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)

Rec. 241744 $30 00 21/7/8

Certificate No 2008/2859

Council	Pittwater
Determination date of issue	Approved 18 July 2008
Subject land	
Address	4A The Avenue, Newport
Lot No DP No	Lot 5 DP 1059003
Applicant	
Name	W & B Consulting Pty Ltd
Address	11 Harst Place Belrose NSW 2085
Contact No (phone)	0419 244 670
Owner	
Name	Mr Daryl & Mrs Aimee Hennessy
Address	4A The Avenue, Newport NSW 2106
Contact No (phone)	0419 244 670
Description of Development	
Type of Work	New Dwelling & Swimming Pool
Builder or Owner/Builder	
Name	Daryl Hennessy
Contractor Licence No/Permit	40685
Value of Work	
Building	$500,000 00

SCANNED 22 JUL 2008 PITTWATER COUNCIL

Attachments

- Copy of completed Construction Certificate Application Form
- Basix Certificate no 206097S dated 17 July 2008
- Pittwater Council Receipt no 240597 for payment of Long Service Levy
- Correspondence from Pittwater Council dated 11 June 2008 confirming Condition C12 is satisfied

COUNCIL COPY

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 **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 Plans & Construction Specifications reference nos 01 to 17 (inclusive) prepared by W & B Consulting Pty Ltd dated 4 April 2007
- Structural Details reference nos H-08-21095-1B & 2B prepared & endorsed by Civil & Structural Engineering Design Services Pty Ltd dated 24 June 2008 & BHP 07L15732 Sheets 1 to 5 (inclusive) prepared and endorsed by Keighran and Associates Pty Ltd dated 25 October 2007
- Completed Form 2 (two pages) of the Geotechnical Risk Management Policy for Pittwater dated 27 June 2008
- Rainwater Treatment Plan (including design certification) reference no H-08-21095-3A prepared by Civil & Structural Engineering Design Services Pty Ltd dated 24 June 2008
- Driveway Design Certification prepared by Civil & Structural Engineering Design Services Pty Ltd, dated 19 June 2008
- Driveway Design Certification reference no 1883 prepared by DP Surveying Services dated 18 June 2008
- Arborist's Report (updated) prepared by Urban Forestry Australia dated June 2008
- Landscape Plan reference no 07 HENNESSY 01, prepared by Catriona Mackenzie dated 1 July 2008
- Copy of Sydney Water Approval dated 29 May 2008

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 18 JUL 2008
Certificate No **2008/2859**

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	**N0176/07**
Date of Determination	**15 October 2007**

BCA Classification **1a & 10b**

insight building certifiers pty ltd

RECEIVED
0 3 JUN 2008

APPLICATION FOR A CONSTRUCTION ~~CERTIFICATE~~

1. Applicant's details

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

Mr ☐ Mrs ☐ Ms ☐ Dr ☐ Other W & B CONSULTING Pty Ltd

Given Names (or ACN) 32 001 864 955

Family Name (or Company) W & B CONSULTING Pty Ltd

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

11 HARST PLACE

BELROSE NSW Post Code 2085

Daytime telephone 0419 244670 Alternate no. Mobile no.

2. Owner's consent

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

Owner(s)

* Daryl and Aimee Hennessy 58 Barrenjoey Re

Address (if

* ~~57~~ 4A The Avenue Mona Vale

* Newport PH 9979 5143 0410 535 143

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

Signature(s)

* D Hennessy Hennessy

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

3. Location of property

Unit/Street no. 4A Street name THE AVENUE

Suburb NEWPORT Post code 2106

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

Lot no. 5 DP no. 1059003

COUNCIL COPY

4. Description of work

What type of work do you propose to carry out?

Please describe briefly everything that you want approved.

NEW RESIDENCE & SWIMMING POOL

5. Estimated cost of work

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

Estimated cost of work: $ 500,000.00

6. Development Consent

Council Consent no: NO 176/07

Date of Determination: 15/10/2007

7. Building Code of Australia classification

This can be found on the development consent.

BCA classification: CLASS 1a & 10b

8. Builder's details

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

Name: DARYL HENNESSEY

Licence no: 40685

Owner/builder permit no:

9. Applicant's declaration

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

Signature: Michael B Ledlin

Date: 14/4/08

SUBMISSION REQUIREMENTS

A GENERAL

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

Yes ☑ No ☐

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

Yes ☑ No ☐

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

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

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

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

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

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

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

LONG SERVICE LEVY (applies to all classes of buildings)

A Long Service Levy at 0 35% of the cost of works is payable on projects valued $25 000 or more This sum can be paid directly to the Long Service Payments Corporation or to Council acting as an agent to the Corporation Partial exemption from the levy may be granted to non profit organizations churches and to owner/builders The levy may also be paid in instalments Application forms for these exemptions are available from Council but all enquiries in this regard should be address to the Long Service Payments Corporation

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

PARTICULARS OF THE PROPOSAL

What is the area of the land (m^2)? 1200	Gross floor area of building (m^2) as proposed 465
What are the current uses of all or parts of the building(s)/land? VACANT	Location 4A The Avenue Use Newport.
Does the site contain a dual occupancy? No	What is the gross floor area of the proposed addition or new building (sq metres)? 465
What are the proposed uses of all parts of the building(s) land? DWELLING	Number of pre-existing dwellings Ø
Number of dwellings to be demolished Ø	How many dwellings proposed? 1
How many storeys will the building consist of? 3	Will the new building be attached to the existing building? No Will the new building be attached to any new building? No

MATERIALS TO BE USED

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

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

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

PITTWATER COUNCIL

ABN61340837871
Telephone 02 9970 1111
Facsimile 02 9970 7150
Postal Address
PO Box 882
Mona Vale NSW 1660
DX 9018 Mona Vale

Matt Hansen
8am to 5pm Mon – Fri
Phone 9970 1624

11th June 2008

Insight Building Certifiers
PO Box 326
Mona Vale NSW 1660

To whom it may concern,

Re Development Application No N0176/07 Property 4a The Avenue, Newport

I have provided advice to the applicant in relation to a condition of consent on the above DA This relates to condition C12 "An Ecological Sustainability Plan complying with Councils ESP templates (Forms 3a/3b) is to be submitted to Council for approval by Councils Natural Environment Assessor prior to release of the Construction Certificate " The applicant has since submitted the required ESP which I have reviewed, and it is acceptable in the context of the property and its natural resources Therefore this ESP has adequately satisfied condition C12 and should be considered when proceeding in the issue of the Construction Certificate

If you have any questions, please do not hesitate to contact me

Yours faithfully

Matt Hansen
Natural Resources Assessment Officer

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BASIX Certificate

Building Sustainability Index www basix nsw gov au

Certificate number 206097S

This certificate confirms that the proposed development will meet the NSW government s requirements for sustainability if it is built in accordance with the commitments set out below Terms used in this certificate, or in the commitments have the meaning given by the document entitled "BASIX Definitions" dated 29/06/2006, published by the Department of Planning This document is available at www basix nsw gov au

Director General
Date of issue Thursday 17 July 2008

NSW GOVERNMENT
Department of Planning

Project address	
Project name	Mr and Mrs Hennessy for Construction Certificate
Street address	4a The Avenue Avenue Newport 2106
Local Government Area	Pittwater Council
Plan type and plan number	Deposited Plan 1059003
Lot no	5
Section no	0 0
Project type	
Project type	separate dwelling house
No of bedrooms	5
Site details	
Site area (m²)	1200
Roof area (m²)	322
Conditioned floor area (m2)	1
Unconditioned floor area (m2)	465
Total area of garden and lawn (m2)	800
Assessor details and thermal loads	
Assessor number	n/a
Certificate number	n/a
Cooling load (MJ/m² year)	n/a
Heating load (MJ/m² year)	n/a
Other	
none	n/a

Score

✓ Water 44 (Target 40)
✓ Thermal comfort pass (Target pass)
✓ Energy 42 (Target 40)

Schedule of BASIX commitments

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

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Landscape			
The applicant must plant indigenous or low water use species of vegetation throughout 750 square metres of the site	✓	✓	
Fixtures			
The applicant must install showerheads with a minimum rating of 3 star in all showers in the development		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 4 star in each toilet in the development		✓	✓
The applicant must install taps with a minimum rating of 6 star in the kitchen in the development		✓	
The applicant must install basin taps with a minimum rating of 6 star in each bathroom in the development		✓	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 10000 litres on the site This rainwater tank must meet and be installed in accordance with the requirements of all applicable regulatory authorities	✓	✓	✓
The applicant must configure the rainwater tank to collect rain runoff from at least 322 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam)		✓	✓
The applicant must connect the rainwater tank to			
all toilets in the development		✓	✓
at least one outdoor tap in the development (Note NSWHealth does not recommend that rainwater be used for human consumption in areas with potable water supply)		✓	✓
• a tap that is located within 10 metres of the swimming pool in the development		✓	✓
Swimming pool			
The swimming pool must not have a volume greater than 57 kilolitres	✓	✓	

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
The swimming pool must be outdoors	✓	✓	

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Floor, walls and ceiling/roof			
The applicant must construct the floor(s) walls and ceiling/roof of the dwelling in accordance with the specifications listed in the table below	✓	✓	✓

Construction	Additional insulation required (R-Value)	Other specifications
floor - suspended floor above open subfloor framed	0 8 (or 1 5 including construction) (down)	site slope > 10% below floor
external wall framed (weatherboard fibro metal clad)	1 30 (or 1 70 including construction)	
internal wall shared with garage - plasterboard	nil	
ceiling and roof - flat ceiling / pitched roof	ceiling 2 75 (up) roof thermocellular reflective	4 wind driven ventilator(s) + eave vents dark (solar absorptance > 0 70)

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Windows, glazed doors and skylights			
The applicant must install the windows glazed doors and shading devices described in the table below in accordance with the specifications listed in the table Relevant overshadowing specifications must be satisfied for each window and glazed door	✓	✓	✓
The dwelling may have 1 skylight (<0 7 square metres) and up to 2 windows/glazed doors (<0 7 square metres) which are not listed in the table	✓	✓	✓
The following requirements must also be satisfied in relation to each window and glazed door	✓	✓	✓
Except where the glass is single clear or single toned each window and glazed door must have a U value no greater than that listed and a Solar Heat Gain Coefficient (SHGC) +/ 10% of that listed Total system U-values and SHGC must be calculated in accordance with National Fenestration Rating Council (NFRC) conditions			✓
The leading edge of each eave pergola verandah balcony or awning must be no more than 500 millimetres above the head of the window or glazed door except that a projection greater than 500 mm and up to 1500 mm above the head must be twice the value in the table	✓	✓	✓
Pergolas with polycarbonate roof or similar translucent material must have a shading coefficient of less than 0 35		✓	✓
Unless they have adjustable shading pergolas must have fixed battens parallel to the window or glazed door above which they are situated unless the pergola also shades a perpendicular window The spacing between battens must not be more than 50 mm		✓	✓

Window/glazed door no.	Orientation	Maximum area (square metres)	Type	Shading	Overshadowing
W1,16 12	N	9 36	improved aluminium single toned (U-value 6 39 SHGC 0 56)	eave/verandah/pergola/balcony 601-750 mm	not overshadowed
W2	N	5 04	timber or uPVC single toned (or U-value 5 67 SHGC 0 49)	eave/verandah/pergola/balcony >2 000 mm	not overshadowed
W3	E	0 68	improved aluminium single toned (U-value 6 39 SHGC 0 56)	none	not overshadowed
W12A	N	2 88	improved aluminium single toned (U-value 6 39 SHGC 0 56)	eave/verandah/pergola/balcony 1,500-2 000 mm	not overshadowed
W4 5,9 18 10	S	12 36	improved aluminium, single toned (U-value 6 39 SHGC 0 56)	eave/verandah/pergola/balcony 451-600 mm	not overshadowed
W10 11 14	N	9 84	improved aluminium single toned (U value 6 39 SHGC 0 56)	eave/verandah/pergola/balcony 601-750 mm	not overshadowed

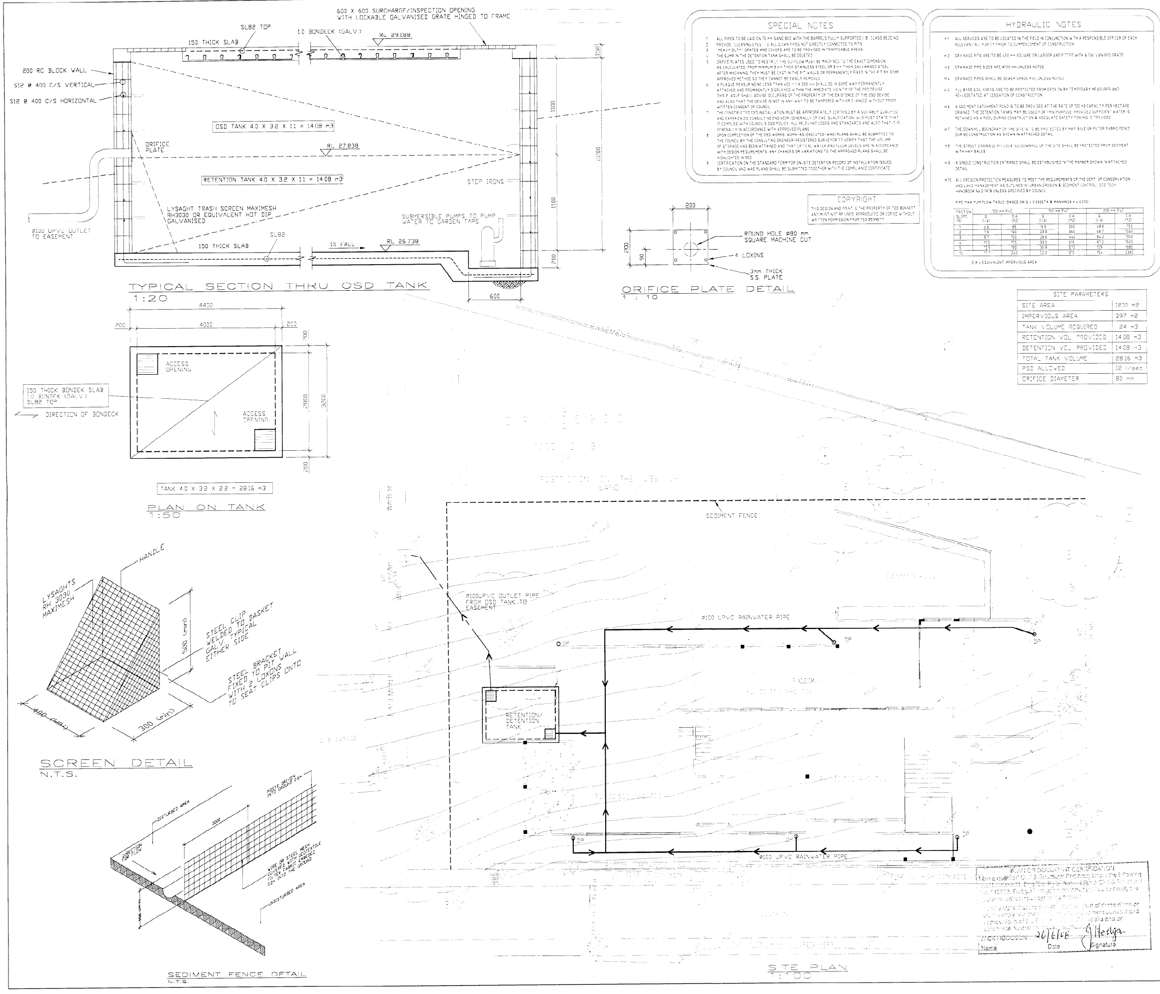
Window/glazed door no.	Orientation	Maximum area (square metres)	Type	Shading	Overshadowing
W5	SE	2 88	improved aluminium single toned (U-value 6 39 SHGC 0 56)	eave/verandah/pergola/balcony 901 1 200 mm	not overshadowed
W17	N	2 04	improved aluminium single toned (U-value 6 39 SHGC 0 56)	eave/verandah/pergola/balcony 601-750 mm	not overshadowed
W6 17	N	10 2	improved aluminium single toned (U-value 6 39 SHGC 0 56)	eave/verandah/pergola/balcony 601-750 mm	not overshadowed
W7 15	E	1 04	improved aluminium single toned (U-value 6 39 SHGC 0 56)	eave/verandah/pergola/balcony 601-750 mm	not overshadowed
W10	W	2 88	improved aluminium single toned (U-value 6 39 SHGC 0 56)	eave/verandah/pergola/balcony 601-750 mm	not overshadowed
W8	S	2 16	improved aluminium single toned (U-value 6 39 SHGC 0 56)	eave/verandah/pergola/balcony >2 000 mm	not overshadowed
W5	W	2 88	improved aluminium single toned (U-value 6 39 SHGC 0 56)	eave/verandah/pergola/balcony 601-750 mm	not overshadowed
D11	W	8 64	improved aluminium single toned (U-value 6 39 SHGC 0 56)	eave/verandah/pergola/balcony 601-750 mm	not overshadowed
D11	N	8 64	improved aluminium single toned (U-value 6 39 SHGC 0 56)	eave/verandah/pergola/balcony 601-750 mm	not overshadowed

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Cross ventilation			
The commitment below applies to the following rooms or areas of a dwelling which comprise a breeze path for the dwelling	✓	✓	✓
Breeze path 1 within main living area			
Breeze path 2 within Bedroom 1 (not ensuite)			
• Breeze path 3 within Bedroom 2 (not ensuite)			
Breeze path 4 within Bedroom 3 (not ensuite)			
The applicant must construct the dwelling so that at least 1 ventilation opening is provided in each such room or area (If only 1 room or area of a dwelling is mentioned for a breeze path then that room or area must have at least 2 ventilation openings)	✓	✓	✓
The 2 ventilation openings must be located as follows			
• Breeze path 1 opposite external walls	✓	✓	✓
Breeze path 2 >3 m apart and on adjacent external walls	✓	✓	✓
• Breeze path 3 opposite external walls	✓	✓	✓
Breeze path 4 opposite external walls	✓	✓	✓
The 2 ventilation openings must meet the following specifications			
(a) not be more than 15 metres apart	✓	✓	✓
(b) be at least 1 square metre in size and	✓	✓	✓
(c) have only 1 doorway or opening less than 2 square metres in size located in the direct path between them	✓	✓	✓

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Hot water			
The applicant must install the following hot water system in the development or a system with a higher energy rating gas instantaneous with a performance of 6 stars	✓	✓	✓
Cooling system			
The applicant must install the following cooling system or a system with a higher energy rating, in at least 1 living area ceiling fans Energy rating n/a		✓	✓
The applicant must install the following cooling system or a system with a higher energy rating, in at least 1 bedroom ceiling fans Energy rating n/a		✓	✓
Heating system			
The applicant must install the following heating system or a system with a higher energy rating in at least 1 living area gas fixed flued heater Energy rating 3 5 Star		✓	✓
The applicant must install the following heating system or a system with a higher energy rating in at least 1 bedroom gas fixed flued heater Energy rating 3 5 Star		✓	✓
Ventilation			
The applicant must install the following exhaust systems in the development			
At least 1 Bathroom individual fan ducted to façade or roof Operation control interlocked to light		✓	✓
Kitchen individual fan, ducted to façade or roof Operation control manual switch on/off		✓	✓
Laundry individual fan ducted to façade or roof Operation control manual switch on/off		✓	✓
Artificial lighting			
The applicant must ensure that the primary type of artificial lighting is fluorescent or light emitting diode (LED) lighting in each of the following rooms and where the word 'dedicated' appears the fittings for those lights must only be capable of accepting fluorescent or light emitting diode (LED) lamps			
• at least 6 of the bedrooms / study		✓	✓
at least 2 of the living / dining rooms		✓	✓
the kitchen dedicated		✓	✓
all bathrooms/toilets dedicated		✓	✓

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
the laundry dedicated		✓	✓
all hallways dedicated		✓	✓
Natural lighting			
The applicant must install a window and/or skylight in the kitchen of the dwelling for natural lighting	✓	✓	✓
The applicant must install a window and/or skylight in 5 bathroom(s)/toilet(s) in the development for natural lighting	✓	✓	✓
Swimming pool			
The development must not incorporate any heating system for the swimming pool		✓	
The applicant must install a timer for the swimming pool pump in the development		✓	
Other			
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling		✓	
The applicant must construct each refrigerator space in the development so that it is 'well ventilated' as defined in the BASIX definitions		✓	
The applicant must install a fixed outdoor clothes drying line as part of the development		✓	
The applicant must install a fixed indoor or sheltered clothes drying line as part of the development		✓	

Legend
In these commitments "applicant" means the person carrying out the development
Commitments identified with a ✓ in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development)
Commitments identified with a ✓ in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development
Commitments identified with a ✓ in the "Certifier check" column must be certified by a certifying authority as having been fulfilled before a final occupation certificate(either interim or final) for the development may be issued



SPECIAL NOTES

HYDRAULIC NOTES

PIPE MAXIMUM FLOW TABLE (BASED ON Q = 0.065EIA & MANNINGS n = 0.012)

	100 mm PVC		150 mm PVC		225 mm PVC	
	Q (l/s)	EIA (m2)	Q (l/s)	EIA (m2)	Q (l/s)	EIA (m2)
	5.6	85	16.5	260	48.6	750
	7.9	120	23.3	360	68.7	1060
	9.7	150	28.6	440	84.2	1300
	11.2	175	33.0	510	97.2	1500
	12.5	190	35.9	570	109	1680
	[illegible]	240	52.2	810	154	2380

EIA = EQUIVALENT IMPERVIOUS AREA

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SITE PARAMETERS	
SITE AREA	1200 m2
IMPERVIOUS AREA	397 m2
TANK VOLUME REQUIRED	24 m3
RETENTION VOL. PROVIDED	14.08 m3
DETENTION VOL. PROVIDED	14.08 m3
TOTAL TANK VOLUME	28.16 m3
PSD ALLOWED	12 l/sec
ORIFICE DIAMETER	80 mm

GENERAL NOTES

C13 REINFORCING SYMBOLS
S GRADE 230S DEFORMED BAR
C GRADE 410C COLD WORKED DEFORMED BAR
Y GRADE 410R DEFORMED BAR
R GRADE 230R PLAIN BAR
F GRADE 450 WELDED WIRE FABRIC
N GRADE 500 DEFORMED BAR

THE NUMBER IMMEDIATELY FOLLOWING THESE SYMBOLS IS THE BAR DIAMETER IN MILLIMETRES

C14 FABRIC REINFORCEMENT TO BE LAPPED 300 MINIMUM AT ENDS AND SIDES. LAPS IN POSITION OF MAXIMUM MOMENT ARE NOT PERMITTED

C15 ALL REINFORCEMENT SHALL BE FULLY SUPPORTED ON INSULATED STEEL, PLASTIC OR CONCRETE CHAIRS SPACED AT 900 AND 750 CENTRES BOTH WAYS UNDER ROD AND FABRIC REINFORCEMENT RESPECTIVELY. RODS SHALL BE TIED AT ALTERNATE INTERSECTIONS

C16 MINIMUM STRIPPING TIMES FOR FORMWORK SHALL BE AS RECOMMENDED IN AS 1509 OR AS DIRECTED BY ENGINEER

CIVIL & STRUCTURAL ENGINEERING DESIGN SERVICES PTY. LTD. ACN 051 307 852

CONSULTING STRUCTURAL, CIVIL, GEOTECHNICAL & ENVIRONMENTAL ENGINEERS

3 Warrili Road BELROSE 2085

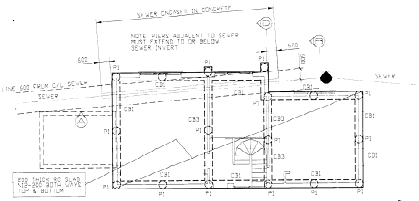
PHONE 61-02 9975 3899
FAX 61-02 9975 1943
MOBILE 0407 753 899
EMAIL h.ted@bigpond.net.au

CLIENT MR & MRS HENNESSY
PROJECT RAINWATER TREATMENT PLAN
4a THE AVENUE
NEWPORT

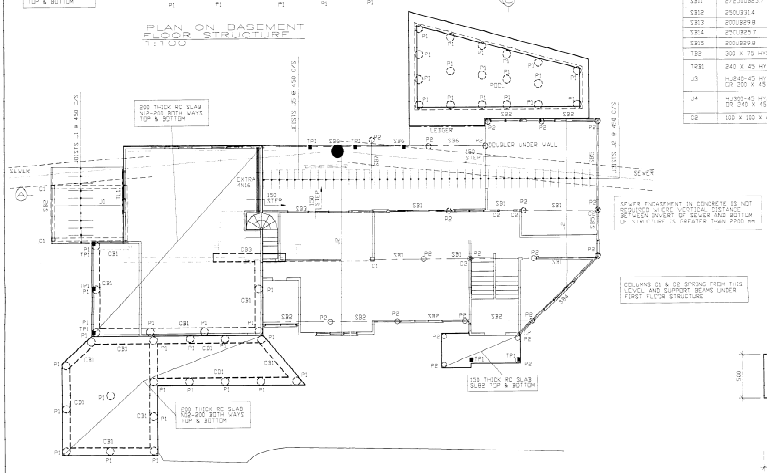
Drawn By	Scale
DWS	AS SHOWN
Checked By	**Drawing No**
E. A. BENNETT M.I.E. Aust	H-08-21095-3A
Date	**Amendment**
26/05/2008	A - 18/06/2008

Registered Professional Engineer 19823
Mr Edward A. Bennett
MIEAust CPEng
Signature ______ Date 24.6.08
Register on the NPER in the Category of:
Civil/Environmental/Structural/Geotechnical
National Professional Engineers Register

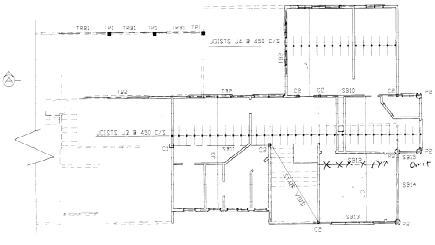
COUNCIL



PLAN ON BASEMENT FLOOR STRUCTURE
1:100



PLAN ON GROUND FLOOR STRUCTURE
1:100



PLAN ON FIRST FLOOR STRUCTURE
1:100

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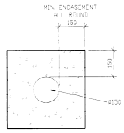
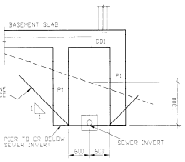
MEMBER SCHEDULE	
TP1	200 X 200 F7
G1	200 X 200 X 6 SHS
SB1	200UB29.8
SB2	250UB37.3
SB3	310UB46.2
SB4	250UB31.4
SB5	200UB25.7
SB6	250UB37.3 + CONTINUITY PL
SB7	460UB89.6
T_1	240 X 45 F7
J1	240 X 45 F7
J2	140X50-4/5 HY JOIST
J3	200 X 45 HYSPAN
SB10	250UB89.6
SB11	610UB82.7
SB12	250UB31.4
SB13	200UB29.8
SB14	250UB25.7
SB15	200UB29.8
TB2	200 X 75 HYSPAN
TB2L	240 X 45 HYSPAN
J3	H_240-4/5 HY JOIST OR 240 X 45 HYSPAN
J4	H_300-4/5 HY JOIST OR 240 X 45 HYSPAN
G2	100 X 100 X 6 SHS



DETAIL OF SEWER ENGAGEMENT
1:10

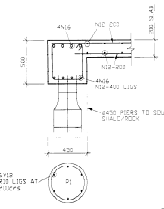
on H3234-45 or 240x45 timber Joist 7/7/08

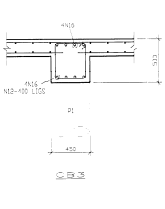


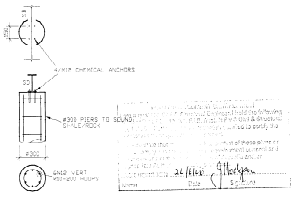
SECTION
1:25

SEWER ENCASEMENT IN CONCRETE IS NOT REQUIRED WHERE VERTICAL DISTANCE BETWEEN INVERT OF SEWER AND BOTTOM OF STRIP FOOTING IS GREATER THAN 2700 mm

COLUMNS G1 & G2 SPRING FROM TOP LEDGE AND SUPPORT BEAM UNDER FIRST FLOOR STRUCTURE







TYPICAL DETAILS OF STRUCTURAL COMPONENTS
1:20

GENERAL NOTES

G1 THESE NOTES SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL AND CIVIL DRAWINGS AND SPECIFICATIONS FOR THE WORKS. ANY DISCREPANCIES SHALL BE REFERRED TO THE ENGINEER IN THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT OR ENGINEER BEFORE PROCEEDING WITH THE WORK.

