



Construction Certificate

yours locally

Sydney South West
Building 1, 21 Elizabeth Street, Camden
PO Box 3190 Narellan NSW 2567
DX 25822 Camden
p 02 4655 5811 f 02 4655 2411
web www.localgroup.com.au

CERTIFICATE NUMBER: 8000180

Issued under the Environmental Planning and Assessment Act 1979

SUBJECT LAND:

LOT: 174
DP: 270385
83 SHEARWATER DRIVE
WARRIEWOOD
NSW 2102

COUNCIL COPY

DEVELOPMENT CONSENT:

N0085/10

DATE OF CONSENT:

21 APRIL, 2010

DESCRIPTION OF WORK:

SINGLE DWELLING

LIMITATIONS &/OR EXCLUSIONS:

BUILDING CLASSIFICATION:

1a

The application for this Construction Certificate has been determined as **APPROVED** in accordance with the procedures outlined in Clause 142 of the Environmental Planning and Assessment Regulation 2000. In making this determination, I certify that the work, if completed in accordance with the documentation accompanying the application for the Certificate (with such modifications verified by the certifying authority as may be shown on that documentation), will comply with the requirements of the Environmental Planning and Assessment Regulation 2000 as referred to in Section 81A(5) of the Environmental Planning and Assessment Act, 1979, as amended.

DOCUMENTS ACCOMPANYING THE APPLICATION:

PLANS:

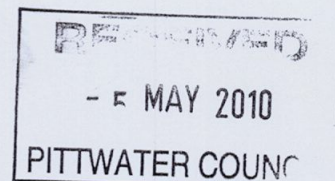
ARCHITECTURAL PLANS PREPARED BY COSMOPOLITAN LIVING, SHEETS 020, 030, 040, 050, 060, 070, ISSUE B, SHEETS 021, 022, ISSUE A, DATED 18/1/10, JOB NO 909441

SPECIFICATIONS:

HIA GENERAL HOUSING SPECIFICATIONS
DIAMOND SPECIFICATIONS

OTHER DOCUMENTS:

APPLICATION FORM
OWNERS CONSENT
HOME OWNERS INSURANCE
COUNCIL RECEIPT
BASIX CERTIFICATE 286487S
WASTE MANAGEMENT PLAN
SYDNEY WATER APPROVAL
HYDRAULIC DETAIL PLAN PREPARED BY RAFELETOS ZANUTTINI,
SHEET 1, ISSUE A, DATED 17/12/09, JOB NO 33307CP
STRUCTURAL ENGINEERS DETAIL PREPARED BY RAFELETOS
ZANUTTINI, SHEETS 1 - 6, ISSUE A, DATED 28/1/10, JOB NO
33307CP
LANDSCAPE PLAN PREPARED BY MONACO DESIGNS, SHEET 1,
DATED 9/2/10, JOB NO 2430



FIRE SAFETY SCHEDULE ATTACHED:

YES ☐

N/A ☒

Paul Gearin
BPB0132

3/5/10
Date of Certificate

Doc ID: 4C4BB09

PWC \$30 REC. 27/5/10 5/5/10

Council Copy



RECEIVED
23 APR 2010

BY:.....**APPLICATION FORM**

☒ Principal Certifying Authority

☒ Construction Certificate
☒ Occupation Certificate

☐ Compliance Certificate

THE APPLICATION

DATE OF APPLICATION: 22.04.10

LAND TO BE DEVELOPED

Lot No.:	174	Deposited Plan:	270385
House No.:	83	Street Name	Shearwater Drive
Suburb:	WARRIEWOOD	Post Code:	2102
Area (m²):	786.60	Section/Folio:	174/270385

THE DEVELOPMENT

Proposed Building Work:	Residential ☒ Commercial ☐ Industrial ☐
Description of Development:	Two Storey Dwelling
Value of Work:	\$ 276,605
Type of work:	New Dwelling
Building Classification:	Class 1a

CONSENT

Consent Authority:	Pittwater Council		
Development Consent No.:	N0085/10	Date of Issue:	21.04.10

BUILDER

Name:	Cosmopolitan Living		
Postal Address:	PO Box 477 BANKSTOWN NSW 1885		
Licence No.:	80391C		
Contact No.:	02 8713 5000	Fax / E-mail:	02 8713 5099

APPLICANT / OWNERS

	Owner 1	Owner 2
First Name:	Christian	Melissa
Surname:	McCUDDEN	McCUDDEN
Street:	7/12-14 The Crescent	
Suburb:	AVALON NSW 2107	
Contact No.:	(M) 0408 828 216	(M) 0402 479 757
E-mail:	christian.mccudden@myc3church.net	melissa.mccudden@myc3church.net

BILLING DETAILS

☐ Applicant	Company Name:	Cosmopolitan Living
☒ Builder	Address:	PO Box 477 BANKSTOWN NSW 1885
☐ Other (Please provide details)	Phone:	02 8713 5000

Local South Coast
48b Princes Highway
Fairy Meadow NSW 2519
P - 02 4284 4709
F - 02 4284 4208

Local Norwest
Suite 21, 5 Inglewood Place
Baulkham Hills NSW 2153
P - 02 9836 5711
F - 02 9836 5722

Local Central Coast
Suite 2/162 The Entrance Road
Erina NSW 2250
P - 02 4365 6051
F - 02 4365 4846

Local Macarthur
PO Box 3190
Narellan NSW 2567
P - 02 4655 5811
F - 02 4655 2411

E - info@localgroup.com.au
Web - http://localgroup.com.au
ABN - 30 735 366 565

LETTER OF CONSENT

OWNERS CONSENT

I/we the owners of the subject property hereby give consent for the lodgement of all relevant applications (i.e. for Construction Certificate/s, Complying Development Certificate/s, Occupation Certificate/s, Compliance Certificate/s) and associated documentation to Local Certification Services Unit Trust for consideration.

I/we also declare that all documentation presented as part of an application for a Construction Certificate has remained unaltered from that issued with any Development Consent or that any changes have been documented and Local Certification Services Unit Trust have been advised accordingly.

In the event that the nominated Principal Certifying Authority resigns from his employment position with Local Certification Services Unit Trust my signature provided below will also serve as the authorisation for the transfer of the role and responsibilities of the Principal Certifying Authority from the nominated person to Mr Craig Hardy.

PRINCIPAL CERTIFYING AUTHORITY

With reference to this proposed development I/we the owners of the subject property hereby advise of our decision to appoint ☐ Andrew Dean ☐ Callan Blackwell ☐ Craig Hardy ☐ Danial Powell ☐ Michael Shanahan ☒ Paul Gearin ☐ Sam Pratt ☐ Paul Morgan ☐ John Parkinson ☐ Michael Hardy ☐ _____ to fulfil the role of Principal Certifying Authority (PCA) as outlined in the Environmental Planning and Assessment Act, 1979 (as amended).

I/we understand that this engagement shall be subject to the Terms and Conditions outlined in this application and the associated Schedule and I/we further understand that he will carry out all mandatory inspections required by the Act during the course of construction along with any others that he deems to be necessary and referred to the abovementioned Agreement.

I/we also advise that I/we are aware of the conditions attached to any Development Consent (i.e. Local Development Consent or Complying Development Consent) and are aware of our responsibilities in relation to those conditions.

SIGNATURES

APPLICANT / OWNERS

Applicant / Owner 1

Signed:

CM Cadden

Name (Please Print):

CHRISTIAN M'CADDEN

Date:

22/11/09

Applicant / Owner 2

Signed:

Melissa M'Cadden

Name (Please Print):

Melissa M'Cadden

Date:

22/11/09

Applicant / Owner 3

Signed:

Name (Please Print):

Date:

Applicant / Owner 4

Signed:

Name (Please Print):

Date:

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48b Princes Highway
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Web - <http://localgroup.com.au>
ABN - 30 735 366 565

Residential Builders' Warranty Insurance**Certificate of Insurance****Policy Number:** 18-0010846-BWI-495**Date Issued:** 22/04/2010

LEVEL 3, 85
HARRINGTON ST
SYDNEY
NSW 2000
Phone: PHONE:8275 9999
Fax: 02 8275 9330
ABN: 78 003 191 035
AFS License No: 239545



MR C & MRS M MCCUDDEN
7/12 THE CRESCENT
AVALON NSW 2107

Name of Intermediary
SAVILL HICKS CORPORATION
P/L

Account Number
18-SAVCOS

Policy Schedule Details**Certificate in Respect of Insurance**

Residential Building Work by Contractors

A contract of insurance complying with Sections 92 and 96 of the Home Building Act 1989 has been issued by QBE Insurance (Australia) Limited ABN 78 003 191 035, in respect of Residential Building Work as described in the Schedule herein.

In Respect of	NEW SINGLE DWELLING CONSTRUCTION CONTRACT
At	LOT 174,83 SHEARWATER DRIVE WARRIEWOOD NSW 2102
Carried Out By	BUILDER COSMOPOLITAN CONST. PTY LTD ABN: 73 076 666 610
Declared Contract Price	\$330,205.00
Contract Date	08/12/2009
Builders Registration No.	U 80391C
Building Owner / Beneficiary	MR C & MRS M MCCUDDEN

Subject to the Act and the Home Building Regulation 2004 and the conditions of the insurance contract, cover will be provided to the Building Owner/Beneficiary named in the domestic building contract and to the successors in title to the Building Owner/Beneficiary or the immediate successor in title to the contractor or developer who did the work and subsequent successors in title.

For and behalf of

QBE Insurance (Australia) Limited

IMPORTANT NOTICE:

This Certificate must be read in conjunction with the Policy Wording and kept in a safe place. These documents are very important and must be retained by you and any successive owners of the property for the duration of the statutory period of cover.

QBE BUILDERS' WARRANTY

Domestic Construction

INSURANCE POLICY

Residential Builders'
New South Wales

POLICY



Policy Wording

1 Residential builders warranty insurance

Residential builders warranty insurance protects the person on whose behalf work is to be done and the subsequent homeowners. The policy covers loss or damage resulting from the non-completion of the work or breach of statutory warranty because of:

- Death; or
- Disappearance; or
- Insolvency

of the builder.

A builder takes out this insurance policy, but the beneficiary is the homeowner or subsequent homeowner.

A builder must have a Letter of Eligibility from a home warranty insurer, which covers them for all approved work for a period of time.

The builder must provide a Residential Builders Warranty Certificate to the homeowners for each job they undertake. In addition, a copy of the Residential Builders Warranty Certificate will be provided to the builder/contractor and the local authority/council.

A copy of this policy wording is held by the builder and a copy is also provided to each homeowner with the Certificate.

2 The insurer

QBE Insurance (Australia) Limited
ABN: 78 003 191 035
82 Pitt Street
SYDNEY NSW 2000

3 Your policy terms and conditions

- 3.1 Some words in this **policy** have special meaning. Those words appear in the **policy** in **bold**. What they mean is set out in section 16.

4 Who is covered by this policy?

- 4.1 **You** are the person covered under this policy. **We** do not cover anyone except **you**.

5 What is covered by this policy?

For buildings other than kit homes

- 5.1 **We** will pay for the following sustained by **you**:

- 5.1.1 loss or damage resulting from non-completion of the **work** because of the **insolvency**, death or **disappearance** of the **builder** or **speculative builder**; or
- 5.1.2 the following loss or damage but only if **you** cannot recover compensation from the **builder** or **speculative builder** or have the **builder** or **speculative builder** rectify the loss or damage because of the **insolvency**, death or **disappearance** of the **builder** or **speculative builder**:
- (a) loss or damage arising from a breach of a **statutory warranty** implied into the **building contract** or applicable to the **sale contract** by the **Act**;
- (b) loss or damage resulting from faulty design, where the design was provided by the **builder** or **speculative builder**; or
- (c) loss or damage resulting from non-completion of the **work** because of the early termination of the **building contract** due to the **builder** or **speculative builder's** wrongful failure or refusal to complete the **work**.

For kit homes

- 5.2 **We** will pay for the following sustained by **you**:

- 5.2.1 loss or damage resulting from non-supply of the **kit home** or non-completion of the **work** because of the **insolvency**, death or **disappearance** of the **kit home supplier**; or
- 5.2.2 the following loss or damage but only if **you** cannot recover compensation from the **kit home supplier** or have the **kit home supplier** rectify the loss or damage because of the **insolvency**, death or **disappearance** of the **kit home supplier**:
- (a) loss or damage resulting from the materials and components in the **kit home** not being good or suitable for the purpose for which they were used; or
- (b) loss or damage resulting from faulty design of the **kit home**.

For all buildings including kit homes

5.3 We will also pay for the following:

- 5.3.1 the cost to **you** of alternative accommodation, removal and storage costs reasonably and necessarily incurred as a result of an event referred to in clauses 5.1.1, 5.1.2(a), 5.2.1 or 5.2.2;
- 5.3.2 **your** loss of a deposit or progress payment due to an event referred to in clauses 5.1.1, 5.1.2(a), 5.2.1 or 5.2.2; and
- 5.3.3 any legal or other reasonable costs incurred by **you** in seeking to recover compensation from the **builder, speculative builder or kit home supplier** for, or in taking action against the **builder, speculative builder or kit home supplier** to rectify, the loss or damage referred to in clauses 5.1.1, 5.1.2, 5.2.1 or 5.2.2.

6 How much will we pay?

- 6.1 We may do two things, at **our** option, when **we** pay a claim under this **policy**. We will either make good the loss or damage or pay the amount of that loss or damage.
- 6.2 However, the following limitations apply to what **we** will pay:
 - 6.2.1 We will not pay the first \$500 o



- 7.1.5 for damage due to or made worse by the failure by you to take reasonable and timely action to minimise the damage.
- 7.1.6 in relation to an appliance or apparatus (such as a dishwasher or air conditioning unit) if the claim is made after the expiry of the manufacturer's warranty period for the appliance or apparatus concerned, or, if there is no warranty period, outside the reasonable lifetime of the appliance or apparatus.
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- 7.1.7 in relatio

Pittwater Council

ABN: 61340837871

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TAX INVOICE**OFFICIAL RECEIPT**

26/02/2010 Receipt No: 276061

To COSMOPOLITAN CONSTRUCTIONS

PO BOX 477

BANKSTOWN NSW 1885

Qty/ Applic Reference	Amount
GL Receipt	
TDEV-DA Fees	\$1,222.24
1 X N0085/10	
Qty 1, TADV-DA Adv/Notify	\$181.82
1 X N0085/10	
GST	\$18.18
Qty 1, NODP-DA Sign	\$34.55
1 X N0085/10	
GST	\$3.45
Qty 1, RMIC-Rcrds Scanning	\$54.55
1 X N0085/10	
GST	\$5.45
QLSL-Builders LSL	\$968.12
1 X N0085/10	
Qty 1, HKER-RR Assur Fee	\$209.09
1 X N0085/10	
GST	\$20.91
ESTR-Eng Strt Levels	\$80.00
1 X ACCESS DRIVEWAY APP	
ESTR-Eng Strt Levels	\$155.00
1 X 139 APP	
Qty 1, ERDP-Eng Road Rest	\$72.73
1 X DRIVEWAY DEED OF AGREEMENT	
GST	\$7.27
Total Amount:	\$3,033.36
Includes GST of:	\$55.26
Amounts Tendered	
Cheque	\$3,033.36
Total	\$3,033.36
Rounding	\$0.00
Change	\$0.00
Nett	\$3,033.36

Printed 22/04/2010 1:07:26 PM

Cashier: ASherry

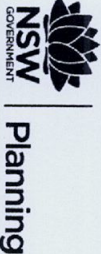
FA 8713 5099.
ATTN: KATE

BASIX Certificate

Certificate number: 286487S

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 29/06/2009 published by the Department of Planning. This document is available at www.basix.nsw.gov.au

Director-General
Date of issue: Monday, 08 February 2010



Description of project

Project address	
Project name	McCUDDEN (909441)
Street address	83 Shearwater Drive WARRLEWOOD 2102
Local Government Area	Pittwater Council
Plan type and plan number	Deposited Plan 270385
Lot no.	174
Section no.	0
Project type	
Project type	separate dwelling house
No. of bedrooms	4
Site details	
Site area (m²)	787
Roof area (m²)	230
Conditioned floor area (m2)	219
Unconditioned floor area (m2)	19
Total area of garden and lawn (m2)	574
Assessor details and thermal loads	
Assessor number	n/a
Certificate number	n/a
Climate zone	n/a
Area adjusted cooling load (MJ/m².year)	n/a
Area adjusted heating load (MJ/m².year)	n/a
Other	
none	n/a

Score

✓ Water: 44 (Target 40)
✓ Thermal comfort: pass (Target pass)
✓ Energy: 40 (Target 40)

Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

Water Commitments				Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Fixtures						
The applicant must install showerheads with a minimum rating of 3 star in all showers in the development.					✓	✓
The applicant must install a toilet flushing system with a minimum rating of 4 star in each toilet in the development.					✓	✓
The applicant must install taps with a minimum rating of 5 star in the kitchen in the development.					✓	
The applicant must install basin taps with a minimum rating of 5 star in each bathroom in the development.					✓	
Alternative water						
Rainwater tank						
The applicant must install a rainwater tank of at least 3000 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.				✓	✓	✓
The applicant must configure the rainwater tank to collect rain runoff from at least 573.57 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).					✓	✓
The applicant must connect the rainwater tank to:						
• all toilets in the development					✓	✓
• the cold water tap that supplies each clothes washer in the development					✓	✓
• at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.)					✓	✓

Thermal Comfort Commitments

Show on DA plans Show on CC/CDC plans & specs Certifier check

Floor, walls and ceiling/roof

The applicant must construct the floor(s), walls, and ceiling/roof of the dwelling in accordance with the specifications listed in the table below.

