PLANNING
BUILDING
HERITAGE
URBAN DESIGN

CITY PLAN SERVICES

22 March 2010

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

Dear Sir or Madam

PROPERTY ADDRESS LOT 33, DP 1135383, NO 1 FAZZOLARI AVENUE, MONA VALE
DEVELOPMENT APPLICATION NO N0559/09
CONSTRUCTION CERTIFICATE NO CC N101284

City Plan Services Pty Ltd has issued a Construction Certificate under Part 4A of the Environmental Planning and Assessment Act 1979 for the above premises

Please find enclosed the following documentation

- Construction Certificate No CC N101284
- Documentation used to determine the application for the Construction Certificate as detailed in the listed Schedules of the certificate
- Approved plans and specifications
- Copy of application (with appointment of PCA from Owner OR PCA Appointment Form)
- Copy of Long Service Levy if applicable
- Home Owners' Warranty, if applicable
- $30 cheque for Council's registration fee

Our client has been advised of the necessity to submit to Council the notice of commencement of building works 48 hours prior to the commencement of works

Should you need to discuss any issues, please do not hesitate to contact the Project Manager, Ashleigh Hayes on the contact details listed

Yours faithfully

William Nettleton
Director

encl

REC: 27661
$30
25/3/10

X:\Projects\CPN2010\N101284B\CC Application&Plans\CC Letter Council.doc

PH 02 4926 4067
FAX 02 4927 1425
4E & 4F T&G BLD 45 HUNTER ST NEWCASTLE NSW 2300
DX 7815 NEWCASTLE PO BOX 1807 NEWCASTLE NSW 2300
WWW.CITYPLAN.COM.AU
ABN 50 103 185 431

PLANNING
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CITY PLAN SERVICES

CONSTRUCTION CERTIFICATE NO CC N101284

Issued under Section 81A(5) and Part 4A Sections 109C of the Environmental Planning and Assessment Act 1979

OWNER	
Name	Maraya Bell Neil Marshall & Sara Bell
Address	C/- Zac Homes PO Box 7160 South Penrith NSW 2750
Contact Details	Phone Fax
DEVELOPMENT CONSENT	
Consent Authority/Local Government Area	Pittwater Council
Development Consent No	N0559/09
Date of Development Consent	11 March 2010
PROPOSAL	
Address of Development	Lot 33, DP 1135383, No 1 Fazzolari Avenue, Mona Vale
Building Classification	Class 1a
Scope of building works covered by this Notice	Dwelling
Value of Construction Certificate (Incl GST)	$338,999 00
Plans and Specifications approved	Schedule 1 See attached Notice
Critical Stage Inspections	See attached Notice
Exclusions	
Conditions (Clause 187 or 188 of the Environmental Planning & Assessment Regulation 2000)	
PROJECT REGULATIONS CONSULTANT	Please contact Ashleigh Hayes for any inquiries
CERTIFYING AUTHORITY	William Nettleton for and on behalf of City Plan Services Pty Ltd
ACCREDITATION BODY	Building Professionals Board Registration No BPB0292

That I, William Nettleton, as the certifying authority certify that the work if completed in accordance with the plans and specifications identified in Schedule 1 (with such modifications verified by the certifying authority as may be shown on that documentation) will comply with the requirements of the Environmental Planning & Assessment Regulation 2000 as referred to in section 81A(5) of the Environmental Planning and Assessment Act 1979

DATED THIS 22nd DAY OF March 2010

William Nettleton
Director

NB Prior to the commencement of work S81A(2)(b)(i) and (ii) and (b2)(i) and (ii) and (iii) and (c) of the Environment Planning and Assessment Act 1979 must be satisfied

X:\Projects\CPN2010\N101284B\CC Application&Plans\CC Certificate doc

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SCHEDULE 1
APPROVED PLANS AND SPECIFICATIONS

1 Endorsed architectural plans prepared by Zac Homes

Plan Title	Drawing No	Revision	Date
Site Plan	1/7	A	21/09/2009
Shadow Diagrams & Landscape Plan	2/7	A	17/03/2010
Ground Floor Plan	3/7	A	21/09/2009
First Floor Plan	4/7	A	21/09/2009
Section & Basix Information	5/7	A	21/09/2009
Elevations	6/7	A	21/09/2009
Elevations	7/7	A	21/09/2009

2 Endorsed specification for Bell / Zac Homes

3 Endorsed structural plans prepared by Kneebone, Beretta & Hall

Plan Title	Drawing No	Revision	Date
Section	1 of 1	-	16/12/2009

4 Other documents relied upon

Title	Prepared By	Reference	Date
LSL Receipt	LSL Corp	5004237	10/3/2010
HOW	Master Builders Queensland	MBIS/039746-Permit Authority	23/09/2009
Basix Certificate	Zac Homes	272467S	17/12/2009

BASI Certificate

Certificate number 272467S

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

Director-General
Date of issue Thursday, 17 December 2009

NSW GOVERNMENT | Planning

Project address	
Project name	Zac Homes - Bell
Street address	1 Fazzolari Avenue Mona Vale 2103
Local Government Area	Pittwater Council
Plan type and plan number	Deposited Plan 1135383
Lot no	33
Section no	n/a
Project type	
Project type	separate dwelling house
No of bedrooms	5
Site details	
Site area (m^2)	627
Roof area (m^2)	224
Conditioned floor area (m2)	229
Unconditioned floor area (m2)	19
Total area of garden and lawn (m2)	383
Assessor details and thermal loads	
Assessor number	n/a
Certificate number	n/a
Climate zone	n/a
Area adjusted cooling load (MJ/m^2 year)	n/a
Area adjusted heating load (MJ/m^2 year)	n/a
Other	
none	n/a

