Project Application

Volume 5

Inner West Marina
Parramatta River, Sydney

Date of Issue: 7th July, 2010
Project No: 01013
Status: Project Application to NSW Department of Planning

Contents

Volume 1

Volume 2

Appendix 1:

- Drawings
- Photographs of Indicative Elements
- NSW Maritime Authority Plans
- Hydrographic Survey Drawings HS01 and HS02

Appendix 2:

- Major Project Declaration and Director-Generals Requirements

Appendix 3:

- Land Owner's Consent

Volume 3

Appendix 4:

- Aquatic Environmental Assessment
- Aquatic Ecology Studies

Volume 4

Appendix 5:

- Construction and Operational Noise Assessment

Appendix 6:

- Historical and Aboriginal Heritage Impact Statement

Appendix 7:

- Traffic and Parking Report

Volume 5

Appendix 8:

- Visual Assessment Report

Volume 6

Appendix 9:

- Estuary Hydrodynamics and Physical Sedimentary Environment Report incorporating Turbidity Investigation

Volume 7

Appendix 10:

- Construction Environmental Management Plan
- Operational Environmental Management Plan

Volume 8

Appendix 11:

- Berth Demand Study

Appendix 12:

- Construction Management Plan

  Attachments

  - Drawings CMP00, CMP01, CMP02, CMP03 and CMP04
  - Geotextile Information

Volume 9

Appendix 13:

- Sediment Management Report
- Declaration of Remediation Fill from Environment Protection Agency
- Site Auditor Advice – Letter from GHD

Volume 10

Appendix 14:

- Assessment of Impact on Avian Fauna

Appendix 15:

- Marina Management Plan

Appendix 16:

- Community Consultation Report

Appendix 17:

Navigation Information

- Drawing N01
- NSW Maritime Plan: Traffic Coordination of the Parramatta River
- Ferry Timetable
- NSW Maritime Schedules of Moored and Registered Vessels

APPENDIX 8:

- VISUAL ASSESSMENT REPORT

richard lamb & associates

Proposed Inner West Marina Sydney

Breakfast Point

Visual Impact Assessment

July 2009

Report prepared for Rosecorp Management Services Pty Ltd
by Dr Richard Lamb

1/134 Military Road, Neutral Bay, NSW 2098 PO Box 1727 Neutral Bay NSW 2089
T 02 99530922 F 02 99538911 E info@richardlamb.com.au W www.richardlamb.com.au

Table of Contents

Table of Contents

Executive Summary

1. This report consists of an assessment of the visual impacts of the proposed Inner West Marina Sydney at Breakfast Point(the subject site). The report consists of an assessment of the visual character and scenic quality of the site and its context, the components of the proposed development, and a review of the relevant planning instruments relating to potential visual impacts.
2. The proposal is for a new 172 berth marina along the western shoreline of Kendall Bay. The subject site is partly at the location of a former wharf which has been mostly demolished and is non-functional. The proposal is for a floating structure to provide wet berths consisting of a main north-south spine and eight east-west vessel berthing arms on which vessels would be berthed in an orientation perpendicular to the respective arm.
3. The vessel sizes proposed to be berthed in the marina range from 8m-25m. The proposal is for 5 temporary berths/destination berths and 167 permanent berths. 103 berths would be suitable for yachts. Arms 1, 2 and 3 are called the northern arms, Arms 4 and 5 are called the central arms and Arms 6, 7 and 8 are called the southern arms in this report for ease of the assessment. There are wide fairways proposed between the arms for manoeuvring of vessels which also act as view corridors.
4. A new jetty is proposed in the alignment of the former jetty. A public ferry wharf pontoon is also proposed beyond the eastern end of the jetty. A marina manager's office is proposed at the landward end of the jetty and a kiosk is proposed at the river end of the jetty.
5. The proposed eastern extent of the arms of the marina is essentially restricted to the extent to which the former jetty extended in the east direction. The exception to this are small parts of Arm 1, Arm 2, Arm 3 and a greater part of Arm 8 of the marina that extend beyond this limit line.
6. The visual character of the site is constituted by a constructed western shoreline, foreshore walkway, medium to high density residential backdrop to the west and southwest on a former AGL industrial site and a relatively natural southern shoreline consisting of intertidal beach and mangroves, Cabarita Park, Cabarita Rivercat Ferry Wharf and waters of Kendall Bay and Parramatta River. The wider visual context consists of some private and commercial marinas, Putney Point vehicular ferry, swing moorings in small bays, far shoreline, foreshore reserves along the far shoreline and residential context of Putney, Tennyson Point and Gladesville.
7. The intrinsic scenic quality of the site and its surrounding context is analysed to be of a low to moderate rating.
8. A view analysis was carried out by visiting and analysing a representative sample of viewing locations within the potential visual catchment. The limits of the potential visual catchment were identified based on this exercise. Observations were made for every viewing location on the potential visual effects and impacts of the proposed development on the existing views. The viewing locations were classified into three view/viewer sensitivity zones based on the distance of it from the site.
9. There would be no significant visual exposure of the proposed development from roads with the exception of the southern terminus of Pellisier Road (Putney), Tennyson Road (Tennyson Point), Ross Street (Gladesville) and Wharf Road (Gladesville). The proposed development would be visible from the foreshore reserves located below the southern termini of these streets. It would be

visible from the foreshore walkway adjacent to the western and southern shoreline of Kendall Bay, Cabarita Rivercat Ferry Wharf, foreshore to the southeast of the Wharf and Putney Point Vehicular Ferry Ramp. It would be visible from the townhouses and apartment buildings in Manors Precinct East and Wharf Precinct in the Breakfast Point residential development and some apartments in Kendall Inlet.

10. The visual effects and impacts of the proposed development were assessed adopting a detailed visual impact methodology. The potential effects of the proposed development on the visual character, scenic quality and view composition for individual viewing locations were analysed. The View blocking effect on each individual location was also analysed.
11. The visual impacts of the proposed development were assessed on three criteria; a) The capacity of individual view compositions to physically absorb the proposed development, b) Compatibility of the proposed development with the maritime elements present in individual views and c) Compatibility of the proposed development with the urban and natural shoreline elements in individual views.
12. The overall effects and impacts rating for the high view sensitivity zone (close range zone within 100m distance from the site) in the public domain were assessed to be high. Highest individual levels of effects were found for close views from the waterway and the foreshore walkway along the western shoreline of Kendall Bay, including the intertidal beaches.
13. The overall effects and impacts rating for the high view sensitivity zone in the private domain were also assessed to be high. Highest individual levels of effects and impacts were found for close views from the townhouses and apartments in Manors Precinct East and Wharf Precinct at ground level, decreasing for higher floor levels.
14. The reasons of high rating impacts on high view sensitivity zones were mostly due to the potential presence of the proposed marina in the foreground of the views from these locations and the resultant change it would cause to the view compositions and visual character of those views.
15. There would not be unreasonable view loss effects of the proposed marina on the potential visual catchment generally, but there would be potential loss of the views of parts of Parramatta River and the sense of the river sweeping towards Kissing Point Bay when seen from viewing locations along the southern shoreline of Kendall Bay and part of Cabarita Park.
16. There would also be view loss effect of parts of Parramatta River and the far shoreline from the foreshore walkway and the ground floors of the residential development adjacent to it, to the west of the site of the proposed marina. The proposed wide fairways assist in maintaining some of the latter views in a view experience which, with the exception of static private views, is a dynamic experience for all viewers and one which is affected along only part of a continuous foreshore access way.
17. The overall effects and impacts rating for the medium sensitivity zone (medium range locations within 100m and 1000m from the site), both in the public and private domains, were assessed to be low, low to medium or medium. A few exceptions to these ratings were the southern end of Tennyson Road and Pellisier Road and Putney Parade on which there would be higher visual effects and impacts.
18. There would be a potential view loss effect of the existing views of the constructed western shoreline of Kendall Bay when seen from medium range viewing locations to the southeast, east and northeast. This view loss effect is not considered to be significant due to the constructed nature of the shoreline and the medium and high density residential backdrop of the site when seen from these directions which overall has a low to moderate scenic quality.

19. Low sensitivity zone locations (distant locations at greater than 1km distance from the site) included public domain views. The overall effects and impacts rating for the low visual sensitivity zone were assessed to be low.
20. The visual effects and impacts of the land based component of the proposed development would be generally low on the whole potential visual catchment.
21. The visual effects of the proposed construction activity and lighting were assessed to be not significant, the first being transitory and water based and making no permanent change to the environment, and the second adding only similar light levels and sources to those that are found in the existing setting.
22. The proposed development was found to be generally consistent with the provisions of the Planning Instruments relevant to visual impacts.

1.0 Introduction

1.1 Purpose of this Report

This Report has been prepared on instructions from Taylor Lauder Bersten Pty Ltd on behalf of the Applicant Rosecorp Management Services Pty Ltd. The Report is an independent assessment of the potential visual effects and impacts of the proposed Inner West Marina Sydney at Breakfast Point (the subject site). The Report is based on the field documentation and assessment undertaken on 30 January, 3 February, 10 June and 7 July 2009, which also included views from the water in a water taxi.

The proposed marina is a State Significant Development and the Minister for Planning is the determining authority. This Report also addresses the Director General's Requirements relevant to potential visual impacts. The Applicant has the land owner's consent to lodge the Development Application for the proposed marina from the NSW Maritime Authority.

1.2 Documents consulted

I have perused the following drawings and documents in the preparation of this Report;

(i) Drawing DA 01 General arrangement, Revision H, prepared by TLB Engineers, dated 5 June 2009

(ii) Drawing DA 02 New Jetty, Revision D, prepared by TLB Engineers, dated 9 July 2009

(iii) Drawing DA 03 Marina layout, Revision E, prepared by TLB Engineers, dated 9 July 2009.

(iv) Drawing DA 05 Marina services, Revision D, prepared by TLB Engineers, dated 9 July 2009.

(v) Drawing DA 06 Bed treatment, Revision C, prepared by TLB Engineers, dated 9 July 2009.

(vi) Drawing DA 07 Lease Diagram, Revision B, prepared by TLB Engineers, dated 9 July 2009.

(vii) Drawing DA 10 Site analysis, Revision E, prepared by TLB Engineers, dated 9 July 2009.

(viii) Drawing PRP01, Photomontage Reference Points, Revision C, prepared by TLB Engineers, dated 9 July 2009.

(ix) Drawing SSP1, Site Sampling Plan, Revision E, prepared by TLB Engineers, dated 9 July 2009.

(x) Drawings CMP01-03, Construction Staging Plans, prepared by TLB Engineers, dated 9 July 2009

(xi) Drawing No. DA-5C-02, Revision A, Silkstone Precinct, (also showing typical plans and elevations of the proposed kiosk, associated facilities and marina manager's office), prepared by Giles Tribe Architects, dated 30 May 2008.

(xii) Drawing 1357.021-E01, Revision 0, prepared by Scientists Engineers Managers & Facilitators dated 16 June 09.

(xiii) Sydney Regional Environmental Plan, Sydney Harbour Catchment, 2005.

(xiv) Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005.

(xv) Canada Bay Local Environmental Plan 2008.

(xvi) Boat Storage Policy for Sydney Harbour, June 2004.

(xvii) Director General's Requirements for the Application, dated 14 January 2009.

(xviii) Breakfast Point Concept Plan 2005.

1.3 The proposal

The proposal is for the construction of a new 172 berth marina at the subject site located along the western shoreline of Kendall Bay. The subject site is partly at the location of a former wharf which has been mostly demolished and is non-functional. The remains of the former wharf/jetty under the water are proposed to be retained. The former wharf was a large structure in the form of an elevated reinforced concrete platform supported by a number of timber columns and beams. The deck of the former jetty was at approximately RL 4.575.

1.3.1 The marina component

The proposal is for a floating structure to provide wet berths. The floating structure would be a proprietary modular pontoon system with timber decking and supported by concrete piles. The proposal has eight arms in total on which vessels are proposed to be berthed either on one side or both sides of the arms in an orientation perpendicular to the respective arm. Table 1.1 indicates the vessel size distribution for the proposed marina.

Table 1.1: Vessel Schedule for the proposed marina

Vessel length (m)	No. of berths			Percentage of total berths (%)
	Temporary berths	Permanent berths	Total	
8	-	12	12	(7.0%)
10	-	30	30	(17.4%)
12	4	42	46	(26.7%)
14	-	40	40	(23.2%)
16	-	28	28	(16.3)%)
18	1	6	7	(4.1%)
20	-	7	7	(4.1%)
> 20-25	-	2	2	(1.2%)
Total	**5**	**167**	**172**	**100**

The vessel sizes proposed to be berthed in the marina range from 8m-25m. The proposal is for 5 temporary berths/destination berths and 167 permanent berths. 103 berths are suitable for yachts. Based on the current trends it is anticipated that no more that 15% of the berths could be yachts and it is also unlikely that larger size yachts would be present in Parramatta River.

Of the proposed 172 berths, only 7 berths are of a maximum length of up to 20m length and 2 berths are of maximum length between 20 to 25m. Hence the more common lengths of the vessels (163) proposed to be occupying the marina range between 8 to 18m.

I have been involved with the Applicant and other consultants at the design stage of the proposed marina and had recommended amendments to the scale and extent of the marina at that time. I also advised the Applicant on limiting the eastern extent of the proposed marina to mitigate potential view loss effects on viewing locations to the south and southeast of the site. The final layout and the eastern extent of the arms of the proposed marina have been considered partly based on my advices to the Applicant and I am generally in support of the overall scale and the extent of the proposed marina. The extent of the proposed marina can also be visualised with the help of the positioning of an existing marker buoy within Kendall Bay (shown as CRP831 in Drawings DA 01 and DA 02). The easterly extent of the proposed marina is predominantly inside this existing marker buoy within the Bay.

One of the governing factors in deciding the easterly extent of the proposed marina by the Applicant is the extent to which the former jetty extended in the east direction in the recent past. It was considered that if the proposed marina did not exceed the easterly extent of the former wharf then it would not have significantly greater visual effects and impacts in terms of view blocking in views parallel to the shoreline compared to those which were caused by the former jetty. Hence, the majority of the parts of the proposed marina are within this limit line which has been shown on Drawings DA 01 and DA 03 and called 'eastern end of original wharf' (ie. a line parallel to the shoreline at that distance). The only exception to this are small parts of Arm 1, Arm 2, Arm 3 and a greater part of Arm 8 of the marina that extend beyond this limit line.

The proposal also includes construction of a new low level fixed jetty on the site of the former wharf, as part of the interpretive reminder of the heritage of the site at Kendall Bay. The proposed marina also has a small land based component associated with its functioning. There is no working berth proposed and the vessels would be subjected to only hand-based maintenance.

The main arm

There is a main arm closer to the shoreline which provides connectivity to all the vessel berthing arms and is perpendicular to them. It kinks slightly landward in the northern section. This main arm extends further in the south direction and splays southeast for a short distance.

The central arms (Arms 4 & 5)

At the location of the former wharf, the proposal is to have two arms with vessels to be berthed on the northern side of the northern arm and the southern side of the southern arm respectively (these arms are called the *'central arms'* in this Report for the convenience of indicating the locations of other arms relative to them). The central arm would berth vessels of sizes ranging from 10 to 16m.

A new jetty is proposed between the two central arms. A kiosk and associated services are proposed at the seaward end and a marina manager's office is proposed at the landward end of the new jetty.

A commuter ferry pontoon which would be subject to the LEP provisions and demonstrated demand is also planned as part of the proposal. This pontoon is located at the eastern end of the new jetty.

The northern arms (Arms 1, 2 & 3)

There are three arms to the north of the central arms (these are called *'northern arms'* in this Report) which are proposed to berth vessels on both sides of the arms. The northernmost arm is approximately in the alignment of the third townhouse with dark grey coloured roof in the Manors Precinct East.

The three northern arms are proposed to berth vessels of sizes ranging from 10 to 25m. The fairways between the central and the northern arms (areas of open water for navigation purposes and which also provide view corridors) are in the range of 21 to 31.2m in width. The fairway between the northern central arm and the northern arm closest to it is the largest, being approximately 31.2m wide.

The southern arms (Arms 6, 7 & 8)

The splayed southern part of the main arm which is approximately at a 60^0 angle to the shoreline serves three relatively small arms. These three arms are called *'southern arms'* in this Report. The inner of the southern arms (Arm 6) would berth vessels only on the south side, however there is also a provision of two temporary berths for 12m vessels to be berthed parallel to the arm on its north side. The middle of the southern arms (Arm 7) would berth vessels on both sides of the full length of the arm. The outer of the southern arms (Arm 8) would berth 8 vessels on the north side and 6 vessels on the south side. The proposed vessels on these southern arms range from 8 to 12m.

Two temporary berths of 12m vessel size are also proposed adjacent to Arm 6 and parallel to and on the east side of the main arm.

1.3.2 The land-based component

There is a kiosk, outdoor catering area and associated facilities proposed at the water-ward end of the central arms. A marina manager's office is proposed at the land-ward end of the central arms.

A timber skid for skiffs, kayaks etc is also proposed along the foreshore. Car parking for the marina is proposed to the southwest of Peninsula Drive.

1.3.3 Other associated facilities

Lighting, fire safety and other services

Lighting and fire safety facilities for the proposed marina would be in the form of light and combined services bollards, fire hose reels and fire hydrants (shown on Drawing DA 05 and Drawing 1357.021-E01). The combined service bollards would be provided on the eight vessel berthing arms. These bollards house fresh water and power outlets. The light bollards would be provided on the main arm of the marina. All bollards provide low level lighting which is sufficient for the safety of patrons using the facilities after dark. Light levels would be low and are not intended to provide general lighting. The bollards would be heavy duty silver pearl cast and extruded aluminium 400mm high C/W clear acrylic lens and concealed double sided light source, Marathon Products P/L "T6 Pedestal".

The lamps would be located near the top of the light and combined service bollards. The lamps are proposed to be of 2x11 PL watts self ballasted compact fluorescent Osram "Long Life" lamps, the colour and type of which may be decided later. The preferred colour for lamps is one which would emit light in the "warm" part of the spectrum (i.e. appear slightly yellow/pink), rather than "cold" white. The lamp is shielded from view, diffused and directed downwards by a translucent plastic louvre system so that it only serves the purpose of providing safe lighting to the walkway deck. There is minor light spill out at angles above the angle of the dominant flow, but there would be no glare.

The lighting is proposed to provide safe illumination of the walkways and to allow pedestrians to safely navigate between the shore and their moored vessels only. The bollard lighting is proposed to be switched on automatically to full output at dusk and then, at a preset time to be determined, fade to a minimum level for safe access along the walkways. The lights would then automatically turn off at dawn.

These units and similar lighting arrangements have been installed in a number of marinas around Sydney including Royal Motor Yacht Club Marina, Catalina Anchorage at the Spit, Rushcutters Bay Marina, Royal Prince Alfred Marina in Pittwater and on piers 6 & 7 of Walsh Bay Marina.

The lighting on the jetty and the ferry pontoon is proposed to be a total of 14 1x35W HIT-CE silver pearl IP65, Marine Grade 5m lighting pole C/W Indirect optics, internal control gear and lamp JSB lighting WE-EF CAT No. 108-0425.

Drawing DA 05 shows the layout of the bollards. There are navigation light bollards, one on the eastern end of each of the eight arms. The locations of the security camera (C), Lights only bollards (L), Navigation Light (NL), Services Bollard with light, water and power (SB), Fire hose reel (FHR), and Fire Hydrant are shown on the Drawing DA 05 and Drawing 1357.021-E01. It will be a requirement for mooring vessels in the Marina that once berthed, all navigation lights are turned off. With the exception of bollard lights and navigation lights on the Marina, all lights on the Marina will be turned off outside Marina operating hours.

There is no significant lighting associated with the proposed marina manager's building and the kiosk as they would be operated only in day time hours say 7AM to 6PM.

I have undertaken a visual effects analysis of the proposed lighting on the night time views from the potential visual catchment. This analysis is presented at Section 8.0 of the report and representative photographs are appended at Appendix D.

Sewage pump out facilities and fuel storage tanks

Drawing DA 05 shows the locations of the three sewage pumps (SP) which are located at the eastern end of the first northern arm, on the main spine to the south of the central arm and on the north eastern end of the southern most arm respectively. The main sewage pump out tank is proposed to be located underneath the marina manager's office at the landward end of the proposed new jetty.

Access control gates

Access control gates would be provided at the landward end of each of the arms. These gates would be of clear glass supported by a metal frame of minimal proportions consistent with adequate functioning.

1.3.4 Public benefits associated with the proposed marina

The following are some of the public benefits proposed as part of the Application.

1. 5 day berths/temporary berths/destination berths (pick up/drop off berths)
2. Ferry wharf at the eastern end of the proposed new jetty
3. Kiosk and public access on the proposed new jetty
4. Disabled access to the proposed marina
5. The main spine of the marina would be publicly accessible during marina working hours so that the public can enjoy Parramatta River views and experience aspects of a working harbour.

1.4 Visual character of the site and its surrounding context

The site for the proposed marina is part of the western shoreline and waters of Kendall Bay in the Parramatta River. There is a constructed retaining wall along the western shoreline of Kendall Bay, approximately between River Quays Marina and the southern part of the Bay. The southern and south western shoreline of Kendall Bay has a partly natural visual character constituted by mangrove growth, sandy and intertidal beaches and foreshore reserve (Cabarita Park). Part of the site is the location of a former wharf, the remains of which can be partly seen including some timber structure and rocks.

The maritime context in the vicinity of the site and within Kendall Bay is constituted by River Quays Marina and a small scale marina between Mortlake Point and River Quays Marina to the northwest of the site, and Cabarita Rivercat Ferry Wharf and the Cabarita Westport Marina to the east of the site.

The Breakfast Point flagstaff knoll area partly restricts the visibility of the site from water based and land based locations to the northwest of the site. There is a foreshore pedestrian walkway all along the Bay between River Quays Marina and Cabarita Rivercat Ferry Wharf. This foreshore walkway mainly between the flagstaff knoll and the Cabarita Rivercat Ferry Wharf provides high viewing opportunity of the site as part of expansive views available from there. There are also views of the site from the beaches and parts of Cabarita Park along the southern and south western shoreline of the Bay.

The close range residential context of the subject site is constituted by townhouses and apartments within the Manors Precinct and Wharf Precinct of the Breakfast Point development, still only partly constructed. The future character of the land based context of the development is of medium to high density residential, only part of which is presently constructed, with a totally constructed foreshore and landscaped interface, replacing the former industrial site that existed on the land.

There are views from these residential developments. The site is also visible from parts of the existing apartment development at Kendall Inlet. Further residential development, for example apartment buildings approved to be constructed in the Silkstone Precinct within the Breakfast Point Development will also have views of part of the proposed development. These apartment buildings would be seen in the background of the views of the proposed marina from locations to the north, northeast, east and southeast, in particular those from the river and its foreshores.

The wider visual context of the site is constituted by the waters of Parramatta River, far shoreline of Putney, Tennyson Point, Gladesville and Henley and the predominantly detached residential developments on the low headlands and particularly the foreshores and lower slopes of these localities. The underlying geology of the land based visual context of the site is that of shale landscapes over minor outcrops of harder sandstone, which explains the low levels and relatively flat terrains of the surrounding localities. There are many small reserves, viewing platforms and intertidal rocks along the far shoreline which are accessible off the termini of roads within the localities such as Wharf Road, Ross Street, Tennyson Road, Putney Parade and Pellisier Road. There are some foreshore parks such as Glades Bay Park, Bill Mitchell Park and Morrisons Bay Park from which there is visibility of the site.

The wider maritime context is constituted by swing moorings within Morrisons Bay, Glades Bay and small scale boat accommodation facilities of various kinds along the far shoreline. Putney Point vehicular ferry wharf is also within the wider maritime context. There are a number of rowing and sailing clubs such as Parramatta River Sailing Club, Scotts College Rowing Club and Sydney Grammar Boat Shed along the foreshore of the Gladesville locality.

1.5 Relevant Planning Documents

The planning documents relevant to the potential visual impacts of the development proposal are as follows. Detailed analysis of the proposal against the planning documents can be found in section 6.2.

Sydney Regional Environmental Plan, Sydney Harbour Catchment, 2005

State Regional Environmental Policy (Sydney Harbour Catchment) (Harbour SREP) was gazetted in 2005 as an underlying planning framework for the Harbour and Parramatta River. Division 2 contains the relevant matters for consideration by consent authorities before granting consent to development under Part 4 of the Act, or to activities to which Part 5 of the Act applies.

The subject site is zoned W1 Maritime Waters under the (Harbour SREP).

Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005

The Landscape Character type of the site is 5 under the Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005. The subject site is described as Landscape Character Type 15. The character of the site and the immediate surroundings are stated to be characterized by sandy beaches, mixed rocky intertidal and rock platform and grassland and shown on Map 3 of the DCP. This character has significantly changed since it was classified and described in the DCP due to the demolition of the industrial structures, changed character of the landscape and the recently constructed medium to high density residential context of Breakfast Point with continuous retaining wall along the shoreline of the western part of Kendall Bay.

Canada Bay Local Environmental Plan 2008

The land based component of the site is zoned R1 General Residential under Canada Bay Local Environmental Plan No, 2008. The land based component of the site and its surroundings are also within the foreshore building line zone within the LEP.

Boat Storage Policy for Sydney Harbour, June 2004

The Boat Storage Policy sets out the NSW Government's strategic policy for dealing with boat storage on Sydney Harbour with an aim to provide a more strategic and certain approach to regulating boat storage facilities on the Harbour, and a balance between promoting a prosperous working harbour, maintaining a healthy and sustainable waterway environment and promoting recreational access to the foreshores and waterways. It addresses key issues and concerns raised by the boating industry, local government and the community. Though primarily applicable for the Sydney Harbour, the Policy is relevant to maritime developments in the Parramatta River as well where demand for boating accommodation is similar.

2.0 The methodology

The methodology used in the present assessment has been developed over several years and uses relevant aspects of methods accepted in landscape assessment, extended and modified to adapt to urban and maritime environments. The modifications introduced are derived from visual perception research carried out by others and ourselves in both natural and urban contexts.

The assessment of visual impacts is a field that requires a degree of subjective judgment and is not completely objective. It is therefore necessary to limit the subjectivity of the work by adopting a systematic, explicit and comprehensive approach. This has the aim of separating aspects that can be more objective, for example the physical setting, visual character, visibility and visual qualities of a proposal, from more subjective elements, such as physical absorption capacity and compatibility of the proposal within the setting.

I have evolved a method for the assessment of maritime developments that is supported by the approach taken in Appendix D of the DCP to Sydney Regional Environmental Plan, Sydney Harbour Catchment (the SREP). The appendix to the SREP provides a general method that is recommended for the assessment of visual impacts of vessel storage proposals, including marina developments within Sydney Harbour, Middle Harbour and Parramatta and Lane Cove River regions. The assessment of Visual Impacts in this Report expands, where appropriate, on the guidelines given in D1.2, D1.3 and D1.4 of Appendix D of the DCP.

In the present assessment, we have used a combined approach which considers both the assessment of the urban component and the maritime component of the development, these two aspects being in turn combined toward the end of the assessment process to arrive at an overall evaluation.

