Peter J Boyce & Associates

Ph 0412 928 500 P.O. Box 375. Strathfield 2135 Ph 9868 2855
Building Surveyor Acc. No BPB0043 Fax 9868 2655

2nd March 2011

The General Manager

Dear Sir,

Re: Submission of 'Partial'Construction Certificate
Gourlay Avenue Balgowlah – (Davis Marina)

Please find enclosed:

1. Letter & cheque for registration of CC
2. Completed Application Form
3. Partial Construction Certificate
4. Council receipts and Bank Guarantees etc as required by D/A conditions.
5. Statement from Applicant that the CC plans are generally in accordance with the DA.
6. Notice of Commencement
7. Public Notice
8. Information re pedestal
9. Sydney Water stamped plan
10. Acid Sulphate Soils Management Plan
11. Safe Work Method Statement
12. Environmental Management Plan
13. Site-Specific Safety Management Plan
14. Management Plan and operational/environmental
15. Architectural plans
16. Fire Safety Schedule

Should any of the above documents not be received please advise me immediately.

Many thanks.

Peter Boyce

$30.00
R/N 764488
AG 3/3/2011

Peter J Boyce & Associates

Ph 0412 928 500 P.O. Box 375. Strathfield 2135 Ph 9868 2855
Level 2, 41 Rawson Street, Epping 2121
Building Surveyor Acc. No BPB0043 Fax 9868 2655

Your ref D/A 86/08

2nd March 2011

The General Manager
Manly Council
PO Box 82
MANLY NSW 1655

Dear Sir,

Re: Copy of 'Partial' Construction Certificate
Gourlay Avenue Balgowlah – (Davis Marina)

Please find enclosed copy of 'Partial' Construction Certificate issued for the above property under D/A 86/08.

A cheque for $30.00 for registration of the 'Partial' Construction Certificate is attached herewith.

Yours faithfully

Peter Boyce

Application for Construction Certificate

Issued under the Environmental Planning and Assessment Act 1997 Part 3 - Schedule 1

Local Council Area
City, Council or Shire — MANLY COUNCIL

RECEIVED 21 FEB 2011

Owner
Name — DAVIS MARINA
Address — END GOURLAY AVE BALGOWLAH
Phone — 9948 3750

Consent of all owner(s)
I/we consent to this application
Signature — .....

Subject Land with lot & deposited plan number — DIP 793098
Address — END GOURLAY AVE BALGOWRAH NSW

Brief description of development
Type of Development i.e. Dwelling. Addition — BOAT MARINA DEMOLITION AND REPLACEMENT

Building code of Australia
Building Classification. Class — ~~N/A~~ 10a

Development Consent
Development consent number: 86/08
Date of Determination: 10/7/2009

Builder/Owner Builder Name or Permit number — SYDNEY MARINA CONTRACTING PTY LTD NOT APP.
Address — PO BOX 68 GLEBE NSW 2037

Value of Work — $ 1,071,723.00

Required attachments --- Copy of D/A approval with Conditions
Four copies of the plans & Specification.
Plan Nos.
List of supporting documents

Schedule --- The building schedule must be completed as part of this application for the Australian Bureau of Statistics

---

Owner Signature .....

Australian Bureau of Statistics

Particulars of Proposal ---What is the area of land (m^2) ....
Gross Floor area of existing building (m^2).....
What are the current use of all or part of the building(s)/land
(If vacant state vacant) .....

Location Use
.....

.....
Does the site contain a dual occupancy?.....NO.....
What is the gross floor area of the proposal (m^2)..NIL....
What are the proposed uses of the building?

Location Use
.....
.....
How many stories will the building consist of ? ....N/A.....

Materials to be used

Place a tick in the box which best describes the material

Walls	code	Roof	code
Brick veneer	12	Aluminium	70
full brick	11	concrete	20
single brick	11	concrete tiles	10
concrete block	11	fibrous cement	30
		fibreglass	80
concrete/masonry	20	masonary/terracotta shingle	
concrete	20	tiles	10
steel	60	slate	20
fibrous cement	30	steel	60
hardiplank	30	terracotta tile	10
timber/weatherboard	40	other	80
cladding aluminium	70	unknown	90
curtain glass	50		
other	80		
unknown	90		

Floor		Frame	
✓concrete	20	timber	40
✓timber	10	✓steel	60
other	80	other	80
unknown	90	unknown	90

Peter J Boyce & Associates

Level 2, 41 Rawson St Epping NSW 2121

Ph: 9868 2855 email:info@boycecorp.com.au Fax: 9868 2655

Planning NSW Building Surveyor No. BPB0043

PARTIAL CONSTRUCTION CERTIFICATE

Certificate No. BM11043(Partial)

This certificate is issued by a certifying authority and verifies that, if the applicant carries out the proposed work in accordance with the plans and specifications that are approved, the work will comply with the Environmental Planning and Assessment Act 1979 and Regulations 2000.

Applicant

Name	Davis Marina
Address	(Bruce Davis) End Gourlay Avenue Balgowlah
Contact Number	9948 3750
Email	-

Development

Development Consent No.	D/A 86/08
Consent Date	10th July 2009
Site Address	Gourlay Avenue Balgowlah
Property Identification	DP 793098
Building Classification under BCA	10a

Pursuant to Section 109C (1) (b), 81A (2) and 81A (4) 0f the Environmental Planning & Assessment Act, 1979 the construction certificate has been determined by approval in accordance with the stamped plans and specifications.

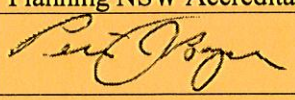
Approval

Plan Nos. Approved	Bellingham Marine – Drawing Nos. 4065-02
Description of works Approved	Upgrade of existing Marina facilities – PARTIAL – Replace fixed Marina with floating Marina and decommission fuel tank..
Partial Construction Certificate No. **Determination Date**	**BM11043(Partial)** - 2 MAR 2011

Note:
Prior to commencement of work, Section 81A (2) (b) and/or 81A (4) (b) and (c) 0f the Environmental Planning & Assessment Act, 1979 must be satisfied (see form 7 of the Regulation) i.e. name of the Principal Certifying Authority.

I certify that the work if completed in accordance with the documents, plans and specifications accompanying the application will comply with the requirements of this regulation as are referred to in Section 81A (5) of the Environmental Planning & Assessment Act 1979

Accredited Certifier

Name of Accredited Certifier	Peter Boyce
Accreditation No. of Certifier	Planning NSW Accreditation No BPB0043
Signature	

Notice of Commencement of Building work and Appointment of Principal Certifying Authority

under Environmental Planning and Assessment Act 1979
Section 81A (2) (b) (ii) or (c), 86 (1) and (2)

Development Details

Subject Land	DP 7930981
Description of Development	BOAT MARINA
Type of Work (Building Class)	FLOATING MARINA

Development Consent

Consent No	86108
Date of Determination	10/7/2009

Construction Certificate

Certificate No	BM11043
Date of Issue	2 MAR 2011

Principal Certifying Authority

Name	Peter J Boyce
Accreditation No	Planning NSW Acc No BPB0043
Address	Level 2, 41 Rawson St Epping NSW 2121
Acceptance of Appointment	

Builders Detail

Name	SYDNEY MARINA CONSTRUCTIONS P/L
Address	PO BOX 68 GLEBE NSW 2037
Telephone No	9571 7200
Licence No	N/A

Compliance with Development Consent

Have all conditions required to be satisfied prior to the commencement of work been satisfied ? (conditions may include payment of s94 contributions, endorsement of building work plans by water supply authority and **Long Service Levy must have been paid**)	Yes / No

Home Building Act

Has PCA been advised of the requirements of cl 78C of the Regulation – Copy of Certificate must be attached, if not previously supplied. Details from Fair Trading Department 9377 9094	Yes / No N/A

Date Work is to Commence	1 ST APRIL 2011

Person Benefiting from the Development Consent:	BRUCE DAVIS
Signature	
Date	16 - 2 - 2011

ABN #:43662868065
Manly Council
PO Box 82
MANLY NSW 1655
Ph 9976 1500 Fax 9976 1400
Email: records@manly.nsw.gov.au
Website: www.manly.nsw.gov.au

2010/2011 Calculator

D/A No.: ...../.....
Date Paid: ...../...../.....
Rec. No.:.....

...to any of the boxes below is the ...e

Yes

Place X in box if fee to be paid

Fee Code						
			...n estimated construction cost		False	Fee
41	Date 15/02/2011 09:07 Receipt 00754429:0001 Terminal 1:1327 Davis Marina Pty Ltd		$ 1,071,723.00		$ 0.00	
				0.064%		
117	Details	Amount	$ 1,071,723.00		$ FALSE	
	Long Service Levy 008000.9200.8079 Gourlay Ave	3751.00			$ 0.00	
43	Total Value:	3751.00	$ -		$ 0.00	
43	Tendered Cheque Change	3751.00 0.00	ng		$	
41					$	
44	Thank you for Prompt Payment		$ -		$ 0.00	
48	[Enter No & Type of Inspections] - First Inspection - Subsequent Inspections -				$ 0.00	
42	**Long Service Levy** [Long Service Payments Corporation] Levy applies to Building Construction work costing $25,000 or more (0.35% from 1/01/2006).		$ 1,071,723.00		$ 3,751.00	x
50	**Builders Damage deposit** [Enter Total Value of Development] *{Additional Fee may apply for Development > $1,000,000}*		$ -		$ 0.00	
49	**S96 Modification of Consent**					
	Fee for application under S96(1), (1A) (2)(i)or(ii) -				$	
	Fee for application under S96(2)(iii) as per Scale: [Enter Total Value of Development] -		$ -		$ 0.00	
47	**Complying Development Application** [Enter Total Value of Development Above] -		$ -		$ 0.00	
118	**S82 Review**					
	Fee for application under S82(1) or (2) -				$	
	Fee for application under S82(3) as per Scale: [Enter Total Value of Development Above] -		$ -		$ 0.00	
41	**Aditional Administration Fee for Integrated Development**				$	
	Other Fees					
Fee Code	*[Description:]*					
					$	
					$	
	TOTAL FEES				$ 3,751.00	

TO WHOM IT MAY CONCERN

RE: DAVIS MARINA P/L DA# 86/08

I hereby certify that the Architectural Plans submitted with the Construction Certificate application are generally in accordance with the Development Approved plans approved by Council.

Signature

LIGHTING

Marine Technologies
AUSTRALIA

WHAT A STERLING IDEA!

Marine Technologies are proud to introduce our new pedestal.....The Sterling.

Smaller berths on marinas don't generally require the extent of services necessary for larger berths. With this in mind, Marine Technologies has introduced a new pedestal to the market. "The Sterling" meets the needs of smaller berths perfectly and is offered ***without compromising quality.***

- Unique slimline design makes it ideal for installing along walkways and gangways.
- Can fit up to six outlets in combination from 16A single phase to 3 phase outlets up to 32A.
- Specifically designed light for marina applications with a hinged top means no loose parts to fall into the marina when replacing lamps. Surrounding louvres direct light downwards toward the marina decking.
- The main body of the pedestal is anodised, extruded aluminium and has a slide out panel for easy access during maintenance.

Marine Technologies Sterling pedestal is a most economical solution whilst still maintaining Marine Technologies high standard of quality.

LEGEND :

- ☐ SERVICE MODULE FITTED WITH :
  1 No. 15AMP (SINGLE PHASE) OUTLET
  1 Nos. RCD/MCB
  1 No. (kWh) METER
  1 No. 3/4" HOSE COCK (CHROME)
  1 No. FLURO LIGHT
- ◪ SERVICE MODULE FITTED WITH :
  2 Nos. 15AMP (SINGLE PHASE) OUTLETS
  2 Nos. RCD/MCBs
  2 Nos. (kWh) METERS
  1 No. 3/4" HOSE COCK (CHROME)
  1 No. FLURO LIGHT
- FIRE HOSE REEL
- PO PUMP OUT
- WASTE & RECYCLE BINS

Ⓑ

4 x 14m

NOTE: MINIMUM OF 600mm IS TO BE MAINTAINED BETWEEN THE UNDERSIDE OF PONTOONS AND SUBSTRATE AT ALL TIMES

PLAN

10 15 20 25m

500 (A3)

SYDNEY WATER
APPROVED

1. Position of structure in relation to Sydney Water's assets is satisfactory.
2. Connections to Sydney Water sewer/water services may only be made following the issue of a permit to a licenced plumber/drainer.
3. It is the owner's responsibility to ensure that all proposed fittings will drain to Sydney Water's sewer.
4. Any Plumbing and /or Drainage Work to be carried out in accordance with the Sydney Water Act 1994, AS 3500 and the NSW Code of practice.
5. Gullies, Inspection Shafts and Boundary Traps shall not be placed under any Roof, Balcony, Verandah, Floor or other cover unless otherwise approved by Sydney Water.
6. Property No. 3252170

Reece, Brookvale,
Quick Check Agent on behalf of
SYDNEY WATER

Per: Reece 21/1/11

PRELIMINARY

Bellingham MARINE

Bellingham Marine Australia Pty. Ltd. A.C.N. 074 864 887

The World's Most Comprehensive Marina Builder

22 Simanon Road
Seventeen Mile Rocks Qld 4073
Australia

Phone (07) 3376 6955
Fax (07) 3376 7955
International (617)
Email: sales@bellingham-marine.com.au

UNIFLOAT

Precision engineered flotation systems

Revisions

International Marina Consultants

Consultants to the Marina Industry.

