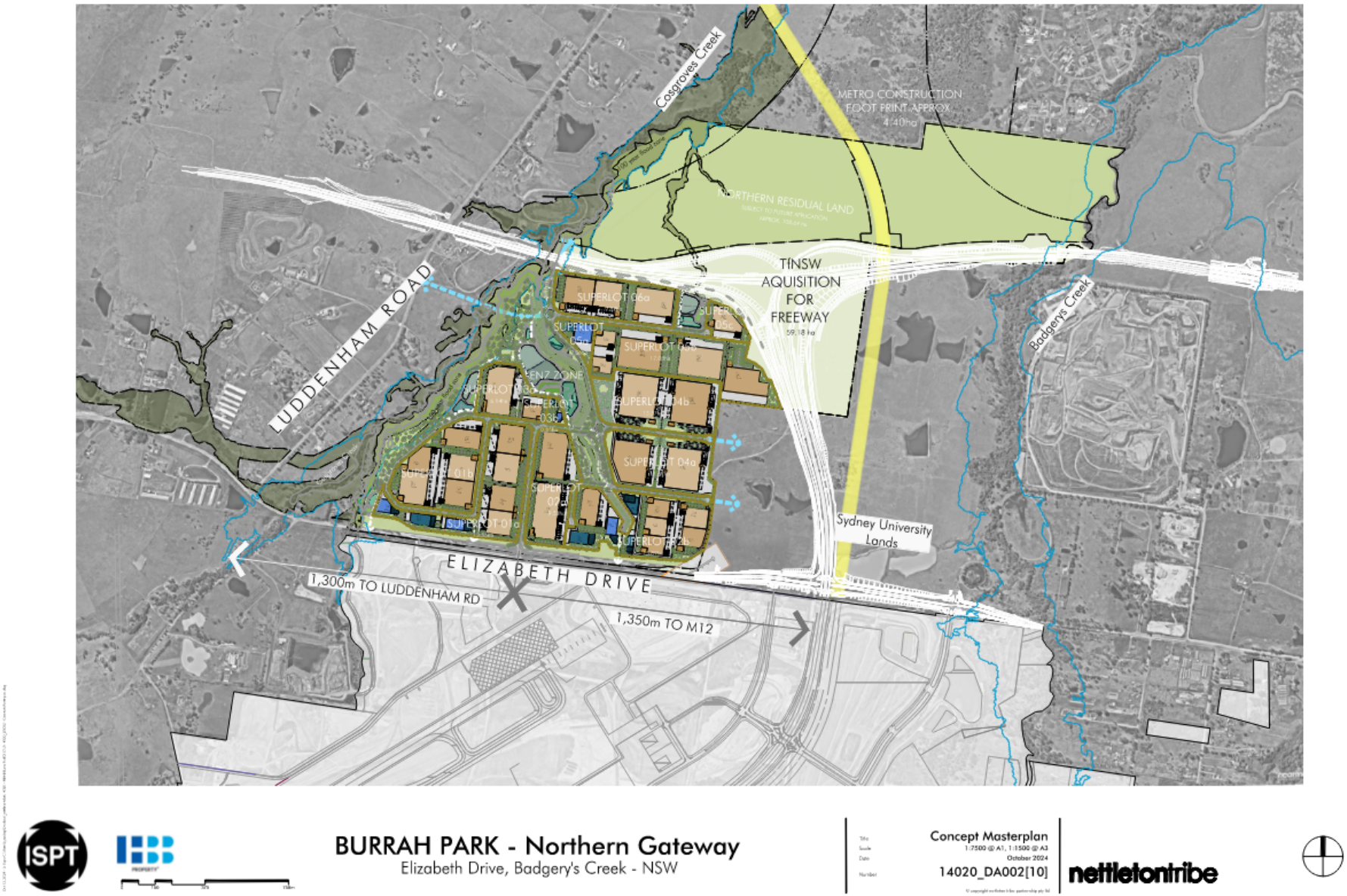

Figure 3: Site plan showing layout of lots across the entire Concept Plan (the site)

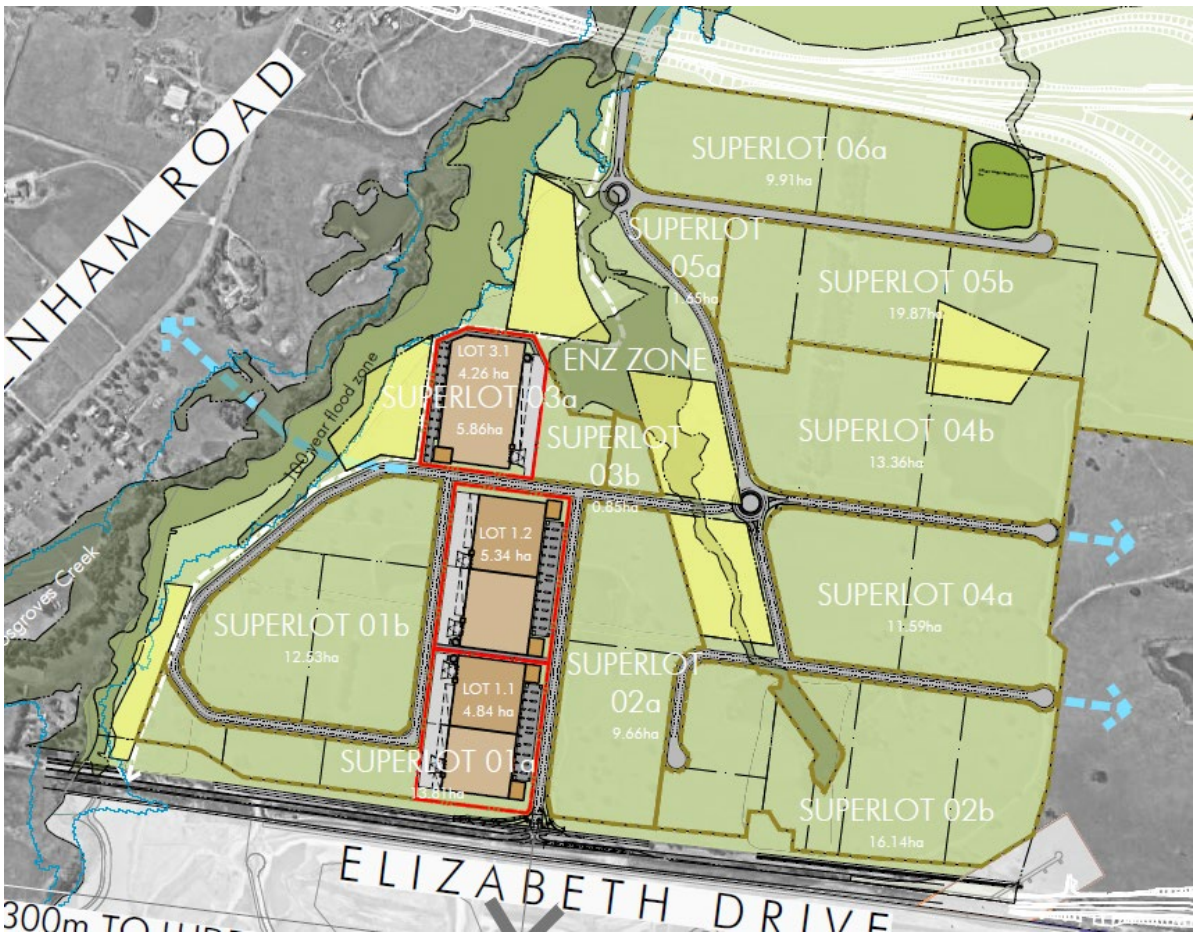

Figure 4: Site plan showing the boundary of the three lots which collectively for Stage 1 (1.1, 1.2 and 3.1)

4.2 Location

The nearest edge of the site is approximately 452m north of the end of runway 05L/23R which is illustrated in Figure 5 below. This runway will be in use when the airport commences operations in late 2026, with a second runway (further to the south) expected to open when 05L/23R reaches its capacity. Current projections estimate this to be in 2050.

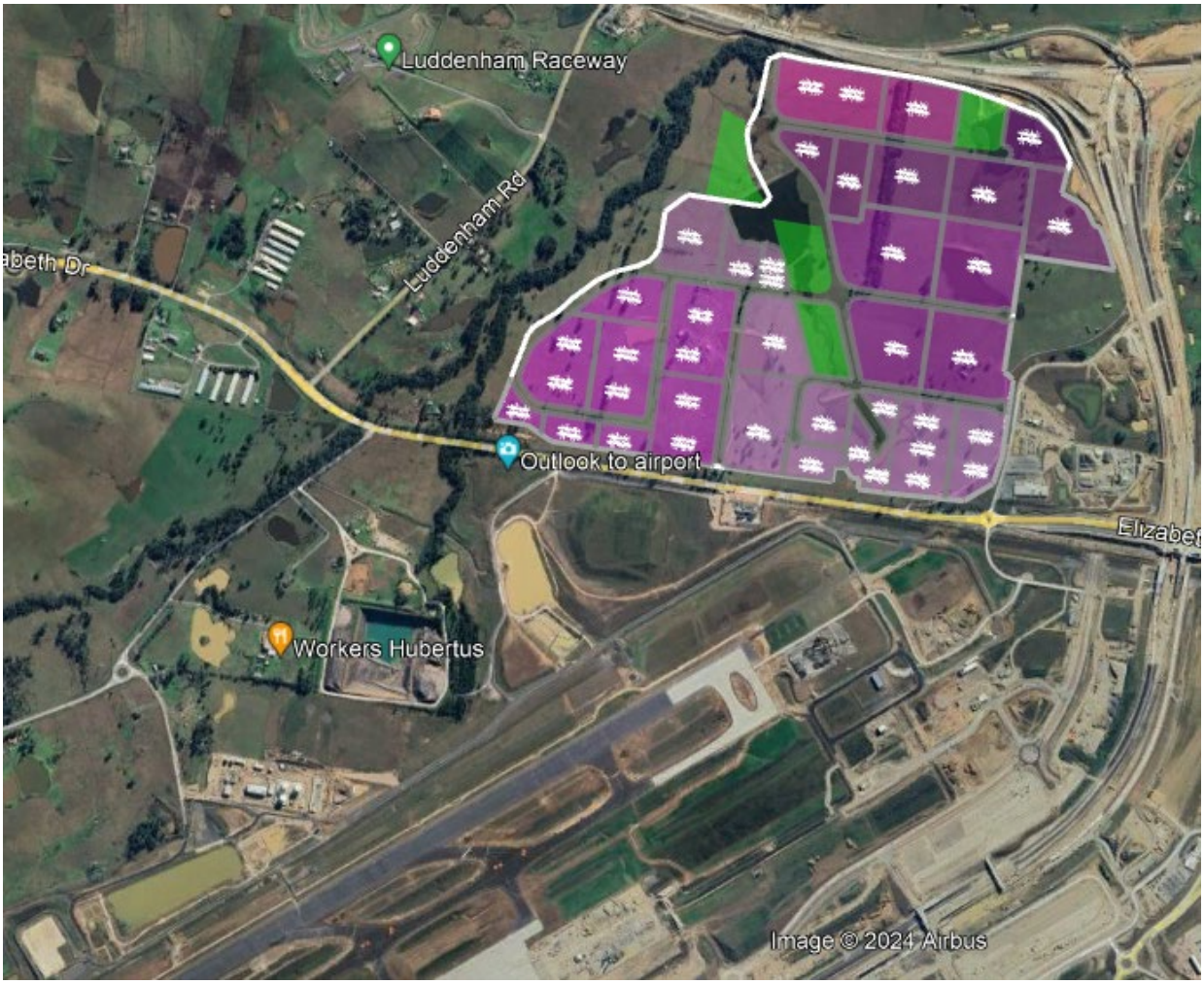

Figure 5: Site in relation the nearest runway end (05L/23R) at WSA

4.3 Permanent structures

The built structures proposed across the site will see a series of warehouses reaching a height 14.6 AGL, with all ancillary features captured within this envelope. The images below show elevations for built structures on the lots.

