

# TECHNICAL NOTE

## Transport Engineering

**Project Code:** 301401183      **Project Name:** Hillarys Beach Club

**Dept:** Transport Engineering, Perth

**Date:** 27 August 2021      **Version No.** 0

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**SUBJECT:** Traffic Assessment

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Hospitality Total Services (Aus) Pty Ltd on behalf of Sandgate (WA) Pty Ltd have engaged GTA, now Stantec (Stantec), to undertake a peer review of the internally prepared "Traffic Impact Assessment for Medium Impact Tenancy" for the proposed Hillarys Beach Club at Lot 20, John Wilkie Tarn, Pinnaroo Point, Hillarys.

*Western Australian Planning Commission Transport Assessment Guidelines (WAPC Guidelines)* provide direction on the level of assessment which is necessary to be carried out with respect to the likely traffic impact of a development proposal. Typically, any development which is expected to have a 'high' traffic impact, that is, generating more than 100 trips in the peak hour is satisfied by a Traffic Impact Assessment (TIA). Any development which is expected to generate less than 100 trips in the peak hour requires a Transport Impact Statement (TIS) to be undertaken. Both types of assessment consider the operation and layout of the site, but they differ in their assessment of external traffic impact.

In the context of this development and considering the information provided and previously prepared, it is estimated there will be less than 100 trips generated in a given peak hour if applying 'typical' traffic generation rates. In this case a TIS is appropriate. The intent of a TIS, as per the WAPC Guidelines, is to provide the approving authority with sufficient transport information to confirm that the Applicant has adequately considered the transport aspects of the amendment and that it would not have an adverse transport impact on the surrounding area.

The review undertaken of the previously prepared TIA ensures compliance with the *WAPC Guidelines*, and *City of Joondalup* requirements. The information provided in this report has been taken from the TIA and cross reference against plans where appropriate. A comparison between the Hospitality Total Services (HTS) prepared report and Stantec's assessment is tabulated throughout this technical note.

## Overview

### Existing Conditions

The site is located on the northern side of John Wilkie Tarn in a Parks and Recreation zone, within an area currently accommodating a car parking area for 86 vehicles (including boats and/or trailers). Adjacent to the subject site on the eastern side and to be retained is a small playground, picnic facilities and an amenity building.

There is a car parking area on the southern side of John Wilkie Tarn which can accommodate approximately 12 vehicles. Accessible via Whitfords Avenue approximately 350m south of John Wilkie Tarn is a larger foreshore car parking area containing 176 car parking spaces.

*Figure 1: Site Location and Context*



### Proposed Development

The proposal includes a 927m<sup>2</sup> development including 763m<sup>2</sup> of restaurant/café, lounge bar, dining areas and function rooms across two floor levels, as shown in **Figure 2** and detailed in **Table 1**. The areas provided supersede those provided in the original Traffic Impact Statement.