✓ ✓ ✓

Construction	Additional insulation required (R-Value)	Other specifications
floor - concrete slab on ground	nil	
floor - suspended floor above garage, framed	nil	
external wall - brick veneer	1.36 (or 1.90 including construction)	
external wall - framed (weatherboard, fibre cement, metal clad)	1.50 (or 1.90 including construction)	
internal wall shared with garage - plasterboard	nil	
ceiling and roof - flat ceiling / pitched roof	ceiling: 2.5 (up), roof: foil/sarking	unventilated; dark (solar absorptance > 0.70)

Note Insulation specified in this Certificate must be installed in accordance with Part 3.12.1.1 of the Building Code of Australia.

Thermal Comfort Commitments

Show on DA plans	Show on CC/CDC plans & specs	Certifier check
---------------------	---------------------------------	--------------------

Windows, glazed doors and skylights

The applicant must install the windows, glazed doors and shading devices described in the table below, in accordance with the specifications listed in the table. Relevant overshadowing specifications must be satisfied for each window and glazed door.

The dwelling may have 1 skylight (<0.7 square metres) and up to 2 windows/glazed doors (<0.7 square metres) which are not listed in the table.

The following requirements must also be satisfied in relation to each window and glazed door:

- Except where the glass is 'single clear' or 'single toned', each window and glazed door must have a U-value no greater than that listed and a Solar Heat Gain Coefficient (SHGC) +/-10% of that listed. Total system U-values and SHGC must be calculated in accordance with National Fenestration Rating Council (NFRC) conditions.
- The leading edge of each eave, pergola, verandah, balcony or awning must be no more than 500 millimetres above the head of the window or glazed door, except that a projection greater than 500 mm and up to 1500 mm above the head must be twice the value in the table.
- Pergolas with polycarbonate roof or similar translucent material must have a shading coefficient of less than 0.35.
- Unless they have adjustable shading, pergolas must have fixed battens parallel to the window or glazed door above which they are situated, unless the pergola also shades a perpendicular window. The spacing between battens must not be more than 50 mm.

✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓

Window/glazed door no.	Orientation	Maximum area (square metres)	Type	Shading	Overshadowing
W1	E	1.26	improved aluminium, single clear (U-value:6.44, SHGC:0.75)	eave/verandah/pergola/balcony >2,000 mm	not overshadowed
W2	E	5.67	improved aluminium, single clear (U-value:6.44, SHGC:0.75)	eave/verandah/pergola/balcony 1,201-1,500 mm	not overshadowed
W3	S	5.4	improved aluminium, single clear (U-value:6.44, SHGC:0.75)	none	not overshadowed
W4	W	8.1	improved aluminium, single pyrolytic low-e (U-value:4.48, SHGC:0.46)	none	not overshadowed
W5	S	7.56	improved aluminium, single clear (U-value:6.44, SHGC:0.75)	eave/verandah/pergola/balcony mm	not overshadowed
W6	W	3.24	improved aluminium, single clear (U-value:6.44, SHGC:0.75)	eave/verandah/pergola/balcony 450 mm	not overshadowed

Window/glazed door no.	Orientation	Maximum area (square metres)	Type	Shading	Overshadowing
W7	N	1.08	improved aluminium, single clear (U-value:6.44, SHGC:0.75)	eave/verandah/pergola/balcony 450 mm	not overshadowed
W8	E	3.24	improved aluminium, single clear (U-value:6.44, SHGC:0.75)	eave/verandah/pergola/balcony 601-750 mm	not overshadowed
W9	E	5.67	improved aluminium, single clear (U-value:6.44, SHGC:0.75)	eave/verandah/pergola/balcony 1,201-1,500 mm	not overshadowed
W10	S	4.12	improved aluminium, single clear (U-value:6.44, SHGC:0.75)	eave/verandah/pergola/balcony 450 mm	not overshadowed
W11	W	2.16	improved aluminium, single clear (U-value:6.44, SHGC:0.75)	eave/verandah/pergola/balcony 601-750 mm	not overshadowed
W12	W	1.96	improved aluminium, single clear (U-value:6.44, SHGC:0.75)	eave/verandah/pergola/balcony 601-750 mm	not overshadowed
W13	W	2.16	improved aluminium, single clear (U-value:6.44, SHGC:0.75)	eave/verandah/pergola/balcony 601-750 mm	not overshadowed
W14	N	2.16	improved aluminium, single clear (U-value:6.44, SHGC:0.75)	eave/verandah/pergola/balcony 601-750 mm	not overshadowed
W15	N	2.04	improved aluminium, single clear (U-value:6.44, SHGC:0.75)	eave/verandah/pergola/balcony 601-750 mm	not overshadowed

Energy Commitments				Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Hot water						
The applicant must install the following hot water system in the development, or a system with a higher energy rating: gas instantaneous with a performance of 5 stars.				✓	✓	✓
Cooling system						
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 3-phase airconditioning. Energy rating: EER > 4.0					✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 3-phase airconditioning. Energy rating: EER > 4.0					✓	✓
Heating system						
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: 3-phase airconditioning. Energy rating: EER > 4.0					✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 3-phase airconditioning. Energy rating: EER > 4.0					✓	✓
Ventilation						
The applicant must install the following exhaust systems in the development: At least 1 Bathroom: no mechanical ventilation (ie. natural); Operation control: n/a Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off Laundry: natural ventilation only, or no laundry; Operation control: n/a					✓ ✓ ✓	✓ ✓ ✓
Natural lighting						
The applicant must install a window and/or skylight in the kitchen of the dwelling for natural lighting.				✓	✓	✓
The applicant must install a window and/or skylight in 3 bathroom(s)/toilet(s) in the development for natural lighting.				✓	✓	✓
Other						
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.					✓	
The applicant must install a fixed outdoor clothes drying line as part of the development.					✓	

Legend

In these commitments, "applicant" means the person carrying out the development.

Commitments identified with a ✓ in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).

Commitments identified with a ✓ in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.

Commitments identified with a ✓ in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate (either interim or final) for the development may be issued.



COSMOPOLITAN
LIVING

Waste Management Plan



on-site recycling

Site Address:	Lot 174 (No.83) Shearwater Drive WARRIEWOOD	
Applicant's Name:	COSMOPOLITAN LIVING	
Address:	PO Box 477 BANKSTOWN NSW 1885	
Phone No.:	02 8713 5000	
Facsimile No.:	02 8713 5099	
Currently on Site:	Vacant Parcel of Land	
Description of Proposal:	1) Cosmopolitan to excavate Site	
	2) Cosmopolitan to construct one double storey dwelling with double garage	
	3) Dwelling to be constructed from concrete slab, timber frame, brick veneer/weatherboard and concrete roof tiles	
"The details provided on this form are the intentions for managing waste relating to this project"		
	Date:	08.02.10

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1 About Force 5

Force 5 has revolutionized the residential building industry by developing a world first system that recycles up to 95% of the construction waste generated during the building process.

Force 5 currently uses the technology and methodology in NSW plans to take the methodology to all other Australian states and territories and New Zealand. Operations commenced in New South Wales in November 2006.

The company utilizes leading edge technology from the US and Australia that enables up to 95% of construction waste to be recycled. This method means considerable savings are made on transport and tipping fees, providing Force 5 with a cost advantage and competitive edge over the incumbent methods. Further, the revolutionary process passes on a number of significant cost savings direct to the builder, including cost reductions on crushed rock purchases, tip fees and insurance premiums through better site management. The process is also extremely environmentally friendly, drastically reducing waste to landfill and emissions from excessive traveling. State and local governments and developers including Delfin Lend Lease and Stocklands have been strong supporters of the Force 5 process.



A key achievement for Force 5 was being the winner of the 2007 GreenSmart Partnership Award with Delfin Lend Lease as part of the Annual HIA Awards. The award was in recognition for the leading edge waste management work Delfin and Force 5 have been doing at the new Bingara Gorge development in Southern Sydney.



on-site recycling

2 Benefits to Builders

The application of the Force 5 process to building sites has a number of key benefits:

- Insulation of your cost base from ever increasing tip fees and EPA levies.
- Eliminate council fines by controlling your windblown waste on sites.
- Achieve two ticks under the GreenSmart accreditation system as up to 95% plus of all residential construction waste is recycled.
- Ability to market your company as being environmentally friendly.
- Ability to use crushed brick, tile and concrete as aggregate to control soil dispersal.
- Consolidation of your various site cleaning and waste recycling under one provider.
- Reduction of OH&S liability by having clean and tidy building sites at all times.
- Quarterly reports detailing percentages of waste recycled per home site.
- Force 5 Certificate confirming recycling targets achieved (part of handover package)





3 Services Provided

3.1 Overview

The service functions provided by Force 5 as part of this proposal are:

- Initial site inspection and risk assessment carried out
- Bags and frames for general waste supplied on site
- Staked areas for construction waste (timber, brick, tile & concrete) as appropriate
- 1st recycling visit - frame clean including steel removal if required
- 2nd recycling visit - broken bricks, tiles, concrete and masonry removed
- 3rd recycling visit - balance of bricks, tiles, concrete and masonry waste removed
- Multi cleans and bag empties performed as required throughout construction
- 1 x final clean

3.2 Bag and Frame for General Waste

The Force 5 1.5m³ bags and frames are an essential part of the site clean process.

- Bag & Frame will be delivered on site.
- Supervisors must contact Force 5 to organise bag replacements which will be done within 2 working days. Bag deployment may be done more promptly when necessary.
- Acceptable waste to be placed in the bags includes:
 - Packaging; PVC material; strapping; plastic wrap; steel bracings; empty paint tins; metal fascia and gutter off cuts; leftover wiring & conduit material; and food scraps.
 - No timber, plasterboard, brick, roof tile or concrete is to be placed in these bags.

3.3 Staked Areas for Construction Waste

- One area will be staked and clearly marked with a sign marked '**Broken Brick, Tile & Concrete**'. The other area will be staked and clearly marked "**Timber Off Cuts**". It should be noted that at any given time there will generally be only one pile.
- These areas will be laid out at the same time as the slab clean is performed. It is the responsibility of the builder and the trades to ensure that all building materials to be recycled are put in the correct designated area. State Government OH&S guidelines have advised that this is an acceptable practice.
- It is the responsibility of the builder and the trades to ensure that all other waste is put in the bag provided.
- On some tight sites there may only be one marked area used at a time e.g. after timber removal has been performed the "**Timber Off Cuts**" sign can be replaced with the '**Broken Brick, Tile & Concrete**' sign. Both signs will be left on sight and it is the responsibility of the site supervisor to use accordingly.
- Reusable tile and brick pallets will be put in a separate pile for removal by the supplier. This is not the responsibility of Force 5 but can be organised by special arrangement.
- All metal fascia and gutter off cuts are to be placed next to the bag and frame.



3.4 Recycling First Visit

The key aspects and responsibilities of this process are:

- Force 5 will do a site inspection 3 - 4 days prior to the first recycling run. Supervisors will be notified if the site is not in acceptable condition in order to give the offending trades a chance to rectify the site.
- All timber will be removed from site and processed at the Force 5 yard. The resulting mulch can be deployed as an evaporation pit beneath and around the front driveway tap, thus minimising site/street contamination of toxic runoff during wet trade contacts.

3.5 Recycling Second and Third Visit (Broken Brick Tiles & Concrete)

The key aspects and responsibilities of this process are:

- All brick and roof tile will be removed from site and processed at the Force 5 yard and be made available for driveway top ups if required.
- The builder must provide 3 business days notice before brickwork is finished.
- Any large masses of ungrindable concrete (over 50 mm thick) will be removed from the site at the cost of the builder or relevant contractor

3.6 Multi cleans

The key aspects and responsibilities of this process are;

- To remove mixed waste and manage site during construction period

3.7 Final clean

The key aspects and responsibilities of this process are;

- To remove all waste on completion
- Blade off site and rake around perimeter of house

3.8 Sydney Metropolitan Operating Zone

The boundary for our metropolitan operating zone in Sydney will be:

- Cronulla in the South
- Campbelltown/Camden in the SSW
- Penrith in the West
- Windsor in the NNW
- Hornsby in the NW
- Mona Vale in the North

Sites outside the above may be arranged via separate negotiations subject to equipment availability.

3.9 Supervisor / Contractor Information Sheets

Information sheets will be provided to all supervisors, detailing the procedures and supplier/contractor responsibilities.



on-site recycling

4 Environmental Policy

The policy is used to develop awareness, knowledge, skill and capabilities of environment management. Force 5 as a major provider of residential building site waste management throughout New South Wales, is committed to understanding and minimising any adverse environmental impacts of our operations, whilst continuing to meet the expectations of our stakeholders. The aim is to achieve a sustainable balance between environmental protection and economic development that is in the interest of future generations. Force 5's environmental policy consists of a series of commitments that set the standards we expect to achieve.

These commitments are:

- To ensure compliance with environmental acts, regulations, by-laws and industry standards.
- Continually improve our environmental performance by allocating responsibilities and resources to set, achieve, and periodically review our objectives and targets.
- To include environmental considerations in business planning and continually improve our management of environmental risk for the prevention of pollution.
- To use environmentally safe products and services and promote environmental awareness amongst the company's employees, suppliers and customers.
- To continually seek efficiencies in the use of resources, including energy, chemicals, water, packaging and other materials.
- To reduce, re-use and recycle wastes wherever practicable.
- To implement procedures to check, review and disclose our company's environmental performance.
- To provide the necessary training to employees and communication to all stakeholders to meet their environmental goals.

Force 5 acknowledges that everyone associated with the Company has an important role to play in achieving our environmental goals.



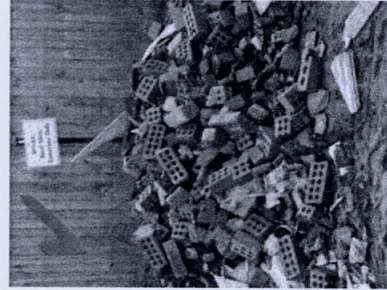
on-site recycling

5 Waste Management Policy & Contractor Responsibilities

WASTE MANAGEMENT POLICY

Our Company has a new site waste and recycling management policy that ALL Contractors MUST comply with. Compliance will be closely monitored by our internal OH&S officer and by Workcover. Force 5 is now contracted to do selected sites within NSW. We have jointly implemented the following procedures:

- 1) All sites will have two signed areas:
 - One area is marked "**Brick, Tile & Concrete**". All broken roof tiles, brickbats & concrete (less than 50mm thickness) must be placed there.
 - The other area is marked "**Timber Offcuts**". All timber off cuts must be placed there
 - On some tight sites there may be one area used at a time into which the above materials may be placed. Again, these will be clearly marked for the appropriate waste type.
 - **NOTHING ELSE IS TO BE PLACED IN THESE AREAS.**
- 2) Reusable roof tile and brick pallets and waffle pods are to be stacked in a separate pile out the front for removal by the relevant supplier.
- 3) ALL **OTHER WASTE** is to be put in the bag and frame supplied on site. This includes; packaging; PVC material; strapping; plastic wrap; steel bracings; empty paint tins; metal fascia and gutter off-cuts; leftover wiring and conduit material; and food scraps.
- 4) If the site bags are full, it is the responsibility of contractors to put additional



wastage into a separate pile **AND** weigh it down to avoid the possibility of dispersal. If bags are full please notify the supervisor immediately so they can organise for it to be emptied and replaced. Masterton Homes would appreciate contractors to report anyone **NOT** complying with our company policy.

RESPONSIBILITY OF CONTRACTORS

Plasterers:

All plasterboard off-cuts are to be placed in one area for removal by relevant supplier. Force 5 is not responsible for this waste.

Roof tilers:

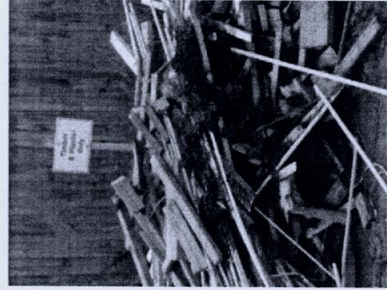
Pallets are to be stacked at the front of the house in a separate pile to be taken away by the supplier. Broken roof tiles are to be placed in the area marked "**Brick, Tile & Concrete**" at the front of the house. Packaging & strapping is to be placed in the provided bag and frame.

Bricklayers:

Brick separators are to be placed in the area marked "**Timber Offcuts**" at the front of the house. Brick bats are to be placed in the area marked "**Brick, Tile & Concrete**" at the front of the house. Brick straps, cement bags and plastic wrap are to be placed in the provided bag and frame.

