

Construction Certificate Determination

issued under the Environmental
Planning and Assessment Act 1979
Section 109C (1) (b), 81A (2) and 81A (4)

Certificate No. 2006/1639

Council

Pittwater

Determination

date of determination

Approved

16 November 2006

Subject land

Address

Lot No, DP No.

213 Riverview Road, Avalon

Lot Y DP 110460

Applicant

Name

Address

Contact No. (phone)

Mr M Hill

215 Riverview Road, Avalon NSW 2107

0409 990 644

Owner

Name

Address

Contact No. (phone)

Mr Michael Hill

215 Riverview Road, Avalon NSW 2107

0409 990 644

Description of Development

Type of Work

New Boatshed Only

Builder or Owner/Builder

Name

Contractor Licence No/Permit

Bellevarde Construction Pty Ltd

31493

Value of Work

Building

\$31,000.00

SCANNED

21 NOV 2006

PITTWATER COUNCIL

Attachments

**COUNCIL
COPY**

1. Copy of completed Construction Certificate Application Form
2. Pittwater Council receipt, no. 204173 for payment of Long Service Levy

PRVC \$30
rec 205177

17/11/06

**Plans & Specifications
certified**

List plans no(s) & specifications
Reference

1. Architectural Plans & Construction Specifications, reference nos. AO3cc, AO4cc, AO5cc, AO7cc & AO8cc prepared by Andrew Coomer & Associates Pty Ltd.
2. Structural Engineers Details, (including Geotechnical Engineer endorsement) reference no. 051201 dated Feb 06 prepared by NB Consulting Engineers Pty Ltd.
3. Completed Form 2 of the Geotechnical Risk Management Policy for Pittwater completed & endorsed.
4. Copy of Sydney Water Approval, dated 10 October 2006 .
5. External finishes schedule prepared by Andrew Coomer dated September 2006

Certificate

I certify that the work if completed in accordance with these plans and specifications will comply with the requirements of S81A(5) of the Environmental Planning and Assessment Act 1979.

Signed

 16 NOV 2006

Date of endorsement
Certificate No.

2006/1639

Certifying Authority

Name of Accredited Certifier
Accreditation No.
Accreditation Authority

Stephen Pinn
POO40
Dept of Infrastructure, Planning & Natural Resources
(NSW Accreditation Scheme)
(02) 9999 0003
13/90 Mona Vale Road, Mona Vale NSW 2103

Contact No.
Address

Development Consent

Development Application No.
Date of Determination

N0553/05
7 October 2005

BCA Classification

10a

Pittwater Council

OFFICIAL RECEIPT

2/11/2006 Receipt No 204173

To CHMAANJA PTY LTD AFT

Applic Reference	Amount
GL Re GLSL-Buil	\$110.00
1 x NO245/05 213 Rivervie	

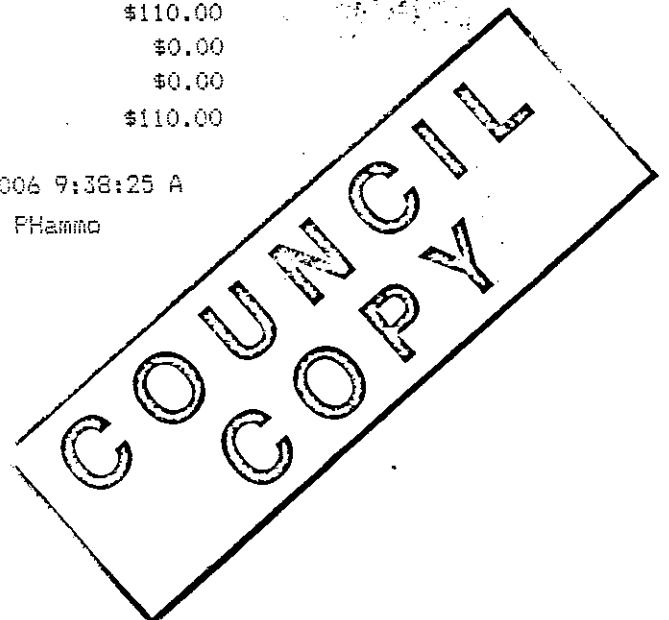
Total: \$110.00

Amounts Tendered

Cash	\$0.00
Cheque	\$110.00
Db/Cr Card	\$0.00
Money Order	\$0.00
Agency Rec	\$0.00
Total	\$110.00
Rounding	\$0.00
Change	\$0.00
Nett	\$110.00

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Cashier PHAMMO



External Finishes Schedule

New Boat Shed and Inclinor

213 Riverview Road Clareville NSW

September 2006

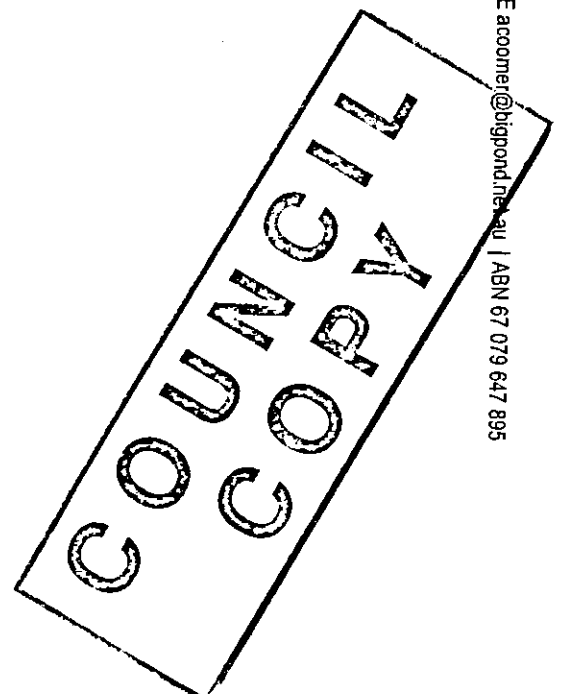
Roof Sheeting
Weathered Zinc

External Timber Decking, Window Frames and Doors
Sikkens Transparent Timber Oil.

External wall cladding
Weathered Zinc

The Above finishes are in accordance with the approved DA.


Andrew Coomer



GEOTECHNICAL RISK MANAGEMENT POLICY FOR PITTWATER
FORM NO. 2 - To be submitted with detailed design for construction certificate

Development Application for _____	Name of Applicant _____
Address of site <u>213 Riverview Rd Clareville</u>	

Declaration made by Structural or Civil Engineer in relation to the incorporation of the Geotechnical issues into the project design

I, Lucas Molloy (insert name) on behalf of Northern Beaches Consulting Engineers (trading or company name)

on this the 27th October 2006 (date)

certify that I am a Structural or Civil Engineer as defined by the Geotechnical Risk Management Policy for Pittwater. I am authorised by the above organization/company to issue this document and to certify that the organization/company has a current professional indemnity policy of at least \$2million. I also certify that I have prepared the below listed structural documents in accordance with the recommendations given in the Geotechnical Report for the above development

Geotechnical Report Details:

Report Title: <u>PROPOSED BOATHOUSE & KAYAKATOR, 213 RIVERVIEW RD, CLAREVILLE</u>
Report Date: <u>4/5/05</u>
Author: <u>G.R. WILSON</u>

Structural Documents list:

<u>SUB No 051201</u>	<u>S01 & S02</u>

I am also aware that Pittwater Council relies on the processes covered by the Geotechnical Risk Management Policy, including this certification as the basis for ensuring that the geotechnical risk management aspects of the proposed development have been adequately addressed to achieve an "Acceptable Risk Management" level for the life of the structure taken as at least 100 years unless otherwise stated and justified.

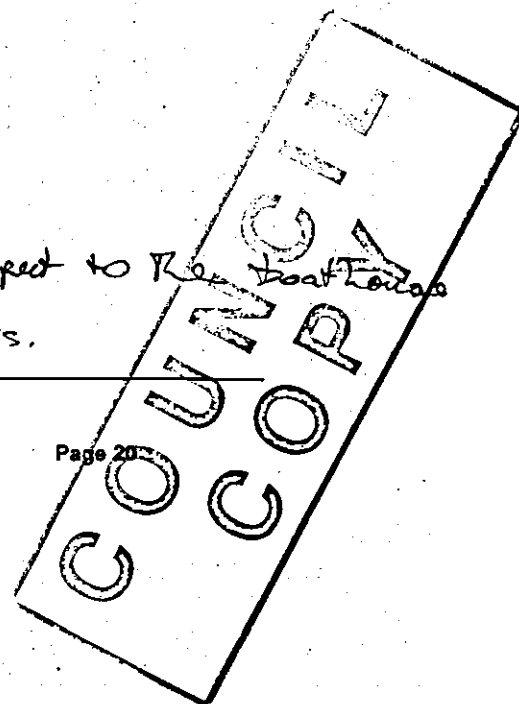
Lucas Molloy (name) [Signature] (signature)

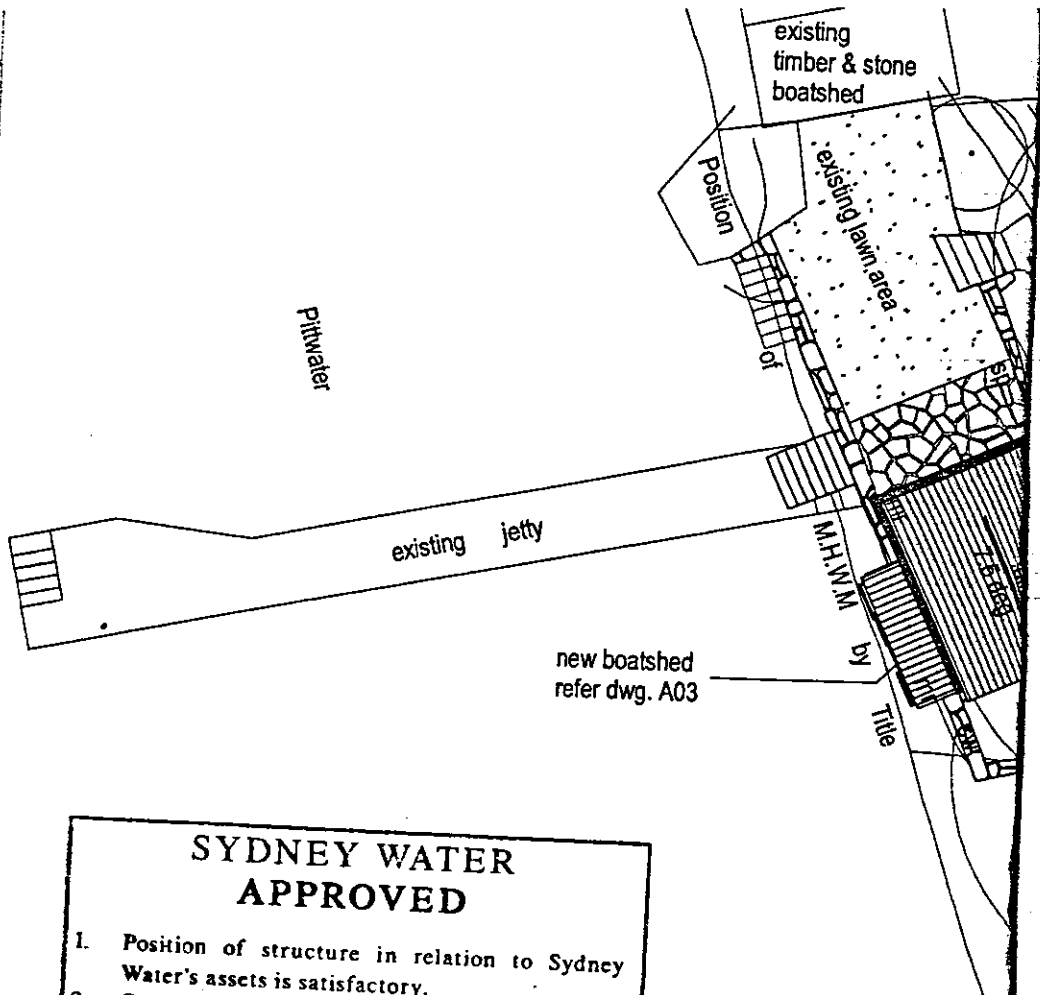
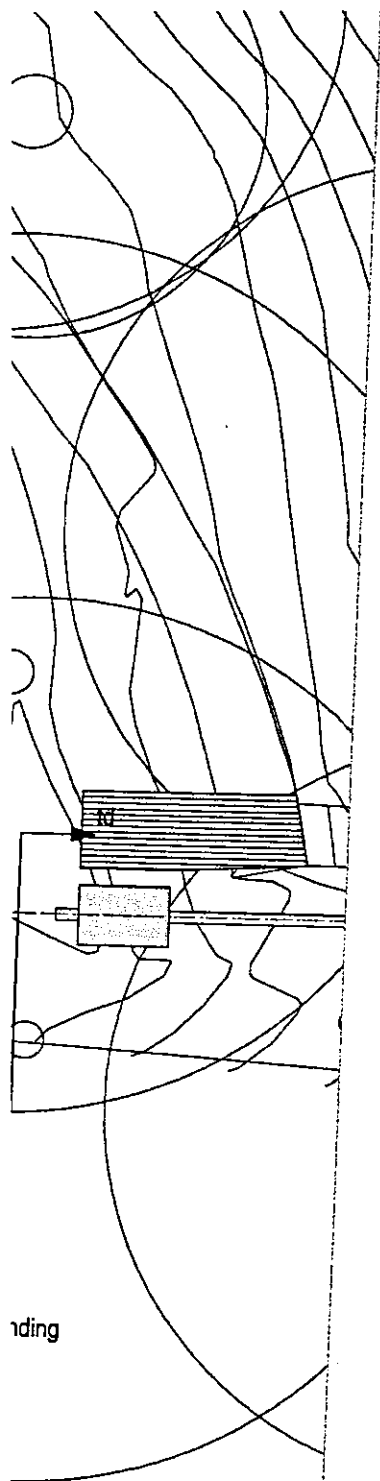
Declaration made by Geotechnical Engineer or Engineering Geologist in relation to Structural Drawings

I prepared and/or technically verified the abovementioned Geotechnical Report as per Form 1 dated _____ and now certify that I have viewed the above listed structural documents prepared for the same development. I am satisfied that the recommendations given in the Geotechnical Report have been appropriately taken into account by the structural engineer in the preparation of these structural documents. I am aware that Pittwater Council relies on the processes covered by the Geotechnical Risk Management Policy, including this certification as the basis for ensuring that the geotechnical risk management aspects of the proposed development have been adequately addressed to achieve an "Acceptable Risk Management" level for the life of the structure taken as at least 100 years unless otherwise stated and justified in the Report and that reasonable and practical measures have been identified to remove foreseeable risk.

Signature [Signature]
 Name G.R. WILSON
 Chartered Professional Status RP600
 Membership No. 10007

NOTE: This Form 2 is provided only in respect to the Boat House described on the structural drawings.





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 licensed plumber/drainier.
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. 3450523

Reece, Mona Vale
Quick Check Agent on behalf of
SYDNEY WATER

Per: REECE 10/10/06

North
Client
Russel & Christina Perkins
213 Riverview Road Clareville NSW 2107

Structural Consultant
NB Consulting Engineers
207/30 Fisher Road Dee Why NSW
Tel. 9984 7000 Fax. 9984 7444