G2 DIMENSIONS SHALL NOT BE OBTAINED BY SCALING. NOTED DIMENSIONAL DRAWINGS

G3 SETT NO SETTING OUT SHALL BE GIVEN FROM DRAWINGS SHALL BE REFERRED BY CONTRACTOR TO ARCHITECT

G4 SURFACE CONSTRUCTION OVER EXCAVATIONS SHALL BE MAINTAINED IN A STABLE CONDITION AND NOT SHALL BE ALLOWED TO DRAIN

G5 ALL DIMENSIONS AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT EDITION OF THE SAA CODE AND THE BCA. SAA CODE DESIGNATED BY THEIR LATEST BUILDING AUTHORITY

G6 INSTALLATIONS SHALL NOT BE RESPECTED WITHIN 3 METRES OF UNDERTAKING STRUCTURE OR WITHOUT PRIOR APPROVAL OF APPROPRIATE AUTHORITY OR SHOWN ON UNDERGROUND PROVIDED BY END USER

FOUNDATIONS AND FOOTINGS

F1 FOOTINGS AND SLABS ARE DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 100kPa. THE ENGINEER SHALL BE CONTACTED IMMEDIATELY IF THE FOUNDATION MATERIAL BEFORE PLACING CONCRETE

F2 FOOTINGS SHALL BE PLACED UNDER WALLS AND COLUMNS AS SHOWN ON THE DRAWINGS

SLABS ON GRADE

S1 SLABS ON GROUND SHALL BE LAID TO FALL, WHERE SHOWN ON THE DRAWINGS AND SHALL BE CONTRACTED AT SURFACES OR WALLS SURFACES. IN LATTICE NOT EXCEEDING 200 mm. TO ENSURE POSITIVE DRAINAGE WITH NO PONDING

CONCRETE WORK

C1 ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH AS 3600

C2 CONCRETE QUALITY SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED

ELEMENT	SLUMP	MAX AGG SIZE	MIN 28 DAY STRENGTH	EXPOSURE	MIN COVER TO N12
ALL	80	20	25	N1	20

C3 SLAB CONCRETE CURING TO BE IMPLEMENTED AS SOON AS POSSIBLE UNLESS OTHERWISE SHOWN

SLABS WITHIN BUILDING WITH AN EXPOSURE CLASSIFICATION OF A1 OR B1

ELEMENT	CONCRETE STRENGTH AT 28 DAYS UNLESS NOTED OTHERWISE	CONCRETE STRENGTH AT TIME OF APPLICATION OF LOAD	CONCRETE STRENGTH AT TIME OF APPLICATION OF SUPERIMPOSED LOAD
FOOTINGS & PILECAPS	25	20	15
SUSPENDED SLABS	25	20	15
RAFT SLAB	25	20	15
BEAMS OR LINTELS	25	20	15
WALLS	25	20	15
SLABS HOLDING BRICK WORK OR BRICK VENEER	25	20	15
BASEMENT RETAINING WALLS	32	25	20

NOTE 1. SLABS PLACED OVER A MEMBRANE ON THE GROUND ARE INCLUDED AS EXPOSURE
2. SLABS EXPOSED TO CORROSIVE VAPOURS, CORROSIVE DRIVING WATER, SEA WATER OR SPRAY ARE TO HAVE THE PERFORMANCE GRADE SELECTED BY ART USED TO SUIT THE SPECIFIC EXPOSURE

C4 S32 OR ABOVE TO HAVE MIN THICKNESS OF AIRLIFT 150 mm

C5 CURING MUST BE AND ANY DEVIATIONS TO BE APPROVED BY THE ENGINEER

C6 SLAB JOINTS TO BE AS PER CONTRACT AND FOLLOW SAME THICKNESS OF WORK UNO

C7 NO HOLES OR TRENCHES TO BE CUT INTO CONCRETE WITHOUT PRIOR APPROVAL OF THE ENGINEER

C8 REINFORCEMENT TO BE PROPERLY SUPPORTED AND TIED TO PREVENT DISPLACEMENT DURING CONCRETE PLACING

C9 WHERE CONSTRUCTION JOINTS ARE NOT SHOWN ON THE DRAWINGS, DETAILS TO BE APPROVED BY THE ENGINEER. WHERE THESE ARE USED IT IS NOT PERMITTED TO CUT REINFORCEMENT

C10 HOLDING DOWN BOLTS SHALL BE SET TO TEMPLATE AND BE ACCURATELY LOCATED IN THE FORMWORK

C11 FIXED OR CONCRETE SHALL NOT BE PLACED WITHIN THE CONCRETE COVER TO REINFORCEMENT WITHOUT THE APPROVAL OF THE ENGINEER

C12 ALL REINFORCING BARS SHALL COMPLY WITH AS 1302. ALL FABRIC SHALL COMPLY WITH AS 1303 AND AS 1304, AND SHALL BE SUPPLIED AS PLAT SHEETS

C13 TRANSVERSE EMBEDS
1. SPACE N12 SITE EMBEDS BAR
2. SPACE N16 SITE EMBEDS BAR
3. SPACE N20 SITE EMBEDS BAR
4. SPACE N24 SITE EMBEDS BAR
5. SPACE N28 SITE EMBEDS BAR
6. SPACE N32 SITE EMBEDS BAR
THE LAPPED LENGTH OF TWO ADJACENT SPACE EMBEDS IS TO BE THE SAME AS THE LAPPED LENGTH OF THE LARGER BAR

C14 FABRIC REINFORCEMENT TO BE LAPPED ONE MESH PLUS ONE CROSS WIRE AND LAPS A POSITION OF MAXIMUM MOMENT ARE NOT PERMITTED

C15 ALL REINFORCEMENT SHALL BE FULLY SUPPORTED ON CHAIRS AND TIES. PLASTIC OR CONCRETE CHAIRS SPACED AT 1000 MAX OR EVERY THIRD MESH WHICHEVER IS THE LESSER. REFER TO SPECIFICATION FOR REQUIREMENTS AND DETAILS OF CONSTRUCTION OF STRIP FOOTINGS

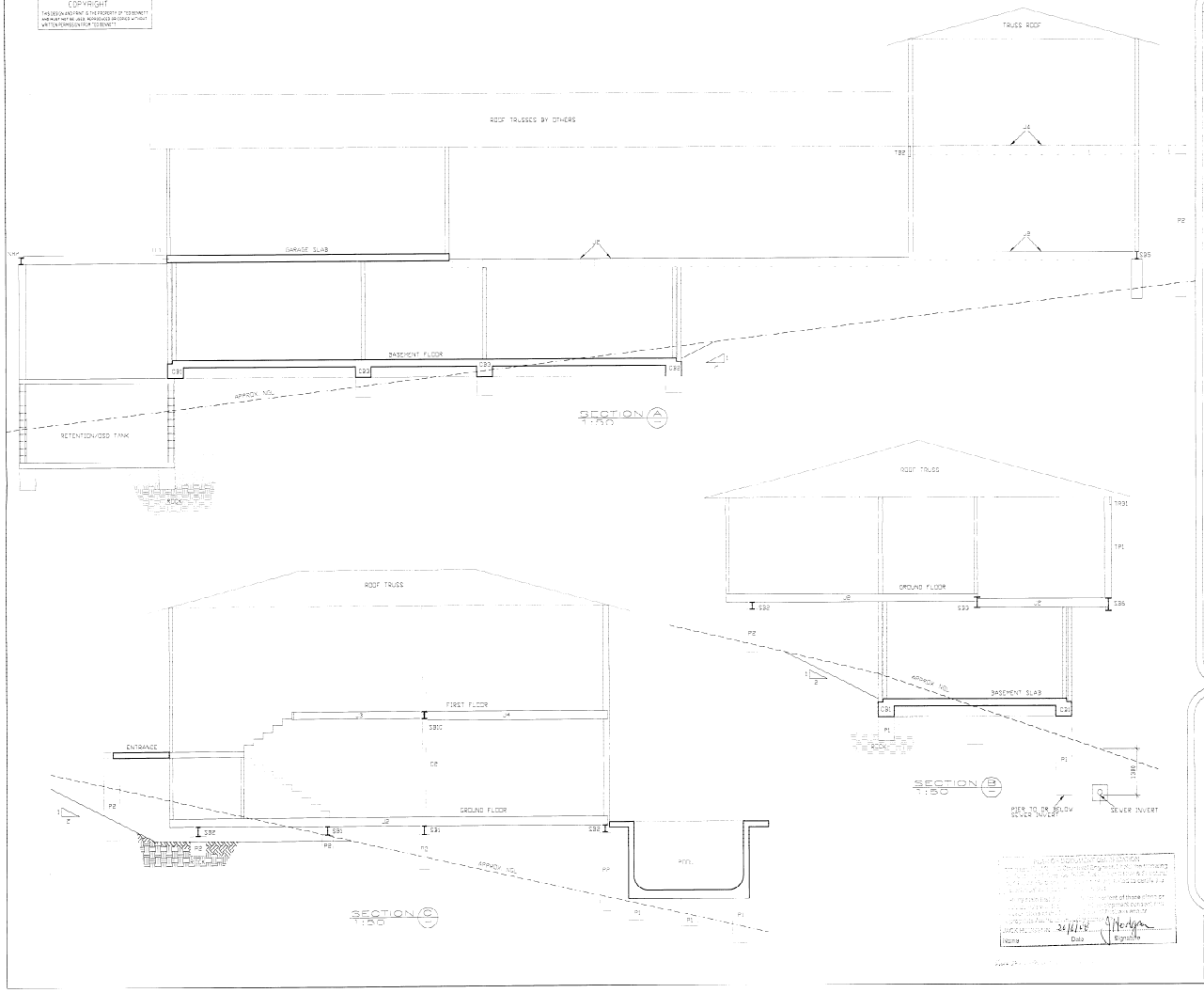
C16 MASONRY STEPPING TIES FOR FORMWORK SHALL BE AS RECOMMENDED IN AS 3700 OR AS DIRECTED BY ENGINEER

CIVIL & STRUCTURAL ENGINEERING
DESIGN SERVICES PTY. LTD. ACN 097 527 992
CONSULTING STRUCTURAL, CIVIL, GEOTECHNICAL & ENVIRONMENTAL ENGINEERS
79 Lawson Street, BONDI BEACH 2026
PHONE (02) 9365 7649
FAX 61 (2) 9365 7649
MOBILE 0417 721 890
EMAIL tmac@ozemail.net.au

CLIENT MR & MRS HENNESSY
PROJECT STRUCTURAL DETAILS OF HOUSE
76 THE AVENUE
NEWPORT

Drawn By	DWS
Scale	AS SHOWN
Checked By	L. A. BENNETT M.I.E. Aust.
Drawing No	H-08-21093-1B
Date	15/05/2008
Amendment	B - 24/06/2008

Registered Professional Engineer (NSW)
Mr Edward A. Bennett
Civil/Environmental/Structural/Geotechnical



GENERAL NOTES

G1 THESE NOTES SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANT'S DRAWINGS AND SPECIFICATIONS AND WITH ANY OTHER WRITTEN INSTRUCTION ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT OR ENGINEER BEFORE PROCEEDING WITH THE WORK

G2 DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE STRUCTURAL DRAWINGS

G3 SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY ON SITE MEASUREMENT

G4 DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED

G5 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT EDITION OF THE BUILDING ACT AND REGULATIONS AND THE REQUIREMENTS OF THE RELEVANT LOCAL BUILDING AUTHORITY

G6 EXCAVATIONS SHALL NOT BE PERMITTED WITHIN A ZONE EQUAL TO THE DEPTH OF ANY ADJACENT FOOTING OR RETAINING WALL UNLESS WITH THE PRIOR APPROVAL OF THE ENGINEER

FOUNDATIONS AND FOOTINGS

F1 FOOTINGS SHALL BE PLACED ON UNDISTURBED NATURAL GROUND AND HAVE A MINIMUM ALLOWABLE BEARING PRESSURE OF 100kPa. THE FOOTINGS SHALL BE PLACED ON A MINIMUM OF 150mm OF COMPACTED GRANULAR MATERIAL

F2 FOOTINGS SHALL BE PLACED UNDER WALLS AND COLUMNS UNLESS OTHERWISE NOTED

SUB-GRADE

SG1 UNDER ALL SLABS ON GRADE, WHETHER ON CUT OR FILL, REMOVE SOFT SPOTS AND REFILL BY COMPACTING IN 150mm MAXIMUM LAYERS TO A DENSITY NOT LESS THAN 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED COMPACTION TEST (NZS 4402 TEST 4.1.3). ENGINEER TO APPROVE ALL SUB-GRADE PREPARATION

CONCRETE WORK

C1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH NZS 3109

C2 CONCRETE QUALITY SHALL BE AS TABULATED AND SHALL BE VERIFIED BY TESTS

ELEMENT	SLUMP	MAX SIZE AGG	CEMENT TYPE	ADMIXTURE	7 DAY CONCRETE STRENGTH
ALL	80	20	A	NIL	20

C3 A TEST CONCRETE CYLINDER TO BE TAKEN FOR EVERY 5m³ OR PART THEREOF PLACED EACH DAY

CAST IN SITU CONCRETE COMPLYING WITH NZS 3109			
ELEMENT	EXPOSURE CLASSIFICATION A1 OR B1 (NOT IN WATER OR FREEZING)	EXPOSURE CLASSIFICATION B2 OR C (NOT IN WATER OR FREEZING)	CONCRETE STRENGTH AT 28 DAYS (MINIMUM F'c FOR DESIGN)
FOOTINGS	-	25	25
STRIP FOOTINGS	-	32	32
SLAB ON GRADE	-	32	25
COLUMNS	40	32	25
SLABS INCLUDED INTERNAL BEAMS	32	32	32
BEAMS	32	32	32
SLABS HOLLOW BLOCK CONSTRUCTION	32	32	32
REINFORCED CONCRETE HOLLOW BLOCK MASONRY WITH STRUCTURE	32		

NOTE 1 SLABS EXPOSED OVER A HEARTH ON THE GROUND ARE INCLUDED AS CONDITION 2
2 SLABS EXPOSED TO EXTERNAL ELEMENTS, EXPOSURE GRADING WATER TABLE WATER OR WITHIN 600 TO 1200 REINFORCEMENT COVER AS NOTED OR AT LEAST TWICE THE REQUIRED FOR CONDITION 2

C4 SIZES OF ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES

C5 CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE TO THE APPROVAL OF THE ENGINEER

C6 BEAM DEPTHS ARE APPROXIMATE AND INCLUDE SLAB THICKNESS IF NOT SHOWN

C7 NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE ELEMENTS WITHOUT PRIOR APPROVAL BY THE ENGINEER

C8 "NOMINAL" SIZES INDICATED DIAGRAMMATICALLY IT IS NOT NECESSARILY SHOWN TRUE PROJECTION

C9 SPLICES IN REINFORCEMENT MADE AT POINTS OTHER THAN SHOWN SHALL BE TO THE APPROVAL OF THE ENGINEER. WHERE LAP LENGTHS ARE NOT SHOWN THEY SHALL BE SUFFICIENT TO DEVELOP THE FULL STRENGTH OF THE REINFORCEMENT

C10 WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS

C11 PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE CONCRETE COVER TO REINFORCEMENT WITHOUT THE APPROVAL OF THE ENGINEER

C12 ALL REINFORCING BARS SHALL COMPLY WITH AS/NZS 4671. ALL FABRIC SHALL COMPLY WITH AS 1302 AND AS 1304 AND SHALL BE SUPPLIED IN FLAT SHEETS

C13 REINFORCING BARS:
R GRADE 250R — 250 GRADE PLAIN ROUND BAR
D GRADE 430D — COLD WORKED DEFORMED BAR
Y GRADE 450Y — 300 GRADE DEFORMED BAR
S GRADE 250S — PLAIN BAR
W GRADE 430 — WELDED WIRE FABRIC
D GRADE 500D — 500 GRADE DEFORMED BAR
THE NUMBER IMMEDIATELY FOLLOWING THESE SYMBOLS IS THE BAR DIAMETER IN MILLIMETRES

C14 FABRIC REINFORCEMENT TO BE LAPPED 300 MINIMUM AT ENDS AND SIDES AND LAPS IN POSITIONS WHERE MOMENTS ARE NOT CRITICAL

C15 ALL REINFORCEMENT SHALL BE FULLY SUPPORTED ON VEE-LATED STEEL, PLASTIC OR CONCRETE CHAIRS SPACED AT 800 MAX TWO DIRECTIONS WITH WIRE UNDER ROD AND FABRIC REINFORCEMENT RESPECTIVELY. RODS SHALL BE TIED AT ALTERNATE INTERSECTIONS

C16 MINIMUM STRIPPING TIMES FOR FORMWORK SHALL BE AS RECOMMENDED IN NZS 3109 OR AS DIRECTED BY ENGINEER

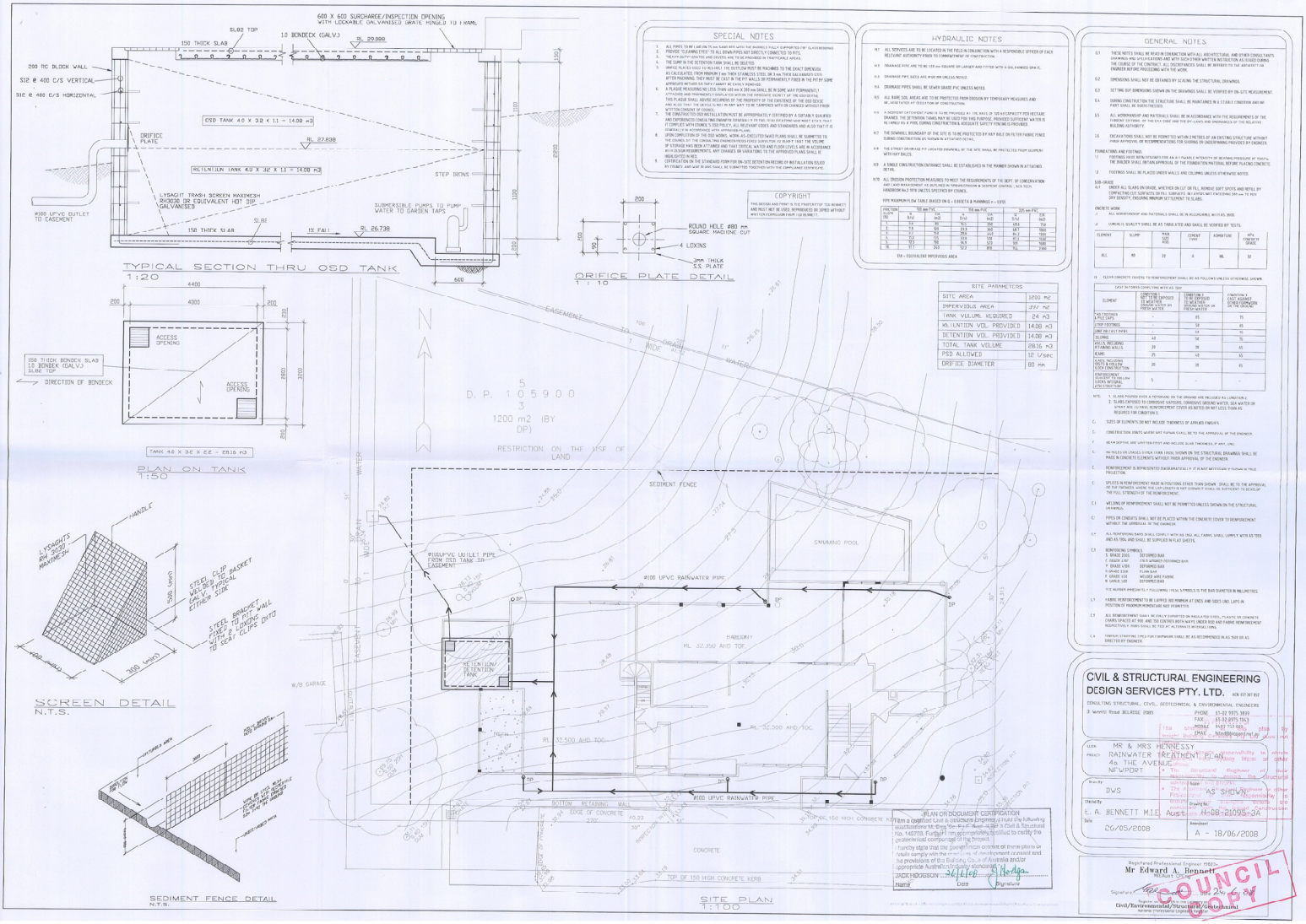
CIVIL & STRUCTURAL ENGINEERING
DESIGN SERVICES PTY. LTD.
ACN 051 697 852
CONSULTING STRUCTURAL, CIVIL, GEOTECHNICAL & ENVIRONMENTAL ENGINEERS
3 SAINT ROSE ROAD 0983
PHONE 09-12 9975 3599
FAX 09-12 9975 7615
MOBILE 0027 733 999
EMAIL tmb@designdoctor.co.nz

CLIENT MR & MRS HENNESSY
PROJECT STRUCTURAL DETAILS OF HOUSE
46 THE AVENUE
NEWPORT

Drawn By: DWS	Scale: AS SHOWN
Checked By: F A RENNETT M.I.P. Auckl	Drawing No: H-08-21096-22
Date: 15/05/2008	Amendment: 3 - 24/06/2008

Registered Professional Engineer 19923
Mr Edward A. Bennett
Full Name (Please Print)
Signature [signature] Date 24 6 08
Registered with the IPENZ in the Category of
Civil/Environmental/Structural/Geotechnical
Full time Practising Engineer

Approved for Building Consent
Auckland Council
Name [signature] Date 24/6/08 Signature



SPECIAL NOTES

1. ALL PIPES TO BE LAID ON FULL LENGTH BEDDING OF SAND FULLY SUPPORTED ON 75mm GLASS BEDDING
2. PROVIDE "CLEANING EYES" TO ALL DOWNPIPES AS SHOWN CONNECTED TO PITS.
3. HEAVY DUTY GRATES AND COVERS ARE TO BE PROVIDED IN TRAFFICABLE AREAS.
4. THE SUMP IN THE DETENTION TANK SHALL BE DELETED.
5. ORIFICE PLATES SHALL BE MACHINE CUT. THE BOTTOM MUST BE MACHINED TO THE EXACT DIMENSION AS CALCULATED, FROM MINIMUM 3 mm THICK STAINLESS STEEL OR 3 mm THICK GALVANISED STEEL AFTER MACHINING THEY MUST BE CAST IN THE PIT WALLS OR PERMANENTLY FIXED IN THE PIT BY SOME APPROVED METHOD SO THEY CANNOT BE EASILY REMOVED.
6. A PLAQUE MEASURING NO LESS THAN 600 mm X 200 mm SHALL BE IN SOME WAY PERMANENTLY ATTACHED AND PROMINENTLY DISPLAYED WITHIN THE IMMEDIATE VICINITY OF THE OSD SYSTEM. THE PLAQUE SHALL BE CLEARLY VISIBLE FROM THE PROPERTY OF THE EXISTENCE OF THE OSD SYSTEM AND ALSO STATE THE METHOD ALONG WITH WHAT NOT TO BE TAMPERED WITH OR CHANGED WITHOUT PRIOR WRITTEN CONSENT OF COUNCIL.
7. THE CONSTRUCTED OSD INSTALLATION MUST BE APPROPRIATELY CERTIFIED BY A SUITABLY QUALIFIED AND EXPERIENCED CONSULTING ENGINEER STATING IF TO FINAL SITE EXISTING AND MUST STATE THAT IT COMPLIES WITH COUNCIL'S OSD POLICY, ALL RELEVANT CODES AND STANDARDS AND ALSO THAT IT IS STRUCTURALLY IN ACCORDANCE WITH APPROVED PLANS.
8. PRIOR TO THE ISSUE OF A CERTIFICATE OF OCCUPATION AS-CONSTRUCTED/AS-BUILT PLANS SHALL BE SUBMITTED TO THE COUNCIL BY THE CONSULTING ENGINEER WHO SHALL STATE THAT TO VERIFY THAT THE VOLUME OF STORAGE HAS BEEN ATTAINED AND THAT CRITICAL WATER AND FLOOR LEVELS ARE IN ACCORDANCE WITH DESIGN REQUIREMENTS. ANY CHANGES OR VARIATIONS TO THE APPROVED PLANS SHALL BE HIGHLIGHTED IN RED.
9. CERTIFICATION ON THE STANDARD FORM FOR ON-SITE DETENTION RECORD OF INSTALLATION ISSUED BY COUNCIL AND MUST BE AND SHALL BE SUBMITTED TOGETHER WITH THE COMPLIANCE CERTIFICATE.

HYDRAULIC NOTES

H1 ALL SERVICES ARE TO BE LOCATED IN THE FIELD IN CONJUNCTION WITH A RESPONSIBLE OFFICER OF EACH RELEVANT AUTHORITY PRIOR TO COMMENCEMENT OF CONSTRUCTION.

H2 DRAINAGE PITS ARE TO BE 450 mm SQUARE OR LARGER AND FITTED WITH A GALVANISED GRATE.

H3 DRAINAGE PIPES SHALL BE SEWER GRADE PVC UNLESS NOTED.

H5 ALL BARE SOIL AREAS ARE TO BE PROTECTED FROM EROSION BY TEMPORARY MEASURES AND BE MAINTAINED AT CESSATION OF CONSTRUCTION.

H6 A NOMINAL CATCHMENT FLOW IS TO BE PROVIDED AT THE RATE OF 120 l/s CAPACITY PER HECTARE DRAINED. THE DETENTION TANKS MAY BE USED FOR THIS PURPOSE, PROVIDED SUFFICIENT WATER IS RELEASED AS A POOL DURING CONSTRUCTION & ADEQUATE SAFETY FENCING IS PROVIDED.

H7 THE DOWNHILL BOUNDARY OF THE SITE IS TO BE PROTECTED BY HAY BALE OR FILTER FABRIC FENCE DURING CONSTRUCTION AS SHOWN IN ATTACHED DETAIL.

H8 THE STREET DRAINAGE PIT LOCATED DOWNHILL OF THE SITE SHALL BE PROTECTED FROM SEDIMENT WITH HAY BALES.

H9 A SINGLE CONSTRUCTION ENTRANCE SHALL BE ESTABLISHED IN THE MANNER SHOWN IN ATTACHED DETAIL.

H10 ALL EROSION PROTECTION MEASURES TO MEET THE REQUIREMENTS OF THE DEPT. OF CONSERVATION AND LAND MANAGEMENT AS OUTLINED IN "URBAN EROSION & SEDIMENT CONTROL, NZS 9201 HANDBOOK No.3 1979 UNLESS SPECIFIED BY COUNCIL.

PIPE MAXIMUM FLOW TABLE BASED ON Q = 0.6187A R$^{2/3}$ S$^{1/2}$ / n (l/s)

FRICTION SLOPE 1in	150 mm PVC DIA	R	225 mm PVC DIA	R	375 mm PVC DIA	R
	19.6	36.25	44.2	56.25	120.3	93.75
2	13.8	50	31.3	398	85.1	710
3	11.3	50	25.5	398	69.5	710
4	9.8	50	22.1	445	60.2	1000
5	8.7	50	19.8	598	53.8	1000
10	6.2	50	14.0	598	38.1	1000
16	4.9	50	11.1	598	30.1	1000

DIA = EQUIVALENT IMPERVIOUS AREA

SITE PARAMETERS	
SITE AREA	1200 m2
IMPERVIOUS AREA	399 m2
TANK VOLUME REQUIRED	24 m3
RETENTION VOL. PROVIDED	14.08 m3
DETENTION VOL. PROVIDED	14.08 m3
TOTAL TANK VOLUME	28.16 m3
PSD ALLOWED	12 l/sec
ORIFICE DIAMETER	80 mm

GENERAL NOTES

G.1 THESE NOTES SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTION AS ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT OR ENGINEER BEFORE PROCEEDING WITH THE WORK.