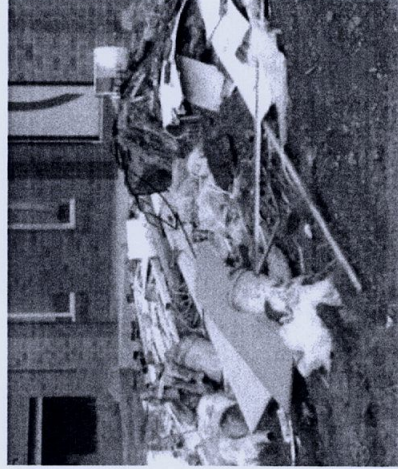
Carpenters:

All timber off cuts is to be placed in the area marked "**Timber Offcuts**" at the front of the house. Strapping and packaging is to be placed in the provided bag and frame.



CORRECT

UNACCEPTABLE



Painters:

All empty paint tins are to be placed in the provided Bag and frame.

Fascia & Gutter Contractors:

All metal fascia & gutter off cuts are to be placed in a neat pile adjacent to the bag and frame.

Slab Contractors:

All leftover waffle pods and reinforced steel must be removed by the contractor or supplier. NOT put in the bag and frame. All plastic and other waste material is to be placed in the bag and frame or removed from site. Any excess concrete less than 50mm thick is to be spread in the driveway area.

Electrical Contractors:

All leftover wiring material & conduit is to be placed in the provided bag and frame.

Plumbers & Drainers:

All waste PVC products must be put in the bag and frame supplied. If the waste container is not there, PVC material must be placed in a separate pile beside the toilet and all other waste removed from site.



on-site recycling

6 Contact Details

Will Arnott
Managing Director
Force 5
55 Townson Road
Schofields NSW 2762

Mob: 0418 321 638





Transaction Summary

Sydney
WATER**Date Requested** Tue January 19 2010**A.B.N** 49 776 225 038**Agent** Greg Houston Plumbing, 1/9 Hargraves Pl Wetherill Park
Applicant Cosmopolitan, PO Box 477 Bankstown 1885

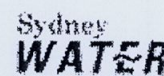
This document will be a tax invoice when you make payment.

Transaction Details

		Charge	GST	Total
<i>Lot 174 Shearwater Dr, Warriewood 2102</i>				
03	2769647 Building Plan Approval Application Fee	\$25.95	\$0.00	\$25.95
97	2769648 Plumbing and Drainage Inspection Application Fee	\$170.35	\$0.00	\$170.35
Transaction Total		\$196.30	\$0.00	\$196.30



Application Lodgement Summary



Reference Number 2769647

Date Requested: Tue January 19 2010

DOLFIN Number D09/0-11870

Agent Greg Houston Plumbing, 1/9 Hargraves Pl Wetherill Park

Applicant Cosmopolitan, PO Box 477 Bankstown 1885

Property/Asset Lot 174 Shearwater Dr, Warriewood 2102 (Cf Mccudden Ml Mccudden) PNum: 5333197

Product Building Plan Approval Application

Charge	Product Cost	GST	Total
Building Plan Approval Application Fee	\$25.95	\$0.00	\$25.95

Property Special Conditions

Boundary Trap Required	No
Watercharged/Tidal area	Unknown
Partial Drainage area	No
Aggressive Soil area	No
Cast Iron Pipe area	No
Sewer Surcharge area	Unknown
Minimum Gully Height area	Unknown
Sewer Available	No
Connection Type	Unknown

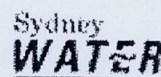
You must contact Sydney Water's Plumbing Inspection and Assurance Services on Ph: 1300 889 099 to clarify the property special conditions where the property special conditions are not shown (yes or no), are shown as "unset", "unknown" or "not available" or if the proposed development is being built over more than one existing property.

Please note that boundary traps must be fitted for all commercial and industrial properties and you must ensure that all plumbing/drainage and building works are carried out in accordance with the relevant codes and standards.

A water meter is required to be fitted to the property during construction. You will need to ensure that your licensed plumber carries out this work in accordance to the relevant codes and standards.



Application Lodgement Summary



Reference Number 2769648 **Date Requested:** Tue January 19 2010
Agent Greg Houston Plumbing, 1/9 Hargraves Pl Wetherill Park
Applicant Cosmopolitan, PO Box 477 Bankstown 1885
Property/Asset Lot 174 Shearwater Dr, Warriewood 2102 (Cf Mccudden Ml Mccudden) PNum: 5333197
Product Plumbing and Drainage Quality Assurance Application

Charge	Product Cost	GST	Total
Plumbing and Drainage Inspection Application Fee	\$170.35	\$0.00	\$170.35

Your application has been sent to **PIAS, Liverpool** for action.
 Enquiries can be directed to **1300 889 099**, fax **9616 2650** or DX : **DX2554W**.
 The anticipated turnaround time is **365 days**

Property Special Conditions

Boundary Trap Required	No
Watercharged/Tidal area	Unknown
Partial Drainage area	No
Aggressive Soil area	No
Cast Iron Pipe area	No
Sewer Surcharge area	Unknown
Minimum Gully Height area	Unknown
Sewer Available	No
Connection Type	Unknown

You must contact Sydney Water's Plumbing Inspection and Assurance Services on Ph: 1300 889 099 to clarify the property special conditions where the property special conditions are not shown (yes or no), are shown as "unset", "unknown" or "not available" or if the proposed development is being built over more than one existing property.

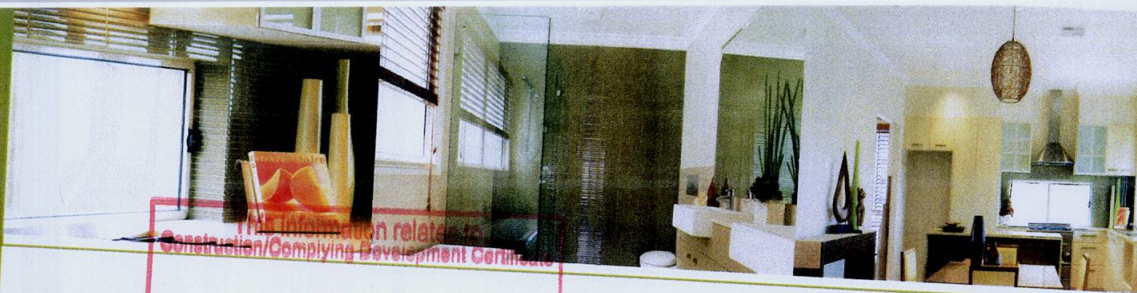
Please note that boundary traps must be fitted for all commercial and industrial properties and you must ensure that all plumbing/drainage and building works are carried out in accordance with the relevant codes and standards.

Properties in recycled water areas are required to pay twice the number of inspection fees as additional inspections are required to be carried out on the potable and recycled water services. These fees will generally be charged upon payment of the Plumbing and Drainage Inspection application, or as directed by Sydney Water's Plumbing and Drainage Inspector.

You must contact the Sydney Water Plumbing & Drainage Inspector on 1300 889 099 at least 2 working days prior to the inspection time to arrange for inspection of the works.

Re-use of greywater (eg washing machine) or blackwater (eg treated sewage) requires the installation/s to be fully inspected by Sydney Water's Plumbing and Inspection Assurance Services, and a testable backflow prevention device fitted to the water service at the meter installation. The application must be supported by written approval from the local council and also include details of the changes to the house drainage/sanitary plumbing.

diamond



externals - 8000180

- Waffle Pod slab construction based on "M" class soil classification (as per Council's Board (BPB0132))
- Structural Guarantee & Warranty period
- Granitgard® Termite Protection to perimeter of home with slab collar protection to penetrations
- Standard 2440mm ceiling heights throughout
- Aluminium Powder Coated sliding windows and sliding doors in builder's standard range of colours
- Keyed locks to sliding windows and sliding doors
- Obscure glazing to windows in bathroom, ensuite & powder room (as per design)
- Meranti timber entry frame with timber sill & clear glazing to sidelights (as per design)
- Face bricks from standard builder's range
- Two external garden taps
- Scaffold & trade platforms to current Work Cover requirements
- Metal fascia, gutter & downpipes

internals

- Decorative cornices to ground floor only excluding powder room, laundry, void and garage
- 90mm cove cornice to remainder
- 10mm Plasterboard to internal walls and all ceilings and 6mm villaboard walls to wet rooms
- Stainless steel balustrade to staircase with pine stringers, MDF treads & risers and pine handrail (two storey homes only)
- 75mm x 25mm (nom) 'Step Profile' OR 'Half Splay' pine timber skirting and architrave
- Internal doors - Hume range of hinged 'Humecraft' solid core doors (HMC1, HMC8, HMC10 profiles)
- Robes/WIR/Linen doors - Hume range of sliding 'Smart Robe' Sorrento 'panel carve doors (SOR1, SOR5 or SOR 11), excluding single door linens and WIR
- White melamine shelving with rail to robes and 4 x white melamine shelves to linens
- Sterling Architectural range of 'Lever' internal door furniture
- Metal with rubber door stops to required doors
- Tiled recessed niche to all showers

roof tiles

- Boral flat profile 'Linea - Colour Through' roof tiles

entry doors

- Hume 'Newington' range of clear glazed front entry doors with painted finish
- Hume 'X1' D.T.H to rear entry door (as per design)
- Gainsborough Architectural Trilock 8901 ANG lever entry sets to front door only
- Gainsborough Governor 840 round series entry set to rear door, internal & external garage entry doors

insulation

- R1.5 Wall insulation to external walls of living areas only (not including garage)
- R 3.0 Ceiling insulation to ceilings of living areas under roof tiles (not including garage)
- Medium density roof sarking under roof tiles

electrical

- 1 x Standard ceiling light point batten per room
- Front and rear external light point
- Double power points throughout (one per room), single power point to fridge, range hood, cook top, and microwave space (as per design)
- 2 x Double power points to kitchen
- Dishwasher plumbing point and single power point
- One 2-way light switch provision
- Three phase run in to meter box
- RCD safety switch in meter box
- Single power point in meter box
- Two hard wired smoke detectors with inbuilt battery back-up
- Ceiling exhaust fans to bathroom, ensuite and powder room ducted into ceiling space (also to wet area if no window provided)
- One phone point to kitchen, one phone point to Bed 1
- One TV Point to living, one TV point to family

gas package

- Instantaneous 5 Star gas hot water system
- Gas cook top
- 1 x Internal gas bayonet heating point (applies where natural gas is available)

diamond



kitchens

- **Kitchen Bench Top** - 20 mm pencil edge Caesarstone from standard range of colours
- **Kitchen Caesarstone End Panels** -Maximum 2 x end panel returns to floor at kitchen bench **OR** kitchen island (does not include bar back or end panels attached to walls)
- **Kitchen Doors** -
1. Polyurethane Doors and end panels
PROFILE: Pencil Edge FINISH: Satin or Gloss
2. Feature timber veneer bar back panel to Island Bench (as per design)
VENEERS: From selected builder's range
- Polyurethane kickboards
- Overhead cupboards (as per design)
- 2.1 high wall cupboard (as per design)
- Bulkheads (as per design)

vanities

- **Vanity Top** - 20mm pencil edge Caesarstone from builder's range of colours
- **Vanity Doors** - Polyurethane Doors and end panels
PROFILE: Pencil Edge FINISH: Satin or Gloss
- **Vanity Plinth**-tiled finish on HMR board plinth
- **Vanity Basin** - Caroma Liano semi recessed or above counter vanity basin (to suit vanity depth as per design)
- **Wall Basin** - Caroma 'Compac' with chrome waste (as per design)

garage doors

- Sectional overhead 'panel lift' garage doors to standard widths from standard builder's range of colours PROFILE: Madison or Tuscan FINISH: Wood grain only
- Roller doors to rear garage doors to suit widths & designs
- One only auto garage door opener to garage door plus 2 x handsets & single power point to ceiling

floor & wall tiling

- Wall & floor tile supply rate of \$50/m² retail
- Standard chrome floor wastes to wet rooms
- Tiling to first floor balconies (as per design)
- Tiling heights as follows:
Bathroom & Ensuite - 2.0m shower height & 1.2 wall height to remainder
Powder Room - 2.0m to showers (as per design), skirting tiles to remainder
Laundry - splashback to tub & skirting tiles to remainder
Kitchen - 600mm high splashback tiles to kitchen bench.

painting

- Selection of 3 x paint colours (two coat system) from builder's range as follows:
1 Low sheen acrylic to internal walls
2 Flat acrylic to ceilings
3 Gloss enamel to internal timber work

shower screens & mirrors

- 1850mm high 'Frameless' shower screens including chrome fittings.
- Frameless pivot doors to shower screens
- Frameless vanity mirrors with 'bevelled edge' to suit vanity widths

pc items

- Caroma 'Leda Invisi' 4A rated concealed cistern floor mounted vitreous china toilet suites
- Stylus range of acrylic baths to suit home design:
- Stylus 'Maxton' 1525mm acrylic bath
- Stylus 'Newbury' 1700mm acrylic bath
- Stylus 'Newbury' 1800mm acrylic bath
- Stylus 'Mirage' 1250mm corner bath
- Laminated laundry cabinet with 45L Clark Flushline drop in tub (as per design)
- Clark 'Epure Quatro' 1 1/2 bowl stainless steel kitchen sink
- Smeg SA995 XR s/steel **900mm OR SA506XA 600mm** s/steel electric under bench/wall oven (as per design)
- Smeg CIR93AX **900mm** or CIR34AX **600mm** stainless steel gas cook top with wok burner (as per design)
- Smeg K39:2L **900mm** or Smeg K7099-ENC **600mm** stainless steel chimney range hood
- External ducting kit to range hood (as per design)
- Grohe 'Euroslim' 4A kitchen sink flickmixer tap
- Grohe 'Euroslim' mixer tapware throughout to baths, showers and vanities
- Grohe 'Exquisit' hand held shower on rail to showers
- Grohe 'Argent Architectural' bath spout to bath
- Laundry tapware - Irwell 'Metro' laundry and washing machine sets with chrome only laundry 450mm telescopic spout to tub
- Caroma 'Cubit' range of bathroom accessories (toilet roll holders, single towel rails & towel rings where applicable)



Housing Industry
Association

ADDRESS OF PROPERTY: LOT 174

SHEARWATER DRIVE

WARRIEWOOD

GENERAL HOUSING SPECIFICATIONS

between

CHRISTIAN MC LUDDEN
 &

MELISSA MC LUDDEN

OWNER

and

COSMOPOLITAN
CONSTRUCTIONS

CONTRACTOR

CONTRACTOR LICENCE NO: 80391C

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GENERAL HOUSING SPECIFICATIONS
(Revised November 2000)

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1.0 INTRODUCTIONS

1.1 General

This Specification details the works to be executed and the materials to be used in carrying out those works at the Site.

This Specification shall be read as a general specification only. The extent of the works shall be governed by the Approved Plans and Special Details where applicable.

Any works not fully detailed shall, where appropriate, be sufficiently performed if carried out in accordance with applicable Manufacturer's Recommendations or Engineer's Recommendations.

1.2 Preliminary Use

This Specification forms part of the Building Contract Documents, and should be read in conjunction with the Building Agreement, Engineer's Reports, Plans and any other special details.

1.3 Prevailing Documents

Where there is a difference between Plan and Specification the Plan will take precedence. The Contractor must at all times maintain a legible copy of the plans and specification bearing the approval of the appropriate authorities.

1.4 Size and Dimensions

All sizes and dimensions given in this Specification are in millimetres unless otherwise stated and are nominal only.

1.5 Prime Cost Items

Prime cost items listed in this Specification are Contractors cost prices, they do not include Builders margins, cost of cartage and freight. Should any of these items not be required, credit will be made at the listed price in the contract's final progress claim.

1.6 Definitions

"Special Details" in respect of any item or part of the works means any drawings, plans, specifications, calculations or other documents (including Engineer's Recommendations) prepared in order to define or detail the work to be done and the materials to be used.

"Engineer's Recommendations" includes any Soil Classification Report, Preliminary Footing Report, Construction Footing Report and any other Report, Recommendation, site or other instruction, calculations or plans prepared by an Engineer in respect of the Works.

Where the words "Local Authority" are mentioned they shall mean the Local Council, or other Governing Authority, or Private Certifier with Statutory responsibility for the compliance of the work performed.

CMR
RD

2.0 STATUTORY REQUIREMENTS

2.1 The Works

The Works shall be constructed in accordance with Australian Standards referred to in Section 1 of the BCA 96 Housing Provisions together with any amendment or replacement of those Standards.

2.2 Regulations, Notices and Fees

The Contractor is to comply with the requirements of all legally constituted authorities having jurisdiction over the Works including the provisions of the Home Building Act.

The Contractor is to give all notices, obtain all Permits and pay all fees required by such authorities.

Where referred to in these specifications, regulations shall mean the Building Regulations and Codes (including the Building Code of Australia, as amended) statutorily enforceable at the time application is made for a permit, consent or approval.

2.3 Insurance

Insurance cover of the Works against risk for Fire, Theft, Malicious Damage and Materials on Site are to be effected by the Contractor at the Contractor's expense. The Contractor shall also at his expense adequately insure Public Liability and arrange Worker's Compensation cover in respect of any liability under the Worker's Compensation Act of New South Wales.

2.4 Labour and Materials

The Contractor is to provide all labour and materials to construct and complete the Building to the stage as specified in the contract documents. Materials to be of the standard specified. Workmanship in each trade to be performed by licensed tradespeople in conformity with adequate building practice. Building materials surplus to requirements of the Works shall be and remain the property of the Contractor.

