PRIVATE BUILDING CERTIFIERS

17 October 2014

Our Reference: 142929

The General Manager
Pittwater Council
PO Box 882
Mona Vale NSW 1660

Dear Sir/Madam,

Re: 2 Howell Close, Newport NSW 2106
Development Consent No: N0242/14
Construction Certificate No: 14/2929-1

Under Part 4A of the Environmental Planning and Assessment Act 1979, Private Building Certifiers has issued a Construction Certificate for the above premises.

Please find enclosed the following documentation:

- Cheque for Council's registration fee.
- Construction Certificate No: 14/2929-1
- Copy of application for Construction Certificate.
- Documentation used to determine the application for the Construction Certificate as detailed in the attachments of the Certificate.

Please provide a receipt upon completion of payment process and post to Suite 2501, 4 Daydream Street, Warriewood NSW 2102.

If you require further information please contact me on (02) 9999 6490.

Regards,

Carla Salles
Building Approvals Coordinator
Private Building Certifiers Pty Ltd
ABN 63 152 183 205

$336 REC: 36286 22/10/14.

North West Sydney
Suite 3.08, 29-31 Lexington Drive, Bella Vista NSW 2153
P. (02) 9680 2464
F. (02) 8079 6184

South West Sydney
Level 2, 121 Queens Street, Campbelltown NSW 2560
P. (02) 9262 2790
F. (02) 8079 6184

Sydney City
Suite 1d, Level 23, 1 Farrer Place, Sydney NSW 2000
P. (02) 9281 5061
F. (02) 8079 6184

North Shore
Suite 1, 133 Alexander Street, Crows Nest NSW 2065
P. (02) 9411 2113
F. (02) 8079 6184

Northern Beaches
Suite 2501, 4 Daydream Street, Warriewood NSW 2102
P. (02) 9999 6490
F. (02) 8079 6184

PRIVATE BUILDING CERTIFIERS

CONSTRUCTION CERTIFICATE No. 14/2929-1

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

Owner

Name:	Matthew Stevens
Address:	2 Howell Close, Newport NSW 2106

Property details

Address:	2 Howell Close, Newport NSW 2106
Lot/Portion No:	2
Section:	-
DP No:	229781
Municipality:	Pittwater Council

Description and value of development

Description:	Additions to the dwelling – including the construction of an attached secondary dwelling, extension to garage, construction of deck and steps and extension to existing driveway
Value of work:	$81,549

Building Code of Australia Building Classification

Use:	Residential
BCA classification:	1a

Determination

Approved/Refused:	Approved
Date of Determination:	17 October 2014

Plans and specifications approved

- Architectural Drawings No. 1403/1 and 1403/2 prepared by David's Designs dated 29.05.2014.
- Structural Drawing No. 1594 prepared by Tihanyi Consulting Engineers dated 05.08.2014.
- Stormwater Drawing No. 29463-H1 prepared by Jack Hodgson Consultants dated 02.10.2014.
- Site Survey No. 1431 prepared by Total Surveying dated 01.04.2014.

Attachments

1. Application Form for Construction Certificate.
2. Record of Site Inspection made by Accredited Certifier in accordance with Clause 143B (EP&A Regulations 2000) prior to issue of Construction Certificate.
3. Long Service Levy receipt prepared by Long Service Corporation dated 24.09.2014.
4. Home Warranty Insurance prepared by QBE dated 30.09.2014.
5. BASIX Certificate prepared by David's Designs dated 14.05.2014.
6. Building Plan Approval prepared by Sydney Water dated 08.10.2014.
7. Schedule of Exterior Colours prepared by David's Designs dated 14.05.2014.
8. Flood Risk Report prepared by Jack Hodgson Consultants dated 15.07.2014.

Development Consent

Certificate No.:	N0242/14
Date of Determination:	17 September 2014

Certificate / Certifying Authority

I certify that work completed in accordance with the documentation accompanying the application for this certificate (with such modifications, if any, verified by me as may be shown on that documentation) will comply with the requirements of the *Environmental Planning & Assessment Regulation 2000* as referred to in s.81A(5) of the *Environmental Planning & Assessment Act 1979.*

Signature

Cheyne James
Accredited Certifier
BPB Registration No. 1269
Private Building Certifier Pty Ltd
ABN 63 152 183 205

Date of endorsement **17.10.2014**
Certificate Number **14/2929-1**

Note: Prior to commencement of work sections 81A(2)(b), 81A(2)(c), 81A(4)(b) and 81A(4)(c) of the Environmental Planning and Assessment Act 1979 must be satisfied.

SCHEDULE TO APPLICATION FOR A CONSTRUCTION CERTIFICATE

Please complete this schedule. The information will be sent to the Australian Bureau of Statistics.

All New Buildings N/A.

Please complete the following:

- Number of storeys (including underground floors) 8
- Gross floor area of building (m2)
- Gross site area (m2)

Residential Buildings Only

Please complete the following details on residential structures:

- Number of dwellings to be constructed
- Number of pre-existing dwellings on site 1
- Number of dwellings to be demolished
- Will the new dwelling(s) be attached to other new buildings? **Yes** ☐ **No** ☐
- Will the new building(s) be attached to existing buildings? **Yes** ☐ **No** ☐
- Does the site contain a dual occupancy? (NB dual occupancy = two dwellings on the same site) **Yes** ☐ **No** ☐

Material to be used – Residential Building

Please indicate the material to be used in the construction of the new building(s):

Walls		Code
Brick (double)	☐	11
Brick (veneer)	☐	12
Concrete or stone	☐	20
Fibre cement	☐	30
Timber	☐	40
Curtain glass	☐	50
Steel	☐	60
Aluminium	☐	70
Other	☐	80
Not Specified	☐	90

Roof		Code
Tiles	☐	10
Concrete or slate	☐	20
Fibre cement	☐	30
Steel	☐	60
Aluminium	☐	70
Other	☐	80
Not Specified	☐	90

Floor		Code
Concrete or slate	☐	20
Timber	☐	40
Other	☐	80
Not Specified	☐	90

Frame		Code
Timber	☐	40
Steel	☐	60
Aluminium	☐	70
Other	☐	80
Not Specified	☐	90

PRIVATE BUILDING CERTIFIERS

Record of inspection

1. Details of application for construction certificate (CC)

Name of applicant	Name of certifying authority
Matthew Stevens	Cheyne James

Date of application for CC	Date application for CC received by certifying authority	Registered No. of the development application/development consent
25/09/2014	25/09/2014	0242/14

2. Address of property

Unit/street no.	Street name
2	Howell Close

Suburb or town	State	Postcode
Newport	NSW	2106

3. Details of Inspection (tick as appropriate)

☒ Inspection by accredited certifier

Name of accredited certifier	Accreditation No.
Cheyne James	1269

Date inspection carried out	30/09/2014
Type of inspection	Pre-CC building inspection under Cl.143B EP&A Regulation

4. Current fire safety measures

Provide details of the current fire safety measures in the existing building the subject of the inspection

-

5. Plans and specifications (tick as appropriate)

Do the plans and specifications that accompany the application adequately and accurately depict the condition of the existing building? ☒ Yes ☐ No

If no, list deficiencies or inaccuracies

6. Commencement of work (tick as appropriate)

Has any building or subdivision work authorised by the development consent commenced on the site?

☐ Yes ☒ No

If YES, provide details

7. Signature

Cheyne James		30/09/2014
Name of accredited certifier conducting inspection	Signature	Date

Levy Online Payment Receipt

Building and Construction

MATTHEW STEVENS
2 HOWELL CL
NEWPORT NSW 2106

Application Details:

Applicant Name:	**MATTHEW STEVENS**
Levy Number:	**5076168**
Application Type:	**DA**
Application Number:	**N0242/14**
Approving Authority:	**PITTWATER COUNCIL**

Work Details:

Site Address:	**2 HOWELL CL** **NEWPORT NSW 2106**
Value of work:	**$82,000**
Levy Due:	**$287.00**

Payment Details:

LSC Receipt Number:	**178957**
Payment Date:	**24/09/2014 7:59:16 PM**
Bank Payment Reference:	**766654684**
Levy Paid:	**$287.00**
Credit card surcharge:	**$1.15**
Total Payment Received:	**$288.15**

Home Warranty Insurance
Certificate of Insurance

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

Policy Number BN0047943BWI-11

MATT STEVENS
2 HOWELL CLOSE
NEWPORT 2104

Name of Intermediary
AON HIA (NSW/ACT)
GPO BOX 2188
CANBERRA ACT 2601

Account Number
BN0006684
Date Issued
30/09/2014

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	ALTERATIONS AND ADDITIONS STRUCTURAL
At	2 HOWELL CLOSE NEWPORT NSW 2106
Carried Out By	BUILDER MIDORIAN PTY LTD ABN: 13 125 903 362
Declared Contract Price	$81,549.00
Contract Date	03/10/2014
Builders Registration No.	U 248807C
Building Owner / Beneficiary	MATT STEVENS

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.

Additional Policy Details
JOB P019

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

Jason Bourne
National Manager - Builders Warranty

QM1824-1207

BASIX® Certificate

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

Alterations and Additions

Certificate number: A187213

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 Alterations and Additions Definitions" dated 29/9/2006 published by Planning & Infrastructure. This document is available at www.basix.nsw.gov.au

Director-General
Date of issue: Wednesday, 14, May 2014
To be valid, this certificate must be lodged within 3 months of the date of issue.

NSW GOVERNMENT | Planning & Infrastructure

Description of project

Project address	
Project name	M & N Stevens
Street address	2 Howell Close Newport 2106
Local Government Area	Pittwater Council
Plan type and number	Deposited Plan 229781
Lot number	2
Section number	0
Project type	
Dwelling type	Separate dwelling house
Type of alteration and addition	My renovation work is valued at $50,000 or more, and does not include a pool (and/or spa).

Certificate Prepared by (please complete before submitting to Council or PCA)
Name / Company Name: David's Designs
ABN (if applicable): 21 134 393 170

Fixtures and systems	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: gas instantaneous.	✓	✓	✓
Lighting			
The applicant must ensure a minimum of 40% of new or altered light fixtures are fitted with fluorescent, compact fluorescent, or light-emitting-diode (LED) lamps.		✓	✓
Fixtures			
The applicant must ensure new or altered showerheads have a flow rate no greater than 9 litres per minute or a 3 star water rating.		✓	✓
The applicant must ensure new or altered toilets have a flow rate no greater than 4 litres per average flush or a minimum 3 star water rating.		✓	✓
The applicant must ensure new or altered taps have a flow rate no greater than 9 litres per minute or minimum 3 star water rating.		✓	

Construction	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Insulation requirements			
The applicant must construct the new or altered construction (floor(s), walls, and ceilings/roofs) in accordance with the specifications listed in the table below, except that a) additional insulation is not required where the area of new construction is less than 2m2, b) insulation specified is not required for parts of altered construction where insulation already exists.	✓	✓	✓

