

## AERONAUTICAL IMPACT ASSESSMENT

200 Aldington Road, Kemps Creek, NSW



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### **Publication Title**

Aeronautical Impact Assessment: 200 Aldington Road, Kemps Creek, NSW

### **Prepared for:**

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# Executive Summary

## **Executive Summary**

This Aeronautical Impact Assessment (AIA) has been prepared by Avlaw Pty Ltd, trading as Avlaw Aviation Consulting (Avlaw), for Fife Capital Pty Ltd (Fife) to address the aviation safeguarding requirements in the Mamre Road Precinct Development Control Plan (DCP) associated with the proposed multi-stage 200 Aldington Road Estate development.

Within the Estate, Fife propose construction of a single-story warehouse building 14.6m AGL including a 10m AGL two-story office on Lot F, at 200 Aldington Rd Kemps Creek, NSW ("the site"). Further development at the precinct will involve similar warehouse construction at a later stage and will be subject to separate assessment. The proposed building height is 87.1m AHD, with all plant and ancillary features captured within this height. One mobile crane will be used during construction will reach a height of 157.3m AHD.

Avlaw's assessment has found that the critical (i.e. lowest) prescribed airspace protection surface covering the site is the Western Sydney Airport Obstacle Limitation Surfaces (OLS) which ranges in height from 218m to 223.2m AHD rising towards the NE. This surface will not be penetrated either permanently by the building development or temporarily by the mobile construction crane, meaning no controlled activity approval will be required.

The National Airport Safeguarding Framework (NASF) published by the Department of Infrastructure, Transport, Regional Development and Communication (Department), and the DCP aviation safeguarding requirements regarding wildlife, noise, light, emissions, and communication, navigation and surveillance systems, have been assessed and do not identify a hazard by development at the site. Full assessment is detailed in this AIA.

The conclusion of this AIA is that the development is compliant with aviation safeguarding requirements in the Mamre Road Precinct DCP, and the NASF. No applications seeking aviation approvals for the building or crane is required. The rationale for this is that the buildings and crane will not penetrate any protected airspace or defined flight operational surfaces and therefore, will not adversely affect the safety, efficiency or regularity of operations of aircraft.



# Regulatory Framework

## **Regulatory Framework**

### 2.1 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 respect to Western Sydney Airport WSA), at the time of writing only the Obstacle Limitation Surfaces (OLS) have been "declared" by the Department and are therefore enshrined in legislation as the airport's prescribed airspace.

Development that infringes on the airport's protected 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.

### 2.2 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, 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 Western Sydney Airport, Airport Plan, herein referred to as the "Airport Plan".

With respect to development at the site, no penetration of prescribed airspace will occur by either the building or temporary crane activity. However, Avlaw understands that an email to WSA (planning@wsaco.com.au) is not required but may be prudent to do so.

A relevant extract from the Airports (Protection of Airspace) Regulations 1996 is copied on the following page.



# Proposed Development

### **Proposed Development**

### **3.1 Location**

The SW corner of site is located 7,270 metres NE of the end, and on the extended centreline, of RWY 05L/23R Western Sydney Airport. Figure 1 and Figure 2 refer. The coordinates at the centre of the site are 285383.54m E, 6257278.51m S.



Figure 1: Site in relation Western Sydney Airport



Figure 2: Site location boundary indicated in red

### 3.2 Estate Infrastructure

The proposed estate consists of roads including provision of street lights, public domain and stormwater management infrastructure including two stormwater basins. There is also an existing farm dam in the north eastern corner of the site. The stormwater basins are designed to provide on- site detention for a short period, with a maximum basin time to drain of 7 hours in a 1% Annual Exceedance Probability (AEP) 6 hr storm. The basins are planted to improve water quality and achieve the DCP water quality targets. The plant selection in the basins and on lot and public domain landscaping will be appropriate to the requirements of the site being within the 8km wildlife buffer zone. Plants will be selected that minimise the attraction of birds and flying foxes.

### **3.3 Permanent Structure**

The proposed building height is 87.1m AHD, with all plant and ancillary features captured within this envelope. An elevation view image of the proposed development indicating its height is provided at Figure 3.







ORFRICE SLEVEL 1



### Top 87.1m AHD (14.6m AGL)

### 3.4 Crane Activity

One temporary mobile crane will be used to complete construction of the proposed development. Temporary crane activity will reach a maximum height of 157.3m AHD.

Figure 4 illustrates the height of crane. The crane will be used at different locations across the site as illustrated on Figure 4 below.



Figure 4: site plan showing all the locations the crane will be positioned during construction

The swing arc for the crane will be contained within the boundary of the site at all times at each of the various locations.

In terms of timing, it is anticipated the mobile crane will be mobilised on 7 November 2022 and then dismantled and removed from the site on 20 April 2023. The crane will operate between 7am and 5pm from Monday to Saturday. When the crane is not in use, it will be lowered with a maximum boom height of 10m AGL.