2.5 Electricity

The Contractor is to make arrangements for any electrical power to be used in the erection of the Works and is to pay fees and costs incurred therein. Should additional poles, wiring, service risers or underground wiring etc., be required by the Electricity Authority, this additional cost plus Builder's margin shall be borne by the Owner.

2.6 Sanitary Accommodation

Prior to the commencement of any Works, unless toilet facilities exist on Site, the Contractor shall provide temporary toilet accommodation for the tradespeople. Where the Authority requires the temporary toilet to be connected to sewer mains, the additional cost plus Builder's margin of such shall be borne by the owner. On completion the Contractor shall remove the convenience.

3.0 OWNER'S OBLIGATIONS

3.1 Surveyor's Certificate

If the Building Agreement so indicates, the Owner shall, at the Owner's expense, obtain a certified survey of the Site. If no survey is required, the Owner hereby certifies that the placement of the existing survey pegs or fences on the Site is correct.

3.2 Engineer's Recommendations

If the Building Agreement so indicates, the Owner shall, at the Owner's expense, provide the Contractor with reports and recommendation (including soil classification) as to the foundations and/or footings requirements for the Works prepared by an Engineer.

If the Contractor instructs any party to provide such recommendations, the Contractor does so only as an agent for the Owner.

3.3 Trades Persons Engaged by Owner

The Owner shall not engage or employ any tradesperson, trade-contractor or any other person to work on the Site without the consent of the Contractor which consent may be subject to such terms and conditions as the Contractor may stipulate.

3.4 Items Supplied by Owner

For all items referred to in the Specification to be supplied by the Owner, it is the responsibility of the Owner to arrange payment for delivery of and protection against damage and theft of all these items.

Delivery is to be made when requested by the Builder to the Site. If not available when required the Owner shall be obliged to make an alternative selection.

3.5 Water Supply

The Owner shall, at the Owner's expense, supply adequate water to the Site for construction purposes. Unless otherwise specified, the Contractor shall pay the standard water metre connection fee to the Water Supply Authority providing this service is prelaid to the Site ready for use. The Owner shall be responsible for any fee to be paid in excess of the standard water metre connection fee.

3.6 Sanitation

Unless otherwise specified, the Owner shall, at the Owner's expense, supply sewerage connection riser or common effluent drainage connection riser on the Site. Unless otherwise specified, the Contractor shall pay the standard sewer connection fee to the Supply Authority providing this service is to prelaid to the Site and ready for use.

The Owner shall be responsible for any fee to be paid in excess of the Standard sewer connection fee.

3.7 Site Clearance

At the Owner's expense clear only the Site area of building work including vegetation stumps, boulders, rubble and the like to a minimum distance of 1,000mm outside the building or to the boundaries of the allotment, whichever is the less and fill any depressions within the area covered by the building.

4.0 PLANS, PERMITS AND APPLICATION FEES

4.1 Permits and Fees

Unless otherwise agreed, the Contractor shall lodge all necessary application notices, plans and details with the Local Authority for approval prior to commencement of construction.

4.2 Mines Subsidence

In areas affected by mines subsidence the appropriate authority to be consulted and work carried out in accordance with their requirements as a variation, any additional cost plus Builders Margin is to be borne by the Owner.

4.3 Setting Out

The Contractor shall accurately set out the Works in accordance with the Site Plan and within the boundaries of the Site.

5.0 EXCAVATIONS

- 5.1 Subject to Clause 3.7 the Site covered by the Building and an area at least 1,000mm wide around the Building or to boundaries of the Site – whichever is the lesser, shall be cleared and/or graded as indicated on the Site Works Plan.

Top soil shall be cut to a depth sufficient to remove all vegetation

Excavations for all footings shall be in accordance with the Engineer's Recommendation or Part 3.2.2 BCA 96 Housing Provisions.

6.0 FOUNDATIONS AND FOOTINGS

6.1 Underfloor Fill

Underfloor fill shall be in accordance with AS 2870 or Part 3.2 BCA 96 Housing Provisions.

6.2 Termite Risk Management

Termite treatment shall be carried out in accordance with Part 3.1.3 BCA 96 Housing Provisions or AS 3660.1.

6.3 Vapour Barrier

The underfloor vapour barrier shall be in accordance with AS 2870 or Clause 3.2.2.6 BCA 96 Housing Provisions.

6.4 Reinforcement

Reinforcement shall conform and be placed in accordance with AS 3600, AS 2870 and the Engineer's recommendations.

Support to all reinforcement shall be used to correctly position and avoid any undue displacement of reinforcement during the concrete pour.

6.5 Concrete

Concrete shall not be less than Grade N20 except where otherwise approved by the Engineer.

Structural concrete shall be in accordance with AS 3600. Pre-mixed concrete shall be manufactured in accordance with AS 1379 with delivery dockets kept on Site and available for inspection by the Engineer.

Concrete shall be placed and compacted in accordance with good building practice. In hot (above 30 degrees Celsius) and windy conditions concrete must be cured by covering with plastic sheeting, spraying with a curing compound or pouding of water on the surface, or as directed by the Engineer.

6.6 Footings and Slabs on Ground

Concrete slabs and footings shall not be poured until approval to pour concrete is given by the Engineer or the Local Authority.

NOTE: Bench levels and floor levels on the Site Works Plan shall be regarded as nominal, unless specified otherwise.

6.7 Suspended Slabs

All concrete slabs, other than those supported on solid ground or properly compacted filling, shall be constructed as suspended slabs. These slabs shall be constructed in accordance with the Engineer's recommendations.

6.8 Foundation Walls

On footings as previously specified build brick walls to the thickness shown on plan to level underside of floor bearers and/or plates.

6.9 Sub-Floor Ventilation

Provide adequate cross ventilation to the space under suspended ground floor. No section of the under floor area wall to be constructed in such a manner that will hold pockets of still air.

6.10 Sub-Floor Access

Provide access under suspended floors in position where indicated on plan.

6.11 Curing

All slabs shall be cured in accordance with AS 3600.

7.0 RETAINING WALLS

7.1 Retaining Walls

Retaining walls shall be constructed as shown on the plans and/or special details designed by an Engineer and if applicable approved by the Local Authority whether the construction of such shall be the obligation of the Owner or the Contractor.

8.0 EFFLUENT DISPOSAL/DRAINAGE

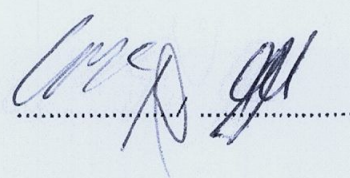
8.1 In both sewered and unsewered areas, fit bath, wash basin, kitchen, wash tubs, pedestal pan and floor grate to shower recess in positions shown on plan. (Refer to schedule of fittings). Provide waste pipes with traps to the above fittings and connect to the drainage system. The whole of the work to be performed in accordance with the rules and requirements of the Sewerage Authority concerned.

8.2 Septic System

Provide and install a septic system where applicable to the requirements of Local Authority and in accordance with the manufacturer's instructions.

8.3 Storm Water Drainage

Allow for the supplying and laying of storm water drains where shown on Site Plan. Drains to be a minimum of 90mm UPVC pipes laid to an even and regular fall so as to have a minimum cover of 150mm. Drains to discharge into street gutter where possible. Where outlets are shown within the Site they are to discharge at least 3,000mm clear of the building. If the Authority's requirements give rise to a variation, any additional cost plus Builder's margin is to be borne by the Owner.



9.0 TIMBER FRAMING GENERALLY

9.1 Timber Framing

All timber framework sizes, spans, spacing, notching, checking and fixing shall comply with the provisions of AS 1684 or Part 3.4.3 BCA 96 Housing Provisions. Alternative structural framing to Structural Engineer's details and certification.

The work shall be carried out in a proper and tradesperson like manner and shall be in accordance with recognised and acceptable trade practices.

9.2 Floor Framing

All floors not specified to be concrete are to be framed at the level shown. Span and spacing of bearers is to conform to the requirements of the span tables for the appropriate member size. Deep joists to upper floors, where shown are to be fitted with solid blocking or herringbone strutting as required. All sizes and stress grades of timber members and tie down methods are to be in accordance with AS 1684.

9.3 Wall Framing

Plates are to be trenched to a depth not exceeding 10mm to provide uniform thickness where studs occur. Where plates are machine gauged to a uniform thickness, trenching may be omitted. Wall framing is to be erected plumb and straight and securely fastened to floor framing. Provide a clear space of 40mm between outer face of wall frame and inner face of brick veneer walls. Tie brickwork to studs with approved veneer ties. Ties are to slope downwards towards the veneer wall.

Studs in each panel of walling shall be stiffened by means of solid noggings or bridging pieces at not more than 1,350mm centres over the height of the wall. Bottom plates shall be fixed to the concrete slab in accordance with AS 1684.

9.4 Heads Over Opening (Lintels)

All sizes, stress grade and bearing area shall conform to AS 1684 or NSW Timber Framing Manual. Heads exceeding 175mm in depth shall be seasoned or a low shrinkage timber species use. Plywood web lintels conforming to the requirements of Plywood Association of Australia may be used. Glue Laminated beams conforming with AS 1328. If approved by the Lending Authority, Laminated Veneer Lumber beams to manufacturer's specification and data sheets may be used.

9.5 Roof Trusses

Where roof truss construction is used, trusses shall be fabricated in a properly equipped factory and erected, fixed and braced in accordance with the fabricator's written instructions.

9.6 Bracing

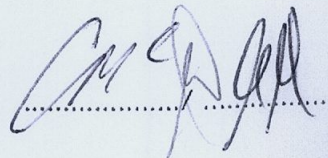
Timber frames must be braced in accordance with Clause 3.4.3.8 BCA 96 Housing Provisions. Bracing units shall be determined as appropriate for the design wind velocity for the building or AS 1684. Bracing shall be evenly distributed throughout the building.

9.7 Flooring

Cover floor joists with strip or sheet flooring as shown on plan. Thickness of flooring to be appropriate for the floor joist spacing. With particular regard to ground clearance and installation in wet areas, structural sheet flooring shall be used strictly in accordance with the manufacturer's recommendations or Part 3.4.3 BCA 96 Housing Provisions.

Strip flooring shall be in accordance with AS 1684.

When listed in Schedule of Works, floors shall be sanded to provide an even surface and shall be left clean throughout.



9.8 Roof Framing

Roofs are to be pitched to the slope shown on plan and constructed in accordance with Clause 3.4.3.6 BCA 96 Housing Provisions or AS 1684. Provide tie-down as required for the appropriate design wind velocity and roof covering. Provide all rafters, ridges, hips, valleys, pulins, struts, collar ties and wind bracing as appropriate with all sizes and stress grades in accordance with AS 1684.

Metal fascias shall be installed in accordance with the manufacturer's recommendations.

9.9 Timber Posts

Posts supporting carports, verandas and porches shall be timber suitable for external use, or as otherwise specified, supported on galvanised or treated metal post shoes. Post shall be bolted to all adjoining beams as required by AS 1684 for the wind speed classification assessed for the Site.

9.10 Corrosion Protection

All metal brackets, facing plates and other associated fixings used in structural timber joints and bracing must have appropriate corrosion protection.

9.11 Hot Water Storage Tank Platforms

Where a hot water storage tank is to be installed in the roof space, the tank platform shall be supported directly off the wall plates and must not be supported on ceiling joists.

All hot water services installed in the roof space shall be fitted with an appropriate spill tray and overflow drain pipe.

10.0 STEEL FRAMING GENERALLY

10.1 Steel Framing

Steel floor, wall or roof framing approved by the Local Authority shall be installed in accordance with the manufacturer's recommendations and AS 3623 or Part 3.4.2 BCA 96 Housing Provisions.

11.0 ROOFING

All roof cladding to comply with the relevant structural performance and weathering requirements of BCA 96 Housing Provisions and be installed as per the manufacturer's requirements.

11.1 Tiled Roofing

Concrete and terracotta tiles shall comply with AS 2049 and be installed in accordance with AS 2050. Cover the roof of the dwelling with first quality approved tiles as selected. The tiles are to be fixed to approved battens of sizes appropriate to the spacing of rafters/trusses in accordance with manufacturer's recommendations. Cover hips and ridges with capping and all capping and all necessary starters and apex caps. Capping and verge tiles are to be well bedded and neatly pointed. Roofing adjacent to valleys should be fixed so to minimise as far as practicable water penetration. As roof tiles are made of natural products slight variation in colour is acceptable.

11.2 Roofing

Provide and install a metal roof together with accessories all in accordance with the manufacturer's instructions.

Except where design prohibits, sheet shall be in single lengths from fascia to ridge. Fixings of sheet shall be strictly in accordance with the manufacturer's recommendations. Incompatible materials shall not be used for flashings, fasteners or downpipes.

11.3 Rainwater Goods

Metal Rainwater goods shall be manufactured in accordance with AS 2179. Rainwater goods shall be installed in accordance with AS 2180 or Part 3.5.2 BCA 96 Housing Provisions.

UPVC components to be manufactured in accordance with AS 1273. Rainwater goods to be compatible with other materials used.

11.4 Sarking

Sarking if used under roof coverings must comply and be fixed in accordance with AS/NZS 4200.1 for materials and AS/NZS 4200.2 for installation.

11.5 Sealants

Appropriate sealants shall be used where necessary and in accordance with manufacturer's specifications.

11.6 Weatherproofing

Flashings shall comply with AS 2904, AS 1804, AS 3700 and Part 3.3.4 BCA 96 Housing Provisions.

12.0 MASONRY

12.1 Bricks

All clay bricks and brickwork shall comply with AS/NZS 4455, AS/NZS 4456 and AS 3700. Clay bricks are a natural kiln fired product and as such their size may vary over a small range. Tolerances shall only be applied to the total measurements over 20 units, not to the individual units.

12.2 Concrete Blocks

Concrete blocks are to be machine pressed, of even shape and well cured in accordance with AS 2733. Autoclaved Aerated Concrete blocks shall be in accordance with the manufacturer's Product Specification at the time the work is being carried out.

12.3 Damp Proof Courses

All damp proof courses shall comply with Part 3.3.4 BCA 96 Housing Provisions, AS 3700 and AS 2904. The damp proof membrane shall protrude to the external face of the masonry member in which it is placed.

CMA

12.4 Cavity Ventilation (Weep Holes)

Cavities shall be cleared of all mortar droppings and weep holes shall not exceed 1,200mm centres, be in accordance with AS 3700, or Clause 3.3.4.3 of the BCA 96 Housing Provisions.

12.5 Mortar and Joining

Mortar shall comply with AS 3700 or Part 3.3.1 BCA 96 Housing Provisions. Joint tolerances shall be in accordance with AS 3700.

12.6 Masonry Accessories

Compliance with Part 3.3.3 of BCA 96 Housing Provisions in acceptable construction practices. All wall ties shall be manufactured in accordance with AS 2699 and be installed in accordance with AS 3700. Wall ties to meet corrosion resistant rating of the site. Provide appropriate ties to articulated joints in masonry.

12.7 Lintels

Lintels used to support brickwork opening in walls must be suitable for the purpose under Part 3.3.3 BCA 96 Housing provisions. Provide one lintel to each wall leaf. Where necessary clearance must be allowed at heads of frames to allow for shrinkage of timber frames.

12.8 Cleaning

Clean all exposed brickwork with an approved cleaning system. Care should be taken not to damage brickwork or joints and other fittings.

13.0 CLADDING AND LININGS

13.1 External Claddings and Linings

Sheet materials or other external cladding shall be fixed in accordance with the manufacturer's recommendations and any applicable special details.

13.2 Internal Wall and Ceilings Linings

Provide gypsum plasterboards or other selected materials to walls and ceilings. Plasterboard sheets to have recessed edges and be a minimum of 10mm thick. Internal angles from floor to ceiling to be set. Set corners or provide cornices for ceilings as required. The lining of wet area walls shall be constructed as per AS 3740 or Part 3.8.1 BCA 96 Housing Provisions. Wet area lining to be fixed in accordance with the manufacturer's recommendations.

Where required in open veranda's, porches and eaves soffits, material indicated on the drawing shall be installed. The ceiling access hole shall be of similar material to the adjacent ceiling. Suitable cornice moulds where required shall be fixed at the junction of all walls and ceilings.

13.3 Waterproofing

All internal wet areas and balconies over internal habitable rooms to be water proofed to AS 3740 or Part 3.8.1 BCA 96 Housing Provisions.

[Handwritten signature]

14.0 JOINERY

14.1 General

All joinery work (metal and timber) shall be manufactured and installed according to good trade practices.

14.2 Door Frames

External door frames shall be a minimum of 32mm thick fitted with 10mm thick door stops. Internal jamb linings shall be a minimum of 18mm thick fit with 10mm thick door stops. Metal door frames shall be installed where indicated on drawings in accordance with the manufacturer's recommendations.

14.3 Door and Doorsets

All internal and external timber door and door sets shall be installed in accordance with AS 1909. Timber Doors and Door Sets shall be manufactured in accordance with AS 2688 and AS 2689.

14.4 Window and Sliding Doors

Sliding and other timber windows and sliding doors shall be manufactured in accordance with AS 2146 and be installed in accordance with AS 2147.