Figure 2: Site Plan Proposed Development

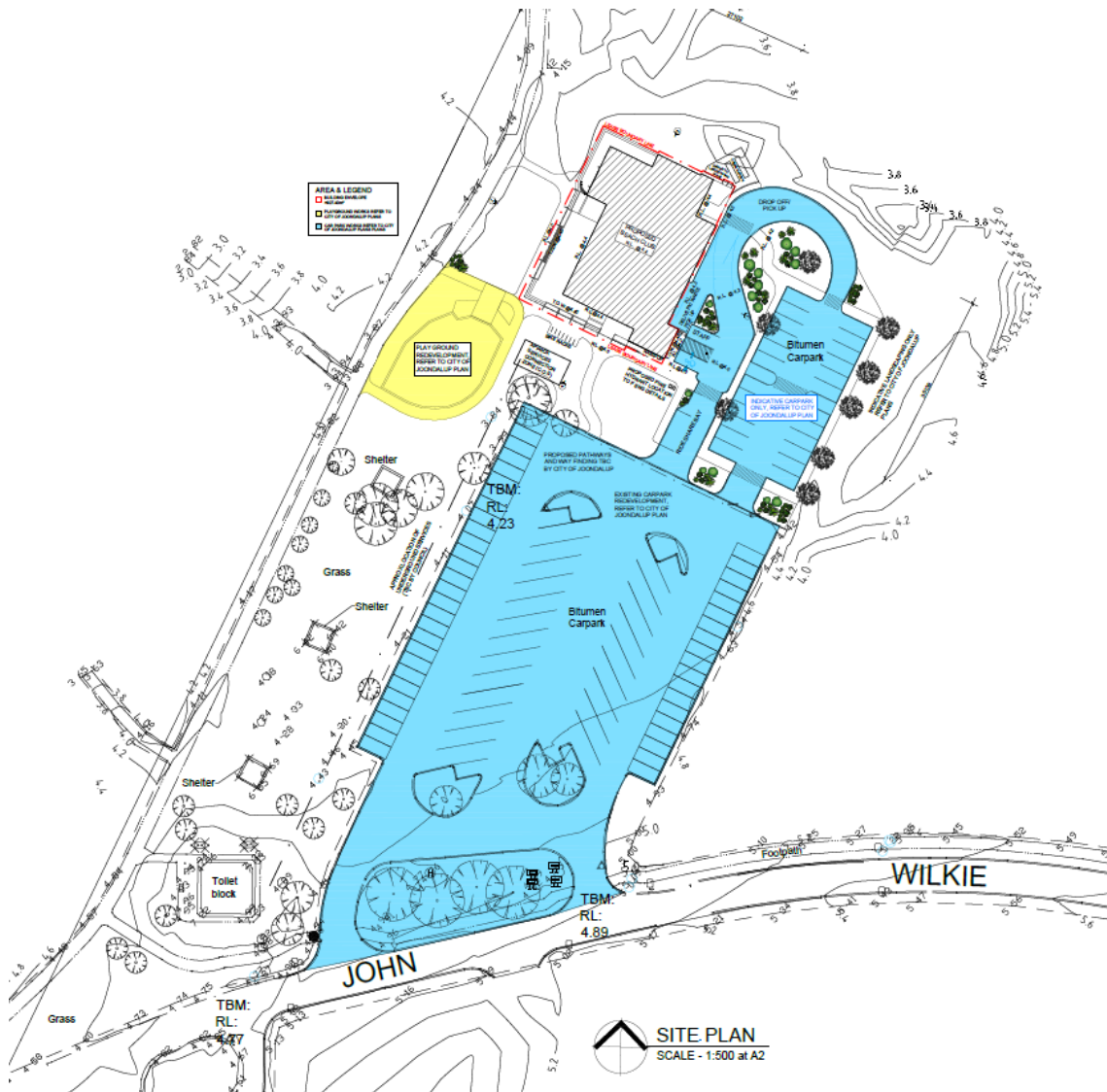


Table 1: Updated Proposed Development – Hillarys Beach Club

Level	Area	GFA	Max Patronage	Hours of Operation
GF	Function area (bookings required)	129m <sup>2</sup>	110 people	5pm – 12am
GF	Café/Dining	156m <sup>2</sup>	90 people	7am – 3pm
GF	Alfresco	60m <sup>2</sup>	50 people	7am – 3pm
FF	Lounge Bar	97m <sup>2</sup>	75 people	12pm – 12am
FF	Dining	165m <sup>2</sup>	130 people	10am – 12am
FF	Alfresco (bookings required)	76m <sup>2</sup>	45 people	12pm – 12am
FF	Function/meeting room (as required)	39m <sup>2</sup>		7am – 12am
	Total	763m <sup>2</sup>	500 people	

The development includes the reconfiguration of the existing parking area to provide 136 car parking spaces, plus creation of an additional 22 car parking spaces to be provided alongside the development for a total car parking provision of 158 spaces.



Figure 3: City of Joondalup Pinnaroo Point Development



(Source: HTS Report – City of Joondalup)

## Car Parking Space Requirement

### Statutory Requirement

A comparison the proposed car parking requirement calculation within the provided TIA and Stantec's determination of the requirement is provided in **Table 2**.