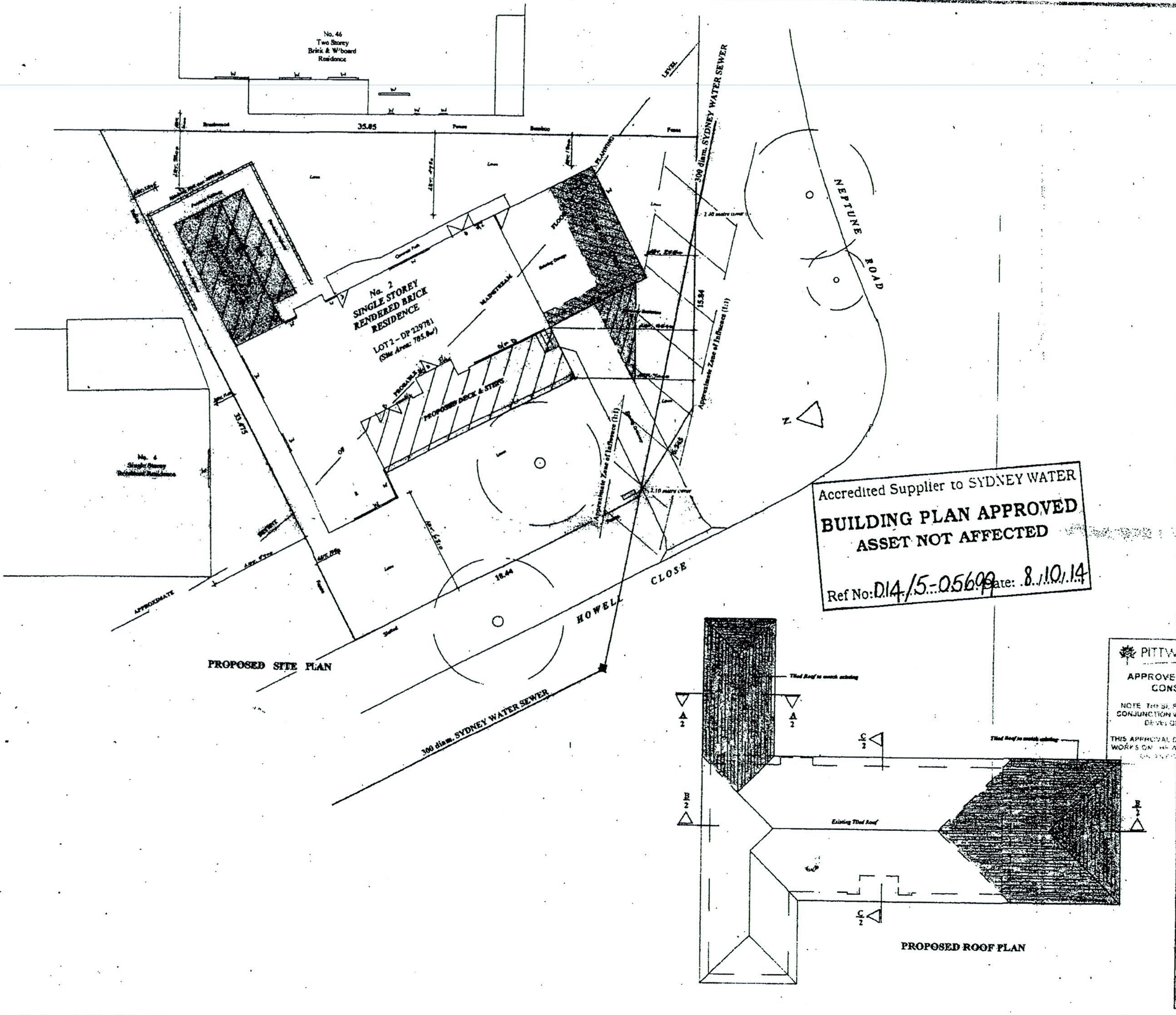
Construction	Additional insulation required (R-value)	Other specifications
suspended floor with open subfloor: framed (R0.7).	R0.8 (down) (or R1.50 including construction)	
external wall: framed (weatherboard, fibro, metal clad)	R1.30 (or R1.70 including construction)	
flat ceiling, pitched roof	ceiling: R1.95 (up), roof: foil backed blanket (55 mm)	medium (solar absorptance 0.475 - 0.70)

Glazing requirements	Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Windows and glazed doors			
The applicant must install the windows, glazed doors and shading devices, in accordance with the specifications listed in the table below. Relevant overshadowing specifications must be satisfied for each window and glazed door.	✓	✓	✓
The following requirements must also be satisfied in relation to each window and glazed door:		✓	✓
Each window or glazed door with standard aluminium or timber frames and single clear or toned glass may either match the description, or, have a U-value and a Solar Heat Gain Coefficient (SHGC) no greater than that listed in the table below. Total system U-values and SHGCs must be calculated in accordance with National Fenestration Rating Council (NFRC) conditions.		✓	✓
For projections described in millimetres, the leading edge of each eave, pergola, verandah, balcony or awning must be no more than 500 mm above the head of the window or glazed door and no more than 2400 mm above the sill.	✓	✓	✓
Pergolas with polycarbonate roof or similar translucent material must have a shading coefficient of less than 0.35.		✓	✓
Pergolas with fixed battens must have battens parallel to the window or glazed door above which they are situated, unless the pergola also shades a perpendicular window. The spacing between battens must not be more than 50 mm.		✓	✓

Windows and glazed doors glazing requirements

Window / door no.	Orientation	Area of glass inc. frame (m2)	Overshadowing		Shading device	Frame and glass type
			Height (m)	Distance (m)		
W1	E	1.9	0	0	eave/verandah/pergola/balcony >=600 mm	standard aluminium, single clear, (or U-value: 7.63, SHGC: 0.75)
D1	S	6.5	0	0	eave/verandah/pergola/balcony >=600 mm	standard aluminium, single clear, (or U-value: 7.63, SHGC: 0.75)
W2	S	0.5	0	0	eave/verandah/pergola/balcony >=600 mm	standard aluminium, single toned, (or U-value: 7.57, SHGC: 0.57)
W3	N	0.5	0	0	eave/verandah/pergola/balcony >=600 mm	standard aluminium, single toned, (or U-value: 7.57, SHGC: 0.57)

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 & 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 for the development may be issued.



FLOOD PLANNING LEVELS:

This site at No. 2 Howell Close, Newport is identified as being impacted by "Flood Hazard – Flood Category 1 – High Hazard".

The following flood advice levels have been provided by Floodplain Management of Pittwater Council:-

Flood Planning Level (FPL):	AHD 12.80
1% AEP maximum level:	AHD 11.50
Probable Maximum Flood (PMF):	AHD 12.40

Refer to "DCP 21 – B3.16 Flood Hazard – Flood Category 1 – High Hazard" for residential development flood controls.

SITE CALCULATIONS

SITE AREA:		Approx. 785.8 m²
EXISTING SITE COVER:		
Residence, including porch	151.5 m²	
Garage, including roof access steps	27.8 m²	
Paths and steps exceeding 1 metre wide	10.4 m²	
Driveway	27.3 m²	216.5 m²
EXISTING SITE RATIO		30.7 %
PROPOSED SITE COVER:		
Existing residence, including covered entry	147.3 m²	
Proposed attached (Secondary Dwelling), including deck	35.3 m²	
Proposed double garage	46.9 m²	
Existing paths exceeding 1 metre wide	3.8 m²	
Driveway, including extension	31.2 m²	263.5 m²
PROPOSED SITE RATIO		37.4 %
Uncovered front deck and steps less than 1 metre above natural ground level	40.5 m²	

PITTWATER COUNCIL

APPROVED DEVELOPMENT CONSENT PLANS

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

THIS APPROVAL DOES NOT AUTHORISE ANY WORKS ON THE ADJACENT ROAD RESERVE

PLAN OR DOCUMENT CERTIFICATION

DAVID A.R. DIGGINS
David's Designs

Date: 24/5/14

Signature: [signature]

PROPOSED ALTERATIONS & ADDITIONS

at

No. 2 HOWELL CLOSE, NEWPORT, N.S.W.

for

Mr. M. & Mrs. N. STEVENS

David's Designs — Drafting & Construction Services

33/57 Queens Parade West, Newport, N.S.W. 2106

SCALE:	DATE:	DRAWING No:
1:100	MAY, 2014	1403/1 – SW

Jack Hodgson Consultants Pty Limited
CONSULTING CIVIL, GEOTECHNICAL AND STRUCTURAL ENGINEERS
ABN: 94 053 405 011

MP 29463.
3rd October, 2014.

The General Manager
Pittwater Council
P O Box 882
MONA VALE NSW 1660

Dear Sir,

2 HOWELL CLOSE, NEWPORT
Development Application No: N0242/14

We have prepared a Stormwater plan drawing number 29463-H1 dated 2nd October 2014 for the proposed alterations and additions at the subject address.

In our opinion the drawing number 29463-H1 complies with Section 3.1.2 Drainage of the Building Code of Australia Housing Provision, AS 3500.3.2 - Stormwater Drainage and Pittwater 21 DCP.

JACK HODGSON CONSULTANTS PTY. LIMITED.

DIRECTOR: N. J. HODGSON
67 Darley Street, Mona Vale NSW 2103
PO Box 389 Mona Vale NSW 1660
Telephone: 9979 6733 Facsimile: 9979 6926
www.jackhodgson.com.au

PROPOSED ALTERATIONS & ADDITIONS

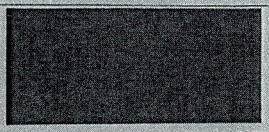
at

No. 2 HOWELL CLOSE,
NEWPORT, N.S.W.

for

Mr. M. & Mrs. N. STEVENS

SCHEDULE of EXTERIOR COLOURS

Base/Component	Finish	Colour	Sample
Roofing and accessories	Tiles	"Dulux" 'Ironstone' (to match existing)	 Ironstone UD C19
Fascia gutters	'Colorbond'	'Monument' (to match existing)	 Monument EB C29
Downpipes	Paint	"Dulux" 'Limed White' (to match existing)	 Limed White W A168
Eaves linings	Paint	White	
Rendered walls	Paint	"Dulux" 'Limed White' (to match existing)	
Windows and external doors and frames	Aluminium	Natural	
Garage door	'Colorbond'	'Ironstone'	

Jack Hodgson Consultants Pty Limited
CONSULTING CIVIL, GEOTECHNICAL AND STRUCTURAL ENGINEERS
ABN: 94 053 405 011

FLOOD RISK REPORT FOR DEVELOPMENT APPLICATION AT 2 HOWELL CLOSE, NEWPORT.

1. INTRODUCTION.

1.1 This assessment has been prepared to accompany an application for a development. The requirements of the Councils DCP 21 Part B.3.16 November, 2013 have been met.

1.2 Flood advice from Council's Newport Beach Floodplain Risk Management Study and Plan (2004) and the Overland Flow Flood Study (Oct 2013) was obtained from the Council. (Appendix 2).

1.3 The experience of the author of this Report spans some 20 years in many areas of Sydney and predominately in the Pittwater area, being one of the principal and senior engineers of Jack Hodgson Consultants Pty Limited.

1.4 The site was visited on the 8th July, 2014.

2. EXISTING DEVELOPMENT.

2.1 The property is located on the corner of Howell Close and Neptune Road with a westerly aspect. The existing property falls from the north-east corner down to the south and west. There is an existing single storey residence and attached single garage on the subject property.

3. PROPOSED DEVELOPMENT.

3.1 As shown on the plans prepared by David's Designs, Drawing No. 1403/1 & 2 and dated May, 2014 it is proposed to add an attached secondary dwelling, front deck and extend the existing garage. The alterations and additions will be of light weight timber and masonry construction.

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4. FLOOD ADVICE.

4.1 The flood advice information is as follows:-

1% Annual Exceedance Probability Level (1% AEP)	11.5 m AHD	1% AEP Velocity (Range)	1.5 m/s
Flood Planning Level (FPL)	12.0 m AHD		
Probable Maximum Flood (PMF)	12.4 m AHD	PMF Velocity (Range)	2.5 m/s
Flood Category	1		
Provisional Hazard Classification	High Hazard Floodway - Affected by FPL and PMF		
Data Source	Newport Beach Floodplain Risk Management Study and Plan (2004)		
Further Information Required?	N		

5. FLOOR LEVELS.

5.1 Proposed attached secondary dwelling floor level is to be 12.0m AHD and the existing ground floor level of the residence being 11.92m AHD is to be retained. The proposed front deck level is to be 11.90 AHD. The proposed garage extension will retain the existing garage floor level of 11.28m AHD. The flood planning level of 12.0m AHD is just higher than the existing residence and proposed deck floor levels and equal to the proposed attached secondary dwelling floor level. The 11.5m AHD 1% AEP will have an effect on the existing yard areas covering the front half of the property by approximately 0.5 metre in depth and other areas as advised by Council with depths of up 0.14m. The proposed attached secondary dwelling will be in the half of the property affected by 0.14m depths and the other proposed deck and garage extension in the front half of the property affected by the 1% AEP and PMF events. The probable maximum flood level of 12.4m AHD will have an effect on approximately two thirds of property covering the site with a depth of water up to approximately 1.4m. The PMF event will have an affect on the existing residence, proposed attached secondary dwelling, deck and garage extension.

