ANGEL PLACE
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29 September 2021

Mark Harold
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Sydney Helicopters
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Dear Mark,

TRAFFIC IMPACT STATEMENT – 89-151 OLD CASTLEREAGH ROAD MULGOA

Urbis has been engaged by Heliport Developers Pty Ltd (**Sydney Helicopters**) to provide a Traffic Impact Statement (TIS) to accompany the development application for the development of a new helipad located at 89-151 Old Castlereagh Road, Penrith. This letter outlines the traffic and parking impacts likely to be generated by the proposal.

This letter is structured as follows

- Existing conditions.
- Proposed development.
- Traffic generation potential.
- Parking provision assessment.
- Car park design assessment.
- Vehicle manoeuvrability assessment.
- Conclusion.

EXISTING CONDITIONS

The Site and Surrounding Roads

The site is located at 89-151 Old Castlereagh Road (the site). It is off Old Castlereagh Road and backs onto Sydney International Regatta Centre. Access to the site is via a driveway off Old Castlereagh Road. The land is currently zoned Tourism (T) under the State Environmental Planning Policy (SEPP) Penrith Lakes Scheme 1989. The main surrounding land to the west, north and east of the site is currently Parkland (P). However, the land to the east, along the Old Castlereagh Rd, is Tourism(T). The land to the south of the site has two zonings, the south-east land is Employment (EP) while the south-west land is Unzoned (U).

The site is located approximately 5 km from the Penrith CBD and 6.5 km away from the Great Western Highway (M4). **Figure 1** shows the existing site context and primary vehicle access.

Figure 1 Site location

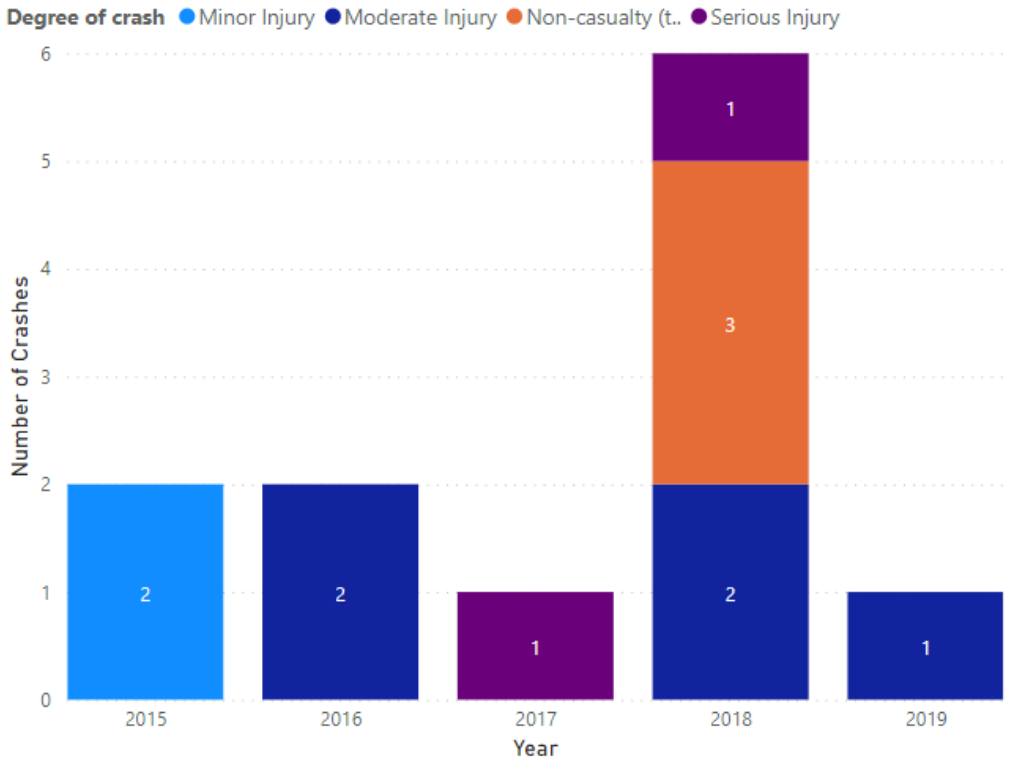
Source: Nearmap

Crash History

Crash and casualty statistics from Transport for New South Wales (TfNSW) Centre for Road Safety were analysed for the surrounding road network. These statistics only report crashes that involve tow-away, police reports or ambulance attendance.

