

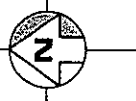
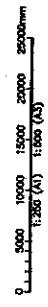
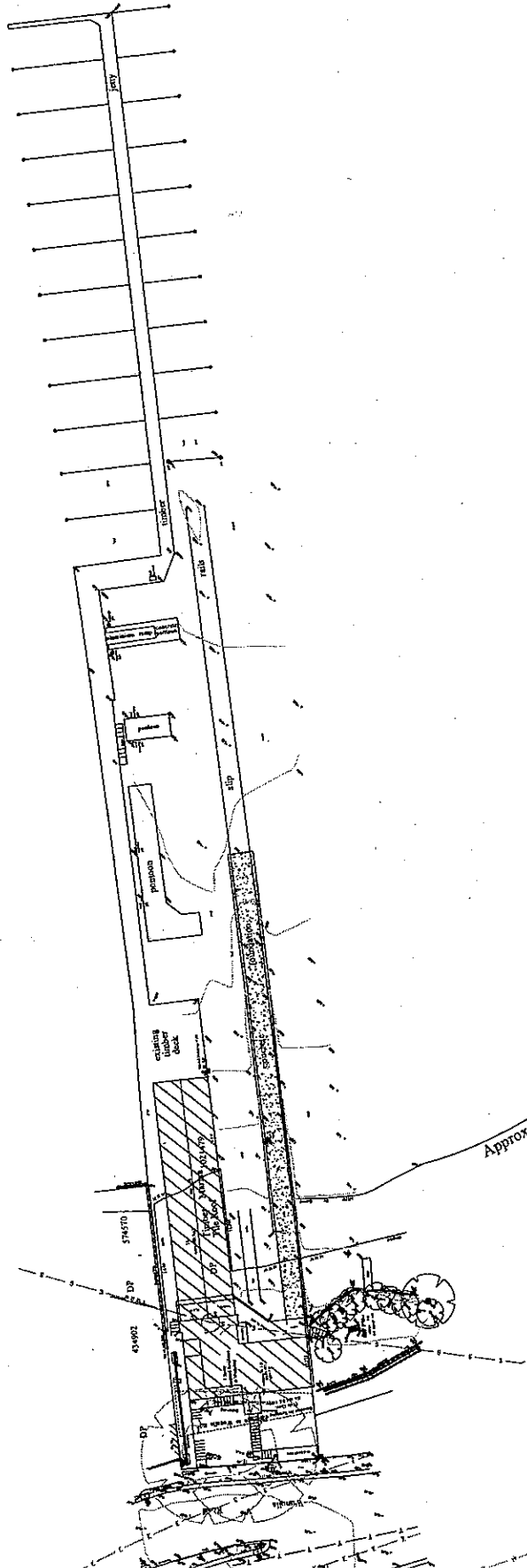
NOTES

1. SURVEY BY WRITER & ASSOCIATES CONSULTING SURVEYORS AND PLANNERS, REF No. 24-800-21/06/2006.
2. ALL LEVELS TO ZERO ON THE FOOT HIGHNESS TIDE GAUGE WHICH IS APPROXIMATELY 0.5M BELOW AUSTRALIAN HEIGHT DATUM (AHD).
3. LOCATIONS OF SERVICES ARE APPROXIMATE ONLY. PRIOR TO CONSTRUCTION THE CONTRACTOR IS TO OBTAIN THE EXACT LOCATIONS OF SERVICES & PROPOSED DOMESTIC & MAIN DOMESTIC SERVICES, PIPES, CABLES & CONDUITS.



LEGEND

- EXISTING WATER MAIN
- EXISTING SEWER MAIN
- EXISTING ENERGY AUSTRALIA CABLE
- EXISTING TELSTRA MAIN CABLE



DRG STATUS: PRELIMINARY, NOT FOR CONSTRUCTION

Issue	Date	Drawn	Dim	Checked	Approved	Details of Issues
A	20/10/06					
ISSUED WITH DRG SUBMISSION						

NOTICES SHOWN IN THE ADJACENT ISSUE SHEETS SHALL BE READ IN CONJUNCTION WITH THE DRAWING APPROVAL PROCESS. DRAWINGS ARE ONLY TO BE USED WHEN APPROVED BY THE ENGINEER. ORIGINAL SIGNATURES CAN BE FOUND ON THE ORIGINAL DRAWINGS. REGISTER/TRANSMITTAL FORM NLS 2.1 HELD BY PATERSON BRITTON & PARTNERS

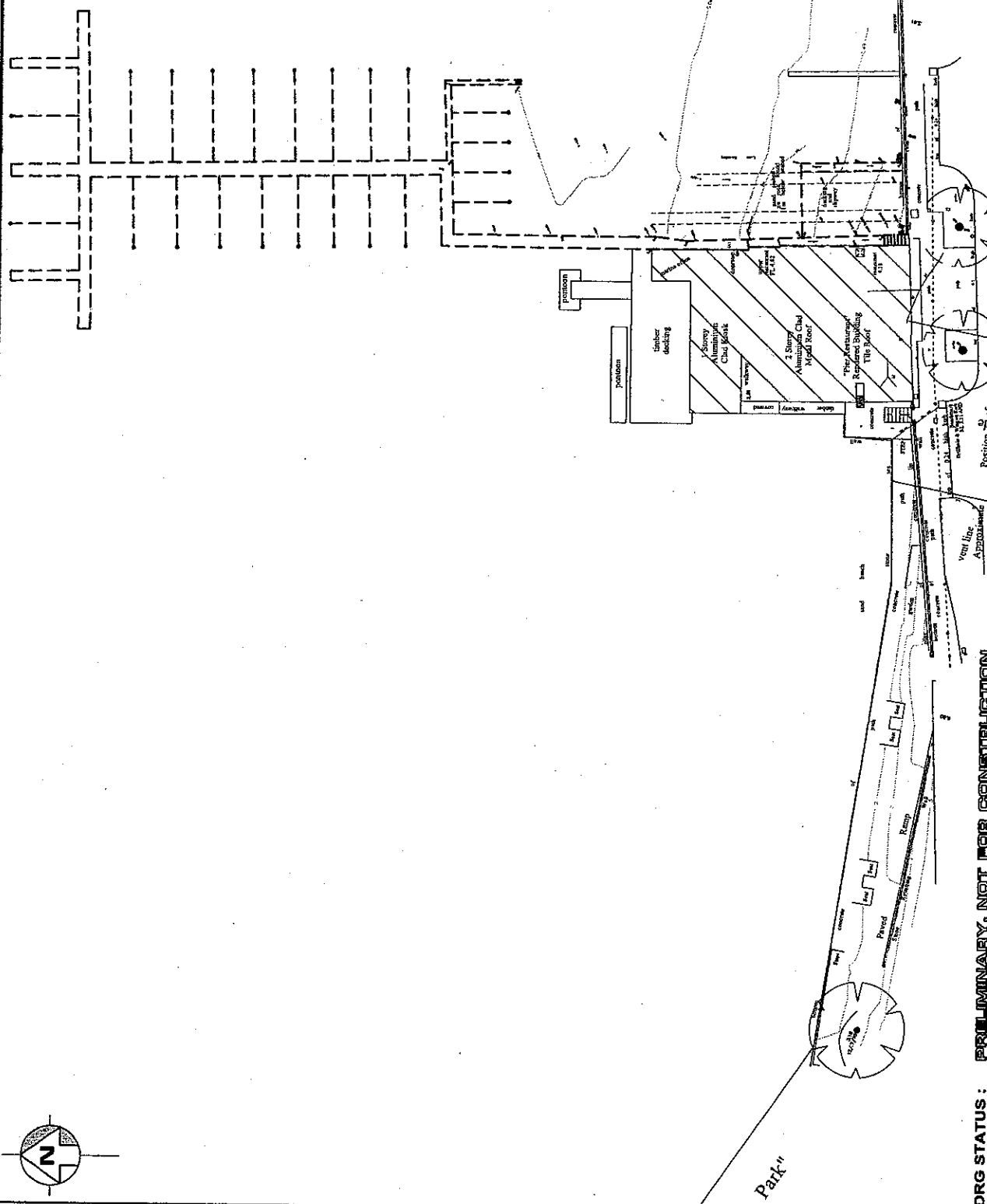
PATERSON BRITTON & PARTNERS Pty Ltd
 consulting engineers
 104 Mount Street
 North Sydney 2060
 Telephone (02) 9407 8110
 Facsimile (02) 9407 1041
 A.C.N. 100 226 276

ADDENBROOKE PTY LTD
 Project
 ROSE BAY AND POINT PIPER MARINA REDEVELOPMENT

Drawing No. **5635-101**
 Title **POINT PIPER MARINA SURVEY AND LOCATION OF SERVICES**
 Rev'd (A)
 Rev'd (A)

NOTES
 1. DRAWN BY SEEVER & ASSOCIATES CONSULTING SURVEYORS AND PLANNERS, 187 MC SPENCE BUILDING
 2. ALL LEVELS TO BE SHOWN AS THE FIRST DENOMINATOR THE GAUGE MARKS IS APPROXIMATE TO THE CURRENT TIDE GAUGE AUSTRALIAN HEIGHT DATUM (AHD).

LEGEND
 - - - - - EXISTING STRUCTURE TO BE REMOVED



DRG STATUS : PRELIMINARY, NOT FOR CONSTRUCTION

Issue	Issued With	Drawn	Checked	Approved	Date
A	ISSUED WITH EIR SUBMISSION	VP	VP	VP	28/10/06

101 Mount Street
 North Sydney NSW 2060
 Telephone (02) 9607 1919
 Facsimile (02) 9607 1011
 A.C.N. 002 20 276
 PATTERSON BRITTON & PARTNERS
 CONSULTING ENGINEERS

Client: ADDENBROOKE PTY LTD
 Project: ROSE BAY AND POINT PIER MARINA REDEVELOPMENT

Drawing No: 5635-102
 Title: ROSE BAY MARINA LOCATION OF EXISTING STRUCTURES TO BE REMOVED
 Scale: A
 Grid File No: (blank)
 Sheet: (blank) of (blank)

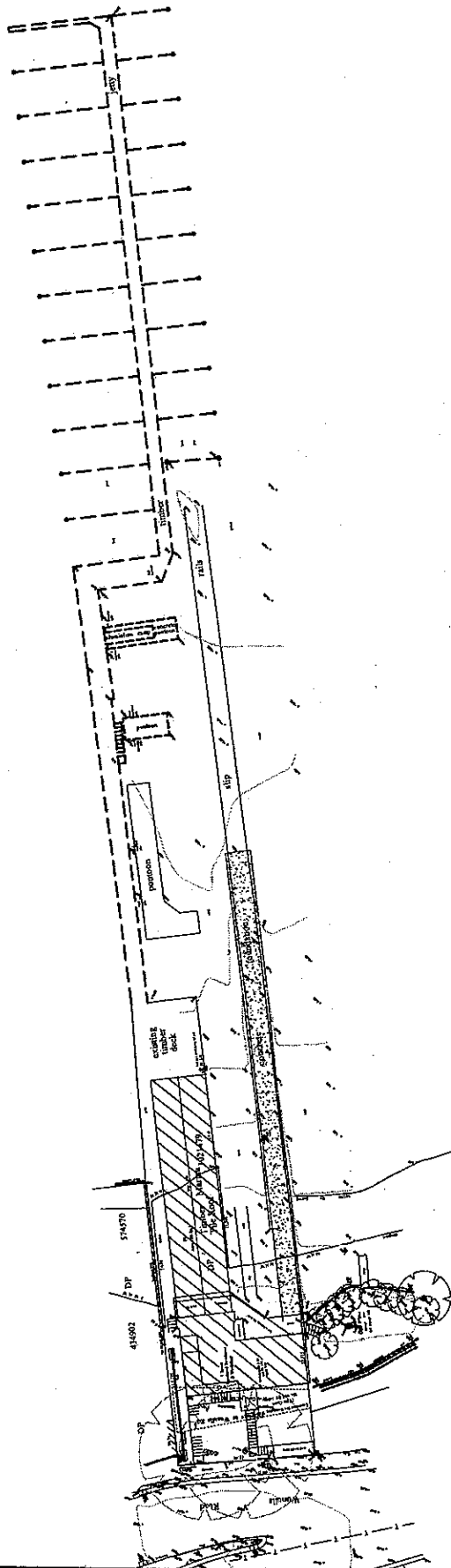
DETAILS SHOWN IN THE ADJACENT ISSUE ARE ONLY TO BE USED WHEN APPROVED BY THE DRAWING APPROVAL PROCESS. DRAWINGS ONLY AS NOTED FOR FOR STATUS ARE ORIGINAL SIGNATURES CAN BE FOUND ON THE REGISTERED TRANSMITTAL FROM N.S. 21 HELD BY PATTERSON BRITTON & PARTNERS

NOTES

1. CHECK BY SURVEY & ASSOCIATES CONSULTING SURVEYORS AND PLANNERS, REF No 24-800-2106.2006
2. ALL LEVELS TO ZERO ON THE POINT PIPER TIDE GAUGE WHICH IS APPROXIMATELY 0.5M BELOW AUSTRALIAN HEIGHT DATUM (AHD).

LEGEND

--- EXISTING STRUCTURE TO BE REMOVED



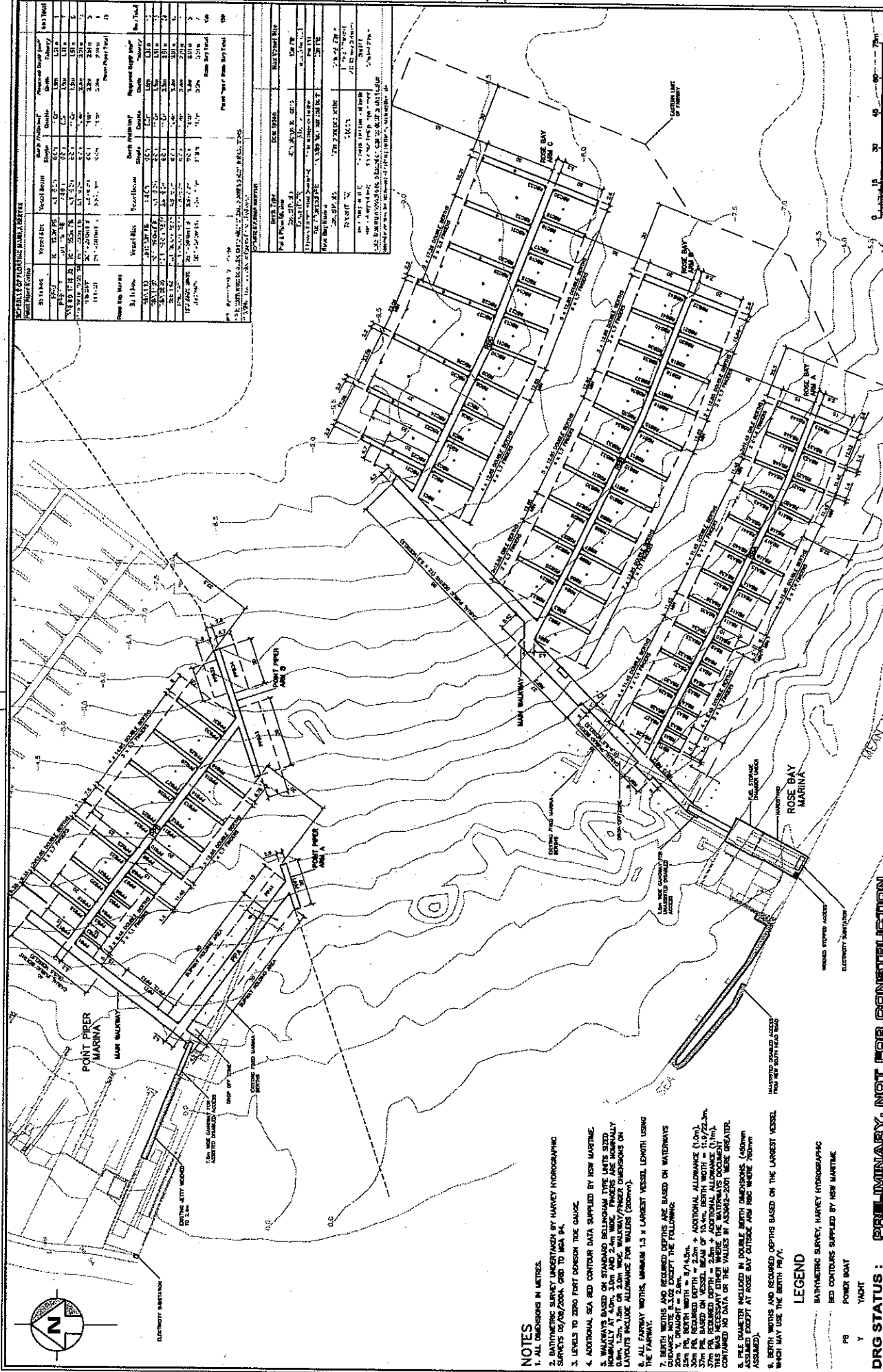
DRG STATUS : PRELIMINARY, NOT FOR CONSTRUCTION

Issue	Date	By	Checked	Approved	Details of Issues
A	24.10.06	WSP	WSP		
ISSUED WITH DS SUBMISSION					

Patterson Britton & Partners Pty Ltd
 consulting engineers
 104 Macquarie Street
 North Sydney 2060
 Telephone (02) 9407 1810
 Fax (02) 9407 1811
 Email info@pattersonbritton.com.au
 A.C.N. 552 259 278

ADDENBROOKE PTY LTD
 Project
 ROSE BAY AND POINT PIPER MARINA REDEVELOPMENT

Drawing No.
5635-103
 Title
**POINT PIPER MARINA
 LOCATION OF EXISTING STRUCTURES
 TO BE REMOVED**
 Sheet No.
A
 Total No. of Sheets
104(4)



RE-DEVELOPMENT OF ROSE BAY MARINA

Item No.	Item Description	Quantity	Unit	Value
1	1.0m x 2.0m Mooring	10	Each	200.00
2	1.5m x 2.5m Mooring	10	Each	375.00
3	2.0m x 3.0m Mooring	10	Each	600.00
4	2.5m x 3.5m Mooring	10	Each	875.00
5	3.0m x 4.0m Mooring	10	Each	1200.00
6	3.5m x 4.5m Mooring	10	Each	1575.00
7	4.0m x 5.0m Mooring	10	Each	2000.00
8	4.5m x 5.5m Mooring	10	Each	2475.00
9	5.0m x 6.0m Mooring	10	Each	3000.00
10	5.5m x 6.5m Mooring	10	Each	3575.00
11	6.0m x 7.0m Mooring	10	Each	4200.00
12	6.5m x 7.5m Mooring	10	Each	4875.00
13	7.0m x 8.0m Mooring	10	Each	5600.00
14	7.5m x 8.5m Mooring	10	Each	6375.00
15	8.0m x 9.0m Mooring	10	Each	7200.00
16	8.5m x 9.5m Mooring	10	Each	8075.00
17	9.0m x 10.0m Mooring	10	Each	9000.00
18	9.5m x 10.5m Mooring	10	Each	9975.00
19	10.0m x 11.0m Mooring	10	Each	11000.00
20	10.5m x 11.5m Mooring	10	Each	12075.00

RE-DEVELOPMENT OF ROSE BAY MARINA

Item No.	Item Description	Quantity	Unit	Value
21	1.0m x 2.0m Mooring	10	Each	200.00
22	1.5m x 2.5m Mooring	10	Each	375.00
23	2.0m x 3.0m Mooring	10	Each	600.00
24	2.5m x 3.5m Mooring	10	Each	875.00
25	3.0m x 4.0m Mooring	10	Each	1200.00
26	3.5m x 4.5m Mooring	10	Each	1575.00
27	4.0m x 5.0m Mooring	10	Each	2000.00
28	4.5m x 5.5m Mooring	10	Each	2475.00
29	5.0m x 6.0m Mooring	10	Each	3000.00
30	5.5m x 6.5m Mooring	10	Each	3575.00
31	6.0m x 7.0m Mooring	10	Each	4200.00
32	6.5m x 7.5m Mooring	10	Each	4875.00
33	7.0m x 8.0m Mooring	10	Each	5600.00
34	7.5m x 8.5m Mooring	10	Each	6375.00
35	8.0m x 9.0m Mooring	10	Each	7200.00
36	8.5m x 9.5m Mooring	10	Each	8075.00
37	9.0m x 10.0m Mooring	10	Each	9000.00
38	9.5m x 10.5m Mooring	10	Each	9975.00
39	10.0m x 11.0m Mooring	10	Each	11000.00
40	10.5m x 11.5m Mooring	10	Each	12075.00

RE-DEVELOPMENT OF ROSE BAY MARINA

Item No.	Item Description	Quantity	Unit	Value
41	1.0m x 2.0m Mooring	10	Each	200.00
42	1.5m x 2.5m Mooring	10	Each	375.00
43	2.0m x 3.0m Mooring	10	Each	600.00
44	2.5m x 3.5m Mooring	10	Each	875.00
45	3.0m x 4.0m Mooring	10	Each	1200.00
46	3.5m x 4.5m Mooring	10	Each	1575.00
47	4.0m x 5.0m Mooring	10	Each	2000.00
48	4.5m x 5.5m Mooring	10	Each	2475.00
49	5.0m x 6.0m Mooring	10	Each	3000.00
50	5.5m x 6.5m Mooring	10	Each	3575.00
51	6.0m x 7.0m Mooring	10	Each	4200.00
52	6.5m x 7.5m Mooring	10	Each	4875.00
53	7.0m x 8.0m Mooring	10	Each	5600.00
54	7.5m x 8.5m Mooring	10	Each	6375.00
55	8.0m x 9.0m Mooring	10	Each	7200.00
56	8.5m x 9.5m Mooring	10	Each	8075.00
57	9.0m x 10.0m Mooring	10	Each	9000.00
58	9.5m x 10.5m Mooring	10	Each	9975.00
59	10.0m x 11.0m Mooring	10	Each	11000.00
60	10.5m x 11.5m Mooring	10	Each	12075.00

NOTES

1. ALL DIMENSIONS IN METRES.
2. BATHYMETRIC SURVEY UNDERTAKEN BY HARVEY HYDROGRAPHIC SURVEYS 06/09/2004. GRID TO MEA 94.
3. LEVELS TO ZERO FORT DENISON TIDE GAUGE.
4. ADDITIONAL SEA BED CONTOUR DATA SUPPLIED BY NSW MARITIME.
5. WALKWAYS BASED ON STANDARD BELLINGHAM TYPE LAYS SIZED 150mm x 150mm x 12mm. WALKWAYS/FRANZIS BARRIERS OR CLAMP, 150mm x 150mm x 12mm. WALKWAY/FRANZIS BARRIERS OR CLAMP, 150mm x 150mm x 12mm.
6. ALL PARKWAY WIDTHS, MINIMUM 1.5 x LARGEST VESSEL LENGTH USING THE PARKWAY.
7. BERTH WIDTHS AND REQUIRED DEPTHS ARE BASED ON WATERWAYS CLEARANCE NOTE 8.3.02 EXCEPT THE FOLLOWING:
 7.1. BERTH WIDTH = 2.0m.
 7.2. BERTH WIDTH = 1.5m.
 7.3. BERTH WIDTH = 2.0m + ADDITIONAL ALLOWANCE (1.0m).
 7.4. BERTH WIDTH = 2.0m + ADDITIONAL ALLOWANCE (1.0m).
 7.5. BERTH WIDTH = 2.0m + ADDITIONAL ALLOWANCE (1.0m).
 THIS WAS NECESSARY TO ACCOMMODATE THE LARGEST VESSEL WHICH COMMANDED NO DATA ON THE VALUES IN AS3092-2001 WERE GREATER.
8. PILE DIAMETER INCLUDED IN DOUBLE BERTH DIMENSIONS (450mm ASSUMED) EXCEPT AT ROSE BAY OUTSIDE AND ROSE WATERS (700mm ASSUMED).
9. BERTH WIDTHS AND REQUIRED DEPTHS BASED ON THE LARGEST VESSEL WHICH MAY USE THE BERTH PER/7.