**Table 2: Car Parking Assessment**

HTS TIA Report – Section 2	Stantec Assessment/Confirmation
City of Joondalup Local Planning Scheme	City of Joondalup Local Planning Scheme
Commercial, Mixed Use and Service Commercial Zone Local Planning Policy	Commercial, Mixed Use and Service Commercial Zone Local Planning Policy
Tavern: 1 space per 5m <sup>2</sup>	Restaurant/Café/Small Bar: 1 space per 4 people accommodated
Restaurant/Café/Small Bar: 1 space per 4 people accommodated	HTS have indicated a maximum occupancy of 500 people, which would require <b>125 car parking spaces</b> .
Based on a previously provided 497m <sup>2</sup> floor area, 100 car parking spaces were required if assessed as a 'tavern', however report Section 2.5 notes that <b>125 car parking spaces</b> which would indicate the assessment has been undertaken for 'restaurant' use.	

### Parking Demand

With the site having differing operating hours across the dining and function areas, the parking demand of the development will vary through the hours of the day, as detailed in **Table 3**. The below table assumes maximum patronage capacity within the allocated hours.

**Table 3: Number of Patrons per Area and Time of Day (HTS Report Section 4)**

Area	7am – 10am	10am – 12pm	12pm – 3pm	3pm – 5pm	5pm – 12am
GF - Function area					110
GF - Café/Dining	90	90	90		
GF - Alfresco	50	50	50		
GF - Dining		130	130	130	130
FF - Lounge Bar			75	75	75
FF - Alfresco			45	45	45
FF - Function/meeting room	25	25	25	25	25
<b>Total</b>	<b>165</b>	<b>295</b>	<b>415</b>	<b>275</b>	<b>385</b>
<b>Parking Space Requirement</b>	<b>42</b>	<b>74</b>	<b>104</b>	<b>69</b>	<b>97</b>

The HTS report Section 2.6 indicates that a maximum of between 90 and 100 spaces will be required based on the varying patronage throughout the day. This is confirmed in the above table, with a maximum requirement based on demand being 104 spaces in the lunch time peak period.

**Table 4: Car Parking Demand Assessment**

HTS TIA Report – Section 2.6 – 2.11	Stantec Assessment/Confirmation
90 – 100 car parking spaces	Maximum of 104 car parking space requirement, assuming 100% patronage capacity.

Assuming maximum patronage capacity, there will be a minimum of 54 car parking spaces for use of beach goers and visitors to the area for recreational uses. This is sufficient considering the availability of nearby car parking spaces, the likelihood of those accessing the area for recreational use also accessing the proposed development, and the peak demand for the Hillarys Beach Club being in the evenings whereas the peak demand for the recreational uses of the beach and playground will be during the day.

# Vehicle Access and Parking

Site access will be via the existing car parking area and John Wilkie Tarn. Widening and realignment of the eastern access point into the car parking area will be undertaken to assist with the vehicle movements.

<b>HTS TIA Report – Section 3</b>	<b>Stantec Assessment/Confirmation</b>
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Vehicle paths indicated within Figure 4: Turning circle for vehicles (provided in below)  
 Deliveries and waste collection will occur within an allocated loading area alongside the building frontage.  
 Deliveries are to occur between 7am and 7pm Monday to Saturday

Swept path analysis should be provided for:

- Passenger B85 vehicles for any constrained car parking spaces
- Passenger B99 vehicles for all circulation and parking aisles
- Nominated waste collection vehicle
- Design service vehicle