There were 12 crashes reported in the five years between 2015 and 2019 in the surrounding area on the Old Castlereagh Road, Castlereagh Road, and at the Old Castlereagh Rd/ Castlereagh Rd roundabout. Seven of these crashes happened at the roundabout, with five injuries recorded. The remaining five crashes had happened on the approaching roads to the roundabout. One out of these five crashes occurred on Old Castlereagh Road, down the road where this site is located. There have been no crashes on Old Castlereagh Road since 2016. The degree of each crash is sorted by the year of occurrence which is presented in **Figure 2**.

Figure 2 Degree of crash by year



Source: TfNSW Crash and casualty statistics modified by Urbis

The nature of crashes at Old Castlereagh Road/Castlereagh Road roundabout was

- Off carriageway left/right on the bend into an object – a vehicle went off the road on a bend hitting an object on either the left or right side of the road. Two crashes were recorded under this description with no serious injury.
- Out of control on bend/road – A vehicle loses control on a bend or road. Three crashes were recorded under this description. None of these crashes resulted in serious injury.

- Right turn sideswipe - A vehicle in a lane that is not the rightmost lane attempts to turn right while a vehicle in the rightmost lane continues straight, resulting in a collision. One crash was recorded under this description resulting in serious injury.

The nature of the crashes on Old Castlereagh Road and at the Old Castlereagh Road/Castlereagh Road roundabout indicate driver error and are not indicative of any underlying road safety issues.

The locations and degrees of each crash are shown in **Figure 3.**

Figure 3 Crash history

Source: TfNSW Crash and casualty statistics modified by Urbis - https://roadsafety.transport.nsw.gov.au/statistics/interactivecrashstats/lga_stats.html?tablga=4

Car Parking

There is no on-street car parking close to the site. All visitors to the site travelling in private vehicles are expected to use the on-site parking provided.

Public Transport and Active Transport

There are two bus stops near the site, located on either side of Castlereagh Road with an approximately 20-minute walk from the site.

These bus stops are serviced by the bus routes 783 and 673 The details of these services are outlined below

- 783 – Werrington to Penrith via Jordan Springs (reverse route follows the same route path). One service per hour in each direction. Weekend service hours are between 8 am and 6 pm.
- 673 – Windsor to Penrith via Cranebrook (reverse route follows the same route path). Six services in each direction on a weekday at irregular intervals from 7 am to 5 pm. Two services per day in each direction on Saturdays. No services on Sundays.

The closest train station to the site is Penrith train station, which is a 7-minute drive from the site and is serviced by the BMT and T1 trains connecting Penrith Station to Central station to the east and Mount Victoria Station to the west. The train headway is 10 to 15 minutes for each direction on weekdays and weekends.

There are no footpaths along the section of Old Castlereagh Road that provides access to the site. There are existing footpaths on the eastern side of Castlereagh Road. No bicycle paths connect the site to the road network or public transport stations.

The limited public transport services within walking distance to the site, combined with the lack of active transport connectivity from public transport stations to the site, indicate that most staff and customers are likely to use private transport to travel to and from the site. **Figure 4** shows two bus stops on either side of Castlereagh Rd. Both bus routes 783 and 673 stop at these bus stops.