International Marina Consultants Pty. Ltd.
A.C.N. 079 905 481

473 Annerley Road
ANNERLEY QLD 4103
Australia
Phone (07)3892 5711 Fax (07)3892 5611
Email : imc@imc-marinas.com

CLIENT:
BELLINGHAM MARINE AUSTRALIA PTY. LTD

PROJECT:
DAVIS MARINA

TITLE:
ARCHITECTURAL DRAWING LAYOUT STAGE 1

Date:	18/01/2011
Drawing No.:	4065-02
Scale:	AS SHOWN
Drawn By: J.C.	Designed By:
Approved By:	

Bellingham MARINE
The World's Most Comprehensive Marina Builder

Bellingham Marine Australia Pty. Ltd.
ABN 60 074 864 887

Unit 10, Fergusons Boatshed
cnr Parriwi and Spit Road
The Spit, Mosman, NSW 2088
Australia

Ph: (02) 9438 9088
Fax: (02) 9968 3064
International (61 2) 9438 9088
Email: sales@bellingham-marine.com.au
Website: www.bellingham-marine.com

Quality Endorsed Company

17 April, 2009

Facsimile: 9948 1716

Davis Marina Pty Ltd
Goulay Avenue
Balgowlah NSW 2093

Re: ACID SULPHATE SOILS MANAGEMENT PLAN

Dear Bruce,

The purpose of this written proposal is to outline the strategies of our Acid Sulphate Soil Management Plan for potential impacts of extracting and installing piles at your marina. Our strategy is to specify potential environmental impacts, performance criteria, and mitigation strategies together with relevant monitoring and reporting requirements, and where an undesirable impact or unforeseen level of impact occurs, an appropriate corrective action.

I. Key elements of Environmental Management:

A. Appropriate Project Management with suitable qualifications.

B. Practical Action Plan prior to site Establishment.

II. Components of the Management Plan

A. Overview of all physical characteristics and environmental attributes of the Davis Marina site (only the areas that requires piling).

B. Topography of the marina including hydraghic survey

C. Types of existing Piles and number and Type.
(Note all existing piles are Turpentine with bark, numbers to be confirmed on site)

D. Presence of sensitive environmental receptors e.g. ground water.
(Note in this environment the whole area is beneath seawater and below seabed sands)

E. Historical use has only been for the existing Marina development.

F. All Management Plan information will be shown on the IMC DA drawings.
(Note there is a typical single pile drawing which shows the typical length, embedment and RL height, this will be used in annotating findings of located acid soils).

G. Additional information if require will also be identified on the drawings if acid soils are found to be localized or in spatial locations.

H. Timing of proposed removal and installation of piles can only be determined after first or second extraction.

I. Performance Criteria:

- Visual Monitoring
- Sampling
- Containment of Samples
- Action if acid soil proven
- Set up of pollution curtain
- Advice to authorities/Council
- Placement of Action Plan

The Plan is to visually monitor the extraction of existing Turpentine Piles. As the pile is extracted the bark is left in the seabed with any clays and soils allowing for a smooth extraction. Sampling will take place on extracted piles and containment will be on a barge in a large plastic lined bin. If acid soils are found to be prevalent then a suitable pollution boom will be immediately placed around that area. All appropriate governing bodies will be notified and a Placement of an Action Plan will be demonstrated to comply with Council. The Plan is to have a pollution boom placed from the seabed to surface at each pile location and allow for slow extractions. The hole left at the seabed will allow for all existing and unwanted soils to settle within the old hole and both boom and tidal influences will allow localized containment.

All new piling will be by installing with a minimal seabed disturbance method. again after initial piling timing and exact impacts will be monitored on a pile by pile basis.

We believe that an appropriate action plan will only be necessary if there is difficulty in the extraction of piles and if the ground is extremely soft during new pile installation and seabed disturbance is developed from varying latent conditions.

III. All items not specifically included above are *specifically excluded from this proposal.* Excluded items include, but are not limited to, the following:

A. **LAND OR SHORESIDE WORK.**

B. **SOILS TESTING OR ENGINEERING.**

C. **OVERALL ENVIRONMENAL ENGINEERING.**

3. Other provisions:

3.1 DESIGN CRITERIA: Bellingham Marine has based its proposal upon design criteria furnished by Buyer, which includes all site conditions.

3.2 CONCEALED OR UNKNOWN CONDITIONS: In preparing this proposal, Bellingham Marine has assumed there are no concealed conditions (subsurface or otherwise) or unknown physical conditions which will adversely impact Bellingham Marine's performance of the work.

3.3 SITE ACCESS: All loading and off loading of all piles will be in area approved by Manly Council.

3.4 CAUTION: Prior to piling the site should be fully reviewed and periodically updated to reflect knowledge gained during the course of operations and to reflect knowledge and changed environments. The management plan is to be developed by others in consultation with Manly Council.

We hope this Management Plan contains sufficient detail to permit your fullest evaluation. Please feel free to contact us at any time for further information.

Sincerely,

Geoffrey Hughes
NSW Manager
Bellingham Marine Australia Pty Ltd

DANTEC Australasia pty. Ltd.

ASSESSMENT SWMS No: Davis Marina 001
Dantec Australasia Pty Ltd
Box 324
Ingleburn NSW 1890 **Customer O/N: TBA**
ABN 83 103 611 687 **Confined Space Permit #:**

SAFE WORK METHOD STATEMENT

Principal Contractor: Dantec Pty Ltd	
SWMS FOR (Task): De Commission Underground Storage Tanks & Lines	This SWMS has been developed by: Superviser Position:– Darren Taylor Project Administrator Date: 2/2/11 Approved by: Dan Mulally Position: MD Date: 03/02/11

Resources

Trades Involved: Petroleum industry installation and repair technicians
Equipment Used: Air pumps and hoses, compressor, air drill, hand tools
Maintenance checks: Inspect all Code 1000 hoses for deteriation, daily safety checks on equipment,
Materials Used: Spill response equipment

List relevant OHS Act and Regulations: OH&S Act 2000, OH&S Regulation 2001, Workers Compensation Act 1987
List relevant Codes of Practice applicable to your work:, Manual handling , Control of workplace hazardous substances COP 2006
Add additional references as required: Reading labels and MSDS guide 2006

Risk Score Calculator

Likelihood	Consequence: Disaster	Very Serious	Serious	Substantial	Minor
Almost certain	1	1	1	2	2
Likely	1	1	2	2	2
Possible	1	2	2	2	3
Remotely Possible	2	2	2	3	3
Practically impossible	2	3	3	3	3

Likelihood / Consequence	Risk Class
The hazard has the potential to: permanently disable or kill cause major damage to the structure have significant impact on the surrounding population and environment	1
The hazard has the potential to: temporarily disable or seriously injure cause minor damage to the structure breach the site boundary and pollute local environment	2
The hazard has the potential to: cause minor injury be contained within the site boundary	3

Project:Davis Marina Decommission

Item	Job Step Break the job down into steps	Potential Hazards Identify the hazards associated with each step. Examine each to find possibilities that could lead to and accident or adverse environment impact	Risk Class	Controls Using the previous two columns as a guide, decide what actions are necessary to eliminate or minimise the hazards that could lead to and accident, injury or occupational illness or environmental impact	Person Responsible
1.	Electrically Isolate Fuel Dispensers	Electric Shock	2	Using Licensed electrician to complete permanent disconnection of dispensers and booster pumps	
2.	Disconnect & Remove dispensers	Spillage of fuel into waterways Strains from removing dispensers from wharf	2 3	Lock out and tag isolation valve beneath the dispenser Install spill containment pads and booms under dispenser Drain product using drain plugs in dispenser into buckets and drain into UST's Disconnect the dispensers and plug the inlet pipe using 40mm plug fitted with a 12mm bleed valve for future draining Use trolley to assist in moving dispensers from wharf	
3.	Electrically disconnect booster pumps	Electric Shock	2	Using Licensed electrician to complete permanent disconnection of dispensers and booster pumps	
4	Disconnect & Remove Booster Pumps	Spillage of fuel into waterways Strains from removing dispensers from area	2 3	Lock out and tag isolation valves on the booster pump Install spill containment pads and booms under and around booster pumps Drain product using drain plugs in booster pumps into buckets and drain into UST's Disconnect the booster pumps and plug the inlet pipe and outlet pipes at the isolation valves Use trolley to assist in moving booster pumps around the building	

5	Drain product lines from the booster pump to the wharf dispensers using air operated diaphragm pump. Product to be pumped into UST's	Spillage of fuel into water ways	2	Place the air pump into position using trolley to assist an and install spill absorbent boon down gradient of the pump Remove the plugs from the booster pump isolation valves and install camlock fittings Connect tested and tagged code 1000 fuel resistant hoses to the camlock from the suction side of the pump Connect the outlet of the pump using tested and tagged code 1000 fuel resistant hoses to the UST's Secure all camlock fittings using tape or wire Check and ensure that UST,s have enough available volume to receive the volume of the lines Ensure that static leads have been connected prior to pumping Ensure that compressor is set up outside the hazardous area Walk the lines and check for any leaks once the lines are charged Stand by person to be located at the control valve to shut down the system in the event of a leak. Introduce air into the line from the bleed valve under the dispensers during	
		Spills, fire and explosion from the pump out lines (Estimated Line Volume,130 ltrs per line)	2		

				pumping	
5-	Flush the lines with water after draining using vacuum tanker	Spillage of fuel into water ways	2	Spill containment booms to be placed beneath the booster pump and spill kits to be placed at vacuum tanker and wharf Check there is no product in the line under the dispenser using the bleed valve first and removing the plug second Once the plug has been removed from the dispenser, connect a suction line from the dispenser line to the water and the booster line point to the vacuum truck With the with the dispenser line connected to the water use the vacuum truck to flush the pipeline with two times the volume of the line (260ltrs)	
6-	Pump out UST's using Vacuum tanker	Fire & Explosion	2	Ensure that all pump hoses have been tested Ensure that static bonding has been completed prior to any pumping	
		Spills from tanker or Hoses	2	Ensure that all drain valves have been closed on the tanker Ensure that all camlock fittings have been secured prior to pumping Spotter to be used to check for leaks and operate emergency stop during pumping	
		Not removing sufficient product from the tanks	2	Prior to pumping the tank out ensure that the product layer in the tank has a minimum of 25mm of water under it to float the product and assist in complete removal. If the water is not 25mm, add water to complete	

7-	Install sediment control for excavation	Contamination and silt run off into water ways Strains from lifting sediment control	2 3	Surround the down gradient surface of the excavation area with straw bales to prevent run off Use two person lift to move straw bales	
8-	Excavate to UST's using hand tools	Hand injury removing pavers Strains from using shovels and bars	3 3	Gloves to be worn when removing pavers Warm up required prior to using shovels and take regular breaks	
9-	Cut opening into UST's and fill voids with Liquifill Concrete, backfill and reinstate grade	Compressed Air Equipment Sharp Edges – Cuts / Scrapes Manual Handling Sabre Saw Ignition from Sabre saw Truck access – pedestrian injury Splashback – Eye Injury Manual Handling - Backfilling	2 3 3 2 2 3 3	Check air hoses for deteriation and install fastening clips to air joiners Grade 3 Cut Proof Gloves – Hand Protection. Safety Glasses to be worn at all times. Use sabre saw correctly, maintain straight back, bend legs and hold saw from the handles allocated. Use water on the cutting blade at all times, and apply high temperature grease to the cutting path Guide truck into position, watch for pedestrian movement at all times. Work within barricaded area. Wear safety glasses at all times and leave vent connected until filling is complete Use shovel correctly, long handle, maintain straight back and bend legs	

This SWMS has been developed through consultation with our employees and has been read & signed by all employees involved with this activity

Name	Signature	Name	Signature

Personnel qualifications and experience required to complete the task:	**Specific training required to complete this task:**	**Engineering Details/Certificates/WorkCover Approvals:**
Setting the position of the wells	**Degree**	**Environmental engineer / Scientist**
Service Location	**Accreditation**	**Telstra Accreditation**
Hazardous area assessment	**AIP accreditation**	**AIP accreditation**

SMC
SYDNEY MARINA CONTRACTING PTY LTD

ENVIRONMENTAL MANAGEMENT PLAN

For:

Davis Marina Demolition, Piling and Installation

Review No: 001

Review Date: 18/01/2011

Scope:

Sydney Marina Contracting has been appointed by Davis Marina to undertake works comprising of the following:

- Demolition and disposal of the existing marina structure;
- Installation of piles;
- Receiving and installation of marina pontoons and gangways.