Score

✓ Water 40 (Target 40)
✓ Thermal comfort pass (Target pass)
✓ Energy 41 (Target 40)

Schedule of BASIX commitments

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

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Fixtures			
The applicant must install showerheads with a minimum rating of 3 star in all showers in the development		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 3 star in each toilet in the development		✓	✓
The applicant must install taps with a minimum rating of 3 star in the kitchen in the development		✓	
The applicant must install basin taps with a minimum rating of 3 star in each bathroom in the development		✓	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 3000 litres on the site This rainwater tank must meet and be installed in accordance with the requirements of all applicable regulatory authorities	✓	✓	✓
The applicant must configure the rainwater tank to collect rain runoff from at least 143 8 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam)		✓	✓
The applicant must connect the rainwater tank to			
• all toilets in the development		✓	✓
• the cold water tap that supplies each clothes washer in the development		✓	✓
at least one outdoor tap in the development (Note NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply)		✓	✓

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

Construction	Additional insulation required (R-Value)	Other specifications
floor - concrete slab on ground	nil	
external wall - brick veneer	1 36 (or 1 90 including construction)	
external wall - framed (weatherboard fibre cement metal clad)	1 50 (or 1 90 including construction)	
internal wall shared with garage - plasterboard	nil	
ceiling and roof - flat ceiling / pitched roof	ceiling 2 5 (up) roof foil/sarking	unventilated dark (solar absorptance > 0 70)

Note	Insulation specified in this Certificate must be installed in accordance with Part 3 12 1 1 of the Building Code of Australia

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

Window/glazed door no.	Orientation	Maximum area (square metres)	Type	Shading	Overshadowing
W1	N	1 64	improved aluminium single clear (U-value 6 44 SHGC 0 75)	eave/verandah/pergola/balcony 1 500 2 000 mm	not overshadowed
W2	W	1 81	improved aluminium single clear (U-value 6 44 SHGC 0 75)	eave/verandah/pergola/balcony 451-600 mm	1 2 m high <1 5 m away
W3 + W4 + W5	W	5 7	improved aluminium single clear (U value 6 44 SHGC 0 75)	none	1-2 m high <1 5 m away
W6	S	1 45	improved aluminium single clear (U value 6 44 SHGC 0 75)	eave/verandah/pergola/balcony 451-600 mm	not overshadowed
W7 + W8 + W9	E	7 15	improved aluminium single clear (U value 6 44 SHGC 0 75)	none	not overshadowed

Window/glazed door no.	Orientation	Maximum area (square metres)	Type	Shading	Overshadowing
W10	S	4 85	improved aluminium single clear (U value 6 44 SHGC 0 75)	none	not overshadowed
W11 + W12	E	3 81	improved aluminium single clear (U value 6 44 SHGC 0 75)	none	not overshadowed
W13	N	5 65	improved aluminium single clear (U-value 6 44 SHGC 0 75)	eave/verandah/pergola/balcony >2 000 mm	not overshadowed
W14	W	3 8	improved aluminium single clear (U-value 6 44 SHGC 0 75)	eave/verandah/pergola/balcony >2 000 mm	not overshadowed
W15	N	2 11	improved aluminium single clear (U-value 6 44 SHGC 0 75)	eave/verandah/pergola/balcony >2 000 mm	not overshadowed
W16 + W19	W	3 8	improved aluminium single clear (U-value 6 44 SHGC 0 75)	eave/verandah/pergola/balcony 451 600 mm	not overshadowed
W17	W	1 09	improved aluminium single clear (U value 6 44 SHGC 0 75)	none	not overshadowed
W18 + W23	S	3 26	improved aluminium single clear (U-value 6 44 SHGC 0 75)	eave/verandah/pergola/balcony 451 600 mm	not overshadowed
W20 + W21 + W22	E	4 71	improved aluminium single clear (U-value 6 44 SHGC 0 75)	eave/verandah/pergola/balcony 451-600 mm	not overshadowed
W24 + W25 + W26 + W2 7 + W28	E	5 64	improved aluminium single clear (U value 6 44 SHGC 0 75)	eave/verandah/pergola/balcony 451 600 mm	not overshadowed

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Hot water			
The applicant must install the following hot water system in the development or a system with a higher energy rating gas instantaneous with a performance of 5 stars	✓	✓	✓
Cooling system			
The living areas must not incorporate any cooling system or any ducting which is designed to accommodate a cooling system		✓	✓
The bedrooms must not incorporate any cooling system or any ducting which is designed to accommodate a cooling system		✓	✓
Heating system			
The living areas must not incorporate any heating system or any ducting which is designed to accommodate a heating system		✓	✓
The bedrooms must not incorporate any heating system or any ducting which is designed to accommodate a heating system		✓	✓
Ventilation			
The applicant must install the following exhaust systems in the development			
At least 1 Bathroom individual fan ducted to façade or roof Operation control manual switch on/off		✓	✓
Kitchen no mechanical ventilation (ie natural) Operation control n/a		✓	✓
Laundry natural ventilation only or no laundry Operation control n/a		✓	✓
Natural lighting			
The applicant must install a window and/or skylight in the kitchen of the dwelling for natural lighting	✓	✓	✓
The applicant must install a window and/or skylight in 4 bathroom(s)/toilet(s) in the development for natural lighting	✓	✓	✓
Other			
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling		✓	
The applicant must install a fixed outdoor clothes drying line as part of the development		✓	