The base line assumption of the methodology was the maximum capacity of the proposed marina as occupied primarily by motor vessels of the greatest length capable of accommodation in the berths proposed. That is to say, the visual effects assessed were based on the 'worst case scenario' of all berths being assumed to be instantaneously occupied by vessels of the maximum length relative to each berth and with superstructure heights in the same range. The assumption is conservative, because the reality is that vessels which are below the maximum berth sizes would be likely to occupy the berths initially, and be replaced over time by larger vessels.

2.1 Relationship to the DCP methodology

Appendix D of the DCP provides a recommended approach to carrying out a View Analysis (at Pages 70-71). The method adopted in this assessment is based on this. It adopts each of the components of the recommended analysis method, with some modifications. In regard to the indicative contributions to potential impacts shown in the Appendix D of the DCP at Figures D1 and D2 (at Pages 69 and 70 respectively) the method in this assessment has made some modifications by way of adding further criteria for assessing the visual effects of the proposal. It has also adopted an analytical approach to assessment of the success of the proposal or otherwise with regard to the "Known Characteristics of Various Types of Vessel Storage Facilities" which are shown at D1.1 of the Appendix D of the DCP at Page 68. This has been achieved by assessing the relative sensitivity of viewing locations in the public and private domains and assessing the compatibility of the proposal to the maritime and the urban/natural components of the setting when seen from a range of viewing places. This has been done to address this deficiency in the Appendix D method.

The overall assessment of visual impacts was undertaken using a Visual Effects and Impacts Matrix, which is similar in its concept to the Visual Impacts Matrix, recommended in Appendix D of the DCP.

A variation to the matrix is that it was considered necessary to establish a series of baseline criteria which are constants for the assessment of all viewing situations so as not to double count relevant assessment factors. The baseline criteria are explained in more detail at Appendix E of this Report.

A second variation to the matrix is that it was decided to use a graphic symbol approach instead of the numerical ratings and quantified approach recommended in the Appendix D of the DCP methodology. The reason for the graphic approach is that it is considered easier for a reader unfamiliar with the method to perceive the pattern or response across the various criteria, rather than becoming distracted by individual rating numbers. It is still possible to see what rating has been applied, without using a number to represent it.

A further reason for a graphic approach is that it is not statistically or logically valid to give numerical values to the ratings and to compute values for overall visual effects or impacts on individual viewing places. This is because there are logical relationships between some of the criteria that are invalidated by the computation. The variables are not fully independent and cannot be meaningfully quantified.

For example, the effect of distance is a necessary factor to assess. The effect of distance can be assessed by itself and given a rating. However, distance is also a part of other criteria; for example, it is logically also a part of the scale criterion. Perceived scale changes with distance. It is also a part of the spatial arrangement criterion, because it is only possible to perceive effects of spatial arrangements when the distance is sufficient to allow this.

Giving numerical values to each of the assessments has value only as far as it shows the weight being given to each criterion in the assessment. Because the variables (criteria) are not independent, computing sums, averages and so on across several different assessments as in D4 of the Appendix D of the DCP methodology is invalid and it obscures the greater value of the matrix approach, which is to explain the pattern of the assessments against the criteria. The quantification that is required in the Appendix D of the DCP methodology gives an appearance of objectivity, which is an illusion and is unnecessary, in our opinion.

A further problem is that the computation can mask the effects of variables which are differently proportional to the criterion being assessed. For example, visual absorption capacity (VAC) is inversely proportional to visual effects: the higher the absorption capacity of the environment, the lower the visual effect created. Scale on the other hand is directly proportional to visual effects: the greater the scale of the proposal or the vessels in question, the higher the visual effect. If the two resulting assessments are given simple numerical values and added, they cancel each other out. Averaging all of the assessments on a particular viewing place is therefore not meaningful.

What is most important in using the matrix is to be able to see the pattern of the assessment on each criterion and how the overall pattern leads to an assessment of overall visual effects and overall visual impacts.

The flow chart at Table 2.1 below indicates the relationships among the parts of the visual impact assessment methodology. A description of each of the components of the methodology is included at Appendix E of this report.

An indicative rating table which describes what is considered a low, medium and high effect and impact on each factor is shown in Table 2.1.

Figure 2.1: Flow Chart of the Visual Impact Assessment Methodology

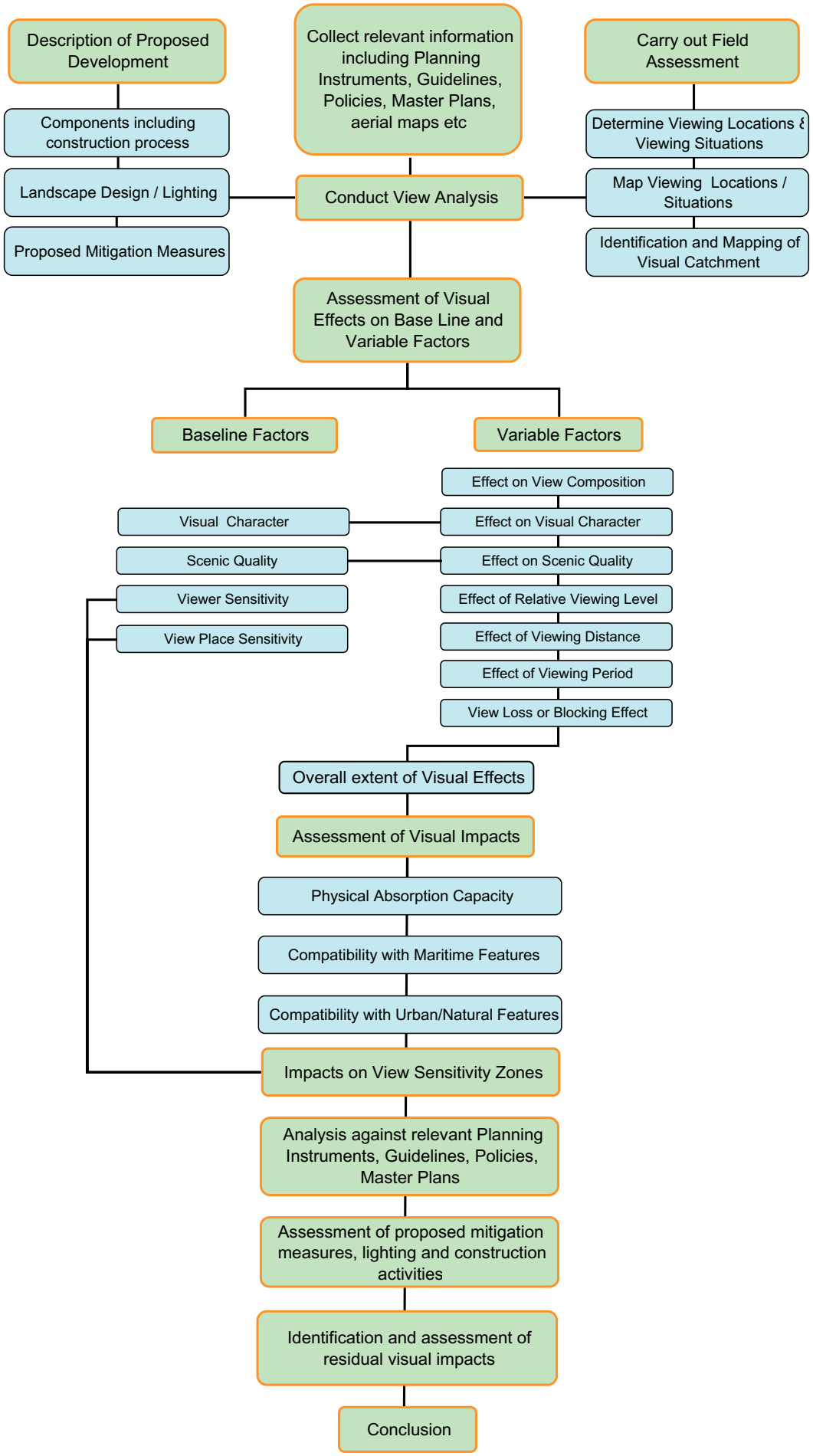

Table 2.1 Indicative Contribution to Visual Effects and Visual Impacts

Indicative Contribution to Visual Effects and Visual Impacts

Factors	Low Effect	Medium Effect	High Effect
Visual Effects Factors			
Scenic quality	Proposal does not have substantial negative effects on features which are associated with high scenic quality, such as the presence of panoramic views, appearance of or visibility of steep and complex topography, presence of extensive areas of water, visibility and diversity of nearby land/water interfaces and presence of compatible existing maritime features.	Proposal has the effect of substantially reducing any or all of: the extent of panoramic views, views of steep or complex topography, the perception of extensive areas of water, visibility of nearby land/water interfaces and maritime features, without significantly decreasing their presence in the range of views available or the contribution that the combination of these features make to overall scenic quality	The proposal significantly decreases or eliminates perception of the integrity of any of: panoramic views, views of steep or complex topography, extensive areas or water and compatibility of maritime features. The result is a significant decrease in perception of the contribution that the combinations of these features make to scenic quality.
Visual character	Proposal does not decrease the presence of or conflict with existing scenic character elements such as topography, urban fabric, land/water interface and maritime features.	Proposal contrasts with or changes the relationship between existing scenic character elements in some individual views by adding new, larger or differently proportioned distinctive features, but does not fundamentally alter the overall visual character of the setting.	The proposal introduces new or contrasting features which are in conflict with, reduce or eliminate existing character features. The proposal causes a loss of or unacceptable change to the overall visual character of the locality.
View place sensitivity	Public domain viewing places providing distant views, and/or with small numbers of users for small periods of viewing time (Glimpses-as explained in viewing period).	Medium distance range views from roads, recreation areas and waterways with medium numbers of viewers for a medium time period (few minutes up to half day-as explained in viewing period).	Close distance range views from roads, recreation areas and waterways with medium to high numbers of users for the majority of the day (as explained in viewing period).
Viewer sensitivity	Residences providing distant views (>1000m)	Residences located at medium range from site (100-1000m) with views of the marina available from bedrooms and utility areas.	Residences located at close or middle distance (<100 or 100-1000m as explained in viewing distance) with views of the marina available from living spaces and private open spaces.
View composition	View composition is unchanged, or panoramic views in which a minor part of the horizontal view is affected, or restricted views where the proposal makes a minor increase in restriction	Panoramic views where a moderate change to the horizontal view is affected, expansive or restricted views where the proposal makes a moderate increase in restriction or focal views with a minor change in composition due to the proposal.	Panoramic or restricted views with a significant change to the composition, or feature or focal views where the proposal itself is the dominant compositional element
Relative viewing level	Elevated position such as ridge top or higher up on slope with clear view over marina.	Slightly elevated (lower slopes) with partial views over marina.	Adjoining shorelines, waterway or reserves with view partly or largely blocked by marina and boats.

Viewing period	Glimpse (eg moving vehicles).	Few minutes up to half day (eg walking along foreshore, recreation in adjoining open space, boating on adjoining waterway).	Majority of day (eg adjoining residence or workplace).
Viewing distance	Land area or waterways (Distant Views)(>1000m).	Land areas or water (Medium Range)(100-1000m).	Adjoining shoreline or waterway (Close)(<100m).
View loss or blocking effect	No loss or blocking of views to dominant scenic features or of iconic items	Partial or marginal view loss compared to the expanse/extent of views available such as loss of part of foreshore or portion of land-water interface in an expansive or panoramic view. No loss of views of scenic icons.	Loss of majority of available views such as those of majority of shoreline, ridges, waterways, land-water interface in a restricted or focal view. Loss of views of scenic icons.
Visual Impacts Factors			
Factors	Low Impact	Medium Impact	High Impact
Physical absorption capacity	Existing elements of the landscape physically hide, screen or disguise the proposal. The presence of marinas, and associated structures, large nos. of swing moorings, marina buildings etc in the existing landscape context reduce visibility. Low contrast and high blending within the existing elements of the setting and maritime features.	The proposal is of moderate visibility but is not prominent because its components, forms and line and its textures, scale and building and vessel form have low to moderate contrasts with existing features of the scene.	The proposal is of high visibility and it is prominent in some views. The floating marina and/or the storage arrangement of boats has a high contrast and low blending within the existing elements of the landscape and waterway and associated built forms.
Compatibility with maritime features	High visible compatibility with the character, scale, form, colours, materials and geometrical arrangements of existing maritime features in the immediate context. The range of sizes of vessels accommodated in the marina is similar to other examples in the immediate setting	Moderate compatibility with the existing maritime features in the immediate context. The proposal introduces new maritime features, but these features are compatible with the scenic character and qualities of similar settings in which they are accommodated in Parramatta River. The average sizes of vessels accommodated in the marina is greater than the average of examples in the immediate setting	The character, scale, form and spatial arrangement of the proposal has low compatibility with the maritime features in the immediate context or which could reasonably be expected to be new additions to it when compared to other examples in the Parramatta River locality. The sizes and forms of vessels accommodated in the marina are outside the range of examples in the wider locality
Compatibility with urban/natural features	High compatibility with the urban and natural features in the immediate context. Low contrast with existing elements of the built environment.	Moderate compatibility with the character of the existing urban and natural features in the immediate context. The proposal introduces new urban features, but these features are compatible with the scenic character of similar settings in which they are accommodated.	The character, scale, form and spatial arrangement of the proposal has low compatibility with the urban features in the immediate context or which could reasonably be expected to be new additions to it when compared to other examples in Parramatta River generally.

3.0 View analysis

The components and features of the proposed development are explained in section 1.3. Detailed field assessments were undertaken on 30 January, 3 February, 10 June and 7 July 2009, which also included water taxi investigation and a night time assessment for lighting.

3.1 Viewing locations and viewing situations

To assess the potential visual impacts which would be experienced by viewers, a view point analysis was conducted. This consisted of visiting the site and locality and assessing the likely impact on views from a selected series of locations. The key viewing locations ranged from a number of public domain locations including those on:

a) roads,

b) recreational areas

c) waterways.

The locations were selected to represent the kind of viewers' experience of the proposed development which would exist in the catchment area. Locations which represent the main kinds of viewing areas that would be affected were visited and photographed. The photographs taken with a digital 35mm format camera set to simulate a focal length of 35mm, to approximate the correct proportions of the elements of views as experienced by the human eye and to encompass both the marina and a representative part of its scenic context where possible. At each viewing place a series of observations and assessments were made, as documented in the assessment sheets at Appendix B and Photographic Plates at Appendix A of the report. A variety of other locations were also visited to ascertain the extent of the catchment and the characteristics of the views.

The viewing locations analysed during the site visits are shown in Figures 3.2 and 3.3. These are shown with respect to the viewing distance-close range, middle distance and distant viewing locations as explained in the Methodology. It is to be noted that all the viewing locations visited are public domain viewing locations, but they also provide insights into the likely visual effects on private views.

3.2 Visual catchment

Figure 3.1 shows the potential visual catchment of the proposed development. The following is an indication of the potential visual catchment and visual exposure of the proposed development. Close range viewing locations are those which are located within 100m distance from any part of the site, medium range viewing locations are those which are located between 100m-1000m distance from the site and distant viewing locations are those which are located at a distance greater than 1km from the site. Figures 3.2 and 3.3 represent the viewing locations within these distance zones which were visited during the field assessment.

3.2.1 Public domain viewing locations

Waterways

- Close range, medium range and distant viewing locations in the north, northeast, northwest, west, southwest and south directions, including parts of Parramatta River, Morrisons Bay, Glades Bay and Kendall Bay.

Land-based viewing locations

Due to the relatively flat land-based wider visual context of the site, its potential visual catchment is generally restricted to a very narrow strip of land adjacent to the shorelines. It is predominantly constituted by foreshore walkways, beaches, foreshore reserves and viewing platforms, residential developments and very few roads.

- Close range viewing locations include
  - (i) The foreshore walkway and the knoll space (flag staff place) along the Manors Precinct East and Wharf Precinct of the Breakfast Point Development.
  - (ii) The foreshore walkway and the beaches along the southern and south-western shoreline of Kendall Bay, along Kendall Inlet residential development.
- Medium range viewing locations include
  - (i) Cabarita Rivercat Ferry Wharf
  - (ii) Parts of Cabarita Wharf, mainly near the foreshore, to the east of Cabarita Rivercat Ferry Wharf.
  - (iii) The beach and part of Cabarita Park to the east of Cabarita Rivercat Ferry Wharf.
  - (iv) A small section of Wharf Road near its southern terminus and the small foreshore reserve at its terminus. (Gladesville locality)
  - (v) Small windows of viewing opportunities from Pile Street and Shackel Avenue through the side setbacks of residential properties. (Gladesville locality)
  - (vi) The southern terminus of an unnamed street, off the intersection of Pile Street, Shackel Avenue and Meriton Street.
  - (vii) Southern terminus of Ross Street and Glades Bay Park to the north of the Street. (Gladesville locality)
  - (viii) The extreme south western section of Bill Mitchell Park. (Gladesville locality)
  - (ix) Southern terminus of Tennyson Road (Raven Point) and a small foreshore viewing area below stone steps possibly leading to a former wharf or ferry site. (Tennyson Point locality)
  - (x) A small foreshore reserve at the southern terminus of Putney Parade. (Putney locality)
  - (xi) The southern end of Pellisier Road and a foreshore retained earth structure off it that may have been a former wharf or ferry site. (Putney locality)
  - (xii) Putney Point vehicular ferry wharf and small foreshore reserve to the west of it. (Putney locality)
  - (xiii) Highly filtered views from a small western section of Putney Park. (Putney locality)
  - (xiv) Focal view through the northern arm of Rosewater Circuit. (Silkstone Precinct of Breakfast Point development)

Figure 3.1: Potential visual catchment of the proposed development

Approximate location and layout of the proposed development

Potential visual catchment

Approximate presentation of the limit line showing the extent to which the original wharf at the location of the proposed new jetty extended in the east direction

Not to Scale

- Distant viewing locations are restricted to
  - (i) A small foreshore viewing platform off the southern terminus of Dick Street. (Henley locality)
  - (ii) A small section of Frances Road in the vicinity of Morrison Bay Park. (Putney Locality)
  - (iii) The north western section of Morrisons Bay Park.

3.2.2 Private domain viewing locations

- Close range viewing locations include
  - (i) Townhouses and apartments in Manors Precinct East and Wharf Precinct of the Breakfast Point development.
- Medium range viewing locations include
  - (i) Apartments in Kendall Inlet development
  - (ii) Some residences in Wharf Road, Pile Street and Shackel Avenue (Gladesville locality)
  - (iii) Some residences in Ross Street (Gladesville locality)
  - (iv) Some residences in Tennyson Road and Champion Road (Tennyson Point locality)
  - (v) Some residences in Putney Parade and Pellisier Road (Putney locality)
  - (vi) Future residences in apartments in the Silkstone and other future residential developments at Breakfast Point as indicated in the Master Plan.
  - (vii) The Scotts College Rowing Club
- Distant viewing locations are restricted to
  - (i) Some residences in Dick Street (Henley)

The visibility of the proposed development of the site is largely confined to these public and private domain viewing locations. In general, it was noted that there are few viewing opportunities from any main or local roads within the visual catchment. There would not be any significant visibility of the proposed development from the Gladesville Hospital site and the heritage precinct.

Figure 3.2 View point analysis - medium range and distant viewing locations

Approximate location of the site

1 Distant viewing locations

2 Medium range viewing locations

100m distance line

1km distance line

Not to Scale

Figure 3.3: View point analysis - close range viewing locations

Approximate location and layout of the propopsed development

15 Close range viewing locations

100m distance line

Not to Scale

3.3 Photomontages to represent views

3.3.1 The approach

Appendix C shows a series of photomontages prepared by Architectural Images, architectural and 3-D graphics specialists. The montages were created with my supervision and advice, using high resolution photographs taken by the montage artists at about mid tides. Wide angle photographs were necessary in some cases so that the full extent of the proposed marina is able to be represented in the photomontages. A wide angle photograph can be merged with the computer model of the marina, whereas the model cannot be merged with a panorama made by electronically merging two or more images. Where it was necessary to use a wide angle focal length, the focal length used was always the same. The focal length was chosen so that all of the image of the marina will fit into a single frame. A 3-dimensional computer model of the proposed development was created from the architectural plans for the floating structure and the kiosks and marina manager's office. The model became the base layer later to be inserted into the photographs, using the Adobe Photoshop program. A series of 3-D models of vessels of various types, lengths and sizes in various orientations were gathered by the montage artist to be used for the preparation of the photomontages.

These photomontages have been one of the many factors on which the assessment of visual impact is based in this report. Vessels have been inserted at an occupancy ratio of 100% with maximum size vessels in each permanent marina berth to reflect worst/realistic case scenario. The public berths are not represented as 100% filled. The montages therefore accurately represent the size, form and character of the proposed vessels and marina structure. The montages were prepared for the following viewing locations which are a mix of close range, medium range and distant locations.

The montage artist gathered the geographical co-ordinates for each of the viewing locations for which a photomontage has been prepared as part of his photography exercise. The viewing locations for which the photomontages have been prepared and their co-ordinates are shown on Figure 3.4 (Courtesy TLB Engineers Pty Ltd)

The co-ordinates for the Reference Points (RP1 to RP6) representing the eastern ends of the northern three and southern three arms and the south eastern extent of the main spine (RP7), the existing marker buoy (CRP831) near the eastern end of the central arms and the existing channel marker pile (SPC) were also gathered by TLB Engineers. These reference points and their co-ordinates are shown on Drawing DA01.

3.3.3 Viewing locations for which photomontages were prepared

The photomontages were prepared for the following viewing locations which are a mix of close range, medium range and distant locations. A total of 11 photomontages were prepared including two for private domain locations. The photomontage sequence is not in order (i.e., there is no photomontages 8 and 12) as initially a number of representative locations were considered and the final selection was made based on the priority for the most important and representative locations for photomontages. Refer Appendix C for photomontages.

<u>Waterway Locations</u>

1. Mid-way between Cabarita Point and Looking Glass Point (Photomontage 1 & 1A)
2. Along the ferry route near Cabarita Public Wharf (approximately mid-way between Cabarita Ferry Wharf and Raven Point) (Photomontage 2 & 2A)

Land based locations

Gladesville locality

3. Scotts College Rowing Club (in the vicinity of Shackel Avenue) (Photomontage 4 & 4A)
4. Glades Bay Park (southern terminus of Ross Street) (Photomontage 5 & 5A)

Tennyson Point Locality

5. Raven Point, southern terminus of Tennyson Road (Photomontage 7 & 7A)

Putney locality

6. Putney Point (vehicular ferry ramp) (Photomontage 9)

Breakfast Point locality

7. The knoll space where the flagpole is located, at Breakfast Point (Photomontage 10)
8. Looking east-southeast from the foreshore walkway in the vicinity of the proposed location of Marina Manager's office (Photomontage 11)

Cabarita locality

9. Public boat launching ramp near Cabarita Rivercat Ferry Wharf. (Photomontage 13 & 13A)

Residences

10. Unit 41/53 Peninsular Drive, Breakfast Point (Photomontage 3)
11. Unit 32/71 Peninsular Drive, Breakfast Point (Photomontage 6)

The montage artist has also prepared another set of photomontages for the locations from where the residential backdrop to the west of the site is visible. This set of photomontages show a further constructed residential backdrop which is approved and which will be constructed in near future (Refer photomontages 1A, 2A, 5A, 4A, 7A and 13A).

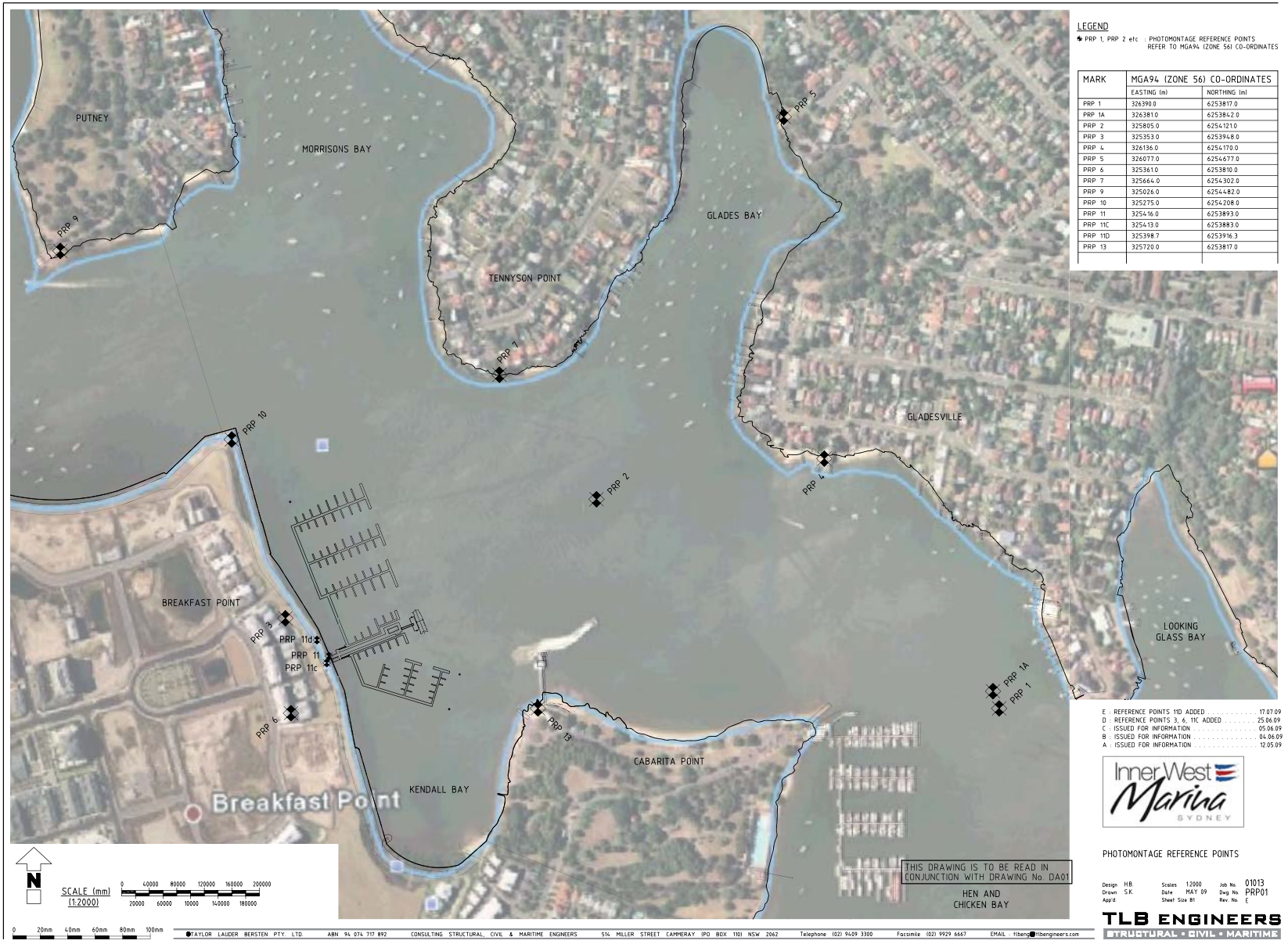

Figure 3.4: *Map showing locations for which photomontages have ben prepared by Architectural Images. (Map courtesy of TLB Engineers Pty Ltd)*
Note: Montage 11 at Appendix C corresponds to Location 11d on this figure.