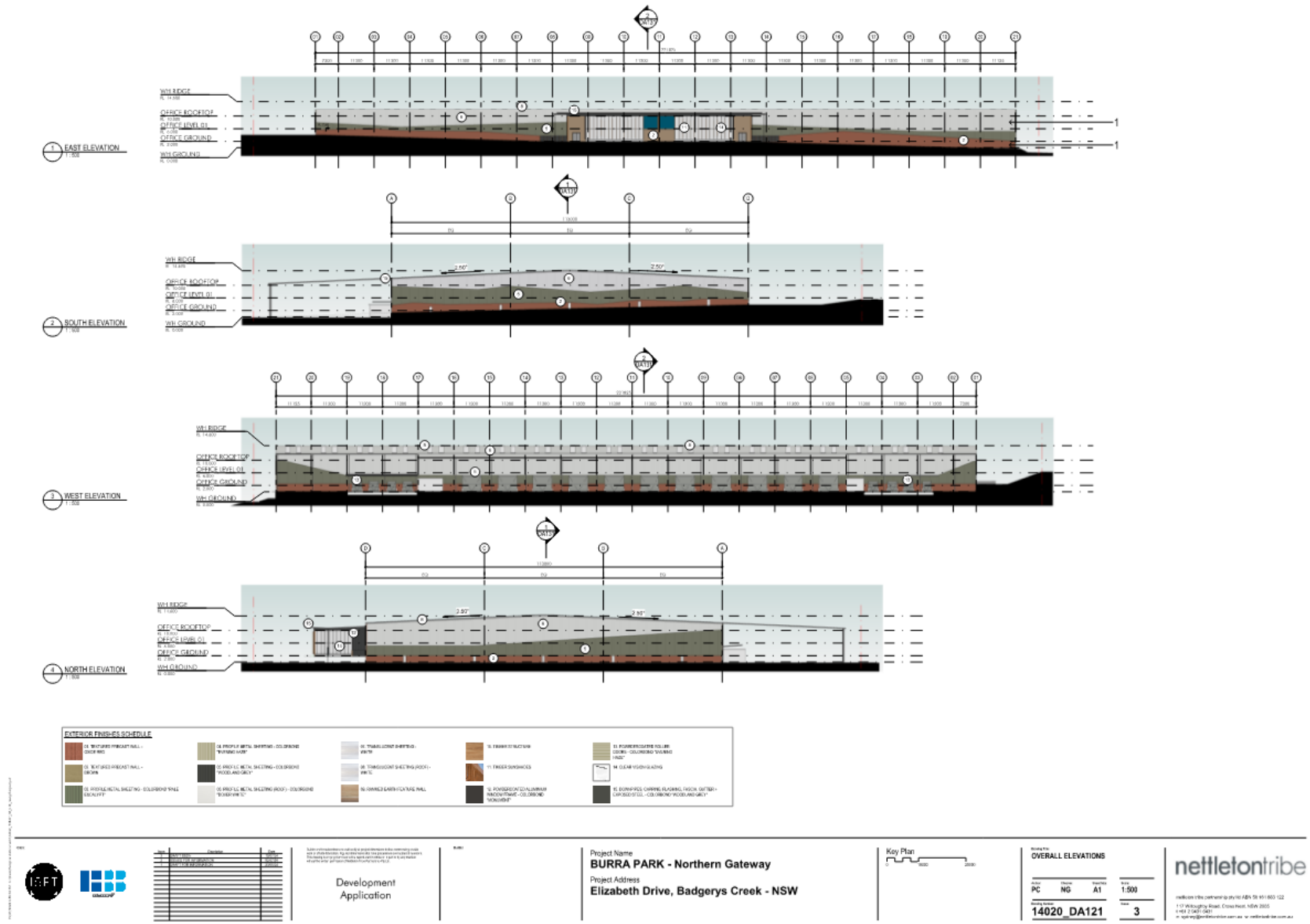

Figure 6: Section showing built structure on Lot 1.1 at 14.6m AGL

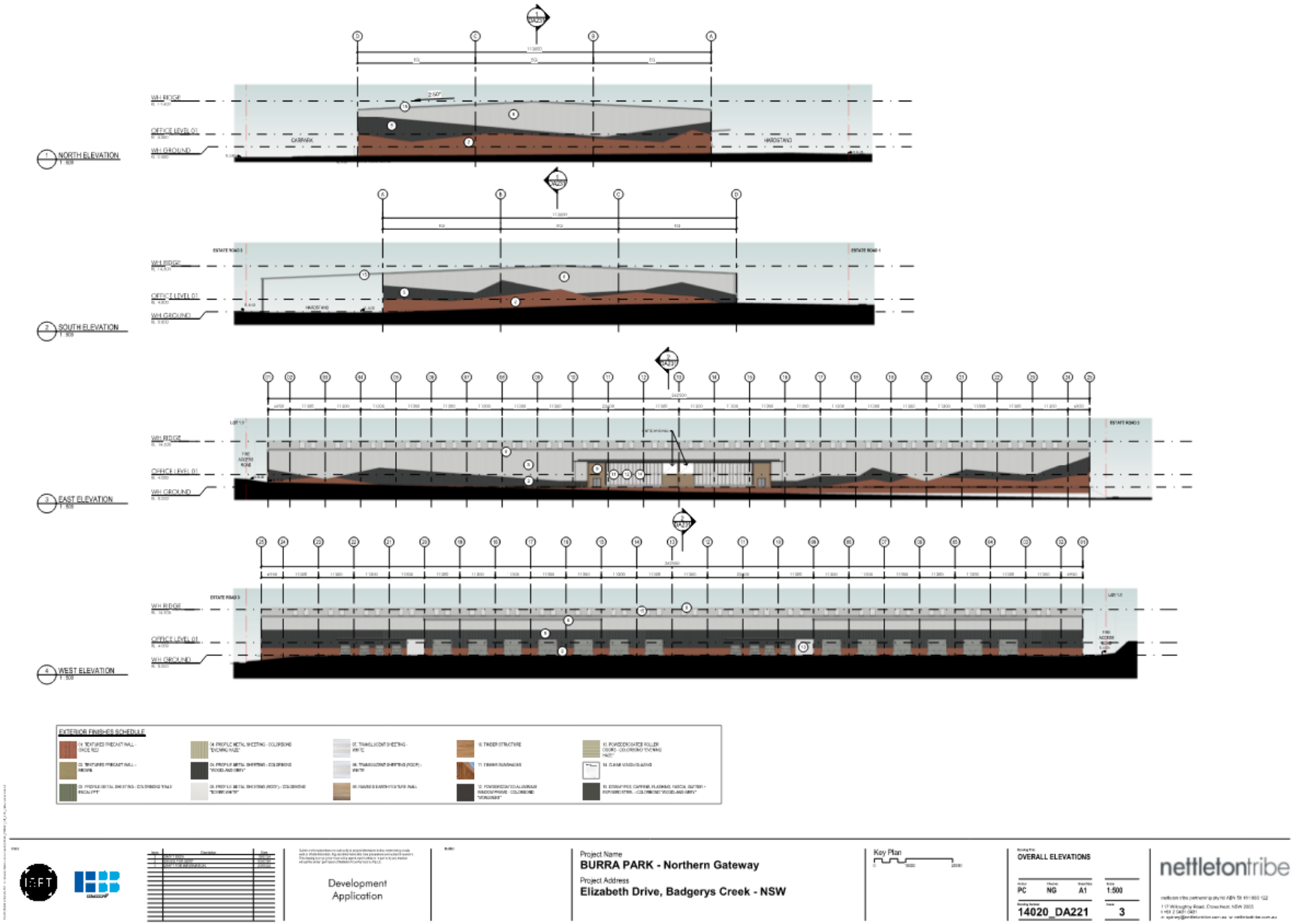

Figure 7: Section showing built structure on Lot 1.2 at 14.6m AGL

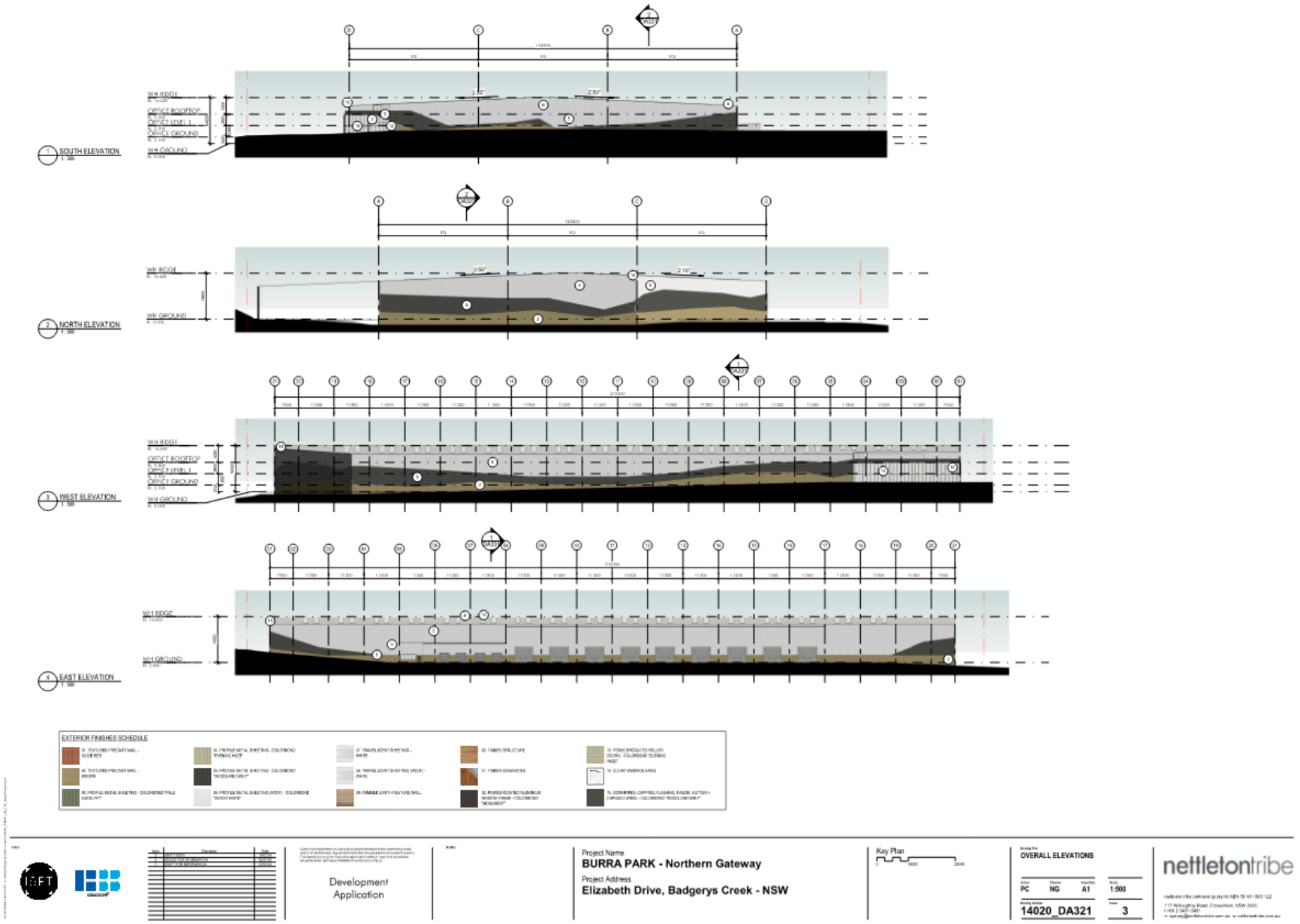

Figure 8: Section showing built structure on Lot 3.1 at 14.6m AGL

4.4 Crane Activity

A detailed Construction Management Plan (CMP) which includes frozen crane heights, locations and periods of erection is not available at the time of writing. However, for the purposes of this assessment, Avlaw has been advised that mobile cranes will be used to complete construction across the site and the lots. Each mobile crane is approximated to reach a maximum height of 40m AGL, with ground levels varying across the site.

Cranes will be positioned at various locations across the site throughout construction but are expected to always be contained within the boundary of each lot (including jib). This will be confirmed once a contractor is engaged to provide this information and detailed design for each location across the site is finalised.

Although a detailed analysis of the various aviation restrictions which apply to the site and the lots is provided later in this document, Avlaw believes it is prudent to highlight constraints with respect to the likely elevations which cranes will be approved, particularly in the south-eastern corner of the site.

The figure on the following page provides a snapshot of a range of airspace protection surfaces which cover this area of interest (i.e. only the south-eastern corner of the site). Controlled activity (i.e. aviation) approvals are still needed for penetrations of protected airspace elsewhere on the site, but are highlighted later in this report. The elevations of the contours on the figure below are those which approval at or above the heights shown will be needed in the south-eastern corner of the site. The exception to this is if they are erected prior to the airport being operational, which is not the case based on the program provided i.e. construction of Stage 1 to commence November 2026 and the Concept Plan later in October 2027.

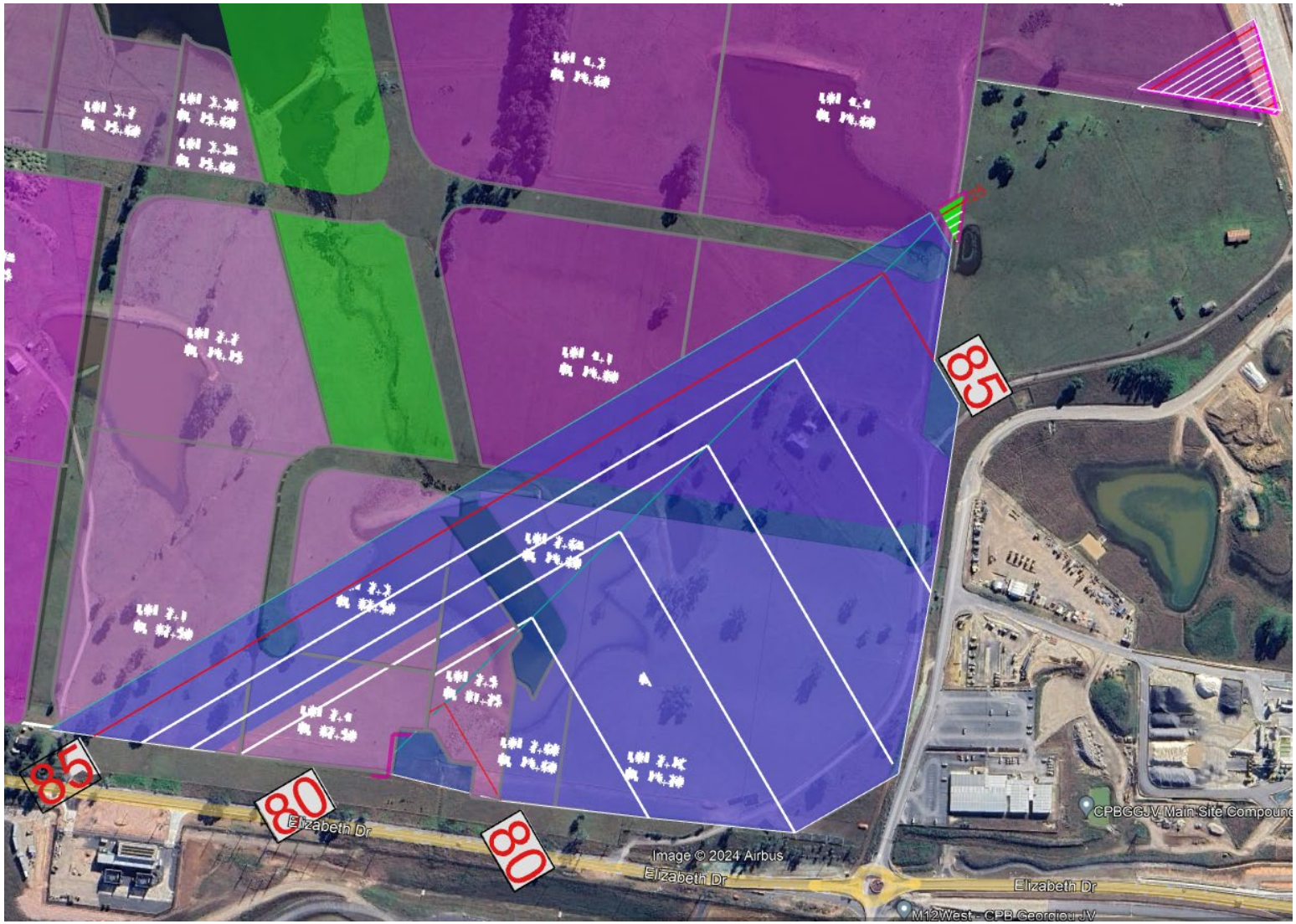

Figure 9: Snapshot of airspace protection surfaces in south-eastern corner of the site at or above which approval for cranes is required

5

NASF Guidelines

NASF Guidelines

The proposed construction across the site and the lots needs to be assessed against a range regulations, legislation, standards and guidelines and standards that are contained within the NASF to satisfy the expectations of local planning authorities and aviation stakeholders. These are in place to safeguard airports from unacceptable risks associated with property development being permitted. All the NASF Guidelines are assessed in this section, with the exception of an assessment of the Proposal against Guideline D of the NASF. This has been omitted as it relates specifically to wind turbine farms which is irrelevant in this instance.

5.1 Aircraft Noise

The operation of WSA will result in significant changes in the pattern and exposure of aircraft noise in Sydney. To help quantify this and establish parameters around appropriate land-use planning based on noise, an Australian Noise Exposure Forecast (ANEF) will be prepared during the detailed airspace design phase that would be based on modelling of long-term parallel runway operations. This will be reflected in the form of an ANEF chart endorsed by Airservices Australia.

In the interim whilst that is being prepared, the development at the site and the lots has been assessed against an Australian Noise Exposure Contour (ANEC) chart that is available in the Airport Plan as well as in a WSA Fact Sheet (March 2023) on this aspect of land-use planning. The versions contained in those documents however are either low-resolution or do not provide sufficient detail on the satellite imagery to accurately plot the Site. The NSW Government, Planning Industry & Environment ANEC Map though can be clearly interpreted – see Figure 10 on the following page.

It is worth noting that this ANEC was developed in 2016 and a new version is being prepared as part of the flight path design process and will inform the from Environmental Impact Statement (EIS) for the flight paths. It was expected to be released during the second half of 2023 but is not available at the time of writing.