## Prescribed Airspace Assessment

## **Prescribed Airspace Assessment**

Only the OLS for QSA has been declared as its prescribed airspace at the time of writing. A combination of the WSA OLS tool as well as the chart which is published on their website has been cited in the preparation of this section.

### **4.1 Obstacle Limitation Surfaces**

The site lies under the OLS for Western Sydney Airport as indicated by the marker on Figure 5. The proposed maximum building height of 87.1 AHD will remain 130.9 metres clear of the OLS. Temporary construction crane at the maximum height of 157.3m AHD will remain 60.7 metres clear of the OLS. Since neither the buildings nor temporary crane activity will penetrate the prescribed airspace for Western Sydney Airport, they will not be considered controlled activities requiring aeronautical assessment.



Figure 5: Location with respect to the Western Sydney Airport OLS

### **4.2 Instrument Flight Procedures**

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."

Avlaw has identified on aeronautical assessments for other projects that the PANS-OPS has only been lower than the OLS in close proximity to the runway ends aligned with the approach and departure areas (specifically in relation to Precision Approach Instrument Landing Systems). The site is outside these limits so the OLS over the site is considered the most critical relevant airspace control and therefore once the PANS-OPS is published, it is anticipated the PANS-OPS surface covering the site will be greater than 118m AHD.

Therefore, Avlaw's assessment is that there will be no greater impact by the PANS-OPS than is provided by the OLS in the vicinity of the site. The buildings and temporary construction cranes will therefore remain below the instrument flight procedure protected surfaces.



## Airport Master Plan and DCP

## **Airport Master Plan and DCP**

The Western Sydney Airport Plan 2021 provides advice on airspace control and contains the detailed OLS. The PANS-OPS is currently under design however as explained in section four, this is not considered to be relevant to the proposed activities at the site. The Airport Plan constraints by way of the OLS are particularly relevant to this assessment and were also explained above in section four.

Other aspects within the Airport Plan regarding the NASF, and the Mamre Road Precinct DCP aviation safeguarding requirements are addressed below:

### 5.1 Wildlife (DCP)

The DCP requires assessment of wildlife likely to be present on the subject land and the risk of the wildlife to the operation of the airport.

The site is located in a new precinct and the development Lot F is largely covered by an enclosed warehouse building with covered external refuse storage and providing no source of attraction for wildlife.

As part of the estate there are two stormwater basins to meet the integrated water management objectives of the DCP, these both drain within 7 hours reducing the attraction to wildlife. There is also an existing farm dam in the north east of the site, this far corner of the site is on the boundary of the 8m radius from the airport boundary. The detailed landscaping within the site will be in accordance with the Council and DCP requirements and will not include seed producing plants that attract wildlife.

Street lighting within the estate will be designed to not attract insects, that may subsequently attract wildlife.

The Department of Infrastructure, Transport, Regional Development and Communication has published Guideline C to provide advice to States and Territories as well as local government decision makers on how to best manage the risk of collisions between wildlife and aircraft at or near airports where that risk may be increased by the presence of wildlife-attracting land uses. The site lies within an 8km radius of Western Sydney Airport where "No Action" is required for mitigation with respect to warehouse (non-food) development. The Figure 6 is the table at Attachment 1 to Guideline C.

#### Prepared by the Australian Aviation Wildlife Hazard Group

#### Guideline C Attachment 1 to Wildlife Strike Guidelines

		Actions for Existing Developments			Actions for Proposed Developments/ Changes to Existing Developments		
	Wildlife Attraction Risk	3 km radius	8 km radius	13 km radius	3 km radius	8 km radius	13 km radius
Land Use		(Area A)	(Area B)	(Area C)	(Area A)	(Area B)	(Area C)
Agriculture							
Turf farm	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Piggery	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Fruit tree farm	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Fish processing /packing plant	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Cattle /dairy farm	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Poultry farm	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Forestry	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action
Plant nursery	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action
Conservation		•					4
Wildlife sanctuary / conservation area - wetland	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Wildlife sanctuary / conservation area - dryland	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Recreation		-			-		4
Showground	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Racetrack / horse riding school	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Golf course	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Sports facility (tennis, bowls, etc)	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Park / Playground	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Picnic / camping ground	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Commercial					-	-	
Food processing plant	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Warehouse (food storage)	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action
Fast food / drive-in / outdoor restaurant	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action
Shopping centre	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action
Office building	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Hotel / motel	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Car park	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Cinemas	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Warehouse (non-food storage)	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Petrol station	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Utilities		•					4
Food / organic waste facility	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Putrescible waste facility - landfill	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Putrescible waste facility - transfer station	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Non-putrescible waste facility - landfill	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Non-putrescible waste facility - transfer station	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Sewage / wastewater treatment facility	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Potable water treatment facility	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action

### Figure 6: NASF Guideline C Attachment 1

The <u>Western Sydney Airport Environmental Impact Assessment</u> was examined in the preparation of this AIA and covers similar typography and features to those present at the site, and no specific concern is identified.