4.0 Visual effects analysis

4.1 Base-line factors

4.1.1 Visual character

The visual character of the site and the surroundings has been described in Section 1.4 above.

4.1.2 Intrinsic Scenic Quality of the site and of its visual context

There is little published evidence as to the scenic quality of the subject site and its general locality. The presence of other maritime elements in the wider visual context of the site such as the River Quays Marina, Cabarita Westport Marina, Cabarita Rivercat Ferry Wharf and other small scale marinas, swing moorings and private boat accommodation facilities may be associated with positive, neutral or negative influences with regard to judgments of scenic quality, however there is little known specific research on the extent to which different forms of vessels or vessel accommodation affects average viewer perceptions.

Marina proposals in our experience tend to produce polarised opinions among vocal respondents. Whether there are widely held community preferences in relation to forms of vessel accommodation or their impacts on scenic quality is unknown in Australia at this time and has not been the subject of carefully designed and conducted empirical research using appropriate populations of respondents. In the absence of such research, it would not be appropriate to generalise about anticipated perceptions.

General landscape perception research would predict that the site would be considered to be of low to moderate scenic quality. The elements that provide down-weight to the scenic quality are relatively flat terrain of the land based context, constructed nature of the shoreline in the vicinity of the site and industrial and medium to high density residential developments on flat terrain as the backdrop of the view of the site. The dense urbanisation of the context would be expected to decrease the attributes of naturalness and scenic integrity which are positively related to scenic quality and therefore to decrease perceptions of the overall scenic quality.

The elements that provide up-weight to the scenic quality are presence of extensive water bodies, varied water edges, long viewing distances in many views, extensive constructed foreshore walkways and presence of natural attributes such as beaches, mangroves and reserves within the visual catchment. An area of higher overall scenic quality that the general setting is to be found to the immediate south east of the proposal in Kendall Bay and Cabarita Park, with some of these higher quality features also shown in isolated pockets on the north side of the river.

SREP Sydney Harbour Catchment zones the site as W1, Maritime Waters. This is not any of the Scenic Waters zones. The zone objectives are;

(a) to give preference to and protect waters required for the effective and efficient movement of commercial shipping, public water transport and maritime industrial operations generally,

(b) to allow development only where it is demonstrated that it is compatible with, and will not adversely affect the effective and efficient movement of, commercial shipping, public water transport and maritime industry operations,

(c) to promote equitable use of the waterway, including use by passive recreation craft.

This indicates that it is considered the scenic quality of the area is generally not a constraint on future development potential for maritime uses and that maritime industrial developments are encouraged.

The DCP to SREP Sydney Harbour Catchment identifies the existing character of the foreshore as Landscape Character Type 15 and states that these areas have a high level of built form characterised by industrial and institutional uses in the foreground and residential development in the background. The DCP does not rank the waterway or foreshore in regard to scenic quality; however it indicates that natural elements along the foreshore and mangrove screening need to be preserved. It is worth noting that the classification of the foreshores in the DCP was done before much of the existing residential conversion of industrial sites such as the former AGL site (the subject site) was begun.

Appendix D to the SREP for Sydney Harbour Catchment presents a series of observations about the relationship between boats accommodated in various ways and their potential visual effects. These are useful assessment tools, but the method otherwise provides little guidance as to how to assess the existing visual character of a location or the likely impacts on that character which would result from various boat accommodation scenarios.

It does indicate though that in the development scenario where a new or extension of the marina is located in front of new urban development, it causes moderate potential visual impact and that the potential visual impact of marinas is significantly less when viewed from adjoining waterway or opposite shoreline, if the facilities are viewed against a background of large scale commercial, industrial or residential development. The latter is the case for almost all of the medium distance and distant viewing places that are relevant. This reduces the extent of the visual effects and the impacts of the proposal.

4.1.3 View place sensitivity

The public domain viewing locations are constituted by those located on roads, reserves/parks/ foreshores/walking tracks and waterways.

The view place sensitivity for public domain viewing locations is rated as high for locations within less than 100m from the development site such as

a) the foreshore walkway along the western and southern shoreline of Kendall Bay (VP15, 16, 17, 18, 19, 20, 24),

b) the beach along the southern shoreline of Kendall Bay (VP23) and

c) close range waterway viewing locations.

The view place sensitivity is rated as medium for locations between 100-1000m from the development site such as the

a) Cabarita Rivercat Ferry Wharf,

b) the foreshore to the southeast of the Cabarita Rivercat Ferry Wharf (VP25, 26, 27),

c) parts of Cabarita Park,

d) foreshore locations at the southern terminus of Wharf Road (VP2), Ross Street (VP5, 6), Tennyson Road (VP8), Pellisier Road (VP13) and Putney Parade (VP12),

e) southern terminus of Meriton Street (VP3),

f) the southeast corner of Bill Mitchell Park (VP7) and

g) medium range viewing locations on the waterway (VP 28, 29, 30).

The view place sensitivity is considered to be low for locations that are at a distance greater than 1km from the development site such as the

a) southern terminus of Dick Street (VP1),

b) Morrisons Bay Park (VP10) and c) Frances Road adjacent to Morrisons Park (VP 10). (Refer Figure 3.1 and assessment sheets in Appendix B).

4.1.4 Viewer sensitivity

The private domain visual catchment is constituted by residences and commercial/industrial developments from which there are long term views of parts of the proposed marina from fixed locations.

The viewer sensitivity was rated as high for

(a) townhouses and apartments in Manors Precinct East and Wharf Precinct of the Breakfast Point development (VP 31, 32, 33).

It was rated as medium for

a) apartments in Kendall Inlet development,

b) some residences in Wharf Road, Pile Street and Shackel Avenue (Gladesville locality),

c) some residences in Ross Street (Gladesville locality),

d) some residences in Tennyson Road and Champion Road (Tennyson Point locality),

e) some residences in Putney Parade and Pellisier Road (Putney locality) and

f) The Scotts College Rowing Club (VP 4)

The viewer sensitivity was rated low for some residences in Dick Street.

4.2 Variable factors

4.2.1 Effect on view composition

It was found that the effect on view composition was greater on close and medium range views due to the closer, greater and clear visibility of the proposed marina. The effect on view composition is high on locations along the foreshore walkway within Kendall Bay (VPs 15 to 20 and VP23 and 24) and for the residences in Manors Precinct East and Wharf Precinct of the Breakfast Point development (VP 31, 32, 33). This is because the proposed marina would be visible in the foreground of the view and would be in a form of a new visual element in the view. It would to some extent dominate the landscape of the existing view available from these viewing locations and also result in partial potential loss of views of some of the components that presently contribute towards the view compositions. However, the fact that a former jetty existed which was significantly elevated above water level and which extended to a similar distance to the east towards the Parramatta River as the proposed marina, reduces the effect on the future composition of some of the close range views. Experienced viewers with a memory of the former jetty may be less likely to find a structure as proposed to have significant effects on the view compositions by comparison.

The effect on view composition would be medium for viewing locations that are at a medium range distance from the site as the proposed marina would have a lesser effect with distance. The proposed marina would form part of their view composition but at the same time would not significantly alter its character or cause unreasonable potential view loss effects to the components that make up the existing view compositions. These viewing locations include locations to the southeast of the Rivercat

Ferry Wharf (VP25, 26 & 27), locations in Gladesville locality (VPs 2, 3, 4, 5, 6 and 7), locations in Tennyson Point (VPs 8 & 9), locations in Putney (VPs 12, 13 & 14) and waterway locations (VPs 28 to 30). There would be similar effects on views from the residences within the potential visual catchment that are located at a medium distance from the site. There are no significant viewing locations within the visual catchment from where there could be focal or restricted views of the proposal that could experience higher effects and the majority of view compositions are either expansive or panoramic.

The effect on view composition would be low for viewing locations located at a greater distance from the site such as the southern end of Dick Street (VP1) or Morrisons Bay Park (VP11) and Frances Road (VP10). There would be distant visibility of the proposed marina from these viewing locations, however, the components of the proposal would not be discernable and it would not result in any potential view loss effects or a significant change in the character of the view compositions.

It is not considered that the proposed land based components would have any significant effect on the existing view compositions from close range, medium range or distant viewing locations.

4.2.2 Effect of relative viewing level

The visual catchment is represented by a mix of locations that are either approximately on grade with the development site such as the foreshores including foreshore reserves and walkways, waterway or slightly elevated locations such as from the southern terminus of various streets in Gladesville, Tennyson and Putney localities and ground floors of residential development within Kendall Inlet and Manors Precinct East and Wharf Precinct (VP33).

The visual effects of the proposed marina would be slightly increased for viewing locations that are close to level with the marina facilities and located at close or medium distance from it such as a) from the waterway (VP 28, 29), b) foreshore walkway along the western and southern shoreline of Kendall Bay (VPs 15 to 20, 24), c) the beach along the southern shoreline of Kendall Bay (VP 23), d) the beach and foreshore locations to the southeast of Cabarita Rivercat Ferry Wharf (VPs 25 to 27), e) the foreshore reserves at the southern terminus of Wharf Road (VP 2), Tennyson Road (VP 8), Pellisier Road (VP 13) and Putney Parade (VP 12), f) the foreshore reserves such as Glades Bay Park (VP 6) and Bill Mitchell Park (VP 7) g) The Scotts College Rowing Club (VP 4) and the southern terminus of Meriton Street (VP 3).

The visual effects of the proposed development would be decreased for viewing locations that have elevated views over the proposed marina such as a) the upper levels of the townhouses in the Manors Precinct East and Wharf Precinct of the Breakfast Point Development (VP 31 & 32), b) upper levels of the townhouses and apartments in Kendall Inlet c) the future residential apartment development in Silkstone precinct and d) the southern terminus of Ross Street (VP 5). It is considered that the relative viewing level does not significantly contribute in increasing or decreasing the potential visual effects of a proposed development for viewing locations located at more than 1km distance from the site (VP 1, 10 & 11).

The land based component is not considered to have any unique effect with regard to viewing level.

4.2.3 Effect of viewing period

The visual effects would be increased for passive users of recreation areas and foreshore walkway such as a) the foreshore walkway along the western and southern shoreline of Kendall Bay (VPs 15 to 20, 24), b) the beach along the western shoreline of Kendall Bay (VP 23), c) the foreshore locations to the

southeast of Cabarita Rivercat Ferry Wharf (VPs 25 to 27), d) the foreshore reserve at the southern terminus of Pellisier Road (VP 13), Wharf Road (VP 2) and Tennyson Road (VP 8), e) Glades Bay Park (VP 6) and f) Bill Mitchell Park (VP 7). This is because there would be medium to long period views from fixed and moving positions from these locations.

The effect of the viewing period would be medium for waterway viewing locations with views ranging from short to medium time periods (VPs 28 to 30). The effect of the viewing period would be low for the highly limited viewing locations on roads such as Pile Street/Shackel Avenue, Rosewater Circuit, Tennyson Road, Ross Street and Wharf Road from where there would be short term view of the proposed marina for the road users who are constantly moving.

The effect of viewing period would be greater for the private domain viewing locations with medium to long period views of the proposed marina from fixed locations such as the residential development of Manors Precinct East, Wharf Precinct and Kendall Inlet (VPs 31, 32, 33).

The land based component is not considered to have any different effect with regard to viewing period.

4.2.4 Effect of viewing distance

The visual effects of the proposed marina would be greater on viewing locations at close distance from the subject site (within approximately 100m) such as the foreshore walkway along the western and southern shoreline of Kendall Bay (VPs 15 to 20, 24), the beach along the southern shoreline of Kendall Bay (VP 23), the townhouses located in the Manors Precinct East and Wharf Precinct (VPs 31, 32 & 33) and close range waterway locations.

The effect of the viewing distance would be medium for viewing locations within the medium range of 100m-1000m such as the medium range waterway locations, residential development in Kendall Inlet, Cabarita Rivercat Ferry Wharf, the foreshore locations and beach to the southeast of Cabarita Rivercat Ferry Wharf (VPs 25 to 27), the foreshore reserves at the southern terminus of Wharf Road (VP 2), Meriton Road (VP 3), Tennyson Road (VP 8), Ross Street (VPs 5 & 6), Pellisier Road (VP 13) and Putney Parade (VP 12), some residences located near the southern terminus of these streets (VP 9), Bill Mitchell Park (VP 7) and the Scotts College Rowing Club (VP 4).

The effect of the viewing distance would be low for viewing locations at distances greater than 1km from the subject site such as the foreshore reserve at the southern terminus of Dick Street (VP 1), Morrisons Bay Park (VP 11) and Frances Road (VP 10).

The land based component is not considered to cause any different effect other than where it is in the immediate foreground of the view. The effect has been considered in relation to close range viewing places above.

4.2.5 View loss or blocking effects

There would be greater view loss and blocking effects of the proposed marina from viewing locations within the close range such as the ones located along the western and southern shoreline of Kendall Bay (VPs15 to 20). This is because the proposal partly comes into the view line of the viewer and obstructs the views in the northeast-south directions. The potential view loss is of parts of the waters of Kendall Bay and Parramatta River, the far shoreline of Gladesville and Tennyson Point and the southern shoreline of Kendall Bay. This effect would also occur from ground floors of the waterfront townhouses within Wharf precinct and Manors Precinct East (VP 33). Some of these views would be maintained through the proposed fairways between the arms which range from 21-36.2m.

There would be a potential loss and blocking effect of the views of the western shoreline of the Bay and parts of the waters of Kendall Bay from locations along the southern shoreline of the Bay (VP 23 & 24).

There would be potential view loss effects of the views of the southern shoreline of Kendall Bay including views of the beach and mangroves from viewing locations to the north and north-northeast of the site. These are the southern end of Tennyson Road (VP 8 & 9), the south eastern end of Putney Parade and Pellisier Road and from the Putney Vehicular Ferry ramp. This potential view loss effect would also occur to the waterway locations to the north of the site such as VP 29.

For most of the other viewing locations to the northeast, east and southeast (VPs 1 to 7 & VPs 25 to 28, & VP30), there would be potential view loss effects of parts of the constructed western shoreline of Kendall Bay and parts of the waters of Kendall Bay. For some viewing locations along the southern and south eastern shoreline of Kendall Bay (VPs 23 to 26), the eastern extent of the northern arms would also cause view loss effect of the views of Parramatta River sweeping beyond the Breakfast Point knoll. Some of the existing views of the western shoreline of the Bay would still be available through the proposed fairways between the arms.

The land based components would overall not cause any significant view loss or blocking effects. There would be some potential view loss effects on the views of the waters of Kendall Bay and towards the southern shoreline from viewing locations in the close vicinity of the proposed location of the marina manager's office.

4.3 Overall extent of visual effect

The overall extent of visual effects was evaluated by inspection of the pattern of assessment of the visual effects of all of the individual factors for each viewing location. These overall assessments of the visual effects of the proposal are shown in summary on Table 4.1.

Table 4.1: Overall visual effects and impacts

Viewing location	Description	Marina component		Land-based component	
		Overall visual effects	Overall visual impacts	Overall visual effects	Overall visual impacts
Distant viewing locations					
VP1	Small reserve at the southern terminus of Dick Street, Henley	Low	Low	Low	Low
VP10	From opposite 60 Frances Road, in the vicinity of Morrisons Bay Park	Low	Low	Low	Low
VP11	From the foreshore walkway in Morrisons Bay Park, in the southeast sector of the park	Low to Medium	Low	Low to Medium	Low
	Overall trend for distant viewing locations	**Low**	**Low**	**Low**	**Low**
	Medium distance viewing locations				
VP2	Small reserve near the south western terminus of Wharf Road, Gladesville	Low to Medium	Low	Low	Low
VP3	From the southern terminus of a narrow street, off the intersection of Pile Street, Shackel Avenue and Meriton Street. (Access to 186SPS Sydney Water Sewerage Pumping Station)	Low to Medium	Low	Low to Medium	Low
VP4	From The Scotts College Rowing Club	Medium	Medium to High	Low to Medium	Low
VP5	The southern terminus of Ross Street	Medium	Medium	Low	Low
VP6	From Glades Bay Park, below and to the west Ross Street	Low	Low	Low	Low
VP7	From the south-eastern edge of Bill Mitchell Park, Tennyson Point	Low	Low	NA	NA
VP8	From Raven Point, southern terminus of Tennyson Road, Tennyson Point	Medium to High	Medium to High	Low	Low
VP9	From in front of No. 163 Tennyson Road, Tennyson Point	Medium	Medium to High	Low	Low
VP12	From the small reserve at the eastern terminus of Putney Parade	Medium to High	Medium to High	Low	Low
VP13	From the reserve at the eastern terminus of Pellisier Road	High	High	Low	Low
VP14	From the small reserve east of the Putney Point vehicular ferry wharf	Low	Low	NA	NA
VP21	From the northern arm of Rosewater Circuit, in the Silkstone residential development	Low to Medium	Medium	NA	NA
VP22	From the southern arm of Rosewater Circuit, in the Silkstone residential development	Low	Low	NA	NA
VP25	From along the foreshore, approximately 100m southeast of the Cabarita Rivercat Ferry Wharf	Medium to High	Medium	Low	Low
VP26	From the beach to the east of Cabarita Rivercat Ferry Wharf	Medium	Low to Medium	Low	Low
VP27	From near the monument (William Beach) in Cabarita Park	Medium	Medium	Low	Low

Viewing location	Description	Marina component		Land-based component	
		Overall visual effects	Overall visual impacts	Overall visual effects	Overall visual impacts
VP28	From waterway, approximately midway between Cabarita Rivercat Ferry Wharf and Raven Point	Medium	Medium to High	Low	Low
VP29	From waterway, approximately midway between Breakfast Point knoll and small foreshore reserve at the terminus of Pellisier Road	Low to Medium	Low	NA	NA
VP30	From waterway, approximately midway between Cabarita Westport Marina and Looking Glass Point	Low to Medium	Low to Medium	Low	Low
	Overall trend for medium range viewing locations	**Medium**	**Medium**	**Low**	**Low**

	Close range viewing locations				
VP15	From the knoll space (lower level walkway) along the foreshore, Breakfast Point	High	High	Low	Low
VP16	From the knoll space (upper level walkway) along the foreshore, Breakfast Point	High	High	Low	Low
VP17	From the walkway along the foreshore, approximately in the alignment of the location of the first arm of the proposed marina	High	High	Low	Low
VP18	From the walkway along the foreshore, approximately in the alignment of the pathway between the town houses and apartments.	High	High	Low	Low
VP19	From the walkway along the foreshore, approximately in the alignment of the location of the proposed marina manager's office	High	High	Low	Low
VP20	From the walkway along the foreshore, approximately in the alignment of a curvy path going up along a green space	High	High	Low	Low
VP23	From the beach along the southern foreshore of Kendall Bay, in front of Kendall Inlet residential development	High	High	Low	Low
VP24	From along the eastern foreshore walkway in the vicinity and to the south of Cabarita Rivercat Ferry Wharf	High	High	Low	Low
VP31	From standing position in living room of Unit 41, 53 Pennisular Drive, Breakfast Point	Medium	Medium	NA	NA
VP32	From standing position in the living room of Unit 32, 71 Pennisular Drive, Breakfast Point	Medium to High	High	Low	Low
VP33	From standing position in front of a ground floor unit in 57-59 Pennisular Drive	High	Medium to High	Medium	Low
	Overall trend for close range viewing locations	**High**	**High**	**Low**	**Low**

5.0 Visual impact analysis

5.1 Physical absorption capacity

It is assessed that the Physical absorption capacity of the view compositions was low for close range and elevated medium range viewing locations from where there were clear views of the proposed development and no screening effect of any of the present components of the view compositions. These include the viewing locations along the western and southern shoreline of the Bay (VPs 15 to 20 and VP 23 & 24), close range and medium range waterway viewing locations to the north and east (VP 28) and residential developments in Breakfast Point (VPs 31, 32 & 33). It included viewing locations in Gladesville locality (VPs 3 to 5), Tennyson Point (VP 8 & 9) and Putney locality (VP 12 & 13).

The Breakfast Point Flagstaff Knoll provided moderate to high physical absorption capacity to views of the proposed development from viewing locations to the north-northwest such as Putney vehicular ferry ramp (VP 14) and the waterway (VP 29).

The swing moorings within Morrisons Bay and Glades Bay and the western headlands of Gladesville and Tennyson Point provide moderate to high physical absorption capacity to the view of the proposed development from the close to water level viewing locations to the north and northeast such as Glades Bay Park (VP 6), Bill Mitchell Park (VP 7) and Morrisons Bay Park (VP 10 & 11).

The Abbotsford Headland, Cabarita Headland and Westport Marina at Cabarita provide moderate to high physical absorption capacity to the views of the proposed development from close to water level distant viewing locations to the southeast such as distant waterway locations and southern end of Dick Street (VP1).

The Cabarita Rivercat Ferry Wharf provides moderate physical absorption capacity to the views of the proposed development from close to water level medium range viewing locations to the southeast such as the southern end of Wharf Road (VP2), waterway locations (VP30) and locations along the Cabarita Park (VPs 25 to 27).

It is assessed that there would be moderate to high physical absorption capacity for the land based component of the proposed development from the majority of the viewing locations within the potential visual catchment.

5.2 Visual compatibility

5.2.1 Visual compatibility with maritime features

Visual compatibility with maritime features was assessed to be high for most of the distant viewing locations and some medium range close to water level viewing locations from where there were expansive to panoramic views consisting of other maritime facilities within the present view compositions available. These included the southern end of Dick Street (VP1), Morrisons Bay Park (VP 10 & 11), southern end of wharf Road (VP2), Southern end of Meriton Street (VP3), Bill Mitchell Park (VP7), some water way locations (VP 29, 30).

The visual compatibility with maritime features was assessed to be medium for distant and medium range elevated viewing locations from which there were views of fewer maritime elements within the present view compositions and views of the proposed marina would not be screened by them. These include the southern end of the Ross Street (VP 5) and the shoreline along Cabarita Park (VP 25 to 27).

The visual compatibility with maritime features was assessed to be low for viewing locations within the close range from which the existing view compositions do not have any significant presence of maritime elements. These include viewing locations along the western and southern shoreline of Kendall Bay (VP 15 to 20, 23 & 24), waterway locations (VP 28), residences in Breakfast Point (VPs 31, 32 & 33) and southern end of Tennyson Road (VP8 & 9). The impact is further increased for locations along the southern shoreline of Kendall Bay due to the visual clutter that would be formed in the southern part of Kendall Bay by the proposed southern arms, in particular the eighth arm. For viewing locations to the west, east, northeast and southeast the wide fairways between the central and northern arms assist in mitigating the cluttering effect.

The land based component was assessed to have a high compatibility with maritime features for most of the viewing locations within the potential visual catchment due to its small scale, proximity to Cabarita Rivercat Ferry Wharf and a compatible backdrop of most of the views consisting of the townhouses and apartments development of Breakfast Point.

5.2.3 Visual compatibility with urban and natural features

The visual compatibility with urban and natural shoreline features was generally moderate to high for the majority of viewing locations within their potential visual catchment spanning from north to southeast of the site. This is due to the presence of medium to high density residential development at Breakfast Point on relatively flat lands in the backdrop of the views from these directions. The viewing locations for which there is high compatibility of the proposed development with urban and natural shoreline features include VP1 to VP14 and VP25 to VP30. The residential development is on the former AGL site which was industrial in character. An industrial building (former AGL Power House) which is a heritage item under Canada Bay LEP 2008 is still present within the Breakfast Point residential development.

It is also true that the presence of a proposed new visual element of a built character in the foreground of the view from locations that are of relatively higher scenic and natural quality are to be considered to have a lesser compatibility with natural features. Hence, it is considered that the proposed development has lesser compatibility with viewing locations along the southern shoreline of Kendall Bay which is of higher scenic quality (VPs 23 & 24). This higher impact rating is due to the presence of the southern arms in the foreground of the views available from here, in particular Arm 8 which is closest to a viewer. It is also due to the larger eastern extents of the northern arms which visually appear to extend the built element within the relatively natural realm of the view compositions.

The visual compatibility with urban and natural features was assessed to be medium for viewing locations to the immediate west of the site such as along the foreshore walkway and the residences within Manors Precinct East and Wharf Precinct (VPs 15 to 20, VPs 31 to 33). This is due to the open nature of the views from here consisting of Parramatta River and far headlands, without any immediate medium or high density urban backdrop. The context in which the proposed development would be seen from here is considered to be of moderate intrinsic scenic quality.

The land based component was assessed to have a high compatibility with urban and natural shoreline features for most of the viewing locations within the potential visual catchment.

5.3 Overall extent of visual impact

The overall extent of visual impacts was evaluated by inspection of the pattern of assessment of the visual impacts of all of the individual factors for each viewing location. These overall assessments of the visual impacts of the proposal are shown in summary on Table 4.1.

6.0 Visual sensitivity zones

6.1 Impact assessment (ratings)

- The overall effects and impacts rating for the high view sensitivity zone in the public domain were assessed to be high. Highest individual levels of effects were found for close views from the waterway and the foreshore walkway along the western shoreline of Kendall Bay, including the intertidal beaches.
- The overall effects and impacts rating for the high view sensitivity zone in the private domain were also assessed to be high. Highest individual levels of effects were found for close views from the townhouses and apartments in Manors Precinct East and Wharf Precinct at ground level, decreasing for higher floor levels.
- The overall effects and impacts rating for the medium sensitivity zone, both in the public and private domains, were assessed to be low, low to medium or medium. A few exceptions to these ratings are VPs 8 & 9 (the southern end of Tennyson Road) and VPs 12 & 13 (southern end of Pellisier Road and Putney Parade) on which there would be higher visual effects and impacts.
- Low sensitivity zone locations included public domain views. The overall effects and impacts rating for the low visual sensitivity zone were assessed to be low.

The visual impacts on the high and medium sensitivity zones are analysed against the relevant mitigation measures in the section below. The views from low sensitivity zones were not analysed. This is because it was considered that no significant impacts could occur for these locations.

6.2 Analysis against relevant planning instruments

6.2.1 Sydney Regional Environmental Plan, Sydney Harbour Catchment, 2005.

State Regional Environmental Policy (Sydney Harbour Catchment) is the relevant instrument for the water based component of the proposed development and is also more generally relevant to the visual impacts of the land based component as seen from the waterway. It combined two previous SREPs for Sydney Harbour and the Parramatta River, included some other waterways and unifies the underlying planning framework.

Part 1 provides the general aims of the Plan. Part 2 of the SREP contains the Planning Principles relevant to the proposed development and Part 3 refers to specific aspects of the Foreshores and Waterways Area. Under Part 3, Division 1 provides development controls for each of the zones and Division 2 contains the relevant matters for consideration by consent authorities before granting consent to development.

Aspects of the SREP relevant to consideration of visual impacts and the proposed development application in its current form follow:

Part 1 Preliminary

2 Aims of plan

(1) This plan has the following aims with respect to the Sydney Harbour Catchment:

(a) to ensure that the catchment, foreshores, waterways and islands of Sydney Harbour are recognised, protected, enhanced and maintained:

(i) as an outstanding natural asset, and

(ii) as a public asset of national and heritage significance,

Comments:

To give effect to the general aims above, the character of the relevant part of the catchment and foreshores is recognised and protected by the provisions and the objectives of the waterways zoning and the requirement of the DCP to the SREP. The provisions of the DCP to the SREP are considered in more detail below.