Aluminium windows and sliding doors shall be installed in accordance with manufacturer's instructions. All glazing shall comply with AS 1288 or Part 3.6 BCA 96 Housing Provisions.

14.5 Architraves and Skirting

Provide architraves and skirting as nominated on the drawings or listed on the Schedule of Works.

14.6 Cupboards/Kitchens/Bathroom

Units shall be installed to manufacturer's recommendations. Bench tops shall be in a water resistant material.

14.7 Stairs, Balustrades and other Barriers

Provide stairs or ramps to any change in levels, and balustrades or barriers to at least one side of ramps, landings and balconies as per BCA Housing Provisions, Part 3.9.1 for stair construction and 3.9.2 for balustrades.

15.0 SERVICES

15.1 Plumbing

All plumbing shall comply with the requirements of the Supply Authority and the work is to be carried out by a licensed plumber.

Fittings shall be supplied and installed as specified.

15.2 Electrical

Provide all labour and materials necessary for the proper installation of electricity service by a licensed electrician in accordance with AS 3000, AS 3006 and the requirements of the local Supply Authority. unless otherwise specified, the electrical service shall be 240 volt, single phase supply.

15.3 Gas

All installation (including LPG) shall be carried out in accordance with the rules and requirements of the Supply Authority.

15.4 Smoke Detectors

Provide and install smoke alarms manufactured in accordance with AS 3786 as specified or as indicated on plan and in accordance with Part 3.7.2 BCA 96 Housing Provisions.

16.0 TILING

16.1 Materials

Cement mortar and other adhesives shall comply with AS 3958.1 according to trade practices.

16.2 Installation

Installation of tiles shall be in accordance with AS 3958.

All vertical and horizontal joints between walls and fixtures e.g. benchtop, bath etc., to be filled with flexible mould resistant grout. Where practicable spacing between tiles should be even and regular. Provide expansion joints where necessary. As tiles are made of natural products a slight variation in colour is acceptable.

16.3 Walls

Cover wall faces where indicated on the drawings with selected neatly grouted tiles. Tiles are to be fixed to wall sheeting with approved adhesives. Provide all necessary strips, vent tiles and recess fittings.

16.4 Floors

Lay selected floor tiles in sand and cement mortar or approved adhesive to areas indicated on the drawings. If required, fit approved edge strips or metal angle to exposed edges in doorways or hobless showers as per AS 3740. Provide adequate and even fall to wastes where necessary.

17.0 PAINTING

17.1 General

All paint used shall be of a quality suitable for the purpose intended and the application shall be as per the manufacturer's recommendations. The colours used shall be as per Colour Schedule. All surfaces to be painted shall be properly prepared to manufacturer's recommendations.

18.0 PRIME COST ITEMS

List hereunder all P.C. Allowances		
Kitchen and Vanity Cupboards (kitchen sink included)		\$
Stove/Wall Oven/Hot Plates		\$
Bath per item		\$
W.C. Suites	per item	\$
Laundry Tub	per item	\$
Entry Door		\$
Door Furniture		\$
Garage Door		\$
Hot Water System		\$
Shower Screen		\$
Wall and Floor Tiles supply only		\$
Bricks		\$/m
		\$/1,000

19.0 SIGNATURES

This is the specification referred to in the Building Agreement No. Date:

Signed by the said
Owner in the
Presence of

[Signature]
Witness

[Signature]
Owner's Signature

8/12/09
Date

[Signature]
Witness

[Signature]
Owner's Signature

8/12/09
Date

Signed by the said
Contractor in the
Presence of

[Signature]
Witness

[Signature]
Contractor's Signature

12/12/09
Date

[Signature]

**SYDNEY WATER
BUILDING PLAN APPROVED
ASSET NOT AFFECTED**

Dolphin No: D09/0-11870

Quick Check Ref No: 2769647

E-Developer Case No: N/A

Property Location

Street No: LOT 174

Street Name: SHEARWATER DRIVE

Suburb: WARRIEWOOD

Building/Structure Description: New Residence

Building Plan No: 909441

Proposed building/structure is **APPROVED** to be constructed **ADJACENT TO** a Sydney Water sewer/asset as:

1. **Service Location Report reveals the building/structure is outside the Zone of Influence.**

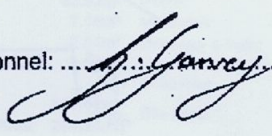
2. **No Special Precautions Required.**

Permits are required to fill all new swimming pools with a capacity greater than 10,000 litres. To arrange for a permit please contact Sydney Water on 13 20 92 during business hours. Fines will apply for filling pools without a permit.

APPROVED BY

WSC Company Name: Greg Houston Plumbing Pty Limited

Name of Key Personnel: Brett Garvey

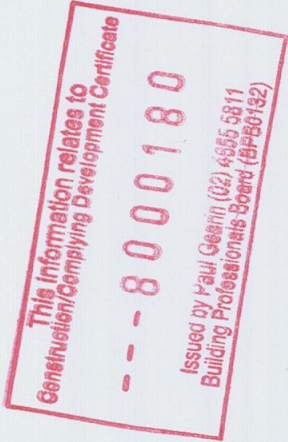
Signature of Key Personnel: 

Date: 19/01/2010



COSMOPOLITAN
LIVING

5 Nelson Avenue
Padstow, NSW 2211
Tel: 02 8713 5000
Fax: 02 8713 5099



NO.	SHEET TITLE		REVISION
010	N/A	COVER SHEET	B
020	1:200	SITE PLAN	B
021	N/A	BASIX REQUIREMENTS	A
022	1:200	SHADOW DIAGRAM & SITE ANALYSIS	A
030	1:100	GROUND FLOOR PLAN	B
030	1:100	FIRST FLOOR PLAN	B
040	1:100	FRONT & REAR ELEVATIONS	B
050	1:100	SIDE ELEVATIONS	B
060	1:100	SECTIONS A& B	B
070	1:100	GROUND FLOOR ELECTRICAL PLAN	B
070	1:100	FIRST FLOOR ELECTRICAL PLAN	B

DEVELOPMENT APPLICATION

Mr & Mrs McCUDDEN
LOT 174 SHEARWATER DRIVE,
THE COAST, WARRIEWOOD

B	18.01.2010	DEVELOPMENT APPLICATION			MH
A	23.11.09	CLIENT SIGNATURES			AA
rev	date	amendment			dr

BASIX REQUIREMENTS

CLIENT: McCUDDEN

JOB No.: 909441

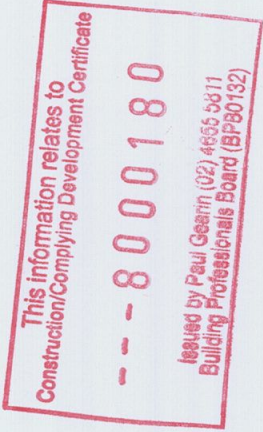
ISSUE DATE: 06.12.09

SITE ADDRESS: Lot 174 (No.83) Shearwater Drive WARRIEWOOD

REQUIREMENTS:

WATER	
1	3000 litre capacity rainwater tank provided
2	Rainwater tank to collect 230. 19m² of roof runoff (100% of roof area)
	Rainwater tank to be connected to:-
3	a) all toilets b) cold water tap that supplies clothes washing machine c) one outdoor tap so that rainwater can be used to irrigate vegetated areas of site
4	All shower tap-ware installed rated 3 star
5	All kitchen & bathroom tap-ware installed rated 5 star
6	All toilet flushing systems installed rated 4 star
THERMAL	
7	3mm standard glazing throughout dwelling (excluding wet areas & below-mentioned windows):- - Kitchen (W) – Upgrade SF1018 to Low E - Meals (W) – Upgrade SD2130 to Low E
8	Foil/sarking roof insulation under dark roof tiles
9	R3.0 ceiling insulation and R1.5 wall insulation (excluding garage) provided to dwelling
10	External colours for roof are to be dark (solar absorbance >0.7)
ENERGY	
11	Gas 5 star energy rated instantaneous HWS provided
12	Active coding and heating to be installed with a three phase air-conditioner rated >4.0 star
13	Exhaust to kitchen with manual switch on/off, ducted
14	Natural light and ventilation provided to laundry and bathroom
15	Gas cooktop and electric oven to kitchen
16	Fixed outdoor clothes drying facility located to rear of yard

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PITTWATER COUNCIL
APPROVED DEVELOPMENT CONSENT PLANS

NOTE: THESE PLANS MUST BE READ IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT

Issue date: 18.01.10
Revision: 1



COSMOPOLITAN
LIVING

5 Nelson Avenue
Padstow, NSW 2211
Tel: 02 8713 5000
Fax: 02 8713 5099

Client: Mr & Mrs McCUDDEN
Address: LOT 174 SHEARWATER DRIVE (THE COAST)
Suburb: WARRIEWOOD
Council Area: PITTWATER

House Type: REPUBLICA 34 (15m)
Facade Type: MODERN
Alternative Plan: STANDARD
Specification: DIAMOND

Drawing Title: BASIX REQUIREMENTS

Drawn: MH
Checked: 18.01.10
Scale: N/A

File No: 909441
Drawing No: 021
Rev: A

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LEGEND	
AC/PAD AIR CONDITIONING CONC. PAD	V
BATH	AJ
ARTICULATION JOINT	VC
COOKTOP	WC
DISHWASHER PROVISION	WR
DRAINAGE POINTS	WO
DOWNWATER PIPES	WM
WASHING MACHINE	WM
1000mm HIGH BALLUSTRADE	FL
1000mm HIGH BALLUSTRADE	FL
FLOOR JOIST DIRECTION	ST
SHOWER TAP AT 1150	ST
SHOWER ROSE AT 1850	O
HOT WATER SYSTEM	CS
CEILING MANHOLE	F
CEILING MANHOLE	F
MC/SWAVE	SP
SPA PUMP	SD
SLIDING DOORS	GSD
CAVITY SLIDING DOOR	GSD
CONCRETE SLAB	CONG
PANTRY	PAV
REFRIGERATOR SPACE	TLS
RANGEHOOD	TLS
TILES	TF
SMOKE DETECTOR	TF
CABINET	TF
TIMER FLOORING	TF
SINK	ST
SHOWER	ST
RHS TO ENGINEERS DETAILS	T
LAUNDRY TUB	UBO
UNDER BENCH OVEN	UBO
BATH TAPS	UBO
HEAD HEIGHT OF SQ. SET HAMMERS	210mm FROM FFL UNLESS NOTED

PITTWATER COUNCIL

DEVELOPMENT APPLICATION

CLIENT SIGNATURES

dr:



THESE PLANS MUST BE IN CONJUNCTION WITH THE CONDITIONS OF DEVELOPMENT CONSENT

Mr & Mrs McCudden

LOT 174 SHEARWATER DRIVE

(THE COAST)

WARRIWOOD

PITTWATER

Client:

Address:

Suburb:

Council Area:

House Type:

Facade Type:

Alternative Plan:

Specification:

Drawing Title:

GROUND FLOOR PLAN

Drawn: AA

Checked: 23.11.09

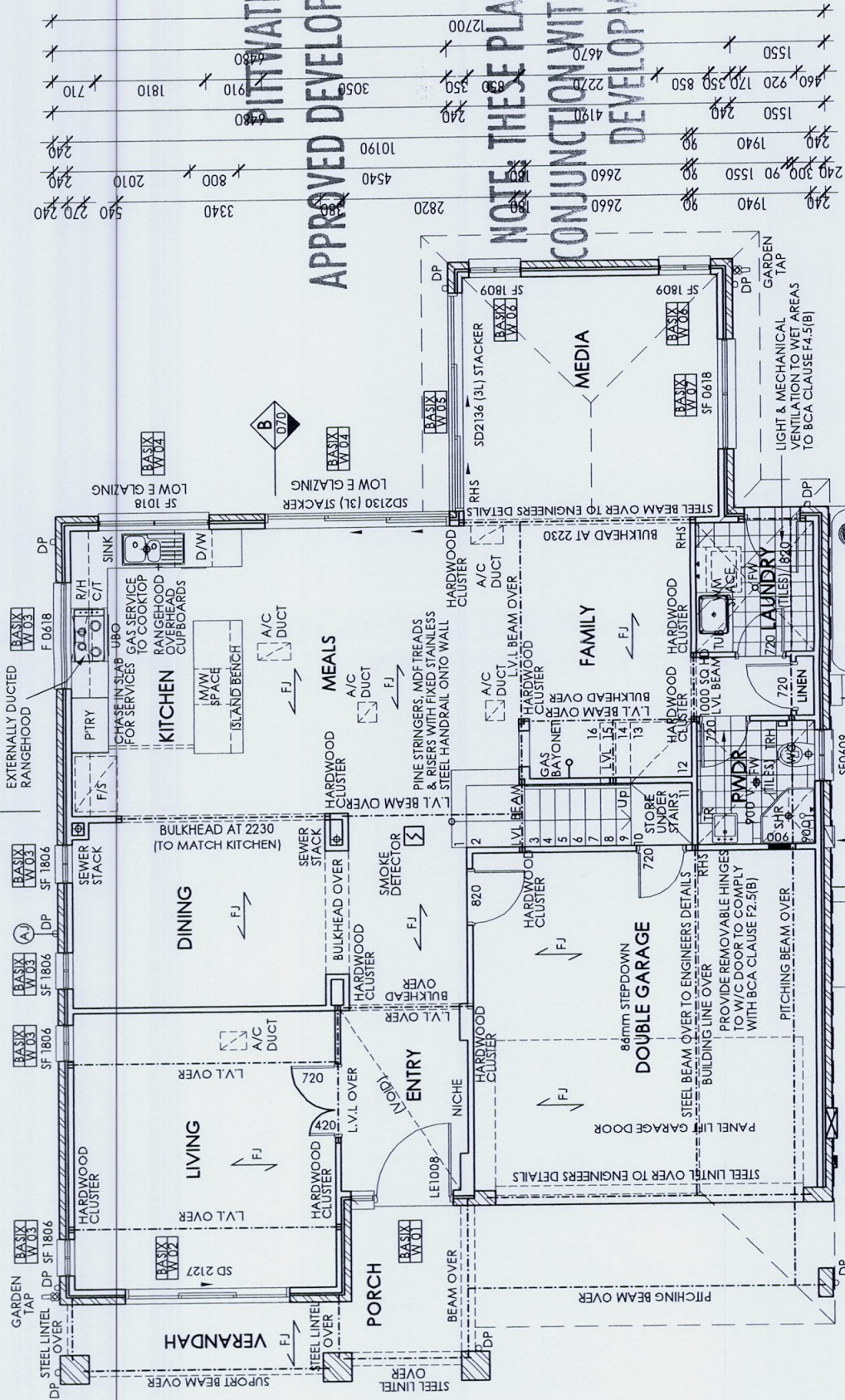
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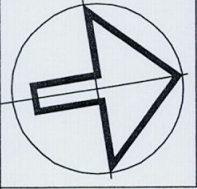
Rev: B

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1310	4080



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470	840	1570	230	2140	4080
1310	470	1100	3710	1810	1310
1310	12990	4080			

1:100 GROUND FLOOR PLAN



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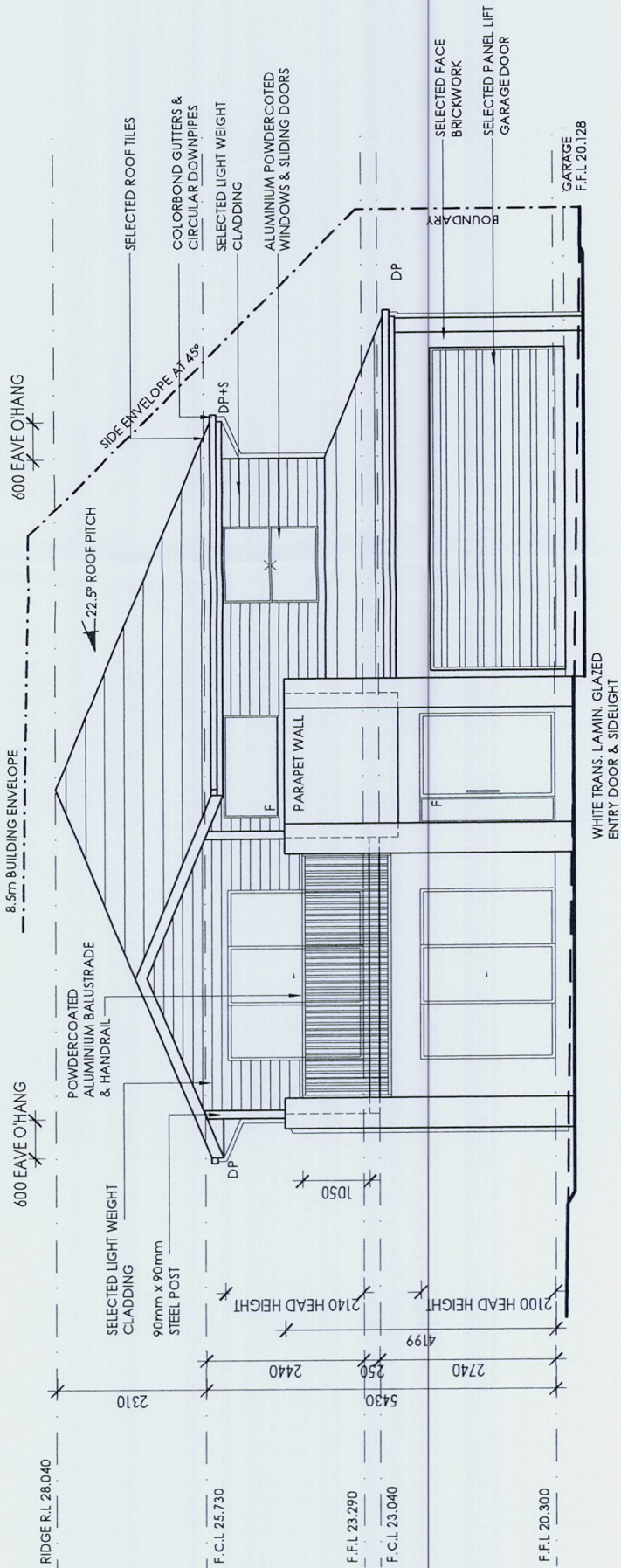
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This information relates to
Construction/Complying Development Certificate
---8000180
Issued by Paul Gegan (02) 4555 9811
Building Professionals Board (BPP0132)