LEGEND

- BATHYMETRIC SURVEY, HARVEY HYDROGRAPHIC
- SEA BED CONTOURS SUPPLIED BY NSW MARITIME
- PB POWER BOAT
- Y YACHT

DRG STATUS: PRELIMINARY, NOT FOR CONSTRUCTION

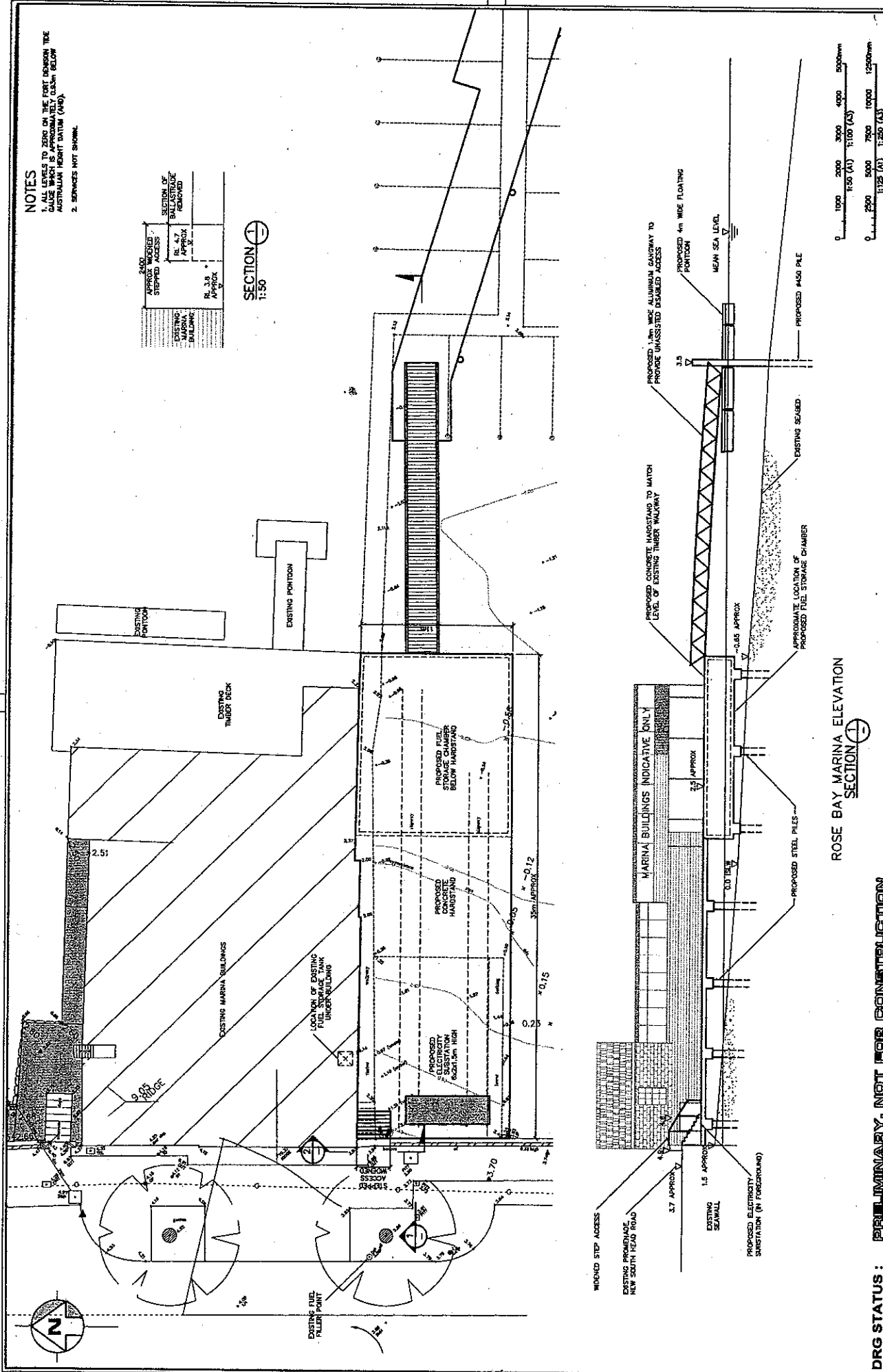
Date	By	Checked	Approved
26.10.08	UP	CHB	
06.12.08	UP	CHB	

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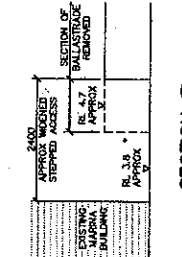
Patterson Britton & Partners Pty Ltd
 consulting engineers
 104 Mount Street
 North Sydney 1585
 Telephone: (02) 9557 1234
 Fax: (02) 9557 1235
 E-Mail: info@patterson.com.au

ADDENBROOKE PTY LTD
 Project: ROSE BAY AND POINT PIPER MARINA REDEVELOPMENT

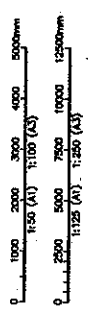
RE-DEVELOPMENT PROPOSAL
FIGURE 10A (1)
 Drawing No: 5635-105
 Name: A(1)
 Cell No: 10A
 Date: 06/12/08



NOTES
 1. ALL LEVELS TO ZERO ON THE FIRST FLOOR. THE GAUGE WHICH IS APPROXIMATELY 0.5m BELOW AUSTRALIAN HEART DATUM (AHD).
 2. SPACES NOT SHOWN.



SECTION 1
1:50



DRG STATUS: PRELIMINARY, NOT FOR CONSTRUCTION

Issue	Date	Drawn	Check	Approved
A	28/10/08	WAG	DM	CHC

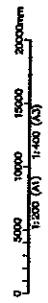
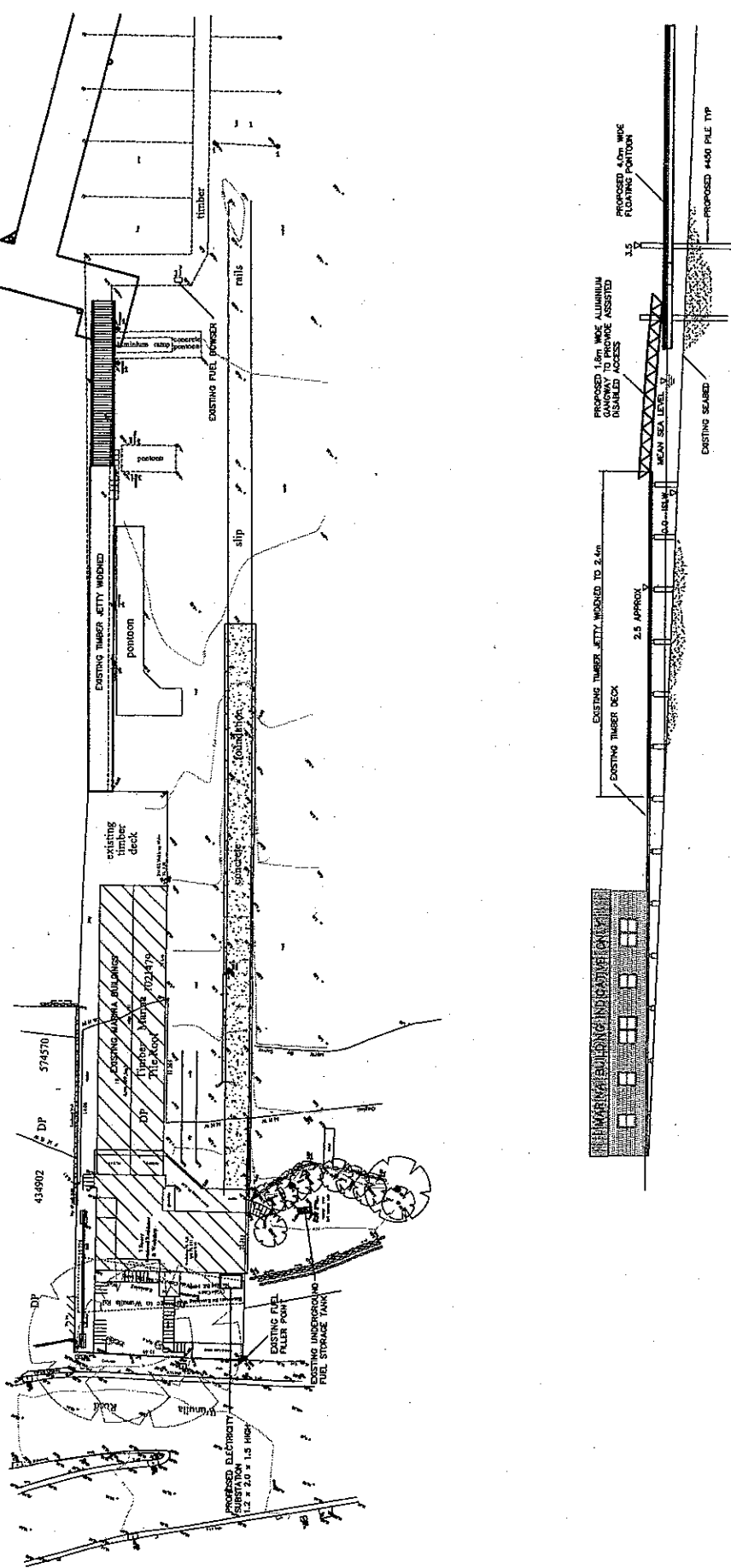
DETAILS SHOWN IN THE ADJACENT ISSUE ARE ONLY TO BE USED WHEN APPROVED BY THE DRAWING APPROVAL PROCESS. DRAWINGS ARE ONLY AS NOTED FOR DRG STATUS. THE ORIGINAL DRAWINGS CAN BE FOUND ON THE REGISTER (TRANSIT) FROM 14/5/07 HELD BY PATTERSON BRITTON & PARTNERS

Client: ADDENBROOKE PTY LTD
Project: ROSE BAY AND POINT PIER MARINA REDEVELOPMENT
Consulting engineers: Patterson Britton & Partners Pty Ltd
 101 Mount Street
 North Sydney 2060
 Telephone (02) 9677 1518
 Fax (02) 9677 1241
 A.C.N. 807 629 078

Drawn No.: 5635-110
Sheet: A
Cost File No.: 7741(A)

**ROSE BAY MARINA
 PLAN AND ELEVATION**

NOTES
 1. ALL LEVELS TO ZERO ON THE FIRST DECKSON THE
 GAUGE WHICH IS APPROXIMATELY 0.35m BELOW
 AUSTRALIAN HEIGHT DATUM (AHD).
 2. SERVICES NOT SHOWN.



DRG STATUS: PRELIMINARY, NOT FOR CONSTRUCTION

Rev	Date	Appr	Chk	Drawn	Scale	Notes
1	28.10.06	OWB	OWB	OWB		DETAILS OF ISLAND

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Client: ADDENBROOKE PTY LTD
Project: ROSE BAY AND POINT PIPER MARINA REDEVELOPMENT

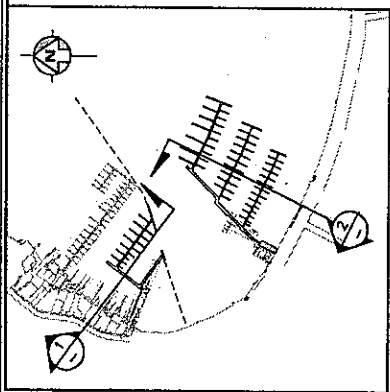
Consulting engineers: PATERSON BRITTON & PARTNERS Pty Ltd
 104 Mount Street
 Rose Square 200
 Singapore 605 007 1618
 Email: info@pbr.com.au
 A.C.N. 605 255 258

Drawing No.: 5635-411
Sheet: A
Scale: As Shown

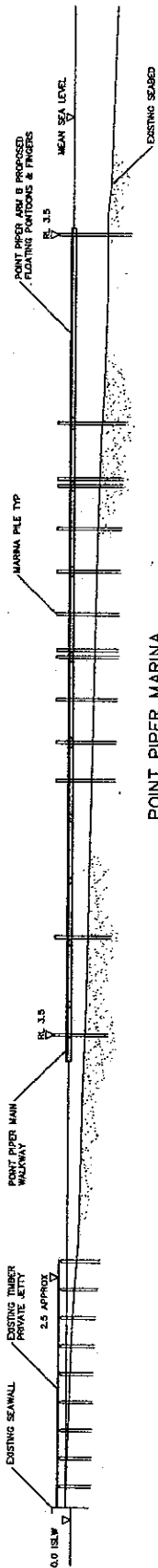
**POINT PIPER MARINA
 PLAN AND ELEVATION**

NOTES

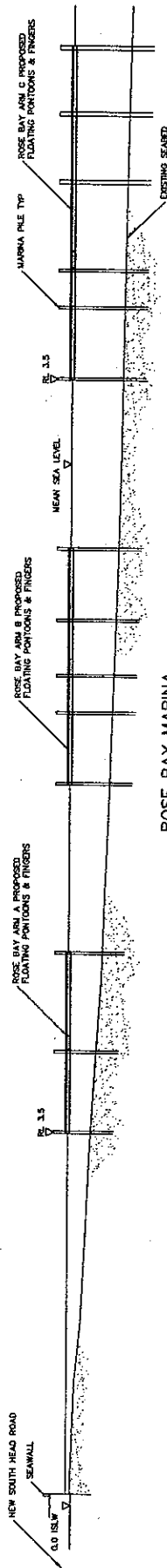
1. ALL LEVELS TO BE SHOWN ON THE SHEET DENOTE THE CHANCE WHICH IS APPROXIMATELY 10% (AS PER AUSTRALIAN HEIGHT DATUM (AHD)).
2. VESSELS NOT SHOWN FOR CLARITY.



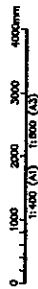
KEY PLAN



POINT PIPER MARINA SECTION 1



ROSE BAY MARINA SECTION 2



DRG STATUS: PRELIMINARY, NOT FOR CONSTRUCTION

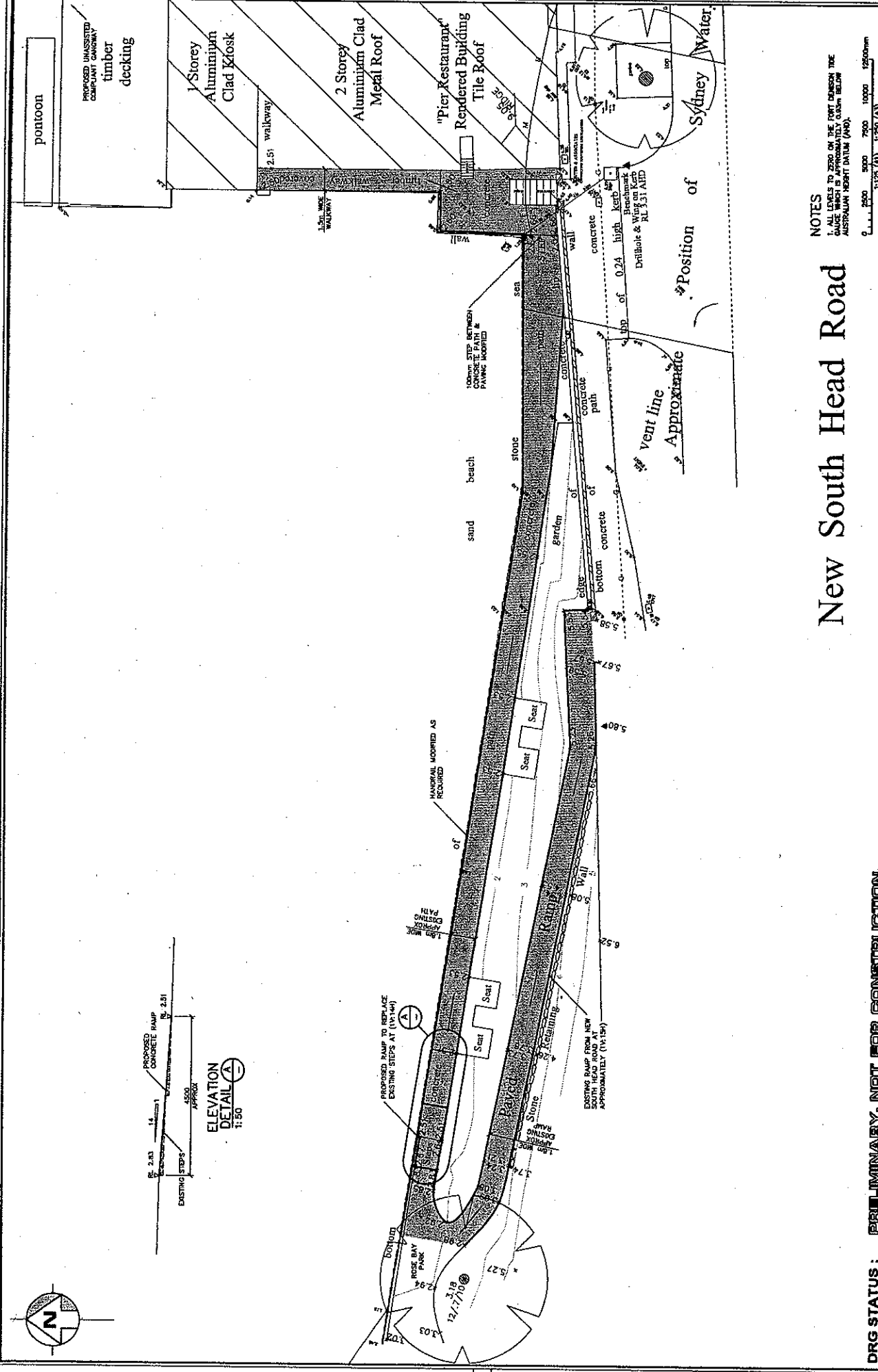
Issue	Date of Issue	Draw'n	Check'd	Appr'd	Date
A	ISSUED WITH DRG SUBMISSION	1/1/19	1/1/19	1/1/19	28/11/08

DETAILS SHOWN IN THE ADJACENT ISSUE ARE ONLY TO BE USED WHEN APPROVED BY THE DRAWING APPROVAL PROCESS. DRAWINGS ARE ONLY AS NOTED FOR DRG STATUS. THE ORIGINAL SIGNATURES CAN BE FOUND ON THE REGISTER/TRANSMITTAL FORM IN 4.12 HELD BY PATTERSON BRITTON & PARTNERS

Client: ADDENBROOKE PTY LTD
Project: ROSE BAY AND POINT PIPER MARINA REDEVELOPMENT
Consulting engineers: Patterson Britton & Partners Pty Ltd
 104 Mount Street
 North Sydney NSW
 Telephone: (02) 9507 1019
 Facsimile: (02) 9507 1941
 A.C.N. 009 200 228

The ROSE BAY AND POINT PIPER MARINA REDEVELOPMENT MARINA SECTIONS

Drawing No. 5635-112
 Sheet A
 Cost File No. 5635-112



New South Head Road

NOTES
 1. ALL LEVELS TO ZERO ON THE FORT DENISON TIDE GAUGE WHICH IS APPROXIMATELY 0.36m BELOW AUSTRALIAN MEAN TIDE (AMT).

Drawing No.	5638-113
Client	ADDENBROOKE PTY LTD
Project	ROSE BAY AND POINT PIER MARINA REDEVELOPMENT
Scale	AS SHOWN
Sheet No.	A
Sheet of	1

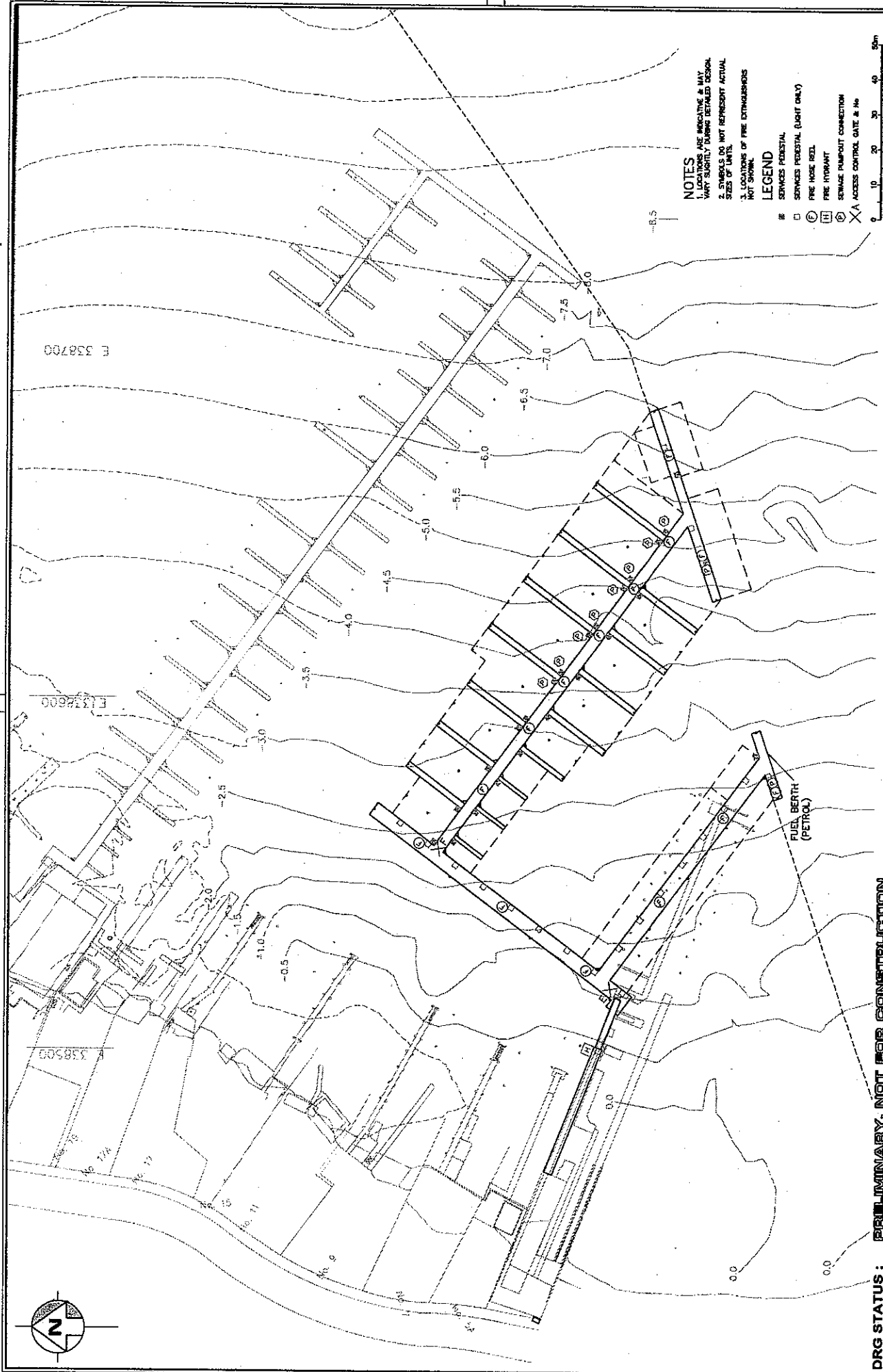
**ROSE BAY MARINA
 PROPOSED DISABLED ACCESS
 WESTERN SIDE OF EXISTING BUILDING**

Client: ADDENBROOKE PTY LTD
Consulting engineers: PATTERSON BRITTON & PARTNERS PTY LTD
 101 Macquarie Street
 North Sydney 2060
 Telephone: (02) 9587 1019
 Facsimile: (02) 9587 1231
 A.C.N. 629 229 278

DRG STATUS: PRELIMINARY, NOT FOR CONSTRUCTION

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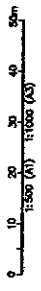
Issue	Date	Drawn	Checked	Approved
A	12/17/06	YIP	CHEN	CHEN
ISSUED WITH EIR SUBMISSION Details of Issues				



NOTES
 1. DIMENSIONS ARE INDICATIVE & MAY VARY SLIGHTLY FROM DETAILLED SERIALS.
 2. SERVICES ARE NOT REPRESENTED ACTUAL SIZES OF MATERIAL.
 3. DIMENSIONS OF FIRE EXTINGUISHERS NOT SHOWN.