The zoning for the subject site, W1 Maritime Waters, is one which in the context of recognising the natural assets, promotes the use of the waterway for commercial, public transport and maritime industrial operations and also the use of the waterway, including that by passive recreational craft. The zoning is not for environmental protection or any of the scenic zones. Development is to be allowed only where it is compatible with and not adversely affecting the effective and efficient movement of commercial shipping, public water transport and maritime industrial operations.

To the extent that the zone promotes the use of the waterway for public and private uses among which marinas are permissible, the proposal is considered to enhance and maintain the recognised attributes of the waterway and foreshores.

In protecting the natural assets, the proposed development has been limited in the distance to which it extends eastward towards the main channel of the Parramatta River. Its eastern extent is approximately limited to the extent to which the former jetty extended in part of the site for the proposed development. While different in character and area, the degree to which the proposal could block views or cause view loss from the waterway, and many foreshore locations, is limited compared to the former wharf's impacts.

The proposed development is set within the backdrop of a constructed shoreline and the foreshore of Breakfast Point on a site of former industrial uses. The constructed shoreline is essentially straight in the vicinity of the application. The medium to high density residential backdrop on flat to slightly sloping lands behind the constructed shoreline provides a compatible backdrop for the application and one which decreases the extent of and the significance of impacts. The general locality is of lower intrinsic scenic quality than that of scenic waterway zones and the backdrop and setting are also of relatively lower scenic quality. The proposed development would appear to be an extension of this built and constructed component from the majority of the viewing locations within the potential visual catchment.

(f) to ensure accessibility to and along Sydney Harbour and its foreshores,

Comments:

The proposed development does not have any negative impact on the existing accessibility to and along the Parramatta River channel and its foreshores. It would not affect the navigation channel.

There are a number of public access provisions within the proposed development that would enhance the accessibility to the public asset of Parramatta River. These include the proposed new jetty and the kiosk at the eastern end of the jetty, public access to the main spine of the proposed marina and disabled access to the marina. A provision for the public wharf at the eastern end of the central arms is also a public access benefit. The timber skid for skiffs, kayaks and the like is also a public interest and public access facility and one that promotes the use of the area and the waterway by passive recreational craft.

(2) For the purpose of enabling these aims to be achieved in relation to the Foreshores and Waterways Area, this plan adopts the following principles:

(a) Sydney Harbour is to be recognised as a public resource, owned by the public, to be protected for the public good,

(b) the public good has precedence over the private good whenever and whatever change is proposed for Sydney Harbour or its foreshores,

(c) protection of the natural assets of Sydney Harbour has precedence over all other interests.

Comments:

As is the case for the general aims themselves, the principles above are to be considered in relation to the waterways zone and the DCP as the enabling document which identifies the nature of the public resource and how to protect it. The W1 Maritime Waters Zone identifies the subject site's resources as being able to provide the opportunity for public use, commercial maritime use and water transport via a permissible use (marina) that is in the nature of a public good, satisfying a demand for storage of vessels in an area of burgeoning population growth. The natural assets of the Harbour are not diminished by the proposal.

Part 2 - Planning principles

13 Sydney Harbour Catchment

The relevant planning principles for land within the Sydney Harbour Catchment are as follows:

(b) the natural assets of the catchment are to be maintained and, where feasible, restored for their scenic and cultural values and their biodiversity and geodiversity,

(c) decisions with respect to the development of land are to take account of the cumulative environmental impact of development within the catchment,

(f) development that is visible from the waterways or foreshores is to maintain, protect and enhance the unique visual qualities of Sydney Harbour,

(g) the number of publicly accessible vantage points for viewing Sydney Harbour should be increased,

Comments:

The application complies with principle (b) in that it does not have any negative impacts on the overall natural assets of the Parramatta River catchment and thereby it maintains them. The proposed development would be located close to the constructed shoreline and foreshore of Kendall Bay in the context of a totally transformed site that is moving from industrial to residential use. It is located

at a distance from the southern shoreline of Kendall Bay which has a relatively greater intrinsic scenic value due to the presence of inter tidal beaches, mangroves and Cabarita Park. The beach and mangrove features have however only recently come into being and may be negatively affected by future remediation work in the inlet. The proposed development would not have any significant negative impact on the scenic quality of this context and would also maintain views to these scenic components from most of its potential visual catchment. It is considered that Arm 8 that is located closer to the natural part of Kendall Bay results in a greater proportional impact on the foreground of the view when seen from locations along the southern shoreline.

The methodology adopted in this assessment (c) specifically addresses the issues of cumulative environmental impact of the development and concludes that what is proposed is within the established character of the settings of the waterway and foreshore and will not cause significant negative cumulative impact effects. The only other large marina in the general vicinity (Westport Marina) is not generally viewed in the same visual catchment and there will not be a significant cumulative effect.

The development would be compatible (f) with the existing character of the waterway and foreshores and be compatible with maintaining and protecting the unique visual qualities of Parramatta River. Apart from forming a part of the view composition for viewing locations to the north, northeast, east and southeast, it does not have an effect of subduing or significantly altering the existing visual character or visual quality of the view containing the Parramatta River and its foreshores. From viewing locations to the west of the site i.e., the townhouses and apartments in Manors Precinct East and Wharf Precinct and some locations along the southern shoreline of Kendall Bay, the proposed development would form the foreground of the view and have relatively greater effect. The Applicant, in this regard has limited the eastern extent of the proposed marina mostly to the extent to which the former jetty on the site extended. The proposed marina would not extend up to the main navigation channel of Parramatta River and would only occupy parts of the waters of Kendall Bay. The proposed wide fairways would retain the visual experience towards Parramatta River and the far foreshore even from these locations.

The development would not have any negative impact on the number of accessible vantage points available (g), but would also enhance public access to and vantage points on the waterway, by providing better and more inviting public access to the kiosk, new jetty and the main spine of the proposed marina.

Part 2 - Planning principles

14 Foreshores and Waterways Area

The relevant planning principles for land within the Foreshores and Waterways Area are as follows:

(a) development should protect, maintain and enhance the natural assets and unique environmental qualities of Sydney Harbour and its islands and foreshores,

(b) public access to and along the foreshore should be increased, maintained and improved, while minimising its impact on watercourses, wetlands, riparian lands and remnant vegetation,

(c) access to and from the waterways should be increased, maintained and improved for public recreational purposes (such as swimming, fishing and boating), while minimising its impact on watercourses, wetlands, riparian lands and remnant vegetation,

(d) development along the foreshore and waterways should maintain, protect and enhance the unique visual qualities of Sydney Harbour and its islands and foreshores,

(e) adequate provision should be made for the retention of foreshore land to meet existing and future demand for working use harbours,

(f) public access along foreshore land should be provided on land used for industrial or commercial maritime purposes where such access does not interfere with the use of the land for those purposes,

(g) the use of foreshore land adjacent to land used for industrial or commercial maritime purposes should be compatible with those purposes,

(i) the provision and use of public boating facilities along the waterfront should be encouraged.

Comments:

Relevant aspects of (a), (b), (c) and (d) have been assessed in considering Clauses A (Aims of Plan) and 13 above. The proposed development is consistent with these principles. In regard to (a), the proposal does not negatively affect the natural assets and the unique environmental qualities of the Parramatta River and it has no effect on views to the assets of islands and significant natural foreshores to which Clause 14 refers. The eastern extents of the northern arms, however, cause a view loss effect on the views of Parramatta River further to the north of Breakfast Point knoll when seen from viewing locations along the southern and south eastern shoreline of Kendall Bay.

The application makes no change to, maintains and enhances the public access along the foreshore (b) and there is no physical impact on any watercourses, wetlands, riparian land or remnant vegetation.

The existing extent and quality of access to and from the waterway is not changed by the application and is therefore maintained, and the proposed development does not diminish, but enhances, the public recreational values of the main Parramatta River channel (c). There are provisions for additional public access and public benefits as part of the proposal.

The proposed development is in accordance with (e) and does not occupy any significant foreshore land. The development overall makes no significant demands on foreshore space and does not reduce, but arguably increases public access and is therefore compatible with (f) and (g) above. The primary aim of the proposal is to increase provision of boating facilities and it therefore satisfies (i) above also.

Part 3 Foreshores and Waterways Area

Division 1 Development Control

Clause17 Zone objectives

As indicated above, the development site is within Zone No W1 Maritime Waters. There does not appear to be any zone objective which is directly relevant to potential visual impacts. Hence, I have mentioned all the objectives below and addressed them in so far as they could be related to the visual impact assessment.

(a) to give preference to and protect waters required for the effective and efficient movement of commercial shipping, public water transport and maritime industrial operations generally,

(b) to allow development only where it is demonstrated that it is compatible with, and will not adversely affect the effective and efficient movement of, commercial shipping, public water transport and maritime industry operations,

(c) to promote equitable use of the waterway, including use by passive recreation craft.

The proposed marina is classified as *"Commercial marinas"* and is permissible with consent under this zoning.

Comments:

The proposed development as far as I am aware does not have any effect on the main navigation channel of the Parramatta River and in that it satisfies (a) and (b). The nature of the proposed development is similar to a maritime industrial operation, albeit it will be in private hands. The proposed development is compatible with the effective movement of commercial shipping, public water transport and maritime industry operations. The proposed development makes provisions for a timber skid for storage of kayaks, dinghies and skiffs. It is thus consistent with (c).

Division 2 Matters for consideration

Clause 22 : Public access to, and use of, the foreshores and waterways

Subclause 22(a):

> *development should maintain and improve public access to and along the foreshore, without adversely impacting on watercourses, wetlands, riparian lands or remnant vegetation.*

Subclause 22(b):

> *development should maintain and improve public access to and from the waterways for recreational purposes (such as swimming, fishing and boating) without adversely impacting on watercourses, wetlands, riparian lands or remnant vegetation.*

Subclause 22(c):

> *if foreshore land made available for public access is not in public ownership, development should provide appropriate tenure and management mechanisms to safeguard public access to, and public use of, that land.*

Comments:

As demonstrated above under address to Clause 1, 13 and 14, the proposed development does not have any negative effect on the existing public access to and along the foreshore. It would provide for additional public access to the proposed new jetty and kiosk and to the main spine of the marina. It also provides a timber skid for the storage of dinghies, kayaks and the like. The proposed development does not have any negative effect on watercourses, wetlands, riparian lands or remnant vegetation. Subclause 22(c) is for others with relevant expertise to address.

Clause 23 : Maintenance of a working harbour

Subclause 23(a):

> *foreshore sites should be retained so as to preserve the character and functions of a working harbour, in relation to both current and future demand.*

Comments:

The marina is proposed to be located at the foreshore site of the former jetty. The immediate and wider context has a potential capacity to visually and physically contain a development of maritime character at the site. While the marina is a private facility rather than a maritime industrial use, the change has some relationship to a working harbour being retained in the context of changing

demand for shipping and an increasing private vessel presence in the waterways generally. The scale of the proposed marina and the vessel size distribution proposed is in line with the current and future demand demonstrated in the demand study conducted for the applicants by Ian McAndrew of Australian Marina Management.

Subclause 23(b):

> *consideration should be given to integrating facilities for maritime activities in any development.*

Comments: The proposed marina is an integrated facility providing for facilities for berthing of vessels, a kiosk that would be available to the general public, a marina manager's office and a generally improved access to the experience of the Parramatta River and its foreshores. The proposed marina is on the site of the former jetty. In light of this, it is considered that the proposed development is consistent within this sub clause.

Subclause 23(c):

> *in the case of development on land that adjoins land used for industrial and commercial maritime purposes, development should provide and maintain public access to and along the foreshore where such access does not interfere with the use of the land for these purposes.*

Comment: The land based component of the proposed marina adjoins a former industrial AGL site, which has now been converted to a residential development. The land based component of the proposed development is very small and consists of a small scale single storey building for marina manager's office at the landward end of the new jetty and a kiosk at the water ward end of the jetty. The proposed development would not have any significant negative effect on existing public access to and along the foreshore and will enhance physical access to the marina itself, which in turn invites higher engagement with views to and from the development site, by a more inviting and better designed quality.

Subclause 23(d):

> *in the case of development for industrial and commercial maritime purposes, development should provide and maintain public access to and along the foreshore where such access does not interfere with the use of the land for those purposes.*

Comment: The proposed development has no negative effect on the existing access to and along the foreshore and will increase general public access opportunities to the new jetty and kiosk and to the main spine of the marina.

Clause 24 : Interrelationship of waterway and foreshore uses

Subclause 24(a):

> *development should promote equitable use of the waterway, including use by passive recreation craft.*

Comment: The proposed development would not have any adverse effect on this aspect. It provides for a timber skid for the storage of kayaks, dinghies and the like. It also provides for recreational activities such as the new kiosk and additional public access.

Subclause 24(b):

> *development on foreshore land should minimise any adverse impact on the use of the waterway, including the use of the waterway for commercial and recreational uses.*

Comment: The land based component of the proposed development is very small and enhances the visual experience of the waterway to the general public. It does not have any negative effect on the existing use of the waterway or the use of it for commercial and recreational uses. It includes provision of a potential future public wharf.

Subclause 24(e):

> *development should avoid conflict between the various uses in the waterways and along the foreshores.*

Comment: The proposed development would not have any adverse effect on this aspect. Apart from occupying part of the waters of Kendall Bay, it would not affect the waterway use within the main navigation channel of Parramatta River or public access to and along the foreshore.

Clause 25 : Foreshore and waterway scenic quality

Subclause 25(a):

> *the scale, form, design and siting of any building should be based on an analysis of:*
>
> *(i) the land on which it is to be erected, and*
>
> *(ii) the adjoining land, and*
>
> *(iii) the likely future character of the locality,*

Comment: The proposal has been the subject of detailed analysis of design and siting, as well as consideration of the likely future character of the immediate locality, the waterway generally and of boating and boat storage in the near future.

The marina manager's office is a small scale, single storey structure of a maritime character and compatible with the residential development within Breakfast Point. The kiosk is also a single storey modest scale structure of maritime nature and is compatible within the context in which it would be seen.

Subclause 25(b):

> *development should maintain, protect and enhance the unique visual qualities of Sydney Harbour and its islands, foreshores and tributaries, and*

Comment: The content of this clause has been addressed under my address to Clauses 1, 13 and 14. In my opinion, the provision of boat storage as proposed is within the established qualities of the wider Parramatta River context and its siting, form and appearance and would protect its unique visual qualities. The proposal would neither cause significant nor widespread negative impacts on the existing or future character of the setting, nor on the scenic quality of the waterway. There are other examples of such developments present within the wider context such as the Cabarita Westport Marina, River Quays Marina and a private marina further to the north of the River Quays Marina, however these are widely spread and there would not be a significant cumulative impact of the proposal in relation to these facilities. The immediate foreshore context and adjacent residential

setting of the site for the proposed development is constructed and is generally of a low to moderate intrinsic scenic quality.

Subclause 25(c):

> *the cumulative impact of water-based development should not detract from the character of the waterways and adjoining foreshores.*

Comments:

The proposed development would form part of the view compositions available from within its potential visual catchment. However, it would not dominate or distract a viewer from the views of the other existing visual components of the views of the waterways and adjoining foreshores. It would be visible in the foreground of the views from viewing locations immediately to the west and south, on which it would have relatively greater impact. The higher scenic quality views would still be largely unaffected and retained with the help of the wide fairways proposed between the arms from these viewing locations.

Clause 26 : Maintenance, protection and enhancement of views

Subclause 26(a)

> *development should maintain, protect and enhance views (including night views) to and from Sydney Harbour,*

Comments:

There would be view loss effects on the waters of Kendall Bay but no significant affect on the views to and from the main navigation channel of Parramatta River, with the exception of view loss of Parramatta River north of the Breakfast Point knoll for viewing locations along the south and south eastern shoreline of Kendall Bay. The proposed wide fairways would assist in retaining and maintaining views to the Parramatta River and far shoreline from the foreshore walkway and from the lower levels of the townhouses and apartments within the Manors Precinct East and Wharf Precinct.

Subclause 26(b):

> *development should minimise any adverse impacts on views and vistas to and from public places, landmarks and heritage items,*

Comment:

The potential view loss effects have been analysed in detail in Section 4.2.5 and as part of the field documentation as shown in the assessment sheets. While there are moderate to high potential view loss effects from a section of the foreshore walkway along the western shoreline of Kendall Bay, the proposed wide fairways would assist in minimising those effects. There is also a view loss effect on views of the Parramatta River further north of the Breakfast Point knoll for viewing locations along the southern and south eastern shoreline of Kendall Bay and part of the Cabarita Park foreshores.

I do not consider that there are such significant or adverse impacts on views and vistas to and from other public places, landmarks and heritage items within the visual catchment of the proposed development that this sub-clause would be justification for its refusal and steps have been taken to minimise the impacts by limiting the proposed eastern extent of the marina to be mostly similar to the extent to which the former jetty on the site extended in the east direction. Exceptions to this are

Arm 8 and some vessels on the extreme eastern sides of Arms 1, 2 and 3. These encroachments are not considered to result in unacceptable impacts.

Subclause 26(c):

> *the cumulative impact of development on views should be minimised.*

Comments: The proposed development is assessed to be consistent with this provision in that:

a) It is located with a backdrop of former industrial site and now a medium to high density residential development comprising of town houses and apartments on relatively flat land;

b) It occupies part of the waters of Kendall Bay against a constructed western shoreline;

c) It is at a considerable distance from the southern shoreline of Kendall Bay which exhibits a relatively more natural character and greater scenic quality, with the exception of Arm 8 which is slightly closer;

d) The proposed eastern extent of the marina is mostly limited to the extent to which the former jetty at the site extended in the east direction, however; there are some small variations to this;

e) Very wide fairways (ranging between 21 to 31.2m) are proposed to maintain views through the proposed marina; and;

f) The proposed vessel size distribution takes into consideration the demand and there are only a small number of vessels ranging from 20 to 25m. There are no vessels proposed to be berthed of size greater than 30m.

Clause 27: Boat storage facilities

Subclause 27(a):

> *development should increase the number of public boat storage facilities and encourage the use of such facilities.*

Comments:

There is provision of five temporary berths within the proposed marina. A new timber skid is also proposed for the storage of skiffs, kayaks and the like. The proposed kiosk would attract the general public for the usage of these facilities and also to take advantage of the additional public access.

Subclause 27(d):

> *development should avoid the proliferation of private boat storage facilities in and over the waterways by ensuring that all such facilities satisfy a demonstrated demand.*

Comments:

The proposed development has the ability to positively respond to the increasing demand for a greater number and size of vessels in the future without leading to an unreasonable increase in area covered by private facilities or alternatively to unexpected or unpredictable visual impacts. A demand study has been submitted by the Applicant with the Application.

6.2.2 Sydney Harbour Foreshores & Waterways Area, Development Control Plan for SREP 2005

Clause 3.1 Introduction

The SREP (Sydney Harbour Catchment) 2005 contains provisions requiring a consent authority to consider the visual impact of development from the waterway and foreshores. The visual impact of a development will vary depending on:

- *The nature of the proposal – its height, width, siting, scale, colour, reflectivity and function;*
- *The landscape setting in which it is proposed;*
- *The degree of change created – whether it will be minimal or not; and*
- *The ability of the proposal to integrate with the landscape character".*

Comments:

The DCP is intended to give effect to these general considerations of the visual impacts of development by identifying environmental and visual qualities of the foreshores and land-water interface and providing strategic planning guidelines that assist in the assessment. The DCP contains maps of the foreshore and land-water interface and design guidelines for water and land-water interface development.

Clause 3.2 General Aims

"All development should aim to:

- *Minimise any significant impact on views and vistas from and to:*

- Public places,

- landmarks identified on the maps accompanying the DCP, and

- heritage items;

- *ensure it complements the scenic character of the area;*
- *protect the integrity of foreshores with rock outcrops, dramatic topography or distinctive visual features;*
- *provide a high quality of built and landscape design; and*
- *contribute to the diverse character of the landscape."*

Comments:

While there are moderate to high potential view loss effects from a section of the foreshore walkway along the western and southern shoreline of Kendall Bay, the proposed wide fairways would assist in minimising those effects. I do not consider that there are significant negative adverse impacts on views and vistas to and from other public places, landmarks and heritage items within the visual catchment of the proposed development and steps have been taken to minimise these impacts.

The proposed development does not cause a significant impact on the character of its immediate visual context as it is located with a backdrop of former industrial site and now a medium to high density residential development comprising of town houses and apartments on relatively flat land against a

constructed western shoreline. It is at a considerable distance from the southern shoreline of Kendall Bay which exhibits a relatively more natural character and somewhat greater scenic quality.

The proposed development is located along a straight, constructed western shoreline of Kendall Bay and does not exhibit any natural features such as rock outcrops, dramatic topography or distinctive visual features. The remains of the former jetty would be unaltered and there would be no affect on the foreshore near the Breakfast Point flagstaff knoll.

Clause 3.3 Landscape character types

The DCP to SREP Sydney Harbour Catchment identifies the existing character of the foreshore as Landscape Character Type 15.

The *Statement of Character and Intent* states;

> *"These areas have a high level of built form characterised by industrial and institutional uses in the foreground and residential development in the background. Part of the Parramatta River Regional Park is located within this landscape.*
>
> *Development is suitable for these areas provided that the following issues are taken into consideration:*
>
> - *the contribution industrial uses make to the economics and vitality of the river and their need for location on the waters edge;*
> - *establishment of open space and recreational opportunities;*
> - *mitigating against incompatible land uses; and*
> - *preserving the mangrove screening along the foreshore and reducing the stark contrast of built elements behind these natural features.*

Comments:

The DCP does not rank the waterway or foreshore in regard to scenic quality; however it indicates that natural elements along the foreshore and mangrove screening need to be preserved.

It is to be noted that the classification of the foreshores in the DCP was done before much of the existing residential conversion of the former industrial sites such as the former AGL site (the subject site) commenced. However the intrinsic scenic quality has not been significantly increased as a result of the land use change.

I do not consider that the proposed development has any adverse impacts on any of the above provisions and it is compatible within its surrounding visual context. The proposed development does not have any affect on the presence of mangroves along the southern shoreline of Kendall Bay. The land based component of the proposed development is of maritime character and has similarity with the background Breakfast Point residential development in terms of materials, colours and built forms.

The Performance Criteria states;

> *Any development within these areas is to satisfy the following criteria:*
>
> - *The industrial uses along the river are maintained and preserved. Pressure for these uses to relocate is minimised;*
> - *design and mitigation measures are provided between incompatible land uses to minimise noise and amenity impacts;*

- *remaining natural elements along the foreshore are preserved to maintain the natural screen along the foreshore; and*
- *vegetation is integrated within the development to minimise the contrast between natural and built elements.*

Comments:

In so far as they are relevant, the proposed development is compatible with these performance criteria. It does not have any physical or visual impacts on the naturalness of the southern shoreline of Kendall Bay.

Section 4.7 Marinas (Commercial and Private)

Visual Impact

- *the visual contrast (derived from an analysis of form, line, colour and texture) between the marina and the existing or planned future character of its setting is to be minimised;*

Comments:

The Breakfast Point Concept Plan indicates that there was always an intention to have a marina at the location of the former jetty. The Applicant has advised me that all the sale contracts with the present owners of residential developments within Breakfast Point contain information about a future marina at the site. While the form and scale of the marina were not known, it was known by buyers in the estate that a marina would be proposed and built at some time.

There is a substantial visual contrast between the existing and proposed future situation, however in my opinion there was a reasonable expectation that a marina would be part of the future visual context of the site for immediate local viewers. As a result the planned future character of the setting, both supported by the waterway zoning and the Concept Plan, included a marina. As such, the contrast between what exists now and what is proposed is less than would appear to be the case. I consider that the proposed marina is compatible within its immediate background context of the constructed western shoreline of Kendall Bay, the medium to height density residential development on relatively flat land and the expectations of the planned future character of the site.

In addition, the existing and planned future character of the site based on the Landscape Character Type 15 within the DCP appears to be of industrial and compatible uses without affecting the remaining naturalness of the context. The land based component has similarities within the background residential context.

- *the visual impact of the marina on people in the visual catchment (derived from an analysis of the potential number of viewers, their location within the landscape, distance from the marina and duration of view) is to be minimised;*

Comments:

The visual impacts of the proposed marina have been considered on the basis of all of these criteria in the methodology of assessment used above. In regard to specific viewing locations within its visual catchment this has been presented in Sections 3.1 to 3.3, the assessment sheets, Maps 1, 2 and 3, photographic plates and montages.

- *any visual analysis shall consider the impact of the largest motor vessel(s) capable of being berthed at the marina;*

Comments:

The base line assumption of the methodology for this assessment was the capacity of the proposed development as occupied by vessels of the largest size capable of accommodation in the berths proposed. For the photomontages, I consider that representing the maximum length vessels in the photomontages seems to be realistic but vessels of maximum size (height) for the particular length range while it is a worst case is too far fetched to be realistic enough to assess objectively and is not reasonable. This is based on the general observation of the kinds of vessels that can be seen in Sydney Harbour, Middle Harbour and the Parramatta River at the present time on current wet berths, as well as by inspection of the images of vessels for sale, either new or as recently purchased.

Hence, the vessels are shown to be of the largest length in the photomontages. The height and bulk of the vessels have been considered on the following basis - this has also been represented in the photomontages;

1. All of the vessels between 18m and 25m are shown with flying bridge type superstructure over a range of vessels that are generally traditional motor cruiser form.
2. 60% of vessels between 12m and 18m are shown with flying bridge or similar superstructure and a range of vessel forms including traditional motor cruisers, sedan, sports and raised deck cruisers (the most popular vessels in recent times).
3. 40% of all others vessels are shown with flying bridge or bridge deck configurations or similar superstructure and a range of vessel forms including those under 2 above as well as runabout, centre console, centre cabin, etc.

- *the largest vessels (motorised or otherwise) to be berthed at the marina are to be located as far from shore as possible;*

Comments:

The proposed development is consistent with this principle and the largest vessels are proposed towards the seaward end of the arms. The largest vessels (up to 20m and 25m lengths) within the marina are proposed to be located at the seaward end on the southern side of Arm 3 (the first northern arm). Distribution of vessel sizes on individual arms in also consistent with this principle.

- *waterside structures and berthed vessels associated with marinas are not to block views from foreshore public open space or views to foreshore public open space from the waterway;*

Comments:

The most noticeable view loss effect of the marina would be the loss of the view of parts of the water of Kendall Bay. Views of Parramatta River further north of the Breakfast Point flagstaff knoll would also be affected to a varied extend for viewing locations along the southern and south eastern shoreline of Kendall Bay and part of Cabarita Park.

The loss of view of the constructed western shoreline of Kendall Bay is not considered a significant negative effect of the proposed marina. Even these views would be maintained through the wide fairways proposed between the arms of the marina. Views to the relatively natural and higher scenic

quality southern shoreline of Kendall Bay would be retained for predominantly all of the viewing locations within the visual catchment.

- *the bulk and scale of buildings and other structures on land is to be minimised through appropriate mitigating measures including landscaping, articulated walls, detailing of surfaces and by using smaller elements;*

Comments:

The land-based component of the proposed development is of a very small scale and contains a single storey small scale marina manager's office at the landward end of the new jetty and a single storey moderate scale kiosk at the seaward end of it. The structures would be light weight, of articulated external appearance and of materials and colours compatible with the built context in which they would be seen.

