

ABN: 92 161 548 625
PO Box 80, Thornleigh NSW 2120
ph: 9473 5488 fax: 9980 2166

CONSTRUCTION CERTIFICATE No:

RECEIVED

10 DEC 2013
X2013-02047

PITTWATER COUNCIL

Signature:

Dom Di Matteo

Approval Date: 29/11/2013

I certify that work completed in accordance with 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 this Regulation as are referred to in Section 81A(5) of the Act. Issued in accordance with the provisions of the Environmental & Assessment Act of 1979 under Sections 109C(1)(b) and 109F

Date Application Received: 11/11/2013

Application Date: 25/11/2013

Council: Pittwater Council

Development Consent No: N0221/13

Approval Date: 11/11/2013

Name of Certifying Authority:

Dom Di Matteo

Accreditation No:

1869

Accreditation Body:

BUILDING PROFESSIONALS BOARD

Applicant: Keith Charles Cox & Hiu Yu Carol Leung C/- Rawson Homes Pty Ltd

Address: PO Box 3099 Rhodes 2138

Contact Number: 8765 5500

Owner: Keith Charles Cox & Hiu Yu Carol Leung

Address: 94 Desmond Street Merrylands 2160

Contact Number: 0414 742 536

Site Address: Lot 4 DP 270730 No 3 Ibis Place Warriewood 2102

Description of Development: Construction of a new two storey dwelling with attached garage

Building Code of Australia Classification: 1a

Value of Work: \$380286.00

Builder Details

Name: Rawson Homes Pty Ltd

Licence / Permit Number: 33493C

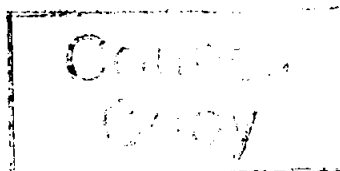
Address: PO Box 3099 Rhodes 2138

Contact Number: 8765 5500

Approved Plans and Documents

Plans Prepared By	Drawing Nos.	Dated
Rawson Homes Pty Ltd	Job J002654 Drawing 1 - 12 Issue E	18/11/2013
A Total Concept	Project Rawson Drawing L/01 Issue B	13/11/2013
Rawson Homes Pty Ltd	External Colour Selections	Undated
BASIX	487416S_04	29/10/2013
HIA	Specifications	Undated

Engineer Details	Drawing Nos.	Dated
Residential Engineering	Job RW1214 Sheet 01/08 - 08/08 Issue B	13/11/2013
Nasseri Associates	Job D2813 Sheet 1 - 4 Issue A	29/07/2013



Application for Section 139 Consent to Work in a Public Road Reserve (including Driveways)

PLEASE PRINT

Applicant / Owner: RAWSON HOMES PTY LTD

Company Name (if applicable): ↑ ↑

Postal Address: PO Box 3099 Rhodes Postcode: 2138

Phone (Work): 8765 5500 Phone (Mobile):

Applicant

Name: Rawson Homes Pty Ltd

Signature: [Signature]

Date: 12.11.13

Owners consent

Name: Please see attached

Signature:

Date:

Property Address: Lot 4, No. 3 Ibis Place Warriewood

Development Application (DA) No. (where applicable): No. 221/13

Nature of Work:

☒ Driveway ☐ Retaining wall (specify type)

☐ Road pavement ☐ Stairs ☐ Footpath paving ☐ Landscape treatment

☐ Kerb and gutter ☐ Other (please specify)

Plans are to be attached (Yes) / No

Description of works: Construction of driveway

Note A: Residential - single dwelling & dual occupancy in association with a Development Consent

Note B: Other than residential - single dwelling and dual occupancy in association with a Development Consent

FEES

	No DA required	DA (see Note A)	DA (see Note B)
Access Driveway only across road reserve (boundary to pavement edge) and Landscape Treatment (includes 2 site inspections) per allotment.	\$270	<u>\$320</u>	\$370
Access Driveway and/or retaining structures / stair structures / special landscape treatment (includes 2 site inspections) per allotment	\$430	\$430	\$640
Fee per additional site inspection	\$270	\$270	\$270

Notes:

- This application will not be considered until the required fees have been paid.**
- This application does **NOT** constitute an approval to commence or proceed with any work.
- A Section 139 Consent is required under the Roads Act 1993.
- Following payment of the required fees, the application will be assessed by Council's Urban Infrastructure Business Unit. If the application is approved, a written consent, including conditions, will be issued by the Road Authority (Council).
- WORK MAY ONLY COMMENCE FOLLOWING RECEIPT OF THE WRITTEN CONSENT FROM COUNCIL. THE CONSENT MUST BE KEPT ON SITE AT ALL TIMES DURING THE WORKS.**

Office Use Only: (1.7.2013 - 30.6.2014)

CODE: EREC

Late Fee: \$770 when work commenced prior to issue of Section 139 Consent

FEE: \$320.00 RECEIPT NO: 353394 ISSUED BY: D. Brown DATE: 5/12/13

Enquiries: - please contact Boondah Works Depot Ph: (02) 9970 1180

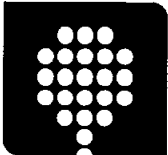
NOTE TO CUSTOMER SERVICE:

PHOTOCOPY APPLICATION FORM AND STAPLE WITH RECEIPT FOR CUSTOMER'S RECORD

Rawson Homes Pty Limited

PQ Box 3099, Rhodes NSW 2138
Building F, Level 2, Suite 1
1 Homebush Bay Drive
Rhodes NSW 2138

ABN 67 053 733 841



Pittwater Council
MONA VALE NSW 2103

Payment advice

Document Date
13.11.2013
Telephone
(02) 8765 5500
Email
accounts@rawson.net.au
Your account with us
100730

< - Fold here --

->

Dear Sir/Madam,

Please find enclosed our cheque, number 009619 to clear the items listed below:

Your document	Date	Deductions	Gross amount
J2654	12.11.2013	0.00	320.00
Sum total		0.00	320.00

Rawson is moving to a new location! From Friday 16th August, our head office details will be:

1 Homebush Bay Drive, Building F, Level 2, Suite 1, Rhodes NSW 2138
PO Box 3099 , Rhodes NSW 2138
DX 23814 Strathfield Exchange
Main phone number: (02) 8765 5500
Fax Number: (02) 8765 8099

Please direct all correspondence to this new address.

< -

->

Date
13.11.2013

Payment amount
*****320.00*

Mr Keith Charles Cox and Ms Hiu Yu Carol Leung
94 Desmond Street
Merrylands NSW 2160

Rawson Homes Pty Ltd
Homebush Business Village
34, 11-21 Underwood Road
Homebush NSW 2140

LETTER OF AUTHORITY

I/We hereby give Rawson Homes Pty Limited the authority to submit a Development Application, Construction Certificate Application and any other Applications required by the appropriate Council on our behalf.

I/We also give consent for authorised Council officers to enter the land to carry out inspections.

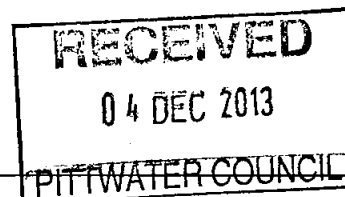
BUILDING ADDRESS Lot 4 Ibis Place, Warriewood

NAME KEITH CHARLES COX HIU YU CAROL LEUNG
SIGNED KCC - Cox HYL
DATE 14/12/12



Notice to council of determination of application for a certificate

Council
Copy



NOTICE TO (Insert council's details and address)

Council name
Pittwater Council

SECTION A. NOTICE

As required by clause 142(2) of the EP&A Regulation 2000 (the Regulation), notice is hereby given of the determination of the following application:

Applicants name Keith Charles Cox & Hiu Yu Carol Leung C/- Rawson Homes Pty Ltd

Development address Lot 4 DP 270730 No 3 Ibis Place Warriewood 2102

Date received 11/11/2013 Date determined 29/11/2013

SECTION B. Attachments (tick appropriate box(es))

☒ Application for construction certificate ☒ Determination of application ☒ Construction Certificate ☒ Record of inspection made under clause 143B of the Regulation ☒ Other endorsed documents lodged with the application for the certificate or received under clause 140 of the Regulation

SECTION C. Certifying Authority

Name Domenic Di Matteo  Signature

Accreditation No. 1869 Date 29/11/2013

\$36 REC: 353277 4/12/13

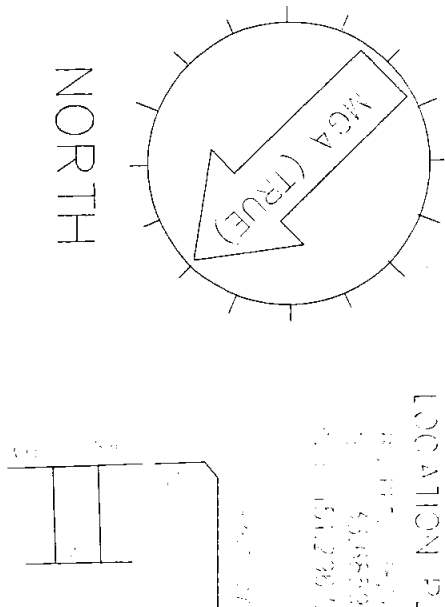
SITE NOTES:

BEFORE STARTING WORK ON SITE CHECK FOLLOWING:

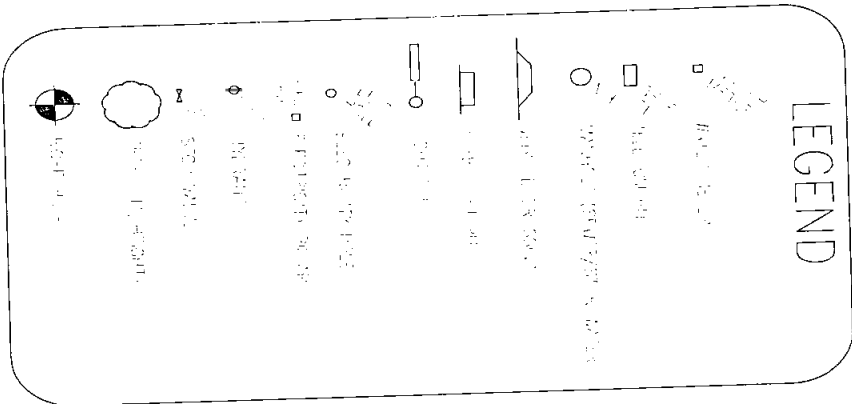
- SERVICE LOCATIONS
- SEWER CONNECTION POSITION
- DRIVEWAY ALIGNMENT & LEVELS

dp INDICATES DOWNPIPE LOCATION

LOCATION PLAN

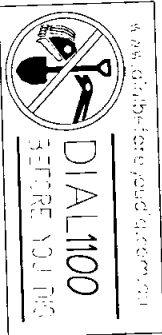
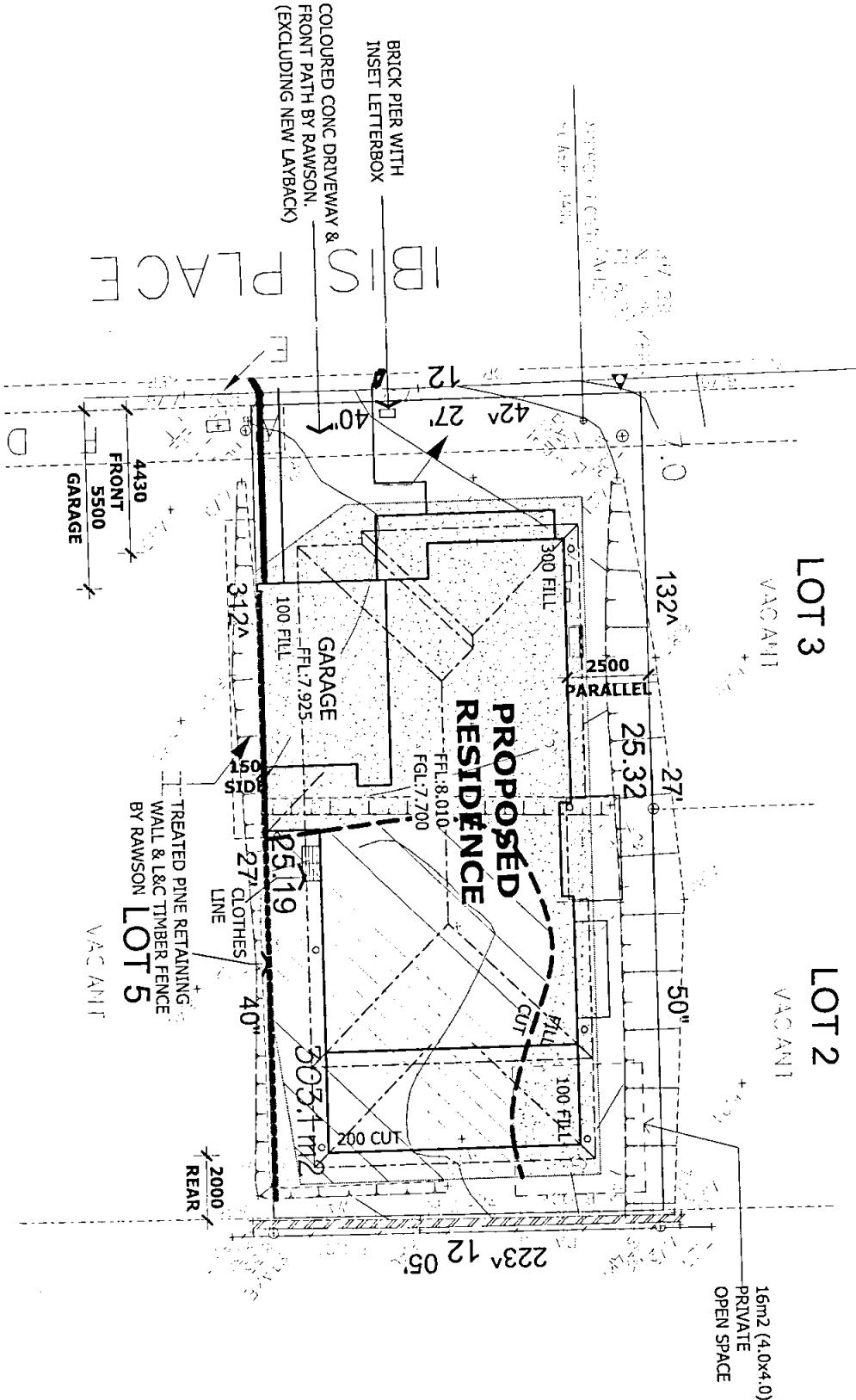


LEGEND



SITE CALCULATIONS	
GROUND FLOOR	118.07 m ²
FIRST FLOOR	120.47 m ²
TOTAL LIVING AREA	238.54 m ²
SITE AREA	303.10 m ²
BUILDING FOOTPRINT	171.80 m ²
ESTIMATED DRIVEWAY & PATH	17.40 m ²
LANDSCAPE AREA	113.90 m ²
FLOOR SPACE RATIO	0.79 :1
TOTAL BUILT UPON AREA	62.42 %

PRIVATE OPEN SPACE = 71.00 m²



LEGEND
KO DENOTES KERB OUTLET
W/EC/TC DENOTES SERVICE CONDUIT
SV DENOTES STOP VALVE
H/D DENOTES HYDRANT
NOTE: CONTOURS SHOWN HAVE BEEN INTERPOLATED FROM SPOT
LEVELS TAKEN ON-SITE AND ARE A REPRESENTATION OF THE
TOPOGRAPHY ONLY.
DIMENSIONS SHOWN (BEARINGS & DISTANCES) HAVE BEEN
DETERMINED BY LAND AND PROPERTY INFORMATION PLANS.
ONLY: BOUNDARIES HAVE NOT BEEN ACCURATELY DETERMINED.
SERVICES SHOWN HAVE BEEN LOCATED WHERE POSSIBLE BY
FIELD SURVEY. PRIOR TO CONTACTED TO DETERMINE EXACT
POSITION OF ANY UNDERGROUND PIPES, CABLES ETC.
DIMENSIONS OF ANY TREES SHOWN ON THE PLAN ARE APPROX.

NOTES:

PLEASE NOTE: DETAILS SHOWN ON THESE PLANS ARE INTENDED
TO BE ACCURATE - HOWEVER INFORMATION WRITTEN INTO
INDIVIDUAL CONTRACTS WILL TAKE PRECEDENCE OVER PLANS

- * ALL DIMENSIONS ARE IN MILLIMETRES
- * DO NOT SCALE - USE WRITTEN DIMENSIONS

RAWSON HOMES



UNIT 34/11-21 UNDERWOOD ROAD
HOMEBUSH NSW 2140
TELEPHONE 02 9764 6442
FAX 02 9764 6992
Builder's licence No. 33493C

CLIENT: MR COX & MS LEUNG

SITE ADDRESS:

LOT 4 (DP:270730)
IBIS PLACE
WARRIEWOOD

HOUSE TYPE

MODEL: KEMPSEY 30

FACADE: TREND

TYPE: SINGLE GARAGE

SPECIFICATION: LUXE + GOLD

DRAWING TITLE:

SITE PLAN

DRAWN BY: DATE DRAWN: CHECKED BY:

WA 24.01.13 Checker

APPROVED FOR CONSTRUCTION:

SCALE:

1 : 200

JOB No:

J002654

DRWG No:

2

ISSUE:

D

Home Warranty Insurance
Certificate of Insurance

Policy Number BNR033211BWI-465



Home Warranty
Insurance Fund

QBE Insurance (Australia) Ltd
Level 3, 85 Harrington St
SYDNEY NSW 2000
Phone: 1300 790 723
Fax: 02 8275 9330
ABN: 78 003 191 035
AFS License No: 239545



MR KEITH CHARLES COX &
94 DESMOND STREET
MERRYLANDS 2160

Name of Intermediary
FINSURA INSUR BROKERS PTY LTD
P O BOX 686
CASTLE HILL NSW 1765

Account Number
BN2085264
Date Issued
30/09/2013

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 as agent for and on behalf of the NSW Self Insurance Corporation (SICorp) (ABN 97 369 689 650) who is responsible for management of the Home Warranty Insurance Fund.

In Respect of	NEW SINGLE DWELLING CONSTRUCTION CONTRACT
At	LOT 4, IBIS PLACE WARRIEWOOD NSW 2102
Carried Out By	BUILDER RAWSON HOMES PTY LTD ABN: 67 053 733 841
Declared Contract Price	\$385,259.00
Contract Date	01/10/2013
Builders Registration No.	U33493C
Building Owner / Beneficiary	MR KEITH CHARLES COX & MS HIU YU CAROL LEUNG

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.

Signed for and on behalf of NSW Self Insurance Corporation (SICorp)

Ty Ayscough

IMPORTANT NOTICE:

In addition to this certificate of insurance, a policy wording which outlines the terms and conditions of the cover provided is available from the HWIF website. To access that policy wording visit www.homewarranty.nsw.gov.au

QM1824-1207



RECEIVED

27 NOV 2013

1-3 Thornleigh St,
Thornleigh NSW 2120
P: 9473 5488
F: 9980 2166
E: admin@fbcc.com.au

Council
Copy

SECTION 1: APPLICATION FORM

1. APPLICATION FOR CONSTRUCTION/COMPLYING DEVELOPMENT CERTIFICATE
2. CONTRACT FOR THE PERFORMANCE OF BUILDING CERTIFICATION WORK

Principal Certifying Authority Agreement, Issued under the Environmental Planning & Assessment Act 1979

Privacy policy – The information you provide in this application will enable your application to be assessed by the certifying authority under the Environmental Planning and Assessment Act 1979. If the information is not provided, your application may not be accepted. The application can potentially be viewed by members of the public. Please contact D M Certifiers if the information you have provided in your application is incorrect or requires modification.

- ☒ Construction Certificate
- ☐ Complying Development Certificate
- ☒ Contract agreement for the performance of Building Certification Work
- ☐ Engagement as Principal Certifying Authority

Date of Receipt of Application: _____

Development Consent No: No 221 / 13 Approval Date: 6th Nov 13

Name of Consent Authority: Pittwater Council Related Development Consent No: _____

KEITH CHARLES COX - HIR VULGARU WUNGC
APPLICANT (This MUST be the Owner/Authorised Agent)

Name/s: Rawson Homes Pty Ltd

Postal Address: PO Box 3099 Rhodes 2138

Ph: 8765 5500 Email: angela.loulli@rawson.net.au

LAND TO BE DEVELOPED

No. 3 Street: 1bis Place Warriewood

Lot: 4 DP: 270730 SP: _____

DETAILS OF DEVELOPMENT (particulars)

Description of work: Construction of a double storey dwelling

Estimated Cost of Works: \$385,159 Class of Building: 1a

DETAILS OF BUILDER

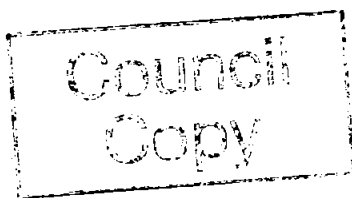
Name: Rawson Homes Pty Ltd

License No: 33493C2

Address: PO Box 3099 Rhodes

Phone No: 8765 5500

Initialed: KC/b date: 25/11/13



1-3 Thornleigh St,
Thornleigh NSW 2120
P: 9473 5488
F: 9980 2166
E: admin@fbcc.com.au

INSPECTION REPORT FORM

Applicant:	Inspection Type: <u>Plat</u>
	Date Of Inspection: <u>28/11/2013</u>
	Contact on Site: <u>KAWSON HOMES</u>
	Ph: <u>87655500</u> Fax:
Booked By:	Email:

Address:	<u>LOT 41 BIRCH PLACE, WARRIEWOOD</u>
----------	---------------------------------------

Notes:

Result:

- | | |
|--|-------------------------------------|
| The work is satisfactory | ☒ |
| Complete the works below and proceed with construction | ☐ |
| Complete the works below and request a re-inspection | ☐ |
| Contact us immediately prior to proceeding | ☐ |
| Provide certificate for _____ | ☐ |

Comments:

Inspector: Sean Curtis

Date: 28/11/2013

Accreditation No: 1796

Signature: [Signature]

THE INTERNAL DRIVEWAY
FINISH IS TO COMPLY
WITH DD COND #02



- EST 1978 -

2013/02047

Issued by DM Certifiers P/L BPB 1869

PLEASE NOTE: DETAILS SHOWN ON THESE PLANS ARE INTENDED TO BE ACCURATE - HOWEVER INFORMATION WRITTEN INTO INDIVIDUAL CONTRACTS WILL TAKE PRECEDENCE OVER PLANS

- * ALL DIMENSIONS ARE IN MILLIMETRES
- * DO NOT SCALE - USE WRITTEN DIMENSIONS
- * ALL DIMENSIONS ARE TO STRUCTURAL FRAMES ONLY EXCLUDING FINISHED SURFACES

LEVEL 2, SUITE 1
RHODES NSW 2138
TELEPHONE 02 8765 5500
FAX 02 8765 8099
Builder's licence No. 33493C

MR COX & MS LEUNG

LOT 4 (DP:270730)

WARRIEWOOD

MODEL: KEMPSEY 30

TYPE: SINGLE GARAGE

SPECIFICATION: LUXE + GOLD

DRAWING TITLE:

COVER SHEET

SIGNATURE:

WA	24.01.13	Checker	CONSTRUCTION
----	----------	---------	--------------

COUNCIL AREA:

PITTSBURGH

JOB No: _____

DRWG No	
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三

* ALL DIMENSIONS ARE IN MILLIMETERS

* ALL DIMENSIONS ARE IN MILLIMETERS

* DO NOT SCALE THE DRAWING - USE WRITTEN DIMENSIONS

* IT IS THE RESPONSIBILITY OF THE OWNER TO ENSURE THAT THE LAYOUT AND ALL SPECIAL INCLUSIONS ARE CORRECT

* RAWSON HOMES PTY. LIMITED WILL TAKE NO RESPONSIBILITY FOR ANY VERBAL DISCUSSIONS OR INSTRUCTIONS. ALL CHANGES AND SPECIAL INCLUSIONS MUST BE DOCUMENTED IN WRITING.

