insight building certifiers pty ltd

8 March 2011

General Manager
Pittwater Council
PO Box 882
MONA VALE NSW 1660

Dear Sir/Madam,

Development Application No. N0181/09
145 Pacific Road, Palm Beach

For Council's information, please find enclosed Construction Certificate No. 2011/4213 issued for alterations & additions to an existing dwelling at the above address, accompanied by:

- Copy of Construction Certificate application form
- Notice of Commencement of Work and Appointment of Principal Certifying Authority
- Home Warranty Insurance Certificate
- Cheque for $30.00 being the prescribed fee to receive the above certificate.

NB: Please forward receipt for the above fee to **Insight Building Certifiers Pty Ltd, PO Box 326, Mona Vale 1660.**

Yours faithfully

Tom Bowden
Insight Building Certifiers Pty Ltd

Suite 13/90 Mona Vale Road Mona Vale NSW 2103 PO Box 326 Mona Vale NSW 1660 **ph: 9999 0003** fax: 9979 1555
email: info@insightcert.com.au **web:** www.insightbuildingcertifiers.com.au **ABN** 54 115 090 456

insight building certifiers pty ltd

Construction Certificate
Determination

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

Certificate No. 2011/4213

Council	**Pittwater**
Determination	**Approved**
Date of issue	8 March 2011
Subject land	
Address	145 Pacific Road, Palm Beach
Lot No, DP No.	Lot 2 DP 1125750
Applicant	
Name	Sandra Plowman
Address	145 Pacific Road, Palm Beach NSW 2108
Contact No.	n/a
Owner	
Name	Sandra Plowman
Address	145 Pacific Road, Palm Beach NSW 2108
Contact No.	n/a
Description of Development	
Type of Work	Alterations & Additions to an Existing Dwelling
Builder or Owner/Builder	
Name	Contemporary Builders
Contractor Licence No/Permit	127646C
Value of Work	
Building	$540,000.00

Attachments

- Copy of completed Construction Certificate Application Form
- Long Service Levy Corporation receipt no. 609880177 and Pittwater Council receipt no. 298134 for payment of Long Service Levy
- BASIX Certificate no. A58165 dated 14 May 2009

Suite 13/90 Mona Vale Road Mona Vale NSW 2103 PO Box 326 Mona Vale NSW 1660 ph: 9999 0003 fax: 9979 1555
email: info@insightcert.com.au web: www.insightbuildingcertifiers.com.au ABN 54 115 090 456

Plans & Specifications certified

The development is to be carried out in compliance with the following plans and documentation listed below and endorsed with *Insight Building Certifiers* stamp.

- Architectural Details & Construction Specification Drawing reference no's. 00, 01, 02, 03, 04 & 05 (all Issue A) prepared by Hurley Design & Build dated May 2009
- Structural Details reference no. 091048, Drawing no's. S01, S02, S03, S04 & S05, prepared & endorsed by North Beaches Consulting Engineers dated December 2009
- Completed Form 2 Certificate (Parts A & B) dated 21 February 2011
- Certificate certifying the adequacy of the existing stormwater reference no. 091048 issued by Northern Beaches Consulting Engineers dated 1 March 2011
- Sydney Water Approval dated 19 February 2011

Certificate

I hereby certify that the above Plans, documents or Certificates, satisfy:

- The relevant provisions of the Building Code of Australia
- The relevant conditions of this Development Consent

and that work completed in accordance with the documentation accompanying the application for this Certificate (and any modifications as verified by me and shown on that documentation) will comply with the requirements of the Environmental Planning & Assessment Regulation referred to in Section 81A(5) of the Environmental Planning & Assessment Act, 1979.

Signed .....

Date of endorsement - 8 MAR 2011

Certificate No. **2011/4213**

Certifying Authority

Name of Accredited Certifier	Tom Bowden
Accreditation No.	BPB0042
Accreditation Authority	Building Professionals Board
Contact No.	(02) 9999 0003
Address	13/90 Mona Vale Road, Mona Vale NSW 2103

Development Consent

Development Application No.	**N0181/09**
Date of Determination	**6 July 2009**

BCA Classification **1a**

insight building certifiers pty ltd

Construction Certificate ☒

25 FEB 2011 Modified Construction Certificate ☐

APPLICATION FOR A CONSTRUCTION CERTIFICATE

Environmental Planning and Assessment Act 1979 & Environmental Planning and Assessment Regulation 2000

Description of Building Work

Alterations and additions

Estimated cost of work

$ 540,000.00

BCA Classification(s)

1A

Development Consent Reference no.

NO 181/09

Date of issue

6/7/09

Property Address

Unit/Street no.: 145

Street name: Pacific Rd

Suburb: Palm Beach

Post code: 2108

Lot no.: 2

DP no.: 1125750

Accompanying Documents

i. Appropriate Architectural Plans and Specifications

ii. All information required by *Part 3 of Schedule 1 Forms* of the Regulation (see over)

I, the owner of the abovementioned property, hereby make application to Tom Bowden/Stephen Pinn of Insight Building Certifiers Pty Ltd ('Insight') for a Construction Certificate for the building work descibed above and, in doing so, I also declare that the documents provided and asserted by me as a opy of a development consent and incorporated plans are a true copy of same as issued by the relevant consent authority or the Land and Environment Court.

Owner's Name: SANDRA PLOWMAN

Owner's Address: 145 PACIFIC ROAD, PALM BEACH 2108

Owner's Signature: Sandra Plowman Date 21/2/2011

[Office Use Only]: Date received by Accredited Certifier:.....

All documents received as part of this Construction Certificate application have been stamped to that effect

Levy Online Payment Receipt

LONG SERVICE

Thank you for using our Levy Online payment system. Your payment for this building application has been processed.

Applicant Name:	CONTEMPORARY BUILDERS PTY LTD
Levy Application Reference:	5012234
Application Type:	DA
Application No.:	NO181/09
Local Government Area/Government Authority:	PITTWATER COUNCIL
Site Address:	145 PACIFIC RD
	PALM BEACH
	NSW
	2108
Value Of Work:	$264,219
Levy Due:	$924
Levy Payment:	$924
Online Payment Ref.:	609880177
Payment Date:	19/02/2011 9:20:53 AM

RECEIVED MONA VALE
01 MAR 2011
CUSTOMER SERVICE

Pittwater Council

OFFICIAL RECEIPT

03/2011 Receipt No 298134

To Contemporary Builders Pty Ltd

78 Hilltop Road
Avalon NSW 2107

[illegible]	[illegible]
EL 50 [illegible]	92.60
EL Re [illegible]	$925.00
1 x n0181/09 145 pacific	
[illegible]	974.65
Cash	0.00
[illegible]	0.00
[illegible]	974.65
Money Order	$0.00
Agency Rec	$0.00
Total	$974.65
[illegible]	$0.00
Charge	$0.00
[illegible]	974.65

[illegible]
Dashwood Way

LEVY PAYMENT FORM

FORM NO.

OFFICE USE ONLY

ORGANISATION LIABLE TO PAY LEVY — PLEASE PRINT ALL DETAILS USING CAPITALS

TEMPORARY BUILDERS
LTD
HILLTOP ROAD
AVALON
NSW
Postcode 2107 Bus. hours phone 0412588592

UCTION WORK

FIG ROAD
BEACH
Postcode 2108
3 Y 2011 Estimated finish date D 03 M 10 Y 2011

ed by consenting/certifying authority with whom plans lodged for approval

WATER
1/09
540,000.00 Levy payable $ 1,890.00

le DA number here

Business hours phone

ept/Authority where applicable – see reverse

Contract amount $ 540,000.00

Phone number

Contact person (Signature) Date D M Y

PART B – DECLARATION – to be signed by person liable to pay levy or authorised officer if company/organisation

Any false or misleading information provided on this form may result in prosecution under Section 58A.
I hereby declare that the information provided on this form is true and correct to the best of my knowledge

Name Mark Thompson Signature Date D 01 M 03 Y 2011

PART C – TO BE COMPLETED WHERE APPLICABLE – SEE REVERSE

Exemption Approval Certificate No.

R# 298134 JW

PAID ONLINE $925 original VOW $264,219.00.
PAY TODAY — $965 VOW 540,000 TOTAL LEVY $1890-00

BASIX Certificate

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

Alterations and Additions

Certificate number: A58165

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 Department of Planning. This document is available at www.basix.nsw.gov.au

Director-General
Date of issue: Thursday, 14, May 2009

NSW GOVERNMENT
Department of Planning

Project address	
Project name	Hurley: Pacific Road, Palm Beach
Street address	145 Pacific Road Palm Beach 2108
Local Government Area	Pittwater Council
Plan type and number	Deposited Plan 1125750
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).

Fixtures and systems	Show on DA plan	Show on CC plan	Certifier check
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	Shower	Storm	Taps
	✓	✓	✓

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
concrete slab on ground floor.	nil	
suspended floor with open subfloor: concrete (R0.6).	R0.9 (down) (or R1.50 including construction)	
external wall: cavity brick	nil	
flat ceiling, pitched roof	ceiling: R1.95 (up), roof: foil backed blanket (55 mm)	medium (solar absorptance 0.475 - 0.70)

Glazing requirements									
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.								✓	✓
Overshadowing buildings or vegetation must be of the height and distance from the centre and the base of the window and glazed door, as specified in the 'overshadowing' column in the table below.							✓	✓	✓

Windows and glazed doors glazing requirements

Window no.	Orientation	Area of glass (m²)	Overshadowing		Shading device	Frame and glass type
			Height (m)	Distance (m)		
Sunroom	W	7.6	0	0	eave/verandah/pergola/balcony >=750 mm	timber or uPVC, single clear, (or U-value: 5.71, SHGC: 0.66)
Entry	W	1.9	0	0	eave/verandah/pergola/balcony >=750 mm	timber or uPVC, single clear, (or U-value: 5.71, SHGC: 0.66)
Office	W	2.9	5	3	none	timber or uPVC, single clear, (or U-value: 5.71, SHGC: 0.66)
Dining	N	5	0	0	eave/verandah/pergola/balcony >=750 mm	timber or uPVC, single clear, (or U-value: 5.71, SHGC: 0.66)

Glazing requirements

Window / door no.	Orientation	Area of glass inc. frame (m²)	Overhang width Eave / verandah / pergola / balcony depth (m)	Overhang width Distance above head of window or glass (m)	Shading device	Frame and glass type
Master Bed	N	1.3	0	0	eave/verandah/pergola/balcony >=750 mm	timber or uPVC, single clear, (or U-value: 5.71, SHGC: 0.66)
Master Bed	N	1.3	0	0	eave/verandah/pergola/balcony >=750 mm	timber or uPVC, single clear, (or U-value: 5.71, SHGC: 0.66)
Ensuite	N	3.5	0	0	eave/verandah/pergola/balcony >=750 mm	timber or uPVC, single clear, (or U-value: 5.71, SHGC: 0.66)
Office	N	2.5	0	0	eave/verandah/pergola/balcony >=750 mm	timber or uPVC, single clear, (or U-value: 5.71, SHGC: 0.66)
Laundry	S	1.2	0	0	none	timber or uPVC, single clear, (or U-value: 5.71, SHGC: 0.66)
Dining	E	10.1	0	0	eave/verandah/pergola/balcony >=750 mm	timber or uPVC, single clear, (or U-value: 5.71, SHGC: 0.66)
Living	E	9.3	0	0	eave/verandah/pergola/balcony >=750 mm	timber or uPVC, single clear, (or U-value: 5.71, SHGC: 0.66)
Master Bed	E	4.2	0	0	eave/verandah/pergola/balcony >=750 mm	timber or uPVC, single clear, (or U-value: 5.71, SHGC: 0.66)
Master Bed	E	1.6	0	0	eave/verandah/pergola/balcony >=750 mm	timber or uPVC, single clear, (or U-value: 5.71, SHGC: 0.66)

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

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.

GEOTECHNICAL RISK MANAGEMENT POLICY FOR PITTWATER
FORM NO. 2 – PART A – To be submitted with detailed design for Construction Certificate

Development Application for Hurley Design & Build
Name of Applicant

Address of site 145 Pacific Road, Palm Beach

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

I, Rick Wray (insert name) on behalf of Northern Beaches Consulting Engineers Pty Ltd (trading or company name)

on this the 21st February 2011 (date)

certify that I am a Structural or Civil Engineer as defined by the Geotechnical Risk Management Policy for Pittwater - 2009. I am authorised by the above organisation/company to issue this document and to certify that the organisation/company has a current professional indemnity policy of at least $2million. I also certify that I have prepared the below listed structural documents in accordance with the recommendations given in the Geotechnical Report for the above development and that

Please mark appropriate box

☑ the structural design meets the recommendations as set out in the Geotechnical Report or any revision thereto.

☐ the structural design has considered the requirements set out in the Geotechnical Report for Excavation and Landfill both for the excavation/construction phase and the final installation in accordance with Clause 3.2 (b)(iv) of the Geotechnical Risk Management Policy.