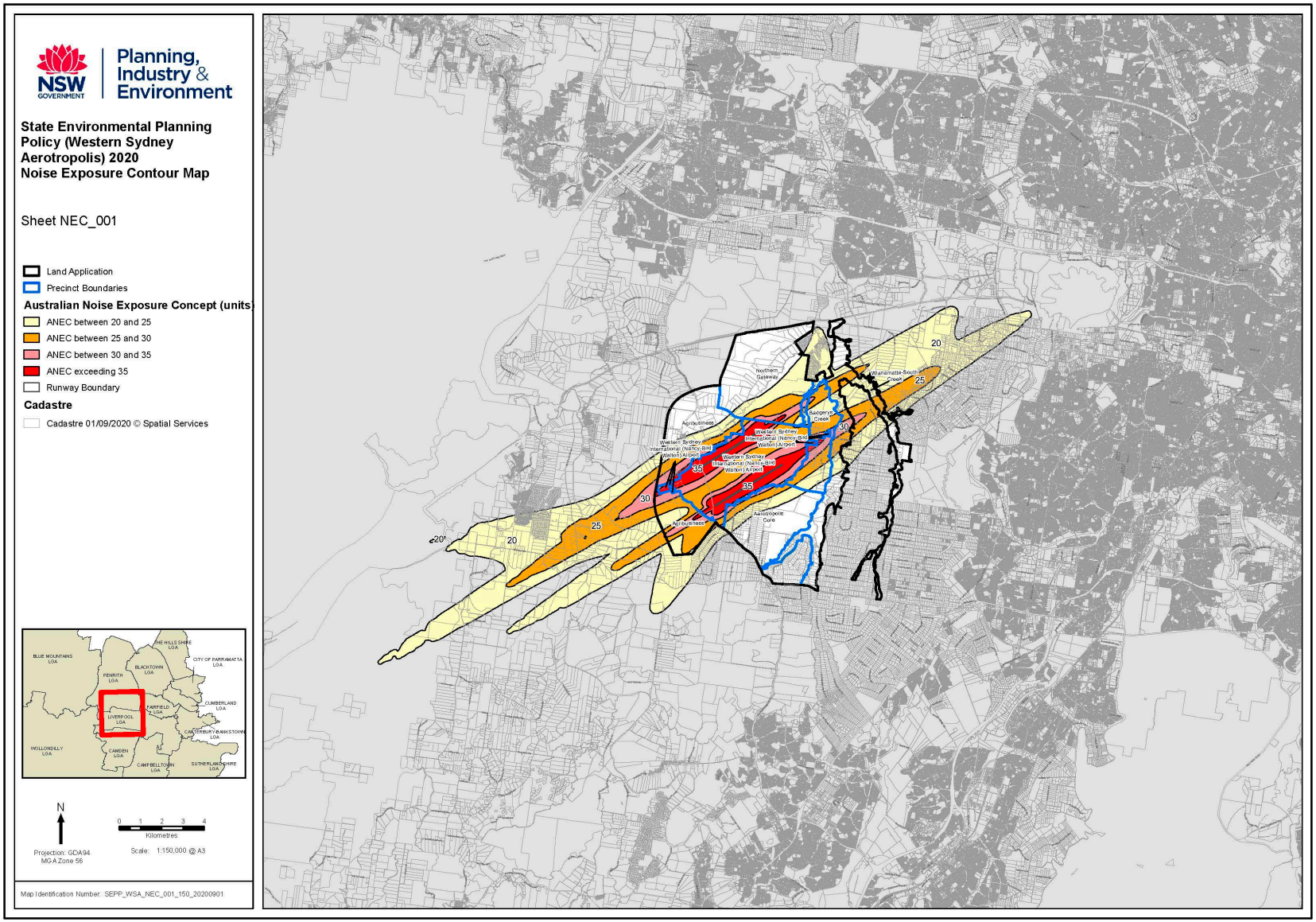

Figure 10: SEPP (WSA Aerotropolis) 2020 Noise Exposure Contour Map

It is clear that multiple contours cover the site and the lots, however the background satellite imagery is difficult to interpret in some areas because of the positioning and intersections of the various overlays. Avlaw's interpretation of Figure 10 produces the following results which will need to be verified by the aviation stakeholders once they commence their respective assessments when asked to provide comments in response to the SSDA:

- The site is covered by all ANEC contours, with the SE corner being most impacted i.e. ANEC > 35; and
- The lots are covered by the following ANEC contours:
  - Lot 1.1 = 30-35
  - Lot 1.2 = 25-30
  - Lot 3.1 = 20-25

These contours are based on Australian Standard Acoustics-Aircraft Noise Intrusion-Building siting and Construction AS 2021:2015 which represent a hypothetical future set of conditions at an airport. Table 2.1 from the the standard is shown below at Figure 11 and the ANEF zone relevant to the Concept Plan and Stage 1 is that which is described as the building type "light industrial".

TABLE 2.1

BUILDING SITE ACCEPTABILITY BASED ON ANEF ZONES
(To be used in conjunction with Table 3.3)

Building type	ANEF zone of site		
	Acceptable	Conditionally acceptable	Unacceptable
House, home unit, flat, caravan park	Less than 20 ANEF (Note 1)	20 to 25 ANEF (Note 2)	Greater than 25 ANEF
Hotel, motel, hostel	Less than 25 ANEF	25 to 30 ANEF	Greater than 30 ANEF
School, university	Less than 20 ANEF (Note 1)	20 to 25 ANEF (Note 2)	Greater than 25 ANEF
Hospital, nursing home	Less than 20 ANEF (Note 1)	20 to 25 ANEF	Greater than 25 ANEF
Public building	Less than 20 ANEF (Note 1)	20 to 30 ANEF	Greater than 30 ANEF
Commercial building	Less than 25 ANEF	25 to 35 ANEF	Greater than 35 ANEF
Light industrial	Less than 30 ANEF	30 to 40 ANEF	Greater than 40 ANEF
Other industrial	Acceptable in all ANEF zones		

Figure 11: Table 2.1 from AS 2021:2015

Avlaw acknowledges that ancillary land uses including parks, playgrounds and wetlands do form part of the Concept Plan, however the assessment in this report is limited to assessing the compliance of activities within the built structures across the Concept Plan and the lots. These other ancillary uses are assessed separately in the EMM Consulting report. Please refer to that report for specific mitigation with respect to the aforementioned land uses.

With respect the the site, an ANEC exceeding 40 would be considered "unacceptable" based on the applicable building type i.e. "light industrial". This may be the case in the SE corner of the site, however this area is already impacted by other aviation restrictions (see 5.2 and 5.8) that could mean no built structures are permitted to be constructed there based on the assessment of the aviation stakeholders. When looking at the ANEC contours that overlay Stage 1, Lot 1.1 being the closest to WSA is conditionally acceptable, whereas Lots 1.2 and 3.1 are acceptable based on Figure 11 above.

5.2 Windshear and Turbulence

The Department has published Guideline B to provide advice to States and Territories as well as local government decision makers and airport operators to manage the risk of building generated windshear and building generated turbulence at airports. The assessment area which triggers additional assessment is illustrated in the figures below.

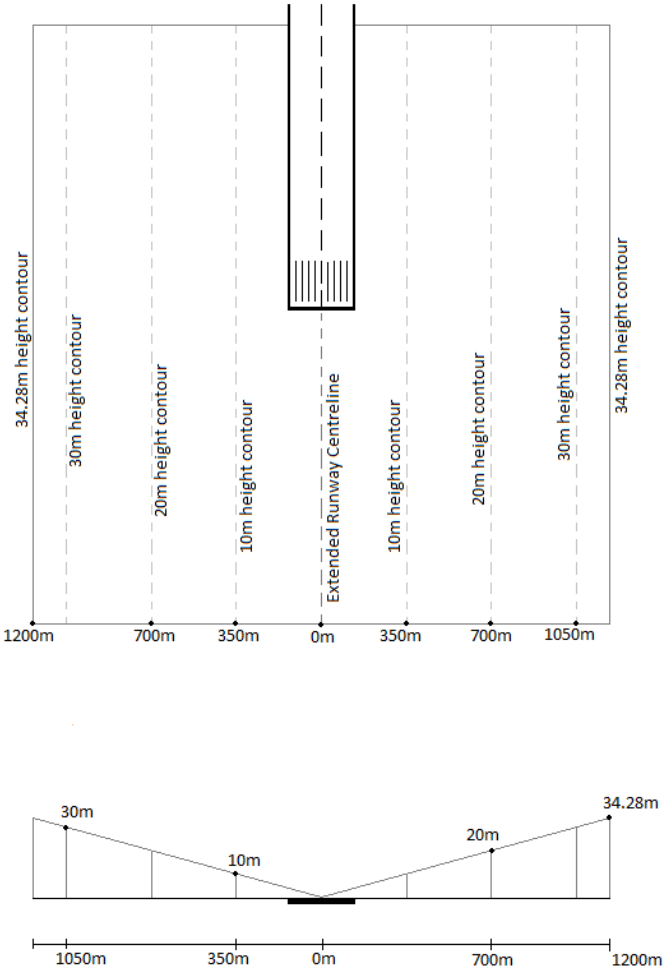

Figure 12: Plan view (top) and elevation view (bottom) of the 1:35 surface

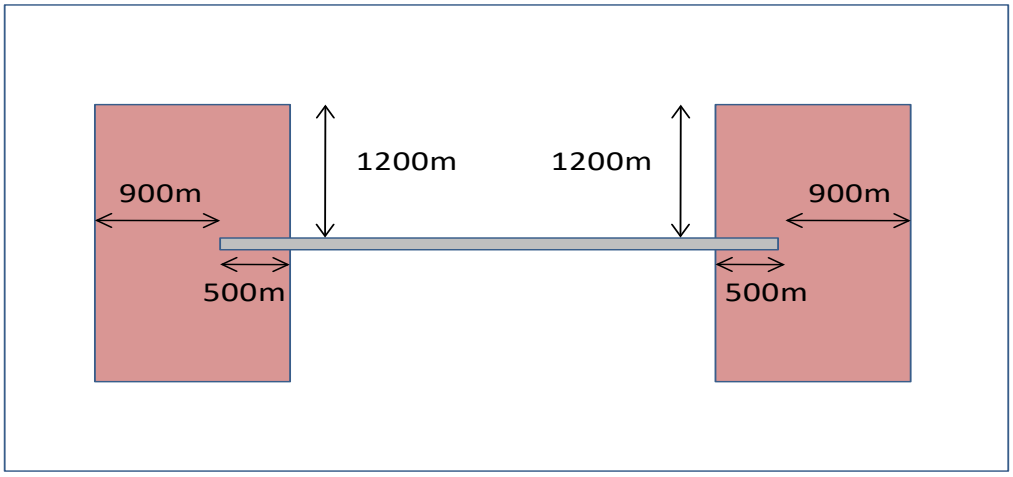

Figure 13: Area within which buildings that penetrate the 1:35 surface should be assessed

Since the closest edge of the site is approximately 452m from the proposed end of RWY 05L/23R, this is a key consideration when determining the height of buildings, particularly in the SE corner of the site. It is strongly advised that built structures remain below a 1:35 sloping surface to avoid a separate study (i.e. Computational Fluid Dynamics or CFD modelling) being required,.

Avlaw has produced its own model of the assessment trigger above as it relates to the site and the lots, the results of which are shown on the following pages.

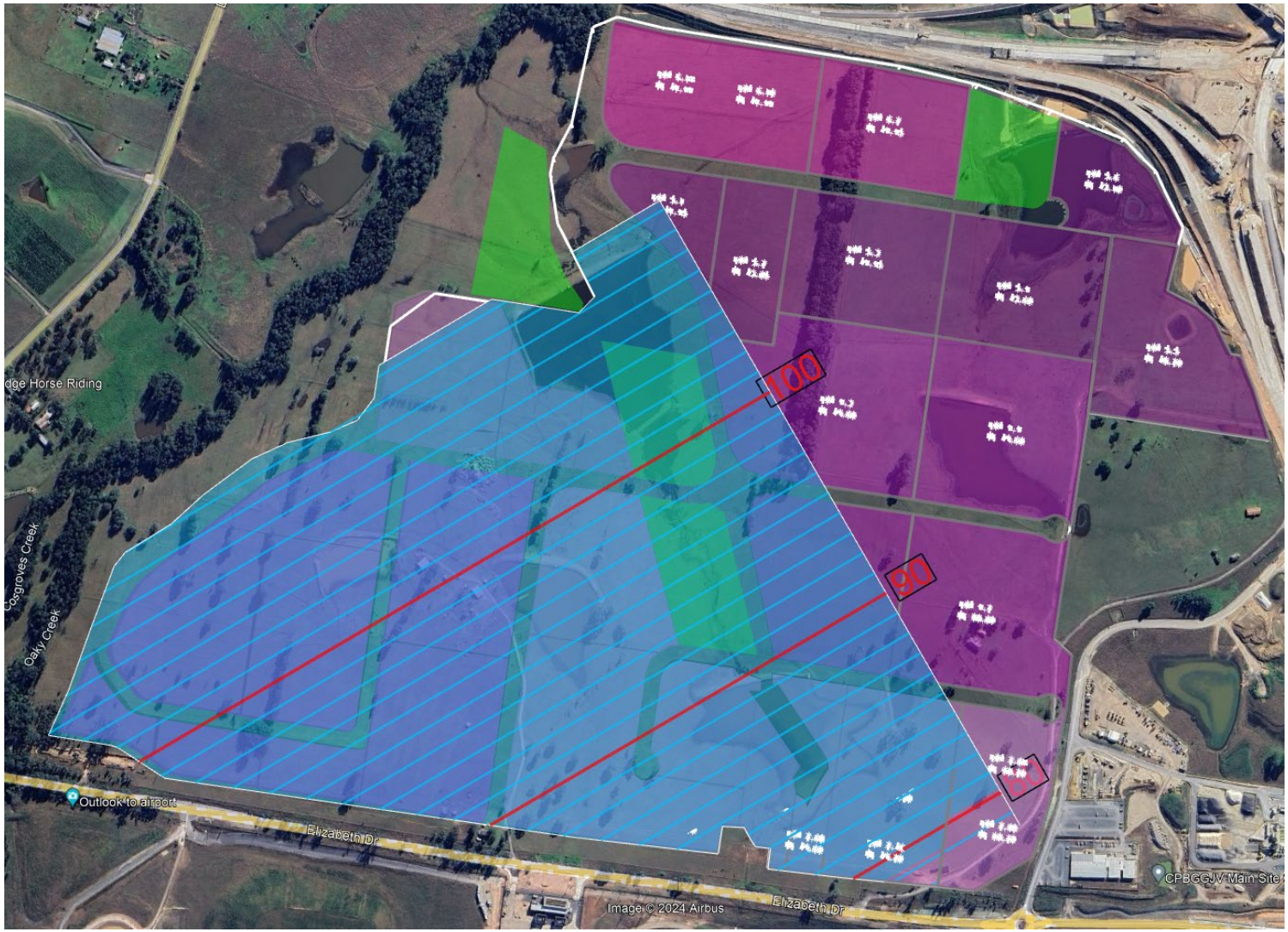

Figure 14: Avlaw's model of the trigger surface shown at Figures 12 and 13

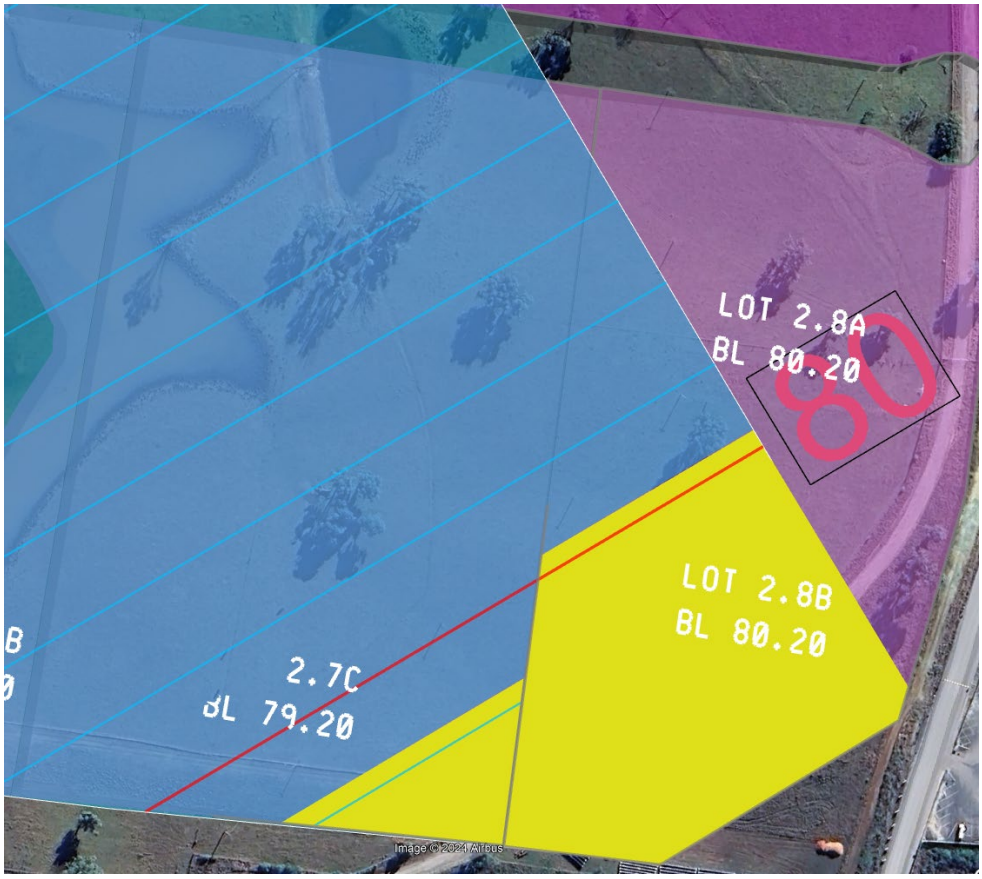

Figure 15: Yellow indicates built structures which penetrate the Figure 14 trigger surface i.e. Lots 2.7C and 2.8B

Figure 15 above is zoomed into the south-eastern corner of the site and highlights (yellow) lots which are currently proposed to penetrate the windshear and turbulence trigger surface i.e. 2.7C and 2.8B. This is based on the assumption that the built structure is at that elevation at the site boundary. The trigger surface is 76.9m AHD at the SE corner of lot 2.8B, meaning a 11.3m AGL built structure would remain below this surface.

