Annexure 13:

**Traffic Engineering Report** 



# **Traffix Group**

# Traffic Engineering Assessment

Proposed Residential & Hotel Development 69-73 Murphy Street, Port Douglas

Prepared for Gurner<sup>™</sup>

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G29056R-01C

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### **Document Control**

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### 1. Introduction

Traffix Group has been engaged by Gurner to undertake a Traffic Engineering Assessment for a Proposed Residential & Hotel Development at 69-73 Murphy Street, Port Douglas.

This report provides a detailed traffic engineering assessment of the parking and traffic issues associated with the proposed development.

In the course of undertaking this assessment, we undertook desktop investigations (due to COVID travel restrictions), reviewed development plans and background material, and assessed the car parking and traffic impacts of the proposal.

Our assessment is as follows.



### 2. Existing Conditions

#### 2.1. Subject Site Location

The subject site is located on the southern side at the eastern end of Murphy Street, in Port Douglas.

A locality plan and an aerial image of the subject site is provided at Figure 1 and Figure 2, respectively.



Figure 1: Locality Map

#### 2.2. Subject Site and Existing Use

The subject land is generally rectangular in shape, consisting two parcels of land and has a total site area of approximately 3,000 square metres with a frontage to the Murphy Street road reserve (and dirt path) of approximately 60 metres.

The eastern boundary of the site abuts The Esplanade Road Reserve, however the road reserve is primarily vegetation and landscaping with the exception of an existing accessway which serves Julan Park and a small associated parking area.

The site abuts existing residential development to the west and a short term accommodation to the south.

The site is currently vacant.

Figure 2, shows an aerial image with the existing property boundaries and road reserves (in yellow).



Figure 2: Aerial Image – Courtesy of Queensland Globe

#### 2.3. Planning Scheme Zones & Surrounding Uses

The subject site currently has a land use classification of 'Tourist Accommodation' under the Douglas Shire Planning Scheme, as shown in the zoning map provided in Figure 4.

The site is located to the east of the Port Douglas Town Centre and is on the border (but outside) the Precinct 1 area.

Existing land use in the immediate vicinity of the subject site is a mixture of residential, short term accommodation and nature park.

Notable land uses in the nearby area include:

- Four Mile Beach, located approximately 100 metres south-east of the site,
- Julan Park, located to the immediate south-east.
- Trinity Bay Lookout, beginning approximately 200 metres north of the site, and
- Flagstaff Hill Lighthouse, located approximately 750 metres north-west of the site.



Figure 3: Planning Scheme Zoning Map – Douglas Shire



Figure 4: Port Douglas Precinct Map- Douglas Shire

#### 2.4. Road Network

**Murphy Street** is aligned in a north-west to south-east direction between Wharf Street (at the west) and the 4-Mile beach lookout to the east. It is nominated in Council's Planning Scheme as an Access Road and runs along the northern boundary of the site.

West of the site, Murphy Street is paved and operates two-way providing local access to the abutting properties. Along the subject site boundary, it continues as a gravel road providing limited vehicle access.

The **Esplanade** operates generally north-south along the coastline between Mowbray Street and Macrossan Street. To the north of Macrossan Street, the Esplanade road reserve connects to Murphy Street, abutting the eastern boundary of the site, however a formal public road is not provided through this road reserve.

South of Macrossan Street, The Esplanade is classified as a Collector Road, forming a connection from the south with the Town Centre to the west via Macrossan Street.

The majority of the existing Esplanade road reserve north of Macrossan Street is vegetated land, however the eastern portion is occupied by the car park access driveway for Julan Park. The driveway has an existing paved width of approximately 4.5-5.0 metres and provides access to 90-degree angled parking on the eastern side a turnaround area to the north-east. Half of the road is located within the Esplanade Road Reserve, whilst the other half is located in the Julan Park reserve.

Bollards restrict access from the existing access driveway and the access to Macrossan Street is provided via a driveway crossover.