* THIS DRAWING IS SUBJECT TO COPYRIGHT LAWS AND
MAY NOT BE COPIED WITHOUT THE WRITTEN
PERMISSION OF RAWSON HOMES PTY. LIMITED - ACN 05
733 841

SCHEDULE OF DRAWINGS:

<u>SHEET</u>	
<u>CONTENTS</u>	
1	COVER SHEET
2	SITE PLAN
3	GROUND FLOOR PLAN
4	FIRST FLOOR PLAN
5	ELEVATIONS 1-2
6	ELEVATIONS 3-4
7	SECTIONS
8	SLAB SETOUT PLAN
9	KIT. & WET AREA DET.
10	EROSION CONTROL PLAN
11	SHADOW DIAGRAM
12	SITE ANALYSIS

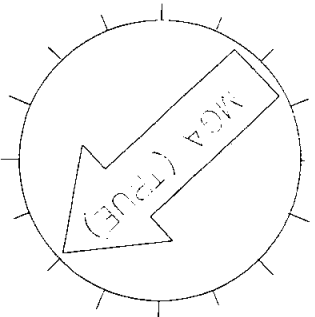


SITE NOTES:

BEFORE STARTING WORK ON SITE CHECK FOLLOWING:

1. SERVICE LOCATIONS
2. SEWER CONNECTION POSITION
3. DRIVEWAY ALIGNMENT & LEVELS

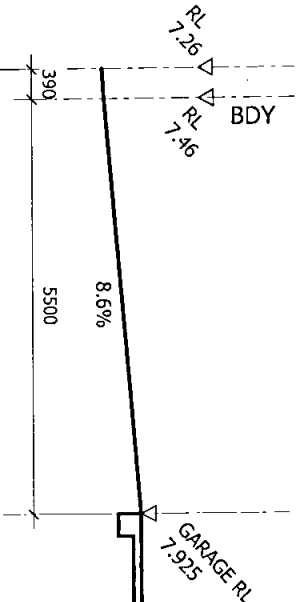
dp INDICATES DOWNPIPE LOCATION



NORTH

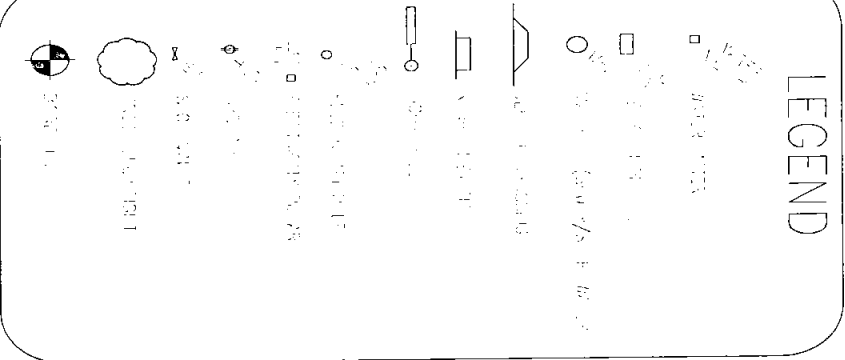
DRIVEWAY DETAIL

SCALE: 1 : 100



SITE CALCULATIONS	
GROUND FLOOR	118.07 m ²
FIRST FLOOR	120.47 m ²
TOTAL LIVING AREA	238.54 m ²
SITE AREA	303.10 m ²
BUILDING FOOTPRINT	171.80 m ²
ESTIMATED DRIVEWAY & PATH	17.40 m ²
LANDSCAPE AREA	113.90 m ²
FLOOR SPACE RATIO	0.79 :1
TOTAL BUILT UPON AREA	62.42 %

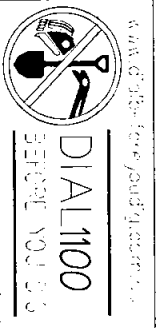
PRIVATE OPEN SPACE = 71.00 m²



LEGEND
KO DENOTES KEEP OUTLET
WC/ELECT DENOTES SERVICE CONDUIT
SVV DENOTES STOP VALVE
HYD DENOTES HYDRANT

NOTE: CONTOURS SHOWN HAVE BEEN INTERPOLATED FROM SPOT
LEVELS TAKEN ON-SITE AND ARE A REPRESENTATION OF THE
TOPOGRAPHY ONLY.

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NOTES:

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EXCLUDING FINISHED SURFACES

RAWSON HOMES

1 HOMEBUSH BAY DRIVE, BLDG. F
LEVEL 2, SUITE 1
RHODES NSW 2138
TELEPHONE 02 8765 5500
FAX 02 8765 8099
Builder's licence No. 33493C



CLIENT:

MR COX & MS LEUNG

SITE ADDRESS:

LOT 4 (DP:270730)
IBIS PLACE
WARRIEWOOD

HOUSE TYPE

KEMPSEY 30

MODEL:

FACADE:

TREND
SINGLE GARAGE
SPECIFICATION: LUXE + GOLD

DRAWN BY:

WA 24.01.13

CHECKED BY:

Checker

APPROVED FOR:

CONSTRUCTION:

COUNCIL AREA:

PITTWATER

SCALE:

As indicated

JOB No:

J002654

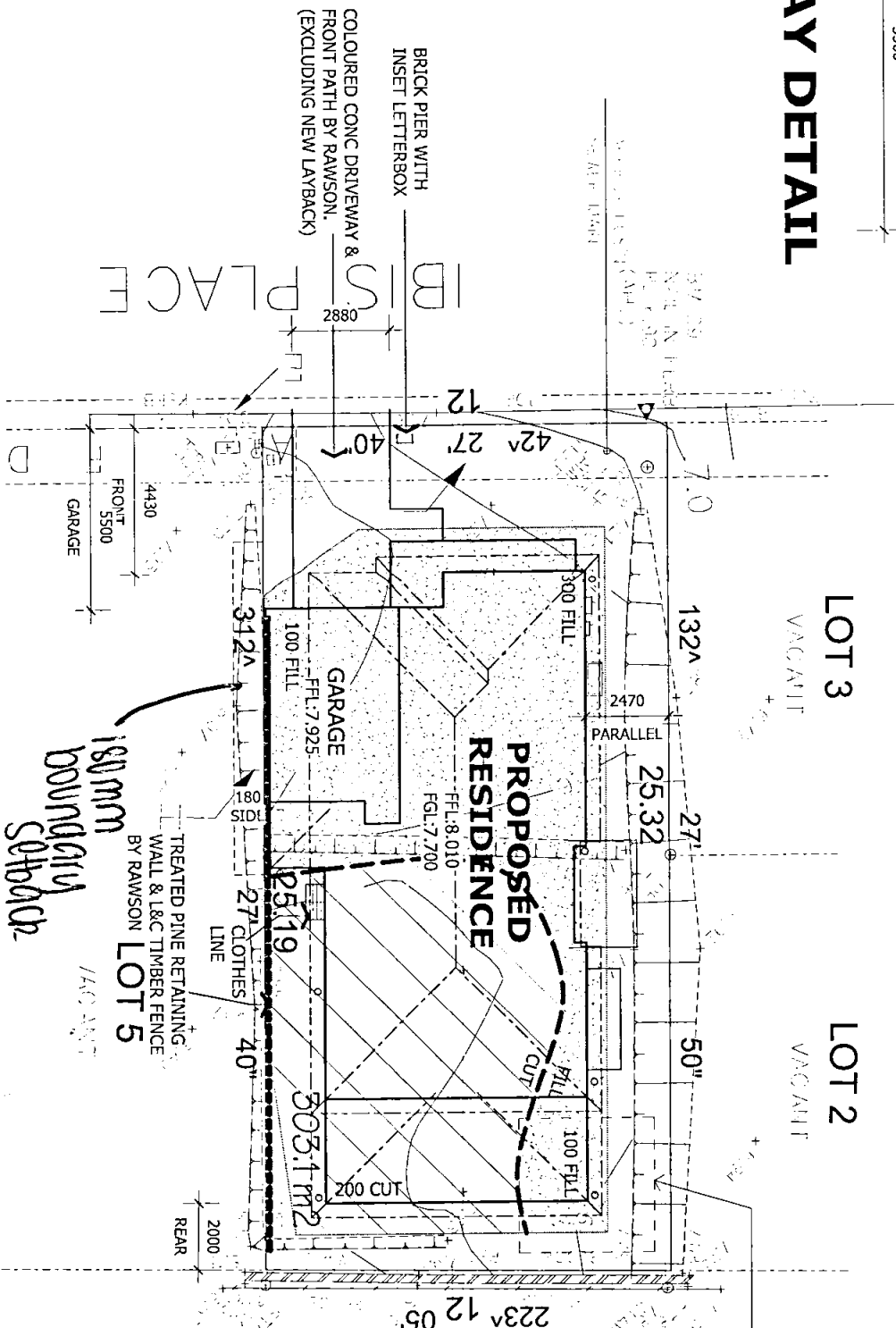
DRWG No:

2

ISSUE:

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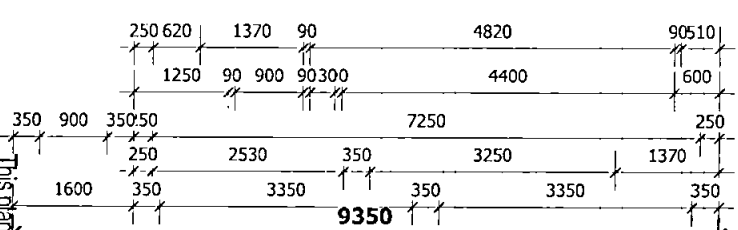
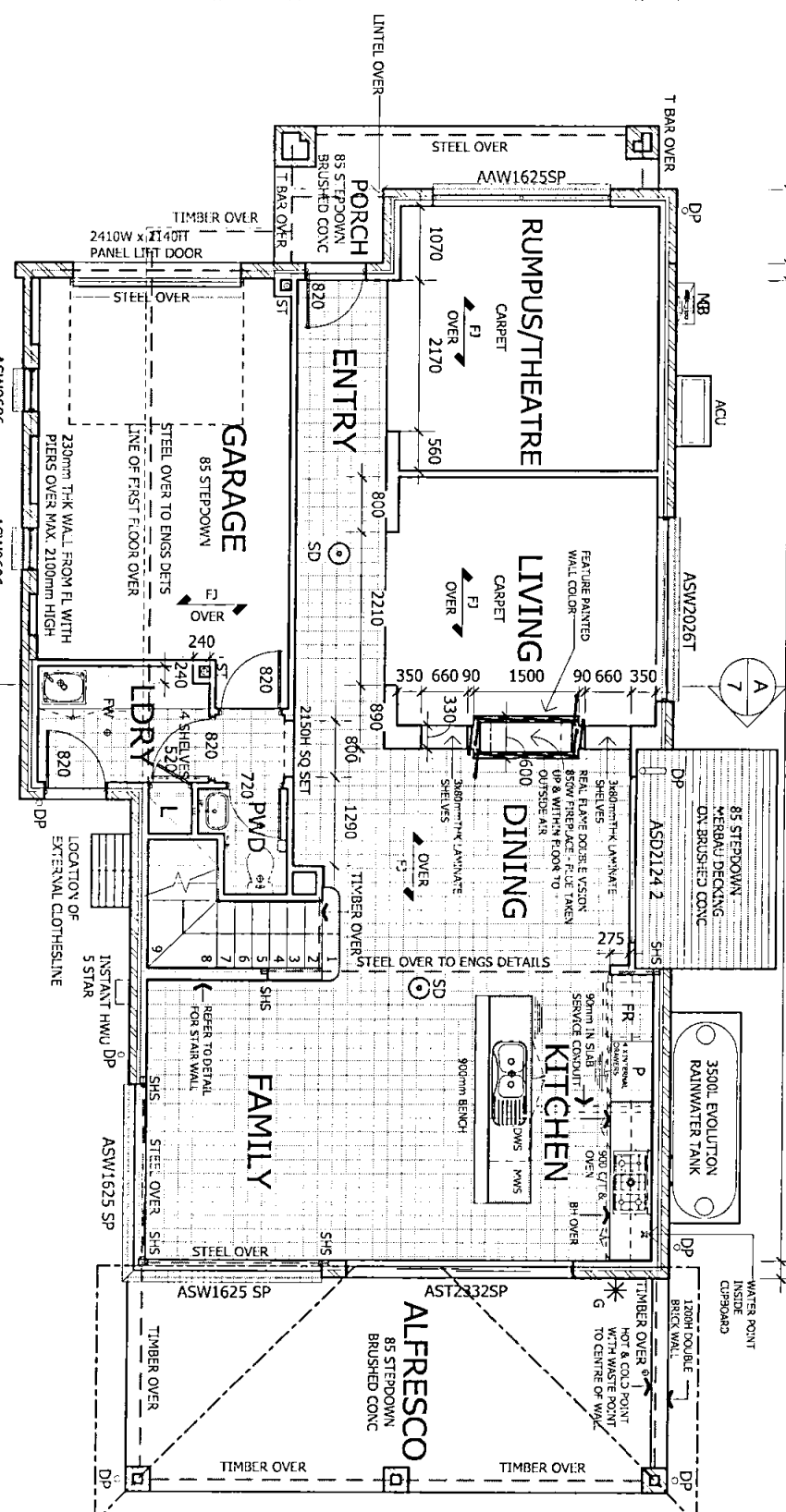
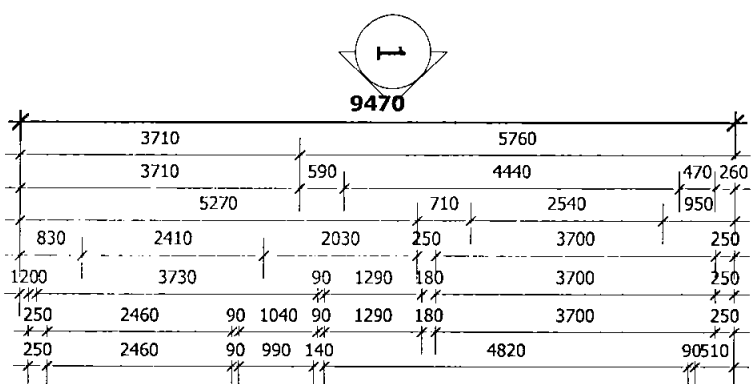
REFER TO NASSERI FOR HYDRAULIC PLAN DATED 18/06/2013.
REF # D2813



This plan/document forms part of the
Approved Complying Development Certificate
2013/02047

Issued by DM Certifiers P/L BPB 1869

- THIS DRAWING IS SUBJECT TO COPYRIGHT LAWS AND
MAY NOT BE COPIED WITHOUT THE WRITTEN PERMISSION
OF RAWSON HOMES PTY LTD-ACN 053 733 841



FLOOR AREAS	
GROUND FLOOR	118.07 m ²
FIRST FLOOR	120.47 m ²
GARAGE	32.96 m ²
ALFRESCO	14.36 m ²
PORCH	6.47 m ²
TOTAL	292.33 m²

³ This plan document forms part of the Approved Complying Development Certificate.

2013/02047

Issued by DM Certifiers P// ~~BPB 1869~~

FLOOR AREAS	
GROUND FLOOR	118.07 m ²
FIRST FLOOR	120.47 m ²
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PORCH	6.47 m ²
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** ALL DIMENSIONS ARE IN MILLIMETRES
 ** DO NOT SCALE - USE WRITTEN DIMENSIONS

CLIENT:
MR COX & MS LEUNG

HOUSE TYPE
MODEL: KEMPSEY 30

DRAWN BY:	DATE DRAWN:	CHECKED BY:	APPROVED FOR CONSTRUCTION:
WA	24.01.13	Checker	

TO BE ACCURATE - HOWEVER INFORMATION WRITTEN INTO

INDIVIDUAL CONTRACTS WILL TAKE PRECEDENCE OVER PLANS

TELEPHONE 02 9764 6442

ALL DIMENSIONS ARE IN MILLIMETERS

Builder's licence No. 33493C

MODEL: KEMPSEY 30

DRAWN BY:	DATE DRAWN:	CHECKED BY:	APPROVED FOR CONSTRUCTION:
WA	24.01.13	Checker	

INCL: INCL

TYPE: SINGLE GARAGE

SPECIFICATION: LUXE + GOLD

DRAFTING TITLE:

CEPOLIND E I GOD DI AN

DRAWN BY:	DATE DRAWN:	CHECKED BY:	APPROVED FOR CONSTRUCTION:
WA	24.01.13	Checker	

COLLECT AREA.

COUNCIL AREA:

PITTSBURGH

Job No.	
---------	--

ADD'NO.
7007564

CHECKED BY:	APPROVED FOR CONSTRUCTION:
Checker	

SCALE.

SCALE:

1 : 100

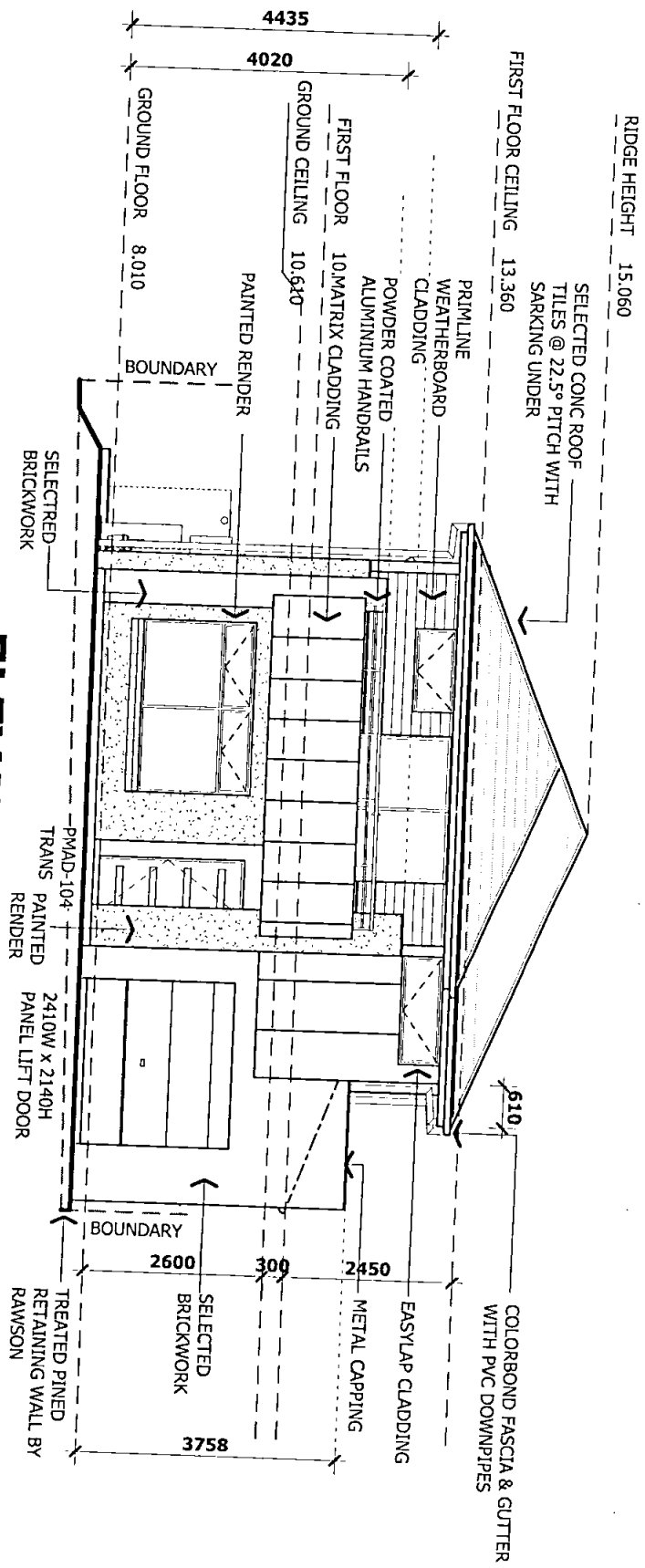
DDI/MC/MS

DRYING INC.

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OF RAWSON HOMES PTY LTD-ACN 053 733 841

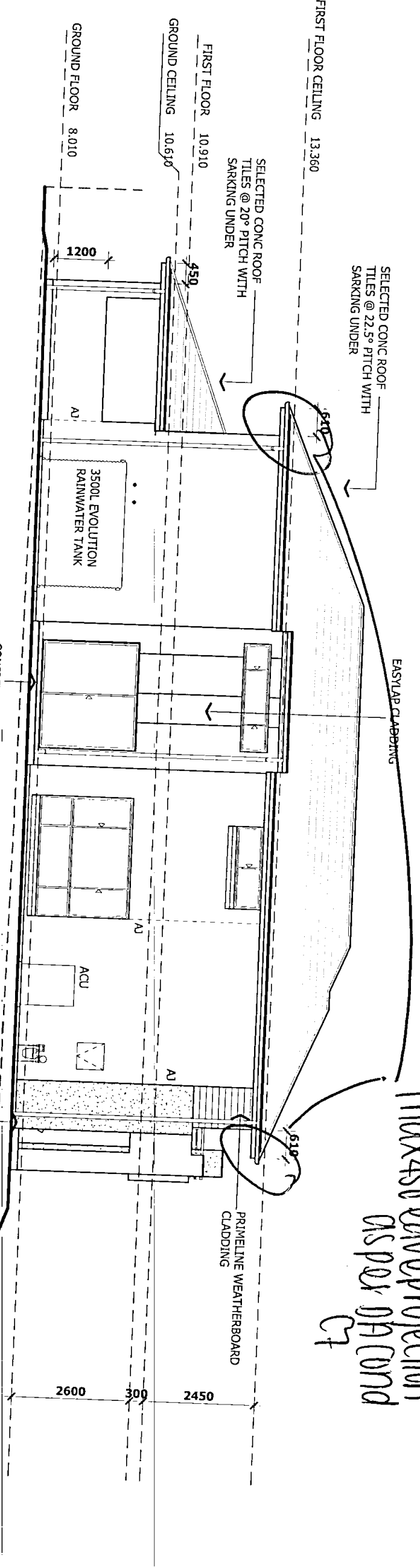


MESH FLY SCREENS TO ALL OPENING
WINDOWS AND SLIDING DOORS



ELEVATION 1

max 450 eave projection
as per OH Cond
G



ELEVATION 2

2013/02047

NOTES:

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RAWSON HOMES

UNIT 34/11-21 UNDERWOOD ROAD
HOME BUSH NSW 2140
TELEPHONE 02 9764 6442
FAX 02 9764 6992
Builder's licence No. 33493C

CLIENT:

MR COX & MS LEUNG
SITE ADDRESS:
LOT 4 (DP:270730)
IBIS PLACE
WARRIEWOOD

HOUSE TYPE

MODEL: KEMPSEY 30
FACADE: TREND
TYPE: SINGLE GARAGE
SPECIFICATION: LUXE + GOLD

DRAWN BY:

WA
24.01.13

CHECKED BY:

Checker

APPROVED FOR CONSTRUCTION:

DATE DRAWN:

SCALE:

1 : 100

ELEVATIONS 1-2

JOB No:

DRWG No:

ISSUE:

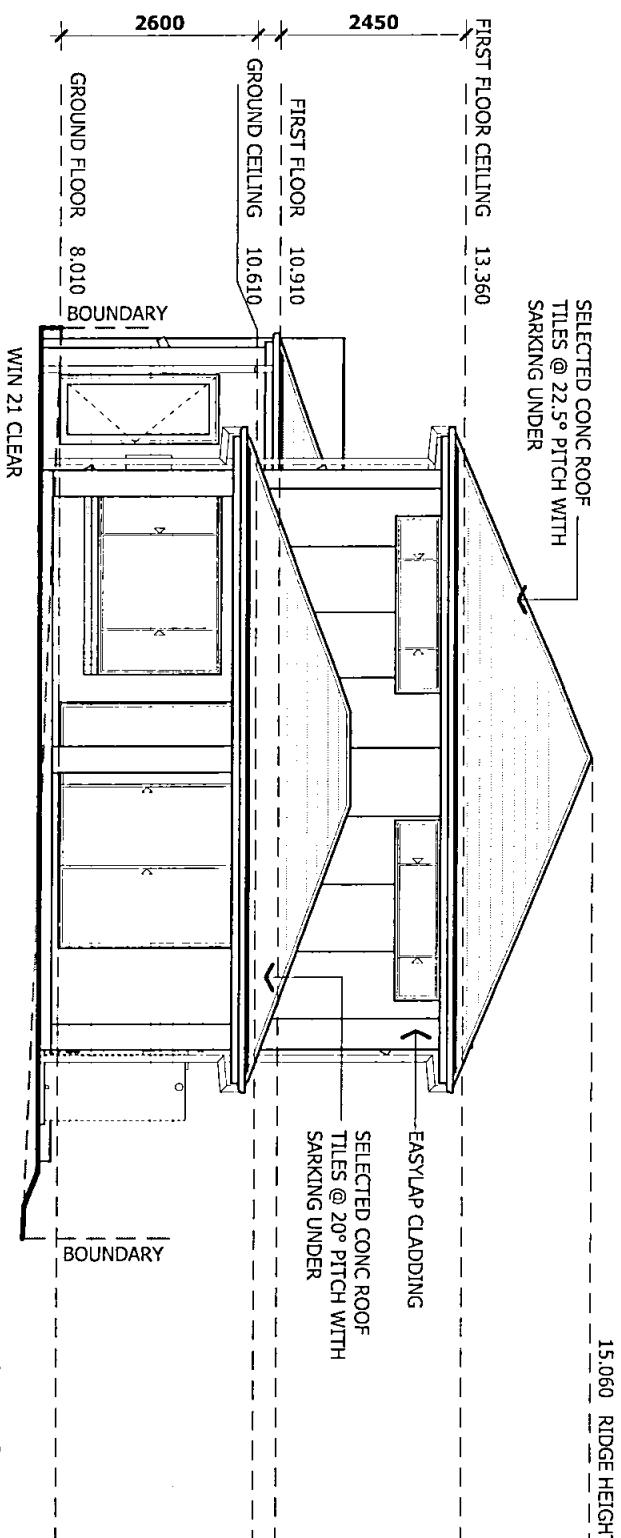
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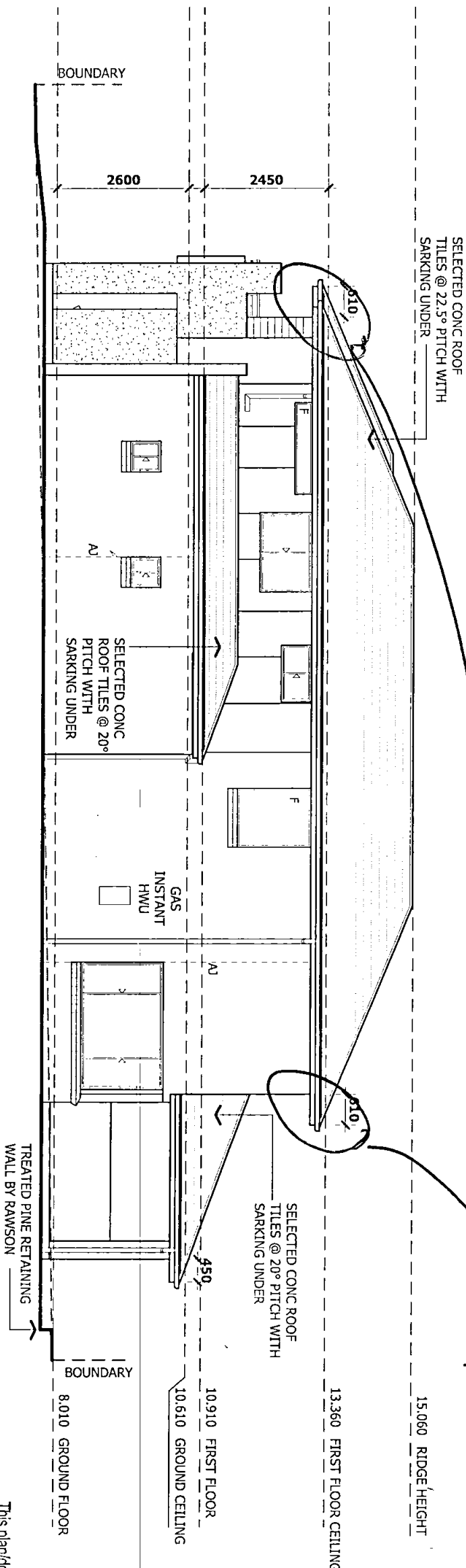
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ELEVATION 3

max 450mm projection
as per DA Comd Ct



ELEVATION 4

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2013/02047

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IBIS PLACE
WARRIEWOOD

HOUSE TYPE

KEMPSEY 30

MODEL:

TREND

FACADE:

SINGLE GARAGE

TYPE:

LUXE + GOLD

SPECIFICATION:

LUXE + GOLD

DRAWN BY:

WA 24.01.13

DATE DRAWN:

Checker

COUNCIL AREA:

PITTWATER

JOB No:

SCALE:

1 : 100

DRAWING TITLE:

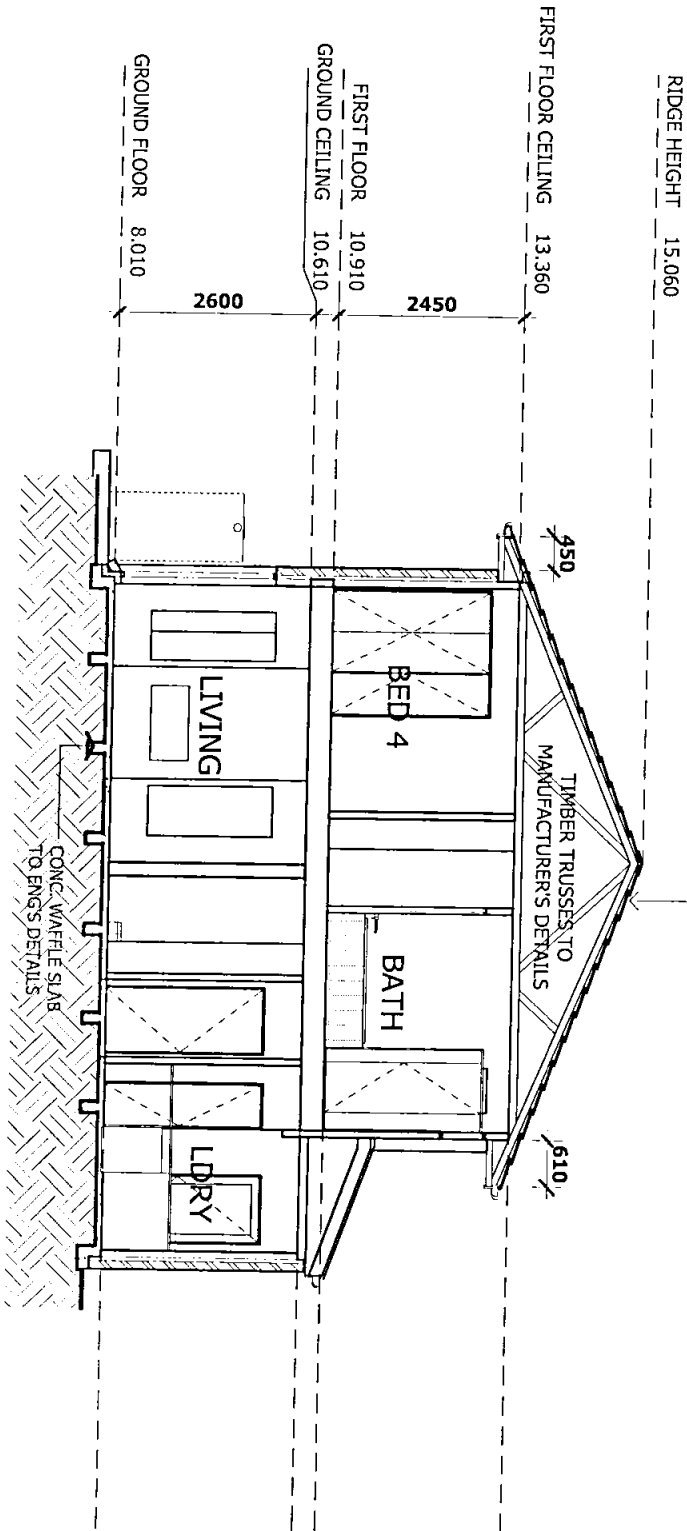
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ISSUE:

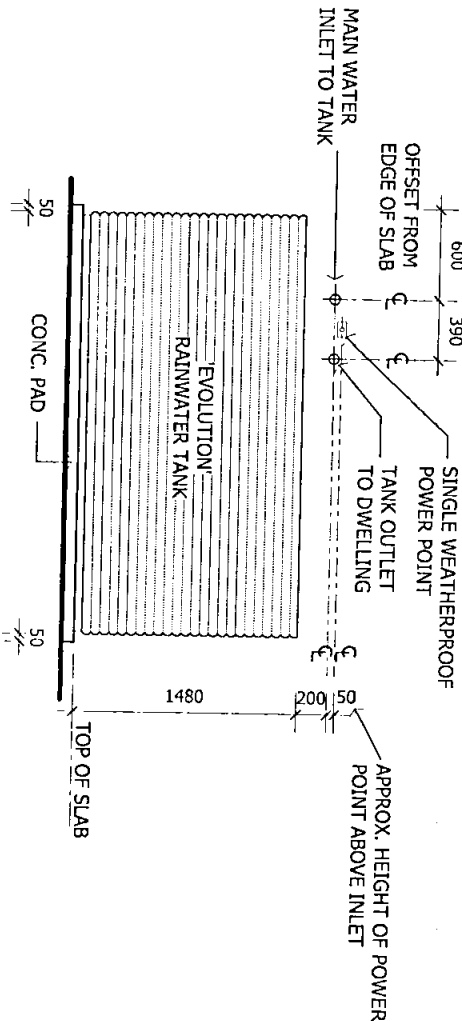
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INSULATION NOTE:
R3.5 BULK INSULATION BATTS TO LIVING AREA
CEILING
SARKING & R2.0 INSULATION TO EXTERNAL
WALLS

SELECTED CONC ROOF TILES
@ 22.5 PITCH WITH
SARKING UNDER



SECTION A-A



RAINWATER TANK DETAIL

SCALE: 1 : 50

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2013/02047

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BASIX COMMITMENTS			
PROJECT DETAILS		STORMWATER	
Site area	303 m ²	Rainwater tank to collect at least 76m ² of rain runoff from roof area	
Roof area	151.0 m ²	Rainwater tank to be connected to all toilets with in the development	
number of bedrooms	4	Rainwater tank to be connected to cold water tap to supply water to the washing machine	
Total area of vegetation (garden & lawn)	114 m ²	Rainwater to be connected to at least one outdoor tap for garden watering	
ABSA Certificate Number (if applicable)	1005829708	Rainwater to have a capacity of at least 3500	
Net conditioned floor area	185 m ²	WATER	
Net Unconditioned floor area	17 m ²	All showers with in the development are to have a minimum rating of 3 star showerheads	
Concession claimed (if applicable)	N/A	Each toilet is to have a flushing system of no less than a 4 star rating	
Cooling load (if applicable)	21 MJ/m ² /pa	All basin taps to have a minimum rating of 3 star rating	
Heating load (if applicable)	36 MJ/m ² /pa	All taps in the kitchen are to have a minimum rating of 3 star	
		ENERGY	
		ACTIVE COOLING/HEATING	
		Cooling system with day/night zoning for bedrooms & living areas with an EER 2.5 -3.0	
		Heating system with day/night zoning for bedrooms & living areas with an EER 3.0 -3.5	
		VENTILATION	
		At least 1 Bathroom: Individual fan, ducted to facade or roof.	
		Kitchen: individual fan, ducted to facade or roof.	
		Laundry: natural ventilation only, or no laundry.	
		HOT WATER	
		Gas instantaneous with a performance of 5 stars.	
		LIGHTING	
		Provide - Natural lighting	
		COOKING (KITCHEN APPLIANCES)	
		Install a gas cooktop and electric oven	
		DESIGN ENHANCEMENTS	
		Refrigerator space to be well ventilated	
		Install an outdoor clothes drying line	
		INSULATION	
		External wall [excluding garage]: R2.0	
		Ceiling [excluding garage & alfresco]: R3.5	

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IBIS PLACE
WARRIEWOOD

HOUSE TYPE

KEMPSEY 30

MODEL:

TREND
SINGLE GARAGE

FACADE:

TYPE:
SPECIFICATION: LUXE + GOLD

DRAWING TITLE:

SECTIONS

DRAWN BY: DATE DRAWN: CHECKED BY: APPROVED FOR
WA 24.01.13 Checker CONSTRUCTION:

COUNCIL AREA:

PITTWATER

SCALE:

As indicated

JOB No:

J002654

DRWG No:

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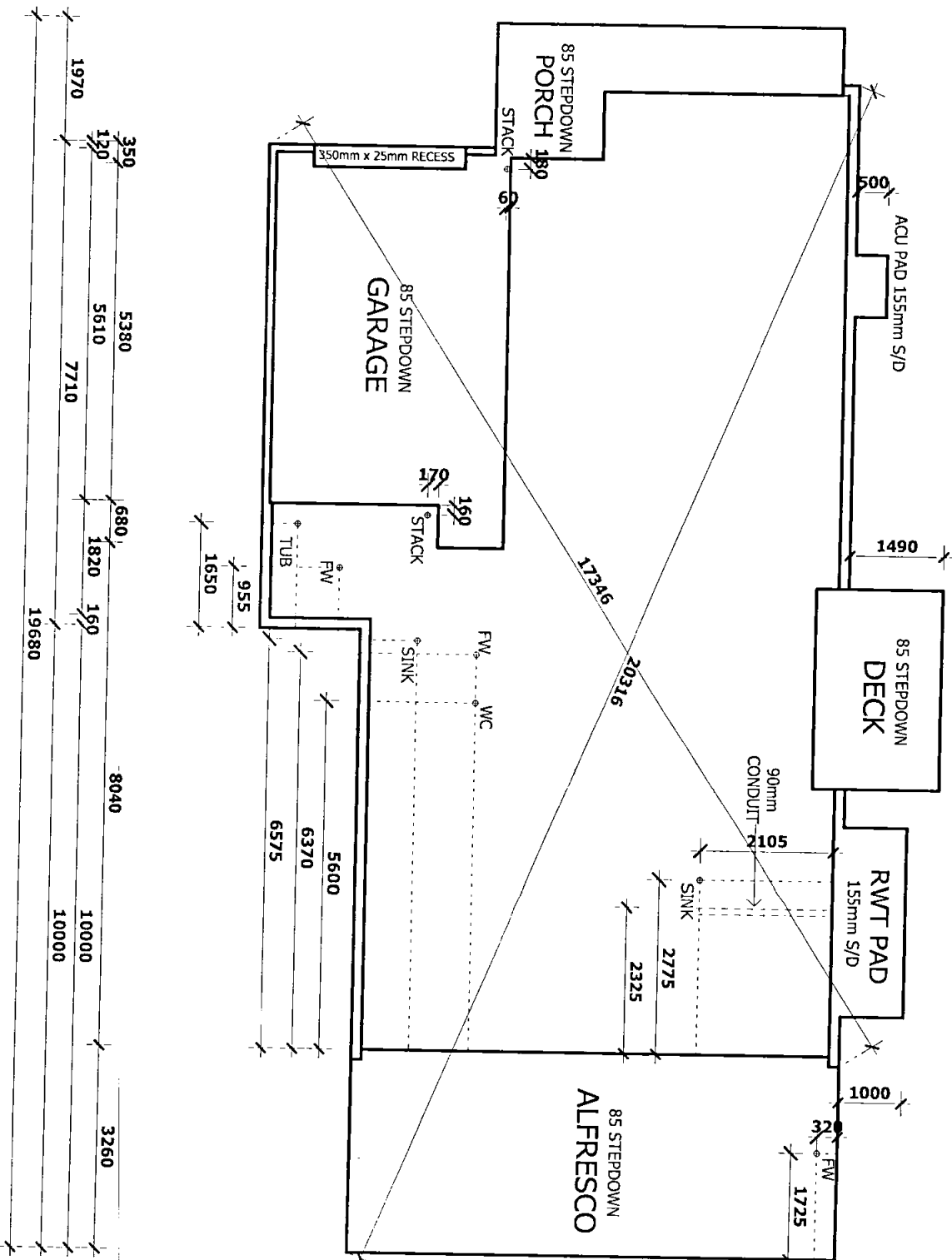
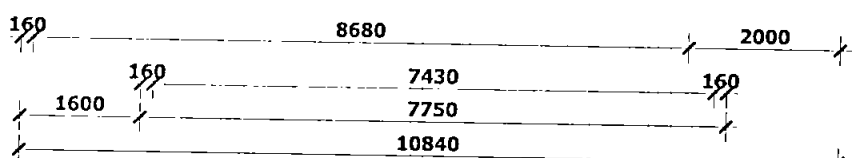
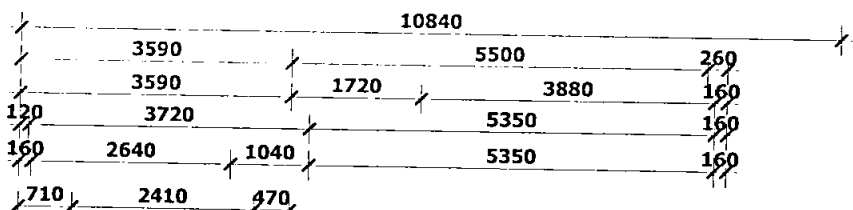
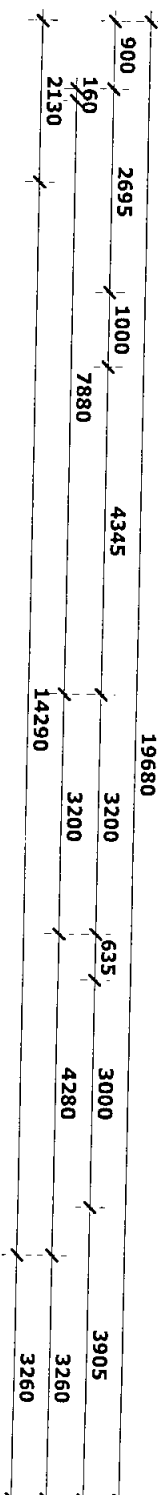
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Slab Plan

SCALE: 1 : 100

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IBIS PLACE
WARRIEWOOD

HOUSE TYPE

MODEL: KEMPSEY 30
FACADE: TREND
TYPE: SINGLE GARAGE
SPECIFICATION: LUXE + GOLD

DRAWN BY:

WA 24.01.13

CHECKED BY:

Checker

APPROVED FOR CONSTRUCTION:

DATE DRAWN:

WA

COUNCIL AREA:

PITTWATER

SCALE:

1 : 100

JOB No:

J002654

DRWG No:

8

ISSUE:

E

SLAB SETOUT PLAN



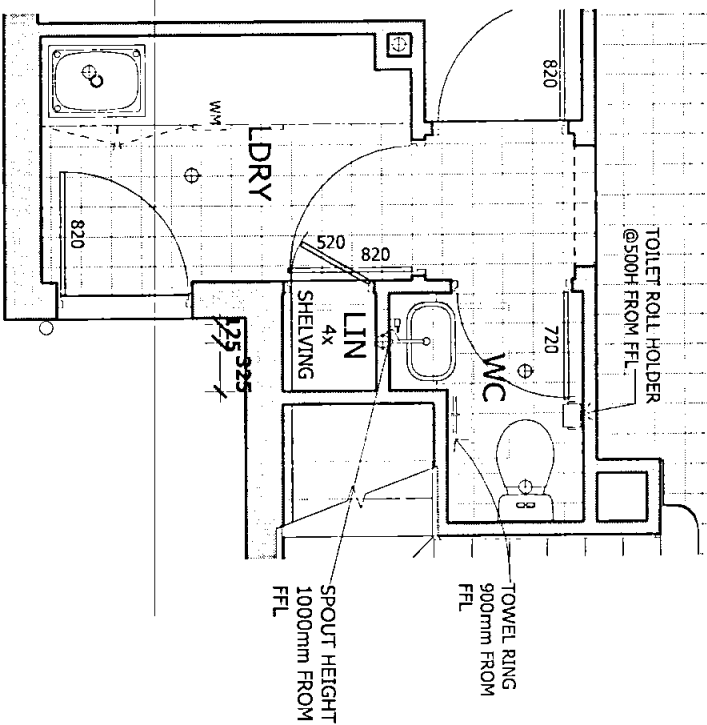
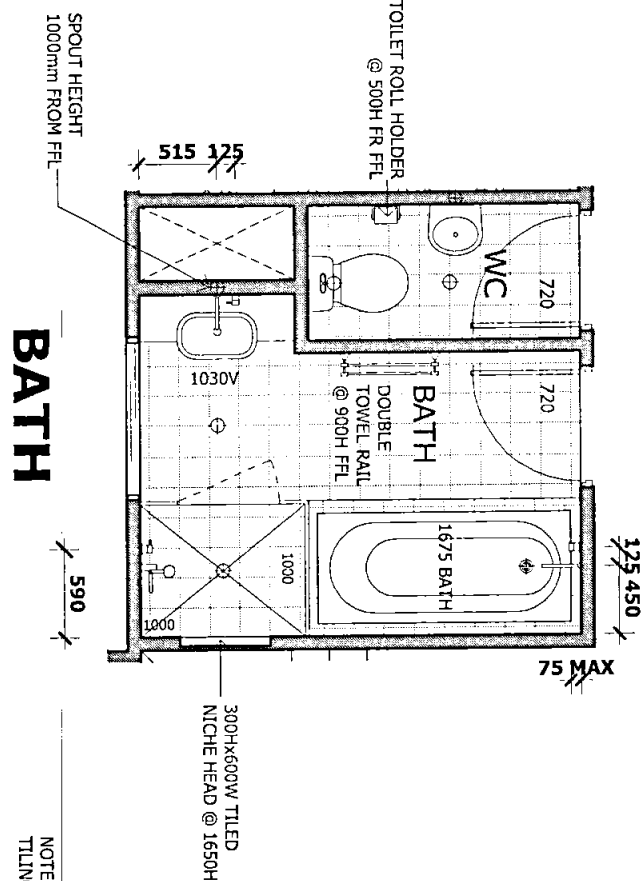
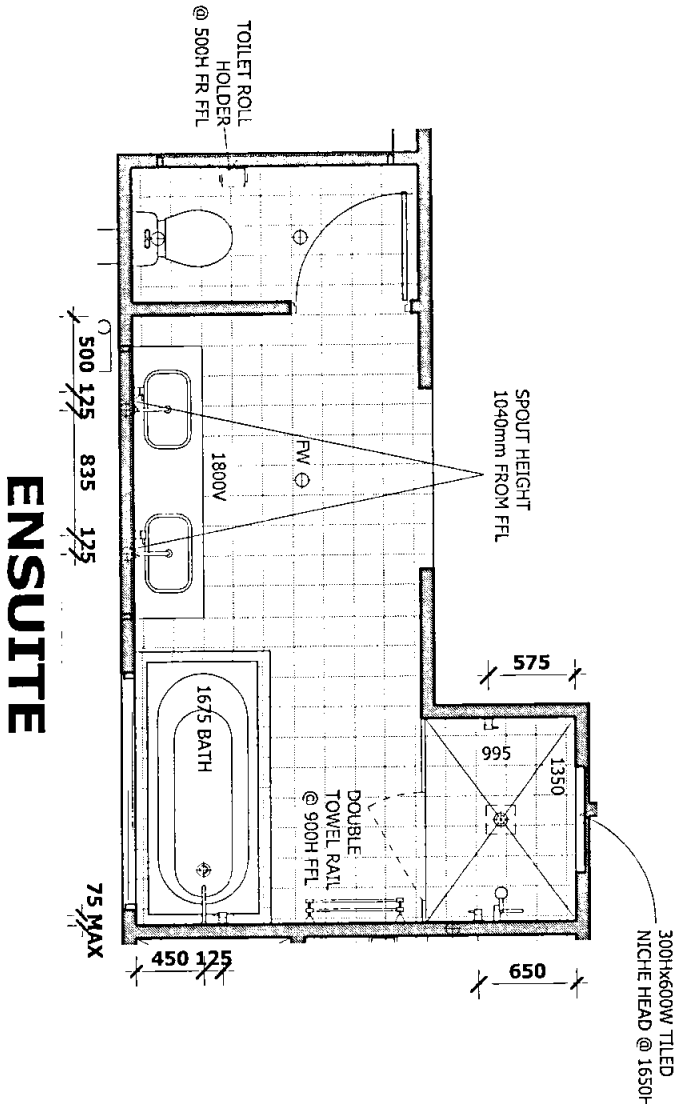
REFER TO ELBA PLANS AND SIGNED COLOR PLANS DATED
15/06/2013 FOR KITCHEN DETAILS

LAUNDRY / WC

- PROVIDE SKIRTING TILE TO PERIMETER WALLS OF LAUNDRY
- TILED SPLASHBACK OVER LAUNDRY TUB & BENCH @ 300mm HIGH

BATHROOM

- PROVIDE CEILING HEIGHT TILING TO BATHROOM & ENSUITE
- SKIRTING TILE TO REMAINDER OF PERIMETER WALL TO WC, POWDER & LAUNDRY
- PROVIDE TILE SPLASHBACK ABOVE VANITY
- GRANGE SEMI FRAMELESS SHOWER SCREEN WITH PIVOT DOOR @ 2100 HIGH.
- TILED SPLASHBACKS TO THE TOP OF VANITIES WITH FLOATING MIRROR ON 32mm BOARD, 130mm FROM SIDE. TOP & MAX. 1800
- PROVIDE KICKER TO BATH HOB 140H x 70W
- FLOATING VANITIES.
- WALL MOUNTED TAPS & SPOUT TO VANITIES & BATH



NOTE: 300
TILING TO TUB
NOTE: WASHING
MACHINE TAPS
LOCATED UNDER TUB

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LDRY & PWDR RM
2013/02047

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TELEPHONE 02 9764 6442
FAX 02 9764 6992
Builder's licence No. 33493C



CLIENT:
MR COX & MS LEUNG

SITE ADDRESS:
LOT 4 (DP:270730)
IBIS PLACE
WARREWOOD

HOUSE TYPE
MODEL: KEMPSEY 30
FACADE: TREND
TYPE: SINGLE GARAGE
SPECIFICATION: LUXE + GOLD

DRAWING TITLE:
KIT. & WET AREA DET.