LEGEND

- # SERVICES PEDESTAL
- SERVICES PEDESTAL (LIGHT ONLY)
- ⊙ FIRE HOSE REEL
- ⊕ FIRE HYDRANT
- ⊗ SEWAGE PUMP/OUT CONNECTION
- ⊗ ACCESS CONTROL GATE & BAR



DRG STATUS: PRELIMINARY, NOT FOR CONSTRUCTION

DETAILS SHOWN IN THE ADJACENT ISSUE OF THIS DRAWING ARE NOT TO BE USED FOR CONSTRUCTION. THE DRAWING APPROVAL PROCESS, DRAWINGS ARE ONLY TO BE USED WHEN APPROVED BY PATERSON BRITTON & PARTNERS PTY LTD. ONLY AS NOTED FOR BAY STATUS. THE ORIGINAL DRAWINGS CAN BE FOUND ON THE REGISTERED DRAWING PLATFORM. THIS DRAWING IS HELD BY PATERSON BRITTON & PARTNERS.

Issue	Rev'd	By	Date	Checked	Approved
A	ISSUED WITH DS SUBMISSION	DS	20/02/2025		

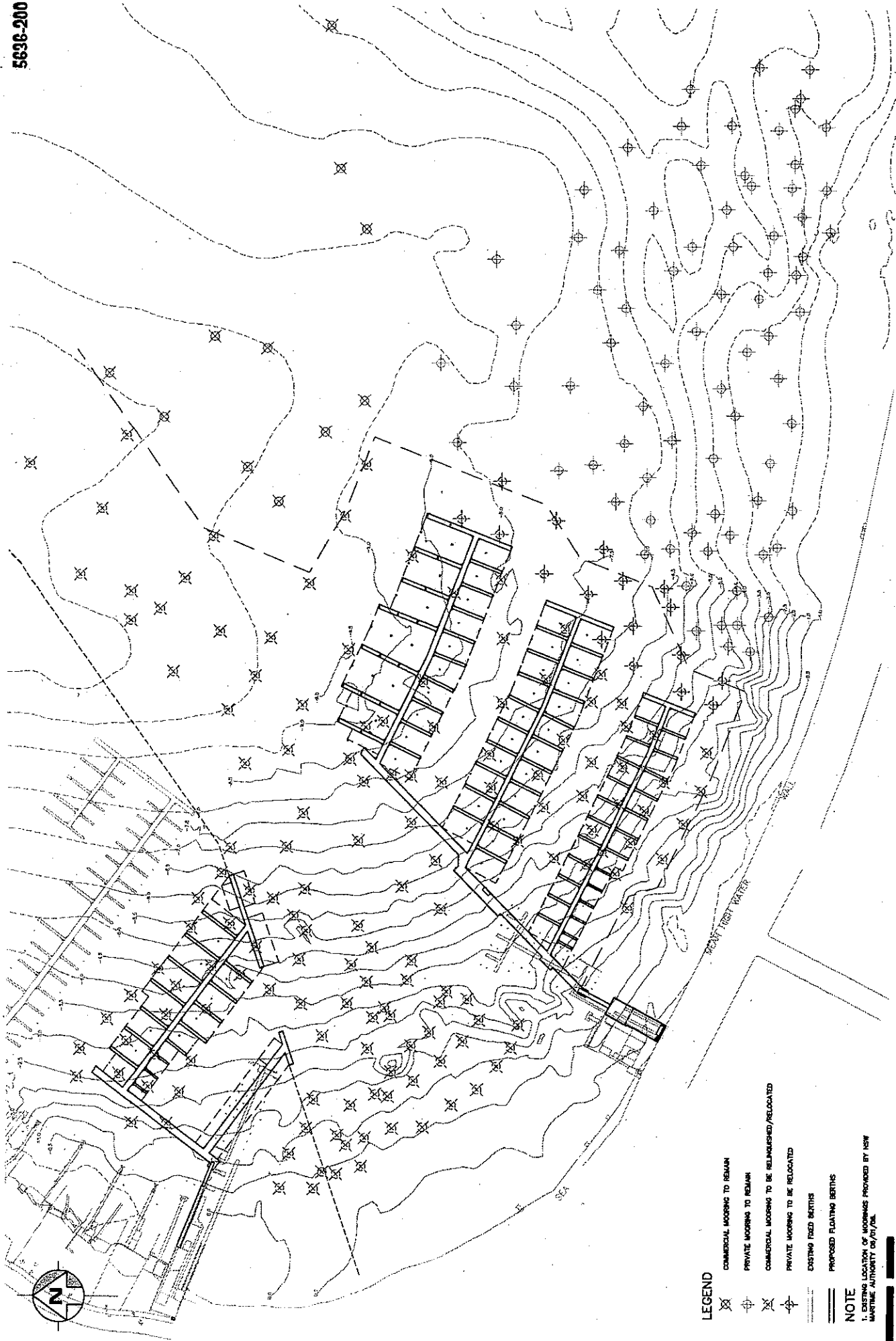
**POINT PIPER MARINA
 PROPOSED LOCATION OF SERVICES**

Client: ADDENBROOKE PTY LTD
 Project: ROSE BAY AND POINT PIPER MARINA REDEVELOPMENT

Engineer: PATERSON BRITTON & PARTNERS PTY LTD
 consulting engineers

100 Macquarie Street
 North Sydney NSW
 New South Wales 1585
 Australia 1571 9000 1571
 A.C.N. 602 839 029

Drawing No. 56335-121
 Issue A
 Date 15/02/2025



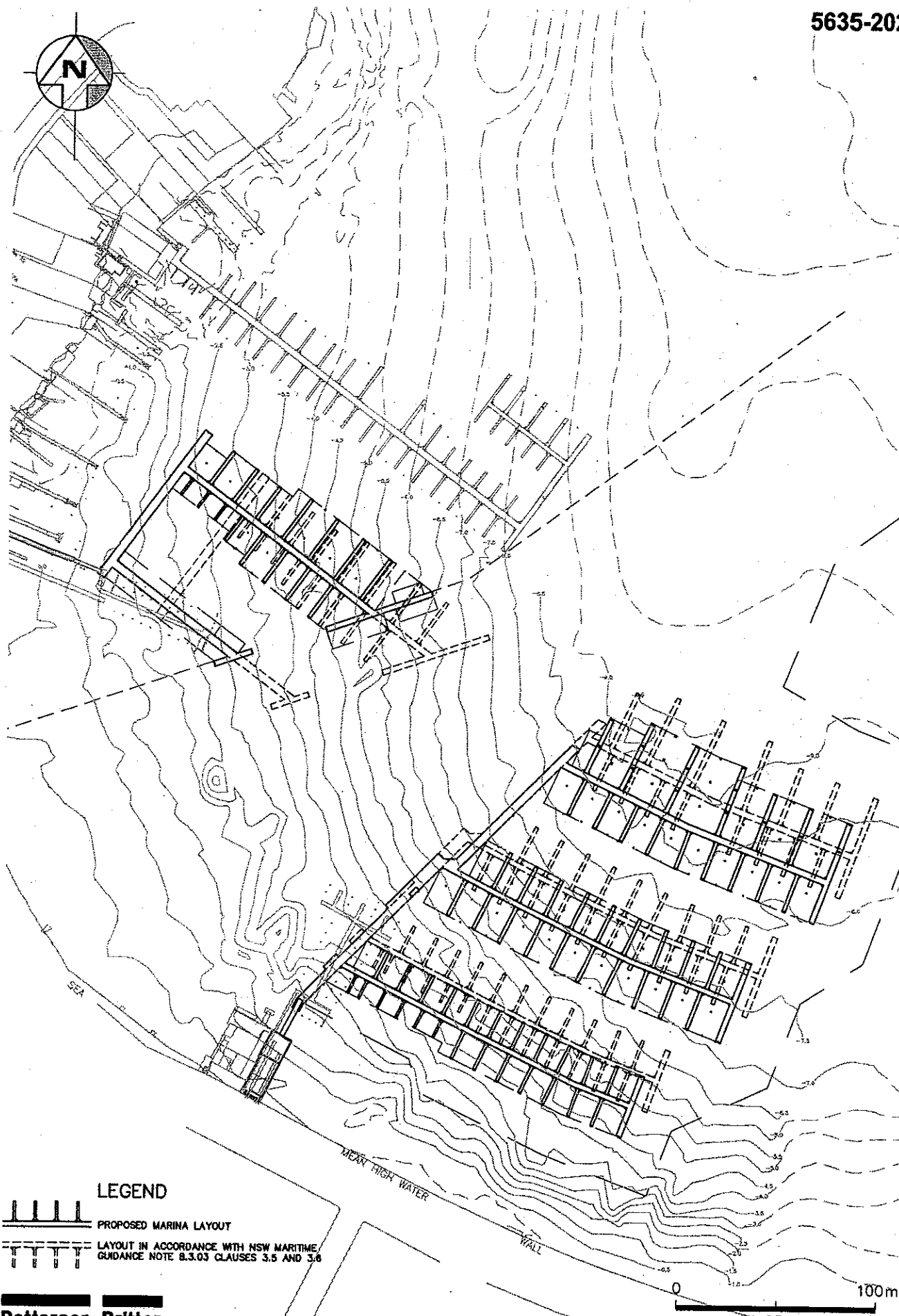
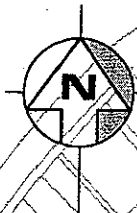
- LEGEND**
- ☒ COMMERCIAL MOORING TO REMAIN
 - ☒ PRIVATE MOORING TO REMAIN
 - ☒ COMMERCIAL MOORING TO BE RELOCATED/RELOCATED
 - ☒ PRIVATE MOORING TO BE RELOCATED
 - ☒ EXISTING FIXED BERTHS
 - ☒ PROPOSED FLOATING BERTHS

NOTE
 1. EXISTING LOCATION OF MOORINGS PROVIDED BY NSW MARITIME AUTHORITY 06/07/06

Patterson Britton & Partners Pty Ltd
 consulting engineers

**ROSE BAY AND POINT PIPER MARINA REDEVELOPMENT
 MOORINGS PRE-REDEVELOPMENT**

REDEVELOPMENT OF ROSE BAY AND POINT PIPER MARINAS - PRELIMINARY CONSTRUCTION PROGRAM FOR ACOUSTIC ASSESSMENT (SEPTEMBER 2006)																								
ITEM	DATE																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	Site establishment																							
2	Preliminary work																							
2.1	Decommission some of the existing services																							
2.2	Repair existing service/instal temporary services																							
2.3	Other preparatory works																							
3	Relocation of berth moorings																							
3.1	Rebate private vessel moorings																							
3.2	Remove existing mooring blocks and rebatse vessels - row C																							
3.3	Remove existing mooring blocks and rebatse vessels - row B																							
3.4	Remove existing mooring blocks and rebatse vessels - row A																							
3.5	Rebate vessels from berths																							
4	Removal																							
4.1	Wharves & jetties																							
4.2	Slipway																							
5	Installation of floating berths																							
5.1	Piling - row C																							
5.2	Piling - row B																							
5.3	Piling - row A																							
5.4	Structural steel																							
5.5	Insulation of floating units - row C																							
5.6	Insulation of floating units - row B																							
5.7	Insulation of floating units - row A																							
6	Services																							
6.1	Sewage pumpout facility																							
6.2	Electricity																							
7	Fuel facility																							
7.1	Install permanent piles																							
7.2	Install precast concrete caisson																							
7.3	Install precast steel tanks																							
7.4	Install precast reinforced concrete deck																							
7.5	Install mechanical and electrical equipment																							
8	Security fencing and gates																							
9	Site restoration/cleanup																							
10	Preliminary work																							
10.1	Decommission some of the existing services																							
10.2	Adjust existing services/instal temporary services																							
10.3	Other preparatory works																							
11	Relocation of berth moorings																							
11.1	Remove existing mooring blocks and rebatse vessels																							
11.2	Rebate vessels from berths																							
12	Removal																							
12.1	Wharves & jetties																							
13	Installation of floating berths																							
13.1	Piling																							
13.2	Gateway																							
13.3	Installation of floating units																							
14	Widen / Replace timber jetty																							
14.1	Piling																							
14.2	Install Decking																							
15	Services																							
15.1	Sewage pumpout facility																							
15.2	Electricity																							
16	Fish facility																							
16.1	Relocation of fuel bower on new path																							
17	Security fencing and gates																							
18	Site restoration/cleanup																							
19	Site decontamination																							



LEGEND



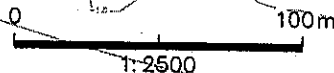
PROPOSED MARINA LAYOUT



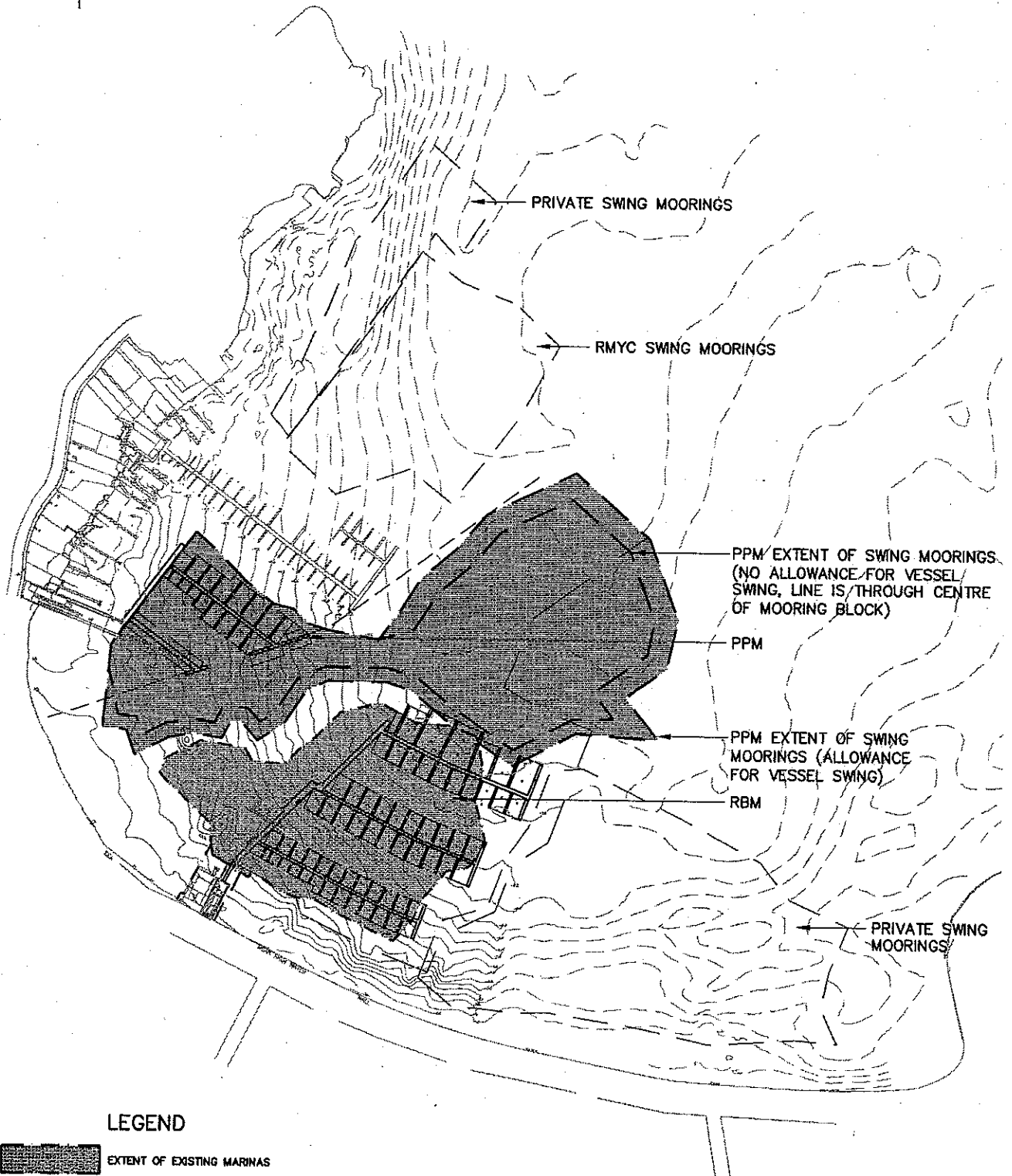
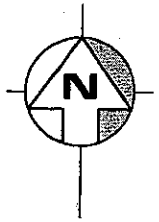
LAYOUT IN ACCORDANCE WITH NSW MARITIME GUIDANCE NOTE 8.3.03 CLAUSES 3.5 AND 3.6

Patterson Britton & Partners Pty Ltd

consulting engineers



LAYOUT COMPLIANT WITH NSW MARITIME GUIDANCE NOTE 8.3.03 CLAUSES 3.5 AND 3.6



LEGEND

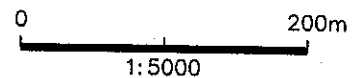
EXTENT OF EXISTING MARINAS

NOTE

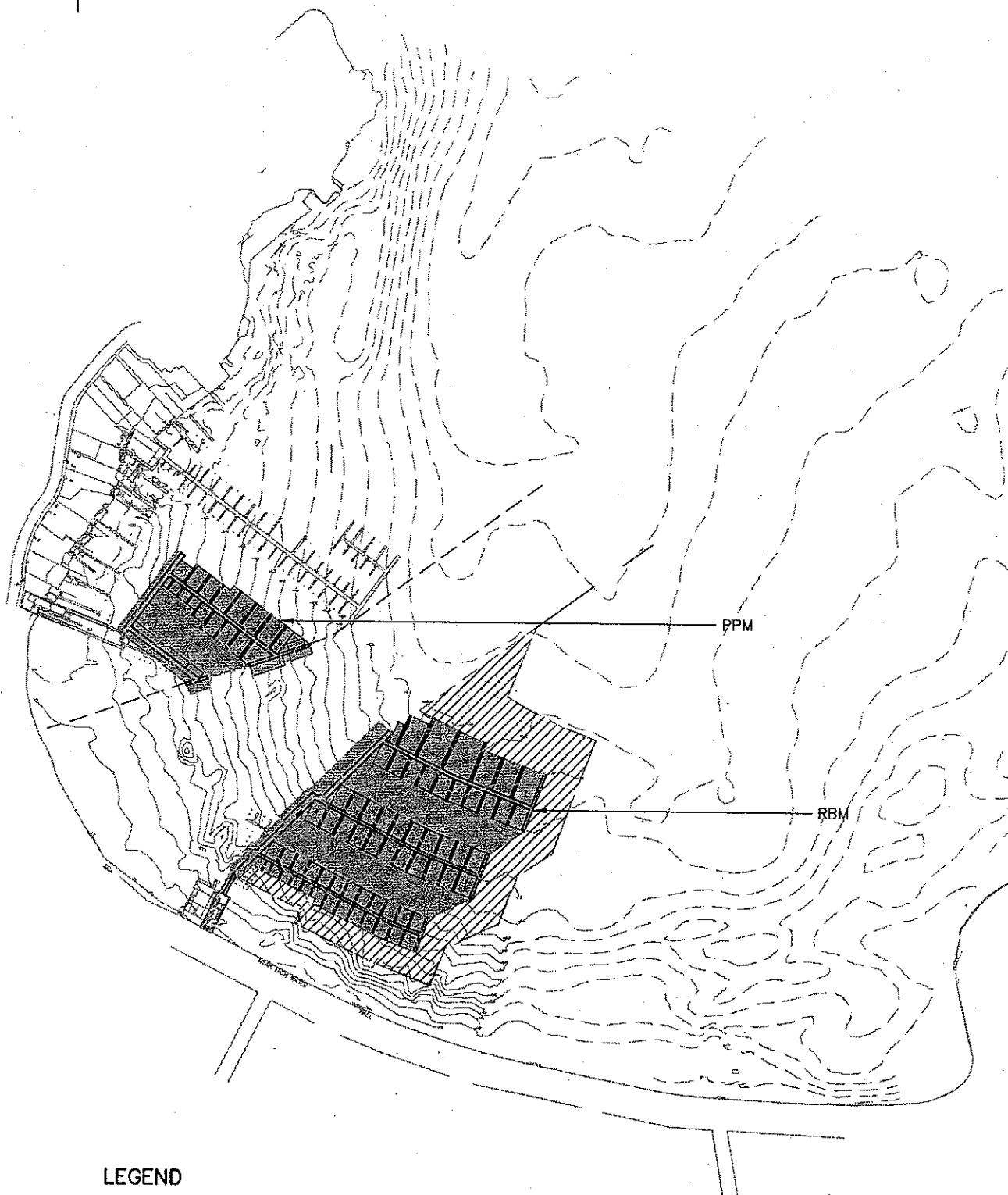
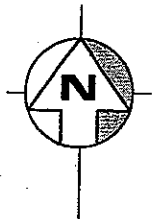
LOCATION OF EXISTING SWING MOORING BLOCKS PROVIDED BY NSW MARITIME