**Macrossan Street** is a local Council road which is aligned in a north-west to south-east direction between Wharf Street in the north-west and Esplanade in the south-east. It is classified in the Planning Scheme as a Collector Street.

In the vicinity of the site, Macrossan Street has a carriageway width of approximately 12 metres accommodating a traffic lane, a bicycle lane and kerbside parking in each direction.



The Planning Scheme Transport Road Hierarchy map is provided at Figure 5.

Figure 5: Douglas Shire Planning Scheme Transport Road Hierarchy

#### 2.5. Sustainable Modes of Transport

The site is located approximately 800 metres walk from the Port Douglas Town Centre and is immediately proximate to a number of beaches and proximate leisure activities and destinations.

There is limited public transport around Port Douglas Town Centre, however local tourist buses, hotel shuttle buses and regional bus connections between Cairns and Port Douglas are available in the area.

Macrossan Street is nominated within the Douglas Shire Planning Scheme as a Principle Cycle and Pedestrian Route as shown in Figure 6.



Figure 6: Douglas Shire Planning Scheme Transport Pedestrian and Cycle Network

### 3. Previous Permit

A Planning Permit was issued in 2013 at the direction of the Planning and Environment Court (ref Number 110 of 2011) allowing for the development of the site for the purposes of six residential units.

The permit included a number of conditions, including relating specifically to traffic and access, requiring access be provided via The Esplanade (and/or Julan Park subject to State Approval).

Condition 9 of the Judgement Document required the following:

"9. Undertake the following works external to the land at no cost to Council:

a. Design and construct access to the site by either:

i. the extension of the Esplanade Road;

OR

*ii.* The road opening through Julan Park, in accordance with the requirements of department of Natural Resources and Mines should it be approved.

The construction of the access to the site shall be to a standard of an access street standard in accordance with Council's FNQROC Development Manual...."

The permit has since expired, however it is relevant in establishing an appropriate access location for the subject land.



### 4. Proposal

#### 4.1. General

The application proposes to develop the site for the purposes of a combined development comprising short term accommodation (18 hotel rooms) and private residential dwellings (16 apartments).

The plans include the provision of resident/guest amenities including a food and drink outlet of 175 square metres and a pool. We are advised that these amenities will be predominantly for resident and guest use.

The residential development comprises 8 x 2-bedroom dwellings,  $5 \times 3$ -bedroom dwellings, and  $3 \times 4$ -bedroom dwellings.

#### 4.2. Access

Pedestrian access will be provided via steps and ramped pathways adjacent the proposed driveway from the south-east and direct pedestrian access will also be afforded to the Murphy Street abuttals.

Vehicular access to the site is proposed from the south-east via a new ramped driveway that connects to the existing access driveway which extends north from Macrossan Street and currently provides access to the Julan Park car parking area.

The proposal seeks to widen the existing car park access to a 5.5 metres pavement width (to be consistent with an "Access Place" under the FNQROC Development Manual and AS2890.1:2004 for two-way accessways) and allow for two-way traffic flow and the increased usage as a result of the proposal.

The new ramped access will provide access to an upper level car parking area and a dedicated pick-up and drop-off zone and porte cochere for the new development.

The pick-up/drop-off area has been designed to accommodate shuttle/tour buses (22 seat mini-buses up to 7.0 metres long) and waste/loading activities for Medium-Rigid Vehicles (MRVs up to 8.8 metres long) under AS2890.2.

#### 4.3. Parking Provisions

The proposal includes a total of 27 formal car parking spaces, inclusive of 22 single bay cars in a secure area (inc. 1x DDA), a single private car garage with 2 spaces, and 2 visitor spaces. This does not include the porte cochere parallel drop-off area which will also accommodate up to two (2) passenger vehicles.

Parking will be allocated at a rate of 0.5 spaces per hotel room (9 spaces) and there will be 16 spaces for the residential apartments (average of 1 space per apartment). The remainder of the spaces (2 porte cochere spaces and 3 formal car spaces) will be for visitors and pick-up/drop-off arrangements.