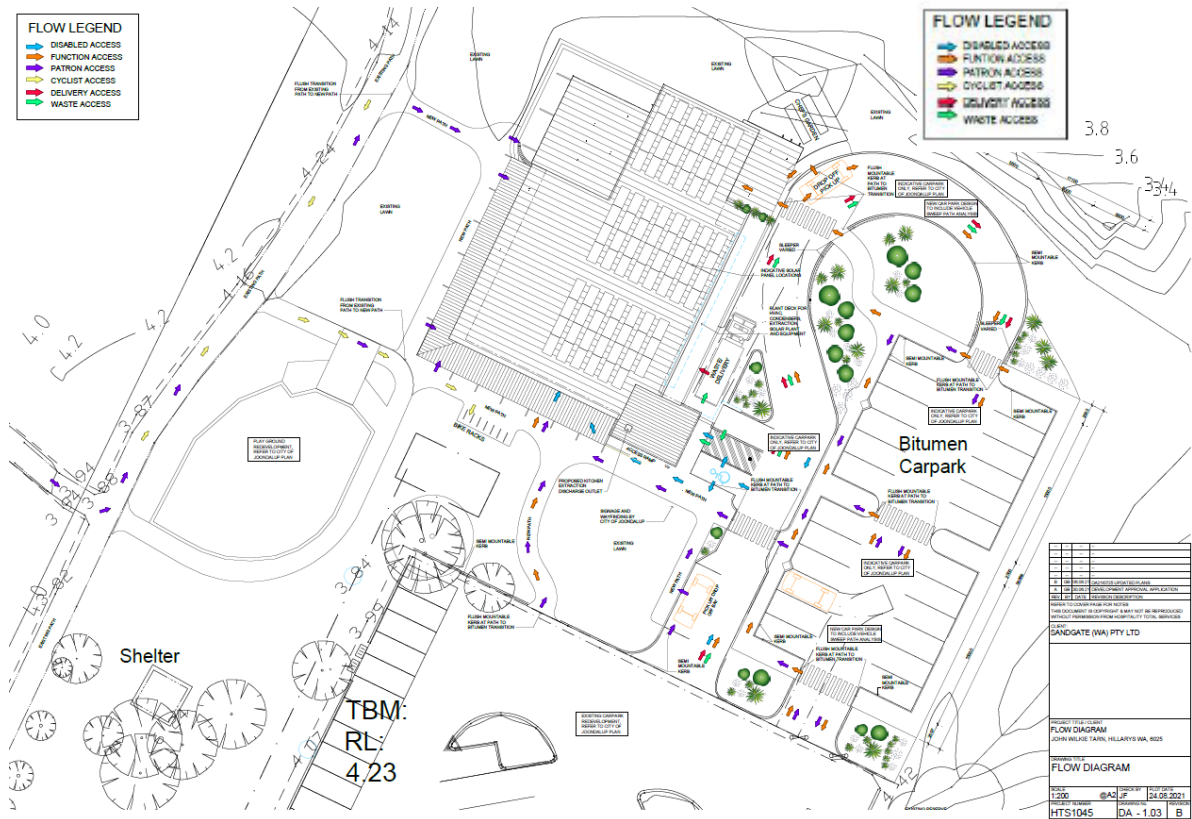
Ensure that site servicing vehicle movements can occur simultaneously with passenger vehicle movements as the proposed service times may coincide. This should be confirmed with swept paths.

No dimensioned plans of the car park area are provided and as such, a review against the relevant Council policies and Australian Standards can not be undertaken. It is understood that the City of Joondalup has prepared the reconfigured car park layout and as such, it is considered that the necessary design checks will have been undertaken.

The length of the car parking aisles may warrant the installation of traffic calming devices such as speed humps.

Consideration could be given to the installation of concrete island extensions partway through the parking row to help reduce the likelihood of anti-social/hoon behaviour.

Figure 4: HTS Proposed Vehicle Paths



## Traffic Generation

The traffic generation of the site can be determined by reviewing relevant trip rates from the *WAPC Guidelines*. HTS have determined the traffic rates based on the parking area capacity and turn over.

HTS TIA Report – Section 5	Stantec Assessment/Confirmation
Based on the maximum car parking occupancy of 136 spaces (excluding the newly provided 22 spaces alongside the building), and a turnover of 1 to 1.5 hours, the vehicle trips have been determined to be 90 vehicles per hour)	The <i>WAPC Guidelines</i> refer to the <i>NSW Road Transport Authority Guide to Traffic Generating Developments</i> when considering restaurants. The <i>Guideline</i> notes an average peak hour rate of 5 trips per 100m <sup>2</sup> GFA, or 10 trips per 100 seats. Without having a 'seat' number but a 'patron' number, the estimated traffic generation of the site can be estimated to be: <ul style="list-style-type: none"> <li>• 38 vehicle trips per hour based on 763m<sup>2</sup> GFA; or</li> <li>• 50 vehicle trips per hour based on the maximum patronage of 500 people (less when considering the varying patronage)</li> </ul>
Light commercial vehicles will occur 3 to 4 times weekly, between 7am and 10am Monday to Saturday	Hours of delivery to be confirmed, noted to be between 7am and 7pm Monday to Saturday in Section 4.2. The delivery vehicles can be accommodated for in the proposed loading zone/waste collection area. Swept path analysis should be undertaken to confirmed that the service vehicle movements will not interfere with those of the patrons.
Heavy commercial vehicles will access the site twice weekly.	Swept path analysis should be undertaken to confirm on site manoeuvrability of the waste collection vehicle.

