



PREFERRED PROJECT REPORT – MP09_0035

EXTENSION TO MARINA & PARKING FACILITIES

ST. GEORGE MOTOR BOAT CLUB
2 WELLINGTON STREET | SANS SOUCI



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CLIENT: ST.GEORGE MOTOR BOAT CLUB

PROJECT REF: 0107/09

DATE: MARCH 1, 2011

PLANNING
I N G E N U I T Y

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1 INTRODUCTION

This Preferred Project Report is written on behalf of St George Motor Boat Club and responds to the submissions raised during the exhibition of Major Project MP09_0035 for the extension to the existing Marina and parking facilities at St George Motor Boat Club, 2 Wellington Street, Sans Souci NSW.

The Environmental Assessment (dated 28 April 2010) was submitted to the NSW Department of Planning and exhibited between 26 May 2010 and 25 June 2010. This report should be read in conjunction with the Environmental Assessment.

On the 24 September 2010, the Department of Planning (DoP) requested a Preferred Project Report (PPR) which responds to the submissions received during the public consultation process as well as other assessment related matters raised by the DoP and other government agencies. The Department's letter also requests a revised Statement of Commitments incorporating any necessary amendments in response to the public submissions.

The DoP's letter identified concerns relating to visual impacts of the proposal and also requested a response to other additional information matters. A copy of the Department of Planning letter of 24 September 2010 is provided at Annexure A and a detailed response to the DoP's letter is provided at Section 3.1 of this report.

In summary, the Proponent seeks consent for the following:

- The regularization and continued use of 23 existing unauthorized berths and to expand the Club's existing marina through the construction of an additional berthing arm. As a result of the proposed development, the marina expansion will provide 78 new berths (ranging from 8-18m) which, in addition to the 128 approved berths and 23 regularized berths, will provide a total of 229 berths.
- To accommodate the additional parking demand, the existing lower level parking layout will be modified in addition to the construction of a new parking level with 34 spaces. The amended parking layout will accommodate a total of 238 spaces.

Matters raised in the submissions did not necessitate any amendments to the proposed design however additional information is provided on the architectural plans submitted with this PPR which responds to matters raised by the Department. A full response to the matters raised in various public and government agency submissions is provided at Section 3 of this report.

This Preferred Project Report is divided into 5 sections as follows:

Section 1: Introduction

Section 2: Preferred Project

Section 3: Response to submissions

Section 4: Revised Statement of Commitments

Section 5: Conclusion

This report should be read in conjunction with the plans, reports and documentation provided at Annexures A to E.

1.1 Consultation

Following conclusion of the exhibition period the DoP provided copies of the submissions received. The DoP's letter dated 24 September 2010 requested that additional information be provided as well as additional justification to address visual impact matters. A response to the submissions received during the public consultation process is also required.

Following receipt of the DoP's letter, representatives from Planning Ingenuity Pty Ltd and St George Motor Boat Club met with DoP Officers to discuss matters raised by the public and the DoP.

1.2 Project Team

The following project team has been involved in the preparation of the proposed development (including the EA and PPR stages of the proposal):

Marina Layout Plans	David Blyth
Parking Plans	David Blyth
Traffic Impacts	Transport & Urban Planning
Noise Impact	RSA Acoustics
Ecological Impacts	Marine Pollution Research Pty Ltd
Sedimentation	Marine Pollution Research Pty Ltd
Geotechnical	Jeffrey & Katauskas Pty Ltd
Coastal Processes	Cardno Lawson Treloar Pty Ltd
Water Quality	Cardno Lawson Treloar Pty Ltd
Hydrographical Survey	Cardno Lawson Treloar Pty Ltd
Climate Change & Sealevel Rise	Cardno Lawson Treloar Pty Ltd
Environmental Management	Golder Associates
Statutory & Urban Planning	Planning Ingenuity Pty Ltd

2 PREFERRED PROJECT

This Section of the report describes the Preferred Project for the proposal.

Amendments to the proposal are not required to satisfy the public submissions or the issues raised by the Department. As a result, the description of the proposed development remains unaltered, as follows:

- The regularization and continued use of 23 existing unauthorized berths and to expand the Club's existing marina through the construction of an additional berthing arm. As a result of the proposed development, the marina expansion will provide 78 new berths (ranging from 8-18m) which, in addition to the 128 approved berths and 23 regularized berths, will provide a total of 229 berths.
- To accommodate the additional parking demand, the existing lower level parking layout will be modified in addition to the construction of a new parking level with 34 spaces. The new parking layout will accommodate a total of 238 spaces.

Reduced and full size copies of the proposed architectural plans are submitted separately with this PPR.

3 RESPONSE TO SUBMISSIONS

The project team of specialist consultants has assisted in preparing responses to the key issues raised in submissions. Relevant specialist studies and documentation prepared for the exhibited Environmental Assessment have been reviewed and updated to reflect the Preferred Project and some consultants have prepared responses where technical merit was warranted including: impacts on water quality and marine life, traffic and parking, visual analysis and Security Management.

A summary response to each of the key issues raised in public submissions on the exhibited Environmental Assessment is provided in the following sub-sections of this report. The response to the public submissions is not provided in any specific order of importance or priority. The response to the government agencies is provided in corresponding order to their submission.

3.1 Department of Planning

On the 24 September 2010, the DoP requested a PPR which responds to the submissions receiving during the public consultation process as well as other assessment related matters raised by the DoP. The Department's letter also requests a revised Statement of Commitments incorporating any necessary amendments in response to the public submissions.

The DoP's letter identified concerns relating to visual impacts of the proposal and also requests a response to other additional information matters. A copy of the DoP's letter of 24 September 2010 is provided at Annexure A.

A response to the issues raised by the DoP is provided in the following Table.

Table 1: Response to issues raised by the Department of Planning	
Issue raised by DoP	Response
Schedule 1 – DoP Key Issue	
<p><i>a. Visual Impacts</i></p> <p><i>Detailed analysis and justification for the visual impact of the proposed marina arm "F" and car parking structure on both the private and public domain, should be provided, including details on other marina configuration options considered.</i></p>	<p>A detailed analysis of the visual impacts of the proposal was provided in the EA submitted with the application, including photographs taken from various vantage points of the Georges River, Gawley Bay and Kogarah Bay. In terms of the consideration of 'other' marina configuration options:</p> <ul style="list-style-type: none"> the marina cannot be expanded to the north because of the location of private jetties and moorings; and Expansion to the west was not considered to be the best option because the width of Kogarah Bay to the west is narrower compared to the width of the Georges River to the south of the site. <p>An alternative option was explored which extended the proposed new Arm F in an easterly direction towards Plimsoll Street reserve, however, this was abandoned in order to preserve the amenity of the nearby residents. The best option for expansion of the marina</p>