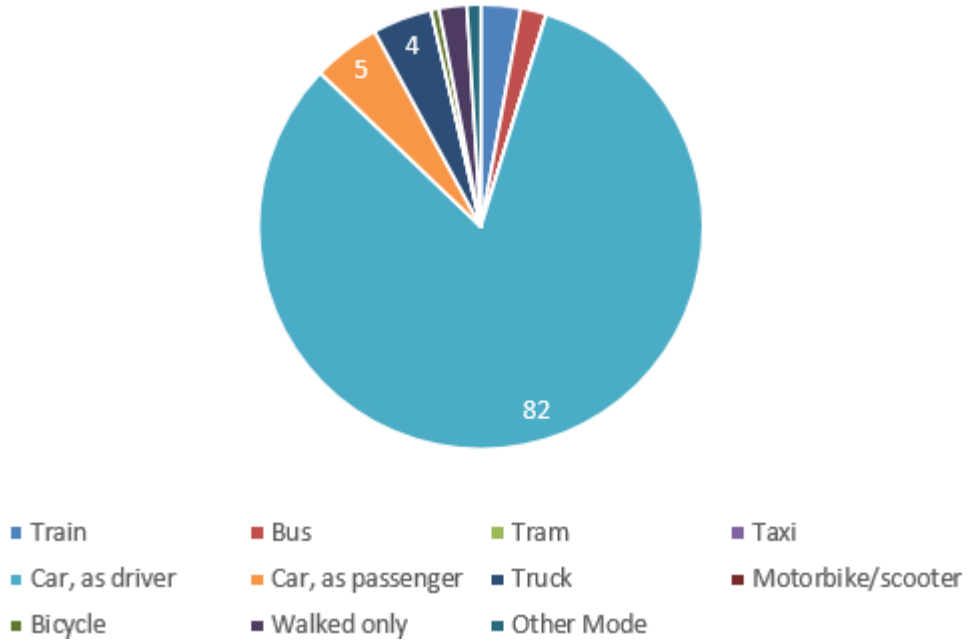
Figure 4 Bus stops

Source: Urbis

Mode Split

An analysis of the Australian Bureau of Statistics (ABS) census data was undertaken to determine the mode splits currently used within the ABS Destination Zone (DZN) that encompasses the site. People who did not go to work, worked from home, or did not state how they went to work were excluded from this analysis. Error! Reference source not found. shows the mode split of the journey to work for the Destination Zone (DZN) that our site falls within. A considerable portion of the journey to work, more than 90 per cent, is undertaken by private cars and trucks.

Figure 5 Mode Split



Source: Based on ABS Tablebuilder - https://auth.censusdata.abs.gov.au/webapi/jsf/tableView/tableView.xhtml#

THE PROPOSED DEVELOPMENT

The proposal is for the demolition of existing buildings and sheds to construct the facilities required for a helipad. The scope of the project is outlined below

- Demolition of 2 single-storey sheds and integrated hardstand extending beyond the footprint of the sheds
- Demolition of one small single-storey shed and associated pavement
- Removal of one inground tank
- Removal of one flood light
- Removal of less than 10 trees
- Reinstatement of grass turf in locations of removed hardstands and pavement
- New concrete hardstand in the location of existing concrete hardstands
- New lighting as required for the Final Approach and Takeoff (FATO)

The proposed site plan is shown in **Appendix A**.

TRAFFIC GENERATION

Development Traffic Generation

There is no specific rate provided in the *TfNSW Guide to Traffic Generating Developments (2002)* for helipads or similar land uses. Sydney Helicopters has provided information from their existing site to Urbis to determine the existing traffic generation potential of the site. Staff members typically work from 8:00 AM to 6:00 PM. The expected number of staff working on-site at one time is 10 from Monday to Friday. Sydney Helicopters has indicated that the proposed development will typically have 10 to 15 customers per day.

Table 1 outlines the peak traffic generating period of the site.

Table 1 Peak Hour Trips Generated

Trip type	**Peak period** **weekdays**	**Peak hour trips generated**	**Peak hour private vehicle trips**
Customer	8:00-9:00 AM 4:00-5:00 PM	2	2
Staff	7:30-8:30 AM 5:00-6:00 PM	10	8-10
Total peak hour trips generated			**12**
Total peak hour private vehicle trips generated			**12**

Source: Based on Sydney Helicopters

The peak traffic generation time for staff was assumed to be 7:30-8:30 AM and 5:00-6:00 PM when staff are arriving and leaving the site.

As no peak period for customers was given, the peak customer period was assumed to be from 8:00-9:00 AM and 4:00-5:00 PM when the facility opens and closes for the day. This was done to assume an overlap with the staff peak period to determine the peak traffic generation in a worst-case scenario.

To determine the volume of peak hour customer trips, a maximum of 15 customers trips per day was divided by the number of operating hours of the facility per day and rounded up to the nearest whole number to determine an average number of customer trips per hour.

It has been assumed that all trips generated in the peak hour will be private vehicle trips. This assumption is made to consider the worst-case scenario which is also aligned with the mode split of the journey to work for the Destination Zone (DZN) that this site falls within.

Assessment

The proposed development is expecting to generate 12 trips per peak hour mainly in form of private car traffic This amount of traffic generated would not affect the performance of the sorounding transport network.

PARKING PROVISION ASSESSMENT

The *State Environmental Planning Policy (Penrith Lakes Scheme)* 1989 (SEPP) does not specify parking rates, and the TfNSW *Guide to Traffic Generating Developments* 2002 does not include specific car parking rates for helipads or other similar facilities. The number of car parking spaces provided for the development will therefore be assessed on merit.

Parking demand

The same information that was provided by Sydney Helicopters to determine the traffic generation was used to determine the required number of car parking spaces. As the proposed development is expected to operate at the same capacity as the facility does in its current location, staff and visitor numbers are expected to remain the same.

There are expected to be 10 staff on the site from 8:00 AM to 6:00 PM. It is expected that all of these staff members will drive to work and park on the site for their entire shift. Sydney Helicopters has indicated that there will be an average of 10 to 15 visitors per day.