Geotechnical Report Details:

Report Title: Geotechnicl Assessment: 145 Pacific Road, Palm Beach
Report Date: May 2009 (PO0902355JR01- V2)
Author: G Taylor & Dr D Martens
Author's Company/Organisation: Martens & Associates Pty Ltd

Structural Documents list:

Job No: 091048, Dwg No's: S01 – S06

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

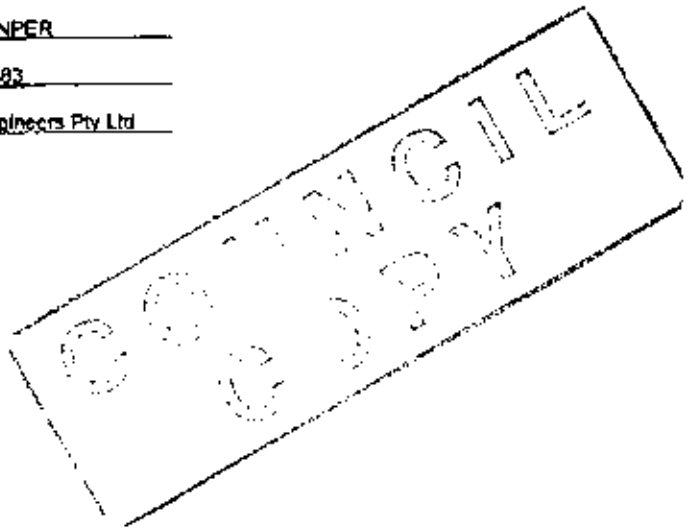
Signature R. Wray

Name Rick Wray

Chartered Professional Status CPEng NPER

Membership No. 803983

Company Northern Beaches Consulting Engineers Pty Ltd



PITTWATER COUNCIL

GEOTECHNICAL RISK MANAGEMENT POLICY FOR PITTWATER
FORM NO. 2 – PART B – To be submitted with detailed design for Construction Certificate

PART B Declaration made by Geotechnical Engineer or Engineering Geologist and/or Coastal Engineer (where applicable) in relation to the incorporation of the Geotechnical Issues into the project design

I, Dr D. Mortens on behalf of Mortens & Associates
(insert name) (trading or company name)

on this the 21.2.2011
(date)

certify that I am a Geotechnical Engineer or Engineering Geologist and/or Coastal Engineer as defined by the Geotechnical Risk Management Policy for Pittwater - 2099 and I am authorised by the above organisation/company to issue this document and to certify that the organisation/company has a current professional indemnity policy of at least $2million. I also certify that I have reviewed the design plans and structural design plans for the Construction Certificate Stage and that I am satisfied that:

Please mark appropriate box

☒ the structural design meets the recommendations as set out in the Geotechnical Report or any revision thereto.
☒ the structural design has considered the requirements set out in the Geotechnical Report for Excavation and Landfill both for the excavation/construction phase and the final installation in accordance with Clause 3.2 (b)(iv) of the Geotechnical Risk Management Policy.

Geotechnical Report Details:

Report Title: Geotechnical Assessment: 145 Pacific Road, Palm Beach
Report Date: May 2009
Author: G. Taylor & Dr D. Mortens

Documentation which relates to or is relied upon in report preparation:

Northern Beaches Consulting Engineers Pty Ltd
091048

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

Signature .....
Name Dr D. Mortens
Chartered Professional Status CPEng, FIE Aust, NPER
Membership No. 2185379
Company Mortens & Associates

NOTE:
We recommend that piers where needed, for lower level deck be socketed into sandstone bedrock a minimum of 300mm
⇒ This form 2 has been updated for the previously certified Form 2 dated 24.12.09

DIRECTORS
Stewart McGeady Rick Wray Brad Seghers

Certificate of Existing Stormwater Drainage

Date: 1st March 2011 Job No. 091048

Client: Sandra Plowman Engineer: RM/RW

Site: 145 Pacific Road, Palm Beach.

Rhys Mikhail of Northern Beaches Consulting Engineers P/L carried out a site inspection at the above residential premises on the 13/01/2010. The purpose of the visit was to inspect and comment on the existing stormwater drainage and the capacity of the system to cater for any additional flows due to the proposed modifications.

The assessment consisted of a walk over style inspection of the site and water testing where required.

In summary, the proposed alterations and additions will not increase the existing stormwater flows.

The existing system is adequate and is piped to Livistona Lane below ground network.

Note: This certification does not alleviate the responsibility of the owners of the property to properly maintain the existing stormwater system.

We trust that this certificate meets with your requirements. Please contact the author if further clarification is required.

NORTHERN BEACHES CONSULTING ENGINEERS P/L

R. Wray

Rick Wray
BE CPEng NPER Director

X:\ENG NBC\2009\091048\SC002.doc

COUNCIL COPY

Northern Beaches Consulting Engineers Pty Ltd Structural, Civil & Stormwater Engineers ACN 076 121 616 ABN 24 076 121 616
Suite 207, 30 Fisher Road Dee Why NSW 2099 Tel 9984 7000 Fax 9984 7444 Email nb@nbconsulting.com.au

SECTION 5 CONSTRUCTION FOR BUSHFIRE ATTACK LEVEL 12.5 (BAL—12.5)

5.1 GENERAL

A building assessed in Section 2 as being BAL—12.5 shall comply with Section 3 and Clauses 5.2 to 5.8.

NOTE: There are a number of Standards that specify requirements for construction; however, where this Standard does not provide construction requirements for a particular element, the other Standards apply.

Any element of construction or system that satisfies the test criteria of AS 1530.8.1 may be used in lieu of the applicable requirements contained in Clauses 5.2 to 5.8 (see Clause 3.8).

NOTE: BAL—12.5 is primarily concerned with protection from ember attack and radiant heat up to and including 12.5 kW/m^2 where the site is less than 100 m from the source of bushfire attack.

5.2 SUBFLOOR SUPPORTS

This Standard does not provide construction requirements for subfloor support posts, columns, stumps, piers and poles.

NOTE: The exclusion of requirements for subfloor supports applies to the principal building only and not to verandas, decks, steps, ramps and landings (see Clause 5.7).

A1

C5.2 *Ideally, storage of combustible materials beneath a floor at this BAL would not occur and, on this assumption, there is no requirement to enclose the subfloor space or to protect the subfloor supports, or the bearers, joists and flooring from bushfire attack; however, should combustible materials be stored, it is recommended the area be protected as materials stored in the subfloor space may be ignited by embers and cause an impact to the building.*

5.3 FLOORS

5.3.1 Concrete slabs on ground

This Standard does not provide construction requirements for concrete slabs on the ground.

5.3.2 Elevated floors

This Standard does not provide construction requirements for elevated floors, including bearers, joists and flooring.

5.4 EXTERNAL WALLS

A2

5.4.1 Walls

The exposed components of an external wall that are less than 400 mm from the ground or less than 400 mm above decks, carport roofs, awnings and similar elements or fittings having an angle less than 18 degrees to the horizontal and extending more than 110 mm in width from the wall (see Figure D3, Appendix D) shall be:

(a) Non-combustible material.

NOTE: Examples include, but are not limited to, full masonry or masonry veneer, with the masonry being clay, calcium silicate, concrete, natural stone, aerated concrete, mud brick; or in situ, or panel walls of concrete, aerated concrete or rammed earth.

or

A2 (b) Timber logs of a species with a density of 680 kg/m^3 or greater at a 12 percent moisture content; of a minimum nominal overall thickness of 90 mm and a minimum thickness of 70 mm (see Clause 3.11); and gauge planed.

or

(c) Cladding that is fixed externally to a timber-framed or a steel-framed wall and is—

(i) non-combustible material; *or*

(ii) fibre-cement external cladding, a minimum of 6 mm in thickness; *or*

(iii) bushfire-resisting timber (see Appendix F); *or*

(iv) a timber species as specified in Paragraph E1, Appendix E; *or*

(v) a combination of any of Items (i), (ii), (iii) or (iv) above.

or

(d) A combination of any of Items (a), (b) or (c) above.

This Standard does not provide construction requirements for the exposed components of an external wall that are 400 mm or more from the ground or 400 mm or more above decks, carport roofs, awnings and similar elements or fittings having an angle less than 18 degrees to the horizontal and extending more than 110 mm in width from the wall (see Figure D3, Appendix D).

5.4.2 Joints

All joints in the external surface material of walls shall be covered, sealed, overlapped, backed or butt-jointed to prevent gaps greater than 3 mm.

A2

5.4.3 Vents and weepholes

Vents and weepholes in external walls shall be screened with a mesh with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium, except where the vents and weepholes are less than 3 mm (see Clause 3.6), or are located in an external wall of a subfloor space.

5.5 EXTERNAL GLAZED ELEMENTS AND ASSEMBLIES AND EXTERNAL DOORS

5.5.1 Bushfire shutters

Where fitted, bushfire shutters shall comply with Clause 3.7 and be made from—

A2 (a) non-combustible material; *or*

A1 (b) a timber species as specified in Paragraph E1, Appendix E; *or*

(c) bushfire-resisting timber (see Appendix F); *or*

(d) a combination of any of Items (a), (b) or (c) above.

A1 ### 5.5.1A Screens for windows and doors

Where fitted, screens for windows and doors shall have a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium. Gaps between the perimeter of the screen assembly and the building element to which it is fitted shall not exceed 3 mm.

A1 A2 The frame supporting the mesh or perforated sheet shall be made from—

(a) metal; *or*

(b) bushfire-resisting timber (see Appendix F); *or*

A1 A2 (c) a timber species as specified in Paragraph E2, Appendix E.

5.5.2 Windows

Window assemblies shall comply with one of the following:

(a) They shall be completely protected by a bushfire shutter that complies with Clause 5.5.1.

or

A1 (b) They shall be completely protected externally by screens that comply with Clause 5.5.1A.

or

(c) They shall comply with the following:

(i) For window assemblies less than 400 mm from the ground or less than 400 mm above decks, carport roofs, awnings and similar elements or fittings having an angle less than 18 degrees to the horizontal and extending more than 110 mm in width from the window frame (see Figure D3, Appendix D), window frames A2 and window joinery shall be made from:

(A) Bushfire-resisting timber (see Appendix F).

or

A1 (B) A timber species as specified in Paragraph E2, Appendix E.

or

(C) Metal.

or

(D) Metal-reinforced PVC-U. The reinforcing members shall be made from aluminium, stainless steel, or corrosion-resistant steel and the frame and sash shall satisfy the design load, performance and structural strength of the member.

(ii) Externally fitted hardware that supports the sash in its functions of opening and closing shall be metal.

(iii) Where glazing is less than 400 mm from the ground or less than 400 mm above decks, carport roofs, awnings and similar elements or fittings having an angle less than 18 degrees to the horizontal and extending more than 110 mm in width from the window frame (see Figure D3, Appendix D), the glazing shall be Grade A safety glass minimum 4 mm, or glass blocks with no restriction on glazing methods.

NOTE: Where double glazed units are used the above requirements apply to the external face of the window assembly only.

(iv) Where glazing is other than that specified in Item (iii) above, annealed glass may be used.

A1 (v) The openable portions of windows shall be screened internally or externally with screens that comply with Clause 5.5.1A.

A2 **C5.5.2** *Screening of the openable portions of all windows is required in all BALs to prevent the entry of embers to the building when the window is open. Screening of the openable and fixed portions of some windows is required in some BALs to reduce the effects of radiant heat on some types of glass.*

If the screening is required to reduce the effects of radiant heat on the glass, the screening has to be external so that the glass in the openable portion of the window will be 'protected' when it is shut.

If the screening is required only to prevent the entry of embers, the screening may be fitted externally or internally.

5.5.3 Doors—Side-hung external doors (including French doors, panel fold and bi-fold doors)

Side-hung external doors, including French doors, panel fold and bi-fold doors, shall comply with one of the following:

A2 (a) Doors and door frames shall be protected by bushfire shutters that comply with Clause 5.5.1.

or

(b) Doors and door frames shall be protected externally by screens that comply with Clause 5.5.1A.

or

(c) Doors and door frames shall comply with the following:

(i) Doors shall be—

(A) non-combustible; *or*

(B) a solid timber door, having a minimum thickness of 35 mm for the first 400 mm above the threshold; *or*

(C) a door, including a hollow core door, with a non-combustible kickplate on the outside for the first 400 mm above the threshold; *or*

(D) a door, including a hollow core door, protected externally by a screen that complies with Clause 5.5.1A; *or*

(E) a fully framed glazed door, where the framing is made from materials specified for bushfire shutters (see Clause 5.5.1), or from a timber species as specified in Paragraph E2, Appendix E.

(ii) Where doors incorporate glazing, the glazing shall comply with the glazing requirements for windows.

A1 (iii) Doors shall be tight-fitting to the door frame and to an abutting door, if applicable.

A1 (iv) Where any part of the door frame is less than 400 mm from the ground or less than 400 mm above decks, carport roofs, awnings and similar elements or fittings having an angle less than 18 degrees to the horizontal and extending more than 110 mm in width from the door (see Figure D3, Appendix D), that

A2 part of the door frame shall be made from:

(A) Bushfire-resisting timber (see Appendix F).

or

A1 (B) A timber species as specified in Paragraph E2, Appendix E.

or

(C) Metal.

or

(D) Metal-reinforced PVC-U. The reinforcing members shall be made from aluminium, stainless steel, or corrosion-resistant steel and the door assembly shall satisfy the design load, performance and structural strength of the member.

(v) Weather strips, draught excluders or draught seals shall be installed at the base of side-hung external doors.