Bicycle parking is provided for staff and storage areas for residents are sufficient to house bicycles if desired.

### 5. Design Considerations

#### 5.1. General

The car park layout, access and loading arrangements have been developed with design advice provided to the project architect (Wolveridge Architects) and is considered to principally meet the relevant requirements of the Douglas Shire Planning Scheme, being design in accordance with AS2890.1/2/3.

#### 5.2. Proposed Access Ramp (AS2890.1 and AS2890.2)

The proposal intends to take access via a new two-way ramped driveway which is to extend north-west from the existing Julan Park car park driveway.

The proposed access ramp is dimensioned at 6.0 metres pavement width with additional kerb/clearances on either side and allows for two-way access as demonstrated by B99 vehicle passing swept paths at Appendix B. This complies with the requirements of AS2890.1-2004.

The ramp has been designed with grades that meet AS2890.2:2018 requirements for transitions and maximum grades for a Medium Rigid Vehicle (MRV). This includes maximum grade transitions of 1 in 16 for a minimum of 7 metre lengths. The central grade does not exceed 1 in 8.

These grades are considered suitable and separate pedestrian access is provided in the form of stairs and a paved ramped pathway.

Whilst the proposed ramp will sit within the existing Esplanade Road Reserve boundary, we understand that there aren't plans to connect Murphy Street or The Esplanade in a road form. This access arrangement is also consistent with what was contemplated for the previously permitted access.

#### 5.3. Modifications to Existing Access from Street (AS2890.1 & FNQROC)

As part of the proposed access the application also seeks to widen the existing Julan Park driveway to a minimum width of 5.5 metres pavement with clearances on either side.

These dimensions are in accordance with the requirements of Douglas Shire Planning Scheme and FNQROC Development Manual Requirements for an "Access Place". This is consistent with the requirements of the previous permit.

Where required, the existing bollards along the western side of the access would be set back and the crossover at The Esplanade/Macrossan Street would be widened for the two-way access.

It is noted that the widening of the existing accessway is all within the existing The Esplanade Road Reserve and doesn't impact on the Juan Park land.

These arrangements are described in Figure 7.





Figure 7: External Vehicular Site Access

#### 5.4. General Car Parking Layout (AS2890.1 & AS2890.6)

An assessment of the car parking layout reveals:

- Conventional car spaces have generally been designated with minimum dimensions in accordance with the relevant User Classes under AS2890.1:2004, being:
  - Hotel spaces are provided with 2.5 metres width and 5.4 metres length, accessible from aisles in excess of 5.8 metres as per User 2, and
  - Resident and staff spaces are provided with 2.4 metres width and 5.4 metres length, accessible from aisles in excess of 5.8 metres as per User 1A.
- Car spaces adjacent to walls and structures have been provided with appropriate clearances to allow for satisfactory car door opening and in accordance with AS2890.1:2004.
- The parking aisle at the end of the car park has been widened to overcome a reduced aisle extension and facilitate access to end spaces. Swept paths demonstrating B85 access as per AS2890.1:2004 are provided at Appendix B demonstrating acceptable access.
- The private double garage has been provided with minimum dimensions of 6.7 metres length, 6.2 metres width measured internally, and are accessible from an aisle in excess of 5.8 metres wide. These dimensions exceed the minimum requirements of AS2890.1:2004.
- We are advised that the spaces in the garage may be allocated to separate dwellings. The dimensions of the garage are sufficient to allow this, and each resident will be allocated with a remote control to access the spaces. This is acceptable.

- Minimum headroom clearance in excess of 2.2 metres is provided throughout the car parking areas in accordance with AS2890.1:2004.
- A single DDA space is provided with dimensions in accordance with AS2890.1:6:2009 with an adjacent shared area (with bollard).

Swept paths have been undertaken demonstrating access into critical spaces and are provided at Appendix A.