G.2 DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE STRUCTURAL DRAWINGS.

G.3 SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY ON-SITE MEASUREMENT.

G.4 DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED.

G.5 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT EDITIONS OF THE E.A.S.I.DOC AND THE BY-LAWS AND ORDINANCES OF THE RELATIVE BUILDING AUTHORITY.

G.6 EXCAVATIONS SHALL NOT BE PERMITTED WITHIN 2 METRES OF AN EXISTING STRUCTURE WITHOUT PRIOR APPROVAL OR RECOMMENDATIONS FOR SHORING OR UNDERPINNING PROVIDED BY ENGINEER.

FOUNDATIONS AND FOOTINGS

F.1 FOOTINGS MUST BE FOUNDED AT MINIMUM ALLOWABLE INTENSITY OF BEARING PRESSURE OF 150kPa. THE BUILDER SHALL OBTAIN APPROVAL OF THE FOUNDATION MATERIAL BEFORE PLACING CONCRETE.

F.2 FOOTINGS SHALL BE PLACED UNDER WALLS AND COLUMNS UNLESS OTHERWISE NOTED.

SUB-GRADE

G.7 UNDER ALL SLABS ON GRADE, WHETHER ON CUT OR FILL, REMOVE SOFT SPOTS AND REFILL BY COMPACTING CUT SURFACES OR FILL SURFACES IN 150 mm LAYERS MAY EXISTING 5kPa AS TO REQ DRY DENSITY, ENSURING MINIMUM SETTLEMENT TO SLABS.

CONCRETE WORK

C.1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600.

C.2 CONCRETE QUALITY SHALL BE AS TABULATED AND SHALL BE VERIFIED BY TESTS.

ELEMENT	SLUMP	MAX AGG SIZE	CEMENT TYPE	ADMIXTURE	MPa STRENGTH GRADE
ALL	80	20	A	ML	32

C.3 CLEAR CONCRETE COVERS TO REINFORCEMENT SHALL BE AS FOLLOWS UNLESS OTHERWISE SHOWN

CAST IN FORMS COMPLYING WITH AS 3599

ELEMENT	CONCRETE NOT TO BE EXPOSED TO THE WEATHER OR BRACKISH OR FRESH WATER	CONCRETE TO BE EXPOSED TO WEATHER OR BRACKISH OR FRESH WATER	CONCRETE CAST AGAINST EARTH FORMED OR ON THE GROUND
SLAB FOOTINGS & PILE CAPS	-	65	75
STRIP FOOTINGS	-	50	65
BEAMS AND PILE WALLS	-	50	70
CEILINGS	40	50	75
WALLS, RETAINING WALLS	30	30	65
SLABS	25	40	65
WALLS USING HOLLOW BLOCK CONSTRUCTION	20	30	65
ENCLOSED SPACES WITHIN A HOLLOW BLOCK STRUCTURE	5	-	-

NOTE: 1. SLABS PLACED OVER A MEMBRANE ON THE GROUND ARE INCLUDED AS UNDER ITEM 2.
2. SLABS EXPOSED TO CORROSIVE VAPOURS, CORROSIVE GROUND WATER, SEA WATER OR SPRAY AND USING REINFORCEMENT COVER AS NOTED OR NOT LESS THAN AS REQUIRED FOR CONDITION 1.

C. SIZES OF ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.

C. CONSTRUCTION JOINTS MUST NOT BE FORMED UNLESS SHOWN, OR TO THE APPROVAL OF THE ENGINEER.

C. BEAM DEPTHS ARE WRITTEN FIRST AND INCLUDE SLAB THICKNESS, IF ANY, (ML)

C. NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE ELEMENTS WITHOUT PRIOR APPROVAL OF THE ENGINEER.

C. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY IT IS NOT NECESSARY TO SHOW IN TRUE PROJECTION

C. SPLICES IN REINFORCEMENT MADE IN POSITIONS OTHER THAN SHOWN SHALL BE TO THE APPROVAL OF THE ENGINEER WHERE THE LAP LENGTH IS NOT SUFFICIENT SHALL BE SUFFICIENT TO DEVELOP THE FULL STRENGTH OF THE REINFORCEMENT.

C1 WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.

C. PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE CONCRETE COVER TO REINFORCEMENT WITHOUT THE APPROVAL OF THE ENGINEER.

C. ALL REINFORCING BARS SHALL COMPLY WITH AS 1302. ALL FABRIC SHALL COMPLY WITH AS 1303 AND AS 1304, AND SHALL BE SUPPLIED IN FLAT SHEETS.

C. REINFORCING SYMBOLS

S	SPACE 2XS DEFORMED BAR
R	GRADE 250 DEFORMED/REVOMED BAR
F	GRADE 450 DEFORMED BAR
M	GRADE 450 MILD STEEL
F	GRADE 450 WELDED WIRE FABRIC
N	GRADE 500 DEFORMED BAR

THE NUMBER IMMEDIATELY FOLLOWING THESE SYMBOLS IS THE BAR DIAMETER IN MILLIMETRES

L1 FABRIC REINFORCEMENTS TO BE LAPPED 300 MINIMUM AT ENDS AND SIDES END LAPS IN POSITION OF MAXIMUM MOMENT ARE NOT PERMITTED

L2 ALL REINFORCEMENT SHALL BE RIGIDLY SUPPORTED ON INSULATED STEEL, PLASTIC OR CONCRETE CHAIRS SPACED AT 900 AND TIED EITHER WITH WIRE UNDER BOD AND FABRIC REINFORCEMENT RESPECTIVELY WIRE SHALL BE TIED AT ALTERNATE INTERSECTIONS.

C.4 THROUGH LIGHTING DUCTS FOR FOOTPATHS SHALL BE AS RECOMMENDED IN AS 1509 OR AS DIRECTED BY ENGINEER.

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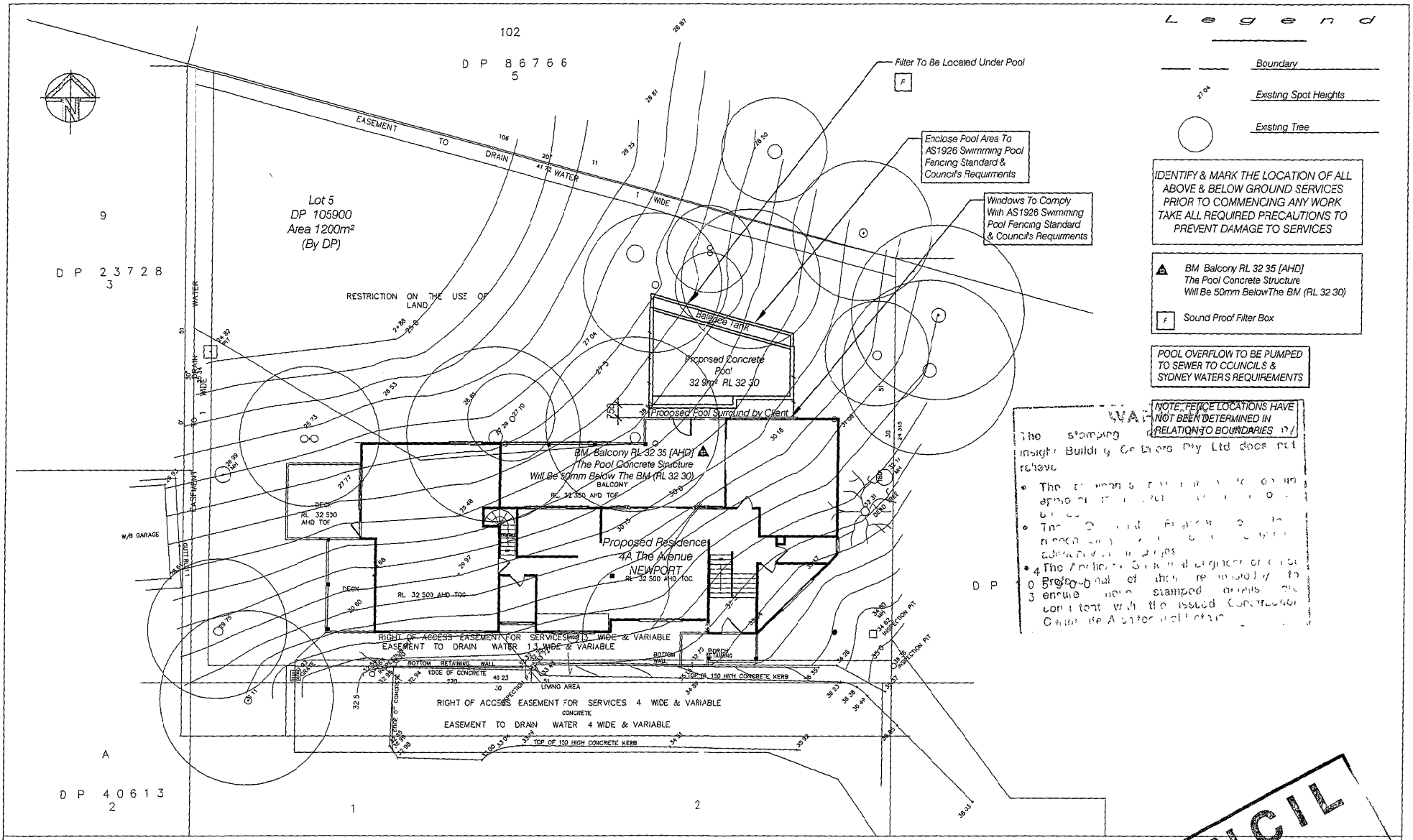
3 WAIWHI Road BELMORE 2085 PHONE 61-02 9975 3899
FAX 61-02 9975 7543
MOBILE 0429 753 695
EMAIL ted@designed.net.au

CLIENT	MR & MRS HENNESSY
PROJECT	RAINWATER TREATMENT PLAN
	46 THE AVENUE
	NEWPORT
Drawn By	DWS
Checked By	E.A. BENNETT M.IE. AUST.
Date	26/05/2008
Issue	A
Drawing No.	08-2109-SA
Amendment	A - 18/06/2008

PLAN OR DOCUMENT CERTIFICATION
I am a qualified Civil & Structural Engineer, and I hold the following qualifications: Mr this Dip. H.T.C. Aust. as per S Civil & Structural No. 140715. Further I am appropriately qualified to certify the geotechnical components of this project.
I hereby state that the construction comprise of these plans or details comply with the provisions of the Building Code of Australia and/or appropriate Australian standards nominated.
ZACK HODGSON 26/6/08
Name Date Signature

Registered Professional Engineer 11827
Mr Edward A. Bennett
M.I.E.Aust. CPEng
Signature [signature] Date 24/6/08
Registered Professional Engineer
Civil/Environmental/Structural/Geotechnical
National Professional Engineers Register



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Keighran and Associates Pty Ltd
Consulting Structural and Civil Engineers
ABN 25 003 832 291
APPROVED DATE 25/10/07
BE (Hons) MEngSci FIEAust CPEng
Registered NPER 3719 (Structural & Civil)

PROPOSED SWIMMING POOL STRUCTURAL DETAILS
FOR A & D Hennessy
AT 4A The Avenue, NEWPORT

DATE 25/10/07
DRAWN KSR
SHEET 1 OF 5
DRAWING/CONTRACT No

GENERAL

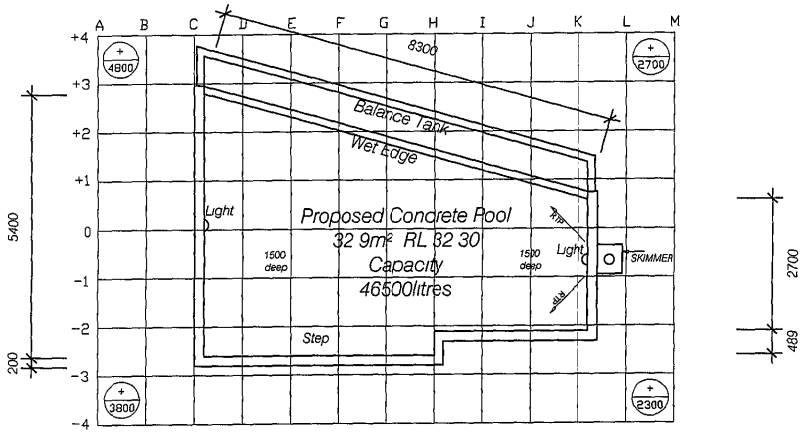
G1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS2783 – 1992
G2 THE SETTING OUT DIMENSIONS SHALL BE CHECKED ON SITE PRIOR TO COMMENCING EXCAVATION
G3 ANY UNFORSEEN VARIATIONS TO THE ASSUMED SITE CONDITIONS SHALL BE REFERRED TO THE ENGINEER PRIOR TO PROCEEDING
G4 THE WALKWAYS AND COPINGS HAVE BEEN DESIGNED FOR A LIVE LOAD OF 4kPa
G5 THE ENGINEER SHALL BE NOTIFIED OF ANY PROPOSED VARIATION TO THIS PRIOR TO PLACING THE REINFORCEMENT
G6 PRIOR TO EMPTYING THE POOL THE OWNER SHALL ENSURE THAT ALL EXTERNAL GROUNDWATER HAS BEEN REMOVED FROM THE BASE AND WALLS OF THE POOL
G7 THE ENGINEER SHALL BE NOTIFIED IF THE POOL IS OUT OF THE GROUND BY MORE THAN 900

CONCRETE

C1 THE DETAILS PRESENTED ON THE FOLLOWING SHEETS COMPLY WITH THE REQUIREMENTS OF AS2783-1992
C2 ALL WORKMANSHIP SHALL BE IN ACCORDANCE WITH AS3600
C3 ALL CONCRETE SHALL HAVE A MINIMUM 28 DAY CONCRETE COMPRESSIVE STRENGTH OF 25MPa AND HAVE A MAXIMUM AGGREGATE SIZE OF 10mm AND A MAXIMUM SLUMP OF 80mm UNLESS NOTED OTHERWISE
C4 WHERE THE POOL IS LOCATED WITHIN 1km OF LARGE EXPANSES OF SALT WATER THE CONCRETE SHELL SHALL HAVE A MINIMUM 28 DAY CONCRETE COMPRESSIVE STRENGTH OF 32MPa
C5 CONCRETE SIZES SHOWN DO NOT INCLUDE FINISH AND MUST NOT BE REDUCED OR HOLED IN ANY WAY WITHOUT THE APPROVAL OF THE ENGINEER HOWEVER THE RADIUS OR CONCRETE THICKNESS MAY BE INCREASED
C6 UNLESS OTHERWISE NOTED CLEAR CONCRETE COVER SHALL BE IN ACCORDANCE WITH AS2783-1992
C7 CONCRETE COVER SHALL BE MAINTAINED BY THE USE OF APPROVED CHAIRS AT APPROXIMATELY 750 CROSS CENTRES
C8 ALL CONCRETE SHALL BE CURED BY THE OWNER FOR A MINIMUM OF 7 DAYS AFTER POURING BY KEEPING ALL EXPOSED SURFACES WET WITH WATER
C9 S NOTATION TO REINFORCEMENT DENOTES GRADE 230 DEFORMED BAR
UNLESS OTHERWISE NOTED ALL REINFORCEMENT LAPS SHALL BE A MINIMUM OF 500mm
C10 PROVIDE 10mm CONTROL JOINTS IN THE WALKWAY FINISH AT MAXIMUM 4000 CENTRES AND AT POINTS OF RE-ENTRANT CORNERS IN PLAN
C11 PROVIDE 10mm CONTROL JOINTS BETWEEN THE PERIMETER EDGE OF THE POOL AND ALL ABUTTING CONCRETE OR MASONRY FINISHES

FOUNDATION

F1 THE DESIGN OF THE POOL HAS BEEN BASED ON BEING SUPPORTED BY UNIFORM NATURAL GROUND WITH A MINIMUM SAFE BEARING VALUE OF 150kPa (UNLESS SHOWN AS SUSPENDED ON PIERS) THE BUILDER SHALL NOTIFY THE ENGINEER IF ANY OTHER GROUND CONDITIONS ARE ENCOUNTERED PRIOR TO COMPLETING THE EXCAVATION THE BUILDER SHALL ALSO NOTIFY THE ENGINEER IF A CLASS H OR E SUBGRADE IS ENCOUNTERED
F2 THE EXCAVATION SHALL BE KEPT FREE OF WATER ANY SOFTENED SUBGRADE MATERIAL SHALL BE REMOVED AND REPLACED WITH COMPACTED GRANULAR FILL PRIOR TO PROCEEDING
F3 THE UNDERSIDE OF THE POOL SHALL BE SEPARATED FROM THE SUBGRADE WITH A 200µm POLYTHENE MEMBRANE OVER 50 CRUSHED STONE COURSE AGGREGATE OR OTHER MATERIAL AS APPROVED BY THE ENGINEER
F4 ANY PROPOSED EXCAVATIONS WHICH ARE TO BE WITHIN THE ZONE OF INFLUENCE OF AN EXISTING STRUCTURE SHALL BE REFERRED TO THE ENGINEER PRIOR TO COMMENCEMENT



PROVIDE 4 OUTLETS
PROVIDE 1 SWIMJET
PROVIDE 4 SPA JETS

LEVELS SHOWN INDICATE FINISHED STRUCTURAL LEVEL
(+) ABOVE (−) OR BELOW EXISTING GROUND LEVELS

POOL PLAN

SCALE 1 100 0 1 2 3 4 5 10

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SHEET 2 OF 5
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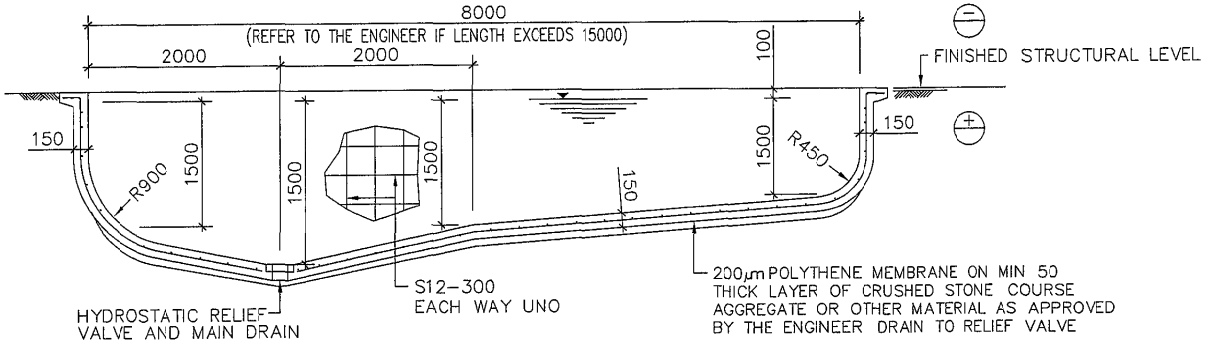

LONGITUDINAL SECTION
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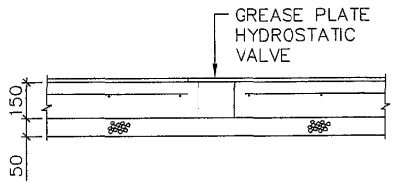

HYDROSTATIC VALVE DETAIL
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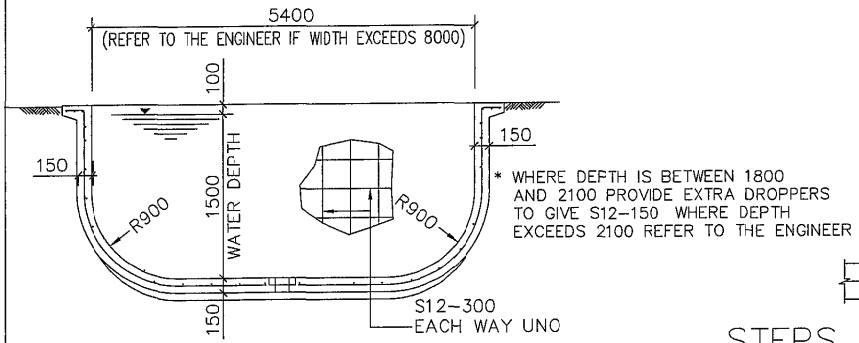

DEEP END SECTION
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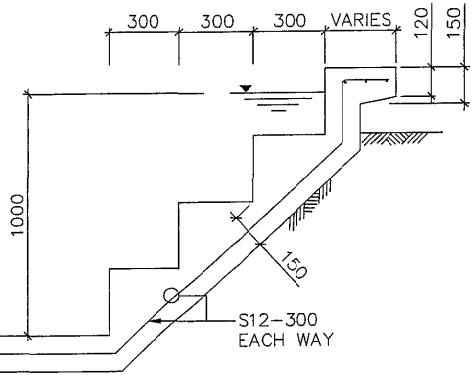

STEPS CAST AGAINST GROUND
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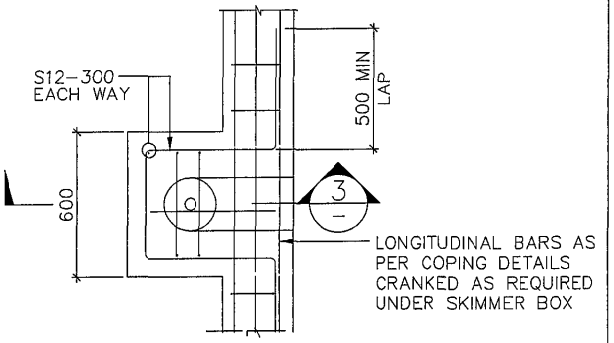

PLAN OF SKIMMER
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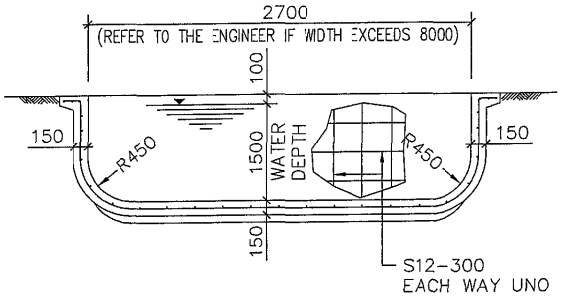

SHALLOW END SECTION
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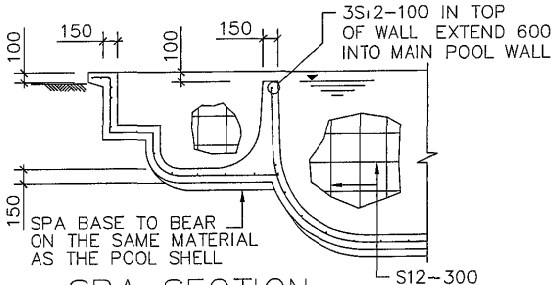

SPA SECTION
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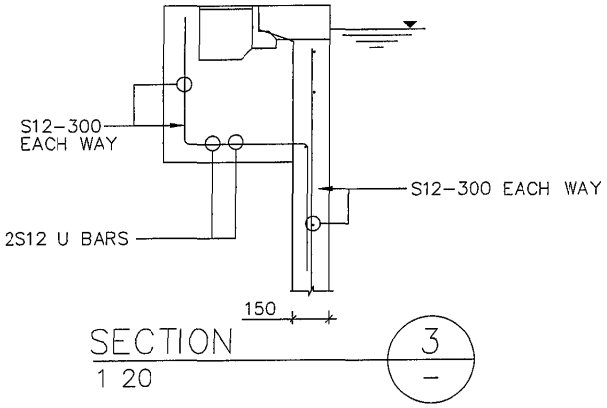

SECTION
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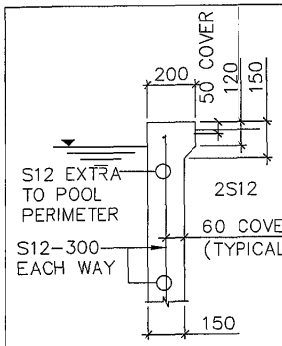

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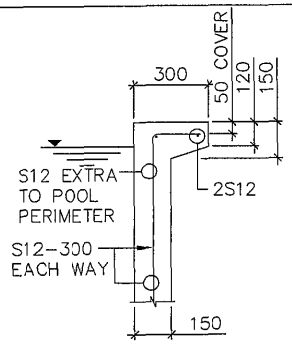

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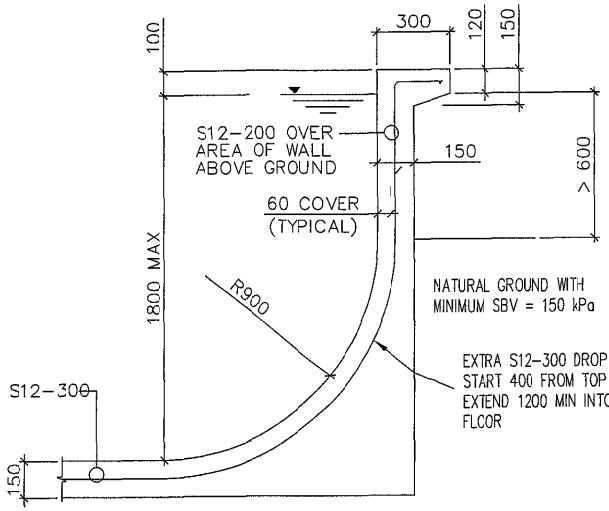

POOL WALL DETAIL
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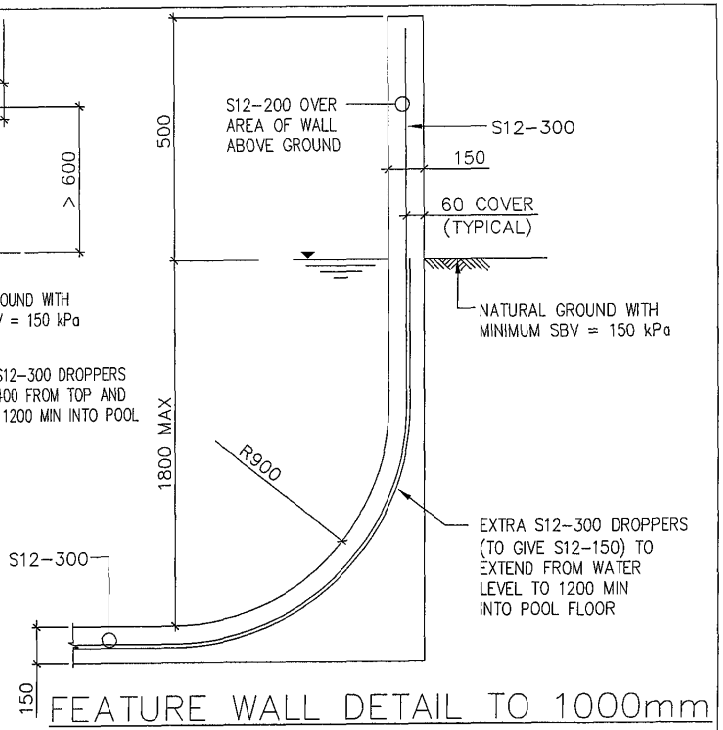
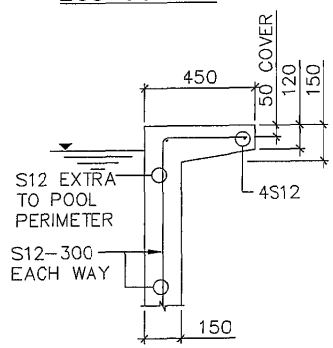


FEATURE WALL DETAIL TO 1000mm
1 20

REFER TO THE ENGINEER IF THE FEATURE WALL IS TO BE PART RETAINING OR IF ITS HEIGHT IS TO EXCEED 1000 ABOVE GROUND



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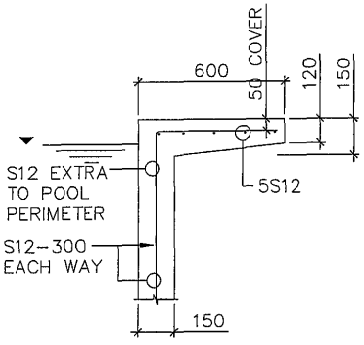