Accessible parking space provision

The SEPP does not specify accessible parking rates. The accessible parking rate has therefore been taken from the *Disability (Access to Premises — Buildings) Standards* 2010.

Under this standard, the proposed development is classified as a Class 9b building (an assembly building of a public nature). The accessible parking requirement for Class 9b buildings with less than 1,000 car parking spaces is one space for every 50 car parking spaces or part thereof.

Assessment

The existing development has 40 standard car parking spaces and 1 accessible car parking space available. There are no proposed changes to the existing car parking spaces.

Assuming a worst-case scenario in which all 10 staff and 15 visitors park on the site at one time gives a car parking requirement of 25 spaces. As the proposed development will have less than 50 car parking spaces, the number of accessible car parking spaces required is one.

The on-site parking provided will therefore be sufficient to support the proposed use of the site.

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CAR PARK DESIGN ASSESSMENT

This section provides a review of the proposed on-site car parking design against the minimum requirements outlined in the relevant Australian Standards (AS 2890.1:2004 and AS2890.6:2004).

There are no proposed changes to the existing on-site car parking and access driveways.

Car Space Dimensions

Based on AS 2890.1, the existing 90-degree car spaces can be categorised under user class 2 (medium-term parking e.g. helipad visitors). Such spaces are required to be 2.5 m wide by 5.4 m long with 5.8 m of aisle width.

The existing car parking spaces are not marked on the architectural plans. When measuring the dimensions on aerial maps of the site, the existing spaces meet the above dimensional requirements. As the current spaces will be retained by the proposed development and are not expected to be high turnover spaces, it is therefore assumed that the existing parking space design is sufficient.

Accessible Car Space Dimensions

The existing 90-degree accessible parking space should meet the requirements for such spaces outlined in AS2890.6. These requirements are as follows

- The disability accessible car parking space should be designed at 2.4 m width and 5.4 m length;
- Shared space of equal dimensions shall be provided adjacent to the car parking space; and
- Both the car parking space and the shared space should include appropriate line-markings. The shared space should include a bollard to prevent motorists from parking at this location.

The existing accessible parking space complies with the dimensions requirements. The parking space is located next to an area marked ‘no parking’ which can be considered a shared space of equal dimensions. The current shared space does not include a bollard to prevent motorists from parking in the space. However, given that this is existing, it can be deemed acceptable.

Lateral Clearance Requirements

AS 2890.1 requires the provision of an additional 300 mm of clearance (for door opening) when car spaces are located adjacent to vertical obstructions higher than 150 mm.

No parking spaces are located adjacent to vertical obstructions higher than 150mm and this requirement is therefore satisfied.

Access Driveway Width

Based on AS 2890.1, the car park can be categorised under access facility category 1 (parking facility class 2, local road, 25 to 100 spaces). Such car parks require the combined entry and exit access driveway width to be 6.0 to 9.0 m wide. The combined entry and exit access driveway to the site are approximately 7.0 m wide, satisfying this requirement.

Driveway Grade

AS 2890.1 requires a maximum grade of 5% between the edge of the frontage road and property line, for at least 6 m prior to vehicular control points, and for at least 6 m into the car park.

The existing driveway access between the edge of the frontage road the property line will remain unchanged.

Head Room

AS 2890.1 requires the height between the floor and an overhead obstruction to be a minimum of 2200 mm. There are no proposed overhead obstructions to vehicles and therefore this requirement is satisfied.

VEHICLE MANOEUVRABILITY ASSESSMENT

On-site parking will primarily be accessed by staff and customers in private The largest vehicle expected to access the site is a medium rigid vehicle (MRV) that will deliver vehicles and fuel. Therefore, vehicle manoeuvrability of the site was tested using both the MRV (8.8 m L x 2.5 m W) and a standard B85 car (4.91 m L x 1.87 m W).

The anticipated manoeuvrability conditions of these vehicles were investigated through swept path tests using vehicle templates (using AutoCad Vehicle Tracking software) which reflect the key dimensions and turning radii of the vehicles.

The results of the swept path tests, along with the vehicle template used, are illustrated in **Appendix B**. It is noted that the red coloured lines in the swept paths indicate the front and rear tyre tracks of the vehicles, while the green coloured lines indicate the vehicle body. On the MRV, the light blue lines indicate a 0.5 m clearance envelope outside of the vehicle body.

As can be seen from the swept path results in **Appendix B**, an MRV can safely manoeuvre through the site and turn around to exit the site in forward gear. The MRV is not expected to use the existing driveway on the northeast corner of the site that accesses the existing single storey office building as the MRV will be accessing the site through the access road on the south of the site to deliver fuel and therefore has not been tested on that driveway. A B85 car can safely access all areas of the site and can park in all existing parking areas, and can turn around within the site to exit in forward gear.

