

Peer Review

Traffic Impact Assessment

Proposed Extensions to Existing Marina

2A McCarrs Creek Road, Church Point.

December 2015

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1 INTRODUCTION

gtk consulting pty ltd has been engaged by Pittwater Council to undertake a peer review of a *Traffic Impact Assessment* prepared by Traffix Pty Ltd for a proposal to increase the number of marina berths and additional dingy moorings at Holmeport Marina, 2A McCarrs Creek Road, Church Point . The proposal comprises:

- Extending the existing marina in a south-westerly direction, increasing the number of mooring berths from 59 to 73, i.e. 14 additional berths.
- Additional dingy moorings on the southern side of the extended marina.
- Reduction of 30 swing moorings.

The proposal does not involve any alterations to the existing buildings or car parking area which is accessed directly from McCarrs Creek Road (**Photo 1**).

Photo 1: Entrance to marina from McCarrs Creek Rd



Source: gtk consulting 2015

2 EXISTING DEVELOPMENT

The existing marina operation comprises:

- 59 berths and 13 dingy moorings.
- 13 commuter berths for water access residents.
- 166 swing moorings.
- A two-storey building accommodating administration office, boat sales office, maintenance and repairs office, and Broken Bay Water Police.
- Car parking for 67 cars.
- Boat repair and service area.
- Boat launching ramp.

The existing car parking area has direct access to and from McCarrs Creek Road which is a State Arterial Road (MR174). The car park access is controlled by a boom gate which states “*Strictly one (1) car per boat*”. The boom gate is located 9 metres from the McCarrs Creek Road carriageway.

Within the car parking area there are 3 spaces reserved for Police Vehicles.

At the entrance to the car parking area there is a sign (**Photo 2**) stating that only authorised vehicles displaying a current Holmeport parking sticker are entitled to park. Additional signs advise that the car parking area is under video surveillance and that the car park will be locked between 4.00pm and 8.00am daily.

Photo 2: Sign at entrance to marina car park



Source: gtk consulting 2015

3 PARKING

3.1 PARKING DEMAND

The application proposes to increase the existing marina berths by 14, bringing the total number of berths to 73, plus an undisclosed additional number of dingy berths. As part of the *Traffic Impact Assessment* (TIA), parking surveys of the existing car park were undertaken on Sunday 26 October 2014, indicating the following:

- A total of 55 vehicles were recorded at the peak parking time (1.15pm - 1.30pm)
- The surveys indicated a peak parking demand of 0.93 vehicles per berth.
- The car parking occupancy did not exceed 82% during the survey period of 10.00am to 2.00pm.

The existing car park at 2A McCarrs Creek Road provides parking for 'authorised parking sticker holders'. The TIA does not define the persons/vehicles eligible to obtain a parking sticker. The time of the survey (Spring) is also considered to reveal a lower car parking demand. In this regard, the Roads and Maritime Services publication *Guide to Traffic Generating Developments* states that "*Ideally, surveys should be undertaken of similar developments, over summer weekends*".

The existing car parking area is controlled by a boom gate, permit parking scheme and one (1) car per boat rule. Thus any boats generating a demand of more than one (1) car would not be able to access the car parking area despite there being vacant spaces. There is no comment in the TIA, or from Council as to whether the boom gate and permit parking scheme has been approved.

The existing Holmeport Marina development accommodates a number of varying land uses, i.e. marina, offices, boat sales, commuter boat moorings (water access residents), boat repairs and maintenance and Water Police (3 reserved spaces). These activities generate differing rates of car parking demand.

A survey of the existing car park occupancy may not reveal the actual car parking demand for the existing marina development due to the controlled access conditions, i.e. boom gate and permit scheme. An inspection of the marina car parking at 9.30am on Sunday 20 December 2015 revealed that there were 16 vacant spaces within the marina car park, however, on-street car parking occupancy was more than 100% (illegal parked vehicles provide occupancies of >100%) as shown in **Photos 3, 4 and 5**.