Table 1: Response to issues raised by the Department of Planning

Issue raised by DoP	Response
<p><i>Additional photomontages should be provided to indicate the visual impact of the proposed marina expansion and car parking structure. The photomontages should be provided at elevations/angles which accurately depict the impacts at the most affected residential properties and the area of open space at the end of Plimsoll Street.</i></p> <p><i>Plans/details are also required which indicate the visual impact of vessels to be moored in marina arm "F" at mean high and low tides.</i></p>	<p>is in a southerly direction because of the width of the Georges River at this point and this is the furthest location from surrounding residential properties.</p> <p>In addition to the montages provided within the EA, an additional photomontage is provided at Annexure B of this report. Additional montages are not provided directly from the residential properties in Plimsoll Street because of the presence of existing trees which obstruct views of the new Marina Arm (refer to survey plan 2 of 2 provided with the amended architectural plan set). An eastern elevation of the car park extension as viewed from Plimsoll Street is provided (plan M002) with this PPR which demonstrates that a typical maximum car height (2m) will be below the height of the proposed retaining wall and landscaping positioned on the eastern property boundary. It should also be noted that the existing chain wire boundary fence has greater visual presence in comparison to the proposed car parking area and property boundary treatment. It was agreed at a meeting with the Department of Planning officers that a montage from the open space at the end of Plimsoll Street is not necessary as the proposal will not have a significant or unreasonable impacts on views from this location.</p> <p>Refer to the architectural and survey plans submitted separately with the application, the photomontages provided with the EA, the new photomontage provided at Annexure B and the details provided at Annexure C. It is noted that the marina and attached vessels are floating structures so the only visual change between low and high tide is the proportion of the support piles that may be under or above the water level.</p>
Schedule 2 – Addition information required	
<p><i>a. Revised Site Plan</i></p> <p><i>A revised site plan incorporating all water-based and land-based components of the proposal. The site plan must also extend beyond the boundaries of the site to show the relationship between the proposed structures and adjacent properties, specifically the distance between the proposed marina arm and the boundary of the nearest residential property and the width of publicly accessible waterfront</i></p>	<p>A revised site plan is provided with the amended architectural plans submitted separately with the application. Plan No.MP001 outlines the overall masterplan and references other plans that provide information for the land based and water based aspects of the proposal, including plans SW001 and M003.</p>
<p><i>b. Hydrographical Survey</i></p> <p><i>Plans/details which provide the level the sea floor, water depth, and which indicate both the mean low and high water marks;</i></p> <p><i>Plans/details demonstrating that no dredging is required to achieve sufficient depth is available for vessels to enter into the proposed marina arm "F" in accordance with "Australian Standard 3962.2001 Guidelines for design of marinas"</i></p>	<p>Details provided at Annexure C of this report.</p> <p>No dredging of the waterway is required. Refer to the report provided by Cardno at Annexure C.</p>
<p><i>c. Car parking area elevation</i></p> <p><i>Elevations (including a streetscape elevation) of the</i></p>	<p>Refer to the architectural plans provided with the</p>

Table 1: Response to issues raised by the Department of Planning	
Issue raised by DoP	Response
<i>proposed car parking structure</i>	application.
<i>d. Marina elevations Elevations/Sections of the proposed marina arm "F"</i>	Refer to the architectural plans provided with the application.
<i>e. Car parking configuration Revised lower level car parking configuration to accommodate boat trailer parking, specifically combined designated double length "car and trailer" spaces</i>	Refer to the architectural plans provided with the application and the response from the traffic consultant at Annexure D.
<i>f. Stormwater Concept Plan A Stormwater Drainage Concept Plan, including details of water quality treatment, rainwater tanks for water re-use on site and water sensitive urban design features;</i>	A stormwater concept plan (SW001) is provided in the architectural plan set submitted separated with this PPR. It details stormwater disposal from the proposed car parking area and includes a 2000 litre rainwater tank, high pressure boat cleaning area/equipment, EPA approved drain, and oil separator. Kogarah Council have confirmed their in principle acceptance of stormwater management consent conditions, as specified in Section 3.3 of this report.
<i>g. Kogarah Council controls An assessment of the proposal against Kogarah City Council's 'Foreshore Management Plan' and 'Marine Assets Management Plan'</i>	<p>The Foreshore Management Plan relates to the protection of Council infrastructure during construction works. In that regard the infrastructure is essentially confined to Anderson Park and Plimsoll Street Reserve. The former is quite some distance from any proposed works and the latter is already identified as requiring some repairs but it too is some distance from any likely construction activities.</p> <p>Council was invited to discuss whether suitable consent conditions were necessary to satisfy the provisions of the Foreshore Management Plan and no reply was received from Council.</p> <p>The Marine Assets Management Plan is of no relevance to the proposed development.</p>
<i>h. Car parking assessment An assessment of car parking provision for the existing facilities in accordance with Council / RTA car parking requirements;</i>	Refer to the response provided from the Traffic Consultant at Annexure D.
<i>i. Crime prevention assessment Details of the compliance with Crime Prevention Through Environmental Design principles, specifically whether access to the car parking will be controlled, provision of any lighting (and measures to mitigate impacts), use of CCTV, etc</i>	<p>The following crime prevention measures are employed at the Club:</p> <ul style="list-style-type: none"> • Marina Access: Access to the Club Marina is via electronic key which are issued to Full Members of the St George Motor Boat Club who have a vessel berthed on the marina and have paid a bond and monthly rent. Keys are also issued to overnight or temporary visiting vessels to the marina that have prior approval and those keys are electronically set for the time of their visit and are rendered useless after that date. Trades persons are also issued keys via the vessel owner or in cases when prior approval is arranged from the Marina Manager. Trades persons must provide the following to be able to access the marina at any time, Public

Table 1: Response to issues raised by the Department of Planning	
Issue raised by DoP	Response
	<p>Liability Insurance, OH&S Certificates, Water Usage Permits and Safe Work Method Statement</p> <ul style="list-style-type: none"> • <u>Boat Ramp Access</u>: The Club boat ramp is available for Full Members of the Club who have purchased an annual trailer label and have that label displayed on the trailer at the time of use. • <u>Parking</u>: Car parking is available on the ground floor for full marina members, full trailer label members, social members and visitors. • <u>Policing</u>: Part of the Marina Managers duties is to monitor trailer parking and member ramp usage. Unauthorised ramp usage is prohibited and visitors are turned away. • <u>Security</u>: During the hours that the marina manager is not on duty, the Club uses a security company. As part of the security company contract they must monitor the car park and marina arms. Car park areas are also monitored by 16 CCTV cameras.
j. <i>Climate Change and Sea Level Rise</i> <i>Assessment of the impacts of Climate Change and sea level rise</i>	The existing seawall is of sufficient height to cater for potential Sealevel rise and the proposed Marina has a floating structure. Refer to the report provided by Cardno at Annexure C.

3.2 Roads and Traffic Authority

The Roads & Traffic Authority made a submission on the exhibited Environmental Assessment dated 29 June 2010. The Table below provides a response to the issues raised in the submission.