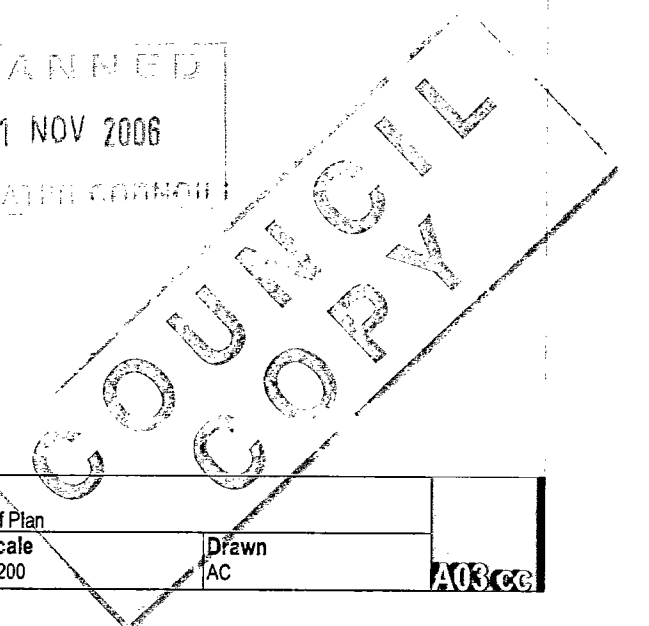
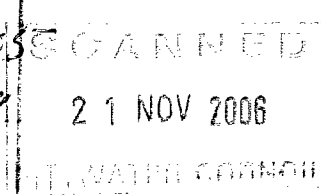
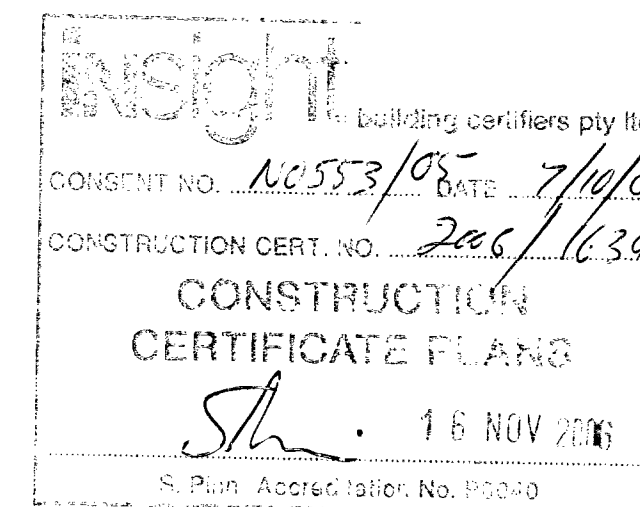
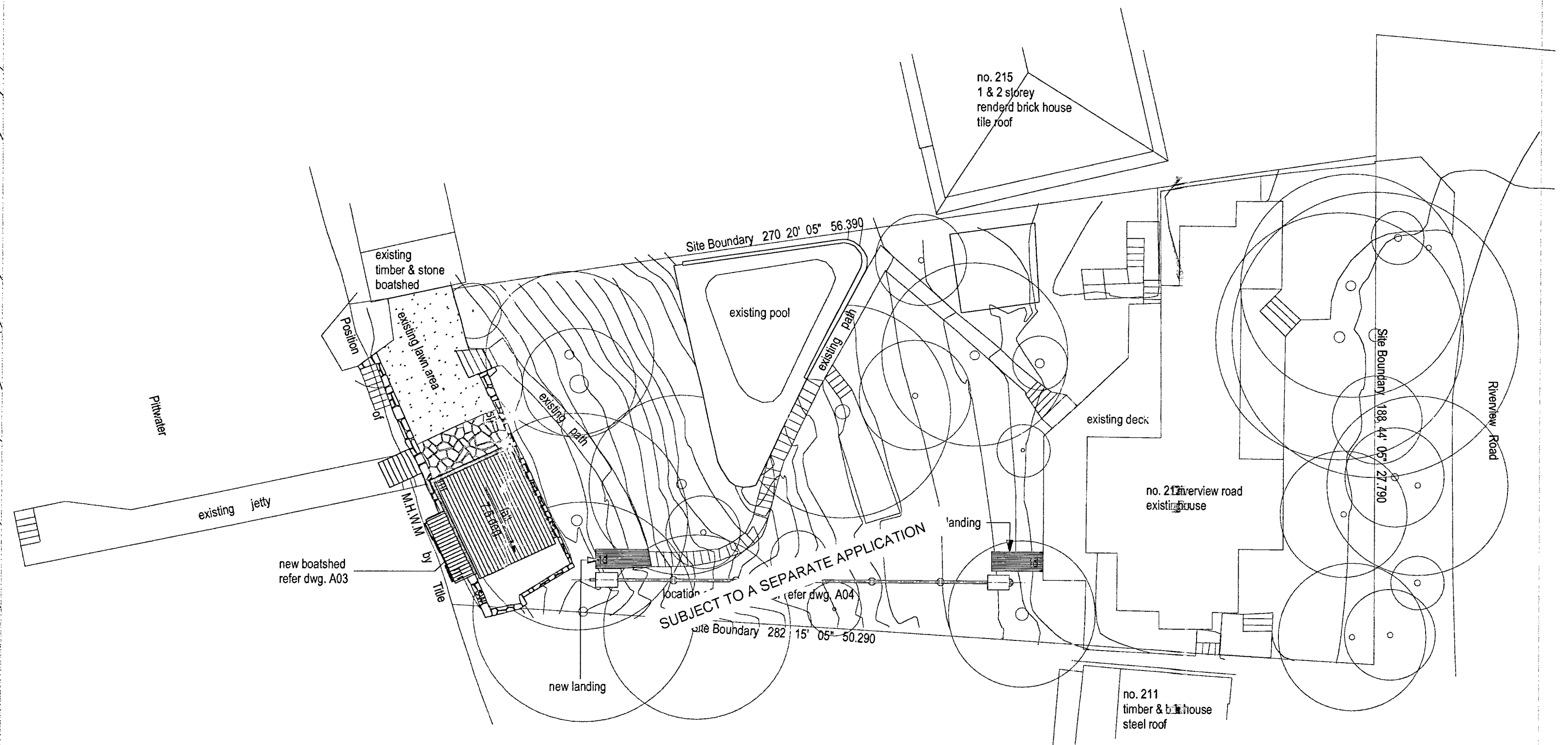
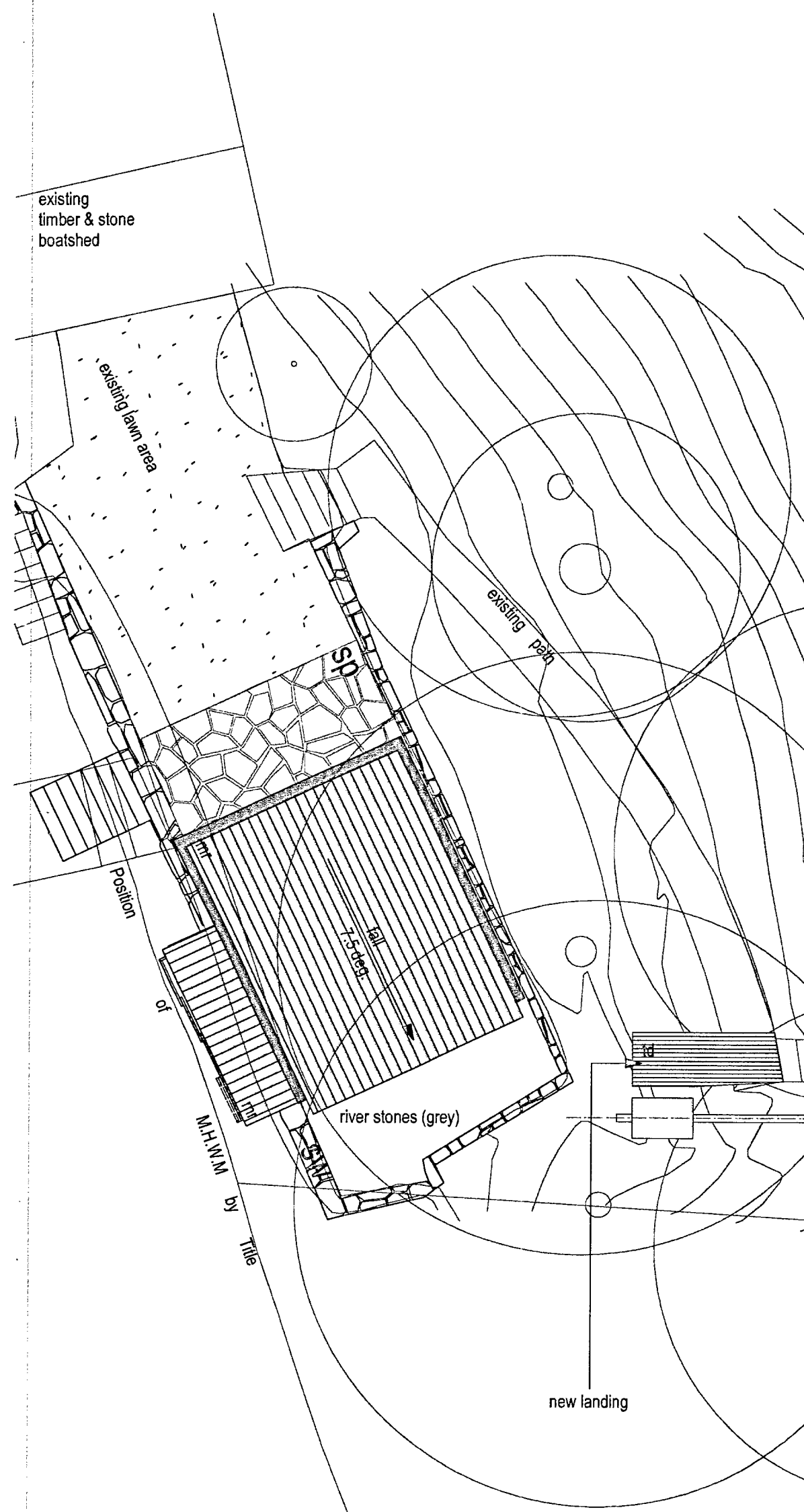
Surveyors
Paul Keen & Company
138 Wallamatta Road Newport 2106
Tel 9997 3088 Fax 9997 3427

Amendments

COUNCIL
COPY

legend
mr new colorbond metal roofing
sw existing stone retaining wall
sp stone paving

Site Calculations
Site Area 1,180 sqm
Existing Site Cover 380 sqm 32%
Proposed Site Cover 422 sqm 36 %



Architecture
Andrew Coomer and Associates Pty. Ltd
4/40 Avalon Pde Avalon Beach NSW 2107
Telephone 02 9918 0033 Facsimile 02 9918 0633 Email acoomer@ozemail.com.au

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Tel. 9984 7000 Fax. 9984 7444

Surveyors
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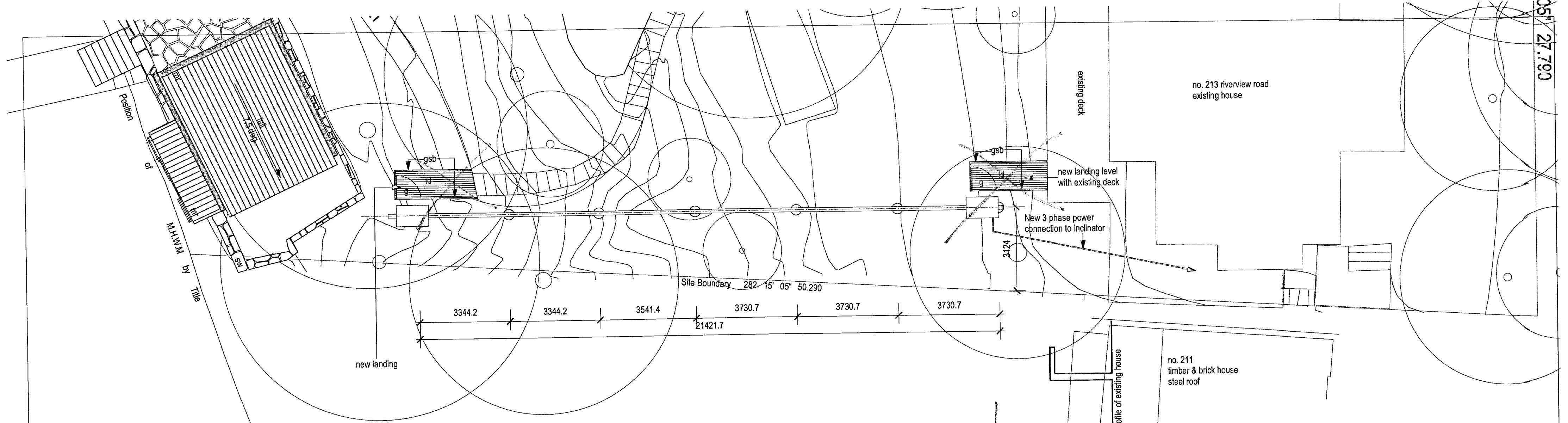
Amendments

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All levels and dimensions are to be checked and verified on site prior to the commencement of any work, making of shop drawings or fabrication of components.
Do not scale drawings. Use figured dimensions only.

Project
New Boat Shed & Inclinator
213 Riverview Road Clareville NSW
Lot Y DP 110460

Drawing Title
Proposed Site Plan and Roof Plan
Scale
1:200

Drawn
AC
A03cc



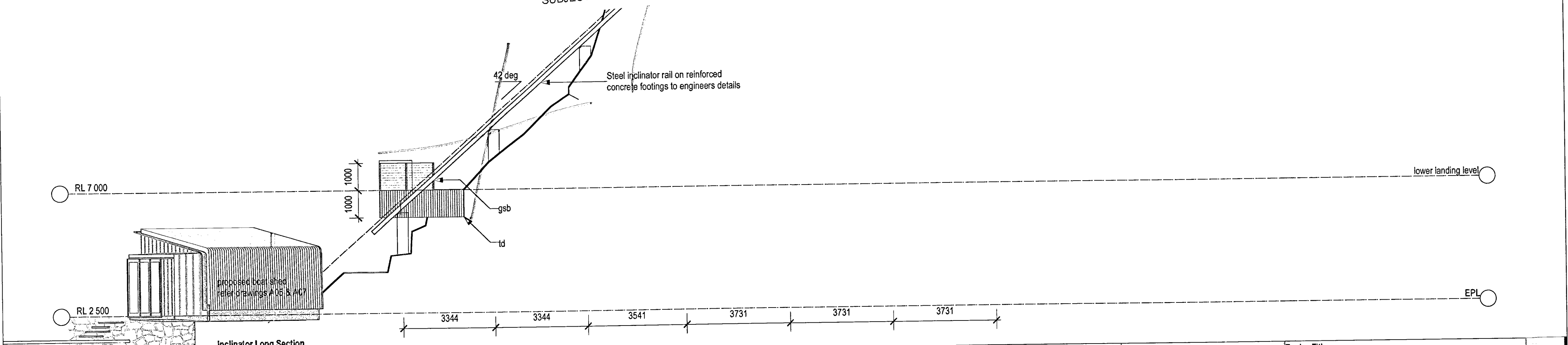
- legend.**
- g** New gal steel gate wit sshinges and latch. Frame and infill to match gsb. confirm size and location of gate with inclinator contractor.
- gsb** New gal steel balustrade with tensioned ss wires at 90mm cts. Posts from 50x25 RHS, top rail from 50x10 flat. Conseal connection to deck.
- td** Treated timber framed landing. Hardwood decking to top and 3 sides fixed to framing with countersunk alan head ss screws

Notes.

Contractor to organise quotations for the design and construction of the inclinator from suitably qualified inclinator contractors and include in the tender price for the works.

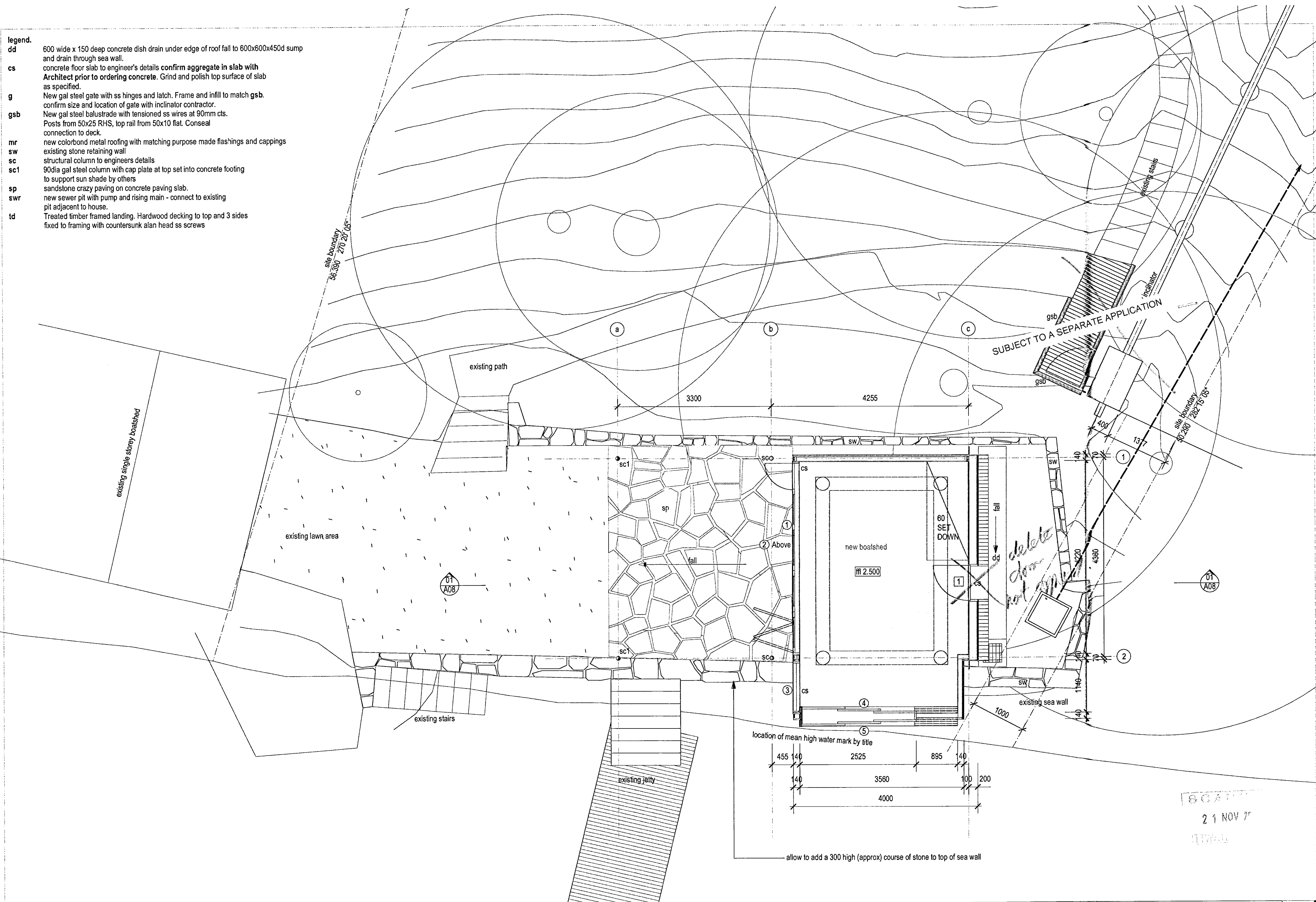
During construction allow for coordination, installation and supervision of the inclinator contractor together with any additional work required for the completion and comissioning of the inclinator.