Photo 3: On-street parking east of site

Source: gtk consulting 2015

Photo 4: On-street parking west of site

Source: gtk consulting 2015

Photo 5: Illegally parked vehicles

Source: gtk consulting 2015

A more appropriate method of determining car parking demand is to conduct an interview survey of patrons and customers attending the marina site. Interview surveys would determine the quantum of on-street parking caused by the controlled access to the marina car park.

An alternate methodology to determining the car parking requirement for the proposed development is to apply the car parking rates provided by Roads and Maritime Services and the Australian Standard 3962-2001 as set out in **Table 1** below:

Table 1: Car parking requirements for marinas

Marina activity	RMS Parking Rates	AS 3962-2001 Parking Rates	Total berth/mooring incl. proposed	Total Spaces Required
Wet berth	0.6 spaces per berth	0.3-0.6 spaces per berth	73 (59 + 14)	44 spaces (RMS) 22-44 spaces (AS)
Dry berth	0.2 spaces per berth	0.2-0.4 spaces per berth	N/A	N/A
Swing mooring	0.2 spaces per mooring	0.3-0.6 spaces per mooring	136 (166 - 30)	27 spaces (RMS) 41-82 spaces (AS)
Employee	0.5 spaces per employee	0.5 spaces per employee	40	20 spaces
TOTAL				69-146 SPACES

Table 1 shows a wide range of car parking requirements. It is also noted that the TIA did not include the existing swing moorings (166) within the car parking requirements for the marina development, which is a significant (minimum 33 spaces) omission.

In respect of the existing and proposed additional marina berths, the RMS and Australian Standard 3962-2001 car parking requirements are 69 – 146 spaces. It is unclear whether the berths for the Water Police are included in the number of existing marina berths, i.e. 59. However, if this is not the case, the 3 spaces reserved for Police Vehicles should be excluded from the number of spaces for the car park and the shortfall in car parking provision for the existing and proposed development will be in the order of 5 – 82 spaces.

Council has advised that the marina site was previously approved to operate 72 berths with an existing informal (not line-marked) car parking area of a similar size to the existing 67 space car park. In 2003, Council approved modifications to the existing pontoons resulting in a reduction in the number of berths from 72 to the current 59. The TIA states that the car park was resurfaced in 2013 and line-marked.

Should the application be considered separate to the existing operation, then the car parking requirement will be:

- 14 additional berths @ 0.3 - 0.6 spaces = 4 – 8 spaces, minus
- 30 swing moorings @ 0.2 – 0.6 spaces = 6 – 16 spaces.

The reduction in the number of swing moorings therefore, results in a net decrease in the number of car parking spaces required for the proposal of 2 – 8 spaces.

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3.2 PARKING LAYOUT

In accordance with AS 2890.1:2004, the car parking area is a Class 2 facility. Class 2 facilities require car parking spaces to have minimum dimensions 2.5m wide x 5.4m long and a minimum aisle width of 3.7m for 45° and 4.6m for 60° angle parking.

The existing car parking area is a one-way configuration with angle parking either side of the traffic aisles. The layout is generally non-compliant with the Australian Standard and the sharp left turn required after passing the boom gate is difficult (**Photo 6**) and most likely impossible for a car towing a boat trailer.

Photo 6: Sharp left turn after passing boom gate



Source: gtk consulting 2015

As noted in the TIA, there are no parking spaces for persons with a disability within the existing car park.

3.3 ACCESS

The minimum requirement in assessing the safety of the proposed access driveway onto McCarrs Creek Road is the need to provide sufficient sight distance for drivers to observe a possible conflict with other vehicles and allow for sufficient time to take evasive action should it be required.

AS 2890.1:2004 *Parking facilities – Off-street car parking* sets out the sight distance requirements for access driveways.

The access driveway to the proposed development is located on a straight section of McCarrs Creek Road. The speed zone is 50 km/h and sight distance from the location of the existing access is set out in **Table 2**:

Table 2: Sight distance requirements 2A McCarrs Creek Rd, Church Point

Source	Sight Distance Required	Sight Distance Available
AS 2890.1:2004 (5 sec gap)	69 metres (east)	70 metres (east)
	69 metres (west)	104 metres (west)

The sight distance in both directions from the existing driveway access, therefore, meets the requirements of AS 2890.1:2004.