Table 2: Response to issues raised by the RTA	
Issue raised	Response
a. <i>A Construction Management Plan should be required prior to CC</i>	A suitable condition may be imposed.
b. <i>Car parking area layout must comply with AS2890.1-2004 and AS2890.2-2002</i>	Figures 7A and 7B of the Traffic and Parking report provided in the EA demonstrates compliance with AS2809.1-2004 and AS2890.2-2002, as required.
c. <i>The sweep path for the longest vehicle using the site should be modeled using AUSTROADS and submitted to the DoP for approval</i>	Figures 7A and 7B of the Traffic and Parking report provided in the EA demonstrates compliance with AS2809.1-2004 and AS2890.2-2002, as required.
d. <i>All vehicles are to enter and exit the site in a forward direction</i>	All vehicles can enter and exit the site in a forward direction as shown on the architectural plans.
e. <i>The proposed turning areas to be kept clear of any obstacles including parked cars, at all times</i>	A suitable condition of consent may be imposed, which may includes installation of appropriate signage.
f. <i>The RTA is not responsible for any associated costs</i>	Noted - a suitable condition of consent may be imposed.

3.3 Kogarah Council

Kogarah Council made a submission on the exhibited Environmental Assessment dated 23 June 2010. The Table below provides a response to the issues raised in the submission.

Table 3: Response to issues raised by Kogarah Council	
Issue raised	Response
<p>a. <i>Traffic and Parking</i></p> <ul style="list-style-type: none"> - <i>No objection raised with respect to traffic generation</i> - <i>Concerns regarding availability of trailer parking during busy days. Sufficient trailer parking must be available on-site</i> - <i>Insufficient car parking spaces for the marina and club operation. Overflow impacts into the adjacent residential areas.</i> 	<p>Noted.</p> <p>The expansion of the marina will not increase the number of boat trailers coming to the club because the expansion is for permanent berths. There will be no change to the boat trailer parking within the existing car park. The current parking demand for trailers on a busy Sunday is 12-20 boat trailers. The additional 39 car parking spaces will cater for the additional car parking demand generated by the additional marina berths. Based on this, there is no reason to expect that parking for boat trailers will be directed to the adjacent streets.</p> <p>The existing traffic conditions on Sundays (busiest day) on the road network have been assessed as satisfactory (refer to the traffic report submitted with the EA). The proposed additional berths will generate an additional 28 vehicles arriving and departing the marina on a busy Sunday. The impact of the additional vehicles on the adjacent street will be extremely minor.</p>
<p>b. <i>Soil and Water</i></p> <ul style="list-style-type: none"> - <i>Acknowledged that no maintenance dredging is required</i> - <i>Protection of the stormwater discharge pipe at the end of Plimsoll Street is required during construction</i> - <i>The site is to be managed in accordance with Council's Water Management Policy and ESD Principles including Water Sensitive Urban Design requirements and incorporation of rainwater tanks, which could be used for boat washing</i> 	<p>Noted.</p> <p>A suitable consent condition may be imposed with respect to the provision of a construction management plan prior to commencement of construction works.</p> <p>Discussions with Council's Stormwater Engineer revealed the following:</p> <ul style="list-style-type: none"> • A suitable consent condition can be imposed with respect to prevention of erosion of the foreshore at the point of discharge, which may be worded as follows – <i>An assessment of existing stormwater outlets shall be carried out by an appropriately qualified and experienced person to ensure that erosion of the adjacent riverbank is not occurring. Any erosion of the riverbank shall be remedied by appropriate and permanent dispersal techniques (or similar) prior to use of the car park extension.</i> • A stormwater concept plan is provided with the architectural plans which sufficiently demonstrate management of stormwater runoff from the site with respect to preventing oil contaminants from entering the adjacent waterway. • A 2000L rainwater tank is included as part of the stormwater concept plan submitted with the PPR.

Table 3: Response to issues raised by Kogarah Council	
Issue raised	Response
<p>c. <i>Aquatic Flora and Fauna</i></p> <ul style="list-style-type: none"> - <i>Response required to the Foreshore Management Plan and Marine Assets Management Plan</i> - <i>Is dredging required for the new arm proposed</i> 	<p>Refer to point G of Table 1 of this report.</p> <p>Dredging is not required for the new arm proposed – refer to the management of different boat sizes provided in the Cardno report attached at Annexure C.</p>
<p>d. <i>Noise</i></p> <ul style="list-style-type: none"> - <i>Noise issues should be addressed</i> 	<p>Refer to the acoustic report provided at E by RSA Acoustics.</p>
<p>e. <i>Impacts on adjoining open space</i></p> <ul style="list-style-type: none"> - <i>Management of vehicular and pedestrian traffic</i> 	<p>The proposed increase in berths is met with a relative increase in provision of car parking spaces on the site and minimal impacts will be created on the surrounding streets and open space areas. Refer to the traffic report provided with the EA and the written response from the traffic consultant provided at Annexure D.</p>
<p>f. <i>Waste generation and disposal</i></p> <ul style="list-style-type: none"> - <i>35% increase in berths should also result in 35% increase in waste disposal facilities and the status quo would be insufficient</i> - <i>Location of skip bins must be appropriate to prevent illegal dumping of materials and to prevent material from blowing into the waterway. Tipping receipts must be retained for verification purposes.</i> 	<p>A suitable condition may be imposed for the increase in waste disposal bins on the site. Such facilities can be catered for within the existing garbage room (area of approximately 28m²) indicated on the plan. The garbage room is not accessible by the general public to prevent illegal dumping of materials.</p>

3.4 Public Submissions

This section of the Preferred Project Report provides a response to the issues raised in the public submissions and where appropriate a description as to how the Preferred Project has been amended in response to these issues.

A total of 13 public submissions were received by the Department of Planning during the exhibition period (additional submissions were received from government bodies that are discussed elsewhere in this report as required, noting that several government bodies raised no objection and therefore a response to their submission is not necessary). Copies of all submissions were provided to the Proponent, in order that issues raised could be addressed in the Preferred Project. The Table below provides a summary of the issues raised in the submissions received during the exhibition period, which have been considered in preparing this Preferred Project Report.

Table 4: Response to issues raised during the public consultation process	
Issue raised	Response
<p>a. <i>Loss of waterway / occupies too much of this section of the river</i></p>	<p>NSW Maritime Department and NSW Department of Primary Industries (Fisheries) raised no objection to the proposed development and these authorities control relevant aspects of the waterway. Visual impacts have been addressed previously.</p>
<p>b. <i>Impact on currents, marine life and water quality</i></p>	<p>NSW Maritime Department and NSW Department of Primary Industries (Fisheries) raises no objection to the proposed development and these authorities control</p>