SUBJECT TO A SEPARATE APPLICATION



Architecture Andrew Coomer and Associates Pty. Ltd 4/40 Avalon Pde Avalon Beach NSW 2107 Telephone 02 9918 0033 Facsimile 02 9918 0633 Email acoomer@ozemail.com.au	Client Russel & Christina Perkins 213 Riverview Road Clareville NSW 2107	Structural Consultant NB Consulting Engineers 207/30 Fisher Road Dee Why NSW Tel. 9984 7000 Fax. 9984 7444	Surveyors Paul Keen & Company 138 Wallamatta Road Newport 2106 Tel 9997 3088 Fax 9997 3427	Amendments	Notes This drawing is the copyright of Andrew Coomer & Associates P/L and may not be altered, reproduced or transmitted in any form or by any means in part or in whole without the written permission of Andrew Coomer & Associates P/L. All levels and dimensions are to be checked and verified on site prior to the commencement of any work, making of shop drawings or fabrication of components. Do not scale drawings. Use figured dimensions only.	Project New Boat Shed & Inclinator 213 Riverview Road Clareville NSW Lot Y DP 110460	Drawing Title Inclinator Details Date 10/05 Scale 1:100 Drawn AC
--	---	--	--	-------------------	---	--	---

legend.	
dd	600 wide x 150 deep concrete dish drain under edge of roof fall to 600x600x450d stump and drain through sea wall.
cs	concrete floor slab to engineer's details confirm aggregate in slab with Architect prior to ordering concrete. Grind and polish top surface of slab as specified.
g	New gal steel gate with ss hinges and latch. Frame and infill to match gsb. confirm size and location of gate with inclinator contractor.
gsb	New gal steel balustrade with tensioned ss wires at 80mm cts. Posts from 50x25 RHS, top rail from 50x10 flat. Conseal connection to deck.
mr	new colorbond metal roofing with matching purpose made flashings and cappings
sw	existing stone retaining wall
sc	structural column to engineers details
sc1	90dia gal steel column with cap plate at top set into concrete footing to support sun shade by others
sp	sandstone crazy paving on concrete paving slab.
swr	new sewer pit with pump and rising main - connect to existing pit adjacent to house.
td	Treated timber framed landing. Hardwood decking to top and 3 sides fixed to framing with countersunk alan head ss screws



Architecture
Andrew Coomer and Associates Pty. Ltd
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Telephone 02 9918 0033 Facsimile 02 9918 0633 Email acoomer@ozemail.com.au

Client
Russel & Christina Perkins
213 Riverview Road Clareville NSW 2107

Structural Consultant
NB Consulting Engineers
207/30 Fisher Road Dee Why NSW
Tel. 9984 7000 Fax. 9984 7444

Surveyors
Paul Keen & Company
138 Wallamatta Road Newport 2108
Tel 9997 3088 Fax 9997 3427

Amendments

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Project	New Boat Shed & Inclinator 213 Riverview Road Clareville NSW Lot Y DP 110460
----------------	--

Doing Title
Bashed Floor Plan

Date: Feb 5

Scale
1:50

Drawn AC

A05.CC

- Legend**
- cs concrete floor slab to engineering details- grind and polish top surface as specified
 - fc 6mm painted fibre cement wall lining- 450 wide panels with 20x20 dressed batten over vertical joints. 6mm wide shadow for horizontal joints
 - lw adjustable louvre window
 - mc pre-formed Colorbond metal capping
 - mr Colourbond metal roof sheet on timber framing to engineer's details
 - sb steel beam to engineer's details
 - sc steel column to engineer's details
 - sc1 90 dia gal steel column wit cap plate at top set into concrete footing to support sun shade by others
 - sd in ground concrete stormwater drain with fall to 450x450x450 pit with 100dia pvc pipe draining to Pittwater.
 - sw existing sandstone retaining wall
 - td timber framed door
 - ts timber sun screen
 - tw timber framed window

outline of existing
boatshed on adjacent
property

sw

a

b

c

Fall 6.5 deg.

window head
rl 4.600

fm
rl 2.500

west elevation

build up stone sea wall to match paving level.

c

b

a

max. roof level
rl 5.699

window head
rl 4.600

retaining wall
rl 3.600

fm
rl 2.500

East Elevation

Fall 6.5 deg.

mr

fc

sc

sc1

cs

window head
rl 4.600

retaining wall
rl 3.600

fm
rl 2.500

window head
rl 4.600

fm
rl 2.500

450

600

600

450

fc

mc

mr

mc

sw

fc cladding to door

class 1 finish

delete door not approved.

south elevation

sw

mr

mc

window head
rl 4.600

fm
rl 2.500

north elevation

sw

Architecture
Andrew Coomer and Associates Pty. Ltd
4/40 Avalon Pde Avalon Beach NSW 2107
Telephone 02 9918 0033 Facsimile 02 9918 0633 Email acoomer@ozemail.com.au

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Surveyors
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138 Wallamatta Road Newport 2106
Tel 9997 3088 Fax 9997 3427

Amendments

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On not scale drawings. Use figured dimensions only.

Project
New Boat House
213 Riverview Road Clareville NSW

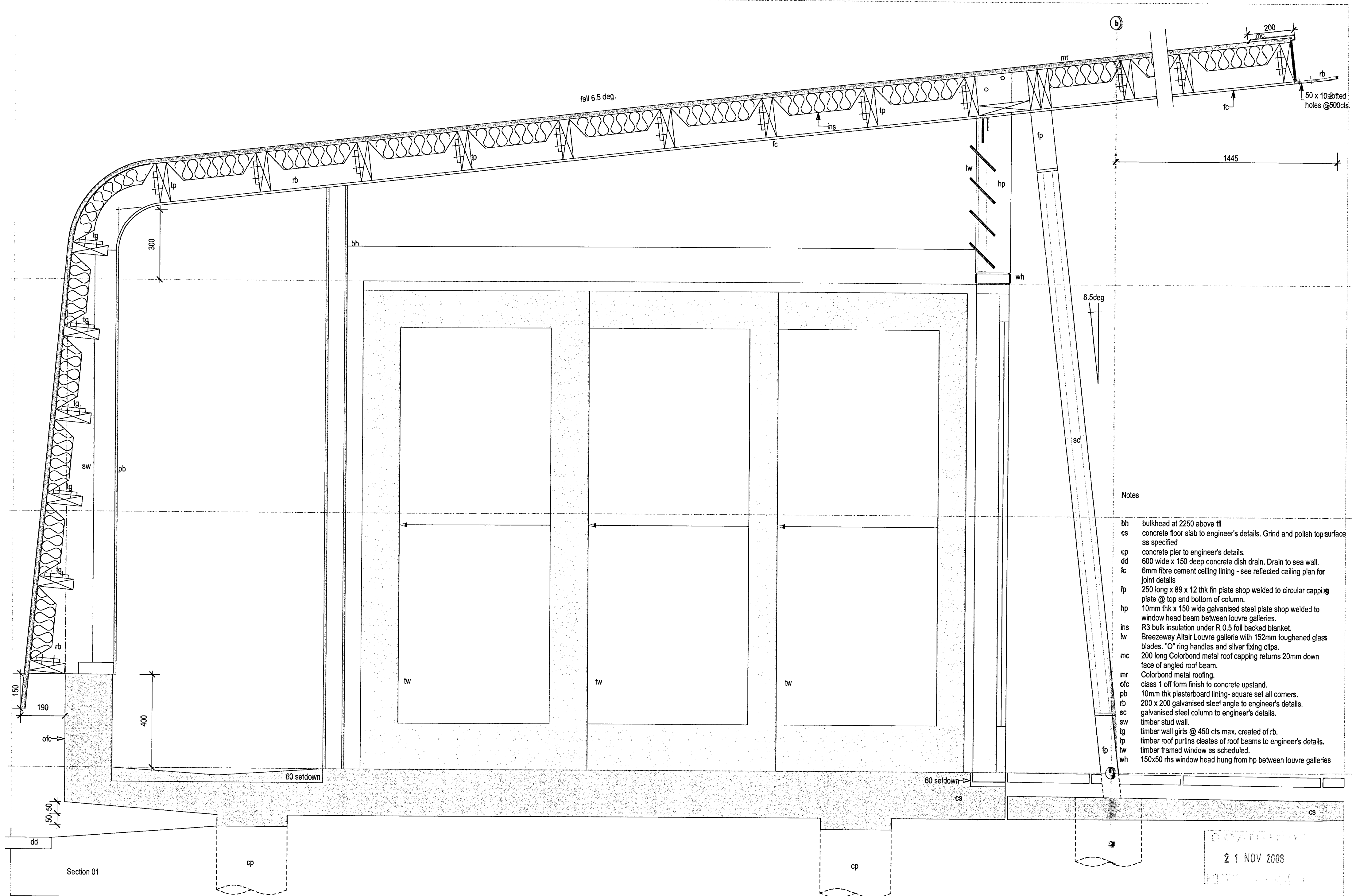
Drawing Title
Elevated Elevations
Sheet 05

Scale
1:50

Drawn
AC

2007/05

BOAT HOUSE
21 NOV 2006
PIT/PA/CLAREVILLE



Notes

- bh bulkhead at 2250 above fl
- cs concrete floor slab to engineer's details. Grind and polish top surface as specified
- cp concrete pier to engineer's details.
- dd 600 wide x 150 deep concrete dish drain. Drain to sea wall.
- fc 6mm fibre cement ceiling lining - see reflected ceiling plan for joint details
- fp 250 long x 89 x 12 thk fin plate shop welded to circular capping plate @ top and bottom of column.
- hp 10mm thk x 150 wide galvanised steel plate shop welded to window head beam between louvre galleries.
- ins R3 bulk insulation under R 0.5 foil backed blanket.
- tw Breezeway Allair Louvre gallery with 152mm toughened glass blades. "O" ring handles and silver fixing clips.
- mc 200 long Colorbond metal roof capping returns 20mm down face of angled roof beam.
- mr Colorbond metal roofing.
- ofc class 1 off form finish to concrete upstand.
- pb 10mm thk plasterboard lining- square set all corners.
- rb 200 x 200 galvanised steel angle to engineer's details.
- sc galvanised steel column to engineer's details.
- sw timber stud wall.
- tg timber wall girts @ 450 cts max. created of rb.
- tp timber roof purlins cleates of roof beams to engineer's details.
- tw timber framed window as scheduled.
- wh 150x50 rhs window head hung from hp between louvre galleries

Architecture
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Project
New Boat House
213 Riverview Road Clareville NSW

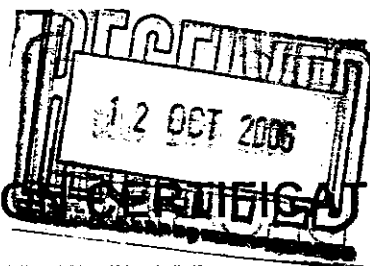
Drawing Title
Section 01

Drawn
AC

Scale
1:10

Drawn
AC

21 NOV 2006



APPLICATION FOR A CONSTRUCTION CERTIFICATE

1. Applicant's details

It is important that we are able to contact you if we need more information. Please give us as much details as possible

Mr ☒ Mrs ☐ Ms ☐ Dr ☐ Other ☐

Given Names (or ACN)

Family Name (or Company)

MICHAEL

HILL

Postal Address (we will post all mail to this address)

215 RIVERVIEW ROAD

AVON

Post Code 2107

Daytime telephone

Alternate no.

Mobile no.

0909 990 644

2. Owners consent

Every owner of the land must sign this form. If the owner is a company the form must be signed by an authorized director and the common seal must be stamped on this form. If the property is a unit under the strata title or a lot in a community title, then in addition to the owner's signature, the common seal of the body corporate must be stamped on this form over the signature of the owner and signed by the Chairman or Secretary of the Body Corporate or the appointed managing agent.

Owner(s)

MICHAEL HILL

Address

215 RIVERVIEW ROAD

AVON

As owner(s) of the land to which this application relates, I/We consent to this application. I/We also consent for the Principal Certifying Authority and/or Accredited Certifier to enter the land to carry out inspections relating to this application.

Signature(s)

[Signature]

Without the owner's consent we will not accept the application. This is a very strict requirement for all applications. If you are signing on the owner's behalf as the owner's legal representative, you must state the nature of your legal authority and attach documentary evidence (eg, power of attorney, executor, trustee, company director, etc).

3. Location of property

Unit/Street no.

213

Street name

RIVERVIEW RD

Suburb

AVON

Post code

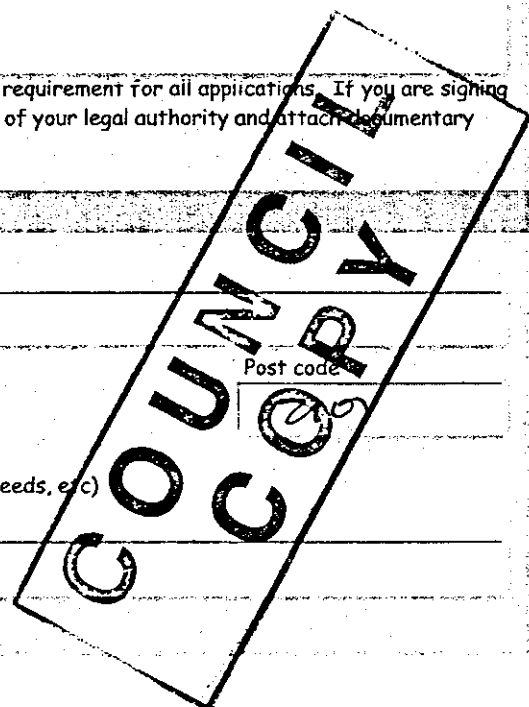
Legal Property Description (these details are shown on your rate notices, property deeds, etc)

Lot no.

7

DP no.

110460



4. Description of Work

What type of work do you propose to carry out?

Please describe briefly everything that you want approved.

NEW BOARDSHED ONLY

5. Estimated Cost of Work

The estimated cost of the development or contract price may be subject to review

Estimated cost of work \$ 31,000

6. Development Consent

Council Consent no. N0553/05

Date of Determination 7/10/05

7. Building Code of Australia classification

This can be found on the development consent

BCA Classification 10a

8. Builder's details

If known, to be completed in the case of residential building work

Name BELEVANT CONSTRUCTIONS

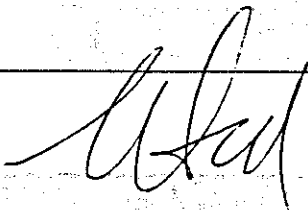
License no. 31493

Owner/builder permit no.

9. Applicant's declaration

I apply for a Construction Certificate to carry out building works as described in this application. I declare that all the information in this application and checklist is, to the best of my knowledge, true and correct.

Signature



Date

8.9.06

SUBMISSION REQUIREMENTS

A. GENERAL

Are the plans submitted with the Construction Certificate Application in accordance with the Development Consent?

Yes ☒ No ☐

Have all the conditions of Development Consent relating to the issue of the Construction Certificate been fully complied with?

Yes ☒ No ☐

If you have answered NO to either of the above questions, then you will need to speak with the Accredited Certifier BEFORE LODGING YOUR APPLICATION.

B. ALL PROPOSALS (has the following required information been submitted?)

Yes	No	Not Applicable	<u>In the case of an application for a Construction Certificate for building work:</u>
☒	☐	☐	Three (3) copies of detailed architectural plans and specifications
☒	☐	☐	The plan for the building must consist of a general plan drawn to a scale not less than 1:100 and a site plan drawn to a scale not less than 1:200. The general plan of the building is to: a) show a plan of each floor section b) show a plan of each elevation of the building c) show the levels of the lowest floor and of any yard or unbuilt on area belonging to that floor and the levels of the adjacent ground d) indicate the height, design, and full construction details e) indicate the provision for fire safety and fire resistance (if any)
☐	☐	☒	Where the proposed building work involves any alteration or addition to, or rebuilding of, an existing building, all copies of the general plan are to be coloured or otherwise marked to the satisfaction of the Council to adequately distinguish the proposed alteration, addition or rebuilding with a separate letter listing the proposed changes being submitted.
☒	☐	☐	3 copies of a specification: a) to describe the construction and materials of which the building is to be built and the method of drainage, sewerage and water supply b) state whether the materials proposed to be used are new or second hand and give particular
☐	☐	☒	Where the proposed building work involves a modification to previously approved plans and specifications the general plans must be coloured or otherwise marked to the satisfaction of the Accredited Certifier to adequately distinguish the modification.
☐	☐	☒	If the proposed building work involves a modification to previously approved plans and specification which were subject of a Development Consent, has the original Development Consent been modified by Council?
☐	☐	☒	Except in the case of an application for, or in respect of domestic building work: a) a list of any fire safety measures that are proposed to be implemented in the building or on the land on which the building is situated, and b) if the application relates to a proposal to carry out any alteration or rebuilding of, or addition to, an existing building, a separate list of such of those measures as are currently implemented in the building or on the land on which the building is situated. This list must specify the standard of design of each of those fire safety measures to which they were originally installed. c) This list must describe the extent, capability and basis of design of each of the measures concerned.
☐	☐	☒	Copy of BASIX Certificate & Report.
☒	☐	☐	All other documentation to satisfy conditions of Development Consent.

HOME BUILDING ACT 1989 (as amended) OWNER/BUILDER REQUIREMENTS

Applicants for work at a residential property with a value of work over \$12,000 require insurance as specified in the Home Building Act 1989.

Owner Builders require Property Owner Builder's Permit issued by the Department of Fair Trading for all projects over \$5,000. In addition to this permit all projects valued in excess of \$12,000 may also require a contract of insurance under the provisions of the Home Building Act 1989 as amended. This requirement will take effect should the property owner offer the property for sale in the ensuing period of 7 years.

Enquiries on any matters relevant to this section should be taken up with the Department of Fair Trading at Level 21, Astra House, 227 Elizabeth Street, Sydney (ph: 133220).

LONG SERVICE LEVY (applies to all classes of buildings)

A Long Service Levy at 0.35% of the cost of works is payable on projects valued \$25,000 or more. This sum can be paid directly to the Long Service Payments Corporation or to Council acting as an agent to the Corporation. Partial exemption from the levy may be granted to non profit organizations, churches and to owner/builders. The levy may also be paid in instalments. Application forms for these exemptions are available from Council but all enquiries in this regard should be address to the Long Service Payments Corporation.