- *the visual impact of car parking from the waterway is to be minimised and*

Comments:

The proposed small car parking within Silkstone Precinct would not be visible from the waterways. .

- *all signage is to be located on dry land below the roofline (or parapet) of buildings. Advertising signs are not to detract from the visual quality or amenity of the foreshores and waterways when viewed from the waterways.*

Comments:

There would be only one business identification sign and a number of utilitarian signs associated with the functioning of the marina. These signage are proposed taking into consideration this objective. They would not have any significant visibility and would not detract from the visual quality or amenity of the foreshores and waterways when viewed from the waterways.

6.2.3 Boat Storage policy for Sydney Harbour

Section 4.2 Changing demands

There is a clear trend toward larger boats and a shift in composition toward motorised rather than sailing boats. Sailing vessels are more likely to be stored on moorings while larger motor cruises are more likely to be stored on marina berths. This trend suggests a future growth in demand for fixed berth storage rather than moorings.

Comments:

The proposal responds to the trend identified in the policy by providing wet berths some of which are suitable for yachts and vessels sizes ranging from 8m to up to 25m.

Section 5.1 Commercial marinas

Commercial marinas will be generally allowable in certain locations around the harbour where: foreshores are already modified through development, including existing maritime commercial and recreational activities; conflicts with other land and water uses are minimised; public access to land use of the foreshores and

waterways is not reduced; the visual impacts of the development are acceptable, and there are no adverse impacts on wetlands or flora and fauna habitats subject to proper consideration through the development assessment process.

Comments: The proposed development is consistent with this provision in that it would be located along a highly modified/constructed shoreline; it would be located with a backdrop of a former industrial site now converted to a medium and higher density residential development. The proposed development is at a significant distance from the Parramatta River navigation channel, thus not conflicting with other water uses. It has a very small land based component and no conflicts with other land uses. The visual impacts of the development are acceptable with only a small number of close range viewing locations on which there would be moderate -high to high visual impacts. It is my understanding that the proposed development would not have any adverse impacts on wetlands or flora and fauna habitats.

6.2.4 Canada Bay Local Environmental Plan 2008

The land based component is within Zoning R1 General Residential and is also on land within Foreshore Building Line. The development is permitted with consent under the zoning.

Clause 6.5 Foreshore building line

(1) The objective of this clause is to ensure that development in the foreshore area will not impact on natural foreshore processes or affect the significance and amenity of the area.

Comments: The proposed development is consistent with this criterion and the land based component would neither impact on the natural foreshore processes nor affect the significance and amenity of the area.

(3) Development consent may be granted for the following:

(a) the extension, alteration or rebuilding of an existing building wholly or partly in the foreshore area, if the consent authority is satisfied the extension, alteration or rebuilding will not have an adverse impact on the amenity or aesthetic appearance of the foreshore,

(b) the erection of a building in the foreshore area, if the levels, depth or other exceptional features of the site make it appropriate to do so,

(c) development for the purposes of boat sheds, sea retaining walls, wharves, slipways, jetties, waterway access stairs, swimming pools, fences, cycleways, walking trails, picnic facilities or other outdoor recreation facilities.

Comments: The proposed development can be approved under these criteria.

(4) Development consent must not be granted under subclause (3) unless the consent authority is satisfied that:

(a) the development will contribute to achieving the objectives for the zone in which the land is located, and

(b) the appearance of any proposed structure, from both the waterway and adjacent foreshore areas, will be compatible with the surrounding area, and

(c) the development will not cause environmental harm such as:

(i) pollution or siltation of the waterway, or

(ii) an adverse effect on surrounding uses, marine habitat, wetland areas, flora or fauna habitats, or

(iii) an adverse effect on drainage patterns, and

(d) the development will not cause congestion of, or generate conflicts between, people using open space areas or the waterway, and

(e) opportunities to provide continuous public access along the foreshore and to the waterway will not be compromised, and

(f) any historic, scientific, cultural, social, archaeological, architectural, natural or aesthetic significance of the land on which the development is to be carried out and of surrounding land will be maintained.

Comments:

The analysis and assessment of the application as described above has been undertaken with special consideration of the relevant visual criteria (ie, (4)(b), (e) and (f). The application is considered to be satisfactory in this regard.

Schedule 6 of the LEP – Transition provisions for certain sites

Comments: The proposed development is associated with Special Transitional Site Precinct B2 of Breakfast Point. The proposal, is entirely water based and is not subject to the specific provisions of the LEP, however the foreshore for 15m back from the top of the sea wall is classified as Precinct B5, Foreshore Public Open Space. The development is adjacent to the latter precinct.

A relevant objective for both Precincts B2 and B5 is to encourage development that takes advantage of views and view corridors to and from the Parramatta River. The layout of the marina has been considered so as to retain wide fairways between arms of the marina so that significant views are retained toward the northern and north eastern shores of the Parramatta River from a variety of vantage points in both public and private domains, consistent with this criterion.

6.3 Summary of the proposed mitigation measures

This section details the measures and considerations made during the design stage of the proposed development to mitigate potential unreasonable visual and cumulative impacts. These measures have been taken into consideration within the visual effects and impacts assessment presented above. These measures are;

6.3.1 Layout of the proposed marina

It was considered that if the proposed marina mostly conformed to the easterly extent of the former wharf then it would not have significantly greater visual effects and impacts in regard to composition of view blocking, compared to the former jetty, in views generally parallel to the shoreline. The visual context of the site was considered to have the potential capacity to absorb/contain a development that is mostly within the visual boundary limit set by the former jetty along the western shoreline of Kendall Bay. Hence, the majority of the parts of the proposed marina are within this limit line which has been shown on Drawings DA 01 and DA 03 and called 'eastern end of original wharf'. This was

done to mitigate potential view loss effects on the existing views of the main Parramatta River Channel when seen from locations to the south and southeast of the site. The exceptions to this are small eastern parts of Arms 1, 2 and 3 and most of Arm 8 that extend beyond this limit line.

The fairways between the central (Arms 4 & 5) and the northern arms (Arms 1, 2 and 3) are in the range of 21 to 31.2m in width. The fairway (view corridor) between the northern central arm (Arm 4) and the first of the northern arms (Arm 3) is the largest, being approximately 31.2m.

The new jetty is considerable lower than the former jetty that existed on the site for a long time in the recent past.

6.3.2 Distribution of vessel size on marina

The vessel sizes proposed to be berthed in the marina range from 8m-25m. The proposal is for 5 temporary berths/destination berths and 167 permanent berths. Some of these berths are suitable for yachts.

Of the proposed 172 berths, only 7 berths are of a maximum length of up to 20m length and 2 berths are of maximum length between 20 to 25m. Hence the more common lengths of the vessels (163) proposed to be occupying the marina range between 8 to18m.

The scale of vessels throughout the proposed marina is generally distributed so that the larger vessels are furthest from shore, with the smaller vessels located close to shore. For example, as shown in Drawing DA 03, the vessels up to 20 and 25m vessel lengths are located on the south side of the seaward end of Arm 3 (the first northern arm).

The vessel size distribution also follows this pattern with relatively smaller size vessels berthed close to the landward side of the arms. This distribution of the vessels sizes would result in lower prominence of the larger vessels when seen from close range viewing locations along the foreshores due to the screening effect of smaller vessels in the foreground and the decrease in visual size of the vessels relative to the distance between the viewer and the location of vessel on water.

6.3.3 Colour and material usage and form of the building

The marina manager's office and kiosk would of building materials and colours that are compatible with maritime environments and functions and also with the medium density residential development that forms the background of the majority of view compositions available from within the potential visual catchment of the proposed development.

The building would be mostly constructed with timber with steel columns also rendered in timber, timber decks and timber railings. The roof would be Colorbond, light weight with concealed gutters and pipe conduits. The timber form of the building would be compatible with other maritime buildings and residences present within the surrounding context of the site.

The form of the building is designed in such a way that would result in a visually attractive and articulated structure, suitable for its function and maritime environments.

6.3.4 Colour scheme and scale of associated facilities

The access control gates, gangway, steps and service bollards have been proposed of colours, scale and materials that are compatible with the maritime environment, reduce their prominence and are of the minimum size required for their functioning and safety. They would be generally not prominently visible in any single view.

6.3.5 Lighting

The lighting for the marina as well as the land based component is so proposed that it would only be sufficient for safe access, safe working and functioning. The lighting arrangement is not considered to result in any unacceptable visual impacts on both high and medium sensitivity zones.

6.4 Residual visual impacts

The remaining visual impacts of the proposal, taking into account the overall visual effects and impacts and the effects of mitigation measures in decreasing these, would occur predominantly for close range viewers in the public domain of the Kendall Bay waterway, its shoreline and foreshore and private domain of residences within Manors Precinct East and Wharf Precinct and to some extent the residences in Kendall Inlet. It would also occur for some public domain viewing locations along the far shoreline to the north and northeast such as the public reserve at the southern terminus of Pellisier Road and southern terminus of Tennyson Road.

The components causing the most impacts are the proposed water-ward extent of the northern arms which would extend eastward north of the Breakfast Point knoll and cause view loss and blocking effects to parts of Parramatta River and of the sense of the sweep of the River towards Kissing Point Bay in views from the east. This view loss and blocking effect would be felt from viewing locations to the southwest including the south western shoreline of Kendall Bay, beach, walkway and parts of Cabarita Park.

The other component of the proposed marina causing the most impact is the three southern arms and in particular Arm 8 which form a significant element in the southern sector of the Bay, resulting in higher effect on the visual character and composition of the view when seen from viewing locations in the southern and south western sector of the Bay. Arm 8, due to its relative closeness to the southern shoreline also reduces the compatibility of the proposed marina with the urban and natural features of the view compositions when seen from along the southern shoreline of Kendall Bay and part of Cabarita Park.

For viewing locations to the west of the site of the proposed marina, the main impact is the potential change in the foreground of the existing view compositions. The primary cause of the visual impacts would be the change of the character of the immediate waterway and foreshore adjacent to the site. The immediate foreshore is however, highly modified and the latter affect does not significantly add to the potential visual impacts. The main impact is considered to be the presence of the proposed development in the foreground of the views from many of the close range public and private domain viewing locations. Notwithstanding, it is also to be taken into account that the proposed development is permissible within the zoning of the waterway and the site accommodated a former wharf with a significantly elevated jetty that caused high levels of impact and view loss for many years. The second most significant impact for viewing locations to the west of the site and also for some medium range public domain viewing locations is considered to be the visibility of the full and large scale extent of the proposed marina.

Apart from the potential significant change in the view composition and the foreground views from these viewing locations, the proposed development is not assessed to cause unreasonable view loss effect or impact the intrinsic scenic quality of the views, with the exception of the view blocking effect of Parramatta River for viewing locations along the southern shoreline of Kendall Bay and some view loss from the ground floors of the townhouses and apartments adjacent to the foreshore walkway to the west of the site for the proposed marina.

The private views affected are from residences bought by people who had a reasonable expectation that there would be a marina constructed in the general vicinity of the proposal. The form and the scale of the marina was not known to them, however the desired future for the site included a marina. Therefore, the sensitivity of these viewers to the appearance of the marina, if negative, is therefore considered to be less than would be the case if there had been no such expectation.

It is important to consider the view experience which is available to a viewer both in the close range public domain and private domain and medium range public domain. The horizontal extent of the view which is available from these locations is almost unlimited in an arc from north through east and to south. The extent to which the view would be interrupted by the proposed development is low to moderate. Notwithstanding, I have acknowledged that there are visual impacts ranging from medium, medium to high and high on all of the close range and some medium range viewing locations mostly due to the change in the foreground of the views that would be caused by the proposal and due to its large extent.

I do not consider that there are significant impacts on the majority of medium range and all of the distant range viewing locations.

Lower scenic preferences are commonly associated with industrial development and to the extent that this activity may be perceived by some to be of that nature, there may be opinions expressed that the proposed development is unattractive and a detriment to the existing visual character.

At a different popular level, there is also evidence that boats, both power and sail, are of great interest to a significant proportion of the population and a significant cultural item among others ranking perhaps only behind the family home, car and garden to many families and persons. That there is also a great interest in boats, boating activities and in simply looking at boats of the kind intended to be moored at the marinas is indicated by the numbers of people who attend The Sydney Boat Show every year. This exhibition is ranked third in popularity behind only the Home Show and Motor Show. These three are by far the most popular exhibitions that are held annually in NSW.

Anecdotal evidence gathered from observation of art gallery collections, popular art, graphic design, landscape painting and advertising subjects indicates that that over a considerable time maritime facilities, boat yards and an active waterfront are commonly considered to be attractive or worthy of depiction as objects of artistic expression. Boats of various sizes, forms and in various contexts from the most romantic to the most mundane, from sail to steam and diesel are featured in all of these media at times. Sydney Harbour, Balmain, Middle Harbour and its shoreline are also popular subjects for artistic expression through decades of variations in styles and fashions in art and theory of aesthetics. Thus there may be divergent opinions as to the merits of parts of the activity proposed.

7.0 Visual effects of construction activities

7.1 Details of construction works

TLB Engineers have prepared a detailed Construction Management Plan. Drawing CMP01 shows the proposed six stages of the construction of the proposed development. The waterside works would be carried out in following six stages and within the stated time frames;

Stage 1Blanket construction (12 weeks)

Stage 2Fixed jetty including kiosk and manager's office (24 weeks)

Stage 3Floating structure Arms 4, 5, 6, 7 and 8 (14 weeks)

Stage 4Floating structure – Arm 3 (10 weeks)

Stage 5Floating structure Arms 1 and 2 (18 weeks)

Stage 6Pontoon and ramp (2 weeks)

The works for the car park (10 weeks) are independent of the above works however it would be undertaken at the same time as the blanket construction. The car park would be constructed using asphaltic concrete over compacted base with concrete kerbs and landscaping.

The blanket would be constructed of geo-textile over which would be placed basalt gravel/grade rock. The floating structure would consist of concrete piles and a proprietary modular pontoon system. The fixed jetty would be constructed of steel piles with HDPE Sleeves supporting steel headstocks on which would be timber beams supporting timber decking. All materials and equipment for the construction of the waterside works would be brought to site by barge. Some of the works could be undertaken concurrently. Piles would be installed at the average rate of 2 per day. There are approximately 160 piles required for the proposed works.

The work hours each day would be in accordance with the Canada Bay Council requirements and the Conditions of Consent, namely:

Monday to Friday	7:00 am to 5:30 pm
Saturday	7.00 am to 1:00 pm
Sunday	No work

There would be limited materials stored on site. The barge mounted cranes would be used for materials handling. The contractor personnel vehicles would temporarily park on the street near the site until such time as the car park is completed. Then these cars would park in the car park.

7.1.1 General Site Management

A Car Park Works

Site Layout

The car park site is located in the Breakfast Point Precinct and is bounded by Peninsular Drive and Rosewater Circuit. The site is adjacent to a residential building named 'Silkstone'.

For all site amenities, temporary buildings will be located within the site boundaries at all times. The location, type and number of the site amenities will be determined closer to the commencement of construction.

Hoardings and Protection

Site Boundaries

Prior to the commencement of any construction works, a temporary perimeter fence will be constructed along the boundary lines. The fence will consist of 50mm chain wire mesh panels 2.1m high with hinged lockable gates that open inwards at all required access points. The fence will also be lined internally with shade cloth to help prevent dust and debris exiting the site from the construction activities.

Upon completion of each stage, the temporary chain wire fence will be removed.

Materials Handing

Excavation and Site Levelling

During the excavation works, trucks will be loaded within the site boundaries. Trucks would enter via Gate 1 and exit via Gate 2. The trucks will pass over the construction vehicle exit, at which point the trucks would be washed down to remove soil and debris.

Standing Trucks

Unloading of all materials and equipment will be carried out on site whenever possible. If any on-street standing is required (including from the carriage way, footpath or verge), all activities will be supervised at all times by qualified traffic controllers.

Machinery

An all terrain telescopic handler (or similar) will be on site for the construction phase of the project for on site materials handling. This machine will be approximately 2-5 tonne capacity and will only be operated by qualified personnel. Various other types and sizes of machinery will also be on site throughout different phases of the project. These include, but are not limited to, excavators, backhoes, rollers, asphalt laying vehicles, forklifts, and concrete pumps.

Site Storage

Construction materials and waste containers for construction refuse will be stored within the site in an area not accessible to the public. The location for storage of the items will vary throughout construction due to changing site constraints. Dedicated storage areas will be established by way of the placement of lockable storage containers and installation of temporary fencing. No materials will be stored outside of the site boundary.

All stored material locations are to be co-ordinated with the site foreman.

Tree Protection

All trees adjacent to site that are nominated as being retained are to be protected at all stages throughout construction. In order to achieve this, temporary 1.8m high chain wire fences are to be constructed around each tree, or cluster of trees, and will encompass the primary root zones where practicable. Any works to be carried out close to the trees nominated to be retained will be supervised by an experienced and qualified Arborist.

Waste Management

Construction Waste

Rubbish skips/bins will be used during the course of the project for the collection of general construction waste and material packaging. Rubbish skips will be located within the site.

All rubbish placed in skips will be removed from site by a waste collection company and taken to

an approved or licensed waste disposal and recycling facilities. At no time will rubbish skips/bins be stored on the footpath or roadway during the course of construction.

Excavated Materials

Excavated material will be tested for contaminants and placed in sealed trucks for transport to the appropriate landfill site.

Where necessary, and in accordance with a Site Remediation Action Plan, contaminated material would be stockpiled on site, dewatered and the material and water treated before the material is loaded onto trucks.

Water would be treated in accordance with an Environmental Management Plan.

Material stock piles will be sprayed with water from time to time to keep dust down and if necessary covered.

Perishable Waste

Perishable wastes will be stored on site in appropriate receptacles with lids to minimise vermin attraction.

B Waterside Works

Site Layout

The area for the waterside works is adjacent to the foreshore public access zone on the western side of the site. Approximately 250m east of the mean high water mark, and approximately 90m east of the site, is the vessel access path of Sydney Ferries vessels moving to and from Cabarita Ferry Wharf.

All waterside works will be undertaken using plant and equipment mounted on barges. All amenities for the construction personnel will be on the barges.

Materials Handling

All materials for waterside works will be delivered to site on barges which will be securely moored to piles.

Materials will be handled using the barge mounted equipment.

All materials will be secured to the barges until required for installation.

Construction Waste

All construction waste will be placed in sealed bins on the barges. These bins will be covered.

From time to time the bins will be removed from site and the waste taken to an approved landfill or waste processing facility.

7.1.2 Traffic Management

A Car Park Works

Heavy Vehicle Access Routes

Heavy vehicle access to the site would be along Tennyson Road, and, into Magnolia Drive and Rosewater Circuit within the Breakfast Point Precinct.

Vehicles would turn onto the site at the southern side (Gate 1) and depart from the site via Gate 2, turning left onto Rosewater Circuit.

From time to time vehicles will park on Rosewater Circuit and Peninsular Drive in the two construction zone parking areas marked on the drawings TPA1 and TPA2 until they are able to move onto the site.

Vehicle Access

Vehicle access is to be via Gate 1 as described for Heavy Vehicle access and egress. All access gates will be sign posted and all vehicles are to enter and leave the site in a forward direction wherever possible.

Vehicle Parking

Construction workers' vehicles will be able to be parked on site for some of the project. Designated parking bays will be located in safe areas on the site. These areas may change throughout the project.

If on site parking is not possible during a phase of construction, then construction workers' vehicles are to be parked on adjacent streets, in accordance with Council's regulations and signage. At no time will vehicles be parked on the nature strip or in a manner that obstructs traffic flow or driveway access of surrounding residents.

Throughout all phases of construction, workers will be encouraged to car pool and utilise public transport. Site personnel will continually monitor parking and ensure the disturbance so surrounding residents is minimal.

Pedestrian Management

As a safety provision for pedestrians, movement past site entries may be restricted during construction activities. Safety and directional signs will be provided during these periods. The footpaths around the site will remain unobstructed at all times.

Access

Pedestrians and personnel to enter the sites will do so via the designated access gates as described for Heavy Vehicle access and egress. Unauthorised entry to work site is prohibited, and signage will be in place to inform pedestrians of access restrictions and requirements. Directional signage will also be in place to direct all personnel and visitors to the site office.

B Waterside Works

Vessel Access

All vessel access to the site would be from the north. Vessels would travel along the main channel of the Parramatta River until reaching the Headland/Point known as Breakfast Point, then turn south to the site.

Vessels would approach the site on a path between 100m and 190m east of the foreshore mean high water mark. This is 60m clear of the ferry access path.

Navigation Management

In order that the construction activities have minimal effect on Sydney Ferries operations and that construction activities including vessel access do not stray into the navigable water used by Sydney Ferries, temporary buoys would be placed east of the site and approximately 50m west of the Sydney

Ferries vessel path. These buoys are shown on drawing CMP1 and marked CMB2, TCB1 and TCB5.

The buoy marked TCB5 would identify the southern extent of the construction zone. No vessel movements or other activities would be permitted south of this buoy.

7.2 Potential visual effects of the construction activities

There would be views from close range public and private and some of the medium range public domain viewing locations of the proposed waterside works. There would be a marked, short term effect caused by the new piling and jetty construction and a more gradual placement of the new pontoons and associated services. These viewing locations would include the waterway, western and southern foreshores of Kendall Bay and the townhouses and residences located adjacent to the western foreshore walkway.

The waterways would provide unimpeded views for some viewers, including close range views of all major phases of construction. Unusual vessels, such as pile driving barges, cargo and demolition barges and other specialist vessels would be among the short term visual changes which would occur. Given that all of these can be seen in various contexts on the working foreshores of Parramatta River and Sydney Harbour at various times, it is not considered that any significant impact would ensue.

There would also be short-term views of the construction activities associated with the car park works. The truck movements, temporary storage of construction materials, operation of machinery for loading and unloading of trucks and construction would be some of the activities that would be visible. These activities would mostly be visible by pedestrians and motorists on Rosewater Circuit and the residents of apartment buildings on Peninsular Drive. The short-term visibility of these activities would be similar to the common construction activities in land based urban environments.

Overall I do not consider that there would be any unreasonable or significant visual impacts of the construction activities.

8.0 Visual effects of the proposed lighting

The proposed lighting for the marina would be visible to a varied extent from its potential visual catchment. The proposed lighting will also be seen in the context of various other lighting sources present in the view composition. The present major lighting sources within the immediate context of the site are;

1. The bollard lighting all along the foreshore walkway adjacent to the western and southern shoreline of Kendall Bay. By comparison, this general lighting is substantially brighter that the proposed marina lighting,
2. The lighting within the background residential context of Breakfast Point and Kendall inlet,
3. The lighting at Cabarita Rivercat Ferry Wharf.

The reflection of these existing lighting sources is seen in the waters of Kendall Bay. Refer Plates 1, 2 and 3 at Appendix D of the Report.

The proposed lighting would be visible from the close range locations to include foreshore walkway adjacent to the western and southern shoreline of Kendall Bay, Cabarita Rivercat Ferry Wharf, from the town houses and apartment buildings in Manors Precinct East and Wharf Precinct in Breakfast Point, some apartments in Kendall Inlet and from immediate waterway.

It would be visible from medium range distances from the foreshore to the southeast of Cabarita Rivercat Ferry Wharf and partly visible from the Putney Point Vehicular Ferry and Ramp. It would also be visible at medium distance from the southern terminus of Pellisier Road (Putney), Tennyson Road (Tennyson Point), Ross Street (Gladesville) and Wharf Road (Gladesville). It would be visible from the foreshore reserves located below the southern terminus of these streets. It would also be visible from the medium distance locations on the waterway. In general, from medium to distant locations, the lighting would not make a significant difference to the perception of existing light sources and would be of a lower intensity and density than those sources.

There would be negligible visibility of the proposed lighting from distant locations on the waterway and land based locations such as the southern terminus of Dick Street in the Henley locality.

The vessels proposed to be berthed on the various arms would provide a high screening effect to the proposed marina lighting when seen from locations to the north, northeast, south and southeast of the site. There would be lesser screening effect provided by the proposed vessels for viewing locations to the west and east of the site from where there would in some view lines be views of the proposed lighting along the alignment of the individual arms of the proposed marina. This effect would be highly restricted.

The proposed lighting will not be prominent or visible at nuisance levels in any of the views, be it from close range or medium range. The existing lighting sources present in the view of the site are relatively brighter and more closely spaced. The effect of the proposed marina lighting will be significantly subdued compared to these present lighting sources.

Overall, I consider that the visual effects of lighting are low and will be an acceptable level of change on the whole potential visual catchment.

9.0 Summary Conclusions

This assessment concluded that there would be visual impacts in the range of medium, medium to high and high for close range public and private domain viewing locations which would be mostly due to the potential presence of the proposed marina in the foreground of the views from these viewing locations and the resultant change it would cause to the view compositions and visual character of those views. The close range public domain viewing locations are constituted by the waterway and foreshore walkway along the western and southern shoreline of the Bay. The close range private domain viewing locations include the townhouses and apartments in Manors Precinct East and Wharf Precinct. The southern shoreline of the Bay is of relatively higher scenic quality and the part of the proposed marina close to this part of the Bay in particular Arm 8 would have a higher impact on this scenic quality. That impact is not considered to be such that the application ought to be refused.

There would not be unreasonable view loss effects of the proposed marina on the potential visual catchment generally, but there would be potential loss of the views of parts of Parramatta River and the sense of the river sweeping towards Kissing Point Bay when seen from viewing locations along the southern shoreline of Kendall Bay and part of Cabarita Park. There would also be view loss effect of parts of Parramatta River and the far shoreline from the foreshore walkway and the ground floors of the residential development adjacent to it, to the west of the site of the proposed marina. The proposed wide fairways assist in maintaining some of the latter views in a view experience which, with the exception of static private views, is a dynamic experience for all viewers and one which is affected along only part of a continuous foreshore access way.

The potential visual impacts of the proposed marina would range from low, low-to medium and medium for most of the medium range viewing locations. There would be a potential view loss effect of the existing views of the constructed western shoreline of Kendall Bay when seen from medium range viewing locations to the southeast, east and northeast. This view loss effect is not considered to be significant due to the constructed nature of the shoreline and the medium and high density residential backdrop of the site when seen from these directions which overall has a low to moderate scenic quality.

The proposed development would not have any significant visibility from roads and, if any, is only within the medium and distant ranges. It would be visible from the foreshore reserves at the terminus of some of the streets within Gladesville, Tennyson and Putney localities. These reserves are considered to be high view sensitively locations. There would not be any significant visibility of the proposed development from the Gladesville Hospital and its grounds.

The potential visual impacts of the proposed marina would be low for most of the distant public domain viewing locations. There may be private domain viewing locations within the distant range but the impacts on these would be low.

The potential visual impacts of the land based component of the proposed development are considered to be low overall on close range, medium and distant viewing locations.

References

Falchero, S., Lamb, R.J., Peron, E.M. and Purcell, A.T. (1992). Is our experience of the world more complicated than we think? In Aristides, M. and C Karaletsou, Socio-Environmental Metamorphoses: Builtscape, Landscape, Ethnoscape, Euroscape, Thessaloniki, Aristotle University Press, IV, 121-125.