Table 4: Response to issues raised during the public consultation process

Issue raised	Response
	relevant aspects of the waterway.
<i>c. Traffic generation and consequent impacts on pedestrian safety</i>	The traffic report provided with the EA and the response to the public submissions by the traffic consultant is attached at Annexure D. It concludes that the proposal will not result in any significant or unreasonable impacts on vehicular or pedestrian traffic or residential amenity within the locality. It is noted that the RTA did not raise any traffic related objections to the proposal.
<i>d. Inadequate parking provision on site and the proposal will result in additional demand for on-street parking</i>	The response from the traffic consultant provided at Annexure D states that <i>additional traffic will be an additional 28 vehicles arriving and departing the marina on a busy Sunday. The impact of the additional vehicles on the adjacent streets will be extremely minor.</i> Again, it is noted that the RTA did not raise any traffic related objections to the proposal.
<i>e. The existing use of the site as a Club is non-conforming and already an overdevelopment of the site</i>	This is not a matter for consideration as part of the proposed marina extension. It is worth noting however that numerous applications have been approved for the Club by Kogarah Council, which authorises its existence.
<i>f. Visual impacts of the marina and loss of views</i>	Visual impacts of the proposal are discussed in detail within the submitted EA. It is worth noting that the closest residential property to the proposed development (No.52 Plimsoll Street) raised no objection. Other properties will continue to have their primary views of the waterway unobstructed by the proposal.
<i>g. Visual impacts on new car parking area</i>	The new car parking area will not obstruct primary views of the waterway from nearby residential properties. Refer to the photomontages provided with the EA and the additional montage provided at Annexure B.
<i>h. Additional noise generation and impacts on privacy</i>	Refer to the acoustic report provided with the EA and the letter from the acoustic consultant at Annexure E. In terms of privacy impacts, the proposed new Arm F will be no closer than any of the existing Arms and as such there will be no additional impacts on privacy created – refer to point a of Table 1 of this report with respect to design options.
<i>i. Increased anti-social behaviour</i>	There is no reason to expect that an increase in berths will result in increased anti-social behaviour. The Club is responsible for adopting appropriate management practices with respect to its members and their visitors.
<i>j. Loss of open space from Plimsoll Street Reserve</i>	The proposal does not impact on the Plimsoll Street Reserve open space.
<i>k. Need for additional berths overstated</i>	This is a commercial viability consideration for the club.

4 STATEMENT OF COMMITMENTS

The Draft Statement of Commitments provided in the Environmental Assessment did not require revision as part of this PPR. Conditions of consent may be imposed by the DoP as considered necessary.

This Statement of Commitments has been prepared for St George Motor Boat Club (the proponent) and forms part of the Preferred Project Report (PPR) for the proposed marina extension and associated parking facilities on the subject site.

The proponent confirms that:

- The proposal does not involve any dredging works;
- There are no seagrasses within the extended marina area;
- All tenants will be subject to and made aware of the Marina Code of Conduct in terms of responsibilities of leasing a berth;
- The provision of parking has been designed in accordance with AS2890.1.

Design

- The proposed new works to the marina will generally comply with the provisions of AS3692-2001- *Guidelines for Design of Marinas*.

Construction Management

- Construction of the parking facility, new berthing arm and marina alterations will take between 5-6 months.
- Construction will be restricted to the following hours:
 - Monday to Friday 7.30am to 4.00pm
 - Saturday 8.00am to 1.00pm
 - No work will be carried out on Sundays or Public Holidays
- Construction works will be carried out in accordance with the Waste Management Plan prepared by Golder Associates date 25 November 2009, submitted with the application and the construction contractor and all sub-contractors will be required to comply.
- Construction works will be carried out in accordance with the Environmental Management Plan prepared by Golder Associates date 25 November 2009, submitted with the application and the construction contractor and all sub-contractors will be required to comply.
- The construction contractor and all sub-contractors are to comply with the Club's Water Quality Management Plan and Emergency and Spill Management Plan at all times when working on the site.

Traffic Management

- A Traffic Management Plan (TMP) will be prepared for the construction activities of the marina extension and associated works, following approval of the Development Application to manage the traffic impacts of the construction.
- Traffic generation associated with the construction is estimated to be:

- 6 construction worker trips per day (i.e. 6 arrivals and 6 departures) for 4 weeks increasing to 20 construction worker trips (i.e. 20 arrival and 20 departure trips) per day for 16 weeks;
- 3-4 general delivery vehicles per week in small to medium rigid trucks;
- 2 semi trailer deliver vehicles per week; and
- A 40 tonne mobile crane coming to the site up to 6 times during the 20 week construction period.

Noise Management

- Works will be carried out in accordance with the DECCW's "Interim Construction Noise Guideline" and AS 2436-1981 "Guide to Noise Control on Construction, Maintenance and Demolition Sites"
- Piling will not be conducted before 8.00am and will include respite periods;
- Regular maintenance of plant and machinery used for the project will be carried out to assist in minimizing noise emissions.

Waste Management

- Construction works and operation of the completed marina will be carried out in accordance with the Waste Management Plan prepared by Golder Associates date 25 November 2009, submitted with the application and the construction contractor and all sub-contractors will be required to comply.
- The marina has an existing sewage pump-out facility. All sewage waste removed from vessels will be disposed of directly to the Sydney Water sewage connection.
- The Club will comply with the NSW DECC and SES directions in managing spills.

Operational

- The Club will revise the existing Emergency Procedures Manual to include responses to the following identified high risk scenarios as identified by the Environmental Management Plan prepared by Golder Associates dated 25 November 2009:

Berthing:

1. Oil/fuel spill
2. Chemical spill

Refueling facilities:

3. Fuel spill into Kogarah Bay
4. Leaking UST, pipe work or bowsers

Dual Slipway:

5. Oil spill

5 CONCLUSION

The proposed development at St George Motor Boat Club seeks consent for a Preferred Project comprising:

- The regularization and continued use of 23 existing unauthorized berths and to expand the Club's existing marina through the construction of an additional berthing arm. As a result of the proposed development, the marina expansion will provide 78 new berths (ranging from 8-18m) which, in addition to the 128 approved berths and 23 regularized berths, will provide a total of 229 berths.
- To accommodate the additional parking demand, the existing lower level parking layout will be modified in addition to the construction of a new parking level with 34 spaces. The amended parking layout will accommodate a total of 238 spaces.

This report and accompanying Environmental Assessment provide an analysis of the proposed development on the subject site. This Report has been prepared on behalf of the Club in accordance with Part 3A of the EP&A Act 1979 and the provisions of SEPP (Major Development) 2005.

A project team of consultants has been assembled to consider and investigate the identified key considerations which include issues relating to visual amenity; soil and water; aquatic flora and fauna; traffic and parking; noise; air quality and waste. The investigation undertaken by each independent consultant concludes that the proposed development will not result in any significant or unreasonable environmental impacts subject to appropriate mitigation measures relating to construction methods as well as management and operation of the expanded facility.

Overall the proposal will facilitate the continued use of an existing marina and will respond to an identified demand for additional berthing facilities in the St George and Sutherland Shire areas. The proposal is considered to be compatible with existing development in the area and represents an appropriate form of land and water based development with respect to the existing character of the area and waterfront locality. The proposal represents a capital investment of approximately \$2 million.

The site is suitable for the development proposed which will not have any unreasonable environmental impacts and is considered unlikely to have any significant adverse impact on the amenity of the locality. Accordingly, in the circumstances of the case, the proposal is considered to be in the public interest and a positive contribution for the community.

This Preferred Project Report has addressed all of the Government and public submissions received. Accordingly, it is recommended that the Minister for Planning approve the subject application subject to the Statement of Commitments provided in this report.

Annexure A

DoP Letter dated 24 September 2010



Planning

Contact: Amy Watson
Phone: 02 9228 6379
Fax: 02 9228 6544
Email: amy.watson@planning.nsw.gov.au

Our ref: MP 09_0035

Mr Lindsay Fletcher
Managing Director
Planning Ingenuity
1/16-22 Willock Avenue
MIRANDA NSW 1490

Dear Mr Fletcher,

**PROPOSED MARINA EXPANSION AND CAR PARKING AT 2 WELLINGTON STREET,
SANS SOUCI (MP09_0035)**

I refer to your Environmental Assessment (EA) for the proposed expansion of the marina at 2 Wellington Street, San Souci. As you are aware, the Department publicly exhibited the application from 26 May 2010 until 25 June 2010.