THE CONSTRUCTION CERTIFICATION CANNOT BE ISSUED UNLESS THE LONG SERVICE LEVY AND HOME BUILDING ACT 1989 INSURANCE (APPLICABLE TO RESIDENTIAL PROPERTIES) HAVE BEEN PAID, OR EVIDENCE OF THE EXEMPTION PROVIDED TO COUNCIL.

PARTICULARS OF THE PROPOSAL

What is the area of the land (m ²)? 1180m²	Gross floor area of building (m ²) as proposed: 25m²
What are the current uses of all or parts of the building(s)/land? RESIDENTIAL DWELLING	Location: 213 RIVERVIEW RD AVARON NSW Use: BOAT SHED
Does the site contain a dual occupancy? NO	What is the gross floor area of the proposed addition or new building (sq metres)? 25m²
What are the proposed uses of all parts of the building(s) land? RESIDENCE + BOATSHED	Number of pre-existing dwellings: 1
Number of dwellings to be demolished: NONE	How many dwellings proposed? 1
How many storeys will the building consist of? 1	Will the new building be attached to the existing building? NO Will the new building be attached to any new building? NO

MATERIALS TO BE USED

The following information must be supplied for the Australian Bureau of Statistics:

Place a tick (✓) in the box which best describes the materials the new work will be constructed of:

WALLS		FLOOR		ROOF		FRAME	
Brick veneer	☐	Concrete	☒	Aluminium	☐	Timber	☒
Full brick	☐	Timber	☐	Concrete		Steel	☒
Single brick	☐	Other	☐	Concrete tile	☐	Other	☐
Concrete block	☐	Unknown	☐	Fibrous cement	☐	Unknown	☐
Concrete/masonry	☐			Fibreglass	☐		
Concrete	☐			Masonry/terracotta shingle	☐		
Steel	☒			Tiles	☐		
Fibrous cement	☐			Slate	☐		
Hardiplank	☐			Steel	☒		
Timber/weatherboard	☐			Terracotta tile	☐		
Cladding-aluminium	☐			Other	☐		
Curtain glass	☐			Unknown	☐		
Other	☐						
Unknown	☐						

Tendering, pre contract information and specification for the construction of a new Boatshed.

Site

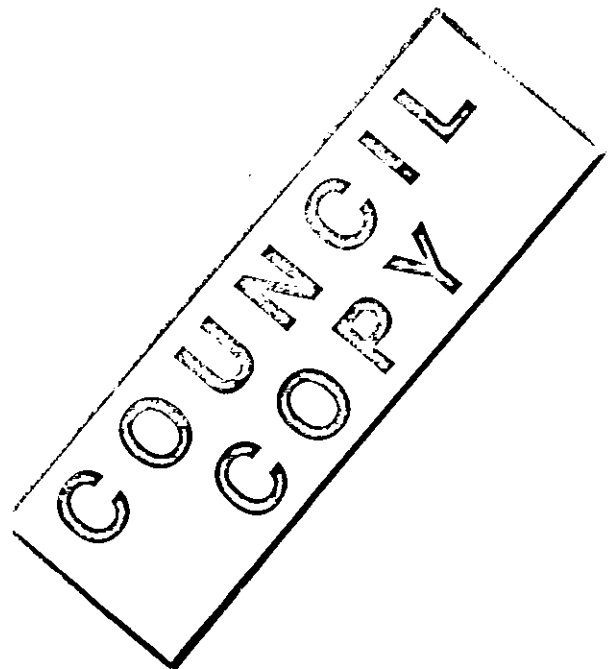
213 Riverview Road Clareville NSW

Proprietors

Michael Hill

Date

January 2006



New Boatshed 213 Riverview Road Clareville

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TENDER DOCUMENTS

Document No	Document Name	Page No
00200	Information For Tenderers	
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00300	Tender Form	

CONTRACT PRELIMINARIES

Document No	Document Name	Page No
00500	Instrument of Agreement	
00630	Warranties	
00650	Certificate of Insurance	
00800	Supplementary Conditions of Contract	
00820	Additional Articles	
00860	Drawings	
00870	Schedules & Tables	
00900	Addenda & Modifications	

TRADE SECTIONS (SPECIFICATIONS)

Document No	Document Name	Page No
02220	Demolition	
02315	Excavation & Fill	
02510	Water Distribution	
02530	Sanitary Sewerage, plus schedule	
02560	Gas Installation	
02630	Storm Drainage	
03310	Concrete	
05100	Structural Steel	
05510	Metal Stairs & Ladders	
05580	Architectural Metalwork & Whitegoods, plus a schedule	
06100	Carpentry, plus a schedule	
06165	Fibre Cement Products	
06400	Joinery-site built	
07200	Thermal Insulation	
07610	Metal Roofing, Siding & Plumbing	
08250	Doors & Door frames, plus schedule	
08550	Timber Windows & Glazing	
08710	Door Hardware, plus schedule	
09250	Plasterboard	
09300	Ceramic Tile	
09500	Ceilings	
09648	Wood Strip Flooring	
09910	Painting	
16150	Low Voltage Lighting	
16350	Electrical Distribution, plus schedule	

1.

The Project

Construction of a new boatshed 213 Riverview Road Clareville NSW
2.

The Contract

Fixed lump sum not subject to rise and fall
3.

Conditions of Contract

ABIC SW-1 2002 Simple works contract

This is a 'lump sum' contract, intended for building works (including alterations) of a relatively small scale, between a proprietor and a builder where an Architect has prepared the contract documents and is providing contract administration services.
4.

Tenders

The Proprietor reserves the right to reject the lowest or any tender or an otherwise conforming tender.

Preference will be given to tenders with a brief construction period.

Comply with AS 4120 1994 Code of tendering.
5.

Tender Documents

Available without fee from the Architect. Further copies will be made available if required at \$100 per set.
6.

Alternative Proposals

Submit tenders in accordance with the tender documents.

Alternatives may be considered.
7.

Permission to Visit the Site

Tenderers may visit the site accompanied by the Architect. Refer Clause 9.
8.

Schedule

Submit a statement of the number of working days required from start to finish date of the contract with Proprietor Occupancy date noted.
9.

Tender Enquiries

All Enquiries during the tender period should be directed to Andrew Coomer.
10.

Consultants

For this Project, the Proprietor has appointed the following Consultants:

Comply with AS 4121-1994 Code of Ethics and Procedures for selection of Consultants.

Architects Andrew Coomer & Associates	Name of Contact Andrew Coomer	Tel : Fax : Mobile : E-mail	02 9918 0033 02 9918 0633 0414 776 063 address :
acoomer@bigpond.net.au			
Structural Engineer NB Consulting Engineers	Name of Contact Lucas Molloy	Tel : Fax : Mobile : E-mail address :	9984 7000 9984 7444
Surveyor Paul Keen & Co	Name of Contact Paul Keen	Tel : Fax : Mobile : E-mail address :	9997 3088

11. **Annexure (or Appendix) to General Conditions of Contract**

Section 00210

General Conditions of Tendering

1. Tender Form

Refer Document 00300 "TENDER FORM"

2. Tender Documents

The tender documents include the "The Conditions" or "the Agreement" or "General Conditions of Contract", Tender Form, and Specification, Drawings, Schedules and any other documents issued by the Architect for the purpose of tendering (available at point of issue of documents). No explanation or amendment to the tender documents shall be recognised unless in the form of written addendum issued by the Architect.

3. Tenderer to Inform Himself and Subcontractors

The Tenderer is deemed to have :

- A. Examined the tender documents, the site and its surroundings and other information made available.
- B. Examined information relevant to the risks, contingencies, and other circumstances having an effect on his tender and which is obtainable by the making of enquiries.
- C. Satisfied himself as to the correctness and sufficiency of his tender and that his tender covers the cost of complying with the obligations of the tender documents.
- D. Advised suppliers and sub-contractors of the requirements of the Preliminary and trade sections of the Specifications.

4. Discrepancies, Errors and Omissions in Tender Documents

If a Tenderer finds any discrepancy, error or omission in the tender documents, notify the Architect, in writing, 5 days before the date and time for closing of tenders.

5. Submission of Tender

- A. Submit tender only on the tender form provided, Document 00300
- B. Include an address for service of notices for the purpose of this tender and subsequent contact.
- C. Sign the tender form, or if the Tenderer is a corporation or company sign the tender with company seal.
- D. The tender shall be for the whole of the work described in the tender documents.
- E. Do not alter or add to tender documents except as required by these General Conditions of Tendering.

6. Lodgement of Tenders

- A. Lodge tender in a sealed envelope marked with the name of the Project sent by pre-paid post to, the Architects office by the date and time for closing of tenders. See "C" below.
- B. Notwithstanding sub-clause A, facsimile, telegraphic or telexed tenders received by the date and time for closing of tenders may be admitted for consideration subject to the concurrent submission of a written tender. Oral tenders will not be received.
- C. **Tenders Close**
Thursday 31st March 2005

7. Informal Tenders (Non-conforming Tenders)

Tenders which do not comply with the requirements of, or which contain provisions not required or allowed by the tender documents, will be declared informal.

8. Trade Names

Trade or proprietary names, brands, catalogue or reference numbers are specified in the tender documents. A successful tenderer may offer material or equipment of similar characteristics or type, quality, appearance, finish, method or construction and performance, after the Letter of Acceptance of tender has been issued.

9. Customs Duties

The tender shall include customs duty and other similar charges applicable to imported materials, plant and equipment required for work described in the tender documents.

10. Pre-requisites to Acceptance

- A. Notwithstanding other requirements of the tender documents, the Proprietor or Architect may require a Tenderer to submit additional information to allow further consideration of his tender.
- B. Should the Tenderer fail to submit the information so required by the date and time stipulated by the Proprietor or Architect the tender may be treated as informal.

11. Acceptance of Tender

A tender shall not be deemed to have been accepted unless and until a Letter of Acceptance is handed to the Tenderer or is sent by pre-paid post to, or is left at, the address stated in the tender form for service of notices.

Section 00230
Existing Conditions at Site

Refer to:
Site survey by Paul Keen & Co Surveyors.
Geotechnical report by Douglas & Partners.

New Boatshed 213 Riverview Road Clareville

Section 00630
Warrenties

Warranty Requirements

- A. The Builder or other approved Warrantors shall provide written warranties where so specified elsewhere in this specification.
- B. Each warranty shall be in approved form and shall specifically include the provisions required in writing.
- C. Warranty periods shall commence from the date of the Notice of Practical Completion.
- D. The Builder is to advise in their if any of the periods below can not be met.

SECTION NO.	SECTION NAME	NO. OF YEARS
02315	Excavation & Fill	5 YEARS
02510	Water Distribution	5 YEARS
02530	Sanitary Sewerage	5 YEARS
02560	Gas Installation	5 YEARS
03310	Concrete	28 DAYS
05100	Structural Steel	10 YEARS
05510	Metal Stairs & Ladders	10 YEARS
05580	Architectural Metalwork, includes a schedule	20 YEARS
06100	Carpentry, includes a schedule	5 YEARS
06165	Fibre Cement Products	5 YEARS
06400	Joinery (Site Built)	5 YEARS
07610	Metal Roofing, Siding & Plumbing	10 YEARS
08250	Doors & Door Frames, includes schedule	5 YEARS
08550	Timber Windows & Glazing	5 YEARS
08710	Door Hardware, includes schedule	5 YEARS
09250	Plasterboard	5 YEARS
09300	Ceramic Tile	5 YEARS
09500	Ceilings	5 YEARS
09910	Painting	2 YEARS
16150	Low Voltage Lighting	10 YEARS
16350	Electrical Distribution, includes schedule	10 YEARS

Section 00630
Certificate of Insurance

Insurance certificates as required by the contract are to be submitted by contractor to the proprietor.

Submit each certificate to the proprietor *before commencement of work*.

Insurance of the works should include but not be limited to;
Cost of demolition and removal of rubbish.
Restoration of existing or built structures
Percentage to cover fees of consultants.
Percentage to cover escalation costs.

Builders Warranty Insurance for the contract works.

Section 00800

Supplementary Conditions of Contract

1. **Information to Subcontractors, Suppliers and Installers**
Advise Sub-contractors and suppliers and installers of material of the requirements of these Supplementary Conditions of Contract.
2. **Amount of Security (Performance Bond)**
See Annexure or appendix to General Conditions of Contract. Refer Document 00610.
3. **Interpretation of Drawings**
Check dimensions on site before proceeding with the work of the contract. Notify Architect of omission or conflict in drawings and their relation to specifications.
4. **Construction Progress Bar Graph**
Within fourteen (14) calendar days after the date of Letter of Acceptance of tender, submit to the Architect a detailed chart of the plan of progress, in Bar Graph form. For each item of work provide graph showing planned progress with planned monthly quantities and with space or other provision for entering actual progress. The Architect may require the Builder to provide an amended bar graph within seven (7) days of being requested to do so.
Submit bar-graph at monthly intervals showing actual progress.
5. **Sub-Contractors and Suppliers**
Within seven days of receipt of the Letter of Acceptance, supply to the Architect a complete list of Sub-Contractors and Suppliers proposed for the Works. The Proprietor, through the Architect, reserves the right to reject any so listed.
6. **Indemnity of Proprietor**
 - A. Indemnify, and keep indemnified the Proprietor against claim, demand, action, suit or proceeding that may be brought or made against the Proprietor by any other person who has entered into a contract with the Proprietor to execute work associated with the project.
 - B. Submit evidence of such insurance in respect of loss, damage or expense incurred by that other person by reason of an act, default or neglect of the Builder in the performance of his obligations under the contract or arising out of or as a consequence of delay by the Builder in executing or failing to complete work under the contract and also from costs and expenses that may be incurred by that other person in connection with such claim, demand, action, suit or proceeding.
 - C. Do not proceed with work under the contract until evidence of Indemnities and Insurances required herein, is submitted in writing to the Architect.
7. **Approvals, Services, Fees and Tax**
 - A. The following documents have been submitted by the Proprietor, via the Architect and fees paid for
Planning permit and/or D.A.
Building Approval (Construction Certificate)
 - B. Be responsible for the connection of services, water, sewerage, drainage, electricity and gas etc. Apply for such permits, pay for fees and charges levied by relevant bodies for such connections.
Issue necessary notices to such bodies. Obtain and pay for scaffolding permit.
 - C. Pay Tax on items where such tax is applicable.
If Tax is not applicable, request from the Proprietor, via the Architect, a Tax exemption certificate for use when ordering specified materials.
 - D. Pay fees, where applicable, relating to "Workplace health and Safety" Acts and other state or local government acts.
8. **Site Control**
 - A. Be responsible for activities on the site including providing access for authorised persons and restricting access by unauthorised persons. Take necessary precautions to secure the assets of the Proprietor.
 - B. Except as otherwise provided in the contract, delivery of materials for the works, space for storage of same and for building sheds, office and workshops will be allowed only as directed by the Builder.
 - C. Do not store waste building materials and flammable liquids in the building.
 - D. Take proper precautions to keep poisons and other injurious substances in places secured against access by unauthorised persons.
9. **Compliance with Ordinances, etc.**
Whenever work or type of plant or machinery, etc. is required either by the specification or by the relevant statutory authority, provide full details of such work, plant, etc. to the relevant statutory authority and make such applications, etc. as may be

required within two weeks of receipt of Letter of Acceptance.

In such cases, approval given by the Architect to data submitted by the Builder will not necessarily imply that such data meet the requirements of the relevant statutory authority.

10. Site Amenities and Meetings

- A. Provide statutory and necessary amenities and sanitary facilities for site workers where such are not already available in suitable locations. Maintain in working condition and clean daily. Comply with Union requirements.
- B. Provide accommodation on the site of sufficient size to hold regular site meetings of Building Foreman, Architect and Consultants.
- C. Arrange for site meetings to occur at regular intervals throughout the contract period. Advise Architect and Consultants of meeting times, keep accurate records of each meeting, and issue to each Attendee a copy of the record within three days of each meeting.

11. Temporary Fire Extinguishers

Maintain fully charged, and accessible fire extinguishers as are necessary for the care and safety of the Works, as required by local Fire Authority.

12. Telephone and Fax

Provide either a mobile telephone or a telephone service and pay costs of installation, rental, calls and removal. Provide fax machine under similar conditions.

13. Light and Power

Provide temporary electric light and power supply during construction and pay charges connected therewith. Provide sufficient of each as required for execution of work specified.

14. Water

Provide and maintain a temporary water supply sufficient for executing the work under the contract. Disconnect and clear away same on completion and pay costs and charges in connection therewith.

15. Project Identification Sign

Provide and erect a project identification sign in accordance with the DA Conditions and erect same on the site as directed and maintain same in good condition throughout the currency of the contract. The sign shall remain the property of the Builder. Remove same from the site on completion of the Works.

16. Commencement of Work

Notwithstanding that possession of the site has been given to the Builder, the Builder shall not be permitted to commence work on the site until he has provided :
Insurances : refer Clause 6 above and document 00650 certificate of insurance.

17. Adjacent Premises

Ensure that the work is carried out without damage to and with a minimum of nuisance or annoyance to the occupants of adjacent premises.

18. General Attendance on Sub-Contractors

General attendance shall include taking delivery, assisting to unload, storing and protecting Sub-Contractor's materials and for allowing Sub-Contractors ample working space, free use of water, electricity (unless otherwise described), scaffolding, hoists and ordinary plant, etc., and messing and sanitary accommodation and for cutting away, building in and protecting finished work and making good.