As discussed in **Section 2**, a boom gate and intercom system controls access to the car parking area. The boom gate is located 9 metres from the edge of the carriageway of McCarrs Creek Road. Whilst the TIA suggests that this is sufficient for a passenger vehicle to store between the boom gate and carriageway it is not sufficient for a car towing a boat trailer which is in the order of 10 metres (and even longer for larger boats). The TIA has suggested that the boom gate be relocated approximately 4 metres into the site, however, this is considered insufficient to accommodate larger boats towed by a four wheel drive. In this regard, the minimum length between the carriageway and the stopping point at the boom gate should be at least 15 metres.

The relocation of the boom gate will result in reduced turning clearances within the current car park and it will be necessary, therefore, to reconfigure the existing layout.

4 TRAFFIC GENERATION

The TIA observed vehicle trips from the surveys undertaken on 26 October 2014 and used these to calculate peak hour trips for the 14 additional berths. The TIA anticipated that an additional 5 peak hour trips would be generated, however, it did not consider the reduction in vehicle trips due to the decrease in swing moorings.

Roads and Maritime Services provide average traffic generation rates for a range of different land uses in their publication *Guide to Traffic Generating Developments*. The rates are based on extensive surveys undertaken throughout the Sydney Metropolitan Area. The surveys revealed an average daily vehicle trip generation of:

- Fixed berth = 2.7 daily vehicle trips
- Swing mooring = 1.4 daily vehicle trips

The average peak hour vehicle trips (10% of daily trips) for the proposed 14 additional berths is, therefore:

- Fixed berths: $14 \times 2.7/10$ = **4 peak hour trips**
- Swing moorings $30 \times 1.4/10$ = **4 peak hour trips**

There is, therefore, nil increase in traffic volumes with the proposed development.

5 CONCLUSION

The *Traffic Impact Assessment* (TIA) and proposed extensions to the existing marina at 2A McCarrs Creek Road, Church Point have been reviewed and the following issues have been identified:

1. The car park access is controlled by a boom gate which states “*Strictly one (1) car per boat*”.
2. The boom gate is located 9 metres from the McCarrs Creek Road carriageway.
3. Only authorised vehicles displaying a current Holmeport parking sticker are entitled to park within the existing marina car parking area.
4. The car park is locked between 4.00pm and 8.00am daily.
5. The TIA did not include the existing swing moorings (166) within the car parking requirements (minimum 33 spaces) for the marina development.
6. The survey of the existing car park occupancy may not reveal the actual car parking demand for the existing marina development due to the controlled access conditions.
7. An inspection of the marina car parking at 9.30am on Sunday 20 December 2015 revealed that there were 16 vacant spaces within the marina car park, however, on-street car parking occupancy was more than 100%.
8. A more appropriate method of determining car parking demand is to conduct interview surveys of patrons and customers attending the marina site. These surveys would determine the quantum of on-street parking caused by the controlled access to the marina car park.
9. In accordance with the RMS and Australian Standard 3962-2001, the car parking requirements for the combined existing and proposed marina berths are 69 – 146 spaces. Taking into account the 3 spaces reserved for Police Vehicles, the shortfall in car parking provision for the existing and proposed development is in the order of 5 – 82 spaces.
10. Should the application be considered separate to the existing marina operation the proposal will result in a net decrease in the number of car parking spaces required of 2 – 8 spaces.
11. The car parking layout is generally non-compliant with AS 2890.1:2004.

12. The existing boom gate is located too close to the carriageway of McCarrs Creek Road and is to be located at least 15 metres from the carriageway of McCarrs Creek Road.
13. Council should check that the boom gate and permit parking scheme has been approved.
14. Relocation of the existing boom gate will most likely necessitate changes to the layout of the existing car park. Any changes must be in accordance with AS 2890.1:2004.
15. The increased traffic generated by the proposed 14 additional berths is off-set by the reduction in swing moorings.
16. The sight distance for vehicles entering McCarrs Creek Road from the existing driveway meets the requirements of AS 2890.1:2004.

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