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

LONG SERVICE
BUILDING & CONSTRUCTION

10 March 2010

Building and Construction Industry
Long Service Payments Corporation
Level 1
19 21 Watt Street
Gosford NSW 2250
Locked Bag 3000
Central Coast MC NSW 2252
Tel 13 64 41
Fax (02) 9287 5685
Email info@lspc.nsw.gov.au
www.lspc.nsw.gov.au
ABN 93 64[illegible]

ZAC HOMES
1/11 HATCHINSON CRES
JAMISONTOWN NSW 2750

As per your request for a copy of your receipt no 00079643 dated 10 March 2010 the following information is provided

Received from (Name of person or organisation paying for levy)	the amount of
ZAC HOMES	**$1,186 00**

Payment details

Online 00585959275 $1 186 00

being payment for Long Service Levy as detailed below

Levy Payment Form number	5004237
Council/Department/Authority	PITTWATER COUNCIL
D A Number	559/09
Work address	1 FAZZOLARI AVE WALANA VALLEY MONA VALE NSW 2103
Estimated value of work	$339 000 00
Levy payable (No exemption)	**$1,186 00**
Total levy paid	**$1,186 00**

Signed

Date 10/3/10

8*849

MBIS/039746-PermitAuthority
23/09/2009

Zac Homes Pty Ltd
1/11 Hutchinson Crescent
JAMISONTOWN NSW 2750

Master Builders Queensland Insurance Services
A Division of Queensland Master Builders Association
Industrial Organisation of Employers
ABN 96 641 989 388 AFS Licence 246834
18 Central Park Avenue, Ashmore, Queensland 4214
Phone. 1300 13 13 24 FAX. 1300 13 13 28

Certificate of Insurance

RESIDENTIAL BUILDING WORK BY CONTRACTORS

A contract of insurance complying with sections 92 and 98 and 98A of the Home Building Act 1989 has been issued by *Calliden Insurance Limited (ABN 47 004 125 268) (AFSL 234438)*

In respect of:	New Single Dwelling
At:	Lot 33, No. 1 Fazzolari Avenue MONA VALE NSW 2103
Caused out by:	Zac Homes Pty Ltd
Licence Number:	47269C
ABN:	47 660 879 578
For:	Mr & Mrs Bell
In the amount of:	$890,165.00

Subject to the Act and the Home Building Regulation 2004 and the conditions of the insurance contract, cover will be provided to:

- a beneficiary described in the contract and successors in title to the beneficiary

OR

- the immediate successor in title to the contractor or developer who did the work and subsequent successors in title.

Authorisation: In Witness Whereof, the Insurer issuing this Certificate of Eligibility has caused this Certificate of Eligibility to be signed by Authorised Signatory of the Insurer's Agent.

Issued on the 23rd day of September, 2009.

Master Builders Queensland Insurance Services (ABN 96 641 989 388) (AFS Licence 246834)
For and on behalf of Calliden Insurance Limited (ABN 47 004 125 268) (AFS Licence 234438) as their authorised agent.

NOTICE: To download a copy of your insurance policy wording visit http://home.policywordings.com.au

Trueline Specification

RESIDENTIAL CONSTRUCTION SPECIFICATION

WHEN USED FOR EXTENSIONS, ADDITIONS, ETC ANY PART THAT IS NOT APPLICABLE TO BE DISREGARDED

PROJECT

Lot 33 Walana Valley Mona Vale
Lot 33 No 1 Fazzolari Avenue

DA No NO 559/09

C C No N101284

NOTE If this document is to form part of a building contract, it is necessary to complete Specification in full
Squares must be ticked thus ☑ where applicable
thus ☒ where not applicable

SPECIFICATION FOR THE

☑ ERECTION AND COMPLETION OF A New Home

LOT NUMBER 33

STREET NUMBER N° 1

STREET Fazzolari Avenue

SUBURB/TOWN Mona Vale

MUNICIPALITY / SHIRE OF P. Hwater

FOR Mr Mrs (Ms) Sarae Maraya Bell
Herein after called the owner

THE CONTRACTOR MUST ENSURE THE WHOLE WORKS AND SERVICES ARE PERFORMED IN ACCORDANCE WITH THIS SPECIFICATION AND DRAWINGS AND COMPLETED IN WHOLE IN A TRUE AND WORKMANLIKE MANNER

BUILDER Zac Homes

ADDRESS 1/11 Hutchison Coesent Townsville 2750

LICENSE NUMBER 47259C EXPIRY DATE Sept / 2010

BUILDERS A B N 47060 699 596.