5.5.4 Doors—Sliding doors

Sliding doors shall comply with one of the following:

(a) They shall be protected by a bushfire shutter that complies with Clause 5.5.1.

or

A1 (b) They shall be completely protected externally by screens that comply with Clause 5.5.1A.

or

A1 (c) They shall comply with the following:

(i) Any glazing incorporated in sliding doors shall be Grade A safety glass complying with AS 1288.

(ii) Both the door frame supporting the sliding door and the framing surrounding A2 any glazing shall be made from:

(A) Bushfire-resisting timber (see Appendix F).

or

(B) A timber species as specified in Paragraph E2, Appendix E.

or

(C) Metal.

A1 *or*

(D) Metal-reinforced PVC-U. The reinforcing members shall be made from aluminium, stainless steel, or corrosion-resistant steel and the frame and the sash shall satisfy the design load, performance and structural strength of the member.

(iii) There is no requirement to screen the openable part of the sliding door. However, if screened, the screens shall comply with Clause 5.5.1A.

NOTE: The construction of manufactured sliding doors should prevent the entry of embers when the door is closed. There is no requirement to provide screens to the openable part of these doors as it is assumed that a sliding door will be closed if occupants are not present during a bushfire event. Screens of materials other than those specified may not resist ember attack.

(iv) Sliding doors shall be tight-fitting in the frames.

5.5.5 Doors—Vehicle access doors (garage doors)

The following apply to vehicle access doors:

(a) The lower portion of a vehicle access door that is within 400 mm of the ground when the door is closed (see Figure D4, Appendix D) shall be made from—

(i) non-combustible material; *or*

(ii) bushfire-resisting timber (see Appendix F); *or*

(iii) fibre-cement sheet, a minimum of 6 mm in thickness; *or*

A1 (iv) a timber species as specified in Paragraph E1, Appendix E; *or*

(v) a combination of any of Items (i), (ii), (iii) or (iv) above.

(b) Panel lift, tilt doors or side-hung doors shall be fitted with suitable weather strips, draught excluders, draught seals or guide tracks, as appropriate to the door type, with a maximum gap no greater than 3 mm.

(c) Roller doors shall have guide tracks with a maximum gap no greater than 3 mm and shall be fitted with a nylon brush that is in contact with the door (see Figure D4, Appendix D).

(d) Vehicle access doors shall not include ventilation slots.

5.6 ROOFS (INCLUDING VERANDA AND ATTACHED CARPORT ROOFS, PENETRATIONS, EAVES, FASCIAS, GABLES, GUTTERS AND DOWNPIPES)

5.6.1 General

The following apply to all types of roofs and roofing systems:

(a) Roof tiles, roof sheets and roof-covering accessories shall be non-combustible.

(b) The roof/wall junction shall be sealed, to prevent openings greater than 3 mm, either by the use of fascia and eaves linings or by sealing between the top of the wall and the underside of the roof and between the rafters at the line of the wall.

(c) Roof ventilation openings, such as gable and roof vents, shall be fitted with ember guards made of non-combustible material or a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium.

A2 ### 5.6.2 Tiled roofs

Tiled roofs shall be fully sarked. The sarking shall—

(a) be located on top of the roof framing, except that the roof battens may be fixed above the sarking;

(b) cover the entire roof area including ridges and hips; and

(c) extend into gutters and valleys.

A2 ### 5.6.3 Sheet roofs

Sheet roofs shall—

(a) be fully sarked in accordance with Clause 5.6.2, except that foil-backed insulation blankets may be installed over the battens; and

(b) have any gaps greater than 3 mm (such as under corrugations or ribs of sheet roofing and between roof components) sealed at the fascia or wall line and at valleys, hips and ridges by—

(i) a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium; *or*

(ii) mineral wool; *or*

(iii) other non-combustible material; *or*

(iv) a combination of any of Items (i), (ii) or (iii) above.

A2 C5.6.3 *Sarking is used as a secondary form of ember protection for the roof space to account for minor gaps that may develop in sheet roofing.*

5.6.4 Veranda, carport and awning roofs

The following apply to veranda, carport and awning roofs:

(a) A veranda, carport or awning roof forming part of the main roof space [see Figure D1(a), Appendix D] shall meet all the requirements for the main roof, as specified in Clauses 5.6.1, 5.6.2, 5.6.3, 5.6.5 and 5.6.6.

(b) A veranda, carport or awning roof separated from the main roof space by an external wall [see Figures D1(b) and D1(c), Appendix D] complying with Clause 5.4 shall have a non-combustible roof covering.

NOTE: There is no requirement to line the underside of a veranda, carport or awning roof that is separated from the main roof space.

5.6.5 Roof penetrations

The following apply to roof penetrations:

(a) Roof penetrations, including roof lights, roof ventilators, roof-mounted evaporative cooling units, aerials, vent pipes and supports for solar collectors, shall be adequately sealed at the roof to prevent gaps greater than 3 mm. The material used to seal the penetration shall be non-combustible.

A2 (b) Openings in vented roof lights, roof ventilators or vent pipes shall be fitted with ember guards made from a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium.

This requirement does not apply to the exhaust flues of heating or cooking devices with closed combustion chambers.

In the case of gas appliance flues, ember guards shall not be fitted.

NOTE: Gasfitters are required to provide a metal flue pipe above the roof and terminate with a certified gas flue cowl complying with AS 4566. Advice may be obtained from State gas technical regulators.

A1 (c) All overhead glazing shall be Grade A safety glass complying with AS 1288.

(d) Glazed elements in roof lights and skylights may be of polymer provided a Grade A safety glass diffuser, complying with AS 1288, is installed under the A1 glazing. Where glazing is an insulating glazing unit (IGU), Grade A toughened safety glass minimum 4 mm, shall be used in the outer pane of the IGU.

(e) Flashing elements of tubular skylights may be of a fire-retardant material, provided the roof integrity is maintained by an under-flashing of a material having a flammability index no greater than 5.

(f) Evaporative cooling units shall be fitted with butterfly closers at or near the ceiling level or, the unit shall be fitted with non-combustible covers with a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium.

(g) Vent pipes made from PVC are permitted.

5.6.6 Eaves linings, fascias and gables

The following apply to eaves linings, fascias and gables:

(a) Gables shall comply with Clause 5.4.

(b) Eaves penetrations shall be protected the same as for roof penetrations, as specified in Clause 5.6.5.

(c) Eaves ventilation openings greater than 3 mm shall be fitted with ember guards made of non-combustible material or a mesh or perforated sheet with a maximum aperture of 2 mm, made of corrosion-resistant steel, bronze or aluminium.

Joints in eaves linings, fascias and gables may be sealed with plastic joining strips or timber storm moulds.

This Standard does not provide construction requirements for fascias, bargeboards and eaves linings.

5.6.7 Gutters and downpipes

This Standard does not provide material requirements for—

(a) gutters, with the exception of box gutters; and

(b) downpipes.

If installed, gutter and valley leaf guards shall be non-combustible.

Box gutters shall be non-combustible and flashed at the junction with the roof with non-combustible material.

5.7 VERANDAS, DECKS, STEPS, RAMPS AND LANDINGS

5.7.1 General

A1 Decking may be spaced.

There is no requirement to enclose the subfloor spaces of verandas, decks, steps, ramps or landings.

C5.7.1 Spaced decking is nominally spaced at 3 mm (in accordance with standard industry practice); however, due to the nature of timber decking with seasonal changes in moisture content, that spacing may range from 0–5 mm during service. The preferred dimension for gaps is 3 mm (which is in line with other 'permissible gaps') in other parts of this Standard. It should be noted that recent research studies have shown that gaps at 5 mm spacing afford opportunity for embers to become lodged in between timbers, which may contribute to a fire. Larger gap spacings of 10 mm may preclude this from happening but such a spacing regime may not be practical for a timber deck.

5.7.2 Enclosed subfloor spaces of verandas, decks, steps, ramps and landings

5.7.2.1 *Materials to enclose a subfloor space*

This Standard does not provide construction requirements for the materials used to enclose a subfloor space except where those materials are less than 400 mm from the ground.

Where the materials used to enclose a subfloor space are less than 400 mm from the ground, they shall comply with Clause 5.4.

5.7.2.2 *Supports*

This Standard does not provide construction requirements for support posts, columns, stumps, stringers, piers and poles.

5.7.2.3 *Framing*

This Standard does not provide construction requirements for the framing of verandas, decks, ramps or landings (i.e., bearers and joists).

A1 5.7.2.4 *Decking, stair treads and the trafficable surfaces of ramps and landings*

This Standard does not provide construction requirements for decking, stair treads and the trafficable surfaces of ramps and landings that are more than 300 mm from a glazed element.

Decking, stair treads and the trafficable surfaces of ramps and landings less than 300 mm (measured horizontally at deck level) from glazed elements that are less than 400 mm (measured vertically) from the surface of the deck (see Figure D2, Appendix D) shall be made from—

(a) non-combustible material; *or*

(b) bushfire-resisting timber (see Appendix F); *or*

A1 A2 (c) a timber species as specified in Paragraph E1, Appendix E; *or*

(d) PVC-U; *or*

(e) a combination of any of Items (a), (b), (c) or (d) above.

5.7.3 Unenclosed subfloor spaces of verandas, decks, steps, ramps and landings

5.7.3.1 *Supports*

This Standard does not provide construction requirements for support posts, columns, stumps, stringers, piers and poles.

5.7.3.2 *Framing*

This Standard does not provide construction requirements for the framing of verandas, decks, ramps or landings (i.e., bearers and joists).

A1 5.7.3.3 *Decking, stair treads and the trafficable surfaces of ramps and landings*

This Standard does not provide construction requirements for decking, stair treads and the trafficable surfaces of ramps and landings that are more than 300 mm from a glazed element.

Decking, stair treads and the trafficable surfaces of ramps and landings less than 300 mm (measured horizontally at deck level) from glazed elements that are less than 400 mm (measured vertically) from the surface of the deck (see Figure D2, Appendix D) shall be made from—

(a) non-combustible material; *or*

(b) bushfire-resisting timber (see Appendix F); *or*

A1 (c) a timber species as specified in Paragraph E1, Appendix E; *or*

(d) a combination of any of Items (a), (b) or (c) above.

5.7.4 Balustrades, handrails or other barriers

This Standard does not provide construction requirements for balustrades, handrails and other barriers.

5.8 WATER AND GAS SUPPLY PIPES

Above-ground, exposed water and gas supply pipes shall be metal.

ALTERATIONS & ADDITIONS

at: 145 Pacific Road PALM BEACH

for: Sandra Plowman

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091048

REV.

GENERAL NOTES:

GENERAL

G1. The drawings are to be read together with all Architects drawings and specifications.

G2. Dimensions shall not be obtained by scaling from the drawings. All setting out dimensions shall be verified and discrepancies shall be referred to the Engineer prior to commencement of work.

G3. Care is required during construction so that structural elements are not over stressed and that the works and excavations required therefore are kept stable at all times.

G4. Design, materials and workmanship are to be in accordance with current S.A.A standards and statutory authority regulations except where varied by these documents.

G5. Design live loads are in accordance with AS 1170.1

G6. Builder to ensure stability of existing structures in the vicinity of excavation works.

FOOTINGS

F1. FOUNDATION STRATA IS ASSUMED FOR DESIGN PURPOSES IN ACCORDANCE WITH AS 2870-1996 'RESIDENTIAL SLAB AND FOOTINGS-CONSTRUCTION'. SEE FOOTNOTE. CLASSIFICATION TO BE VERIFIED BY A GEOTECHNICAL ENGINEER COMMISSIONED BY THE CLIENT FOR CERTIFICATION OF FOUNDATIONS.

F2. Footings to be constructed and back filled as soon as possible following excavation to avoid softening by rain or drying out by exposure.

F3. Footings must bear into undisturbed natural ground clear of organic material. Refer to details.

F4. If rock or variable bearing strata is encountered during excavation of the footings all footings/piers are to be excavated to similar material of greater bearing capacity.
The Engineer is to be contacted at that time for approval or review.

F5. Footings to be cast in approved material having an allowable capacity as follows:

Sand Foundations:

SA1. Required bearing capacity 100 kPa.
SA2. Trenches must be cleaned of all debris and hand compacted prior to placement of reinforcement.

Clay Foundations:

CL1. Required bearing capacity 150 kPa.
CL2. Trenches must be cleaned of all debris. Soft spots must be cut out and filled as per compacted fill notes, prior to placement of reinforcement.

Shale Foundations:

SH1. Required bearing capacity 400 kPa.
SH2. Excavation for footings into shale must be cast or capped with plain concrete on the same day as excavation.

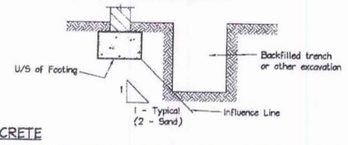
Sandstone Foundations:

SS1. Required bearing capacity 600 kPa.
SS2. Scrape weathered surface to remove cleaved sandstone under footings.

Refer adjacent for assumed Design bearing strata.

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

F7. UNLESS OTHER WISE APPROVED. Excavations near new or existing footings shall not be within the footing influence line.



CONCRETE

C1. All workmanship and materials shall be in accordance with AS 3600.