SYDNEY MARINA CONTRACTING Pty Ltd
ABN: 48 096 465 333
PO Box 68 Glebe 2037
Telephone: 02 9571 7200
Facsimile: 02 9571 7300

1. PURPOSE

a. To outline the requirements for the work area to minimise any risk of contaminating the surrounding environment with pollutants.
b. To minimise impact of the work to the public.

2. OBJECTIVES

The Environmental Management Plan aims to achieve the following objectives in accordance with the **ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979**:

a. Detailed locations of emergency equipment, and methods of use. To incorporate soil and water management
b. To incorporate waste management
c. To incorporate noise and vibration management
d. To incorporate spill management
e. To establish the environmental management process involving co-operation between SMC staff, The Principal, other contractors at the site and subcontractors to ensure understanding of the key environmental issues for this project so that objectives and targets are met. Standard and site specific procedures and equipment for mitigation of environmental damage will be implemented and used.
f. To realise optimum performance in the key areas of, piling (noise, disturbance to seabed, water quality) and waste minimisation/disposal to complete this project and achieve a 'nil' recording of environmental incident. To achieve these objectives all site workers will be inducted at site and instructed in their responsibilities of care and reporting and familiarised with environmental safeguards, procedures and forms.
g. To provide clearly identified emergency procedures

3. STATEMENT

Sydney Marina Contracting cares about the environment and keeping the work area free of pollutants. By doing this, Sydney Marina Contracting aims to provide not only a clean, safe work environment for employees, but also to allow a system for co-operation between Sydney Marina Contracting staff, the Principal, other contractors at the site and subcontractors to ensure understanding of the key environmental issues for this project. This system ensures that objectives and targets are met.

4. DESCRIPTION OF WORKS

Sydney Marina Contracting, under contract to Davis Marina, shall undertake works comprising of the following:

- Demolition and disposal of the existing marina structure;
- Installation of piles;
- Receive and install marina pontoons and gangways.

5. GENERAL ISSUES

a. All Environmental issues that may be incurred by Sydney Marina Contracting whilst on site, and actions to overcome these issues, have been identified in the Environmental Assessment table and attached as **(Appendix A)**

b. An Environmental Incident Form, attached as **(Appendix B),** is to be completed after an incident involving any of the above-mentioned points. Where possible, concerns raised by the public or any personnel involved in the project, will be addressed and appropriate measures taken to rectify the situation.

c. At different stages during construction a random site check will be performed, by a Sydney Marina Contracting, to ensure all items are being addressed. This check will be recorded in the way of a Construction Worksite Checklist **(Appendix C)**

6. IN THE EVENT OF AN INCIDENT

Appropriate procedures will be followed in the event of an incident, as identified in **Appendix (D),** making full use of all spill kit materials and any other relevant items available. General procedures for incident rectification will be as follows:

a. Stop the source of the pollution.
b. Contain any pollution already in evidence.
c. Prevent any further spread of the pollutant.
d. Clean up the contaminated site.
e. Address the reason for the incident to ensure it does not happen again.
f. Complete the appropriate reporting which, if required, shall include telephoning the EPA Pollution Line on **'13 1555'**, or the emergency services on **'000'**

7. COMMUNICATION & DISTRIBUTION OF THIS DOCUMENT

To communicate the information in this document to all persons on-site, this document will be communicated and distributed in the following ways:

a. Prior to the commencement of works all workers and visitors shall be provided access to this document and explained its contents during the site induction.
b. All Safe Work Method Statements (SWMS) shall highlight environmental issues associated with that work activity and identify the appropriate measures that are to be taken.
c. Weekly Tool Box Talks shall be scheduled to provide a means for the employees to communicate environmental issues to colleagues and management.
d. The Site Manager will be present on site to provide a means of relating environmental issues that arise to from day to day works, to upper management.
e. It is the duty of the project manager to ensure that environmental management is carried out in accordance with this plan, and that the systems and training facilities are in place to facilitate environmental management in accordance with this plan.

8. LIST OF APPENDICES

(A) Environmental Assessment table
(B) Environmental Incident/Complaint report Form
(C) Construction Work Site Check List
(D) How would our organisation respond to a spill?

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Appendix (A)

ENVIRONMENTAL ASSESSMENT TABLE

ISSUE	OBJECTIVE	HOW THE OBJECTIVE WILL BE ACHIEVED. ACTIONS REQUIRED TO ACHIEVE OBJECTIVE	WHEN THE ACTIONS WILL BE TAKEN	WHO WILL ENSURE THAT THE OBJECTIVE IS ACHIEVED
KEY: Project Manager: **(PM)**		Leading Hand:**(LH)**	Service Provider:**(SP)**	
Public Controls	Minimise the impact that work activities have on the public	• A traffic management plan will be developed, where required, and implemented on-site prior to the start of work.	Prior to initial Tool Box Talk	(LH)
		• Pedestrian controls will be assessed and implemented on-site, ensuring all public is separated from work areas while maintaining flow.	Prior to initial Tool Box Talk	(LH)
		• Where work activities require the use of welding, Welding screens will be used to prevent welding spray coming in contact with the public	As Required	(LH)
		• Where pontoon hatches are required to be open, specific pedestrian controls will be implemented to divert the public from these areas.	As Required	(LH)
		• Where specific work activities arise in which the public is adversely affected, each situation is to be assessed with controls implemented prior to the commencement of works.	As Required	(LH)
		• Fire precautions shall be implemented, in accordance with the accompanied OH&S management Plan.	Prior to initial Tool Box Talk	(LH)
Emergencies Incident Reporting	All environmental incidents are reported to the Principal's Representative immediately	All environmental incidents are reported to the Principal's Representative immediately	As required.	(PM)
Vehicles and Plant	Exhaust emissions are minimised	• No vehicles or plant producing excessive exhaust emissions will be used (Exhaust must not be visible for more than 10 seconds.)	Prior to vehicles entering site.	(LH)
		• Plant must be well maintained maintenance logbooks and checklists kept inside machinery		

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ISSUE	OBJECTIVE	HOW THE OBJECTIVE WILL BE ACHIEVED. ACTIONS REQUIRED TO ACHIEVE OBJECTIVE	WHEN THE ACTIONS WILL BE TAKEN	WHO WILL ENSURE THAT THE OBJECTIVE IS ACHIEVED
KEY: Project Manager: **(PM)**		Leading Hand:**(LH)** Service Provider:**(SP)**		
Emergency Spills	Spills are contained damage to the eco-system minimised and rectification organised	• A fully stocked spill kit of appropriate size will be kept on site at all times. • Floating boom in place at all times to contain oil spills • All machinery hoses and seals to be in good serviceable condition • Ensure all chemicals, fuels and oils are kept in their designated area away from drains and any places that would allow leakage into the water system. • When refuelling avoid overfilling tanks and refuel in a contained, well ventilated area with spill kit on hand in case of spillage	All times.	(LH) Subcontractors
Noise Management	Minimise detrimental impact Adhere to EPA, council and other noise limited	All machines/ power tools where applicable will be fitted with noise suppressors to minimise sound during operation. (eg. Compressor fitted with muffler)	Prior to use on site.	(LH) Subcontracors
Waste disposal	Appropriate and lawful disposal of waste associated with the contract including: • Packaging materials • Replaced or redundant parts and materials • Chemicals • Oils and grease from machinery • Paints and solvents including the cleaning of equipment, tools and brushed • Cleaning materials and rags • Trade waste	• Identify lawful places for the disposal of all waste generated in the contract. • Record, for all waste, the method and location of disposal, and whether or not that location was a place that could lawfully be used as a waste facility for that waste • Adequate garbage bins to be located in various areas to make disposal of waste easy for everyone. • Empty bins promptly once full to prevent overflowing and items blowing away. • On a daily basis the work site shall have all excess materials and rubbish removed leaving the site in a tidy state. • All effort is to be taken to recycle materials to reduce the volume of waste on the job.	As required.	(LH) Subcontractors

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ISSUE	OBJECTIVE	HOW THE OBJECTIVE WILL BE ACHIEVED. ACTIONS REQUIRED TO ACHIEVE OBJECTIVE	WHEN THE ACTIONS WILL BE TAKEN	WHO WILL ENSURE THAT THE OBJECTIVE IS ACHIEVED
KEY: Project Manager: **(PM)**		Leading Hand:**(LH)** Service Provider:**(SP)**		
	• Materials unsuitable for re-use	• All dredged material to be lawfully disposed in landfill Tip receipts provided for all loads		
Water Quality Management Storm Water Management	Keep adjacent waterways free from waste developed during the works	• Any item/substance dropped into waterways shall be removed as soon as practicable. • Floating boom to be installed to collect floating debris and emergency oil spills Work site to be kept tidy at all times to prevent the build up of possible pollutants. All run off emanating from the construction works area will be effectively filtered. Storm water drainage inlets in the immediate catchment of the construction area will require protection by sediment filtering traps. These traps will be cleaned prior to the sediment accumulation in the trap reaching a level that reduces the effective drainage. All cut off and/or interception drains will also be maintained free of accumulated sediments and obstructions.	As required.	All
Air quality management	Adhere to all relevant standards in air quality management	• Construction will be limited to the hours between 7am to 5pm from Monday to Friday, working within these times will contain the noise pollution affecting any buildings/ people surrounding the site to a set period. • All plant will be in good serviceable condition to reduce exhaust emissions • Any work producing sawdust/ dust will where practical be confined to one area to assist with the clean up process. Ideally this area will be sheltered from any prevailing winds to minimise any air born pollutants entering the surrounding area, with periodic clean ups to remove the sawdust etc.	All times.	(LH) Subcontractors

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ISSUE	OBJECTIVE	HOW THE OBJECTIVE WILL BE ACHIEVED. ACTIONS REQUIRED TO ACHIEVE OBJECTIVE	WHEN THE ACTIONS WILL BE TAKEN	WHO WILL ENSURE THAT THE OBJECTIVE IS ACHIEVED
KEY: Project Manager: **(PM)**		Leading Hand:**(LH)**	Service Provider:**(SP)**	
		The air pollution created through the construction activities will be closely monitored at all times. SMC will comply with the criteria outlined in EPA Air Pollution Control Guidelines. SMC will ensure that emission controls on all plant are well maintained and that a maintenance schedule is kept for each plant.		
Records	Sufficient records to demonstrate appropriate environmental management Documentation of notifications and fines from the EPA and the resulting corrective action	This environmental management plan will be submitted to the principals representative The environmental management plan will be updated when required The principle's representative will be notified of all EPA action and fines from the EPA and the resulting corrective action Construction Work Site Checklist will be completed every two weeks	Prior to SMC commencing on site.	(PM)
Vehicle access	Damage to the ecosystems on site is minimised	All vehicles and plant will access the site along designated routes	All times.	All
Parking of vehicles and plant	Damage to the ecosystems on site is minimised	All vehicles and plant will park in designated areas	All times.	All
Movement of pedestrians, materials and equipment	Damage to the ecosystems on site is minimised	All pedestrian, materials and equipment will be along approved access routes	All times	All

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APPENDIX (B)

ENVIRONMENTAL INCIDENT/COMPLAINT REPORT

Any accident or incident which may impact on the environment MUST be reported
Any complaint MUST be recorded and reported

Accident/Incident/Complaint Date: Time:

LOCATION AND DURATION/SOURCE OF INCIDENT/COMPLAINT
.....
.....
PERSON REPORTING
.....