### 5.5. Porte Cochere (AS2890.1 & AS2890.2)

The application proposes the provision of a porte cochere to which will facilitate short-term vehicle storage and operate as a turn around area. This area will be managed by hotel staff.

The Porte Cochere design is premised on a 7.0 metre long mini-bus / shuttle bus turnaround and passenger vehicle circulation.

An area of 3.0 metres width has been nominated for vehicles to prop and passengers to alight. This space will accommodate a single mini-bus or two passenger vehicles (ie taxis/uber) propped whilst another passenger vehicle can circulate around the central landscaped island.

#### 5.6. Loading Arrangements (AS2890.2)

Formal loading is proposed to be undertaken within the Porte Cochere of the proposal outside of the peak guest arrival/departure periods to minimise any impact to the porte cochere operation and pedestrian conflicts.

The porte cochere has been designed to accommodate an 8.8 metre MRV. This is in excess of the minimum requirements stipulated for short term accommodation in the Douglas Shire Planning Scheme

We are advised that a minimum headroom clearance of 4.5 metres is to be provided within the porte cochere where trucks will manoeuvre meeting the minimum clearance requirements of AS2890.2-2018.

As noted previously, the ramp grades have been designed based on the larger vehicle requirements of AS2890.2:2002 and swept paths have been prepared and provided at Appendix A demonstrating access to the site via critical loading vehicles.

### 5.7. Bicycle Parking (AS2890.3)

Bicycle parking is provided with a secure area for staff.

The plans show all spaces as vertical rails. It is recommended that 20% of spaces be provided as horizontal rails to comply with AS2890.3:2015. The design of bicycle parking should also be provided to ensure compliance with AS2890.3:2015.

It is noted that access to the bicycle parking area is via a ramp grade of 1 in 11. Whilst this marginally exceeds the recommendations of AS2890.3 (to a maximum of 1 in 12) given the

wide driveway and topography of the site, we are of the view that this is an acceptable outcome.

### 6. Parking Provisions

#### 6.1. Car Parking Assessment

#### 6.1.1. Statutory Requirements - Code 9.4.1

The car parking requirements for the proposed development are outlined under Code 9.4.1-Access, Parking and Service Code of the Douglas Shire Planning Scheme.

A statutory assessment of the proposal under Code 9.4.1 is provided at Table 1.

It is noted that PO9 of Clause 6.2.14 of the Planning Scheme specifies that:

"Where a commercial service or facility offers services to persons over and above in-house guests, the commercial component provides onsite car parking for 50% of the floor area available for use in accordance with the relevant requirements of the Parking and access code."

Use	No. / Size	Statutory Requirement	No. Spaces Required
Multiple Dwelling	16 no.	1.5 car spaces to each dwelling	24 spaces
Hotel	18 rooms	For over 10 units: 0.75 car spaces per dwelling unit, plus 3 spaces for visitors and 2 service/staff parking for the first 10 units and 0.5 additional service/staff space per 10 units, there-above.	16 staff/resident spaces 3 visitor spaces
Food and Drink Outlet	87.5m <sup>2</sup> (50% of total floor area)	1 space per 25m <sup>2</sup> GFA	4 spaces
Total Require	47 spaces		

Table 1: Statutory Car Parking Requirements (Code 9.4.1)

Based on the table above, the development is statutorily required to provide a total of 47 car spaces, comprising 24 spaces for residents, 19 spaces for the hotel use and 4 spaces for the external component of the food and drink.

The application proposes the provision of 27 car spaces and therefore a reduction in the parking provisions is sought.

An assessment of the appropriateness of reducing the car parking provision below rates at Table 9.4.1.3b is set out as follows, having particular regard to the following criteria as specified within the required 'performance outcomes' PO1 at Code 9.4.1.3 which requires:

"Sufficient on-site car parking is provided to cater for the amount and type of vehicle traffic expected to be generated by the use or uses of the site, having particular regard to:

- (a) the desired character of the area;
- (b) the nature of the particular use and its specific characteristics and scale;
- (c) the number of employees and the likely number of visitors to the site;
- (d) the level of local accessibility;
- (e) the nature and frequency of any public transport serving the area;

(f) whether or not the use involves the retention of an existing building and the previous requirements for car parking for the building

- (g) whether or not the use involves a heritage building or place of local significance;
- (h) whether or not the proposed use involves the retention of significant vegetation.