Lamb, R.J., and Purcell, A.T. (1982). A Landscape Perception Study of the Peninsula Area of Warringah Shire: Implications for Planning Controls, Building Regulations and Other Areas of Council Activities. University of Sydney, Department of Architecture, Occasional Paper, 44pp.

Lamb, R.J., Purcell, A.T., Mainardi Peron, E., and Falchero, S. (1994). Cognitive categorisation and preference for places. In S.J. Neary, M.S. Symes and F.E. Brown, The Urban Experience: a People Environment Perspective, London, E & F.N. Spon, pp 405-416.

Lothian, A (n.d.). Coastal Landscape Assessment the South Australian Coastal Viewscapes Project, pdf document, viewed 7th May 2007, Victorian Coastal Council, <http://www.vcc.vic.gov.au/coasttocoastproceedings/LOTHIAN_Andrew_paper.pdf>

Purcell, A.T. and Lamb, R.J. (1984). Landscape perception: An examination and empirical investigation of two central issues in the area. Journal of Environmental Management, 19, 31-63.

Purcell, A.T., Lamb, R.J., Mainardi Peron, E.M., and Falchero, S. (1994). Preference of preferences for landscapes? Journal of Environmental Psychology 16, 195-205.

Peron, E, Purcell, A.T., Staats, H., Falchero, S., and Lamb, R.J. (1998). Models of preference for outdoor scenes: some experimental evidence. Environment and Behaviour, 30, 382-305.

Nasar J L 1989 Perception, cognition and evaluation of urban places. In: Altman I, Zube E (eds.) Human Behaviour and Environment: Public Spaces, Plenum, New York, pp. 31-56

Nasar J L 1994 Urban design aesthetics: The evaluative quality of building exteriors. Environment and Behaviour 26: 377±401

Nasar J L 1997 The Evaluative Image of the City. Sage, Thousand Oaks, CA

Nasar, J.L., (2002). Images of cities, in N.J. Smelser and P.B. Baltes (Eds.), International Encyclopaedia of the Social & Behavioural Sciences (pp. 1822-1825), Oxford, Pergamon, 2001

Appendix A: Photographic Plates for Viewing Locations (VPs)

(Also refer Figures 3.2 and 3.3 of the Report for the viewing locations)

Photographic Plate 1: *VP1, Small reserve at the southern terminus of Dick Street, Henley*

Photographic Plate 2: *VP2 Small reserve near the south western terminus of Wharf Road, Gladesville*

Photographic Plate 3: *VP3, from the southern terminus of a narrow street, off the intersection of Pile Street, Shackel Avenue and Meriton Street. (Access to 186SPS Sydney Water Sewage Pumping Station)*

Photographic Plate 4: *VP4 From The Scots College Rowing Club*

Photographic Plate 5: *VP5, the southern terminus of Ross Street*

Photographic Plate 6: *VP6 From Glades Bay Park, below and to the west of Ross Street*

Photographic Plate 7: *VP7 From the south-eastern edge of Bill Mitchell Park, Tennyson Point*

Photographic Plate 8: *VP8 From Raven Point, southern terminus of Tennyson Road, Tennyson Point*

Photographic Plate 9: *VP9 From in front of No. 163 Tennyson Road, Tennyson Point*

Photographic Plate 10: *VP10 From opposite 60 Frances Road, in the vicinity of Morrisons Bay Park*

Photographic Plate 11: *VP11 From the foreshore walkway in Morrisons Bay Park, in the southeast sector of the park*

Photographic Plate 12: *VP12 From the small reserve at the southeastern terminus of Putney Parade*

Photographic Plate 13: *VP13 From the reserve at the southeastern terminus of Pelisier Road*

Photographic Plate 14: *VP14 From the small reserve east of the Putney Point vehicular ferry ramp*

Photographic Plate 15: *VP15 From the knoll (lower level walkway) along the foreshore, Breakfast Point*

Photographic Plate 16: VP16 From the knoll (upper level walkway) along the foreshore, Breakfast Point

Photographic Plate 17A: *VP17 From the walkway along the foreshore, approximately in the alignment of the location of the first arm of the proposed marina, looking east*

Photographic Plate 17B: *VP17 From the walkway along the foreshore, approximately in the alignment of the location of the first arm of the proposed marina, looking south-southeast.*

Photographic Plate 18A: *VP18 From the walkway along the foreshore, approximately in the alignment of the pathway between town houses and apartments, looking east.*

Photographic Plate 18B: *VP18 From the walkway along the foreshore, approximately in the alignment of the pathway between the town houses and apartments, looking south-southeast.*

Photographic Plate 19A: *VP19 From the walkway along the foreshore, approximately in the alignment of the location of the proposed marina manager's office, looking east.*

Photographic Plate 19B: *VP19 From the walkway along the foreshore, approximately in the alignment of the location of the proposed marina manager's office, looking south-southeast.*

Photographic Plate 20A: *VP20 From the walkway along the foreshore, approximately in the alignment of the beginning of a curved path going up into the green space, looking northeast.*

Photographic Plate 20B: *VP20 From the walkway along the foreshore, approximately in the alignment of the beginning of a curved path going up into the green space, looking east-southeast.*

Photographic Plate 21: *VP21 From the northern arm of Rosewater Circuit, in the Silkstone residential development*

Photographic Plate 22: *VP22 From the southern arm of Rosewater Circuit, in the Silkstone residential development*

Photographic Plate 23: *VP23 From the beach along the southern foreshore of Kendall Bay, in front of Kendall Inlet residential development*

Photographic Plate 24: *VP24 From along the eastern foreshore walkway near the public boat ramp, in the vicinity of Cabarita Rivercat Ferry Wharf*

Photographic Plate 25: *VP25 From along the foreshore, approximately 100m southeast of the Cabarita Rivercat Ferry Wharf*

Photographic Plate 26: *VP26 From the beach to the east of Cabarita Rivercat Ferry Wharf*

Photographic Plate 27: *VP27 From near the monument (William Beach) in Cabarita Park*

Photographic Plate 28: *VP28 From the waterway, approximately midway between Cabarita Rivercat Ferry Wharf and Raven Point*

Photographic Plate 29: *VP29 From waterway, approximately midway between Breakfast Point knoll and small foreshore reserve at the terminus of Pellisier Road*

Photographic Plate 30: *VP30 From waterway, approximately midway between Cabarita Westport Marina and Looking Glass Point*

Photographic Plate 31: *VP31 Looking east from standing position at the centre of the terrace of Unit 41, 53 Peninsular Drive, Breakfast Point*

Photographic Plate 31: *VP32 Looking east from standing position in living room of Unit 32, 71 Peninsular Drive, Breakfast Point*

Photographic Plate 33: *VP33 Looking east from standing position in front of a ground floor unit in 57-79 Penninsular Drive.*

Appendix B: Assessment sheets for viewing locations (VPs)

(Also refer to Appendix A for photographs and Figures 3.2 and 3.3 for viewing locations)

Viewpoint: VP1, Small reserve at the southern terminus of Dick Street, Henley

Comment: This is a distant public domain viewing location with views approximately level with the waterway. A part of the site is screened by the presence of Cabarita Marina (Westport Marina). The land based component of the proposal can not be seen in this view. The details of the layout of the proposed marina will not be discernable from here. The visual context of the view is constituted by a number of medium and medium to high density residential development along the foreshore, part natural and part constructed shoreline and boat accommodation facilities of various kinds. There are not any significant viewing opportunities of the site from Dick Street other than from its southern terminus. The residences located at the southern end of Dick Street would have similar views. Overall, there will be low effect on the visual character and scenic quality of view. There would be no significant view blocking effect.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore	X		
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

Assessment Factor where effects increase as ratings increase		Marina Component			Land Based Component		
	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View		X			X		
Effect on Scenic Quality of View		X			X		
Variable factors							
Effect On View Composition		X			X		
Effect of Relative Viewing Level				X			X
Effect of Viewing Period			X			X	
Effect of Viewing Distance		X			X		
View Loss or Blocking Effect		X			X		
Overall Extent of Visual Effect		**Low**			**Low**		

Assessment Factor where impacts decrease as ratings increase		Marina Component			Land Based Component		
	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity			X			X	
Compatibility with Maritime Features		X			X		
Compatibility with Urban/ Natural Features		X			X		
Overall Extent of Visual Impact		**Low**			**Low**		

Viewpoint: VP2 Small reserve near the south western terminus of Wharf Road, Gladesville

Comment: This is a medium range public domain viewing location with views approximately level with the waterway. Cabarita Marina (Westport Marina) and Cabarita Rivercat Wharf are seen in the foreground of the view. These and other small scale boat accommodation facilities along the shoreline provide high compatibility for the proposed marina. The details of the layout of the proposed marina will be slightly discernable from here. The land based component would have high compatibility with the background urban and natural features and would not be highly discernable. There are not any significant viewing opportunities of the site from Wharf Road other than from its southern terminus. There would be some view loss of parts of the mostly constructed western shoreline of Kendall Bay. There would be similar views from residences located near the southern terminus of Wharf Road. Overall, there would be low effect in the character and the scenic quality of the view.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore		X	
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

Assessment Factor where effects increase as ratings increase		Marina Component			Land Based Component		
	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View		X			X		
Effect on Scenic Quality of View		X			X		
Variable factors							
Effect On View Composition		X			X		
Effect of Relative Viewing Level				X			X
Effect of Viewing Period			X			X	
Effect of Viewing Distance			X			X	
View Loss or Blocking Effect		X			X		
Overall Extent of Visual Effect		**Low to Medium**			**Low**		

Assessment Factor where impacts decrease as ratings increase		Marina Component			Land Based Component		
	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity			X		X		
Compatibility with Maritime Features		X			X		
Compatibility with Urban/ Natural Features		X			X		
Overall Extent of Visual Impact		**Low**			**Low**		

Viewpoint: VP3, from the southern terminus of a narrow street, off the intersection of Pile Street, Shackel Avenue and Meriton Street. (Access to 186SPS Sydney Water Sewerage Pumping Station)

Comment: This is a medium distance public domain viewing location with slightly elevated views of the proposed development. The Cabarita Rivercat Wharf is visible in part of the foreground of the site. There would be similar views from the residences located on Pile Street and Shaclkle Avenue. However, there are not many viewing opportunities from these streets. There are maritime industrial uses present within the view, associated with the Scotts College Rowing Club and Westport Marina. The layout of the proposed marina and the land based components would be discernable from here. Overall, there would be medium effect on the character and the scenic quality of the view. There would be view loss effect of parts of the constructed western shoreline of Kendall Bay, but no effect of the views of the existing shoreline of Cabarita Park and the southern shoreline of Kendall Bay.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore		X	
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

Assessment Factor where effects increase as ratings increase		Marina Component			Land Based Component		
	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View			X			X	
Effect on Scenic Quality of View		X			X		
Variable factors							
Effect On View Composition		X			X		
Effect of Relative Viewing Level			X			X	
Effect of Viewing Period			X			X	
Effect of Viewing Distance			X			X	
View Loss or Blocking Effect		X			X		
Overall Extent of Visual Effect		**Low to Medium**			**Low to Medium**		

Assessment Factor where impacts decrease as ratings increase		Marina Component			Land Based Component		
	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity				X	X		
Compatibility with Maritime Features		X			X		
Compatibility with Urban/ Natural Features		X			x		
Overall Extent of Visual Impact		**Low**			**Low**		

Viewpoint: VP4 From The Scotts College Rowing Club

Comment: This a medium distance private domain viewing level with views approximately level with the waterway. The maritime industrial activities associated with the Club itself are visible in the foreground of the view and immediately to the left at Westport Marina. The Cabarita Rivercat Wharf is also visible. The layout of the proposed marina and the land based components would be discernable from here. There would be medium view blocking effect of parts of the constructed western shoreline of Kendall Bay, while some views of it would still be available through the wide fairways proposed. Views of Cabarita Park and the southern shoreline of Kendall Bay would not be affected. Overall, there would be high effect on the character and medium effect on the scenic quality of the view

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore			
	Waterway			
Private Domain	Residence		X (This is a private domain-Club)	
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

Assessment Factor where effects increase as ratings increase		Marina Component			Land Based Component		
	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View				X	X		
Effect on Scenic Quality of View			X		X		
Variable factors							
Effect On View Composition		X			X		
Effect of Relative Viewing Level				X			X
Effect of Viewing Period			X			X	
Effect of Viewing Distance			X			X	
View Loss or Blocking Effect		X			X		
Overall Extent of Visual Effect		**Medium**			**Low to Medium**		

Assessment Factor where impacts decrease as ratings increase		Marina Component			Land Based Component		
	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity				X			X
Compatibility with Maritime Features			X		X		
Compatibility with Urban/ Natural Features		X			X		
Overall Extent of Visual Impact		**Medium to High**			**Low**		

Viewpoint: VP5, the southern terminus of Ross Street

Comment: This is a medium distance public domain viewing location with an elevated view of the proposed development. Approximately half of the arms of the proposed marina will be visible from here. The land based components will also be discernable. The residences located near the southern terminus of Ross Street will have similar views. There are a number of swing moored vessels and various boat accommodation facilities along the shoreline in the foreground of the view. Overall, there would be medium effect on the visual character and scenic quality of the view. There would be view blocking effect of parts of the constructed western shoreline of Kendall Bay. Views of the mangroves and beach in the southern part of Kendall Bay would not be affected.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads		X	
	Reserves/ foreshore			
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

Assessment Factor where effects increase as ratings increase		Marina Component			Land Based Component		
	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View			X		X		
Effect on Scenic Quality of View			X		X		
Variable factors							
Effect On View Composition		X			X		
Effect of Relative Viewing Level			X			X	
Effect of Viewing Period			X			X	
Effect of Viewing Distance			X			X	
View Loss or Blocking Effect			X		X		
Overall Extent of Visual Effect		**Medium**			**Low**		

Assessment Factor where impacts decrease as ratings increase		Marina Component			Land Based Component		
	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity				X		X	
Compatibility with Maritime Features			X		X		
Compatibility with Urban/ Natural Features			X		X		
Overall Extent of Visual Impact		**Medium**			**Low**		

Viewpoint: VP6 From Glades Bay Park, below and to the west of Ross Street

Comment: This is a medium distance public domain viewing location with views approximately level with the proposed marina. There are a number of swing moorings in the bay and boat accommodation of various types along the shoreline in the middle ground of the view. Part of the site is screened from view due to the presence of some vessels moored along the south western shoreline of Glades Bay in the vicinity of Raven Point and due to the presence of Tennyson Point headland itself in the view. There would be visibility of the central and the three southern arms of the proposed marina. There would be view blocking effect of parts of the constructed western shoreline of Kendall Bay. Views of the mangroves and the beach along the southern shoreline of Kendall Bay would not be affected. Overall, it is considered that there would be low effect on the visual character and scenic quality of the view.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore		X	
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type		Expansive	Restricted	Panoramic	Focal	Feature

		Marina Component			Land Based Component		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View		X			X		
Effect on Scenic Quality of View		X			X		
Variable factors							
Effect On View Composition		X			X		
Effect of Relative Viewing Level				X			X
Effect of Viewing Period				X			X
Effect of Viewing Distance			X			X	
View Loss or Blocking Effect		X			X		
Overall Extent of Visual Effect		**Low**			**Low**		

		Marina Component			Land Based Component		
Assessment Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity			X			X	
Compatibility with Maritime Features			X		X		
Compatibility with Urban/ Natural Features		X			X		
Overall Extent of Visual Impact		**Low**			**Low**		

Viewpoint: VP7 From the south-eastern edge of Bill Mitchell Park, Tennyson Point

Comment: This is a medium distance public domain viewing location with views approximately level with the proposed marina. There is no significant visibility of the site from the Park with the exception of the views from the extreme south eastern corner. From here, most of proposed marina and the land based component will not be visible. Due to the highly restricted visibility of the proposal, it is considered that there would be low effect on the visual character and scenic quality of the view, the view composition and view loss and view blocking.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore		X	
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

Assessment Factor where effects increase as ratings increase		Marina Component			Land Based Component		
	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View		X			NA		
Effect on Scenic Quality of View		X			NA		
Variable factors							
Effect On View Composition		X			NA		
Effect of Relative Viewing Level				X	NA		
Effect of Viewing Period			X		NA		
Effect of Viewing Distance			X		NA		
View Loss or Blocking Effect		X			NA		
Overall Extent of Visual Effect		**Low**			**NA**		

Assessment Factor where impacts decrease as ratings increase		Marina Component			Land Based Component		
	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity		X			NA		
Compatibility with Maritime Features		X			NA		
Compatibility with Urban/ Natural Features		X			NA		
Overall Extent of Visual Impact		**Low**			**NA**		

Viewpoint: VP8 From Raven Point, southern terminus of Tennyson Road, Tennyson Point

Comment: This is a medium distance public domain viewing location with views approximately level with the proposed marina. The full extent of the proposed marina would be seen from here. It will cause view loss or view blocking effect of parts of the constructed shoreline, while some views would still be available through the wider fairways between the arms of the proposed marina. The views of the mangroves and the beach along the southern shoreline of Kendall Bay would not be affected. Views of highest intrinsic scenic quality will not be affected. Overall, there would be high effect on the character and medium effect on the scenic quality of the view, the view composition and view loss and view blocking due to the proposed marina component. There is low physical absorption capacity and compatibility with maritime features of the proposed marina component in this view.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore		X	
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type		Expansive	Restricted	Panoramic	Focal	Feature

		Marina Component			Land Based Component		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View				X	X		
Effect on Scenic Quality of View			X		X		
Variable factors							
Effect On View Composition			X		X		
Effect of Relative Viewing Level				X			X
Effect of Viewing Period			X			X	
Effect of Viewing Distance			X			X	
View Loss or Blocking Effect			X		X		
Overall Extent of Visual Effect		**Medium to High**			**Low**		

		Marina Component			Land Based Component		
Assessment Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity				X			X
Compatibility with Maritime Features				X	X		
Compatibility with Urban/ Natural Features			X		X		
Overall Extent of Visual Impact		**Medium to High**			**Low**		

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore			
	Waterway			
Private Domain	Residence		X	
		>1000m	100-1000m	<100m
		Viewing Distance		

Viewpoint: VP9 From in front of No. 163 Tennyson Road, Tennyson Point

Comment: This is a moderately elevated medium distance private domain view. The view composition is similar to the one available from the foreshore off Tennyson Road (VP 8). There would be similar views from residences near the terminus of Tennyson Road and Champion Road. Most of the proposed marina would be seen from here. It will cause view loss and view blocking effect to parts of the constructed shoreline, while some views would still be available through the wide fairways. The views of the mangroves and the beach along the southern shoreline of Kendall Bay would not be affected. Views of higher intrinsic scenic quality and Cabarita Park will not be affected. Overall, there would be high effect on the character and medium effect on the scenic quality of the view, the view composition and view loss and view blocking due to the proposed marina component. There is low physical absorption capacity and compatibility with maritime features of the proposed marina component in this view.

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

		Marina Component			Land Based Component		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View				X	X		
Effect on Scenic Quality of View			X		X		
Variable factors							
Effect On View Composition			X		X		
Effect of Relative Viewing Level			X				X
Effect of Viewing Period				X		X	
Effect of Viewing Distance			X			X	
View Loss or Blocking Effect			X		X		
Overall Extent of Visual Effect		**Medium**			**Low**		

		Marina Component			Land Based Component		
Assessment Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity				X			X
Compatibility with Maritime Features				X	X		
Compatibility with Urban/ Natural Features			X		X		
Overall Extent of Visual Impact		**Medium to High**			**Low**		

Viewpoint: VP10 From opposite 60 Frances Road, in the vicinity of Morrisons Bay Park

Comment: This is a distant public domain viewing location with cameo views of the site available to the road users travelling on the road. The foreground of the view is constituted by those of Morrisons Bay Park. There are a number of swing moored vessels visible in the middle ground of the view which screen parts of the site. There would be highly screened visibility of parts of the proposed marina and its details would not be visually discernable. The land-based component would not be discernable. Overall, there will be low effect on the character and scenic quality of the view. There will be similar views available to some residences located on the northern side of Frances Road.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads		X	
	Reserves/ foreshore			
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

Assessment Factor where effects increase as ratings increase		Marina Component			Land Based Component		
	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View		X			X		
Effect on Scenic Quality of View		X			X		
Variable factors							
Effect On View Composition		X			X		
Effect of Relative Viewing Level				X			X
Effect of Viewing Period		X			X		
Effect of Viewing Distance			X			X	
View Loss or Blocking Effect		X			X		
Overall Extent of Visual Effect		**Low**			**Low**		

Assessment Factor where impacts decrease as ratings increase		Marina Component			Land Based Component		
	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity		X			X		
Compatibility with Maritime Features		X			X		
Compatibility with Urban/ Natural Features			X		X		
Overall Extent of Visual Impact		**Low**			**Low**		

Viewpoint: VP11 From the foreshore walkway in Morrisons Bay Park, in the southeast sector of the park

Comment: This is a distant public domain viewing location with views approximately level with the proposed marina. There are a number of swing moored vessels within Morrisons Bay in the middle ground of the view. These screen parts of the site and would provide a significant screening effect and physical absorption capacity to the proposed marina and land-based component. There are no views of the site from the western part of the Park and the foreshore walkway generally in the vicinity of Phillip Road. Overall, there would be a low effect on the visual character and on scenic quality of the view. There is medium compatibility with the maritime and urban/natural features in the view. However, depending on the wind direction, if the swing moored vessels were facing the viewer in the view, there would be increased visibility of the proposed marina.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore			X
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

Assessment Factor where effects increase as ratings increase		Marina Component			Land Based Component		
	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View		X			X		
Effect on Scenic Quality of View		X			X		
Variable factors							
Effect On View Composition		X			X		
Effect of Relative Viewing Level				X			X
Effect of Viewing Period				X			X
Effect of Viewing Distance			X			X	
View Loss or Blocking Effect		X			X		
Overall Extent of Visual Effect		**Low to Medium**			**Low to Medium**		

Assessment Factor where impacts decrease as ratings increase		Marina Component			Land Based Component		
	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity		X			X		
Compatibility with Maritime Features		X			X		
Compatibility with Urban/ Natural Features		X			X		
Overall Extent of Visual Impact		**Low**			**Low**		

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore		X	
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

Viewpoint: VP12 From the small reserve at the eastern terminus of Putney Parade

Comment: This is a medium distance public domain viewing location with views approximately level with the proposed marina. There is no formal public access to the reserve. It appears that the rock shelf within the reserve along the shoreline would be under water at high tide and inaccessible. There would be similar views from the residences located towards the eastern end of Putney Parade. The full extent of the proposed marina would be visible in this view. There would be view loss of the mangroves and the beach along the southern shoreline of Kendall Bay and also of parts of the constructed western shoreline of Kendall Bay. Overall, there would be high effect on the visual character, view composition and view loss and view blocking and a medium effect on the scenic quality of the view.

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

Assessment Factor where effects increase as ratings increase		Marina Component			Land Based Component		
	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View				X	X		
Effect on Scenic Quality of View			X		X		
Variable factors							
Effect On View Composition				X	X		
Effect of Relative Viewing Level				X			X
Effect of Viewing Period			X			X	
Effect of Viewing Distance			X			X	
View Loss or Blocking Effect				X	X		
Overall Extent of Visual Effect		**Medium to High**			**Low**		

Assessment Factor where impacts decrease as ratings increase		Marina Component			Land Based Component		
	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity				X	X		
Compatibility with Maritime Features				X	X		
Compatibility with Urban/ Natural Features			X		X		
Overall Extent of Visual Impact		**Medium to High**			**Low**		

Viewpoint: VP13 From the reserve at the eastern terminus of Pelisier Road

Comment: This is a medium distance public domain viewing location with views approximately level with the proposed marina. There would be similar views from the residences located towards the eastern end of Pelisier Road. There is a small beach to the southwest of this reserve which is accessible to the public however; there is no formal access to it. The whole extent of the proposed marina would be visible in this view. There would be view loss of the mangroves and the beach along the southern shoreline of Kendall Bay and a small part of the western shoreline of Kendall Bay. Overall, there would be high effect on the visual character and scenic quality of the view, view composition and view loss and view blocking.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore		X	
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

Assessment Factor where effects increase as ratings increase		Marina Component			Land Based Component		
	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View				X	X		
Effect on Scenic Quality of View				X	X		
Variable factors							
Effect On View Composition				X	X		
Effect of Relative Viewing Level				X			X
Effect of Viewing Period			X			X	
Effect of Viewing Distance			X			X	
View Loss or Blocking Effect				X	X		
Overall Extent of Visual Effect		**High**			**Low**		

Assessment Factor where impacts decrease as ratings increase		Marina Component			Land Based Component		
	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity				X	X		
Compatibility with Maritime Features				X	X		
Compatibility with Urban/ Natural Features			X		X		
Overall Extent of Visual Impact		**High**			**Low**		

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore		X	
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

Viewpoint: VP14 From the small reserve east of the Putney Point vehicular ferry ramp

Comment: This is a medium distance public domain viewing location with views approximately level with the proposed marina. Most of the proposed development will not be visible from here as it would be screened by the Breakfast Point knoll which is seen in the middle ground of the view. However, some vessels on the water-ward side of each arm may be visible to extend beyond the knoll. There would not be any significant view loss or blocking effect of the southern and eastern shoreline of Kendall Bay. Overall, it is considered that there would be low effect on the visual character and scenic quality of the view and also on the view composition and view loss. There would be similar views from the vehicular ferry at the wharf. The visibility would further decrease as the ferry moves forward towards the far shore.