DRAWN BY: WA DATE DRAWN: 24.01.13 CHECKED BY: Checker APPROVED FOR CONSTRUCTION:

COUNCIL AREA: PITTWATER

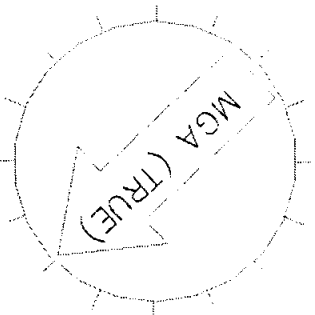
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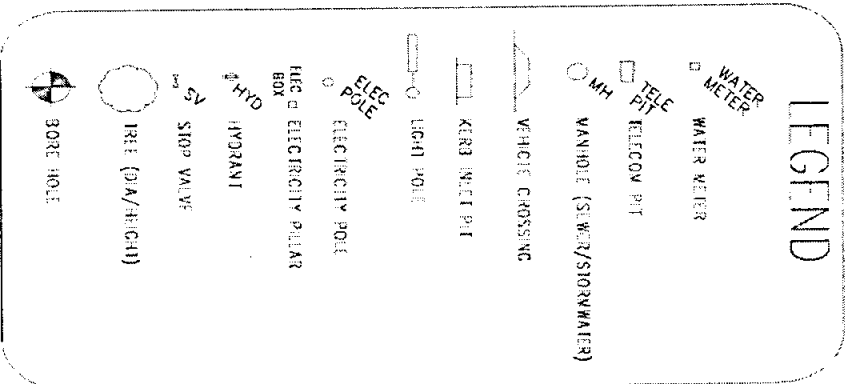
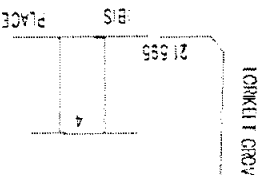
DRWG NO: 9 ISSUE: E

LOCATION PLAN

URD REF: 158,78
LAT: 35.68591
LONG: 151.29677



NORTH



LEGEND
KO: DENOTES KERB OUTLET
WC: DENOTES SERVICE CONDUIT
SV: DENOTES STOP VALVE
HYD: DENOTES HYDRANT

NOTE: CONTOURS SHOWN HAVE BEEN INTERPOLATED FROM SPOT LEVELS TAKEN ON-SITE AND ARE A REPRESENTATION OF THE TOPOGRAPHY ONLY.

DIMENSIONS, SHOWN (BRACKETS), A JOB (ANGLES) HAVE BEEN DETERMINED BY LAND AND PROPERTY INFORMATION PLANS. ONLY DIMENSIONS HAVE NOT BEEN ACCURATELY DETERMINED SERVICES SHOWN HAVE BEEN LOCATED WHERE POSSIBLE BY FIELD SURVEY PRIOR TO ANY SITE WORKS. THE RELEVANT AUTHORITY SHOULD BE CONTACTED TO DETERMINE EXACT POSITION OF ANY UNDERGROUND PIPES, CABLES ETC.

LOCATIONS OF ANY TREES SHOWN ON THE PLAN ARE APPROXIMATE.

DIMENSIONS OF ANY TREES SHOWN ON THE PLAN ARE APPROX



DIAL 1100

www.dialbeforeyoudig.com.au

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LOT 4 (DP:270730)

IBIS PLACE

WARRIEWOOD

HOUSE TYPE

MODEL: KEMPSEY 30

TYPE,

SPECIFICATION: LUXE + GOLD

DRAWING TITLE

SHADOW DIAGRAM

DRAWN BY:

Author	05/01/13
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COUNCIL AREA:

PITTSBURGH

	FOR NO.

CHECKED BY _____

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APPROVED FOR
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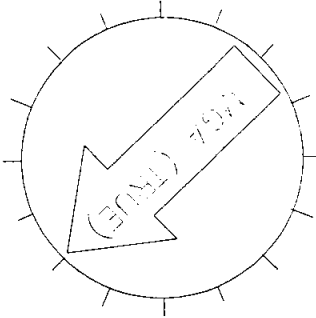
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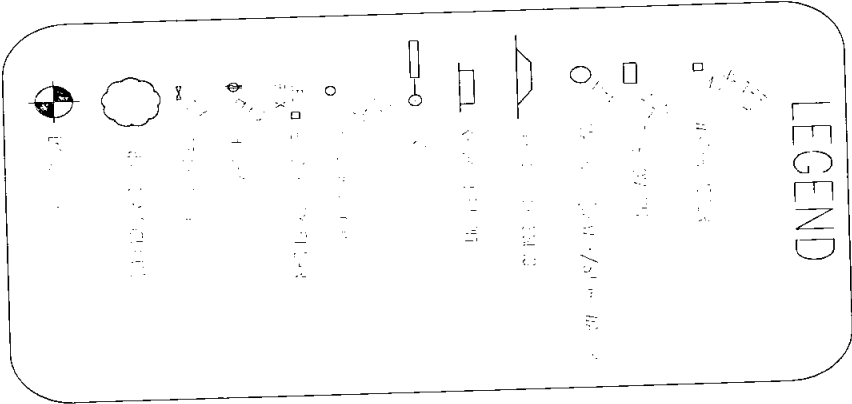
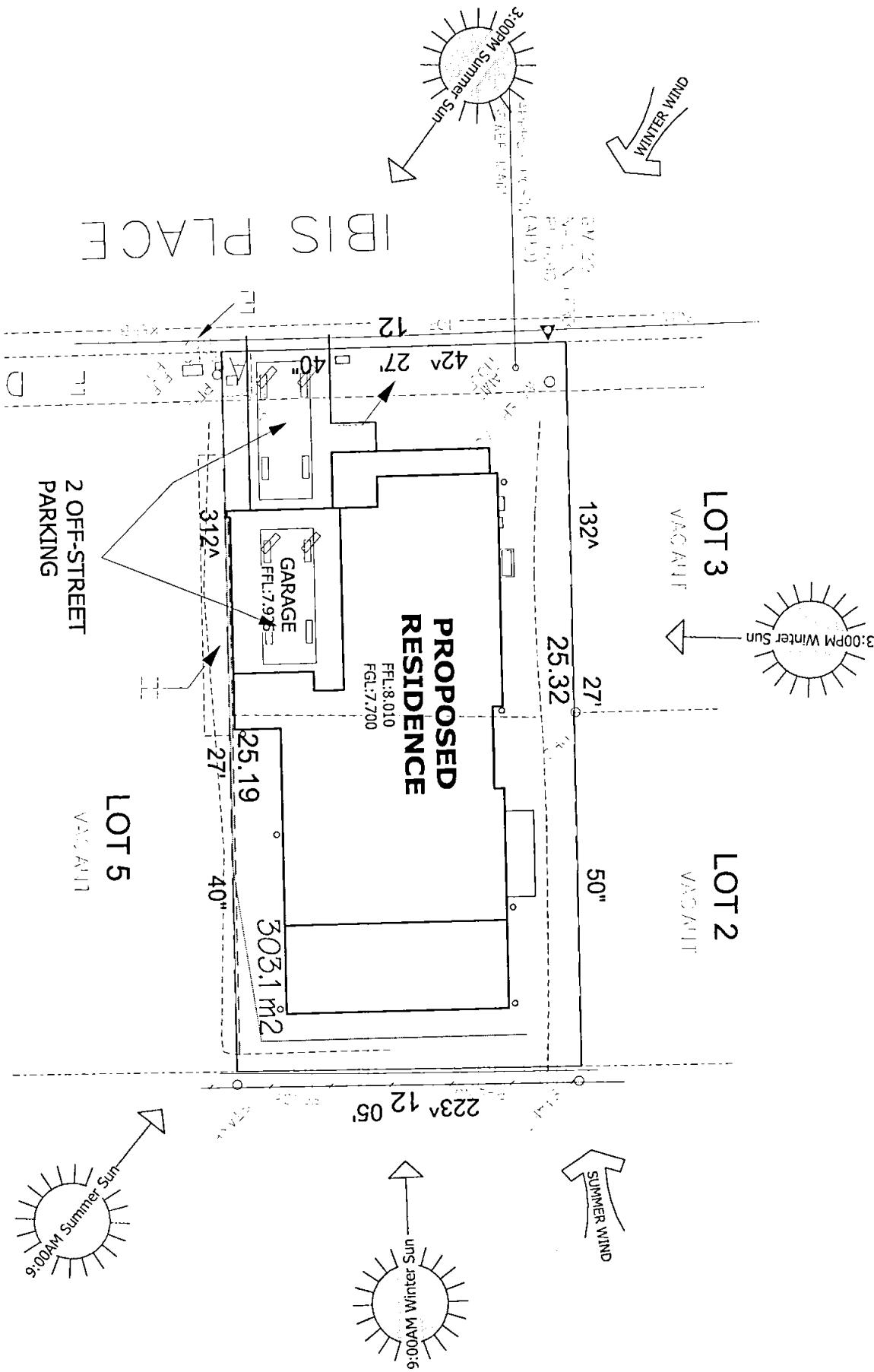
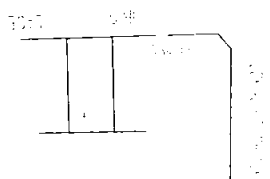
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LOCATION PLAN

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NORTH

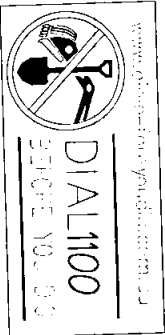


LEGEND

K.O. DENOTES KERB OUTLET
W.C. DENOTES SERVICE CONDUIT
S.V. DENOTES STOP VALVE
H.V. DENOTES HYDRANT

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SITE ADDRESS:

LOT 4 (DP:270730)
IBIS PLACE
WARRIEWOOD

HOUSE TYPE

KEMPSEY 30
TREND
SINGLE GARAGE

MODEL:

FAÇADE:
TYPE:
SPECIFICATION: LUXE + GOLD

COUNCIL AREA:

PIT/WATER

SCALE:

1 : 200

ISSUE:

E

DRAWN BY:

Author

DATE DRAWN:

05/02/13

CHECKED BY:

Checker

APPROVED FOR:

CONSTRUCTION:

JOB NO.:

J002654

DRWG NO.:

12

ISSUE:

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GENERAL NOTES

- G1. Engineers structural drawings are signed and issued on the understanding that the builder maintains in force, proper and adequate contract works insurance and public liability insurance during the full course of the construction, and/or any maintenance period, claims of damage to any adjacent property or building is not the responsibility of the engineer.
- G2. These drawings shall be read in conjunction with all architectural and other consultants drawings and specifications and with such other written instructions as may be issued during the course of the contract. all discrepancies shall be referred to the architect for decision before proceeding with the work.
- G3. All workmanship and materials shall be in accordance with the requirements of the current editions of the sso codes and there-by laws and ordinances of the relevant building authority.
- G4. Dimensions shall not be obtained by scaling the structural drawings. refer to architectural drawings for set out plan measurements. any set out dimensions shown on this document shall be verified by the builder.
- G5. Any discrepancies/substitution in these documents shall be referred to the engineer for decision before proceeding with the work.
- G6. The sections/details on these drawings are intended to give the structural specifications only. architectural sections/details on these drawings are illustrative only.
- G7. These documents are signed subject to certificate of inspection being issued by this firm. all piers, slab and footing reinforcement shall be inspected by the engineer prior to the pouring of concrete. give 24hrs notice to the engineer.

SITE CLASSIFICATION

- C1. The site has been the subject of a geotechnical investigation requiring adherence to particular construction procedures and/or techniques. therefore these documents have been prepared using the recommendations of the geotechnical engineer.

Site classification: 'P/M'
Classified by: IDEAL FOUNDATIONS
Report/Project no: 5617-RSS
Dated: 30 NOVEMBER 2012

- C2. The footing details shown are for the site classification stipulated. while every care has been taken to verify that the information shown is correct, Residential Engineering takes no responsibility for variations which may occur in site conditions subsequent to construction.
- C3. **SL1:** less than 1km from breaking surf or less than 100m from salt water not subject to breaking surf or within heavy industrial areas.
- C4. **SL2:** 1km or more but less than 10km from breaking surf or 100m or more but less than 1km from salt water not subject to breaking surf
- C5. **SL3:** 10km or more from breaking surf or 1km or more from salt water not subject to breaking surf. Refer BCA class 1 and class 10 buildings housing provisions volume 2 for tables.
- C6. Protective Coatings For Steelwork (table 3.4.4.2) Corrosion Protection Of Built-In Structural Steel Members (table 3.3.3.2)
Corrosion Protection For Wall Ties (table 3.3.3.1)

FOUNDATION AND FILLING

- F1. Strip topsoil or other organic matter to a depth of 100 mm and stockpiled.
- F2. Filling used for the support of a slab shall be controlled fill or rolled fill as follows:
- (o) **CONTROLLED FILL:** Shall be placed, tested and certified by a qualified Geotechnical Engineer as defined in AS 3798. This is deemed to be adequate to support the footing system.
- (b) **ROLLED FILL:** consists of material compacted in layers by repeated rolling with an excavator or similar equipment. The depth shall not exceed 0.6 m compacted in layers not more than 0.3 m thick for sand material or 0.3 m compacted in layers not more than .15m thick for other material.
- F3. Where fill consists of reactive clay, the fill shall be placed in a moist condition.
- F4. Any fill shall continue past the edge of the building by at least 1 m and shall be retained or battered beyond this point by a slope not steeper than 1:2.
- F5. Except for sites with aggressive soils, a blinding layer of sand is not required. Where used, the blinding layer of sand shall comply with rolled fill requirements.

DRAINAGE DESIGN REQUIREMENTS

- D1. Surface drainage shall be designed and constructed to avoid water ponding against or near the footing.
- D2. The ground in the immediate vicinity of the perimeter footing shall be graded to fall 50 mm min away from the footing over a distance of 1 m.
- D3. The min height of the slab above F.G.L., landscaping or paving shall be 150 mm. Where adjoining paved areas slope away from the building, this height may be reduced to 50 mm.
- D4. The base of trenches shall be sloped away from the building and backfilled in accordance with AS 2870
- D5. During construction, water run-off shall be collected and channeled away from the building.

CONCRETE PIERS

- P1. Pier diameter and locations are shown on plan.
- P2. u.n.o minimum pier depth is 600 mm below footings and wherever nominated should be socketed a minimum 300 mm into stiff clay.
- P3. All pier holes shall be cleaned and dewatered prior to the placement of concrete.
- P4. All piers shall be poured separate to footings. It should be noted that if any of the footings encounter rock or shale, then all footings shall be then articulation joints shall be provided at the rock/non-rock interface.
- P6. Concrete piers/footings are required to uniform bearing. engineer or council shall inspect ground bearing of piers/footings prior to pouring of concrete.

Strata	Stiff Clay	Rock and Shale	Natural Sand
Min Bearing Capacity kPa	250	600	150

DAMP PROOFING MEMBRANE

- DP1. A 0.2 mm min polyethylene damp-proofing high impact resistant membrane shall be placed beneath the slab so that the bottom surface is entirely undehoid and terminate at ground level.
- DP2. The membrane shall be branded continuously 'AS 2870 concrete underlay, 0.2 mm high impact resistant, together with manufacturer or distributors name, trademark or code.
- DP3. Lapping shall be 200 mm at joints and laped or sealed at plumbing penetrations with continuous close fitting sleeve or made continuous with the vapour barrier by taping and be made waterproof.

PLUMBING

- PL1. Close cell polyethylene logging shall be used around all stormwater and sanitary plumbing drain pipe penetrations through footings. The logging shall be a minimum of 20 mm thick on H1 sites and 40 mm thick on Class H2 and Class E sites. Vertical penetrations do not require logging. Additionally drains attached to or emerging from underneath the building including stormwater, sanitary and discharge pipes shall incorporate flexible joints immediately outside the footing and commencing within 1 m of the building perimeter to accommodate a total range of differential movement of the site (ys).

REINFORCEMENT AND FIXING

- R1. Minimum concrete cover as follows:
40 mm to unprotected ground
30 mm to a membrane in contact with the ground
40 mm to an external surface
20 mm to an internal surface
- R2. Slab fabric shall be supplied in flat sheets and be lapped on full square plus 25 mm at splices and placed on bar chairs at 1 m cts both ways.
- R3. Reinforcing bars shall have a lap length at splices not less than:
500 mm up to a bar ϕ of 12 mm
700 mm up to a bar ϕ of 16 mm
At T and L intersections the bars shall be continued across the full width of the intersection.
- R4. Service penetrations are permitted through the middle third of the depth of the edge beam and stiffening beams.
- R5. Reinforcement and void formers shall be fixed in position prior to concreting by means of proprietary spacers, bar chairs with bosses, lighters or other appropriate fixings to achieve the required reinforcement position and concrete cover.
- R6. Bar reinforcement shall be tied beneath the slab fabric if used or otherwise placed on bar chairs
- R7. Concrete shall be transported, placed, compacted and cured in accordance with good building practice.
- R8. Trenches, pier holes and beams shall be dewatered and cleaned prior to concrete placement such that no significant softened or loosened material remains.
- R9. Concrete in trenches and beams shall be mechanically vibrated.

EXCAVATIONS

- E1. Temporary excavations in the area of the footing shall be carried out only where adequate support for the footing system is maintained such as piling beneath the expected excavation level or underpinning.
- E2. Permanent excavations of any vertical or near vertical structure within 2 m of the building and deeper than 0.6m in material other than rock shall be adequately retained or battered.
- E3. Excavations shall not extend below a line drawn at 30° for sand, 45° for clay to the horizontal from the bottom edge of the footing/pier without prior assessment.

AGGRESSIVE SOILS

- A1. Buildings with masonry or concrete exposed to saline soils or to acid sulfate soils shall be protected from the aggressive soil or groundwater.
- A2. Where a layer of bedding sand 100 mm deep is provided, it shall comply with the 'FOUNDATION AND FILLING' notes.
- A3. Protection requirements from Geotechnical & local authorities shall be adhered to and provided to this office before commencing detailing.

SHRINKAGE CRACKING CONTROL

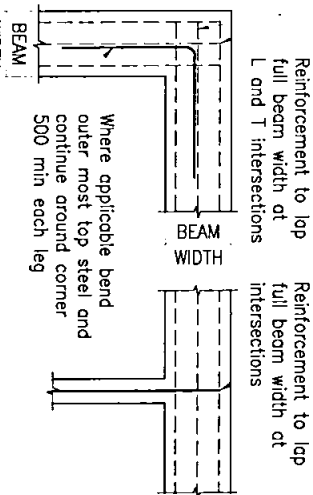
- S1. At re-entrant corners, one strip of 3-N11 or 3-N12 bar 2 m long shall be placed across the direction of potential cracking.
- S2. Where brittle floor coverings are to be used over an area greater than 16 m² the following applies:
(a) Slab reinforcement in part of the slab which brittle finishes are applied shall not be less than SL92 or equivalent.
- (b) The bedding system for brittle coverings shall be selected on the basis of the expected slab movement
- (c) The placement of floor coverings shall be delayed by a minimum period of 3 months.
- S3. Water shall not be added to the concrete on site so as to increase the slump above that specified.
- S4. Curing the concrete shall start immediately after finishing by continually wetting for 7 days min. Plastic or wax liquid sprays may be used in accordance with the manufacturers specifications. extra precaution such as the method of evaporative retardation (the use of aliphatic alcohols) is recommended during hot weather pours to help avoid thermal related slab cracking.

SUB-TERRANEAN TERMITE PROTECTION AND MAINTENANCE

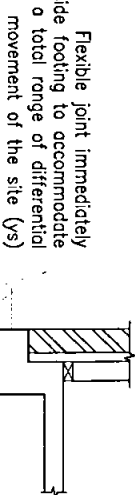
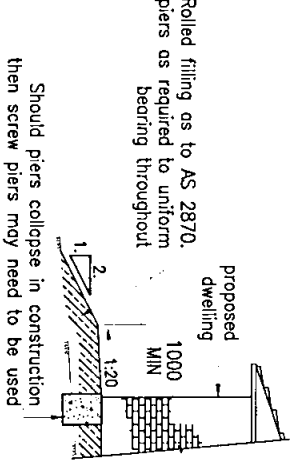
- T1. All works to be in accordance with AS 3660.1
- T2. Any future cracking occurring in the slab/footing system is to be assessed by a qualified pest expert and where directed be sealed by epoxy injection.
- T3. Inspections of the residence and immediate surrounds to be carried out by a qualified pest expert on an annual basis by the home owner.
- T4. Site maintenance is the responsibility of the owner. All recommendations outlined in the CSIRO phumphet, Building Technology File 18, Foundation Maintenance and Footing performance: A Homeowners Guide, and its recommendations should be followed in full.

MASONRY NOTES

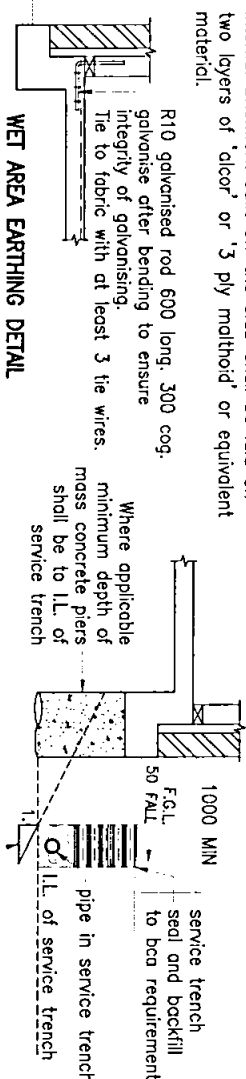
- M1. Load bearing masonry shall comply with AS 3700
- M2. Masonry, Mortar durability and Articulation shall comply with the BCA class 1 and 10 buildings volume 2, form TN61 articulated walling and AS 2870
- M3. Internal brickwork, built off the slab shall be laid on two layers of 'cleor' or '3 ply methodoid' or equivalent material.



REINFORCEMENT LAPPING DETAIL AT 'L' AND 'T' INTERSECTIONS (PLAN VIEW)



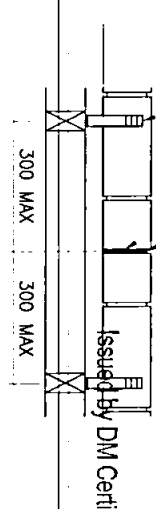
UNDER SLAB PLUMBING DETAIL FOR H1, H2 AND E SITES



HOUSE SERVICES DETAIL

It is outside the control of the engineer to ensure the building complies with this detail. The builder shall ensure the drainage contractor complies with this detail in full

ALTERNATIVE METHODS OF LAPPING OF MESH



ARTICULATION JOINT AND WALL TIE DETAIL
All wall ties to be built in and fixed to frame progressively as construction proceeds spaced at each side of expansion joints and at each third course. the spacing of all other ties shall be as described in the b-c-a class 1 and 10 buildings housing provisions volume 2.