C2. Concrete quality shall be as follows and shall be verified by tests.

C3. All concrete unless otherwise noted shall have a slump of 80mm at point of placement, a max. aggregate size of 20 mm.
No water shall be added to the mix prior to or during placement of concrete. Strength as specified on plans.

C4. Clear concrete cover to reinforcement shall be as follows unless otherwise shown-

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

C5. Sizes of concrete elements do not include thickness of applied finishes.
C6. All Construction Joints locations shall be approved by the Structural Engineer.
C7. Beam depths are written first and include slab thickness, if any.
C8. No holes or chases other than those shown on the structural drawings shall be made in concrete elements without the prior approval of the engineer.
C9. Shrinkage reducing admixtures such as 'Eclipse' or approved equivalent, if specified, must be added to mix prior to pour.
C10. Water reducing agents, if specified, must be added to mix prior to pour. No extra water is to be added to increase slump.
C11. Where vertical slab/beam surfaces are formed against a masonry (or other) wall, provide 10 mm styrene separation material.
C12. Water must not be added to concrete mix prior to placement of concrete.
C13. Above covers may have to be adjusted if fire rating is a requirement.

REINFORCEMENT

R1. All reinforcement specified is Grade D500 unless noted otherwise.
R2. Reinforcement is represented diagrammatically it is not necessarily shown in true projection.
R3. Top reinforcement is to be continuous over supports.
Bottom reinforcement to be lapped at supports.
R4. Welding of reinforcement shall not be permitted unless shown on the structural drawings.
R5. Pipes or conduits shall not be placed within the zone of concrete cover to the reinforcement without the approval of the engineer.
R6. All reinforcing bars and fabric shall comply with AS 4671-2001.
R7. Reinforcement symbols:
N - Grade 500N deformed bar (D500) Normal Ductility
R - Grade 250N plain round bar (R250) Normal Ductility.
SL - Grade 500L welded deformed ribbed mesh (D500) Square Low Ductility.
RL - Grade 500L welded deformed ribbed mesh (D500) Rectangular Low Ductility.
The number immediately following these symbols is the number of millimeters in the bar diameter.
Example :
8 N12-250, denotes 8, Grade 500N deformed bars, 12 mm diameter at 250 cts.
R8. Fabric reinforcement to be lapped 1 complete square + 25 mm unless noted otherwise.
R9 All reinforcement shall be firmly supported on bar chairs spaced at a maximum of 750 centres both ways under rod and fabric reinforcement. Reinforcement shall be tied at alternate intersections.

FORMWORK

FW1. Formwork must be cleaned of all debris prior to casting of concrete.
FW2. Minimum stripping times for form work shall be as recommended in AS 3610 - 1990 or as directed by the engineer.
FW3. The finished concrete shall be a dense homogeneous mass, completely filling the form work, thoroughly embedding the reinforcement and free of stone pockets. All concrete elements including slabs on ground and footings shall be compacted with mechanical vibrators.
FW4. Curing of all concrete is to be achieved by keeping surfaces continuously wet for a period of 3 days, followed by prevention of loss of moisture for seven days followed by a gradual drying out . Approved sprayed on curing compounds may be used where no floor finishes are proposed. Polythene sheeting or wet hessian may be used if protected from wind and traffic.

BRICKWORK

BR1. Brickwork is to be constructed to AS 3700.
BR2. Two layers of approved greased metal based slip material shall be used over all load bearing walls that support concrete slabs and placed on smooth brickwork or trowelled mortar finish. Non load-bearing walls shall have 10 mm compressible material and ties to the slab soffit.
BR3. No brickwork shall be constructed on suspended slabs until all propping has been removed from the underside of the slab and the concrete has the specified 28 day cylinder strength verified by tests.
BR4. Control joints to be placed at a maximum of 8m centres or in accordance with AS 3700.
BR5. Exposure grade bricks to be used below damp proof course.
BR6. Vertical control joint material where specified on plan between slabs and brick walls shall be: 10 mm Spandex External UNO.
Bitumastic fibreboard internal UNO.
BR7. Provide stainless steel wall ties above DPC to AS 3700. Provide galvanized wall ties above DPC to AS 3700 & Local Council Specifications.
BR8. Dry Pressed Bricks should always be use for brick retaining walls. In addition we recommend that dry pressed bricks be used for all types of construction where possible. Dry pressed bricks grow only half as much as extruded bricks. Extruded bricks are difficult to fix to and excessive brick growth leads to cracking in walls and render.

BLOCKWORK

BL1. Concrete blocks shall have a minimum compressive strength of 15 MPa and conform to AS 1500.
Masonry to be constructed to AS 3700.
BL2. Where cores of hollow blocks are to be filled, properly compacted 20MPa concrete with 10 mm aggregate and 230 mm slump shall be used. Clean out openings must be utilized for all cores.
BL3. Location of actual starters is critical to suit block cores, allow 55 mm cover from the outside face of blockwork. All reinforcement lap lengths to conform to AS 3600.
BL4. Control joints to be placed at a maximum of 8 m centres or in accordance with AS 3700.
BL5. Vertical control joint material where specified on plan between slabs and brick walls shall be: 10 mm Spandex External UNO.
Bitumastic fibreboard internal UNO.
BL6. Retaining walls or any reinforced and concrete core filled block walls to be of Double 'U' Block Construction.
BL7. No blockwork shall be constructed on suspended slabs until all propping has been removed from the underside of the slab and the concrete has the specified 28 day cylinder strength verified by tests. unless approved by the Structural Engineer.
BL8. Max. pour height for unrestrained blockwork is 2000.

STEEL

S1. All Structural steelwork to be Grade 300 or greater.
Design, fabrication and erection to be in accordance with AS 4100.
S2. Materials and workmanship shall comply with AS 1250 - 1981, SAA Steel Structures Code and the specification for Structural Steel.
S3. Rolled steel sections including steel plates shall comply with AS 3678 - 1990.
S4. Cold formed steel sections shall be Grade 450 Zinc coated in accordance with AS 1538-1988.
S5. Welded and seamless steel hollow sections shall comply with AS 1163. Grade 350.
S6. Bolt Designation:
4.6S - Commercial bolts Grade 4.6, snug tightened.
8.8S - High Strength structural bolts Grade 8.8, snug tightened.
8.8TB - High Strength structural bolts Grade 8.8, fully tightened to AS 1511 and acting as a Bearing Joint.
8.8TF - High Strength structural bolts Grade 8.8, fully tensioned to AS 1511 and acting as a Bearing Joint.
Unless noted otherwise, all bolts will be 8.8S.
S7. Unless shown otherwise, minimum connection shall be 2M16 bolts, 10 thick gusset plates, 6mm continuous fillet welds.
S8. Load indicating washers shall be used in all fully tensioned joints. (8.8TF & 8.8TB).
S9. All welding shall be carried out in accordance with AS 1554 SAA Structural Steel Welding Code.
S10. Unless noted otherwise all welds shall be category SP using E41xx Electrodes. All butt welds shall be complete penetration butt welds category SP.
S11. Grouting of anchor bolt sleeves and base plates shall be completed by the contractor using High Strength, Non-Shrink grout.
S12. Fabrication and erection tolerances for Structural Steelwork shall be in accordance with AS 4100.
S13. Purlin bolts shall be M12 - 4.6S galvanised.
S14. Steel work shall have one of the following grades of corrosion protection:-
INTERNAL
a. Thoroughly cleaned wire brushing, followed by two coats of zinc phosphate primer equivalent to Dulux Luxaprime applied by hand using brushes to achieve a total dry film thickness of 70 microns.

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

EXTERNAL ELEMENTS, & ELEMENTS WITHIN EITHER SKIN OF EXTERNAL CAVITY WALLS GREATER THAN 2 km FROM SEA WATER:

b. Preparation Blast clean to a minimum standard Class 2.5 in accordance with AS 1627 Part 4. Primer 2-pack epoxy phosphate at dft 75 microns (Dulux Durepon P14). Barrier Coat 2-pack epoxy micaceous iron oxide, dft 100 microns Finish Coat 2-pack epoxy high gloss acrylic to dft 75 microns. (e.g. Dulux Acrathane 1 F)
c. Hot dipped galvanized to AS 4680.
Where the galvanic (Hot Dip Galvanized) coating is compromised by welding, bolting or damage, two pack zinc rick epoxy primer (Dulux Zincanode 202) is to be be applied after wire brushing affected area (use 3 coats minimum) or Hot Metal Spray in accordance with AS 4680.
PAINTING OVER HOT DIP GALVANISED STEEL:
Degrease and preparation whip blast. Application of a general purpose epoxy (Dulux Duramax GPE) thickness 125 microns. Application of a high build polyurethane (Dulux Weathermax HBR) thickness 100 microns

EXTERNAL ELEMENTS, & ELEMENTS WITHIN EITHER SKIN OF EXTERNAL CAVITY WALLS LESS THAN 2 km FROM SEA WATER:

d. Preparation blast clean to minimum Class 2.5
Application of a two pack zinc rich epoxy primer (Dulux Zincanode 402) thickness 75 microns. Application of a general purpose epoxy (Dulux Duramax GPE) thickness 125 microns. Application of a high build polyurethane (Dulux Weathermax HBR) thickness 100 microns
S15. Workshop drawings shall be prepared and two copies submitted to the engineer for review prior to fabrication commencement.

TIMBER

T1. All workmanship and materials to be in accordance with AS 1684, AS 1720 and as 3959. All soft wood to be Grade F7 unless noted otherwise. All hardwood to be minimum Grade F14 unless otherwise noted. Exposed timber to be CCA treated (to AS 1604) redried after full impregnation, or durability class 1, 2 or 3. ALL SOFTWOOD TIMBER FRAMING TO HAVE A MINIMUM TREATMENT PROTECTION OF H2 or T2 TREATED FOR TERMITE PROTECTION UNLESS NOTED OTHERWISE.
T2. All joists deeper than 150 to have blocking over support bearers and at a maximum 3000 centres.
T3. Roof trusses to be designed by the manufacturer to the relevant standards. Pre camber to be an amount equal to dead load deflection u.n.o.
T4. All holes for bolts to be exact size. Washers to be used under all heads and nuts and to be at least 2.5 times the bolt diameter. Bolts to be M16 grade 4.6 unless noted otherwise.
T5. Treat all exposed cut ends with Reseal by Protim to manufacturers specification to achieve required Hazard Level Exposure Classification.
T6. Battens for T & G to be Kiln Dried to 12 %. 38mm minimum deep treated pine or as recommended by supplier. Flooring to be installed no sooner than 28 days after slab pour.
T7. Hot dip galvanized nails/clouts/screws to be used with all timber connections.
T8. Continuous nailing must not be used for any timber connections.
T9. All exposed CCA treated pine to have an application of penetrating sealer to reduce warping and twist of the timber due to varying moisture content in service.
T10. All Stud walls to be 90x45 F7 Kiln Dried
T2 Treated at 450 Cts and noggings to AS 1684.

COMPACTED FILL

CF1. Only to be used with approval by Engineer & to be certified by a geotechnical Engineer.
CF2. Clear organic material, topsoil and any uncontrolled existing fill under proposed slabs/footings.
CF3. Filling shall be granular material compacted in not more than 200 mm layers to a minimum dry density ratio (AS 1289/E4.2 1982) of 98 percent standard maximum dry density.
CF4. During clearing and excavation for slabs and footings cut out soft spots and fill as above.

INSPECTIONS BY ENGINEER

48 HOURS NOTICE IS REQUIRED BEFORE ANY SITE INSPECTION
1. Bearing strata of all footings prior to concrete pour by Geotechnical Engineer.
2. Any reinforcement prior to concrete pour.
3. Timber and Steel framing prior to cladding or lining.
4. Steel lintels after installation.
5. CONTACT YOUR PCA (Principal Certifying Authority) AS TO REQUIREMENTS FOR MANDATORY CRITICAL STAGE INSPECTIONS IN ACCORDANCE WITH REVISED EPAA ACT REGULATIONS EFFECTIVE JULY 1, 2004.
6. Inspection by Geotechnical Engineer over 1.5m of vertical cut through Sandstone bed rock to permit identification of defects and remedial measures initiated.

Northern Beaches Consulting Engineers Pty Ltd.

A2

Date:	Rev:	Amendment:	By:
-	-	-	

DOCUMENT CERTIFICATION
Date : Dec 09
Rick G. Wray
BE(Civil),CPEng,MEAust.,NPER.
(Director Northern Beaches Consulting Engineers.)