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6. FLOOD IMPACTS.

6.1 1% Annual Exceedance Probability Level (1% AEP).

6.1.1 The degree of inundation is null to the proposed attached secondary dwelling due to the floor level of the proposed alterations and additions is set at the 12.0m AHD which is at the required FPL. The proposed deck level of 11.90m AHD is also very unlikely to be affected by the subject event being 0.1m below the FPL and similarly the existing residence floor level is only 0.08m below the FPL. There will be a low to medium impact to the proposed garage extension as there is 0.22m of inundation above the 11.28m AHD floor levels.

6.1.2 The hazard level is low for the proposed attached secondary dwelling as the floodwaters do not reach. The proposed deck hazard level is low as floodwaters of a depth of approximately 0.12m. The garage extension hazard level is low because of the 0.22m depth and the classification of High Hazard Floodway.

6.1.3 Debris will have minimal or no impact during this event on the proposed attached secondary dwelling. The deck will have low impact during this event from debris as depth of waters up to 0.12m. The garage extension hazard level is low because of the 0.22m depth and due to expected high velocities in the flood way although these will be reduced as the garage is on the outside edges of the main flow path.

6.1.4 Buoyancy will have minimal or no impact during this event on the proposed attached secondary dwelling and deck. The garage extension will be impacted with a low risk due to the 0.22m depth.

6.1.5 Evacuation and emergency procedure will need to be indicated by signs also showing the extents of flooding on the subject site.

6.2 Probable Maximum Flood (PMF)

6.2.1 The degree of inundation is low to the proposed attached secondary dwelling and deck due to the floor level of the proposed attached secondary dwelling being set at the 12.0m AHD and 11.90m AHD respectively which are 0.40m and 0.5m below the PMF level of 12.4m AHD. The degree of inundation is high due the proposed garage extension is below the PMF of 12.4m AHD with water depths of up to approximately 1.12m are to be expected. The front of the subject site will have waters up to 1.64m during this event.

6.2.2 The hazard level is low for the proposed attached secondary dwelling and deck as the floodwaters are of depth and velocity just in this range. The hazard level is high with a depth of 1.12m occurring proposed garage extension and a possible high velocities. The proposed garage extension is on the edge of the main floodway.

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6.2.3 Debris will have low impact during this event on the proposed attached secondary dwelling and deck. Debris will have a high impact during this event on the proposed garage extension.

6.2.4 Buoyancy will have a high impact during this event on the proposed garage extension and a low impact on proposed attached secondary dwelling and deck.

6.2.5 Evacuation and emergency procedure will need to be indicated by signs also showing the extents of flooding on the subject site.

7. FLOOD ASSESMENT.

7.1 The effect on the net flood storage will be none to minimal on the 1% AEP event with waters not being changed by proposed attached secondary dwelling and deck. See Table 1 for PMF. The proposed garage extension will reduce the net plain flood storage for 1% AEP and PMF events, see Table 1. During the 1% AEP event the proposed garage extension will affect the floodplain storage by 5.41m^3 which is a minimal amount and does not allow for the fact that the waters are most likely to enter the garage as well, thus negated the loss.

Event	Development	Area increase (m^2)	Expected average depth (m)	Earth Removed (m^3)	Flood storage decrease (m^3)
1%	Garage extension	24.6	0.22	0.0	24.6x0.22- 0.0=**5.41**
PMF	Garage extension	24.6	1.12	0.0	24.6x1.12=**27.55**
PMF	Attached secondary	25.3	1.0	21.0	25.3x1.0-21.0=**4.3**

Table 1.

7.2 There are minimal or no adverse impacts on neighbouring properties in the 1% AEP event and the PMF event as the subject property is on the edge of the floodway flow and the proposed garage extension in our opinion will provide only minor change to the flow direction of the floodway waters as they cross Neptune Road and down the drainage reserve. The proposed garage floor level is to match the existing garage floor level which is at natural ground level. If this floor level was to be raised as in accordance with B3.16 to allow waters under the garage floor this will mean that the driveway would have to be raised as well and in our opinion this would adversely affect the floodway flow direction more adversely than the proposed garage extension floor level.

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8. RECOMMENDATIONS FOR STRUCTURAL DESIGN.

8.1 Where possible the existing residence is to be checked and tied down as necessary to the existing foundations this includes. The proposed deck and garage extension are to be designed and constructed to ensure structural integrity for immersion and impact of velocity and debris up to the level of the 1% AEP flood level. See the SES NSW Building guidelines in flood prone areas for the recommendations for construction.

9. RECOMMENDATIONS.

9.1 In regards to the proposed attached secondary dwelling extension there are no special recommendations for the 1% AEP event except to follow the requirements by Council shown in Appendix 1. The proposed deck and garage extension besides the structural recommendations are also to follow the requirements by Council shown in Appendix 1.

9.2 All electrical and where possible plumbing to be located above the 12.0m AHD FPL or protected from flood waters. Evacuation procedures to be known to all inhabitants and visitors to the subject address showing the most likely evacuation path to the east uphill to Neptune Road or to the south uphill to Seaview Avenue. Alternatively, the ground level in the north east corner of the site is higher than the PMF level of 12.4 and could be used as this area is above both flood event levels. Communication of the PMF event occurrence will be required to allow the safe egress from floodwaters to higher ground. Flood extents to be clearly sign posted. Any hazardous material to be placed above the PMF event level and safely secured. Also to follow the requirements by Council shown in Appendix 1.

10. DOCUMENTS.

10.1 The plans prepared by David's Designs, Drawing No. 1403/1 & 2 and dated May, 2014 and the survey prepared by Total Surveying-Land & Property Surveyors Job No 1431, dated April 2014 were used for this report. Also information provided by Council in Appendix 2.

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11. SUMMARY.

11.1 In our opinion if the work is carried out in accordance with this report it will minimise the risk of the flooding and adverse effects of flooding to the subject address and surrounding properties to a low and acceptable level.

JACK HODGSON CONSULTANTS PTY. LIMITED.

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Appendix 1.

General to all Development

The following applies to all development:

- All development or activities must be designed and constructed such that:
- There is no additional adverse flood impact on surrounding properties or flooding processes for any event up to the Probable Maximum Flood event and;
- There is no net decrease in floodplain volume of a floodway or flood storage area within the property for any flood event up to the 1% AEP flood event; and
- All foundation structures within the area of the property affected by the Flood Planning Level, where the Flood Planning Level is equal to or greater than 500mm above the existing ground level, is to incorporate a suspended floor system on open pier/pile footings with openings in perimeter walls to allow for the flow of surface water and flood storage up to the level of the 1% AEP flood; and
- All structural elements below the Flood Planning Level shall be constructed from flood compatible materials; and
- All structures must be designed and constructed to ensure structural integrity for immersion and impact of velocity and debris up to the level of the 1% AEP flood. If the structure is to be relied upon for 'shelter-in-place' evacuation then structural integrity must be ensured up to the level of the Probable Maximum Flood; and
- All electrical equipment, wiring, fuel lines or any other service pipes and connections must be waterproofed to the Flood Planning Level; and
- The storage of toxic or potentially polluting goods, materials or other products, which may be hazardous or pollute floodwaters, will not be permitted below the Flood Planning Level.
- To ensure the recommended flood evacuation strategy of 'shelter-in-place' it will need to be demonstrated that there is pedestrian access via a low flood hazard area to a 'safe haven' above the Flood Planning Level or 300mm below the level of the Probable Maximum Flood (whichever is the higher).

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Jack Hodgson Consultants Pty Limited
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Appendix 2.

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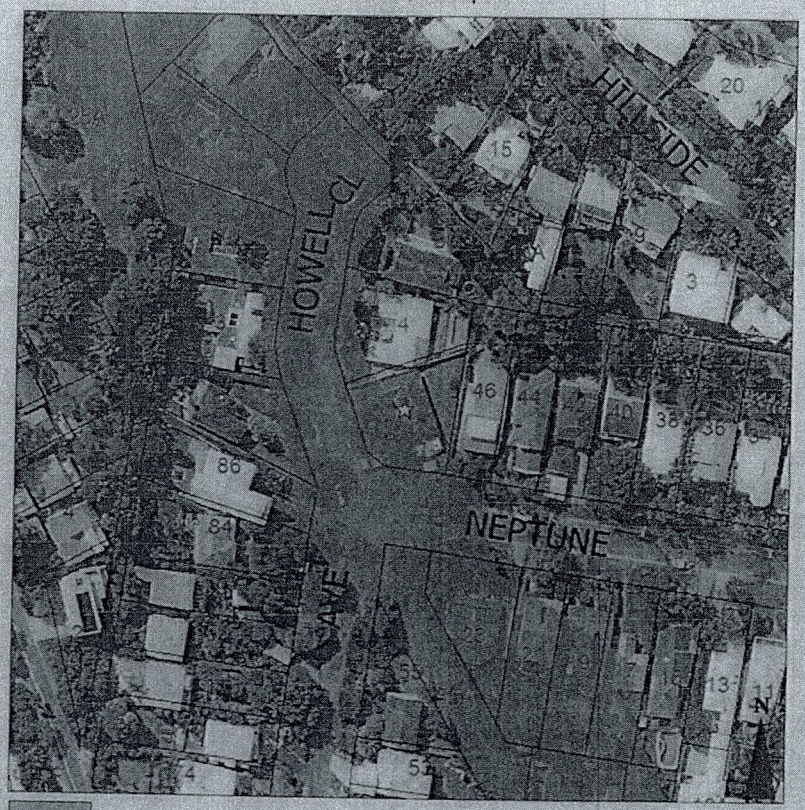
ABN: 94 053 405 011

Pittwater Flood Extent Map

2 Howell Close, Newport



Major Overland Flow Path extent

Minor Overland Flow Path extent*

Mainstream Flood Planning Level extent

Notes:
1.Overland Flow Mapping adopted November 2013
2.* extent represents the 1% annual Exceedance Probability (AEP) flood event
3.Overland Flow Path Major includes a fixed 5m horizontal planning buffer on the 1% AEP extent for planning purposes
4.Mainstream FPL - Mainstream Flood Planning Level includes the 0.5m freeboard on the 1% AEP extent for planning purposes
5.Cadastre Lines, flood extents, aerials and pit and pipes locations are indicative only