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EXTENT OF EXISTING MARINAS AND SWING MOORINGS

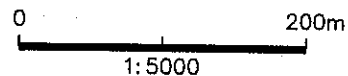


LEGEND

-  EXTENT OF PROPOSED MARINA STRUCTURES
-  EXTENT OF PROPOSED EXTERNAL FAIRWAY AT ROSE BAY MARINA


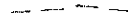






**Patterson Britton
& Partners Pty Ltd**

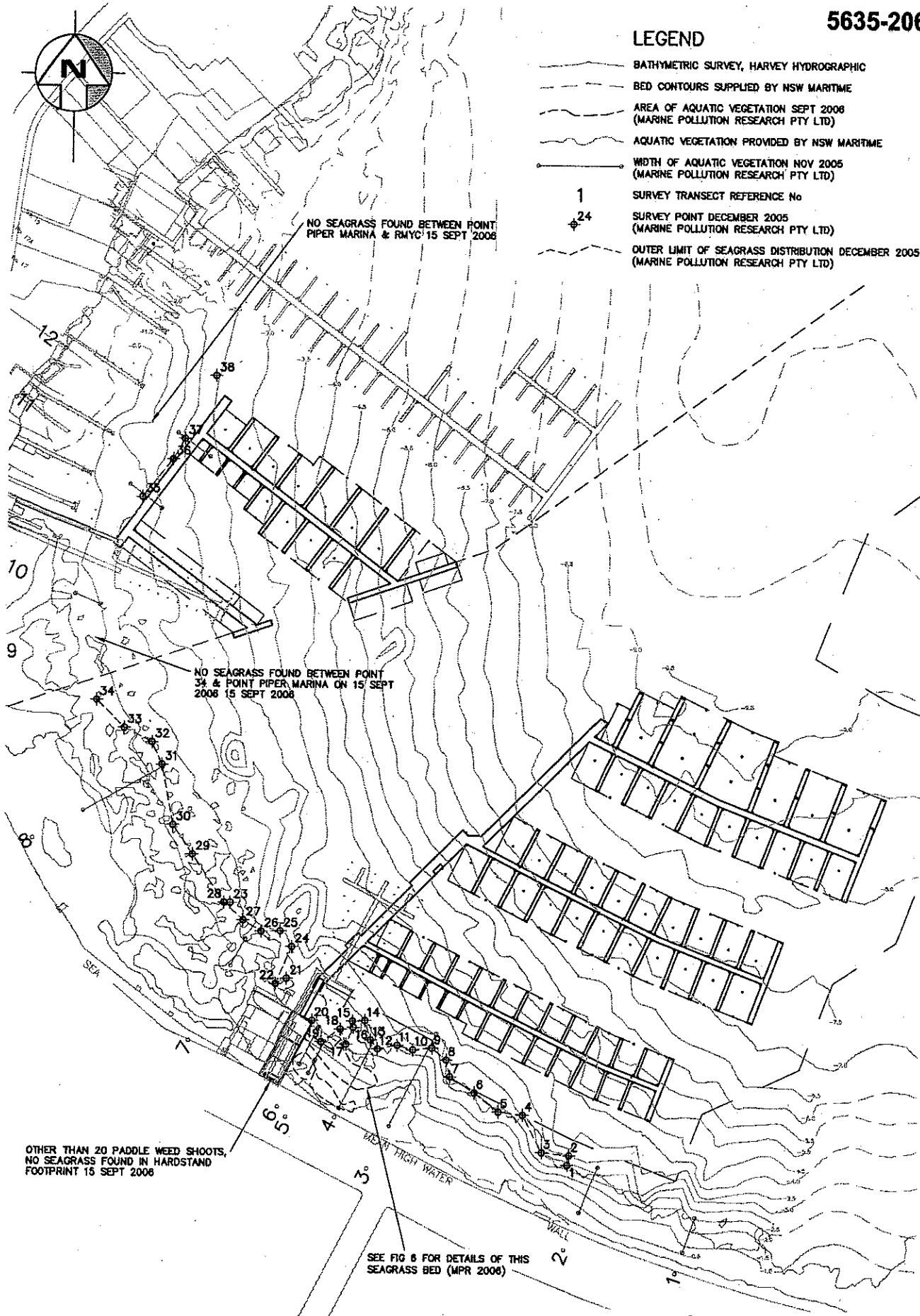
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**EXTENT OF
PROPOSED MARINAS**

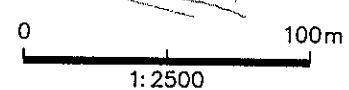
LEGEND

-  BATHYMETRIC SURVEY, HARVEY HYDROGRAPHIC
-  BED CONTOURS SUPPLIED BY NSW MARITIME
-  AREA OF AQUATIC VEGETATION SEPT 2006 (MARINE POLLUTION RESEARCH PTY LTD)
-  AQUATIC VEGETATION PROVIDED BY NSW MARITIME
-  WIDTH OF AQUATIC VEGETATION NOV 2005 (MARINE POLLUTION RESEARCH PTY LTD)
-  SURVEY TRANSECT REFERENCE No
-  SURVEY POINT DECEMBER 2005 (MARINE POLLUTION RESEARCH PTY LTD)
-  OUTER LIMIT OF SEAGRASS DISTRIBUTION DECEMBER 2005 (MARINE POLLUTION RESEARCH PTY LTD)



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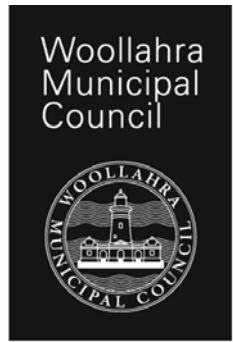
Patterson Britton & Partners Pty Ltd
consulting engineers



**ROSE BAY & POINT PIPER MARINAS
AQUATIC VEGETATION SURVEYS**

Memorandum Annexure 2

Date 12 November 2007
File No. 871.G
To Peter Kauter – Executive Planner
CC
From David Sheils - Manager Public Open Space
Subject ROSE BAY MARINA DA 766/2006/1



ABN 32 218 483 245

Redleaf Council Chambers
536 New South Head Road
Double Bay NSW 2028
Correspondence to
General Manager
PO Box 61
Double Bay NSW 1360
DX 3607 Double Bay
records@woollahra.nsw.gov.au
www.woollahra.nsw.gov.au
Telephone (02) 9391 7000
Facsimile (02) 9391 7044

Comments

I have reviewed the Environmental Impact Statement and associated supporting documents and comment on the proposed impact on Rose Bay Park, its users and the Public domain area of New South Head Road.

1. Publicly accessible marinas and pedestrian access through Rose Bay Park

The application lists one of the benefits of the proposal is the opportunity for the public to access the two marinas during operating hours. This suggestion has some merit as it would provide the public further opportunities to access the Harbour.

Benefit could be obtained by encouraging pedestrian access between the two marinas through Rose Bay Park. Increased pedestrian access through the Park would assist to promote public use and generate 'activity' in the park. Whilst Rose Bay Park environment is benefited from being relatively 'secluded', some residents / park users have indicated that they have felt 'uncomfortable' using the park as the site lacks surveillance from adjacent residents, or public roads. Therefore any increased pedestrian activity in the Park for access to the marinas is supported.

Whilst the Rose Bay Marina is proposed to have pedestrian access from the Park, the Point Piper Marina has pedestrian access proposed only from Wunulla Road. The access from Wunulla Road is steep and would discourage pedestrians from seeking to take a relatively level graded walk between to the two marinas using the Park. The opportunity exists for the Point Piper marina to provide pedestrian access from Rose Bay Park at the western end of the slipway.

I have received an email from the applicant's representative dated 24 July 2007, indicating that this proposal would be supported and plans would be provided to Council indicating how this may be done. However, these details have not been provided.

Recommendation

The applicant provides Council details of how pedestrian access is to be achieved from the Point Piper Marina to the northern end of Rose Bay Park, adjacent to the existing underground fuel tank. These plans and the works proposed, when produced and, if satisfactory to Council, may be conditioned to be undertaken as part of any development approval.

2. Public toilet access for Rose Bay Park users

Rose Bay Park provides the ideal setting for long stay users undertaking picnics, using the playground, sitting / relaxing, beaching and launching kayaks / water craft, and, in the warming months, swimming and wadding. These

water based opportunities will increased this year as the beach front has been cleared of catamarans and dinghies will have been installed and rationalized in the dinghy storage facility.

However, one of the constraints for extended day use of the Park is the absence of public toilets. In the early 1900's public toilets existed and the park was popular as a bathing and picnic site. However, as improved public bathing facilities were provided elsewhere, the popularity of the park for swimming declined, the toilets were removed. The decline in use of the Park for swimming may also have been attributed to a decline in water quality. In more recent years some requests for public toilets have been received by Park users, however, we have declined these requests as a result of the high cost and potential to attract anti-social behaviour. This view has also been supported by Rose Bay Police.

Therefore, a public benefit for park users associated with any marina proposal would be the ability for to have access to toilets contained within the marinas. This would contribute greatly to the usability of Rose Bay Park for picnics and all day social gathering and events.

Therefore **condition F** is recommended to provide for public toilet access. Public toilet access would also be improved with the provision of pedestrian access from Rose Bay Park to Point Piper Marina.

3. Disabled access, lighting

Only Rose Bay Marina is provided with disabled access that meets the relevant access standards. This proposal involves the use of the Rose Bay Park pathways and includes a modification which deletes a small flights of steps. These proposed works are not detrimental to the Park's character and will not be in conflict with any other park uses. Therefore the public path modifications are supported (**see condition A**).

However, it is noted that Rose Bay Park is not afforded park lighting as night use of the area has generally been discouraged when considering the absence of passive surveillance. Therefore, to ensure disabled access is provided to the marina after dark, particularly in winter when lighting is required from 5:15pm, lighting would need to be installed along the pathway. Such lighting should be installed by the applicant using Council's standard light fixtures used for Council's public parks and installed to Council's satisfaction. This lighting would be maintained by Marina and the costs of the lighting maintenance and power would be provided by the marina owner. (**See condition B**).

4. Dinghy racks

The proponent has offered as part of the development proposal to install a dinghy storage facility to assist Council in managing the orderly storage of 25 water craft in the Park. The facility as proposed by the applicant, is to be managed by Council, subject to the final design and location being determined in consultation with Council.

Council has recently installed a dinghy storage facility catering for 50 water craft and advertised its availability. We have been able to meet all but a small number of requests for dinghy storage at this facility. Therefore, the need for dinghy storage is reduced. However, it may be feasible to install further dinghy racks should the demand greatly exceed the current level. Alternatively, a kayak storage facility could also be installed subject to demonstrated demand. It is estimated that dinghy rack catering for 25 vessels could be installed for approximately \$17,000.

Therefore, when considering Council has already funded the installation of a dinghy storage facility, the applicant could provide a financial contribution to Council of \$17,000 in lieu of the dinghy storage facility. This funding could then be used by Council to contribute to the cost of any necessary addition dinghy storage, kayak storage, or upgrading the Rose Bay Park playground facility (**see condition C**).

5. Construction access across Rose Bay Park

To protect the amenity and features of Rose Bay Park such as pathways and vegetation, unregulated construction access through Rose Bay Park is not permitted without the authorisation of Council. It is noted that construction access for the marinas is not proposed as the marinas have access from the water of Rose Bay and have street frontage access.

However, it may be feasible to permit certain construction activities, subject to separate application to Council and the imposition of conditions that protect the Park's amenity and features. Where any such access is separately approved, a fee will be imposed in accordance with Council's adopted fees and charges for construction access through parks (**see condition E**).

Building, excavation or demolition material and plant shall not be permitted in Rose Bay Park unless prior written approval has been obtained by Council's Open Space Management Team ([see condition H](#)).

6. Operational access across Rose Bay Park

Until recently, employees of the Point Piper Marina slipway obtained vehicular access through the Park without the authority of Council, the Park's Reserve Trust Manager. The practice, whilst infrequent is not supported as it potentially conflicts with other park users. Particularly when vehicles gain access to the beach frontage. Therefore a condition is recommended to be imposed ([See condition G](#)) to ensure operational access to the marina is not provided through Rose Bay Park.

7. Street Trees

The New South Head Road frontage of Rose Bay Marina contains two mature Hills Weeping Figs. These healthy trees contribute greatly to the tree lined avenue along New South Head Road. The proposal includes the installation of fuel pipes under the Rose Bay Promenade to fuel filling points located near the road kerb. Should the development be approved and to avoid potential disruption to the tree roots and the newly installed Rose Bay Promenade pavement, underground conduits to house fuel pipes have been installed at the cost of the developer.

However, there may be some risk of possible tree damage associated with the transport of construction materials and equipment from New South Head Road to the marina, passing adjacent to the tree. The risk of damage can be reduced with the installation of tree protection measures outlined in [Condition I](#).

A tree security damage bond shall also be imposed with each tree valued at \$30,000 ([see condition J](#)).

8. Fuel handling

To be sent separately

David Sheils
Manager Public Open Space

Recommended conditions if approved

A. [Pathway and handrail materials for Rose Bay Park.](#)

The modifications to the public pathway to facilitate compliance with AS 1428, Part D2 of the BCA for the provision of disability access and incoordance with Drawing No.5635-113 Issue A dated 26.10.06

B. [Pathway lighting to Rose Bay Marina](#)

To facilitate lighting of the disabled access to the Rose Bay Marina, the applicant shall install Council approved light fixtures along the pathway to achieve lighting levels of at least P2 in accordance with AS/NZS 1158.2:2005. The light poles and fixtures shall be consistent with Council's adopted park lighting scheme.

C. [Contribution towards Rose Bay Park watercraft storage / furniture](#)

In lieu of the installation of a dinghy storage facility, the applicant shall provide Council a contribution of \$17,000. This contribution shall be submitted with Council prior to the commencement of works for use on water craft storage facilities and/or park furniture within twelve months of receipt of contribution.

D. [Nil](#)

E. [Construction access](#)

Construction access for the development is not permitted through Rose Bay Park without prior and Council approval. An application may be made to Council to gain vehicular access through Rose Bay Park for construction purposes. Such applications will, if approved, be subject to conditions required to protect the park and the payment of a fee and security deposit in accordance with Council's fees and charges.

F. [Publicly accessible toilets](#)

The development shall make available for public use the toilets and associated washroom facilities. These

facilities shall be available for use during the hours of the marina operations.

- G. Other than for pedestrian access, Rose Bay Park shall not be used for the day to day, operational use of the marinas. Council authorisation is required to be obtained for any proposed vehicular access through Rose Bay Park. Any applications for vehicular access will, if approved, be subject to conditions required to protect the park and the payment of a fee and security deposit in accordance with Council's fees and charges.
- H. Building, excavation or demolition material and plant must not be stored in Rose Bay Park unless prior written approval has been obtained by Council's Open Space Management Team. Any applications for such use will, if approved, be subject to conditions required to protect the park and the payment of a fee and security deposit in accordance with Council's fees and charges.

I. Establishment of Tree Protection Zones

To limit the potential for damage to the two Fig street trees, Tree Protection Zones are to be established prior to demolition, or construction works and must be maintain for the full period of construction. The Tree Protection Zones are to comply with the following requirements;

(a) Tree Protection Zone areas

Council Reference No:	Species	Location	Radius from Trunk (Metres)*
1	<i>Ficus macrocarpa 'hilli'</i>	Western side of 'Pier Restaurant entrance	2m
2	<i>Ficus macrocarpa 'hilli'</i>	Eastern side of 'Pier Restaurant entrance	2m

***NB:** Where this condition relates to street trees and the fence cannot be placed at the specified radius, the fencing is to be positioned so that the entire verge (nature strip) area in front of the subject property, excluding existing driveways and footpaths, is protected.

- (b) Tree Protection Zones are to be fenced with a 1.8 metre high chainmesh or weldmesh fence to minimise disturbance to existing ground conditions. The area within the fence must be mulched, to a depth of 75mm, irrigated and maintained for the duration of the construction works.
- (c) Trunk protection, to a maximum height permitted by the first branches, is to be installed around the trunks of the trees listed in the table below;

Council Reference No:	Species	Location
1	<i>Ficus macrocarpa 'hilli'</i>	Western side of 'Pier Restaurant entrance
2	<i>Ficus macrocarpa 'hilli'</i>	Eastern side of 'Pier Restaurant entrance

A padding material eg. Hessian or thick carpet underlay, is to be wrapt around the trunk first. Harwood planks, 50x100mm and to the maximum possible length, are to be placed over the padding and around the trunk of the tree at 150mm centres. These planks are to be secured in place by 8 gauge wire at 300mm spacing.

- (d) A sign must be erected on each side of the fence indicating the existence of a Tree Protection Zone and providing the contact details of the site Arborist.
- (e) The storage of materials, stockpiling, siting of works sheds, preparation of mixes, cleaning of tools or equipment is not permitted within Tree Protection Zones.

Site personnel must be made aware of all Tree Protection requirements, measures and any actions that constitute a breach of the Conditions of Development Consent with regard to tree protection on site during their site induction.

Standard Condition: B5

J. Conditions which must be satisfied prior to the issue of any construction certificate

A.1 Payment of Security, Levies and Fees (S80A(6) & S94 of the Act, Section 608 of the Local Government Act 1993)

Description	Amount	Indexed	Council Fee Code
LONG SERVICE LEVY under Building and Construction Industry Long Service Payments Act 1986			
Tree Damage Security Deposit – Making good any damage caused to any public tree as a consequence of the doing of anything to which the consent relates.	\$60,000	No	T600
INSPECTION FEES under section 608 of the Local Government Act 1993			
Public Tree Management Inspection Fee	\$155.00	No	T95

Standard Condition: C5

REFERRAL RESPONSE – TECH. SERVICES

FILE NO: DA 766/2006/1
ADDRESS: 594-596 New South Head Road ROSE BAY 2029
PROPOSAL: Redevelopment of Rose Bay and Point Piper Marinas
FROM: Nick Tomkins – Team Leader, Development Engineer
TO: Mr Peter Kauter

I refer to the following documents received for this report:

1. Marina plans and drawings by Patterson Britton and Partners
2. Environmental Impact Statement Volumes 1 and 2, November 2006 Prepared by JBA Urban Planning Consultants Pty Ltd.
3. CMP by Patterson Britton and Partners Appendix B dated 22 December 2006 part 10
4. CMP by Advanced Marina Management dated 20 Dec 2006 Appendix J
5. Loading and Work Zone comments by John Coady Consultants P/L Appendix K
6. Fuel tank comments by Patterson Britton and Partners Appendix B dated 22 December 2006

Comments have been prepared on the following.

Impacts on Council Infrastructure comments

- Fuel Storage
 - *conduits have been placed under new Rose Bay promenade works so as not to disturb recently constructed works should the development proceed*
 - *Details on spillage control bunding area are yet to be provided*
 - *Licence agreement for fuel tanks has not progressed.*
- Construction Management Plan (CMP) – *The CMP by Advanced Marina Management dated 20 Dec 2006 Appendix J is brief and reiterated that the majority of materials, builders etc would come by barge. For small deliveries the CMP stated that Loading Zones be provided for deliveries. This matter is yet to be resolved by Council's Traffic Committee - see traffic comments below*
- Possible boundary encroachment – *It appears that the existing building in New South Head Road is supported by the existing seawall. Should this be the case then the structure is to be removed or a legal agreement put in place. This is to be resolved and clarified by the applicant.*

Traffic comments

Council at it's meeting of 10/09/2007 resolved:

- “A. That Council write to the applicant for the Point Piper Marina DA to request the following information:
- i. That the applicant demonstrate the necessity for an 18 metre long Loading / No Parking Zone to accommodate the fuel and general deliveries necessary to service the proposed development.
 - ii. That the applicant provide details of the number, type, frequency and times of the day that the deliveries occur currently, including the types of vehicles used for these deliveries.
 - iii. That the applicant provide details of the number, type, frequency and times of the day that the deliveries will occur for the proposed development, including the types of vehicles used for these deliveries.
- B. That the Wyuna Road / Wunulla Road intersection be redesigned in consultation with the operators of the current Marina to improve the safety for vehicles currently using the intersection while accommodating the fuel and general delivery vehicles and reducing the impact of this traffic facility on the on-street parking availability at this location.
- C. That the information provided by the applicant and the proposed redesign be the subject of a further report to the Woollahra Local Traffic Committee.”

To date no additional information as requested above has been provided by the applicant.

Comments on other issues have been provided separately by Traffic Section

RECOMMENDATION

Council's Development Engineer has determined that the proposal is not satisfactory in its current state. This is due to inadequate documentation provided in support of the DA. As detailed above

19 January 2007

REFERRAL RESPONSE - HEALTH

FILE NO: DA 766/2006/1
ADDRESS: 594-596 New South Head Road ROSE BAY 2029
PROPOSAL: Redevelopment of Rose Bay and Point Piper Marinas
FROM: Louie Salvatore
TO: Peter Kauter

Comments are provided in relation to the Noise Impact Planning Assessment prepared by Atkins Acoustics and Associates Pty Ltd (Ref: 36.5959.R1:CFCD2 Rev 02 dated October 2006) for Addenbrooke Pty Ltd in relation to the proposed Rose Bay & Point Piper Marina Redevelopment, Rose Bay.

Proposal

The Rose Bay/Point Piper proposal involves the construction of two separate floating marinas. Specifically:

Rose Bay

- *Removal of existing fixed berths*
- *Removal of disused slipways*
- *Installation of low profile floating berths (124) and walkway*
- *Construction of hardstand deck area*
- *Upgraded fuel facility and sewage pump out facility*
- *Upgraded power supply*
- *Upgraded disability access*
- *Casual public berths*

Point Piper

- *Removal of existing fixed berths*
- *Removal of disused slipways*
- *Installation of low profile floating berths (35) and walkway*
- *Upgraded fuel facility and sewage pump out facility*
- *Upgraded power supply*
- *Upgraded disability access*
- *Casual public berths*
- *Holding area for existing slipways*

Principal noise issues identified and assessed in the report include:

- Construction noise during development of the facilities, especially piling activities
- Operational noise from boat manoeuvring (powerboats and yachts)
- Mechanical plant and equipment installed on the marinas including pumps and substations
- Existing activities associated with the Rose Bay and Point Piper Marinas such as administration, brokerage, café and workshop will not change as a result of the proposed redevelopment. No dredging is involved as part of the proposal.

The proposed operating hours considered in the report for noise assessment purposes were:

- Marina Access:* 7 days a week, 24 hours (customers only)
Other Services: 7 days a week, 7am to 6pm (summer)
 7 days a week, 7am to 5pm (winter)

NOISE IMPACT PLANNING ASSESSMENT

Residential areas of the nearest potentially affected properties to the proposed redevelopment have been identified as follows:

- **R1** Residences on Wunulla Road, Point Piper (west)
- **R2** Residences on Wunulla Road & New South Head Road, Point Piper (south-west)
- **R3** Residences on New South Head Road (south)

Note: Noise modelling and assessment of impacts from the proposed site works and noise contour plots have been prepared for descriptive purposes to identify the likely extent of the noise catchment area.

Existing Noise Levels

For the purpose of establishing goals for assessing noise from the proposed redevelopment, the existing ambient noise levels were measured from 8 November, 2005 to 16 November, 2005.

Noise monitoring equipment was placed on the balcony of a residence fronting Rose Bay, shielded from traffic noise and located approximately 200m from New South Head Road. Noise levels at this location were also utilised for the assessment of operational and construction noise for all residential properties. Table 2 of the Noise Impact Planning Assessment details a summary of the noise measurement results:

	Day	Evening	Night
Rating Background Level (RBL)	50	50	40
Ambient L_{aeq}	59	55	49

*Note: Daytime: (7am to 6pm)
 Evening: (6pm to 10pm)*

Night-time: (10pm to 7am)

Operational Noise & Plant and Equipment Goals

The report has applied the Department of Environment and Conservation's Industrial Noise Policy (INP). The assessment procedure for industrial noise sources has two components:

- Controlling intrusive noise impacts in the short term for residences.
- ***Maintaining noise level amenity for particular land uses for residences and other land uses.***

The **Amenity Criterion** ($L_{Aeq, Period}$) has been applied for assessing Operational Noise Goals. Protecting noise amenity aims to limit continuing increases in noise levels, with maximum ambient noise levels within an area from an industrial noise source not exceeding acceptable noise levels specified in Table 2.1 of the INP. These levels represent current best practice for assessing industrial noise sources.