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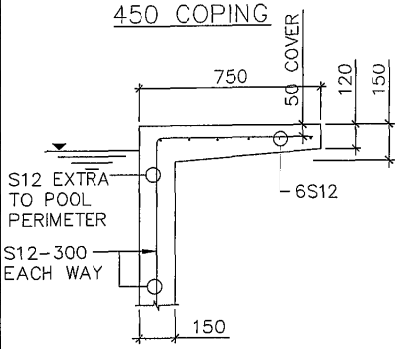

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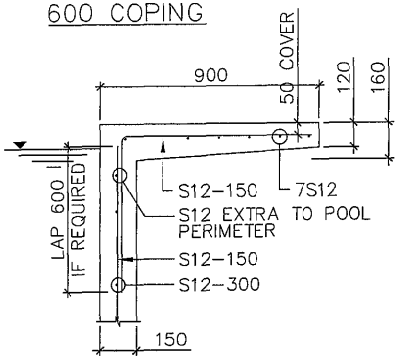

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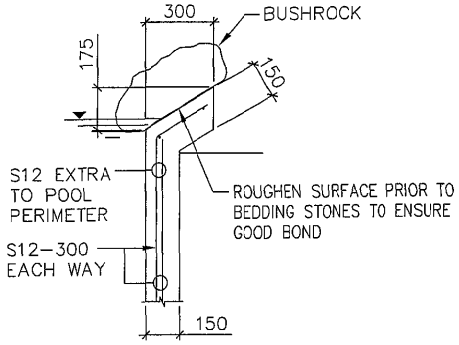
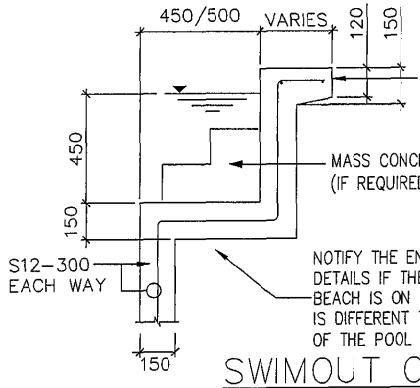


BUSHROCK COPING

COPING DETAILS
1 20



SWIMOUT OR BEACH
1 20

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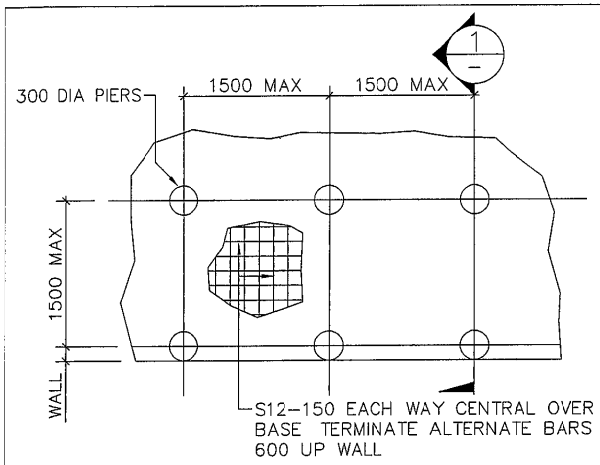
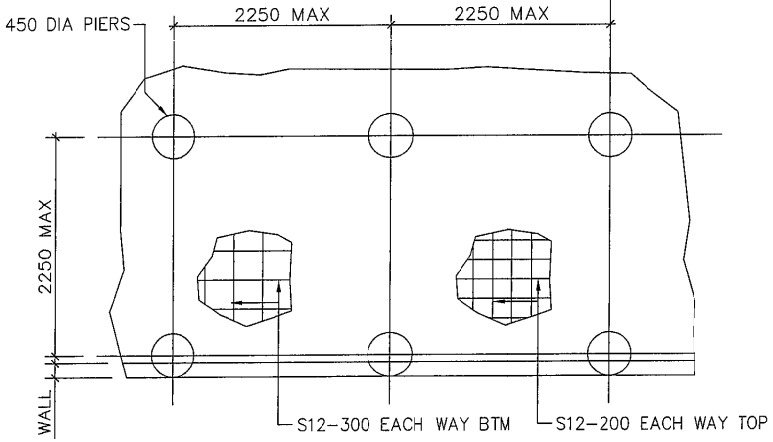


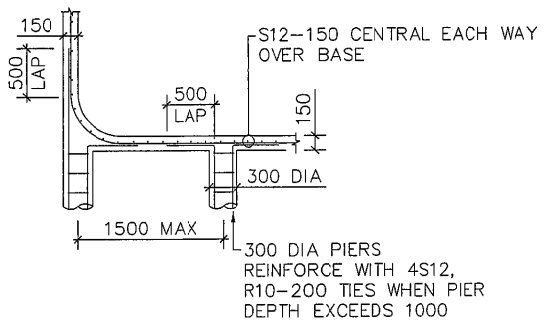
PART PLAN – OPTION 1



PART PLAN – OPTION 2

SUSPENDED POOL PLANS

1 50



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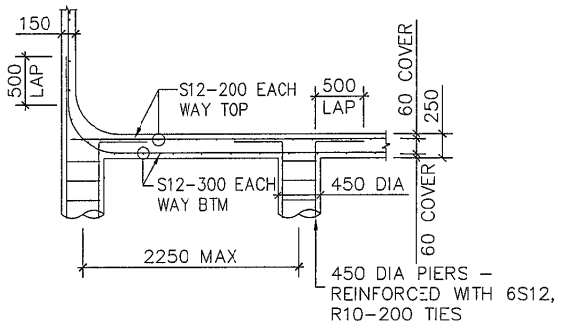

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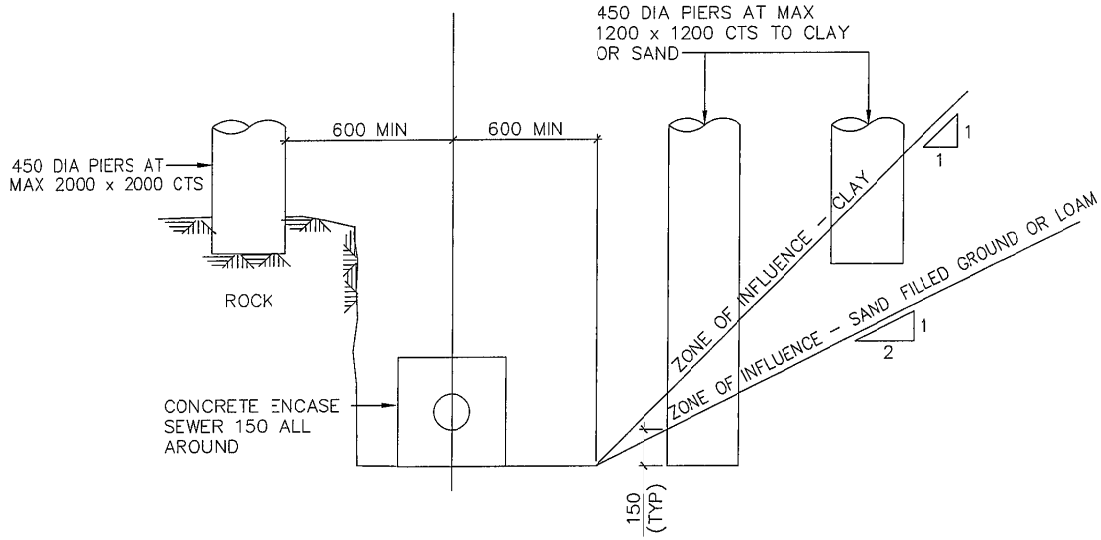

TYPICAL BUILDING OVER SYDNEY WATER SEWER

1 20

1 CLAY OR SAND TO HAVE A MINIMUM SAFE BEARING VALUE OF 200kPa
2 ROCK TO HAVE A MINIMUM SAFE BEARING VALUE OF 800kPa
3 POOL BASE TO BE AS PER SUSPENDED POOL FOR RELEVANT PIER SPACING

PIERS
F'c = 20 MPa
60 COVER TO REINFORCEMENT
PIERS TO BE FOUNDED IN UNIFORM ROCK WITH A SAFE BEARING VALUE OF 800 kPa REFER TO THE ENGINEER IF DEPTH OF PIERS EXCEEDS 3000

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PLANTING SCHEDULE

KEY BOTANIC NAME COMMON NAME

CANOPY TREES

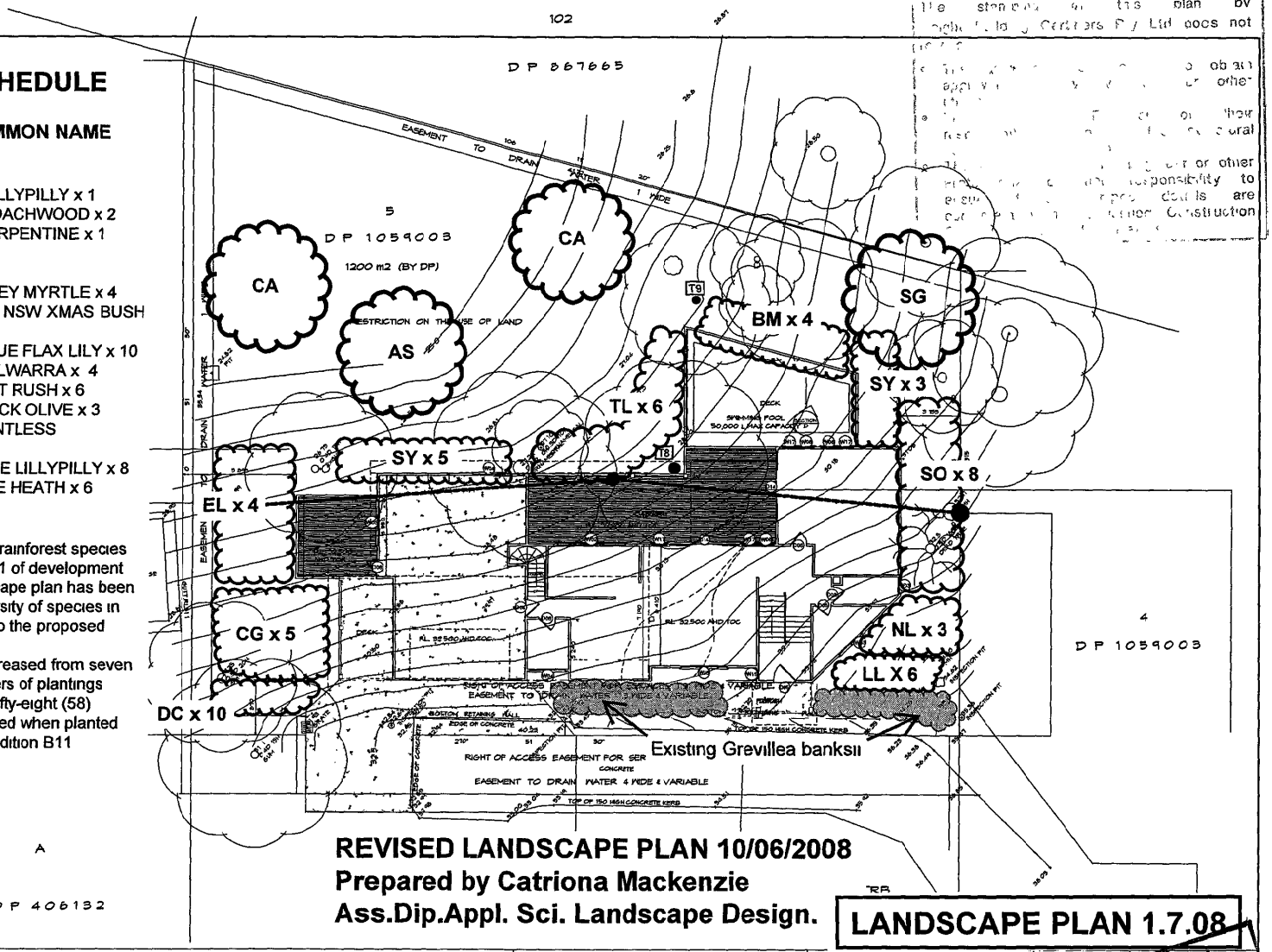
AC Acmena smithii LILLYPILLY x 1
CA Ceratopetalum apetalum COACHWOOD x 2
SG Syncarpia glomulifera TURPENTINE x 1

SHRUBS

BM Backhousia myrtifolia GREY MYRTLE x 4
CG Ceratopetalum gummiferum NSW XMAS BUSH x 5
DC Dianella caerulea BLUE FLAX LILY x 10
EL Eupomatia laurina BOLWARRA x 4
LL Lomandra longifolia MAT RUSH x 6
NL Notelaea longifolia MOCK OLIVE x 3
SY Synoum glandulosum SCENTLESS ROSEWOOD 8
SO Syzygium oleosum BLUE LILLYPILLY x 8
TL Trochocarpa laurina TREE HEATH x 6

NOTES

All plants are locally indigenous rainforest species
In accordance with condition C11 of development consent DAN0167/07, the landscape plan has been revised to provide a greater diversity of species in the areas immediately adjacent to the proposed swimming pool and dwelling
Proposed species have been increased from seven (7) to twelve (12), and the numbers of plantings increased from forty-six (46), to fifty-eight (58)
The four (4) canopy trees proposed when planted will meet the requirements of condition B11



REVISED LANDSCAPE PLAN 10/06/2008
Prepared by Catriona Mackenzie
Ass.Dip.Appl. Sci. Landscape Design.

LANDSCAPE PLAN 1.7.08

REVISIONS	PROPOSED NEW TIMBER FRAMED RESIDENCE AT 4a THE AVENUE NEWPORT LOT FOR MR AND MRS HENNESSY SITE PLAN	W & B CONSULTING PTY LTD BUILDING DESIGNERS PROJECT CONSULTANTS MEMBER HOUSING INDUSTRY ASSOCIATION	11Harst Place Belrose NSW 2085 Ph 02 9452 4367 Fax 02 9452 4366 Mob 0419 244 670 ACN 32 001 864 455 EMAIL mled@bigpond.net.au	DRAWN BY MIKE LEDBURY DATE 4 APRIL 07 SCALE 1 :200 DRAWING NUMBER Q7 HENNESSY 01

COUNCIL COPY

SYDNEY WATER
BUILDING PLAN APPROVED
SUBJECT TO REQUIREMENTS

Dolfin No D07/8-11294 Quick Check Ref No 2273795

e-Developer Case No N/A

Property Location

Street No 4A Lot No 5

Street Name The Avenue

Suburb Newport

Building/Structure Description New Residence

Building Plan No 07 Hennessy 01 Engineers Plan No H-08-21095-1A

Proposed building/structure is **APPROVED** to construct **OVER TO** a Sydney Water sewer/asset, subject to the following requirements
(NB Delete non applicable requirements)

1 The foundations/piers are to be founded below 1 in 1 zone of influence, soil strata
2 No part of the building/structure or its foundations to be less than a minimum 0 6 metre, horizontal distance from the centreline of the sewer
3 No part of the swimming pool or its foundations to be less than a minimum 0 6 metre, horizontal distance from the centreline of the sewer to the outer edge of the pool coping
4 No part of the building/structure or swimming pool coping to be less than 1 m horizontal distance from outside edge of maintenance hole rim
5 No piering of building/structure to be less than 2 m horizontal distance from centreline of maintenance hole to edge of piers
6 Foundations/piers are constructed in accordance with Engineers detail plans (stated above) as submitted to Sydney Water
7 All foundations/piers are to be founded to below the zone of influence or to solid rock
8 Concrete encase approximately 11 metres of sewer Concrete encasement to be carried out by an Accredited Constructor of Minor Works (Sewer) / Constructor and a Minor Works Agreement signed prior to commencement of works
9 Concrete encasement must extend a minimum of 600 mm past the external walls of the building/structure
10 Minimum of 300 mm vertical clearance between top of concrete encasement to underside of concrete slab

SPECIAL REQUIREMENTS

(a) Min 2 8m vertical clearance to be maintained to MH under deck

(b)

(c)

NOTE

Above requirements must be inspected/supervised by an Accredited Supplier or Sydney Water to enable the issue of a satisfactory compliance letter

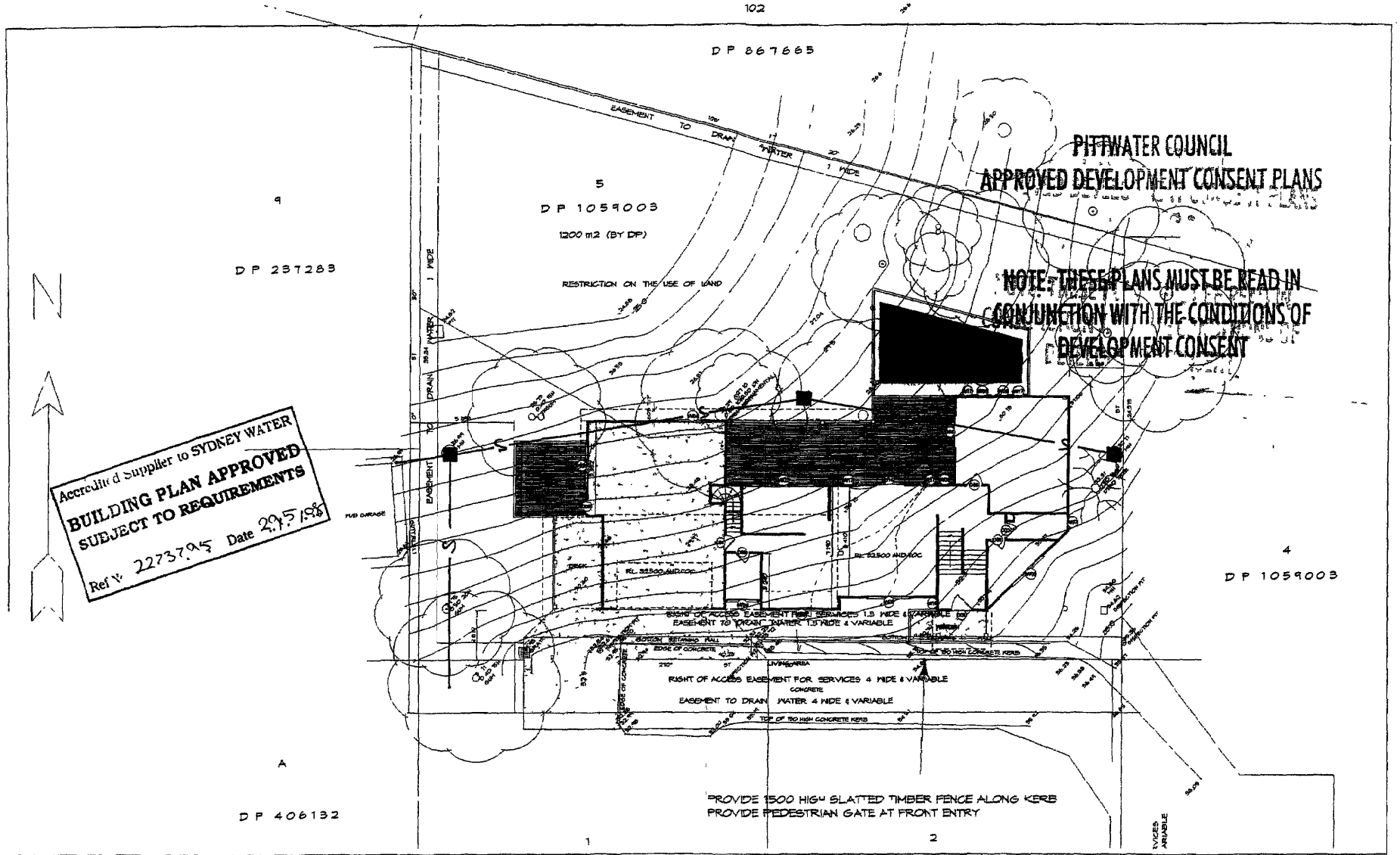
Permits are required to fill all new swimming pools with a capacity greater than 10,000 litres To arrange for a permit please contact Sydney Water on 13 20 92 during business hours Fines will apply for filling swimming pools without a permit.

APPROVED BY

WSC Company Name AWPM – Northern Beaches

Name of Key Personnel Alex Ross

Signature of Key Personnel  Date 29/05/2008



REVISIONS	PROPOSED NEW TIMBER FRAMED RESIDENCE AT 4a THE AVENUE NEWPORT LOT FOR MR AND MRS HENNESSY SITE PLAN

W & B CONSULTING PTY LTD
BUILDING DESIGNERS
PROJECT CONSULTANTS

MEMBER
HOUSING INDUSTRY
ASSOCIATION

11Harst Place Belrose NSW 2085
Ph 02 9452 4367
Fax 02 9452 4366
Mob 0419 244 670
ACN 32 001 864 955
E MAIL mled@bigpond.net.au

DRAWN BY	MIKE LEDBURY
DATE	4 APRIL 07
SCALE	1 200
DRAWING NUMBER	

C & SITE-IT

Civil & Structural Engineering Design Services Pty. Ltd.

ABN 62 051 307 852
3 Wanniti Road BELROSE NSW 2085
Email civilandstructural@bigpond com

Tel 02 9975 3899 Fax 02 99751943
Web www civilandstructural com au

19th June 2008

W & B Consulting Pty Ltd
11 Hurst Place
BELROSE NSW 2085

Dear Sir,

Re New Dwelling & Swimming Pool at 4A The Avenue, Newport

DRIVEWAY DESIGN ADEQUACY CERTIFICATE

I am an appropriately qualified and competent person in this area being listed in the National Professional Engineers Register (NPER) and I have been engaged by Mr Hennessy to prepare the driveway details for the above project and I am able to certify that the design for the proposed access driveway complies with the requirements of B6 1 of Pittwater DCP 21 to satisfy Condition C3

I possess Indemnity Insurance to the satisfaction of the building owner or my principal

Full Name of Designer	**Edward Arthur Bennett**
Qualifications	**M I E Aust CPE NPER 198230**
Address of Designer	**3 Wanniti Road, Belrose NSW 2085**
Business Telephone No	**02 99753899 Fax No 02 99751943**
Name of Employer	**Civil & Structural Engineering Design Services Pty Ltd**

Yours faithfully,

E A Bennett M I E Aust

COUNCIL COPY

DP SURVEYING SERVICES

A.B N 18 532 038 993

Land & Engineering Surveys

David Parsons, B Surv M I S. (Aust)

760A Barrenjoey Road Avenue Avalon 2107

Phone (02) 9974-3354 Fax (02) 9974-3352

Mobile 0414 183 220

Email david@dpsurveying com au

Our Ref 1883

18 June, 2008

DARYL HENNESSY
58 BARRENJOEY ROAD
MONA VALE NSW 2103

Re 4A The Avenue, Newport

As instructed I have inspected the Pittwater Council approved plans of the proposed residence at the abovementioned address and prepared by W & B Consulting Pty Ltd dated 04/04/2007 and find that if the residence and driveway extension are constructed in accordance with the said plans the proposed access driveway will comply with the requirements of clause B6 1 of Pittwater 21 DCP in that egress to the shared driveway and The Avenue will be possible in a forward direction

David Parsons
Registered Surveyor

URBAN FORESTRY AUSTRALIA

TREE MANAGEMENT CONSULTING ARBORICULTURISTS

ARBORICULTURAL ASSESSMENT

for

Mr and Mrs Hennessy
58 Barrenjoey Road
MONA VALE NSW 2103

SITE ADDRESS
4A THE AVENUE
NEWPORT NSW

JUNE 2008

MEMBER OF
INSTITUTE OF AUSTRALIAN
I A C A
CONSULTING ARBORICULTURISTS

URBAN FORESTRY AUSTRALIA

ABN 90 639 906 218
www urbanforestry com au

Correspondence

PO Box 151
NEWPORT NSW 2106

Telephone (02) 9918 9830
0414 987 417
Facsimile (02) 9918 9844
Email cmackenzie1@bigpond com

CONTENTS

1 INTRODUCTION

1 1 This amendment to the original Arboricultural report by Urban Forestry Australia, dated April 2006, was commissioned by Emay and Daryl Hennessy, owners of the subject site
The subject site is identified as Lot 5 in D P 1059003, and known as 4A The Avenue, Newport, New South Wales

1 2 The original report of April, 2006 accompanied a development application to Pittwater Council for the proposed construction of a new dwelling, garage and pool on the subject site

1 3 The purpose of the original report was to assess the health and condition of trees within proximity to the proposed development of the subject site The report also assessed any identified or potential impacts that the proposed development may have on the subject trees, and provided recommendations for tree retention and removal, and guidelines for tree protection and maintenance

1 4 The Development Application DAN0176/07 was approved on 15th October, 2007 This amended report addresses the requirements of Development Consent condition C9, specifically addressing the protection measures for Trees 8 and 9

1 5 Information contained in this Arboricultural Assessment covers only the trees that were examined and reflects the condition of the trees at the time of inspection Care has been taken to obtain all information from reliable sources
All data has been verified as far as possible, however, I can neither guarantee nor be responsible for the accuracy of information provided by others

1 6 This report is not intended to be a comprehensive hazard assessment, however the report may make recommendations, where appropriate, for further assessment or testing of trees where potential structural problems have been identified or where below ground investigation may be required

2 METHODOLOGY

2 1 In preparation for the April 2006 report, a ground level visual tree assessment (Mattheck 1994) was undertaken by the author of this report on 5 April, 2006
A second inspection of Trees 8 and 9 was undertaken on 10 June, 2008

2 2 Tree height and canopy spread was estimated
Trunk diameter was measured at 1 4 metres above ground level (DBH), using a standard metal tape

2 3 Field observations were written down

2 4 No aerial (climbing) inspections or woody tissue testing was undertaken as part of this tree assessment
Information contained in this tree report covers only the trees that were examined and reflects the condition of the trees at the time of inspection

2 5 Plans and documents referenced for the preparation of this amended report include

- Plans and Elevations, Dwg No's 07 HENNESSY 01- 13, dated 04/04/07, prepared by W & B Consulting Pty Ltd
- Pittwater Council Development Consent DAN0176/07, issued 15th October, 2007

2 6 Trees assessed at the original site inspection in 2006 include those within 5 metres of the proposed development, or where they may be outside the 5 metre setback, but potentially affected by the proposal (including neighbouring properties)
Only Trees 8 and 9 were re-inspected at the June 2008 site visit

2 7 Trees are shown on a marked up copy of the site plan The plan is attached as Appendix D – Tree Plan

3 OBSERVATIONS AND DISCUSSION

3 1 General

3 1 1 Many of the subject trees are in poor condition due to overplanting, pest and fungal problems, poor pruning techniques, and restricted area for crown and/or root development

3 1 2 There are six (6) trees within the site which are considered to contribute to the site amenity, and these are all proposed for retention
For the most part, these trees exhibit good health and condition

3 2 Tree removal

3 2 1 Of the sixteen (16) trees assessed, ten (10) are proposed for removal
Of these trees it is noted

- Eight (8) are in poor to very poor health and condition, and would be removed for safety reasons, regardless of site development
  These are Trees 2, 4, 6, 7, 10, 12 (which is outside the property boundary, but a significant hazard), 15 and 16, and
- Two (2) are in fair condition – Trees 11 and 14

3 2 2 The two (2) *Guioa semiglaucas* – Trees 6 and 7, are in very poor condition, and are just too close to the proposal to retain without excessive branch removal The ongoing risk of branch and/or stem failure at such proximity to the dwelling and open space precludes their safe retention in this location Given the constraints of the site, e g planning controls on boundary setbacks, easements and land use restrictions, it would be reasonable to remove these two trees to construct the dwelling, enabling an area around the structure where the occupants can feel safe from high risk trees

3 3 Trees to be Retained

3 3 1 Six (6) trees are proposed for retention as part of this development proposal These are Trees 1, 3, 5, 8, 9 and 13
Of these it is noted