Not to Scale
Printed: 2014

PITTWATER COUNCIL

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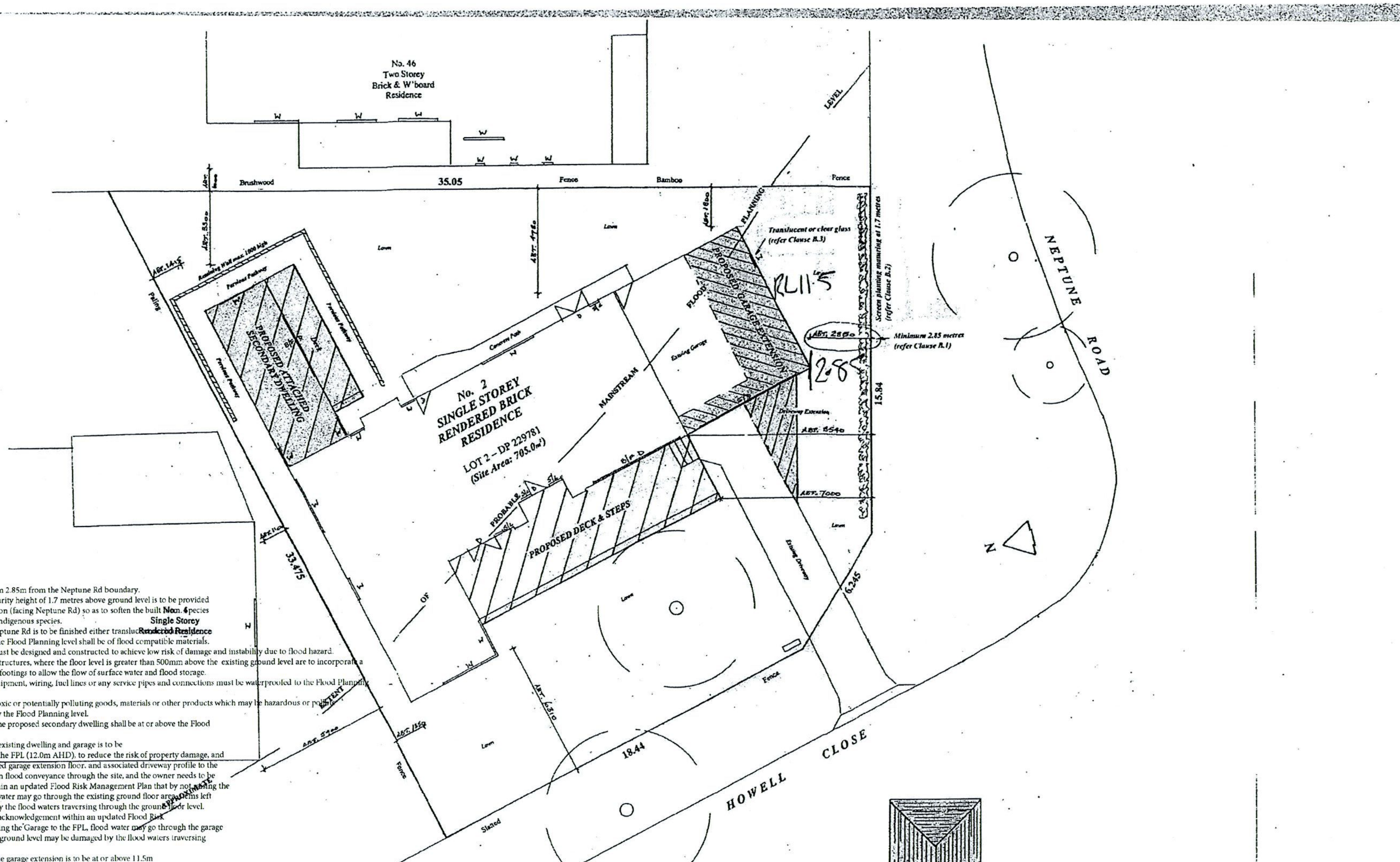


PROPOSED SITE PLAN

1. The garage is to be a minimum 2.85m from the Neptune Rd boundary.
2. Screen planting having a maturity height of 1.7 metres above ground level is to be provided along the garage's southern elevation (facing Neptune Rd) so as to soften the built form. Species selection is to incorporate locally indigenous species.
3. The garage window facing Neptune Rd is to be finished either translucent or clear glass.
5. All structural elements below the Flood Planning level shall be of flood compatible materials.
- All structures must be designed and constructed to achieve low risk of damage and instability due to flood hazard.
- All foundation structures, where the floor level is greater than 500mm above the existing ground level are to incorporate a suspended floor on open pier/pile footings to allow the flow of surface water and flood storage.
- All electrical equipment, wiring, fuel lines or any service pipes and connections must be waterproofed to the Flood Planning level.
- The storage of toxic or potentially polluting goods, materials or other products which may be hazardous or polluting to floodwaters is not permitted below the Flood Planning level.

6. The minimum floor level of the proposed secondary dwelling shall be at or above the Flood Planning level.
7. The ground floor level of the existing dwelling and garage is to be waterproofed (wet and/or dry) to the FPL (12.0m AHD), to reduce the risk of property damage, and The impact that raising the enclosed garage extension floor, and associated driveway profile to the 1% AEP (11.5m AHD) will have on flood conveyance through the site, and the owner needs to be notified by acknowledgement within an updated Flood Risk Management Plan that by not raising the existing ground floor level, flood water may go through the existing ground floor area. Items left at ground level may be damaged by the flood waters traversing through the ground floor level. the owner needs to be notified by acknowledgement within an updated Flood Risk Management Plan that by not raising the Garage to the FPL, flood water may go through the garage area. Items (including vehicles) at ground level may be damaged by the flood waters traversing through the garage.
- The Finished Floor Level of the garage extension is to be at or above 11.5m AHD, and
- The existing garage and the garage extension structure, for the life of the development:

o Cannot be connected internally to the existing dwelling, and
o Can only be used for car parking purposes only, and
o The entrance of the garage cannot face towards the upstream direction of floodwaters, and o Cannot be located in a floodway.

- Side walls and supporting piers for the existing garage and extension to the garage need to be able to resist the forces associated with immersion and impact of debris up to the Flood Planning Level for the garage (12.0mAHD), and
- Bollards are to be installed at the front corners of the garage to prevent floating debris from impacting the existing garage structure, and
- All structural elements below the Flood Planning Level for the garage extension shall be constructed from flood compatible materials, and
- All electrical equipment (including pool pumps and filters), wiring, power points fuel lines or any service pipes and connections must be waterproofed to the FPL, and
- Electrical wiring/data cabling needs to be made suitable for continuous submergence to a depth of 12.0mAHD and conduits graded so they are free draining in a flood event, and
- The additions/existing dwelling(s) structure must be ensured (and signed off by an appropriately qualified engineer) that the building can withstand immersion and impact of velocity and debris up to the level of the Probable Maximum Flood (12.4mAHD), and
- Portions of the site may be liable to flooding from the 1% AEP and the PMF (Probable Maximum Flood) and effective precautions should be taken by the owner(s) and/or occupier(s) of the land to reduce any potential risk to personal safety and to minimise any property damage to the proposed structure, its fixtures and conten

11. Any vegetation planted outside approved landscape zones is to be consistent with locally native species growing onsite and/or selected from the list pertaining to the vegetation community growing in the locality as per the vegetation mapping and Native Plants for Your Garden available on the Pittwater Council website http://www.pittwater.nsw.gov.au/environment/species_lists
12. The internal driveway finish is:

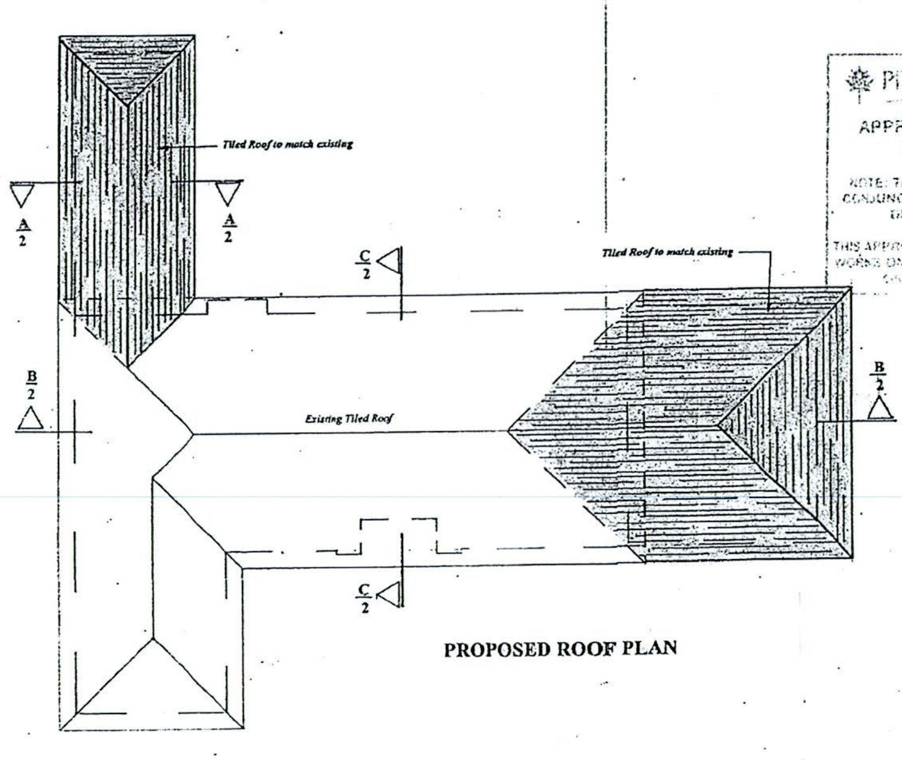
a) to be a stable surface for all weather conditions
b) to be constructed of materials that blend with the environment and are of dark or earthy tones or natural materials.

13. To satisfy the off-street parking requirements for development, the minimum number of two vehicle space requirements shall be provided. These spaces are to be provided and retained over the life of the development.
14. Screen planting is to be provided, which after three years will, in conjunction with the canopy planting, screen 60% of the built form when viewed from the street. Species selection is to incorporate locally native species. This screen planting is to retained over the life of the development and replaced if any part of it should die or be destroyed or removed.
15. In accordance with Pittwater Councils DCP Control B4.22 Protection of Trees and Bushland Vegetation, all existing trees as indicated in the Survey Plan and/or approved Landscape Plan shall be retained except where Council's prior written consent has been obtained, for trees that stand within the envelope of approved development areas and removal is approved through an arborist report. For all other tree issues not related to a development application, applications must be made to Council's Tree Management Officers.
16. Screen planting having a maturity height of 1.7 metres above the secondary dwelling finished floor level is to be provided along the northern side boundary. Species selection is to incorporate locally indigenous species.
17. Materials and colour schemes are to be in accordance with the sample scheme approved by Council.

This Development is subject to the BASIX Certificate requirements. Please ensure compliance with BASIX Commitments are met.

These plans form part of and are to be read in conjunction with the conditions of consent. Please make yourself aware of your legal position. Mandatory inspections are applicable. Received on: 25/09/2014

PRIVATE BUILDING CERTIFIERS
Construction Certificate No: 14/2929-1 Approved Date: 17/10/2014
Certifying Authority: Cheyne James
Accreditation No: BPB 1269



PROPOSED ROOF PLAN

CONDITIONS of APPROVAL for DA No: N0242/14 dated 17 September 2014

Matters to be incorporated into the approved development and maintained over the life of the development:-

Clause B.1 The garage is to be a minimum of 2.85 metres from the Neptune Road boundary.

Clause B.2 Screen planting having a maturity height of 1.7 metres above ground level is to be provided along the Neptune Road boundary to soften the built form of the garage. The species selection is to incorporate locally indigenous species.

Clause B.3 The garage window is to be glazed with translucent or clear glass.

FLOOD PLANNING LEVELS:

This site at No. 2 Howell Close, Newport is identified as being impacted by "Flood Hazard – Flood Category 1 – High Hazard".

The following flood advice levels have been provided by Floodplain Management at Pittwater Council:-

Flood Planning Level (FPL):	AHD 12.00
1% AEP maximum level:	AHD 11.50
Probable Maximum Flood (PMF):	AHD 12.40

Refer to "DCP 21 – B3.16 Flood Hazard – Flood Category 1 – High Hazard" for residential development flood controls.

SITE CALCULATIONS

SITE AREA: Approx. 705.0 m²

EXISTING SITE COVER (Built-upon area):

Residence, including porch	151.6 m²	
Garage, including roof access steps	27.0 m²	
Paths and steps exceeding 1 metre wide	10.4 m²	
Driveway	27.5 m²	216.5 m²
EXISTING SITE RATIO:		30.7 %

PROPOSED SITE COVER (Built-upon area):

Existing residence, including covered entry	147.2 m²	
Proposed attached 'Secondary Dwelling', including deck	35.2 m²	
Proposed double garage	46.9 m²	
Existing path exceeding 1 metre wide	3.0 m²	
Driveway, including extension	31.2 m²	263.5 m²
PROPOSED SITE RATIO:		37.4 %
Uncovered front deck and steps less than 1 metre above natural ground level	40.9 m²	5.8 %

PITTWATER COUNCIL
APPROVED DEVELOPMENT CONSENT PLANS
NOTE: THESE PLANS MUST BE READ IN CONJUNCTION WITH THE DEVELOPMENT CONSENT.

PLAN OR DOCUMENT CERTIFICATION

I am a BUILDING DESIGNER and DRAFTSPERSON with over 55 years experience in the Building Industry, encompassing Documentation, estimating, pre- and post- contract administration and design work.

Further, I am the designer and draftsperson of this project and am, therefore, appropriately qualified to certify this component of the project.

I hereby state that these plans and/or details comply with the Conditions of Development Consent, the provisions of the Building Code of Australia and/or relevant Australian/Industry Standards.

