

URBAN PROPERTY

AVIATION IMPACT ASSESSMENT REPORT



AIRSPACE IMPLICATIONS DUE TO THE CONSTRUCTION OF THE 10 DANGAR ST, WICKHAM DEVELOPMENT

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This Report on the airspace implications, both during and following construction of the development is prepared for UPG Wickham Pty Ltd by Resolution Response Pty. Ltd. ABN: 94 154 052 883, trading as 'AviPro'.

The Report relates to the coordination aspects associated with prescribed/protected airspace at Newcastle/Williamstown Aerodrome and the Helicopter Landing Sites (HLS) at: the John Hunter Hospital, Westpac Rescue Helicopter Base, Broadmeadow and the Port of Newcastle helicopter base at Dykes Point due to the establishment and site design of the development at 10 Dangar St, Wickham. It is intended to inform design and planning.

Contents

1.	EXECUTIVE SUMMARY	6
2.	INTRODUCTION	7
2.1.	Overview	7
2.2.	Project Background	7
2.3.	The Proposal	8
2.3.1.	Rezoning Proposal	8
2.3.2.	State Significant Development Application.....	8
2.4.	The Site	8
2.5.	Secretary's Environmental Assessment Requirements (SEARs) Reporting	9
2.6.	Additional Background Information	9
2.6.1.	Background Material	9
2.6.2.	Methodology	9
2.7.	Explanation of Terms	10
2.8.	Applicable Abbreviations	12
2.9.	List of Images	14
2.10.	List of Tables	14
2.11.	List of Figures	14
3.	GENERAL AIRSPACE REQUIREMENTS AND CONSIDERATIONS	15
3.1.	Purpose of this Section	15
3.2.	Civil Airspace Regulation in Australia - Aerodromes	15
3.3.	Military Airspace Regulation in Australia – Aerodromes	15
3.4.	Airspace Management in Australia – Heliports and Helicopter Landing Sites.....	16
3.5.	Helicopter Routes	16
3.6.	State Government Requirements.....	16
3.7.	Local Government Requirements	16
3.8.	Unmanned Aircraft Systems Operations	16
3.9.	Obstacle Limitation Surfaces	17
3.10.	Procedures for Air Navigation – Aircraft Operations (PANS-OPS) Surfaces	17
3.11.	Radar Terrain Clearance Charts	18
4.	SPECIFIC 10 DANGAR ST DEVELOPMENT CONSIDERATIONS	19
4.1.	The 10 Dangar St Development Location	19
4.2.	The 10 Dangar St Development Elevation	20
4.3.	Newcastle Local Environment Plan (LEP) 2012 - Airspace	20
4.4.	The Newcastle Development Control Plan (DCP) 2012	21
4.5.	Defence Regulation 2016	21
4.6.	Aero Logistics Helicopter Operations	23
4.7.	Dykes Point Helicopter Operations	23
4.8.	The John Hunter Hospital (JHH) Heliport.....	24
4.9.	The Westpac Rescue Helicopter Service Maintenance Base.....	24
4.10.	Tall Structure Considerations.....	26

4.11. Construction Crane Considerations	26
4.12. RAAF Base Williamtown Contact.....	27
4.13. Deductions: Airspace, Cranes, Obstructions and HLS	27
4.14. Authority Consultation.....	27
4.15. Cumulative Impacts	28
4.16. Mitigations	28
4.17. Conclusion.....	28
4.18. Recommendations.....	28

1. EXECUTIVE SUMMARY

The aim of this report is to provide insights into the impacts of constructing the 10 Dangar St development on the aviation operations into and out of Newcastle/Williamtown Aerodrome and of helicopter operations within the city of Newcastle and Port of Newcastle. The report analyses the likely impact of the completed building and any associated construction cranes on all such aviation activities.

The following key outcomes arose from the analysis:

- The 10 Dangar St development, once constructed, will not intrude into the Newcastle/Williamtown Aerodrome PANS-OPS surfaces.
- The 10 Dangar St development, once constructed, will not intrude into the Newcastle/Williamtown Aerodrome OLS.
- The 10 Dangar St development, once constructed, will not impact the Port of Newcastle Dykes Point HLS flight paths or the Dykes Point HLS.
- The 10 Dangar St development, once constructed, will not impact the instrument approach into the Westpac Rescue Helicopter Service base at Broadmeadow.
- The 10 Dangar St development, once constructed, will not impact helicopter operations to and from the Westpac Rescue Helicopter Service base at Broadmeadow.
- The 10 Dangar St development, once constructed, will not impact helicopter operations to and from the JHH.
- The 10 Dangar St development construction crane(s) will not intrude into the Newcastle/Williamtown Aerodrome PANS-OPS surfaces.
- The 10 Dangar St development construction crane(s) will not intrude into the Newcastle/Williamtown Aerodrome OLS.
- The 10 Dangar St development construction crane(s) will not impact the Port of Newcastle Dykes Point HLS flight paths or the Dykes Point HLS.
- The 10 Dangar St development construction crane(s) will not impact the instrument approach into the Westpac Rescue Helicopter Service base at Broadmeadow.
- The 10 Dangar St development construction crane(s) will not impact helicopter operations to and from the Westpac Rescue Helicopter Service base at Broadmeadow.
- The 10 Dangar St development construction crane(s) will not impact helicopter operations to and from the JHH.
- The 10 Dangar St development construction crane(s) will require aviation-standard obstacle lighting as specified by CASA and as stated by RAAF Base Williamtown.

The additional consideration of cranes will not be sufficient to impact aviation safety at Newcastle/Williamtown Aerodrome or affect helicopter operations within the city of Newcastle and the Port of Newcastle.

Approval will not be required to erect a construction crane(s) unless specifically advised by Newcastle City Council.

As the construction crane(s) will be in excess of 100m above ground level, they will require assessment by CASA and notification to Airservices Australia as a tall structure(s).

Once complete, the building will need to be lit and will need to be notified to Airservices Australia as a tall structure.

2. INTRODUCTION

2.1. Overview

This Aviation Impact Assessment report is submitted to the Department of Planning, Housing and Infrastructure (DPHI) on behalf UPG Wickham Pty Ltd (the Applicant), to support a State Significant Development Application (SSDA) and concurrent Rezoning Report for the construction of a 43-storey mixed-use development at 10 Dangar Street, Wickham (the site). The site is located within the Newcastle local government area (LGA) and occupies a prominent corner position immediately north of the Newcastle Interchange.

The project has been selected by the NSW Housing Delivery Authority (HDA) as a key development to help accelerate the delivery of well-located, diverse and affordable housing in New South Wales. Commencing in early 2025, the HDA plays a coordinating role across government agencies, focusing on unlocking complex sites through strategic planning, infrastructure coordination, and streamlined assessment pathways.

Following the Applicant's expression of interest (EOI 240837), the HDA considered and recommended to the Minister for Planning and Public Spaces (the Minister) that the project be declared SSD under Section 4.36(3) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) on 23 June 2025. Following this recommendation, the development was declared by the Minister to be SSD pursuant to the *State Significant Development Declaration Order 2025 (No 10)*, Part 2, Section 1(a), dated 30 June 2025.

2.2. Project Background

The site was identified under the *Wickham Master Plan 2017* as a strategically significant location for increased development capacity, given its proximity to the Newcastle Interchange and its potential to support high-density, mixed-use development. The Master Plan proposed an uplift in planning controls, increasing the permissible building height from 45m to 60m, and the FSR from 5:1 to 6:1, subject to the delivery of public domain improvements, including a 3-metre southern setback adjacent to the transport interchange.

This strategic vision was subsequently reaffirmed in the *Wickham Master Plan 2021 Update* (PP-2021-1506) and further refined in the 2022 amendment, which supported additional incentive-based planning controls. The Community Infrastructure Incentives in Wickham Planning Proposal (PP-2022/1541), endorsed by Council in March 2022 (and subsequently approved 08 November 2022), proposed:

- An incentive FSR of 7:1 for Area E (the site),
- A maximum incentive building height of 60m, and
- Community infrastructure requirements.

In alignment with these strategies, the site has been subject to successive development consents as outlined in the Environmental Impact Statement (EIS) prepared by Beam Planning. These prior consents have been physically commenced through demolition and excavation works and establish the maximum envelope for basement structures. This SSDA will adopt and refine these commenced elements to expedite the assessment process, continue construction progress on the site, and ensure continuity with previously endorsed planning outcomes.

2.3. The Proposal

2.3.1. Rezoning Proposal

To facilitate the proposed development described in [Section 2.3.2](#), a concurrent Rezoning Proposal is sought to make the following amendments to the *Newcastle Local Environmental Plan 2012* (Newcastle LEP 2012) in relation to the site:

- Amend Clause 7.9 to permit a maximum building elevation of RL152 on the site; and,
- Amend the Clause 7.9A to permit a maximum FSR of 14.4:1 on the site.

2.3.2. State Significant Development Application

The proposed amendments to the Newcastle LEP 2012, as outlined above, will facilitate the following development, proposed via a concurrent SSDA. Specifically, the proposed works sought under the SSDA include:

- Construction of a 43-storey (+ plant) mixed-use tower, comprising:
 - 245 residential apartments;
 - 99 co-living units;
 - Ground floor retail premises, to all three street frontages;
 - A hotel component within the podium; and
 - Basement car parking.
- Associated landscaping and public domain improvements, including the provision of a pedestrian through-site link that runs east/west adjacent to the Newcastle Interchange.