19. Precautions in Carrying Out Work Under the Contract

Unless otherwise specified in the contract, observe, in the absence of statutory requirement to the contrary, the relevant current Australian Standard published by Standards Australia relating to storage, transport, use of materials, explosives, fire precautions in arc or flame cutting flame heating and arc or gas welding operations, plant and equipment, work processes and safety precautions.

20. Interference with Existing Services

Notify the Architect of connection, disconnection or interference with existing services.
Repair, to the satisfaction of the Architect, damage which occurs to services during currency of the contract.

21. Damaged Services

Where existing services at or adjacent to the site are in non-optimum condition, arrange for an inspection by the Architect and

New Boatshed 213 Riverview Road Clareville

the Officer-in-charge of the area responsible for such service. At such meeting, record the condition and follow instructions when issued in writing by the Architect.

22. Solid, Liquid and Gaseous Contaminants

- A. Be responsible for the proper disposal of solids, liquid and gaseous contaminants.
- B. Discharge gaseous contaminants in such a manner that they will be sufficiently diluted with fresh air that the toxicity will be reduced to an acceptable level.
- C. Subject to statutory and local requirements, liquid contaminant may be diluted with water to a level of quality acceptable in the sewer system or contained in approved vessels for disposal at sites approved by the relevant Authority.
- D. Dispose of solid contaminants by removal from the site to locations approved by the relevant Authority.

23. Disposal of Refuse

Refuse from construction operation (including food scraps and the like) shall be removed from the site at frequent intervals.

24. Explosive Devices

Powder powered fixing tools may be used.

25. Dimensioning

Do not scale drawings which are clearly diagrammatic and/or marked 'not to scale' or NTS.

27. Shop drawings

Shop drawings mean complete drawings showing details of fabrication, assembly, installation, fixing and waterproofing methods of specific items or components, and shall include necessary explanatory notes and specifications.

28. Care of the Works

- A. **Delivery, Handling and Storage :** Deliver, handle and store products in accordance with manufacturer's recommendations and by methods and means which will prevent damage, deterioration, and loss including theft. Control delivery schedules to minimise long-term storage of products at site and over-crowding of construction spaces. In particular, co-ordinate delivery and/or installation to ensure minimum holding or storage times for products recognised to be flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other sources of loss.
- B. **Limiting Exposure of Work :** To the extent possible, through control and protection methods, supervise performance of work in a manner which will ensure that none of the work, whether completed or in progress, will be subjected to harmful, dangerous, or damaging exposures during construction period.
- C. **Cleaning and Protection of Finished Work : General :** during handling and installation of work as project proceeds, clean site and protect work in progress and adjoining work on a basis of perpetual maintenance. Apply suitable protective covering on newly installed work where required to ensure freedom from damage or deterioration at a time of Practical Completion; otherwise, clean and perform maintenance on newly installed work as frequently as necessary throughout remainder of construction period. Adjust and lubricate operable components to ensure equipment operates as intended.

29. General Product Compliance

- A. Provide products which comply with requirements, and which are undamaged and unused at time of installation, and which are complete with accessories, trim, finish, features required by regulation, and other devices and details needed for a complete installation and for intended use and effect.
- B. **Standard Products :** where available, provide standard products of types which have been produced and used previously and successfully on other projects and in similar applications.
- C. **Continued Availability :** where additional amounts of a product, by its application, are likely to be needed by Proprietor at a later date for maintenance and repair or replacement work, provide a standard, domestically produced product which is likely to be available to Proprietor at such later date.
- D. **Manufacturer's recommendations :** where installations include manufactured products, comply with manufacturer's current and applicable recommendations for installation, to whatever extent these are more explicit or more stringent than applicable requirements indicated in contract Documents.
At completion of project, provide to the Architect a copy of each set of Manufacturer's recommendations which have been used in the work of each trade.
- E. **Manufacturer's Data Sheets :** where this specification requires, obtain two copies of the current data sheets issued by the manufacturer of specified component. Retain one copy for use on site and submit the other to the Architect as a record of instructions followed on the site.

30. Builder's Quality Control

New Boatshed 213 Riverview Road Clareville

- A. Inspect each item of materials or equipment immediately prior to installation and reject damaged or defective items.
- B. Provide attachment and connection devices and methods for securing materials properly as they are installed, true to line and level, and within recognised industry tolerances unless otherwise indicated. Allow for expansion and building movements. Provide uniform joint widths in exposed Work, organised for best possible visual effect. Refer questionable visual effect choices to the Architect.
- C. Re-check measurements and dimensions of the Work as an integral step before starting each installation.
- D. Install work during conditions of temperature, humidity, exposure and weather which will ensure the best possible results for each part of the work, or component or treatment as necessary to prevent damage and deterioration.
- E. Co-ordinate enclosure and closing-in of work with required inspections and tests, so as to avoid necessity of uncovering work for that purpose.

31. Quality Assurance

Provision of a formal quality assurance system is not required.

32. Material/Colour Selections

- A. The Architect will prepare a master Colour Schedule indicating the required colour, finish, pattern, material, texture and other pertinent information in connection with interior and exterior finishes.
- B. Submit colour chips for items having colour unless otherwise directed or approved by Architect.
- C. To facilitate the preparation of such a schedule, submit within fifteen days following date of award of contract, unless otherwise extended by the Architect, the names and products of those manufacturers whose products are proposed for use within the framework of the specifications wherever colour, finish, pattern, texture and other related information is a consideration.

33. Miscellaneous Completion Procedures

- A. Removal of Protection : except as otherwise indicated or requested by Architect, remove temporary protection devices and facilities installed during course of the work to protect previously-completed work. Where secured to exposed-to-view new work or existing to remain, remove evidence of protection devices. Remove protection within 5 days before Practical Completion.
- B. Trade Cleaning : as each trade completes its work in each area of the building, the Sub-Contractor is required to be responsible for "broom clean" standard of cleaning in that area.

34. Final Cleaning

Final Cleaning : provide final cleaning of the work of this specification, at time indicated, consisting of cleaning each surface of unit of work to normal 'clean' condition expected for a first class building cleaning and maintenance programme.

Examples of required cleaning are :

- A. Remove labels which are not required as permanent labels.
- B. Clean transparent materials, including mirrors and window/door glass, to a polished condition, removing substances which are noticeable as vision-obscuring materials. Replace broken glass and damaged transparent materials.
- C. Clean exposed exterior and interior hard surfaces finished, to a dirt free condition, free of dust, stains, fingermarks, films and similar noticeable distracting substances. Except as otherwise indicated, avoid disturbance of natural weathering of exterior surfaces. Restore reflective surfaces to original reflective condition.
- D. Wipe clean surface of mechanical and electrical equipment, including lift and similar equipment; remove excess lubrication and other substances.
- E. Remove debris and surface dust from limited access spaces.
- F. Clean concrete floors broom clean.
- G. Vacuum clean carpet and similar soft surfaces.
- H. Clean plumbing fixtures to a sanitary and polished condition, free of stains including those resulting from water exposure.
- I. Clean light fixtures and lamps so as to function with full efficiency.
- J. If permanent lighting fixtures have been used for construction purposes replace globes with new.
- K. Clean project site, including planted sections and footpaths, of litter and foreign substances. Sweep paved areas to a broom clean condition; remove stains, petro-chemical spills and other foreign deposits.
- L. Label keys for locks accurately and provide in duplicate to the Architect at the completion of the project.

34a Clean Site and Access Roads

Be responsible for maintaining clean roads and access. Remove and clean away mud, building debris from footpaths, gutters, drains, walls etc. when such occurs.

35. Warranties

Provide written warranties as set out in DOCUMENT 00630 WARRANTIES

New Boatshed 213 Riverview Road Clareville

Section 02315
Excavation and Fill

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Prepare site, excavate for paving, drains, pits, foundations, slabs. Remove trees and other vegetation, including roots, where they prevent building work, paving, trenches etc.

Refer to geotechnical report for engineering requirements.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Water Distribution, Sanitary Sewerage, Storm Drainage, Pavements, Concrete.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*
AS 1289 Methods of testing soils. AS 3660 Termite treatment.
AS 3798 1996 Guidelines on earthworks for commercial and residential developments.
AS/NZS 4200 1994 Pliable building membranes and underlays.
Comply with particular specifications in Building Regulations and/or Local Council publications.

Definitions:
Rock: natural or artificial material encountered in the excavation which cannot be removed until broken up by mechanical means such as rippers, jack-hammers or percussion drills.
Rippable Rock: Means rock which can be removed by a single tine, "D9" ripper.
Non-Rippable Rock: Means all other rock.
Other than Rock: other material encountered in excavation.
Sub-Grade: The natural ground below the excavations
Filling: A general term for material spread and compacted over the sub-grade to make up levels to the underside of the base.
Sub Base: Selected filling spread and completed over sub-grade to compacted over sub-grade to make up levels to the underside of the base.
Base: A selected filling layer spread and compacted to form an acceptable working surface directly under the building.
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Item	Description	Manufacturer
Termite control:	Physical barrier of stainless steel mesh	Termi-Mesh pty. ltd

Rock excavation & removal	
Filling	
Hardcore:	15 to 40mm, 100mm thick
Fine Crushed Rock:	5 to 15mm, 50mm thick
Sand:	Clean, salt free, 50mm thick
Waterproof membrane:	0.2mm thick plastic film:
Back filling:	Approved clean excavated inorganic material

PREPARATION *Inspect conditions at site before starting work*
Clear site under building and paving of plants, trees, rocks shown on plan.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*
-Below slabs on ground : refer to Structural Engineers details
-Below footings, beams and other structural elements refer to Structural Engineers details.
-For pier footings below columns and other structural elements refer to Structural Engineers details. **Allow for average pier depths of 2000mm and provide a \$ rate per metre for additional depth.**

Refer to Geotechnical report for excavation requirements and inspections.

In service trenches : 1:2:4 concrete/approved compacted pipe bedding material.
Excavation for strip footings and edge beams, paving, water and piped supply and drains, pits. Provide fill and compact in 150 mm layers, to 95% of maximum density, by vibrating or watering. Protect excavations from damage. Maintain excavations free of water. Install waterproof membrane over sand. Seal laps. Take underlay in walls to level of top of slab. Seal service pipes. Inspect and repair membrane before concrete pour.
Apply termite protection by an approved Termi-Mesh contractor in accordance with manufacturers details.

Section 02510
Water distribution

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install pipes to distribute water from water main supply to each required outlet.
Supply and install pipes from hot water heater to each required outlet.
Contractor to confirm prior to commencement that pipe sizes are suited to site water pressure and if existing water service pipe has sufficient capacity to service the boat shed..

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Sanitary Sewerage, Concrete, Carpentry, Plumbing fixtures and equipment.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*
AS/NZS 1260 PVC Pipes & fittings. AS 1432 Copper tubing for plumbing, gas fitting.
AS 3500 National plumbing and drainage code.
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED		
Item	Description	Size
Cold water pipes	Copper	Size from main: in accordance with AS3500
		Size of branches: in accordance with AS3500
Hot water pipes:	Prelagged copper	in accordance with AS3500

PREPARATION *Inspect conditions at site before starting work*
Prepare trenches and paths of pipes through structure.
Builder to form cut outs of minimum size to take pipes. Not to be done by plumber.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*
Coordinate with others trades, connect supply pipes to fittings. Conceal where possible. Ensure correct pipe sizes and connect with complete seal. Jointing of pipes: On manufacturer's advice, select from: Capillary, brazed, compression, pushfit, solvent-welded.
Chrome plating : all exposed pipes. Obtain approval certificate on completion. Cover no pipes until local authority has issued certificate.
Protect installation until completion of project.

Section 02560
Gas Installation

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Connection to supply main pipe or to onsite gas tank, distribution material, fittings valves and gas fuelled water and air heaters, cooking equipment etc. Note refer to Section 00820 Additional Articles for items to be supplied by proprietor.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Sanitary Sewerage, Concrete, Carpentry, Plumbing fixtures and equipment.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*
AS/NZS 1260 PVC Pipes & fittings. AS 1432 Copper tubing for plumbing, gas fitting.
AS 3500 National plumbing and drainage code.
Comply throughout with the current edition of the Building Code.
All pipe sizes to be in accordance with Australian Standards and appliance requirements.

MATERIALS TO BE USE			
Item	Description	Manufacturer/Supplier	Comments
Gas meter	Existing		
Pipe from main	Copper		
Pipe from storage tank	Copper		
Branches to heater	Copper		
Water heater	Instantaneous externally mounted	Rinnai Infinity 25 external	confirm location with Architect
Air heater	By Proprietor		
BBQ	By Proprietor		
Gas cooker	Bench mounted cooktop	Miele	Supplied and installed by builder

PREPARATION *Inspect conditions at site before starting work*
Prepare trenches and paths of pipes through structure. Builder to form cut-outs of minimum size to take pipes. Not to be done by plumber.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*
Coordinate with others trades, connect supply pipes to fittings. Conceal where possible. Ensure correct pipe sizes and connect with complete seal. Obtain an approval certificate on completion. Cover no pipes until local authority has issued certificate. Protect installation until completion of project.

Provide 1 wall/floor mounted gas outlet to external paved area. Final location of each outlet to be confirmed with Architect prior to commencement.

Section 02630
Storm Drainage

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and lay a complete system of site storm water drainage including agricultural drains, drains below slabs and pavements, retaining wall drains, culverts, pits, frames, manhole covers.
COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Sanitary Sewerage, Concrete, Concrete Pavement, Masonry Pavers. Excavation & Fill, Bituminous Concrete Pavement.
COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*
AS 1379 1997 Specification and supply of concrete. AS 3500.3 Storm water drainage. AS 3500.3.1 1998 Performance requirements. AS/NZS 3500.3.2 1998 Acceptable solutions.
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Item	Description
Stormwater pipes	UPVC stormwater grade pipes:
Agricultural drains:.....	Slotted UPVC with filter fabric laid in aggregate bed
Pits:.....	Concrete or plastic with cast iron or gal steel grate

PREPARATION *Inspect conditions at site before starting work*
Form straight and true trenches 600mm clear of walls, maintain sides, and free from water. Form trenches and bedding to provide constant falls as approved by the local authorities. Prepare trenches and paths of pipes through structure.
Builder to form cutouts of minimum size to take pipes. Not to be done by plumber.
After inspection (and testing) where required, back-fill with material approved by Local Council Engineer and Architect.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*
Ensure correct pipe sizes. Provide upstands to and connect to bottom of downpipes. Provide inspection openings where authority requires(usually at 6 metre intervals), bends and junctions. Provide complete seals at junctions and ends in accordance with manufacturers written instructions.
Arrange for inspection by and obtain approval certificate from local authority. When issued, back fill with material approved by authority.
Remove debris and clean areas beside excavation for drains.

Drain stormwater from dishdrain at rear of boatshed into stormwater pit and then thru sea wall to Pittwater..

Section 03310
Concrete

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install termite control, concrete, reinforcing steel, formwork, for strip footings, floor slabs, paving, pits, curbs etc.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Excavation & Fill, Storm Drainage, Sanitary Sewerage, Pavements, Concrete screeds.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*
SAA HB64 Guide to concrete construction. AS 1012 Testing concrete. AS 1304 1991 Welded wire reinforcing fabric for concrete. AS 2870 1996 Residential slabs & footings. AS 3600 1994 Concrete structures.
AS 3610 1995 Formwork for concrete. AS/NZS 3727 Guide to residential pavements.
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED
Refer to Structural engineers specifications and details

PREPARATION *Inspect conditions at site before starting work*
Use new form ply only. Locate joints in formwork evenly around the edge of the slab cover formwork joints with 20x20 smooth triangular beading. Prepare surfaces to receive concrete smooth class 2 finish, clean & stable under concrete load.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*
Arrange for installation of pipes, cables, conduits etc.. Over prepared surface, install WP membrane. Place reinforcement, secure in place & prevent movement during pour, maintain required concrete cover.
Comply with structural engineer's requirements for joints, splices etc. of reinforcement.
Finish exposed floor surfaces: steel trowel. Provide setdowns for concrete screeds. Provide fall to outlets: See Schedule of Finishes.
Cure finished slabs for 5 days with plastic film secured in place. Use packing sand for curing concrete paving. Keep damp for 5 days.
Slump Tests: Provide and pay for slump test reports 80-100mm slump: one on first batch and one for every 15 cubic meters of concrete delivered thereafter. Tests and rejection criteria in accordance with AS 3600. Vibrate concrete to achieve compaction. Do not "travel" vibrators. Strip formwork in accordance with Table in AS 3610 "Minimum Stripping Times"

Polished concrete finish.
The concrete shall incorporate 90% 10mm basalt aggregate (blue metal) and 10% 8mm river gravel.
Formwork shall be filled to the intended level and concrete shall be levelled struck and screeded without introducing hollows. Any hollows or depressions shall not be filled with slurry but must be back rolled and screeded with aggregate and paste to ensure a monolithic mass.
Finish slab by machine trowel.
Honing the slab shall be undertaken only after the concrete has been cured. Expose concrete to a depth of 3-5mm. Grind slab to a 400 grit fineness and seal with a penetrating sealer and cure to manufacturers recommendations.

Section 05100
Structural Steel

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*

Supply, fabricate apply surface treatment, anchor bolts and other attachments, permanent grouting.

Supply and submit shop drawings to Superintendent. Do not commence fabrication without approved shop drawings.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*

Concrete, Wall Construction, Roof construction, Painting.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

SAA HB48 1993 Steel Structures Design. AS 1538 1988 Cold formed steel structures code AS/NZS 1554 Structural Steel Welding. AS 1627 Metal Finishing - Preparation & Pretreatment. AS 4100 1990 Steel Structures. AS/NZS 4680 1999 Hot-dip galvanised (zinc) coatings on fabricated ferrous articles.

Comply throughout with the current edition of the Building Code.