INSURANCE DETAILS Master Builders QLD

GENERALLY

PROVIDE Means the supply and complete building in of specified materials fittings etc
APPROVED Means approved by the owner L C APPROVED means approved by the local council
REGULATIONS AND NOTICES All State and Local Government Building Ordinances and Amendments thereto and requirements of legally Constituted Authorities and the Building Code of Australia and Australian Standards must be complied with by the builder The Builder to give all notices and obtain all permits

INSURANCE The ☐Owner ☐Builder must effect the insurance of all works against fire and storm The Builder shall at his own expense adequately insure against Public Risk and to insure as required under terms of the appropriate Workers Compensation and Employers Liability Acts and Home Warranty Insurance
LABOUR AND MATERIALS All labour, material fittings and plant required to construct and complete the building is to be provided by the builder Materials are to be new and of the standard specified Faulty or unsuitable material not to be used All work to be performed in a good worklike manner
SETTING OUT The Builder is to ensure the building is set out in accordance with the site plan and within the boundaries of the site

TEMPORARY TOILET ☐Owner ☐Builder shall provide temporary toilet accommodation for the workmen Where the Authority requires the temporary toilet to be connected to sewer mains the additional cost plus Builders margin shall be bourne by the Owner
ELECTRICITY The Builder is to make arrangements for any electrical power to be used in the erection of the works and is to pay fees and costs incurred therein Should Additional poles wiring service risers or underground wiring etc be required by the Electricity Supply Authority this additional cost plus Builders margin shall be bourne by the Owner

WATER ☐Owner ☐Builder allow for connecting water to the proposed building and fittings
PLANS AND SPECIFICATIONS Any work indicated on the plan but not in the specification or vice versa and any item not shown in either plan or specification but which is obviously necessary as part of proper construction and/or finish is to be considered as so shown or specified and is to be done as part of the contract Variations to plans specifications may not be made without written consent of the owner
PLANS OF THE JOB A legible copy of the plans and specifications bearing the approval of the Municipal Authority concerned must be maintained by the Builder at all times
RESPONSIBILTIES It is the responsibility of the Builder / end user to verify plans and Specifications as to their accuracy and suitability
VARIATIONS Any variations to specifications are to be added in the addenda at the back of the specification

SITE SIGN ☐Owner ☐Builder to supply site sign showing Lot No name of Builder and Licensee and full License No

EXCAVATOR - B C A. PART 3 1 1

SITE ☐Owner ☐Builder to clear the site of all stumps roots etc grubbed to a minimum distance of 3m outside the building line or to the boundaries of the allotment whichever is the less Any depressions within the area covered by the building are to be filled
TRENCHES B C A. PART 3 2.2 - All footings for walls, piers etc to be excavated to a minimum depth of 500mm or to a depth necessary to secure solid bottoms and even bearings throughout bottoms to be level and stepped as necessary
At completion of foundations walls etc all excavations are to be filled well rammed to ground level and surplus soil spread

ROCK OR SHALE Excavation in rock or shale and removal from the site by ☐Owner ☐Builder at additional cost

ACCESS ☐Owner ☐Builder to provide all weather access to site

CONCRETOR – B C A. PART 3 2 3

CONCRETE IS TO CONSIST OF
4 parts 20mm gauge blue metal or other approved aggregate 2 parts clean sharp sand 1 part fresh cement a sufficiency of water all well mixed mechanically and placed in position immediately after mixing The slump of the concrete is not to exceed 100mm Ready mixed concrete AS1379 to have a minimum compressive strength of 20Mpa tested in accordance with code AS3600 "SAA Concrete Structures Code" After pouring the concrete is to be kept damp covered and allowed to stand at least four days for footings and seven days for beams etc before being built on all subject to engineering specifications

FOUNDATIONS – B C A PARTS 3 2 3 3 2 4 & 3 2 5

REINFORCED CONCPETE FOUNDATIONS

Provide reinforced concrete footings to AS2870 and to Local Council's requirements or engineers design if applicable

PIER AND BEAM FOOTINGS

Piers shall be solid concrete as designed by structural engineers, taken to uniform bearing approved by supervising engineer Beams shall be reinforced concrete having even bearing on piers as designed by structural engineer

CONCRETE FLOORS Provide suspended concrete floors if shown on drawings Approved metal formwork may be used to manufacturers recommendations, solid filling may be used for laundry/garage adjoining building top of slab to be not less than 50mm below antcap/dampcourse level and have a continuous support on a minimum of 75mm on at least two opposite sides

TABLE FOR SUSPENDED CONCRETE SLABS

Guide Only Engineering details may be required All measurements in mm Y = Structural Grade Deformed Bar Int = Internal Ext = External

Clear Span Between Supports	20 MPa Slab Thickness		REINFORCEMENT Bars to AS 1302							
			Fabric to AS 1304		Main Bars			Tie Bars		
					Size	Spacing		Size	Spacing	
Up to	Int	Ext	Int.	Ext	*	Int	Ext	*	Int	Ext
2000	100	100	F72	F82	Y12	280	220	Y12	400	400
2500	100	110	F82	F102	Y12	220	240	Y12	400	400
3000	110	130	F92	F81	Y12	160	100	Y12	400	300
3500	130	150	F102	F81	Y12	140	100	Y12	300	280
4000	150	180	F81	F918	Y12	100	90	Y12	280	240
4500	170	-	F81	-	Y12	100	-	Y12	260	-

This table to apply to single spans, simply supported one way non wall bearing slabs Main bar reinforcements to be set 20mm from bottom and edges of slab and run from support to support. Minimum 50mm bearing of reinforcement over supports with tie bars on top edge of slab and to have 30mm cover to reinforcement if exposed to weather The main bars shall be laid in direction of shorter span For fabric reinforcements with different bar spacing, closer bars are the main bars. For the purpose of shrinkage control, add top layer of F72 mesh for spans to 3m and F82 mesh for spans tp 3 9m Durability requirements in above ground exterior concrete to be 40MPA to 1km from coastline and 32MPA 1 km to 50km from coastline Provide slip joints between concrete and supporting walls All wall bearing or larger slabs must be designed by a structural engineer