- Tree 1 is in poor health and may not be a candidate for retention in the long term,
- Tree 3 is actually two trees which should always be treated as a single unit,
- Trees 5, 8, 9 and 13 are generally in good health and condition

3 4 Impacts on Trees Proposed for Retention

3 4 1 Tree 1

This rainforest tree is showing signs of decline, although it may recover to an extent where reasonable maintenance may allow retention for the short to medium term (e g 5 – 15 years) It is exposed as a result of approved subdivision works removing surrounding vegetation, which has probably contributed to its current poor vigour
The crown is high and clear of the proposed garage roof line so no pruning, other than deadwooding, would be required

3 4 2 The proposed garage, stairs and deck on the west side of the dwelling are fully elevated Provided piers are hand dug and located away from any primary roots, the development is not expected to accelerate the decline of the tree Protection of the tree stem and rootzone would be required to ensure increased foot traffic and other site activities do not also contribute to the decline of the tree

3 4 2 Tree 3

This mature Turpentine is well clear of the elevated structure, and would require normal protection measures to reduce any impacts of work activities

Fencing and silt control measures would suffice as protection against materials stargaze and particulates from encroaching into the majority of the root zone

Any pruning of the tree crown would be minor for garage roof clearance, and, given the good vigour of the tree, not expected to create a decline in tree health as a result

3 4 3 Tree 5

A young Paperbark located well clear of the dwelling Normal tree protection would be required to ensure the tree is not affected by work activities

3 4 4 Tree 8

The condition of development consent requires this tree to be retained It is extremely close to the proposed deck, and it appears the approved roofline is over the tree on plan

A proposed pier would be located within 300mm of the base of the tree

3 4 5 Tree 9

The proposed pool is elevated well above ground, and approximately 1 2 metres from the tree The greatest impact to the tree would occur via compaction of soil within the root zone, particularly upslope of the tree

3 4 6 Tree 13

This Turpentine is located approximately 3 metres from the east side of the elevated dwelling Some branches are located approximately 4 metres and 8 metres above ground, on the west side of the tree, and may need to be removed or reduced to accommodate the dwelling

The crown of the tree is reasonable well balanced and could tolerate branch removal and deadwooding to reduce dropping of limbs on, or near the dwelling

3 4 7 There are a few immature *Livistona australis* Cabbage Tree Palms scattered through the development area These could be easily relocated outside the building footprint prior to works commencing

4 CONCLUSIONS

4 1 The trees nominated for removal are, for the most part, in poor health and/or condition, and do not warrant design changes to retain them

4 2 One tree proposed for removal is a locally significant species which could be retained if the proposed pool was redesigned to accommodate it
As the continued presence of this species in the local area is under threat the removal of two poor specimens should be considered reasonable if one good, healthy specimen can be retained

4 3 The proposal will not have any significant or detrimental impacts on the trees to be retained as the development is fully elevated, and no alteration of the existing ground contours is proposed
Minor pruning works may be required to provide building clearances, however this would not affect the health of the trees
Appropriate protection measures to retained trees would be required to ensure potential impacts such as slurry runoff and soil compaction do not affect tree root zones

4 4 The proposal is a reasonable one which does not intend to alter the nature, drainage patterns or topography of the site

4 5 Tree removal can be readily compensated for by planting in the large area where development is restricted
The replacement trees and understorey plantings would improve the landscape character, amenity and habitat potential of the site

5 RECOMMENDATIONS

5 1 Tree Removal

5 1 1 Remove the nominated trees to allow development

5 1 2 The removal must be carried out by trained tree workers with a minimum Australian Qualification Framework Level 3 in Arboriculture This is to ensure that untrained contractors do not inadvertently cause damage to trees to be retained

5 1 3 Where possible roots should be cut below ground Do not pull out stumps that lie within the PRZ of trees to be retained

5 1 4 Removed trees should be chipped, and this material used for temporary ground protection within the PRZ's of trees to be retained

5 2 Minimising Impacts on Trees to be Retained

5 2 1 *Specific*

Tree 8

Construction drawings need to modify the proposed roofline over the deck, to provide adequate clearance for the tree trunk

The drawings also must relocate any piers as far as practicable from the base of the tree Cantilevering of deck sections may be required to enable this Final pier locations must be determined by hand excavation to ensure woody anchor roots are not severed, damaged or significantly disturbed

5 2 2 Prior to construction, the tree is to be pruned to remove branches on its south side that may contact the built structure It is also recommended the smaller of the three stems (i e smaller stem growing to the northwest) is removed, as it is well over the pool area, and likely to be damaged during works The pruning must be carried out to Australian Standard 4373-2007 Pruning of Amenity Trees, and performed by a tree worker with a minimum Australian Qualification Framework Level 3 in arboriculture Removal of live

foliage is to be restricted to no more than 10% of the overall canopy area, otherwise an arboriculturist should be contacted for advice

5 2 3 Prior to construction, the tree must have the trunk protected from ground to 7 metres The protection device is to be generally in accordance with the materials and methods shown in Figure 1, page 10

5 2 4 To avoid unnecessary compaction of the soil within the root zone, and area of a minimum 4 metres radius of the tree, is to be covered in coarse mulch to a depth no less than 100mm Where areas of heavy foot traffic occurs within this mulched area, the ground is to be further protected by placing temporary boardwalks, or sturdy timber or metal planks which can support wheelbarrows, and the like

5 2 5 **Tree 9**

Prior to construction, the tree must have the trunk protected from ground to 6 metres The protection device is to be generally in accordance with the materials and methods shown in Figure 1, page 10

5 2 6 To avoid unnecessary compaction of the soil within the root zone, and area of a minimum 4 metres radius of the tree, is to be covered in coarse mulch to a depth no less than 100mm Where areas of heavy foot traffic occurs within this mulched area, the ground is to be further protected by placing temporary boardwalks, or sturdy timber or metal planks which can support wheelbarrows, and the like

5 2 7 Any pruning of this tree must be carried out to Australian Standard 4373-2007 Pruning of Amenity Trees, and performed by a tree worker with a minimum Australian Qualification Framework Level 3 in arboriculture Removal of live foliage is to be restricted to no more than 10% of the overall canopy area, otherwise an arboriculturist should be contacted for advice

5 2 8 *General*

Prior to commencement of any site works, the project arboriculturist is to meet the builder/project manager and determine the most appropriate tree protection measures to be adopted on site for the remaining trees to be retained

Protection devices may include mulching, tree guards and other devices other than fencing

5 2 9 Provide sediment control devices (i e silt arrestor fabric, etc) in front of the protection fencing upslope of any tree to be retained The silt control device must extend a minimum 4 metres in each direction across the slope to ensure runoff does not flow into the root zone The silt control fabric should be securely placed at approximately 100mm below ground, and at least 300mm above ground to be effective

5 2 10 Container size of proposed plants within the *Primary Root Zone* (PRZ) of trees to be retained should be determined by careful location of any woody tree roots prior to planting Otherwise, proposed plants should consist of tubestock only This is required to ensure that damage to the tree's roots is avoided or minimised

Mattocks and similar digging instruments must not be used within 3 metres of the trees Planting holes should be dug carefully by hand with a garden trowel, or similar small tool

5 2 4 No strip footings are to be used within the PRZ of trees to be retained Any pad footings proposed within the PRZ of trees must be dug by hand under the supervision of a qualified arboriculturist

5 3 Tree Protection Zones

5 3 1 Tree protection zones must be in place prior to any site works commencing, including clearing, demolition or grading

The following is strongly recommended

- It is recommended that an arboriculturist provide written certification that the TPZ is installed and will satisfy tree protection requirements
- The most appropriate fencing for TPZ is 1 8m chainlink with 50mm metal pole supports
- No stock-piling shall take place around the root zone of any tree intended for retention
- Nothing is to occur in the TPZ, so therefore all access to personnel and machinery, and storage of fuel, chemicals, cement or site sheds is prohibited
- Silt fencing and protection fencing must be inspected daily by the site supervisor Any repairs required must be carried immediately
- Signage should explain exclusion from the TPZ and carry a contact name for access or advice
- The TPZ cannot be removed, altered, or relocated without the projects arborists' prior assessment and approval

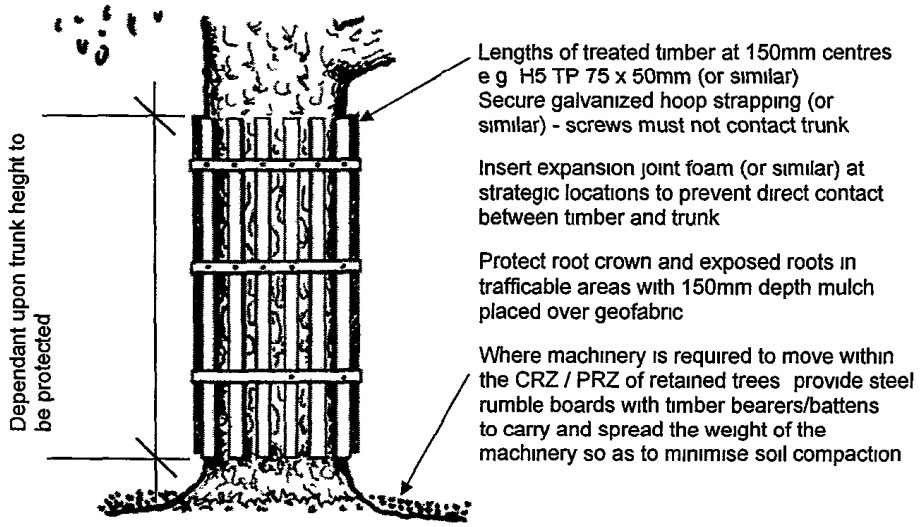


Figure 1 Tree Guard detail

5 4 Pruning

5 4 1 Pruning of any tree to be retained must be carried out by an AQF3 trained tree worker (or higher qualification), and be in strict accordance with Australian Standard 4373-2007 Pruning of Amenity Trees

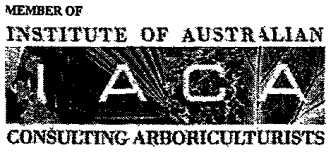
5 5 General

5 5 1 The following general comments apply to trees nominated for retention

- No stockpiling should take place around the root zone
- A qualified arboriculturist must be retained to carry out and/or supervise works within the *Critical Root Zone* (CRZ) and PRZ of the trees
- Any excavation within the CRZ should be carried out by hand i e a trench along the line of cut adjacent to the tree should be carefully dug by hand to expose any roots The project arboriculturist is to advise on which roots may be severed, if any After cutting of roots, machinery may complete the excavation
- Do not allow excavation vehicles or equipment to rip at, or remove the roots along the face of the excavation adjacent to a tree In the event the vehicles 'grab' at roots during works, the machine operator must stop work immediately and allow the roots to be cut before continuing
- Any damage to trees, or incursions into the TPZ, must be reported immediately to the project arboriculturist
- Service trenches should not pass through a fenced area, although if this cannot be avoided, a qualified arboriculturist should be present to supervise excavation, cut torn roots cleanly or redesign around roots
- Regular monitoring of protected trees during development works for unforeseen changes or decline will help to maintain healthy trees, and identify any further potential impacts
- All site trees should be re-assessed every two years, or after a major storm event, to ensure the trees are maintained in a safe and healthy manner The assessor must be a competent arboriculturist with a minimum Australian Qualification Framework (AQF) Level 5 attained

Should you require further assistance with this matter, or require my liaison with Council officers, please do not hesitate to contact me

Yours faithfully,



Catriona Mackenzie MAIH, MIACA, MISAAC
Consulting arboriculturist, horticulturist and landscape designer
Certificate of Horticulture *Honours*
Diploma of Horticulture (Arboriculture) *Distinction*
Associate Diploma of Applied Science (Landscape) *Distinction*

6 BIBLIOGRAPHY

Barrell, J (1995) *Pre-development Tree Assessment* from *Trees and Building Sites*, Eds Watson & Neely, International Society of Arboriculture, Illinois

Mattheck, C & Breloer, H (1999) *The Body Language of Trees* Research for Amenity Trees No 4, The Stationary Office, London

APPENDIX A

TERMS AND DEFINITIONS

TERMS AND DEFINITIONS

The following relates to terms or abbreviations that may have been used in this report and provides the reader with a detailed explanation of those terms

Age classes

- (I) = immature and refers to a well established but juvenile tree
- (S) = semi-mature and refers to a tree at growth stages between immaturity and full size
- (M) = mature and refers to a full sized tree with some capacity for further growth
- (O) = over-mature and refers to a tree about to enter decline or already declining

Condition refers to the tree's form and growth habit, as modified by its environment (aspect, suppression by other trees, soils) and the state of the scaffold(i e trunk and major branches), including structural defects such as cavities, crooked trunks or weak trunk/branch junctions These are not directly connected with health and it is possible for a tree to be healthy but in poor condition

Critical Root Zone (CRZ) refers to a radial offset of five (5) times the trunk DBH measured from the center of the trunk Excavation within this area may seriously destabilize the tree Fully elevated construction within this area is possible with specific root zone assessment

Diameter at Breast Height (DBH) refers to the tree trunk diameter at breast height (1 4 metres above ground level)

Health refers to the tree's vigour as exhibited by the crown density leaf colour presence of epicormic shoots, ability to withstand disease invasion and the degree of dieback

Primary Root Zone (PRZ) refers to a radial offset of ten (10) times the trunk DBH measured from the center of the trunk Excavation is possible within one offset only with this area and subject to specific rootzone assessment

SAFE USEFUL LIFE EXPECTANCY (SULE)
In a planning context, the time a tree can expect to be usefully retained is the most important long-term consideration SULE i e a system designed to classify trees into a number of categories so that information regarding tree retention can be concisely communicated in a non-technical manner
SULE categories are easily verifiable by experienced personnel without great disparity
A tree s SULE category is the life expectancy of the tree modified first by its age health condition safety and location (to give safe life expectancy) then by economics (i e cost of maintenance retaining trees at an excessive management cost is not normally acceptable), effects on better trees, and sustained amenity (i e establishing a range of age classes in a local population)
SULE assessments are not static but may be modified as dictated by changes in tree health and environment Trees with a short SULE may be at present be making a contribution to the landscape but their value to the local amenity will decrease rapidly towards the end of this period prior to them being removed for safety or aesthetic reasons
For details of SULE categories see Appendix B, adapted from Barrell 1996

Scaffold branch A primary structural branch of the crown

Tree Protection Zone (TPZ), generally the minimum distance from the center of the tree trunk where protective fencing or barriers are to be installed to create an exclusion zone

APPENDIX B

SULE CATEGORIES

Safe Useful Life Expectancy (SULE) CATEGORIES (after Barrell 1996 Updated 01/04/01)

The five categories and their sub-groups are as follows

1 **Long SULE** - tree appeared retainable at the time of assessment for over 40 years with an acceptable degree of risk, assuming reasonable maintenance

- A structurally sound trees located in positions that can accommodate future growth
- B trees which could be made suitable for long term retention by remedial care
- C trees of special significance which would warrant extraordinary efforts to secure their long term retention

2 **Medium SULE** - tree appeared to be retainable at the time of assessment for 15 to 40 years with an acceptable degree of risk assuming reasonable maintenance

- A trees which may only live from 15 to 40 years
- B trees which may live for more than 40 years but would be removed for safety or nuisance reasons
- C trees which may live for more than 40 years but would be removed to prevent interference with more suitable individuals or to provide space for new planting
- D trees which could be made suitable for retention in the medium term by remedial care

3 **Short SULE** - tree appeared to be retainable at the time of assessment for 5 to 15 years with an acceptable degree of risk assuming reasonable maintenance

- A trees which may only live from 5 to 15 years
- B trees which may live for more than 15 years but would be removed for safety or nuisance reasons
- C trees which may live for more than 15 years but would be removed to prevent interference with more suitable individuals or to provide space for new planting
- D trees which require substantial remediation and are only suitable for retention in the short term

4 **Removal** - trees which should be removed within the next 5 years

- A dead dying suppressed or declining trees
- B dangerous trees through instability or recent loss of adjacent trees
- C dangerous trees because of structural defects including cavities decay, included bark wounds or poor form
- D damaged trees that are clearly not safe to retain
- E trees which may live for more than 5 years but would be removed to prevent interference with more suitable individuals or to provide space for new planting
- F trees which are damaging or may cause damage to existing structures within the next 5 years
- G trees that will become dangerous after removal of other trees for the reasons given in (a) to (f)
- H trees in categories (a) to (g) that have a high wildlife habitat value and with appropriate treatment could be retained subject to regular review

5 **Small, young or regularly pruned** - Trees that can be reliably moved or replaced

- A small trees less than 5m in height
- B young trees less than 15 years old but over 5m in height
- C formal hedges and trees intended for regular pruning to artificially control growth

APPENDIX C

SCHEDULE OF ASSESSED TREES

SCHEDULE OF ASSESSED TREES

4A The Avenue, Newport 5th April, 2006

Tree No	Species and Common Name	Height (m)	Crown spread (m)	DBH (mm)	Age	Health	Condition	SULE	Comments
1	Rainforest sp Unidentified at time of inspection	15	9	400	OM	Poor	Fair	4A	Locally indigenous species Appears to be in decline as a result of adjacent subdivision works and exposure
2	*Brachychiton populneus* Kurrajong	11	4	220	SM	Poor	Fair	3B	Native species Poor form health Close to proposed dwelling
3	*Syncarpia glomulifera* Turpentine	13	12	320 + 400	M	Good	Fair	2A	Locally indigenous species Some crown suppression to south Two trees with shared crown
4	*Melaleuca styphelioides* Prickly-leaved Paperbark	13	6	450	OM	Poor	Poor	4A	Locally indigenous species Crown declining Major dieback Leaning Within development footprint
5	*Melaleuca styphelioides* Prickly-leaved Paperbark	8	1	100	SM	Good	Good	1A	Locally indigenous species Slightly suppressed by T6
6	*Guioa semiglauca* Guioa	10	7	180 to 300	OM	Poor	Poor	4C	Locally indigenous species Multiple stem and branch failures Declining condition Remove for safety reasons
7	*Guioa semiglauca* Guioa	8	5	130	SM	Good	Poor	4C	Locally indigenous species Heavily suppressed Significant lean to north Stem damage Failures noted Remove for safety reasons
8	*Syncarpia glomulifera* Turpentine	16	12	2 x 400 280	M	Good	Good	2A	Locally indigenous species One poorly developed stem Very close to proposed deck
9	*Guioa semiglauca* Guioa	11	7	250	M	Good	Good	3A	Locally indigenous species Close to pool
10	*Syncarpia glomulifera* Turpentine	11	4	110 120	SM	Poor	Poor	4A	Locally indigenous species Dead stem Highly suppressed High % dieback Within development footprint
11	*Allocasuarina torulosa* Forest Oak	15	6	300	OM	Fair	Fair	3D	Locally indigenous species Major branch *inclusions* Significant deadwood Within development footprint
12	*Eucalyptus* sp	18	5	500	OM	Poor	Poor	4C	Hard to identify species the condition of tree is so poor Significant decline Hazardous tree Outside property boundary Remove for safety reasons
13	*Syncarpia glomulifera* Turpentine	18	12	550	M	Good	Good	2A	Locally indigenous species Some deadwood to lower crown Outside property boundary

14	*Syncarpia glomulifera* Turpentine	11	8	310	M	Good	Fair	3D	Locally indigenous species Crown highly suppressed to west Within development footprint
15	*Syncarpia glomulifera* Turpentine	9	6	200	SM	Good	Poor	4C	Locally indigenous species Very poor form – kinked upper stem Within development footprint
16	*Syncarpia glomulifera* Turpentine							4A	Almost dead

LEGEND

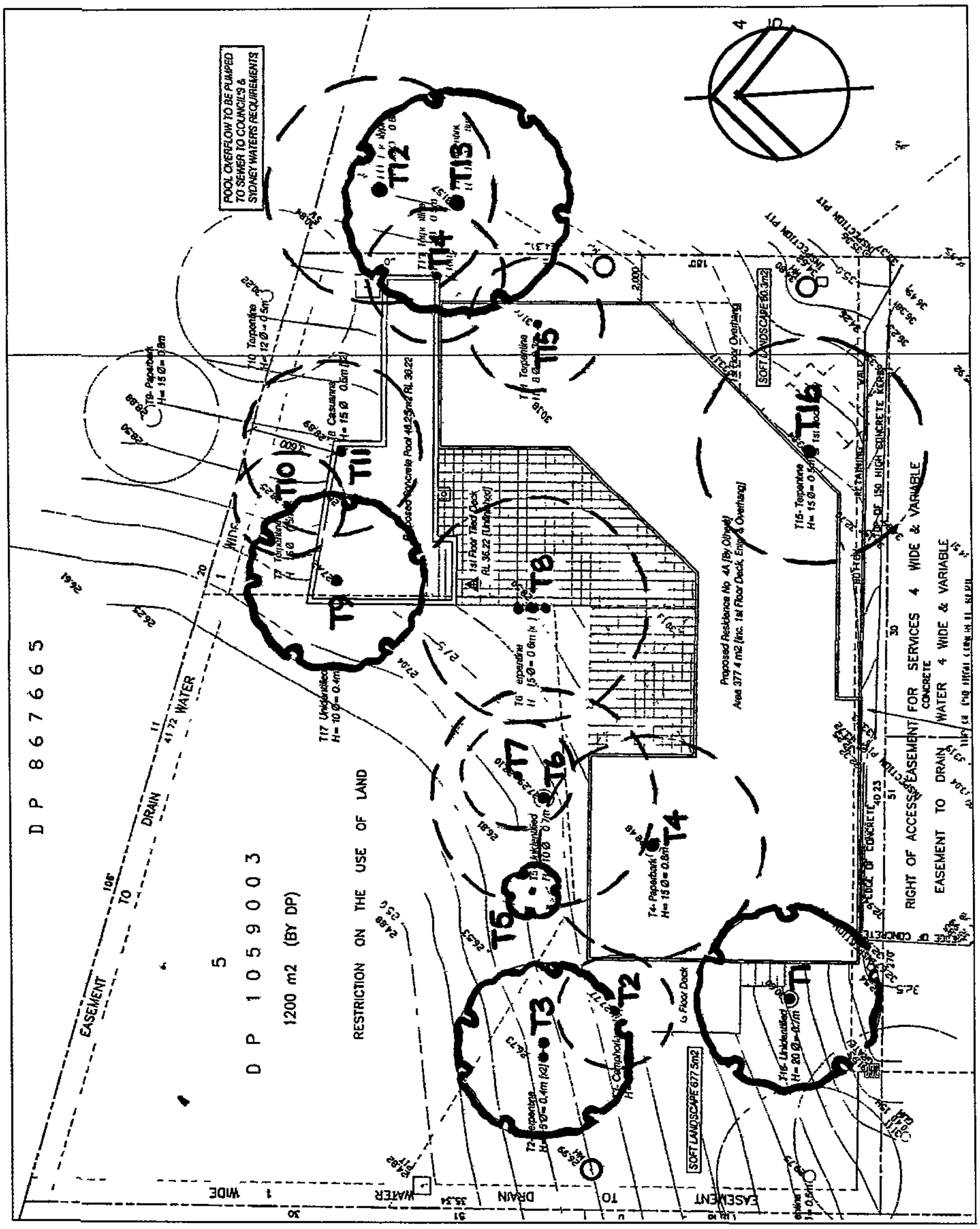
Trees to be retained

Trees to be removed

Tree which could be retained subject to amended pool design

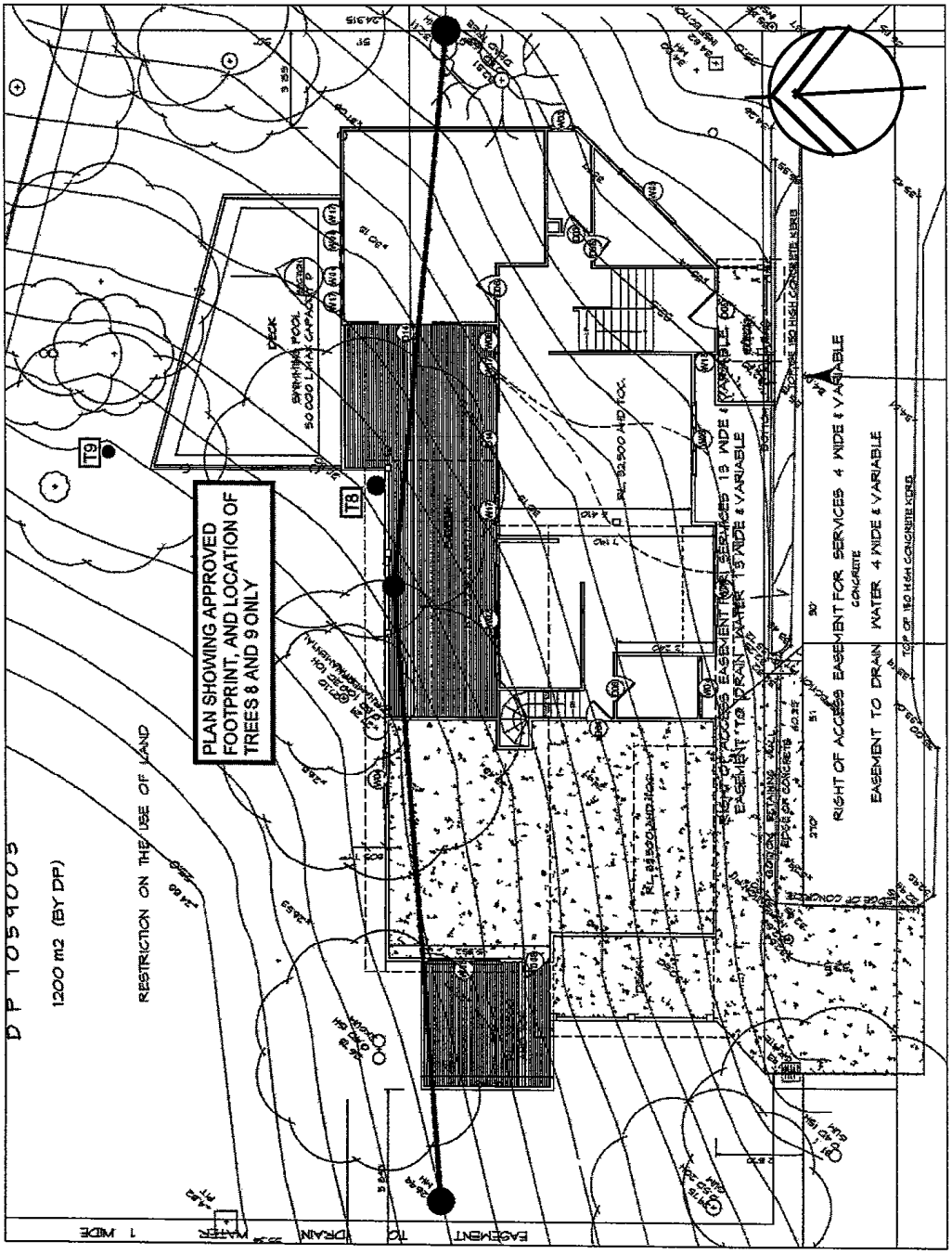
APPENDIX D

ORIGINAL (2006) TREE PLAN

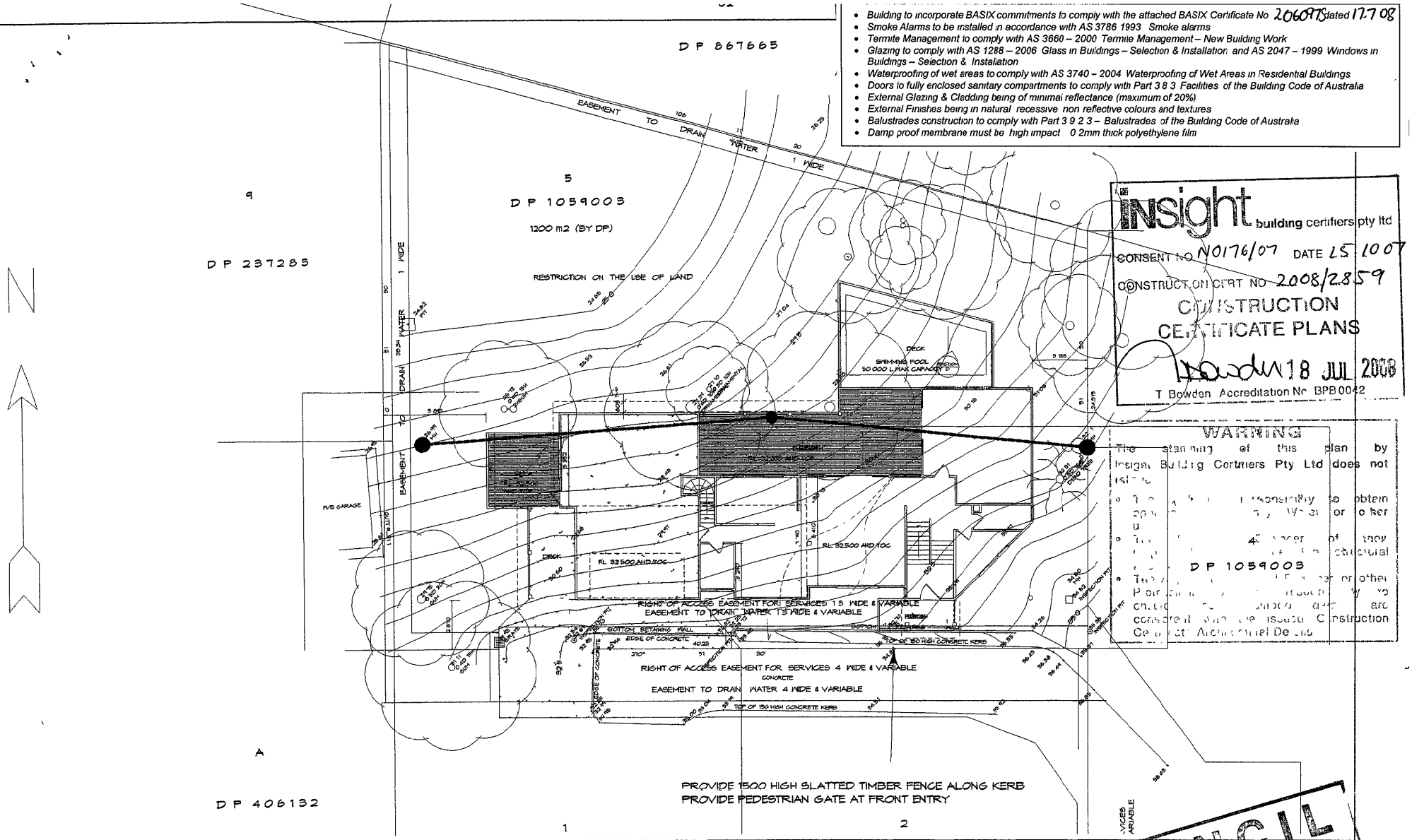

POOL OVERFLOW TO BE PUMPED TO SEWER TO COUNCIL'S & SYDNEY WATERS REQUIREMENTS
D P 8 6 7 6 6 5
D P 1 0 5 9 0 0 3
5
1200 m2 (BY DP)
RESTRICTION ON THE USE OF LAND
EASEMENT TO DRAIN WATER
RIGHT OF ACCESS EASEMENT FOR SERVICES 4 WIDE & VARIABLE
EASEMENT TO DRAIN WATER 4 WIDE & VARIABLE
SOFT LANDSCAPE 677.5m2
SOFT LANDSCAPE 60.3m2
Proposed Residence No 4A (By Others)
T1 T2 T3 T4 T5 T6 T7 T8 T9 T10 T11 T12 T13 T14 T15 T16

APPENDIX E

UPDATED (2008) TREE PLAN


PLAN SHOWING APPROVED FOOTPRINT, AND LOCATION OF TREES 8 AND 9 ONLY
T8
T9
DP 1059005
1200 m2 (BY DP)
RESTRICTION ON THE USE OF LAND
RIGHT OF ACCESS EASEMENT FOR SERVICES 4 WIDE & VARIABLE
EASEMENT TO DRAIN WATER 4 WIDE & VARIABLE
EASEMENT TO DRAIN WATER 1 WIDE
DECK
SWIMMING POOL
RL 52.300 AHD (TYP.)