The recommended noise goals from operational sources for all residential premises are:

	Day	Evening	Night
Plant/Boats ($L_{Aeq, Period}$)	49	45	39

Yacht & Powerboat Manoeuvring Activities

Noise levels from yachts and powerboats utilising small outboard and inboard motors were predicted using ENM environmental noise computer modelling (approved by the DEC), which takes account of noise attenuation due to increase in distances, water and ground effect, atmospheric absorption, shielding from intervening structures and topography. Details provided by the client considering typical usage has suggested that four (4) vessels-day, one (1) vessel-evening and one (1) vessel-night for Rose Bay, whilst for Point Piper two (2) vessels-day, one (1) vessel-evening and one (1) vessel-night for envisaged simultaneous activities over a typical fifteen to 30 (15-30) minute period. *These are typical maximum usage rates during summer.*

The number of vessels utilised for the modelling are higher than projected peak usage during the summer months to provide a more conservative assessment, although actual operations are expected to be lower (with the exception on Boxing Day, Australia Day and New Years Eve).

Recommendation

- 1. The noise modelling results obtained by Atkins Acoustics and Associates Pty Ltd using the ENM (Environmental Noise Model Computer Program) indicate that noise levels from operational activities for the marinas (noise from powerboat and yacht manoeuvring) will satisfy the project specific noise goals for day, evening and night at all nearest potentially affected properties. (Refer to Table 7 of the Noise Impact Planning Assessment for results demonstrating compliance).***

Mechanical Plant & Equipment

Specific details of mechanical plant and equipment to be used on the marina have not been included in the Noise Impact Planning Assessment as they were not available at the time of assessment. It is anticipated that fuel pumps and waste pump facilities will be proposed.

The report states that plant and equipment will be selected on acoustic performance and installed to achieve the project specific noise goals as outlined in Section 5.1.2 of the Noise Impact Planning Assessment.

Recommendation

- 1. That the recommendations outlined in Section 5.5 within the Noise Impact Planning Assessment prepared by Atkins Acoustics and Associates Pty Ltd (Ref: 36.5959.R1:CFCD2 Rev 02 dated October 2006) be implemented for all proposed mechanical plant and equipment of the Rose Bay and Point Piper Marina Redevelopment.***

Construction Noise & Vibration Assessment

Proposed construction works involve:

- removal of fixed marina berths at Rose Bay and Point Piper
- removal of an existing slipway at Rose Bay marina
- installation of new floating marina berths and associated piles
- construction of concrete hardstand and fuel storage facility (Rose Bay)
- widening of a section of the existing fixed timber jetty at Point Piper
- installation of improved services to the marina including electricity, fuel and sewage pump out facilities

The main source of noise envisaged during the construction program is from *piling activities*. It is proposed that construction, supply of materials and removal of materials from the site would be conducted from the water by barge. Construction activities would be restricted between 8am and 5pm, Monday to Friday, and 8am to 1pm on Saturday.

Construction of the hardstand and fuel storage facility will be with pre-cast concrete and pre-fabricated steel tanks supported by circular steel piles. Piling activity

(concrete and steel) would involve a piling hammer but 20-30% of piles may be “jetted”. Timber piles would be driven for the widening of the timber jetty at Point Piper.

Construction Noise Goals

The assessment criteria to be used for construction noise activities is that documented within the Department of Environment and Conservation’s *Environmental Noise Control Manual (1994, Chapter 171)*. The noise goals depend on the duration of the construction activities as follows:

- for construction periods limited to 4 weeks, the LA 10,15min noise levels should not exceed the LA90 background by more than 20dB(A)
- for construction periods between 4 weeks and 26 weeks, the LA 10,15min noise levels should not exceed the LA90 background by more than 10dB(A)
- for construction periods longer than 26 weeks, the LA 10,15min noise levels should not exceed the LA90 background by more than 5dB(A)

The envisaged duration of **construction activities is 21 weeks**, with a total duration of **piling activities estimated to be 10 weeks**.

The background noise (RBL) measurement for daytime was 50 dB(A). Therefore, given the above assessment criteria, the following noise goals are applicable for construction noise activities:

	Existing Daytime Background LA90	Noise Assessment Goal	
		Less than 4 weeks	4 to 26 weeks
R1-Wunulla Rd (west)	50dB(A)	70dB(A)	60dB(A)
R2-Wunulla Rd & New Sth Hd Rd (south-west)	50dB(A)	70dB(A)	60dB(A)
R3-New Sth Hd Rd (south)	50dB(A)	70dB(A)	60dB(A)

Noise and vibration levels from construction activities

The *DEC, Assessing Vibration: a technical guideline, ENCM and AS 2670.2-1990* recommend goals for assessing of potential disturbance to the occupants of buildings. *Table 9* contained within the Noise Impact Planning Assessment prepared by Atkins Acoustics and Associates Pty Ltd (Ref: 36.5959.R1:CFCD2 Rev 02 dated October 2006) presents a summary of the vibration levels. Where levels exceed goals set for continuous vibration, activities should be restricted between 7am and 6pm Monday to Friday and 8am to 1pm Saturday.

Specifically, with intermittent vibration activities that will be associated with piling operations, for the purpose of noise modelling, a noise audit of piling operations (timber piles) was conducted during September 2006 at Double Bay. Noise levels measured over a 1, 5 or 15 minute periods were typically in the order of 69-73 dB(A) @ 15m. It is anticipated that noise levels from installing concrete piles (majority of the marina) would be lower than for timber piles as a result of the closer coupling of the piling ‘helmet’ and hammer with the pile.

Predicted noise levels considering distance attenuation only in conjunction with environmental noise computer modelling (ENM) utilised to predict noise levels considering distance, barriers, water and ground effect, atmospheric absorption and shielding from intervening structures and topography, identifies that noise levels from piling activities would satisfy the medium term construction noise goal (4 to 26 weeks) for all scenarios except an exceedance of 2 dB(A) during scenario D at R!-Wunulla Rd (west).

The report states that should noise exceedances be confirmed from noise audits during piling activities, additional amelioration measures will be considered. **This is considered unsatisfactory and that Council request detail of all noise mitigation strategies prior to the commencement of piling activities should the duration of such activities be prolonged for a period greater than 26 weeks.**

The modelling has considered 3 piling rigs operating simultaneously as a worst case scenario, in practice there may only be 1 or 2 rigs driving piles. Higher levels of noise may be experienced from the intermittent use of chainsaw(s) to prepare and trim timber piles (1-2 minutes). *To avoid potential annoyance from piling noise, activities are to be restricted between 8am to 12 midday and 2pm to 5pm Monday to Friday.*

Recommendation

- 1. That the applicant provide Council detail of all noise mitigation strategies prior to the commencement of piling activities, to meet noise assessment goals outlined in the Department of Environment and Conservation's Environmental Noise Control Manual (1994), where the $L_{A10,15min}$ noise level should not exceed the L_{A90} background by more than 5 dB(A) for construction periods exceeding 26 weeks.***
- 2. That the recommendations outlined in Section 6.6 within the Noise Impact Planning Assessment prepared by Atkins Acoustics and Associates Pty Ltd (Ref: 36.5959.R1:CFCD2 Rev 02 dated October 2006) be implemented for all construction activities proposed at the Rose Bay and Point Piper Marina Redevelopment.***

15 March 2007

REFERRAL RESPONSE

FILE NO: DA 766/2006/1
ADDRESS: 594-596 New South Head Road ROSE BAY 2029
PROPOSAL: Redevelopment of Rose Bay and Point Piper Marinas
FROM: Rebecca Peacock - Environmental Protection Coordinator
TO: Mr P Kauter

1. Introduction

The following comments and recommendations are made in relation to the proposed redevelopment of Rose Bay and Point Piper Anchorage Marinas. In summary the redevelopment will involve the replacement of the existing fixed marina berths with modern low profile floating pontoons. The redevelopment will result in the relinquishment of approximately 157 commercial swing moorings and the construction of 124 new floating marina berths at Rose Bay and 35 new floating berths at Point Piper Marina. The redeveloped marinas will have a combined storage capacity of 174 vessels, equating to a total reduction of 50 vessels. The redevelopment will also involve the expansion of the fuel dispensing facilities at Rose Bay Marina.

2. Environmental Impact Assessment

I have reviewed the information contained in the *Environmental Impact Statement (EIS), Redevelopment of Rose Bay and Point Piper Marinas, November 2006 Volume 1 and Volume 2*, relating to aquatic ecology, sediment contamination, fuel storage and distribution and environmental management. The following comments are made regarding each topic.

Aquatic ecology

The report titled *Marine Ecological Aspects*, October 2006 by Marine Pollution Research Pty Ltd was included as Appendix L of the EIS. The report reviews and assesses marine and riparian ecological aspects of the proposed Rose Bay and Point Piper Marinas redevelopment. In conclusion the report finds that there will be no significant impacts from the development on the aquatic ecology.

I have a number of concerns regarding impacts on the marine ecology resulting from the redevelopment of the two marinas.

1. The redevelopment of Rose Bay Marina, in particular the construction of the concrete fuel tank structure, will result in the loss of seagrass adjacent to the

existing marina structures. The consultant justifies the loss by stating that the seagrass found in this vicinity do not represent a seagrass bed, but 'unhealthy looking individual plants'. The consultant also notes that the construction of the tank would preclude any intermittent colonisation of this area by seagrasses in the future. 'The impact on the growth from the development is small considering the continual impacts due to water turbidity and wave action'.

Seagrasses are particularly valuable as nursery, feeding and shelter areas for many aquatic animals, including commercially and recreationally important fish, mollusc and crustacean species. Like other estuarine vegetation, seagrasses contribute organic matter to the food chain, and remove nutrients from the water. They also baffle water currents, causing them to drop their sediment loads, thus maintaining water quality (www.fisheries.nsw.gov.au February 2007).

2. Surveys undertaken in November 2005 and September 2006 found that *Posidonia australis* (posidonia) is present east of Rose Bay Marina. The location of the posidonia seagrass is not clearly marked on the seagrass map provided, but from the description in the report, the bed is located towards the end of transect 2 (Figure 5 Rose Bay and Point Piper Marinas Aquatic Vegetation Surveys). This location is close to the external fairway identified in the EIS. Indeed the outlying limit of the seagrass beds east of Rose Bay Marina is roughly the edge of the external fairway area. I am concerned about the impact of boat movements on the seagrass beds, particularly the area of posidonia seagrass.

The NSW Department of Primary Industries applies a number of policies relating to marine vegetation destruction, including that *Posidonia australis* seagrass, must not be directly or indirectly impacted by any activity or development (www.fisheries.nsw.gov.au February 2007). *Posidonia* does not readily colonise an area once it has been eliminated from it (DPI www.fisheries.nsw.gov.au February 2007). The proposed redevelopment contravenes this policy.

3. The report notes that water quality in the vicinity of the proposed Rose Bay fuel tank/hardstand is more turbid than areas east of the drain (referred to as the Cranbrook drain). I am concerned that the layout and use of the proposed marina will further reduce the water quality in this area and impact on the seagrass beds. The new marina structures extend for a considerable distance along the Rose Bay foreshore (>150 metres) and are located approximately 75 metres from the foreshore. These structures have the potential to trap stormwater runoff in shore, and the boat traffic will further stir up silty sediments.

West et al (2004) states that seagrass growth is influenced by factors including water clarity. Recreational uses can stir up bottom sediments, reducing light intensity. Stormwater discharge also increases turbidity, meaning that seagrasses may be stressed at stormwater outlets. There are five stormwater outlets into Rose Bay in this area.

Therefore the trapping of stormwater inshore by the proposed floating structures of the Rose Bay marina combined with the increased use of motorised recreational boats, will likely contribute to a localised decline in water quality and detrimentally impact on the seagrass beds found in this vicinity.

4. The report fails to consider the long term and regional impacts of the proposed development on the aquatic ecology of Rose Bay and the harbour. The impacts are viewed in isolation in the context of western Rose Bay. West et al (2004), finds that seagrass beds have declined significantly in the harbour since the early 1980's, reducing from 129 ha to 52 ha in 2000. This report also finds that the majority of seagrass beds (31.2 ha) are located in the area of the harbour defined as the Central Mud Basin Parramatta River, predominantly on the southern shores. Rose Bay is located in this area.
5. Although Rose Bay does not possess declared critical habitat for threatened or endangered marine species or communities, many are known to frequent the bay. For example, the Little Fairy Penguin colony found at Manly is the only known Little Fairy breeding colony on mainland NSW (Little Penguin Recovery Plan). Fairy Penguins are known to frequent Rose Bay for fishing and foraging. By changing the recreational boating nature of Rose Bay, from largely non motorised craft to larger motorised craft, the conditions favoured by the Little Fairy Penguin may be lost.
6. *Caulerpa taxifolia* is present in the redevelopment area. I am concerned about the potential to fragment and spread this aggressive aquatic weed species. If the proposed development is approved, ensure that the location of caulerpa is clearly mapped in relation to construction works and that safeguards are in place to ensure that this weed is not disturbed further and spread to other areas in Rose Bay.
7. The report refers to the fuel tank as the hardstand. Hardstand implies an area where boat repair activities are conducted.
8. The report states that the redevelopment does not involve reclamation or dredging, when the sediment contamination report states that some dredging will occur for the construction of the fuel tank/hardstand.

Fuel facilities

The report titled *Redevelopment of Rose Bay and Point Piper Marinas SEPP 33 Review Report*, 24 October 2006 by Sherpa Consulting is included as Appendix J in the EIS. The report provides an assessment of the proposed development, in particular the Rose Bay fuel tank decommission and construction of a new tank, in relation to SEPP 33.

The existing 4,300 L unleaded petrol tank at Rose Bay Marina will be decommissioned and replaced by a 75,000 L marine diesel tank. The existing tank filling point will continue to be used to fill the new tank, however, there are proposed

modifications to allow for diesel deliveries (details yet to be confirmed). This will represent an 852% increase in the fuel distribution capacity from existing levels.

The existing fuel tank at Point Piper Anchorage (5,100 unleaded) is not subject to this DA. Only the fuel dispensing equipment will be upgraded as a part of this DA.

Increasing the number of motor craft in the bay and the amount of fuel distributed will potentially lead to a decrease in the water quality of Rose Bay, through accidental spills, operation of boat engines and the discharge of bilge water. West et al 2004 notes that intertidal seagrass beds are 'extremely sensitive' to oil spills. Littoral vegetation is at greatest risk as it is exposed to floating oils during ebb tides.

The new marina would cater for much larger boats than is currently catered for and the new development will encourage boats to purchase petrol from Rose Bay, potentially increasing the number of boat movements in the bay. Although the swing moorings will be removed from between the two marinas, this is the location of where the fuel filling points will be positioned as a part of the redevelopment. So it is assumed that the area created from the clearing of the swing moorings will be used as a turning circle for boats filling up at either marina.

Sediment Sampling and Testing

The reports titled Rose Bay and Point Piper Marinas March 2006 Sediment Sampling and Testing, May 2006 and Rose Bay and Point Piper Marinas September 2006 Sediment Sampling and Testing, October 2006 by Patterson Britton and Partners Pty Ltd are included as Appendix K of the EIS.

The reports provided the results and conclusions on the sediment sampling and analysis undertaken for the two marina sites.

The May 2006 assessment involved the testing of samples from 13 locations over the two marina sites. Samples were not taken in the vicinity of the slipways or fuel tanks for the marinas. A new concrete hardstand/fuel tank will replace the existing slipway. Dredging will be required prior to installation of the tank.

The report discusses the results of previous sediment sampling and testing undertaken in November 2005. This sampling and testing was undertaken to specifically investigate the contamination levels and acid sulphate soils risk in the area to be dredged. Sixteen samples were tested from seven test locations.

The May 2006 investigation concludes that further assessment of the sediment is required. The report however, did not include any conclusions regarding the presence or treatment of acid sulfate soils in the vicinity of the dredging, nor any specific conclusions regarding the contaminated sediment located in the area that will be dredged.

A further ten samples were collected and tested for the second sediment report October 2006. Four of these samples were located in the direct vicinity of the Rose Bay Marina slipway.

In conclusion the consultant states that:

The sediment sampling and testing program has shown that in accordance with the decision tree included in the ANZECC/ARMCANZ (2000) sediment quality guidelines, remediation of the sediments at the Rose Bay and Point Piper Marinas is not required. In addition, the sediment testing and testing of the harbour water have shown that there is unlikely to be any impacts on aquatic organism due to the disturbance of sediments from vessel movements and the proposed demolition and construction activities as part of the marina redevelopment, having regard to the expected dilution in the overlying harbour water.

The combined area for the two marinas is 4.3 hectares, excluding the external fairways. The EPAs Contaminated Sites Sampling Guidelines recommends that 50 samples be taken and tested for a 4 hectare site and 52 for a 4.5 hectare site. The two sediment reports analysed samples from a total of 30 sample locations.

The existing Rose Bay Marina fuel tank is to be decommissioned. However, no samples were taken from around the tank to determine whether the seabed is contaminated and if remediation is required.

Neither reports reference or review earlier contamination assessments undertaken for Point Piper Anchorage, in relation to the fuel storage tanks and licence requirements. These reports identified an area of TPH contamination between the slipway and the seawall that requires remediation.

The chemicals tested for in both investigations did not include all of the chemicals recommended by the Department of Urban Affairs and Planning and the Environment Protection Authority in the Managing Land Contamination Guidelines for marinas and engine work facilities.

The majority of development for the DA is located on the seabed of Sydney Harbour, and therefore, NSW Maritime is the land owner.

Environmental Management

The Rose Bay and Point Piper Marina's Environmental Management Plan was included as Appendix W of the EIS. The plan was prepared by Patterson Britton and Partners. The information provided in Appendix W includes the proposed structure of the Environmental Management Plan (EMP) and states that an EMP will be prepared in the accordance with the Marine and Related Facilities EIS guidelines (DUAP 1996).

3. Conclusion

As the consent authority, Council has an obligation to assess applications in relation to the principles of ecologically sustainable development (ESD).

The Local Government Act 1993 defines ESD and the principles of ESD in the following.

Ecologically sustainable development requires the effective integration of economic and environmental considerations in decision making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs:

- *The precautionary principle,*
- *Inter-generational equity,*
- *Conservation of biological diversity and ecological integrity,*
- *Improved valuation, pricing and incentive mechanisms.*

In my opinion the proposal in its current form goes against the principles of ESD, specifically the precautionary principle, inter-generational equity and the conservation of biological diversity and ecological integrity.

The development will result in the net loss of seagrasses in the harbour, and the potential loss of an additional area of seagrass with increased motor boat movements and decreased water quality. *Posidonia* seagrass is found inshore of the proposed development. The Department of Primary Industries policy is that '*Posidonia australis* seagrass must not be directly or indirectly impacted by any activity or development.' Seagrasses are vital to the aquatic ecology of Sydney Harbour. Council should not be supporting a development that will further destroy and impact on seagrass beds, especially considering the dramatic reduction in seagrass communities in Sydney Harbour since the 1980's. The proposed development will completely alter the character of Rose Bay, by catering to larger motorized water craft and alienating the traditional smaller non motorized vessels currently moored at Rose Bay. The increase in fuel dispensing activities from the marinas will potentially increase the amount of motor boat movements in western Rose Bay.

The proposed marinas will change the nature and types of boats in Rose Bay from predominantly non motorised craft <10metres, to predominantly motorised craft ranging from 10 – 37 metres. The replacement of swing moorings to a floating platform will condense and intensify the environmental and visual impacts of the marina. Increasing the amount of fuel dispensed from Rose Bay and the shift to largely motorised craft will potentially lead to a decline in water quality. The shift in cliental will disadvantage the existing boat owners, replacing the current facilities with those suited to motorised craft.

Rose Bay is largely surrounded by residential and open space land uses. I question the suitability of the site for the mooring of large motorised vessels. The mooring of such craft would be better suited to an industrial site, such as Rozelle Bay. The provision of suitable marina facilities and moorings, needs to be considered for the whole of Sydney Harbour, where by supply and demand and the assessment of suitable sites need to be identified as a part of a broader strategic approach.

There are positive aspects to the proposal. The removal of the slipway at Rose Bay Marina, the removal of swing moorings located between the two marinas and improvements to sewage pump out facilities. However the negatives and uncertainties mean that I cannot support the proposed redevelopment in its current form.

4. Recommendations

The applicant is to provide Council with the following additional information:

- Confirm whether dredging will be undertaken as a part of the marinas redevelopment. A further ecological assessment will need to be undertaken in relation to potential impacts on the ecology resulting from dredging, if dredging is to be undertaken as a part of the redevelopment.
- Environmental Management Plan prepared in accordance with the *Best Practice for Marinas and Slipways* (EPA 1998) and the *Sollutions to Pollution Marina, boatsheds and slipways* (EPA 1998) for the operation of both marinas. EMP is to include details of the future use of the hardstand at Rose Bay Marina.
- Details of the fuel delivery and distribution, including spill response procedures for refuelling.
- The results and recommendations of the acid sulphate soils assessment undertaken in the vicinity of the dredging to be undertaken for the installation of the fuel storage tank.
- Further sampling and testing of samples in the vicinity of the existing Rose Bay Marina fuel tank.

I recommend that Council engage:

- A marine ecological expert to review the reports and conclusions made in the ecological study included in the EIS and additional information provided by the applicant and provide Council with clear recommendations regarding contamination and remediation if required. The consultant is to consider each of the issues raised by Council in their review of the information provided with the EIS.
- A contamination expert to review the reports and conclusions made in the contamination reports and additional information provided by the applicant and provides Council with clear recommendations regarding contamination and remediation if required.

The independent experts are to review the information contained in the EIS and the additional information requested by Council. Their advice will assist Council in assessing the potential impacts of the redevelopment.

5. Related issues regarding the marinas, outside of the scope of the DA

Council approved DA558/2004 for the upgrade of the two slipways at Point Piper Anchorage on the 12 November 2004. Condition 9 of that consent was that an EMP be submitted to Council within three months of the issue of the Occupation Certificate. To date the applicant has not applied for a construction certificate nor the occupation certificate from Council. A site visit conducted on Friday 9 February

confirmed that the slipway works had not been undertaken. We were advised by people working at the marina, that the works were not going ahead until the current DA is determined.

What is the capacity of the upgraded slipways at Point Piper Anchorage? (ie: tonnage capacity, number of boats able to be handled at any one time, length of largest boat able to be slipped). Page 13 of the Ecological Report states that the approved DA for Point Piper Anchorage slipway upgrade, involved four working cradles with 40 tonne capacity. The POEO Act classifies Marina's and boat repair facilities as a scheduled activity if:

(1) pontoons, jetties, piers or other structures (whether water-based or land-based) designed or utilised to provide moorings or dry storage (other than swing moorings) for 80 or more vessels (excluding rowing boats, dinghies or other small craft), or

(2) works such as slipways, hoists or facilities for the repair and maintenance of vessels (other than boat repair facilities that are not adjacent to waters) at which 5 or more vessels (being vessels other than rowing boats, dinghies or other small craft) or any vessel 25 meters or longer is handled or capable of being handled at any one time.