☐SLAB ON GROUND Provide 100mm minimum thick concrete slab reinforced with F72 AS1304 set 30mm from top of concrete on a foundation of a minimum of 50mm of sand with a 200 uni polythene membrane between lapped 150mm and turned up Maintain a minimum of 100mm bearing surface all round

PATHS ☐Builder ☐Owner to provide paths of concrete as previously specified from front entry step and as shown on plans car tracks to be 100mm thick, and paths 75mm thick. Finished thickness including provision of two parts metal screening to one part cement dusted over surface and trowelled all in one operation or alternatively rendered while concrete is green Paving to be laid with bituminous felt jointing strips not more than 1 2m apart and to full thickness of concrete and rendering to be "V" jointed over same Excavate for and lay paths to even grade true to line and curve

PEST CONTROL The underslab area shall be treated against termite infestation in accordance with AS 3660 1 commonly known as Part A unless relevant authority regulations prohibit any such treatment Part B will be provided as a perimeter treatment in accordance with AS 3660 To be carried out by licensed contractor with owner to be supplied with applicable certificates A durable notice is to located in a prominent position showing method, date type of barrier and life expectancy

BRICKLAYER

BRICKLAYER General AS3700 AS2125 & 2126

☐ CLAY BRICKS To be sound hard of well burnt clay and shale and comply with specification A21 "Burnt Clay and Shale Building Bricks"

☐ CONCRETE BLOCKS OR BRICKS To comply with AS 2733 "Concrete Building Blocks"

☐Stonework ☐Texture Bricks ☐Face Bricks ☐Concrete Blocks or Bricks Common bricks may be used for all other work

SAND To be clean sharp and free from all impurities

MORTAR & JOINING AS3700 or B C A PART 3 3 1

CEMENT MORTAR To be one part fresh cement to three parts sand

LIME MORTAR To be one part lime to 3 parts sand Lime to be well slaked before use

COMPO MORTAR To be one part cement, one part lime (or approved plasticizer) and 6 parts sand All bricks to be well wetted before use This is not to apply to texture bricks Footing courses to be grouted solid with cement mortar All brickwork to be properly bonded laid on full bed and all perpends filled All piers are to be built solid and each course grouted as work proceeds Carry up all work true and plumb to even gauge and in level courses the full height and thickness required The face brickwork above damp course level to be finished with neatly ironed or raked joints Beds and joints to be kept to a reasonable thickness Finish all other exposed brickwork with neat struck joints

BUILD THE FOLLOWING IN CEMENT MORTAR All brickwork to underside of floor bearers level All 110mm thick brickwork. All copings, steps brick balustrade walls sills piers wing walls retaining walls Brick Fences on alignment and/or brickwork under timber fencing also concrete blocks or bricks

BUILD IN COMPO MORTAR All other brickwork including concrete masonry

VENEER WALLS To be 110mm Brickwork built in Compo Mortar on foundation walls as previously specified Internal faces to be a minimum 25mm from timber frames Build in 3mm galvanised wall ties opposite each alternate stud four courses above level of bottom plate then every fourth course and spaced not more than 460mm horizontally and 610 vertically Ties to be left open for attachment to studs A cavity space of between 25mm and 50mm must be maintained throughout. Cavities and weep holes to be clean and clear at a damp course level All mortar droppings to be caught on paper or other material and removed before internal linings are fixed Mortar joints on inside faces of walls to be flush with brickwork

BRICK WALLS External walls to have two leaves of brickwork with a clear cavity of not less than 50mm Masonry units used for external walls in clear cavity construction and internal walls to comply with AS 3700 and manufacturers instructions Single skin external walls if approved may require the external face to be coated with an approved waterproof material

WALL TIES B C A PART 3 3 3 For brick and brick veneer buildings shall be corrosion resistant and suitable for the environmental conditions of the building site Ties shall be spaced at maximum 600mm apart in both directions and 300mm around openings and edges of brickwork in accordance with AS 3700 and have a duty classification as per AS 2699

Wall ties cavities and vermin proofing kept free of mortar droppings

SPECIAL WALLS (If shown on plan) Walling not of timber Veneer-on-Timber or Masonry to be constructed as per Structural Engineers Details and Certificate

SILLS To be brick on edge unless stated otherwise

SLEEPER PIERS Provide brick solid filled concrete masonry units or concrete to a minimum of 200 x 200mm up to 1 3m high spaced not more than 1 8 centres If pier exceeds 1 3m increase by 50mm all round All piers to have concrete pads under as per table below

SUPPORTED AREA (m^2)	WIDTH OF SQUARE PAD (mm)	DIAMETER OF CIRCULAR PAD (mm)	THICKNESS (mm)
10	400	500	200
20	500	600	200
40	600	750	250

ENGAGED PIERS To be minimum of 200 x 90 mm spaced at not more than 1 8m centres to support floor bearers and at similar centres to stiffen walls supporting concrete slabs Ties to brick wall every 4th course with approved ties

ACCESS Adequate access in the external foundation wall must be provided under all floors – AS 3660 1