PREPARATION *Inspect conditions at site before starting work*

Advise Structural Engineer when fabrications may be inspected before delivery. Steel components bent or buckled before erection may be rejected. All structural steel components to be hot dip galvanised

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Provide holding down bolts to concreter for building in. Comply with Structural Engineers Instructions and details.

Erect plumb and secure in place. Erect so that components can be fixed without distortion. Provide temporary bracing against wind and other stresses. Advise Engineer when erected steel is ready for inspection. Adjust as required. Grout under base plates in high strength mortar. Touch up steel with zinc-rich paint after installation. Weld in accordance with AS 1554. No site welding without approval from Architect.

Section 06100
Carpentry

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*

Supply & erect framing both structural and substructural. Include floor panels, wall cladding, roof framings, incidental framing. Refer Schedule on Page 2. Note refer to Section 00820 Additional Articles for items to be supplied by proprietor.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Concrete, Brickwork, Wall Lining, Plumbing, Electrical, Insulation, Painting, Fibre cement products.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*
SAA HB44 Guide to the timber framing cod. AS 1684 Nat. Timber Framing Code. AS 1720 Timber Structures Code.
AS 1860 1998 Installation of Particleboard flooring. AS 4055 Wind Loads for Housing.
Comply with recommendations of the National Assoc. of Forest Industries Technical bulletins.
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED
Refer Schedule following

PREPARATION *Inspect conditions at site before starting work*
Store timber on site above ground, flat and horizontal. Protect from rain, damage and other material.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*
Comply with National framing code.
Perform operations including grooving, rebating, framing, housing, beading, mitring, scribing, nailing, screwing and gluing as necessary to carry out the works. Use timber in single lengths whenever possible. If joints are necessary, make them over supports unless otherwise shown or specified.
Arris visible edges in sawn work and in dressed work arris with sandpaper to 1.5mm radius unless otherwise shown or specified.
Back plough boards liable to warping (for example, if exposed on one face). Make the width, depth number and distribution of ploughs appropriate to the dimensions of the board and the degree of its exposure.
Provide necessary templates, linings, blocks, stops, ironwork and hardware, screws, bolts, plugs and fixings generally.
Trim framing where necessary for openings, including those required by other trades.
Galvanise mild steel components (including fasteners) to AS 1214 and AS 1650 as appropriate if:

- Exposed to weather
- Embedded in masonry
- In contact with chemically treated timber

Provide additional support in the form of studs, noggings and trimmers for fixing lining, cladding, hardware accessories, fixtures and fittings as necessary.

Carpentry				
ITEM	F No.	TIMBER NAME	SIZE (mm)	SPACING
Bearer	#		#	#
Floor Joist	#		#	#
Bottom Plate	#		#	
Columns	#		#	#
Beams	#		#	
Studs	F7		90x40	450
Jamb Studs (double)	F7		90x40	
Lintels	F7		*	
Noggins	F7		70x40	600cts
Bracing	#			
Ceiling Joists	#			
Wall Cladding		9mm thk fibre cement panels with 10mm exposed joints in a staggered vertical brick bond pattern. Laid over 12mm waterproof ply backing board.	400wx1200h	

Denotes – Refer to Structural Engineers Details
 * Denotes – Refer to AS 1684 National Timber Framing Code.

Section 06165
Fibre Cement Products

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install fibre cement and associated equipment and fixing to:
Wall linings internal and external, wet area wall lining.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Wall Framing, Ceiling Framing, External Decks, Plumbing, Electrical.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*
AS 2329 1980 Mastic adhesives for fixing wallboards
AS 2908 1992 Cellulose - cement products. 2908.2 - 1992 Flat sheets.
Relevant Technical Bulletins and published instructions produced by manufacturer. Comply with requirements of relevant Statutory Authorities, and Building Code.
Comply throughout with the current edition of the Building Code

MATERIALS TO BE USED	
SELECT FROM: JAMES HARDIE PRODUCTS	CSR BUILDING MATERIALS EQUIVALENT
Villaboard 9.0mm	Wallboard FC 9mm
Compressed sheet 18mm	Compressed sheet decking 18mm
Underlay for ceramic tile	CT Underlay
NOTE: THE MANUFACTURER SUPPLIES ACCESSORIES FOR THE ABOVE	
Supply all those required for each application	

PREPARATION *Inspect conditions at site before starting work*
Tradesmen with wide experience and knowledgeable in this class of work to undertake the work.
Co-ordinate with other trades prior to commencement of work and arrange for fixing grounds required for satisfactory execution of the work of this trade including penetrations.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*
Comply with the manufacturer's installation instructions. Take care of and protect surrounding work, including other finishes, equipment and components, during installation. Provide protective covering where necessary.
Finish joints and secure fasteners. Remove surface defects to achieve uniform appearance of each type of installation.
Protect finished work. Make good damage in every respect at no additional cost to the Proprietor.
Clean exposed surfaces including trim, edge mouldings, and comply with manufacturer's instructions for cleaning and touch-up of minor finish damage.
Remove splatterings, droppings and surplus material.
Provide flashings trims and sealants to waterproof wet areas in accordance with manufacturers details and instructions ensure compliance with AS 3740 Waterproofing wet areas.

Provide 12mm thk waterproof plywood sub cladding. External wall cladding to be 9mm thk machine cut fibre cement panels with 10mm exposed joints over a 50mm wide backing strip. Screw fix panels through backing strip to timber framing in a staggered vertical brick bond pattern. Use countersunk marine grade ss screws located in a regular even pattern.

Section 06400
Joinery – Site Built

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
The work of this section covers the supply and installation of site built joinery items. It includes:
Service cupboards, wardrobes, coat cupboards, benches, shelves, rails, stairs, handrails, architraves, skirting, pelmets.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Floor, wall and ceiling construction. Window and door installations, finishing trades, electrical.
COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*
AS 1493 1973 Shelving and dressed boards milled from radiata pine. AS 1859 1995 Re-constituted wood-based panels.
Includes particleboard & medium density fibreboard 1859.1 Particleboard 1859.2 MDF
AS 2754 Adhesives for timber and timber products (in three parts) 2754.3 1988 Adhesives for non-structural applications. AS 2796
1985 Timber - Seasoned hardwood - Milled products.
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Item	Description
Service cupboards, wardrobes, coat cupboards:..	Melamine carcass with painted doors
BBQ Bench:	Stainless steel.
Architraves & Skirtings	70x12 customwood – paint finish

PREPARATION *Inspect conditions at site before starting work*
Construct a sample installation of door frame and door, bench, shelves, architraves and other trim. Stop. When approved complete remaining work.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*
Provide necessary anchoring devices. Use concealed shims to install work plumb, level, straight and distortion free within the following tolerances:

- 1mm in 800mm for plumb and level.
 - 0.5mm maximum offsets in flush adjoining surfaces.
 - 2mm maximum offsets in revealed adjoining surfaces.
- Scribe and cut to fit adjoining work; refinish cut surfaces or repair damaged finishes at cuts. Secure joinery with anchors or blocking built-in or directly attached to substrates. Secure to grounds, stripping and blocking with countersunk, concealed fasteners and blind nailing as required to complete the installation. Except where pre-finished matching fastener heads are required, use fine finishing nails, countersunk and filled flush. Use a matching filler where a transparent finish is required. Install without distortion.

Section 07200
Thermal Insulation

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
The supply and installation of thermal insulation.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Wall and roof framing, roofing, wall lining, brickwork, blockwork, suspended ceiling.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*
SAA HB63 1994 Home Insulation in Australia. AS 2627 Thermal insulation of dwellings.

Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Item	Description	R-Rating	Location	Manufacturer/Supplier
Wall insulation	Glass Fibre Batts	2.5	Between studs	
Vapour barriers	Reflective foil		Between wall sheet & studs	
Roof Insulation	Glass Fibre Batts	3.0	Between roof purlins	
Roof Sarking	Composite foil / blanket	1.0	Between roof sheet & purlins	Insulco Vapa-Chek

PREPARATION *Inspect conditions at site before starting work*
Prepare surfaces and or framing material and ensure that no obstructions will prevent rapid and effective installation.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*
Comply with manufacturer's current written instruction. Install insulation to the following areas and structures.
Floors: Provide insulation between joists and support using nylon cord or galvanised wire.
Walls: Sandwich reflective foil vapour barrier between studs and metal wall cladding locate bats between studs to external walls and to internal walls around bedrooms.
Roof: Sandwich composite blanket between roof sheet and purlins and provide batts between purlins and support using nylon cord or galvanised wire.

Section 07610
Metal Roofing, Siding and Plumbing

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Metal roofing and sarking, downpipes, gutters, translucent roofing and metal wall cladding.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Roof Framing, Wall Cladding, Storm Drainage Insulation.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*
SAA HB39 Code of common practice for steel roofing. AS 1562 Design & Installation of sheet roof & wall cladding.
AS 2180 1986 Metal rainwater goods, selection and installation. AS 4285 Skylights.
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED				
Item etc.	Material	Trade Name / Material	Finish / Colour	Thickness / Weight
	Supplier			
Metal roof	BHP	Custom Blue orb Ultra	Colorbond Woodland Grey	0.47mm TCT
Pre formed flashings	BHP (or equal)		Colorbond Woodland Grey	0.55mm BMT
Malleable flashings		Soft zinc	natural	0.7mm
Accessories				
Gutters and soakergutter:				
Downpipes				
Sealing of penetrations	BHP (or equal)	Dektite pipe flashing	To suit pipe size	
Sealant		Neutral curing silicone	Clear	
Pre formed infill strip	BHP (or equal)	Infill strip for custom orb		
Fixings	Class 4		Colorbond Woodland Grey	
Plywood wall sub structure			Type A bond CD finish	12mm
Fixings		Stainless steel screws		

PREPARATION *Inspect conditions at site before starting work*
Ensure framing is in place and secure.
Ensure safety equipment is in place.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*
Comply with recommendations in HB 39 (see above), Code of Common Practice for steel roofing. Install each item in accordance with manufacturer's current written instructions. Provide infill strip to all corrugated edges of roofing and wall cladding. Form penetration flashings neatly with material matching roofing material or install EPDM collars. Provide flashings at all upstands lapped 150mm at junctions. Step flashings evenly. Finish top corners to a line parallel to the roof slope.
Close and seal ends of cut ribs. Form back gutters not less than 100mm wide with falls towards the sides of the penetration collars. Seal joints with compatible sealant. Secure downpipes through cladding to structure. Seal at stormwater pipe upstands. Remove debris from gutters and downpipes. Test on completion.

Note - locate plumbing vents away from house roof so as there are no penetrations.

Section 08250
Doors and Door Frames

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install door frames and doors for external and internal door openings. Refer Drawn Schedule, A24
IDENTIFY REQUIREMENTS: Timber frames, metal frames, doors, glazed, solid core, waterproof, louvred, flyscreen, security, acoustic, flush panel - hollow core, expressed framed doors,
COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Carpentry, Door Hardware, Wall Construction, Glass, Painting.
COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*
AS 2688 Timber doors. AS 2689 Timber doorsets. AS/NZS 2803 Doors-security screens.
AS/NZS 2804 Installation of security screen doors. AS1288-1994 Glass in buildings (selection and installation)
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Refer to Architectural drawing A10 for frame types and details.

Item	Frame type	Description	Manufacturer
Door frames:	External	140x40 double rebated Cedar	
	internal	Width to match finished width of wall – 45mm thk single rebated seasoned timber	

Item	Description
External Doors	
Glazed Timber Doors	40mm thick clear Cedar frame with laminated glazing in accordance with AS1288
Fly Screen doors	40mm thick clear Cedar frame with nylon fly mesh.
Hinges	Three 100x75x1.6mm brass or SS hinges per leaf
Internal Doors	
Flush panel hollow core	35mm thick with paper / honeycomb core and 4.5mm veneered hardboard faces. 10mm edge strips to 4 sides of door.
Hinges	Two 85x60x1.6mm brass hinges per leaf
Sliding Track	Henderson top hung sliding door track too suit door size

PREPARATION *Inspect conditions at site before starting work*
Prepare openings in walls. Install fixing grounds to secure frames.
Erect a sample frame and door of each type complete. Stop. When approved by Architect, continue.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*
Erect frames plumb and true. Comply with named Standard listed. At head and jambs allow 3mm clearance.
At floor allow 10 mm over floor covering. Install flashings caulking and pointing so that water is prevented from entering the building between frames and structure. Conceal all fastenings by sinking heads below surface of frame and fill with material compatible with surface finish. Check and clean on completion.

Section 08550
Timber Windows, Louvres and Glazing

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install timber window frames and glass, sashes, glazed doors, flyscreens, hardware, flashing, sun control material.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Carpentry, Blockwork, Painting.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*
AS 1288 Glass in Buildings, amended 1997. AS 2047 1996 Windows in buildings in 2 parts.
Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED
Refer to Architectural drawing A10 for frame types and details.
Timber Windows

Item	Frame type	Description	Manufacturer
Window frames:	F1	140x40 clear cedar	
Sashes		Minimum 60x40mm clear cedar	
Door frames		Refer to drawn schedule	
Glass		Laminated min thickness 6.38 size in accordance with AS1288,	
Obscure Glazing		White translucent finish	
Putty		Linseed oil	
Flashing		Zinc to sill, jamb & head	
Hardware (sashes)		Window winders with key operated locks	
Flyscreens		locate on inside for awning windows and on outside for all other windows and doors. Timber framed with nylon mesh.	

Louvre windows		Description	Manufacturer
Item			
152mm toughened glass blades		Powder coated aluminium frames with weather strips complete with PVC seals. Provide light and medium duty mullions between frames as noted on architects drawings. Provide silver grey O ring handles and clips.	Altair by Breezeway Australia

PREPARATION *Inspect conditions at site before starting work*
Prepare for installation of frames. Supply required anchors for building into masonry.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*
Ensure frames are anchored. Comply with AS 2047. Install glass in accordance with AS 1288 Part 2. Install flyscreens fixed, hinged, or removable, where directed. Install window winders catches locks etc. Comply throughout with manufacturer's instructions.
Install flashings caulking and pointing so that water is prevented from entering the building between frames and structure. Conceal all fastenings by sinking heads below surface of frame and fill with material compatible with surface finish.

Section 08710
Door Hardware

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install door hardware listed in the Schedule for doors.

COOPERATE WITH THESE OTHER TRADE *to resolve possible problems before starting work*

Doors & Door Frames, Metal Windows, Timber Windows

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*

AS 4145 Locksets

Comply throughout with the current edition of the Building Code.

MATERIALS TO BE USED

Item	Description	Manufacturer/Supplier
External door locks handle	Double key deadlock satin chrome finish	Lockwood 001 Deadlatch lever
Internal door handles	Satin stainless flush pulls	
External sliding track	Roller to bottom of door, guide at top	To joiners details
Flush bolts	Keyed drop bolt satin natural finish	Centor "Forte" 200mm
Internal sliding track	Proprietary cavity slider with acoustic seals	
Internal sliding door latch	Flush bolts	
Sliding door handles	Flush pulls-Sat chrome finish	
Weather stripping	To all external hinged doors	
Door stop	Satin Chrome fixing plate with rubber stop floor and wall fixed as appropriate	
Master key	Key alike all external doors	

PREPARATION *Inspect conditions at site before starting work*

Install a complete set of hardware as scheduled.

Install samples of each type. Stop. When approved by Superintendent, continue.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*

Install with accordance with AS 4145 and written instructions of each manufacturer. Check deliveries on arrival. Lock away until needed and assume responsibility for hardware. Fit accurately at correct heights and protect until completion of project. Oil hinges and locks and provide two keys to each lock. Mounting height of locksets-1 metre from centreline of spindle to finished floor level.

Section 09250
Plasterboard

SCOPE OF WORK *Perform work described here and shown on drawings including but not limited to:*
Supply and install plasterboard, lining of masonry walls, ceilings and bulkheads.

COOPERATE WITH THESE OTHER TRADES *to resolve possible problems before starting work*
Wall, Frames, Carpentry, Brickwork, Blockwork, Suspended ceiling, Electrical.

COMPLY WITH APPLICABLE CLAUSES OF THESE BUILDING STANDARDS *Current Edition.*
AS/NZS 2589.1 1997 Gypsum linings in residential & commercial construction.
AS 3740 Waterproofing of wet areas within residential buildings.
Comply throughout with the current edition of the Building Code.
Comply with manufacturer's technical bulletins;
Boral Plasterboard installation reference manual -Products & their uses Booklet 1 –201DC issue 4
Boral Plasterboard installation reference manual -Fixing to timber and masonry Booklet 2 –2021DC issue 4
Boral Plasterboard installation reference manual -Fixing in wet areas Booklet 4 –204D issue 4

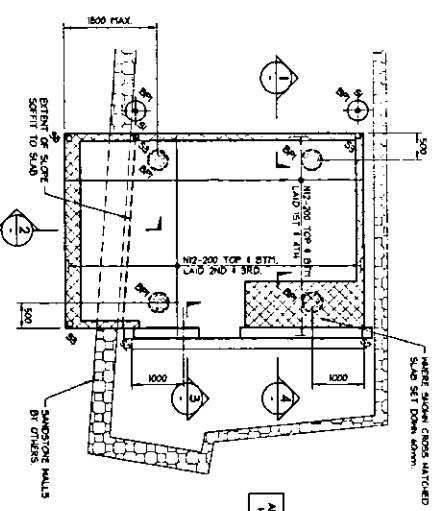
MATERIALS TO BE USED

Item	Description	Manufacturer/Supplier
Plasterboard walls	13mm	Boral
Plasterboard ceilings	13mm	Boral
Plasterboard for: bulkheads.	13mm	Boral
Metal sections		
	P 50 shadowlin to ceiling / wall junction	Rondo
	P32 Plasterlock corner Bead	Rondo
	Internal angles	Rondo,

Square set ceiling / wall junctions.