#### 6.1.2. Assessment under Precinct 1

The subject site is located on the boundary (but immediately outside of) the Port Douglas Precinct 1 area of the Douglas Shire Planning Scheme.

Different (reduced) car parking rates apply to a site within the Precinct 1 Area as below:

- 1 space per dwelling for the residential use.
- 0.5 spaces per dwelling unit is required for the hotel use.
- 1 space per 50m<sup>2</sup> for the food and drink outlet component (but still at 50% of the food and drink use because it is shared between guests and external uses).

These rates reflect the fact that sites located in closer proximity to the Port Douglas Town Centre can support reduced parking provisions.

Whilst the site sits outside the Precinct 1 boundary, it is immediately adjacent it, as shown in Figure 8. It demonstrates that the neighbouring site would be eligible for reduced rates, but arguably it is not materially advantaged over the subject site from a transport/accessibility perspective.

That is, with the exception of the arbitrary/nominal precinct boundary line, the parking demands on this site would be similar to the neighbouring site.

If the reduced Precinct 1 Rates were applied, to the proposal, it would indicate a requirement to provide 27 parking spaces, inclusive of 16 residential spaces, 9 hotel spaces and 2 food and drink spaces.

The proposal includes 27 formal spaces and a further 2 spaces in the porte cochere.

In effect, the Precinct 1: Port Douglas requirements would be satisfied by the proposal, and there is additional porte cochere parking.





Figure 8: Port Douglas Precinct Map- Precinct 1 Boundary

#### 6.1.3. Anticipated Parking Demand

#### **Residential Apartments**

To understand car ownership proximate to the site, we refer to 2016 Australian Bureau of Statistics (ABS) Census data within the suburb of Port Douglas.

The ownership data identifies that 2-bedroom dwellings have an average car ownership of 1.0 vehicles per dwelling, with 16% of dwellings having no car space and 63% of dwellings having 1 car space.

For 3-bedroom dwellings, the average car ownership is 1.4 vehicles per dwelling, with 53% of dwellings with only 1 car space.

We have also referenced the ABS Census data for 3-bedroom dwellings in wider Douglas Municipality. A summary of the ABS Census data is as shown in Table 2.

Table 2: ABS Car Ownership Statistics (2016)

Study Area	Port Douglas	Douglas LGA
Average no. of cars per 2-bed apartment	1.0	1.0
Average no. of cars per 3-bed apartment	1.4	1.4
% of 2-bed apartment with 1 car	63%	63%
% of 3-bed apartment with 1 car	53%	47%

As can be seen above, the ABS Data demonstrates that there is a demand for 2 & 3-bedroom apartments with only a single car space in Port Douglas and Douglas LGA.

The proposed allocations of a single space for each of the dwellings is therefore considered acceptable.

#### **Hotel Staff & Guest Demands**

Hotel guest demands are influenced by a mixture of factors including, the scale and type of accommodation offered, the location of the accommodation in relation to nearby uses the Town Centre and leisure/tourist activities and access from other modes (such as mini-buses, taxis and uber).

Guest preference and parking supply also heavily dictates/influences demands.

For example, when booking accommodation, hotel guests will be advised on the availability of hotel parking and/or alternative access options. At this point, they would make a conscious choice to either (a) drive if a car space is available and a reasonable cost or free, (b) chose to use a shuttle bus, taxi/uber or driver if parking is not available (or not affordable), or (c) choose alternative accommodation if neither (a) or (b) is suitable.