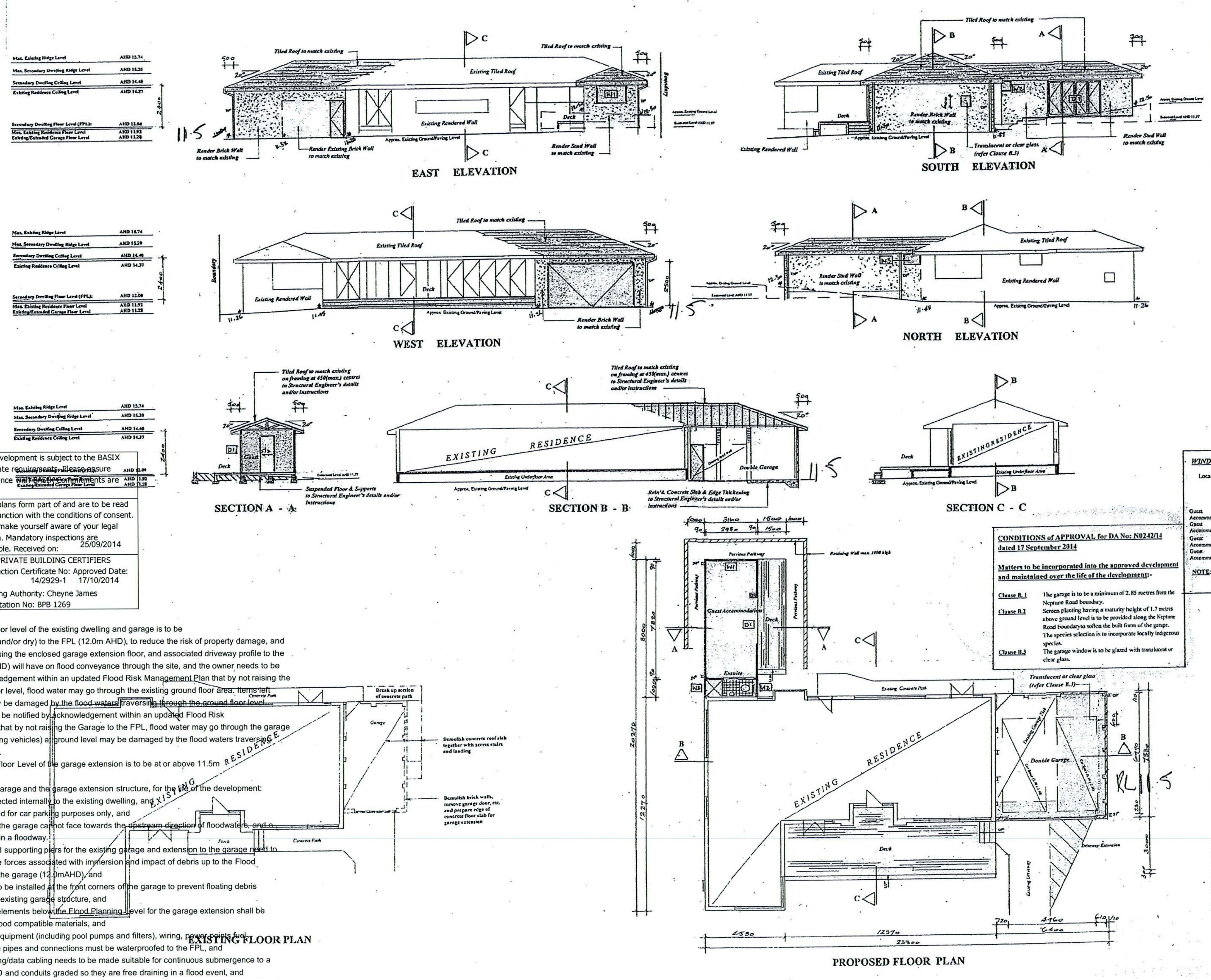
DAVID A.R. DIGGENS
David's Designs Date 24/5/14 Signature

PROPOSED ALTERATIONS & ADDITIONS
at
No. 2 HOWELL CLOSE, NEWPORT, N.S.W.
for
Mr. M. & Mrs. N. STEVENS

David's Designs Drafting & Construction Services
ABN: 21 134 713 170
33/57 Queens Parade West, Newport, N.S.W. 2106 Answer-phone/Fax: (02) 9983 0011
Email: dd3gens@bigpond.net.au

SCALE:	DATE:	DRAWING No.
1:100	MAY, 2014	1403/1

INCORPORATING DA CONDITIONS – Clauses B.1 to 3 inclusive


EAST ELEVATION
SOUTH ELEVATION
WEST ELEVATION
NORTH ELEVATION
SECTION A - A
SECTION B - B
SECTION C - C
EXISTING FLOOR PLAN
PROPOSED FLOOR PLAN
Max. Existing Ridge Level AHD 15.74
Max. Secondary Dwelling Ridge Level AHD 15.20
Secondary Dwelling Ceiling Level AHD 14.40
Existing Residence Ceiling Level AHD 14.37
Secondary Dwelling Floor Level (FPL) AHD 12.00
Max. Existing Residence Floor Level AHD 11.92
Existing/Extended Garage Floor Level AHD 11.28
Existing Tiled Roof
Tiled Roof to match existing
Existing Rendered Wall
Render Brick Wall to match existing
Render Stud Wall to match existing
Deck
Double Garage
Guest Accommodation
EXISTING RESIDENCE
Translucent or clear glass (refer Clause B.3)
Driveway Extension
Existing Driveway
RL 11.5

This Development is subject to the BASIX Certificate requirements. Please ensure compliance with BASIX Commitments are met.

These plans form part of and are to be read in conjunction with the conditions of consent. Please make yourself aware of your legal position. Mandatory inspections are applicable. Received on: 25/09/2014

PRIVATE BUILDING CERTIFIERS
Construction Certificate No: 14/2929-1 Approved Date: 17/10/2014
Certifying Authority: Cheyne James
Accreditation No: BPB 1269

7. The ground floor level of the existing dwelling and garage is to be waterproofed (wet and/or dry) to the FPL (12.0m AHD), to reduce the risk of property damage, and The impact that raising the enclosed garage extension floor, and associated driveway profile to the 1% AEP (11.5m AHD) will have on flood conveyance through the site, and the owner needs to be notified by acknowledgement within an updated Flood Risk Management Plan that by not raising the existing ground floor level, flood water may go through the existing ground floor area. Items left at ground level may be damaged by the flood waters traversing through the ground floor level. the owner needs to be notified by acknowledgement within an updated Flood Risk Management Plan that by not raising the Garage to the FPL, flood water may go through the garage area. Items (including vehicles) at ground level may be damaged by the flood waters traversing through the garage.

- The Finished Floor Level of the garage extension is to be at or above 11.5m AHD, and
- The existing garage and the garage extension structure, for the life of the development:
  - o Cannot be connected internally to the existing dwelling, and
  - o Can only be used for car parking purposes only, and
  - o The entrance of the garage cannot face towards the upstream direction of floodwaters, and o Cannot be located in a floodway.
- Side walls and supporting piers for the existing garage and extension to the garage need to be able to resist the forces associated with immersion and impact of debris up to the Flood Planning Level for the garage (12.0mAHD), and
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- Electrical wiring/data cabling needs to be made suitable for continuous submergence to a depth of 12.0mAHD and conduits graded so they are free draining in a flood event, and
- The additions/existing dwelling(s) structure must be ensured (and signed off by an appropriately qualified engineer) that the building can withstand immersion and impact of velocity and debris up to the level of the Probable Maximum Flood (12.4mAHD), and
- Portions of the site may be liable to flooding from the 1% AEP and the PMF (Probable Maximum Flood) and effective precautions should be taken by the owner(s) and/or occupier(s) of the land to reduce any potential risk to personal safety and to minimise any property damage to the proposed structure, its fixtures and conten

CONDITIONS of APPROVAL for DA No: N0242/14 dated 17 September 2014

Matters to be incorporated into the approved development and maintained over the life of the development:-

Clause B.1 The garage is to be a minimum of 2.85 metres from the Neptune Road boundary.

Clause B.2 Screen planting having a maturity height of 1.7 metres above ground level is to be provided along the Neptune Road boundaryto soften the built form of the garage. The species selection is to incorporate locally indigenous species.

Clause B.3 The garage window is to be glazed with translucent or clear glass.

GENERAL NOTES:

All dimensions are approximate only and shall be verified on site.

Do not scale off drawings.

All existing ground/paving levels shown have been taken from a fixed bench mark to AHD in Howell Close but may vary slightly due to site conditions.

The whole of the workmanship and materials shall comply with the relevent provisions of the Building Code of Australia and/or Australian Standard.

BASIX REQUIREMENTS:

Location: 2 Howell Close, Newport, N.S.W. 2106 (Lot 2 – DP 229781).

Basix Certificate No: A 187213.

Project Type: Separate dwelling house.

Type of Renovation Works: Alterations & additions valued at more than $50,000.00

FIXTURES & SYSTEMS:

Hot Water: A gas instantaneous hot water system shall be installed.

Lighting: A minimum of 40% of new or altered light fixtures are to be fitted with fluorescent, compact fluorescent or LED lamps.

Fixtures:
New or altered showerheads shall have a flow rate of no greater than 9 litres per minute or a 3-star water rating.
New or altered toilets shall have a flow rate of no greater than 4 litres per average flush or a minimum 3-star water rating.
New or altered taps shall have a flow rate no greater than 9 litres per minute or a minimum 3-star water rating.

CONSTRUCTION:

All new or altered construction (floors, walls and ceilings/roofs) shall be constructed in accordance with the specifications listed in the table in the BASIX report No. A 187213, except that (a) additional insulation is not required where the area of new construction is less than $2m^2$ or (b) insulation specified is not required for parts of altered construction where insulation already exists.

GLAZING REQUIREMENTS:

The windows, glazed doors and shading devices shall be installed in accordance with the specifications listed in the table in the BASIX report No. A 187213. Relevant overshadowing requirements must, also, be satisfied for each window and glazed door.

Each window or glazed door with standard aluminium or timber frames and single clear or toned glass may either match the description, or, have a U-value and a Solar Heat Gain Coefficient (SHGC) no greater than that listed in the table in the BASIX report No. A 187213. Total system U-values and SHGC's must be calculated in accordance with National Fenestration Rating Council (NFRC) conditions.

For projections described in millimetres, the leading edge of each eave, pergola, verandah, balcony or awning must be no more than 500mm above the head of the window or glazed door, and no more than 2400mm above the sill.

WINDOW and EXTERNAL DOOR SCHEDULE

Location	Window /Door Number	Dimensions (mm) * Height	Width	Remarks/BASIX Commitments
Guest Accommodation	W1	1020	1790	Standard aluminium – single clear glass
Guest Accommodation	D1	2100	3100	Standard aluminium bi-fold – single clear glass
Guest Accommodation	W3	590	840	Standard aluminium – single toned glass
Guest Accommodation	W4	590	840	Standard aluminium – single toned glass

NOTE: Dimensions are overall frame sizes and are approximate only. Final overall window/door dimensions shall be verified on site.

PLAN OR DOCUMENT CERTIFICATION

I am a BUILDING DESIGNER and DRAFTSPERSON with over 35 years experience in the Building Industry encompassing measurement, estimating, pre- and post- contract administration and design-work.

Further, I am the designer and draftsperson of this project and am, therefore, appropriately qualified to certify this component of the project.

I hereby state that these plans and/or details comply with the Conditions of Development Consent, the provisions of the Building Code of Australia and/or relevant Australian/Industry Standards.

DAVID A.R. DIGGENS, David's Designs — Date: 24/5/14 — Signature

PROPOSED ALTERATIONS & ADDITIONS

PITTWATER COUNCIL — APPROVED DEVELOPMENT CONSENT PLANS

No. 2 HOWELL CLOSE, NEWPORT, N.S.W.