It is noted that the project will commit to providing 15% of the residential GFA as affordable housing for a minimum of 15 years, to be managed by a registered Community Housing Provider (CHP).

The proposed SSDA will seek consent for the use of basement structures and enabling works approved under DA2018/01197 (as modified).

For a detailed description of the proposed development, refer to the EIS prepared by Beam Planning, and the Architectural Drawings prepared by SJB Architecture.

2.4. The Site

The site is located at 10 Dangar Street, Wickham, within the Newcastle LGA. The site benefits from triple street frontages, with a primary street frontage of approximately 64m to Dangar Street, and secondary street frontages of approximately 61m to Hannell Street and 50m to Charles Street.

The surrounding locality comprises a diverse mix of land uses including residential, commercial, and light industrial uses, reflecting the area's ongoing transition. The site's frontage to Hannell Street, a major arterial road, supports high levels of connectivity to the broader metropolitan area. The site is located immediately north of the Newcastle Interchange, providing bus, rail and light rail services. Strategically, the site sits at the intersection of the Newcastle West End, Wickham, and Honeysuckle precincts, positioning it to support the city's transition to a higher-density, mixed use metropolitan centre.

The site is currently vacant following demolition works approved under DA2018/01197 (as modified).

[Image 1](#) illustrates the location of the site.



Image 1: Site Location

2.5. Secretary's Environmental Assessment Requirements (SEARs) Reporting

This Aviation Impact Assessment report addresses the requirement of the Secretary as directed in SEARs covering letter for SSD-89869959 dated 25 September 2025. There are no generic conditions pertinent to Aviation currently applicable to SEARs for Housing. In preparing this report, the SEARs requirements of other similar developments were reviewed and this proposed development was assessed against other similar projects. Relevant, implied, generic SEARs Aviation requirements have been addressed in [Table 1](#) below. Aviation SEARs are additional to statutory civil aviation requirements which are typically located in Local Environment Plans (LEP).

Item	Implied SEARS Requirements (Not Stated)	Relevant Section
24.1	If the development proposes a helicopter landing site (HLS), assess its potential impacts on the flight paths of any nearby airport, airfield or HLS.	N/A
24.2	If the site contains or is adjacent to an HLS, assess the impacts of the development on that HLS.	See Sections 4.5 to 4.8

Table 1: Secretary's Environmental Assessment Requirements - Aviation

2.6. Additional Background Information

2.6.1. Background Material

Reference material provided by UPG Wickham Pty Ltd, SJB Architects and Beam Planning include final plans and frozen design drawings.

2.6.2. Methodology

Criteria from all relevant references were assessed, including: National Airports Safeguarding Framework Guideline H – Protecting Strategically Important Helicopter Sites; CASA Advisory Circular (AC) 139.R-01 v3.1 Guidelines for heliports - design and operation, NSW MoH GL 2020_014 Guidelines for Hospital Helicopter Landing Sites in NSW and requirements of Defence Regulation 2016.

2.7. Explanation of Terms

Aircraft. Refers to both aeroplanes (fixed wing) and helicopters (rotorcraft).

Approach/Departure Path (VFR) (Day and Night). The flight track helicopters follow when landing at or departing from the FATO of an HLS. Updated standards to align with ICAO recommendations now have the VFR Approach/Departure path extending outwards from the edge of the FATO safety area with an obstacle free gradient of 2.6° or 4.5% or 1:22.2 vertical to horizontal, measured from the forward edge of the FATO safety area. The VFR Approach/Departure path commences at a width of 34m, and splays laterally at an angle of 8.7°/15%/1:12.8 to a width of 140m, then remains parallel to a distance of 3,386 m, where the height is 152 m above the elevation of FATO surface.

Design Helicopter. The Leonardo AW139 contracted to the NSW Ambulance. The type reflects the new generation Performance Class 1 capable helicopters used in HEMS and reflects the maximum weight and maximum contact load/minimum contact area.

D Value (also Overall Length (L)). The distance from the tip of the main rotor tip plane path to the tip of the tail rotor tip plane path or the fin if further aft, of the Design Helicopter.

Elevated Helicopter Landing Site. An HLS located on a roof top or some other elevated structure where the Ground Effect Area/Touchdown and Lift-off Area (TLOF) is at least 2.5 m. above ground level.

Final Approach. The reduction of height and airspeed to arrive over a predetermined point above the FATO of an HLS.

Final Approach and Takeoff Area (FATO). A defined area over which the final phase of the approach to a hover, or a landing is completed and from which the takeoff is initiated. For the purposes of these guidelines, the specification of 1.5 x Length Overall of the Design Helicopter is used and equates to 25 m. diameter. Area to be load bearing.

Ground Taxi. The surface movement of a wheeled helicopter under its own power with wheels touching the ground.

Hazard to Air Navigation. Any object having a substantial adverse effect upon the safe and efficient use of the navigable airspace by aircraft, upon the operation of air navigation facilities, or upon existing or planned airport/heliport capacity.

Helicopter Landing Site (HLS). The area of land, water or a structure used or intended to be used for the landing and takeoff of helicopters, together with appurtenant buildings and facilities.

Helicopter Landing Site Elevation. At an HLS without a precision approach, the HLS elevation is the highest point of the FATO expressed as the distance above mean sea level.

Helicopter Landing Site PC1 Survey Reference Point. A position at eye height (1.5 m.) above the forward edge of the FATO in the centre of the flight path, from which the PC1 survey at 2.6° (4.5%) is initiated.

Helicopter Landing Site Reference Point (HRP). The geographic position of the HLS expressed as the latitude and longitude at the FATO centre.

Hospital Helicopter Landing Site. HLS limited to serving helicopters engaged in air ambulance, or other hospital related functions.

Note:

*A designated HLS located at a hospital or medical facility is an emergency services HLS and **not** a medical emergency site.*

Heliport. An HLS that meets or exceeds the specifications contained within CASA Advisory Circular (AC) 139R-01 Guidelines for heliports design and operation. A heliport may have two or more co-existing HLS. There are no implications for operating a heliport as opposed to an HLS, other than having a “Heliport Operations Manual” rather than an “HLS Operations Manual” which would address the various interactions and interoperability (aviation, clinical etc) at multi-HLS sites.

Hover Taxi. The movement of a helicopter above the surface, generally at a wheel/skid height of approximately one metre. For facility design purposes, a skid-equipped helicopter is assumed to hover-taxi.

Landing and Lift Off Area (LLA). A load-bearing, nominally paved area, normally located in the centre of the TLOF, on which helicopters land and lift off. Minimum dimensions are based upon a 1 x metre clearance around the undercarriage contact points of the Design Helicopter.

Lift Off. To raise the helicopter into the air.

Movement. A landing or a lift off of a helicopter.

Object Identification Surface. The OIS are a set of imaginary surfaces associated with an HLS or heliport. They define the volume of airspace that should ideally be kept free from obstacles in order to minimise the danger to a helicopter during an entirely visual approach.

Obstacle Limitation Surface. The OLS are a set of imaginary surfaces associated with an aerodrome. They define the volume of airspace that should ideally be kept free from obstacles in order to minimise the danger to aircraft during an entirely visual approach.

Obstruction to Air Navigation. Any fixed or mobile object, including a parked helicopter, which impinges the approach/departure surface or the transitional surfaces.

Parking Pad. The paved centre portion of a parking position, normally adjacent to an HLS.

Performance Class 1 (PC1). Similar to Category A requirements. For a rotorcraft, means the class of rotorcraft operations where, in the event of failure of the critical power unit, performance is available to enable the rotorcraft to land within the rejected take-off distance available, or safely continue the flight to an appropriate landing area, depending on when the failure occurs. For an elevated HLS, the reject area is that area within the FATO (25 m. diameter) and therefore this area is to be load bearing. PC1 also requires CASA approved flight path surveys to/from the HLS.

Performance Class 2 (PC2). For a rotorcraft, means the class of rotorcraft operations where, in the event of failure of the critical power unit, performance is available to enable the rotorcraft to safely continue the flight, except when the failure occurs early during the take-off manoeuvres, in which case a forced landing may be required. PC2 also requires CASA approved flight path surveys to/from the HLS.

Performance Class 2 With Exposure (PC2WE). PC2WE is very similar to PC2 as mentioned above. The primary difference is that there need not be any provision for a suitable forced landing area during the take-off and landing phases of flight, within the designated exposure period for the rotorcraft. PC2WE offers operators alternative mitigation strategies based on: a defined exposure time limit, demonstrated engine reliability, engine maintenance standards, pilot procedures and training, and operator risk assessments. Specific approval to operate with exposure is required from CASA and will require a number of mitigation strategies from the operator to gain that approval.

Performance Class 3 (PC3). For a rotorcraft, means the class of rotorcraft operations where, in the event of failure of the critical power unit at any time during the flight, a forced landing:

- in the case of multi-engine rotorcraft – may be required; or
- in the case of single-engine rotorcraft – will be required.

Pilot Activated Lighting (PAL). A PAL system utilises a hospital-based VHF radio and timed switching device, activated by the pilot via a radio transmission on a pre-set frequency, to turn on the associated HLS lighting.

Rotor Downwash. The volume of air moved downward by the action of the rotating main rotor blades. When this air strikes the ground or some other surface, it causes a turbulent outflow of air from beneath the helicopter.