VENTILATION B C A PART 3 4 1 - Sub floor to be ventilated and cross ventilated by means of evenly distributed openings in the external walls having an unobstructed area of not less than 2100mm per square m of external wall and not less than 200mm in depth in every part. Vents to be immediately below bearers and similarly provide vents under verandah floors and suspended floor slabs Sufficient cross ventilation to be provided through all still air Room ventilation above floor must be provided in accordance with Good Building Practice Appropriate special provision to be made where a gas appliance is installed Ventilation may be vaned by Local Council

CORBAL COURSES Concrete floors to be supported by corbal courses as required

DAMP COURSE B C A PART 3 3 4, AS3700 & AS2904 - Provide a continuous run of approved dampcourse material to full width of wall thickness on all brickwork at level not higher than bottom of floor bearers and engaged piers Damp course material is to be run in long lengths, lapped minimum 100m at joints and full width at all intersections To walls surrounding concrete and/or solid floors an additional run of dampcourse is to be laid one full course above floor level and stepped down to meet lower dampcourse

ANT CAPS AS 3600 1 To all brickwork and piers at the level of underside of floorbearers ant capping of 0 5mm gauge Zincalume or other approved metal is to be set projecting 38mm beyond the internal faces of all brickwork and turned down at a 45 degree angle, lapped 13mm, sealed and/ or crimped at all joints and corners so as to provide a continuous and effective barrier against termites throughout the length of the material

VERMIN PROOFING 13mm mesh galvanised bird wire to be built into brickwork and taken across cavity and secured to bottom plate

FLASHINGS B C A PART 3 3 4 AS2904 AS1804 AS3700 - Approved dampcourse material to be built in under all window sills 25mm at back of wood sill and 50mm at each end of same Flashing to be bent down across cavity and built 25mm into veneer wall L C approved dampcourse material to be built in over all exposed window and external door openings also as required in all "wet areas"

WEEP HOLES Perpend joints are to be left open in external brick walls spaced approx 600mm immediately over flashings of all exposed openings and to brick retaining walls, fender walls etc as required

STEPS As shown on plan in bricks to match other exposed brickwork. To be built in solid work or where side walls are provided on consolidated filing Treads are to be brick on edge or precast concrete units with a minimum of 255mm and maximum of 396mm width and a maximum of 190mm and minimum of 115mm rises

ARCH BARS A S 1170 pts 1 & 2 SA Masonry code section 3 A.S 3700 Brickwork over openings to be supported on Ingal" specific made arch bars or equivalent galvanised to A.S 1650 and have minimum bearing of 150mm each end

Spans to 1100mm = one 65mm flat bar

Spans from 1100mm to 1800mm = one 100mm x 100mm Lintel

Spans from 1800mm to 3 0m = one 150mm x 100mm Lintel

For spans over 3 0m refer to structural engineer

☐ FIREPLACE TYPE_____

☐ HEATING TYPE_____

☐ AIRCONDITIONING TYPE_____

BY ☐ OWNER ☐ BUILDER

FOUNDATION DOOR Provide access door where applicable approximately 600mm wide and fitted with appropriate hinges and lock.

STEEL WORKER

Provide steel work in accordance with Engineers details or as shown on plan If wrought iron is shown on plan provide same

METAL FRAMING

METAL FRAMING Provide and erect framing to A S 3623 or engineers detail as shown on plan in accordance with manufacturers recommendations and instructions Damp proofing (flashing) to be provided between concrete floors and bottom plate and any adjoining masonry walls etc If this section is applicable, any section in this specification which duplicates any of this work is to be disregarded

CARPENTER

GENERALLY Timber shall comply with AS1720 2, AS 1684 B C A PART 3 4 3 and be part of the class specified reasonably straight grained and free from those defects which might effect its durability and/or strength Scantlings to be in long lengths accurately cut and fitted well spiked and securely fixed For the exercise of this specification (unless specifically stated otherwise) hardwood is to be of a stress grade and not less than F8 and softwood not less than F5 Timber shall be graded to appropriate SAA grading specification Mechanical grading to AS1748 visual grading will require evidence that they comply with the required stress grade Allowable tolerances as to size is permitted only as outlined by the appropriate SAA standard Timber is NOT to be weakened by any method such as cutting planing chipping or etc Where size of timber is restricted owing to lack of space a higher grade or laminated timber may be substituted if warranted all only as approved by Local Council

FLOOR FRAMING All floors shown on plan as timber are to be framed at level shown with hardwood Bearers to be laid true and level Packing not permitted Provide 100 x 75mm or 125 x 75mm bearers set on edge as already specified at max 1 8m centres Provide 100 x 50mm joists set on edge at a maximum 450mm centres and fix to bearers by double nailing at each crossing Underside of joists to be checked out as necessary over bearers to enable tops of joists to be finished true and level Provide Hardwood or Oregon joists Unsupported spans exceeding 2.7m to have 50 x 50 herringbone strutting or solid blocking spaced at maximum of 1 8m centres No span to exceed 4 8m (Timber walls must have double joists under)

WOOD PRESERVATIVE All hardwood plates bearers and joists (if timber construction) in ground floor are to treated with one coat of pest resisting and wood preserving oil (Specification No AS1604) or approved chemical treatment before fixing, on all faces and ends except tops of joists