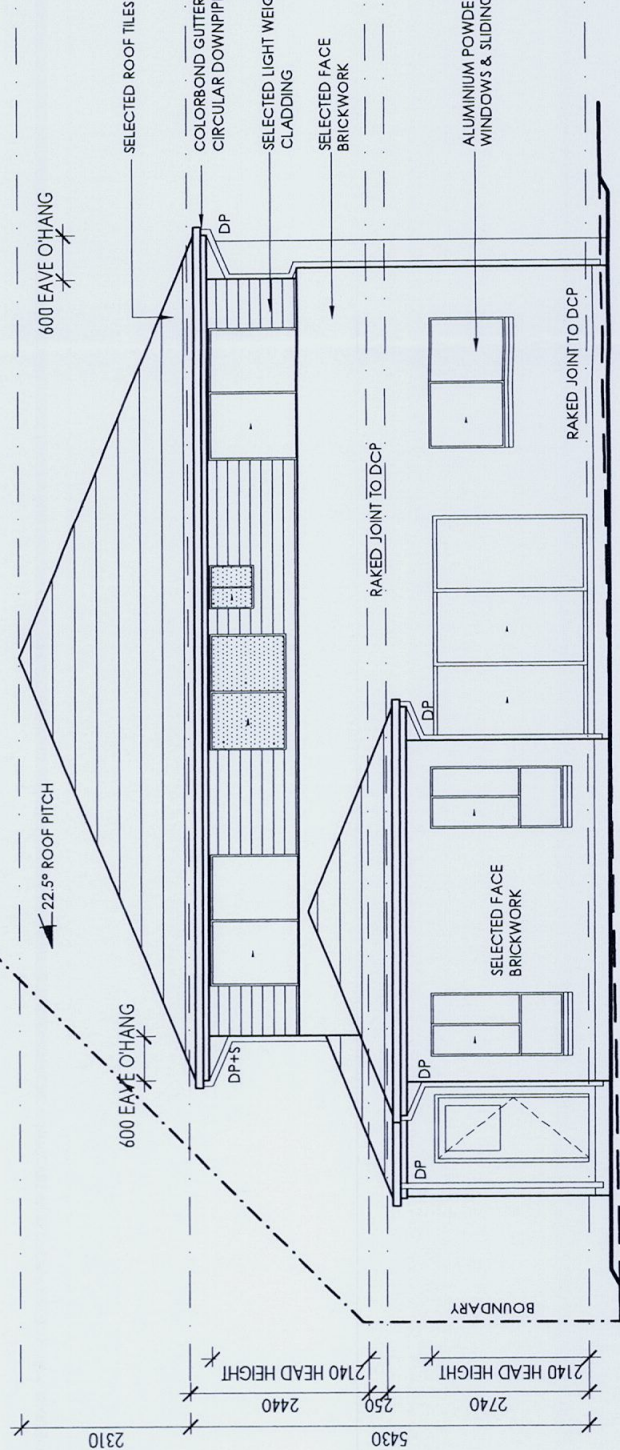
1:100 FRONT ELEVATION
EAST

PITTWATER COUNCIL
APPROVED DEVELOPMENT CONSENT PLANS
RIDGE R.L. 28.040



COSMOPOLITAN
LIVING

5 Nelson Avenue
Padstow, NSW 2211
Tel: 02 8713 5000
Fax: 02 8713 5099



1:100 REAR ELEVATION
WEST

1:100 FRONT & REAR ELEVATIONS

client:
Address:
Suburb:
Council Area:

Mr & Mrs McCUDDEN
LOT 174 SHEARWATER DRIVE
(THE COAST)
WARRIEWOOD
PITTWATER

House Type: REPUBLICA 34 (15m)
Facade Type: MODERN
Alternative Plan: STANDARD
Specification: DIAMOND

Drawing Title:
FRONT & REAR ELEVATIONS

Drawn: AA
Checked: 23.11.09
Date Drawn: 1:100
Scale:

File No: 909441
Drawing No: 050
Rev: B

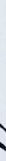
[illegible]

- RAINWATER TANKS MUST BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- RAINWATER TANKS TO BE INSTALLED AND CONNECTED TO SERVICES SPECIFIED IN THE BASIS REPORT, AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- DEVICE MUST BE IDENTIFIED BY LICENSED PLUMBER, A FIRST FLUSH DEVICE MUST FITTED WHERE APPROPRIATE.
- THE TANK SHOULD BE LOCATED TOGETHER WITH ANY SOUP, AND DESIGNED TO BE EASILY ACCESSIBLE TO THE TANK'S TOWERS WHERE APPROPRIATE.
- ANY LINE, SHALL BE SCREENED TO PREVENT ENTRY OF FOREIGN MATTER AND TO PREVENT CLOGGING, TANKS AND ASSOCIATED STRUCTURES ARE TO BE PLUMBING CODE COMPLIANT.
- RAINWATER TANKING AND FITTINGS INSTALLED OTHER OR IMMEDIATELY ADJACENT TO THE TANK ARE TO BE IDENTIFIED BY LICENSED PLUMBER.
- THE CLIENT IS RESPONSIBLE FOR THE MAINTENANCE OF THE RAINWATER TANK. RELEVANT AUTHORITY REQUIREMENTS MUST CONFORM TO THE RELEVANT AUTHORITY REQUIREMENTS.
- THE RAINWATER TANKS MUST BE MARKED SUITABLY, MARKED AND LABELLED.
- ANY APPROPRIATE BACK FLOW PREVENTION MEASURES ARE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- ANY PLUMBING AND ELECTRICAL CONNECTION ARE TO BE INSTALLED BY A LICENSED ELECTRICIAN IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- ENSURE COMPLETE SEPARATION TO PARALLEL, POTABLE WATER SUPPLY LINES.
- ONLY COLLECT RAINWATER FROM ROOFS AND ASSOCIATED SURFACES.
- ONLY COLLECT RAINWATER LINES ARE CHARGED INTO THE RAINWATER TANK.
- PROVIDE A CLEANING LEVEL TO BASE OF DOWN PIPES AND ENSURE DOWNPIPES ARE NOT CLOGGED.
- RAINWATER TANK LOCATION IS INDICATIVE ONLY AND MAY BE SUBJECT TO RELOCATION DEPENDING ON PREVALING SITE CONDITIONS.
- ALL MATERIALS ARE TO BE PROTECTED FROM UV RADIATION.

HYDRAULIC DETAIL PLAN

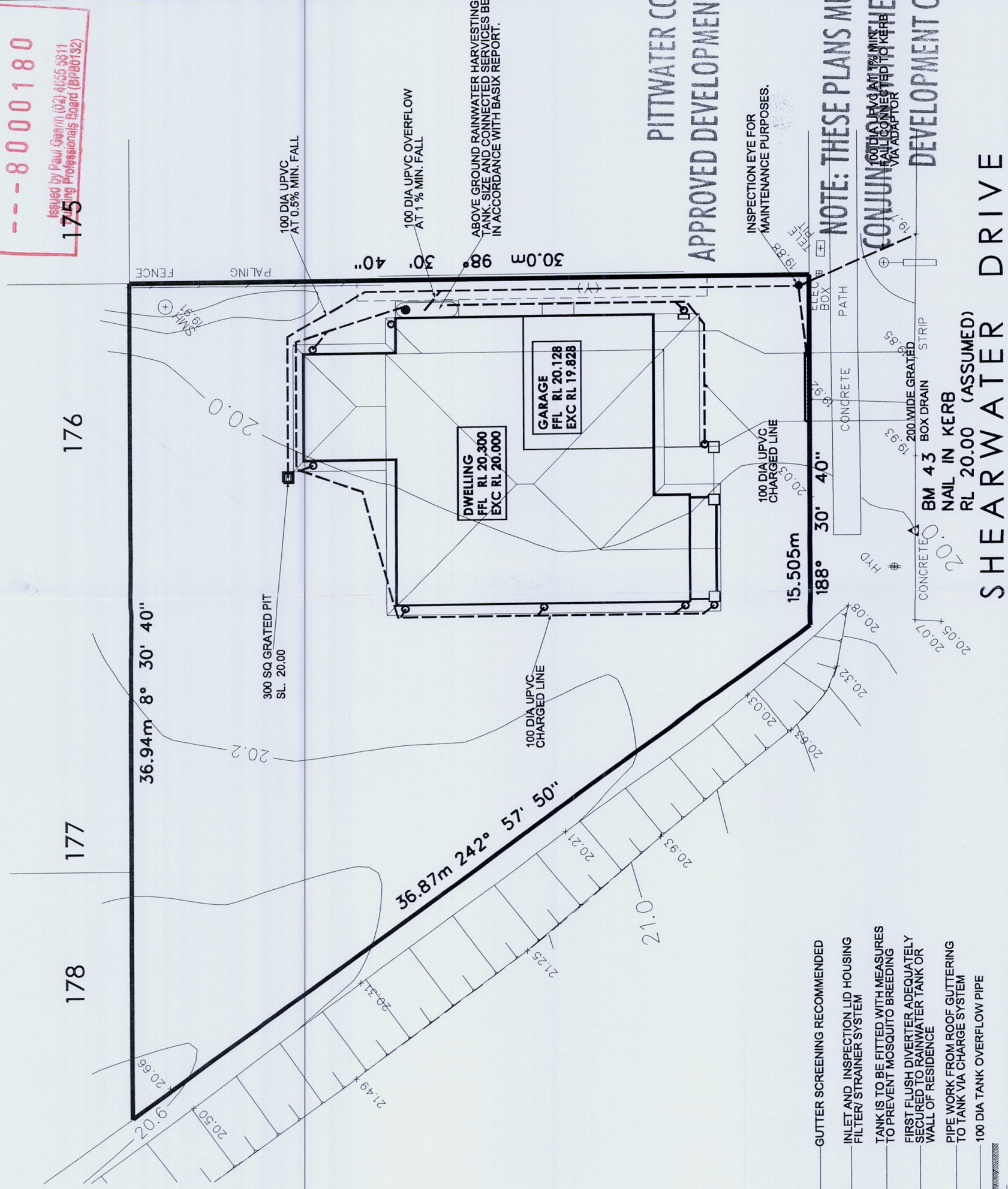
ADDRESS: LOT 174 SHEARWATER DR
WARRIEWOOD

COUNCIL:	PITTSWATER
SCALE:	A1: 1:100, A3: 1:200
SHEET NUMBER:	1
JOB NUMBER:	33307 CP

 ☐ B.E. MIE Aust CPENG

RAFELOS
ACR 079097596
LEVEL 2, 103 VANDERSTRAAT
KINGS GROVE NSW 2208
PO BOX 181 KINGS GROVE NSW 2208

175
Issued by Paul Giegan (02) 4655 5811
Training Professionals Board (TPB0132)



A cross-sectional diagram of a water storage tank. The tank has a sloped roof and a vertical wall. A gutter is shown on the roof edge, connected to a pipe that runs along the wall. The pipe has a vertical section and a horizontal section. The tank is filled with water, indicated by a wavy line. The diagram is labeled with the following text:

- GUTTER SCREENING RECOMMENDED
- INLET AND INSPECTION LID HOUSING FILTER/ STRAINER SYSTEM
- TANK IS TO BE FITTED WITH MEASURES TO PREVENT MOSQUITO BREEDING
- FIRST FLUSH DIVERTER ADEQUATELY SECURED TO RAINWATER TANK OR WALL OF RESIDENCE
- PIPE WORK FROM ROOF GUTTERING TO TANK VIA CHARGE SYSTEM
- 100 DIA TANK OVERFLOW PIPE

TYPICAL RAINWATER TANK SYSTEM

SCALE: 1:50

CONSTRUCTION NOTES

- GENERAL: UNLESS NOTED OTHERWISE
- THE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER WORKING DRAWINGS AND SPECIFICATIONS AND ANY OTHER WRITTEN INSTRUCTIONS ISSUED DURING CONSTRUCTION. ALL DISCREPANCIES AND VARIATIONS SHALL BE REFERRED TO THE ENGINEER, BEFORE PROCEEDING WITH THE WORK.
 - DURING CONSTRUCTION THE STRUCTURE AND ANY ADJACENT STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED.
 - DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE DRAWING ALL LEVELS AND SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF THE WORKS.
 - THE CONTRACTOR IS RESPONSIBLE TO ESTABLISH THE LOCATION, SIZE AND LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORKS.
 - ALL WORKMANSHIP AND MATERIALS TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF RELEVANT AUSTRALIAN STANDARD CODES AND THE REGULATIONS OF THE RELEVANT BUILDING AUTHORITY
 - UNLESS REQUESTED AND PRODUCED ON THE PLANS, THE BUILDER IS TO ENSURE THAT ARTICULATION JOINTS ARE SHOWN ON THEIR ARCHITECTURAL DRAWINGS AND BE SATISFIED THAT THEY ARE IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS AND BUILDING CODES.
 - ALL SITE SAFETY MEASURES AND WORK METHOD STATEMENTS PREPARED BY BUILDER/SUB-CONTRACTORS ARE TO BE IMPLEMENTED DURING CONSTRUCTION. NO WORK IS TO COMMENCE UNTIL SUPERVISOR/BUILDER HAS IDENTIFIED AND APPROPRIATELY ACTED ON ANY POTENTIAL HAZARDS.
 - BUILDER TO ADHERE TO ANY GEOTECHNICAL REPORT RECOMMENDATIONS PREPARED FOR THE SITE.
 - REFER TO ARCHITECTURAL PLANS FOR LOCATIONS OF RAINWATER TANK AC, HWS AND LPG UNITS.
 - CONCRETE
 - CONCRETE SPECIFICATION (F_c 28 DAYS) TO BE AS FOLLOWS: ADOPT TYPE 'A' CEMENT WITH MAX AGGREGATE SIZE OF 20mm AND 60mm SLUMP

LOCATION	NORMAL F _c	SALINE AFFECTED F _c
PIERS	15 MPa	32 MPa
SLAB	20 MPa	32 MPa
STRIP FOOTINGS	25 MPa	32 MPa

• CLEAR COVER TO REINFORCEMENT TO BE AS FOLLOW:

LOCATION	FORMED & SHELTERED	FORMED & EXPOSED	POURED ON GROUND
SLABS & WALLS	20	30	85
BEAMS	25	40	65
COLUMNS	40	50	—
STRIP FOOTING	—	—	65

• REINFORCEMENT SYMBOLS ARE FOLLOWS:

- (N) - HOT ROLLED DEFORMED BARS (400 n)
- (SL) - HARD-DRAWN WIRE REINFORCING FABRIC (450 #)
- (S) - STRUCTURAL GRADE DEFORMED BARS

- NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS ARE TO BE MADE IN CONCRETE MEMBERS WITHOUT PRIOR ENGINEERS APPROVAL.
- CONSTRUCTION JOINTS THAT ARE NOT SHOWN SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER
- ALL REINFORCEMENT TO BE ADEQUATELY SUPPORTED IN ITS REQUIRED POSITION AND COVER DURING PLACEMENT OF CONCRETE
- PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE CONCRETE COVER TO REINFORCEMENT WITHOUT THE APPROVAL OF THE ENGINEER.
- ALL CONCRETE TO BE MECHANICALLY VIBRATED AND SHALL BE CAREFULLY WORKED AROUND THE REINFORCEMENT AND INTO THE CORNERS OF FORMWORK EARTHWORKS
- FOOTINGS ARE DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 100kPa.
- PIER HOLES ARE DESIGNED FOR ALLOWABLE BEARING PRESSURE OF 200kPa.
- FOUNDATION MATERIAL SHALL BE APPROVED PRIOR TO CONSTRUCTION
- ADDITIONAL CONCRETE PIERS MAY BE REQUIRED UNDER SLAB TO EVEN BEARING IN SOIL AS RECOMMENDED BY AUSTRALIAN STANDARD AS 2870.
- ADDITIONAL PIERS IN THE CUT SECTION OF BUILDING PLATFORM MAY ALSO BE REQUIRED TO ACHIEVE THE SAME BEARING AS PIERS IN THE FILL SECTION.
- ALL SITE FILLING PLACED BENEATH SLAB TO BE TREATED IN ACCORDANCE WITH CLAUSE 8.4. OF AS 2870.2 - 1996.
- A 1 METRE WIDE APRON, WITH 25 CROSS FALL AWAY FROM SLAB EDGE IS TO BE FORMED ALL AROUND THE RAFT SLAB WHERE APPLICABLE
- IF THE LOCATION OF THE SLAB IS NEXT TO AN ABOVE OR BELOW ON SITE DETENTION SYSTEM OR BELOW GROUND RAINWATER TANK, THE BUILDER IS TO ADVISE ENGINEER IN ORDER TO ENSURE THAT CONCRETE PIERS ARE TAKEN 500mm BELOW THE INVERT LEVEL OF TANK OR THE FOOTING OF THE SUPPORTING WALL FOR AN ABOVE GROUND DETENTION SYSTEM.