The capacity of the slipway will determine the Appropriate Regulatory Authority for this site and whether or not the operation of the site will require an Environmental Protection License.

Sediment sampling and analysis was undertaken in the vicinity of the underground fuel tank for the transfer of the Point Piper Anchorage Marina licence. The testing was undertaken at Council's request. An area of TPH contamination was identified between the slipway and the seawall that requires remediation. Has this been carried out?

In a memorandum to Anthony Sheedy Council's Property Officer dated the 25 November 2004, I raised the issue of the long term suitability of fuel storage on public open space land. Competing landuses and the risk to recreational uses of the site need to be addressed. The inconsistencies in environmental and planning objectives suggest that the storage of fuel on this sensitive harbour foreshore location is unacceptable. Staff from planning, the environment, public open space and risk management should investigate the long-term suitability of the site for the storage and distribution of fuel from this location. The marina operators are to investigate the relocation of the underground fuel storage tank onto their land

Rebecca Peacock
Environmental Protection Coordinator

Memorandum

Date 24 May 2007

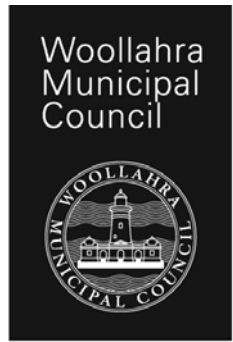
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To Peter Kauter - Executive Planner

CC Chris Bluett - Manager Strategic Planning

From Rebecca Peacock - Environmental Protection Coordinator

Subject ROSE BAY AND POINT PIPER ANCHORAGE DEVELOPMENT APPLICATION - RESPONSE TO ADDITIONAL INFORMATION PROVIDED BY THE APPLICANT.



ABN 32 218 483 245

Redleaf Council Chambers
536 New South Head Road
Double Bay NSW 2028

Correspondence to
General Manager
PO Box 61
Double Bay NSW 1360
DX 3607 Double Bay
records@woollahra.nsw.gov.au
www.woollahra.nsw.gov.au

Telephone (02) 9391 7000
Facsimile (02) 9391 7044

Background

My initial assessment of the *Environmental Impact Statement (EIS), Redevelopment of Rose Bay and Point Piper Marinas, November 2006 Volume 1 and Volume 2*, relating to aquatic ecology, sediment contamination, fuel storage and distribution and environmental management, resulted in the following recommendations:

The applicant is to provide Council with the following additional information:

- Confirm whether dredging will be undertaken as a part of the marinas redevelopment. A further ecological assessment will need to be undertaken in relation to potential impacts on the ecology resulting from dredging if dredging is to be undertaken as a part of the redevelopment.
- Environmental Management Plan (EMP) prepared in accordance with the *Best Practice for Marinas and Slipways* (EPA 1998) and the *Sollutions to Pollution Marina, boatsheds and slipways* (EPA 1998) for the operation of both marinas. EMP is to include details of the future use of the hardstand at Rose Bay Marina.
- Details of the fuel delivery and distribution, including spill response procedures for refuelling.
- The results and recommendations of the acid sulfate soils assessment undertaken in the vicinity of the dredging to be undertaken for the installation of the fuel storage tank.
- Further sampling and testing of samples in the vicinity of the existing Rose Bay Marina fuel tank.

I recommend that Council engage:

- A marine ecological expert to review the reports and conclusions made in the ecological study included in the EIS and additional information provided by the applicant. The expert is to provide Council with clear recommendations regarding contamination and remediation if required. The consultant is to consider each of the issues raised by Council in their review of the information provided with the EIS.

- A contamination expert to review the reports and conclusions made in the contamination reports and additional information provided by the applicant. The expert is to provide Council with clear recommendations regarding contamination and remediation if required.

The independent experts are to review the information contained in the EIS and the additional information requested by Council. Their advice will assist Council in assessing the potential impacts of the redevelopment.

Assessment of additional information provided by the applicant

The applicant has provided Council with additional information in response to matters raised by Council staff dated 7 May 2007. The following outlines the applicant's response to each issue raised in my initial assessment.

1. Confirm whether dredging will be undertaken as a part of the marinas redevelopment. A further ecological assessment will need to be undertaken in relation to potential impacts on the ecology resulting from dredging, if dredging is to be undertaken as a part of the redevelopment.

The applicant states that no dredging is proposed or required for the redevelopment.

2. Environmental Management Plan prepared in accordance with the Best Practice for Marinas and Slipways (EPA 1998) and the Sollutions to Pollution Marina, boatsheds and slipways (EPA 1998) for the operation of both marinas. EMP is to include details of the future use of the hardstand at Rose Bay Marina.

The applicant has provided two draft EMPs, one for each of the marinas. The applicant states that the EMPs will be finalised following development consent when all conditions that may need to be reflected in the EMP are known.

An EMP is to identify the specific environmental issues associated with the operation of a business. It should list the objectives to be achieved, actions to achieve the objectives, and measures to determine wether the objectives have been met (EPA Sollutions to Pollutions). I acknowledge that the EMPs will be finalised following development consent.

The draft EMPs submitted as additional information state the objectives for the environmental management of the marina and present information on how these objectives will be achieved. The activities included in the draft EMPs reflect the uses that will be carried out at each of the marinas, specifically that boat repair activities will be undertaken at Point Piper but not at Rose Bay Marina.

The applicant is to ensure that the final EMPs cover all aspects of the operation of each marina, including the storage of chemicals, paints and cleaning products in appropriately bunded and contained areas. The final draft EMPs are to be forwarded to Council for review and comment prior to finalisation.

3. Details of the fuel delivery and distribution, including spill response procedures for refuelling.

The applicant has provided additional information in relation to fuel distribution and delivery. David Sheils will be coordinating a response from Council staff, following a meeting held to discuss the issue.

4. The results and recommendations of the acid sulfate soils assessment undertaken in the vicinity of the dredging to be undertaken for the installation of the fuel storage tank.

The applicant states that as no dredging will be required and acid sulfate soils are not considered an issue for the proposed development.

5. Further sampling and testing of samples in the vicinity of the existing Rose Bay Marina fuel tank.

The applicant refers to Appendix A of their response to Council for the response from the consultant on this issue. Appendix A states that the sediment sampling undertaken for the EIS, included samples taken from adjacent to the slipway and building structure at Rose Bay and thus near the existing fuel tank. The consultant confirms the conclusions of the reports in the EIS that remediation is not required and that further sampling and testing of sediments is not considered necessary.

Recommendations

In relation to dredging and acid sulfate soils I have no further comment.

David Sheils will be providing a response regarding fuel delivery, distribution and spill response.

The draft EMPs prepared for both marinas provide information on the environmental management objectives for the site and present information on how these objectives will be achieved. I acknowledge that the EMPs will be finalised following development consent and consider this to be acceptable. The applicant is to ensure that the final EMPs cover all aspects of the operation of each marina, including the storage of chemicals, paints and cleaning products in appropriately bunded and contained areas. The final draft EMPs are to be forwarded to Council for review and comment prior to finalisation.

I reiterate my recommendations from my initial referral advice relating to the information provided in the EIS, that Council engage:

- A marine ecological expert to review the reports and conclusions made in the ecological study included in the EIS and additional information provided by the applicant and provide Council with clear recommendations regarding the proposal. The expert is to consider each of the issues raised by Council in their review of the information provided with the EIS.

- A contamination expert to review the reports and conclusions made in the contamination reports included in the EIS and additional information provided by the applicant. The expert is to provide Council with clear recommendations regarding contamination and remediation if required. The expert is to consider each of the issues raised by Council in their review of the information provided with the EIS.

The advice provided by the independent experts will assist Council in assessing the potential impacts of the redevelopment.

Under SEPP 55 the determining authority can request that a site audit be undertaken for the development. It is recommended that an accredited site auditor review the contamination assessments for the development. A Site Audit Statement is to be prepared and submitted to Council prior to the granting of consent, certifying that the site is suitable, or can be made suitable after remediation. Should remediation works be required, any conditions on the Site Audit Statement shall form part of the consent.

Rebecca Peacock
Environmental Protection Coordinator

Memorandum

Date 13 November 2007

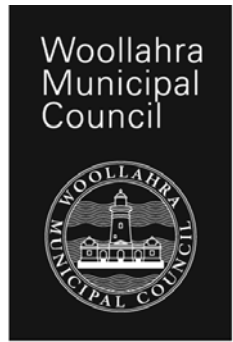
File No.

To Peter Kauter - Executive Planner

CC Chris Bluett - Manager Strategic Planning

From Rebecca Peacock - Environmental Protection Coordinator

Subject ROSE BAY AND POINT PIPER ANCHORAGE DEVELOPMENT APPLICATION - RESPONSE TO ADDITIONAL INFORMATION PROVIDED BY THE APPLICANT.



ABN 32 218 483 245

Redleaf Council Chambers
536 New South Head Road
Double Bay NSW 2028

Correspondence to
General Manager
PO Box 61
Double Bay NSW 1360
DX 3607 Double Bay
records@woollahra.nsw.gov.au
www.woollahra.nsw.gov.au

Telephone (02) 9391 7000
Facsimile (02) 9391 7044

In concluding my comments regarding the Rose Bay Marinas Development Application, I make the following comments and recommendations for each of the environmental areas of review.

1. Aquatic ecology

Both The Ecology Lab (the independent expert) and Marine Pollution Research (MPR), the consultants that prepared the EIS aquatic investigation, concur that there will be minimal and/or acceptable impacts to the aquatic ecology of Rose Bay resulting from the proposed development.

In relation to seagrasses, the development will result in the net loss of seagrasses in the harbour (46m²) through the overshadowing of the seabed for the installation of the proposed deck and suspended fuel tank. The total area of overshadowing will be 220m². MPR acknowledge that although some seagrass will be lost initially, this will be off set by the removal of swing moorings in the area between the two marinas, which will potentially increase the area of seagrass habitat in the future. The Department of Primary Industries (DPI) in their response (12 January 2007) accept this as 'compensation for harm to seagrass and macroalgae'.

The proposed development will result in the initial loss of seagrass bed and contributes to the continuing decline of seagrasses in Sydney Harbour. The potential for seagrass regeneration in the area where the swing moorings will be removed may be limited by the increased motorised boat movements in this vicinity for refuelling.

In relation to the Posidonia seagrass, MPR considers that the distance between the bed and the marina structures (approximately 35m) means that there will be no measurable impact on the patch arising from normal marina usage.

In relation to threatened species, MPR concludes that there were no listed threatened species or communities residing in or dependant on the study area, and that listed species which do occur in the study area from time to time (ie Little Penguins or juvenile Black Cod) were not adversely affected by the present marina activities.

This is based on the impacts from the present marina activities. The proposed marina will involve a dramatic increase in the bulk and scale of the marina, change the nature of craft that utilise Rose Bay, and

increase boat movements for fuel distributed from the marinas. These activities associated with the proposed marinas may alienate the threatened species from using the bay in the future.

In relation to *Caulerpa*, MPR notes that it is found at relatively low densities and at a patchy distribution, in and around the two marinas. MPR suggests that a pre-construction survey for the presence of *Caulerpa* be made closer to construction, and that if there has been a substantial increase in the cover and distribution of this species within the proposed construction area, a *Caulerpa* construction management plan could be prepared in conjunction with DPI.

MPR also refers to the MPR, Ecology Lab meeting whereby 'all agreed that it (*Caulerpa*) can be managed and is therefore not considered to be a serious issue'.

If the proposed development is approved, I recommend that Council impose a condition requiring that a pre-construction survey for the presence of *Caulerpa* be made closer to construction, and that if there has been a substantial increase in the cover and distribution of this species within the proposed construction area, a *Caulerpa* construction management plan be prepared in conjunction with DPI.

In relation to the hardstand, the applicant clarified in an email to Peter Kauter (19 February 2007) that the hardstand will be used for a variety of functions including: fuel storage, mustering area for marina customers, storage area for the dry electrical substation, store 2 to 3 waste bins, widen the access point to the marina, fixing point for gangway to the floating marina, assist in providing greater disabled access and the installation of a fire hydrant. The information does not specifically exclude boat repair activities.

If the proposed development is approved, I recommend that a condition be imposed prohibiting the use of the hardstand for boat repair activities.

In direct response to the issue raised by Council on the impact of construction and boat movements on seagrass, the consultant provided information on safeguard measures that can be implemented during construction, but did not specifically address the impact/safeguards for impacts of seagrasses arising from boat movements. Elsewhere in the report the consultant concludes that there are no remaining issues regarding changes in distribution or assemblages of fauna in the seagrass as the identified impacts are beneficial. The specific beneficial impacts included the dampening of wind and boat wash effects on seagrass shallows, and the imposition of speed limits and zoning limits to minimise sediment disturbance. The consultant also states that in relation to indirect impacts on the seagrass beds arising from the proposal, the design of the Rose Bay marina is so that the inner most marina arm pens are further off-shore that the current pens to provide a suitable distance from the in-shore bed.

Information contained in the Literature Review (Appendix C) raises the possibility of impacts in wash zones, including that differences in benthic infauna have been found between wash zones and no wash zones (Bishop and Chapman 2004) and that there were boat wash effects on the epifaunal assemblages of seagrass regardless of sediment granulometry (Bishop 2005). This raises concern that this issue has not been adequately addressed for this proposal, especially considering that the area where swing moorings will be removed for rehabilitation of the seagrass beds is where there will be a concentration of boat movements for refuelling.

2. Sediment contamination

The accredited auditor has completed the review of the sediment investigations for the EIS and has prepared the 'Site Audit Report Development of Rose Bay and Point Piper Marinas for Addenbrooke Pty Ltd' November 2007.

In conclusion the Auditor states that:

- Concentrations of contaminants, principally TBT, in sediments in the vicinity of the slipways at the Point Piper and Rose Bay marinas have a potential to cause localised adverse effects on the benthic community near the slipways;

- The slipways are the main source of contamination. Other sources of contamination are stormwater discharges and atmospheric deposition. Levels of sediment contamination in the wider marina areas are consistent with background levels;
- Although there is some uncertainty as to the boundaries of the contaminated areas, this is not critical because the sediment management procedures for the marina redevelopment will extend well beyond the immediate areas of contamination associated with the slipways at each of the marinas;
- The source of TBT contamination is historical and has now ceased. Sediments in the affected areas are stable and not subject to erosion and transport. It is unlikely that contaminated sediments are migrating from the slipway areas. Proposed marina development will further reduce the potential for re-suspension and migration of the sediments;
- Risks to human health and the environment posed by localised sediment contamination at the marinas are considered to be low. There is a possibility of some adverse effects if remediation of the localised contaminated sediments were undertaken. Considering relative risks and benefits, the Auditor accepts the management approach proposed by the PBP and agrees that the risks associated with sediment disturbance should be addressed through the implementation of an environmental management plan. (EMP);
- Suitable EMPs have been prepared for the construction management and ongoing operation of the marinas. The EMPs address the potential mobilisation of contaminated sediments throughout the construction and subsequent operational phases at both of the marinas;

In the Auditor's opinion, the site can be made suitable for use as a marina subject to implementation of the EMPs. It is noted that:

- The EMPs have been reviewed by the Auditor and are considered appropriate;
- The provisions of the EMPs can be made to be legally enforceable (i.e. Development Consent conditions) in site development;
- There will be appropriate public notification of restrictions applying to the site through a notification of the Section 149 Certificate for the site.
- The remnant contamination is not considered to pose an unacceptable risk to onsite or offsite environments.

The Auditor, Mike Hayter from Environs has reviewed the draft Construction Management Plan for Environmental Management (CEMP), the draft Rose Bay Marina Environmental Management Plan (EMP) and the draft Point Piper Marina Environmental Management Plan (EMP) and concludes that the CEMP and the EMPs will provide an adequate framework for the management of the remnant sediment contamination at the site.

If the development is to be approved, I recommend that a condition be applied to the consent requiring that the implementation of the construction works and the ongoing management of the marinas be undertaken in accordance with the CEMP and the EMPs respectively.

The Auditor has conditioned the Site Audit Statement (SAS), requiring the management of the site in accordance with the CEMP and EMPs. The *Environmental Planning and Assessment Act 1979* prescribes that SASs be recorded on the 149 certificates. Therefore the SAS, and the conditions of the SAS, will be permanently attached to these sites.

If the development is to be approved, I recommend that a condition be applied to the consent that requires the development be undertaken in accordance with the SAS and the conditions attached to the statement. Council may wish to place a covenant on the titles, tying the ongoing implementation and review of EMPs to sites.

3. Environmental management

Draft Environmental Management Plans (EMPs) have been provided for both marinas separately. The applicant states that the EMPs will be finalised following development consent when all conditions that may need to be reflected in the EMP are known.

Both of the EMPs for the marinas have a section relating to the identification and management of the contaminated sediments that remain on site. Both of the EMPs state that “any activities that are likely to disturb contaminated sediments should be carried out in accordance with the relevant requirements in the Construction Environmental Management Plan (CEMP)” for each of the marina developments. As the EMP will be a condition of the Site Audit Statement and included on the 149 certificates for the sites, the information contained in section 6 *Contaminated sediments and possible disturbance to the seabed during pile installation*, is to be included in the site specific EMPs in the section relating to contaminated sediment. This will ensure that all ongoing future environmental management of the site, including measures to limit the impacts from contaminated sediment, are included in the one document for each site.

The Hazard Management section of the EMP is to include information on fuel delivery and handling procedures and safeguards to avoid spills. This is especially important in relation to the Rose Bay Promenade Upgrade that Council is currently implementing. The upgrade includes a stormwater treatment and re-use element, whereby the stormwater that runs off New South Head Road is treated through porous paving and then stored in underground tanks for irrigation and maintenance purposes. The project will help to improve the quality of stormwater run off running off New South Head Rd into Rose Bay. The current fuel filling point is located adjacent to the kerb and gutter directly in front of the Pier Restaurant. This is not located in an area that will have the porous paving installed through the Rose Bay Promenade Upgrade project. However, the EMP is to provide details of the fuel delivery and handling procedures and mechanisms to ensure that the risk of spills polluting Rose Bay is eliminated.

The draft EMPs prepared for both marinas provide information on the environmental management objectives for the site and present information on how these objectives will be achieved. I acknowledge that the EMPs will be finalised following development consent and consider this to be acceptable. The applicant is to ensure that the final EMPs:

- cover all aspects of the operation of each marina, including the storage of chemicals, paints and cleaning products in appropriately banded and contained areas, installation and maintenance of fuel storage tanks and lines and the distribution of fuel,
- will need to ensure that all of the environmental areas included in the DEC's determination regarding the proposed redevelopment of Rose Bay and Point Piper Marinas (8 February 2007), are included,
- incorporate the CEMP requirements for managing contaminated sediment,
- are consistent with the DECC's Environmental Action for Marinas, Boatsheds and Slipways (June 2007), and
- are to be forwarded to Council for review and comment prior to finalisation.

The applicant has provided Council with a copy of the draft Construction Management Plan for Environmental Management (email 17 October 2007). The CEMP outlines the environmental management practices and safeguards for the construction of the proposed marinas.

I recommend that we require that the CEMP is consistent with the DEC's stormwater/sediment control condition (correspondence 8 February 2007). The condition requires an Erosion and Sediment Control Plan (ESCP) be prepared in accordance with the requirements outlined in the *Managing Urban Stormwater: Soils and Construction* and implemented, and that best industry practice for piling operations are used.

4. Fuel

The applicant has provided additional information in relation to fuel distribution and delivery. David Sheils, Council's Manager Public Open Space will be coordinating a response from Council staff, following a meeting held to discuss the issue (24 May 2007). I have no further comment other than those included in the environmental management section relating to fuel management.

5. Discussion

As the consent authority, Council has an obligation to assess applications in relation to the principles of ecologically sustainable development (ESD).

The Local Government Act 1993 defines ESD and the principles of ESD in the following.

Ecologically sustainable development requires the effective integration of economic and environmental considerations in decision making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs:

- *The precautionary principle,*
- *Inter-generational equity,*
- *Conservation of biological diversity and ecological integrity,*
- *Improved valuation, pricing and incentive mechanisms.*

In my opinion the proposal in its current form goes against the principles of ESD, specifically inter-generational equity and the conservation of biological diversity and ecological integrity.

MPR states that the proposed marina 'is not a new marina structure being imposed on a pristine estuarine bay with no existing artificial structures, but is in fact a refurbishment of existing facilities plus reconfiguration of existing mooring facilities, which would replace a number of fixed pile plus swing mooring structures with new fixed piles plus a large number of new floating pontoon structures.' This is correct, in that the proposal is a refurbishment of existing facilities. But it must be noted that the proposed marinas involve a significant increase in the bulk and scale of the marina structures, the change in craft size and nature (from sailing to motorized), and the dramatic increase in the amount of fuel (800%) distributed from Rose Bay.

The development will result in the net loss of seagrasses the harbour (46m²) through the overshadowing of the seabed for the installation of the proposed deck and suspended fuel tank. The total area of overshadowing will be 220m². This would preclude the establishment/re-establishment of seagrasses in this vicinity and will contribute to the decline in seagrass beds in Sydney Harbour that has been occurring since the 1980s. West et al (2004), found that seagrass beds have declined significantly in the harbour since the early 1980's, reducing from 129 ha to 52 ha in 2000. This report also finds that the majority of seagrass beds (31.2 ha) are located in the area of the harbour defined as the Central Mud Basin Parramatta River, predominantly on the southern shores. Rose Bay is located in this area. Seagrasses are vital to the aquatic ecology of Sydney Harbour.

The nature of the proposed Rose Bay Marinas and increase in the distribution of fuel in Rose Bay will attract a greater number of larger, motorized craft into the bay. The area that will have the swing moorings removed is located between the fuel filling points for the two marinas. Therefore removal of the swing moorings in this location will facilitate the maneuvering boats for refueling for the proposed marinas. Increased boat movement in itself may impact on the health of seagrasses in Rose Bay.

The Land and Environment Court in the case of *Milne v Minister for Planning and Anor* regarding the Chinderah Marina development found that the impacts to seagrasses, being the direct shading of 10m² and increases in boat traffic potentially impacting on seagrasses, warranted refusal of the application.

The proposed development will completely alter the character of Rose Bay, by catering for larger motorized water craft and alienating the traditional smaller non motorized vessels currently moored at Rose Bay. The increase in fuel dispensing activities from the marinas will increase the amount of motor boat movements in western Rose Bay. This may in turn alienate threatened species, such as the Little Penguin, from using the bay. The consultants assessment of the impacts of the proposed marinas on threatened species using Rose Bay, were based on the assumptions from the current marina operation. The proposed marinas will dramatically alter the nature and size of craft utilizing the bay, and increase the number of motorised boat movements in the bay for refuelling.

The proposed marinas will change the nature and types of boats in Rose Bay from predominantly non motorised craft <10metres, to predominantly motorised craft ranging from 10 – 37 metres. Increasing the amount of fuel dispensed from Rose Bay (800% increase in fuel stored at Rose Bay Marina) and the shift to largely motorised craft will potentially lead to a decline in water quality. The shift in cliental will disadvantage the existing boat owners, replacing the current facilities with those suited to motorised craft.