The "200 Aldington Road Industrial Estate Biodiversity Development Report V4 final" also refers and was examined in preparation of this AIA. That report is available as a separate PDF document.

With no source of attraction for fauna, and NASF Guideline C requiring no action, there is no assessed wildlife risk to the operation of the airport.

### 5.2 Heights (DCP)

Heights are addressed in Section 3, and Section 4, of this AIA. The development does not encroach on the protected airspace for the airport.

### 5.3 Noise (DCP)

The ANEF for Western Sydney Airport if available in the Airport Plan. It is also shown in the Western Sydney Fact sheet as shown in Figure 9. The site is located on the northern extremity of the indicative ANEC 20-25. <u>The NSW Government, Planning Industry &</u> <u>Environment ANEC Map</u> also refers.

Australian Standard Acoustics-Aircraft Noise Intrusion-Building siting and Construction AS 2021:2015 provides advice at Table 2.1 per Figure 7 below identifing a commercial building is acceptable in an area with a ANEF less than 25. The site is located on the boundary of the 20 ANEF contour per Figure 8, so is therefore deemed compatible/acceptable land use.

### TABLE 2.1

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

De Uline (en e	ANEF zone of site					
Building type	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 7: Table 2.1 of AS 2021:2015



Figure 8: from SEPP (WSA Aerotropolis) 2020 Noise Exposure Contour Map

### 5.4 Lighting (DCP)

The Department of Infrastructure, Transport, Regional Development and Communication has published NASAF Guideline E on Managing Risk of Distractions to Pilots from Lighting in the Vicinity of Airports.

The guideline advises on situation where lights are to be installed within a radius of 6km from an airport. Figure 9 refers. The site is 7,270m from the NW end of RWY 05L/23R at Western Sydney Airport and falls outside the 6km radius so there is no identified restriction on lighting installation for the site. However, it should be noted that CASA has the power under the Civil Aviation Act to regulate potential sources of distractions from lighting, and CASA can require lights which may cause confusion, distraction or glare to pilots in the air, to be extinguished or modified.

The potential for glare caused by reflected sunlight from structures has been considered by CASA and they have advised in 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 also advised that it is further attenuated by the use of sunglasses which pilots normally wear in bright sunlight.



Figure 1

Figure 9: NASF Lighting zones

### 5.5 Emissions (DCP)

Plumes with a vertical efflux of more than 4.3m/sec are considered an obstacle if they penetrate protected airspace. The development involves the construction of a warehouse building and does not generate emissions, therefore is not applicable.

### 5.5 Wildlife Hazards (DCP)

This is addressed in Section 5.1 above.

The Department of Infrastructure, Transport, Regional Development and Communication has published Guideline C to provide advice to States and Territories as well as local government decision makers on how to best manage the risk of collisions between wildlife and aircraft at or near airports where that risk may be increased by the presence of wildlifeattracting land used. The site lies within an 8km radius of Western Sydney Airport where "No Action" is required for mitigation with respect to warehouse development (non-food).

### 5.6 Communications, Navigation and Surveillance Systems (DCP)

The Department of Infrastructure, Transport, Regional Development and Communication 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.

Details of the BRAs for each type of CNS is shown in an extract from Guideline G at Figure 9. Further detail on specific requirements for each facility is provided in Guideline G Attachment 3.

Facility Type	Zone A (metre radius)	Zone A/B (metre radius)	Area of Interest (metre radius)
High Frequency (HF)	0 – 100	100 - 6000	6000 - 10000
Very High Frequency (VHF)	0 - 100	100 - 600	100 - 2000
Satellite Ground Station (SGS)	0 - 30	30 - 150	n/a
Non-Directional Beacon (NDB)	0 - 60	60 - 300	n/a
Distance Measuring Equipment (DME)	0 - 100	100 - 1500	n/a
VHF Omni-Directional Range (VOR)	0 - 100	100 - 1500	n/a
Conventional VHF Omni-Direction- al Range (CVOR)	0 - 200	200 - 1500	n/a
Doppler VHF Omni-Directional Range (DVOR) - Elevated	0 - 100	150 - 1500	n/a
Doppler VHF Omni-Directional Range (DVOR) - Ground Mounted	0 - 150	150 - 1500	n/a
Middle and Outer Marker	0 - 5	5 - 50	n/a
Glide path	n/a	n/a	n/a
Localiser	n/a	n/a	n/a
Automatic Dependent Surveillance Broadcast (ADS-B)	0 - 100	100 - 1500	n/a
Wide Area Multilateration (WAM)	0 - 100	100 - 1500	n/a
Primary Surveillance Radar (PSR)	0 - 500	500 - 4000	4000 - 15000
Secondary Surveillance Radar (SSR)	0 - 500	500 - 4000	4000 - 15000
Ground Based Augmentation Sys- tem (GBAS) - RSMU	0-155	155-3000	n/a
GBAS - VDB	0-200	200-3000	n/a
Link Dishes	30m		
Radar Site Monitor - Type A	30m	0 - 500	n/a
Radar Site Monitor - Type B	70m	0 - 500	n/a