Penetration of this surface by built structures is not strictly prohibited , but does introduce a requirement to complete CFD modelling (often expensive). With that in mind, Avlaw strongly suggests this surface not be penetrated permanently, noting that there are other restrictions which also impact this part of the site that are discussed elsewhere in this report. In any case, further assessment will be conducted at a later stage when preparing a detailed planning application to ensure that lots 2.7C and 2.8B are designed to comply with this guideline.

It is worth noting that Stage 1 development does not propose any permanent penetration through this trigger surface. Crane activity through this trigger surface is not treated in the same manner and does not trigger the CFD modelling required for permanent penetrations.

5.3 Wildlife Hazards

Within a certain proximity to an airport, aviation stakeholders require an assessment to be conducted on proposed developments to identify the risks of wildlife that may be present or attracted to a location as a means of understanding the impacts on airport operations. Once identified, certain land uses are either deemed to be acceptable, unacceptable or conditionally approved based on specific monitoring and mitigation measures being development and implemented.

The map on the following page has been sourced from the SEPP and reflects the wildlife buffers described in the NASF, whilst the table inserted as Figure 17 specifies the risk rating associated with each land use type by proximity to WSA.

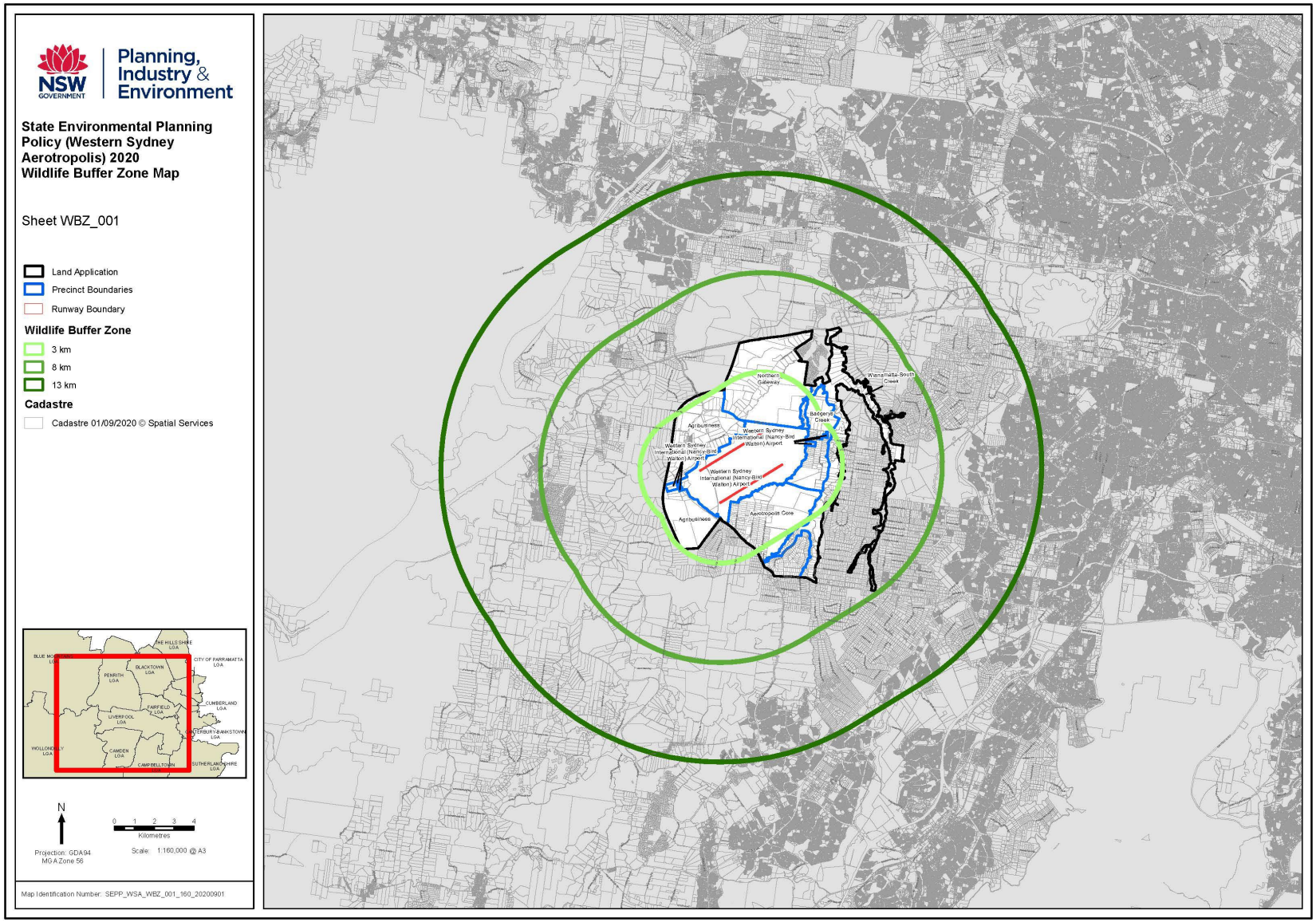

Figure 16: SEPP Wildlife Buffer Zone Map – the site and the lots completely within the 3km wildlife buffer zone (lightest shade of green)

Wildlife Hazard Management Action Table **Attachment 1**

Land use types	Likely attractants ▲ natural elements ■ structural elements ● waste and food	Wildlife attraction risk	Actions for existing development and land uses in wildlife management areas			Actions for new and changed development and land uses in wildlife management areas		
			0-3 km (Area A)	3-8 km (Area B)	8-13 km (Area C)	0-3 km (Area A)	3-8 km (Area B)	8-13 km (Area C)
Agriculture								
Turf farm, piggery, abattoir, aquaculture	▲ ■ ●	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Fruit tree farm/orchard	▲ ■ ●	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Fish processing/packing plant	▲ ■ ●	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Farm (cattle, dairy, poultry, crops)	▲ ■ ●	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Horticulture, viticulture, market farms/gardens	▲ ■ ●	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/conservation area - wetland, waterways	▲	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Wildlife/conservation area - dryland	▲	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Recreation								
Significant open water (ancillary to development)	▲	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Showground	▲ ■ ●	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Significant landscaped space (ancillary to development)	▲	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Golf course	▲ ■ ●	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Park, playground	▲ ●	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Picnic areas, camping ground	▲ ●	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Racetrack, horse riding school	▲ ■ ●	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Sports facility (tennis, bowls, football fields)	▲ ■ ●	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Commercial								
Food processing or storage facility	■ ●	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
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
Warehouse (food storage)	■ ●	Low	Monitor	Monitor	No Action	Monitor	Monitor	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
Hotel/motel	■ ●	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Office building	■ ●	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
Warehouse (non-food storage)	■ ●	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
Water infrastructure (drains, channels, basins)	▲	High	Mitigate	Mitigate	Monitor	Mitigate	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 17: NASF Guideline C Attachment 1 - risk ratings by land use type and proximity to WSA (highlighted cells apply to the site and the lots)

As was the case with respect to assessing the impacts of aircraft noise (5.1), Avlaw acknowledges that ancillary land uses including parks, playgrounds and wetlands do form part of the Concept Plan. However, Avlaw's assessment in this document is limited to assessing compliance of activities within the built structures across the Concept Plan and the lots. Please refer to the Ecological Australia report for specific mitigation with respect to the aforementioned land uses.

The entire site and the lots fall within the 3km wildlife buffer zone applicable to WSA. As the type of uses that will occupy the site and the lots will be driven by tenant demand, the most specific description that can be provided is that the land uses will predominately be constructed for the purpose of standard large format industrial as well as some manufacturing uses. This covers a broad range of light industrial, logistics operations and manufacturing and therefore depending on the tenant, the possibility of packaged food being stored within the warehouses remains.

Based on this categorisation, the following land uses apply when referring to Figure 17:

- Warehouse (food storage); and
- Warehouse (non-food storage)

Within the 3km wildlife buffer zone ,a new development which meets the land use definitions above results in a requirement to "Monitor" wildlife hazards and attractions, with particular emphasis placed on structural elements along with waste/food.

It is important to note that while certain land uses pose a potential risk with respect to wildlife hazards, Figure 17 is designed to be a tool for risk mitigation and not a complete ban on all development activities. Therefore, provided it can be shown that there is an acceptable level of risk from an aviation safety perspective, a development application may be approved following consultation with aviation stakeholders.

The responsibilities that are associated with monitoring potential attractions of wildlife are determined on a case-by-case basis between the Proponent and the airport operator. Some examples of what this may entail include:

- Regular monitoring surveys;
- Wildlife hazard assessments by qualified ornithologists;
- Wildlife awareness and management training for relevant staff;
- Establishment of bird population triggers;
- Implementation of activities to reduce hazardous bird populations; or
- Adoption of wildlife deterrent technologies to reduce hazardous bird populations

Point 22 in Guideline C of the NASF recommends that airport operators should negotiate with land use planning authorities and land owners if required on agreed action plans for monitoring and, where necessary reducing wildlife attractions in the vicinity of airports. These processes will be ongoing to ensure the safe movement of air traffic. For the reasons mentioned earlier with respect to other ancillary land uses addressed by Ecological Australia, a range of mitigation strategies will need to be developed to ensure that risks are managed to As Low As Reasonably Practicable (ALARP).

5.4 Lighting

The Department has published NASF Guideline E on Managing Risk of Distractions to Pilots from Lighting in the Vicinity of Airports. The guideline advises on situations where lights are to be installed within a radius of 6km from an airport.

Attachment 1 to the guideline illustrates what is referred to as a "primary area" which is further divided into four segments which is illustrated below at Figure 18. The various lighting zones are also overlaid onto satellite imagery and can be found in the SEPP which is also shown below at Figure 19.