NATURE/DETAILS OF INCIDENT/COMPLAINT/QUANTITY OF POLLUTANTS ETC.
.....
.....
.....

ACTUAL OR SUSPECTED CAUSE
.....
.....

ACTION TAKEN OR PROPOSED ACTION – MANAGEMENT & PREVENTION
.....
.....

CONTRACTOR
.....

REPORTED TO EPA (Pollution Line) 13 1555

Site Superintendent

SIGNATURE .....

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Appendix (C)

I2. CONSTRUCTION WORK SITE CHECKLIST

Attached here is the Construction Work Site Checklist (Form 006), for Sydney Marina Contracting.

SMC **CONSTRUCTION WORK SITE CHECK LIST** FORM 006

This Checklist is to be completed by the Contractor's Site Manager and submitted at each site meeting (or, as required when there are no site meetings) to the Authorised Person/Principals Representative.

All non-conformances must be rectified immediately and actions documented.

Construction Site Name:	DATE: / /
Contractor's Site Manager:	TELEPHONE: MBL: 0410 435 211

(Please place your initials in the boxes do NOT use ticks or crosses)
Clauses referenced in brackets relate to OHS regulations 2001

	YES	NO	N/A	COMMENTS & ACTIONS
DOCUMENTS (Clauses 226-227)				
Is the Safety Management Plan for this project on site?				
Have Safe Work Method Statements (SWMS) been provided prior to work commencing for all site activities?				
Have SWMS been reviewed?				
Is the Construction Environmental Plan on site?				
Is there a accident/injury register on site?				
Have you provided written advice regarding rectification of site safety/environmental instructions?				
Is there a register of asbestos on site? (44)				
Is there a Hazardous Substances Register on site?(228)				
Is there a register of Plant and Equipment on site? (143)				
Is there a record of electrical equipment inspections? (65)				
INDUCTION				
Are there Induction records on site? (223)				
Have all workers undergone a site induction training prior to starting work on site? (Clause 213)				
CONSULTATION				
What consultation with employees has occurred since the last checklist? a) Safety Committee? (Clauses 21-30)				
b) Safety Representative ?				
c) Toolbox Talks ?				
d) Other agreed arrangements ?				
SITE AREA				
a) **Security** Is the site securely fenced? (Clause 235)				
b) **Signage** Is there a clearly visible sign with the name & phone number, (including an after hours emergency telephone number) of the Principal Contractor? Clause (235.4)				
Is appropriate Construction & PPE signage displayed?				
Is an emergency/serious accident procedure displayed on site? (Clause 173b)				
Is an Environmental incident response plan displayed?				
c) **Emergency /Incidents** Where is the nearest phone in case of an emergency?				Location

SMC **CONSTRUCTION WORK SITE CHECK LIST** FORM 006

	YES	NO	N/A	COMMENTS & ACTIONS
Are there suitable fire extinguishers on site?				
Is there a fully stocked first aid box on site?(Clause20.4)				
Is there a qualified first aid person on site?(Clause 20.1)				Name/s
Is there a spill kit on site?				
Has a spill kit been used since the last site inspection?				
d) **Amenities** – (1 toilet per 20 workers) (Clause 18.1) Are there washing facilities?				
Is there adequate fresh, cool drinking water?				
Are clean toilet, lunch and change rooms provided?				
Are rubbish bins provided?				
e) **Waste Disposal** Is there a rubbish / waste container on site?(Clause 62d)				
Is the site area clear of rubbish/scattered materials? (9i)				
Were roads & paths cleaned (at work completion)?				
Have you submitted a waste disposal report since the last site meeting?				
f) **Specific Work Areas** Are barricades/fences around trenches and work areas?				
Are excavations >1.5m benched/batteredor shored? (240.1)				
LADDERS & SCAFFOLDING				
a) **Ladders** Are ladders in good condition?				
Are all ladders construction rated ?				
b) **Scaffolding** (Clause 58) If the scaffold is under erection, has a safety barrier been set up near the scaffolding base?				
Is proper ladder access provided to scaffold working decks ?				
Are scaffolds secured against tipping ?				
Are the planks secure ?				
Has Scaffolding of 4m or more been signed off by a licensed scaffolder?				
Are handrails and toe boards in place along the full length of scaffolds ?				
HAZARDOUS SUBSTANCES				
a) Are copies of Material Safety Data sheets (MSDS's) available on site for all the registered substances? (162)				
b) Labelling Are all containers of chemicals adequately labelled (including decanted ones)? (Clause 156)				
c) Training Have site workers been trained in how to use the chemicals/spill kits safely?				If yes who conducted the training?
d) Ventilation Is adequate ventilation provided when chemicals are stored or in use?				

	YES	NO	N/A	COMMENTS & ACTIONS
TOOLS				
a) Guards Do the machines/tools on site have guards fitted? (90)				
b) Electrical (Clause 207) Are electrical leads and plugs in good condition?				
Are extension leads off the ground?				
Is there any electrical equipment overdue for inspection?				
Are all the construction supply switchboards locked at the end of daily work?				
Are all power supply outlets protected by earth leakage devices?				
c) Explosive Tools Are there explosive tools in use on site?				
Are warning signs for explosive powered tools displayed?				
Are operators licensed ? (Clause 301)				
PLANT & EQUIPMENT				
a) Documentation Do plant operators have appropriate licences? (266)				
Does all machinery have registration/permits? (113)				
Are Safety Check log books for machinery being completed? (Clause 131)				
b) **Specific Plant** Where quick hitch systems are being used, is a safety pin installed?				
Do backhoes/ excavators have "Beware of Electrical Hazards" signs?				
Is the work close to power lines &/or underground services & are workers aware of regulations?				
Is plant in good order (visual inspection - no oil leaks - hydraulic hoses OK etc)?				
Is the Safe Working Load indicated on the boom of all cranes? (Clause 142)				
Do vehicles have reverse alarms and rotating orange lights where necessary? (Clause 141.10)				
Are workers wearing high visibility vests?				
Are operators of EWP that can exceed 11m, ticketed?				
PERSONAL PROTECTIVE EQUIPMENT (PPE)Clause 15)				
Are Safety Helmets being worn by all persons onsite?				
Are safety boots being worn?				
Are site workers wearing hearing protection whilst doing and/or working near noisy work?				
Are supervisors and site workers wearing UV protective equipment and clothing?				eg., hand, eyes, skin, respiratory
ENVIRONMENTAL MANAGEMENT				
a) Pollution control Have all steps been taken to minimize and control Soil				

	YES	NO	N/A	COMMENTS & ACTIONS
and Water Pollution. Eg uncontrolled drainage offsite, illegal discharge into sewer?				
Have all steps been taken to minimize and control Noise and Vibration Pollution? Eg piling near residences				
Have all steps been taken to minimize and control Air Pollution? Eg Dust				
b) Environmental Quality Does water quality downstream of site appear to be unaffected by construction works?				
Have nearby residents been affected by potentially offensive noise and/or vibration?				
Are there any signs of dust/mud deposits outside of construction site?				
c) Other *Vegetation* - Are all required vegetation protection measures in place and functional?				
Archaeology/Heritage - Are all required protection measures in place and functional?				
Traffic Management - Have all required traffic control measures been implemented in accordance with the EMP (eg warning signs, temporary road closures, etc)?				
Community Consultation - Have local residents been notified 5 days prior to the commencement of works, for works outside of the normal working or for work likely to create offensive dust or noise or affect access?				
WorkCover, DEC (EPA) or Local Authority Visits				
a) Have any WorkCover, DEC (EPA) or Local Authority representative(s) attended the site since the last site meeting?				
b) If **Yes** to (**a**) when did they attend?				
c) Were any Prohibition Improvement Notices (PINs) or on-the-spot fines issued to either the Contractor and/or Sub-contractor and/or employee?				

What informal rating would you give this site?	Un	M	A	G	S
Safety					
Environmental					

Grading	Definition
Superior	Standard well above the acceptable standard of performance.
Good	Standard often exceeds the acceptable standard of performance.
Acceptable	Meets the acceptable standard of performance.
Marginal	Mostly meets the acceptable standard of performance but has some weakness.
Unsatisfactory	Well below the acceptable standard of performance.

What is the best area of safety management and what needs most improvement?

_____

_____

CONTRACTOR'S SITE MANAGER (signature) _____ DATE ____/____/____

Discussed at Site Meeting on _____ DATE ____/____/____

SMC **CONSTRUCTION WORK SITE CHECK LIST** FORM 006

CONTRACTORS MONTHLY OHS STATISTICS REPORT FOR PROJECTS > $1M

Construction Site Name:	DATE: / /
Contractor	Signature of Person Completing this form:

These statistics are for all persons working on the construction site.

	This Month	Total Cumulative
1. Number of Lost Time Injuries		
2. Number of Hours Worked		
3. Number of Hours Lost Due to Injury		
4. Lost Time Injury Frequency Rate (LTIFR)*		
5. Number of OHS Management Audits		
6. Number of OHS Inspections		

*LTIFR is calculated by 1. Number of Lost Time Injuries x 1,000,000

divided by

2.Number of Hours Worked

These measures are defined in the Australian Standard (AS) WorkSafe Australia National Standard AS 1885.1- 1990 Workplace Injury and Disease Recarding Standard

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Appendix (D)

How would our organization respond to a spill?

If in the unlikely event of a spill despite all the precautions set out in the tender, the response will be as follows:

Action	Method	Response time from incident
Notify EPA	Radio or runner to sheriffs office	1minute
Turn off leak	Turn of machinery and turn off valves if possible	<15 seconds
Contain any further leak	Get under The wharf if safe to do so and put boat or bucket under broken pipe to catch any further leak (as pipes drain) from going into the water	0 to 2 minutes
Remove Spill from water using SMC spill kits	Use absorbent spill soakers from spill kit next to crane	30 minutes to two hours
Call EPA for backup	If spill is too big for SMC Assistance will be sought from EPA	5 minutes
Treat any residue in water	Use appropriate chemical dispersants on residue on water from spill kit	After mopping up
Fill out incident report		24 hours

SYDNEY MARINA CONTRACTING PTY LTD

SITE-SPECIFIC SAFETY MANAGEMENT PLAN

For:

Davis Marina Demolition, Piling and Installation

Review No: 001

Review Date: 18/01/2011

Scope:

Sydney Marina Contracting has been appointed by Davis Marina to undertake works comprising of the following:

- Demolition and disposal of the existing marina structure;
- Installation of piles;
- Receiving and installation of marina pontoons and gangways.

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1.0 PROJECT PARTICULARS

1.1 Purpose

Sydney Marina Contracting will issue this plan to all people that require it and used as a guide while undertaking all works for Davis Marina to outline the requirements for the work area and the actions taken by SMC in order to minimise any risk of injuries to employees and the public. This plan also covers procedures in the event of incidents

1.2 Description of Works

Sydney Marina Contracting has been appointed by Davis Marina to undertake works comprising of the following:

- Demolition and disposal of the existing marina structure;
- Installation of steel marina piles;
- Receiving and installation of marina pontoons and gangways.

1.3 Interested Parties

Sydney Marina contracting has a interfaces with the following parties:

- Davis Marina

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2.0 RISK MANAGEMENT

2.1 Risk Assessment

Detailed in (**Appendix A)** is the assessment of risks for this particular project, it identifies the hazards associated with each work activity, the measures for eliminating or minimising the risks and identifies when and by whom this risk control will be actioned.

2.2 Safe Work Method Statements

Risk management covers the application of Safe Work Method Statements and hazardous management processes. SWMS will be applied to Risks that are identified as having a risk class of 1or 2 and will describe in detail the nature of foreseeable risks, the degree of risk and planned controls necessary to safely manage individual work activities. Before establishing onsite, the Project manager will submit a detailed SWMS for the overall Scope of Works to the Superintendent or principal contractor for review and comment. The SWMS will be developed using the following steps:

- Break down the activity into step-by-step tasks;
- For each task identify potential risks – i.e. what can harm you or others;
- For each potential risk classify the risk based on likelihood and impact;
- Determine how each hazard will be controlled using the Risk Control Hierarchy; and
- Induct/ train all relevant personnel into the requirements of the SWMS and its Control Measures prior to the commencement of works.

Safe Work Method Statements are evaluated on how well Class 1 & 2 hazards have been identified for the work activity to be undertaken and weather the suggested controls eliminated the potential hazard or minimised the risk of injury.