## Traffic Management on Frontage Streets

A roundabout is present at the intersection of John Wilkie Tarn and Whitfords Avenue, no further intersection improvements are proposed as part of the development.

HTS TIA Report – Section 6	Stantec Assessment/Confirmation
No upgrades to the frontage road, John Wilkie Tarn, or Whitfords Avenue are proposed	No upgrades to John Wilkie Tarn or Whitfords Avenue are required.
Ramps are proposed to tie footpaths connections together along the John Wilkie Tarn frontage.	Existing footpath connections and acceptable, no upgrades beyond those proposed are required.

## Public Transport Access

HTS TIA Report – Section 7	Stantec Assessment/Confirmation
HTS report indicates bus stops are location on Whitfords Avenue near the subject site.	The nearest bus stop is located on Flinders Avenue approximately 1.75km from the subject site. The stop provides access to service 441. Bus service 441 travels between Warwick Station and Whitfords Station.
Whitfords Station is approximately 4.9km from the subject site.	Whitfords Station provides access to services on the Joondalup Rail Line.

## Pedestrian Access

Footpath connections from the site continue to Whitfords Avenue and into Hillarys.

HTS TIA Report – Section 8	Stantec Assessment/Confirmation
No additional external pedestrian connections or upgrades are proposed as part of the development.	Ensure sufficient lighting of footpaths connecting the site with Whitfords Avenue.

No additional internal pedestrian connections or upgrades are proposed as part of the development

No additional internal pedestrian connections are required. The existing is sufficient to accommodate the proposed development.

## Cyclist Access

There are cycle lanes provided on Whitfords Avenue in the vicinity of John Wilkie Tarn.

HTS TIA Report – Section 9	Stantec Assessment/Confirmation
No additional external cyclist connections or upgrades are proposed as part of the development. Bicycle parking for 8 bicycles will be provided near the building.	No additional external cyclist connections or upgrades are required. The existing is sufficient to accommodate the proposed development.
No additional internal pedestrian connections or upgrades are proposed as part of the development	No additional internal cyclist connections or upgrades are required. The existing is sufficient to accommodate the proposed development.

## Safety Issues

HTS TIA Report – Section 10	Stantec Assessment/Confirmation
Pedestrian movements through the area accessing rideshare or taxi services. Footpath connections will assist movements from the site through to Hillarys.	The proposed car park area designates a 'drop off' area near the building entrance. A portion of this area should be allocated solely to taxi/Uber services. Ensure pedestrian lighting is sufficient from the subject site to the roundabout with Whitfords Avenue.
	Consider the possibility of the large car park area attracting anti-social/hoon driver behaviour and provide appropriate mitigating measures, e.g., speed humps and concrete islands
	Ensure minimal interaction between public access and 'back of house' especially areas where large trucks maybe operating (such as refuse collection).

## Summary

On review of the information presented in the Traffic Impact Assessment prepared by Hospitality Total Services for the Hillarys Beach Club at Pinnaroo Point, Stantec are in agreement that the proposed development can be supported. The car parking and traffic impact of the development can be readily accommodated for in the proposed car parking layout design and existing road infrastructure.

Any variances in the HTS report and the assessment undertaken by Stantec has been confirmed as to not significantly impact on the proposed development or the surrounding road network.

To ensure that all aspects of the proposal are acceptable, the following should be undertaken for the nominated car park design:

- Swept path analysis for B85 and B99 cars within the car park area, specifically through the proposed extension adjacent to the building
- Swept path analysis for the nominated service vehicles
- Swept path analysis for the waste collection vehicle
- Confirmation of the delivery times and frequency
- Dimensioned layout of the car park area, specifically the 22-bay extension
- Consideration given to providing traffic calming within the car park area to reduce the likelihood of anti-social/hoon behaviour
- Provision of lighting on footpath from the site to Whitfords Avenue