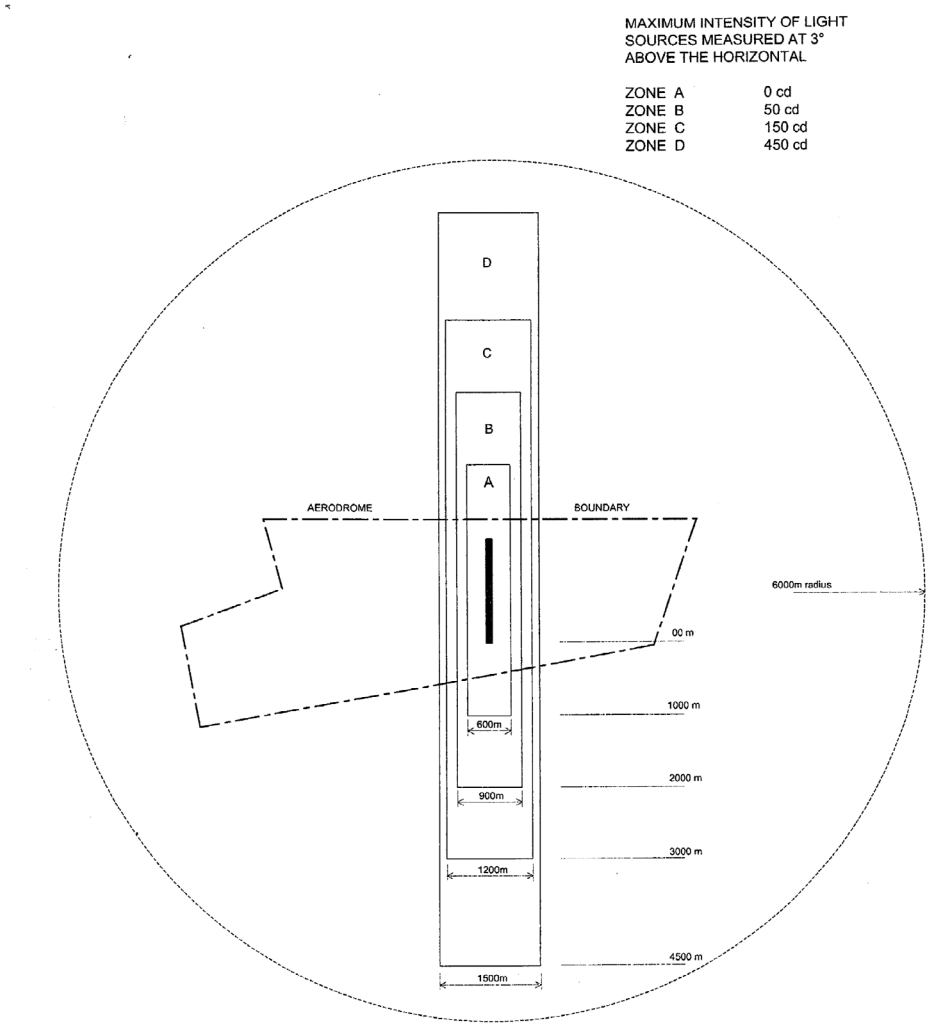

Figure 18: NASF lighting zones

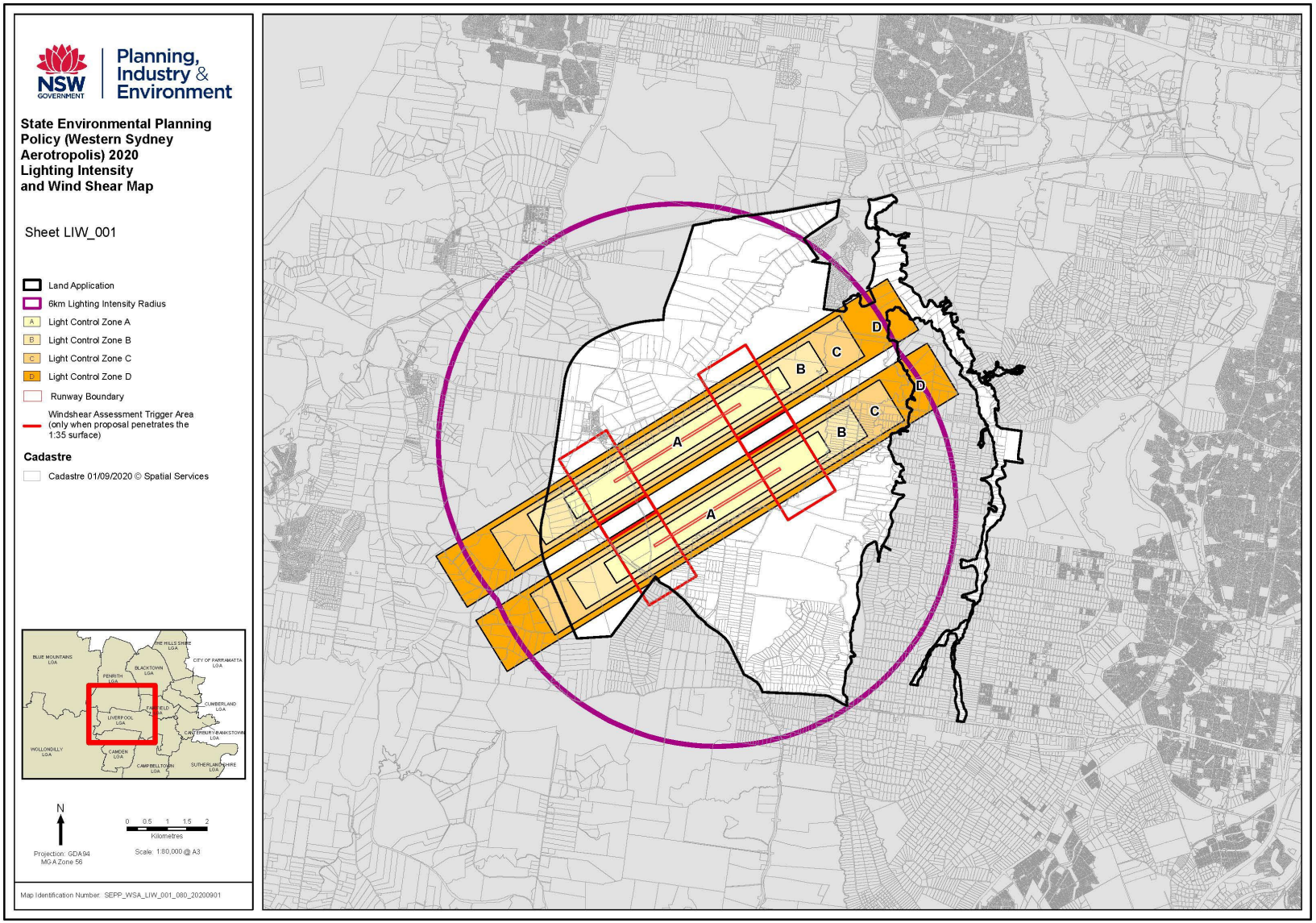

Figure 19: SEPP Lighting Intensity and Wind Shear Map

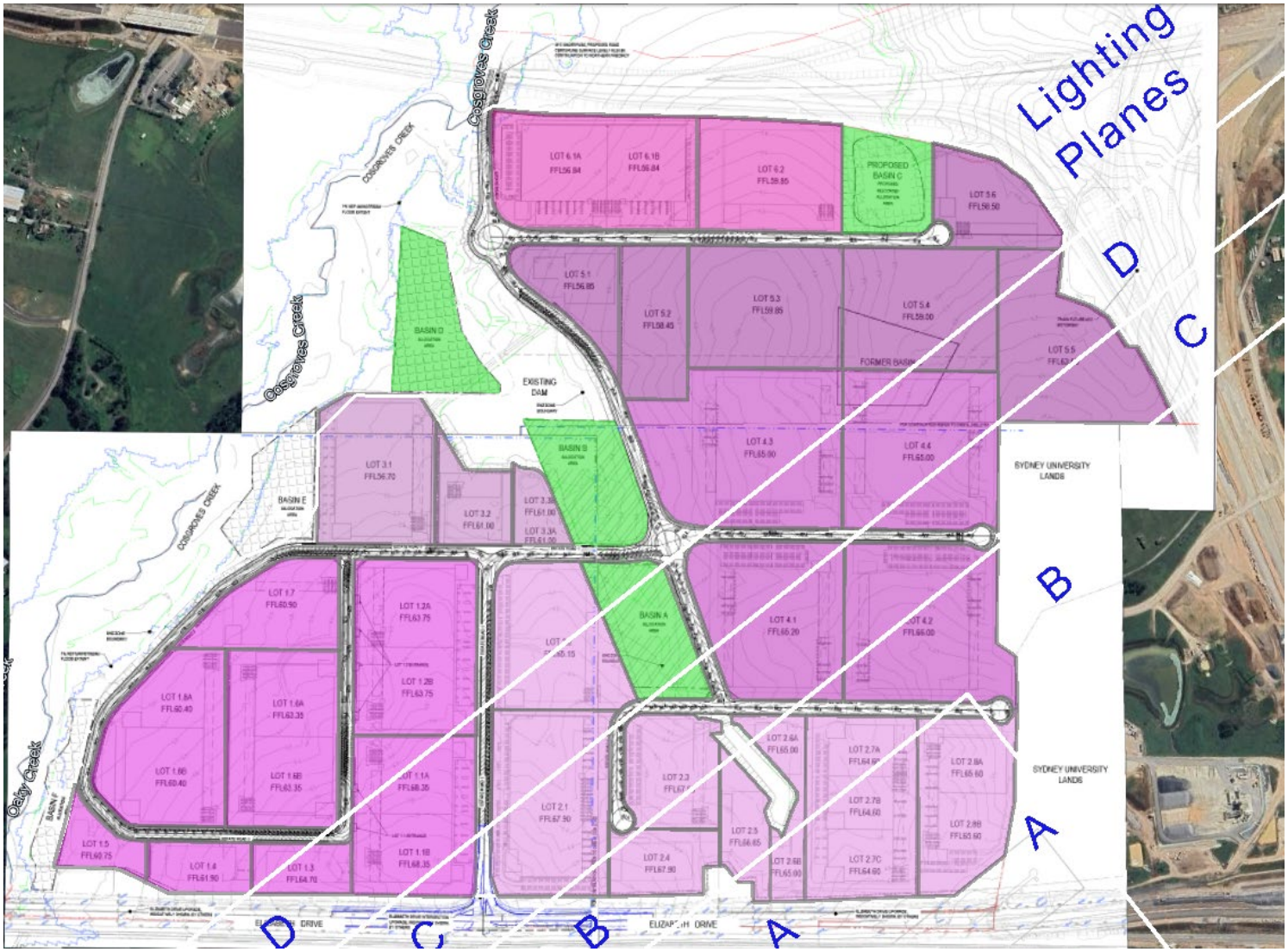

Figure 20: NASF lighting zones overlaid the site and the lots

As is shown above, approximately half of the site and the lots is impacted by various lighting zones, within which there are limitations on the maximum lighting intensity that will be permitted by aviation stakeholders. A summary of the findings of Avlaw's assessment of the Concept Plan and Stage 1 is listed below:

- The SE portion of the site is most impacted as it is covered by Zone A where the maximum intensity of light measured at 3 degree above the horizontal is zero candelas;
- Lot 1.1 is covered by both Zones C and D where the maximum intensity of light measured at 3 degree above the horizontal is 150 and 450 candelas respectively;
- A small portion of the SE corner of Lot 1.2 is s covered by Zone D where the maximum intensity of light measured at 3 degrees above the horizontal is 450 candelas; and
- Lot 3.1 and the rest of the site fall outside the primary area illustrated by Zoned A-D
    - The rest of the site still falls within the 6km radius within which lighting will need to be assessed by CASA to ensure no hazards to aircraft operations are introduced

It is important to note that the above limitations on maximum lighting intensity also apply to construction lighting. This should be taken into account when developing a CMP to ensure that unacceptable hazards to the safety of aircraft operations are not introduced.

One other point worth noting in this section is the potential for glare caused by sunlight reflecting off built structures. This hazard has been considered by CASA and they have advised in NASF Guideline E that the glare from buildings tends to be momentary and therefore unlikely to be a source of risk. The potential for risk from building glare is further attenuated by the use of sunglasses which pilots normally wear in bright sunlight, and therefore this is not considered an impediment to Concept Plan or Stage 1.

5.5 Protected Airspace

The airspace design process for any airport is a highly technical and lengthy. This is especially true with a new international airport like WSA and must be considered carefully before construction of any nearby buildings commences. At the time of writing, only the OLS for WSA has been declared as its prescribed airspace by the Department, meaning other key components of WSA's airspace protection such as the PANS-OPS and Radar Terrain Clearance Chart (RTCC) are not available publicly for review. In any case, Avlaw has completed a thorough prescribed airspace assessment which is based on our own modelling from first principles, the findings for which are explained below.

5.5.1 OLS

The site is covered by the approach/take-off surfaces of the OLS as well as the Inner Horizontal Surface for runway 05L/23R. The figures on the following pages show the results of Avlaw's modelling of the OLS.

Figure 21: Avlaw's model of OLS covering the site and the lots

Note: elevation of OLS is 126.0m AHD across the site and the lots where no contours are displayed

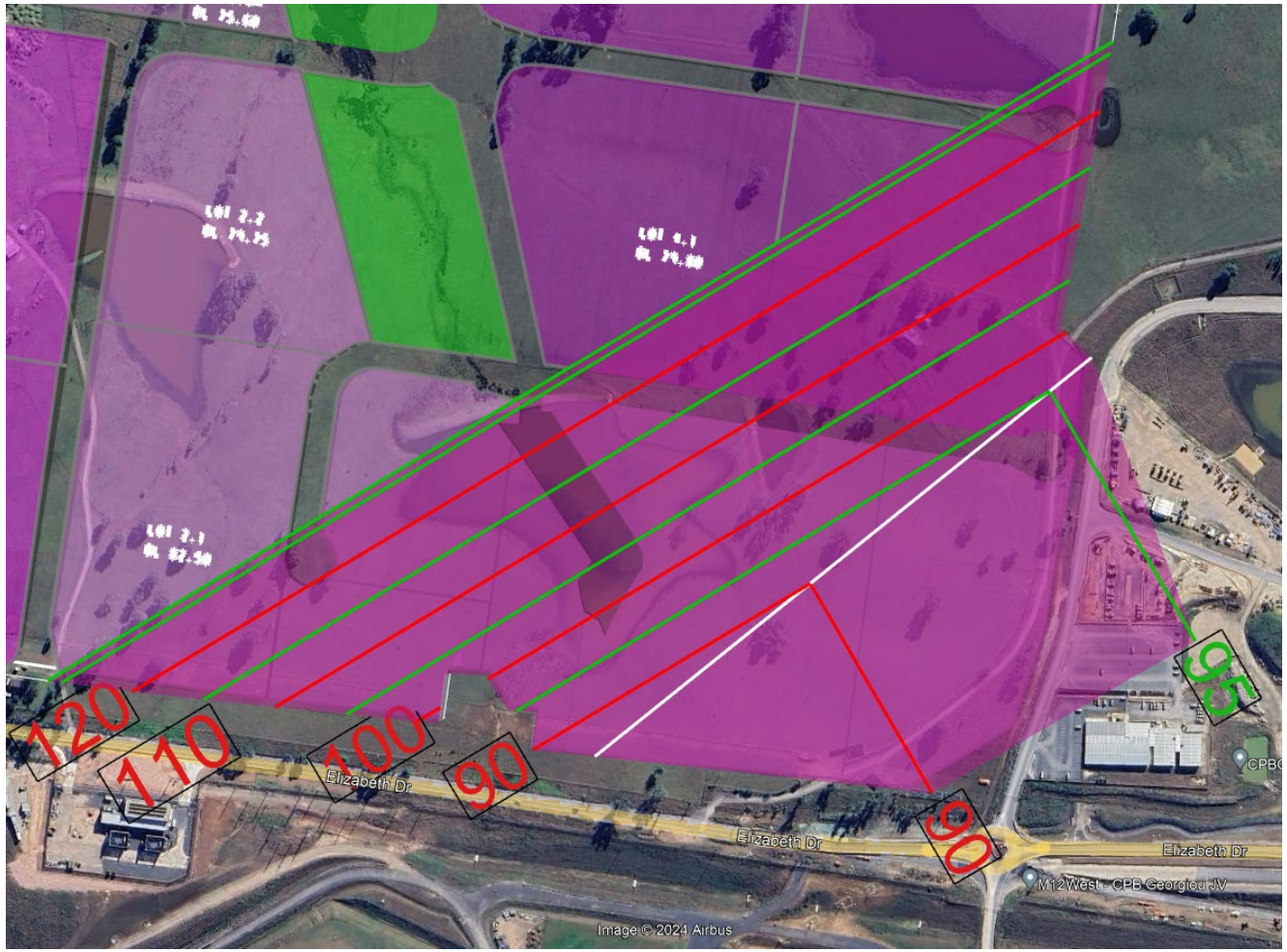

Figure 22: Zoomed in version of Figure 21 showing OLS covering south-eastern corner of the site

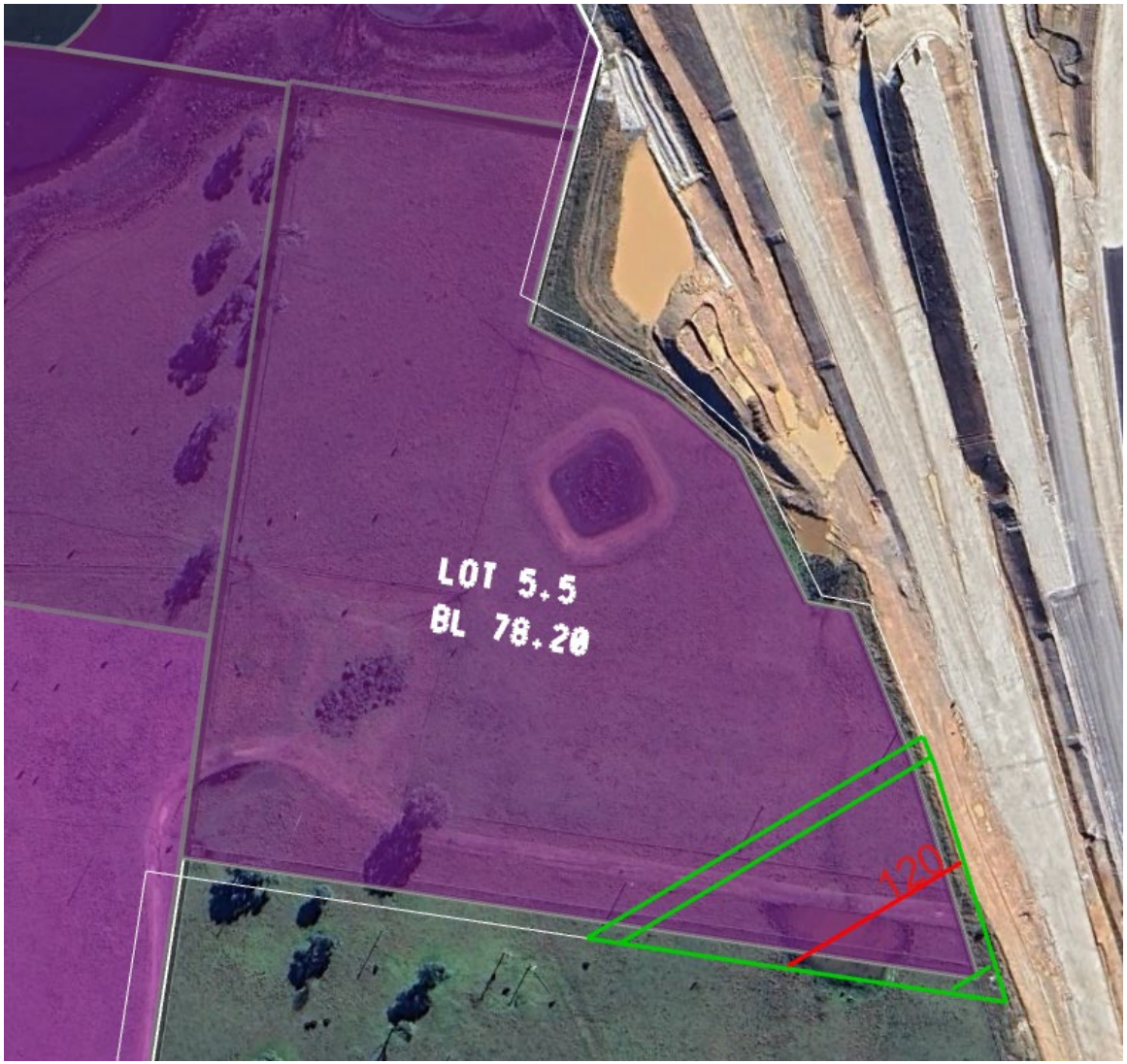

Figure 23: Zoomed in version of Figure 22 showing OLS covering north-eastern corner of the site

At a proposed maximum height of 14.6m AGL, the built structures across the site and the lots will remain below the WSA OLS. Temporary construction cranes during Stage 1 development will not penetrate the OLS and will therefore not require controlled activity approval prior to being erected.