- Building to incorporate BASIX commitments to comply with the attached BASIX Certificate No 206978 dated 17 7 08
- Smoke Alarms to be installed in accordance with AS 3786 1993 Smoke alarms
- Termite Management to comply with AS 3660 – 2000 Termite Management – New Building Work
- Glazing to comply with AS 1288 – 2006 Glass in Buildings – Selection & Installation and AS 2047 – 1999 Windows in Buildings – Selection & Installation
- Waterproofing of wet areas to comply with AS 3740 – 2004 Waterproofing of Wet Areas in Residential Buildings
- Doors to fully enclosed sanitary compartments to comply with Part 3 8 3 Facilities of the Building Code of Australia
- External Glazing & Cladding being of minimal reflectance (maximum of 20%)
- External Finishes being in natural recessive non reflective colours and textures
- Balustrades construction to comply with Part 3 9 2 3 – Balustrades of the Building Code of Australia
- Damp proof membrane must be high impact 0 2mm thick polyethylene film



insight building certifiers pty ltd

CONSENT NO N0176/07 DATE 15/10/07

CONSTRUCTION CERT NO 2008/2859

CONSTRUCTION CERTIFICATE PLANS

18 JUL 2008

T Bowden Accreditation No BPB0042

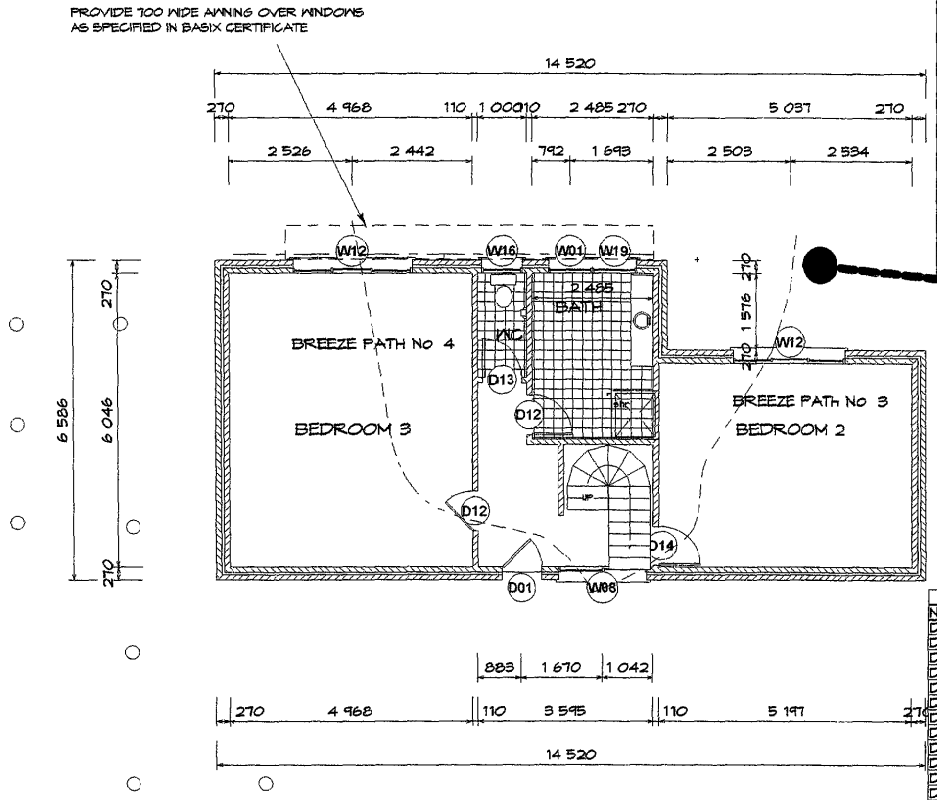
WARNING

The stamping of this plan by Insight Building Certifiers Pty Ltd does not relieve the owner or any other person of the responsibility to obtain approvals required by Council or other authorities prior to commencement of any work. The owner or any other person is responsible for ensuring that any structural details, calculations, specifications and other documentation are consistent with the issued Construction Certificate Architectural Drawings.

DP 1059003

COUNCIL

REVISIONS	PROPOSED NEW TIMBER FRAMED RESIDENCE AT 4a THE AVENUE NEWPORT LOT FOR MR AND MRS HENNESSY SITE PLAN	W & B CONSULTING PTY LTD BUILDING DESIGNERS PROJECT CONSULTANTS MEMBER HOUSING INDUSTRY ASSOCIATION	11Harst Place Belrose NSW 2085 Ph 02 9452 4367 Fax 02 9452 4366 Mob 0419 244 690 ACN 32 001 864 755 EMAIL mled@bigpond.net.au	DRAWN BY MIKE LEDBURY DATE 4 APRIL 07 SCALE 1 : 200 DRAWING NUMBER 07 HENNESSY 01



WINDOW SCHEDULE

NUMBER	QTY	FLOOR	WIDTH	HEIGHT	DESCRIPTION	COMMENTS	AREA
W01	1	1	900	800	FIXED GLASS		1.32
W02	1	2	3600	1400	TRIPLE SLIDING		1.32
W03	1	2	850	600	LOUVERED		1.32
W04	1	2	1500	1200	RIGHT SLIDING		1.32
W05	4	2	2400	1200	TRIPLE SLIDING		1.32
W06	2	2	850	2400	FIXED GLASS		1.32
W07	1	3	650	800	FIXED GLASS		1.32
W08	1	1	1800	1200	LEFT SLIDING		1.32
W09	3	3	600	800	LOUVERED		1.32
W10	4	3	2400	1200	TRIPLE SLIDING		1.32
W11	2	3	850	800	LOUVERED		1.32
W12	2	1	2400	1200	TRIPLE SLIDING		1.32
W13	1	2	474	2400	LOUVERED		1.32
W14	1	3	850	1200	FIXED GLASS		1.32
W15	1	3	650	800	LOUVERED		1.32
W16	1	1	826	800	LOUVERED		1.32
W17	4	2	850	2400	LOUVERED		1.32
W18	1	3	660	800	LOUVERED		1.32
W19	1	1	900	800	LOUVERED		1.32
W20	1	3	850	1200	LOUVERED		1.32

DOOR SCHEDULE

NUMBER	QTY	FLOOR	WIDTH	HEIGHT	DESCRIPTION	COMMENTS
D01	1	1	820	2040	EXT HINGED-DEFAULT	
D02	1	2	800	2040	HINGED-DEFAULT	
D03	1	3	820	2040	EXT HINGED	
D04	1	2	600	2400	EXT HINGED	
D05	3	2	820	2040	HINGED-DEFAULT	
D06	1	3	800	2040	HINGED-DEFAULT	
D07	1	2	820	2040	EXT HINGED-DEFAULT	
D08	1	3	3730	2040	QUAD SLIDER-PANEL	
D09	6	3	820	2040	HINGED-DEFAULT	
D10	1	2	5400	2600	GARAGE-DEFAULT	
D11	2	2	3600	2400	EXT QUAD SLIDER-GLASS	
D12	2	1	820	2040	HINGED-DEFAULT	
D13	1	1	800	2040	HINGED-DEFAULT - SMOKEY PEARL	
D14	1	1	800	2040	HINGED-DEFAULT	

BASIX COMMITMENTS AND COMPLIANCE

ALL COMPONENTS COVERED BY THE BASIX CERTIFICATE MUST COMPLY WITH THAT CERTIFICATE

1 THE DEVELOPER MUST INSTALL NEW WALLS FLOORS & CEILINGS A DETAILED IN THE BASIX CERTIFICATE
2 THE DEVELOPER MUST INSTALL WINDOWS GLAZED DOORS & SHADING DEVICES AS DETAILED IN THE BASIX CERTIFICATE.
3 THE DEVELOPER MUST PLANT INDIGENOUS OR LOW WATER USE SPECIES ON 750 SQ METRES OFTHE SITE
4 THE DEVELOPER MUST INSTALL A RAINWATER TANK OF AT LEAST 10 000 LITRES ON THE SITE
5 THE DEVELOPER MUST INSTALL CROSS VENTILATION AS DETAILED IN THE THERMAL COMFORT COMMITMENTS
6 THE DEVELOPER MUST INSTALL A HOT WATER UNIT AS NOTED IN THE ENERGY COMMITMENT SECTION
7 THE DEVELOPER MUST INSTALL WINDOWS OR SKYLIGHTS TO KITCHEN AND BATHROOMS AS DETAILED UNDER NATURAL LIGHTING
8 THE SWIMMING POOL MUST NOT HAVE A VOLUME GREATER THAN 50 KILOLITRES AND MUST BE OUTDOORS

REVISIONS

PROPOSED NEW TIMBER FRAMED RESIDENCE
AT 4a THE AVENUE
NEWPORT
LOT
FOR MR AND MRS HENNESSY
PROPOSED BASEMENT FLOOR PLAN

W & B CONSULTING PTY LTD
BUILDING DESIGNERS
PROJECT CONSULTANTS

MEMBER
HOUSING INDUSTRY
ASSOCIATION

11Harst Place Belrose NSW 2085

Ph 02 9452 4367
Fax 02 9452 4366
Mob 0419 244 670

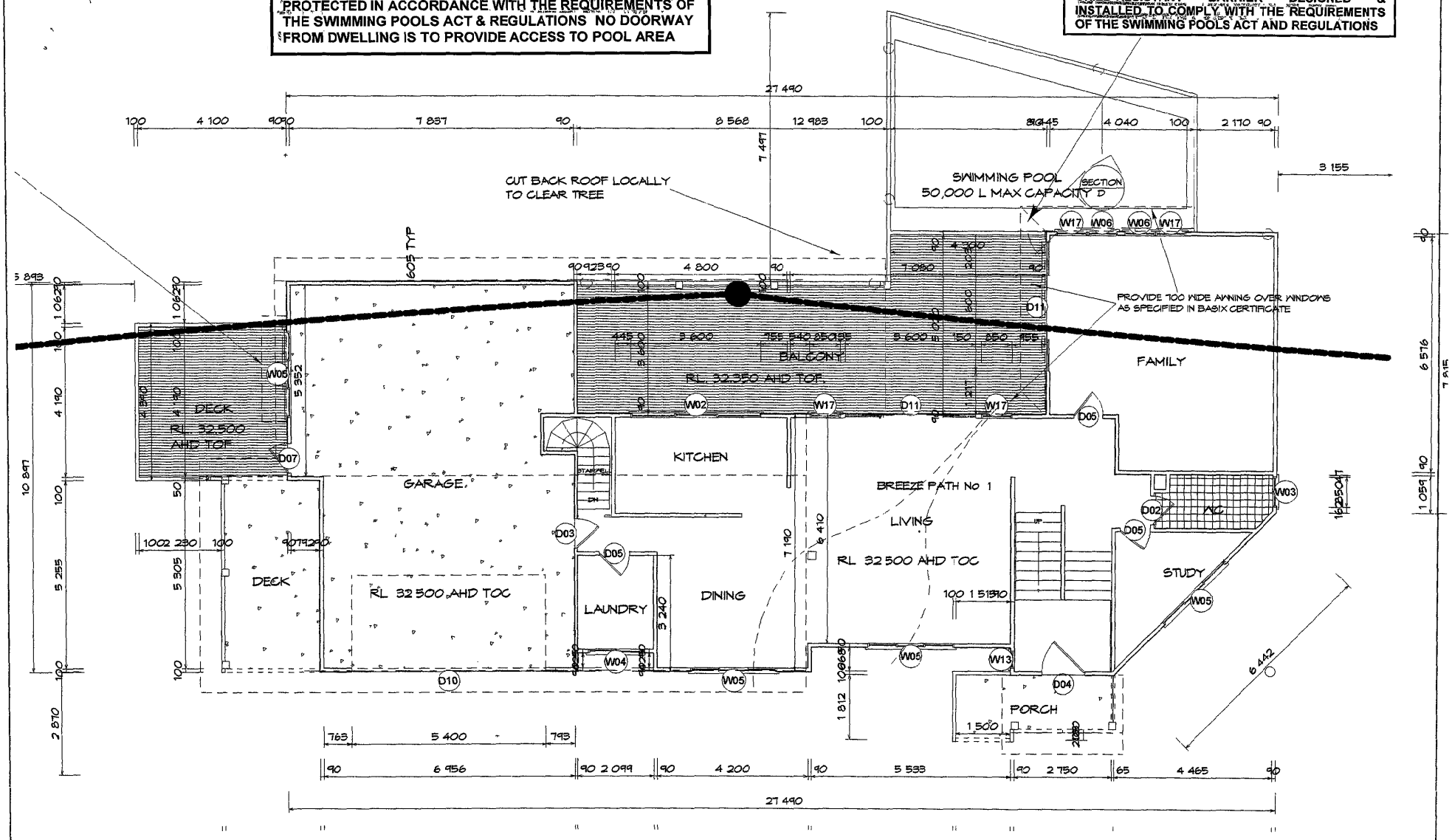
ACN 32 001 864 955

E MAIL mied@bigpond net au

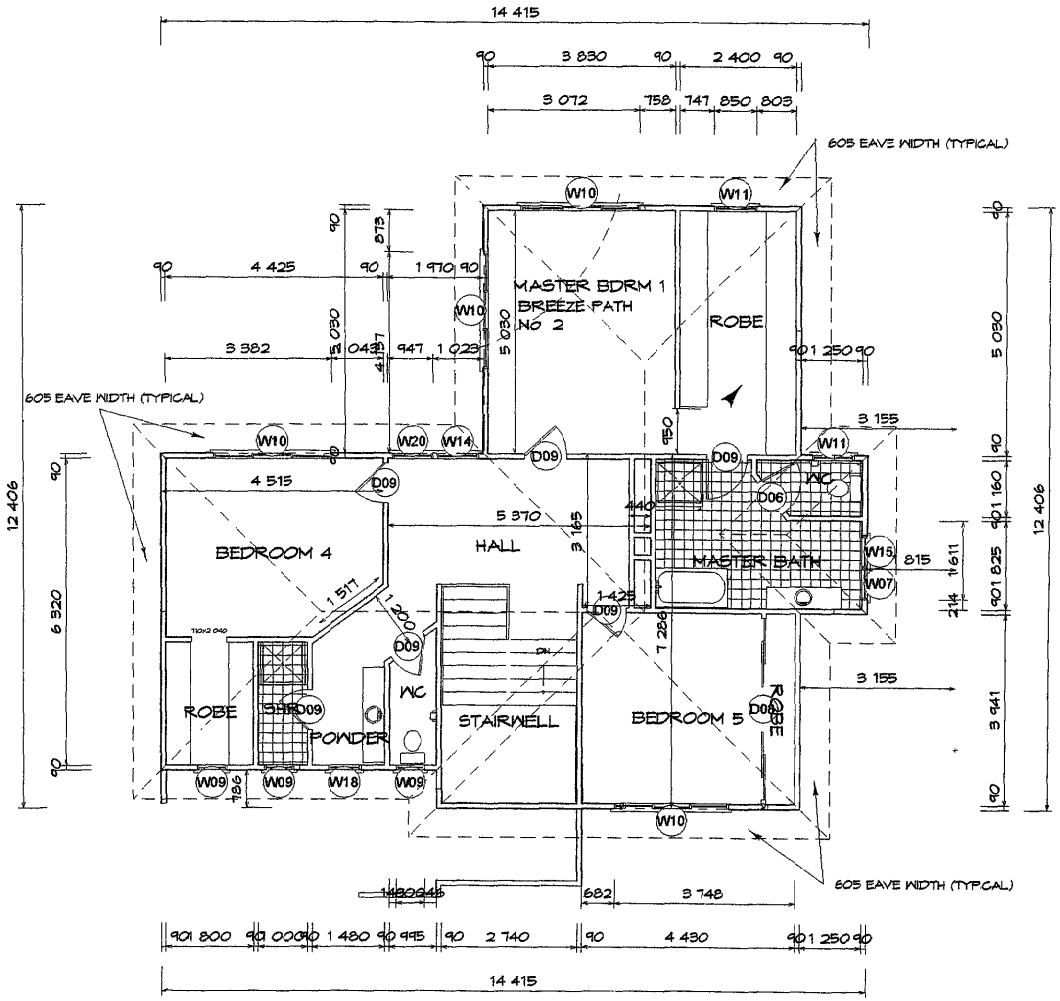
DRAWN BY	MIKE LEDBURY
DATE	4 APRIL 07
SCALE	1 100
DRAWING NUMBER	
07 HENNESSY 02	

NOTE WINDOWS OPENING ONTO POOL AREA TO BE PROTECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SWIMMING POOLS ACT & REGULATIONS NO DOORWAY FROM DWELLING IS TO PROVIDE ACCESS TO POOL AREA

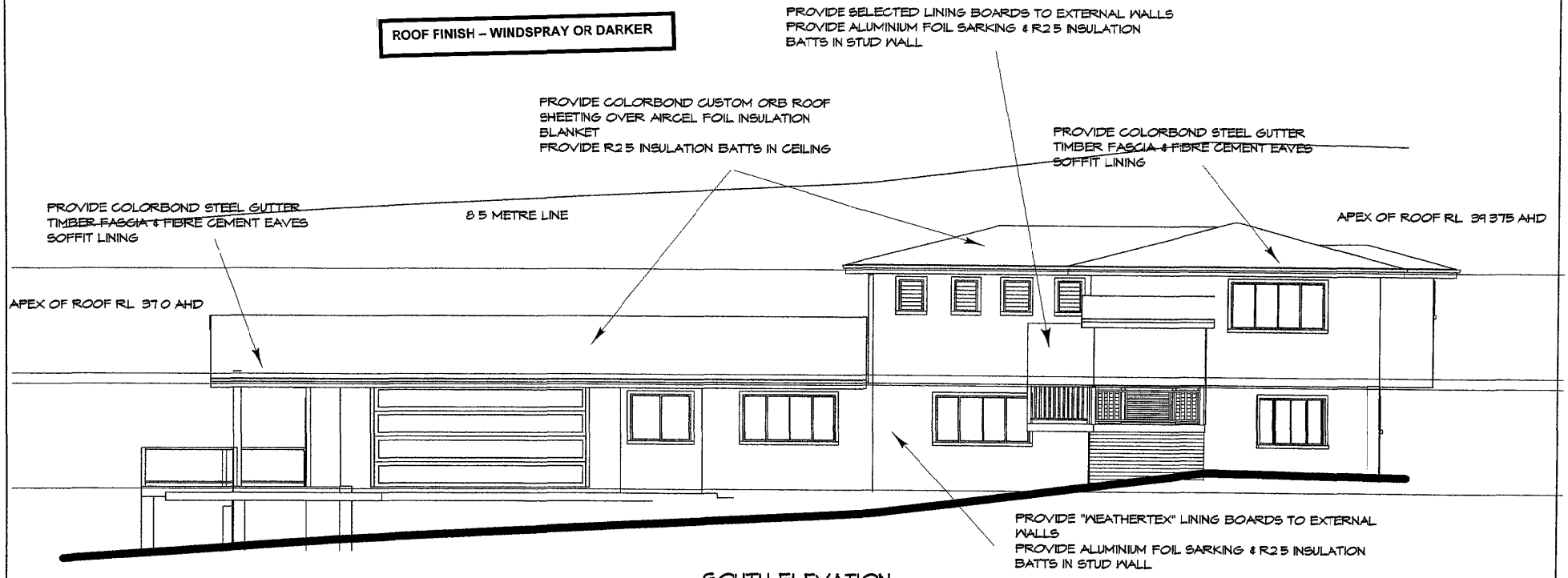
NOTE SWIMMING POOL TO BE SURROUNDED BY A CHILD-RESISTANT BARRIER DESIGNED & INSTALLED TO COMPLY WITH THE REQUIREMENTS OF THE SWIMMING POOLS ACT AND REGULATIONS



REVISIONS	PROPOSED NEW TIMBER FRAMED RESIDENCE AT 4a THE AVENUE NEWPORT LOT FOR MR AND MRS HENNESSY PROPOSED GROUND FLOOR PLAN	**W & B CONSULTING PTY LTD** BUILDING DESIGNERS PROJECT CONSULTANTS	11Harst Place Belrose NSW 2085 Ph 02 9452 4367 Fax 02 9452 4366 Mob 0419 244 670 ACN 32 001 864 955 E MAIL mled@bigpond net au	DRAWN BY	MIKE LEDBURY
		MEMBER HOUSING INDUSTRY ASSOCIATION		DATE	4 APRIL 07
				SCALE	1 100
				DRAWING NUMBER	07 HENNESSY 03



REVISIONS	PROPOSED NEW TIMBER FRAMED RESIDENCE AT 4a THE AVENUE NEWPORT LOT FOR MR AND MRS HENNESSY PROPOSED FIRST FLOOR PLAN	**W & B CONSULTING PTY LTD** BUILDING DESIGNERS PROJECT CONSULTANTS **MEMBER** **HOUSING INDUSTRY** **ASSOCIATION**	11Harst Place Belrose NSW 2085 Ph 02 9452 4367 Fax 02 9452 4366 Mob 0419 244 670 ACN 32 001 864 955 E MAIL mied@bigpond net au	DRAWN BY: MIKE LEDBURY DATE: 4 APRIL 07 SCALE: 1 100 DRAWING NUMBER 07 HENNESSY 04

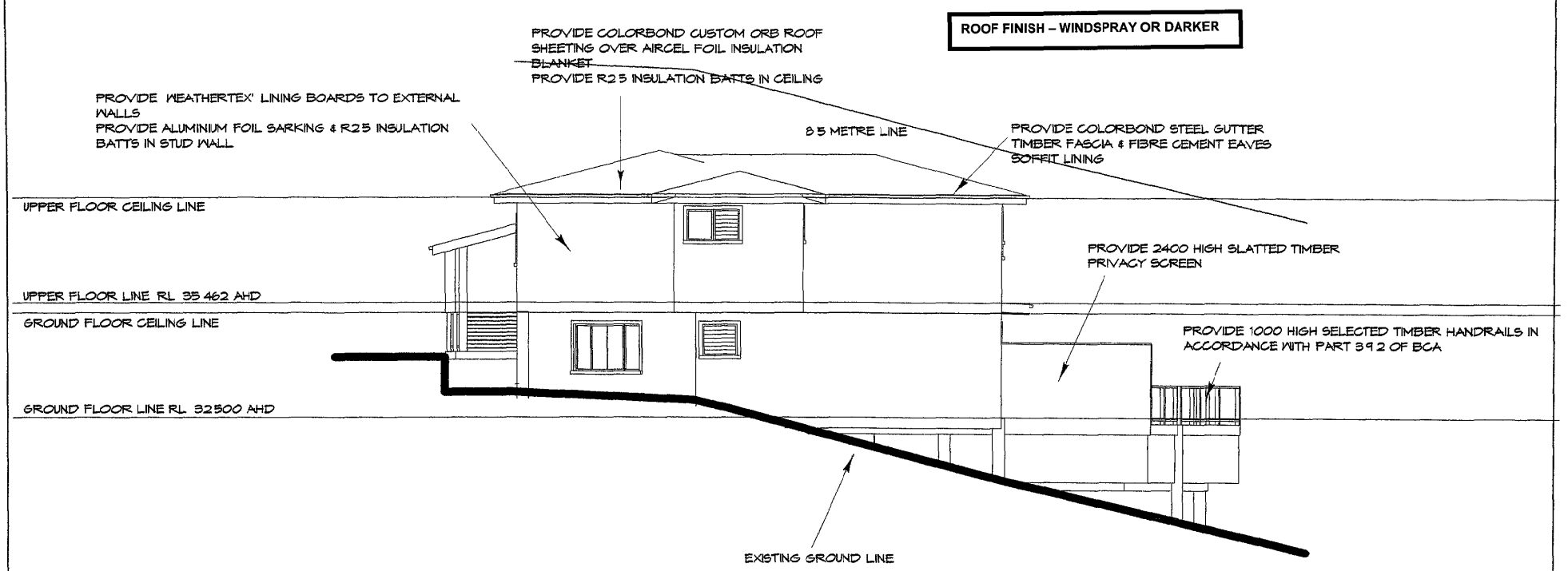


SOUTH ELEVATION

ROOF WATER NOTES

CONNECT NEW ROOF DRAINAGE LINES TO WATER TANKS UNDER HOUSE.
PROVIDE FIRST FLUSH SYSTEM PROVIDE FIRST FLUSH SYSTEM TO TANKS
DISCHARGE EXCESS INTO STORMWATER EASEMENT ON NORTH BOUNDARY