Safety Area. A defined area on an HLS surrounding the FATO intended to reduce the risk of damage to helicopters accidentally diverging from the FATO. This area should be free of objects, other than those frangible mounted objects required for air navigation purposes. The Safety Area for the Design Helicopter extends 4.5m beyond the FATO perimeter forming a 34m X 34m square or a 34m diameter circle.

Safety Net. Surrounds the outer edge of a rooftop HLS. It is to be a minimum of 1.5m wide and have a load carrying capacity of not less than 122 kg/m². The outer edge is not to project above the HLS deck, and slope back and down to the deck edge at approximately 10 degrees, and not more than 20 degrees. Both the inside and outside edges of the safety net are to be secured to a solid structure.

Shielded Obstruction. A proposed or existing obstruction that does **not** need to be marked or lit due to its close proximity to another obstruction whose highest point is at the same or higher elevation.

Take off. To accelerate and commence climb at the relevant climb speed.

Take off Position. A load bearing, generally paved area, normally located on the centreline and at the edge of the TLOF, from which the helicopter takes off. Typically, there are two such positions at the edge of the TLOF, one for each of two takeoff or arrival directions.

Touchdown and Lift-off Area (TLOF). A load bearing, generally paved area, normally centred in the FATO, on which the helicopter lands or takes off, and that provides ground effect for a helicopter rotor system. Size is based on 1 x main rotor diameter of the Design Helicopter, and is 14m diameter.

Unshielded Obstruction. A proposed or existing obstruction that may need to be marked or lit since it is **not** in close proximity to another marked and lit obstruction whose highest point is at the same or higher elevation.

2.8. Applicable Abbreviations

Acronym	Meaning
AC	Advisory Circular
ACC	Aeromedical Control Centre (NSW Ambulance HQ Eveleigh)
CAAP	Civil Aviation Advisory Publication (Australia)
CASA	Civil Aviation Safety Authority (Australia)
CARs	Civil Aviation Regulations (1988) Australia
CASRs	Civil Aviation Safety Regulations (1998) Australia
D (value)	In relation to a helicopter, the total distance between the extremities of main rotor and tail rotor tip path planes (also referred to as Overall Length)
DCP	Development Control Plan
DDO	Design and Development Overlay
FAA	Federal Aviation Administration, USA
FATO	Final approach and Take-Off Area (1.5 x helicopter length)
FARA	Final Approach Reference Area

Acronym	Meaning
GPS	Global Positioning System
HEMS	Helicopter Emergency Medical Service
HLS	Helicopter Landing Site
HLSRO	HLS Reporting Officer
ICAO	International Civil Aviation Organisation
IFR	Instrument Flight Rules
IMC	Instrument Meteorological Conditions - requiring flight under IFR
JHH	John Hunter Hospital
LDP	Landing Decision Point (Category A/Performance Class 1 operations)
LEP	Local Environment Plan
LGA	Local Government Area
LLA	Landing and Lift Off Area. Solid surface meeting dynamic loading requirements, with undercarriage contact points + 1 metre in all directions
MRI	Magnetic Resonance Imagers
MTOW	Maximum Take Off Weight
NOTAM	Notice to Airmen. Issued by Airservices in relation to airspace and navigation warnings
NVG	Night Vision Goggle(s)
OIS	Object Identification Surface(s) (Heliport/HLS)
OLS	Obstacle Limitation Surface(s) (Aerodrome)
PC1	Performance Class 1
PC2	Performance Class 2
PC2WE	Performance Class 2 With Exposure
PC3	Performance Class 3
RD	Main Rotor Diameter
RTCC	Radar Terrain Clearance Chart
SARPS	Standards and Recommended Practices developed by ICAO and promulgated in the Annexes to the Convention of International Civil Aviation
TDP	Takeoff Decision Point (Category A/Performance Class 1 operations)
TLOF	Touch Down and Lift Off Area. Load bearing min. 1 x main rotor diameter.
VFR	Visual Flight Rules
VHF	Very High Frequency radio
VMC	Visual Meteorological Conditions - allowing flight under VFR
V _{TOSS}	Take off Safety Speed

2.9. List of Images

Image	Description
1	Site Location

2.10. List of Tables

Table	Description
1	Secretary's Environmental Assessment Requirements - Aviation

2.11. List of Figures

Figure	Description
1	Example of Obstacle Limitation Surfaces
2	Example of PANS-OPS Surfaces
3	Example of a Radar Terrain Clearance Chart
4	HLS VFR Approach and Departure Surfaces (1)
5	HLS VFR Approach and Departure Surfaces (2)
6	Protected Side Slopes
7	HLS IFR Approach/Departure and Transitional Surfaces
8	Object Identification Surfaces
9	Category A Backup Procedure Profile
10	Category A Backup Procedure Surfaces
11	Location of the Proposed 10 Dangar St Development (1)
12	Location of the Proposed 10 Dangar St Development (2)
13	Elevation of the Proposed 10 Dangar St Development
14	Williamtown OLS overlay and the 10 Dangar St development
15	RAAF Base Williamtown Defence Aviation Area
16	The Port of Newcastle helicopter flight paths
17	The Broadmeadow Base RNP110 Approach Procedure
18	Visual Approach Area - Helicopter

3. GENERAL AIRSPACE REQUIREMENTS AND CONSIDERATIONS

3.1. Purpose of this Section

It is important that the reader has a good understanding of the fundamentals of airspace protection for aerodromes and heliports/HLS in order to be able to understand the analysis later in this report. Section 3 provides this general overview.

3.2. Civil Airspace Regulation in Australia - Aerodromes

Approvals will be required if prescribed airspace could be impinged. The normal contact for this process is through the operator of the relevant airport.

Protected airspace includes an airport's Obstacle Limitation Surfaces (OLS) involving a set of imaginary surfaces associated with an aerodrome that should be kept free of obstacles. Additionally, the Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS) surfaces that takes account of the airspace associated with aircraft instrument procedures, and the airspace associated with the Radar Terrain Clearance Chart (RTCC) must be considered.

At Federally-leased aerodromes, the Airports Act 1996 and the Airports (Protection of Airspace) Regulations 1996 differentiate between short-term (less than 3 months) and long-term controlled activities. The Regulations provide for the airport operator to approve short-term controlled activities that penetrate the OLS, and for the Commonwealth Department of Infrastructure, Transport, Regional Development, Communications and the Arts for approval of long-term controlled activities and those short-term controlled activities referred to it by the airport operator. However, the airport operator must refer short-term PANS-OPS infringements to the Department for approval. Long term intrusions of the PANS-OPS surface are prohibited.

CASA Advisory Circular (AC) 139.E-01 Reporting of Tall Structures provides guidance on what needs to be reported.

Regulation 139.165 (Notifying CASA of certain proposed objects or structures) of Civil Aviation Safety Regulations Part 139 states: "This regulation applies if a person proposes to construct or erect an object or structure that...will have a height of 100 metres or more above ground level...or is of a kind prescribed by the Part 139 Manual of Standards." This is done through Airservices Australia.

3.3. Military Airspace Regulation in Australia – Aerodromes

Military airspace in Australia is regulated under Part 11A of Defence Regulation 2016 which is in turn authorised under the Defence Act 1903. Part 11 A pertains to Defence aviation areas. The key information relevant is found in Division 2, Subdivision A, Clause 68C - Construction of buildings, structures and objects in Defence aviation areas above specified height restrictions. The clause states that:

- (1) A person commits an offence if:
 - (a) the person constructs a building, structure or object within an area; and
 - (b) the area is a defence aviation area; and
 - (c) the building, structure or object exceeds the height restriction applying to the building, structure or object within the defence aviation area as specified in a Ministerial declaration for the defence aviation area; and
 - (d) the person does not have a valid approval under section 68F to construct the building, structure or object at a height that exceeds the height restriction applying to the building, structure or object.

A crane entering protected airspace would be considered a "structure or object" and entry into protected airspace would be considered to "exceed the height restriction".

3.4. Airspace Management in Australia – Heliports and Helicopter Landing Sites

Currently within Australia, there are no set rules or regulations applicable to the design, construction or placement of HLS'. The appropriate national regulatory guidance at present for the use of HLS' is Civil Aviation Safety Regulation (CASR) 91-410 which places the onus on the helicopter pilot to determine the suitability of a landing site. CASA, as the regulator of aviation in Australia divested itself of direct responsibility for regulating HLS' in the early 1990s and currently provides only basic operating guidelines via CASA Advisory Circular (AC) 91-29 Guidelines for helicopters – suitable places to takeoff and land.

Because no Federal or State (NSW) legislation is in place to protect VFR approach and departure paths and the transitional surfaces associated with hospital HLSs, in May 2018, the Commonwealth Department of Infrastructure, Transport, Regional Development and Communications issued Guideline H: Protecting Strategically Important Helicopter Landing Sites under the National Airports Safeguarding Framework (NASF). Whilst this publication has no legal effect in NSW as yet, its content is gradually being aligned within the NSW MoH Guidelines for Hospital Helicopter Landing Sites in NSW.

3.5. Helicopter Routes

In addition to considering the impacts on heliports, HLSs and their associated approach and departure paths (see [paragraph 3.3](#)) it is also necessary to consider special routes designed for, and used by, helicopters to navigate the complex airspace around major aerodromes. These routes are typically associated with key destinations such as aerodromes, heliports and hospitals. Details of these routes can be found in the Enroute Supplement Australia (ERSA) entry for the related aerodrome.