CONCLUSION

Based on this traffic impact statement, the following can be concluded

- The proposed development is expecting to generate 12 trips per peak hour mainly in form of private car traffic. This would not impact the performance of the surrounding transport network.
- The parking demand generated by the development will be appropriately accommodated by the existing 41 car parking spaces on-site.
- The existing standard on-site car parking meets Australian Standards requirements. The existing accessible car parking does not meet Australian Standards requirements because the current

shared space does not include a bollard, however, given that this is existing, it can be deemed acceptable.

- The largest vehicle to regularly access the site will be an MRV. Based on the swept path test results, this vehicle can enter and exit the site in forward gear and manoeuvre safely around the site.

Should you wish to discuss any aspect of this letter, please don't hesitate to contact me on 02 8233 7665 or gmccabe@urbis.com.au.

Yours sincerely,

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APPENDIX A SITE PLAN

Figure 6 Proposed site plan

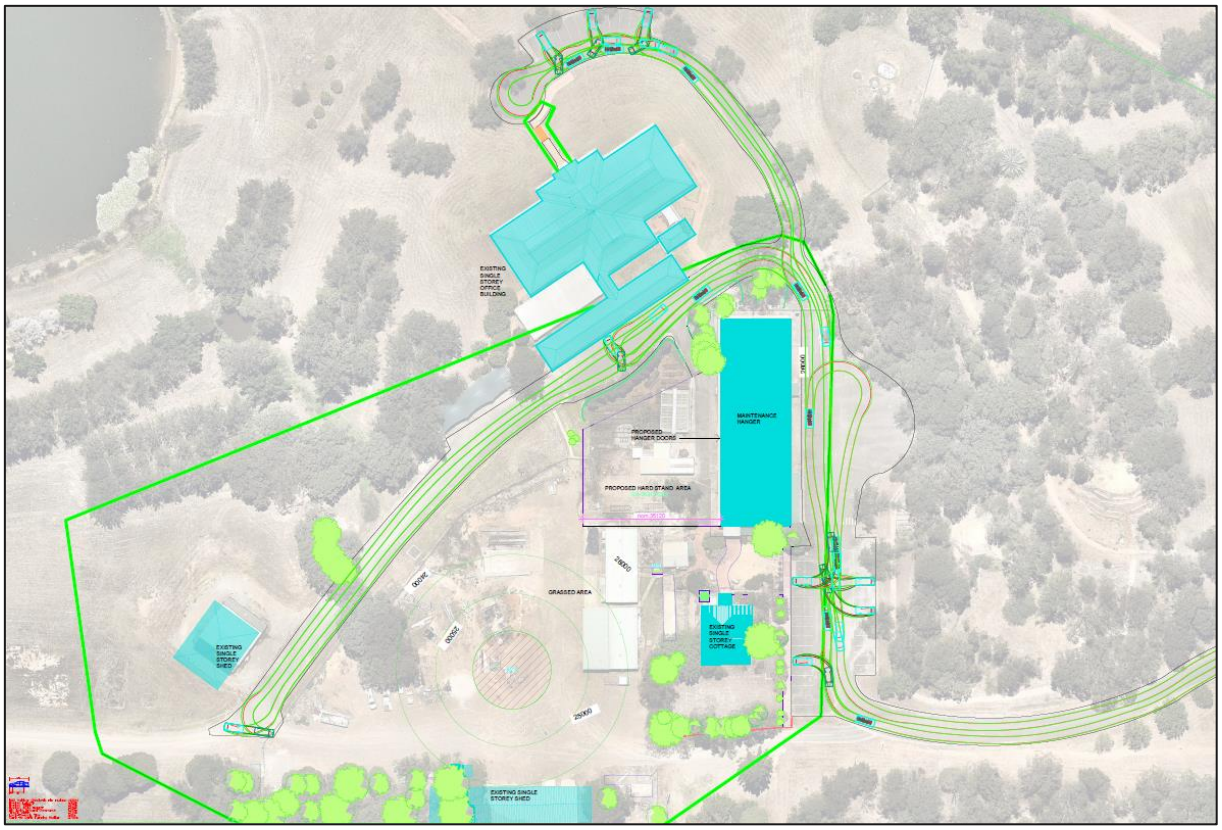
Source: WMK Architecture

APPENDIX B SWEPT PATHS

Figure 7 - MRV swept path

Source: Urbis

Figure 8 B85 car swept path



Source: Urbis