A copy of submissions has previously been provided via e-mail, however I have enclosed a complete set of submissions received, including responses from relevant Government agencies, and Kogarah Council.

The Department has reviewed the submissions received and considered the proposal as detailed in the EA. The Department has identified a key issue with the proposal relating to visual impacts on adjoining residential and public land. This issue is outlined in **Schedule 1**.

The Department will also require additional information to complete our assessment as outlined in **Schedule 2**.

The Director General, pursuant to Section 75H(6) of the Act, requires that you provide a response to the issues raised in these submissions. A Preferred Project Report (PPR) and/or response to submissions should be prepared identifying how you have addressed these issues (including those raised by the Department) and how the proposal minimises the environmental impacts.

A Statement of Commitments is also to be provided incorporating any amendments following your response to the submissions.

If you wish to meet with Departmental Officers to discuss the issues raised, please contact Amy Watson on (02) 9228 6379 or amy.watson@planning.nsw.gov.au.

Yours sincerely

Michael Woodland
Director
Metropolitan Projects

24/9/2010

SCHEDULE 1 – DEPARTMENT OF PLANNING KEY ISSUE

1. Visual Impact

Detailed analysis and justification for the visual impact of the proposed marina arm "F" and car parking structure on both the private and public domain, should be provided, including details on other marina configuration options considered.

Additional photomontages should be provided to indicate the visual impact of the proposed marina expansion and car parking structure. The photomontages should be provided at elevations/angles which accurately depict the impacts at the most affected residential properties and the area of open space at the end of Plimsoll Street.

Plans/details are also required which indicate the visual impact of vessels to be moored in marina arm "F" at mean high and low tides.

SCHEDULE 2 - ADDITIONAL INFORMATION REQUIRED

In addition to any revised architectural plans and supporting documentation, including analysis of options and designs reflecting the issue raised in **Schedule 1**, the following information is also required:

- A revised site plan incorporating all water-based and land-based components of the proposal. The site plan must also extend beyond the boundaries of the site to show the relationship between the proposed structures and adjacent properties, specifically the distance between the proposed marina arm and the boundary of the nearest residential property and the width of publicly accessible waterfront;
- Plans/details which provide the level the sea floor, water depth, and which indicate both the mean low and high water marks;
- Plans/details demonstrating that no dredging is required to achieve sufficient depth is available for vessels to enter into the proposed marina arm "F" in accordance with "*Australian Standard 3962.2001 Guidelines for design of marinas*";
- Elevations (including a streetscape elevation) of the proposed car parking structure;
- Elevations/Sections of the proposed marina arm "F";
- Revised lower level car parking configuration to accommodate boat trailer parking, specifically combined designated double length "car and trailer" spaces;
- A Stormwater Drainage Concept Plan, including details of water quality treatment, rainwater tanks for water re-use on site and water sensitive urban design features;
- An assessment of the proposal against Kogarah City Council's 'Foreshore Management Plan' and 'Marine Assets Management Plan';
- An assessment of car parking provision for the existing facilities in accordance with Council / RTA car parking requirements;
- Details of the compliance with Crime Prevention Through Environmental Design principles, specifically whether access to the car parking will be controlled, provision of any lighting (and measures to mitigate impacts), use of CCTV, etc; and
- Assessment of the impacts of Climate Change and sea level rise.

Annexure B

Photomontage



ST. GEORGE MOTOR BOAT CLUB

2 WELLINGTON STREET SANS SOUCH

VIEW OF PROPOSED NEW MARINA EXTENSION AND
CARPARK AS SEEN FROM THE UPPER LEVEL PLIMSO
L STREET CARPARK ENTRY

wegmanimaging.com.au



ST. GEORGE MOTOR BOAT CLUB
2 WELLINGTON STREET SANS SOUCI

VIEW OF EXISTING MARINA AND CARPARK AS SEEN
FROM THE UPPER LEVEL PLIMSOL STREET CARPARK ENTRY

wegmanimaging.com.au

Annexure C

Cardno Assessment

Our Ref LJ2841\L2227 :SJG

Contact Sean Garber



26 November 2010

Planning Ingenuity Pty Ltd
Suite 1, 16-22 Willock Avenue
MIRANDA NSW 1490
Email: lindsay@planningingenuity.com.au

Attention: Mr Lindsay Fletcher - General Manager

Dear Sir,

**AVAILABLE DRAFT ASSESSMENT AND SEA LEVEL RISE ASPECTS
PROPOSED MARINA DEVELOPMENT
ST GEORGE MOTOR BOAT CLUB**

Cardno (NSW/ACT) Pty Ltd
ABN 95 001 145 035

Level 3
910 Pacific Highway
Gordon New South Wales
2072 Australia

Telephone: 02 9496 7700
Facsimile: 02 9499 3902
International: +61 2 9496 7700

Web: www.cardno.com.au

Cardno has been commissioned by Planning Ingenuity Pty Ltd to undertake an assessment of the available draft for motor boats within the proposed marina extension area at the St George Motor Boat Club, Sans Souci. This assessment has been undertaken using the Australian Standard – Guidelines for Design of Marinas (AS3962-2001). This assessment follows on from coastal processes investigations undertaken by Cardno (CLT, 2010) for the proposed development and has been prepared to address comments received from the Department of Planning in response to the development application.

AS2962-2001 - Guidelines for Design of Marinas

To allow the safe and effective operation of the marina facility, minimum channel and basin depths have been assessed. These analyses were undertaken in accordance with Australian Standard – Guideline for Design of Marinas (AS-3962 – 2001). It is understood from inspection of the marina berth layout plans that the marina will accommodate motor boat vessels of a range of sizes, up to 20m in length. Table 3.1 from AS3962, details vessel drafts as a function of vessel length (power boats) and these criteria are presented in **Table 1**. Maximum draught requirements for the marina will be 1.5m, based on a 20m length motor boat.

AS-3962 specifies the following allowances in addition to vessel drafts in relation to marina design:-

- a minimum keel clearance of 0.3m for a soft (sandy) bottom
- the additional draft required to account for waves is $0.5 \cdot H_s$.



Table 1: Typical Vessel Drafts - metres (adapted from Table 3.1 – AS3962)

Boat Length (m)	Power Boats
8	0.9
10	1
12	1
15	1.2
20	1.5
25	1.8

The guidelines state that marina design should be carried out to accommodate the 50-years ARI wave conditions at vessel berths. The total required depth for safe navigation must then be calculated at low tide (LAT).

The total design depth required (relative to Australian Height Datum) is then:-

$$\text{Vessel Draft} + 0.3 \text{ (m)} + 0.5 * H_s \text{ (m)} + \text{LAT (mAHD)} \quad \text{Eqn(1)}$$

Data

The data used for the assessment of available draft was taken from the Coastal Processes Investigations undertaken as part of the development application (CLT, 2010). For further details please refer to that report.