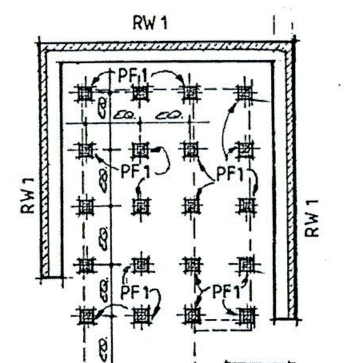
for Mr. Mc & Mrs. N. STEVENS

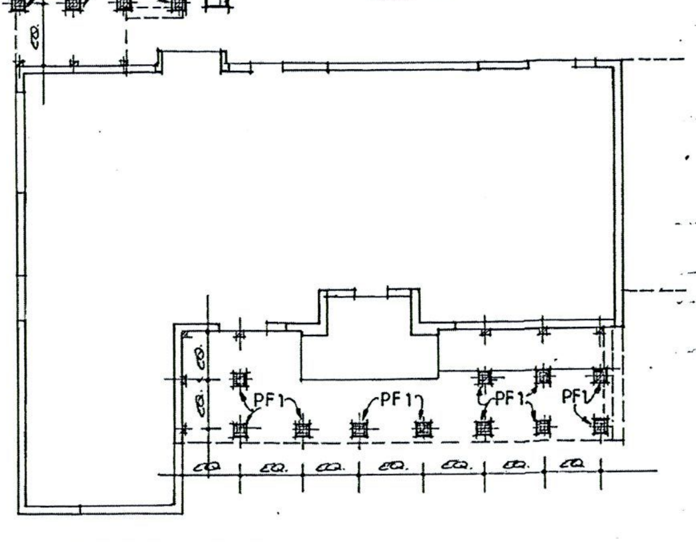
David's Designs — Drafting & Construction Services — ABN: 31 134 293 170

33/57 Queens Parade West, Newport, N.S.W. 2106 Answer-phone/Fax: (02) 9986 0011 Email: ddiggens@bigpond.net.au

SCALE:	DATE:	DRAWING No.
1:100	MAY, 2014	1403/2

INCORPORATING DA CONDITIONS – Clauses B.1 to 3 inclusive

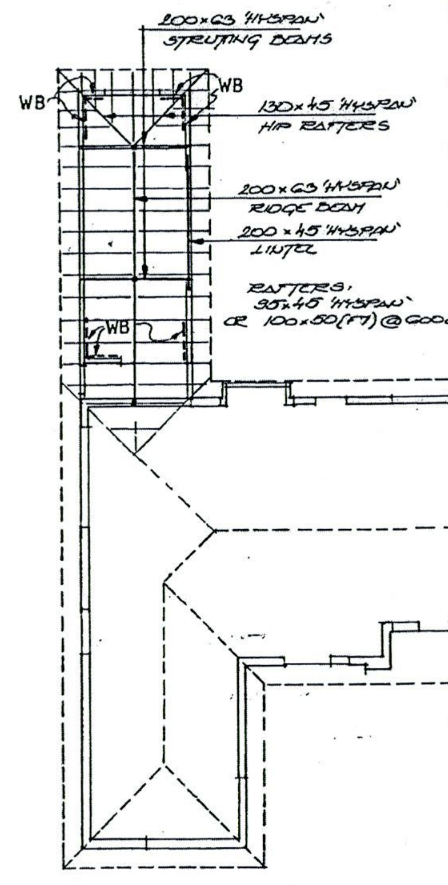


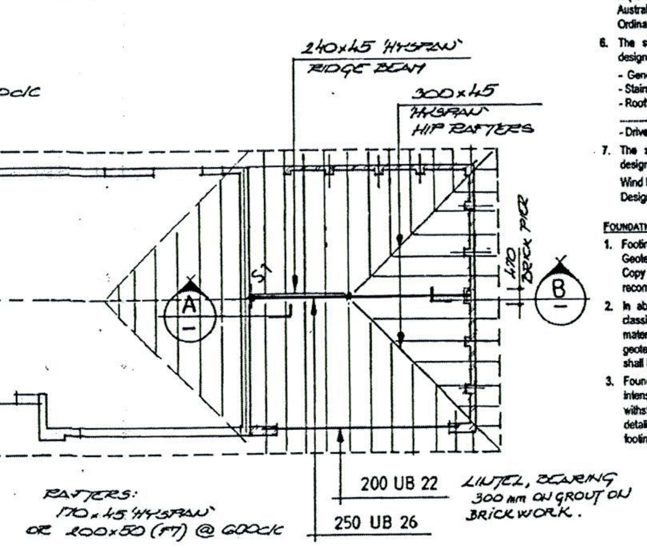


FOOTING LAYOUT

REINFORCED CONCRETE RETAINING WALLS

- Blocks shall be strength Grade 15 conforming to AS2733.
- Mortar shall comprise 1 cement: 0.25 lime : 3 sand
- Provide cleanout holes at base of all walls and rod core holes to remove protruding mortar fins.
- Core filling grout to have a characteristic strength of 20MPa, 10mm aggregate, 230mm slump (±30mm) with a minimum cement content of 300kg/m³.
- Provide 65mm cover to reinforcing bars from the outside face of the block-work to allow adequate grout cover. Position of bars shall be strictly as nominated on the structural details.
- Retaining walls must not be backfilled before core fill is min 14 days old, retaining walls connected to slab on top must not be backfilled until slab above is min. 14 days old.
- Backfill drainage and waterproofing (if applicable) shall be provided as specified by the Architect.
- Provide vertical control joints at max 6m cts (max 3m from corners for concrete blocks.





ROOF FRAMING PLAN

TIMBER FRAMING NOTES

1. All timber work, timber sizes and details not shown on this drawing, shall be in accordance with the relevant requirements of AS 1684-Light timber Framing Code, and AS 1720-Timber Engineering Code.
2. The stud wall supplier/erector shall be responsible for the adequacy of the walls for lateral wind loads. Adequate provision for holding down roof shall be made in conjunction with AS 1684.
3. Nailing plates (refer to architect's details) shall be M10 bolted or gun-fixed to steel beams at 900 mm max. centres
4. Roof, and wall framing shall be fully braced in accordance with AS 1684.

Wall Bracing Notes

WB: Type B Bracing unit to AS 1684. (Timber Framing Code): 2/20mm x 19mm x 1.2mm galvanised metal angles crossed for min 1.8m width, or min. 900mm wide structural plywood with recommended thickness of 9mm-F8 or 6mm-F14 for 600mm stud centres or 4mm-F14 for 450mm stud centres. Fixing to be in accordance with the code.

GENERAL CONSTRUCTION NOTES

1. These drawings shall be read in conjunction with all architectural and other consultant's drawings and with such other written instructions as may be issued during the course of the contract. All discrepancies shall be referred to the Supervising Officer for decision before proceeding with the work.
2. No responsibility will be taken by the Consulting Engineer for dimensions obtained by scaling the structural drawings
3. All dimensions shall be verified on site by the contractor, who shall be responsible for their correctness.
4. The contractor shall be responsible for maintaining the structure and neighbouring structures in safe and stable conditions during construction. No part shall be overstressed.
5. All workmanship and materials shall be in accordance with the requirements of the current editions of the Building Code of Australia, SAA Codes (with amendments), and BY-Laws and Ordinances of the relevant Government Authorities.
6. The structural work shown on these drawings has been designed for the following live loads:
   - Generally (UNO): 1.5 kPa
   - Stairs / Balconies: 3.0 kPa
   - Roof: 0.25 kPa
   - ....: ....kPa
   - Drive way: ....ESA
7. The structural work shown on these drawings has been designed for:
   Wind Load of Region A Terrain Category 3
   Design Earthquake load for Seismic Zone A

FOUNDATION:

1. Footings have been designed in accordance with the Geotechnical report No. — by — Copy of the report shall be kept on site and all recommendations in it shall be followed.
2. In absence of report footings have been designed for site classification M in accordance with AS2870. If questionable material is found classification shall be confirmed by qualified geotechnical engineer prior to construction, and his instructions shall be followed.
3. Foundation material shall be approved for an allowable bearing intensity of 200 kPa immediately prior to placing concrete. Not withstanding this, the underside of all footings shall be as detailed, and in natural residual. Where rock is present all footings shall go to rock.

Concrete

C1 All workmanship and materials shall be in accordance with AS3600 current edition with amendments (unless otherwise specified).

C2 Ready-mix concrete supply shall comply with AS1379.

C3 Concrete Quality (unless otherwise specified):
Cement: Type A Normal Portland Cement
Maximum size of coarse aggregate: 20mm
Maximum slump during placing: 80mm

C4 Project control testing shall be carried out in accordance with AS1379, Clause B7.

C5 No admixtures shall be used unless approved in writing.

C6 Concrete grade and clear concrete cover to reinforcement including ties and stirrups (excluding tendons) for durability shall be as follows unless shown otherwise.

Exposure Classification:	A1 & A2	B1	B2
Concrete grade f'c:	25MPa	32MPa	40MPa
Members cast against ground:	50mm	60mm	65mm
Exposed slabs and walls in forms or on membrane:	30mm	40mm	45mm
Not exposed slabs and walls in forms up to 90minutes FRL	20mm	N.A.	N.A.
Beams and columns in forms up to 120 minutes FRL	40mm	40mm	45mm

- Unreinforced mass concrete F'c: 20MPa
- For cover requirements over 90 minutes Fire Resistance Levels refer to AS 3600 and specification.
- Exposure classification shall be determined on site in accordance with Table 4.3 in AS 3600. Most common categories (for guide only) listed below:
- in interior environment or exposed to non aggressive ground or weather further than 50km from coast line, not in industrial area: A1
- exposed to weather 1 km to 50km from coast line: B1
- exposed to weather less than 1 km from coast line: B2
- in tidal or splash zone, water or other corrosive environment see specification and drawings.

C7 All reinforcement shall be firmly supported on mild steel plastic tipped chairs, plastic chairs or concrete chairs at not greater than 1 metre centres both ways. Bars shall be tied at alternate intersections. In exposure condition B2 or C use only plastic chairs.

C8 Concrete sizes shown and cover nominated to reinforcement do not include thicknesses of applied finishes.

C9 Depths of beams are given first and include slab thickness.

C10 For chamfers, drip grooves, reglets, etc., refer to Architect's details; maintain cover to reinforcement at these details.

C11 No holes, chases or embedment of pipes other than those shown on the structural drawings shall be made in concrete members without the prior written approval of the Structural Engineer.

C12 Construction joints where not shown shall be located to the approval of the Structural Engineer.

C13 Conduits, pipes etc. shall not be placed within the cover to reinforcement, shall only be located in the middle one third of slab depth and spaced not less than 3 diameters.

C14 Slabs and beams shall be constructed to bear only on the beams, load-bearing walls, columns, etc. shown on the drawings. All other building elements shall be kept 15mm minimum clear from the structure.

C15 Reinforcement:
- All reinforcing bars shall be Grade D500N to AS4671 unless noted otherwise. All mesh shall be Grade 500L to AS4671 and shall be supplied in flat sheets.
- Reinforcement notation shall be as follows: number of bars in group - bar grade and type- nominal bar size in mm - spacing in mm. Example: 17 N20-250
- The figures following the fabric symbol F are the reference numbers for the fabric to AS4671.
- Reinforcement shown diagrammatically and not necessarily in true projection, therefore must not be scaled from drawings.
- Slab reinforcement shall extend at least 65mm onto masonry support walls.
- Splices in reinforcement shall be made only in positions shown or otherwise approved in writing by the Structural Engineer. Laps shall be in accordance with AS3600 and not less than the development length for each bar.
- Site bending of deformed reinforcing bars shall be done without heating using mechanical bending tools.
- Welding of reinforcement shall not be permitted unless shown on the structural drawings or approved by the Structural Engineer in writing.
- Unless otherwise noted on drawings, all unsupported bars shall be tied in the transverse direction to N12 @ 300mm distribution bars which shall have minimum 400mm lap where required.
- Fabric shall be lapped 2 transverse wires plus 50mm. Bundled bars shall be tied together at 30 bar diameter centres with 3 wraps of tie wire.

C16 The Structural Engineer shall be given minimum 24 hours notice for reinforcement inspection and concrete shall not be delivered until final approval obtained.

C17 Ffinished concrete shall be a dense homogeneous mass, completely filling the formwork thoroughly embedding the reinforcement and free of stone pockets. All concrete shall be compacted using high frequency vibrators.