3.6. State Government Requirements

There are no specific articles of legislation for aerodromes in NSW. Matters pertaining to aerodromes are governed under the guise of State environmental legislation. The various legislative/regulatory requirements relating to HLSs in NSW are complex. Current regulation excludes emergency service landing sites from the definition of “designated development” in the Environmental Planning and Assessment Regulation (which otherwise includes most HLSs). Generally, hospital HLSs are considered “ancillary-uses” to hospital purposes and are thus not separate “development”. The same cannot necessarily be said about off-site emergency medical HLSs, e.g. local sports fields.

Whilst not an aviation requirement, cranes may need access to airspace above neighbouring properties in which case the NSW Access to Neighbouring Land Act 2000 may apply.

3.7. Local Government Requirements

Where an aerodrome is owned or operated by a Local Government Authority (LGA) or other entity, local government requirements for airspace protection are normally included in a Local Environment Plan (LEP), Development Control Plan (DCP) or similar document. The Civil Aviation Safety Regulations 1988 provide jurisdiction over allowable construction activities in the vicinity of non-Federally leased aerodromes. The LGA will require a proponent to obtain an assessment from CASA as to the hazard presented by such development, and will require compliance with that CASA assessment.

3.8. Unmanned Aircraft Systems Operations

If the proposed development is in proximity to an aerodrome or a strategically important HLS, Unmanned Aircraft Systems (UAS) operations will ordinarily be restricted. Various requirements to operate within such proximity will need to be met.

3.9. Obstacle Limitation Surfaces

The objective of the OLS is to define a volume of airspace in proximity to the airport which should be kept free of obstacles that may endanger aircraft in visual operations, or during the visual stages of an instrument approach.

The intention is not to restrict or prohibit all obstacles, but to ensure that either existing or potential obstacles are examined for their impact on aircraft operations and that their presence is properly taken into account. Since they are relevant to visual operations, it may sometimes be sufficient to ensure that the obstacle is conspicuous to pilots, and this may require that the obstacle be marked or lit.

In reality, there is little issue with breaching the OLS as pilots will be visual with the obstruction and can work on “see and avoid” principles. OLS at a multi-runway aerodrome look akin to [Figure 1](#) below:

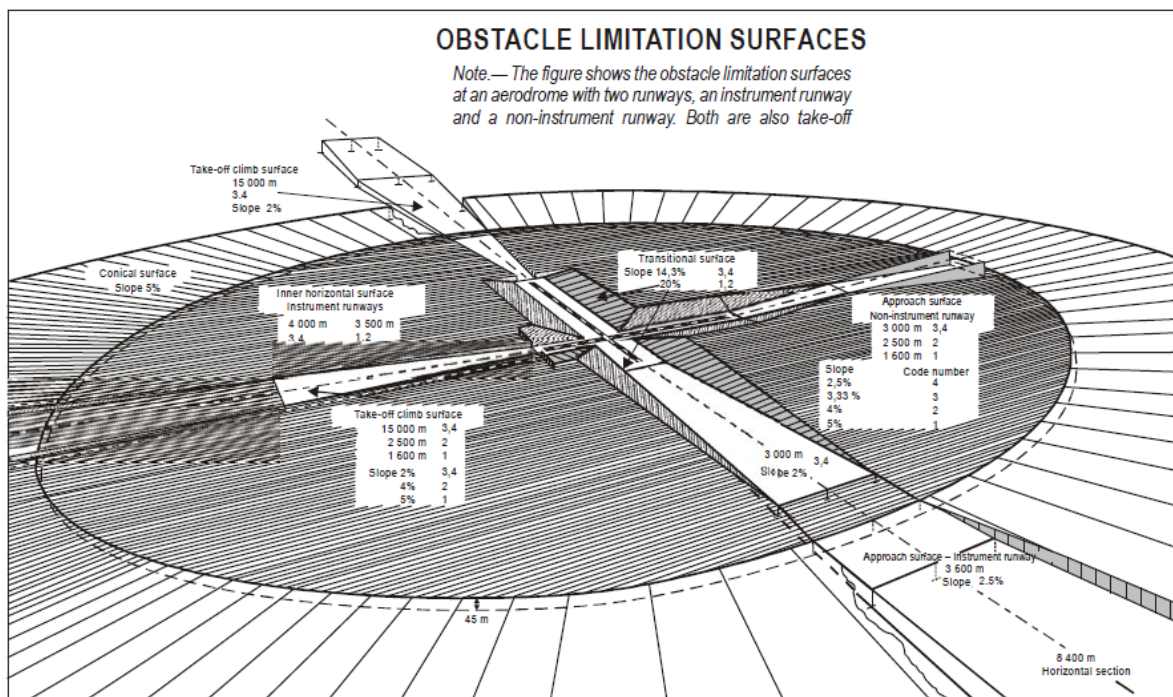


Figure 1: Example of Obstacle Limitation Surfaces

3.10. Procedures for Air Navigation – Aircraft Operations (PANS-OPS) Surfaces

PANS-OPS surfaces detail essential areas and obstacle clearance requirements for the achievement of safe, regular instrument flight operations.

The instrument flight procedures enable pilots to either descend from the high enroute environment of cruise type flight to establish visual contact with the landing runway, or climb from the runway to the enroute environment, with a prescribed safe margin above terrain and obstacles, by use of aircraft instruments and radio navigation aids or GPS in conditions where the pilot cannot maintain visual contact with the terrain and obstacles due to inclement weather conditions.

Pilots must be protected against protrusions into the PANS-OPS surfaces as they have no way of avoiding obstructions if they get off track and they cannot see such obstructions.

PANS-OPS surfaces are constructed differently to OLS however they serve a similar purpose. An example of PANS-OPS surfaces is in [Figure 2](#) below:

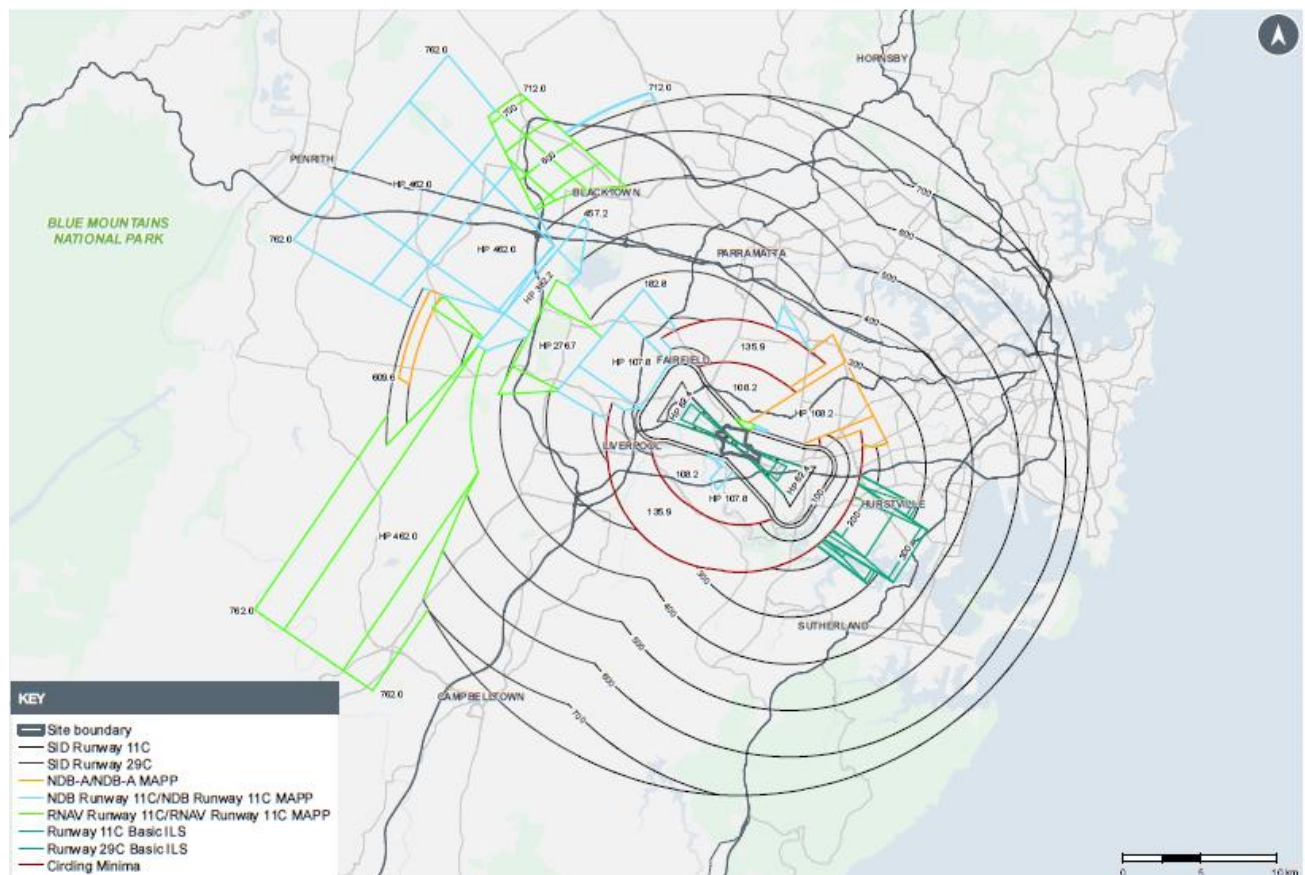


Figure 2: Example of PANS-OPS Surfaces

3.11. Radar Terrain Clearance Charts

The Radar Terrain Clearance Chart defines an area in the vicinity of an aerodrome, in which the minimum safe levels allocated by an Air Traffic Controller (ATC) vectoring Instrument Flight Rules (IFR) flights with Primary and/or Secondary Surveillance RADAR equipment have been predetermined. The figure shown on the chart is the lowest altitude which an ATC may assign to a pilot. An example of an RTCC is in [Figure 3](#) below:

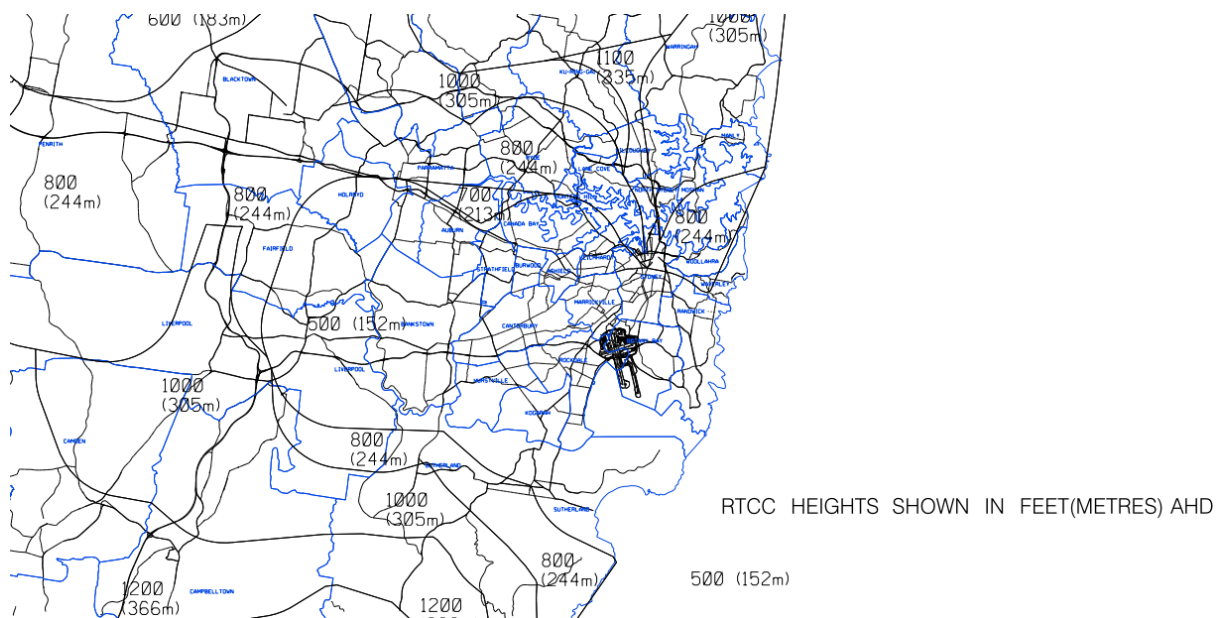


Figure 3: Example of a Radar Terrain Clearance Chart (RTCC)

4. SPECIFIC 10 DANGAR ST DEVELOPMENT CONSIDERATIONS

4.1. The 10 Dangar St Development Location

The location of the proposed 10 Dangar St development is shown in [Figures 11 and 12](#) below: 16km south-south-west of Newcastle/Williamstown Aerodrome; 6.25km east of the John Hunter Hospital at New Lambton Heights; 2.8km east of the Westpac Rescue Helicopter Service base in Broadmeadow; and 1.4km south-west of the Port of Newcastle Dykes Point Helicopter Base.

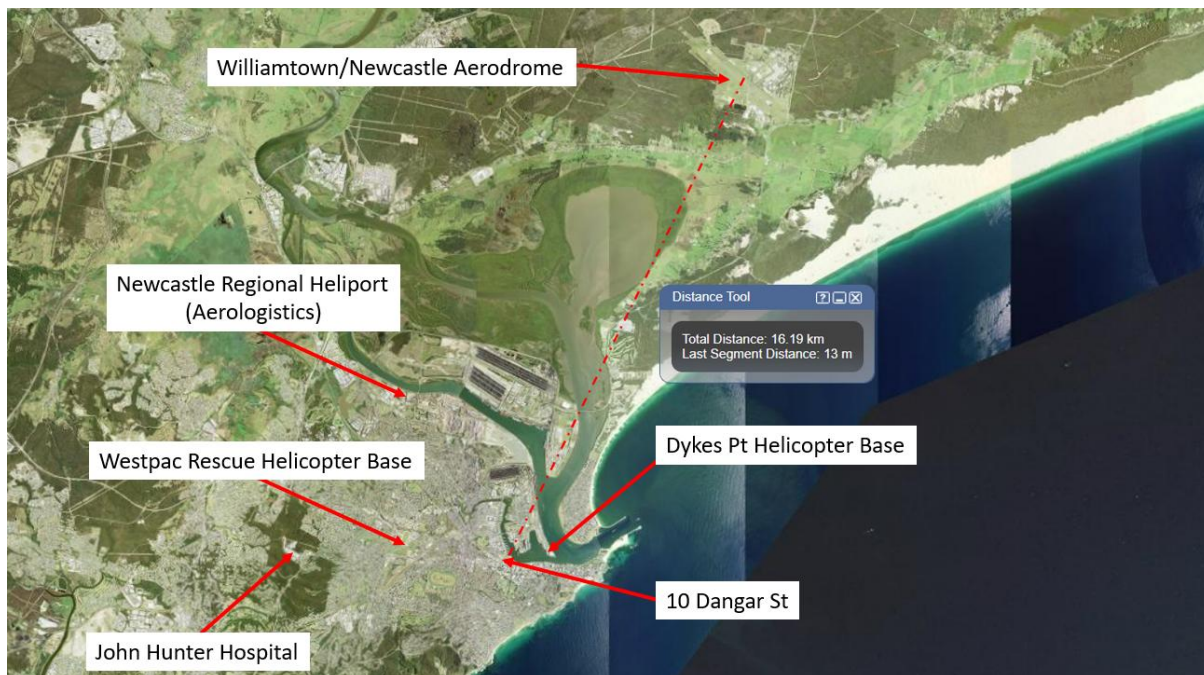


Figure 11: Location of the Proposed 10 Dangar St Development (1)



Figure 12: Location of the Proposed 10 Dangar St Development (2)

4.2. The 10 Dangar St Development Elevation

The 10 Dangar St development is currently planned to be built to 150.9 metres above sea level (RL 150.9), but with potential to increase up to RL152 if necessary to accommodate essential, late design changes. See [Figure 13](#) below. The proposed rezoning permits an elevation of up to RL152.

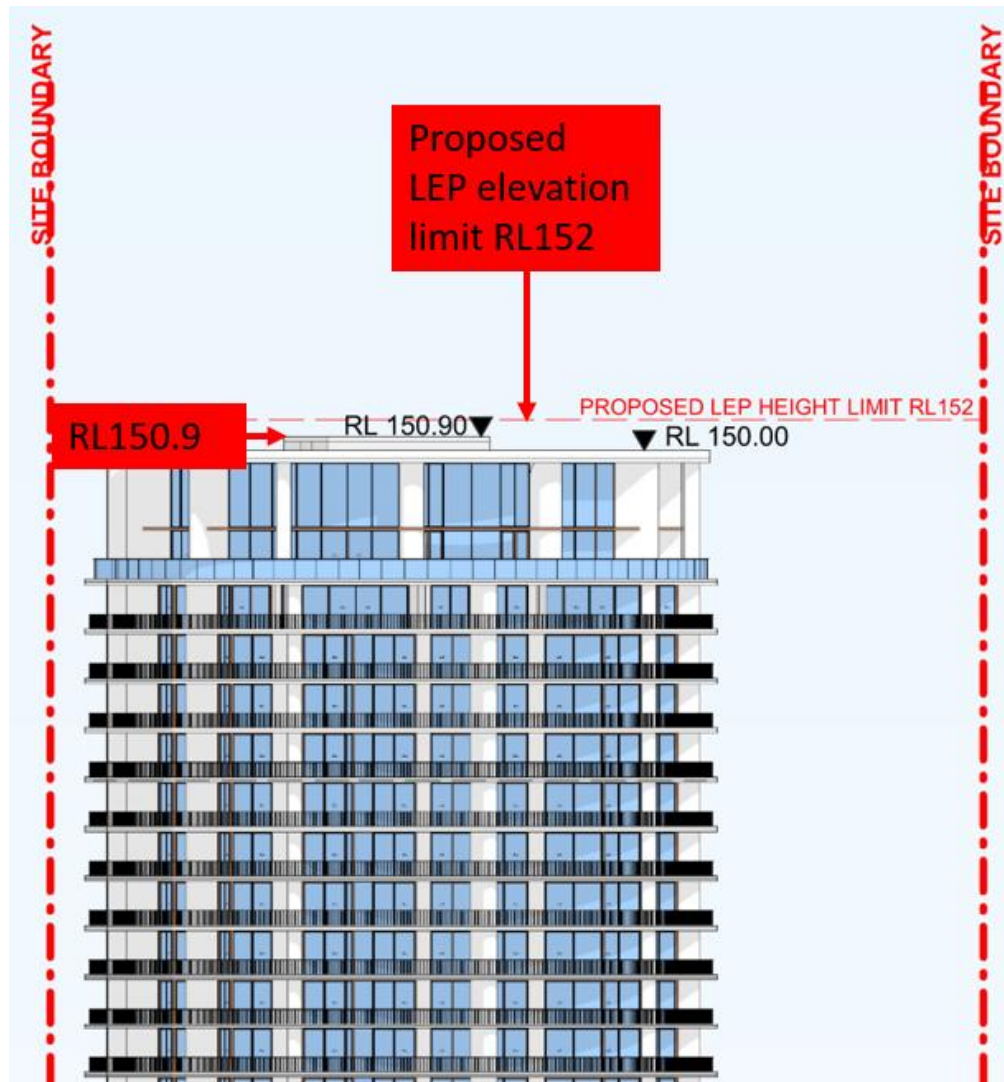


Figure 13: Elevation of the Proposed 10 Dangar St Development

4.3. Newcastle Local Environment Plan (LEP) 2012 - Airspace

The Newcastle/Williamstown Aerodrome is not within the Newcastle Local Government Area (LGA) (it is within the Port Stephens LGA). To that end, the Newcastle LEP does not contain any “Airspace Operations” requirements. The Port Stephens LEP 2013 is not applicable to the 10 Dangar St development.