To understand existing car usage trends for tourists, we have reviewed the available Drive Market Statistics from Tourism Tropical North Queensland (year ending December 2019) which suggests that 42% of all tourists (domestic and international) to Tropical North Queensland drive and 51% arrive by air.

This data suggests that there is a significant portion of guests who will arrive to the region via air, and then may not necessarily have a car if they choose a shuttle bus, taxi/uber or private transfer service.

For this site, this is particularly relevant because this site is conveniently located within walking distance to the Port Douglas Town Centre and neighbouring leisure and tourist destinations. With the exception of the transfer between the airport and the accommodation, guests do not need a car to access all of the available services in Port Douglas and any short trips that may require vehicle transport could be undertaken using a cab, private transfer, or a tour company.

With regard to staff, a review of the ABS 'Journey to Work' data for the 2016 census for the Port Douglas SA2 statistical area identifies that a significant number of employees who work in this area, use active or alternate transport modes to travel to work, rather than a car, as driver.

This data reveals a good reliance of bicycle and walking trips as summarised at Table 3.



Mode of Travel for 'journey to work' trips	Work within Port Douglas – SA2 (2016)
Car as driver	58.4%
Walking	8.5%
Cycling	5.4%
Public Transport	1.3%

Table 3: Journey to Work Data 2016 Census – Employees in Port Douglas – SA2<sup>1</sup>

The site includes a generous provision of bicycle parking for employees and facilities including showers and change rooms. These facilities will actively encourage staff to travel to the site using alternative transport (including running, walking, cycling).

If on-site car parking is not readily available for staff, they are likely to seek alternative transport modes to get to and from the site.

Given the scale of the development, and existing driver proportions, we expect the staff car parking demands will be relatively low-moderate.

Based on the preceding, we are of the view that the supply of hotel parking on the site will dictate both the guest and staff demands, and the rate of 0.5 spaces per room is acceptable.

#### Hotel Visitor and Food and Drink Demands

The proposal includes 2 formal parking spaces and space for 2 drop-off/pick-up spaces in the porte cochere at the main entry of the site which will be managed by hotel staff for short term visitor parking of guests is required.

Given the size of the food and drink offering (particularly the fact that it is unlikely to generate significant external parking demand) and also the proximity of the site to the Town Centre, it is likely that there will be limited if any long term demands generated by patrons of the food and drink use.

We expect the majority of external trade to be walk-up or will arrive by taxi/uber/vehicle transfer.

Staff of the food and drink use are likely to be already associated with the hotel operations also.

Given the availability of alternative off-site visitor parking on Macrossan Street and in the nearby parking areas, visitor demands will be low or able to be accommodated elsewhere.

#### 6.1.4. Summary

Based on the preceding, particularly when having regard to the site's location, if the proposal were within the adjacent the Precinct 1 boundary, the provision of 27 formal car spaces plus additional space for bus and taxi/uber pick-up drop-off within the porte cochere would be sufficient.

<sup>&</sup>lt;sup>1</sup> Includes those who did not go to work, worked at home and method not stated

We expect that the provisions are appropriate to meet the expected demands and therefore we are satisfied that the proposed car parking provisions are acceptable.

#### 6.2. Bicycle Parking

Code 9.4.1 of the Douglas Shire Planning Scheme specifies the bicycle parking requirement for new developments.

An assessment of the site under the requirements of Code 9.4.1 is provided at Table 4.

Table 4: Bicycle Parking Requirements

Use	Units	Statutory Requirement	No. Of Spaces Required
Multiple Dwellings	16 dwellings	1 space per 3 dwellings for residents 1 space per 12 dwellings for visitors	6 spaces 2 spaces
Hotel	18 units	1 space per 10 rooms	2 spaces
Food & Drink Outlet	87.5m <sup>2</sup>	1 space per 100m <sup>2</sup> GFA	1 space
Total			11 spaces

Based on the preceding, the development is required to provide a minimum of 11 bicycle spaces.

There is no requirement at Table 9.4.1.3.b for End of Trip Facilities for the proposal, however we understand that staff will have access to guest amenities to change.