Rose Bay is largely surrounded by residential and open space land uses. I question the suitability of the site for the mooring of large motorised vessels. The mooring of such craft would be better suited to an industrial site, such as Rozelle Bay. The provision of suitable marina facilities and moorings, needs to be considered for the whole of Sydney Harbour, where by supply and demand and the assessment of suitable sites need to be identified as a part of a broader strategic approach.

The following is an assessment of the information provided to date against the principles of ESD.

Precautionary principle

Investigations have been undertaken into the environmental impacts of the proposal. The impacts to the aquatic ecology are considered acceptable by the consultants that prepared the investigations included in the EIS, the independent expert engaged to review the investigations and the DPI.

Intergenerational equity

The replacement of swing moorings to a floating pontoon, catering for larger motorised craft, will alienate smaller, traditional boat owners and users from using the facilities at Rose Bay.

Conservation of biological diversity and ecological integrity

The applicant, and consultants involved in the aquatic ecological investigations and the DPI, maintains that the ecological impacts will be minimal and that the removal of the swing moorings and potential increase in seagrass habitat, constitutes adequate compensation for any loses resulting from the proposed marina.

The proposed development will result in the overshadowing of 220m² of the seabed, directly overshadowing 46m² of seagrasses identified through the investigation process. This will preclude the establishment/re-establishment of seagrasses in this vicinity and will further contribute to the decline in seagrasses in Sydney Harbour since the 1980s. The increase in motorised boat movements in the bay may impact on the seagrasses and reduce the suitability of the site for hunting and foraging by threatened species known to frequent Rose Bay.

Improved valuation, pricing and incentive mechanisms

The proposed development will be operated in accordance with an EMP which will state the environmental objectives for the site and detail the measures to be implemented to ensure that the objectives are met.

6. Conclusions and recommendations

There are positive aspects to the proposal. The removal of the slipway at Rose Bay Marina, the removal of swing moorings located between the two marinas and improvements to sewage pump out facilities. However the negatives and uncertainties mean that I cannot support the proposed redevelopment.

The following recommendations are made, **if** development consent is granted:

Council imposes a condition requiring that a pre-construction survey for the presence of Caulerpa be made closer to construction, and that if there has been a substantial increase in the cover and distribution of this species within the proposed construction area, a Caulerpa construction management plan be prepared in conjunction with DPI.

Council imposes a condition prohibiting the use of the hardstand at Rose Bay Marina for boat repair activities.

The applicant is to ensure that the final EMPs:

- cover all aspects of the operation of each marina, including the storage of chemicals, paints and cleaning products in appropriately bunded and contained areas, installation and maintenance of fuel storage tanks and lines and the distribution of fuel,
- will need to ensure that all of the environmental areas included in the DEC's determination regarding the proposed redevelopment of Rose Bay and Point Piper Marinas (8 February 2007), are included,
- incorporate the CEMP requirements for managing contaminated sediment,
- are consistent with the DECC's Environmental Action for Marinas, Boatsheds and Slipways (June 2007), and
- are to be forwarded to Council for review and comment prior to finalisation.

The applicant is to ensure that the CEMP is consistent with the DEC's stormwater/sediment control condition (correspondence 8 February 2007). The condition requires an Erosion and Sediment Control Plan (ESCP) be prepared in accordance with the requirements outlined in the *Managing Urban Stormwater: Soils and Construction* and implemented, and that best industry practice for piling operations are used.

Council imposes a condition requiring that the implementation of the construction works and the ongoing management of the marinas be undertaken in accordance with the CEMP and the EMPs respectively.

Council imposes a condition requiring that the development be undertaken in accordance with the Site Audit Statement and the conditions attached to the statement. Council may wish to place a covenant on the titles, tying the ongoing implementation and review of EMPs to sites.

Rebecca Peacock
13 November 2007

17 January 2007

REFERRAL RESPONSE – HERITAGE

FILE NO: DA 766/2006/1

ADDRESS: 594-596 New South Head Road ROSE BAY 2029

PROPOSAL: Redevelopment of Rose Bay and Point Piper Marinas

FROM: Louise Thom - Heritage Officer

TO: Mr P Kauter

I refer to the following documents received for this report:

Drawing set by Patterson Britton & Partners numbered 5635-100 A; 5635-101 A; 5635-102 B; 5635-103 A; 5635-105 A(1); 5635-110 A; 5635-111 A; 5635-112 A; 5635-113 A; 5635-120 A; 5635-121 A; dated 26/10/06

Sketch 5635 – Balustrade 22/12/06

Environmental Impact Statement by JBA Urban Planning Nov 2006

Environmental Impact Statement Heritage Issues by NBR & P dated 31Oct 2006

Maritime Archaeological Impact Assessment by Cosmos Archaeology October 2006

Visual Impact Assessment by Richard Lamb & Assoc. October 2006

The following research was undertaken in the preparation of this assessment:

Site Inspection: Date 12 Jan 2007

Photographic record of promenade and Harbour from Lyne Park to Point Piper

Review of documents:

· Rose Bay Sea Wall and Promenade Heritage Report by Rod Howard October 2001

· Rose Bay Promenade Statement of Heritage Impact by Connybeare Morrison Feb 2004

· National Trust of Australia (NSW) Classification Report

· Sydney Harbour Catchment Sydney REP 2005

· Sydney Harbour Foreshores and Waterways DCP

Review of aerial photography.

Heritage Status:

Heritage item (WLEP1995): yes Rose Bay Esplanade, concrete balustrade

Heritage item (Sydney Harbour REP 2005): no

Conservation area: no

Vicinity of heritage item (Sydney Harbour REP 2005): yes, Item 55 Remains of Western Rose Bay ferry Wharf; Item 59 Site of public baths Lyne Park; Site of former Rose bay Flying Boat Base, Lynne Park; Item 82 Shark Island

Vicinity of heritage item (WLEP1995): Yes The Chilterns 593 New Sth Head Rd;

House, gardens & trees - 1 Rose Bay Ave; House, gardens & front stone wall 5 Rose Bay Ave.; 629 New Sth Head Rd; Rose Bay Police Station

Non Statutory: National Trust - Sydney Harbour Landscape Conservation Area.

Significance of property

Rose Bay and Point Piper Marinas

Both marinas contribute to the understanding of the history of Rose Bay and Point Piper. The marinas provide physical evidence of maritime structures of the early 20th century. Rose Bay Marina has landmark value from New South Head Road and from Sydney Harbour. Point Piper Mariner has landmark value from Sydney Harbour. Both sites have the potential to provide information regarding construction techniques, form and fabric of these structures.

Archaeology

The archaeological report predicts that there are likely to be archaeological remains on both marina sites relating to the early 20th century use of these sites. Piles from the Point Piper jetty constructions are likely to be evident and at the Rose Bay site there may be sandstone flagging, concrete foundations or timber pile stumps. There are also likely to be relics (objects) relating to the maritime use of the area throughout the development zone.

Rose Bay Promenade and Sea Wall

The promenade and sea wall have been assessed as having State significance. They are important and prominent elements in Rose Bay. The appreciation of the Harbour and the Bay afforded by the promenade is integral to its significance. The scenic appreciation of Rose Bay and Sydney Harbour is made possible by the location of the promenade and its use adjacent to and integrated with public open space. The views to the promenade are important as well as the views from the promenade.

“The Sea Wall and Promenade incorporate civic beautification and public amenity in a unique integrated scheme that catered to the requirements of motorists and pedestrians alike. As well the Sea Wall and Promenade form an important contribution to the group of walls and public spaces on the edge of Sydney Harbour, and physically defines the harbour side edge of Sydney Harbour since 1926. The Sea Wall and Promenade form a major townscape element within this section of Rose Bay and have provided a place in which locals and passing visitors can partake of recreational activities and enjoy views of Sydney Harbour since 1926.”¹

The physical setting of the promenade and sea wall includes Rose Bay, Rose Bay Park, Lyne Parks western edge, views back from Point Piper. Within the existing setting is a bay of boats on swing moorings. These allow a view through the boats and ensure the horizon, the distant shores and Shark Island remain visible. These views are only interrupted at the existing marinas. The existing marinas form a solid wall of boats and structure that blocks these key views. The existing swing moorings maintain a visual connection between Sydney Harbour and the public foreshore and parks.

Assessment of heritage impact

The scenic qualities of the Rose Bay Promenade and Sea Wall will be compromised by the proposal. The connection with Sydney Harbour will be lost along a large portion of the length of the promenade. The views to Sydney Harbour are currently through the boats on swing moorings. Construction of a marina of the size proposed will alter this view by blocking the connection with the Harbour. Views of the Bay

¹ Noni Boyd National Trust of Australia (NSW) Classification Report

will be obstructed as the marina will have the affect of being a solid mass on the harbour and views between the existing swing moorings will be lost. The spatial arrangement of swing moorings makes them visually less dominant than the marina which is essentially a built structure on the water. This impact upon the setting of the Promenade and Sea Wall and the experience afforded to the public through their use of the Promenade is detrimental to its significance.

The removal of swing moorings between the two marinas will have a negligible visual impact. The existing Royal Motor Yacht Club Marina and the existing Point Piper Marina already dominate this space. The value of the removal of these moorings does not adequately compensate for the impact of the new large built form and berths of the proposed marinas.

The proposed break in the promenade to enlarge the stairs on the eastern side of the existing building is acceptable provided it is undertaken according to the drawing 5635 – balustrade dated 22/12/06.

Impact upon places and items within the vicinity of the new marina.

- SREP 2005: Item 55 Remains of Western Rose Bay ferry wharf; The fabric of this item is its most significant characteristic. This will not be impacted by the proposal.
- Item 59 Site of public baths Lyne Park; Site of former Rose Bay Flying Boat Base, Lynne Park; These items are sufficiently removed from the proposed development so as not to be impacted by it.
- Item 82 Shark Island. The views from the foreshore to the island and views from the island to the foreshore will be obstructed in places due to the increased size of the Rose Bay Marina.
- WLEP1995: The Chilterns 593 New Sth Head Rd; The views from this item already include the existing marina. The existing views are also obscured by a large street tree.
- House, gardens & trees - 1 Rose Bay Ave; Not impacted
- House, gardens & front stone wall 5 Rose Bay Ave.; Not impacted
- 629 New Sth Head Rd; Negligible impact upon views back to Point Piper.
- Rose Bay Police Station; Not impacted
- Non Statutory: National Trust - Sydney Harbour Landscape Conservation Area.; there will be a negative impact on the scenic qualities of the conservation area.

Archaeology

Archaeological deposits from objects discarded from vessels, jetties and the marinas are also likely to be present throughout the study area. The development would require an excavation permit unless an exemption from the NSW Heritage Office is granted. Archaeological monitoring and recording should be undertaken at Rose Bay Marina during construction. Should a dilapidation or preconstruction survey be undertaken at Point Piper Marina then a maritime archaeologist should be involved. Only work as specified should be undertaken in order to minimise the impact upon the potential archaeological resource.

Consideration :

Woollahra Local Environmental Plan 1995

Part 1. 2(1)(c)&(g); 2(2)(g)(ii)&(v)(vii); 2(2)(h)(v)

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Rose Bay Marina#2.doc

Part 3. 19(2)

Part 4. 26(2); 27; 31(2);

The proposed marinas would have a detrimental impact upon the visual setting of the heritage item the Rose Bay Esplanade and Balustrade (Promenade and Sea wall). The aim is to protect and improve the view of Sydney Harbour. Obstructing views from public foreshore and public promenade does not improve the view of Sydney Harbour. The visual impact when viewed from Sydney Harbour is also considerable. An excavation permit or an exemption will be required from the NSW Heritage Office.

Sydney Harbour Foreshores and Waterways Area DCP 2005

Appendix D. The visual character of swing moorings differs from a fixed berth marina. There is visibility between and around swing moorings whereas a marina is a single visual element. Marinas contain more power boats adding to the bulk above the berths. Marinas have a greater potential to block harbour views from adjoining public open space.

Recommendation

Refusal. Due to the impact upon the visual setting of the heritage item the Rose Bay Esplanade and Balustrade (Promenade and Seawall) I cannot support this application.

Conditions

Should this application be approved there should be conditions relating to archaeology and the opening in the balustrade. I will draft these conditions when the outcome is determined.

Louise Thom
Heritage officer

REFERRAL RESPONSE – URBAN DESIGN

FILE NO: DA 766/2006/1
ADDRESS: 594-596 New South Head Road ROSE BAY 2029
PROPOSAL: Redevelopment of Rose Bay and Point Piper Marinas
FROM: Tom Jones Urban Design Planner
TO: Mr P Kauter

1. DOCUMENTS PROVIDED

This response is informed by the following information provided by the applicant:

- *Environmental Impact Statement Volumes 1 and 2*, November 2006, prepared by JBA Urban Planning Consultants Pty Ltd.
- *Visual Impact Assessment* by Richard Lamb and Associates October 2006 (RLA report)
- *The Visual Effects Assessment of the Proposed Rose Bay and Point Piper Marinas* by Scenic Spectrum April 2007 (SS report)
- Drawings by Patterson Britton and Partners including: *Distances Issue B*, 25 July 2007

2. BACKGROUND

2.1 Description of the Location

Rose Bay is the largest bay in Sydney Harbour, flanked by Point Piper to the west and Vaucluse to the east. The sweep of the bay is approximately 1.7 kilometres long and forms the northern side of the sandy isthmus, the southern side of which is Bondi Beach.

In the early 19th century New South Head Road leading to the village of Watsons Bay was constructed following the edge of the bay. Approximately 6 hectares of land reclamation in the centre of the shore line, being Lyne Park, interrupts the relationship between the water, the original beach line and the public road. The proposal is sited in the western corner of the bay adjacent to a public park and beach, and where New South Head Road meets the shoreline of the Harbour.

2.2 The Existing Character of the Bay of Rose Bay.

Rose Bay is a large north facing open bay characterised by:

- Openness

- Sheltered water
- Small boats on swing moorings
- Steep flanks covered by mature trees and predominantly residential buildings.
- The sweep of the beach formalised by a promenade, lighting and street trees.
- Views of Shark Island, the Headlands and the Harbour beyond.
- Marine activity including sailing, seaplanes and motorboats.

However, the western part of the bay adjoining Rose Bay Park has a more intimate scale with a greater sense of enclosure due to the steeply rising backdrop, large trees within the park and Wunulla Road and partial enclosure and containment of views out by the existing marinas.

2.3 Relevant Planning Controls

The application is assessed with reference to the following planning documents:

- *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005.*
- *Sydney Harbour Foreshores & Waterways Area, Development Control Plan for SREP (Sydney Harbour Catchment) 2005.*
- *Appendix D, Sydney Harbour Foreshores & Waterways Area Development Control Plan for SREP (Sydney Harbour Catchment) 2005.*

2.3.1 Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (SHREP)

Under the SHREP, the proposed marina is located in zone W5 Water Recreation. In Zone W5, the proposed use as a commercial marina is permitted with consent. The W5 zone overview P.5 SHREP includes the following statement:

While many waterfronts have been modified, new development will need to protect any remnant natural features, retain important views and harmonise with the landscape. As water recreation facilities and marinas generally occupy a large amount of the waterway they will need to meet a demonstrated need and avoid conflicts with other water users.

Relevant sections of the SHREP are duplicated below:

Aims of Plan

2(1) (a) Sydney Harbour is to be recognised as a public resource, owned by the public, to be protected for the public good.

Zone No W5 Water Recreation

The objectives of this zone are as follows:

- (a) *to give preference to and increase public water-dependent development so that people can enjoy and freely access the waters of Sydney Harbour and its tributaries,*
- (b) *to allow development only where it is demonstrated that the public use of waters in this zone is enhanced and will not be compromised now or in the future,*
- (c) *to minimise the number, scale and extent of artificial structures consistent with their function,*
- (d) *to allow commercial water-dependent development, but only where it is demonstrated that it meets a justified demand, provides benefits to the general and boating public and results in a visual outcome that harmonises with the planned character of the locality,*
- (e) *to minimise congestion of and conflict between people using waters in this zone and the foreshore,*
- (f) *to protect and preserve beach environments and ensure they are free from artificial structures,*
- (g) *to ensure that the scale and size of development are appropriate to the locality, and protect and improve the natural assets and natural and cultural scenic quality of the surrounding area, particularly when viewed from waters in this zone or from areas of public access.*

DIVISION 2 MATTERS FOR CONSIDERATION

26 Maintenance, protection and enhancement of views

The matters to be taken into consideration in relation to the maintenance, protection and enhancement of views are as follows:

- (a) *development should maintain, protect and enhance views (including night views) to and from Sydney Harbour,*
- (b) *development should minimise any adverse impacts on views and vistas to and from public places, landmarks and heritage items,*
- (c) *the cumulative impact of development on views should be minimised.*

2.3.2 Sydney Harbour Foreshores & Waterways Area, Development Control Plan for SREP (Sydney Harbour Catchment) 2005

The SHDCP contains the following controls which are of particular significance to the proposal.

Part 3 Landscape Assessment

3.2 general aims are to:-

- *Minimise any significant impact on the 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.*

It is noted that map 12 in the SHDCP showing Rose Bay illustrates 4 landmarks visible from the proposal being:

- Strickland House
- St Michael's Spire

- Sacred Heart Convent
- Mansion on Woollahra Point

as well as parts of the Sydney Harbour National Park.

Section 3.4 of the DCP classifies Rose Bay as having Landscape Character Type 10. Landscape Character Type 10 applies to the wide open bays of the Eastern Suburbs, including Rose Bay, Watsons Bay, Double Bay and Rushcutters Bay.

The following performance criteria apply:

Any development within this landscape is to satisfy the following criteria:

- *it does not obscure, detract from or destroy special natural elements that are significant within the local context of the area;*
- *the open nature of the bays is not lost by overdevelopment of the foreshores; and*
- *it has been demonstrated that the commercial activities proposed within and adjacent to the foreshores are necessary and that their proposed use is compatible with existing and likely future land uses.*

2.3.3 Appendix D, Sydney Harbour Foreshores & Waterways Area Development Control Plan for SREP (Sydney Harbour Catchment) 2005 (App. D SHDCP)

The DCP for the SHREP contains an Appendix D: *How to Undertake a Visual Impact Assessment for Marinas*. This Appendix includes 11 key findings of a study undertaken by URS consultant engineers on the visual impact of marinas. The proposal is discussed below in **4.0 VISUAL IMPACT ASSESSMENT** using these criteria. Appendix D also contains a table which scores the severity of the impact of marina development. The methodology set out in Appendix D has been used to assess the visual impact of the proposal. The outcome of this assessment is summarised in **TABLE 2**.

3. THE PROPOSAL

The Point Piper and Rose Bay Marinas proposal has two basic elements: the fixed elements and the vessels. The following description of the proposal describes these two elements. The fixed elements are clearly identified in the documents supplied. The vessels which will have the greater visual impact are described only by a maximum length and assumption that they will float and are movable.

3.1 Fixed elements

- An extension of the existing marina facilities at the Point Piper Marina. The existing jetty will be removed and replaced by a longer pontoon arm extending

approximately 23m further east into the Bay. It is proposed that there be a petrol filling station on the end of this arm. An additional infill arm will utilise the water between the existing marina jetty and the Royal Motor Yacht Club marina for 33 new mooring locations. This floating arm will extend 220m into the Bay in a SE direction. Two security gates approximately 2.4m high control access to the pontoons. It is proposed that the pontoons are lit at night.

- Removal of the swing moorings in the south west of Rose Bay.
- The removal of the existing Rose Bay marina jetty and the 29 berths which extend 115m from the shore and their replacement with floating pontoons extending 260m from the shore and 220m eastwards measured parallel to the shoreline. These pontoons will provide berthing for 124 vessels.
- A minor alteration to the access ramp to the west of the Rose Bay Marina buildings allowing equitable access to the building and access to the marina's main arm.
- A 385sqm.flat concrete hard standing to the east of the Rose Bay marina buildings, positioned over the water. Beneath part of the platform is proposed a diesel storage tank and an electrical power substation will sit on top of the platform.
- Two diesel refuelling stations and sewage pump out facilities located on the western side of the main arm.
- A glass and steel shelter associated with the refuelling and 4 security gates approximately 2.4m high, controlling access to the pontoons.

It is proposed that the pontoons are lit at night.

3.2 The Vessels

The more significant visual component of the marinas are the vessels that the berths accommodate. The length of these vessels is indicated in **TABLE 1** below:

TABLE 1

Overall Length in Metres	Up to 10.0	10.1 - 15.0	15.1 - 20.0	20.1 - 25.0	25.1 - 30.0	30.1 - 37.0
Number of berths	17	45	76	8	9	4

The berthed vessels will constitute the great majority of the proposed marinas' visual bulk. Many of the vessels it is proposed to berth are much larger than those at the existing marinas.

The visual impact of the combined mass of these boats is significant. The bulk of 37m long recreational motor vessels is not dissimilar to that of a large two storey house. Eighteen metre vessels are equivalent to the size of an attached house. This is illustrated by a comparison of boats in Rushcutters Bay to dwellings in parts of Woollahra and Bellevue Hill see **FIGURE 1**.



FIGURE 1. Part of Rushcutters Bay Marina is enlarged to show a 37m craft, the biggest able to be berthed at Rose Bay Marina, this image is compared to parts of Woollahra and Bellevue Hill at the same scale.



FIGURE 2. This typical 37 m long motor vessel is approximately 8m high above the water line excluding the funnel and mast.

The marina proposal reduces the number of swing moorings and increases the amount of vessels at berths. The density of vessels on swing moorings is controlled by the geometry of the boat's swing. This natural control on density means that swing moorings as a visual component in a bay are permeable and able to be seen through and beyond. The provision of fixed berths allows more large vessels to be moored in the bay. A density comparison of swing moorings and fixed berths is instructive. Sixteen boats 10m long can be accommodated on swing moorings in a hectare of water. One hundred and ten vessels 10m long can be accommodated in a hectare of fixed berths. Fixed berths are approximately 6.75 times denser than swing moorings. See **FIGURE 3**

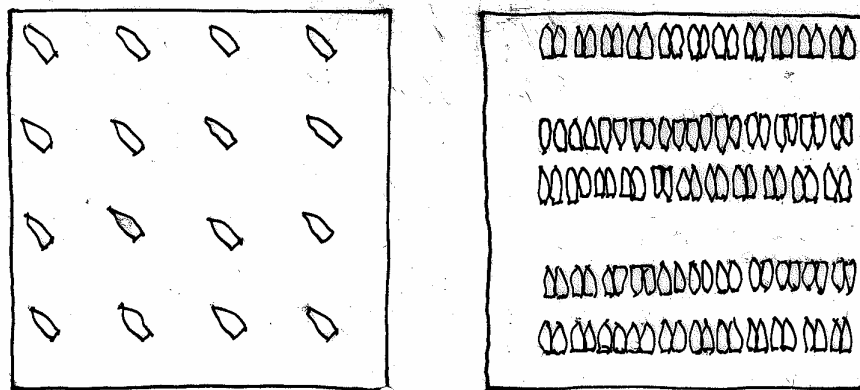


FIGURE 3 Density comparison of swing moorings and fixed berths

4. VISUAL IMPACT ASSESSMENT

I have visited the site and proximity, selected six varied viewing points and assessed the potential visual impact from these points. The locations I have selected are indicated on **FIGURE 4** and discussed below:



FIGURE 4 Showing viewing points selected for the visual impact assessment matrix. The 6 locations closest to the proposal are also viewing points used by the applicant.