There is, however, a Department of Defence document titled “Operation of Cranes and Tall Structures in the Vicinity of Newcastle Airport” dated July 2013 and attached to the City of Newcastle Council website states that: “This instruction details the procedures to seek approval to erect a crane or tall structure within 15 km of Newcastle Airport”. As the 10 Dangar St development is approximately 16km from the Newcastle/Williamstown Aerodrome, it does not apply. See [Figure 14](#) below. See also [Section 4.12](#).

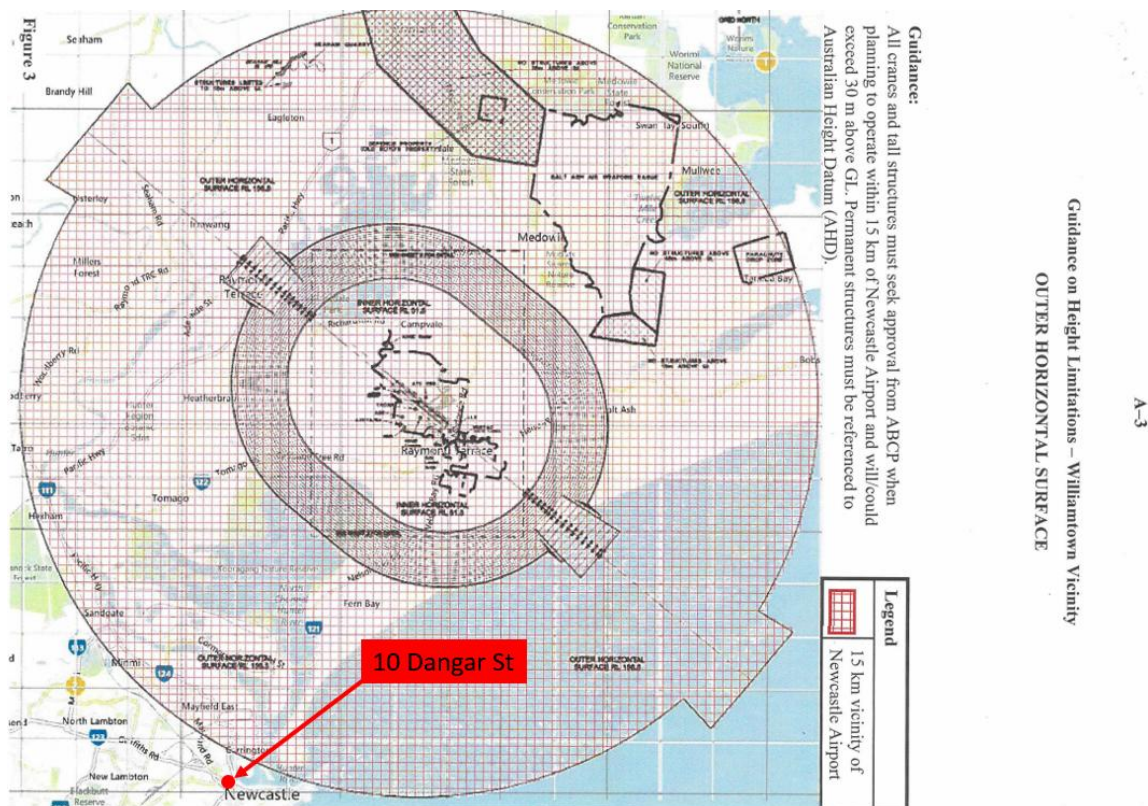


Figure 14: Williamtown OLS overlay and the 10 Dangar St development

4.4. The Newcastle Development Control Plan (DCP) 2012

The stated purpose of the Newcastle DCP is to:

- Provide detailed provisions relating to matters of significance to The City of Newcastle to be considered by Council when exercising its environmental assessment and planning functions under Part 4 of the Environmental Planning and Assessment Act 1979;
- Expand upon the aims, objectives and other provisions of the Newcastle Local Environmental Plan 2012;
- Provide detailed criteria for the assessment of development applications; and
- Identifies notification requirements in accordance with section 3.43(c) of the Environmental Planning & Assessment Act 1979.

There are no references to protection of approach and departure paths for helicopter landing sites in the Newcastle DCP. The DCP formerly made reference to State Environmental Planning Policy (SEPP) (Three Ports) 2013 which has now been superseded by the Transport and Infrastructure SEPP. The 10 Dangar St development is outside of the land that was formerly zoned for “Special Activities” in relation to the Port of Newcastle.

4.5. Defence Regulation 2016

Defence Regulation 2016 places construction requirements around the Defence Aviation Area (DAA) for RAAF Base Williamtown. Whilst a building as low as RL 28.85 (13.65m above ground level) will undoubtedly be approved, it will require assessment by RAAF Base authorities. Likewise, construction cranes, regardless of type, will require assessment by RAAF Base authorities.

Defence Regulation 2016 provides guidance for making building and crane applications under a declared DAA. For “general construction” it states:

“A DAA application is required to be submitted to Defence before construction commences if the following applies:

- The height of a planned structure exceeds the DAA height restriction for the proposed development.
- Proposed development will bring into, or use, a hazardous object within a DAA.

The assessment process can take up to 2 months to allow consultation to occur with a wide range of stakeholders.

Submit an application by emailing sufficient information for Defence to understand the possible impact on aviation safety, such as:

- A brief description of the proposal.
- The street address and legal description of the subject site.
- A plan showing the proposed structure’s location in relation to the property boundaries and natural ground levels.
- Plans and elevations of the proposed structures showing the maximum height for:
 - buildings,
 - electrical equipment,
 - vegetation used for landscaping (include the height of vegetation at maturity where trees are proposed),
 - lights,
 - antennas,
 - lightning protection terminals,
 - air conditioning units, and
 - any other service infrastructure mounted on the roof in both Australian height datum (AHD) and above ground level (AGL) formats.
- Geographical co-ordinates (latitude and longitude) and universal transverse mercator (UTM) grid co-ordinates (easting and northing) for the development.
- The horizontal datum for the co-ordinates, i.e. Geocentric Datum of Australia 2020 (GDA2020), Map Grid of Australia 2020 (MGA2020), or other datum.
- If cranes are to be used, the location and height information for the crane.”

For crane use only, Defence Regulation 2016 states:

“For a DAA application involving only the proposed use of a crane, complete the crane notification form.

Contact the Air Base Command Post or Base Aviation Safety Officer by calling [1300 333 362](tel:1300333362) and ask to be connected to the relevant military aerodrome.”

Email addresses for the Air Base Command Post and Base Aviation Safety Officer at RAAF Base Williamtown, which may be easier, are as follows:

- WLM.ABCP@defence.gov.au, and
- WLM.BASO@defence.gov.au

See also [Section 4.12](#).

The 10 Dangar St, Wickham development is shown in relation to the RAAF Base Williamtown DAA in [Figure 15](#) below.