REVISIONS	PROPOSED NEW TIMBER FRAMED RESIDENCE AT 4a THE AVENUE NEWPORT LOT FOR MR AND MRS HENNESSY SOUTH ELEVATION	**W & B CONSULTING PTY LTD** BUILDING DESIGNERS PROJECT CONSULTANTS **MEMBER** **HOUSING INDUSTRY** **ASSOCIATION**	11Harst Place Belrose NSW 2085 Ph 02 9452 4367 Fax 02 9452 4366 Mob 0419 244 670 ACN 32 001 864 955 E MAIL mled@bigpond net au	DRAWN BY: MIKE LEDBURY DATE: 4 APRIL 07 SCALE: 1 100 DRAWING NUMBER 07 HENNESSY 05

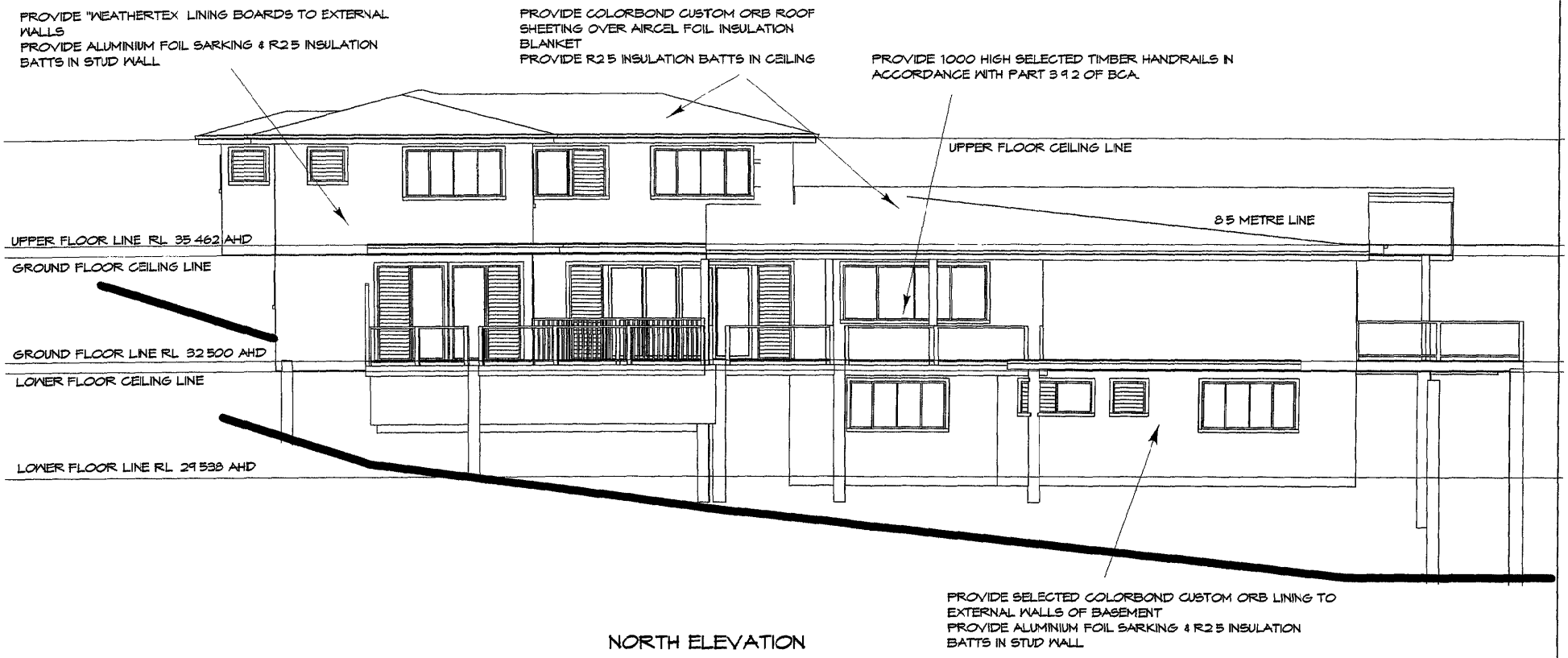


EAST ELEVATION

REVISIONS	PROPOSED NEW TIMBER FRAMED RESIDENCE AT 4a THE AVENUE NEWPORT LOT FOR MR AND MRS HENNESSY EAST ELEVATION	W & B CONSULTING PTY LTD BUILDING DESIGNERS PROJECT CONSULTANTS MEMBER HOUSING INDUSTRY ASSOCIATION	11Harst Place Belrose NSW 2085 Ph 02 9452 4367 Fax 02 9452 4366 Mob 0419 244 670 ACN 32 001 864 955 E MAIL mled@bigpond net au	DRAWN BY: MIKE LEDBURY DATE: 4 APRIL 07 SCALE: 1 200 DRAWING NUMBER 07 HENNESSY 06

NOTE BALUSTRADES FOR FLOOR/BALCONIES MORE THAN 4M ABOVE THE SURFACE BENEATH MUST NOT HAVE ANY HORIZONTAL ELEMENTS BETWEEN 150MM & 760MM ABOVE THE FLOOR WHICH COULD FACILITATE CLIMBING

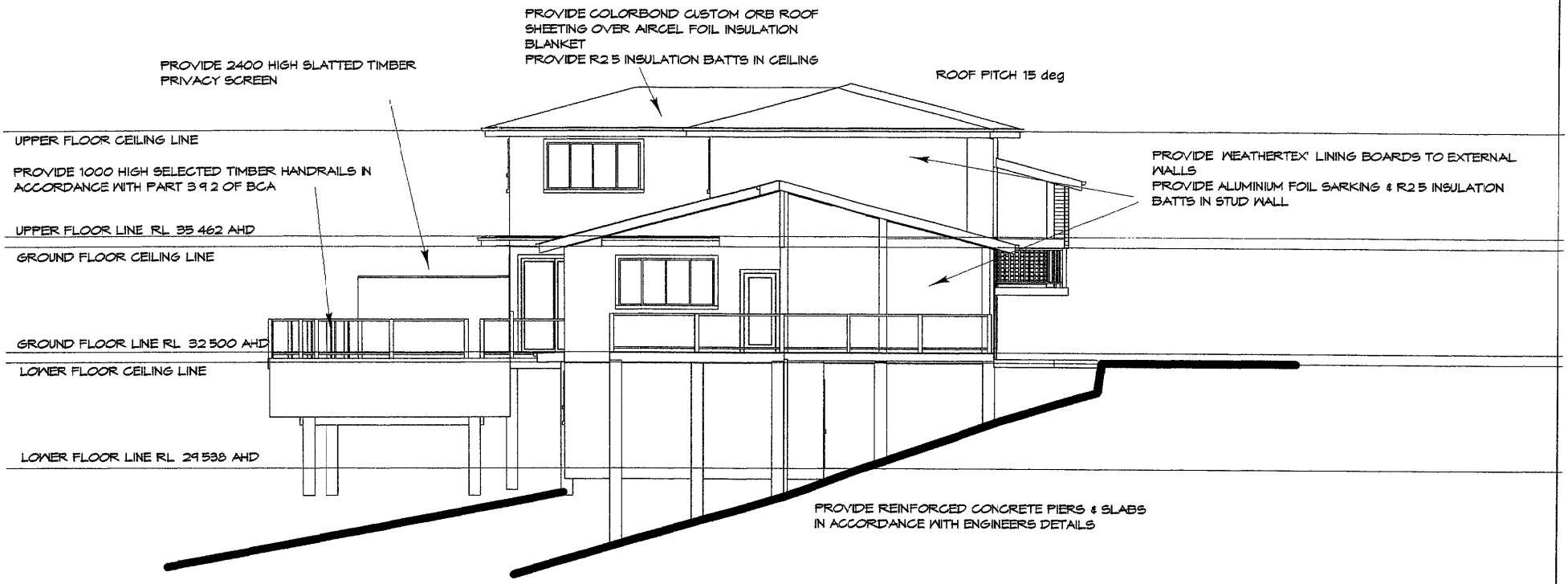
ROOF FINISH – WINDSPRAY OR DARKER



NORTH ELEVATION

REVISIONS	PROPOSED NEW TIMBER FRAMED RESIDENCE AT 4a THE AVENUE NEWPORT LOT FOR MR AND MRS HENNESSY NORTH ELEVATION	**W & B CONSULTING PTY LTD** BUILDING DESIGNERS PROJECT CONSULTANTS **MEMBER HOUSING INDUSTRY ASSOCIATION**	11Harst Place Belrose NSW 2085 Ph 02 9452 4367 Fax 02 9452 4366 Mob 0419 244 670 ACN 32 001 864 955 EMAIL mled@bigpond net au	DRAWN BY	MIKE LEDBURY
				DATE	4 APRIL 07
				SCALE	1 100
				DRAWING NUMBER	07 HENNESSY 07

ROOF FINISH – WINDSPRAY OR DARKER



WEST ELEVATION

REVISIONS		

PROPOSED NEW TIMBER FRAMED RESIDENCE
AT 4a THE AVENUE
NEWPORT
LOT
FOR MR AND MRS HENNESSY
WEST ELEVATION

W & B CONSULTING PTY LTD
BUILDING DESIGNERS
PROJECT CONSULTANTS

MEMBER
HOUSING INDUSTRY
ASSOCIATION

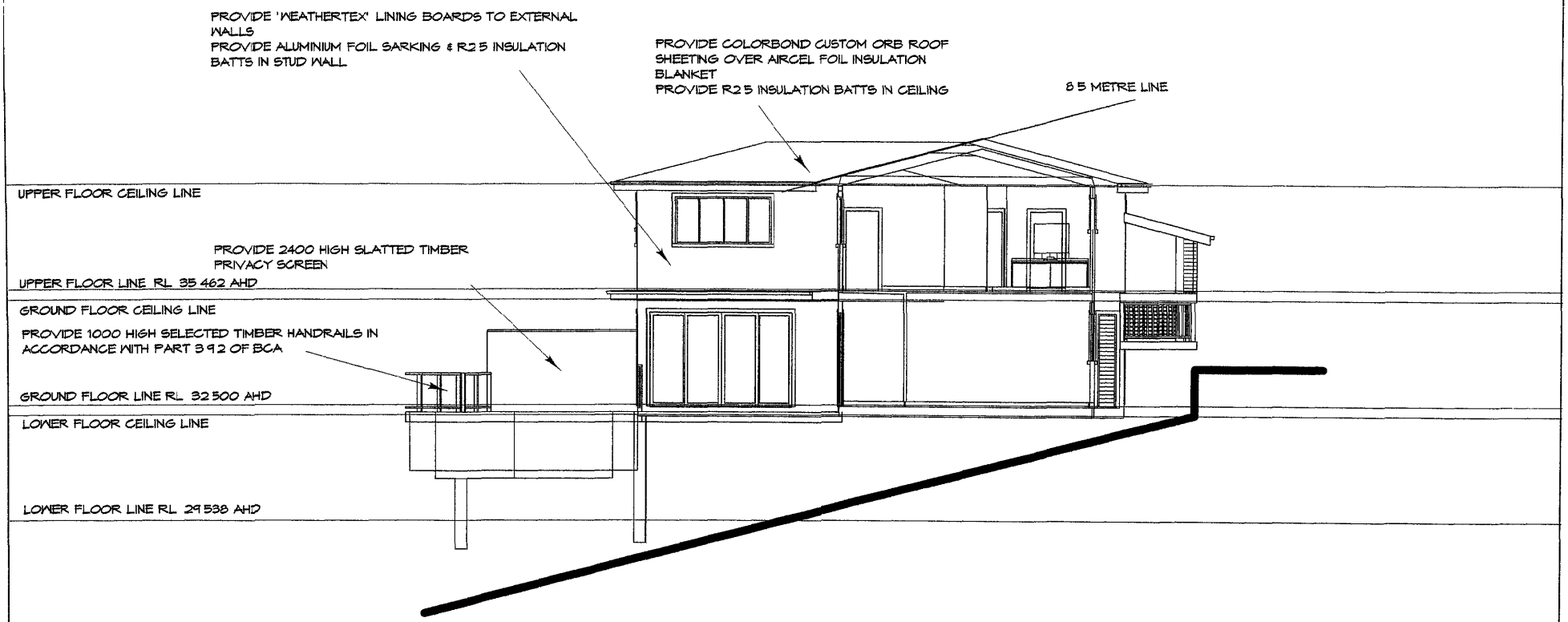
11Harst Place Belrose NSW 2085

Ph 02 9452 4367
Fax 02 9452 4366
Mob 0419 244 670

ACN 32 001 864 955

E MAIL mledebigpond net au

DRAWN BY	MIKE LEDBURY
DATE	4 APRIL 07
SCALE	1 100
DRAWING NUMBER	
07 HENNESSY 08	



SECTION A - A

REVISIONS		

PROPOSED NEW TIMBER FRAMED RESIDENCE
AT 4a THE AVENUE
NEWPORT
LOT
FOR MR AND MRS HENNESSY
SECTION A - A

W & B CONSULTING PTY LTD
BUILDING DESIGNERS
PROJECT CONSULTANTS

MEMBER
HOUSING INDUSTRY
ASSOCIATION

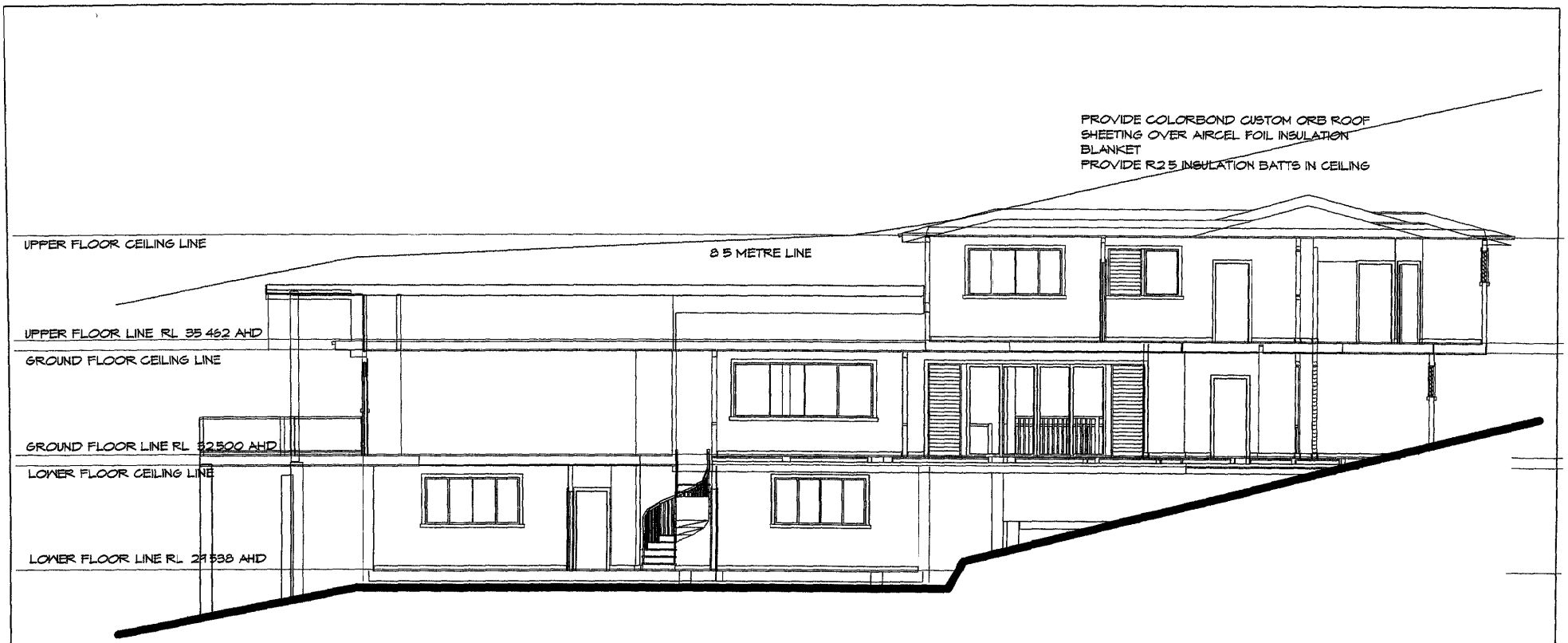
11Harst Place Belrose NSW 2085

Ph 02 9452 4367
Fax 02 9452 4366
Mob 0419 244 670

ACN 32 001 864 955

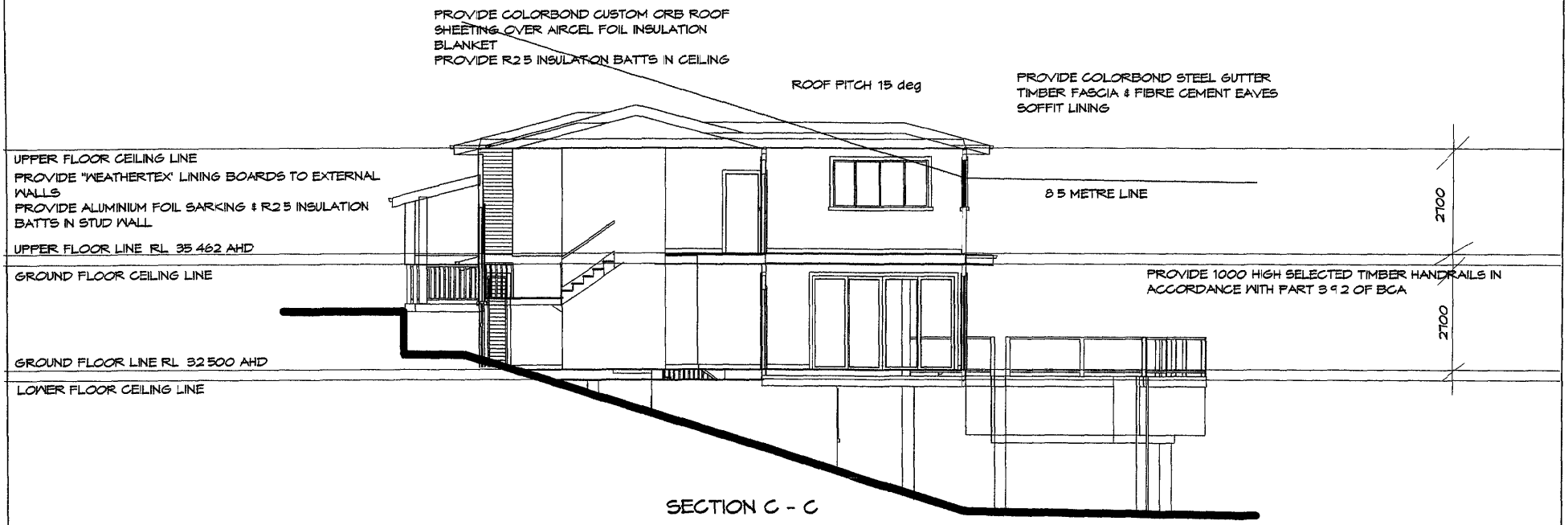
E MAIL mled@bigpond net au

DRAWN BY	MIKE LEDBURY
DATE	4 APRIL 07
SCALE	1 100
DRAWING NUMBER	
07 HENNESSY 09	



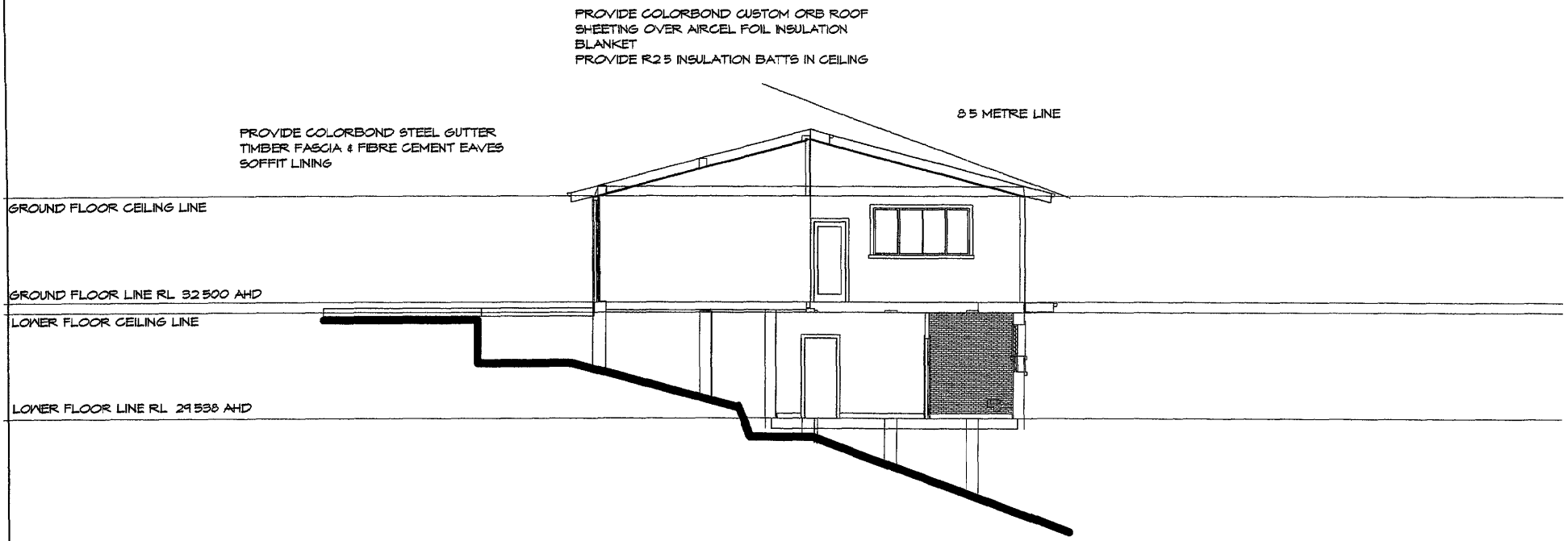
SECTION B - B

REVISIONS	PROPOSED NEW TIMBER FRAMED RESIDENCE AT 4a THE AVENUE NEWPORT LOT FOR MR AND MRS HENNESSY SECTION B - B	**W & B CONSULTING PTY LTD** BUILDING DESIGNERS PROJECT CONSULTANTS **MEMBER** **HOUSING INDUSTRY** **ASSOCIATION**	11Harst Place Belrose NSW 2085 Ph 02 9452 4367 Fax 02 9452 4366 Mob 0419 244 670 ACN 32 001 864 955 E MAIL mled@bigpond net au	DRAWN BY: MIKE LEDBURY DATE: 4 APRIL 07 SCALE: 1 100 DRAWING NUMBER 07 HENNESSY 10



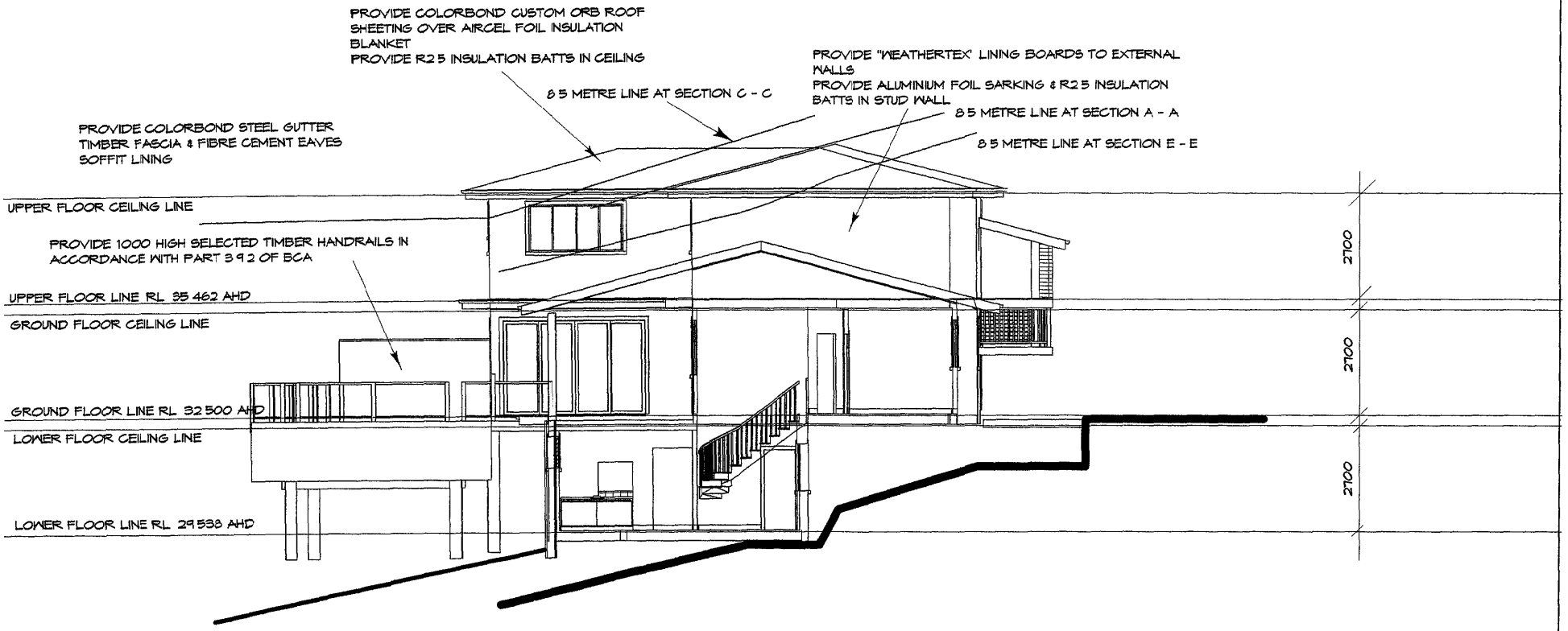
SECTION C - C

REVISIONS	PROPOSED NEW TIMBER FRAMED RESIDENCE AT 4a THE AVENUE NEWPORT LOT FOR MR AND MRS HENNESSY SECTION C - C	W & B CONSULTING PTY LTD BUILDING DESIGNERS PROJECT CONSULTANTS MEMBER HOUSING INDUSTRY ASSOCIATION	11Harst Place Belrose NSW 2085 Ph 02 9452 4367 Fax 02 9452 4366 Mob 0419 244 670 ACN 32 001 864 955 E MAIL mled@bigpond net au	DRAWN BY: MIKE LEDBURY DATE: 4 APRIL 07 SCALE: 1 100 DRAWING NUMBER 07 HENNESSY 11