The Safe Work Method Statement will be completed and signed by an appropriately qualified person/s representing SMC who is competent in the work activity to be undertaken and work will not proceed until employees review the SWMS and sign that they understand and are willing to implement the controls required to carry out

Sydney Marina Contracting has a number of standard SWMS that cover regularly carried out work activities. SWMS will be altered to encompass changes in methodology or new SWMS will be developed to cover new work activities

3.0 RISK CONTROL

3.1 Electrical Power Tools

The OHS Manager will ensure that all employees and sub-contractors maintain and operate all power tools in the following manner:

Power saws, drills, grinders and other power tools shall have proper guards in place at all times. Cords and hoses are placed so as not to create a tripping hazard, or be subjected to damage from equipment or materials.

All power tools and leads must be tagged by qualified personnel.

Electrical equipment shall be used in a safe and proper manner, with all workers receiving adequate instruction in the use of the equipment and demonstrate competence with equipment used.

Electrical equipment shall be run through earth leakage protection devices. Electrical appliances and leads shall be maintained in good and serviceable condition. Noise reduction equipment shall be properly fitted and maintained. All electrical tools and equipment must be used in accordance with OHS Regulation Chapter 4 – Part 4.2 - Division 3 – Electricity, the Code of Practice for Electrical Practices on Construction Sites.

Residual Current Devices (RCD) shall be installed on all portable generators and electrical distribution boards, where it is found that a RCD is not fitted the Subcontractor shall provide a portable RCD to protect employees from electrocution.

Where electrical leads are hung on lead stands or other structures the lead hanger shall be suitably insulated.

All electrical tools, welding gear and equipment shall be properly stored in a manner that will not cause damage in storage.

All electrical equipment must be thoroughly inspected prior to use and where damage is evident the equipment must be danger tagged DO NOT USE and reported to the supervisor immediately.

Any tools and equipment that does not have a current inspection tag in place must not be used on the project, danger tagged OUT of SERVICE and the supervisor notified.

Appropriate personal protective equipment must be worn at all time when using electrical tools and equipment.

3.2 Hoisting Equipment & Materials

Materials handling will be in accordance with AS 2550.7 and AS1418.

3.3 Work-boat

Only personnel with a current Waterways Boating Licence (general) or equivalent will be permitted to drive the work-boat and shall be aware of and adhere to the following requirements

- Life Jackets must be available and used as instructed by the OH & S Manager.
- Any materials or tools in the work-boat must be stored correctly and not cause a hazard or impede the proper handling of the boat.
- The work-boat must be properly secured when not in use.
- No person is to ride on the bow of the work-boat at any time.

3.4 Formwork

All formwork shall be supplied, designed, constructed, erected, used, maintained, inspected and tested in accordance with AS 3610 – Formwork for concrete and with the provision stated in the OHS Regulation 2001 – Chapter 8 – Part 8.4 - clause 233 – Formwork – particular risk control measures and as detailed in the Code of Practice – Formwork

All persons required to erect and dismantle formwork shall be trained and /or certified for the task and must hold the appropriate competence certification Trade Restricted Falsework / Formwork Certification.

3.5 Concrete Pumps

Concrete pumps must conform to the NSW OH&S Act 2000 and its associated Regulations.

All persons required to operate a concrete pump must hold the appropriate competence certification for the plant item being used.

3.6 Scaffolding

Scaffolding is to be erected to supplier's specifications, by ticketed scaffolders. Workers to be inducted in use of safety harness if height is above 1.8m

3.7 Hand Tools

All hand tools and hand operated equipment must be thoroughly inspected prior to use and where damage is evident the equipment must be tagged.

Appropriate personal protective equipment must be worn at all time when using hand tools and hand operated equipment.

It is required as a minimum, that suitable eye protection is worn at all times whilst using hand held power tools and equipment.

3.8 Rigging, Lifting and Fall Protection Equipment

All rigging equipment shall be inspected by the rigger and/or dogman prior to use. All slinging, chains, shackles, hooks and other lifting equipment shall have the SWCL and/or WLL details clearly marked on the equipment. Any equipment with 10% or > wear shall be condemned and physically destroyed so as to prevent the equipment being used.

3.9 Plant / Equipment & Tool Selection

All tools and equipment must be selected so as to minimise risks to employees in the workplace.

The tool selection must consider the impact on the employee (ergonomics, manual handling, repetitive, muscular effects etc.) and environmental effects (noise, explosion, work at height etc.) with the aim of reducing the potential for incidents in the workplace by using the most appropriate tool for the task.

This must be carried out at the initial stages of the task usually during JSEA formulation or team briefing session with employees prior to the work or activity commencing.

3.10 Working Underwater

The supervisor responsible for organising any underwater diving work shall ensure the following have been considered;

a) All hazards have been identified and assessed by accredited diving personnel
b) The diving operation shall be organised and planned so as to ensure the competence of the divers are appropriate for the task
c) The divers are supplied with all possible information relevant to the task
d) Adequate surface assistance and facilities are made available
e) A dive & emergency plan shall be prepared and shall be agreed upon by all parties involved in the diving operation.

3.11 Fire Prevention & Protection

Prior to the establishment of any site facilities, the Project Manager or his nominated representative shall ensure that any necessary fuel reduction works are carried out to minimise the likelihood of fire. These fuel reduction measures shall be maintained for the duration of the project works. All site amenities, offices, workshops, vehicles, plant and storage facilities including subcontractors shall have a suitable type and number of fire extinguishers available for use in the case of a fire. Such equipment shall preferably be of CO_2 or Dry Chemical Foam type.

An assessment of the suitability of fire fighting equipment should be made for each site. AS 2444 provides details on the various types available and their use and effectiveness for various types of fire. Bulk storage of fuels, oils or other products may have specific requirements for provision of fire fighting equipment and should be in accordance with the relevant Act or Australian Standard.

Smoking is also prohibited in work areas, which have been identified and sign posted as No Smoking e.g. chemical and flammable liquid storage areas or within 6m of a confined space.

3.12 Access, Egress and Working Space

Supervisors are responsible for maintaining safe access, egress and working space in all work areas. Access, Egress and Working space provisions shall be considered in all SWMS developed for work tasks being performed Access and egress shall be appropriate to each given situation and shall be maintained in an un-hinder manner free from hazards that may cause slips, trips and falls in accordance with NSW OH&S Regulation Chapter 4 – Part 4.3 - Division 1 – Working Space. All access must be constructed as per AS 1657- Fixed Platforms, Walkways, Stairways & Ladders - Design Construction and Installation and/or AS 1567 – Scaffolding – General Requirements.

Use of ladders will be only used as a last means of control and must comply with AS/NZS 1892.5 – Portable Ladder – Part 5 – select, safe use and care further reference can be made to the WorkCover Safety Guide No. 4503 – Portable Ladders and the WorkCover Position Paper – Working off Step Ladders, dated 25th August 2004.

3.13 Smoking

Smoking is not permitted in any SMC office, amenities shed and/or vehicles.

Where the works interfacing with client and/or the public, all employees are to observe that no smoking is permitted within the confines of any premise or where no smoking signs are posted.

3.14 Alcohol and Illicit Drugs

SMC recognises that the use of drugs and alcohol can seriously impair a person's ability to work safely. At risk are the person, fellow workers and the Company.

The possession or consumption of alcohol or drugs of addiction are prohibited on all SMC work sites. In all cases, persons found under the influence of alcohol or drugs of addiction will not be permitted to commence work or enter any office or workplace.

Persons taking drugs under a doctor's direction must inform their supervisor. Should the drug impair the personal ability to work safely, alternative duties will be offered, if available.

3.15 Site Cleaning

The employees and sub-contractors shall, to the satisfaction of SMC, carry out the following:

- During the trade contract period and at frequent intervals or as reasonably directed by the Project Manager, clean up and remove from site all debris, rubbish, etc. created by their own operations, dispose of same lawfully and.
- At completion of the Trade Contract Works thoroughly clean up and clear away from the site all debris, plant, etc., and leave in a condition suitable for handing over to the Principal and/or as required by following trades.

3.16 Public Access

There is no general public access to the work-site. Unauthorised persons will be asked to leave immediately. Employees and sub-contractors must notify the Project Manager or a delegated representative of any unauthorised persons noticed at the work-site.

3.17 General Safety

Before commencing work at site or upon initial visit to the site, all personnel will attend site induction and complete Personal Registration forms. No general access to site will be allowed without appropriate identification or without visitor approval.

Materials, equipment, etc. should be stacked in such a manner so as to prevent dislodgment. No material is to be stored haphazardly and a clear, safe access is to be maintained at all times.

Life rings are to be maintained in positions at identified danger points and on the piling barge.

4.0 PERSONEL PROTECTIVE EQIPTMENT

All employees are to be issued with Personal protective equipment free of charge

All sub-contractors are to supply all personnel with PPE as required.

The OHS Manager or those delegated by him throughout the project will ensure that protective equipment is used and worn as instructed at site induction and according to the Site Safety Rules.

4.1 Eye Protection

Approved eye protection to AS 1337 - Eye protectors for industrial applications, appropriate to the task shall be worn at all times by all personnel using oxy/acetylene, welding, power and pneumatically driven tools and equipment.



Application guide: General Use Grinding Welding

4.2 Hearing Protection

The identification, assessment of risk and control of risk associated with noise in the workplace must be in accordance with NSW OH&S Regulation Chapter 4 – Part 4. 3 - Division 4 – Noise.

Approved hearing protection to AS 1270, must be worn at all times where an employee is in a designated mandatory hearing protection area. Where an employee in carrying out a task that generates noise and exposes the employee to noises > 85dbA, then the appropriate hearing protection will be provided and must be worn by the employee and any other employee that is effected.

All plant and equipment that exposes an employee to noises > 85dbA is required to have mandatory hearing protection signage displayed.

4.3 Hand Protection

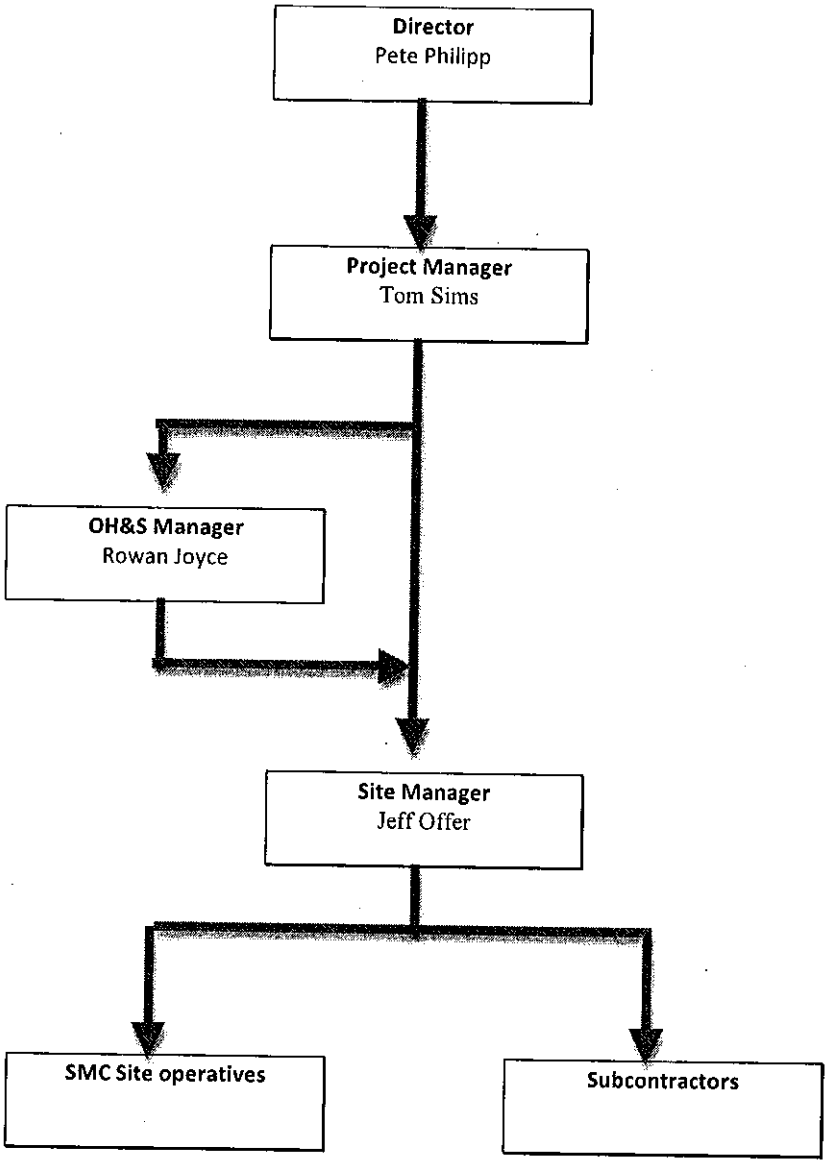
Hand protection in accordance with AS/NZS 2161.1 - Occupational protective gloves - Part 1: Selection, use and maintenance, must be worn when the employee is exposed to chemical contaminants or work that has the potential to causes injury to an employees hands i.e. but not limited to rigging, welding and dogging activities. The gloves provided, must suite the task and the hazard which the employee is exposed to, the gloves must be maintained in good condition and free from excessive wear.