WIND CLASS	WALL TIE (DUTY)	HORIZONTAL SPACING	VERTICAL SPACING
N1	W28H1	600mm	600mm
N2	W33H2	600mm	600mm
N3	W41H3	MEDIUM	430mm (5 COURSES)

NOTE:
• wall tie spacings around openings 300c/s ew
• polymer wall ties rated "light duty only" (*28m1)
• (yp = permissible stress method)

RESIDENTIAL ENGINEERING
CONSULTING ENGINEERS

NSW: B99 0255
VIC: EC 24609
Q.LD: RECg 4109

1/19 Jonathan Street, Croydon NSW 2145
3/256 Agyle Street, Moss Vale NSW 2577

T: 02 9896 5494
F: 02 9636 1064
T: 02 4869 5003
F: 02 4869 5008

enquiries@residentialengineering.com.au
www.residentialengineering.com.au

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APPROVED BY:

CLIENT:

DATE: 27.06.13

DRAWN: B.K.

SCALE: 1:1

FOR: **MR COX & MS LEUNG**

SITE ADDRESS: **LOT 4 IBS PLACE WAREWOOD**

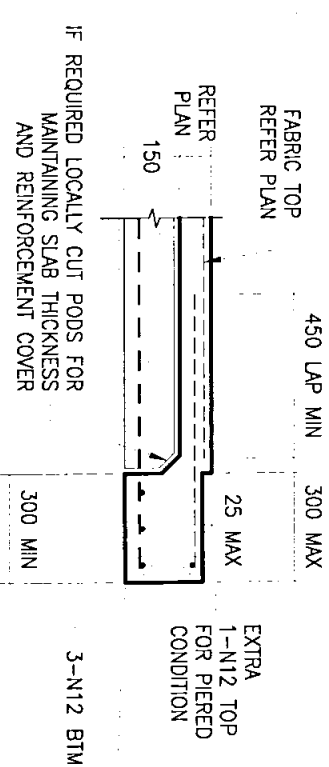
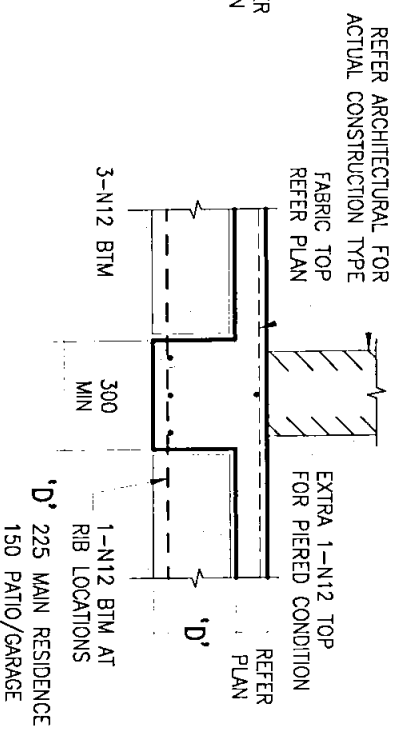
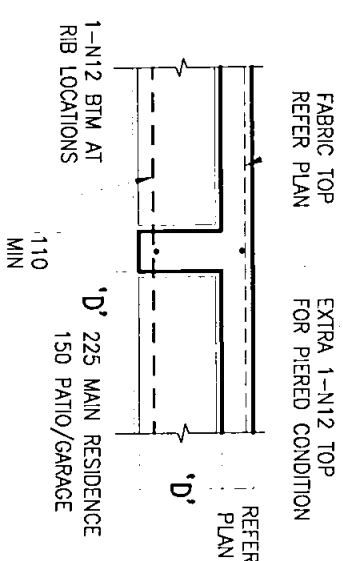
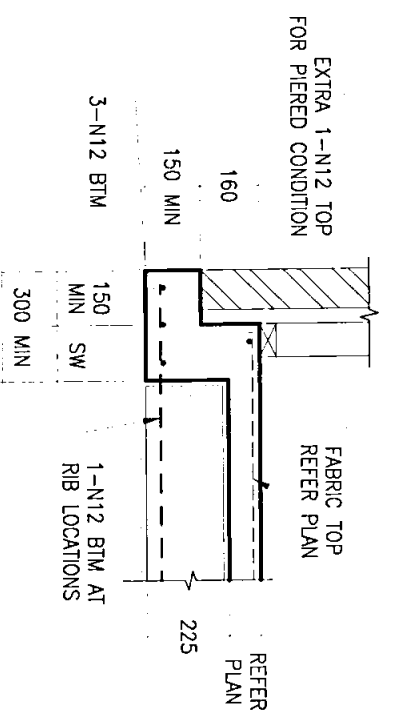
DRAWN	DATE	AMENDMENT
AB	26.07.13	AMENDED PLANS
AB	13.11.13	AMENDED PLANS TO SHOW ALFRESCO

REV: A

JOB NO: **RW1214**

ISSUE: **B**

SHEET No: **02 of 08**

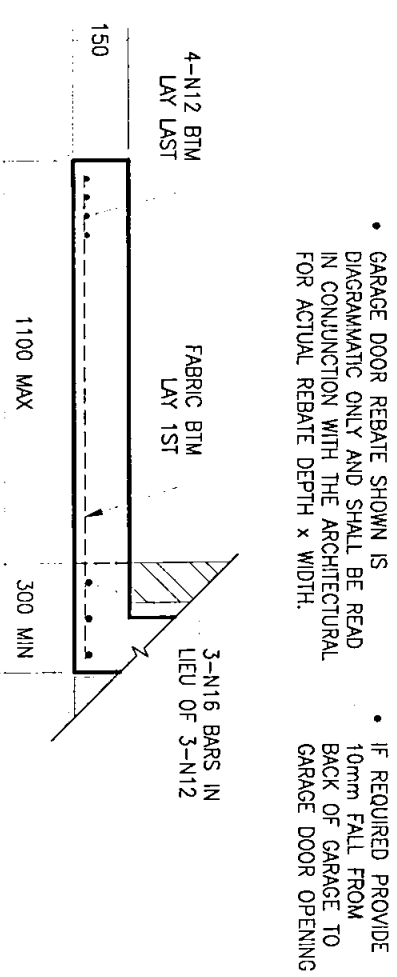
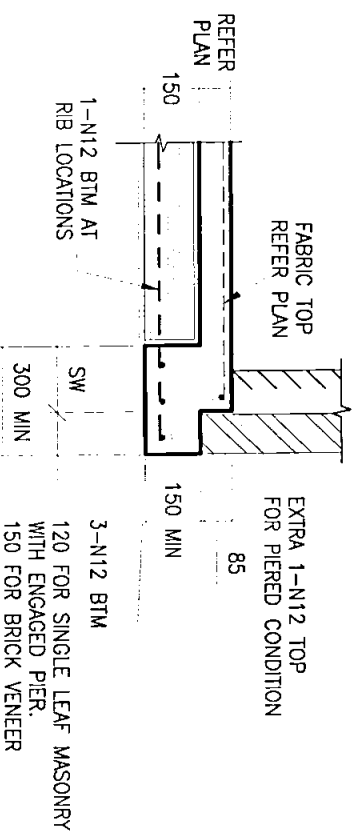
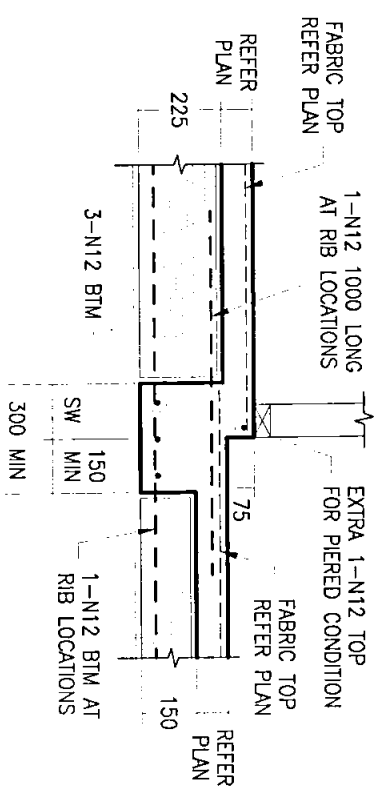


TYPICAL EDGE BEAM DETAIL

TYPICAL RIB BEAM DETAIL

TYPICAL INTERNAL BEAM DETAIL 'IB1'

TYPICAL GARAGE DOOR REBATE DETAIL

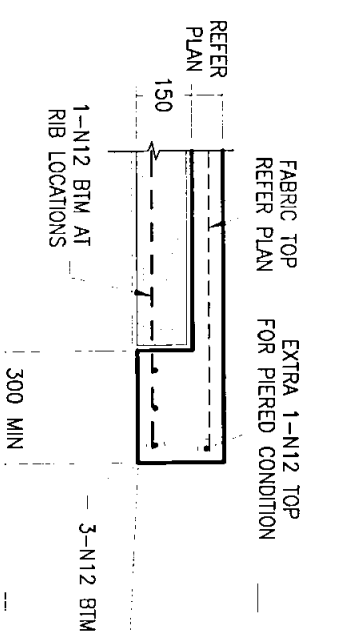
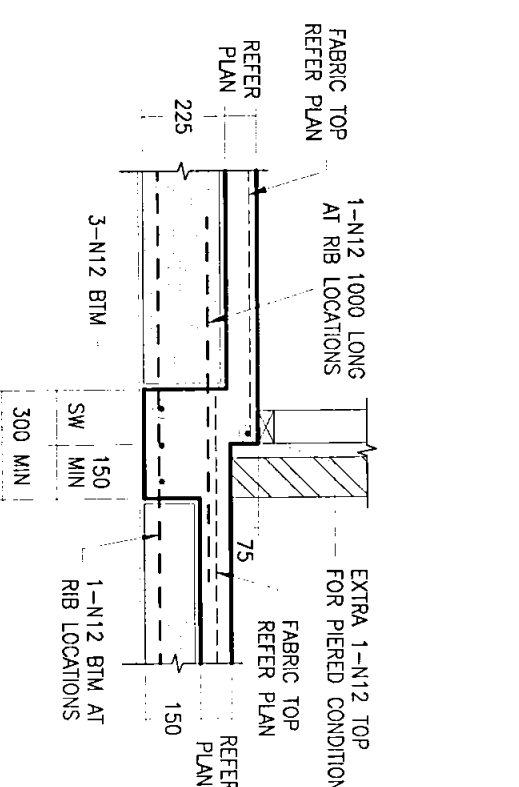


TYPICAL GARAGE STEP BEAM DETAIL

TYPICAL GARAGE EDGE BEAM DETAIL

TYPICAL RAINWATER TANK SLAB DETAIL

THIS DETAIL IS APPLICABLE AT ALL TYPICAL EDGE BEAMS
CONSTRUCTION TYPE MAY VARY FROM SHOWN

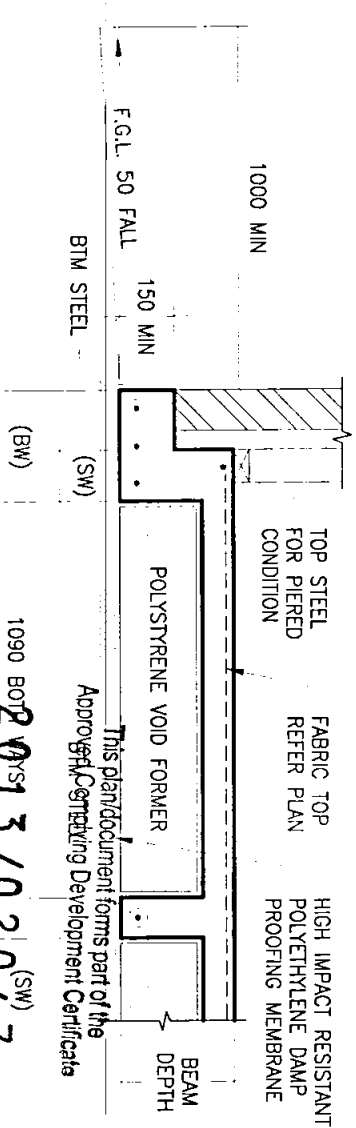


TYPICAL PATIO STEP BEAM DETAIL

TYPICAL PATIO EDGE BEAM DETAIL

BEAM WIDTH (BW)	BTM STEEL
110 TO 150	1-N12
151 TO 220	2-N12
221 TO 330	3-N12
331 TO 440	4-N12

STEM WIDTH (SW)	ADDITIONAL TOP-STEEL IN ADDITION TO SLAB FABRIC
110 TO 150	NIL
151 TO 220	1-N12
221 TO 330	2-N12
331 TO 440	3-N12



TYPICAL WAFFLE RAFT DETAIL

RW11(RIBBED WIRE GRADE 500RW) MAY BE USED IN PLACE OF N12'S

IF IN DOUBT, CONTACT ENGINEER.



1/19 Jonathan Street, Greystanes NSW 2145
3/256 Argyle Street, Moss Vale NSW 2577
www.residentialengineering.com.au
enquiries@residentialengineering.com.au

APPROVED BY: *William McCarthy*

CUSTOMER REF:	J002654
DATE:	27.06.13
DRAWN:	B.K.
SCALE:	1:20

RAWSON
HOMES



UNIT 34/11-21 UNDERWOOD ROAD
HOMERUSH NSW 2140
TELEPHONE 02 9764 6442
FAX 02 9764 6992
Builder's License No. 33453C

MR COX & MS LEUNG
SITE ADDRESS:
LOT 4 IBIS PLACE
WARRIEWOOD

DRAWN	DATE	AMENDMENT	REV	JOB No.	ISSUE
AS	26.07.13	AMENDED PLANS	A	RW1214	B
AS	13.11.13	AMENDED PLANS TO SHOW ALTRESO	B		
				SHEET No. 03 of 08	

THE BEAM(S) SPECIFIED ON THIS DRAWING DOES NOT REPRESENT THE ONLY POSSIBLE STRUCTURAL SOLUTION. PLEASE CONTACT RESIDENTIAL ENGINEERING IF AN ALTERNATIVE BEAM PROFILE WOULD BE PREFERRED FOR ARCHITECTURAL OR CONSTRUCTABILITY REASONS.

GALINTEL T-BAR NOTE:
THE INSTALLATION OF GALINTEL T-BARS TO BE STRICTLY IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS. PROVIDE 230 MIN END BEARING UNO.



⚡
FLOOR JOIST
DIRECTION OVER
BY BUILDER

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2013/02067
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1/19 Jonathan Street, Greystones NSW 2145
3/256 Argyle Street, Moss Vale NSW 2577
www.residentialengineering.com.au enquiries@residentialengineering.com.au

APPROVED BY:

William McCarthy

A.W. MCCARTHY
B.Sc.(Eng), M.I.E.Aust., N.I.E.R., C.P.Eng.

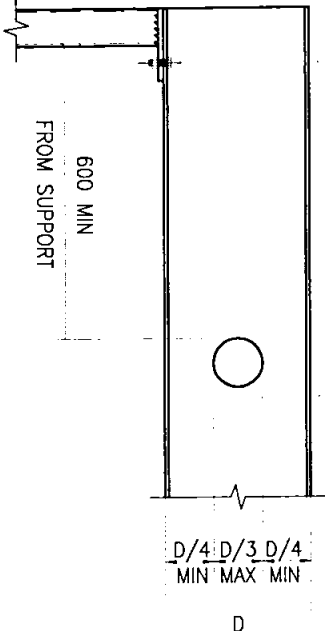
FOR:
MR COX & MS LEUNG

SITE ADDRESS:
LOT 4 IBIS PLACE
WARRIEWOOD

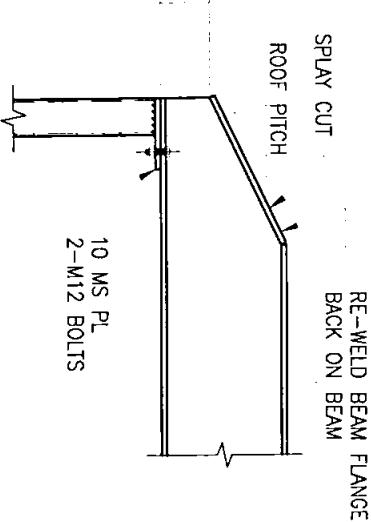
A3

STRUCTURAL STEEL NOTES

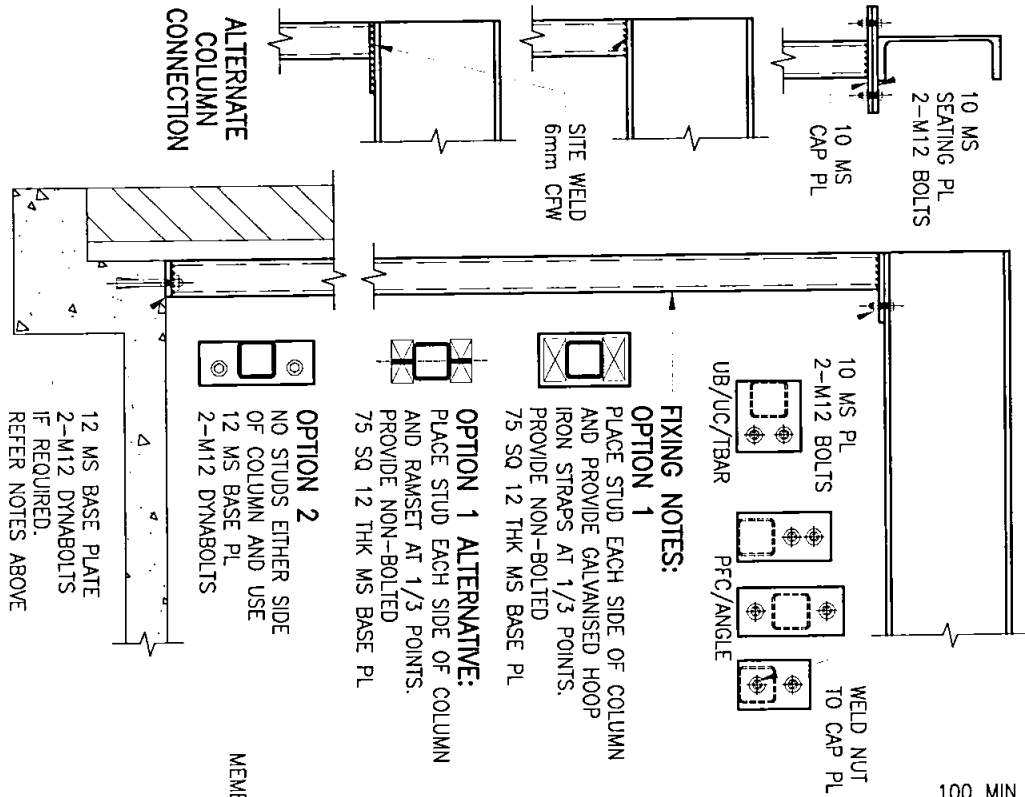
- S1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 4100.
- S2. STEELWORK DESIGNED IN ACCORDANCE WITH AS 4100 "STEEL STRUCTURES CODE" AND AS 1170.1/AS 1170.2 "DEAD AND LIVE LOADS AND WIND LOADS". STRUCTURAL STEEL TO BE GRADE (BHP 300 PLUS)
- S3. SURFACE PREPARATION AND FINISH TO COMPLY WITH AS/NZS 2312 AND BUILDING CODE OF AUSTRALIA CLASS 1 AND 10 BUILDINGS VOLUME 2. THE BUILDER MUST CLARIFY HIS CONTRACTUAL OBLIGATIONS IN THIS REGARD.
- S4. THE INSTALLATION OF GALVATELS AND 'T' BARS TO BE STRICTLY IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
- S5. THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION IS THE BUILDER'S RESPONSIBILITY. ADEQUATE TEMPORARY BRACING SHALL BE PROVIDED AS IS NECESSARY TO STABILISE THE STRUCTURE DURING CONSTRUCTION.
- S6. WELDS:
- ALL WELDS TO BE 6mm CONTINUOUS FILLET WELD U.N.O.
 - BUT WELDS WHERE INDICATED IN THE DOCUMENTS TO BE COMPLETE PENETRATION BUT WELDS AS DEFINED IN AS 1554.
 - ALL SHOP WELDS TO BE FULLY WELDED U.N.O.
 - USE E41XX ELECTRODES FOR ALL WELDING U.N.O.
- S7. SITE WELDING OF HOT DIP GALVANISED STEEL IS PERMISSIBLE IF UPON COMPLETION THE WELDS ARE TREATED WITH THE APPROPRIATE COATING FOR SEVERE AS PER THE B.C.A AND AS/NZS 2312.
- S8. BOLT DESIGNATION:
- 4.6/5 - COMMERCIAL BOLT OF GRADE 4.6 TO AS 1111 SNUG TIGHTENED
 - 8.8/5 - HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS 1252 SNUG TIGHTENED
 - BOLTS TO BE PROVIDED WITH THREADS CLEAR OF SHEAR PLANE.
- S9. ALL BOLTS TO BE COMMERCIAL GRADE U.N.O. NO CONNECTION SHALL HAVE LESS THAN TWO BOLTS. ALL BOLTS AND WASHERS TO BE GALVANISED.
- S10. BEAMS SUPPORTED ON BRICKWORK (BEARING NOTED ON DRAWINGS) SHALL BE SUPPORTED AS PER THE PLAN UNDER THE END OF THE BEAM TO ENSURE EVEN BEARING ON THE BRICKWORK.
- S11. THE BUILDER SHALL PROVIDE ALL DRILL ALL HOLES NECESSARY FOR FIXING STEEL TO STEEL AND TIMBER TO STEEL, WHETHER OR NOT DETAILED IN THE DRAWINGS.
- S12. ALL GUSSET PLATES TO BE BY BHP 300 PLUS B1869
- S13. ALL COLUMNS AND BEAMS SHOWN ON THE DRAWINGS FOR TIMBER FRAMED BUILDINGS SHALL BE LATERALLY RESTRAINED BY THE BUILDING FRAME AT EACH SUPPORT LOCATION THROUGH POSITIVE SCREW FIXING OF WALL STUDS TO THE COLUMNS AND EITHER JOISTS OR NOGGINGS TO THE BEAMS. FOR ARTICULATED FULL MASONRY-BUILDINGS, COLUMNS WILL-BE LATERALLY RESTRAINED BY BRICKWORK AT EACH SUPPORT LOCATION THROUGH POSITIVE FIXING OF WALL-TIES-WHERE A BEAM DIRECTLY SUPPORTS A CONCRETE SLAB NO ADDITIONAL RESTRAINT IS REQUIRED.
- S14. THE BUILDER IS TO MAKE GOOD AND/OR REPAIR ALL DAMAGED SURFACES DURING PERFORMANCE OF THE WORK. IF IN DOUBT, CONTACT ENGINEER.