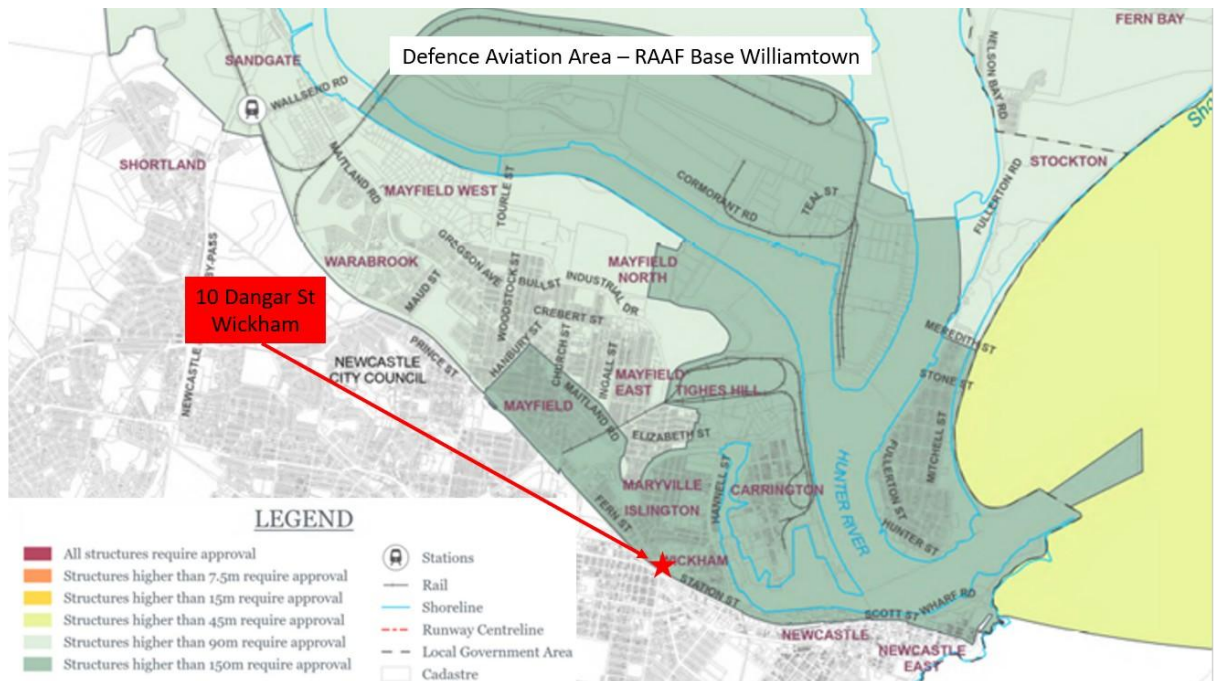


Figure 15: RAAF Base Williamtown Defence Aviation Area

4.6. Aero Logistics Helicopter Operations

There is a private heliport owned by Aero Logistics at 10 Laurio Place, Mayfield West. This heliport is not classified as “Strategically Important” in accordance with the National Airports Safeguarding Framework Guideline H – Protecting Strategically Important Helicopter Landing Sites which states at paragraph 4 that: “Not all HLS will require protection from land use or development activity due to the nature or frequency of use of those sites. However, where a HLS is identified as being of strategic importance these sites must be protected from surrounding incompatible uses and encroachment into their flight paths.” In any case, the Aero Logistics heliport is approximately 5.75km “as the crow flies” from the proposed 10 Dangar St development and this distance places it well clear of any potential obstruction which may be a hazard to aviation. Although not required to provide any assurance, the proposed 10 Dangar St development presents no danger to the Aero Logistics heliport at 10 Laurio Place, Mayfield West.

4.7. Dykes Point Helicopter Operations

The Port of Newcastle has been granted consent to update arrangements for their helicopter base to accommodate twin-engined helicopter operations. As part of the application, the flight paths for Dykes Point helicopter operations were published. See [Figure 16](#) below. The 10 Dangar St development (and its construction cranes) is not in conflict with the Port of Newcastle helicopter flight paths.

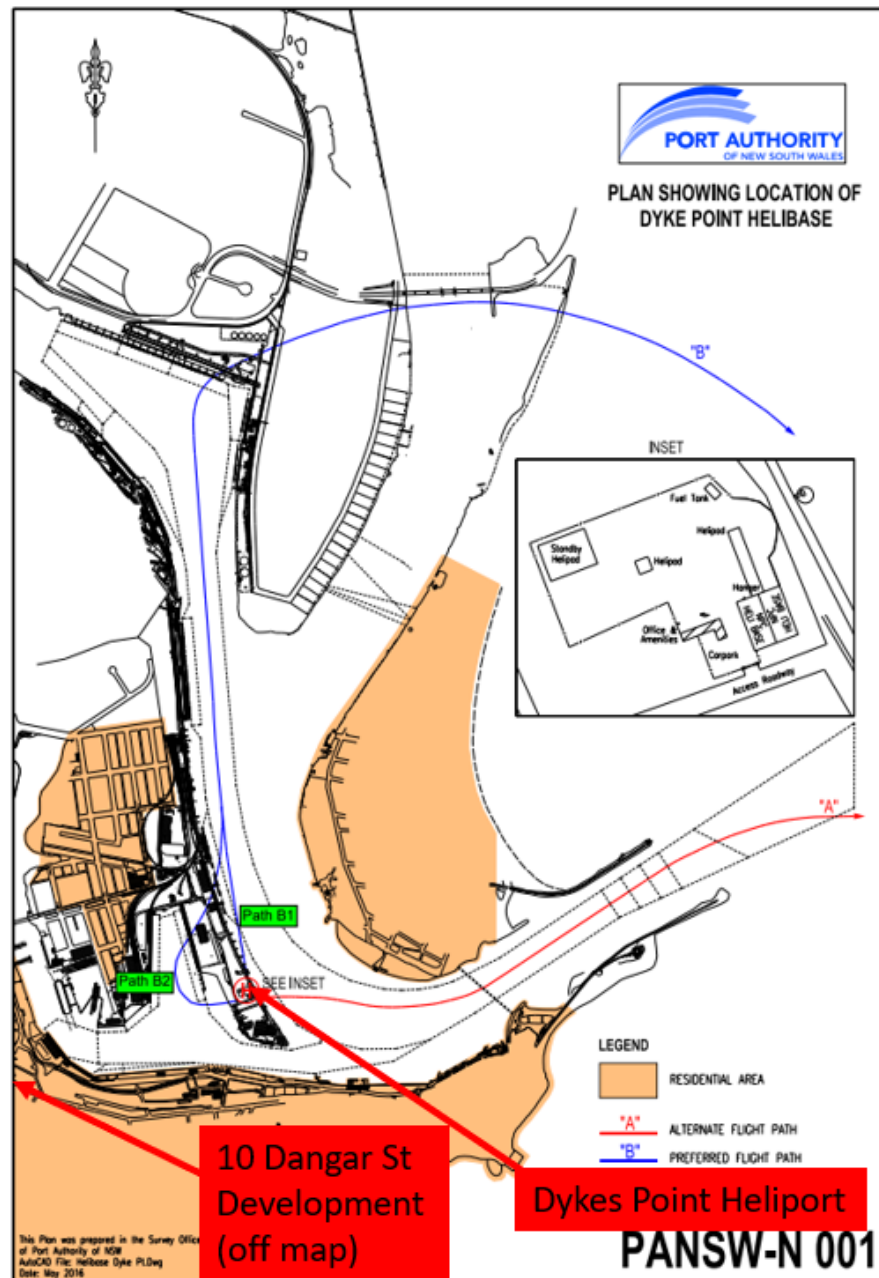


Figure 16: The Port of Newcastle helicopter flight paths

4.8. The John Hunter Hospital (JHH) Helipoint

At 6.25km away from the 10 Dangar St development, the JHH helipoint will not be impacted by either the new building or the construction crane(s). It should be noted that this assessment pertains to both the existing JHH HLS and the new helipoint that will be constructed as part of the John Hunter Health and Innovation Precinct (JHHIP) development that is currently underway.

4.9. The Westpac Rescue Helicopter Service Maintenance Base

The Westpac Rescue Helicopter Service operates from Aeropelican in Belmont to the south of Newcastle. It retains a base at Broadmeadow for maintenance purposes. There is no instrument that protects approach and departure paths to and from the Westpac Rescue Helicopter Service base at Broadmeadow. Operations to and from Broadmeadow are minimal; and are

concentrated in the area between Belmont and Broadmeadow. This keeps helicopters well clear of the 10 Dangar St development. An instrument approach procedure exists for the Broadmeadow base. See Figure 17 below.