Figure 10: Summary of BRAs for CNS facilities (those potentially extending over the site highlighted)

The location of all facilities is unknown at the time of writing, however the ground level at the site is 72.5m AHD with a building height of 14.6m above ground level. The indicative elevation of the runway is described in the Airport Plan as RWY 05L at 93.05m AHD and RWY 23R at 73.2m AHD. The Cecil Park off airport existing radar is 4,885m SE of the site at a height of 200.51m AHD. Facilities highlighted in Figure 11 are all sited above ground level. For this analysis ground level at the end of RWY 23R has be assumed as the datum for the HF facility.

Analysis of a HF facility located on the airport made with reference to Figure 11 places the lowest area of interest height above 250m AHD and well above the building height of 87.1m AHD at the site.



Figure 11: Assessment zones for HF receiver facility from NASF Guideline G

Analysis of Primary and Secondary Radar located nominally within the boundary of Western Sydney Airport for the Primary Radar, and at Cecile Park for the Secondary Radar place these outside Zone A and Zone B and below the Area of Interest.



Figure 12: Assessment zones for Primary and Secondary Radar facility from NASF Guideline G

This analysis of BRAs determines that the warehouse building on the site should not be of concern to CNS facilities.

### 5.7 Windshear and Turbulence (NASF)

The Department of Infrastructure, Transport, Regional Development and Communication

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 site is well clear of the assessment trigger area that extends only 900m from the end of a runway as indicated in Figure 13. Therefore, this is not applicable at the site.



Figure 13: Assessment trigger area around runways NASF Guideline B



## **Helicopter Operations**

## **Helicopter Operations**

Legislation requires the pilot of a helicopter to determine the safe take-off and landing approach taking into account all factors including aircraft performance, wind direction, obstacles, and emergency landing in the event of engine failure. The helicopter operations relevant to development at the site and are by visual flight rules and have been assessed, the findings of which are summarised below.

### **6.1 Hospital Helipads**

The NASF Guideline H has been issued regarding protection of 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 14 below that has been sourced from Guideline H and illustrates the protection of SHLS and the heights above which further assessment is triggered.





#### Figure 14: Referral trigger for SHLS

The nearest hospital helipad to the site is the Nepean Hospital rooftop helipad, which is approximately 12,500 metres to the NW of the site (i.e. the site is 12,000 metres to the SE of the hospital helipad). The approach and departure paths for the helipad are not in the direction of the site, and the NASF guideline assessment area only extends 3,500 metres from the helipad. This places the site outside the horizontal limit of the assessment area. Apart from visual flight reference during approach and departure covered by the NASF Guideline H, no instrument flight procedures are established for the Nepean Hospital Helipad to be impacted by the proposed development at the site.



Figure 15: Nepean Hospital Helipad (flight paths indicated by arrows)

Therefore, Avlaw's assessment of current and future helicopter operations in the vicinity of the site concludes the proposed development (i.e. buildings and cranes) will pose no increased safety risk to those that already exist due to other obstacles in the area.

# Conclusions

## Conclusions

Permanent building development at the site is proposed to reach a height of 87.1m AHD, with all plant and ancillary features captured within this envelope whilst temporary crane activity will reach a height of 157.3m AHD. The only airspace protection surface that is applicable is the Western Sydney Airport OLS at 180m to 223.2m AHD. All building development activity including temporary construction cranes will be clear of the OLS and will not trigger a formal approval process.

The presence of stormwater basins within the 8km wildlife buffer zone is mitigated by the drain time of the basins being 7 hours reducing their attraction to wildlife and the landscaping of the estate and basins being with species that minimise wildlife attraction so as not to attract birds and flying foxes.

Analysis of the NASF published by the Department of Infrastructure, Transport, Regional Development and Communication, and analysis of aviation safeguarding requirements in the Mamre Road Precinct DCP regarding wildlife, noise, light, emissions, and communication, navigation and surveillance systems, do not identify a hazard by development at the site, and identifies that the development is compliant with aviation safeguarding requirements.

This AIA concludes that the proposed building heights up to 87.1m AHD and temporary crane activity to a height of 157.3m AHD will not adversely affect safety, efficiency or regularity of operations of aircraft prior to WSA opening as well as after operations have commenced.





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