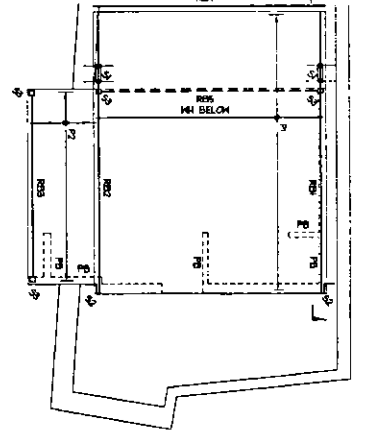
PREPARATION *Inspect conditions at site before starting work*
Ensure framing is complete and electrical and other wiring is in place.

ON-SITE ACTIONS *Start of work means total acceptance of conditions*
Comply with plasterboard manufacturer's current written instructions. Form dropwalls, recesses, manholes as required.



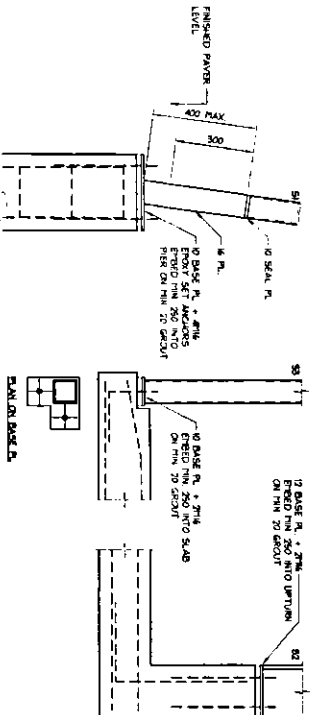
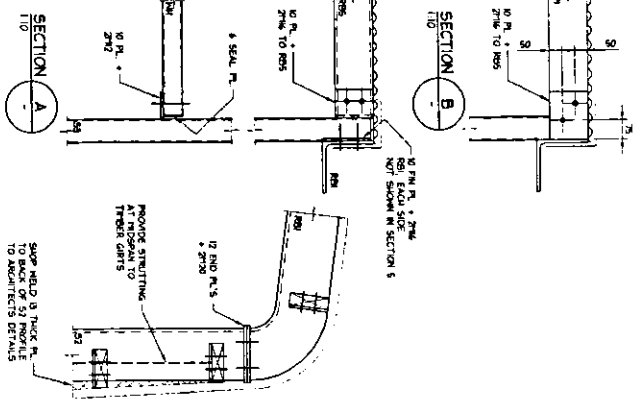
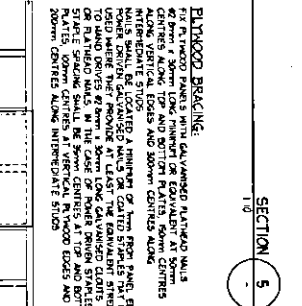
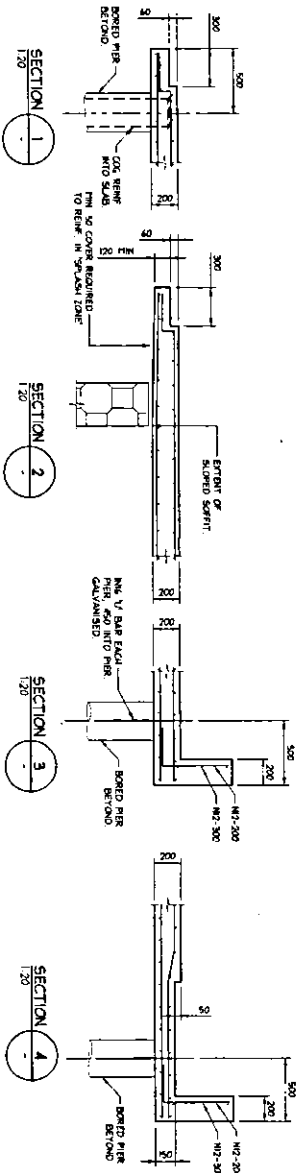
PLAN ON BOATSHED SLAB - 200 THICK UNO

SCALE: 1/100
 1. 100% STRENGTH FOR INTERNAL SLAB F.C. = 40 MPa (40 CORES)
 2. 100% STRENGTH FOR EXTERNAL SLAB F.C. = 30 MPa (30 CORES)
 3. 4000 BOND WIRE SPOCKETED IN 300 INTO SOLID ROCK, REFER TO DETAILS.
 4. 100% STRENGTH FOR EXTERNAL SLAB F.C. = 30 MPa (30 CORES)
 5. 100% STRENGTH FOR EXTERNAL SLAB F.C. = 30 MPa (30 CORES)
 6. 100% STRENGTH FOR EXTERNAL SLAB F.C. = 30 MPa (30 CORES)



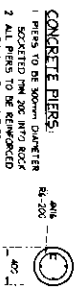
PLAN ON BOATSHED ROOF FRAMING

SCALE: 1/100
 1. 100% STRENGTH FOR EXTERNAL SLAB F.C. = 40 MPa (40 CORES)
 2. 100% STRENGTH FOR EXTERNAL SLAB F.C. = 30 MPa (30 CORES)
 3. 4000 BOND WIRE SPOCKETED IN 300 INTO SOLID ROCK, REFER TO DETAILS.
 4. 100% STRENGTH FOR EXTERNAL SLAB F.C. = 30 MPa (30 CORES)
 5. 100% STRENGTH FOR EXTERNAL SLAB F.C. = 30 MPa (30 CORES)
 6. 100% STRENGTH FOR EXTERNAL SLAB F.C. = 30 MPa (30 CORES)



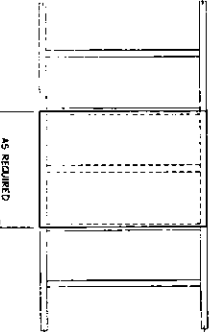
BASE PL. DETAILS TO STEEL POSTS

SCALE: 1/10



CONCRETE PIERS

SCALE: 1/20



TYPE PB - PLY WALL BRACING UNIT

SCALE: 1/20

PLYWOOD THICKNESS	PLYWOOD THICKNESS
10mm	10mm
15mm	15mm
20mm	20mm
25mm	25mm
30mm	30mm
35mm	35mm
40mm	40mm
45mm	45mm
50mm	50mm

NOTES:
 1. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WITH WORK.
 2. FOR GENERAL NOTES AND DRAWING SCHEDULE REFER TO DRAWING NUMBER: 501.

DOCUMENT CERTIFICATION		NORTHERN BEACHES		PROPOSED BOAT SHED		STRUCTURAL PLANS		DATE	
I, the undersigned, being a duly qualified and registered Professional Engineer, do hereby certify that the above is a true and correct copy of the original drawings as submitted to me for certification.		Covering Engineers PL		at: 213 RIVERVIEW RD.		& DETAILS		JAN '06	
I hereby state that the drawing is in compliance with the provisions of the Building Code of Australia and/or relevant Australian Standards.		CLAREVILLE		For: R. & C. PERKINS				LIT	
I hereby state that the drawing is in compliance with the provisions of the Building Code of Australia and/or relevant Australian Standards.								KENTON	
I hereby state that the drawing is in compliance with the provisions of the Building Code of Australia and/or relevant Australian Standards.								502	
I hereby state that the drawing is in compliance with the provisions of the Building Code of Australia and/or relevant Australian Standards.									

GENERAL NOTES:

GENERAL

- G1. The drawings are to be read together with all Architects drawings and specifications.
- G2. Dimensions shall not be obtained by scaling from the drawings. All setting out dimensions shall be verified and discrepancies shall be referred to the Engineer prior to commencement of work.
- G3. Care is required during construction so that structural elements are not over stressed and that the works and excavations required therefore are kept stable at all times.
- G4. Design, materials and workmanship are to be in accordance with current S.A.A. standards and statutory authority regulations except where varied by these documents.
- G5. Design live loads are in accordance with AS 1170.1
- G6. Builder to ensure stability of existing structures in the vicinity of excavation works.

FOOTINGS

- F1. FOUNDATION STRATA IS ASSUMED FOR DESIGN PURPOSES IN ACCORDANCE WITH AS 2870-1994, 'RESIDENTIAL SLAB AND FOOTINGS-CONSTRUCTION'. SEE FOOTNOTE, CLASSIFICATION TO BE VERIFIED BY A GEOTECHNICAL ENGINEER COMMISSIONED BY THE CLIENT FOR CERTIFICATION OF FOUNDATIONS.
- F2. Footings to be constructed and back filled as soon as possible following excavation to avoid softening by rain or drying out by exposure.
- F3. Footings must bear into undisturbed natural ground clear of organic material. Refer to details.
- F4. If rock or variable bearing strata is encountered during excavation of the footings all footings/piers are to be excavated to similar material of greater bearing capacity.
- The Engineer is to be contacted at that time for approval or review.
- F5. Footings to be cast in approved material having an allowable capacity as follows:

Soil Foundations:

- S41. Required bearing capacity 100 kPa.
- S42. Trenches must be cleared of all debris and hard compacted prior to placement of reinforcement.

Clay Foundations:

- C11. Required bearing capacity 150 kPa.
- C12. Trenches must be cleared of all debris. Soft spots must be cut out and filled as per compacted fill notes, prior to placement of reinforcement.

Shale Foundations:

- S41. Required bearing capacity 400 kPa.
- S42. Excavation for footings into shale must be cast or capped with plain concrete on the same day as excavation.

Sandstone Foundations:

- S51. Required bearing capacity 600 kPa.
- S52. Scarps weathered surface to remove cleaned sandstone under footings.

Refer adjacent for assumed Design bearing strata.

F6. Future development of neighboring properties may affect ground water conditions on this site. Consequently, proximity in subsurface beneath footings may be locally altered therefore putting footing at risk of differential settlement. We recommend that, particularly in clay subgrades, agricultural drainage is installed to the upstream perimeter of the building at a distance from the building which is outside the zone of influence of the footings. The agricultural drain must be installed below the fluctuating seasonal zone which should be identified by geotechnical investigation.

CONCRETE

- C1. All workmanship and materials shall be in accordance with AS 3600.
- C2. Concrete quality shall be as follows and shall be verified by tests.
- C3. All concrete unless otherwise noted shall have a slump of 80mm at point of placement, a max. aggregate size of 20 mm.
- No water shall be added to the mix prior to or during placement of concrete. Strength as specified on plans.
- C4. Clear concrete cover to reinforcement shall be as follows unless otherwise shown-

ELEMENT	INTERIOR	EXTERIOR	EXTERIOR CAST AGAINST GROUND
FOOTINGS	-	-	50
COLUMNS/PEDESTALS	30 UNO	REFER TO PLAN	-
SLABS/WALLS	25	REFER TO PLAN	40 ON MEMBRANE
BEAMS	25 UNO	REFER TO PLAN	50
BLOCKWORK		55 FROM APPROPRIATE FACE	

- C5. Sizes of concrete elements do not include thickness of applied finishes.
- C6. All Construction Joints locations shall be approved by the Structural Engineer.
- C7. Beam depths are written first and include slab thickness, if any.
- C8. No holes or chases other than those shown on the structural drawings shall be made in concrete elements without the prior approval of the engineer.
- C9. Reinforce reducing admixtures such as 'Eloped' or approved equivalent, if specified, must be added to mix prior to pour.

A1

DOCUMENT CERTIFICATION

I am a qualified Structural/Civil Engineer.
I hold the following qualifications:
BEC(III), CPENG, TIE(Adv), JPER.
Institute of Engineers' Membership No. 78984
I hereby state that this drawing is in compliance with the provisions of the Building Code of Australia and/or relevant Australian/Industry Standards.
Lucas Polley
(Director Northern Beaches Consulting Engineers)

- C10. Water reducing agents, if specified, must be added to mix prior to pour.
No extra water is to be added to increase slump.
- C11. Where vertical slab/beam surfaces are formed against a masonry (or other) wall, provide 10 mm styrene separation material.
- C12. Waller must not be added to concrete mix prior to placement of concrete.
- C13. Above covers may have to be adjusted if fine rating is a requirement.

REINFORCEMENT

- R1. All reinforcement specified is Grade D500 unless noted otherwise.
- R2. Reinforcement is represented diagrammatically it is not necessarily shown in the projection.
- R3. Top reinforcement is to be continuous over supports.
Bottom reinforcement to be lapped at supports.
- R4. Welding of reinforcement shall not be permitted unless shown on the structural drawings.
- R5. Pipes or conduits shall not be placed within the zone of concrete cover to the reinforcement without the approval of the engineer.
- R6. All reinforcing bars and fabric shall comply with AS 4671-2001.
- R7. Reinforcement symbols:
N - Grade 500N deformed bar (D500) Normal Ductility
R - Grade 250N plain round bar (D250) Normal Ductility
SL - Grade 500L welded deformed ribbed mesh (D500)
RL - Grade 500L welded deformed ribbed mesh (D500) Square Low Ductility.
The number immediately following these symbols is the number of millimetres in the bar diameter.
Example: 8 N12-250, denotes 8, Grade 500N deformed bars, 12 mm diameter at 250 cts.
R8. Fabric reinforcement to be lapped 1 complete square + 25 mm unless noted otherwise.
- R9. All reinforcement shall be firmly supported on bar chairs spaced at a maximum of 750 centres both ways under and fabric reinforcement. Reinforcement shall be tied at alternate intersections.

FORMWORK

- F01. Formwork must be cleared of all debris prior to casting of concrete.
- F02. Minimum stripping times for form work shall be as recommended in AS 3610 - 1990 or as directed by the engineer.
- F03. The finished concrete shall be a dense homogeneous mass, completely filling the form work, thoroughly embedding the reinforcement and free of stone pockets. All concrete elements including slabs on ground and footings shall be compacted with mechanical vibrations.
- F04. Curing of all concrete is to be achieved by keeping surfaces continuously wet for a period of 3 days, followed by prevention of loss of moisture for seven days followed by a gradual drying out. Approved approved on curing compounds may be used where no floor finishes are proposed. Polythene sheeting or wet hessian may be used if protected from wind and traffic.

BRICKWORK

- B01. Brickwork is to be constructed to AS 3700.
- B02. Two layers of approved graded metal based slip material shall be used over all load bearing walls that support concrete slabs and placed on smooth brickwork or trowelled mortar finish. Non load-bearing walls shall have 10 mm compressible material and ties to the slab soffit.
- B03. No brickwork shall be constructed on suspended slabs until all propping has been removed from the underside of the slab and the concrete has the specified 28 day cylinder strength verified by tests.
- B04. Control joints to be placed at a maximum of 8m centres or in accordance with AS 3700.
- B05. Exposure grade bricks to be used below damp proof course.
- B06. Vertical control joint material where specified on plan between slabs and brick walls shall be: 10 mm Spandex External UNO.
Bitumastic Fibreboard Internal UNO.

BLOCKWORK

- B01. Concrete blocks shall have a minimum compressive strength of 15 MPa and conform to AS 1500.
- Masonry to be constructed to AS 3700.
- B02. Where cores of hollow blocks are to be filled, properly compacted 20MPa concrete with 10 mm aggregate and 250 mm slump shall be used. Clean out openings must be utilised for all cores.
- B03. Location of actual starters is critical to suit block cores, allow 55 mm cover from the outside face of blockwork. All reinforcement lap lengths to conform to AS 3600.
- B04. Control joints to be placed at a maximum of 8 m centres or in accordance with AS 3700.
- B05. Vertical control joint material where specified on plan between slabs and brick walls shall be: 10 mm Spandex External UNO.
Bitumastic Fibreboard Internal UNO.

- B06. Retaining walls or any reinforced and concrete core filled block walls to be of Double U/ Block Construction.
- B07. No blockwork shall be constructed on suspended slabs until all propping has been removed from the underside of the slab and the concrete has the specified 28 day cylinder strength verified by tests.
- B08. Max. pour height for unrestrained blockwork is 2000.

STEEL

- S1. All Structural steelwork to be Grade 300 or greater.
Design, fabrication and erection to be in accordance with AS 4100.
- S2. Materials and workmanship shall comply with AS 1250 - 1993, SAA Steel Structures Code and the specification for Structural Steel.
- S3. Rolled steel sections including steel plates shall comply with AS 3678 - 1990.
- S4. Cold formed steel sections shall be Grade 450 Zinc coated in accordance with AS 1536-1998.
- S5. Welded and seamless steel hollow sections shall comply with AS 1163, Grade 350.
- S6. Bolt Designation:
4.65 - Commercial bolts Grade 4.6, snug tightened.
8.85 - High Strength structural bolts Grade 8.8, snug tightened.
8.8TB - High Strength structural bolts Grade 8.8, fully tightened to AS 1511 and acting as a Bearing Joint.
8.8TF - High Strength structural bolts Grade 8.8, fully tensioned to AS 1511 and acting as a Bearing Joint.
Unless noted otherwise, all bolts will be 8.85.
S7. Unless shown otherwise, minimum connection shall be 2016 bolts, 10 thick gusset plates, 6mm continuous fillet welds.
- S8. Load reflecting washers shall be used in all fully tensioned joints. (8.8TF & 8.8TB).
- S9. All welding shall be carried out in accordance with AS 1554 SAA Structural Steel Welding Code.
- S10. Unless noted otherwise all welds shall be category SP using E49xx Electrodes.
- S11. All bolt welds shall be complete penetration butt welds category SP.
- S12. Fabrication and erection tolerances for Structural Steelwork shall be in accordance with AS 4100.
- S13. Finish bolts shall be F12 - 4.65 galvanised.
- S14. Steel work shall have one of the following grades of corrosion protection:-
INTERNAL
a. Thoroughly cleaned wire brushing, followed by two coats of zinc phosphate primer equivalent to Dulux Lupacreme applied by hand using brushes to achieve a total dry film thickness of 70 microns.
b. Preparation Blast clean to a minimum standard Class 2.5 in accordance with AS 1627 Part 4.
c. Primer 2-pack epoxy phosphate at dft 75 microns (Dulux Durapox P14).
Barrier Coat 2-pack epoxy mizocane iron oxide, dft 100 microns
Finish Coat 2-pack epoxy high gloss acrylic at dft 75 microns (e.g. Dulux Acordthane 1 F) in an approved colour.