C18 Curing of all concrete is to be achieved by keeping surfaces continuously wet for a period of 3 days, or by prevention of loss of moisture for a total of 7 days followed by a gradual drying out. Polythene sheeting or wet hessian may be used to retain concrete moisture where protected from wind and traffic. Sprayed on curing compounds that comply with AS3799 can be used only where floor finishes will not be affected, and approved in writing.

C19 Construction support propping is to be left in place where needed to avoid overstressing the structure due to construction loading. Stripping and backpropping time shall be approved by the Structural Engineer. No brickwork or partition walls are to be constructed on suspended levels until all propping is removed.

C20 The Builder shall obtain certification from an appropriately qualified structural engineer for the adequacy of the slab formwork and false-work for each suspended slab being poured, and of back-propping of lower slabs, prior to pouring each suspended slab above.

STRUCTURAL STEEL

S1 All workmanship and material shall be in accordance with AS4100. Fabrication shall be in accordance with Section 14,. erection shall be in accordance with Section 15 of AS4100.

S2 The Contractor shall provide all cleats and drill all holes necessary for fixing steel, timber and other members, architectural elements, fixtures, temporary & final bracing, whether or not detailed on the structural drawings.

S3 Unless noted otherwise all bolts shall be M16 category 4.6/S. with 10mm thick cleats, min. 2 bolts per connection.

S4 Unless noted otherwise all welds shall be 6mm continuous fillet weld or butt weld, category SP, using E48XX electrodes.

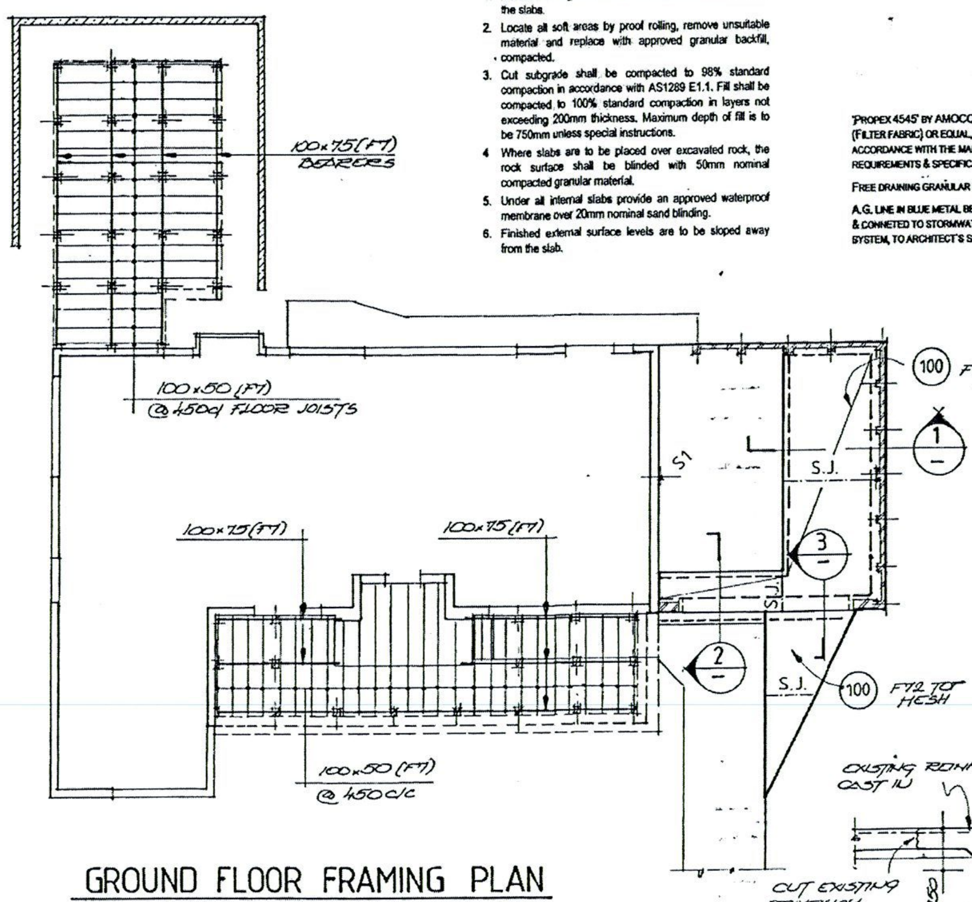
S5 Structural steelwork not encased in concrete shall have:

Element:	Preparation:	Protection:
Steelwork exposed to weather, wall cavity or water, bolts, holding down bolts, anchors	pickle or abrasive blast clean to Class 3 to AS 1650	hot dip galvanising to AS4680(min, 550 g./m² zinc)
Steelwork not listed above and protection not otherwise specified	hand or power tool cleaned to Class 2 to AS 1650	two coats of red oxide zinc chromate primer in shop

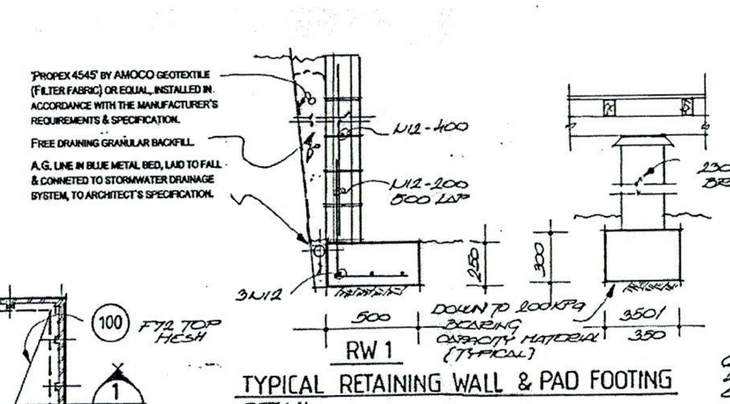
S6 Steel columns and tie beams shall be connected to adjacent masonry with stainless steel wall ties at max. 400mm centres unless shown otherwise.

SLAB ON GROUND NOTES

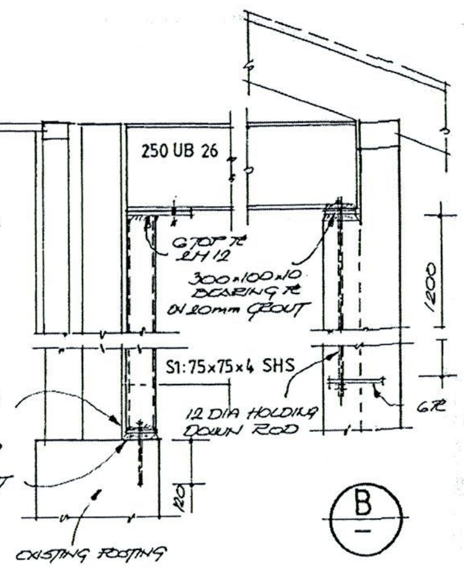
1. Remove all organic material and topsoil from the area of the slabs.
2. Locate all soft areas by proof rolling, remove unsuitable material and replace with approved granular backfill, compacted.
3. Cut subgrade shall be compacted to 98% standard compaction in accordance with AS1289 E1.1. Fill shall be compacted to 100% standard compaction in layers not exceeding 200mm thickness. Maximum depth of fill is to be 750mm unless special instructions.
4. Where slabs are to be placed over excavated rock, the rock surface shall be blinded with 50mm nominal compacted granular material.
5. Under all internal slabs provide an approved waterproof membrane over 20mm nominal sand blinding.
6. Finished external surface levels are to be sloped away from the slab.

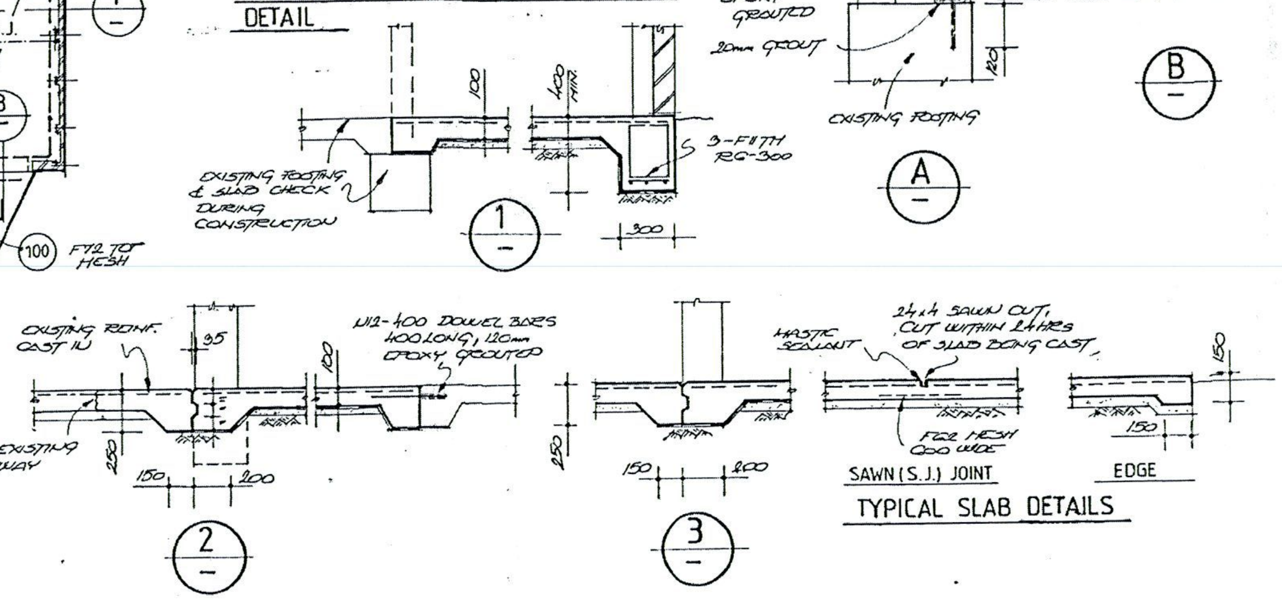


GROUND FLOOR FRAMING PLAN



TYPICAL RETAINING WALL & PAD FOOTING DETAIL





TYPICAL SLAB DETAILS

Issue	Amendment	Date

This drawing is not to be used for construction unless signed here: Z. Tihanyi M.I.Eng. Aust. CP.Eng. 5·8·14