With regards to the Concept Plan, cranes will only penetrate in the SE corner of the site nearest the airport. Penetration of these surfaces is currently proposed, however, further detailed assessments will be needed nearer to construction commencing in this part of the site along with consultation with aviation stakeholders to ensure compliance with required obstacle clearances

5.5.2 PANS-OPS

Formal advice on the WSA PANS-OPS contained in the Airport Plan is as follows:

"Calculating the 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 start of operations. Once designed, the PANS-OPS will be protected under the Airspace Protection Regulations."

In order to identify the elevations of the PANS-OPS surfaces across the site and the lots, Avlaw has modelled these protection surfaces based on applicable criteria, the results of which are shown on the following pages.

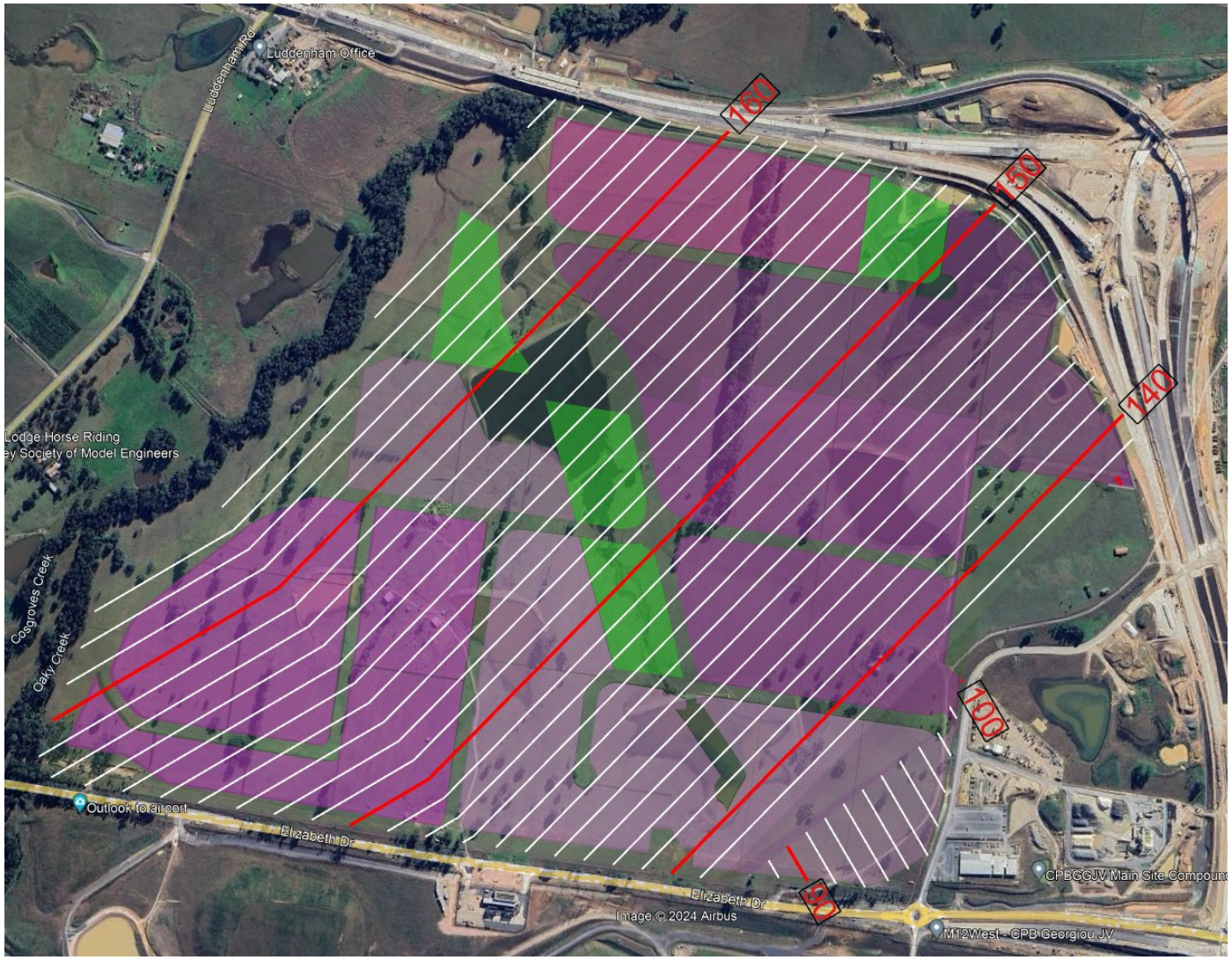

Figure 24: Avlaw's model of WSA PANS-OPS – IFP (RWY 05L)

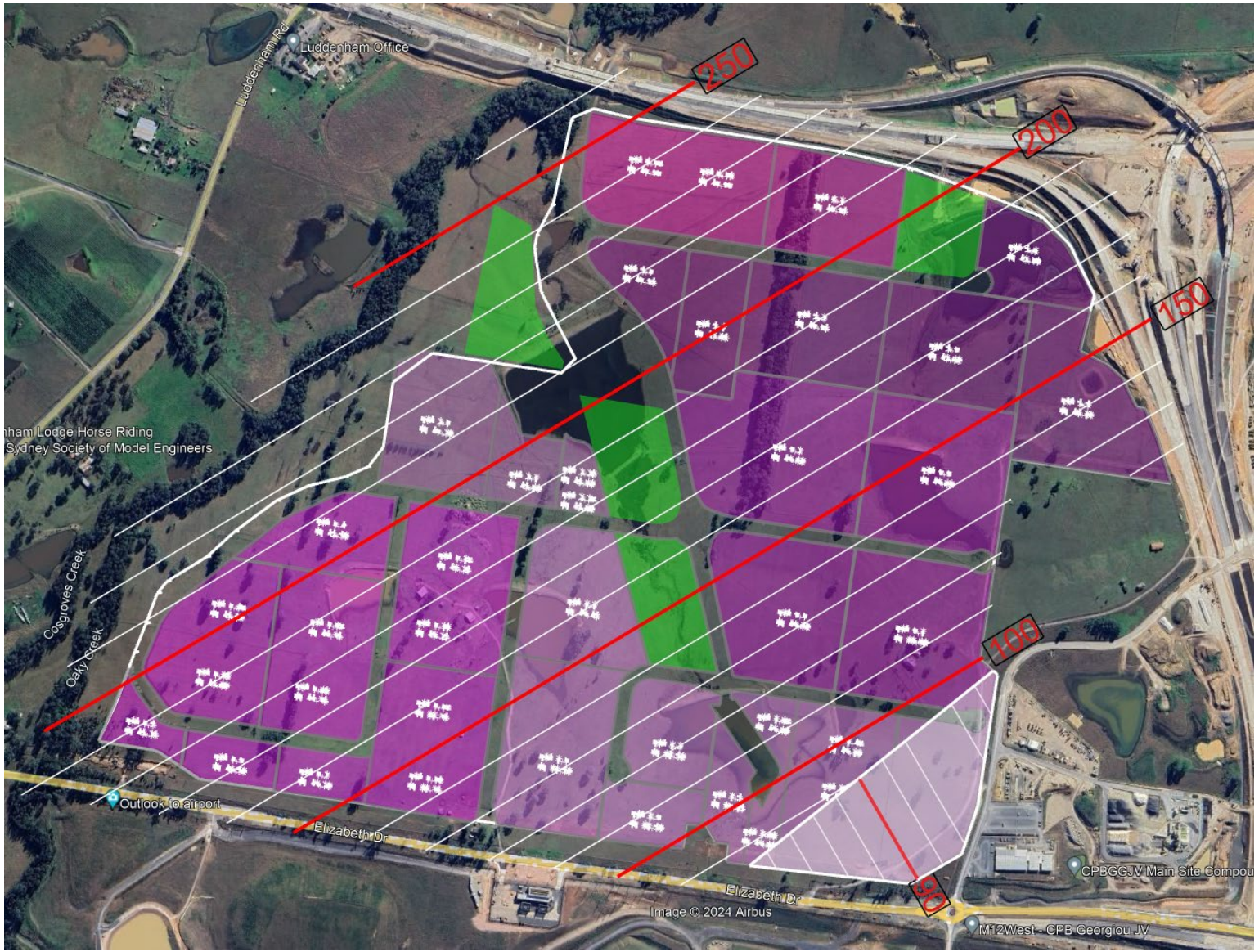

Figure 25: Contours related to the IFP (23R GLS/ILS)

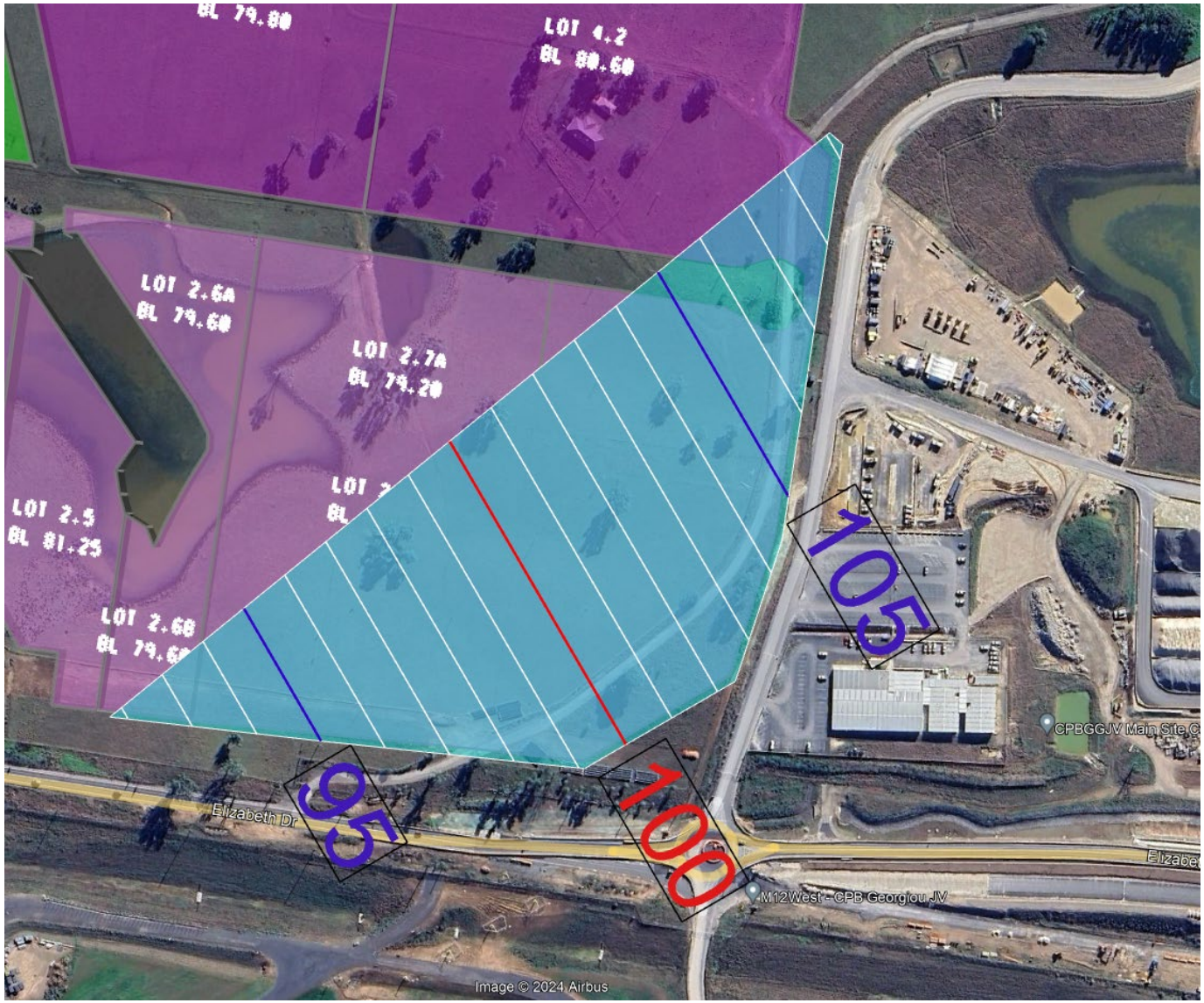

Figure 26: Contours related to the Visual Segment of the IFP (23R approach) across SE corner of the site

Permanent penetration of the PANS-OPS surfaces is strictly prohibited by the applicable aviation regulations, however none are proposed based on the 14.6m AGL heights of the built structures across the site and the lots.

Applications for temporary penetrations of the PANS-OPS are limited to a maximum of three contiguous months, are not always approved and should be avoided wherever possible. With regards to the Concept Plan, the SE corner of the site is most restricted with respect to the PANS-OPS surfaces, with approval in this area not likely to be given unless they are prior to the airport being operational.

Therefore, Avlaw's assessment is that further assessment is needed with respect to construction of built structures in the SE corner of the site, noting that this area is also restricted based on other assessment criteria discussed in this report (see 52 and 5.8).

5.5.3 Emissions and Plumes

Avlaw notes that CASR 139.180 states that *"CASA may determine a gaseous efflux having a velocity in excess of 4.3m/s will be a hazard to aircraft operations because of the velocity or location of the efflux"*. It is unclear at the time of writing whether the Concept Plan or Stage 1 will introduce such risks to the safety of aircraft operations, however it is prudent to point out now to ensure it is taken into consideration when completing detailed design and if necessary, engineering solutions are developed to mitigate the risks that may be introduced. This is considered prudent given Avlaw's understanding of other industry standards which dictate a minimum discharge velocity that may conflict with the CASA regulations described above e.g. AS1668.2.

HBB will need to engage an appropriately qualified Subject Matter Expert to conduct the necessary modelling, but at a high-level, Avlaw suggests that mitigation measures that could become relevant concentrate on deflecting, cooling or expanding the flow of the plume to the reduce the concentration of energy, thus mitigating the risk.