NORTHERN BEACHES
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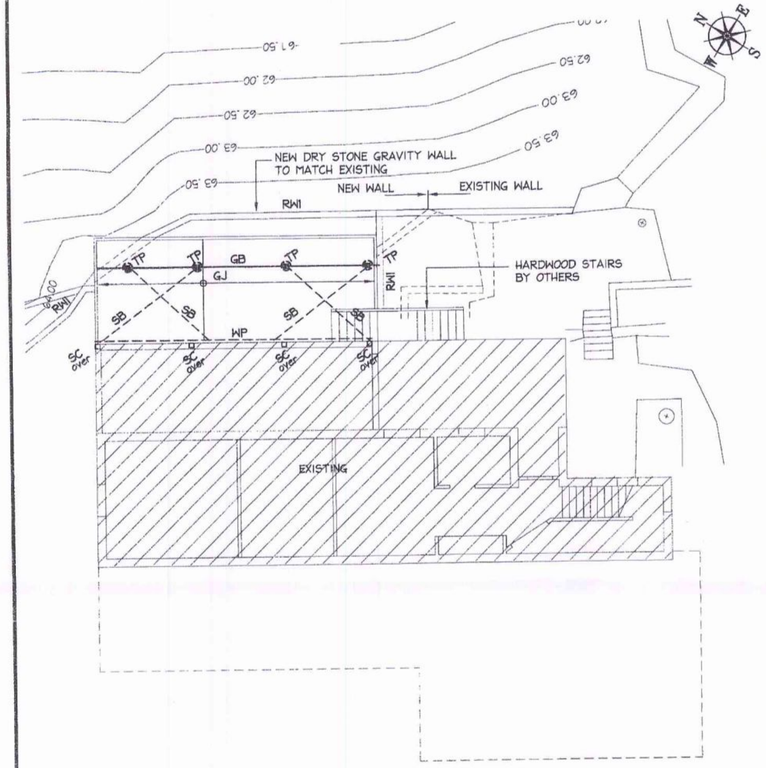
Architect:	hurley design and build
Client:	Sandra Plowman
Project:	ALTERATIONS & ADDITIONS 145 PACIFIC ROAD PALM BEACH
Drawing Title:	GENERAL NOTES
Date:	NOV 2009
Design:	BS
Drawn:	MC
Checked:	RGW
Job No:	091048
Drawing No:	S01
Rev:	-



GROUND FLOOR FRAMING PLAN

SCALE = 1 : 100

MEMBER SCHEDULE:

TP - 90x90 F17 HWD - TIMBER POSTS
WITH HEAVY DUTY GALV. POST SHOES EPOXY SET INTO 300ϕ PIER TO ROCK (FPI)
REFER STANDARD PIER NOTES

GB - 2/190x35 F17 HWD GLUE & NAIL LAMINATED - BEARERS
MAXIMUM CANTILEVER = 1000mm

GJ - 140x45 F17 HWD - FLOOR JOISTS AT 450 CTS
HUNG TO WP WITH HANGERS & TRIPLE GRIPPED TO GB

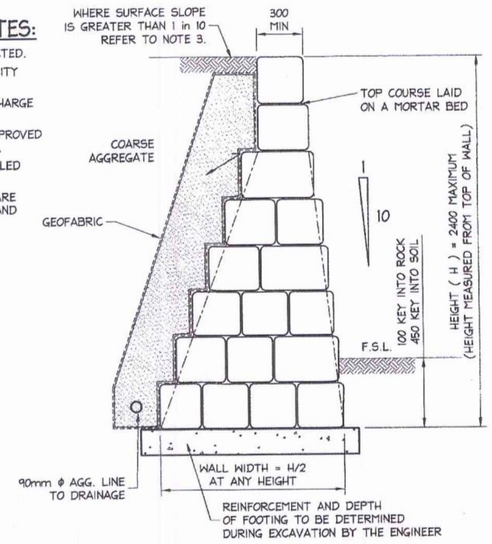
WP - 140x45 F17 HWD - WALL PLATE
IN PLANE OF JOISTS WITH M12 EPOXY ANCHORS INTO EXISTING STONE WALL AT 900 CTS STAGGERED

SB - SPEED BRACING WITH TENSIONERS NAILED TO UNDERSIDE OF JOISTS

ALL HARDWOOD TO BE DURABILITY CLASS 2

GRAVITY STONE RETAINING WALL NOTES:

1. BACKFILL IS TO BE GRANULAR, FREE DRAINING AND COMPACTED.
2. FOUNDATION TO BE APPROVED FOR A SAFE BEARING CAPACITY OF 200 KPa PRIOR TO CONSTRUCTION.
3. THE RETAINING WALL HAS BEEN DESIGNED FOR 5 kPa SURCHARGE OR 1 in 4 SLOPE OF RETAINED MATERIAL.
4. ROCK IS TO BE SOUND DURABLE SANDSTONE OR OTHER APPROVED MATERIAL. MINIMUM SIZE 200 DEEP x 300 WIDE x 400 LONG.
5. A CONTINUOUS 90mm DIA. SUBSOIL DRAIN IS TO BE INSTALLED AT THE REAR OF THE WALL.
6. ROCKS SHALL BE PLACED IN SUCH A MANNER THAT THEY ARE STABLE AND INTERLOCKING AND LAID ROUGHLY COARSED AND BEDDED ON THEIR BROADEST BASE.



SELECT WALL THICKNESS FOR HEIGHT REQUIRED
MAXIMUM HEIGHT OF WALL = 2400 mm

RWI - GRAVITY STONE RETAINING WALL DETAIL

SCALE = 1 : 20

NOTES:

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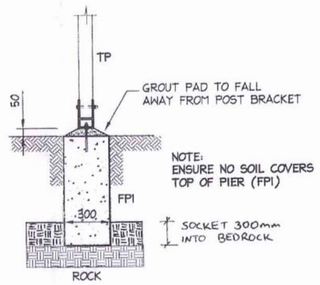
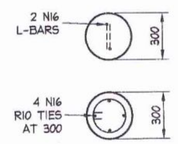


'FPI' PIER DETAIL

CONCRETE PIERS:

1. PIERS TO BE 300mm DIAMETER FOUNDED ON SOUND ROCK.
2. FOR DEPTH LESS THAN 1200mm UN-REINFORCED.
3. FOR DEPTH GREATER THAN 1200mm AND LESS THAN 1800mm. 2 N16 L-BARS.
4. FOR DEPTH GREATER THAN 1800mm AND LESS THAN 3000mm. 4 N16, R10 TIES AT 300.
5. FOR DEPTH GREATER THAN 3000mm TO BE CONFIRMED BY ENGINEER



TYPE 'FPI' FOOTING PIER SECTION

SCALE = 1 : 20

A2

Date:	Rev.	Amendment:	By:
-	-	-	-

DOCUMENT CERTIFICATION
Date : Dec 09
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Architect: hurley design and build
Client: Sandra Plowman
Project: ALTERATIONS & ADDITIONS 145 PACIFIC ROAD PALM BEACH
Drawing Title: GROUND FLOOR FRAMING PLAN & DETAILS

Date:	Design:	Drawn:	Checked:
NOV 2009	BS	MC	RGW

Job No:	Drawing No:	Rev:
091048	S02	-

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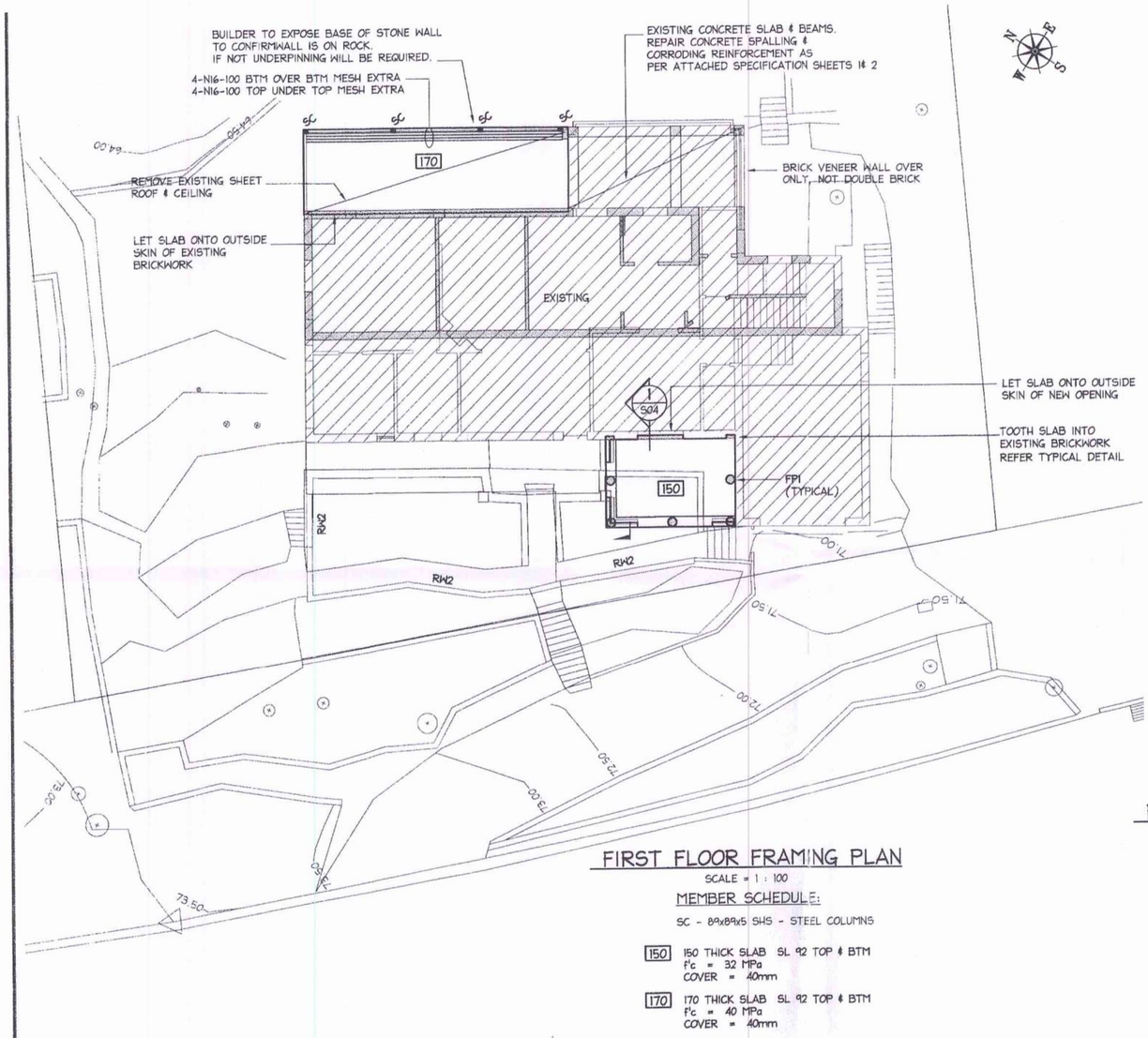

FIRST FLOOR FRAMING PLAN

SCALE = 1 : 100

MEMBER SCHEDULE:

SC - 89x89x5 SHS - STEEL COLUMNS

150 150 THICK SLAB SL 92 TOP & BTM
f'c = 32 MPa
COVER = 40mm

170 170 THICK SLAB SL 92 TOP & BTM
f'c = 40 MPa
COVER = 40mm

NOTES:

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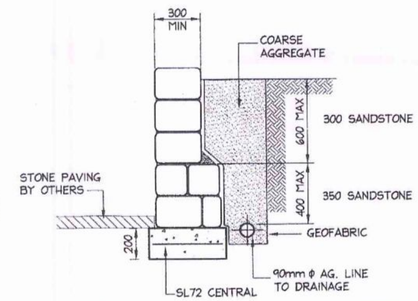

RW2 - STONE RETAINING WALL DETAIL

SCALE = 1 : 20

NOTE:
RE-USE EXISTING SANDSTONE.

ALL JOINTS TO HAVE MORTAR.

BUILDER TO CONFIRM DEPTH OF BASE OF EXISTING RETAINING WALL ADJACENT TO NEW WALL, TO ENSURE EXISTING WALL IS NOT UNDERMINED WHILE BUILDING THE NEW WALL.

Northern Beaches Consulting Engineers Pty Ltd.

A2

Date:	Rev:	Amendment:	By:
-	-	-	-

DOCUMENT CERTIFICATION
Date : Dec 09' R. Wray
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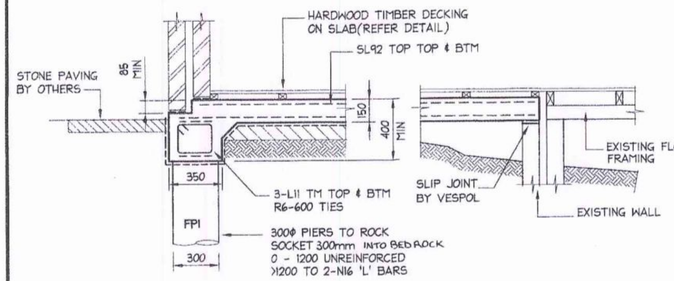
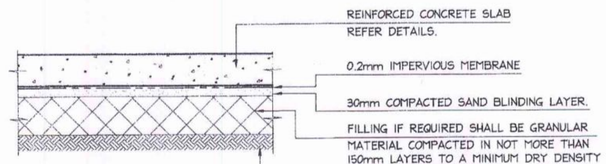
Architect: hurley design and build	Project: ALTERATIONS & ADDITIONS 145 PACIFIC ROAD PALM BEACH	Date: NOV 2009	Design: BS	Drawn: MC	Checked: RGW
Client: Sandra Plowman	Drawing Title: FIRST FLOOR FRAMING PLAN	Job No: 091048		Drawing No: S03	Rev: -



SECTION 1 / S03

SCALE = 1:20

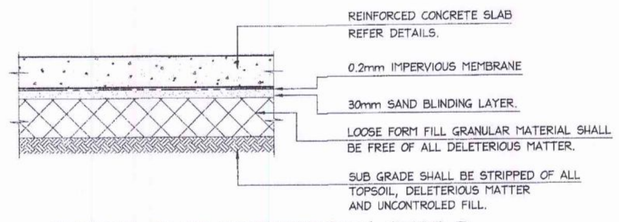


NOTE :

SAND BLINDING, SUB-BASE, FILLING AND SUB GRADE TO BE MECHANICALLY COMPACTED TO A DRY DENSITY RATIO OF NOT LESS THAN 98% STANDARD MAXIMUM DRY DENSITY TO A.S. 1289/E4.2 1982.
ALL AREAS TO BE TESTED BY GEOTECHNICAL ENGINEER AND RESULTS FORWARDED TO STRUCTURAL ENGINEER PRIOR TO POURING CONCRETE.