The application plans illustrate the provision of a minimum of 8 bicycle spaces but this could readily be increased to 11 spaces to meet the minimum requirements under Code 9.4.1 of the Planning Scheme.

This could be addressed by condition of permit should one issue.



## 7. Traffic Considerations

### 7.1. Existing Traffic Volumes

Due to COVID restrictions and limitations of tourist travel and seasons, relevant and 'up-todate' traffic counts have not been undertaken or sourced in the vicinity of the subject site.

The following assessment reviews the expected traffic generation of the proposal and impact of that traffic on the localised network.

### 7.2. Proposed Traffic Generation

#### 7.2.1. Residential

Residential traffic generation varies dependent on the size of the dwellings, location in relation to leisure, employment and retail services and access to public and alternative transport modes.

In the case of this proposal, some (if not all) of the residential apartments are likely to be holiday residences, whereby they are occupied at lower rates than typical residential housing on average across the year.

In consideration of the location of the site and the access to services both on the site, and within walking and cycling distance from the site, we will adopt an average daily traffic generation rate of 5 vehicle movements per dwelling. This is inclusive of an average of 0.5 movements per dwelling in peak hours.

This is consistent with the NSW RMS (formerly RTA) Guide to Traffic Generating Developments which identifies rates of between 4-6.5 daily vehicle trips per dwelling for *"medium density residential flat buildings"*.

Adopting the rate above to the 16 dwellings results in a traffic generation of 80 daily vehicle movements and up to 8 peak hour movements.

#### 7.2.2. Hotel

The NSW RMS (formerly RTA) Guide to Traffic Generating Developments does not include tourist based hotels, however it does suggest a daily traffic generation rate of 3 movements per unit for motels, inclusive of 0.4 movements per unit in a peak hour.

Based on the proposed parking provisions, the proximity of the site to the Town Centre and the proportion of guests which will arrive by shuttle bus, we will adopt the RMS Rate. This allows for movements for guests to check in or out over the course of a day, for staff to arrive and depart and for patrons of the hotel to make 1-2 vehicle trips during the day, including those trips associated with taxis/ubers/transfers.

Application of this rate for the 18 rooms equates to a daily traffic projection of 54 vehicle movements per day and 7 vehicle movements in a peak hour.

In our experience, the majority of guests typically check-in and check-out between 10am and 2pm, with the remaining trip types (work, shopping, entertainment, etc) spread throughout the day.

With regards to the hotel shuttle bus generation through the porte cochere, it is assumed that there would be up to 4 shuttle bus pick-up/drop-off occurrences per day, equal to a total of 8 mini-bus movements per day but these would be included in the total volume generated by the rooms

#### 7.2.3. Total

Based on the preceding the proposal is expected to generate a total average daily traffic generation of some 134 vehicle movements, split between inbound and outbound movements.

In the order of 15 movements would be expected to occur during the peak hours.

#### 7.3. Traffic Impact

Based on the preceding, the proposal is projected to generate in the order of 134 vehicle movements per day to/from the site.

The widening of the proposed access to the Esplanade will have an indicative daily capacity of 300 vehicles per day (based on an "Access Place" definition in the FNQROC Development Manual). Allowing for the projected traffic generation, and some traffic to be generated to and from the existing Julan Park car parking areas, we expect that the total average daily traffic volumes on the widened access will remain within the indicative daily capacity of 300 vehicles per day.

The peak hour traffic generation of in the order of 15 vehicle movements is low in traffic engineering terms and equates to an average of 1 vehicle being generated each 4 minutes to the network. This will be further split between inbound and outbound movements and then left and right turning movements.

Ultimately the volumes are sufficiently low that further detailed intersection analysis is not necessary and we are comfortable that the expected traffic volumes can be adequately accommodated in the existing road network.

The proposed access arrangements are appropriate.