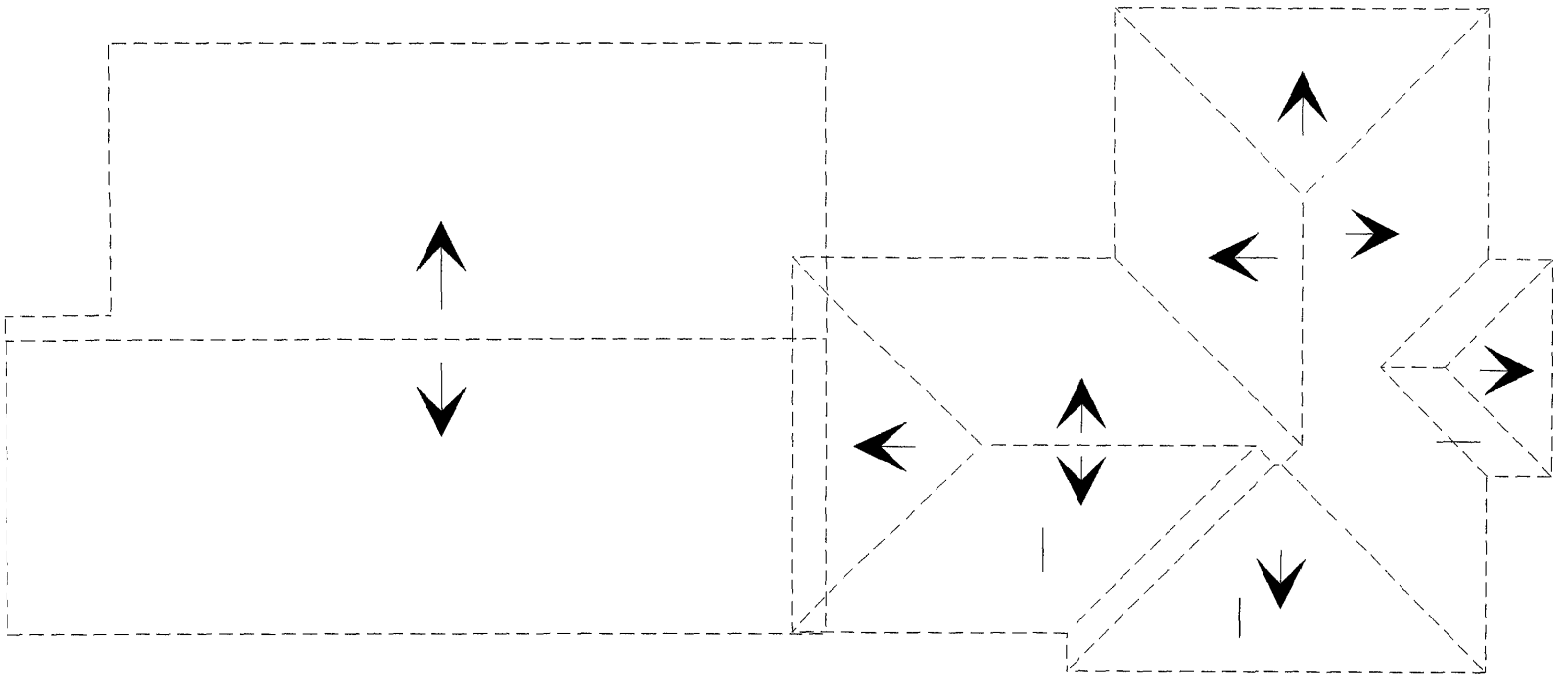
SECTION D - D

REVISIONS	PROPOSED NEW TIMBER FRAMED RESIDENCE AT 4a THE AVENUE NEWPORT LOT FOR MR AND MRS HENNESSY SECTION D - D	**W & B CONSULTING PTY LTD** BUILDING DESIGNERS PROJECT CONSULTANTS **MEMBER** **HOUSING INDUSTRY** **ASSOCIATION**	11Harst Place Belrose NSW 2085 Ph 02 9452 4367 Fax 02 9452 4366 Mob 0419 244 670 ACN 32 001 864 955 E MAIL mled@bigpond net au	DRAWN BY: MIKE LEDBURY DATE: 4 APRIL 07 SCALE: 1 100 DRAWING NUMBER 07 HENNESSY 12



SECTION E - E

REVISIONS	PROPOSED NEW TIMBER FRAMED RESIDENCE AT 4a THE AVENUE NEWPORT LOT FOR MR AND MRS HENNESSY SECTION E - E	W & B CONSULTING PTY LTD BUILDING DESIGNERS PROJECT CONSULTANTS MEMBER HOUSING INDUSTRY ASSOCIATION	11Harst Place Belrose NSW 2085 Ph 02 9452 4367 Fax 02 9452 4366 Mob 0419 244 670 ACN 32 001 864 955 EMAIL mled@bigpond net au	DRAWN BY MIKE LEDBURY DATE 4 APRIL 07 SCALE 1 100 DRAWING NUMBER 07 HENNESSY 13



REVISIONS		

PROPOSED NEW TIMBER FRAMED RESIDENCE
AT 4a THE AVENUE
NEWPORT
LOT
FOR MR AND MRS HENNESSY

ROOF PLAN

W & B CONSULTING PTY LTD
BUILDING DESIGNERS
PROJECT CONSULTANTS

MEMBER
HOUSING INDUSTRY
ASSOCIATION

11Harst Place Belrose NSW 2085

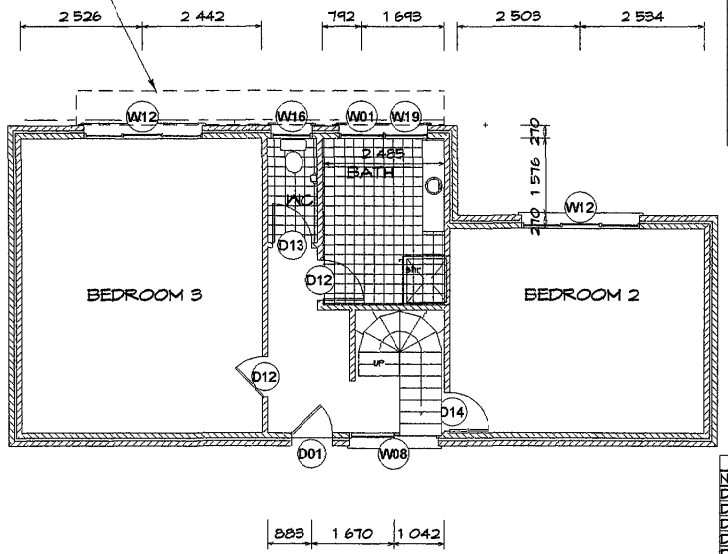
Ph 02 9452 4367
Fax 02 9452 4366
Mob 0419 244 670

ACN 32 001 864 955

E MAIL mled@bigpond net au

DRAWN BY	MIKE LEDBURY
DATE	4 APRIL 07
SCALE	1 100
DRAWING NUMBER	
07 HENNESSY 14	

PROVIDE 700 WIDE AWNING OVER WINDOWS AS SPECIFIED IN BASIX CERTIFICATE



WINDOW SCHEDULE							
NUMBER	QTY	FLOOR	WIDTH	HEIGHT	DESCRIPTION	COMMENTS	AREA
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W02	1	2	3600	1400	TRIPLE SLIDING		1 32
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W06	2	2	850	2400	FIXED GLASS		1 32
W07	1	B	650	800	FIXED GLASS		1 32
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W15	1	B	650	800	LOUVERED		1 32
W16	1	1	826	800	LOUVERED		1 32
W17	4	2	850	2400	LOUVERED		1 32
W18	1	B	680	800	LOUVERED		1 32
W19	1	1	900	800	LOUVERED		1 32
W20	1	B	850	1200	LOUVERED		1 32

DOOR SCHEDULE						
NUMBER	QTY	FLOOR	WIDTH	HEIGHT	DESCRIPTION	COMMENTS
D01	1	1	820	2040	EXT HINGED-DEFAULT	
D02	1	2	800	2040	HINGED-DEFAULT	
D03	1	2	820	2040	EXT HINGED	
D04	1	2	600	2400	EXT HINGED	
D05	B	2	820	2040	HINGED-DEFAULT	
D06	1	B	800	2040	HINGED-DEFAULT	
D07	1	2	820	2040	EXT HINGED-DEFAULT	
D08	1	B	3730	2040	QUAD SLIDER-PANEL	
D09	6	B	820	2040	HINGED-DEFAULT	
D10	1	2	5400	2600	GARAGE-DEFAULT	
D11	2	2	3600	2400	EXT QUAD SLIDER-GLASS	
D12	2	1	820	2040	HINGED-DEFAULT	
D13	1	1	800	2040	HINGED-DEFAULT - SMOKEY PEARL	
D14	1	1	800	2040	HINGED-DEFAULT	

REVISIONS

PROPOSED NEW TIMBER FRAMED RESIDENCE
AT 4a THE AVENUE
NEWPORT
LOT
FOR MR AND MRS HENNESSY
BASEMENT WINDOW SETOUT

W & B CONSULTING PTY LTD
BUILDING DESIGNERS
PROJECT CONSULTANTS

MEMBER
HOUSING INDUSTRY
ASSOCIATION

11Harst Place Belrose NSW 2085

Ph 02 9452 4367
Fax 02 9452 4366
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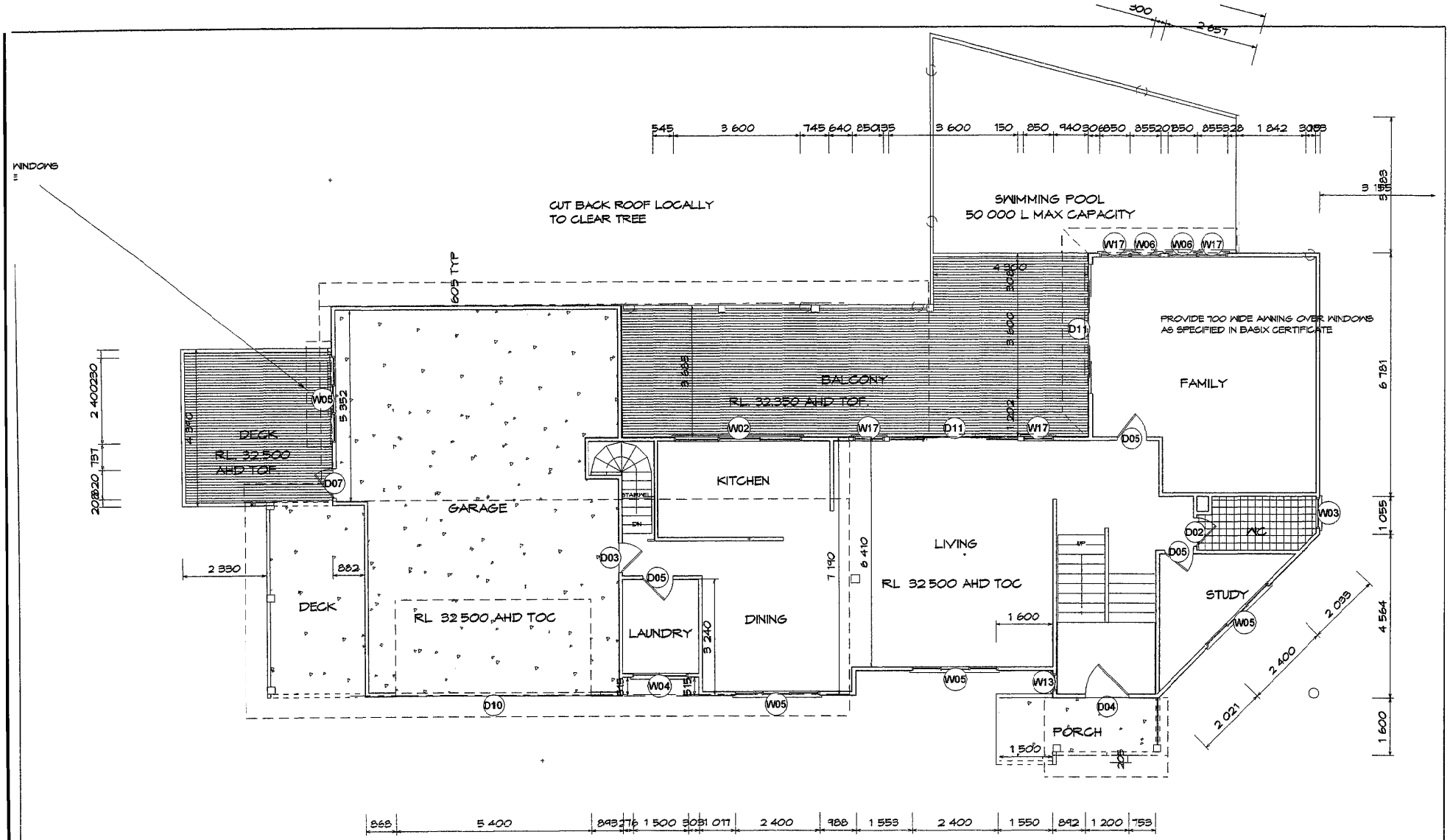
ACN 32 001 864 955

E MAIL mled@bigpond net au

DRAWN BY	MIKE LEDBURY
DATE	4 APRIL 07
SCALE	1 100
DRAWING NUMBER	
07 HENNESSY 15	



REVISIONS			

PROPOSED NEW TIMBER FRAMED RESIDENCE
AT 4a THE AVENUE
NEWPORT
LOT
FOR MR AND MRS HENNESSY
GROUND FLOOR WINDOW SETOUT

W & B CONSULTING PTY LTD
BUILDING DESIGNERS
PROJECT CONSULTANTS

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Ph 02 9452 4367
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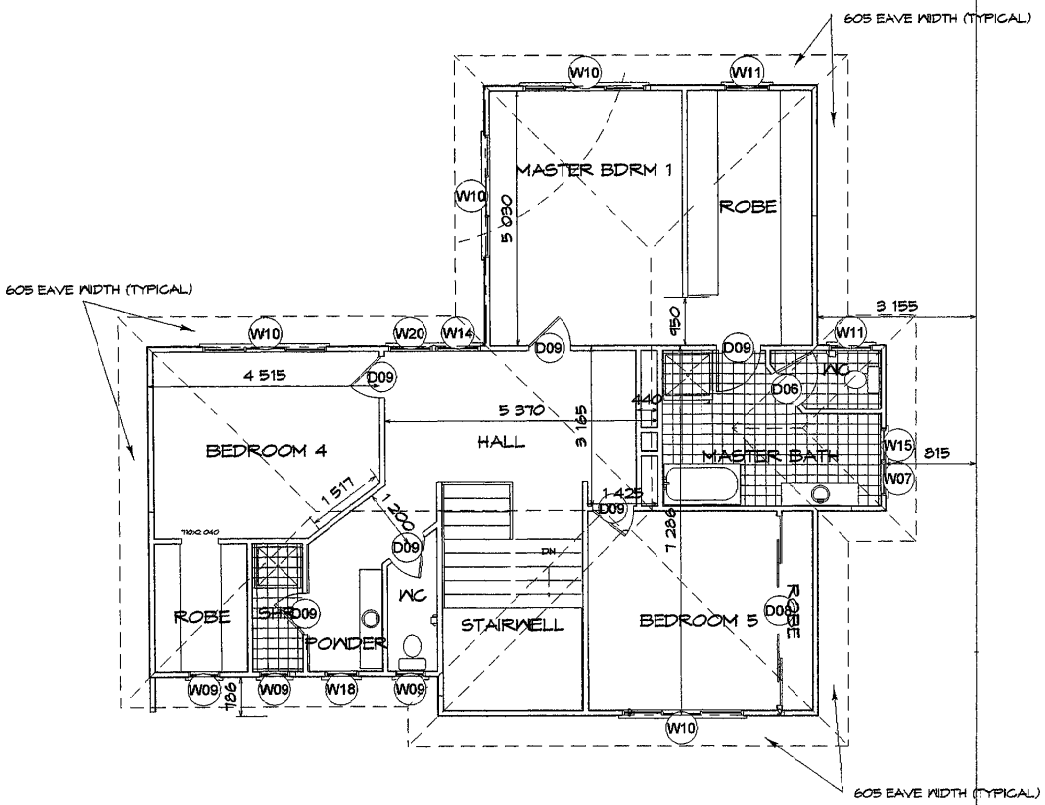
EMAIL mled@bigpond net au

DRAWN BY	MIKE LEDBURY
DATE	4 APRIL 07
SCALE	1 100
DRAWING NUMBER	
07 HENNESSY 16	



REVISIONS	PROPOSED NEW TIMBER FRAMED RESIDENCE AT 4a THE AVENUE NEWPORT LOT FOR MR AND MRS HENNESSY FIRST FLOOR WINDOW SETOUT	**W & B CONSULTING PTY LTD** BUILDING DESIGNERS PROJECT CONSULTANTS **MEMBER** **HOUSING INDUSTRY** **ASSOCIATION**	11Harst Place Belrose NSW 2085 Ph 02 9452 4367 Fax 02 9452 4366 Mob 0419 244 670 ACN 32 001 864 955 E MAIL mled@bigpond net au	DRAWN BY: MIKE LEDBURY DATE: 4 APRIL 07 SCALE: 1 100 DRAWING NUMBER 07 HENNESSY 17

SPECIFICATION

The erection and completion of proposed residence at -

4a The Avenue
Newport

Pittwater Council

for

Mr And Mrs Hennessy
(hereinafter called the Owner)

GENERAL CONDITIONS

REGULATIONS AND NOTICES

The Builder is to comply with the Building Code of Australia and/or any amendment thereto, the requirements of legally constituted Authorities for Local Government and/or Services The Builder is to give all notices obtain all permits and pay all fees required by such Authorities

The Builder must ensure that the work and services are performed in accordance with the contract and the provisions of the Building Services Corporation

VISIT THE SITE

Builders tendering are to visit the site and satisfy themselves to the nature and extent of the work, the facilities available and the difficulties entailed in the execution of the said works No extra amount above the accepted price will be allowed because of work arising due to neglect of this precaution

LABOUR AND MATERIALS

The builder is to provide all materials labour, fittings and plant required to construct the works Material shall be of the standard specified and workmanship in each trade shall be performed by tradesmen of the particular trade and in conformity with current good building practice

MAKING GOOD

The Builder shall be responsible for, and make good any damage to fencing, piping, footways, roads and surfaces generally, and any other work which may be disturbed or injured in carrying out this contract. He must leave the whole in as good a state of repair as they were in when he commenced the works

GENERAL CONDITIONS (cont)

SETTING OUT

The Builder is to set out and maintain the works in accordance with the drawings Figured dimensions on plans are to be taken in preference to scaled measurements No dimensions are to be scaled and used without first checking with the Designer Where any doubt occurs as to boundary location, setout must be confirmed by a registered Land Surveyor

INSURANCE

Insurance of the works against fire will be effected by the Owner The Builder shall at his own expense adequately insure against Public Risk and arrange indemnification in respect of his liability for Workers Compensation. Superannuation and Long Service Leave

WORKMANSHIP AND MATERIALS

The whole of the work is to be faithfully executed in the most tradesmanlike and substantial manner All materials are to be new and of the best quality

ON COMPLETION

The whole of the works to be cleaned up on completion, all surplus materials and rubbish removed, the spaces under floors left clear of rubbish, all doors and windows eased. locks oiled. all keys properly tabulated and handed over, glass cleaned and the whole left ready for immediate occupation

MAINTENANCE PERIOD

The Building shall maintain the works in respect of any defects, caused by faulty workmanship or materials, for a period of thirteen weeks from the date of practical completion

SITE AND CHECK MEASURE

The Builder should check all dimensions on site. prior to commencement of work

AUSTRALIAN STANDARDS

All work shall comply with the following Australian Standards and any other standards governing this style of work

AS 1684	SAA National Timber Framing Code
AS 1720 1	SAA Timber Structures Code
AS 3700	Masonry Code
AS 3600	Concrete Structures
AS 2040	Windows in Building
AS/NZS	Stormwater Drainage
AS 1657	Fixed Platforms, Walkways, Stairways and Ladders

BASIX COMPLIANCE

All described in this specification shall compliance with Basix Certificate Number 72454M

It shall comply with the following items in particular

Water

- Indigenous plants are to be used for a minimum area of 750 Square metres of the site
- All internal shower heads are to have a 3 star rating
- Toilet flushing systems shall be 4 star
- All taps shall be 6 stai
- Water tank must be 10,000 litres and must be configured as noted in Basix certificate
- Swimming pool must be outdoors

Construction

- Floors, walls and ceilings must be constructed in accordance with the basix table
- Windows, glazed doors and shading devices must be constructed as detailed in the certificate

Energy

- A 4 star gas instaneous hot water system must be installed for each residence
- Ventilation and Air Conditioning must be installed in each residence as detailed in the Basix Certificate
- Artificial and natural lighting must be installed as detailed in the Basix Certificate
- A gas cooktop and electric oven must be installed as detailed in the Basic certificate

Thermal Comfort

- Thermal comfort performances as detailed in the Basix report must be adhered to

EXCAVATOR

EXCAVATION FOR DRAINS

Trenches for drains where running parallel to the building must not be within 600mm of the building

Excavate to necessary depths and regulation grades for drains, trenches and service pipes

Allow for 300mm cover (minimum) for all drains

DRAINER

SEPTIC DRAINAGE

Sewered Areas

Carry out drainage work to the rules and requirements of the local Authority responsible for Sewerage

The drainage system shall be carried out in approved sewerage pipes, laid to uniform falls, complete with necessary fittings, bends, inspection eyes, gully and boundary traps

Connect all required fittings to the system

STORMWATER DRAINAGE

To be constructed in accordance with the Engineering Drawings

PLASTERER

Provide plasterboard lining as required to all internal walls

BRICKLAYER

MATERIALS

Bricks

Common, approved for cement rendering

Mortars

Cement mortar to be one part fresh cement to three parts sand

GENERALLY

All brickwork is to be accurately bonded, keeping perpends plumb, and carried up true and plumb to the various heights on the drawings with beds and joints 10mm thick All bricks are to be wetted before laying The work shall be carried up in uniform scaffold heights, no part being taken higher than 15 courses above adjoining work All work shall have flush joints ready for cement rendering

WALLING

Provide brick veneer walling and single skin walling as noted on drawings
DAMPCOURSE

Provide dampcourse to each wall

Dampcourse to be laid one course above finished ground level and underside of bearer and/or floor slab level where foundations exceed 600mm in height Otherwise to underside of bearer or floor slab

CARPENTER

GENERALLY

All work shall comply with the relevant codes governing this type of work

TIMBER GRADES

Timber grade shall be generally F5 unless described otherwise on the drawing

EAVES SOFFIT

Provide overhang for eaves as shown on drawings and provide framing to support fibre cement soffit lining

FASCIA

To be as described on the drawings

ROOF FRAMING

To be as described on the drawings

WALL LINING EXTERNALLY

Provide "Harditex lining boards to stud walls of first floor and finish externally with Granosite or similar in accordance with Manufacturer printed specification

OTHER ITEMS

Provide all other timber items as described on the drawings whether shown in this specification or not

BALCONY HANDRAILS

All new handrails are to be as noted on the drawings

DOOR FRAMES, DOORS, FURNITURE AND WINDOWS

Door Frames
To all door openings, provide where required timber or pressed metal door frames

Doors
Provide doors as nominated on plan Doors to exterior are to be glazed panel Doors to interior to be hollow core

Door Furniture
Provide all Door furniture as required as suitable for the individual application

Windows
Provide windows as described on the drawings Manufacturer of window is to be discussed with owner before ordering Refer window schedule for sizes

ROOFER

Provide Colorbond Custom Orb roofing as noted on drawings

PLUMBER

GENERALLY

All plumbing work is to comply with the requirements of the appropriate authorities from which a certificate of satisfactory completion is to be obtained

WATER SERVICE,

Connect to existing water service

HOT WATER SERVICE

Extend from hot water unit properly lagged copper tubing to points over basins. shower recesses, sinks Terminate at these points with approved fittings as required Provide inlet and outlet stop cocks to hot water unit and in positions to be indicated

SANITARY PLUMBER

Provide fixtures in positions shown on plan
Provide wastes with traps to the above fittings and connect to the drainage system The whole of the work to be performed in accordance with the rules and requirements of the relevant authority

Provide overflow outlet in wet area floors Fit grate

STORMWATER DRAINAGE

Gutters to be as noted on plan, supported by gutter brackets as specified by manufacturer
Downpipes to be as noted on Plan

CONCRETOR

Provide concrete footings and slabs in accordance with engineers details

TILER

Provide selected wall and floor tiles as required

ELECTRICIAN

Provide all labour and materials for the proper installation of electricity service in accordance with the appropriate S.A A rules and the requirements of the local supply authority

Arrange with the supply authority for connection from supply mains to meter board

Provide for the proper installation of and connect electricity as required

Provide light points in positions to be determined Approved switch for each point is to be mounted in positions to be determined

Provide power points in positions to be determined

Refer to power and lighting diagram for location of light and power points

PAINTER

GENERALLY

All paints stains. varnishes and water colours are to be properly mixed, be of approved brands and brought to the job in unopened containers

Materials used for priming are to be as recommended by the manufacturers of the paints to be used

All finishing colours are to be selected by the owner

Do all necessary stopping after the priming has been applied Rub down all surfaces to a smooth finish prior to the application of each successive coat of paint.

EXTERNALLY

Prime Before Fixing
All dressed surfaces of external woodwork are to be primed before fixing

Woodwork
After priming, all exposed woodwork is to be given an undercoat and finished with one coat

Cement Render
All rendered surfaces shall be given one undercoat and two finish coats of acrylic paint

INTERNALLY

All plasterboardsurfaces to be given two coats of selected paints

COMPLETION

The building is to be completed in every trade Sashes and doors to be eased locks oiled and all plant, surplus building materials and rubbish removed from the site Gutters and drains to be cleared and the building generally to be left clean and fit for occupation

The Builder is to furnish the Owner with -

Notification of completion

Certificate from sewerage authority re sanitary drainage

Invoices for P C items

All keys for all doors

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

Development Application for _____
Name of Applicant

Address of site 4A THE AVENUE, NEWPORT

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

I _____ on behalf of KEIGHRAN & ASSOCIATES PTY LTD
(insert name) (trading or company name)

on this the 27/6/08
(date)

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

Geotechnical Report Details

Report Title RISK MANAGEMENT FOR PROPOSED NEW RESIDENCE AT 4A THE AVENUE NEWPORT VQ 22804

Report Date 11th JULY 2005

Author JACK HODGSON

Structural Documents list

DRAWINGS BHP 07615732 NO 1 5

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

EDWARD A BENNETT (name) _____ (signature)

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

I prepared and/or technically verified the abovementioned Geotechnical Report as per Form 1 dated 11TH JULY 2005 and now certify that I have viewed the above listed structural documents prepared for the same development I am satisfied that the recommendations given in the Geotechnical Report have been appropriate taken into account by the structural engineer in the preparation of these structural documents I am aware that Pittwater Council relies on the processes covered by the Geotechnical Risk Management Policy including this certification as the basis for ensuring that the geotechnical risk management aspects of the proposed development have been adequately addressed to achieve an Acceptable Risk Management level for the life of the structure taken as at least 100 years unless otherwise stated and justified in the Report and that reasonable and practical measures have been identified to remove foreseeable risk

Signature J Hodgson
Name J HODGSON
Chartered Professional Status MEngSc FIEAust
Membership No 149 788
Company Jack Hodgson Consultants Pty Ltd

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

Development Application for _____
Name of Applicant

Address of site 4A THE AVENUE, NEWPORT

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

I EDWARD A BENNETT (insert name) on behalf of CIVIL & STRUCTURAL ENGINEERING DESIGN SERVICES PTY LTD (trading or company name)

on this the 27/6/08 (date)

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

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Report Date 11th JULY 2005

Author JACK HODGSON

Structural Documents list

DRAWING NOS H 21095 1A 2B & 3A

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Signature _____
Name J HODGSON
Chartered Professional Status MEngSc FIEAust
Membership No 149 788
Company Jack Hodgson Consultants Pty Ltd

C & SITE-IT

Civil & Structural Engineering Design Services Pty. Ltd.

ABN 62 051 307 852
3 Wannıtı Road BELROSE NSW 2085
Email civilandstructural@bigpond com
Tel 02 9975 3899 Fax 02 99751943
Web www civilandstructural com au

19th June 2008

W & B Consultıng Pty Ltd
11 Hurst Place
BELROSE NSW 2085

Dear Sır,

Re New Dwellıng & Swımmıng Pool at 4A The Avenue, Newport

HYDRAULIC DESIGN ADEQUACY CERTIFICATE

I am an appropriately qualified and competent person in this area being listed in the National Professional Engineers Register (NPER) and I have been engaged by Mr Hennessy to prepare the Hydraulic Details for the above project and I am able to certify that the design and performance of the design complies with the requirements of B5 3 of Pittwater DCP 21 to satisfy Condition C2

I possess Indemnity Insurance to the satisfaction of the building owner or my principal

Full Name of Designer	**Edward Arthur Bennett**
Qualifications	**M I E Aust CPE NPER 198230**
Address of Designer	**3 Wannıtı Road, Belrose NSW 2085**
Business Telephone No	**02 99753899 Fax No 02 99751943**
Name of Employer	**Civil & Structural Engineering Design Services Pty Ltd**

Yours faithfully,

E A Bennett M I E Aust