4.4 UV Protection

Due to the nature of construction work, it is required that a supply of 30+ sun-block, UV safety glasses and broad brim for hard hats be available to all employees for their use at all times during to project. Where a Subcontractor fails to provide the necessary lotion and/or brim to and employee, SMC on request will provide the employee with the equipment and invoice the Subcontractor.

5.0 ORGANISATIONAL STRUCTURE AND RESPONSABILITIES

5.1 Site-Specific OHS Organisational Structure



5.2 Responsibilities

- **Site Manager**

Identifying hazards and assessing the risks associated with the work, and documenting the risk control measures to be taken

Making sure that the Site Safety Rules are displayed and available on the work site and provided to people who work on, or visit, the work site

Managing OHS communication and consultation provisions in accordance with the regulatory and other requirements

- **OHS Manager**

Managing compliance with OHS, workplace injury management and workers compensation legislation, regulations, standards and codes, Safe Work Method Statements and the Site Safety Rules

Assessing and monitoring the capability of service providers in the supply chain, and verifying that they meet OHS requirements.

Providing the service providers in the contract chain with this Site-specific Safety Management Plan and any updates

Ensuring that site-specific induction, specific work activity safety training and refresher training are conducted

Making sure that before starting work on site, all personnel attend an OHS induction training course covering general construction work as well as the particular site and specific work activity

Preparing, maintaining and making available the register of hazardous substances

Managing workplace injury management processes to suit procedures

Maintaining first aid stocks

Managing illness/injury and emergency processes to suit procedures

Keeping OHS records

- **Site Operatives/Subcontractors**

Reporting all OHS issues to the site manager

Operate in accordance with this Safety Management Plan and all accompanying Safe Work Method statements.

6.0 OHS TRAINING

6.1 OHS Induction Training

To improve knowledge about site safety rules, OHS issues, hazards, risks and procedures SMC has a three-stage induction training program in place to enforce that OHS requirements are met, they include:

1. The 'general induction for construction work in NSW' conducted by Work Cover, provides basic knowledge of OHS issues. Workers will not be allowed to enter the site without proof of this training
2. An 'activity based induction' is undertaken by employees when commencing work for SMC or performing new activities outside there previous job description. Workers competencies are assessed monitored and reviewed by competent personnel, with any required training or supervision being provided
3. A 'Site Induction' **(Appendix E)** provides site-specific training and is a requirement for all workers when commencing work on the site. It will explain the site safety rules, relevant safe work method statements, risk management procedures and consultative arrangements on that specific site. The site induction will also communicate emergency procedures to everyone on site.

To ensure that all workers have attended the required level of induction training, details and descriptions are entered into the Induction register, which is maintained onsite. This provides a checking method for the Site Manager to confirm that all personnel that are present on the project work site have been inducted in accordance with the requirements of the NSW Code of Practice: OHS Induction Training for Construction Work, which is maintained at head office and made available on request.

6.2 Refresher Training Needs

To ensure that all personnel maintain the required knowledge and attitudes, refresher training shall be implemented when required, to provide up to date information on specific activities to ensure that OHS requirements are met. Refresher training is required on longer duration projects or for particular high-risk activities such as plant operation, use of hazardous substances and manual handling.

6.3 Training to Operate Plant and Equipment

All employees are to undergo on the job training when operating plant and equipment where they do not have a current Licence (if a licence is required), or are operating plant and equipment that they are not familiar with.

Logs books must be filled out for all time spent training on plant and equipment and must be signed daily by the supervisor that is giving instruction. Employees must be instructed in the operation AND MAINTENANCE of plant and equipment.

If there are no experienced SMC personnel to give adequate on the job training must be outsourced to a licensed training centre and the ticket of competency must be achieved before operating the plant or equipment on site. Safe work method statements must be prepared for the use of all equipment that has a significant OHS risk.

Emergency Procedure Training

During the 'Site induction', which is conducted by SMC prior to anyone entering the site, training is given on the procedures required in the event of an emergency. This training is attached in **(Appendix F)** and will convey:

The best exits to use from various areas of the site
Location of gathering areas and the strict requirement to attend
Locations of first aid kits and displayed emergency contact numbers
Any Specific emergency information that is relevant to that site

Training Procedure

In order to ascertain the training requirements of employees, individual assessments are conducted prior to commencement of work and recorded on the Skills/Competency Assessment Register.

Where skill deficiencies are detected appropriate training will be provided and recorded in the Training Attendance Register before work commences so that employees can perform their designated duties safely.

SMC Training Policy

- Although senior first aiders are not required by (legislation) on many sites, SMC encourages all employees to undergo senior first aid training

As an incentive to promote OHS training SMC will re-emburse employees for any costs incurred while completing training courses

7.0 INCIDENT MANAGEMENT

On this particular site, the Site Manager (Rowan Joyce) will be available (both during and outside normal working hours) to prevent, prepare for, respond to and recover from illness/injury and incidents. The contact numbers for the Site Manager will be clearly displayed on site, with any changes to these arrangements being promptly amended and displayed.

In the event of an Incident or Injury/illness, the following procedure shall be undertaken.

An injury report is filled out by the site manager. **(Appendix C)** and entered into the incident register

If required an accident investigation report is filled in by the OHS Manager.

If an underlining hazard is identified then a Hazard/Non – Compliance Form is filled out. This form describes the Hazard, attributes a risk class and details the corrective action to be undertaken. It Stipulates:

The person to enforce this action
The deadline for the rectification

The Hazard-Non Compliance Report is Listed in the Hazard/Non-compliance register. The hazard Non-compliance register is reviewed at monthly OHS manager meetings to make sure corrective actions have been signed off and to investigate the effectiveness of the corrective actions.

Where the injury results in an absence from the workplace of 7 days or more the injury and its circumstances will be reported to Work Cover NSW using the appropriate form .

When incidents which result in illness or injury to workers and are considered serious work cover must be notified on 13 10 55. QBE (SMC's worker's compensation provider must be notified within 48 hours (Form 10). Clients and subcontractors are to be informed on the nature and severity of incidents, their causes and the progress of corrective actions. Clients will be updated monthly with the provision of the Injury Register.

8.0 SITE SAFETY RULES

All SMC employees and subcontractors are required to abide by the site safety rules **(Appendix D)** that have been established by SMC for this particular site. These rules shall be explained to every worker and visitor during their compulsory site specific induction.

DAVIS MARINA

MANAGEMENT PLANS
AND
OPERATIONAL/ENVIRONMENTAL

10 JANUARY 2011

Health, Safety, Environment and Community Policy

At Davis Marina we are committed to ongoing reforms to meet and exceed our community responsibilities regarding health, safety and environment.

We will achieve this commitment by:

1. Training staff and contractors about safety and environmental best practice.
2. Educating and guiding our clients towards better safety and environmental practice.
3. Avoiding waste and encouraging recycling.
4. Reducing our use of energy.
5. Working with industry associations to achieve best practice.
6. Providing the best possible services to our clients.
7. Implementing a strong maintenance program.
8. Maintaining involvement in community and council activities.

We will apply conservative risk management principles to new and ongoing work and will regularly review this policy and make our progress public.

Bruce Davis
Manager

CONTENTS

1. INTRODUCTION

Davis Marina's principal business activity is to provide safe moorings and berths for their client's boats along with safe and reliable access to and from these craft. The Marina also provides support services such as mechanics, electricians and cover makers.

The Marina must ensure that it complies with O H & S and environmental legislation. The Marina has participated in an industry partnership program with the NSW Government and Manly Council.

The Marina has an approved development application from Manly Council and intends to commence construction in the near future. The purpose of the redevelopment is to improve the quality of services provided and to better meet the requirements of O H & S and the Pollution of the Environment Acts while improving financial viability.

2. OBJECTIVES

The objectives of the Marina are as follows:

1. Improve facilities for clients and the local community
2. Improve environmental performance
3. Comply with the requirements of Workcover
4. Improve financial viability

3. PRINCIPAL BUSINESS ACTIVITIES

The principal business activities are as follows:

1. Renting moorings
2. Renting berths
3. Slipping
4. Cleaning
5. Antifouling
6. Polishing

These activities are supported by other activities such as:

1. Shipwrights
2. Marine Engineers
3. Electronics
4. Refrigeration
5. Gasfitter
6. Cover maker
7. Spars and rigging
8. Yacht Sales
9. Tender service

4. PROCESSES ALLOWED

The following processes will be allowed at the Marina:

1. Timberwork
2. Fibreglass repairs
3. Polishing
4. Sanding
5. Cleaning
6. Hand painting using brushes and rollers
7. Touch up spray painting using no more than 200mL of polyurethane per day
8. Jetblasting
9. Mechanical and electrical work

5. PROCESSES NOT ALLOWED

1. Sandblasting
2. Spray painting more than 200mL per day
3. Washing mechanical components

6. PLANT AND EQUIPMENT

The following table details all plant and equipment at the Marina:

Plant	Description
Building	Weatherboard
Fixed Jetties	Piles Beams and decking
Floating Marina	Pile Pontoon Whaler Through Bolts Mooring Line Ramps Guides
Toilet/Shower	Building Water heater Toilets and basins Shower
Dinghy pontoon	Ramp Float
Moorings	Blocks Ground chain Rub Chain Rope Deck chain Blocks Buoy ropes Buoys

Cranes	Back door crane Mast Crane
Slipway	Two slipways, large and small. Tracks Cradles, decking and bunding Winch, wire turning block Ladders and scaffolding
Rumpus	Hull and deck Engine Winch
Runaround	Hull and deck Engine
Dinghies	Six rowing dinghies
ANM 29E	Utility (vehicle)
Trailer	Box trailer
Tools	Various
Electrical system	Switchboard Cabling Power points Lights
Water system	Pipes & taps Backflow
Telephone	Three lines and six hand sets and fax
Fuel System	Tanks Pipes Boosters pumps Bowers Spill bunding
Compressed air	Compressor Lines Regulator
Computers and office equipment	Computer (Office) Computer (Bruce Davis) Virus protection Internet connection Web site
First aid	Kit
Landscaping	Paths Gardens Drains
Trade waste	Industrial bin Wheelie rubbish bins

Signs	Welcome sign Signage East Marina Signage West Marina
Security	Building alarm Marina alarm
Plant hire	Oxy bottles

7. HUMAN RESOURCES

The Marina operates with a normal staff of six full time staff and four part-time staff and have the following job descriptions.

Manager

1. Attends to matters raised by staff members
2. Draw up maintenance and improvement programs
3. Attends to human resource issues
4. Attends to matters arising from Government and industry groups
5. Supervision and involvement in all Marina activities
6. Attend to Marina clients and customer service issues
7. Deal with various regulatory authorities

Office Manager

1. Telephonist
2. Bookkeeper
3. Manage weekend staff
4. Manage mooring and berth register and waiting list
5. Analyse water and energy performance
6. Keep First Aid kit up to date

Slipmaster

1. Slipping
2. Jetblasting
3. Antifouling
4. Polishing
5. Repairs and maintenance to slipway
6. Analysis jetblaster water usage
7. Disposal of paint scraping and dust
8. Manage paint and chemical store

Shipwright/Mechanical/Electrician

1. Repairs to clients' boats

Weekend Manager

1. Answers enquiries
2. Manages mooring and berth register and waiting list
3. Sells ice and drinks

Tender driver

1. Provides transportation for clients to and from their boats.
2. Is the point of contact with the Marina.
3. Ensures that clients comply with the OH & S regulations.

NOTE: Slipmaster, Shipwright, Mechanic, Electrician - may be performed by subcontractor or sub-tenant.