### 8. Conclusions

Having undertaken a detailed traffic engineering assessment of the proposed residential & hotel development at 69-73 Murphy Street, Port Douglas, we are of the opinion that:

- a. The proposed parking layout and access arrangements can be made to accord with the requirements of AS2890.1, AS2890.2, AS2890.3 and AS890.6 as stipulated by the Douglas Shire Planning Scheme.
- b. The proposed development has a statutory car parking requirement of 47 car spaces based on the rates at Code 9.4.1 of the Douglas Shire Planning Scheme and a reduction in these provisions is sought.
- c. The provision of 27 formal spaces plus additional drop-off/pick-up spaces within the porte cochere area is considered acceptable as:
  - i) The site is immediately adjacent the Port Douglas Precinct 1 boundary and is not materially different from an access perspective from the neighbouring sites which benefit from reduced parking requirements.
  - ii) The nature of hotel and holiday residential accommodation is that parking supply can dictate guest parking demands, particularly when alternative transport is available (ie shuttle bus, taxi, uber or private transfers). That is, if parking is not available, guests will choose alternative accommodation.
  - iii) The site is well located from a walkability perspective and guests, visitors and staff will not necessarily require a car day to day.
  - iv) The site is appropriately designed to facilitate shuttle bus and taxi/uber pick-up/dropoff arrangements.
  - v) Staff who do not have an on-site parking space will be encouraged to make a mode shift to more sustainable transport to access the site as there is limited long term parking in the area.
  - vi) There is a generous provision of bicycle parking to encourage active transport choices.
- d. Bicycle parking can be provided to meet the requirements set out under Code 9.4.1of the Douglas Shire Planning Scheme.
- e. The traffic impact of the proposal is manageable and the proposed access arrangements will suitably cater for the traffic generation of the site.





# Appendix A Swept Paths

**Traffix Group** 

G29056R-01C



REV.	REVISION NOTES	REVISION DATE	GENERAL NOTES:	DESIGNED BY:	ļ		60.721
A	TOWN PLANNING	30/10/2020	BASE FILES FROM WOLVERIDGE ARCHITECTS DATED 18/11/2020	S.GOH	30/10/2020		09-131
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		1		G29056-01	A	TEL: (03) 9822-2888	SCALE 0 2

#### MURPHY STREET, PORT DOUGLAS DESIGN VEHICLE SWEPT PATHS D HOTEL AND RESIDENTIAL DEVELOPMENT

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				G29056-01	A	TEL: (03) 9822-2888	SCALE: 0 2 4 1:200 (A3)	SHEET NO.: 02/05

#### ET, PORT DOUGLAS E SWEPT PATHS SIDENTIAL DEVELOPMENT

#### MRV PORTE COCHERE ACCESS - INGRESS



LEGEND REAR WHEELS FRONT WHEELS BODY CLEARANCE

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PRELIMINARY ONLY NOT FOR CONSTRUCTION





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#### 69-73 MURPHY STREET, PORT DOUGLAS DESIGN VEHICLE SWEPT PATHS PROPOSED HOTEL AND RESIDENTIAL DEVELOPMENT

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**B85 END SPACE PARKING 1 - INGRESS** 



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**B85 END SPACE PARKING 2 - INGRESS** 



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			629000-01		TEL: (03) 9822-2888	1:200 (A3)	SHEET NO.: 04/05	DRAWING NO.: G

#### B85 END SPACE PARKING 1 - EGRESS

#### B85 END SPACE PARKING 2 - EGRESS

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в	AMENDED PLANS	19/11/2020		CHECKED BY:		Irattix Group	
				C.MORELLO	30/10/2020		PROPOSED
				FILE NAME:	ISSUE:	Level 28, 459 Collins Street MELBOURNE VICTORIA 3000	
				G29056-01	A	TEL : (03) 9822-2888	SCALE: 0 2 1:200 (A3)

MURPHY STREET, PORT DOUGLAS DESIGN VEHICLE SWEPT PATHS D HOTEL AND RESIDENTIAL DEVELOPMENT

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