5.6 Aviation Facilities - Communications, Navigation and Surveillance (CNS)

The Department has published Guideline G to provide advice to States and Territories, Local Government planning decision makers and others on planning protection within Building Restricted Areas (BRAs) of Communication, Navigation and Surveillance (CNS) facilities.

The location of all facilities is unknown at the time of writing, however for the purpose of this analysis, ground level at the end of RWY 05L (i.e. nearest threshold to the site) has been assumed as the datum for this analysis i.e. 73.2m AHD.

Avlaw has modelled the protection surfaces associated with the glide path, the results of which are presented below.

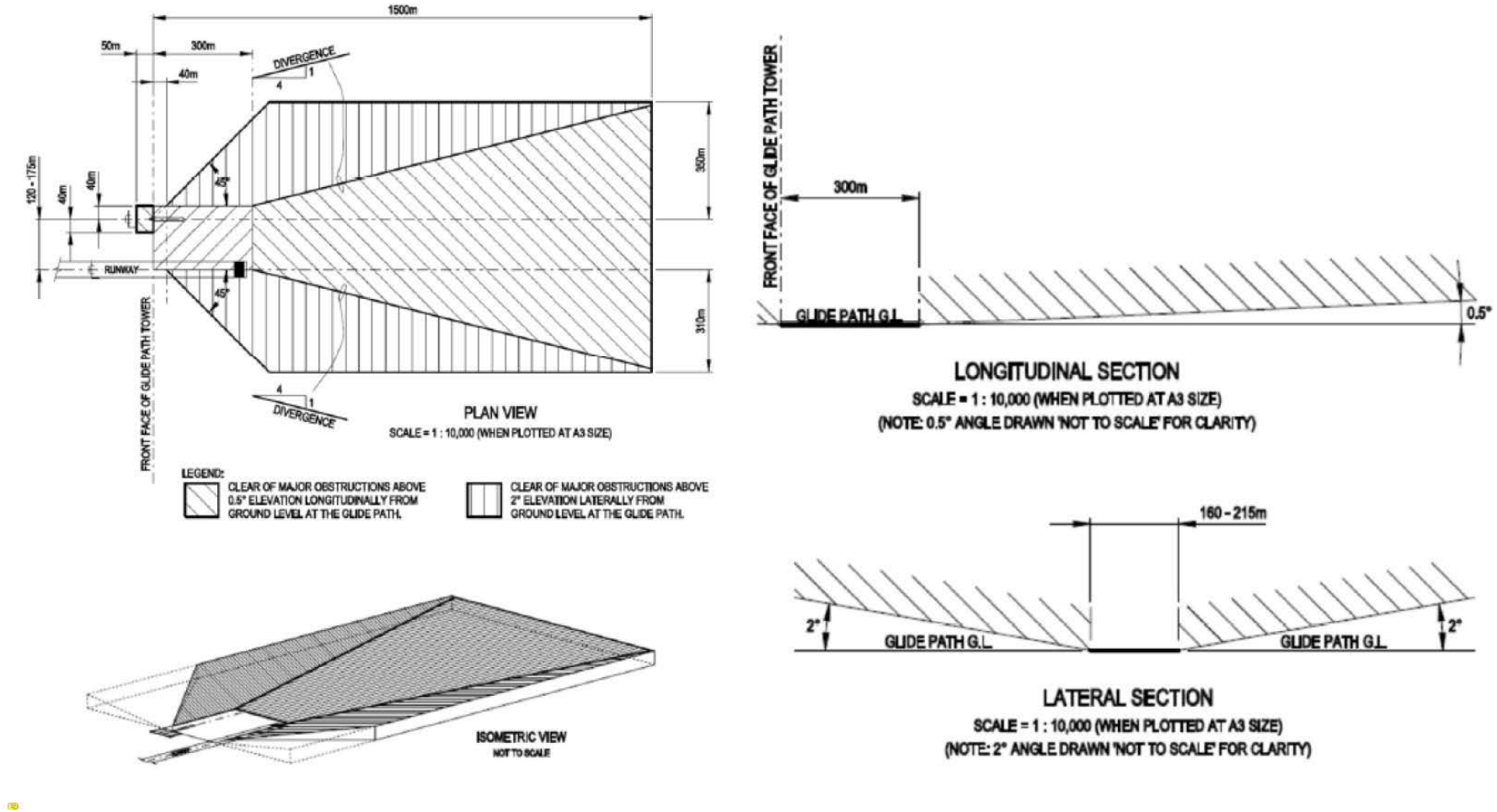

Figure 27: Various illustrations of the glide path protection surfaces

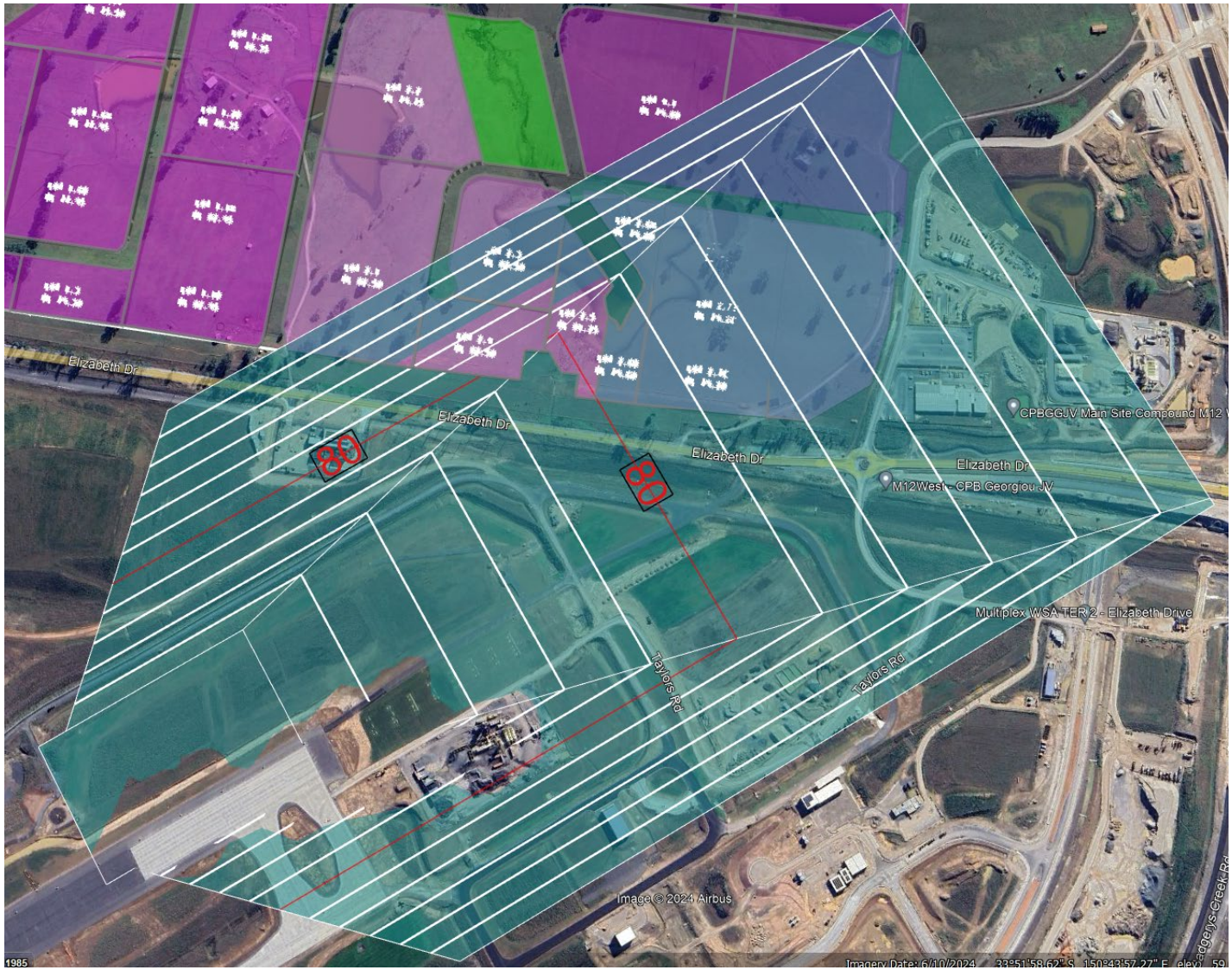

Figure 28: Glide path protection surfaces shown in Figure 27 for runway 23R approaches covering SE corner of the site and the lots

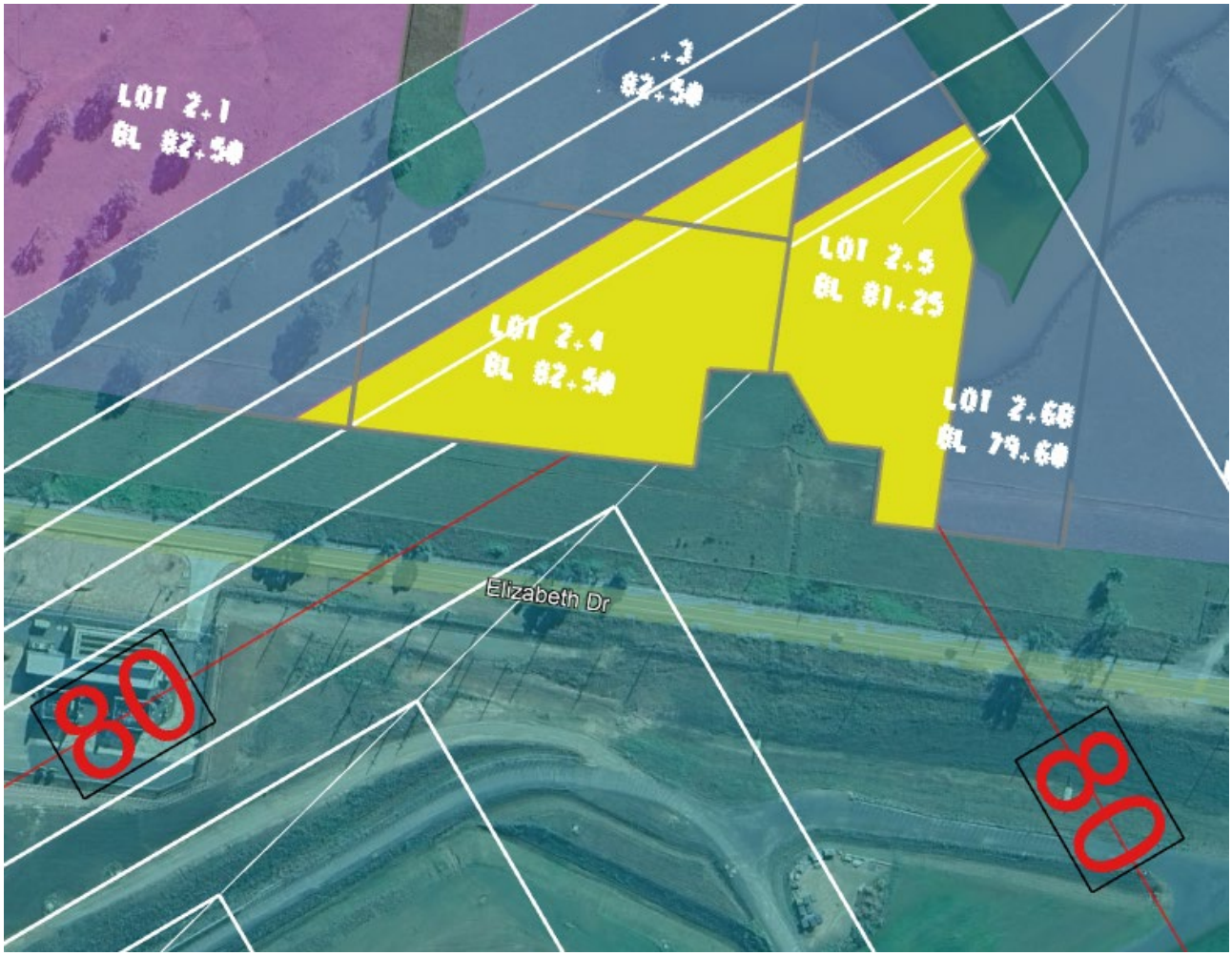

Figure 29: Zoomed in version of Figure 28 showing penetrations of glide path protection surfaces (yellow)

Based on the proposed built structure height of 14.6m AGL, Lots 2.1, 2.3, 2.4 and 2.5 will penetrate the glide path protection surfaces. It is intended that through a detailed planning application, the heights of built structures on these lots will be reduced to remain below the contours shown in Figure 29. Maximum permissible crane heights will also be taken into consideration when determining the height of built structures.

5.7 Helicopter Landing Sites

The triggers for assessment of proposed development activities with respect to airspace surrounding hospital Helicopter Landing Sites (HLSs) are not captured within those that are protected in legislation described in section 4 of this report. Applications for airspace approval for developments in close proximity to hospital HLSs are instead lodged with the asset owner (i.e. the hospital) who in turn refer the application to their aviation advisors and Helicopter Emergency Medical Services (HEMS) operators that fly to/from the HLS in question for assessment.

NASF Guideline H has been developed to offer some form of protection to what are being termed strategically important Helicopter Landing Sites (SHLSs). Under the guideline, hospital helipads would be considered as SHLSs and therefore protected from obstacles being erected in close

proximity to it. The guideline defines 140m wide rectangular steps in the direction of the approach/take-off area in 500m long increments until reaching 125m above the SHLS. The steps, rising in 15m increments, are shown in Figure 30 below that has been sourced from Guideline H and illustrates the protection of SHLS and the heights above which further assessment is triggered.

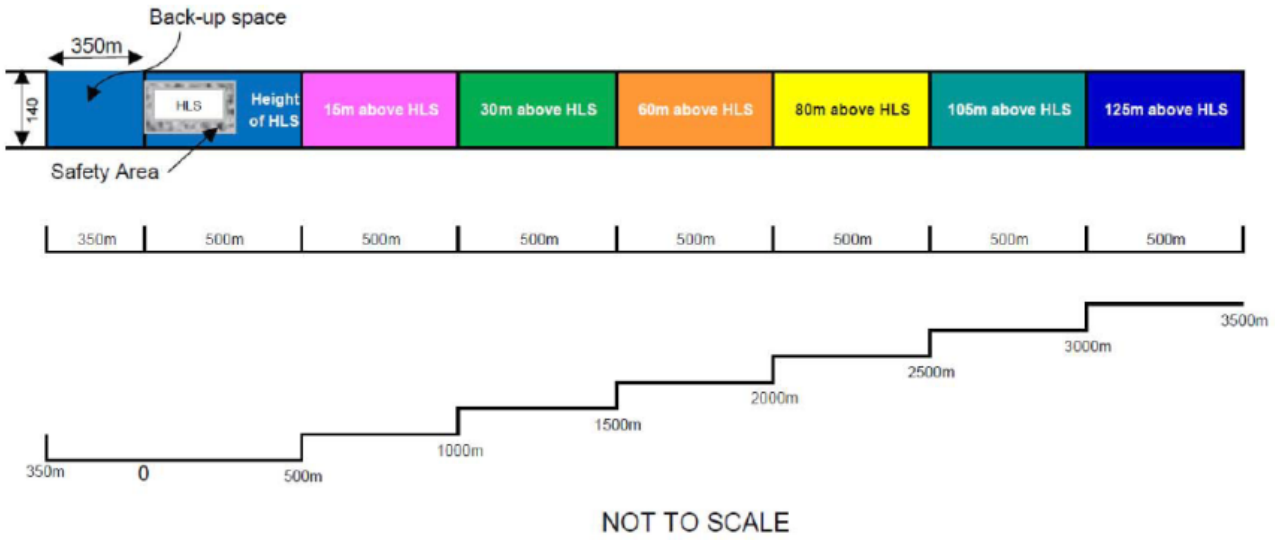

Figure 30: Referral trigger for SHLS

The closest existing hospital to the site or the lots with a helipad is the Nepean Hospital, however that is approximately 11km from the site. Therefore, Avlaw can confirm that there are no existing hospitals with helipads in close enough proximity to the site or the lots to impose restrictions on the heights of buildings or cranes at the site. The development of new hospitals in the vicinity of the Site should be monitored closer to construction to ensure these findings are still valid.