- REINFORCED CONC. PIER
- SEWER AFFECTED PIER
- SCREW PIER
- UNREINFORCED CONC. PIER
- ARTICULATION JOINT
- STARTING POINT

DESIGNED TO AS 2870 - 1996 SLAB AND FOOTING CODE

STRUCTURAL SLAB DETAIL PLAN

CLIENT LOCATION
MCUDDEN
LOT 174 SHEARWATER DR WARRIEWOOD

SCALE	1:100	SHEET No.	1
E.V.	A	DATE	28/01/10
ISSUE	A	JOB No.	33307 CP



CLASSIFICATION H
REFERENCE 909441

B.E., M.I.E. AUST.

ZANUTTINI
Pty Ltd

FACSIMILE: (02) 9554 9764
TELEPHONE: (02) 9554 9311
EMAIL: admin@rafzan.com.au

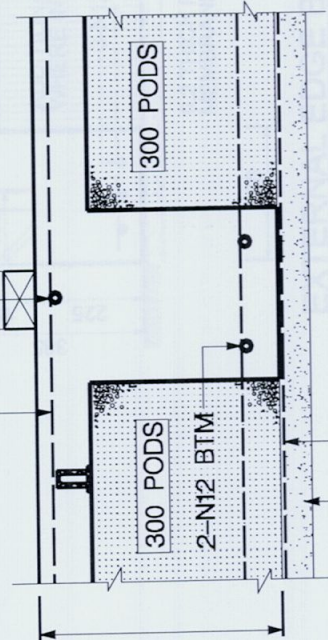


AFELETOS

079 047 466
2, 103 VANESSA STREET
GROVE NSW 2208
161 KINGSGROVE NSW 2208

OP FABRIC

ADDITIONAL 1-N12 TOP OVER PIERS



0.2 THICK POLYTHENE MEMBRANE

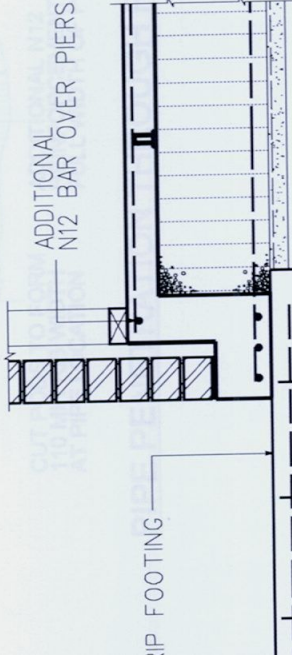
50 THICK CONSOLIDATED SAND

1100 X 1100 270 1100 X 1100

INTERNAL LOAD BEARING RIB

SECTION Z-Z

SCALE 1:200



DETAIL A

SCALE 1:200

WAFLE PODS
CUT TO FORM
450 SQUARE x
385 DEEP
MASS
CONCRETE PAD
TYPICAL

EXTENDED PODS
REFER TO PAGE
2 FOR DETAILS

STRIP FOOTING &
EDGE BEAM
CONNECTION

STRIP FOOTING 300 WIDE 400
DEEP 3L-11 TM TOP & BTM
R6 TIES @ 900 CTS WIDEN AS
REQUIRED TO 750 SQUARE x
400 DEEP MASS CONCRETE
PAD

CUT FILL

STARTING POINT

STARTING POINT

USE 300 PODS

USE 225 PODS

172 STEP DOWN

400 WIDE x 400 DEEP STRIP FOOTING 3L-11TM TOP & BTM R6 TIES AT 300 CTS.

SP

172 STEP DOWN

STARTING POINT

STARTING POINT

USE 300 PODS

USE 225 PODS

172 STEP DOWN

400 WIDE x 400 DEEP STRIP FOOTING 3L-11TM TOP & BTM R6 TIES AT 300 CTS.

SP

172 STEP DOWN

STARTING POINT

STARTING POINT

USE 300 PODS

USE 225 PODS

172 STEP DOWN

400 WIDE x 400 DEEP STRIP FOOTING 3L-11TM TOP & BTM R6 TIES AT 300 CTS.

SP

172 STEP DOWN

STARTING POINT

STARTING POINT

USE 300 PODS

USE 225 PODS

172 STEP DOWN

400 WIDE x 400 DEEP STRIP FOOTING 3L-11TM TOP & BTM R6 TIES AT 300 CTS.

SP

172 STEP DOWN

STARTING POINT

STARTING POINT

USE 300 PODS

USE 225 PODS

172 STEP DOWN

400 WIDE x 400 DEEP STRIP FOOTING 3L-11TM TOP & BTM R6 TIES AT 300 CTS.

SP

172 STEP DOWN

STARTING POINT

STARTING POINT

USE 300 PODS

USE 225 PODS

172 STEP DOWN

400 WIDE x 400 DEEP STRIP FOOTING 3L-11TM TOP & BTM R6 TIES AT 300 CTS.

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STARTING POINT

STARTING POINT

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USE 225 PODS

172 STEP DOWN

400 WIDE x 400 DEEP STRIP FOOTING 3L-11TM TOP & BTM R6 TIES AT 300 CTS.

SP

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STARTING POINT

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STARTING POINT

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STARTING POINT

STARTING POINT

USE 300 PODS

USE 225 PODS

172 STEP DOWN

400 WIDE x 400 DEEP STRIP FOOTING 3L-11TM TOP & BTM R6 TIES AT 300 CTS.

SP

172 STEP DOWN

STARTING POINT

STARTING POINT

USE 300 PODS

USE 225 PODS

172 STEP DOWN

400 WIDE x 400 DEEP STRIP FOOTING 3L-11TM TOP & BTM R6 TIES AT 300 CTS.

SP

172 STEP DOWN

STARTING POINT

STARTING POINT

USE 300 PODS

USE 225 PODS

172 STEP DOWN

400 WIDE x 400 DEEP STRIP FOOTING 3L-11TM TOP & BTM R6 TIES AT 300 CTS.

SP

172 STEP DOWN

STARTING POINT

STARTING POINT

USE 300 PODS

USE 225 PODS

172 STEP DOWN

400 WIDE x 400 DEEP STRIP FOOTING 3L-11TM TOP & BTM R6 TIES AT 300 CTS.

SP

172 STEP DOWN

STARTING POINT

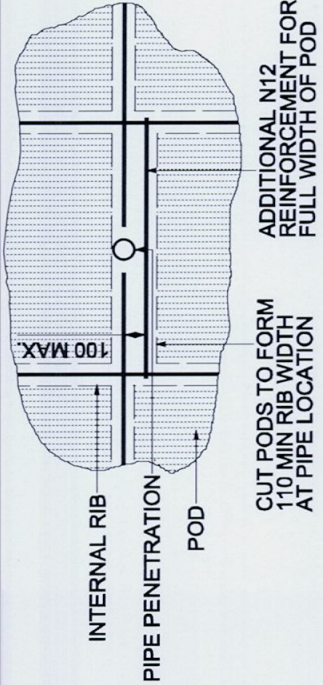
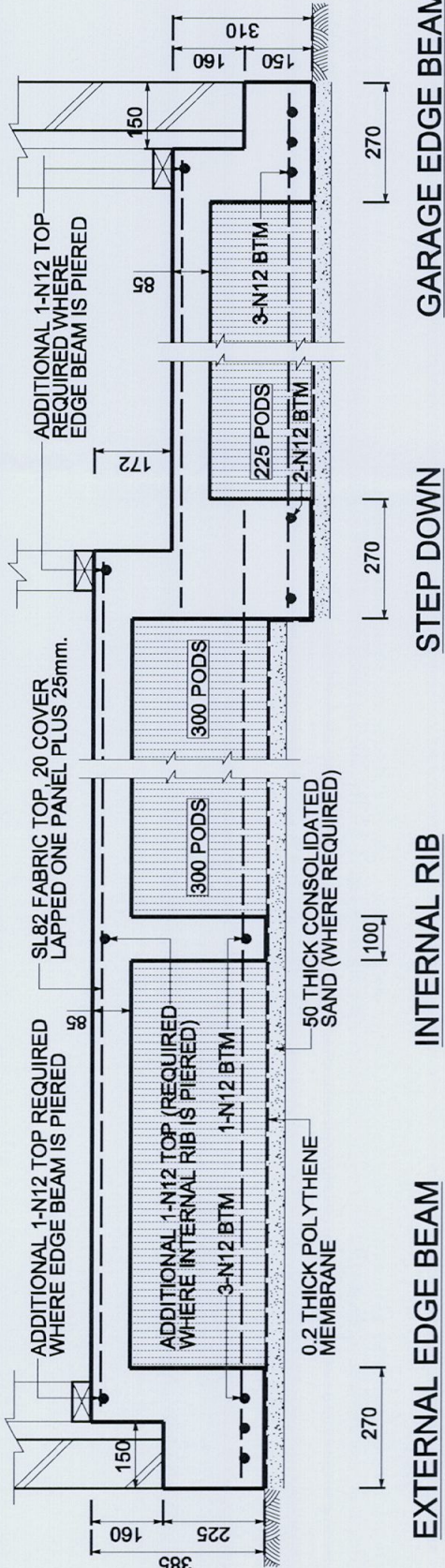
STARTING POINT

USE 300 PODS

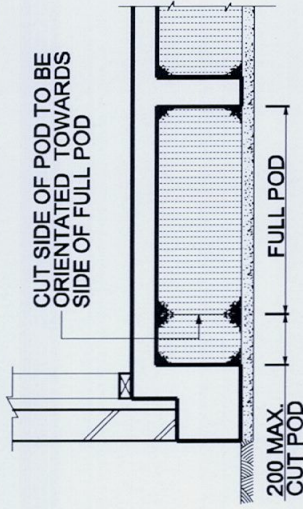
USE 225 PODS

172 STEP DOWN

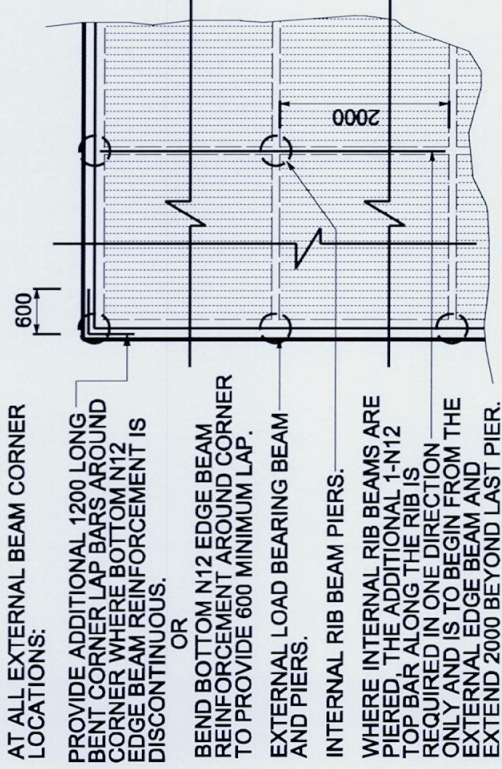
400 WIDE x 400 DEEP STRIP FOOTING 3L-11TM TOP & BTM R6 TIES AT 300 CTS.



PIPE PENETRATION THROUGH RIB



POD EXTENSION DETAIL

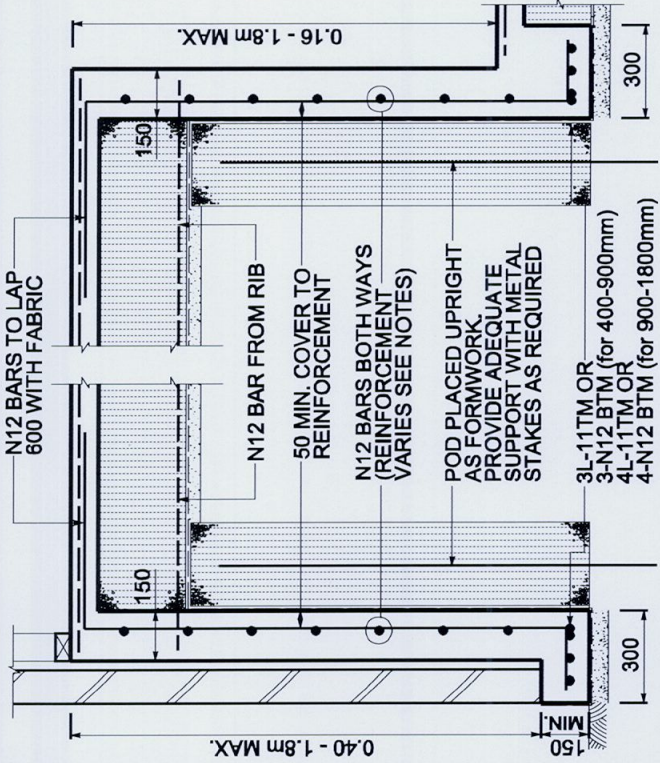


PROVIDE 400 DIA. CONCRETE PIERS TO CLAY AND SAND, OR 300 DIA. TO ROCK OR SHALE. SPACE PIERS AT 2400 CTS AS SHOWN ALONG EXTERNAL EDGE BEAM, UNLESS NOTED OTHERWISE

PIERS REQUIRED UNDER INTERNAL RIB BEAMS WHEN CONSTRUCTED ON MORE THAN 300mm OF UNCONTROLLED/NON-COMPACTED MATERIAL, OR AS SHOWN.

N12 BARS CAN BE REPLACED WITH 10.65mm HDW (450MPa STRESS GRADE)

REINFORCEMENT FOR RIBS AND BEAMS			
WIDTH	TOP STEEL	BTM STEEL	
271-330	1-N12	3-N12	
331-440	2-N12	4-N12	
441-550	3-N12	5-N12	
551-660	4-N12	6-N12	



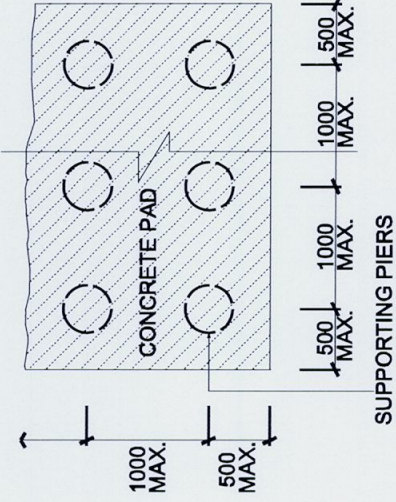
DEEP BEAM DEPTH	BEAM REINFORCEMENT
180 - 400mm	N12 BARS AT 1200 CENTRES & 1-N12 HORIZONTAL
400 - 900mm	N12 BARS AT 600 CENTRES & 1-N12 CENTRALLY
900 - 1500mm	N12 BARS AT 300 CENTRES BOTH WAYS
1500 - 1800mm	N12 BARS AT 200 CENTRES BOTH WAYS

PAD DETAIL

FOR RAINWATER TANK, LPG & A/C UNITS ETC. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS.

SPACE PIERS AS REQUIRED TO SUIT PAD SIZE:

- 500 MAXIMUM TO EDGE OF SLAB FOR PERIMETER PIERS.
- 1000 MAXIMUM CENTRES IF ADDITIONAL INTERNAL PIERS ARE REQUIRED FOR PAD SIZE.



RAFELETOS

ACN 079047486
LEVEL 2, 103 VANESSA STREET
KINGSGROVE NSW 2208
PO BOX 161 KINGSGROVE NSW 2208



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B.E. M.I.E. AUST.