Bathymetric data was collated from two sources, being AUS Chart 198 and site specific hydro-survey undertaken for this project. This survey covers the proposed marina expansion footprint and a small section of the existing marina.

Tidal planes were obtained from the Australian National Tide Tables which present this information for Botany Bay, immediately downstream of Kogarah Bay. Tidal planes at Botany Bay show that Lowest Astronomical Tide (LAT) is approximately -0.93m AHD.

The 50-years ARI wave condition at berth locations was obtained from numerical wave modelling (CLT, 2009). This information provides a spatial map of the 50-years ARI wave condition throughout the existing and proposed marina footprint (excluding additional attenuation from moored boats).

Vessel drafts were obtained from the information provided in Table 3.1 of AS3962-2001 (Guidelines for Design of Marinas) for typical vessel drafts based on vessel length.

Seabed information presented in the Aquatic Ecology Impact Assessment (MPR, 2010) show that the seabed consists of soft sediments within the extent of the proposed marina extension.

Available Drafts

Using the data described above and the calculation for total required depth (**Eqn1**) the available draft throughout the marina was determined. The results of the assessment are presented in

Figure 1. The information is presented spatially, as areas within the marina where boats of certain lengths (as specified in AS3962) are able to navigate and berth.

The outcomes show that the majority of the marina expansion will allow access to all boats that will potentially use the marina (up to 20m in length). However, shallower depths and larger waves at the eastern end of the marina expansion will limit safe navigation according to AS3962. For example, areas on **Figure 1** depicted in red, are not suitable for boats greater than 8m in length. This will limit the allowable size of boats to less than 8m in up to 3 proposed berths. Appropriate limits on boat sizes should be imposed on these berths.

Sea Level Rise

Recently the Department of Planning, within the NSW Coastal Planning Guideline: Adapting to Sea Level Rise, adopted the NSW Sea Level Rise Policy Statement (DECCW, 2009), that sets down climate change benchmarks for the 2050 and 2100 planning periods. These benchmarks are specified for the NSW coast as 0.4m (2050) and 0.9m (2100) above 1990 levels. Due to the nature of this development, a planning period to 2050 is considered to be appropriate and hence a sea level rise of 0.4m should be allowed for in the development of the site.

The vessel draft requirements described above will be fulfilled for present-day sea levels. Hence, as sea level rises, larger vessels may be able to use the berths at some future time.

Coastal processes investigations, undertaken by Cardno (2010), state that no tidal attenuation occurs between Botany Bay (and the open coast) and Kogarah Bay. It could therefore be assumed that a rise in sea levels will result in an equivalent rise in tidal planes at the site. Under such a scenario Highest Astronomical Tide (HAT) would be 1.57mAHd for a 0.4m rise in mean sea levels. The same could also be assumed for storm surge, in that the 100-years ARI storm surge would also rise by 0.4m. Long term water level records from Fort Denison (appropriate for this site) indicate a 100-years ARI level of 1.45mAHd. This would rise to 1.85mAHd under a 0.4m rise in mean sea level.

Finally, a Georges River flood level of 1.6mAHd is applicable at this site based on the Georges River Flood Study (1990). The change in flood level with a sea level rise of 0.4m cannot be definitively assessed without more detailed investigations; however, it is likely that the flood level would not increase by greater than the rise in mean sea level. In fact, the increase may be less than 0.4m as the effective conveyance through the Georges River estuary may be increased with higher tide levels. Conservatively however, a future flood level of 2mAHd could be adopted.

It is understood that the crest level of the existing marina seawall is 1.88mAHd. This level is above the potential future HAT and 100-years ARI storm tide levels (at 2050); however, it is below the 100-years ARI Georges River flood level. This would result in flooding of the land adjacent to the marina during extreme catchment run-off events. Given the depths involved, the probability of occurrence and the nature of the land adjacent to the marina (being a carpark area), it is thought that this outcome does not warrant the modification of the seawall structure to protect against such infrequent flooding; noting that the duration would only be about 2 hours because the astronomical tide will fall.

The marina structure itself is floating and hence its function will not be impeded by a rise in sea level.



I trust this assessment of available boat drafts and sea level rise aspects fulfils the requirements of the development application. Should you have any further queries please contact me on 9496 7700.

Yours faithfully

A handwritten signature in blue ink, appearing to read "Sgarber", with a long horizontal flourish extending to the right.