EXTERNAL ELEMENTS, & ELEMENTS WITHIN EITHER SKIN OF EXTERNAL CAVITY WALLS

- Where the galvanic (Hot Dip Galvanised) coating is compromised by welding, bolting or damage, organic zinc-rich paint (minimum 5% zinc content) is to be applied after wire brushing affected area (use 3 coats minimum), or Hot Metal Spray in accordance with AS 4660.
- S15. Workshop drawings shall be prepared and two copies submitted to the engineer for review prior to fabrication commencement.

TIMBER

- T1. All workmanship and materials to be in accordance with AS 1684, AS 1720 and as 31951. All soft wood to be Grade F7 unless noted otherwise. All hardwood to be minimum Grade F14 unless otherwise noted. Exposed timber to be CCA treated (to AS 1604) redified after full impregnation, or durability class 1, 2 or 3.
- ALL SOFTWOOD TIMBER FRAMING TO HAVE A MINIMUM TREATMENT PROTECTION OF 42 or 12 TREATED FOR TERMITES PROTECTION UNLESS NOTED OTHERWISE.
- T2. All joints deeper than 150 to have blocking over support beams and at a maximum 3000 centres.
- T3. Roof trusses to be designed by the manufacturer to the relevant standards. Pre counter to be an amount equal to dead load deflection UNO.
- T4. All holes for bolts to be exact size. Washers to be used under all heads and nuts and to be at least 2.5 times the bolt diameter. Bolts to be M16 grade 4.6 unless noted otherwise.
- T5. Treat all exposed cut ends with Resol by Prochem to manufacturers specification to achieve required Hazard Label Exposure Classification.
- T6. Bolsters for T & G to be Kih Dried to 12 %.
- T7. 30mm minimum deep treated pine or as recommended by supplier. Flooring to be installed no sooner than 28 days after slab pour.
- T7. Hot dip galvanised nails/screws to be used with all timber connections.
- T8. Continuous nailing must not be used for any timber connections.
- T9. All exposed CCA treated pine to have an application of penetrating sealer to reduce warping and twist of the timber due to varying moisture content in service.

DRAWING SCHEDULE:

- S01 - GENERAL NOTES AND DRAWING SCHEDULE
- S02 - STRUCTURAL PLANS & DETAILS

WARNING

The stamping of this plan by Insight Building Certifiers Pty Ltd does not relieve:

- The applicant's responsibility to obtain approval from Council and/or other utilities.
- The Structural Engineer of their responsibility to ensure the structural adequacy of this proposal.
- The Applicant, Structural Engineer or other Professional of their responsibility to ensure those stamped details are consistent with the Issued Construction Certificate Architectural Details.

ASSUMED FOUNDATION CLASSIFICATION FOR DESIGN PURPOSES - 1/1
ASSUMED BEARING STRATA FOR DESIGN PURPOSES - ROCK, 600 kPa.
CONTRACTOR TO ENGAGE GEOTECHNICAL CONSULTANT TO
VERIFY FOUNDATION CLASSIFICATION

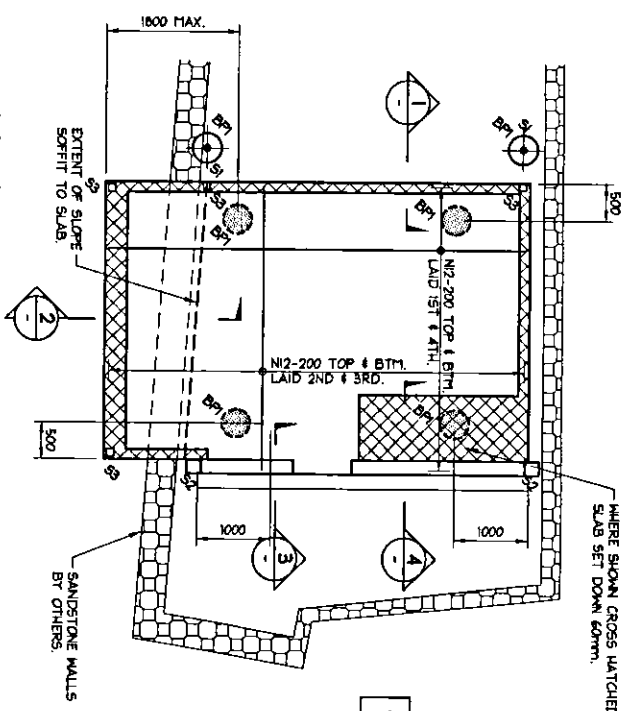
- INSPECTIONS BY ENGINEER
- 48 HOURS NOTICE IS REQUIRED BEFORE ANY SITE INSPECTION
- Bearing strata of all footings prior to concrete pour.
 - Any reinforcement prior to concrete pour.
 - Timber and Steel framing prior to cladding or lining.
 - Steel joints after installation.
 - CONTACT YOUR PCA (Principal Certifying Authority) AS TO REQUIREMENTS FOR MANDATORY CRITICAL STAGE INSPECTIONS IN ACCORDANCE WITH REVISED EPA ACT REGULATIONS EFFECTIVE JULY 1, 2004.

COMPACTED FILL

- CF1. Only to be used with approval Engineer & to be certified by a geotechnical Engineer.
- CF2. Clear organic material and topsoil under proposed slabs/footings.
- CF3. Filling shall be granular material compacted in not more than 200 mm layers to a minimum dry density ratio (AS 1029/EL2 1982) of 98 percent.
- CF4. During clearing and excavation for slabs and footings cut out soft spots and fill as above.

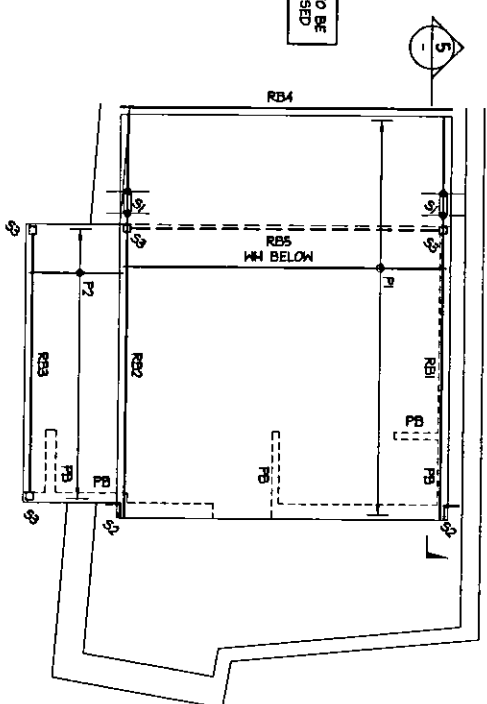
GENERAL NOTES
AND DRAWING SCHEDULE

Drawn By:	Checked By:	Date:	Drawn By:	Checked By:	Date:
GENERAL NOTES AND DRAWING SCHEDULE		JAN '06	L.M.	KENTON	
		Job No:	040913	Drawn By:	S01
				Per:	-



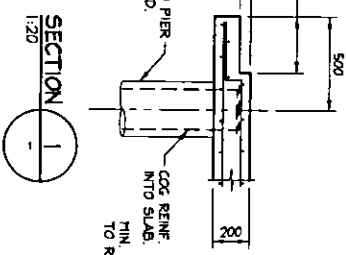
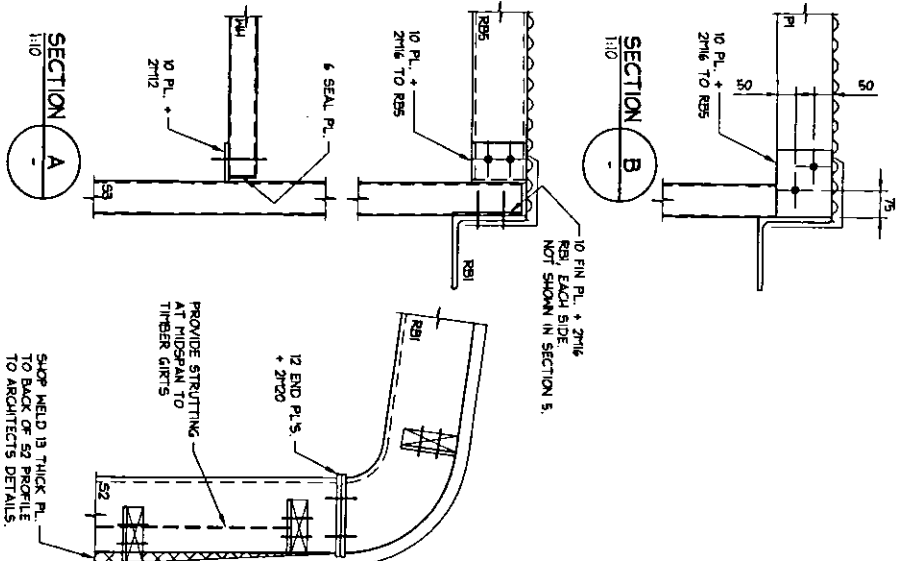
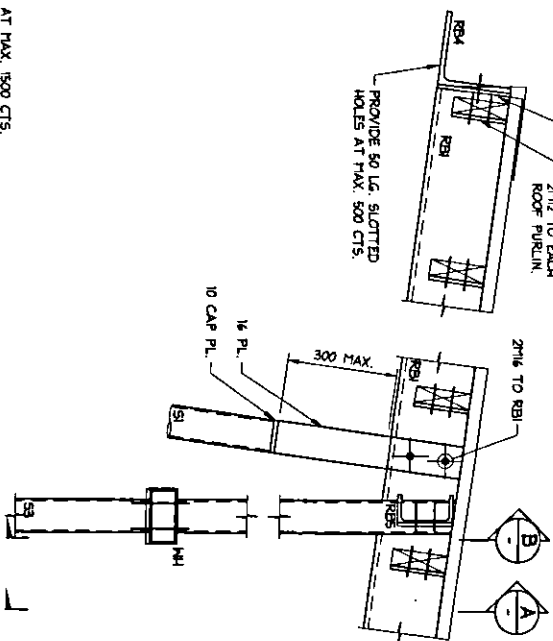
PLAN ON BOATSHED SLAB - 200 THICK UNO

SCALE = 1 : 100
CONCRETE STRENGTH FOR INTERNAL SLABS $f'_c = 40$ MPa (50 COVER)
CONCRETE STRENGTH FOR EXTERNAL SLABS $f'_c = 50$ MPa (50 COVER)
BPI - 4000 BOND PIER SOCKETED MIN. 200 INTO SOLID ROCK, REFER TO DETAILS
51 - 90 x 6.0 S45 STEEL COLUMN
53 - 200 x 200 x 14 S45 STEEL COLUMN
55 - 40 x 40 x 5.0 S45 STEEL COLUMN

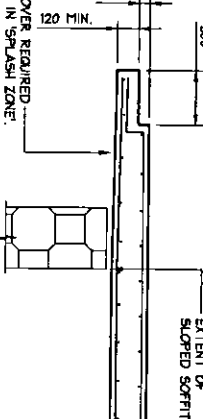


PLAN ON BOATSHED ROOF FRAMING

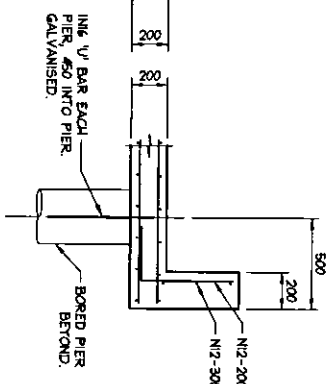
SCALE = 1 : 100
P1 - 150 x 45 HYPSPAN LVL, TIMBER PURLING AT MAX. 450 CTS.
P2 - 140 x 45 STRENGTH GRADE F1 TIMBER PURLING AT MAX. 600 CTS.
RB1, RB2, RB4 - 200 x 200 x 13 EA. STEEL ROOF BEAM
RB3 - 90 x 90 x 5.0 SHS STEEL ROOF BEAM
RBS - 150mm CANTILEVER ROOF PLATE
RH - 50 x 75 x 5.0 RIS (KNOX) - HUNG FROM RBS WITH 75 x 10 PL. AT MAX. 1500 CTS.
H4 - 175 BRACE WALL, CHAIN SOE. REFER TO DETAILS.



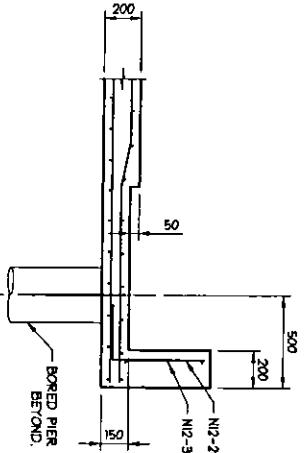
SECTION 1
1:20



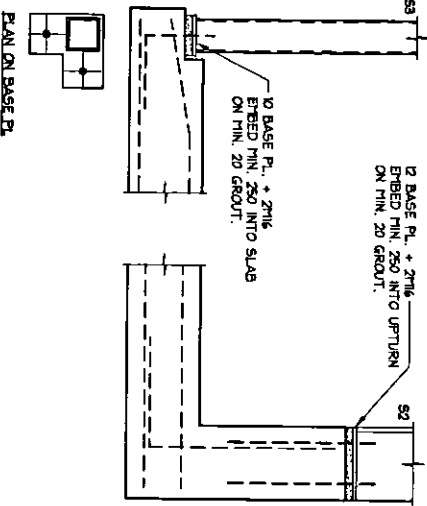
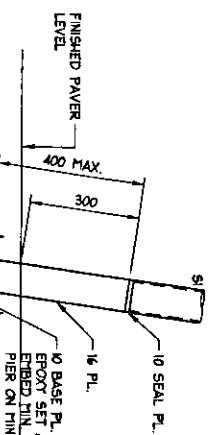
SECTION 2
1:20



SECTION 3



SECTION 4



PLAN ON BASE PT

BASE PL. DETAILS TO STEEL POSTS

SCALE = 1 : 10

DOCUMENT CERTIFICATION

DOCUMENT CERTIFICATION

I am a qualified Structural/Civil Engineer.
I hold the following qualifications:
BE(Civil), CPENG, IET(Land), NFER,
Institute of Engineers Membership No. 760184
I hereby state that this drawing is in compliance
with the provisions of the Building Code of
Australia and/or relevant Australian/industry
Standards.

Date :
Lucas Melloy
Director (Western Bioacoustics Consulting Engineers)

NORTHERN BEACHES
Consulting Engineers P/L
ACK 078 010 610 ALK 9 078 021 618
Suite 207, 30 FISHER ROAD
DEE WHY NSW 2208
Ph (02) 304 7000 Fax (02) 8864 7444
e-mail: info@northernbeaches.com.au

PROPOSED BOAT SHED
at: 213 RIVERVIEW RD.
CLAREVILLE
for: R. & C. PERKINS

STRUCTURAL PLANS & DETAILS

Date:	JAN '06	Design:	L.M.	Drawing:	KENTON	Checker:	
Job No:	051201	Drawing No:	502	Rev:	-		

PLYWOOD THICKNESS		
PLYWOOD STRESS GRADE	PLYWOOD THICKNESS	
	MAXIMUM STUD SPACING	
F3	450mm	600mm
F11	700mm	900mm
F14	400mm	600mm
F27	400mm	450mm

PLATWOOD BRACING:
 PLATWOOD PANELS: 1mm GALVANIZED PLATWOOD NAILS @ 60mm x 30mm LONG MINIMUM OR EQUIVALENT AT 50mm CENTRES ALONG TOP AND BOTTOM FLANGES, 150mm CENTRES ALONG VERTICAL EDGES AND 300mm CENTRES ALONG LONG EDGES.
 EDGEBOLTS: 10mm GALVANIZED NAILS OR EQUIVALENT AT 50mm CENTRES ALONG LONG EDGES.
 POWER DRIVEN GALVANIZED NAILS OR COATED STAPLES MAY BE USED WHERE THEY PROVIDE AT LEAST THE EQUIVALENT STRENGTH.
 150mm GALVANIZED PLATWOOD NAILS @ 60mm x 30mm LONG GALVANIZED CLOUTS TO BE USED TO BRACE 150mm GALVANIZED PLATWOOD PANELS.
 PLATWOOD SPACING SHALL BE 300mm CENTRES DRIVEN STAPLES TO BE USED TO BRACE 150mm GALVANIZED PLATWOOD PANELS.
 PLATWOOD CENTRES ALONG VERTICAL PLATWOOD EDGES AND 300mm CENTRES ALONG INTERMEDIATE STUDS.

NOTES:

1. FOR PLYWOOD THICKNESS REFER TO TABLE.
2. FOR POWER DRIVEN NAILS AND STAPLES REFER ABOVE.
3. PANEL EDGES SHALL BE SUPPORTED BY STUDS.
4. NOGGINGS HAVE BEEN OMITTED FOR CLARITY.

TYPE PB - PLY WALL BRACING UNIT

SCALE = 1 : 20

NOTES:

1. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WITH WORK.
2. FOR GENERAL NOTES AND DRAWING SCHEDULE REFER TO DRAWING NUMBER: S01.

Reviewed for postadmission/
defects only
Shirley - 2/7/10/06
Doubtful answers by LTJ.