Architect: DAVID'S DESIGNS

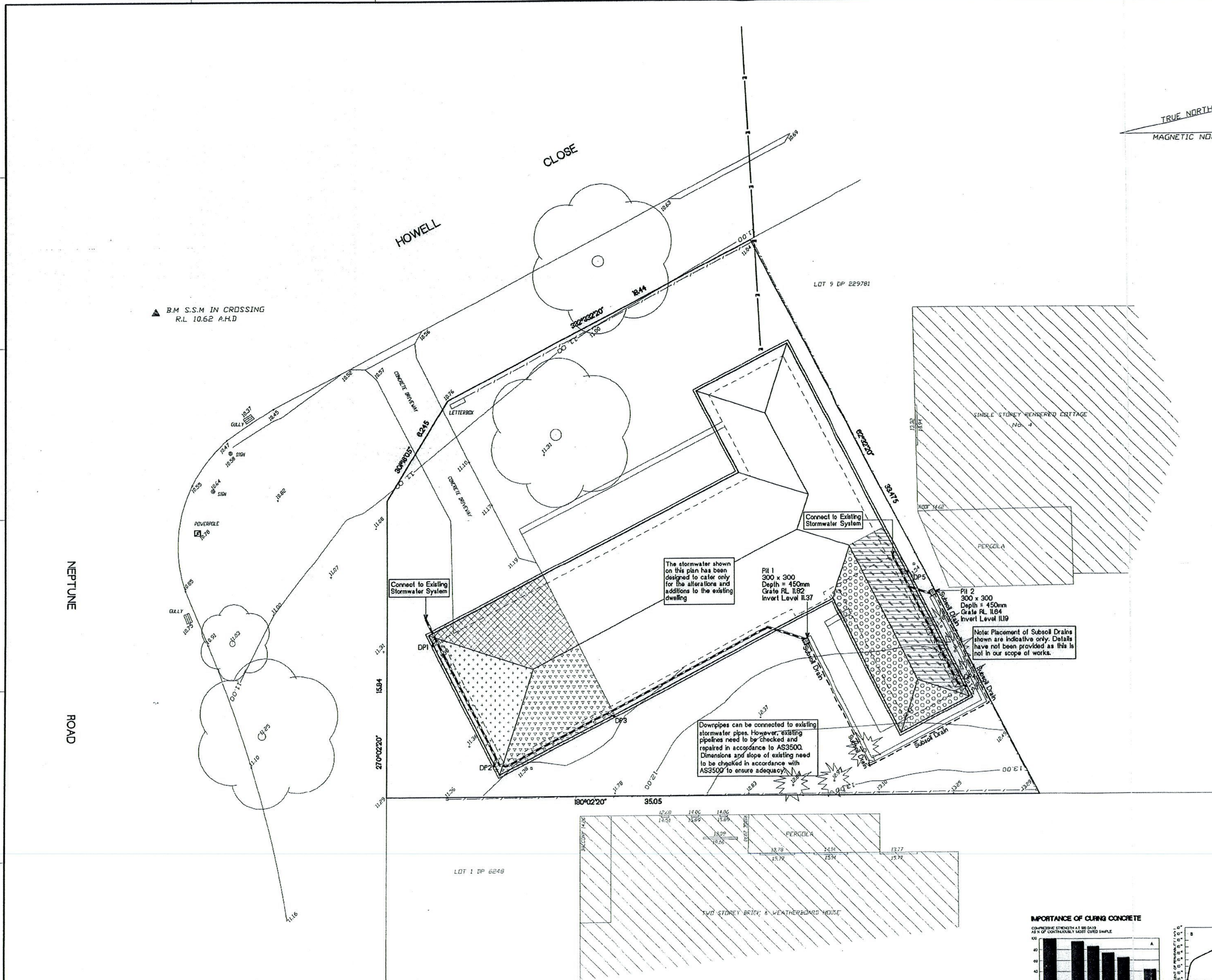
Project: PROPOSED ALTERATIONS & ADDITIONS AT 2 HOWELL CLOSE NEWPORT FOR: Mr. M. & Mrs. N. STEVENS

Tihanyi CONSULTING ENGINEERS PTY LTD
Structural Specialists
ACN 064338706
6 Suzanne Rd· Mona Vale · NSW ·2103 ·
Phone: (02) 9997 8821 · Mob: 0412 704 718
E-mail: tihanyieng @ optusnet.com au

Title: **STRUCTURAL DETAILS**

Date: 08 2014 | Scale: 1:100, 1:20, 1:10 @ A1 | Drawing: BICB-1594 | Revision:

Document Transmission To:	No. of Copies:
	Date: 5/08/14
CLIENT	Frank / 6 Sept



Maximum Plan Area is 24.4m² per downpipe

Indication Of Area Draining To Downpipes By Hatching	
DP1 - 21.2m²	
DP2 - 17.9m²	
DP3 - 21.1m²	
DP4 - 22.8m²	
DP5 - 19.8m²	

Note:- Areas are unfactored plan areas

Drainage Pipe Notes.
Slope of pipes to be a minimum of 1:100 i.e. 1%
All levels and dimensions to be checked and confirmed on site.
All design work and works to be in accordance with AS/NZS 3500.5 (2000) and AS/NZS 3500.3.2 (1998)

All pipes unless otherwise specified on the plan to be 100 dia. UPVC pipe.

Inspection openings will be required at even spacings not more than 30 metres apart and at any change of direction greater than 45 degrees.

The Eaves Gutter connected to all DP's to have a minimum cross sectional area of 6365 sq. mm or similar. Downpipes attached to the eaves gutter to have a minimmum diameter of 90mm or 100 x 50 rect. or similar.

No.	Amendment	Drawn	Date

PLAN OR DOCUMENT CERTIFICATION

I am a qualified......CIVIL, GEOTECHNICAL & STRUCTURAL ENGINEER.....
I hold the following qualifications or licence No..B.EngSc......M.I.E. Aust........
Further I am appropriately qualified to certify this component of the project.
I hereby state that these plans or details comply with the conditions of development consent, the provisions of the Building Code of Australia.
AS.1170. AS.1170.1. AS.1170.2. AS.1684. AS.2870.1.AS.3500. AS.3600. AS. 3700. AS.4100 & AS.1163. On behalf of Jack Hodgson Consultants

Name Date Signature

STORMWATER MANAGEMENT PLAN

PROPOSED ALTERATIONS AND ADDITIONS
2 HOWELL CLOSE
NEWPORT

MATT & NATALIE STEVENS

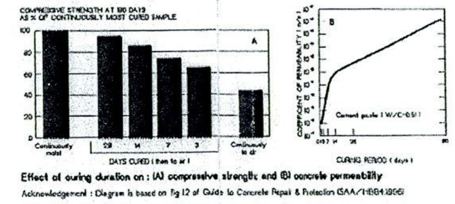
Our design and drawings are based upon and derived from information (including levels, surveys, etc) provided by the owner/architect/designer/ builder.
DAVID'S DESIGNS
DWG No: 1403/1 & 1403/2 Date: MAY 2014
TOTAL SURVEYING - LAND & PROPERTY SURVEYORS
Job No: 1431 Date: APRIL 2014
Should the information provided to us be found to be deficient, unreliable, incorrect or inaccurate then our design/drawings may require modification. We take no responsibility for verifying the accuracy of the information that forms the basis of our brief and it is your obligation to verify it prior to the commencement of building operations.

The Structural Details shown on this Drawing are NOT to change under any circumstance.
NO Certificate will be issued for work NOT in accordance with the Drawing.

JACK HODGSON CONSULTANTS PTY. LIMITED.
Consulting Civil, Geotechnical, and Structural Engineers.
67 Darley Street, MONA VALE 2103, P.O. Box 389, Post Code 1660.
Telephone (02) 9979 6733. Facsimile (02) 9979 6926.
Email:info@jackhodgson.com.au web:www.jackhodgson.com.au
A.C.N. 053 405 011

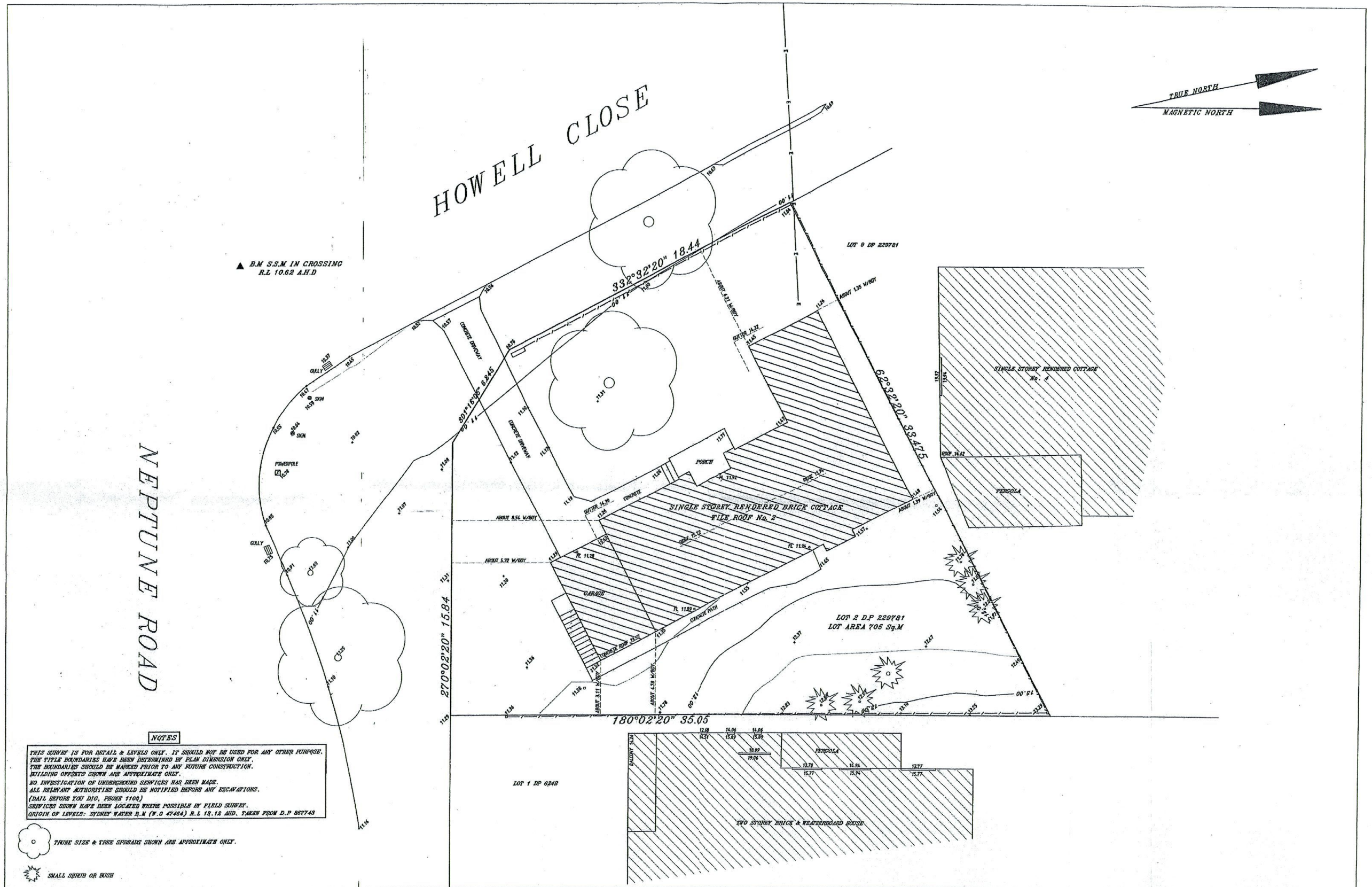
Designed	Drawn	Job No.	Drawing No.
CP	CP		29463-H1
Design Check: GH	Drawing Check: GH		
Date: 2 OCTOBER 2014			

IMPORTANCE OF CURING CONCRETE



Effect of curing duration on : (A) compressive strength; and (B) concrete permeability
Acknowledgement : Diagram is based on fig 12 of Guide to Concrete Repair & Protection (SAA/HB84-1996)

Scale 1:100 0 5m 10m 15m 20m 25m
Scale 1:20 0 1m 2m 3m 4m 5m



NOTES

THIS SURVEY IS FOR DETAIL & LEVELS ONLY. IT SHOULD NOT BE USED FOR ANY OTHER PURPOSE.
THE TITLE BOUNDARIES HAVE BEEN DETERMINED BY PLAN DIMENSION ONLY.
THE BOUNDARIES SHOULD BE MARKED PRIOR TO ANY FUTURE CONSTRUCTION.
BUILDING OFFSETS SHOWN ARE APPROXIMATE ONLY.
NO INVESTIGATION OF UNDERGROUND SERVICES HAS BEEN MADE.
ALL RELEVANT AUTHORITIES SHOULD BE NOTIFIED BEFORE ANY EXCAVATIONS.
(DAIL BEFORE YOU DIG, PHONE 1100)
SERVICES SHOWN HAVE BEEN LOCATED WHERE POSSIBLE BY FIELD SURVEY.
ORIGIN OF LEVELS: SYDNEY WATER B.M (W.O 47464) R.L 13.12 AHD. TAKEN FROM D.P 867743

TRUNK SIZE & TREE SPREADS SHOWN ARE APPROXIMATE ONLY.

SMALL SHRUB OR BUSH

JOB	DATUM	SCALE	DATE OF SURVEY	CLIENT	L.G.A	TOTAL SURVEYING–LAND & PROPERTY SURVEYORS P.O BOX 44 BELROSE WEST NSW 2085. PHONE /FAX 9402 0790, MOBILE 0417 277107
1431	A.H.D	1:100	APRIL 2014	MATT STEVENS	PITTWATER	PLAN SHOWING HEIGHTS, LEVELS & FEATURES OVER LOT 2 D.P 229781 KNOWN AS NUMBER 2 HOWELL CLOSE NEWPORT