Sean Garber
Senior Engineer
for **Cardno (NSW/ACT) Pty Ltd**

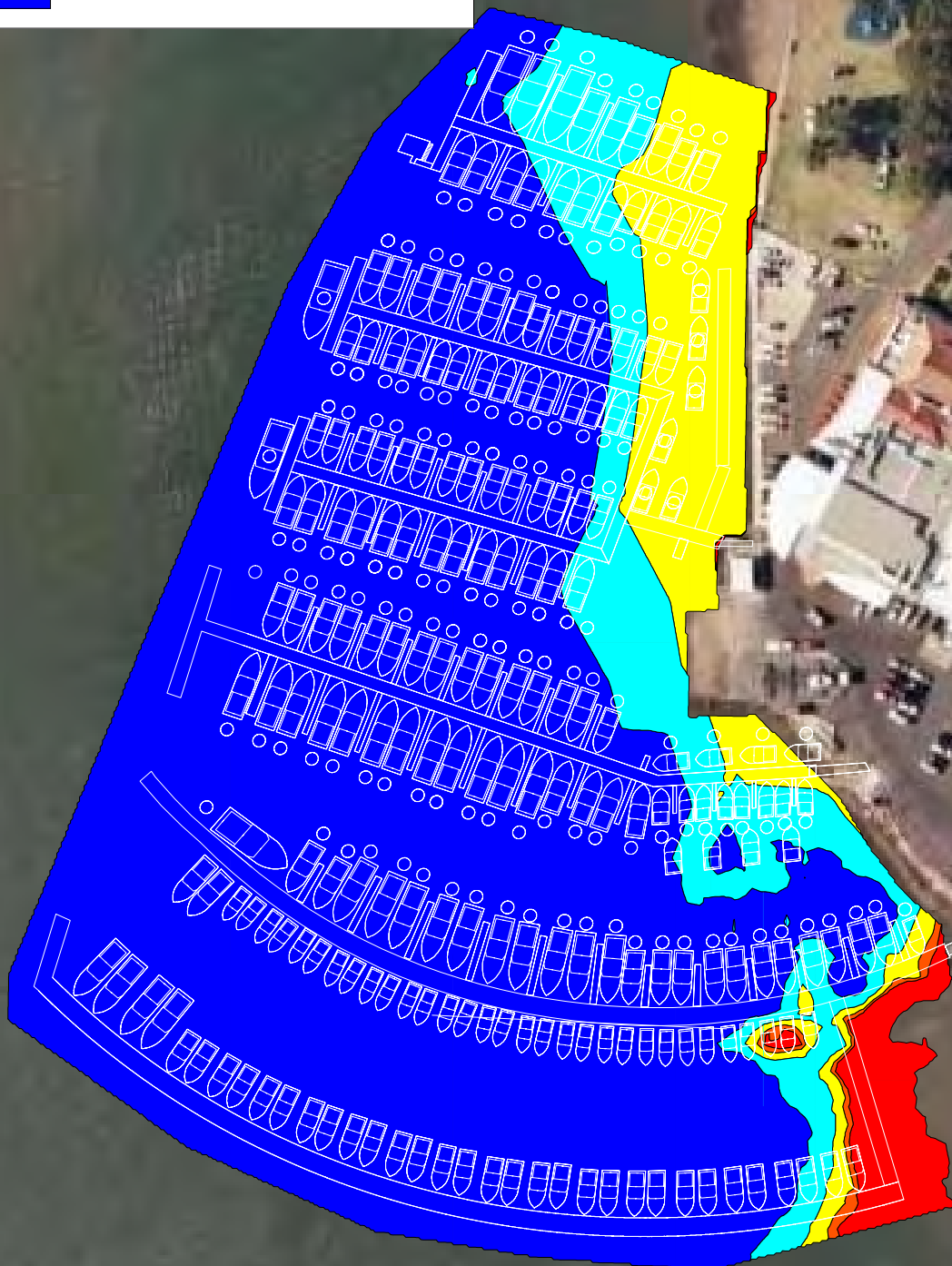
References

Australian Standard 3962 (2001). AS3962-2001 - Guidelines for Design of Marinas. Standard Australia, Sydney. 5 December 2001.

Cardno Lawson Treloar (2010). St George Boat Club Marina - Coastal Processes Investigations. LJ2841/R2601. Report Prepared for Planning Ingenuity Pty Ltd. 5 February 2010.

MPR (2010). St George Boat Club Marina Redevelopment – Aquatic Ecology Impact Assessment. Report Prepared for Planning Ingenuity Pty Ltd by Marine Pollution Research Pty Ltd. February 2010

- No access to Boats larger than 8m length
- No access to Boats larger than 10m length
- No access to Boats larger than 12m length
- No access to Boats larger than 15m length
- Access to all Boats



Annexure D

Response to submissions by Traffic Consultant

**EXTENSION OF MARINA
ST GEORGE MOTOR BOAT CLUB**

RESPONSE TO SUBMISSIONS

RTA Letter

1. Preparation of Construction Traffic Management Plan.
Answer – “This can be a condition of consent.”
2. AS2890.1 Requirements for Proposed Car Park.
Answer – “This can be a condition of consent.”
3. Swept paths for service vehicles.
Answer – “Figures 7A and 7B of Traffic and Parking Assessment report (TUP Jan 2010) show the swept paths.”
4. Vehicles enter/exit the site in forward direction.
Answer – “This can be a condition of consent.”
5. Proposed turning areas to be kept clear.
Answer – “This can be a condition of consent.”
6. All works at no cost to RTA.
Answer – “This can be a condition of consent.”

Submission 1 – Kelly Submission

More traffic will be generated within a quiet residential area.

Answer – “Additional traffic will be an additional 28 vehicles arriving and departing the marina on a busy Sunday. The impact of the additional vehicles on the adjacent streets will be extremely minor.”

Parking for boat trailers will be diverted to relatively narrow streets.

Answer – “The expansion of the marina will not increase the number of boat trailers coming to the club. There will be no change to the boat trailer parking within the existing carpark. The current parking demand for trailers on a busy Sunday is 12-20 boat trailers. The additional 39 car parking spaces will cater for the additional car parking demand generated by the additional marina berths. Based on this, there is no reason to expect that parking for boat trailers will be directed to the adjacent streets.”

EXTENSION OF MARINA ST GEORGE MOTOR BOAT CLUB

Submission 2

Existing excessive traffic congestion locally, due to large number of visitors to SGMBC and impacts during the construction period. Additional parking spaces unlikely to be sufficient to accommodate the additional visitors to SGMBC, let alone existing members of visitors.

Answer – It is accepted that there will be some on site parking displaced at SGMBC during the construction period. However this will be a temporary situation until the construction is completed. The SGMBC will organise the work so that the impacts during construction in terms of loss of parking are minimised. This would be addressed in the Construction Traffic Management Plan.

Once operational the only additional visitors generated by the extra marina births will be those owners/visitors using their boats moored at the proposed births. Some, if not most of these people are already likely to be club members and using the club's facilities (ie visitors to the club). The additional 39 car spaces will accommodate the parking for the additional cars generated by the extra marina births on a busy Sunday, during the day.

At other times, such as on Friday, Saturday and Sunday evenings, the additional parking spaces will be available for all visitors to the club. Based on this, it is concluded that there should be no increase to parking that occurs on street due to the proposal and if anything on street parking impacts are likely to reduce.

Submission 5

The increase in the marina births will also increase traffic and will further exasperate the existing traffic problems being experienced by the residents in the surrounding streets.

Answer – The existing traffic conditions on Sundays on the road network have been assessed as satisfactory. The proposed additional births will generate an additional 28 vehicles arriving and departing the marina on a busy Sunday. The impact of the additional vehicles on the adjacent street will be extremely minor.

Submission 7

Proposed parking will be 1 level higher than existing parking and cause massive obstruction to the magnificent view.

Answer – The proposed additional parking level will be lower than the existing upper level at grade parking in front of the club. I understand that there will be virtually no impact on existing views enjoyed by residents from the additional parking level. However this is not a traffic matter and should be addressed by PI.

EXTENSION OF MARINA ST GEORGE MOTOR BOAT CLUB

Submission 8

Additional parking traffic would generate kerbside parking problems and noise in neighbourhood streets.

Answer – The proposed additional parking spaces at SGMBC will ensure that the (additional) parking demand created by the additional marina births can be accommodated on site within the car park at the club.

There should be no increase in on street parking due to the proposal. At times other than good boating Sundays, the proposal will provide additional parking for use by club patrons.

The additional 28 vehicles arriving and departing the marina on a Sunday during the day would be unlikely to increase traffic noise in the adjacent streets.

Submission 9

- Growth of the marina will have a significant impact on parking in the neighbourhood residential area.
- More patrons of SGMBC will park in the streets as parking will not be available within the club's car parks.
- Resident's complaints about lack of parking and illegal parking.
- Lack of adequate trailer parking on site and in particular lack of car and trailer parking.

Answer – The parking demand of the existing marina and additional births was established through extensive surveys. These established that an additional 36 parking spaces would meet the maximum demand of the additional 78 new births and 23 unapproved births. The proposal will incorporate an additional 39 off street car parking spaces at the SGMBC and will be sufficient to meet the additional demand. The proposal is not expected to lead to an increase in on street parking.

SGMBC already provides trailer parking within the lower level car park. The protocol is that trailers are removed from the car and stored in trailer spaces and the car parked in an adjacent space. There are 18 marked spaces as well as other areas and more than 1 small trailer can be stored in these spaces. There is a marina manager who supervises this. The current demand for car and trailer parking is between 12 – 20 trailers on a good boating Sunday. The existing arrangements provide the most efficient use of the car park area and result in more vehicles and trailers being parked in the car park. The provision of a car and trailer parking space, as a single unit would affect manoeuvring in the car park aisles and would reduce the number of parking spaces that the lower car park area could accommodate.