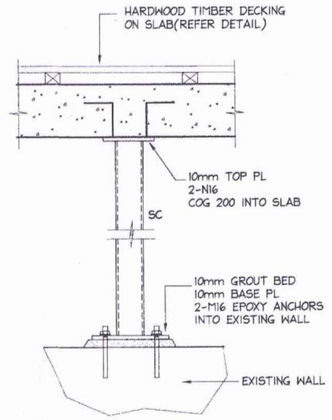
TYPICAL SLAB PREPARATION TYPE A SLAB ON GRADE

N.T.S.



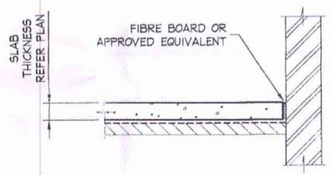
TYPICAL SLAB PREPARATION TYPE B SUSPENDED SLAB ON LOOSE FORM FILL

N.T.S.



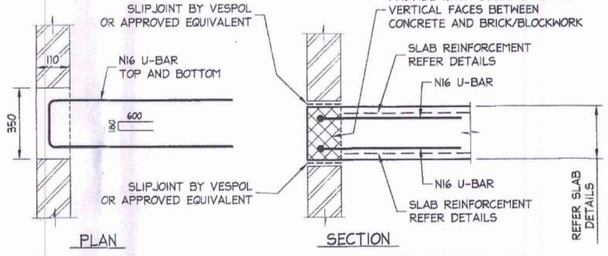
'SC' CONNECTION DETAIL

SCALE = 1 : 10



ISOLATION JOINT DETAIL

SCALE = 1 : 20

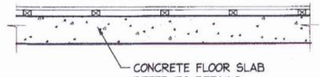


PLAN SECTION

TOOTHING TO BE PROVIDE AT 1500mm MAXIMUM CENTRES UNO.

TYPICAL TOOTHING DETAIL

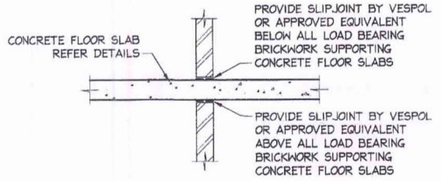
SCALE = N.T.S.



BATTENS FOR T & G TO BE 38x50 MINIMUM H3 TREATED PINE AND KILN DRIED TO 12% OR AS RECOMMENDED BY SUPPLIER.
USE 40 MPa CONCRETE FOR SLAB.
ALLOW TO CURE FOR 28 DAYS PRIOR TO LAYING FLOORING. LEAVE FLOOR BOARDS OVERTURNED AND IN POSITION FOR 6 WEEKS PRIOR TO TURNING AND FIXING INTO POSITION. CHECK MOISTURE CONTENT BEFORE INSTALLING BOARDS.

T & G FLOORING DETAIL OVER CONCRETE SLAB

SCALE = 1 : 20



TYPICAL SLIP JOINT DETAIL FOR LOAD BEARING BRICK WALLS

N.T.S.

NOTES:

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A2

Date:	Rev:	Amendment:	By:
-	-	-	-

DOCUMENT CERTIFICATION
Date: Dec 09'
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Architect:	hurley design and build
Client:	Sandra Plowman
Project:	ALTERATIONS & ADDITIONS 145 PACIFIC ROAD PALM BEACH
Drawing Title:	SECTIONS & DETAILS
Date:	NOV 2009
Design:	BS
Drawn:	MC
Checked:	RGW
Job No:	091048
Drawing No:	S04
Rev:	-

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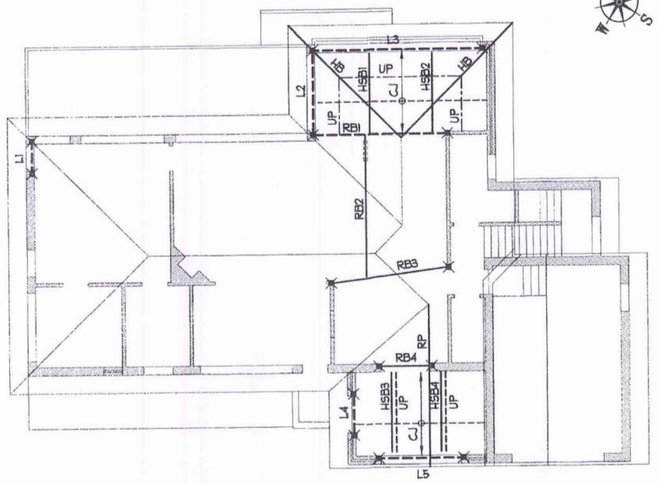


ROOF FRAMING PLAN

SCALE = 1 : 100

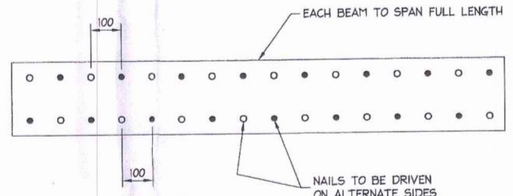
MEMBER SCHEDULE:

RB1, RB2, RB3 - 2/300x45 HYSPAN LVL GLUE & NAIL LAMINATED - ROOF BEAM
RB4 - 2/150x100x6 GALINTEL - ROOF BEAM
HSB1 -HSB4 - 150x63 HYSPAN LVL
HB - 140x45 F7 KD MAX SPAN = 2500mm - HIP BEAM
RP - 140x45 F7 KD MAX SPAN = 2500mm - RIDGE PLATE
UP - 90x70 F7 KD MAX SPAN = 1800mm - UNDER PURLINS
CJ - 90x45 F7 KD - CEILING JOISTS AT 600 CTS

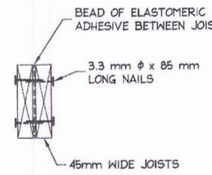
RAFTERS: (NOT SHOWN FOR CLARITY)
90x45 F7 KD AT 600 CTS

LINTELS:
L1 - 2/85x8 GALINTEL FLAT BAR
L2 - 2/150x100x6 GALINTEL
L3 - 150 PFC + 250x10 PL FULLY WELDED TO BOTTOM FLANGE. WELD 100 MISS 200
L4 - 2/100x100x6 GALINTELS
L5 - 2/150x100x6 GALINTELS

⊗ LOAD CONCENTRATION POINT



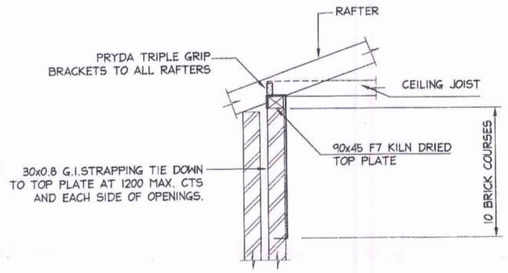
BEAM ELEVATION



BEAM SECTIONS

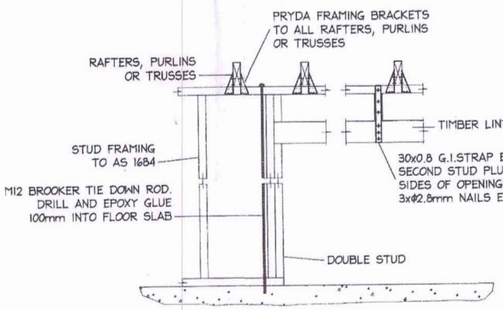
TYPICAL GLUE AND NAIL LAMINATED MEMBER DETAILS

SCALE = 1 : 10

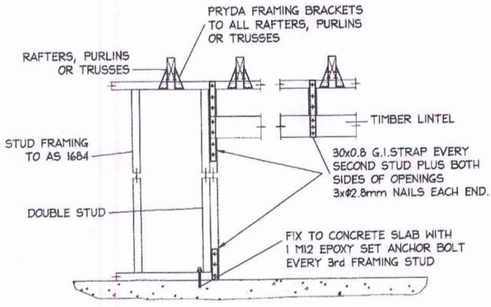


TYPICAL RAFTER TIE DOWN TO BRICK WALL

SCALE = 1 : 20



ROD TIE DOWN



HOOP IRON STRAP TIE DOWN

TYPICAL LINTEL TIE DOWN DETAIL

SCALE = 1 : 20

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Northern Beaches Consulting Engineers Pty Ltd.

A2

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-	-	-	-

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Date : Dec 09
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Architect: hurley design and build	Project: ALTERATIONS & ADDITIONS 145 PACIFIC ROAD PALM BEACH	Date: NOV 2009	Design: BS	Drawn: MC	Checked: RGW
Client: Sandra Plowman	Drawing Title: ROOF FRAMING PLAN & DETAILS	Job No: 091048		Drawing No: S05	Rev: -

BCA COMPLIANCE SPECIFICATION

1. EARTHWORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH PART 3.1.1 OF THE BCA HOUSING PROVISIONS, VOLUME 1A.
2. TERMITE PROTECTION IS TO BE IN ACCORDANCE WITH PART 3.1.3 OF THE BCA HOUSING PROVISIONS, VOLUME 1A.
3. DRAINAGE IS TO BE IN ACCORDANCE WITH PART 3.2.1 OF THE BCA HOUSING PROVISIONS, VOLUME 1A.
4. FOOTINGS AND SLABS ARE TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH PART 3.2 OF THE BCA HOUSING PROVISIONS, VOLUME 1A.
5. ALL MASONRY IS TO COMPLY WITH PART 3.3 OF THE BCA HOUSING PROVISIONS, VOLUME 1A.
6. ALL FRAMING IS TO BE IN ACCORDANCE WITH PART 3.4 OF THE BCA HOUSING PROVISIONS, VOLUME 1A.
7. ROOF AND WALL CLADDING IS TO COMPLY WITH PART 3.5 OF THE BCA HOUSING PROVISIONS, VOLUME 1A.
8. ALL GLAZING IS TO BE IN ACCORDANCE WITH PART 3.6 OF THE BCA HOUSING PROVISIONS, VOLUME 1A.
9. SMOKE ALARMS ARE TO BE INSTALLED IN ACCORDANCE WITH PART 3.7.2 OF THE BCA HOUSING PROVISIONS, VOLUME 1A.
10. WET AREAS ARE TO BE IN ACCORDANCE WITH PART 3.8.1 OF THE BCA HOUSING PROVISIONS, VOLUME 1A.
11. AREAS REQUIRING VENTILATION, WHICH ARE NOT NATURALLY VENTILATED, ARE TO BE PROVIDED WITH MECHANICAL VENTILATION IN ACCORDANCE WITH PART 3.8.5 OF THE BCA HOUSING PROVISIONS, VOLUME 1A.
12. STAIR CONSTRUCTION IS TO COMPLY WITH PART 3.9.1 OF THE BCA HOUSING PROVISIONS, VOLUME 1A.
13. BALUSTRADES ARE TO COMPLY WITH PART 3.9.2 OF THE BCA HOUSING PROVISIONS, VOLUME 1A.
14. POOL FENCING IS TO COMPLY WITH THE SWIMMING POOLS ACT 1992.

15. ALL WORK TO BE CARRIED OUT AT BEST PRACTISE AND TO COMPLY WITH ALL RELEVANT AUTHORITY APPROVALS, CONSENT CONDITIONS, BCA AND THE APPLICABLE AUSTRALIAN STANDARDS.
16. ANY DISCREPANCY WITHIN ANY PART OF THE DOCUMANTATION OR AS FOUND ON SITE IS TO BE BROUGHT TO THE ATTENTION OF THE DESIGNER.
17. FIGURED DIMENSIONS ARE TO BE USED ONLY. DO NOT SCALE.