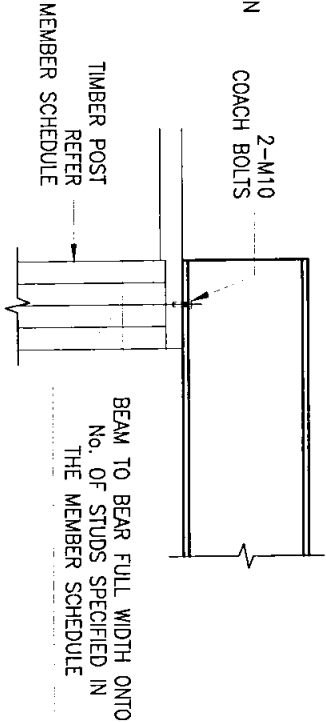
STEEL BEAM PENETRATION DETAIL



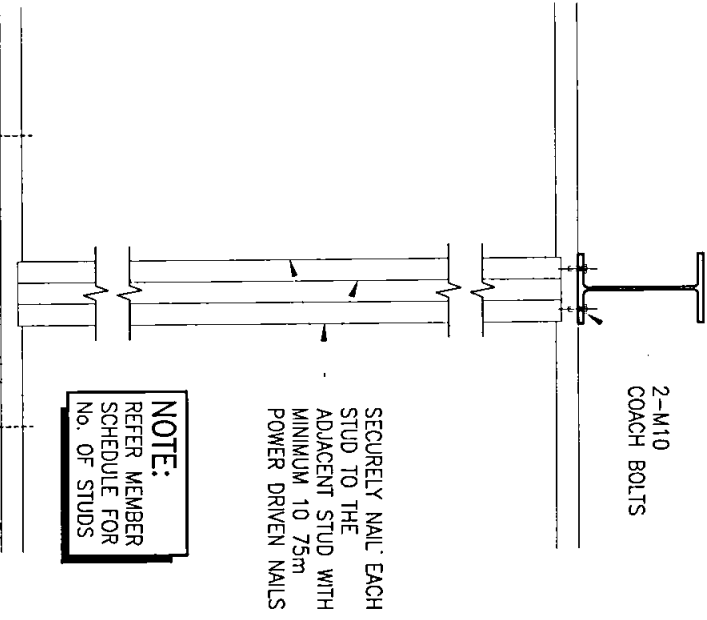
TYPICAL SPLAY DETAIL



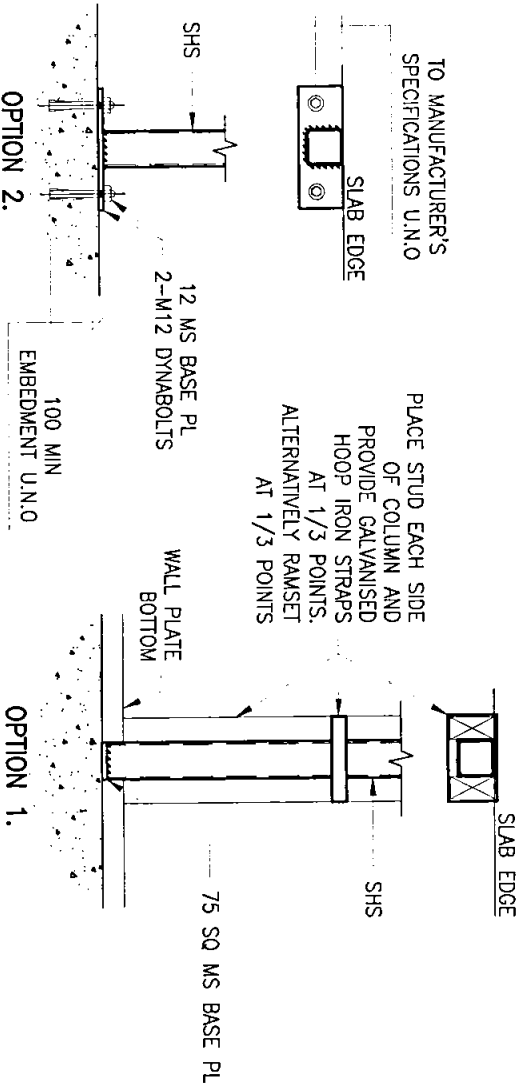
TYPICAL STEEL POST DETAIL



TYPICAL TIMBER POST DETAIL (SIDE ELEVATION)



TYPICAL TIMBER POST DETAIL



COLUMN BASE PLATE CONNECTION DETAILS

- COLUMN BASE PLATE DETAILS
- ORIENTATE BASE PLATE TO SUIT WALL LOCATION
 - 12mm THICK BASE PLATE U.N.O.
 - 2-M12 DYNA BOLTS, 100 MIN EMBEDMENT U.N.O.
 - 6mm CFW CONNECTION OF COLUMN TO BASE PLATE

NOTE:

- ALL WELDS TO BE 6mm CFW U.N.O.
- ALL BOLTS TO BE SPANNER TIGHTENED

RESIDENTIAL ENGINEERING CONSULTING ENGINEERS

NSW: BPH 0255
VIC: EC 24609
QLD: RPEQ 4109

1/19 Jonathan Street, Greystanes NSW 2145
3/356 Anygle Street, Moss Vale NSW 2577

T: 02 9896 5494
T: 02 4869 5003
F: 02 9636 1064
F: 02 4869 5008

enquire@residentialengineering.com.au
www.residentialengineering.com.au

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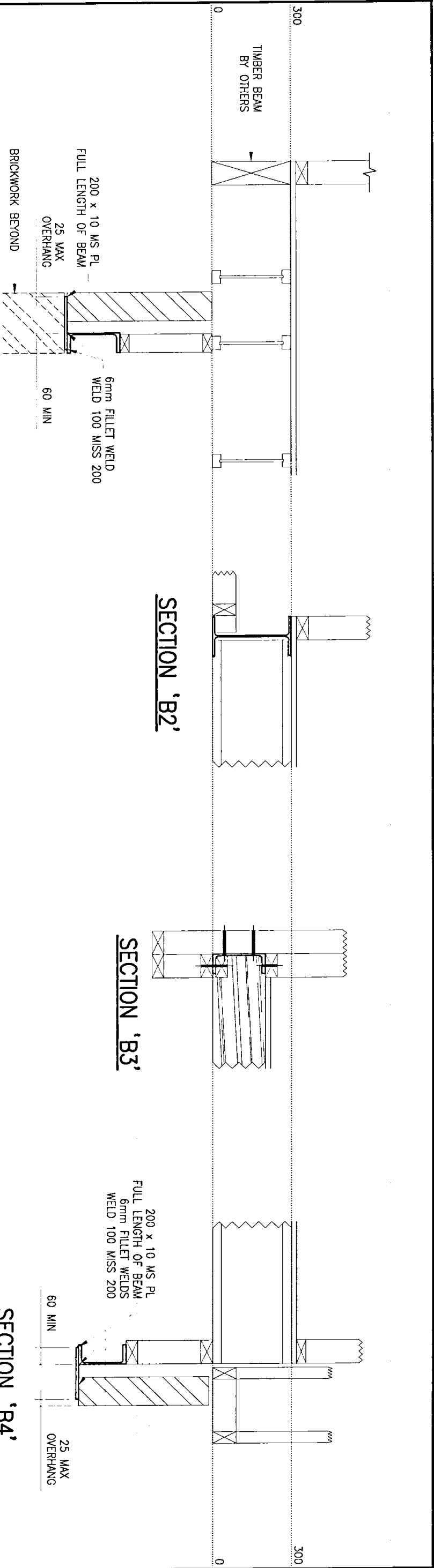
APPROVED BY: *John McCarthy*
A.W. MCCARTHY
B.Sc. (Eng), M.I.E.Aust., N.P.E.R., C.P.Eng.

CLIENT REF: J002554
DATE: 27.06.13
DRAWN: B.K.
SCALE: 1:15

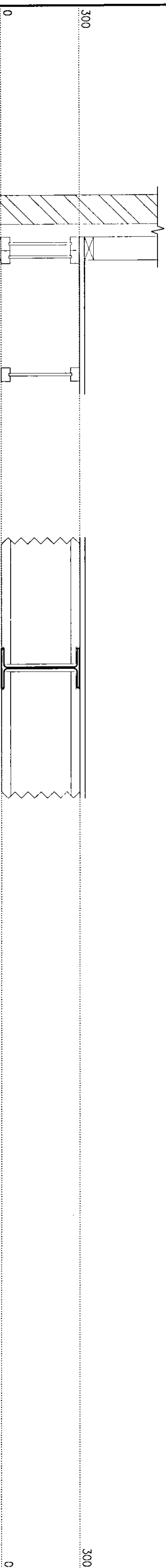
CLIENT: RAWSON HOMES
UNIT 34/11-21 UNDERWOOD ROAD
HOMERIDGE NSW 2140
TELEPHONE 02 9784 6442
FAX 02 9784 6992
Builder's License No. 33493C

FOR: MR COX & MS LEUNG
SITE ADDRESS: LOT 4 IBIS PLACE WARRIEWOOD

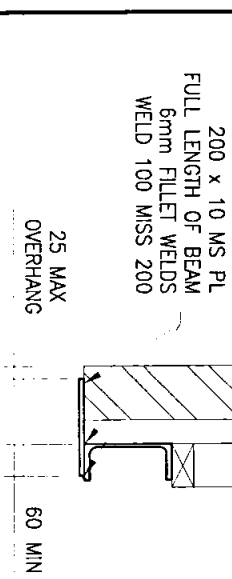
DRAWN	DATE	REV	JOB No:	ISSUE:
AB	26.07.13	A	RW1214	B
AB	13.11.13	B		
SHEET No: 06 of 08				



SECTION 'B1'



SECTION 'B6'



SECTION 'B5'

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NOTE:

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- ALL BOLTS TO BE SPANNER TIGHTENED

ALL STEEL-BEAM-CROSS-SECTIONS-ARE-DIAGRAMMATIC-ONLY

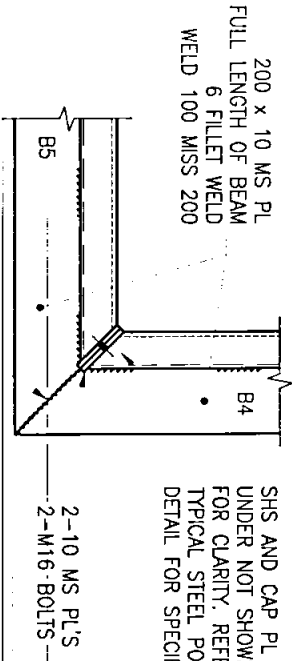
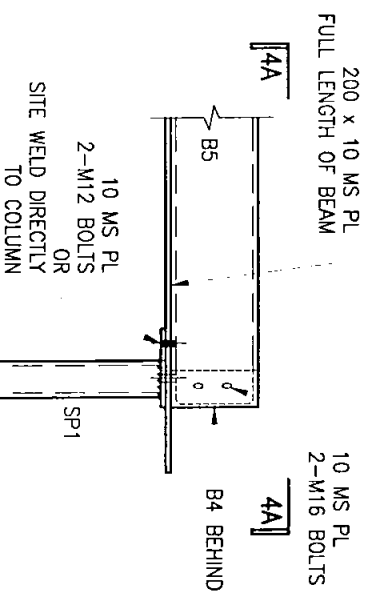
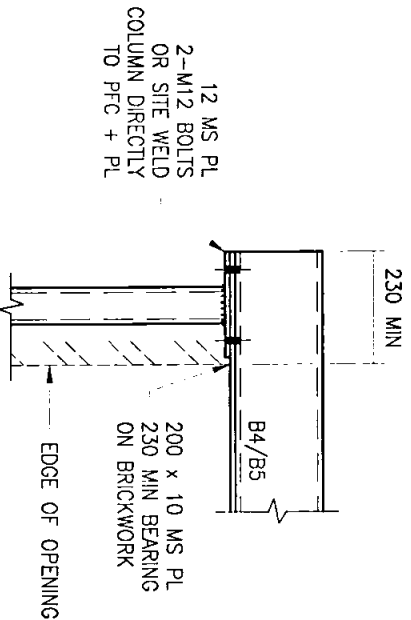
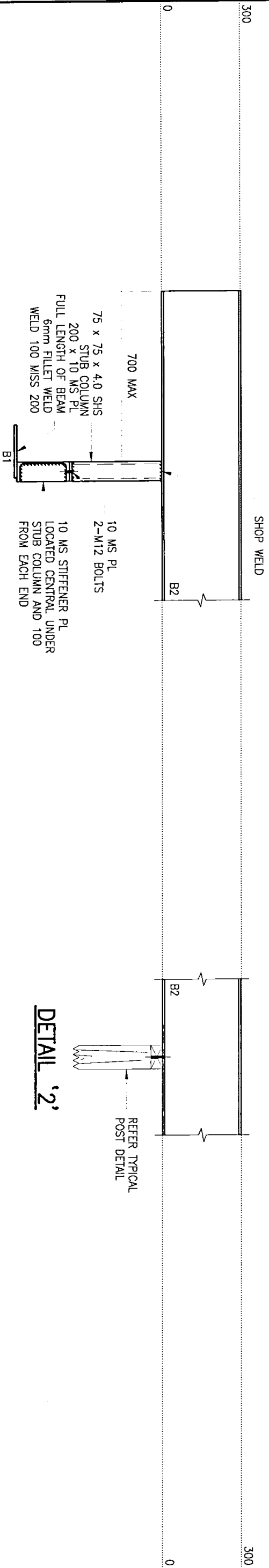
- REFER TO THE MANUFACTURERS SPECIFICATIONS FOR INSTALLATION DETAILS OF L-JOISTS, LVL'S AND ROOF TRUSSES WHERE APPLICABLE.
- SOLID TIMBER JOISTS SHALL NOT BE NOTCHED IN EXCESS OF THE RECOMMENDATIONS OF AS 1684.1 WHERE NECESSARY PROVIDE TIMBER PLATE OVER STEEL BEAM AND PROVIDE TOP MOUNT JOIST HANGERS. ALTERNATIVELY USE TIMBER BLOCKING BETWEEN FLANGES OF STEEL BEAM SUPPORTING JOISTS AND USE FACE MOUNTED JOIST HANGERS.

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2013/02047

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		NSW: BPB 0255 VIC: EC 24609 QLD: RPEQ 4109	
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CLIENT: RAWSON HOMES UNIT 34/11-21 UNDERSWOOD ROAD HOMERICH NSW 2140 TELEPHONE 02 9764 6442 FAX 02 9764 6932 Builder's License No.33493C		CLIENT REF: J002654 DATE: 27.06.13 DRAWN: B.K. SCALE: 1:15	
FOR: MR COX & MS LEUNG SITE ADDRESS: LOT 4 IBIS PLACE WARRIEWOOD		DRAWN: AB DATE: 26.07.13 REVISED: 13.11.13 AMENDED PLANS TO SHOW ALFRESCO	
SHEET No: 07 of 08		JOB No: RW1214 ISSUE: B	



ALL STEEL BEAM CROSS SECTIONS ARE DIAGRAMMATIC ONLY

- REFER TO THE MANUFACTURERS SPECIFICATIONS FOR INSTALLATION DETAILS OF I-JOISTS, LVL'S AND ROOF TRUSSES WHERE APPLICABLE.
- SOLID TIMBER JOISTS SHALL NOT BE NOTCHED IN EXCESS OF THE RECOMMENDATIONS OF AS 1684.1. WHERE NECESSARY PROVIDE TIMBER PLATE OVER STEEL BEAM AND PROVIDE TOP MOUNT JOIST HANGERS. ALTERNATIVELY USE TIMBER BLOCKING BETWEEN FLANGES OF STEEL BEAM SUPPORTING JOISTS AND USE FACE MOUNTED JOIST HANGERS.

NOTE:

- ALL WELDS TO BE 6mm CFW U.N.O.
- ALL BOLTS TO BE SPANNER TIGHTENED

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1/19 Jonathan Street, Greystanes NSW 2145 3/256 Argyle Street, Moss Vale NSW 2577 www.residentialengineering.com.au		T: 02 9886 5494 T: 02 4869 5003 F: 02 4869 5008			DATE: 27.06.13	UNIT 34/11-21 UNDERWOOD ROAD HOMEBUSH NSW 2140 TELEPHONE 02 9764 6442 FAX 02 9764 6992 Builder's License No.334930				AMENDED PLANS TO SHOW ALTRESO	B	SHEET No: 08 of 08	
					DRAWN: B.K.		SITE ADDRESS: LOT 4 IBIS PLACE WARRIEWOOD						
					SCALE: 1:15								

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Approved Complying Development Certificate

2013/02047

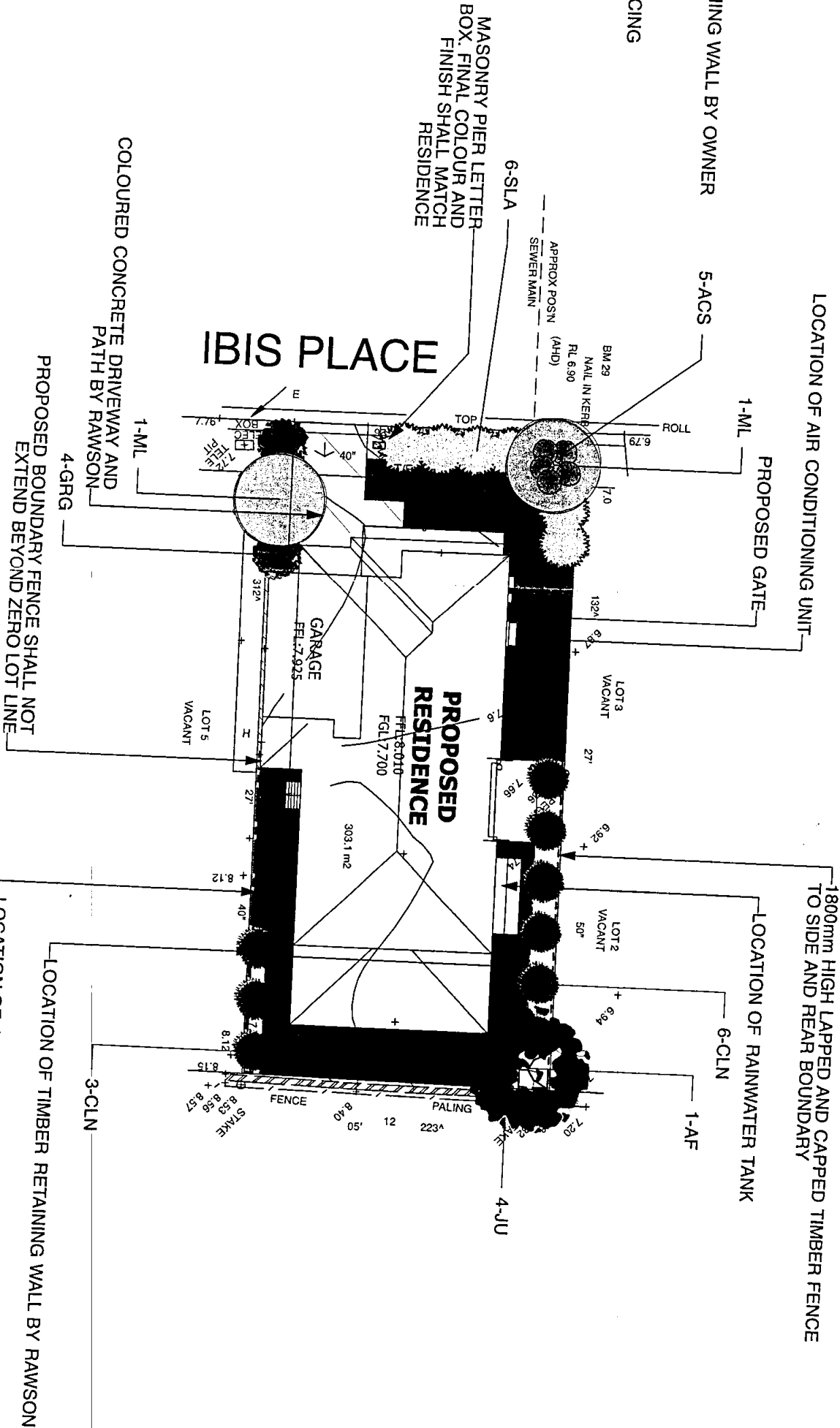
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LEGEND

FFL RL 8.010

1
6

- PROPOSED LEVEL
- EXISTING LEVEL
- MULCHED ACCESS PATH
- PROPOSED DRIVEWAY
- LAWN AREA
- PROPOSED TIMBER RETAINING WALL BY OWNER
- T/E: TIMBER LAWN EDGE
- PROPOSED BOUNDARY FENCING



PLANTING SCHEDULE

NOTE:
PLANT SPECIES WERE SELECTED FROM PITTSWATER
COUNCIL'S NATIVE PLANT BOOKLET (LOWLANDS
LOCALITY) AND IN ACCORDANCE WITH DCP 21

* = AUSTRALIAN NATIVE SPECIES

ID	Latin Name	Common Name	Quantity	Scheduled Size	Spread	Height
ACS	Acmena smithii 'Minor'	Lillypilly	*	5 200mm	1000	2000
AF	Angophora floribunda	Rough Barked Apple	*	1 45LT	5000	15000
CLN	Callistemon linearis	Narrow Leaved Bottlebrush	*	9 5LT	1500	2500
GRG	Grevillea 'Robyn Gordon'	Grevillea	*	4 200mm	2000	2000
JU	Juncus usitatus	Common Rush	*	4 2.5lt	500	600
ML	Melaleuca linearifolia	Snow In Summer	*	2 45LT	4000	9000
SLA	Syzygium 'Cascade'	Aussie Compact Lilly Pilly	*	6 200mm	2000	3000

Notes:

- All dimensions and levels shall be verified by Contractor on site prior to commencement of work.
- All levels shall be determined by others and approved on site by client.
- All levels shall be determined by others and approved on site by client.
- Extent, height and position of all retaining walls shall be determined by others and approved on site by client, to Structural Engineers detail.
- Do not scale from drawings.
- All levels shall be surveyed prior to commencement of construction.
- All levels shall be surveyed prior to commencement of construction.
- This plan is for DA purposes only. It has not been detailed for construction.
- All dimensions, levels and boundaries are nominal only.
- This design shall not be copied, utilised or reproduced in any way without prior written permission of A Total Concept.

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Approved Compiling Development Certificate

2013/02027



DATE: 13/11/13

REVISION 'B' Amendments made to as per Councils request

PROPOSED LANDSCAPE PLAN

LOT 4 IBIS PL, WARRIEWOOD

KEITH CHARLES COX & HIU YU CAROL LEUNG

A Total Concept Landscape Architects &
Swimming Pool Designers
65 West Street, North Sydney NSW 2060
Tel: (02) 9957 5122 Fax: (02) 9957 5922

DATE #

29/05/12

DWG #

L/01

PROJECT #

Rawson

SCALE @ A3

1:200

DRAWN

JS

CH/D

SW

REVISION

B

atc

010101 CONCEPT

13/11/13 13/11/13 13/11/13

13/11/13

13/11/13

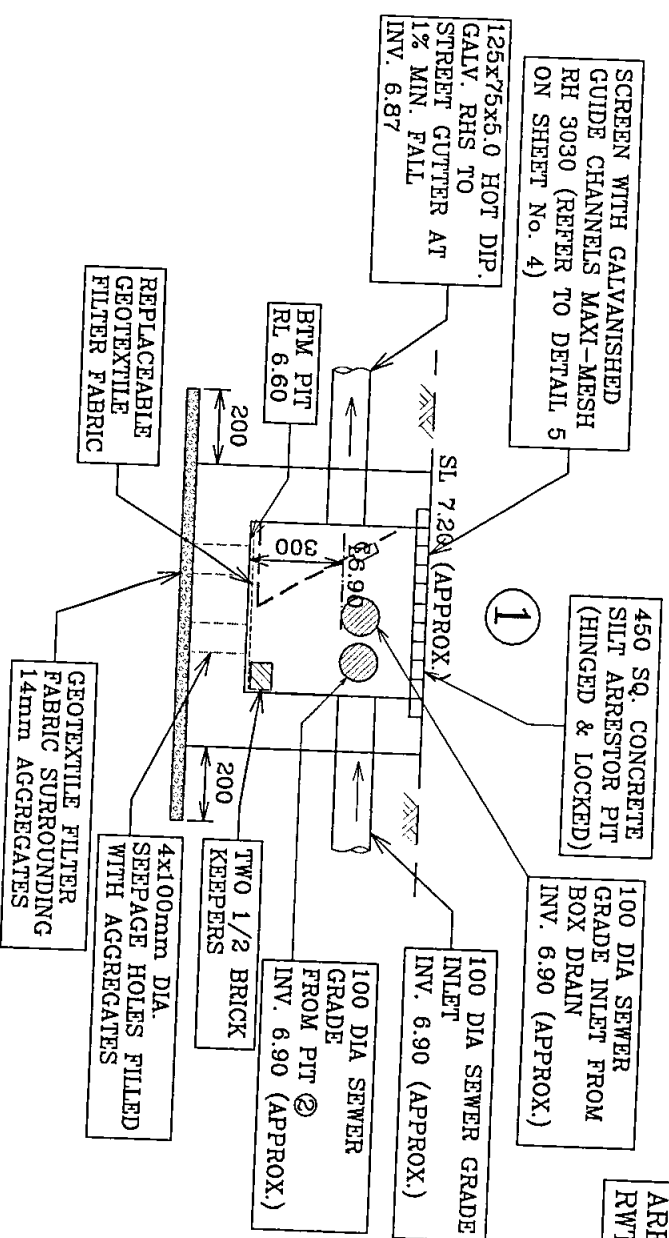
13/11/13

13/11/13

13/11/13

GENERAL NOTES:

1. ALL HYDRAULIC WORKS TO BE IN ACCORDANCE WITH PITTSWATER CITY COUNCIL'S STANDARD SPECIFICATIONS AND TO THE SUPERVISING ENGINEER'S SATISFACTION.
2. THESE PLANS ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL PLANS FROM RAWSON HOMES JOB No. J002654 ISSUE D DATED 16 JULY 2013 (PHONE: (02) 9764 6442).
3. ALL STORMWATER PIPES TO BE 100 DIA. UPVC UNLESS NOTED OTHERWISE. PIPES UNDER DRIVEWAY TO BE SEWER GRADE.
4. DEPTH AND LOCATION OF SEWER & SERVICES TO BE CONFIRMED PRIOR TO COMMENCEMENT OF DRAINAGE WORKS.
5. THE CONTRACTOR SHALL IMPLEMENT EROSION AND SEDIMENTATION CONTROL MEASURES AS NECESSARY AND TO THE SATISFACTION OF COUNCIL PRIOR TO COMMENCEMENT OF CONSTRUCTION AND DURING CONSTRUCTION.
6. ENSURE FINISHED GROUND LEVELS ARE SLOPING AWAY FROM THE DEVELOPMENT & INTO PITS OR YARD SUMPS, AS SHOWN ON THE ATTACHED DRAINAGE PLAN.
7. HYDRAULIC PLANS ARE SUBJECT TO COUNCIL APPROVAL.