5.8 Public Safety Areas

Another aspect of compatible land uses which the site and the lots have been assessed against is Public Safety Areas (PSAs). These are designated areas of land at the end of runways within which development may be restricted in order to control the number of people on the ground. This is to reduce the risk of injury or death in the event an aircraft accident occurs during take-off or landing.

At the time of writing, there are a number of different iterations of the actual area within which the WSA PSA applies to. One example is that which the Department has published in Guideline I of the NASF to provide guidance to the Australian Government, state, territory and local government decision makers on the assessment and treatment of potential increases in risk to public safety.

Guideline I of the NASF makes specific reference to WSA, with the relevant extract copied below:

An example of the Australian Government's approach to PSAs can be illustrated by the Western Sydney Airport. In line with the Queensland PSA template approach, and in the absence of a consistent national approach or accurate aircraft data to use in risk modelling, the Airport Plan nominally identified a 1,000m trapezoid-shaped clearance area, extending off the ends of each

proposed runway to cover the area of highest anticipated safety risk. As detailed planning and design for the airport continues, there will be opportunities for the Airport Lessee Company, in consultation with the planning authority, to review which PSA model is most appropriate for Western Sydney Airport. The PSAs have been identified in these early planning stages of the proposed new airport in order to encourage land use planning and development that does not pose a public safety risk and is compatible with the future development of the airport.

The NSW Government has also published Aviation Safeguarding Guidelines for Western Sydney Aerotropolis and surrounding areas that endorses the UK model from Guideline I of the NASF. Figure 31 illustrates the PSA as extending 1,000m from the end of a runway.

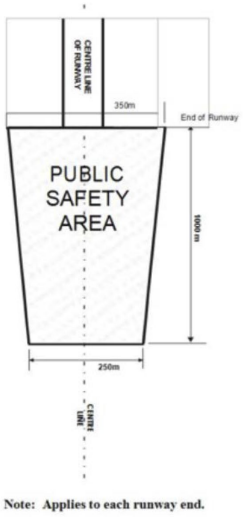

Figure 2: Queensland Public Safety Area

Figure 31: NASF Guideline I extract – QLD PSA

Another iteration of the WSA PSA is shown below which has been sourced from the SEPP. During discussions with WSA in relation to another project, Avlaw sought clarification as to which version of the PSA is more relevant and likely to be adopted once the airport is open. Most importantly, which set of contours would the site and the lots be assessed against. Avlaw was told that the version in the SEPP (i.e. Figure 32) is that which will be adopted.

With that in mind, Avlaw has produced its own version to clearly show the part of the site which is impacted by this restriction.

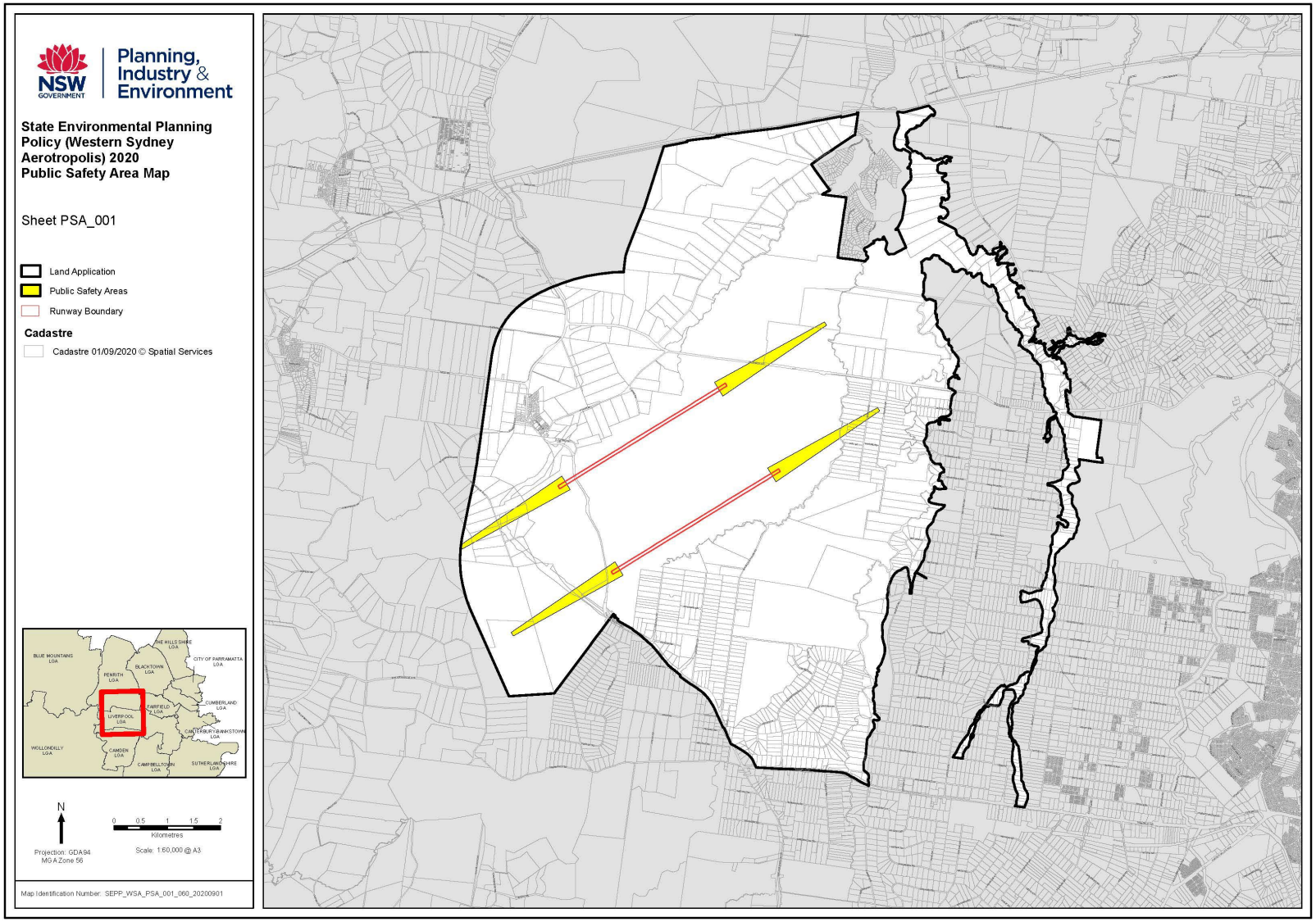

Figure 32: Extract from SEPP (Western Sydney Aerotropolis) 2020 PSA Map

Figure 33: Contour from Figure 32 overlaid onto Concept Plan

Figure 34: Contour from Figure 33 overlaid onto Concept Plan

A very small portion of Lot 2.7C and the south-eastern corner of Lot 2.8B fall within the lateral limits of the PSA for WSA where development is restricted. With respect to Lot 2.7C, given the majority of it is not within the PSA boundary, it may be possible for a concession to be applied to this lot to allow for the proposed built structure to be constructed. This will need to be considered by aviation stakeholders to determine if the current plan needs to be changed or if it will be permitted to proceed as proposed. With regards to Lot 2.8B, based on the compatible and incompatible uses defined in Table 1 of NASF Guideline I, the proposed built structure on this lot is not likely to be permitted. Consideration may be given to amended plans which ensure the portion of the lot which is within the PSA is not considered incompatible land use (e.g. car parking), all of which will be addressed at a later stage when preparing a detailed planning application.

Table 1: General guidance for new/proposed developments on compatible and incompatible activities within PSA risk contours

PSA	COMPATIBLE USES	INCOMPATIBLE USES/ACTIVITIES
OUTER AREA - 1 in 100,000	• **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**	• **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	• **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)	• **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 35: Tabel 1 from NASG Guideline I

Note: it is unclear if or how WSA will define the boundaries of the inner and outer areas of the PSA shown at Figure 33

6

Conclusions

Conclusions

Stage 1	
Aviation hazard	Findings
NASF Guideline A - Noise	Lot 1.1 conditionally acceptable Lots 1.2 and 3.1 acceptable
NASF Guideline B - Windshear and Turbulence	Trigger surface is not proposed to be penetrated by built structures Cranes penetrating this surface will be permitted
NASF Guideline C - Wildlife	Requirement to monitor wildlife attractions and hazards
NASF Guideline D - Wind Turbines	N/A given the proposed land use
NASF Guideline E - Lighting	Lot 1.1 limited to maximum lighting intensity between 150-450 candelas Lot 1.2 partly impacted by maximum lighting intensity of 450 candelas Lot 3.1 not covered by lighting zone but within 6km radius (CASA) Construction lighting will require CASA assessment to ensure compliance
NASF Guideline F - Protected Airspace	No permanent penetrations proposed Cranes will not penetrate OLS or PANS-OPS and not require approval Plume rises may need to be assessed if relevant at detailed design
NASF Guideline G - Aviation Facilities	No penetrations proposed by built of temporary structures
NASF Guideline H - Helicopter Landing Sites	No impact on helicopter operations
NASF Guideline I - Public Safety Areas	No impact

Figure 36: Stage 1 - Aviation Safeguarding Assessment findings

Concept Plan	
Aviation hazard	Findings
NASF Guideline A - Noise	Largely compatible land use SE corner of the site requires further analysis and mitigations
NASF Guideline B - Windshear and Turbulence	Only lots 2.7C and 2.8B penetrate trigger surface Temporary penetrations of this surface are permitted
NASF Guideline C - Wildlife	Requirement to monitor wildlife attractions and hazards
NASF Guideline D - Wind Turbines	N/A given the proposed land use
NASF Guideline E - Lighting	Lighting zones A-D impact the SE half of the site The rest of the site falls within 6km radius Construction lighting will need to be assessed to ensure compliance
NASF Guideline F - Protected Airspace	No permanent penetrations proposed Crane heights assessed in this report are indicative only. Final crane heights once confirmed will be subject to approval, ensuring compliance with the OLS and PANS-OPS restrictions, which will be addressed through a detailed planning application and consultation with aviation stakeholders Plume rises may need to be assessed if relevant at detailed design
NASF Guideline G - Aviation Facilities	Lots 2.1, 2.3, 2.4 and 2.5 penetrate glide path protection surfaces and will need to be reduced in height through a detailed planning application and consultation with aviation stakeholders
NASF Guideline H - Helicopter Landing Sites	No impact on helicopter operations
NASF Guideline I - Public Safety Areas	Contour impacts Lots 2.7C and 2.8B Positions of built structures within these lots and permitted land uses will be addressed through a detailed planning application and consultation with aviation stakeholders

Figure 37: Concept Plan- Aviation Safeguarding Assessment findings

Figure 38: Snapshot of the most restrictive surfaces across Stage and the Concept Plan (yellow shows permanent intrusions currently proposed)

Note: PSA is a flat surface at ground level

7

Appendix – DCP and Precinct Plan Tables

Appendix – DCP and Precinct Plan Tables

State Environmental Planning Policy (Precincts – Western Parkland City) 2021 – Chapter 4 Western Sydney Aerotropolis

Part 4.3 Development controls – Airport safeguards		
Requirement	**Assessment**	**Consistent**
Clause 4.22 Airspace operations (2) 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. (3) Development consent must not be granted to development to which this section applies unless— (a) the consent authority has consulted the relevant Commonwealth body, and (b) the relevant Commonwealth body advises the consent authority that— (i) the development will penetrate the prescribed airspace but it does not object to the development, or (ii) the development will not penetrate the prescribed airspace.	Refer to section 5.5	
Clause 4.23 Public safety (1) The objective of this section is to regulate development on land on which there is an appreciable risk to public safety from the operation of the Airport. (2) 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	Refer to section 5.8	

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; Service stations; Tourist and visitor accommodation (3) Development consent must not be granted to development for a purpose not specified in subsection (2) on land shown as the "public safety area" on the *Public Safety Area Map* unless the consent authority— (a) has considered a written assessment of the risk of the development to persons provided by the applicant, which includes— (i) 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 (ii) the likely number of people who will use or otherwise be present on the land, and (iii) 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 (b) is satisfied that the development will adequately mitigate the risk to persons on the land, including by limiting the number of people or vehicles.		
<u>Clause 4.23A Operation of certain air transport facilities</u> (2) Development consent must not be granted to development on land shown as the "Building Restricted Area" on the *Building Restricted Area Map* unless the consent authority— (a) has consulted the relevant Commonwealth body, and (b) is satisfied that the development will not adversely impact the operation of communication and air traffic control facilities or structures associated with the Airport's air transport facilities.	Refer to section 5.6	

Western Sydney Aerotropolis Development Control Plan 2022

2.10 Airport Safeguarding			
Performance Outcome	**Benchmark Solution**	**Assessment**	**Consistent**
PO1 Development does not generate turbulent emissions into the protected airspace**.**	**1.** Any plumes caused by a development do not: **a.** Have peak vertical velocities of more than 4.3m/sec; or **b.** Incorporate flares, unless an aviation impact assessment is completed and determines flares are acceptable.	Refer to section 5.5	
PO2 Development does not impact on aviation or the operation of the Airport regarding light emission and reflective surfaces.	**1.** Development must comply with the provisions of the Civil Aviation Regulations 1988 (Cth) and not cause distraction or confusion to pilots due to its configuration, pattern or intensity or prevent clear reception of aerodrome lights or signals. Significant lighting includes: **a.** Motorway and freeway lighting; **b.** Flare plumes from industrial activities; **c.** Flood lighting from stadiums or outdoor recreation facilities; and **d.** Construction lighting. **2.** Lighting within the primary light control zones – Zones A, B, C and D: **a.** Must not exceed the following intensity of light above a 3-degree horizontal: i. Zone A – 0 candela (cd); ii. Zone B – 50 cd; iii. Zone C – 150 cd; and iv. Zone D – 450 cd. OR **b.** Be fitted with a screen/shroud that	Refer to section 5.4	

	prevents the light emission above the horizontal plane. **3.** Proposals within 6km of the Airport: **a.** Must not include coloured or flashing lights; or **b.** Where coloured or flashing lights are to be incorporated, the proposal must be referred to the relevant Commonwealth body **c.** The appearance, material, reflectivity and aesthetics of the roofscapes consider the flight path and flight zone. *Note: The relevant consent authority may request a report prepared by a suitably qualified consultant demonstrating compliance with this section of the DCP in support of any development application*		

State Environmental Planning Policy (Precincts – Western Parkland City) 2021 – Chapter 4 Western Sydney Aerotropolis

Part 4.3 Development controls – Airport safeguards		
Requirement	**Assessment**	**Consistent**
Clause 4.20 Wind turbines (2) Development for the following purposes is prohibited on land in the 3 km zone— (a) electricity generating works comprising a wind turbine, (b) wind monitoring towers that are not ancillary or incidental to the Airport. (3) 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. (4) 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— (a) has consulted the relevant Commonwealth body, and (b) has considered a written assessment of the risk of the development to the safe operation of the Airport provided by the applicant, and (c) is satisfied that the development will adequately mitigate the risk to the safe operation of the Airport.	N/A – no wind farms/turbines form part of the development at the site or the lots	

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