NOTE: ALL NEW WORKS ARE TO BE CONSTRUCTED TO SATISFY THE REQUIREMENTS OF BUSHFIRE ATTACK LEVEL (BAL) 12.5 OF AS3959-2009 & PLANNING FOR BUSHFIRE PROTECTION 2006 (AS AMENDED)

DEVELOPMENT APPLICATION

PROPOSED ALTERATIONS AND ADDITIONS

NOTE -
1. ALL SUSPENDED CONCRETE SLABS TO HAVE R0.9 INSULATION (OR R1.5 INCLUDING CONSTRUCTION) IN ACCORDANCE WITH BASIX REPORT.
2. ALL NEW FLAT CEILINGS WITH PITCHED ROOFING TO HAVE R1.99 INSULATION (UP) FOR THE CEILING AND FOIL BACKED BLANKET (55MM) FOR THE ROOF IN ACCORDANCE WITH THE BASIX REPORT.
3. ROOF TO BE OF MEDIUM COLOUR WITH SOLAR ABSORPTANCE 0.475-0.70 IN ACCORDANCE WITH THE BASIX REPORT.
4. ALL WINDOWS, GLAZED DOORS AND SHADING DEVICES TO BE IN ACCORDANCE WITH THE SPECIFICATIONS LISTED IN THE TABLE BELOW. RELEVANT OVERSHADOWING SPECIFICATIONS MUST BE SATISFIED FOR EACH WINDOW AND GLAZED DOOR.
5. 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 SHGC'S MUST BE CALCULATED IN ACCORDANCE WITH NATIONAL FENESTRATION RATING COUNCIL (NFRC) CONDITIONS.
6. FOR PROJECTIONS DESCRIBED IN MILLIMETRES, THE LEADING EDGE OFEACH EAVE, PERGOLA, VERANDAH, BALCONY OR AWNING MUST BE NO MORE THAN 500MM ABOVE THE HEAD OF THE WINDOW OR GLAZED DOORAND NO MORE THAN 2400MM ABOVE THE SILL.
7. OVERSHADOWING BUILDINGS OR VEGETATION MUST BE OF THE HEIGHT AND DISTANCE FROM THE CENTRE AND THE BASE OF THE WINDOW AND GLAZED DOOR, AS SPECIFIED IN THE 'OVERSHADOWING' COLUMN IN THE TABLE BELOW.

WINDOW/GLAZED DOOR NO.	ORIENTATION	AREA OF GLASS (INCL. FRAME)	FRAME AND GLASS TYPE	SHADING DEVICE	OVERSHADOWING
SUNROOM	W	7.6	TIMBER OR UPVC, SINGLE CLEAR, (U-VALUE: 5.71, SHGC: 0.85)	EAVE/VERANDAH/PERGOLA/BALCONY >= 750MM	NOT OVERSHADOWED
ENTRY	W	1.9	TIMBER OR UPVC, SINGLE CLEAR (U-VALUE: 5.71, SHGC: 0.85)	EAVE/VERANDAH/PERGOLA/BALCONY >= 750MM	NOT OVERSHADOWED
OFFICE	W	2.9	TIMBER OR UPVC, SINGLE CLEAR, (U-VALUE: 5.71, SHGC: 0.85)	NONE	5M IN HEIGHT, 5M IN DISTANCE
DINING	N	5.0	TIMBER OR UPVC, SINGLE CLEAR, (U-VALUE: 5.71, SHGC: 0.85)	EAVE/VERANDAH/PERGOLA/BALCONY >= 750MM	NOT OVERSHADOWED
MASTER BEDROOM	N	1.3	TIMBER OR UPVC, SINGLE CLEAR, (U-VALUE: 5.71, SHGC: 0.85)	EAVE/VERANDAH/PERGOLA/BALCONY >= 750MM	NOT OVERSHADOWED
MASTER BEDROOM	N	1.3	TIMBER OR UPVC, SINGLE CLEAR (U-VALUE: 5.71, SHGC: 0.85)	EAVE/VERANDAH/PERGOLA/BALCONY >= 750MM	NOT OVERSHADOWED
EN-SUITE	N	3.5	TIMBER OR UPVC, SINGLE CLEAR (U-VALUE: 5.71, SHGC: 0.85)	EAVE/VERANDAH/PERGOLA/BALCONY >= 750MM	NOT OVERSHADOWED
OFFICE	N	2.5	TIMBER OR UPVC, SINGLE CLEAR, (U-VALUE: 5.71, SHGC: 0.85)	EAVE/VERANDAH/PERGOLA/BALCONY >= 750MM	NOT OVERSHADOWED
LAUNDRY	S	1.2	TIMBER OR UPVC, SINGLE CLEAR (U-VALUE: 5.71, SHGC: 0.85)	NONE	NOT OVERSHADOWED
DINING	E	10.1	TIMBER OR UPVC, SINGLE CLEAR, (U-VALUE: 5.71, SHGC: 0.85)	EAVE/VERANDAH/PERGOLA/BALCONY >= 750MM	NOT OVERSHADOWED
LIVING	E	9.3	TIMBER OR UPVC, SINGLE CLEAR (U-VALUE: 5.71, SHGC: 0.85)	EAVE/VERANDAH/PERGOLA/BALCONY >= 750MM	NOT OVERSHADOWED
MASTER BEDROOM	E	4.2	TIMBER OR UPVC, SINGLE CLEAR, (U-VALUE: 5.71, SHGC: 0.85)	EAVE/VERANDAH/PERGOLA/BALCONY >= 750MM	NOT OVERSHADOWED
MASTER BEDROOM	E	1.6	TIMBER OR UPVC, SINGLE CLEAR, (U-VALUE: 5.71, SHGC: 0.85)	EAVE/VERANDAH/PERGOLA/BALCONY >= 750MM	NOT OVERSHADOWED

8. ALL WORKS TO BE IN ACCORDANCE WITH RECOMMENDATIONS IN BUSHFIRE ASSESSMENT REPORT (C1473-HDB) BY TOTAL EARTH CARE.
9. ALL WORKS TO BE IN ACCORDANCE WITH RECOMMENDATIONS IN GEOTECHNICAL ASSESSMENT (#P0902355JR01_v2) BY MARTENS & ASSOCIATES PTY. LTD.
10. ALL WORKS TO BE IN ACCORDANCE WITH RECOMMENDATIONS IN ARBORICULTURAL ASSESSMENT BY URBAN FORESTRY AUSTRALIA (MAY 2009).

insight building certifiers pty ltd
CONSTRUCTION CERT. NO. 2011/4213
CONSTRUCTION CERTIFICATE PLANS
I certify that the work completed in accordance with these plans & specifications will comply with the regulations referred to in Section 81A(5) of the Environmental Planning & Assessment Act 1979
T. Bowden 8 MAR 2011
T. Bowden Accreditation No. BPB0042

PITTWATER COUNCIL
APPROVED DEVELOPMENT CONSENT PLANS

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

COUNCIL COPY

CONSULTANTS
hurley design and build
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building
63 binalong avenue
allambie new 2100
hp/fax 99975511

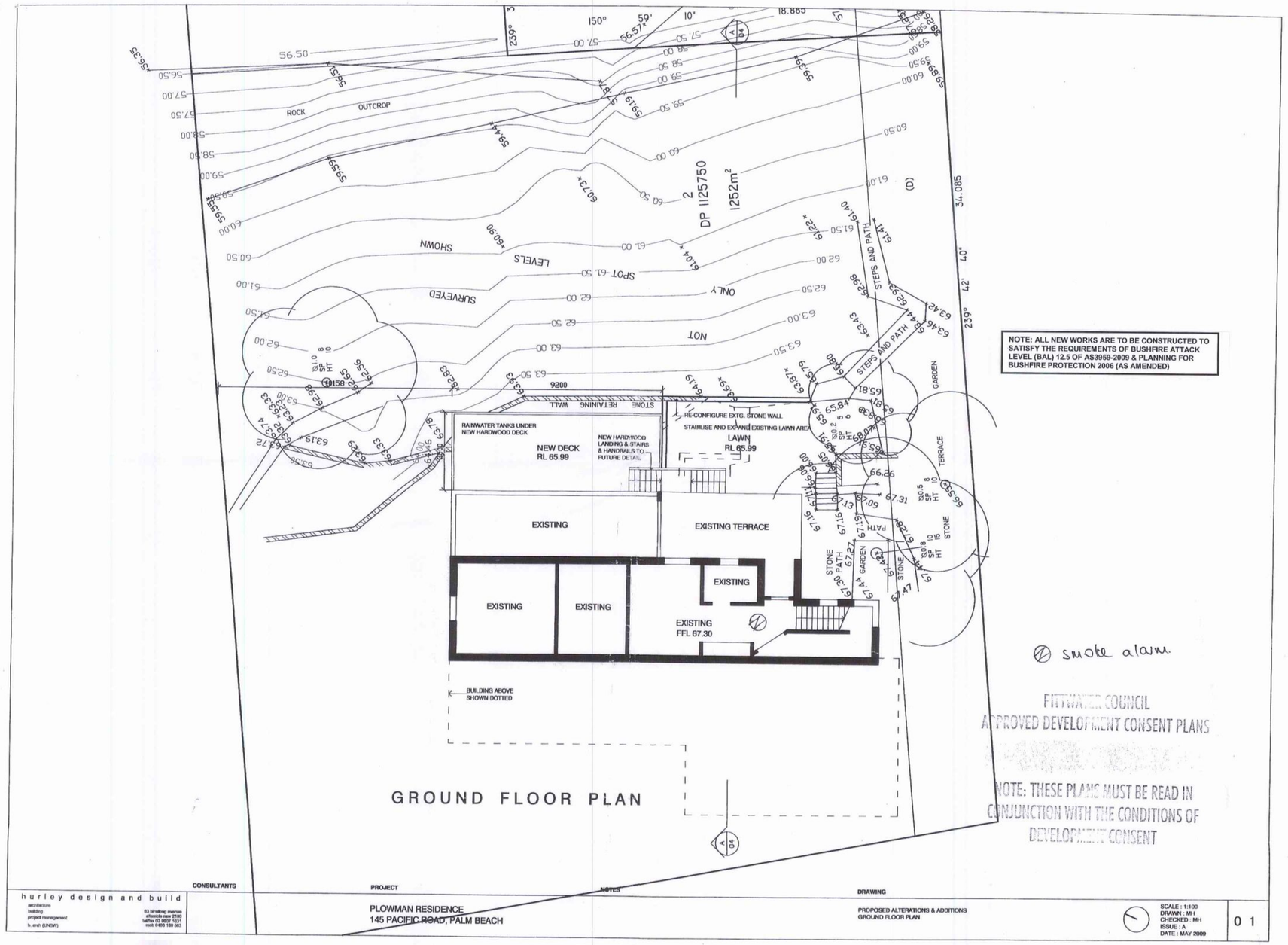
PROJECT
PLOWMAN RESIDENCE
145 PACIFIC ROAD, PALM BEACH

NOTES

DRAWING
PROPOSED ALTERATIONS & ADDITIONS
TITLE

SCALE : 1:100
DRAWN : MH
CHECKED : MH
ISSUE : A
DATE : MAY 2009

00



NOTE: ALL NEW WORKS ARE TO BE CONSTRUCTED TO SATISFY THE REQUIREMENTS OF BUSHFIRE ATTACK LEVEL (BAL) 12.5 OF AS3959-2009 & PLANNING FOR BUSHFIRE PROTECTION 2006 (AS AMENDED)

⊘ smoke alarm

PITTWATER COUNCIL
APPROVED DEVELOPMENT CONSENT PLANS

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CONSULTANTS

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tel/fax 02 9907 1031
mob 0403 180 583

PROJECT

PLOWMAN RESIDENCE
145 PACIFIC ROAD, PALM BEACH

NOTES

DRAWING

PROPOSED ALTERATIONS & ADDITIONS
GROUND FLOOR PLAN

SCALE : 1:100
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01

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NEW DECK FFL 70.16

NEW DINING

MASTER BEDROOM

LIVING

FFL 70.26

LDRY

LINEN

ROBE

E/S

SUN ROOM

ENTRY

KITCHEN

NEW WIC

NEW STAIR

GARAGE FFL 70.96

NEW STONE PATHWAY FFL 70.16

NEW OFFICE

NEW GRASSED AREA FFL 70.00

NEW STONE PATHWAY FFL 70.16

RENDERED COTTAGE NO.141 METAL ROOF

TIMBER DECK (BALCONY ABOVE)

NEW CONCRETE BALCONY OVER EXISTING METAL ROOF, BATTENED AND CLAD IN HARDWOOD DECKING. DTO ENGINEERS SPEC.

REPLACE EXTG. WINDOWS WITH NEW TIMBER FRAMED WINDOWS TO MANUF. SPEC.

ENLARGE EXISTING OPENING TO ALLOW FOR NEW WINDOW SIZE

CUT NEW OPENING IN EXISTING BRICKWORK FOR NEW WINDOWS

BRICK IN EXTG. DOOR OPENING AND MAKE GOOD FINISH

NEW TIMBER FRAMED WINDOWS IN LIVING & DINING ROOM TO MANUF. SPEC.

NEW DINING ROOM TO BE BUILT ON EXISTING CONCRETE BALCONY IN BRICKWORK. RESURFACE TO SPEC.

EXISTING WALL TO BE DEMOLISHED SHOWN DOTTED

NEW TIMBER FRAMED WINDOW TO MANUF. SPEC.

NEW LINEN CUPB'D TO FUTURE DETAIL

RE-USE EXTG. SANDSTONE TO MAKE NEW RETAINING WALL TO ENGINEERS SPEC.

EXTG. GARDEN AREA

REMOVE TOP COURSE OF BLOCKS OF EXTG. WALL TO BE LEVEL WITH EXTG. LAWN AREA

TREE TO BE REMOVED SHOWN DOTTED (SEE ARBORISTS REPORT)

REMOVE EXTG. STAIR AND FOLD IN WITH LANDSCAPING TO SUIT WHAT IS EXTG.