DETAIL 1
SILT ARRESTOR PITT

SCALE 1:20

NASSERI ASSOCIATES

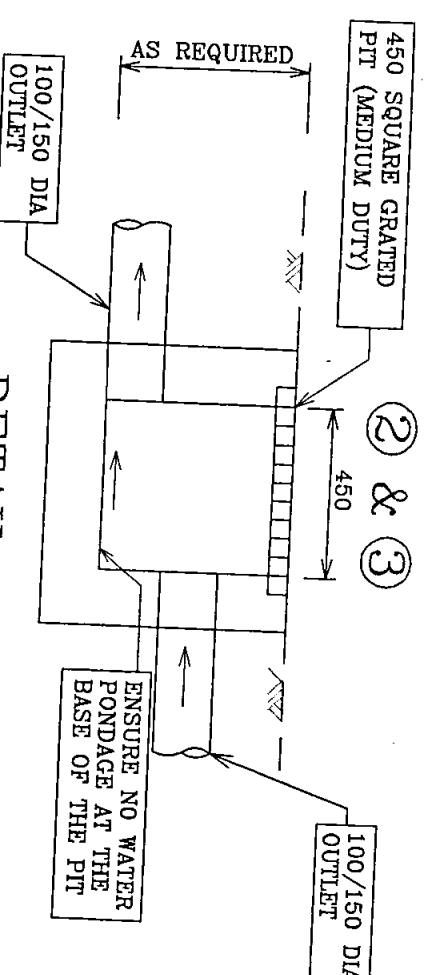
CIVIL, HYDRAULIC & STRUCTURAL ENGINEERING
SUITE 51, No.14 NARABANG WAY, BELROSE 2085
PO BOX 714, BALGOWLAH, NSW 2093
TEL. (02) 9986 3875
FAX. (02) 9986 3876
MOB. 0410 308 064
EMAIL. nasserlassociates@bigpond.com

J. NASSERI
BE, FIEAust.,
NPER, CPEng.
DATE: 18/06/2013

SYMBOLS & NOTATIONS

- | STORMWATER LINES | SL | FINISHED SURFACE LEVEL |
|--|-----|--------------------------|
| ○ DOWNPIPE | FFL | FINISHED FLOOR LEVEL |
| ● 100 DIA YARD SUMP | FPL | FINISHED PLATFORD LEVEL |
| <u>EXISTING</u> 225x100 GRATED BOX DRAIN | X | SEDIMENT CONTROL BARRIER |
| INVERT LEVEL (PIPE / PIT) | --- | PROPOSED BOUNDARY |
| | --- | S - SEWER |

REVISION A:
ARCHITECTURAL PLANS ALTERED
HYDRAULIC PLANS CHANGED
ACCORDINGLY (REVISION A
REFLECTS THESE CHANGES)



DETAIL 2

TYPICAL PIT DETAIL

SCALE 1:20

BASIS REQUIREMENT:

3,500 LITRES CAPACITY RAINWATER
TANK FOR AT LEAST 76m² OF ROOF
AREA. PROVIDED 3,500 LITRES CAPACITY
RWT FOR TOTAL ROOF AREA

CALCULATIONS:

TOTAL SITE AREA = 303.10 m²
TOTAL ROOF AREA INTO RWT = 151.00 m²
TOTAL IMPERVIOUS AREA = 168.30 m² APPROX. (55.5%)
(INCLUDING ROOF, GARAGE, DRIVEWAY AND PAVED AREAS).

IMPORTANT NOTES:

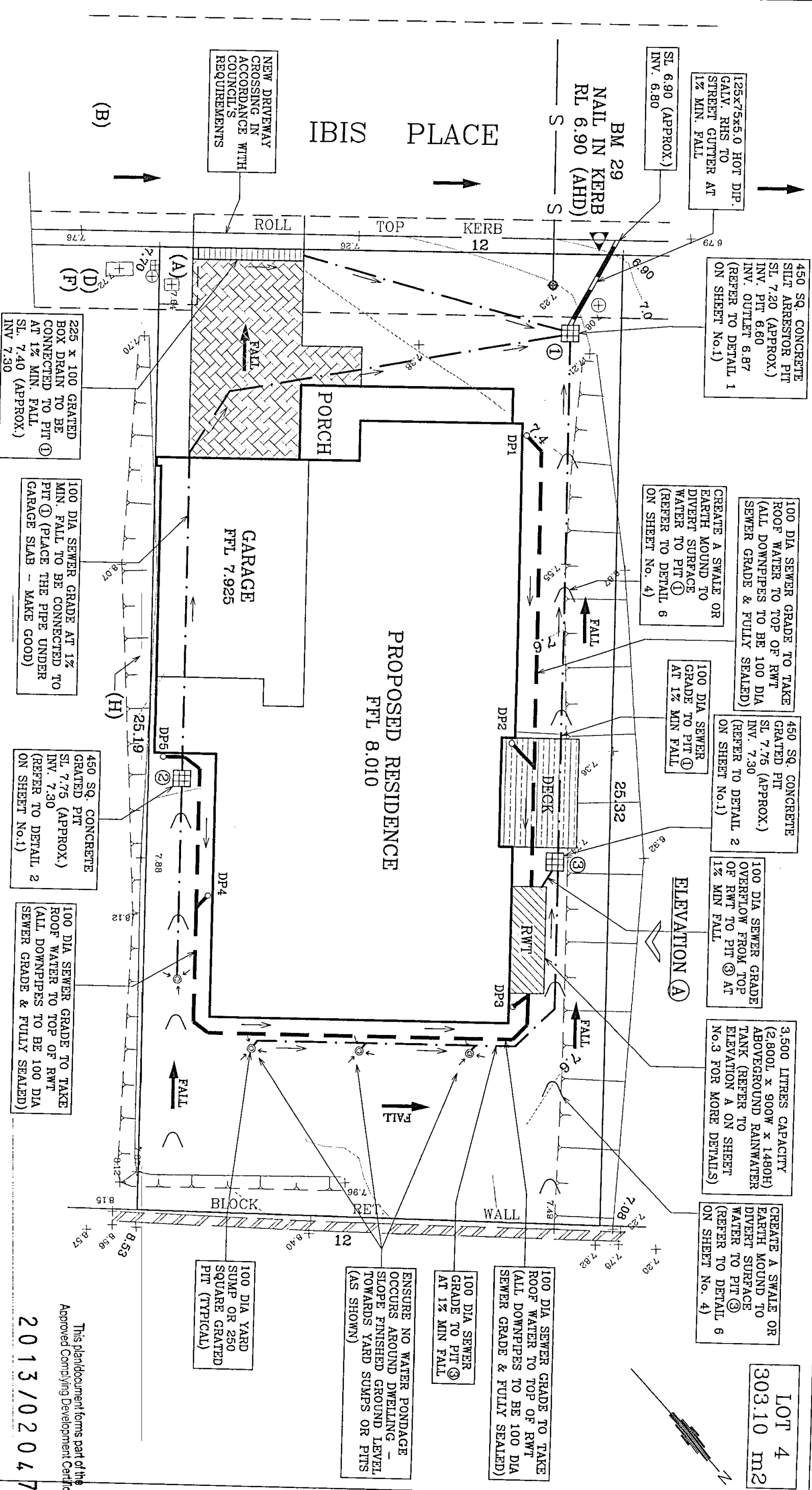
1. THIS DEVELOPMENT IS TO CONSTRUCT A NEW RESIDENTIAL DWELLING IN A NEW SUBDIVISION. ON-SITE DETENTION SYSTEM HAS BEEN PROVIDED FOR THE WHOLE SUBDIVISION AND IS THEREFORE NOT REQUIRED FOR INDIVIDUAL PROPERTY.
2. AN ABOVE GROUND RAINWATER TANK WITH CAPACITY OF 3,500 LITRES HAS BEEN PLACED ON NORTHERN SIDE OF THE DWELLING TO COLLECT ALL ROOF WATER ONLY FOR RE-USE OF WATER SUCH AS TOILET FLUSHING, LAUNDRY & IRRIGATION SYSTEMS - 100 DIA SEWER GRADE-OVERFLOW PIPE FROM TOP OF RWT IS TO BE CONNECTED TO PIT ③ AND EVENTUALLY TO A SILT ARRESTOR PIT (PIT ①). THE RHS OUTLET FROM PIT ① IS CONNECTED TO STREET GUTTER AT 1% MIN. FALL (REFER TO DRAINAGE PLAN ON SHEET No.2).
3. SURFACE WATER AROUND THE DWELLING INCLUDING DRIVEWAY AND TOP OF RWT TO BE DRAINED TO THE SILT ARRESTOR PIT (PIT ①) BEFORE DISCHARGING INTO STREET GUTTER AT 1% MIN. FALL (REFER TO DRAINAGE PLAN ON SHEET No.2).
4. LEVELS ARE CRITICAL. PRIOR TO ANY CHANGES CONTACT ENGINEER.
5. PRIOR TO BACKFILLING STORMWATER PIPES, CONTACT ENGINEER FOR AN INSPECTION.
- Issued by DM Certifiers P/L BpB 18666
2013/0202-7

A	ARCHITECTURAL PLANS ALTERED	
ISSUE	AMENDMENTS	29.07.13
		DATE

CLIENTS: RAWSON HOMES (MR COX & MS LEUNG)
LOT 4 (H/No.3) IBIS PLACE, WARRIEWOOD

HYDRAULIC DETAILS

NOTES, CALCULATIONS & PITS DETAILS



LEGEND:
CONCRETE/PAVED AREA
100 DIA UPVC OR SEWER GRADE FOR SURFACE WATER DRAINAGE
100 DIA SEWER GRADE FOR ROOF WATER DRAINAGE ONLY

NASSERI ASSOCIATES

CIVIL, HYDRAULIC & STRUCTURAL ENGINEERING
SUITE 51, No.14 NARABANG WAY, BELROSE 2085
TEL. (02) 9986 3875
FAX (02) 9986 3876
MOB. 0410 308 064
EMAIL nasseriasociates@bigpond.com

J.NASSERI
BE, FIEAust.,
NPER, CPEng.
DATE: 18/06/2013

SYMBOLS & NOTATIONS
STORMWATER LINES
DOWNPIPE
100 DIA YARD SUMP
225x100 GRATED BOX DRAIN
INVERT LEVEL (PPE / PIT)
FINISHED SURFACE LEVEL
FINISHED FLOOR LEVEL
FINISHED PLATFORM LEVEL
SEDIMENT CONTROL BARRIER
PROPOSED BOUNDARY
SEWER

DRAINAGE PLAN
SCALE 1:100

(A) EASEMENT TO DRAIN WATER 1.5 WIDE
(B) EASEMENT TO DRAIN WATER 6 WIDE & VARIABLE WIDTH (DP 1161062)
(D) EASEMENT FOR WATER SUPPLY PURPOSES 1.65 WIDE
(E) EASEMENT FOR WATER SUPPLY PURPOSES 0.85 WIDE
(F) EASEMENT FOR SERVICES 1.65 WIDE & VARIABLE
(H) EASEMENT FOR ACCESS, BUILDING, MAINTENANCE & SUPPORT 0.9 WIDE

HYDRAULIC DETAILS

DRAINAGE PLAN

DESIGNED	HN	DRAWN	HN	CHECKED	JN	SCALE	AS SHOWN	CAD REF. ENG/RAWSON	JOB No. D2813	SHEET No. 2
CLIENT: RAWSON HOMES (MR COX & MS LEUNG)										
LOT 4 (H/No.3) IBIS PLACE, WARREWOOD										
DATE: 29.07.13										
AMENDMENTS										
ARCHITECTURAL PLANS ALTERED										
ISSUE										
A										

This plan/document forms part of the
Approved Complying Development Certificate
2013/02047

Issued by DM Certifiers P/L BPB 1869

IMPORTANT NOTES:
1. RAINWATER TANK IS FROM TANKWORKS AUSTRALIA OR SIMILAR. PH: 1300 736 562

2. A FIRST FLUSH DEVICE IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS SHALL BE FITTED TO THE SYSTEM TO DIVERT THE FIRST 0.5mm OF RUN-OFF FROM THE AREA DRAINING AWAY FROM THE STORAGE TANK. (eg 0.5 l/m²)

REFER TO DETAIL 3
ON SHEET No.4
FOR MORE DETAILS

100 DIA YARD
SUMP OR 250
SQUARE GRATED
PT (TYPICAL)

100 DIA SEWER
GRADE TO PT ③
AT 1% MIN FALL

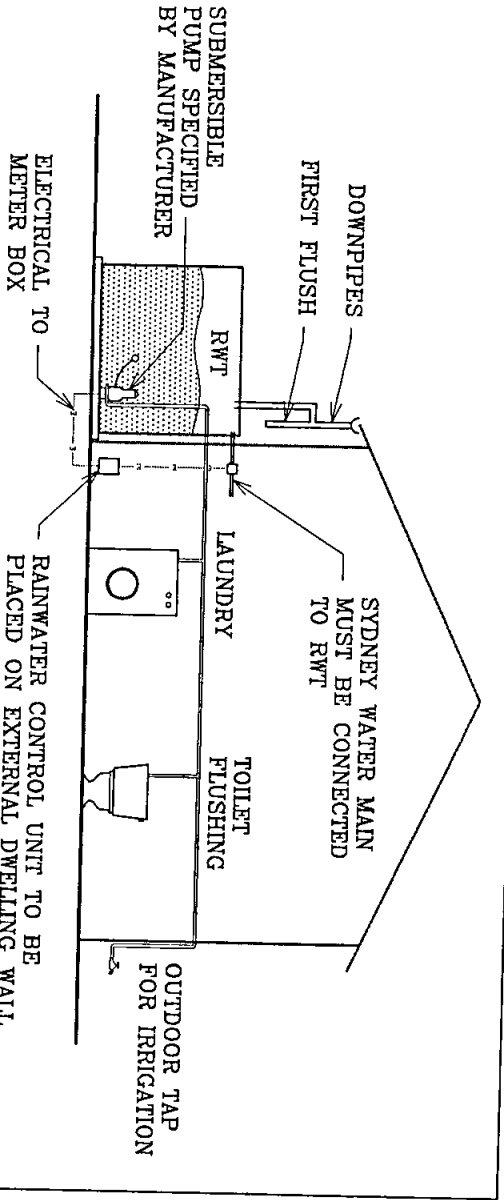
100 DIA SEWER
GRADE OVERFLOW
TO PT ③ AT 1%
MIN FALL

100 DIA SEWER
GRADE TO PT ①
AT 1% MIN FALL

100 DIA SEWER GRADE TO TAKE
ROOF WATER TO TOP OF RWT
(ALL DOWNPIPES TO BE 100 DIA
SEWER GRADE & FULLY SEALED)

3500 LITRES CAPACITY
(2,800L x 900W x 1480H)
ABOVEGROUND RAINWATER
TANK (REFER TO DETAIL 3
ON SHEET No.4 FOR
MORE DETAILS)

100 DIA SEWER GRADE TO TAKE
ROOF WATER TO TOP OF RWT
(ALL DOWNPIPES TO BE 100 DIA
SEWER GRADE & FULLY SEALED)



RAINWATER HARVESTING SYSTEM

NOT TO SCALE

ELEVATION A

SCALE 1:100

NASSERI ASSOCIATES

CIVIL, HYDRAULIC & STRUCTURAL ENGINEERING
SUITE 51, No.14 NARABANG WAY, BELROSE 2085
PO BOX 714, BALGOWLAH, NSW 2093
TEL. (02) 9986 3875
FAX. (02) 9986 3876
MOB. 0410 308 064
EMAIL: nasseriasociates@bigpond.com

SYMBOLS & NOTATIONS

- STORAGE WATER LINES
- DOWNPIPE
- 100 DIA YARD SUMP
- 225x100 GRATED BOX DRAIN
- INV INVERT LEVEL (PPE / PT)
- SL FINISHED SURFACE LEVEL
- FIL FINISHED FLOOR LEVEL
- FPL FINISHED PLATFORM LEVEL
- X- SEDIMENT CONTROL BARRIER
- PROPOSED BOUNDARY
- 5- SEWER

ARCHITECTURAL PLANS ALTERED
AMENDMENTS
29.07.13
DATE

CLIENT: RAMSON HOMES (MR COX & MS LEUNG)
LOT 4 (H/No.3) IBIS PLACE, WARRIEWOOD

HYDRAULIC DETAILS

ELEVATION DETAILS

DESIGNED HN DRAWN HN CHECKED JN SCALE AS SHOWN

CAD REF. ENG/RAWSON

JOB No. D2813

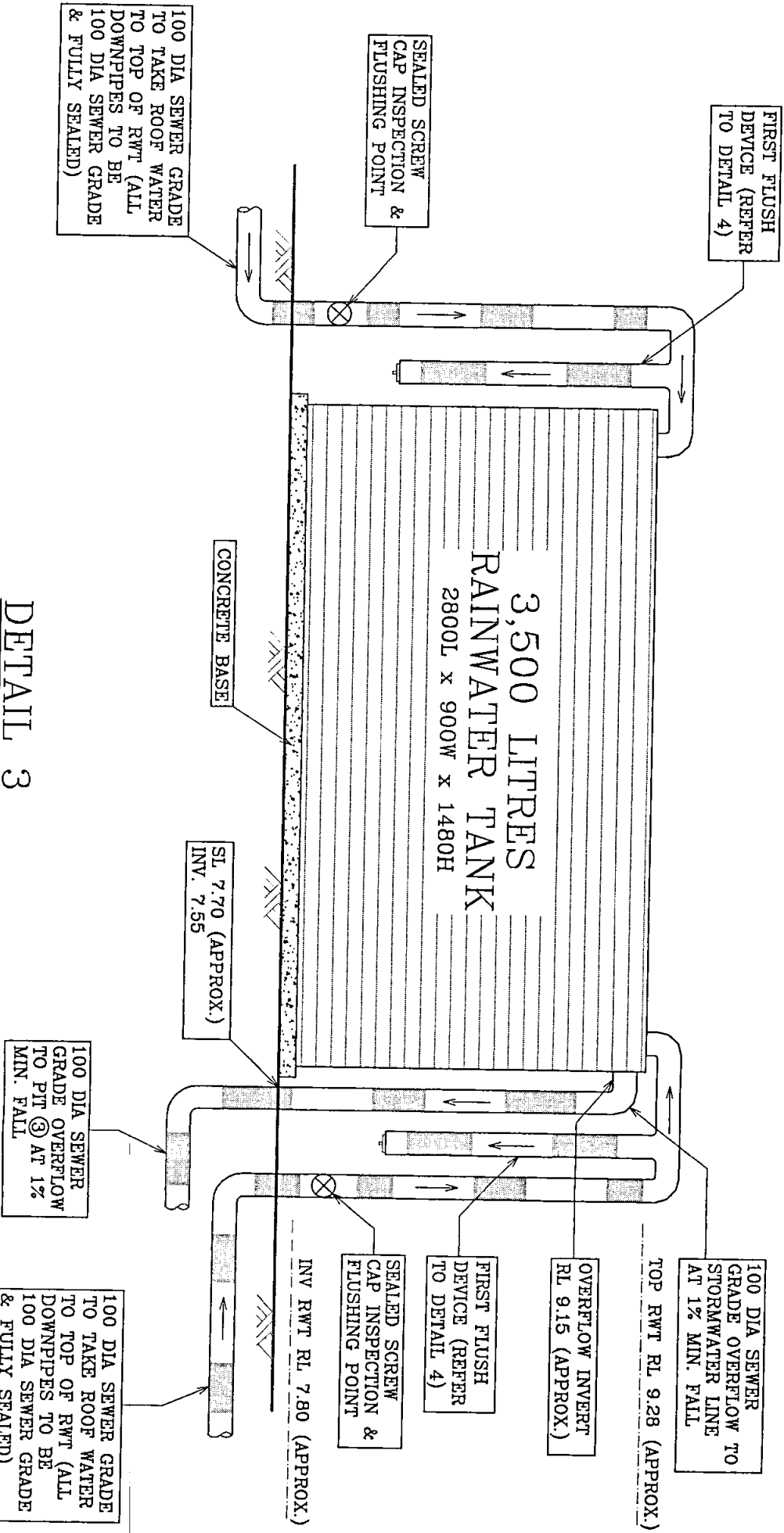
SHEET No. 3

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Approved Complying Development Certificate

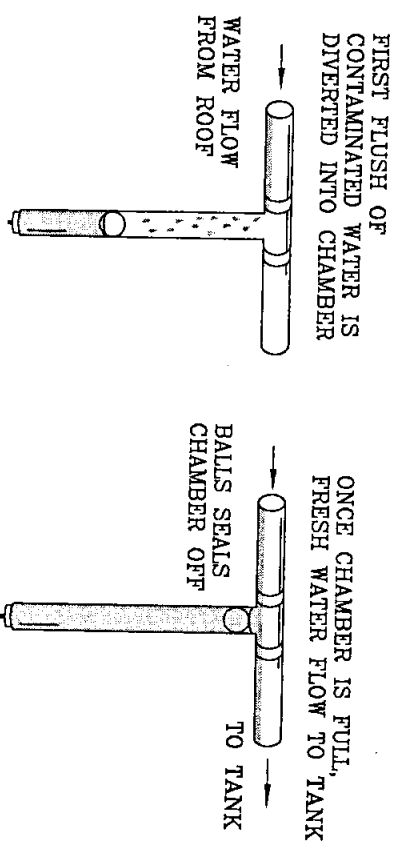
20-13-02047

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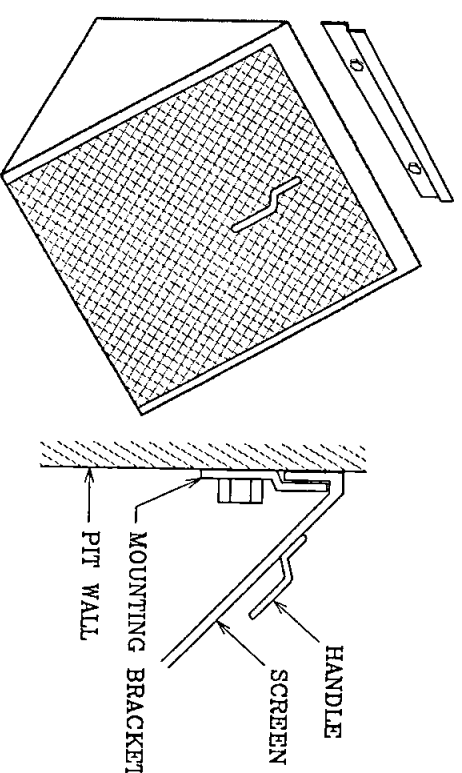
- IMPORTANT NOTES:**
1. RAINWATER TANK IS FROM TANKWORKS AUSTRALIA OR SIMILAR. PH: 1300 736 562
 2. A FIRST FLUSH DEVICE IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS SHALL BE FITTED TO THE SYSTEM TO DIVERT THE FIRST 0.5mm OF RUN-OFF FROM THE AREA DRAINING AWAY FROM THE STORAGE TANK. (eg.0.5 l/m²)



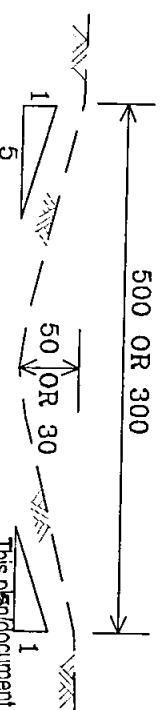
DETAIL 3
RAINWATER TANK DETAILS
SCALE 1:25



DETAIL 4
FIRST FLUSH DETAILS
NTS



DETAIL 5
MAXI-MESH RH 3030 DETAILS
NTS



DETAIL 6
500 OR 300mm WIDE EARTH MOUND
NTS

This document forms part of the
Approved Complying Development Certificate

NASSERI ASSOCIATES

CIVIL, HYDRAULIC & STRUCTURAL ENGINEERING
SUITE 51, No.14 NARABANG WAY, BELROSE 2085
PO BOX 714, BALGOWLAH, NSW 2093
TEL. (02) 9986 3875
FAX. (02) 9986 3876
MOB. 0410 308 064
EMAIL. nasseriasociates@bigpond.com

J.NASSERI
BE, FIEAust.
NFER, CPENG.
DATE: 18/06/2013

SYMBOLS & NOTATIONS	
--- S ---	STORMWATER LINES
○	DOWNPIPE
●	100 DIA YARD SUMP
225/100 GRATED BOX DRAIN	INVERT LEVEL (PIPE / PIT)
---	FINISHED SURFACE LEVEL
---	FINISHED FLOOR LEVEL
---	FINISHED PLATFORM LEVEL
---	SEDIMENT CONTROL BARRIER
---	PROPOSED BOUNDARY
---	SEWER

A		ARCHITECTURAL PLANS ALTERED	29.07.13
ISSUE		AMENDMENTS	DATE
CLIENT: RAWSON HONES (MR COX & MS LEUNG)			
LOT 4 (H/No.3) IBIS PLACE, WARRIEWOOD			
DESIGNED	HN	DRAWN	HN
CHECKED	JN	SCALE	AS SHOWN
CAD REF. ENG./RAWSON	JOB No. 02813	SHEET No. 4	
HYDRAULIC DETAILS		RAINWATER TANK DETAILS	

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BASIX Certificate

Building Sustainability Index www.basix.nsw.gov.au

Single Dwelling

Certificate number: 487416S_04

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: Tuesday, 29 October 2013
To be valid, this certificate must be lodged within 3 months of the date of issue.