COSMOPOLITAN
LIVING

CLIENT
LOCATION

MCUDDEN
LOT 174 SHEARWATER DR WARRIEWOOD

CLASSIFICATION
ISSUE

H
A

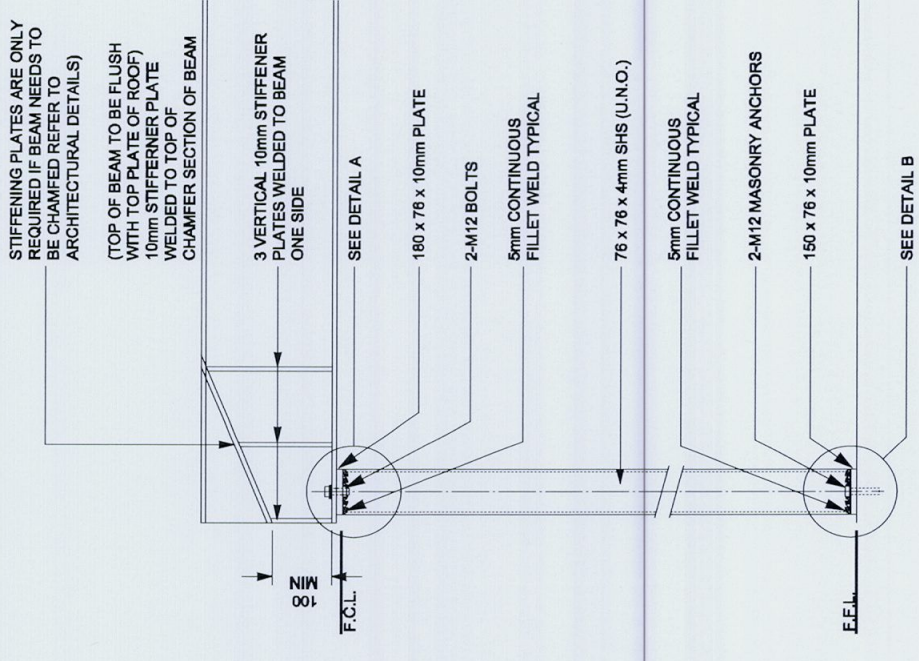
SCALE
DATE

NTS.
28/01/10

SHEET No.
JOB No.

2
33307 CP

STRUCTURAL DETAIL PLAN



150 x 75 x 10mm
PLATE

2-M12 MASONRY
ANCHORS

5mm CONTINUOUS
FILLET WELD
TYPICAL

STUD

STUD

180 x 75 x 10mm
PLATE

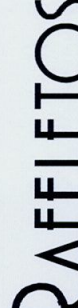
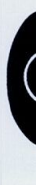
2-M12 BOLTS

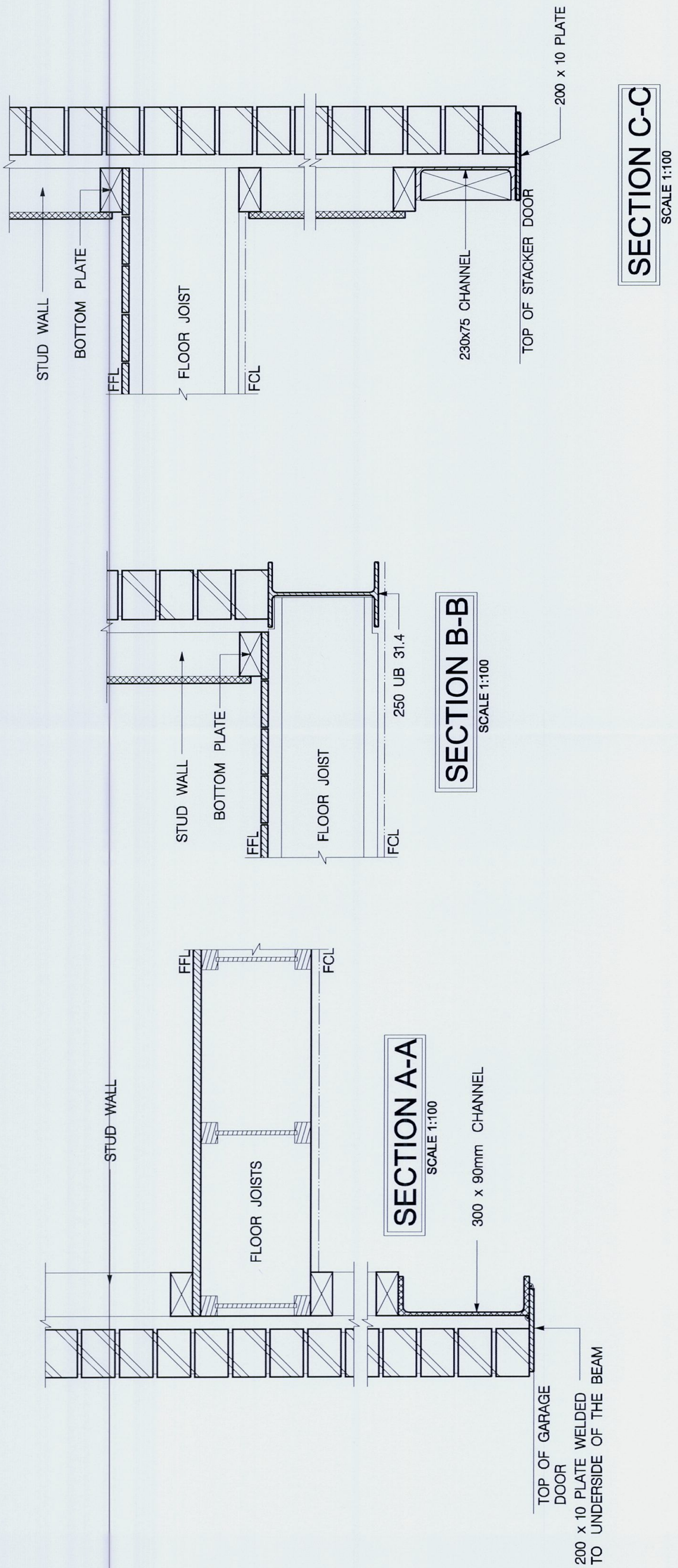
STUD

STUD

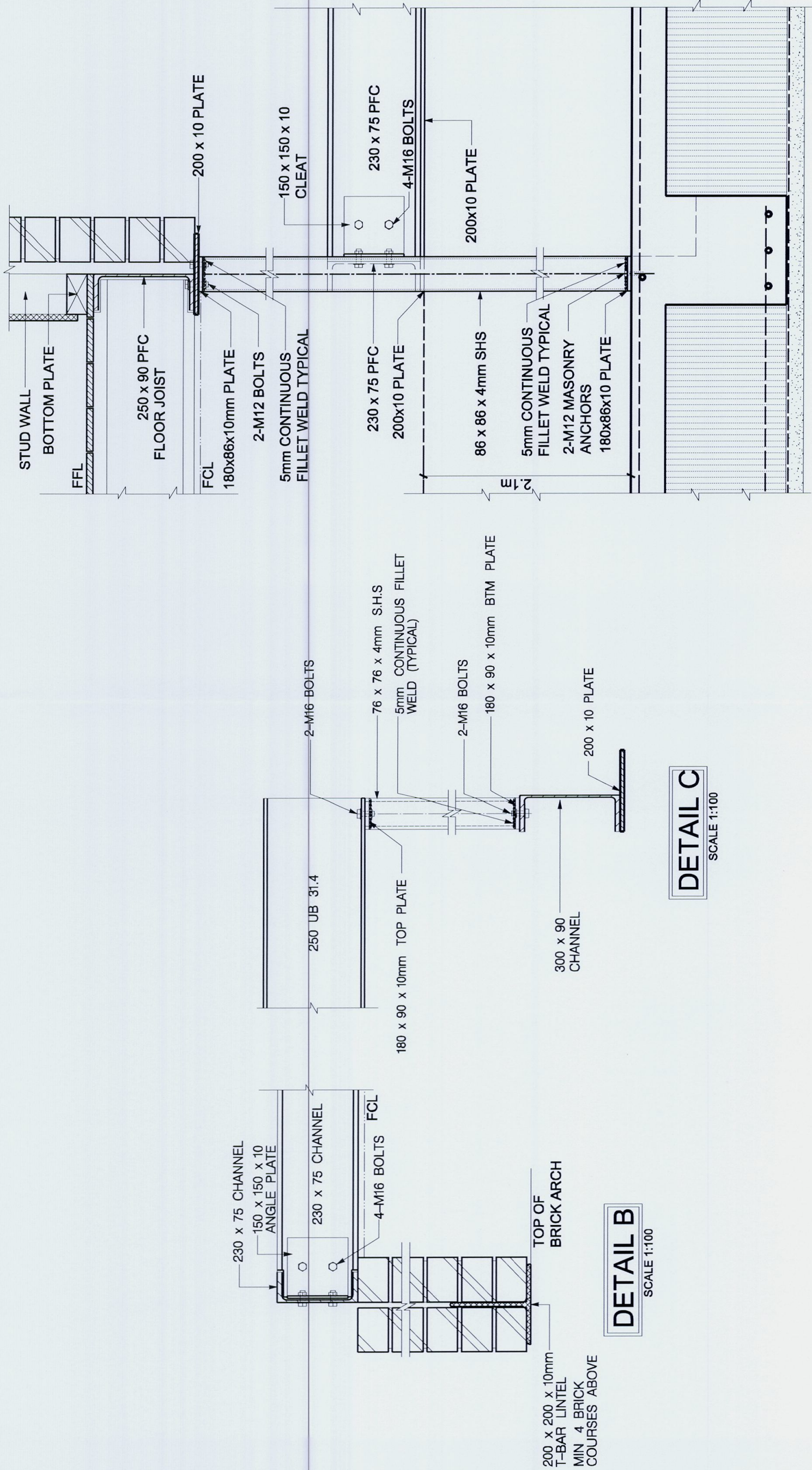
NOTE:

- ALL STEELWORK TO BE PAINTED WITH AN APPROVED CORROSIVE RESISTANT PRIMER.
- NOTE: IF BUILDING IS LOCATED WITHIN 1.0 KM OF THE COAST, ENGINEER IS TO NOTIFY AND STEEL BEAMS ARE TO BE GALVANISED.
- SHS: DENOTES SQUARE HOLLOW SECTION OR STEEL POST. ALL POST TO BE 76 x 76 x 4mm SHS, BUILD POST INTO STUD FRAMEWORK
- DS: DENOTES DOUBLE 90 x 90 HARDWOOD STUDS.
- ASHS: DENOTES SQUARE HOLLOW SECTION STEEL POSTS.

 RAFELETOS ABN: 35 079 047 486 LEVEL 2, 103 VANESSA STREET KINGSGROVE NSW 2208 PO BOX 161 KINGSGROVE NSW 2208  ZANUTTINI Pty Ltd FASCILIMILE: (02) 9554 9764 TELEPHONE : (02) 9554 9311 EMAIL: admin@zan.com.au		 B.E. M.I.E. AUST.		 COSMOPOLITAN LIVING		STRUCTURAL STEEL DETAIL PLAN			
CLIENT		MCUDDEN							
LOCATION		LOT 174 SHEARWATER DR WARRIEWOOD							
DRAWN	E.V.	SCALE	1:100	SHEET No.	3				
ISSUE	A	DATE	28/01/10	JOB No.	33307 CP				
REFERENCE		909441							



STRUCTURAL STEEL DETAIL PLAN						
 RAFELETOS ABN: 35 079 047 466 LEVEL 2, 103 VANESSA STREET KINGSGROVE NSW 2208 PO BOX 161 KINGSGROVE NSW 2208	 ZANUTTINI Pty Ltd FASCILMILE: (02) 9554 9764 TELEPHONE : (02) 9554 9311 EMAIL: admin@rafzan.com.au	 COSMOPOLITAN LIVING		CLIENT	MCUDDEN	
		LOCATION	LOT 174 SHEARWATER DR WARRIEWOOD		DRAWN	E.V.
		ISSUE	909441	SCALE	1:100	SHEET No.
B.E.,M.I.E. AUST.		REFERENCE	28/01/10	DATE	JOB No.	
					33307 CP	



DETAIL D

SCALE 1:100

DETAIL C

SCALE 1:100

DETAIL B

SCALE 1:100

RAFELETOS
ABN: 35 079 047 466
LEVEL 2, 103 VANESSA STREET
KINGSGROVE NSW 2208
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[Signature]
B.E., M.I.E. AUST.



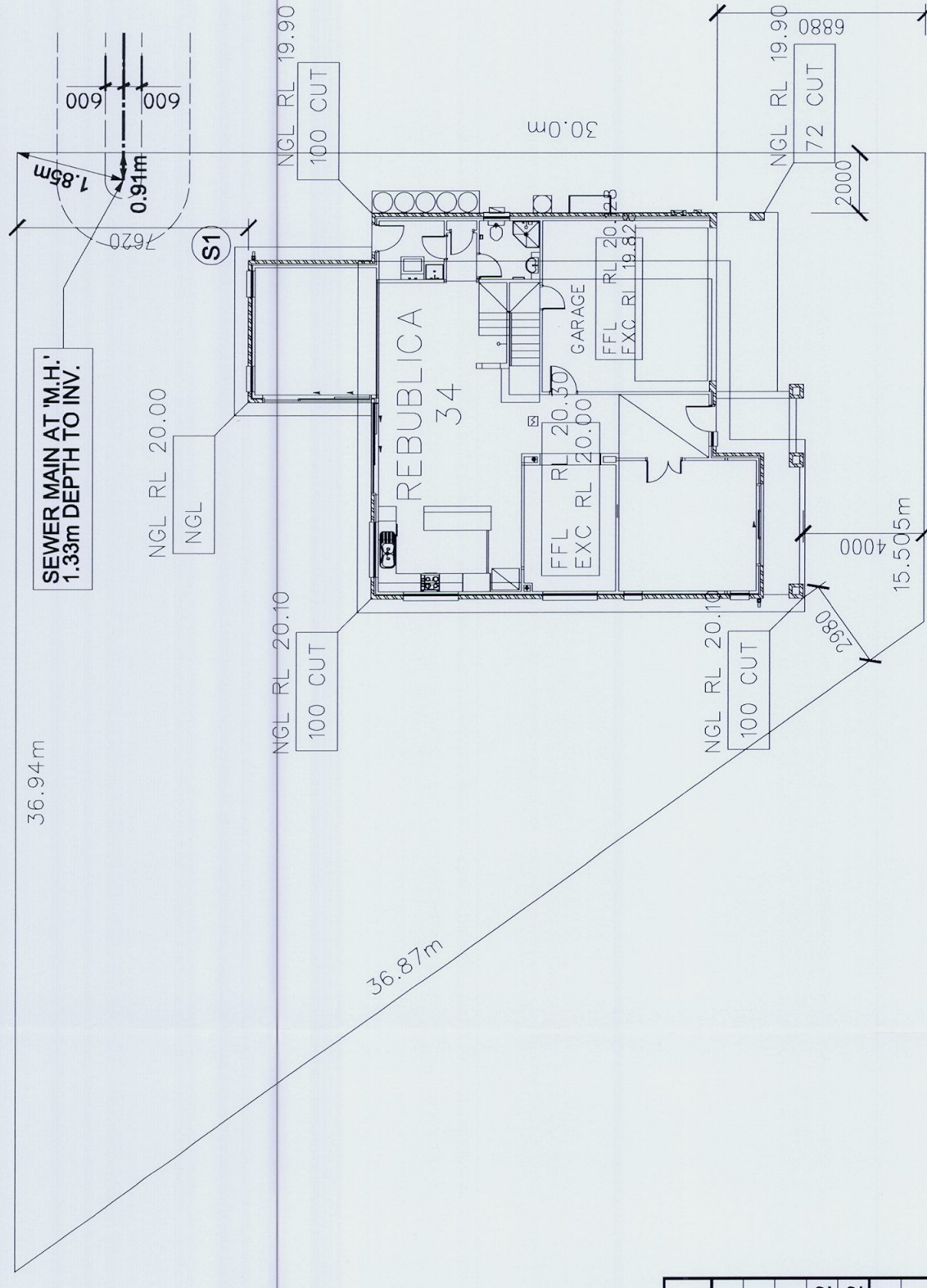
COSMOPOLITAN
LIVING

STRUCTURAL STEEL DETAIL PLAN

CLIENT	MCUDDEN			
LOCATION	LOT 174 SHEARWATER DR WARRIEWOOD			
DRAWN	E.V.	SCALE	1:100	SHEET No. 5
ISSUE	A	DATE	28/01/10	JOB No. 33307 CP

REFERENCE 909441

NOT AFFECTED BY Z.O.I.



SEWER CALCULATIONS

SEWER CALCULATIONS	S1
ANGLE OF REPOSE (CLAY 1:1, SAND 2:1)=	1
ZONE OF INFLUENCE HALF TRENCH WIDTH (m) =	0.6
PERPENDICULAR DISTANCE FROM SEWER TO PIER (m)	4.12
FINISHED PLATFORM LEVEL AT PIER LOCATION =	19.92
SEWER INVERT LEVEL AT SECTION LOCATION =	18.62
PIER DEPTH FROM FINISHED PLATFORM LEVEL (m) =	0.00
Z.O.I. EXTENT FROM SEWER USING PLATFORM LEVEL (m) =	1.90

NOTES:

POSITION OF SEWER IS ONLY APPROXIMATE.
POSITION AND DEPTH OF SEWER TO BE VERIFIED
ON SITE PRIOR TO COMMENCEMENT OF ANY WORK.

PIER DEPTHS AS SHOWN ARE FOR ZONE OF INFLUENCE REQUIREMENTS ONLY. PIERS ARE TO BE FOUNDED ON NATURAL BEARING AS PER ENGINEERING REQUIREMENTS WHERE NECESSARY.

SHEARWATER DRIVE

RAFELETOS

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COSMOPOLITAN
LIVING

SEWER SITE PLAN

CLIENT LOCATION	MCUDDEN LOT 174 SHEARWATER DR WARRIEWOOD		
DRAWN	E.V.	SCALE	1:200
ISSUE	A	DATE	28/01/10
		SHEET No.	6
		JOB No.	33307 CP

