

29 April 2016

David Smith
Coordinator Development Assessment
Liverpool City Council
33 Moore Street
Liverpool NSW 2170

Level 5, 21 Bolton Street
Newcastle NSW 2300
PO Box 506
Newcastle, NSW, 2300

T +61 (0)2 4927 0506
F +61 (0)2 4926 1312
E info@emmconsulting.com.au
www.emmconsulting.com.au

Re: Proposed Georges Cove Marina (DA781-2015) - EIS Supplement - Navigation Assessment

Dear David,

1 Introduction

This Navigation Assessment describes the use of the Georges River for boating and the potential impact of the proposed Georges Cove Marina on river navigation and safety. It provides the information provided in the Section 6.1.6 of the *Georges Cove Marina, Moorebank, Environmental Impact Statement* prepared by EMM Consulting Pty Limited (EMM) (June 2015) and supplementary information.

2 Existing boat traffic

2.1 Georges River

The NSW Maritime report, *Boating Safety Plan for Botany Bay, Georges River, Woronora River, Cooks River* (2012) summarises the information available on boat usage of the Georges River as follows:

In 2010 the former NSW Maritime published the “NSW Boat Ownership and Storage: Growth Forecasts to 2026” study. While the report does not deal separately with the Botany Bay/Georges River estuary it does provide information on recreational vessel growth forecasts for the Botany Bay/Port Hacking region.

The study tracks vessel ownership between 1999 to 2009 and predicts growth to 2026. In 1999 there were approximately 21,000 vessels registered to people living in the area serviced by the Sutherland and Liverpool offices and this grew to approximately 24,000 in 2009. By 2026 the projected number of vessels will increase to approximately 30,000. Vessels less than 6m in length make up the vast majority of vessels registered to persons living in the area and the study indicates that this will continue to be the case. Additionally 19% of the State’s personal watercraft are currently registered to persons in the area serviced by the Sutherland and Liverpool offices.

In the same area there are approximately 54,000 people who currently hold a boat licence and over 8,500 personal watercraft licensees, again representing 19% of all personal watercraft licensees in NSW.

2.2 Marinas and boating facilities

The following facilities are in the stretch of river to about 5 km downstream of the proposed marina:

- Deepwater Motor Boat Club;
- Sandy Point Dragons Boat Club; and

- the Picnic Point Boat Shed.

The South Western Motorway bridge, about 1.7 km downstream from the proposed marina, has a 7.5 m clearance.

The Chipping Norton Lake Sailing Club is located upstream of the proposed marina in Chipping Norton Lake (about 5 km upstream from the proposed marina).

There are swing moorings in the Georges River, approximately 1.5 km upstream of the proposed marina.

2.3 Commercial, charter and ferry services

Sydney Ferries do not operate scheduled services along the Georges River in the vicinity of the proposed marina. There are a number of cruise and charter operators along the river.

2.4 Georges River close to the proposed marina

While no formal river traffic usage statistics are available for the river (see above), research on Georges River boat traffic close to the proposed marina on weekends during peak summer usage has indicated surprisingly low levels of river traffic. Aerial photos taken on Saturdays in summer on days where the temperature was more than 30°C indicate that there were:

- 3 to 4 vehicles parked in the Davey Robinson Boat Ramp and Park carpark to the north of the marina site; and
- 4 to 5 small craft on the river over a 15 km stretch of the river downstream of Newbridge Road Bridge.

2.4.1 Davy Robinson Boat Ramp and Park

The Davey Robinson Boat Ramp and Park were specifically identified as a potential demonstration site as part of the *Georges River Catchment Built Environment Foreshore Access Study* (DIPNR 2004) (referred to the report as the 'Newbridge Boat Ramp'). The access criteria for selecting demonstration sites included:

- provides a range of levels of access to the river;
- enhances the natural values and recreational amenity of the foreshore area and reduces adverse impacts on the waterway;
- provides existing or potential links between access points and recreational areas;
- exhibits the potential to provide a physical link/crossing of the river or tributary. A potential to promote an integrated cross Council approach to management;
- enhances the focus on the river;
- improves the ecological environment by controlling access;
- has significant amenity values, and community values; and
- exhibits high visibility from the river and from surrounding roads.

The access study report notes that "it is not intended that the choice of these demonstration sites should supersede other important foreshore improvements already in train or planned for the Georges River.

Rather, the intention is to illustrate typical opportunities and a project that could be applied at these and other sites”.

In keeping with Liverpool City Council’s aim to provide better recreational access to the river, the boat ramp and launching facilities have been upgraded in the last two years. The Voluntary Planning Agreements for the marina and the adjacent site provide for public access to the shore of the Georges River.

The proposed marina precisely meets the design goals and strategy for river access and foreshore accessibility.

2.4.2 Deepwater Motorboat Club

The Deepwater Motorboat Club race days typically occur on approximately five Sundays of the year. The club does not have any exclusive aquatic licences for use of the river. Given such infrequent use there is not expected to be any conflict of river use or traffic.

2.4.3 Vessel clearances for safe navigation

The majority of boats using the marina will be less than 15 m long. There will be four berths for boats between 15 m and 20 m long and no berths for boats more than 20 m long. Power boats 15 to 20 m long have draughts of up to 2.0 m (JBA Planning 2008). An under keel clearance of 0.3 m plus half the significant wave height is required to allow safe boat movement (JBA Planning 2012) where the bed is soft sediment. The marina basin will be 2.92 m deep at low tide and there will be no waves. Therefore there will be 0.92 m clearance for the longest boats using the marina at low tide. A speed limit of 4 knots in the marina will be enforced.