This plan/document forms part of the
Approved Complying Development Certificate

2013/02047

Issued by DM Certifiers P/L BPB 1869

Project summary		
Project name	13-14411_04	
Street address	3 lbs Place WARRIEWOOD 2102	
Local Government Area	Pittwater Council	
Plan type and plan number	deposited 270730	
Lot no.	4709	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	4	
Project score		
Water	✓ 43	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 43	Target 40

Certificate Prepared by	
Name / Company Name: Energy Ratings Australia Pty Ltd	
ABN (if applicable): 31133256676	

Energy Performance Certificate

Project address	
Project name	13-14411_04
Street address	3 Ibis Place WARRIEWOOD 2102
Local Government Area	Pittwater Council
Plan type and plan number	Deposited Plan 270730
Lot no.	4709
Section no.	-
Project type	
Project type	separate dwelling house
No. of bedrooms	4
Site details	
Site area (m²)	303
Roof area (m²)	151
Conditioned floor area (m2)	185
Unconditioned floor area (m2)	17
Total area of garden and lawn (m2)	114

Assessor details and thermal loads		
Assessor number	20390	
Certificate number	1005829708	
Climate zone	56	
Area adjusted cooling load (MJ/m²·year)	21	
Area adjusted heating load (MJ/m²·year)	36	
Other		
none	n/a	
Project score		
Water	✓ 43	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 43	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 (> 7.5 but <= 9 L/min) 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 3 star in the kitchen in the development.			✓	
The applicant must install basin taps with a minimum rating of 3 star in each bathroom in the development.			✓	
Alternative water				
Rainwater tank				
The applicant must install a rainwater tank of at least 3500 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 76 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
------------------	------------------------------	-----------------

Simulation Method

The applicant must attach the certificate referred to under "Assessor Details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for an occupation certificate for the proposed development.			
---	--	--	--

The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
---	--	--	--

The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX certificate, including the Cooling and Heating loads shown on the front page of this certificate.			
---	--	--	--

The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Assessor Certificate requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor to certify that this is the case. The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.			
--	--	--	--

The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✓	✓
---	--	---	---

The applicant must construct the floors and walls of the dwelling in accordance with the specifications listed in the table below.	✓	✓	✓
--	---	---	---

Floor and wall construction	Area
floor - concrete slab on ground	All or part of floor area square metres
floor - suspended floor above garage	All or part of floor area

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 2.5 - 3.0			✓	✓
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 2.5 - 3.0			✓	✓
The cooling system must provide for day/night zoning between living areas and bedrooms.			✓	✓
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 3.0 - 3.5			✓	✓
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 3.0 - 3.5			✓	✓
The heating system must provide for day/night zoning between living areas and bedrooms.			✓	✓
Ventilation				
The applicant must install the following exhaust systems in the development:				
At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: manual switch on/off			✓	✓
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				

Energy Commitments

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.

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

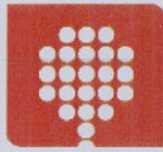
Legend

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.



RAWSON HOMES

External Colour Selections

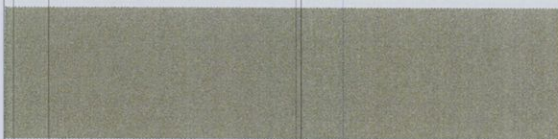
Lot 4 Ibis Place, Warriewood
Mr Keith Cox and Ms Hiu Leung



Main Brick:
PGH Bricks
Brick Name – Pearl Grey



Roofing
Monier Madison Profile
Tile Name – Soho Night



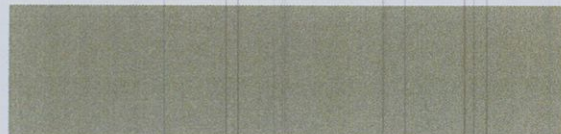
Rendered Brickwork to Front Façade
Dulux - Mud Pack



Primeline Weatherboard Cladding
Dulux - Domino



Matrix Cladding
Dulux - Domino



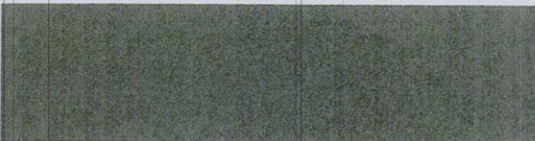
Easylap Cladding
Dulux - Mud Pack



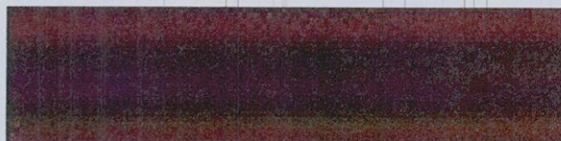
Rendered RHS Pier
Dulux - Domino



Downpipe:
Colorbond – Painted Mud Pack



Gutter :
Colorbond – Woodland Grey

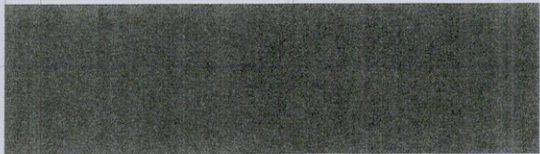


Garage Door:
Timbergrain - Caoba

This plan/document forms part of the
Approved Complying Development Certificate

2013/02017

Issued by DM Certifiers P/L BPB 1869



Fascia:
Colorbond – Woodland Grey



Window Frames and Flyscreens
Colorbond – Surfmist



Driveway:
ColourThru: Graphite



External Handrail to front Balcony:
Colorbond – Surfmist

HIA GENERAL HOUSING SPECIFICATIONS - NSW
(INCORPORATING THE HIA GUIDE TO MATERIALS & WORKMANSHIP)
REVISED SEPTEMBER 2012

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This is the Specification referred to in the Contract No..... Date:.....

Owner 1

Name:				
Owner's Signature:			Date:	
Witness's name:			Witness's signature:	

Owner 2

Name:				
Owner's Signature:			Date:	
Witness's name:			Witness's signature:	

Builder

Name:				
Builder's Signature:			Date:	
Witness's name:			Witness's signature:	

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**HIA GENERAL HOUSING SPECIFICATIONS - NSW
(INCORPORATING THE HIA GUIDE TO MATERIALS & WORKMANSHIP)
REVISED SEPTEMBER 2012**

1. INTRODUCTION

1.1 General

This Specification forms part of the *Contract* documents referred to in the building *Contract* and details the works to be executed and the materials to be used in carrying out those works at the site.

This Specification is to be read as a general specification only. The extent of the works shall be governed by the approved plans and other requirements under the *Contract*.

Any works not fully detailed shall, where appropriate, be sufficiently performed if carried out in accordance with the *National Construction Code (NCC) Series*, the relevant manufacturer's instructions or *Engineer's Instructions*.

1.2 Preliminary Use

This Specification forms part of the *Contract* and should be read in conjunction with the other contract documents.

1.3 Prevailing Documents

Where there is a difference between the plans and this Specification, this Specification shall take precedence. The *Builder* must at all times maintain a legible copy of the plans and this Specification bearing the approval of the relevant *Local Authority*.

Otherwise to the extent of any conflict between documents, the order of precedence set out in the building contract shall apply.

1.4 Size and Dimensions

Unless otherwise stated, all dimensions given in this specification are in millimetres and are nominal only.

1.5 Prime Cost and Provisional Sum Items

Prime Cost and Provisional Sums Items are items that the Owner is to select after the contract has been entered into. The prices listed are the Builder's reasonable estimate of the "cost price" of those items including GST. The prices listed do not include unquantifiable components including the "Builder's margin", cost of cartage and freight.

1.6 Definitions

In this Specification the following definitions shall apply:

- "*NCC*" *Series* includes *NCC* Series Volume 2, "Building Code of Australia Class 1 and Class 10 Buildings also known as the 'Housing Provisions', *NCC* Series Volume 3 Plumbing Code of Australia is also included.

- "*Engineer's Instruction* " includes any soil classification report, preliminary footings report, construction footings report and any other report, recommendation, site or other instruction, calculations or plans prepared by an engineer in respect of the works.
- Where the term "*Local Authority*" is mentioned it shall mean the local council, or other governing authority or private certifier with statutory responsibility for the compliance of the work performed.
- Where referred to in this Specification, "*Regulations*" shall mean the building *Regulations* and Codes (including the *NCC*, as amended) statutorily enforceable at the time application is made for a construction certificate or other permits, consents or approvals relating to the *Contract*.
- The "*HIA Guide*" means the HIA Guide to Materials & Workmanship for Residential Building Work.

2. STATUTORY REQUIREMENTS

The building works outlined in the Schedule of Works, annexed to this Specification, shall be constructed in accordance with:

2.2 Compliance with Requirements of Authorities

2.3 Electricity

2.4 Sanitary Accommodation

3. OWNER'S OBLIGATIONS

3.1 Engineer's Instructions

If the *Contract* indicates, the *Owner*, at their expense, shall provide the *Builder* with engineer's reports and specifications (including wind and soil classifications) for the foundation or footing requirements.

In these circumstances, if the *Builder* instructs any party to provide such reports, the *Builder* does so only as agent for the *Owner*.

3.2 Water Supply

Where there is no existing building on the site, the *Owner*, at their expense, shall supply adequate water to the site for construction purposes. The contract documents must include all details for management of water providing clarity for the *Owner* and *Builder* regarding items such as rainwater tanks, septic systems and the like.

3.3 Sanitation

Unless otherwise specified the *Owner* shall supply sewerage connection and pay the standard sewer connection fee to the sewerage supply authority.

4. PLANS, PERMITS AND APPLICATION FEES

4.1 Permits and Fees

Subject to a contrary requirement under the *Contract*, the *Builder* 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 mine subsidence, the appropriate authority is to be consulted and any work carried out in accordance with the authority's requirements.

4.3 Setting Out

The *Builder* shall accurately set out the building works in accordance with the site plan and within the boundaries of the site.

5. EXCAVATIONS

5.1 Excavations

The part of the site to be covered by the proposed building or buildings and an area at least 1000mm wide around that part of the site or to the boundaries of the site, whichever is the lesser, shall be cleared 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 Instructions* or the *NCC* requirements.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466
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6.1 Underfloor Fill

Underfloor fill shall be in accordance with the NCC.

6.2 Termite Risk Management

Termite treatment shall be carried out in accordance with the *NCC*.

6.3 Vapour Barrier

The vapour barrier installed under slab-on-ground construction shall be installed in accordance with the NCC.

6.4 Reinforcement

Reinforcement shall conform and be placed in accordance with the *Engineer's Instructions* and the *NCC*.

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

6.5 Concrete

Except where otherwise approved by an engineer, structural concrete shall be in accordance with the *NCC*. Pre-mixed concrete shall be manufactured in accordance with the *NCC* with delivery dockets kept on site or available for inspection by the engineer, or the *Local Authority*.

Concrete shall be placed and compacted in accordance with good building practice and the *NCC*.

6.6 Curing

All concrete slabs shall be cured in accordance with the NCC.

6.7 Footings and Slabs on Ground

Concrete slabs and footings shall not be placed until approval to do so is given by the engineer or the *Local Authority*.

Unless otherwise specified bench and floor levels indicated on the site plan shall be regarded as nominal.

6.8 Suspended Slabs

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

6.9 Foundation Walls

Where specified, masonry foundation walls are to be built on specified footings to the thickness indicated on the plans and to the height of the underside of the floor bearer or bottom wall plate.

6.10 Sub-Floor Ventilation

All sub floor spaces to suspended ground floors shall be provided with adequate ventilation in accordance with the *NCC*.

6.11 Sub-Floor Access

Where required, access to suspended sub floor areas shall be located as indicated on the plan.

7. RETAINING WALLS

7.1 Retaining Walls

Where the *Builder* is required by the Schedule of Works annexed to this Specification, the *Builder* shall construct retaining walls as shown on the approved plans. Where a retaining wall is not included in the Schedule of Works, the construction of any retaining wall shall be the responsibility of the *Owner*.

8. EFFLUENT DISPOSAL/DRAINAGE

8.1 Effluent Disposal/Drainage

In both sewered and unsewered areas:

- (a) Any bath, wash basin, kitchen waste, wash tubs, pedestal pan and the floor grate to a shower recess shall be located in the position shown on the plan (refer to Schedule of Works); and
- (b) waste pipes with traps shall be provided to the above fittings and connected to the drainage system.

The whole of the work is to be performed in accordance with the *NCC* and requirements of the sewerage authority concerned.

8.2 Septic System

The *Builder* will provide and install a septic system where applicable to the requirements of the *Local Authority* and in accordance with the manufacturer's instructions.

8.3 Storm Water Drainage

Stormwater drainage shall be carried out in accordance with the *NCC*.

The *Builder* will allow for the supplying and laying of stormwater drains as shown on the site plan.

9. TIMBER FRAMING

9.1 Generally

All timber framing shall comply with the *NCC*, alternative structural framing shall be to structural engineer's details and certification.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466
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The work shall be carried out in a proper and tradesperson like manner and shall be in accordance with recognised and accepted building practices.

9.1.1 Floor Framing

All floor framing is to be framed at the level shown on the plan.

9.1.2 Wall Framing

Wall framing is to be erected plumb and straight and securely fastened to the floor framing or floor slab.

The interface between masonry and wall framing will conform with the *NCC*.

9.1.3 Heads Over Opening (Lintels)

- All solid timber lintels shall conform to the *NCC*.
- Glue laminated beams conforming to AS 1328 or laminated veneer lumber beams to manufacturer's specification and data sheets may also be used.

9.1.4 Roof Trusses

Where roof truss construction is used, trusses shall be designed in accordance with AS 1720 and be erected, fixed and braced in accordance with the manufacturer's instructions.

9.1.5 Bracing

Bracing units shall be determined and installed in accordance with the *NCC* as appropriate for the design wind velocity for the site. Bracing shall be evenly distributed throughout the building.

9.1.6 Flooring

Strip and sheet timber floors shall be installed in accordance with the *NCC*.

The selection, installation and waterproofing of wet area floors shall conform to the *NCC* when listed in Schedule of Works. Where specified in the contract floors shall be sanded to provide an even surface and shall be left clean throughout.

9.1.7 Roof Framing

Roofs shall be pitched to the slope shown on plan.

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

Metal fascias shall be installed in accordance with the manufacturer's instructions and shall meet the requirements of the *NCC*.

9.1.8 Timber Posts

Unless otherwise specified and where required by the *NCC* posts supporting carports, verandas and porches shall be timber suitable for external use.

[illegible]

9.2 Corrosion Protection

All metal brackets, facing plates and other associated fixings used in structural timber joints and bracing must have corrosion protection appropriate to the site in accordance with the *NCC*.

9.3 Hot Water Storage Units

Where a hot water storage unit or solar panels are supported by the roof structure the structure shall be specifically designed to support all imposed loads.

10. STEEL FRAMING

10.1 Generally

Steel framing shall be installed in accordance with the manufacturer's recommendations and the *NCC*.

11. ROOFING CLADDINGS

All roof cladding is to comply with the relevant structural performance and weathering requirements of the *NCC* and be installed as per the manufacturer's specifications.

11.1 Tiled Roofing

The *Builder* shall cover the roof of the dwelling with approved tiles as selected. The roof shall be fixed and waterproofed in accordance with the *NCC*. Roofing adjacent to valleys should be fixed so as to eliminate water penetration. Where roof tiles are made of natural products slight variation in colour is acceptable.

11.2 Metal Roofing

The *Builder* shall provide and install a metal roof together with accessories as determined in the contract documents in accordance with the *NCC* and the manufacturer's recommendations.

Except where design prohibits, sheets shall be in single lengths from fascia to ridge. Fixing of sheets shall be in accordance with the manufacturer's instructions as required for the appropriate design and wind speed.

11.3 Gutters and Downpipes

Gutters and downpipes as determined in the contract documents shall be manufactured and installed in accordance with the *NCC*.

11.4 Corrosion protection

Materials used for flashings, fasteners, gutters and downpipes shall be compatible.

11.5 Sarking

Sarking under roof coverings must comply with and be fixed in accordance with the *NCC*.

11.6 Sealants

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

11.7 Flashing

Flashings shall comply with, and be installed in accordance with the *NCC*.

12. MASONRY

12.1 Bricks

All masonry construction and units shall comply with the *NCC*.

Tolerances shall only be applied to the total measurements over 20 units, and not to the individual units. As clay masonry units are natural kiln fired products their individual size may vary due to the manufacturing process.

12.2 Concrete Blocks

Concrete blocks are to be machine pressed, of even shape, well cured and shall comply with the *NCC*. Concrete blockwork shall be constructed in accordance with the *NCC*.

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 the *NCC*.

The damp proof membrane shall be visible in the external face of the masonry in which it is placed and shall not be bridged by any applied coatings, render or the like.

12.4 Cavity Ventilation (Weepholes)

Where required open vertical joints (weepholes) must be created in the course immediately above any Damp Proof Course or flashing at centres in accordance with the *NCC*.

12.5 Mortar and Joining

Mortar and joint tolerances shall comply with the *NCC*.

12.6 Masonry Accessories

Masonry accessories shall comply with the *NCC* and accepted building practices. Articulated joints shall be constructed in accordance with the *NCC*.

12.7 Lintels

Lintels used to support masonry above openings in walls must be suitable for the purpose as required by the *NCC*. Lintels are to be provided to each wall leaf and are to be corrosion protected appropriate for the site environment and location of the lintel within the structure in accordance with the *NCC*.

12.8 Cleaning

All exposed face brickwork shall be cleaned with an approved cleaning system. Care should be taken not to damage brickwork or joints and other fittings.

13. CLADDING AND LININGS

13.1 External Claddings

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

Where required, the specified materials shall be used to line soffits at eaves, open verandas and porches.

13.2 Internal Wall and Ceilings Linings

Unless otherwise specified, internal linings to walls and ceilings in other than wet areas shall be of gypsum plasterboards.

Plasterboard sheets are to be of a minimum 10 mm thick with recessed edges to facilitate a smooth set finish. Internal angles to walls are to be set from floor to ceiling.

Where specified, suitable cornice moulds shall be fixed at the junction of all walls and ceilings. Alternatively the joint may be set as required for vertical internal angles.

Wet area linings are to be fixed in accordance with the manufacturer's recommendations.

The ceiling access hole shall be of similar material to the adjacent ceiling.

13.3 Waterproofing

All internal wet areas are to be waterproofed in accordance with the *NCC*. External tiled decks and balconies where required are to be waterproofed in accordance with the *NCC* and relevant manufactures specifications.

14. JOINERY

14.1 General

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

14.2 Door Frames

External door frames shall be suitable for the expose conditions and to receive doors. Internal jamb linings shall be suitable to receive doors as specified in the contract documents. Manufactured door frames shall be installed in accordance with the manufacturer's instructions.

14.3 Doors and Doorsets

All internal and external timber door and door sets shall be installed in accordance with accepted building practice and specific manufacturer's instructions.

14.4 Window and Sliding Doors

Sliding and other aluminium windows and doors shall be installed in accordance with manufacturer's recommendations and AS 2047.

All glazing shall comply with the *NCC* and any commitments outlined in the relevant BASIX Certificate.

14.5 Architraves and Skirting

Architraves and skirting as nominated on the plans or listed in the Schedule of Works shall be installed in accordance with accepted building practice.

14.6 Cupboards/Kitchens/Bathroom

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

14.7 Stairs, Balustrades and other Barriers

Where required stairs or ramps to any change in levels shall be provided and balustrades or barriers fitted in accordance with the *NCC*.

15. SERVICES

15.1 Plumbing

All plumbing shall comply with the requirements of the *NCC* Volume 3 and the relevant supply authority. All work shall be carried out by a licensed plumber.

Fittings, as listed in the Schedule of Works, shall be supplied and installed to manufacturer's specifications.

Fittings, hot water systems and any rainwater harvesting systems shall be appropriate to satisfy any commitment outlined in the relevant BASIX Certificate.

15.2 Electrical

All electrical work is to be carried out by a licensed electrical contractor to AS/NZS 3000 Electrical installations (known as the Australian/New Zealand Wiring Rules) plus any other relevant regulations. The location of lights, switches, power points and the like, is to be nominated in the contract documents.

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 relevant supply authority.

15.4 Smoke Detectors

Smoke alarms shall be installed in accordance with the *NCC*.

15.5 Thermal Insulation

Where thermal insulation is used in the building fabric or services, such as air conditioning ducting or hot water systems, it shall be installed in accordance with manufacturer's recommendations to achieve the R-Values required by the *NCC* or as outlined in the relevant BASIX Certificate.

16. TILING

16.1 Materials

Tiles shall be as listed in the Schedule of Works or as selected by the *Owner*.

Cement mortar and other adhesives shall comply with AS 3958.1 or tile manufacturer's specifications.

16.2 Installation

Installation of tiles shall be in accordance with AS 3958.1 or the manufacturer's recommendations and accepted building practices.

Where practicable, spacing between tiles should be even and regular.

Expansion joints shall be installed in accordance with AS 3958.1 or the tile manufacture's specifications.

All vertical and horizontal joints between walls and fixtures e.g. bench top, bath, etc. and wall/floor junctions shall be filled with flexible mould resistant sealant.

All joints in the body of tiled surfaces shall be neatly filled with appropriate grout material as specified by the tile manufacturer or accepted building practice.

As tiles are made of natural products a slight variation in colour is acceptable.

Tiles are to be fixed to the substrate with adhesives that are compatible with the substrate and any waterproofing material.

16.3 Walls

Wall surfaces shall be tiled with selected tiles and accessories where indicated by the contract documents.

16.4 Floors

Floors shall be tiled to areas where indicated by the contract documents with selected tiles. Tiles shall be laid in a sand and cement mortar or using an adhesive, where required, edge strips or metal angle to exposed edges in doorways or hob-less showers in wet areas shall be provided in accordance with the *NCC*.

Where required, adequate falls shall be provided to wastes in accordance with the *NCC*.

17. 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 specifications. The colours used shall be as listed in the Schedule of Works or other relevant contract document. All surfaces to be painted shall be properly prepared to manufacturer's instructions.

18. WORKMANSHIP STANDARDS AND TOLERANCES

18.1 General

These general specifications incorporate the *HIA Guide*. By agreeing to these specifications, the *Owner* agrees that he/she has been provided with a copy and has had the opportunity to read the *HIA Guide*.

The *HIA Guide* is to be used by the *Builder* and *Owner* as a point of reference for information on workmanship standards and tolerances, and amongst other things, in deciding whether an alleged defect exists and/or whether the materials used and/or workmanship is in accordance with the plans and specifications.

The parties agree to use the *HIA Guide* in precedence over any other non-legislated guide to standards and tolerances.

Schedule of Works

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