The proposal is for additional fixed births and is unlikely to result in additional demand by boats on trailers coming to use the club's boat ramp.

Illegal parking is an enforcement matter.

EXTENSION OF MARINA ST GEORGE MOTOR BOAT CLUB

Submission 11

Objects to the proposal as it will exacerbate the already existing traffic problems that residents have to put up with.

Answer – The traffic impacts of the additional marina births will be minor and will have no measurable impact on the existing traffic conditions in the adjacent road system.

Submission 12

Assessment has not taken the parked trailers into account (Table 5.2).

Answer – The above statement is incorrect. The assessment has taken into account the parked trailers.

There has been no increase in parking spaces for people with a disability.

Answer – The above statement is incorrect. Additional disabled spaces will be provided in the upper level car park adjacent the club building.

No mention of operating hours and number of function rooms.

Answer – There is no change to existing club operation (ie hours, floor space etc) as part of the proposal.

Traffic volumes in Plimsoll Street are unacceptable.

Answer – The traffic volumes using Plimsoll Street reflects the existing approved uses that operate. Plimsoll Street is a wide road and can easily accommodate the existing traffic volumes, as well as the additional traffic from the proposal. Due to the nature of the street, vehicle speeds are low and traffic conditions are considered to be satisfactory. Traffic volumes are also considerably lower on Monday to Friday.

On street parking demand. Assessment gives no consideration to the residents of Plimsoll Street and their visitors.

Answer – There are no on street parking controls in Plimsoll Street or any of the adjacent streets. This means any registered vehicle and or trailer can legally park in the streets for as long as they like regardless or not whether they live in the street and or if any other parking is available.

The residential properties in Plimsoll Street all have off street parking and therefore have an alternative of parking on their properties, if on the street parking spaces are not available.

EXTENSION OF MARINA ST GEORGE MOTOR BOAT CLUB

Aerial photos showing boats and trailers parked in Anderson Park.

Answer – The club will need to respond to this. However during parking surveys (8 days) between 1 August 2009 and 29 November 2009, there was no parking in Anderson Park by club patrons and or marina users.

Submission 14

Lack of car and trailer parking.

Answer – See response for Submission 9.

No Parking Requirement for Club and Marina (ie. whole site)

Answer - The proposal is to extend the marina only. There are no changes proposed to the club facility either by way of additional floor space or changed hours of operation.

Under the existing approvals for the club and marina the car parking requirement is 202 car parking spaces, of which 193 spaces are available for club patrons and marina users.

The existing approvals acknowledge that the marina and the club facility are complimentary uses and the parking can be shared. This will still be the case with the additional marina births.

The assessment has found that the additional marina births including the existing unapproved births will require an additional 36 car parking spaces. The proposal will result in a total of 238 car spaces on the site at SGMBC.

While the parking assessment has not specifically examined the parking requirements of the club facility separately, as it is not part of the current marina proposal, it should be noted that the RTA research on clubs including parking demand is dated (some 32 years old) and the RTA Guidelines do not recommend a specific parking requirement for clubs.

The increase in the marina size will lead to an increase in parking requirements and will push more users of the SGMBC onto the adjacent streets.

Answer – The proposed additional parking spaces at SGMBC will cater for the increased parking demand associated with the additional marina births. For this reason it is considered unlikely that there will be any increase in on street parking in adjacent streets, due to the proposal. If anything, it is expected that on street parking will reduce if the proposal is approved.

Annexure E

Acoustic Report

17 November 2010

4330 L001 Response to DoP Submissions 20101117.doc

Planning Ingenuity Pty Ltd
PO Box 715
MIRANDA NSW 1490

Attention: Ms Alison Davidson

Dear Alison

**Proposed Marina Extension
St George Motor Boat Club, Sans Souci
Response to Submissions to DoP - Noise**

As requested we have reviewed the submissions to the Department of Planning regarding the potential noise impacts associated with the proposed extension of the Marina at the St George Motor Boat Club, Sans Souci. Our responses are set out in the following. Reference is made where required to RSA Acoustics Report 4330R1R1 *Proposed Marina Extension St George Motor Boat Club, Sans Souci Noise Impact Assessment*, dated October 2009.

Submission 2

The proposed Marina extension is unlikely to have a discernible impact upon the current noise levels experienced during weekend race days.

The noise emissions and potential noise impacts associated with people talking at various voice levels on board a vessel moored at the proposed wet berth in closest proximity to the residential receivers are addressed in Section 6.2 of our Report 4330R1R1. Calculations established that the night-time sleep disturbance criterion is complied with for people talking in "raised" and "loud" voices aboard a moored vessel. A marginal 1dBA exceedance of the criterion is predicted for "shouting". In terms of audibility, a 1 dB change in noise level would not be perceptible.

The sleep disturbance criterion may be exceeded by the disposal of garbage, particularly bottles etc into bins in the lower level carpark area.

It was recommended that such potentially sleep disturbing events be specifically addressed in the Marina Noise Management Plan/Code of Conduct.

Submission 5

The distance between the closest wet berth on the existing Marina arm E and the nearest residential receiver is approximately 60 m. The location of the closest wet berth on the proposed Marina arm F is in the order of 50 m to 55 m. There would be no audible change in the relative level of boat noise received at this residence as a result of the proposed extension. In addition, based on typical cruiser engine noise levels, the $L_{Aeq}(15\text{minute})$ noise level at the nearest residence is predicted to comply with the daytime, evening and night-time operational noise goals.

To address the concern:

“Additional boats will also increase the noise level emanating from the club due to additional boat movements.”

In order to increase the overall daily boat traffic noise level by 3 dBA, the volume of boat movements would need to double. Furthermore the audibility of a 3 dB increase in such circumstances is doubtful.

Submission 6

Refer to above response.

Submission 12

Refer to above responses.

Submission 13

The scope of the noise impact assessment, presented in Report 4330R1R1, is confined to the proposed Marina expansion and as such does not include assessment of the St George Motor Boat Club's existing operations.

The purpose of the environmental noise survey was to establish the existing ambient noise levels at nearby residential premises, upon which to determine appropriate criteria for the assessment of the proposed Marina extension in line with NSW regulatory requirements. The ambient noise survey was therefore conducted in accordance with Australian Standard procedures and the requirements of the NSW Department of Environment Climate Change and Water (DECCW).

The noise sources directly associated with the proposed Marina extension have been addressed within Report 4330R1R1. The Club carpark is considered acoustically significant in terms of the proposed Marina extension only insofar as the potential for garbage disposal within the bins located at the lower level and the behaviour of patrons returning from vessels moored at the new wet berths during the night-time period. These issues have been recommended for particular consideration by the Club's Noise Management Plan/Code of Conduct.

Submission 21

Refer to above responses in relation to noise impact associated with additional berths. In very simple terms, the proposed increase in the number of wet berths would represent a less than 2 dBA increase in the overall noise level from moored vessels.

We trust these responses provide sufficient clarification of the issues raised directly relevant to the potential noise impact of the proposed development. Please do not hesitate should you require any additional information or wish to discuss the foregoing in further detail.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Lee Hudson', with a long horizontal stroke extending to the right.

LEE HUDSON

Senior Project Consultant