3 Georges Cove Marina boat traffic

Modelling based on internationally recognised survey data for general marina usage rates indicate that:

- up to 60% of vessels leave their berth very rarely or never; and
- recreational craft will be in their berths 95% of the time.

Peak berth usage has been predicted by calculating a weighted average of about 16.8% usage in peak summer periods contrasting with 0.16% during winter periods. This is based on survey data from other marinas in Sydney in publically available studies.

On the busiest days, Christmas, New Year, Easter, October Long Weekend and Australia Day, a maximum of only 73 boats are expected to leave the marina. As at least half of these small craft movements will occur on a pre-booked departure time (and pre-booked retrieval times upon return) for the dry berth facility, small craft traffic flows into the river will be easily managed. This will be assisted by the overall marina basin design, with generous widths provided for general small craft movement including manoeuvring at the fuel and pumpout facilities. No mooring or anchoring will be permitted in the marina and a no-wash zone (4 knots) will be implemented within the marina. This will be policed with the marina facility tender/retrieval vessel which will be responsible for implementing no-wash rules and retrieving small craft owned by marina members that have experienced engine or other mechanical failure.

4 Impacts of Georges Cove Marina on navigation and safety

4.1 Construction

Rock armouring will be installed along the marina foreshore to protect the bank against the effects of waves and vessel wake. Armouring will span approximately 550 m along the marina foreshore and there will be a 40 m wide marina entrance.

A floating silt curtain along the length of the works will be installed to contain and control silt and sediment runoff during construction. The silt curtain will be approximately 3–5 m from the shore. Georges River is approximately 125 m wide at this point and therefore, it is unlikely that commercial or recreational boating activities will be affected by these works. The silt curtain will be marked by buoys and, being close to the bank, will not be a significant safety hazard.

4.2 Marine structures

The physical layout of Georges Cove Marina will have very little impact on river navigation as the entire development will be outside of the Georges River channel. No structures of any kind will be erected in the river channel.

4.3 Georges River channel

Currently, boats are launched backwards at Davey Robinson boat ramp. These craft either remain at idle in the river channel while the trailers are parked or manoeuvre across to the public jetty where they are tied up to await the return of the driver after parking the vehicle and boat trailer. In either case, a considerable portion of the channel can be occupied with boats manoeuvring at low speed, often in reverse. These boats present safety risks in the river channel.

Boats entering the river from the marina will do so via an entrance about 40 m wide. They will be travelling forward, will not need to wait in the river for the car driver to return, and will quickly integrate with any other boat traffic on the river (subject to speed limits).

During the previous application determination period, RMS Maritime Division raised concern that boats entering/exiting the proposed marina could potentially impact vessel navigation safety in respect to the operation and efficiency of users of along the Georges River. In regard to the previous application, LCC (2014) stated that:

While the proposed marina and such operations will be on the side of the Georges River, the entry and exit channel to the river is of concern. It is noted that this stretch of the river is not speed restricted and historically, is popular for towing activities such as water-skiing, wakeboarding and aquaplaning. Moreover, the entrance could have issues relating to lack of vision due to the riverbank and seawalls and the advent of upgraded pontoon facilities downstream, the area will experience an increase in vessel use.

It was noted that the existing speed limit along the stretch of the river is unlikely to change in the near future and therefore, the operation of the proposed marina will need to be managed so as to not cause an adverse impact to all boat users.

In order to address the RMS' concerns on this matter, it is considered appropriate that a 'Boating Management Plan' be conditioned as part of any consent which will address, but not be limited to:

- internal speed limits within the marina basin;
- identification of laneways for navigation throughout marina basin with respect to type of size of watercraft; and

- identify appropriate means of access/egress from the marina basin to the Georges River as well as speed and the like.

The above list is not exhaustive and it was agreed with the RMS, that the condition will need to direct the applicant to directly consult with the RMS on the appropriate matters to be addressed.

A boating management plan will be prepared accordingly.

5 Management measures

A boating management plan will be prepared that includes:

- internal speed limits within the marina basin (4 knots);
- navigation in the marina basin for the sizes of watercraft using the marina;
- a description of access and egress from the marina basin to the Georges River;
- marking of the marina entry in accordance with RMS standards;
- principles for scheduling of boat departures and retrievals during peak periods; and
- operation of the marina tender/retrieval vessel.

Implementation of the boating management plan will ensure that there will be no adverse impacts on navigation or safety in the Georges River.

Yours sincerely

A handwritten signature in blue ink, appearing to be 'P. Towler', with a long horizontal flourish extending to the right.

Philip Towler

References

Department of Infrastructure, Planning and Natural Resources (DIPNR) 2004, *Georges River Catchment Built Environment and Foreshore Access Study*.

JBA Urban Planning Consultants Pty Ltd 2008 *Environmental Impact Statement: Redevelopment of Point Piper Marina*. Prepared by JBA Urban Planning Consultants for Addenbrooke Pty Ltd.

JBA Urban Planning Consultants Pty Ltd 2012 *Environmental Impact Statement: Extension of Rose Bay Marina*. Prepared by JBA Urban Planning Consultants for Rose Bay Marina Pty Ltd.

Liverpool City Council (LCC) 2014 *Marina Development (DA-846/2012): Sydney West Joint Regional Planning Panel Report*. August.