NEW GATE TO FUTURE DETAIL

smoke alarm

FIRST FLOOR PLAN

ROAD

PACIFIC

APPROVED DEVELOPMENT CONSENT PLANS

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CONSULTANTS	hurley design and build architecture building project management b. arch (UNSW) 63 broadarra avenue allambie nsw 2100 tel/fax 02 9907 1831 mob 0403 189 083
PROJECT	PLOWMAN RESIDENCE 145 PACIFIC ROAD, PALM BEACH
NOTES	
	PROPOSED ALTERATIONS & ADDITIONS FIRST FLOOR PLAN
	SCALE : 1:100 DRAWN : MH CHECKED : MH ISSUE : A DATE : MAY 2009
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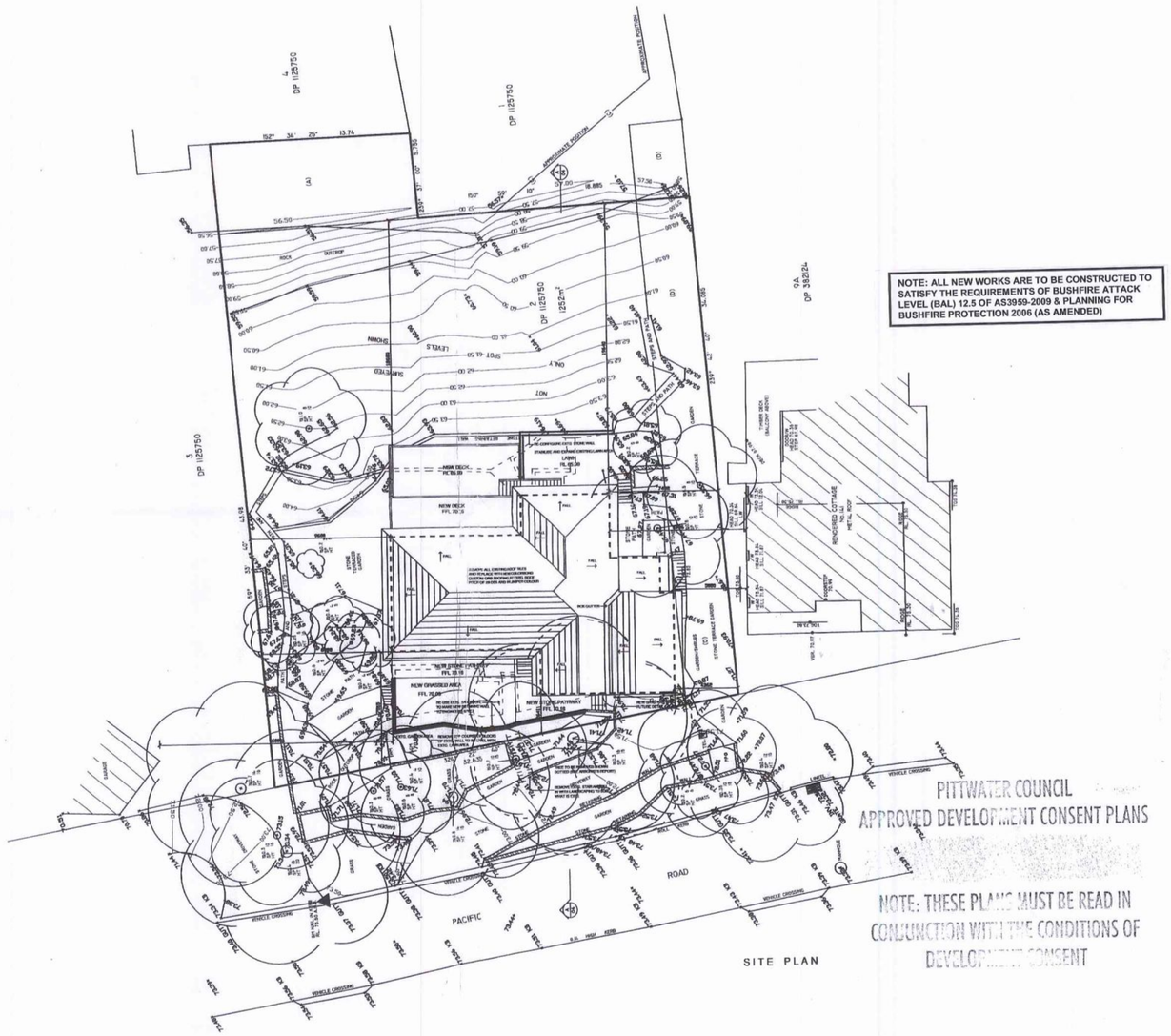

SITE PLAN

PITTWATER COUNCIL
APPROVED DEVELOPMENT CONSENT PLANS

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CONSULTANTS

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PROJECT

PLOWMAN RESIDENCE
145 PACIFIC ROAD, PALM BEACH

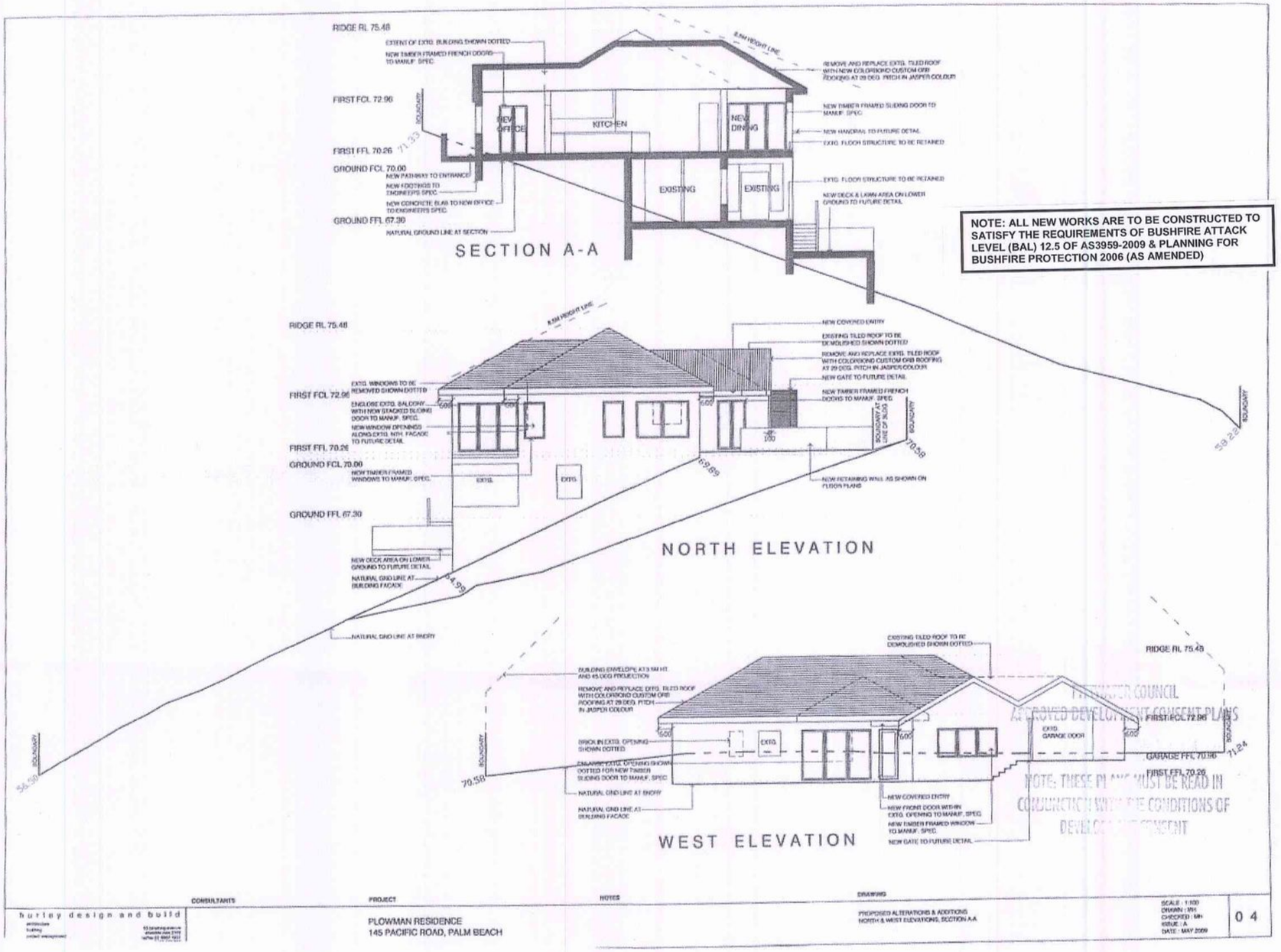
NOTES

DRAWING

PROPOSED ALTERATIONS & ADDITIONS
SITE PLAN

SCALE : 1:200
DRAWN : MH
CHECKED : MH
ISSUE : A
DATE : MAY 2009

03



CONSULTANTS

hurley design and build

PROJECT

PLOWMAN RESIDENCE
145 PACIFIC ROAD, PALM BEACH

NOTES

DRAWING

PROPOSED ALTERATIONS & ADDITIONS
NORTH & WEST ELEVATIONS, SECTION A-A

SCALE : 1:100
DRAWN : MH
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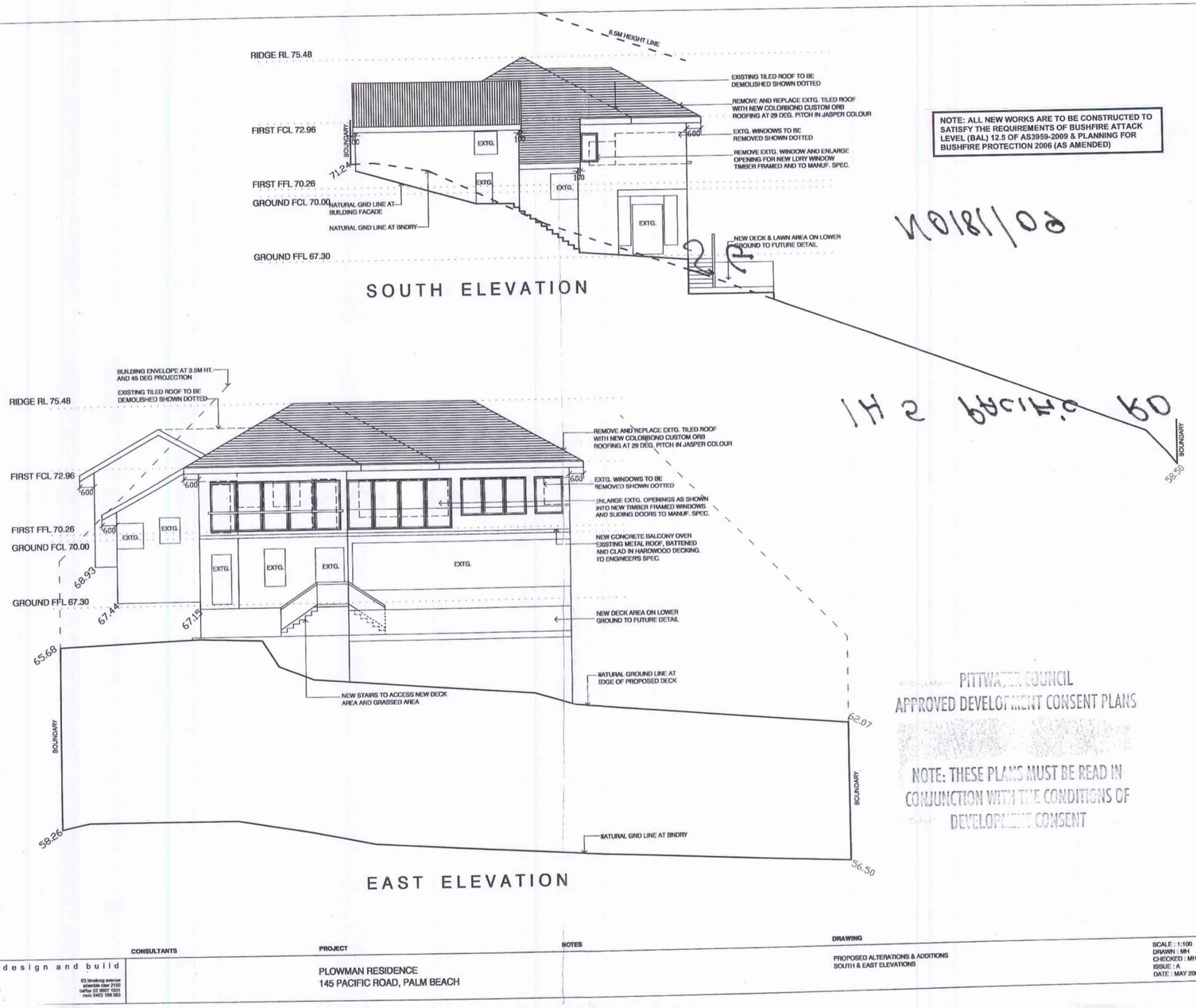
04



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N0181/09

PITTWATER COUNCIL
APPROVED DEVELOPMENT CONSENT PLANS

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CONSULTANTS

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PROJECT

PLOWMAN RESIDENCE
145 PACIFIC ROAD, PALM BEACH

NOTES

DRAWING

PROPOSED ALTERATIONS & ADDITIONS
SOUTH & EAST ELEVATIONS

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05