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

Assessment Factor where effects increase as ratings increase		Marina Component			Land Based Component		
	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View		X			NA		
Effect on Scenic Quality of View		X			NA		
Variable factors							
Effect On View Composition		X			NA		
Effect of Relative Viewing Level				X	NA		
Effect of Viewing Period			X		NA		
Effect of Viewing Distance			X		NA		
View Loss or Blocking Effect		X			NA		
Overall Extent of Visual Effect		**Low**			**NA**		

Assessment Factor where impacts decrease as ratings increase		Marina Component			Land Based Component		
	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity		X			NA		
Compatibility with Maritime Features		X			NA		
Compatibility with Urban/ Natural Features		X			NA		
Overall Extent of Visual Impact		**Low**			**NA**		

Viewpoint: VP15 From the knoll (lower level walkway) along the foreshore, Breakfast Point

Comment: This is a close distance public domain viewing location with views approximately level with the proposed marina. The full extent of the proposed marina would be visible from here. There would be high view loss and blocking effect to the views of the southern and eastern shoreline of Kendall Bay including the mangroves and the beach. There is low physical absorption capacity of the view for the proposed development. The land based component would have low effect and impact on the view. Overall, there would be high effect on the visual character and scenic quality of the view.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore			X
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

Assessment Factor where effects increase as ratings increase		Marina Component			Land Based Component		
	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View				X	X		
Effect on Scenic Quality of View				X	X		
Variable factors							
Effect On View Composition				X	X		
Effect of Relative Viewing Level				X			X
Effect of Viewing Period				X			X
Effect of Viewing Distance				X			X
View Loss or Blocking Effect				X	X		
Overall Extent of Visual Effect		**High**			**Low**		

Assessment Factor where impacts decrease as ratings increase		Marina Component			Land Based Component		
	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity				X	X		
Compatibility with Maritime Features				X	X		
Compatibility with Urban/ Natural Features			X		X		
Overall Extent of Visual Impact		**High**			**Low**		

Viewpoint: VP16 From the knoll (upper level walkway) along the foreshore, Breakfast Point

Comment: This is a close distance public domain viewing location with slightly elevated views of the proposed marina. The full extent of the proposed marina would be visible from here. There would be medium view loss and blocking effect to the views of the southern and eastern shoreline of Kendall Bay including the mangroves and the beach due to the elevated nature of the viewing location. There is low physical absorption capacity of the view for the proposed development. The land based component would have low effect and impact on the view. Overall, there would be high effect on the visual character and scenic quality of the view.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore			X
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

Assessment Factor where effects increase as ratings increase		Marina Component			Land Based Component		
	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View				X	X		
Effect on Scenic Quality of View				X	X		
Variable factors							
Effect On View Composition				X	X		
Effect of Relative Viewing Level			X			X	
Effect of Viewing Period				X			X
Effect of Viewing Distance				X			X
View Loss or Blocking Effect			X		X		
Overall Extent of Visual Effect		**High**			**Low**		

Assessment Factor where impacts decrease as ratings increase		Marina Component			Land Based Component		
	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity				X	X		
Compatibility with Maritime Features				X	X		
Compatibility with Urban/ Natural Features			X		X		
Overall Extent of Visual Impact		**High**			**Low**		

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore			X
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

Viewpoint: VP17 From the walkway along the foreshore, approximately in the alignment of the location of the first arm of the proposed marina

Comment: This is a close distance public domain viewing location with slightly elevated views of the proposed marina. The full extent of the proposed marina would be visible from here. There would be medium view loss and blocking effect to the views of the southern and eastern shoreline of Kendall Bay including the mangroves and the beach due to the elevated nature of the viewing location. There is low physical absorption capacity of the view for the proposed development. The land based component would have low effect and impact on the view. Overall, there would be high effect on the visual character and scenic quality of the view.

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

		Marina Component			Land Based Component		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View				X	X		
Effect on Scenic Quality of View				X	X		
Variable factors							
Effect On View Composition				X	X		
Effect of Relative Viewing Level				X			X
Effect of Viewing Period				X			X
Effect of Viewing Distance				X			X
View Loss or Blocking Effect			X		X		
Overall Extent of Visual Effect		**High**			**Low**		

		Marina Component			Land Based Component		
Assessment Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity				X	X		
Compatibility with Maritime Features				X	X		
Compatibility with Urban/ Natural Features			X		X		
Overall Extent of Visual Impact		**High**			**Low**		

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore			X
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

Viewpoint: VP18 From the walkway along the foreshore, approximately in the alignment of the pathway between town houses and apartments.

Comment: This is a close distance public domain viewing location with views approximately level with the proposed marina. The full extent of the proposed marina would be visible from here. There would be medium view loss and blocking effect to the views of the southern and eastern shoreline of Kendall Bay including the mangroves and the beach as well as the far shoreline of Glades Bay and Parramatta River generally. There is low physical absorption capacity of the view for the proposed development. The land based component would have low effect and impact on the view. Overall, there would be high effect on the visual character and scenic quality of the view.

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

		Marina Component			Land Based Component		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View				X	X		
Effect on Scenic Quality of View				X	X		
Variable factors							
Effect On View Composition				X	X		
Effect of Relative Viewing Level				X			X
Effect of Viewing Period				X			X
Effect of Viewing Distance				X			X
View Loss or Blocking Effect			X		X		
Overall Extent of Visual Effect		**High**			**Low**		

		Marina Component			Land Based Component		
Assessment Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity				X	X		
Compatibility with Maritime Features				X	X		
Compatibility with Urban/ Natural Features			X		X		
Overall Extent of Visual Impact		**High**			**Low**		

Viewpoint: VP19 From the walkway along the foreshore, approximately in the alignment of the location of the proposed marina manager's office

Comment: This is a close distance public domain viewing location with slightly elevated views of the proposed marina. The full extent of the proposed marina would be visible from here. There would be medium view loss and blocking effect to the views of the southern and eastern shoreline of Kendall Bay including the mangroves and the beach as well as the far shoreline of Glades Bay and Parramatta River generally. There is low physical absorption capacity of the view for the proposed development. The land based component would have low effect and impact on the view. Overall, there would be high effect on the visual character and scenic quality of the view.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore			X
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

Assessment Factor where effects increase as ratings increase		Marina Component			Land Based Component		
	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View				X			X
Effect on Scenic Quality of View				X			X
Variable factors							
Effect On View Composition				X			X
Effect of Relative Viewing Level				X			X
Effect of Viewing Period				X			X
Effect of Viewing Distance				X			X
View Loss or Blocking Effect			X			X	
Overall Extent of Visual Effect		**High**			**Low**		

Assessment Factor where impacts decrease as ratings increase		Marina Component			Land Based Component		
	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity				X			X
Compatibility with Maritime Features				X	X		
Compatibility with Urban/ Natural Features			X		X		
Overall Extent of Visual Impact		**High**			**Low**		

Viewpoint: VP20 From the walkway along the foreshore, approximately in the alignment of the beginning of a curved path going up into the green space

Comment: This is a close distance public domain viewing location with slightly elevated views of the proposed marina. The full extent of the proposed marina would be visible from here. There would be medium view loss and blocking effect to the views of the far shoreline of Glades Bay and Parramatta River generally. Views of the southern and eastern shoreline of Kendall Bay would be mostly unaffected. This is due to the presence of smaller vessels on the proposed three southern arms in the foreground of the view and larger vessels being located in the middle ground. There is low physical absorption capacity of the view for the proposed development. The land based component would have low effect and impact on the view. Overall, there would be high effect on the visual character and scenic quality of the view.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore			X
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type		Expansive	Restricted	Panoramic	Focal	Feature

		Marina Component			Land Based Component		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View				X			X
Effect on Scenic Quality of View				X			X
Variable factors							
Effect On View Composition				X			X
Effect of Relative Viewing Level				X			X
Effect of Viewing Period				X			X
Effect of Viewing Distance				X			X
View Loss or Blocking Effect			X			X	
Overall Extent of Visual Effect		**High**			**Low**		

		Marina Component			Land Based Component		
Assessment Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity				X			X
Compatibility with Maritime Features				X	X		
Compatibility with Urban/ Natural Features			X		X		
Overall Extent of Visual Impact		**High**			**Low**		

Viewpoint: VP21 From the northern arm of Rosewater Circuit, in the Silkstone residential development

Comment: This is a medium distance public domain viewing location with views approximately level with the marina. The pedestrians and road users may have cameo views of only one or two arms of the proposed marina in this focal view through a little window of viewing opportunity. There would be low effect on the visual character and scenic quality and medium effect on the composition of the view. The land-based component would not be visible. There would be medium view loss and blocking effect of the water view and the far shoreline. There are not many viewing opportunities from Peninsular Drive other than this view from its intersection with Rosewater Circuit.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads		X	
	Reserves/ foreshore			
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

Assessment Factor where effects increase as ratings increase		Marina Component			Land Based Component		
	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View		X			NA		
Effect on Scenic Quality of View		X			NA		
Variable factors							
Effect On View Composition			X		NA		
Effect of Relative Viewing Level				X	NA		
Effect of Viewing Period		X			NA		
Effect of Viewing Distance			X		NA		
View Loss or Blocking Effect			X		NA		
Overall Extent of Visual Effect		**Low to Medium**			**NA**		

Assessment Factor where impacts decrease as ratings increase		Marina Component			Land Based Component		
	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity		X			NA		
Compatibility with Maritime Features			X		NA		
Compatibility with Urban/ Natural Features			X		NA		
Overall Extent of Visual Impact		**Medium**			**NA**		

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads		X	
	Reserves/ foreshore			
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

Viewpoint: VP22 From the southern arm of Rosewater Circuit, in the Silkstone residential development

Comment: This is a medium distance public domain viewing location with views approximately level with the marina. The pedestrians and road users would have significantly filtered or negligible views of the proposed marina manager's office and the two arms in the alignment of the existing jetty in this focal view. There would be low effect on the visual character, scenic quality and the composition of the view. The land-based component would not be visible. There would be negligible view loss or blocking effect. There are not many viewing opportunities from the roads within the Breakfast Point residential development.

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

Assessment Factor where effects increase as ratings increase		Marina Component			Land Based Component		
	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View		X			NA		
Effect on Scenic Quality of View		X			NA		
Variable factors							
Effect On View Composition		X			NA		
Effect of Relative Viewing Level				NA	NA		
Effect of Viewing Period		X			NA		
Effect of Viewing Distance			X		NA		
View Loss or Blocking Effect		X			NA		
Overall Extent of Visual Effect		**Low**			**NA**		

Assessment Factor where impacts decrease as ratings increase		Marina Component			Land Based Component		
	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity		X			NA		
Compatibility with Maritime Features		X			NA		
Compatibility with Urban/ Natural Features		X			NA		
Overall Extent of Visual Impact		**Low**			**NA**		

Viewpoint: VP23 From the beach along the southern foreshore of Kendall Bay, in front of Kendall Inlet residential development

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore			X
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

Comment: This is a close range public domain viewing location with views level with the proposed marina. There is a continuous walkway along the foreshore along Kendall Bay between Breakfast Point knoll and Cabarita Rivecat Wharf. There would be similar views of the proposed marina from the full extent of this foreshore walkway along the southern and eastern shoreline of Kendall Bay. The full extent of the proposed marina would be visible. This part of the shoreline has higher intrinsic scenic quality and naturalness. This is a part rocky inter tidal beach. There would be view loss and blocking effect of parts of the constructed western shoreline of the bay, parts of the waters of Kendall Bay and the Parramatta River to the west of the Breakfast Point knoll. The sense of river sweeping around towards Kissing Point Bay would be lost. There would be overall medium effect in the visual character and high effect on the scenic quality and composition of the view.

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

Assessment Factor where effects increase as ratings increase		Marina Component			Land Based Component		
	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View			X		X		
Effect on Scenic Quality of View				X	X		
Variable factors							
Effect On View Composition				X	X		
Effect of Relative Viewing Level				X			X
Effect of Viewing Period				X			X
Effect of Viewing Distance				X			X
View Loss or Blocking Effect				X	X		
Overall Extent of Visual Effect		**High**			**Low**		

Assessment Factor where impacts decrease as ratings increase		Marina Component			Land Based Component		
	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity				X			X
Compatibility with Maritime Features				X	X		
Compatibility with Urban/ Natural Features			X		X		
Overall Extent of Visual Impact		**High**			**Low**		

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore			X
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

Viewpoint: VP24 From along the eastern foreshore walkway, near the public boat ramp, to the southwest of Cabarita Rivercat Ferry Wharf

Comment: This is a close range public domain viewing location with views level with the proposed marina. It is a rocky inter tidal beach with high intrinsic scenic quality and naturalness. There would be view loss and blocking effect of parts of the constructed western shoreline of Kendall Bay, parts of the waters of Kendall Bay and Parramatta River further west of the Breakfast Point knoll. There would be loss of views of the Putney Point vehicular ferry wharf as well. There would be a medium effect on the visual character and high effect on the scenic quality and composition of the view. The full extent of the proposed marina would be visible from here. There would be overall medium effect in the visual character and high effect on the scenic quality and composition of the view.

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

		Marina Component			Land Based Component		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View			X		X		
Effect on Scenic Quality of View				X	X		
Variable factors							
Effect On View Composition				X	X		
Effect of Relative Viewing Level				X			X
Effect of Viewing Period				X			X
Effect of Viewing Distance				X			X
View Loss or Blocking Effect				X	X		
Overall Extent of Visual Effect		**High**			**Low**		

		Marina Component			Land Based Component		
Assessment Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity				X			X
Compatibility with Maritime Features				X	X		
Compatibility with Urban/ Natural Features			X		X		
Overall Extent of Visual Impact		**High**			**Low**		

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore		X	
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

Viewpoint: VP25 From along the foreshore, approximately 100m southeast of the Cabarita Rivercat Ferry Wharf

Comment: This is a medium range public domain viewing location with views level with the proposed marina. It is a sensitive viewing location with natural features such as intertidal foreshore, beach and Cabarita Park. There would be no significant visibility of the proposed marina from part of Cabarita Park to the west of Cabarita Road due to the low viewing level and filtering effect of the vegetation within the park. However, it would be visible from the section of the Park between Cabarita Road and Park Accessway which is relatively elevated. There would be high effect on the character and medium effect on the scenic quality and composition of the view. There would be view loss and blocking effect of parts of the constructed western shoreline of Kendall Bay, parts of the waters of Kendall Bay and Parramatta River further west of the Breakfast Point knoll.

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

		Marina Component			Land Based Component		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View				X	X		
Effect on Scenic Quality of View			X		X		
Variable factors							
Effect On View Composition			X		X		
Effect of Relative Viewing Level				X			X
Effect of Viewing Period				X			X
Effect of Viewing Distance			X			X	
View Loss or Blocking Effect			X		X		
Overall Extent of Visual Effect		**Medium to High**			**Low**		

		Marina Component			Land Based Component		
Assessment Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity			X		X		
Compatibility with Maritime Features			X		X		
Compatibility with Urban/ Natural Features			X		X		
Overall Extent of Visual Impact		**Medium**			**Low**		

Viewpoint: VP26 From the beach to the east of Cabarita Rivercat Ferry Wharf

Comment: This is a medium distance public domain viewing location with views level with the proposed marina. It is a viewing location with high intrinsic scenic quality and naturalness. The pedestrian walking platform associated with the Cabarita Rivercat Ferry Wharf would provide high screening effect to the proposed marina. It already causes view loss and blocking effect of the constructed western shoreline of Kendall Bay. It also provides high physical absorption capacity for the proposed marina in the view. There would not be substantial visibility of the southern three arms. There would be medium change to the visual character and scenic quality of the view. There would be medium view loss and blocking effect of the marina component.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore		X	
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type		Expansive	Restricted	Panoramic	Focal	Feature

		Marina Component			Land Based Component		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View			X		X		
Effect on Scenic Quality of View			X		X		
Variable factors							
Effect On View Composition		X			X		
Effect of Relative Viewing Level				X			X
Effect of Viewing Period				X			X
Effect of Viewing Distance			X			X	
View Loss or Blocking Effect			X		X		
Overall Extent of Visual Effect		**Medium**			**Low**		

		Marina Component			Land Based Component		
Assessment Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity			X		X		
Compatibility with Maritime Features			X		X		
Compatibility with Urban/ Natural Features		X			X		
Overall Extent of Visual Impact		**Low to Medium**			**Low**		

Viewpoint: VP27 From near the monument (William Beach) in Cabarita Park

Comment: This is a medium distance public domain viewing location with slightly elevated views of the proposed marina. It is a viewing location with high intrinsic scenic quality and naturalness. The pedestrian walking platform associated with the Cabarita Rivercat Ferry Wharf would provide a partial screening effect to parts of the proposed marina. It already causes some view loss and blocking effect of the constructed western shoreline of Kendall Bay. There would be medium change to the visual character and scenic quality of the view. There would be view loss and blocking effect of the parts of the western shoreline of Kendall Bay, parts of the waters of Kendall Bay and part of the view up the Parramatta River to the north.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore		X	
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type		Expansive	Restricted	Panoramic	Focal	Feature

		Marina Component			Land Based Component		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View			X		X		
Effect on Scenic Quality of View			X		X		
Variable factors							
Effect On View Composition		X			X		
Effect of Relative Viewing Level			X			X	
Effect of Viewing Period				X			X
Effect of Viewing Distance			X			X	
View Loss or Blocking Effect			X		X		
Overall Extent of Visual Effect		**Medium**			**Low**		

		Marina Component			Land Based Component		
Assessment Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity				X	X		
Compatibility with Maritime Features			X		X		
Compatibility with Urban/ Natural Features		X			X		
Overall Extent of Visual Impact		**Medium**			**Low**		

Viewpoint: VP28 From the waterway, approximately midway between Cabarita Rivercat Ferry Wharf and Raven Point

Comment: This is a medium distance waterway viewing location with views level with the proposed marina. The full extent of the proposed marina would be visible in the view. There would be view loss and blocking effect of parts of the constructed western shoreline of Kendall Bay. The flat land and medium to high density residential development as the backdrop provides medium intrinsic scenic quality of the view of the site and a compatible urban background. High scenic quality views of the total view composition would not be affected. There would be a high effect on the visual character and medium effect on the scenic quality and the composition of the view.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore			
	Waterway		X	
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

		Marina Component			Land Based Component		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View				X	X		
Effect on Scenic Quality of View			X		X		
Variable factors							
Effect On View Composition			X		X		
Effect of Relative Viewing Level				X			X
Effect of Viewing Period			X			X	
Effect of Viewing Distance			X			X	
View Loss or Blocking Effect			X		X		
Overall Extent of Visual Effect		**Medium**			**Low**		

		Marina Component			Land Based Component		
Assessment Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity				X	X		
Compatibility with Maritime Features				X	X		
Compatibility with Urban/ Natural Features			X		X		
Overall Extent of Visual Impact		**Medium to High**			**Low**		

Viewpoint: VP29 From waterway, approximately midway between Breakfast Point knoll and small foreshore reserve at the terminus of Pellisier Road

Comment: This is a medium distance waterway viewing location with views level with the proposed marina. Some vessels towards the landward end of the northernmost arms of the proposed marina would be visible in this view and would cause minor view loss and blocking effect of the beach and mangroves along the southern shoreline of Kendall Bay. There would be a low effect on the visual character and composition of the view and a medium effect on the scenic quality.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore			
	Waterway		X	
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

		Marina Component			Land Based Component		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View		X			NA		
Effect on Scenic Quality of View			X		NA		
Variable factors							
Effect On View Composition		X			NA		
Effect of Relative Viewing Level				X	NA		
Effect of Viewing Period			X		NA		
Effect of Viewing Distance			X		NA		
View Loss or Blocking Effect		X			NA		
Overall Extent of Visual Effect		**Low to Medium**			**NA**		

		Marina Component			Land Based Component		
Assessment Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity		X			NA		
Compatibility with Maritime Features		X			NA		
Compatibility with Urban/ Natural Features		X			NA		
Overall Extent of Visual Impact		**Low**			**NA**		

Viewpoint: VP30 From waterway, approximately midway between Cabarita Westport Marina and Looking Glass Point

Comment: This is a medium distance waterway viewing location with views level with the proposed marina. The pedestrian walkway associated with the Cabarita Rivercat Ferry Wharf provides screening effect to part of the site. The northern three arms would be fully visible in this view. It would cause a low view loss and blocking effect to part of the constructed western shoreline of Kendall Bay. The presence of Westport Marina increases the compatibility of the proposed marina within the view composition. Overall, there would be medium effect on the visual character and low effect on the scenic quality and composition of the view.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore			
	Waterway		x	
Private Domain	Residence			
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type		Expansive	Restricted	Panoramic	Focal	Feature

		Marina Component			Land Based Component		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View			X		X		
Effect on Scenic Quality of View		X			X		
Variable factors							
Effect On View Composition		X			X		
Effect of Relative Viewing Level				X			X
Effect of Viewing Period			X			X	
Effect of Viewing Distance			X			X	
View Loss or Blocking Effect		X			X		
Overall Extent of Visual Effect		**Low to Medium**			**Low**		

		Marina Component			Land Based Component		
Assessment Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity			X		X		
Compatibility with Maritime Features		X			X		
Compatibility with Urban/ Natural Features			X		X		
Overall Extent of Visual Impact		**Low to Medium**			**Low**		

Viewpoint: VP31 From standing position at the centre of the terrace of Unit 41, 53 Pennisular Drive, Breakfast Point

Comment: This is a close range, elevated private domain viewing location with panoramic views spanning from north-northeast-east-southeast-south. The views of the foreshore walkway and parts of water of Kendall Bay are partly obscured by townhouses in the foreground. Some of the vessels on the southern arms (Arms 6, 7 & 8) would be only be visible in this view. There may be visibility of vessels close to the eastern ends of other arms from standing further south on the terrace. There would not be any significant view loss effects. Views of Parramatta River channel, the southern shoreline of the Bay and far shoreline would be maintained. Overall, there would be medium effect on the existing view composition and character of the views. There would be low effect on the scenic quality of the view. The proposed marina would have moderate compatibility with maritime features and high compatibility with the urban and natural shoreline features in this view. The land based component would not have any significant visibility from this apartment.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore			
	Waterway			
Private Domain	Residence			X
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

		Marina Component			Land Based Component		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View			X		NA		
Effect on Scenic Quality of View		X			NA		
Variable factors							
Effect On View Composition			X		NA		
Effect of Relative Viewing Level		X			NA		
Effect of Viewing Period				X	NA		
Effect of Viewing Distance				X	NA		
View Loss or Blocking Effect		X			NA		
Overall Extent of Visual Effect		**Medium**			NA		

		Marina Component			Land Based Component		
Assessment Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity			X		NA		
Compatibility with Maritime Features			X		NA		
Compatibility with Urban/ Natural Features				X	NA		
Overall Extent of Visual Impact		**Medium**			NA		

Viewpoint: VP32 From standing position in the living room of Unit 32, 71 Pennisular Drive, Breakfast Point

Comment: This is a close range, elevated private domain viewing location with panoramic views spanning from north-northeast-east-southeast-south. The proposed marina would be visible in the foreground of the views at a downward viewing angle. There would not be any significant view loss effects. The proposed marina would be visible in the form of arms spread out with wide fairways between them. There would not be high visibility of the southern arms from the living rooms. However, they would be visible from the balcony adjacent to the living room. Overall, there would be high effect on the existing view composition and character of the views. There would be medium effect on the scenic quality of the view. The proposed marina would have low compatibility with maritime features and moderate compatibility with the urban and natural shoreline features. The land based component would not have a high visual effect and impacts.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore			
	Waterway			
Private Domain	Residence			X
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

Assessment Factor where effects increase as ratings increase		Marina Component			Land Based Component		
	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View				X	X		
Effect on Scenic Quality of View			X		X		
Variable factors							
Effect On View Composition				X	X		
Effect of Relative Viewing Level		X			X		
Effect of Viewing Period				X			X
Effect of Viewing Distance				X			X
View Loss or Blocking Effect		X			X		
Overall Extent of Visual Effect		**Medium to High**			**Low**		

Assessment Factor where impacts decrease as ratings increase		Marina Component			Land Based Component		
	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity				X		X	
Compatibility with Maritime Features				X	X		
Compatibility with Urban/ Natural Features			X		X		
Overall Extent of Visual Impact		**High**			**Low**		

Viewpoint: VP33 From standing position in front of a ground floor unit in 57-59 Pennisular Drive

Comment: This is representative of a close range private domain viewing location approximately level with the proposed marina. The viewing level is similar to the level of the terrace of the ground floor unit and represents the existing view experience and the potential impact of the proposed marina on the existing view. The proposed marina would be visible in the form of arms spread out with wide fairways between them. There would not be high visibility of the southern arms from the living rooms. The trees along the foreshore walkway provide some screening effect to the proposed individual arms. There would be view loss effect of parts of Parramatta River and the far shoreline for this viewing location. These views would still be maintained through the fairways. There would be high effect of the visual character, scenic quality and the view composition. The land based component would also be visible and may cause a similar view loss effect.

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/ foreshore			
	Waterway			
Private Domain	Residence			X
		>1000m	100-1000m	<100m
		Viewing Distance		

View Composition Type	Expansive	Restricted	Panoramic	Focal	Feature

		Marina Component			Land Based Component		
Assessment Factor where effects increase as ratings increase	Assessment	Low	Medium	High	Low	Medium	High
	Visual Effect	(Low Effect)	(Medium effect)	(High effect)	(Low Effect)	(Medium effect)	(High effect)
Base-line factors							
Effect On Visual Character of View				X	X		
Effect on Scenic Quality of View			X		X		
Variable factors							
Effect On View Composition				X	X		
Effect of Relative Viewing Level				X			X
Effect of Viewing Period				X			X
Effect of Viewing Distance				X			X
View Loss or Blocking Effect			X			X	
Overall Extent of Visual Effect		**High**			**Medium**		

		Marina Component			Land Based Component		
Assessment Factor where impacts decrease as ratings increase	Assessment	High	Medium	Low	High	Medium	Low
	Visual Impact	(Low Impact)	(Medium impact)	(High impact)	(Low Impact)	(Medium impact)	(High impact)
Physical Absorption Capacity				X			X
Compatibility with Maritime Features			X		X		
Compatibility with Urban/ Natural Features			X		X		
Overall Extent of Visual Impact		**Medium to High**			**Low**		

Appendix C: Photomontages
Courtesy: Architectural Images

(Refer Figure 3.4 and Section 3.3.3 of the report for the viewing locations for which photomontages have been prepared)

Original 1: *From waterway, midway between Cabarita Point and Looking Glass Point.*

Photomontage 1*: From waterway, midway between Cabarita Point and Looking Glass Point.*

Original 2: *From waterway, along the ferry route near Cabarita Rivercat Ferry Wharf.*

Photomontage 2: *From waterway, along the ferry route near Cabarita Rivercat Ferry Wharf.*

Original 3: *From the terrace of Unit 32, 71 Peninsular Drive, Breakfast Point.*

Photomontage 3: *From the terrace of Unit 32, 71 Peninsular Drive, Breakfast Point.*

Original 4: *From Scotts College Rowing Club, in the vicinity of Shackel Avenue.*

Photomontage 4: *From Scotts College Rowing Club, in the vicinity of Shackel Avenue.*

Original 5: *From Glades Bay Park, near southern terminus of Ross Street.*

Photomontage 5: *From Glades Bay Park, near southern terminus of Ross Street.*

Original 6: *From the terrace of Unit 41, 53 Peninsular Drive, Breakfast Point.*

Photomontage 6: *From the terrace of Unit 41, 53 Peninsular Drive, Breakfast Point.*

Original 7: *From Raven Point, southern terminus of Tennyson Road.*

Photomontage 7: *From Raven Point, southern terminus of Tennyson Road.*

Original 9: *From Putney Point vehicular ferry ramp*

Montage 9: *From Putney Point vehicular ferry ramp*

Original 10: *From the knoll space where the flagpole is located at Breakfast Point.*

Photomontage 10: *From the knoll space where the flagpole is located at Breakfast Point.*

Original 11: *Looking east-southeast from the foreshore walkway in the vicinity of the proposed location of Marina Manager's office.*

Photomontage 11: *Looking east-southeast from the foreshore walkway in the vicinity of the proposed location of Marina Manager's office.*

Original 13: *From a public boat launching ramp near Cabarita Rivercat Ferry Wharf.*

Photomontage 13: *From a public boat launching ramp near Cabarita Rivercat Ferry Wharf.*

***Photomontage 1A**: From waterway, midway between Cabarita Point and Looking Glass Point - Photomontage showing the proposed development with a further constructed residential backdrop which is approved and which will be constructed in near future.*

***Photomontage 2A:** From waterway, along the ferry route near Cabarita Rivercat Ferry Wharf - Photomontage showing the proposed development with a further constructed residential backdrop which is approved and which will be constructed in near future.*

Photomontage 4A: *From Scotts College Rowing Club, in the vicinity of Shackel Avenue - Photomontage showing the proposed development with a further constructed residential backdrop which is approved and which will be constructed in near future.*

Photomontage 5A: *From Glades Bay Park, near southern terminus of Ross Street - Photomontage showing the proposed development with a further constructed residential backdrop which is approved and which will be constructed in near future.*

Photomontage 7A: *From Raven Point, southern terminus of Tennyson Road - Photomontage showing the proposed development with a further constructed residential backdrop which is approved and which will be constructed in near future.*

Photomontage 13A: *From a public boat launching ramp near Cabarita Rivercat Ferry Wharf - Photomontage showing the proposed development with a further constructed residential backdrop which is approved and which will be constructed in near future.*

Appendix D: Lighting Photographs

Plate 1: *Looking south from the Breakfast Point knoll flagstaff place.*

Plate 2: *Looking south from the foreshore walkway adjacent to the western shoreline of Kendall Bay.*

Plate 3: *Looking west-northwest from near the public boar launching ramp in the vicinity of Cabarita Rivercat Ferry Wharf.*

Appendix E

Components of the visual impact assessment methodology

Overall, the major components of the visual impact assessment are determining the concept for the development, and general strategic planning principles, view analysis, visual effects analysis, visual impact evaluation and assessment of significance of residual visual impacts. This assessment is also supplemented with an assessment of the merits and compliance of the proposed development with the relevant Planning Instruments in relation to visual and related amenity impacts and the mitigation measures that have been undertaken to reduce or eliminate residual impacts. It is also supplemented by a comparative analysis of other mixed shoreline development and marinas in Parramatta River, Sydney Harbour and Middle Harbour.