WALLS To be framed with ☐Hardwood ☐Oregon ☐Pine

WALL PLATES (and Bottom) For 100mm studs – 100 x 50mm for 75mm studs – 75 x 50mm Plates may be checked approx 10mm to provide uniform thickness where studs occur Where plates are machine gauged to a uniform thickness checking may be omitted

STUDS (not more than 3m long) Wall external and internal

MAXIMUM 3M LONG	UPPER STOREY	LOWER STOREY
At 450mm centres	100 x 38mm or 75 x 50mm	100 x 50mm
Each side of openings up to 1 8m wide	100 x 50mm or 75 x 50mm	100 x 75mm
Other openings up to 3 6m	100 x 75mm or 75 x 75mm	100 x 100mm
Over 3 6m	100 x 100mm	100 x 100mm

Three studs are to be provided at each wall angle and intersection well blocked and securely fastened together Two studs mat be accepted in brick veneer construction With corner windows the angle studs are to be cut away to suit frame 100 x 100mm or 75 x 75mm posts are to be framed in corner mullions of windows or galvanised pipe may be used

TIMBER ROOF TRUSSES To be properly fabricated to manufacturers certified detail or Engineers detail and fixed in strict accordance with their drawings or instructions Bottom chord to be clear of internal walls with a minimum clearance of 13mm at the point of maximum deflection after loading Self adjusting fasteners to be used to fix truss chord to internal top plate

HEADS Where supporting Roof Trusses up to 900mm centres (To be checked into studs)

	FOR TILED ROOF CONSTRUCTION			FOR SHEET ROOF CONSTRUCTION (Metal of Fibre Cement)		
SPAN	6000mm	7500mm	9000mm	6000mm	7500mm	9000mm
Up to						
1200	125x50 or 150x38	150x50 or 175x38	150x50 or 175x38	100x50	125x50 or 100x75	125x50 or 100x75
1500	175x150 or 150x75	175x50 or 150x75	200x50 or 175x75	125x50 or 100x100	150x50 or 125x75	150x50 or 125x75
1800	200x50 or 175x75	225x50 or 200x75	225x50 or 200x75	150x50	175x50 or 150x75	175 x50 or 150x75
2100	225x50 or 200x75	250x50 or 225x75	250x75	175x50 or 150x75	200x50 or 175x75	200x50 or 175x75
2400	250x50	250x75	300x50	200x50 or 175x75	225x50 or 200x75	250x50 or 200x75
2700	300x50	300x50	300x75	225x50 or 200x75	250x50 or225x75	300x50 or 225x75
3000	300x75			250 x 50 or 225x75	300x50 or 250x75	300x75 or 250x75

HEADS Where supporting conventional roof construction (To be checked into studs)

SPAN	FOR TILED ROOF CONSTRUCTION	FOR SHEET ROOF CONSTRUCTION (Metal or fibre cement)
1 2m	75x75mm or 100x38mm	50x75mm
1 5m	125x50mm or 100x100mm	100x38mm
1 8m	175x50mm or 150x75mm	125x50mm or 100x100mm
2 1m	200x50mm or 175x75mm	150x50mm or 125x100mm
2 4m	225x50mm or 200x75mm	175x50mm or 150x75mm
2 7m	250x50mm or 225x75mm	200x50mm or 175x75mm
3 0m	250x75mm or 300x50mm	225x50mm or 200x75mm

Timber grading Hardwood AS2082 Oregon or C/Pine AS2440 Where depth exceeds 150mm timber is to be seasoned having a maximum moisture content of 18%

BRACING AS1684 B C A PART 3 4 3 As appropriate for wind velocity for buildings type "A and or B" to be evenly distributed throughout For wind speeds exceeding AS1684 frame and bracing to be designed by Structural Engineer

NOGGING (BRIDGING) To be fixed between studs at 1 35m maximum height where wall cladding is joined 38mm thick Where not joined 25mm thick and finished not more than 7mm behind the face of the frame Skirting blocks of the same section as bottom plates and not less than 225mm long to be spiked to plates Skirting blocks not required if wall linings extend below the top of the bottom plate and skirtings are less than 75mm high

ROOFS AS1684 B C A Clause 3 4 3 6 - To be framed with ☐Hardwood ☐Oregon ☐Pine Length of rafters to longest ridge is to be gauged to suit full tile courses

CEILING JOISTS To be of dimensions 100 x 38mm Hardwood 100 x 50mm Oregon at maximum 450mm centres Fix trimmers to ceiling joists where required at 450mm centres Where two lengths of joists are used they are to be lapped and well spiked over partition walls All to be dogged to hangers Ceiling joists, where practicable are to be at right angles to ridge

HANGERS To be provided so that the unsupported length of ceiling joists does not exceed 2 1m double nailed to each ceiling joists and secured to side of rafters wherever practicable

SPAN	HARDWOOD	OREGON
Up to		
3 0m	175 x 38mm	200 x 38mm
3 025m to 3 6m	200 x 38mm	200 x 50mm
3 625 to 4 2m	225 x 38mm	250 x 38mm
4 225 to 4 8m	250 x 38mm	300 x 38mm

Where the length of hanger exceeds 4 8m the hanger is to be supported by a beam as for Strutting Beams and the size of hanger is to be governed by the new span **(Roof not to be strutted off hangers or beam supporting hanger)**

STRUTS Strutting from ceiling joists or hangers over room not permitted Struts must be seated on or directly above walls Size to be 75 x 75mm up to a length of 2 1m centres under purlins Where strutting beams are required, they are to be packed up from the walls and be 13mm above level of ceiling joists also must not be used as hangers for ceiling joist or to support hangers