4.1 Rose Bay Beach and Public Park (View 1)

The South West corner of Rose Bay features a sandy beach facing North East behind which is a small, well treed public park.

4.1.1 Existing Condition The beach is flanked by the existing marinas. The enclosed water adjacent to the beach is presently occupied by boats on swing moorings. This beach and Tingira Reserve on the far side of Lyne Park are the only public recreation beaches on Rose Bay.

4.1.2 Proposed

The applicant intends to extend the arms flanking the bay and to remove the swing moorings. The applicant has proposed the clearing of swing moorings from a visual corridor in front of the beach. Richard Lamb and Associates indicate that this corridor “*would contain no boats*”. Scenic Spectrum indicate that the corridor will “*provide a zone of open water not used by large sailing and cruise vessels*”.

While the corridor will be free of permanent moorings, a number of pens on the Point Piper marina will be accessed from the corridor. Vessels will also need to navigate the corridor to access casual berths and refueling facilities. The proposed gap between the marinas on the east and west of this cleared area will be reduced from the 137m to 96m. This gap is illustrated in **FIGURE 5**.

One of the URS key findings in App. D of the SHDCP noted:

Marinas create significantly greater potential to block harbour views from adjoining foreshore public open space than the equivalent number of boats stored on swing moorings.

4.1.3 View Impacts

The view cone from the beach will be considerably reduced from all parts of the beach by the extension of the Marina arms and the vessels moored there. The northern end of the beach will have views to the open water of Rose Bay completely blocked by vessels moored at the extended fixed berths. See **FIGURE 5**

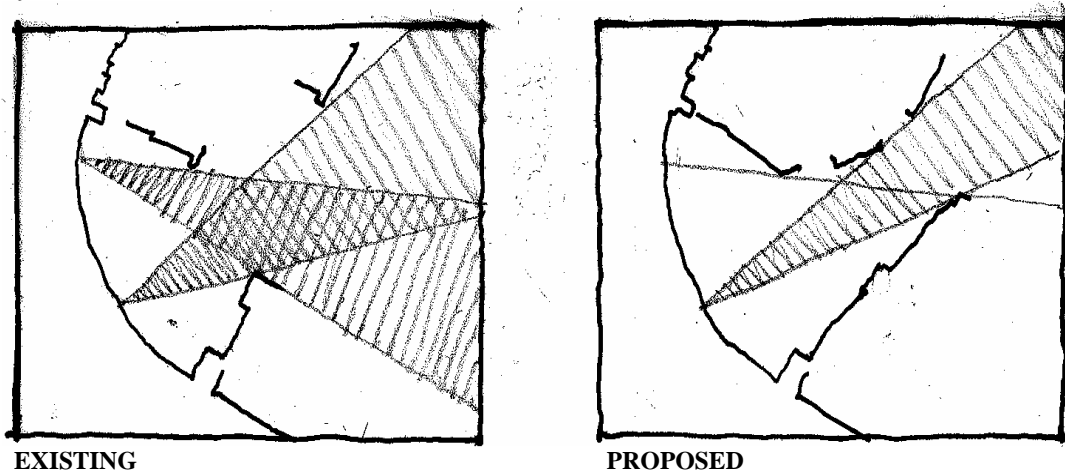


FIGURE 5 Showing existing and proposed view cones from Rose Bay Park Beach

The cleared water will be used for marina activities. The swing moorings that are being removed are characteristic of Rose Bay and the extended marina will further enclose the beach. These factors will result in a high visual impact from the beach.

4.2 Viewing point on the promenade on New South Head Road approximately 60m east of the Rose Bay Pier (View 2)

4.2.1 Existing Condition

This is where New South Head Road and the waters of Rose Bay meet. Travelers on New South Head Road and people on the generous water front promenade first clearly see the expanse of Rose Bay when going east from around this point. From here the extent of the bay is visible although the view of the western flank is blocked by the Rose Bay Marina buildings and the moored vessels at the existing marinas. The Bay is filled with boats on swing moorings, but the low density of these boats and their relatively small size enables them to be easily seen over and between.

4.2.2 Proposed

The proposal replaces swing moorings with fixed berths which extend parallel to the promenade approximately 220m from the Rose Bay Pier to the east. It is proposed that the Rose Bay Marina would provide the majority of the new berths and would accommodate the larger vessels up to 37m in length. A person standing on the promenade with an eye level of approximately 4.65m above mean high sea level will not be able see over an 8m high vessel. See **FIGURE 2**. The large number of berths and the size of the boats will impact on views from over 200m of the pedestrian

promenade along New South Head Road to the east of the existing Rose Bay Pier. The URS key finding in the APP D SHDCP is noted:

Marinas generally contain a higher proportion of powerboats than swing mooring facilities. Powerboats create significantly more visual bulk than yachts of similar length because the greater height to length ratio of powerboat hull and cabin compared to yachts.

The proposed marina is intended to be mainly used by powerboats.

4.2.2 View Impacts

This view point from the public road is important. Each day over 26,000 vehicles travel along New South Head Road. Many of the occupants are tourists seeing the outer Harbour for the first time, a scene that leaves a lasting impression. New South Head Road is the only major road east of the city that follows the shoreline of the Harbour. The proposed marinas will have a substantial impact on the perceived openness of Rose Bay, greatly reducing the amount of public road from which the main harbour beyond Shark Island will be visible. The landscape character of Rose Bay at this point is wide and open, consistent with Landscape Character Type 10 as described in the DCP. The extension of the marinas will affect the visual experience from one of most significant roads adjacent to Sydney Harbour.

4.3 Residential Property on Wunulla Road (View 3)

The residential properties on Wunulla Road between Point Piper Marina and The Royal Motor Yacht Club are the closest to the proposal.

4.3.1 Existing Condition

The water between Point Piper Marina and The Royal Motor Yacht Club is presently open, allowing a view to the south east out into Rose Bay. The jetties of the adjacent marina facilities flank this area of water. These residences generally have private piers which allow deep water access.

4.3.2 Proposed

The proposal fills in the open area between the existing marina jetties with floating pontoon arms and fixed berths. This extension of the Point Piper Marina is immediately in front of the water frontage of the Wunulla Road residences. On the other side of the cleared channel the extension of the Rose Bay Marina would further obstruct the open water. The pontoons are proposed to be lit.

4.3.3 View Impacts

From the residences viewers look over and beyond the proposal, however the immediate water views of the sort enjoyed by the residents of these dwellings would be impacted on by the fixed berths. The water in the middle and foreground is considered an integral part of the view. The occupation of these areas by berthed vessels will impact on the character of the view. This is particularly the case on Wunulla Road where the distant view of Vaucluse and Dover Heights is predominantly of a suburban nature.

From the garden or the waters edge of these properties the view will be completely blocked.

The waters of the bay are generally unlit. Any lighting beyond the line of the shore as proposed is intrinsically intrusive in a natural setting. No longer are viewers looking into the dark, but onto a lit environment. It is possible that the lights from larger vessels could cause amenity impacts to surrounding residents.

4.4 Residential Property on New South Head Road at the corner of Salisbury Road (View 4)

Residential properties line the south side of New South Head Road and look out over the Bay. Most of these properties are in multiple occupation.

4.4.1 Existing Condition

The residential buildings on New South Head Road, look out over the road and onto the Bay. The views are interrupted by well established street trees.

4.4.2 Proposed

The Rose Bay Marina extension will cross in front of these residential locations on New South Head Road. The boats on swing moorings will be replaced by larger vessels in fixed berths.

4.4.3 View Impact

The middle ground of views from this location will be impacted by the extension of Rose Bay Marina. Residents on higher floors will be able to see over the berthed vessels to the distant views of the harbour and north shore. The existing small boats on swing moorings in the foreground have a visual impact completely different to the bulk of consolidated vessels up to 37m in length (refer figure 3) approximately 220m from the shore. Existing boats on swing moorings are looked down on and are surrounded by water, whereas predominately motor vessels moored side by side will form a consolidated visual block. This observation is consistent with the opinion of the URS in App D of the SHDCP which states:

The visual character of boats stored on swing moorings is significantly different than an equivalent number of boats stored in a marina, because boats on swing moorings are more dispersed, allowing visibility between and around vessels. On the other hand vessels stored in marinas appear as a single visual element forming a visual extension of the adjoining land-based development.

4.5 From the Public Ferry (View 5)

A public ferry sails on a regular basis on a course adjacent to the proposed Marina.

4.5.1 Existing condition

On a ferry sailing to or from The Rose Bay Ferry Wharf in Lyne Park there is a clear view of the existing marinas including the Royal Motor Yacht Club. The marinas are set against a treed back drop. There is no clear view of the beach at Rose Bay Park.

4.5.2 Proposed

The largest boats in the proposed marinas are berthed on the waterside. The size and number of berthed vessels will mean their visual presence becomes more apparent in the view from vessels and ferries on the waters of the main Harbour and the Bay.

4.5.3 View Impacts

The larger berthed vessels will be more apparent than the existing berthed vessels. However this corner of Rose Bay has been obscured by the existing marinas. The proposed extension of the Marinas will not obscure valued views of the beach since these have already been blocked. The visual impact from the ferries operating in Rose Bay between Woollahra Point and Rose Bay wharf is limited.

4.6 Dudley Page Reserve (View 6)

Dudley Page Reserve, Waverley is high up on Dover Heights to the east of the proposal in the neighbouring Local Government Area.

4.6.1 Existing condition

Dudley Page Reserve is one of a number of viewing points which looks down on the proposal from an elevated position. There are a large number of public open spaces from which the proposal is clearly visible to the east. They include:

- Hermitage Foreshore Reserve, Sydney Harbour National Park
- Neilsen Park, Sydney Harbour National Park
- Shark Island, Sydney Harbour National Park.
- Lyne Park, Woollahra
- Dumaresq Reserve, Woollahra
- Percival Park, Woollahra
- Caffyn Park, Waverley
- Dudley Page Reserve, Waverley
- Multiple vantage points on New South Head Road's "Heart Break Hill" east of Rose Bay town centre.
- Vantage points on Vacluse Road.

4.6.2 Proposed

The proposal extends the existing marinas further into Rose Bay and berths larger vessels there. The facility will be lit at night.

4.6.3 View Impacts

The visual catchment to the east is considerable. This means many residences as well as viewers from public areas will see the proposal from the east. The proposal would be obvious since it sits outside the natural shoreline on flat water. This effect will be particularly apparent at night when the pontoons and vessels will be lit. However the impact of the proposal is minor due to the distance from the viewer.

4.7 Visual Impact Assessment Matrix

The procedure prescribed in App. D of the SHDCP is based on a comparison of before and after photographs. Photographs of existing views are taken using a 50mm

focal length lens in landscape format to closely simulate the view experienced by the human eye. The proposal is illustrated by montaging an illustration of the proposed marinas at the same scale on to a second photograph of the existing. The viewpoints selected should represent a range of locations from which the proposed development is visible and has potential impact. Each view is assessed with reference to the criteria set out in Appendix D of the DCP for SREP and a score is determined for each view point.

High Impact	Average score of 2.334-3.000
Medium Impact	Average score of 1.667-2.333
Low Impact	Average score of 1.000-1.666

The scores which have been attributed to each factor (location of viewer, distance of view, etc.) are based on indicative contributions to potential view impact as set out in Fig D2 of the DCP. This figure is contained in annexure 20.

The assessed impact of the fifth factor *Boat storage type/ Spatial relationship (ie. private or commercial marina or swing moorings and its settings)* differs between the view points. When viewed in the *open bay* setting the visual impact is assessed as moderate. When seen from the beach and Wunulla Road where the setting is considered to be enclosed, a higher visual impact is registered.

Factor	View 1 From Rose Bay Park Beach	View 2 From NSH Rd east of Rose Bay Pier	View 3 From residential properties on Wunulla Rd	View 4 From residential property at Salisbury and NSH Rd	View 5 From the waterway as if on a ferry	View 6 From Dudley Page Reserve, Waverley
Location of viewer	3	3	2	2	2	1
Distance of view	3	3	3	2	2	1
Period of View	2	2	3	3	2	2
Scale or relative size (boat numbers and mix of vessel types)	3	3	3	2	3	2
Boat storage type / Spatial relationship (ie private or commercial marina or swing moorings and its settings)	2.5	2	2.5	2	2	2
Overall potential visual impact average Score)	2.7 (High)	2.6 (High)	2.7 (High)	2.2 (Med)	2.2 (Med)	1.6 (Low)

TABLE 2 Visual Impact Assessment Matrix of the Proposed Marinas

The matrix in appendix D of the SHDCP indicates that the proposal will have a high visual impact from 3 of the chosen viewing points, i.e. from Rose Bay Park, New South Head Road and from residential properties in Wunulla Road. There will be a medium impact from residential properties further east and from the waterway. From more distant locations such as Dudley Page reserve the proposal will have a low visual impact.

4.8 Visual Impact Assessment Comparison

The views I have selected and those used by the applicant's consultants, do not exactly correspond. However, the 5 locations I chose close to the marina (see **FIGURE 5**) relate to the locations used by Richard Lamb and Associates and Scenic Spectrum. **TABLE 3** shows a comparison of the view impact scores produced from my analysis compared to the analyses of Richard Lamb and Associates and Scenic Spectrum. This comparison indicates that while there are differences in scoring, one or other of the applicant's consultants scores the impacts from Rose Bay Park and New South Head Road as High. Both consultants score the impact from Wunulla Road as medium whereas I have scored the impact from this location as high. We all agree that the impacts from residential properties east of the marinas and from the waterway are medium.

Location	Richard Lamb and Associates	Scenic Spectrum	Council (Urban Design)
1. Rose Bay Park beach	2.4 (High)	2.2 (Med.)	2.7 (High)
2. NSH Road east of Rose Bay Pier	2.0 (Med.)	2.4 (High.)	2.6 (High)
3. Residential properties Wunulla Road	1.67 (Med.)	2.0 (Med.)	2.7 (High)
4. Residential property NSH Road near Salisbury Road	1.8 (Med.)	2.0 (Med.)	2.2 (Med.)
5. Waterway – ferry route	2.0 (Med.)	2.2 (Med.)	2.2 (Med.)
6. Dudley Page Reserve, Dover Heights	-	-	1.6 (Low)

TABLE 3. Comparison of matrix results

5. CONCLUSION

The Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 requires the council to answer a number of key questions about the marina development:

- is the development in the public interest?
- is there a need?
- does the visual outcome harmonise with the location?

In response to these questions I make the following observations:

- According to the applicant's submission the proposal reduces the number of vessels that will be accommodated on swing moorings and increases the number of vessels that will be accommodated in fixed berths. The evidence shows that vessels berthed in marinas are used less than vessels on swing moorings. Therefore, the conclusion is that there is less access to the harbour for the public.

- There is a clearly demonstrated market demand for the berthing of large motor boats particularly in the outer Harbour. This demand does not necessarily amount to a location specific need, since there are other potential locations for such marina facilities.
- The principle question posed for the Urban Design assessment is, does the development *maintain, protect and enhance the unique visual qualities of Sydney Harbour* ? The SHREP in zone W5 allows a marina only if it *results in a visual outcome that harmonises with the planned character of the locality*. The meaning of *planned character* is not defined in the SHREP. For the purposes of this assessment it is suggested that the *planned character* is the same as the existing character which is described in section 2.2.

The SHREP does not allow commercial marina development in this location unless it harmonises with the existing character of the bay. A summary of the visual impact is made below.

5.1 The visual impact of the proposed structures

Most of the marina buildings are existing and are not being substantially altered by the proposal. The pontoons are more extensive than the existing piers, but are at water level so have less impact. The various structures on the pontoons; the piers, the shelter, fuel bowsers, pump out and security gates, will have a secondary visual impact.

5.2 The visual impact of the vessels berthed at the marinas

The boats berthed at the proposed marinas will be highly visible. This is due to the large number, layout and large size of vessels to be accommodated. They will be seen from the public domain from most directions and together cover approximately 6.2 hectares of water. The view impacts of the proposal from New South Head Road, Wunulla Road and from Rose Bay beach will be high. The visual impacts from more distant locations will be medium to low.

5.3 The visual impact on residential properties

There are three groups of residential properties from which there will be a visual impact. These are:

- The houses on Wunulla Road
- The houses and residential flat buildings on New South Head Road
- Residences in the greater visual catchment.

Nine dwellings on Wunulla Road between Point Piper Marina and the Royal Motor Boat Yacht Club will have their views impacted upon. The existing open water with swing moorings in the foreground view will be filled by consolidated fixed berths of the proposed Point Piper Marina pontoon arm. The middle ground view will be filled with large motor vessels on the proposed Rose Bay Marina. However, the development will not block views of the far shore and skyline beyond.

A mix of residential flat buildings and single residences on the south of New South Head Road face directly towards the proposed extension of the Rose Bay Marina. The fixed berths will have a different visual effect to the existing swing moorings with a consolidated mass of berthed vessels separating the foreground from the views over the marina to the main harbour beyond.

Dwellings in the larger visual catchment will experience a slight change of character and composition to their harbour and city views.

5.4 The visual impact from the public domain

There are four groups of public domain locations from which there will be a visual impact. These are from the:

- Rose Bay Park and beach
- New South Head Road and the adjacent public promenade
- The waters of Rose Bay
- Public domain in the greater visual catchment.

It is proposed to clear an area in front of the public beach of swing moorings providing a clearer view from the beach through a gap between the extended marina arms to the eastern shores of Rose Bay. This gap is considerably narrower than presently exists and although cleared of swing moorings will further enclose the beach area.

A northern view from over 200m of New South Head Road east of Rose Bay Marina, shows that the majority of the Bay will be visually blocked by large vessels on fixed berths. The loss of this section of the Harbour view from one of the most important roads adjacent to Sydney Harbour is significant.

The visual impacts of the proposed marinas from the waterway are mitigated by the treed back drop and the existing use of the area. The significance of the impact on the view from the public spaces east of the site is incremental, since marina facilities already exist. The illuminated development over the water will be evident at night.

5.5 The potential visual benefits of the proposal

Three arguments are used by the applicant to support the visual qualities of the development. These are:

- The benefits to the public of clearing the area in front of the beach of swing moorings
- The availability of new vantage points for viewing the harbour from the floating pontoons.
- The visual interest created by the fixed moorings.

The proposal improves visibility by clearing swing moorings but also reduces the width of the view corridor due to the extended marina arms. In addition, the use of the area cleared of swing moorings for refuelling, servicing and temporary berthing of vessels will impact on the visual outlook from the beach.

The public access to the pontoons will be a public benefit. However the applicant does not establish whether there is a demand from the non boating public to access pontoon mooring arms. Enabling the public generally to access a facility which may not have wider public use is unlikely *to offset the perception of marinas as privatised and unavailable*, as suggested by Richard Lamb and Associates.

The third possible public visual benefit is that boats on the fixed berths are aesthetically interesting. This is purely a subjective matter, but it is possible that the majority of viewers would prefer harbour views through swing moorings over those of consolidated marina berths.

5.6 Summary of Visual Assessment

There is a major impact on relatively few residents in the immediate vicinity. There is a less obvious but significant impact on the view amenity of a large number of residences in the larger visual catchment. However, the main visual impacts will be experienced from the public domain along New South Head Road and from Rose Bay beach. The most significant impacts will be:

- The blocking of views from a considerable length of New South Head Road. This will impact on a large number of viewers and change the visual outlook to the harbour.
- The further enclosing of views from Rose Bay park and beach due to the location and length of the proposed pontoons and the number and size of vessels to be berthed.

6. RECOMMENDATION

That the proposal be refused in its present form for the following reasons:

1. The bulk of the vessels accommodated by the proposed extension of Point Piper and Rose Bay Marinas is such that the character of the bay will be changed. The predominantly open nature of the bay with small boats on swing moorings will be changed by the consolidated bulk of the extended area of fixed berths. The SHREP allows marina development only if it *results in a visual outcome that harmonises with the planned character of the locality*. The proposal is not considered to harmonise with the character of the locality.
2. Views of the bay will be negatively impacted on during the day and at night. Views will be blocked and a light source created at night. These visual impacts conflict with the requirements of the strategic documents that require the scenic quality of the bay be protected. In particular the final objective of zone W5: in the SHREP:
 - (g) *to ensure that the scale and size of development are appropriate to the locality, and protect and improve the natural assets and natural and cultural scenic quality of the surrounding area, particularly when viewed from waters in this zone or from areas of public access.*is not achieved.

Tom Jones Urban Design Planner

4 September 2007

REFERRAL RESPONSE

FILE NO: DA 766/2006/1
ADDRESS: 594-596 New South Head Road ROSE BAY 2029
PROPOSAL: Redevelopment of Rose Bay and Point Piper Marinas
FROM: Dale Hyde Fire Safety Officer
TO: Mr P Kauter

Peter

Please include the following as condition of development consent:

- 1 The Marina Development shall comply with the following standards:
 - The Building Code Of Australia
 - AS 1940-2004 The storage and handling of flammable and combustible liquids.
 - AS 3962- 2001 Guidelines for design of marinas.
 - AS 2430-2004 Classification of hazardous areas
 - AS 60079.10 Classification of hazardous areas

- 2 The pressures and flows for reticulated water supply shall be adequate for the purpose of Fire Brigade intervention and the Australian Standards AS 2419.1 2005 Fire hydrant Installations, AS 2441 2005 Installation of Fire Hose Reels, As 2118 1999 AS 2118 .6 1995 should these measures be installed.

- 3 The two closest Fire Stations to each marina shall be provided with access keys or cards to allow 24 hour access to the jetties prior to the construction of barriers restricting access to the new part.

- 4 Prior to occupation for the new part crews from the two nearest local fire stations shall be provided with a familiarisation visit to each marina site

- 5 **Pursuant to clause 94 of the Environmental Planning and Assessment Regulation 2000** Council as the consent authority requires the existing buildings to be brought into partial conformity with the Building Code of Australia as the measures contained in the building are inadequate to protect persons using the building, and to facilitate their egress from the building, in the event of fire, and to restrict the spread of fire from the building to other buildings nearby.

- (a) Prior to the issue of a construction certificate a Fire Safety Audit Report which indicates recommendation of required upgrade within the building to ensure an adequate level of fire safety exists shall be submitted to and approved by Woollahra Municipal Council subject to requirements the Council may have as Local Authority. The report shall be prepared by a suitably qualified Building Surveyor or Fire safety Engineer.
- (b) Prior to the issue of an occupation certificate the recommendations of the fire safety audit report noted in (a) and any requirements of Woollahra Municipal Council as local authority shall be implemented within the building to ensure an adequate level of fire safety exists.

ADVICE:

1. The Principal Certifying Authority shall submit to Council a fire safety schedule indicating fire safety measures to be installed within the building. The fire safety schedule shall be submitted with the notice of proposed commencement required by (s) 81A of the Environmental Planning and Assessment Act 1979 no later than 2 days prior the beginning of any work.
2. A copy of the final fire safety certificate shall be submitted to the Commissioner of the New South Wales Fire Brigades and displayed within the building as soon as practical after the completion of the works.
3. Within 12 months after the final fire safety certificate is issued an annual fire safety statement dealing with each essential fire safety measure in the building shall be submitted to council, the Commissioner of the New South Wales Fire Brigades and displayed in the building in accordance with the requirements of Clause 177 of the Environmental Planning and Assessment Regulation 2000.

Thanks
Dale