E1.0 Components of the view analysis

E1.1 The development proposed and detailed field assessment

This includes a thorough understanding of the proposed development including its location, scale and extent to understand the scale and spatial arrangement of the development. The next step is to carry out a detailed field assessment by identifying the potential viewing locations, visiting the representative locations, documenting the proposal's approximate location on a base map, photographing representative locations and filling out an evaluation sheet for each which contains separate and overall assessment of the visual effects and relative visual impacts factors. Examples of the analysis sheets can be found in Appendix B of this report. The assessment factors are explained in Section E2.0 and E3.0. The analysis sheet completed for each viewing location rated the factors explained in E2.0 and E3.0 in three ranges; Low, Medium and High. An indicative rating table which describes what is considered a low, medium and high effect and impact on each factor is shown in Table 2.1 of this report.

E1.2 Identifying viewing locations and viewing situations

So as to represent all of the kinds of viewing locations which could be affected by each of these factors and variations among them, a view point analysis was conducted. This was carried out as part of our field assessment associated with mapping the visual catchment. Views on land and on the waterway were assessed.

The viewing locations fall into two categories, a) public domain locations and b) private domain locations. Public domain locations are major and minor roads, public reserves and recreation areas and waterways. The private domain viewing locations are predominantly residences.

It was not possible for views to be assessed from the many residences that would have views containing the proposal. However, it was possible to interpret the likely effects of the proposal on the basis of views taken toward the proposal from roads and reserves in the vicinity of the residences and also by observing the locations of buildings with windows and outdoor areas which would provide views when these were seen from the existing facilities.

The viewing places visited therefore represent views predominantly from the public domain, but they also provide insights into the likely visual effects on private views.

E 1.3 Mapping viewing locations and situations

The representative viewing locations visited during the field assessment are mapped including the ones for which photomontages have been prepared to represent the future appearance of the proposed development in the existing context.

E1.4 Identification and mapping of visual catchment

The potential total visual catchment is mapped. The potential total visual catchment comprises the physical area within which the proposal would be visible and identifiable if there were no other constraints on that visibility, such as intervening vegetation and buildings. The catchment on the water is not delineated by a finite boundary because there is no identifiable physical feature which can define it. As is the case for views from the distant foreshore or land, the potential total visual catchment is larger than the area within which there could be visual effects of the proposal. This is because with increasing distance, perspective effects, the horizon of the water body itself and intervening elements such as topography, buildings and boats, a viewer's ability to discern and potentially be affected by the proposal would decrease to zero before the theoretical extent of the potential total visual catchment is reached.

Within the boundary of the area mapped as the potential total visual catchment, the visibility of the proposal would therefore vary. We identify the area within which the proposal would be identifiable and where it could cause visual impacts by assessing visibility.

Visibility means the extent to which the proposal would be physically visible to the extent that it could be identified, for example as a new, novel, contrasting or alternatively a recognisable but compatible feature. Features such as vegetation, buildings and intervening topography can affect the degree of visibility.

E 2.0 Components of the visual effect analysis matrix

E 2.1 Base-Line Factors

These are the criteria that remain predominantly constant and independent of the nature of viewing locations and factors which condition the viewing situation.

Visual character

The visual character of the locality in which the development would be seen is identified. It consists of identification of the physical and biological components of the area and the setting of the proposal which contribute to its visual character. The character elements include topography, vegetation, natural systems, land use, settlement pattern, urban form, interface of land-water elements maritime features and waterways.

Visual character is a baseline factor against which the level of change caused by the proposal can be assessed. The desired future character of the locality is also relevant to assessing the extent of acceptable change to character.

Scenic quality

Scenic quality is a measure of the ranking which the setting of the proposal either is accepted to, or would be predicted to have, on the basis of empirical research carried out on scenic beauty, attractiveness, preference or other criteria of scenic quality.

Scenic quality is a baseline factor against which the visual impacts caused by the proposal can be assessed.

View place sensitivity

View place sensitivity means a measure of the public interest in the view. The public interest is considered to be reflected in the relative number of viewers likely to experience the view from a publicly available location. Places from which there would be close or middle distance views available to large numbers of viewers from public places such as roads, or to either large or smaller numbers of viewers over a sustained period of viewing time in places such as reserves, beaches and walking tracks, are considered to be sensitive viewing places.

Viewer sensitivity

Viewer sensitivity means a measure of the private interests in the effects of the proposal on views. The private interest is considered to be reflected in the extent to which viewers, predominantly viewing from private residences, would perceive the effects of the proposal. Residences from which there would be close or medium distance range views affected, particularly those which are available over extended periods from places such as the living rooms and outdoor recreational spaces, are considered to be places of medium and high viewer sensitivity respectively.

The relationship between the viewer's location in either the private or public domain and the viewing distance in determining view place or viewer sensitivity is shown in the table below. (For example, a view place in a reserve or foreshore at a distance of 100-1000m is rated as of medium sensitivity)

Table E.1: Relationship between viewing situation, viewing distance and view/viewer sensitivity zones (example of medium range foreshore location)

		View Place or Viewer Sensitivity		
		L	M	H
Public Domain	Roads			
	Reserves/foreshore		X	
	Waterway			
Private Domain	Residence			
		>1000m	100-1000m	<100m
			Viewing Distance	

E 2.2 Variable factors

These are the assessment factors which vary between viewing places with respect to the extent of visual effects.

View composition type

View composition type means the spatial situation of the proposal with regard to the organisation of the view when it is considered in formal pictorial terms. The types of view composition identified are:

- Expansive (an angle of view unrestricted other than by features behind the viewer, such as a hillside, vegetation and buildings.)

- Restricted (a view which is restricted either at close range or some other distance by features between or to the sides of the viewer and the view such as vegetation and buildings.)
- Panoramic (a 360 degree angle of view unrestricted by any features close to the viewer who is surrounded by space elements.)
- Focal (a view which is focused and directed toward the proposal by lateral features close to the viewer, such as road corridors, roadside vegetation, buildings, boats etc.)
- Feature (a view where the proposal is the form element which dominates the view, for example in close range views.)

It is considered that the extent of the visual effects of the proposal is related to its situation in the composition of the view. The visual effect of the proposal on the composition of the view is considered to be greater on a focal or a feature view, cognisant of the distance effect, compared to a restricted, panoramic or expansive view.

Relative viewing level

Relative viewing level means the location of the viewer in relative relief, compared to the location of the proposal. It is conventional in landscape assessment to assess views from locations above, level with and below the relative location of the proposal. However when maritime developments are concerned, the latter viewing level (i.e. relatively below the level of the proposal) has no practical application.

It is considered that the visual effects of a development are related to the relative viewing level and distance. Viewing levels above the development where views are possible over and beyond it decrease the visual effects, whereas views from level with and close to the development, dependent on viewing distance, may experience higher effects, particularly if built form intrudes into horizons.

Viewing period

Viewing period in this assessment means the influence on the visual effects of the proposal which is caused by the time available for a viewer to experience the view. It is assumed that the longer the potential viewing period, experienced either from fixed or moving viewing places such as dwellings, roads or the waterway, the higher the potential for a viewer to perceive the visual effects of the proposal. Repeated viewing period events, for example views repeatedly experienced from roads as a result of regular travelling, are considered to increase perception of the visual effects of the proposal.

Viewing distance

Viewing distance means the influence on the perception of the visual effects of the proposal which is caused by the distance between the viewer and the development proposed. It is assumed that the viewing distance is inversely proportional to the perception of visual effects: the greater the potential viewing distance, experienced either from fixed or moving viewing places, the lower the potential for a viewer to perceive and respond to the visual effects of the proposal.

Three classes of viewing distance have been adopted which are the same as those in Appendix D and Figure D2 in the DCP methodology, i.e. short range (<100m), medium range (100-1000m) and distant (>1000m).

View loss or blocking effects

View loss or blocking effects in this assessment means a measure of the extent to which the proposal is responsible for view loss or blocking the visibility of items in the view. View loss is considered in relation to the principles enunciated in the Land and Environment Court of NSW by Roseth SC in Tenacity v Warringah [2004] NSWLEC 140. Although Tenacity concerned view losses from residential properties, the matter of what could be construed to be a valuable feature of the view which could be lost, eg. specific features of views such as whole views and iconic elements viewed across water, alluded to in Tenacity, are of some relevance to the public domain also.

It is assumed that view loss and blocking effects increase the perception of the visual effects of the proposal. It is also assumed that view loss and view blocking can be important matters for consideration in regard to short range views from the public domain of the foreshore and potentially from nearby adjacent residences.

E 2.3 Overall extent of visual effect

Based on inspection of the pattern of the assessment ratings for the above factors on the relevant assessment sheets for each viewing location, an overall rating is arrived at which represents an overall extent of visual effects for a viewing location.

E 3.0 Components of the visual impact analysis

The criteria in E2.3 concern assessment of the extent of the visual effects of the proposal when seen from specific viewing places. The extent of the visual effects is the baseline assessment against which to judge the visual impacts.

Whether or not a visual effect is an impact of potential significance cannot be equated directly to the extent of the visual effect. For example, a high visual effect can be quite acceptable, whereas a small one can be unacceptable. As a result, it is necessary to give a weighting to the assessed levels of effects to arrive at an assessment of the impact.

This method therefore does not equate visual effects directly to visual impacts. This is one of the features of the methodology in Appendix D to the DCP accompanying the SREP which we specifically avoided. The approach is to assess visual effects as above to arrive at an overall level of visual effect of the proposal for each kind of viewing place and then to assess the level of impact, if any, by giving differential weighting criteria to impact criteria. By this means, the relative importance of impacts are distinguished from the size of the effect. We consider that two weighting criteria are appropriate to the overall assessment of visual impacts, Physical Absorption Capacity and Visual Compatibility. Each of these addressed the primary question of the acceptability of the visual effects and changes caused by the proposal.

E 3.1 Physical absorption capacity

Physical Absorption Capacity (PAC) means the extent to which the existing visual environment can reduce or eliminate the perception of the visibility of the proposed development.

PAC includes the ability of existing elements of the landscape to physically hide, screen or disguise the proposal. It also includes the extent to which the colours, material and finishes of buildings and in the case of boats and buildings, the scale and character of these allows them to blend with or reduce contrast with others of the same or closely similar kinds to the extent that they cannot easily be distinguished as new features of the environment.

Prominence is also an attribute with relevance to PAC. It is assumed in this assessment that higher PAC can only occur where there is low to moderate prominence of the proposal in the scene.

Low to moderate prominence means:

- Low: The proposal has either no visual effect on the landscape or the proposal is evident but is subordinate to other elements in the scene by virtue of its small scale, screening by intervening elements, or difficulty of being identified.
- Moderate: The proposal is either evident or identifiable in the scene, but is less prominent, makes a smaller contribution to the overall scene, or does not contrast substantially with other elements or is a substantial element, but is equivalent in prominence to other elements and landscape alterations in the scene.

Design and mitigation factors are also important to determining the PAC. Appropriate colours, materials, building forms, line, geometry, textures, scale, character and appearance of buildings, marina structures and vessels are relevant to increasing PAC and decreasing prominence.

PAC is related to but distinct from Visual Compatibility (see below).

E 3.2 Visual compatibility

Visual Compatibility is not a measure of whether the proposal can be seen or distinguished from its surroundings. The relevant parameters for visual compatibility are whether the proposal can be constructed and utilised without the intrinsic scenic character of the locality being unacceptably changed. It assumes that there is a moderate to high visibility of the proposal to some viewing places. It further assumes that novel elements which presently do not exist in the immediate context can be perceived as visually compatible with that context provided that they do not result in the loss of or excessive modification of the visual character of the locality.

A comparative analysis of the compatibility of similar items to the proposal with other locations in the area which have similar visual character and scenic quality or likely changed future character can give a guide to the likely future compatibility of the proposal in its setting.

Because the development proposed is on the interface between water and land, with components on each, the question of its visual impacts also depends on its perception both as an entity and in regard to its compatibility with the major scenic character attributes. In this regard, both the maritime/industrial environment and the urban/natural environment are attributes of relevance. Hence, it is considered that there are two relevant measures of Visual Compatibility, i.e. Compatibility with Urban and Natural Features, and Compatibility with Maritime Features.

Visual compatibility with urban and natural features

This assessment is a measure of the extent to which the visual effects of the proposal are compatible with urban and natural features. It is assumed that in some views the proposal can be seen and clearly distinguished from its surroundings. Compatibility does not require that identical or closely similar features to those which are proposed exist in the immediate surroundings, however this would increase compatibility on this criterion.

Compatibility with Urban and Natural Features means that the proposal responds positively to or borrows from within the range of features of character, scale, form, colours, materials and geometrical arrangements of urban and natural features of the surrounding area or of areas of the locality which have the same or similar existing visual character.

Visual compatibility with maritime features

This assessment is a measure of the extent to which the visual effects of the proposal are compatible with maritime features. In some views, the proposal can be seen and clearly distinguished from its surroundings. Compatibility does not require that identical or closely similar features to those which are proposed exist in the immediate surroundings, however this would increase compatibility on this criterion.

Compatibility with Maritime Features means that the proposal responds positively to or borrows from within the range of features of character, scale, form, colours, materials and geometrical arrangements of maritime features of the surrounding area or of areas of the locality which have the same or similar existing visual character.

E 3.3 Overall extent of visual impact

Based on the inspection of the pattern of the assessment ratings for the above factors on the relevant analysis sheet for each viewing location an overall rating is arrived at which represents an overall extent of visual impacts for a viewing location.

E 4.0 Visual sensitivity zones

Three visual sensitivity zones are identified which are based on the view place sensitivity or viewer sensitivity as explained above in E2.1. These are related to the distance zones from the development site and whether views are from significant public domain or private viewing locations. Viewing places within the high or medium visual sensitivity zones are further assessed as explained below.

E 4.1 Impact assessment for each zone

An overall impact rating for each of the three visual sensitivity zones is arrived at by inspecting the pattern of the assessment ratings for the visual impacts factors (as given in E3.3) on the relevant analysis sheet for each viewing location in that zone. It is generally found that the close range visual sensitivity zone is most affected by any development as the development forms part of the foreground views from the viewing locations within this zone.

E 4.2 Analysis against relevant information/planning instruments / policies and master plans

The proposed development and its overall impacts on each of the visual sensitivity zones is analysed against the relevant information. These include:

1. Sydney Regional Environmental Plan, Sydney Harbour Catchment, 2005.
2. Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005.
3. Boat Storage policy for Sydney Harbour, June 2004.
4. Canada Bay Local Environmental Plan 2008.

E 4.3 Assessment of the mitigation measures proposed to eliminate visual impacts

The mitigation measures that are already proposed as part of the development are then assessed in terms of their capability to overcome the visual effects and impacts on each of the visual sensitivity zones. Other mitigation measures and management guidelines are then formulated to overcome every possible visual effect and impact.

E 4.4 Significance of residual visual impacts

Finally and subsequent to the visual effects of the mitigation factors being assessed, a relevant question is whether there are any residual visual impacts and whether they are acceptable in the circumstances. These residual impacts are predominantly related to the extent of visual change to the immediate setting and are also a result of personal choices and preferences.

In terms of the urban component of the development, residual impacts relate to individuals' preferences for the nature and extent of change which cannot be mitigated by means such as vegetation, colours, materials and the articulation of building surfaces. In terms of the marina component, they relate to preferences for the visual effects and appearance of the boat storage and also to individual's preference for whether he/she would prefer a differently organised array of boats. This could be in the form of for example, a large number of scattered swing moorings in the views available to them instead.

These personal choices are also a result of people's resistance or resilience towards any change to the existing arrangement of views. Particular individuals or groups may express strong preferences for either form of urban development or of vessel storage. There is no clear research evidence of which we are aware to support either preference.

The significance of these residual impacts is assessed on the basis of the relative sensitivity of viewers and viewing places that may experience these impacts. Whether overcoming these impacts would result in undermining of the potential capacity of the development site to economically support the intended use is not the focus of a visual impacts assessment such as this.

Appendix F

Empirical research related to scenic quality

Scenic quality is a base line against which the effects of changes to the physical environment can be predicted to impact either positively or negatively on the perceptions and emotional reactions of viewers in most kinds of landscapes. It is an important consideration of assessing the visual effects of developments of all kinds and is relevant to assessing the visual impacts of this application.

There is an extensive empirical research literature concerning general relationships between visible aspects of the physical environment and predicted judgments of scenic quality or other expressions of this, such as judgements of scenic beauty and scenic preference. Most research carried out in this domain unfortunately does not directly address either the effects on perceptions of boat accommodation, boats themselves or the settings in which they are stored.

High presence of extensive water bodies, varied water edges, varied topography and long viewing distances in many views are features often reported in empirical research studies as being positively associated with scenic quality or various surrogates for it, such as scenic preferences or expressions of attractiveness and landscape beauty. In an empirical study carried out by myself in the 1980s in Pittwater (Lamb and Purcell, 1982), these features were associated with views judged to be among the highest possible in preference by a large sample of respondents.

A commonly held generalisation in landscape perception research is that scenic preferences are negatively related to the extent of development and particularly the built component in landscapes which have significant natural elements present (E.g. Lamb and Purcell, 1982, Kaplan and Kaplan, 1989, Nasar, 2002). The dense urbanisation of the general context of Kendall Bay compared to its natural attributes would be expected to decrease the attributes of naturalness and scenic integrity. The latter are often reported as being positively related to scenic quality and therefore urbanisation would be expected to decrease perceptions of overall scenic quality (e.g. Williamson and Chalmers, 1982; Zube, Pitt and Anderson, 1974).

Compared to the kinds of scenery usually associated with unequivocally high preferences and ratings of scenic quality, such as predominantly natural scenes or those with minor human-constructed elements, Kendall Bay can be expected to rate as of low to moderate scenic quality. It is of some note perhaps that the Waterways' zoning of the Kendall Bay in which the site is located is not in any of the three scenic waterways categories, possibly indicating that this section is not considered to be of the highest scenic quality.

Whether a landscape is perceived as natural or built is also thought to influence preferences and the extent of the built component compared to the natural can produce negative evaluative responses in some cases (Lamb, Purcell, Mainardi Peron and Falchero, 1994). In the study reported above in Pittwater (Lamb and Purcell, 1982), built foreshores and associated maritime facilities were in some cases associated with higher variance between judgements of scenic quality. This does not indicate differences in overall preference, but later research indicated that the variance could be explained by respondents differentially and systematically paying attention to different parts of the scene. Commonly, they gave greater weight to either the built or the natural components of the scene, or alternatively perceived the scene as containing cognitive conflicts between different parts. One possibility on this reading in regard to the application is that a marina could possibly be perceived as a built environment and to decrease naturalness and scenic integrity more than, say, swing moored

vessels in a given view. This would depend on a yet untested hypothesis that swing moored vessel arrangements are either more natural in appearance or less built than marinas.

My 1982 study did not indicate that there was any effect of vessels accommodated in various ways, including marinas, on the scenic quality judgements of a large sample of scenes, however. Some of these were judged to be of the highest scenic quality. Neither however was boat accommodation a focus of the research, so this finding should be approached with caution.

It might also be expected that the order and formality of a marina might be associated with lower scenic quality than other forms of vessel accommodation. This would lead to lower overall perceptions of scenic quality where marinas were present. However order, novelty and increased complexity, which are likely features of a marina compared with swing moored vessels are positively associated with arousal and other evaluative responses (Nasar, 1991, 1994). These responses could by more likely to be associated with a marina compared to a swing moored vessel arrangement.

However even the generalisation that built environments are less preferred is not clear cut. High scenic quality judgements occur for both built and natural scenes (Peron, Purcell, Staats, Falchero and Lamb, 1998) and water-based landscapes are often disproportionately preferred (Lamb et al, 1994; Peron et al, 1998) even when they occur in urban settings. Some of the high preferences which were reported in Peron et al,(1988) were for scenes of highly urbanised landscapes with constructed hard walled edges to the water. Although not analogous, the constructed foreshore retaining wall along the western shoreline of Kendall Bay has some similarities to some of the scenes used as stimuli in this experiment.

A wide ranging study by Dr Andrew Lothian in South Australia which had a small sample of mostly undeveloped landscapes in which marinas among other developments were simulated indicated a possible reduction in judgements of scenic quality of those scenes compared to those without marinas. However, the sample was too small for the effect to be relied on with any confidence (Lothian, n.d.). In addition, the simplified statistical analyses are not sufficiently sensitive to indicate any significant differences. In the context of this application, the Lothian study is also not particularly useful, because the setting already contains a number of marina developments and many other vessels accommodated on swing moorings and jetties/pens and is not usefully compared to the "without marina" treatments in the Lothian sample, which depict undeveloped landscapes.

There is little published evidence as to the scenic quality of the subject site and its general locality. Nor are there any Australian studies carried out specifically to investigate public perceptions of the scenic quality of Parramatta River, Sydney Harbour and Middle Harbour or the impacts of boats or boat accommodation styles on these, if any.

Taken in the context of two values which are conventionally associated positively with scenic quality, naturalness and visual integrity, the overall landscape setting of the proposal is of relatively lower naturalness and visual integrity compared to other areas of Parramatta River, Sydney and Middle Harbour in the general vicinity with which it could be compared. The nature of the foreshore itself is of low naturalness and integrity in the vicinity of part of the proposal (the reclaimed and retained foreshore along the western shoreline) and the visual integrity of the foreshore and upper slopes in many areas are obscured by a largely built urban form, dominated by it, or both.

The presence of maritime elements such as the proposed marina therefore may be associated with positive, neutral or negative influences with regard to judgments of scenic quality, however there is little known specific research on the extent to which different forms of vessels or vessel accommodation affects average viewer perceptions.

Whether there are widely held community preferences in relation to forms of boat accommodation or their impacts on scenic quality is unknown in Australia at this time. This question has not been the subject of carefully designed and conducted empirical research using appropriate populations of respondents and methods of analysis. So far as we are aware, there are also no substantial overseas studies which could be relied on to indicate what perceptions might be. In the absence of such research it would not be appropriate to generalise about anticipated perceptions.

It is accepted for the purposes of this assessment however that the immediate locality of the proposal, in regard to Breakfast Point residential development, the constructed shoreline, the southern relatively natural shoreline with intertidal beaches and an area of mangroves and Cabarita Park is of low to moderate scenic quality and that there is a moderate sensitivity to matters which could compromise or change that quality. The remainder of the locality is also of moderate scenic quality.

Appendix G: Curriculum Vitae

Maritime Development

Assessment and advice

A Snaith & F Kyle

Advice concerning visual impacts of proposed jetty, ramp, pontoon and berthing facility, Reiby Road, Hunters Hill.

Addenbrooke Pty Ltd

Visual and scenic amenity impact assessment to accompany Application for Landowners Consent to proposed additions and alterations to Rose Bay and Point Piper Marinas.

Ajani Boat Company Pty Ltd

Visual Impact Assessment to accompany development application for refurbishment of existing boatshed and conservation of heritage fabric.

Aesthetic assessment, pre-design and pre-DA evaluation of proposed marina, Sailors Bay.

Boating Industry Association

Advice on visual resource management issues relating to boat accommodation, Sydney Region.

Hunter, D

Advice concerning application for reduced jetty and ramp, remove pontoon and for parallel mooring pen, Julian Street, Mosman.

McWilliam, B,

Visual Impact Assessment for the proposed private landing steps, Wolseley Crescent, Point Piper

Numbaa Marine Facility

Assessment of visual issues relating to existing vessel moored on the mooring pen and NSW Waterways Authority's notification of size of vessel able to be moored there, Toocooya Road, Hunters Hill

Patterson Britton and Partners and Austral Monsoon Pty Ltd

Pre-design and DA advice, Visual Impact Assessment and Statement of Environmental Effects, proposed redevelopment, Careel Bay Marina, Pittwater.

PlanningNSW

Independent visual assessment: Commission of Inquiry into proposed pearl oyster industry operation, Port Stephens.

Rose Bay and Point Piper Marinas

Visual Impact Assessment to accompany Statement of Environmental Effects, application for Landowners Consent for extensions to Rose Bay and Point Piper Marinas.

Ryan, P

Visual Impact Assessment for a development application for the construction of a slipway for launching, retrieval and dry storage of a motor cruiser, Wolseley Road, Point Piper

Sunland Group Ltd

Visual Impact Assessment for the proposed slipway and storage of two dinghies, Cammeray Road, Cammeray

Visual Impact Assessment for the proposed two vessel private marina, Louisa Road, Birchgrove

Sydney Slipways

Scenic assessment and Statement of Environmental Effects, Proposed heavy maritime maintenance facility and wharf, Blackwattle Bay, Glebe Island.

Taylor Lauder Bersten

Statement of Environmental Effects to accompany application for accommodation of new vessel, The Crescent, Hunters Hill.

Assessment of proposed alterations to existing mooring pen to accommodate larger vessel, Hunters Hill.

Visual Impact Assessment to accompany Statement of Environmental Effects, Application for Landowners Consent, Double Bay Marina proposal.

Statement of Environmental Effects to accompany Application for Landowners Consent, Manly Boat Shed.

Westport Marina Pty Ltd

Scenic assessment and Statement of Environmental Effects, Westport Marina, Cabarita Point, Parramatta River.

White, D and anor

Advice on scenic and visual impacts, proposed berthing facilities, Parramatta River.

Land and Environment Court Proceedings

Bishop R v the Minister administering the Ports Corporation and Waterways Management Act, Proposed mooring pen, Lodge Road, Cremorne.

Captain Cook Cruises v North Sydney Council, Proposed refurbishment, rebuilding and construction of new boat shed, Kurraba Road, Neutral Bay.

Drummoyne Foreshore Committee v Drummoyne Council,, Legality of the approval of extension to and alterations to the Gladesville Marina.

Double Bay Marina Pty Ltd v Woollahra Council, Proposed revelopment of the existing marina, Double Bay.