8. STANDARD OPERATING PROCEDURE

i. Definitions

Alignment	Whether or not the supports are in a straight line in the vertical plane.
Arms	Vertical post to prevent boat from rolling over when on the slipway.
Balance point	The point on the keel where the boat could be supported in equilibrium together with the slip arms.
Boatman	A person who positions a boat in the slipway cradle so it can be hauled from the water.
Centre of gravity	The point at which the boat could be supported and be in equilibrium.
Chocks	Small pieces of timber placed under the slip wheels to prevent the cradles rolling down.
Clearance	The distance from the hull to the slipway cradle.
Cradle setup	The configuration of supports on a slipway needed to safely slip a particular boat.
Gauge	The spacing between the railway lines.
Landing	The moment when a boat's keel first touches the slipway.
List	The amount a boat leans to port or starboard.
Load binder	A system of levers to tension a chain which tightens a slip arm against a boat.
Pitching	The way a boat moves in the fore and aft direction by moving its bow or stern up or down.
Rolling	The way a boat rolls from side to side.
Slipway	Inclined railway/ramp sloping to the water where boats are repaired.
Springs	Ropes tied from the slip arms to the boat in order to prevent the boat from moving fore and aft.
Stability	The amount the boat will pitch or roll whistle on the slipway.
Supports	Blocks, beams or bow rests that hold a boat up on the slipway.
Winchman	A person who controls the slipway winch.

ii. Slipways

General

The Marina owns and operates two conventional slipways.

SPECIFICATIONS		
ITEM	**BIG SLIP**	**SMALL SLIP**
Location	Further from shed	Closest to shed
Gauge	7 ft	6 ft
Number of trolleys	Three	Three
Arms	Scissor movement	Main supported by prop arm and wedge

Limits	Weight	40 Tonnes	8 Tonnes
	Beam	6 metres	4 metres
	Draft	3 metres	1.7 meters
Winch	Motors	Electric	Electric
	Gears	Gear train and 4 speed gear box	Flat belt and gear chain
	Reversing	Electric reversing switch	Electric reversing switch and dogs
	Wire parts	Two	Single
	Start switch	Star delta button and lever	Button
	Stop button	Button	Button

Job Descriptions

Usually a two person team is required to slip a boat. The Winchman drives the winch and initially assists in positioning the boat. The Boatman positions the boat in the cradle, checks it has been landed correctly, checks stability and corrects the list. It is also usual to use a two man team to launch a boat. The Winchman controls the winch and the Boatman releases the arms as the boat begins to float.

The Boatman is the team leader and makes the decisions. He needs advice on the list and position of the boat from the Winchman to make these decisions.

Operating the Winch

Both winches are powerful machines and great care should be taken when operating them. Time should be taken to check that the cradle, boat, scaffolding and the winch is set up correctly and all personnel are clear before starting the winch.

The Winchman **must never leave** the winch pit while the winch is in operation.

OPERATING THE WINCHES		
Operation	**Big Slipway**	**Small Slipway**
Start	Release the brake until the cradle is on the point of running, push the start button, after 2 seconds push the lever to the right and then release the brake	Press the brake peddle with your foot, release the screw jack on the brake and press the start button lift your foot from the brake
Stop	Press the stop button, apply the brake and push the lever to the left	Press the stop button, press the brake pedal with your foot and apply the screw jack
Disengage gears	Stop the winch, apply the brake and disengage dog clutches using the clutch lever	Stop the winch, apply the brake and disengage dog clutches using lever
Lowering cradle	Disengage gears, release brake until cradle moves	Disengage gears, release brake until cradle moves.

Changing gears	Stop the winch and change gears using the gear stick	Stop the winch, reverse the motor using the electric switch, start and immediately stop the motor while at the same time keeping pressure on the gear lever
Reversing under power downhill	Stop the winch. Use the electric reversing switch to reverse the motor direction. Start the winch and constantly check that the cable is always under tension and feeding from the winch. If the cradle stops the cable will go slack and the winch must be stopped immediately to prevent excess cable being jammed in the winch.	Stop the winch. Use the electric reversing switch to reverse the motor direction. Start the winch constantly checking that the cable is always under tension and feeding from the winch. If the cradle stops the cable will go slack and the winch must be stopped immediately to prevent excess cable being jammed in the winch.

Operating Slip Arms

The slip arms are heavy and care should be taken when moving them.

The Big Slip

The arms are moved out using the rope tackle but they usually move in under their own weight. Care should be taken to control their inward movement using the tackle system. Ensure that the tackle system is cleated off when arms are not being moved to prevent them moving unexpectedly.

When locking arms against the boat release the rope tackle, use the load binder to tension the chain and then re-cleat tackle with a little slack.

The Small Slip

There are three ways of moving the arms. Fine movements are achieved by means of the wedges and a timber mallet; medium movement by removing the pin and moving the prop arm up or down the main arm to a new position; course movement by removing the pins in the bases of the prop and or main arms and moving the arms to a new position. This is a two man job. Before removing the pins ensure the wedges have removed.

Signals

The boatman makes the following signals to the Winchman.

Action	**Meaning**
Index finger and arm vertical up	Winch cradle up
Index finger and arm vertical down	Lower cradle
Palm of hand held facing the Winchman	Stop cradle
Lower part of arm held horizontally athwartships	Which way is boat listing?
Lower part of arm held fore and aft	Is boat centre in the cradle?

Cradle set up

A book is kept of cradle set ups for commonly slipped boats. A correctly set up cradle will reduce the time and effort required slipping a boat and also improving safety.
Beams are mostly used to support yachts with fin keels while it is more common to use blocks to support powerboats or yachts with long keels.

Consideration should be give to the following factors when setting up cradles:

CRADLE SET UP	
Issue	**Consideration**
Weight of boat	Does the weight of the boat exceed the capacity of the cradles or is there a point load which exceeds the capacity of the beams or wheels?
Draft of boat	Does the draft of the boat exceed the draft of the cradle?
Beam of boat	Does the beam of the boat exceed the beam of the cradle?
Strength of boat	Does the boat have enough strength to support itself?
Number of supports	Some boats require multiple supports especially timber power boats
Spacing of supports	Are multiple supports located to distribute loads evenly?
Fore and aft height of supports	Are the supports arranged correctly to achieve proper balance of the boat to minimise pitching?
Alignment	If multiple supports are in use are they in perfect line?
Use of bow rests	Does the boat need a bow rest to achieve balance?
Centre of gravity	Will the centre of gravity fall between the supports?
Balance point	Will the balance point be close to a support?
Clearance	Will items like props, shafts, rudders and sounders have enough clearance from the cradle, blocks and beams?

Positioning boats in cradle

A boat that is not positioned correctly will not land properly on her blocks or beams. Boats need to be positioned correctly and properly aligned fore and aft. This is achieved as follows:

1. Move boat into cradle and secure by the use of the fore and aft springs.
2. Adjust arms so they are about 300mm wider than the beam of the boat.
3. Winch the cradle up until the boat has about 150mm of water under her keel.
4. Adjust the springs so the boat is moved into the correct position fore and aft over her supports.

5. Adjust the arms so that the boat is in the centre of the cradle athwartships and reduce the arm spacing to within 75mm or 100mm of the boat's beam.
6. Adjust the arms so that the boat is not skewed.
7. It may be necessary to repeat steps 4, 5 & 6 as these actions effect each other.

The Winchman should guide the Boatman in this process using hand signals.

Landing

A boat makes a landing when it first touches the cradle as it is winched up the slipway. Two or three point landings are best but one-point landings are probably more common. Between the first and second point landing the boat may develop a list which can be difficult to correct.

Two point landings

Stop the cradle when the boat has been lifted out of the water about 100mm. If it is a two point landing the boat will roll evenly. If the boat has landed in the correct position the arms can be secured against the boat correcting any list during this process.

One point landing

Stop the cradle when the boat is showing about 100mm. Unlike a two point landing the boat will pitch and skew as she rolls. Let in the arms closest to the point where the boat has landed, so that a bad list is prevented from developing. Check that the boat has landed in the correct position. Lift the boat further until it lands on the second support. Secure the arms against the boat correcting any list during this process.

Checking Stability

If it is a fin keel yacht lift it until the hull is just clear of the water. For other boats lift them until the cradle is taking about 30% of the weight.
Check the following:

1. Is the boat sitting at too steep an angle –bow up or down?
2. Does the boat have too much list?
3. Is it sitting on the bearers correctly?
4. Are the prop shafts or leg drives taking any loads?
5. Is the rudder aground? Check if the steering is free.
6. If it is a yacht, rock the bow or stern to make the boat pitch. This will indicate if the boat has been landed near the point of balance and whether it will need re-slipping or ballast added.

Separating and Chocking Cradles

Each slipway has three cradles and a maximum of four boats can be slipped at any one time. To achieve this, the cradles may need to be separated and chocked. Timber chocks are placed under each wheel of the cradle. The chocks are flat on the bottom and the upper surface should be circular. This radius should be about twice the diameter of the wheel being chocked. The wedges should be made of good quality hardwood. Cradles can be attached with chains which prevent the cradles becoming separated when rolling two or more cradles down the rails. The cradles should not be moved without the chains and it is important to ensure there is no slack in these chains. The chains should only be released when the upper cradle has been chocked properly.

Launching

Perform the following checklist:

1. Remove scaffolding, planks, ladders, trestles, scaffold bars
2. Check that the cradle has been cleaned. (No paint flakes, dusts or other pollutants)
3. Check all arms are secure against boat
4. Check all rope tackles are cleated with minimal slack
5. Check cradles are chained together
6. Check the boat has not moved in the cradle
7. Check all personnel are clear of the slipway
8. Winch boat up to remove weight from chocks if they are in use
9. Remove chocks
10. Check all personnel are clear of slipway
11. Lower cradle into water and stop just before boat begins to float
12. Be careful not to lower the cradle over the end of the track. Keep the mark on the wire on the drum
13. Release load binders on one side only and use tackles to move arms away from boat. If using the small slipway remove the wedges and move the prop arm up the main arm to a new position
14. Lower cradle and re-float boat
15. Remove springs and push boat clear of cradle by hand before starting the engine

Warning

Be observant and watch the cradle, the boat and the winch whenever the slipway is in use.

iii. Scaffolding and working at heights

The Marina recognises the importance of ensuring that all scaffolding is used correctly.

Storage

All scaffolding is stored on the rack situated on the East Marina.

Condition checking

All scaffolding should be condition checked before use.

Usage

Trestles should be chocked and checked for stability before use.

Ladders should be chocked and stabilised with a rope tie at the top end.

f scaffold planking is more than 2.4 metres above ground or decking then the following applies:

- Double planking and handrails shall be installed

Or

- A harness shall be used.

iv. Working with Tools

See Authorisation.

v. Lock up Procedure

General

After work the premises must be secured to safeguard valuable tools, equipment and client files. Problems experienced in the past have included stolen dinghies, entry onto Marina by fishermen

4. Lock front door, back door and side doors
5. Turn off power points and check hot system is unplugged
6. Turn off heaters
7. Return all paints and chemicals to fireproof cabinet and close
8. Turn on alarm

Jet blaster

1. Coil hose on reel
2. Return lance to box
3. Lock box and ensure key is returned to key rack

Working back

When a staff member works back after hours the Lock Up Officer will perform as many of his duties as practical and then notify the late worker of his responsibility to complete the process.

vi. Dinghy Pontoon

The principle purpose of the dinghy pontoon is to moor the Marina dinghies and provide clients access to them. When all of the six Marina dinghies return to the pontoon they occupy the entire space.

The Marina does not have sufficient room in its lease area for the storage of client's dinghies. From time to time clients may find it convenient to have short term tie up to the dinghy pontoon for the purpose of landing, unloading or arranging transport. To assist our clients in these circumstances the Marina will allow the use of the pontoon for a maximum of three hours.

vii. Soft Stand

Description

The soft stand is a system that allows small yachts to be stored clear of the water. It consists of an electric chain hoist supported by a steel beam atop of two piles. The stored yacht is lifted clear of the water and prevented from rolling by two stabilisers that touch the deck and from pitching by a stabiliser at the transom.

Operation

To lift the boat:

- Ensure that the mast cannot fall forwards (have a crew member lean against forward face of mast)
- Remove backstay
- Push or paddle the boat backwards into berth
- Replace backstay
- Move boom to one side
- Trim the balance of the boat by moving loose equipment and sails into correct position
- Choose carefully the correct button on electrical control box. Using the wrong button may damage another boat
- Lower lifting hook
- Attach to slings to boat and hook
- Carefully raise the boat until the stabilisers nearly touch the deck. They should just roll from one stabiliser to the other. A 10 to 20mm gap is ideal

- Slide in the aft stabiliser
- Connect the tension aft rope

To lower the boat use the reverse procedure.

viii. Outside Labour

Introduction

Davis Marina has secured comprehensive insurance to cover its operations. The insurer requires that we minimise our exposure to risk wherever possible and this is also in our interest because it will allow us to renew our insurance and obtain reasonable premiums in the future.