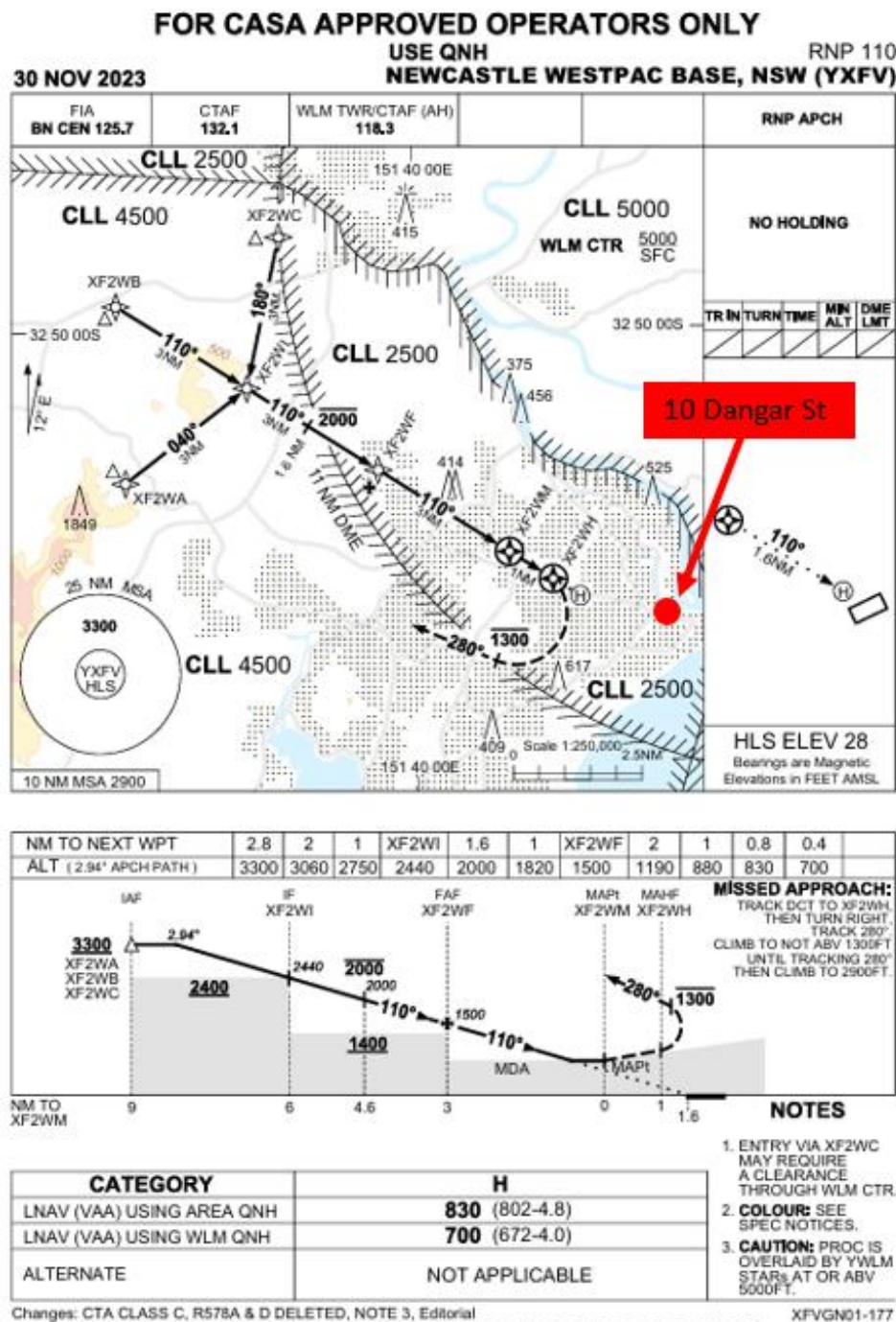


Figure 17: The Broadmeadow Base RNP110 Approach Procedure

It can be seen that the RNP 110 approach is predominantly conducted to the west of the base and the missed approach procedure also turns immediately to the west, and away from the general area of the 10 Dangar St development. There is a 926m radius Visual Approach Area (VAA) – Helicopter around an HLS (see Figure 18 below) within which obstacles must be considered. As the 10 Dangar St is more than 926m away from the

Broadmeadow Base and outside the VAA for the RNP 110 approach, the requirement does not apply. It is therefore assessed that the Westpac Rescue Helicopter Service Maintenance Base at Broadmeadow will not be impacted by either the 10 Dangar St development building(s) or the construction crane(s).

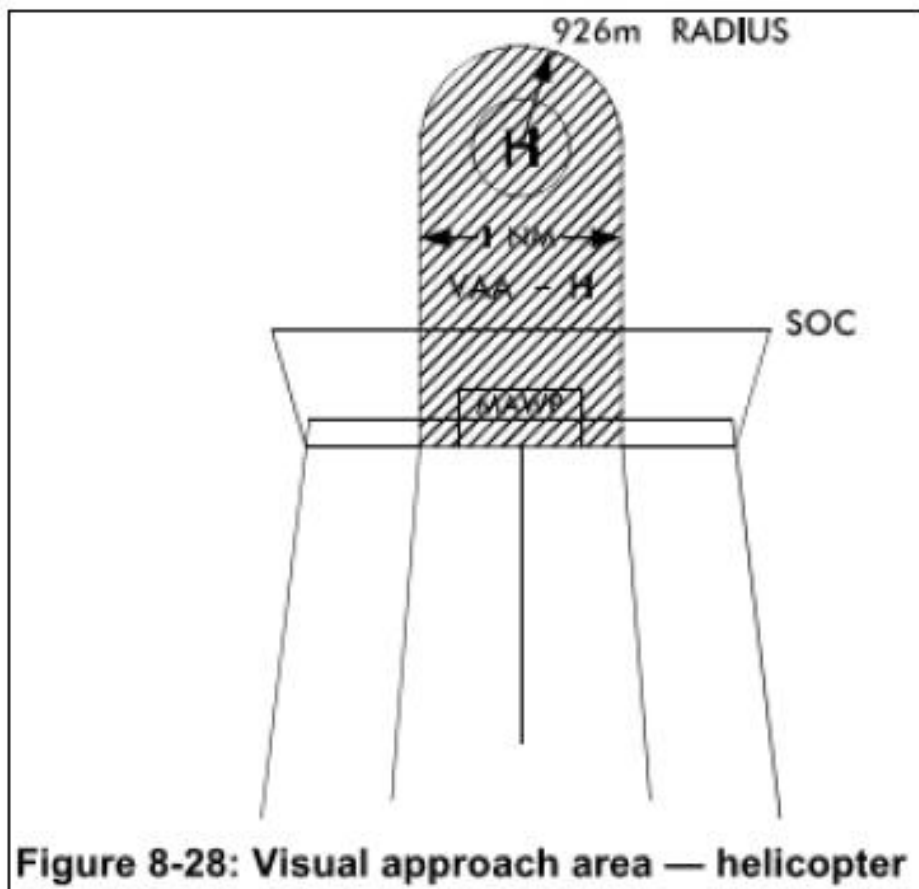


Figure 18: Visual Approach Area - Helicopter

4.10. Tall Structure Considerations

CASA AC 139.E-01 v1.0 Reporting of tall structures dated December 2021 states that “the RAAF and Airservices Australia require information on structures that are 30 m or more above ground level - within 30 km of an aerodrome or 45 m or more above ground level elsewhere for the RAAF, or 30 m or more above ground level elsewhere for Airservices Australia.”

This building therefore will need to be notified to Airservices Australia as a tall structure. AC 139.E-01 v1.0 also states that “Any object that extends to a height of 100 m or more above local ground level, must be notified to CASA by the proponent or owner.” At more than 100 m above ground level, this building will need to be notified to CASA for assessment.

4.11. Construction Crane Considerations

As the construction crane(s) will be in excess of 100m above ground level, they will require assessment by CASA and notification to Airservices Australia as a tall structure(s). CASA may determine a crane or cranes to be a hazard to aviation and require them to be marked and lit. This is most likely to be the case given their proximity to several helicopter bases and heliports.

4.12. RAAF Base Williamtown Contact

Contact was made with RAAF Base Williamtown and a reply received on Mon 2 Feb 26. The response stated: “As the proposed development is outside of the 15km OLS of RAAF Base Williamtown, there is nil requirement to submit a crane form. However please ensure cranes are lit with red obstacle lighting IAW MOS139 as there may be other aircraft in the airspace.”

4.13. Deductions: Airspace, Cranes, Obstructions and HLS

The following key deductions can be made:

- The 10 Dangar St development, once constructed, will not intrude into the Newcastle/Williamtown Aerodrome PANS-OPS surfaces.
- The 10 Dangar St development, once constructed, will not intrude into the Newcastle/Williamtown Aerodrome OLS.
- The 10 Dangar St development, once constructed, will not impact the Port of Newcastle Dykes Point HLS flight paths or the Dykes Point HLS.
- The 10 Dangar St development, once constructed, will not impact the instrument approach into the Westpac Rescue Helicopter Service base at Broadmeadow.
- The 10 Dangar St development, once constructed, will not impact helicopter operations to and from the Westpac Rescue Helicopter Service base at Broadmeadow.
- The 10 Dangar St development, once constructed, will not impact helicopter operations to and from the JHH.
- The 10 Dangar St development construction crane(s) will not intrude into the Newcastle/Williamtown Aerodrome PANS-OPS surfaces.
- The 10 Dangar St development construction crane(s) will not intrude into the Newcastle/Williamtown Aerodrome OLS.
- The 10 Dangar St development construction crane(s) will not impact the Port of Newcastle Dykes Point HLS flight paths or the Dykes Point HLS.
- The 10 Dangar St development construction crane(s) will not impact the instrument approach into the Westpac Rescue Helicopter Service base at Broadmeadow.
- The 10 Dangar St development construction crane(s) will not impact helicopter operations to and from the Westpac Rescue Helicopter Service base at Broadmeadow.
- The 10 Dangar St development construction crane(s) will not impact helicopter operations to and from the JHH.
- The 10 Dangar St development construction crane(s) will require aviation-standard obstacle lighting as specified by CASA and as stated by RAAF Base Williamtown.

4.14. Authority Consultation

Consultation has been undertaken with the Department of Defence (RAAF Base Williamtown) (See also [Section 4.12](#)) in relation to the Williamtown Defence Aviation Area and the Newcastle Williamtown Aerodrome OLS.

4.15. Cumulative Impacts

The cumulative impacts of this proposed development on aviation operations to either Newcastle Williamtown Aerodrome or the any strategically important hospital HLS are negligible.

4.16. Mitigations

There is nothing significant to mitigate in relation to aviation impact and airspace protection matters for the proposed development. Aviation-standard obstacle lighting for construction crane(s) are routine issues that are considered on all projects in the vicinity of aerodromes, helicopter landing sites or helicopter routes.

Project Stage	Mitigation Measures	Relevant Section
C	Crane lighting to CASA standards.	4.11 and 4.12

Table 3: Mitigation Measures

4.17. Conclusion

The additional consideration of cranes will not be sufficient to impact aviation safety at Newcastle/Williamtown Aerodrome or affect helicopter operations within the city of Newcastle and the Port of Newcastle.

Approval will not be required to erect a construction crane(s) unless specifically advised by Newcastle City Council.

4.18. Recommendations

Ensure that the proposed development construction tower crane(s) is/are fitted with CASA standard aviation obstacle lighting. If operating at night or in low visibility, ensure that the proposed development construction mobile crane(s) is/are fitted with CASA standard aviation obstacle lighting.