Contractors

If a Marina client employs someone for reward (money, contra deal etc) they are known as a contractor. Contractors can be categorised into three groups as follows:

- Marina staff/sub-tenants staff
- Preferred contractors
- Outside contractors

Marina staff are covered by the Marina's insurance and preferred contractors have their insurance checked by the Office Manager on a regular basis. Outside contractors are required to sign in to the Marina office on a daily basis and to have their insurance checked. Inadequate insurance means they cannot begin work.

Typically contractors undertake the following trades and tasks:

- Mechanics
- Electricians
- Electronics
- Plumbing
- Gasfitters
- Cover makers
- Carpet fitters
- Riggers
- Or any tradesmen or workers who use equipment, tools, dismantle or assemble equipment

Some outside workers pose a very minimal insurance risk and the Marina will not require proof of their insurance. They are as follows:

- Yacht brokers
- Surveyors not entering Marina work space
- Sales person who is demonstrating equipment

Others may be added to this list by Bruce Davis.

Workspace

Under the Occupational Health and Safety Act, the workshop and slipways are considered the workspace. The Act states that all workers entering the workspace are required to complete an induction course. This includes the Marina staff and the preferred contractors.

ii. Heavy Rain

Heavy rain may cause the following:

1. Minor flooding of the boatshed from road run off
2. Water damage if combined with inadequate pruning of garden plants and trees
3. Rain can fill any vessel quickly. In fact, rain can fill dinghies to the gunwales overnight and the same is true of Runaround and Rumpus if the drains are blocked. In very heavy or extreme rain Rumpus and Runaround will need pumping daily and the night watchman will need to check them late evening.

iii. High Wind

High winds can cause problems with boats on the slipway and the Marina berths and also loose equipment left lying around.

Slipway

If high winds are forecast or being experienced, Acro Props shall be placed from the boat's hull to the cradle and also from the cradle to the concrete support pads. From previous experience westerly and north westerly winds impact adversely on the slipway. Winds from other directions are of minor concern.

Berths

High winds from the north west and west can load Marina lines and waves have swamped very low free board boats on the West Marina. Extreme winds from the south east to east have created seas that can break weaker Marina lines on the East Marina.

Moorings

Recent experience has shown that the Marina mooring tackle is more than adequate.

Dinghies

The Marina dinghies can sustain damage and swamping during extreme westerly and north westerly winds when moored at the dinghy pontoon. This can be avoided by tethering them to the eastern side of the West Marina in the vicinity of the work berth.

iv. Storm Surge

Surging is caused by extremely large swells from the south east lashing the metropolitan coast. They cause a surging wave action in North Harbour that is like an extremely vigorous tide. On very rare occasions this can swamp the Marina dinghies, brake Marina lines and cause boats on moorings to hit each other. The water level can rise to more than 500mm above the astronomical tide prediction overtopping the Marina and flooding the boatshed. On such occasions it is important to take the following action:

1. Open the boatshed doors to allow the building to be flooded and prevent it from floating off its foundations
2. Tether the dinghies from the Marina in the vicinity of the work berth
3. Prevent debris from jamming under the building
4. Raise sensitive equipment such as computers above potential water levels

12. FIRST AID

Training

The Marina encourages all staff to undertake first aid training. The Marina will reimburse staff for the cost of any recognised adult first aid course.

Personal injury

Any personal injuries should be brought to the attention of one of the Marina's first aid officers. To assist the officer a first aid kit is located in the Marina office. All staff injuries should be reported to Work Cover.

First Aid Kit

This kit will meet all legislative requirements. It will be the responsibility of the Office Manager to keep the kit up to date.

13. ENVIRONMENTAL MANAGEMENT PLAN

The Marina is a modest user of energy but there are work practices and use of equipment that can lead to a reduction of energy usage.

i. Energy Conservation

The following equipment has been identified as users

1. Slipway
2. Jet blaster
3. Hot water system
4. Heating
5. Runaround

The use of the slipway and jetblaster is minimised to reduce the use of electricity, the water heater is electric and instantaneous and the Runaround is powered by a modern diesel engine which is regularly maintained.

ii. Wash Water

The Marina has two slipways where boats are cleaned and antifouled. The cleaning process produces an amount of wash water that goes into the harbour. Through government regulation the formulation of antifouling paint has been changed to make the paint more environmentally friendly. The Marina has included in its redevelopment plan a proposal to capture and treat this water. In addition, it is intended to install rainwater tanks to collect roof water. This water will feed the boat cleaning system.

Wash Minimisation

Marina staff will avoid creating excessive wash and scouring of the seabed when maneuvering powerful motor boats. Clients who own such boats will be advised that it is the policy of the Marina to protect the seabed and encourage the growth of seagrass with the exception of Caulerpa Taxifolia.

iii. Chemicals and paints

The Marina workshop stores and uses the following chemicals:

1. Paints
2. Resins
3. Acids
4. Thinners
5. Glues

A 250 litre fire proof cabinet is used to store these chemicals and paints. The preparation bench is located in the bunded area.

iv. Paint scrapings and dust

Paint scrapings and dust are generated by the workshop. The following sources have been identified:

1. Workshop
2. Slipway
3. Maintenance on the boats in our berths
4. Maintenance of the premises

Collection and disposal is managed by the Marina in the following manner:

1. Staff education
2. Client education
3. Publishing information in our catalogue
4. Use of tarpaulins
5. Use of our paint flake catcher (a unique Davis Marina design0
6. Use of a vacuum cleaner
7. Cleaning cradles before re-launch
8. Use of vacuum dust collectors on sanding machines

v. Spray Painting

Some of the repair processes undertaken by our workshop require spraying polyurethane paints in their final stages. Spray painting with polyurethanes can release a fine mist of chemicals into the atmosphere and is best done in a spray both. The Marina has undertaken to limit the amount of praying these paints to less than 200mls per day. It is estimated that the annual use is less than 5 litres. New roller and brush tipping paints are coming to the market that can be safely used outside a spray both and our staff are becoming practiced in their usage.

vi. Machinery Noise

The Marina staff use hand held power tools, an air compressor and a jetblaster. These tools are inspected regularly for wear and excessive noise. Normal usage is not considered a problem because of the considerable distance to the nearest residence.

vii. Sump Oil

Sump oil is generated when boat motors are serviced. This work is usually done by the sub-tenant and they have an approved waste oil storage tank which is emptied regularly by an approved contractor.

viii. Pump out

All recently built craft are required to be fitted with holding tanks and commercial marinas are required to provide pump out facilities. Our Marina has a mobile pump out facility that consists of a tank and a pump that can be temporarily fitted to Runaround. The client's boat would be pumped out and taken to the nearest land base facility where the mobile facility would be discharged.

Management

The following Marina staff will be Waste Supervisors. The first person on the list will assume the daily duty. If they are not able to do the job the next person on the list will become the Supervisor.

Weekdays:

1. Peter Muller
2. Bruce Davis

Weekends:

1. Tender driver
2. Manager

.he Supervisors will control the use of the bins. Marina staff will practice recycling of bottles and paper and will encourage our clients to do likewise. It should be noted that all NSW citizens have a responsibility to recycle. The Marina encourages its clients to recycle but does not have the resources to enforce recycling. In effect they have a choice of recycling or using the mixed bin.

Emptying

The Waste Supervisor will monitor the bin usage and arrange regular empting as they determine appropriate. The Office Manager or the Waste Manager may arrange a special collection by calling Manly Council Waste department on 9976 1446. The 200L bins should be wheeled onto the roadway near the mixed bin on the evening prior to collection and returned next day.

Unauthorised Use

Where there is reasonably good evidence of unauthorised use of the bins the matter can be referred to the Manly Council Rangers.

`ontamination of Recycle Bins

Contamination of the recycled bins may occur. An example would be when garbage is left in the bottle and can bin. The Supervisor may remove small amounts of contaminants (gloves may be needed). If the contamination is larger the entire bin may be emptied into the mixed bin. Supervisors should practice a polite education program directed at our clients to prevent contamination.

Location

1. The mixed skip bin is to be stored on the paving stones below the toilets block
2. One 200 litre mixed and one 200 litre bottle and can recycle bins will be stored on the East Marina
3. The remaining 200 litre bins are to be stored near the ice box

Locking
The 200 litre paper bin and the skip will be locked at all times.

x. Litter
Litter occurs on all private and public sites. Litter is controlled by the provision of waste and recycling bins. Signage information is included in the catalogue and web page. Marina staff are encouraged to remove litter including water borne litter in the normal course of their duties.

xi. Environmental Emergencies
Chemical or Paint Spill in Workshop
Should there be a spill in the bunded area the appropriate action should be taken to mop up the spill and disposed of properly. Should the spill occur outside the bunded area then it may be appropriate to deploy the spill kit.

Fuel Spill
In the unlikely event of a fuel spill the boom and absorbent material should be deployed from the spill kit.

Paint Flakes and Dust Shavings
The boom and absorbent material should be deployed from the spill kit.

Reporting Adverse Events
Adverse environmental events should be reported to the Environmental Protection Authority and logged in the Marina Environmental Record Book.

xii. Rubbish and Recycling
The Marina has a responsibility to dispose rubbish generated by:

1. Clients on their boats (not from their homes or work)
2. The Marina workshop.

In addition the Marina staff have a responsibility under environmental legislation to practice recycling wherever possible and to make it available to its clients.

The Marina has the following rubbish facilities:

1. 1 only skip bin (1.3 cubic metres) for mixed rubbish
2. 2 only 200 litre paper recycle bins
3. 2 only 200 litre bottle and can recycle bins
4. 2 only 200 litre mixed rubbish bins
5. Bins are also located on the East and West Marina arms

Banned Substances
The Supervisors will conduct spot checks on rubbish deposited in its bins by clients. This should be done in a polite manner as possible to ensure banned substances are not placed in our bins.

14. AUTHORISATION

Staff	Slipway Boatman	Slipway Winchman	Mast Crame	Back Crane	Band Saw	Table Saw	Planer Thicknesser	Planer Circ. saw	Welder	Grinder	Rumpus	Runaround	Comp-uters	Vehicle	Soft Stand	Oxy Act	Engine Crane
Bruce Davis	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ken Houlihan	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Peter Muller	×	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Richard Seymour	×	×	×	×	×	×	×	×	×	×	✓	✓	✓	✓	✓	×	×
Judith Seymour	×	×	×	×	×	×	×	×	×	×	×	×	✓	✓	×	×	×
Marlene Brooks	×	×	×	×	×	×	×	×	×	×	×	×	✓	✓	×	×	×
Warwick Brooks	×	×	×	×	×	×	×	×	×	×	✓	✓	✓	✓	×	×	×
Vivienne Inns	×	×	×	×	×	×	×	×	×	×	×	×	✓	✓	×	×	×
Warner Smith	×	×	×	×	×	×	×	×	×	×	✓	✓	✓	✓	✓	×	×
Bruce Walker	×	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	✓	✓	✓	✓
Frits van Groll	×	×	×	×	×	×	×	×	×	×	×	×	✓	✓	×	×	×
Michael Peters	×	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	✓	✓	✓	✓
John Knight	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
M (Sal) Saleh	✓	✓	✓	✓	✓	×	×	×	×	✓	✓	✓	✓	✓	✓	×	✓

Fire Safety Schedule

Applicant

Name	Davis Marina
Address	End Gourlay Avenue Balgowlah
Contact Number	9948 3750
Email	-

Development

Development Consent No.	D/A 86/08
Consent Date	10th July 2009
Site Address	Gourlay Avenue Balgowlah
Building Classification under BCA	10a

Construction Certificate

No.	BM11043(Partial)
Date of Determination	- 2 MAR 2011

Fire Safety – Existing Measures

Measure	**Standard of Performance**
N/A	N/A

Fire Safety – New Measures

Measure	**Standard of Performance**
7 x hose reels	AS3962

Accredited Certifier

Name of Accredited Certifier	Peter Boyce
Accreditation No. of Certifier	Planning NSW Accreditation No BPB0043
Address	Level 2, 41 Rawson St Epping NSW 2121
Telephone	9868 2855
Signature