COLLAR TIES Up to 4 2m span – 75 x 50mm Hardwood or 100 x 50 mm Oregon Over 4 2m span – 100 x 50mm Hardwood or 125 x 50mm Oregon Fixed to alternate pair of rafters

GUTTERS AND VALLEY BOARDS 19mm thick and width of gutter

MANHOLE Trim as required between ceiling joists for manhole 600 x 400mm line the opening and provide suitable cover

HOT WATER TANK Provide hot water storage tank (AS1529)

PORCH ROOF To be constructed when shown on plan Post D A.R pipe or wrought iron, securely fixed top and bottom 75 x 50mm Top Plates – D A.R if exposed 75 x 50mm Rafters spaced at maximum of 450mm centres A fall of at least 13mm in 300mm must be maintained towards outer edge Roof to be covered as per drawing Fix 25mm facia all round

GABLES (If shown on drawing) Form and project plates, purlins, ridges etc Supply and fit 159 x 19mm barge boards with fillet at top scribed up to tiling or capped with fibre cement to allow for verge tiles to be pointed with mortar or formed metal fascia to manufacturers specifications Cover gable faces with siding as shown on drawing Line soffits as for eaves

EAVES Project rafters at eaves to give soffit as shown on plan and fix facia all round out of 25mm timber

☐ Line underside of rafters with 4 5mm fibre cement, cover joints and provide quadrant moulding against wall,

☐ Form flat soffit with 4 5mm fibre cement let into a full 7mm groove at back of facia and secured at wall to 50 x 25mm battens nailed to framing and supported at all joints and intermediately with 38 x 38mm sprokets at maximum of 450mm centres Cover joints with approved strips and provide quadrant moulding against wall

☐ SHEET FLOORING To be fixed in strict accordance with manufacturers recommendations – A S 2269 A.S 1859

☐ FLOORING TIMBER Must not be fixed until roofing complete and building weatherproof Timber must be seasoned to a moisture content between 10% and 15% Flooring is to be tightly cramped every board nailed at each bearing with nails punched below the surface thoroughly cleaned and flushed off at completion Floor must be T & G with a finished thickness not less than 19mm Flooring exceeding 43mm face wide to be double nailed at all bearing points

FLOOR SANDING Floor to be sanded to even surface

☐TIMBER DECKING To be ☐Hardwood ☐Treated pine ☐Other To be securely fixed to joists using corrosion proof fasteners

☐ COMPRESSED FIBRE CEMENT Not less than 18mm for joists spacing 600mm or 15mm for joists spacing 450mm All installed as per manufacturers instructions

FLOOR FRAMING ☐

		HARDWOOD	OREGON / PINE
	(Over 2 or more spans)		
BEARERS			
At 1 8m centres set on edge	Non load bearing & sheet roofing	100x75mm	125x75mm
	Supporting tile roof or trusses	125x75mm	125x75mm
JOISTS			
Ground and upper floors	Up to 1 8m	100x50mm	150x50mm
At 450mm centres	1 8 to 2 4m	125x50mm	175x50mm
	2 4 to 3 0m	150x50mm	200x50mm
	3 0 to 3 6m	175x50mm	250x50mm
	3 6 to 4 2m	225x50mm	275x50mm
	4 2 to 4 8m	250x50mm	300x50mm

An engineers certificate is required as to size and adequacy for spans over 4 0m

Unsupported spans exceeding 2 7m to have 38x38mm herringbone strutting or solid blocking 1 8m centres as per AS 1684

PITCHED ROOF ☐	SPACING	HARDWOOD	OREGON OR PINE
RAFTERS Tile roofing	At 450mm centres	100x38mm	100x50mm
	Up to 600mm centres	100x38mm	100x50mm
Corrugated Fibre Cement Roofing	At 600mm centres	100x38mm	100x50mm
Corrugated metal roofing	At 900mm centres	100x38mm	100x50mm
BATTENS Tiled roofing –		38x25mm	38x25mm
Rafters at 450mm centres	Spaced to suit full tiles	38x38mm	38x38mm
Rafters at 600mm centres	Spaced to suit full tiles	38x38mm	38x38mm
Corrugated Fibre Cement Roofing		75x32mm	75x38mm
Corrugated Metal Roofing	900 mm centres	75x32mm	75x38mm
RIDGES and HIPS all roofs		150x25mm	150x25mm
VALLEYS all roofs		150x38mm	150x38mm
PURLINS tile roofs	2 1m centres	100x75mm	100x75mm
Metal or Fibre cement roofs	2 1m centres	100x75mm	100x75mm
STRUTS maximum 2.1m	2 1m centres	100x50mm	75x75mm
COLLAR TIES to 4.2m	every alternate pair of rafters	75x50mm	100x50mm
Over 4 2m	every alternate pair of rafters	75x50mm	125x50mm
STRUTTING BEAMS spaced at 2.4m as required	span to 2 0m	100x50mm	125x75mm
Not to be used as hangers for ceiling joists	2 0m to 2 4m	150x50mm	150x75mm
	2.4m to 3 0m	175x50mm	175x75mm
	3 0m to 3 6m	200x50mm	200x75mm
GUTTER and VALLEY BOARDS	min thickness	20mm	
CEILING JOISTS	450mm centres	100x38mm	100x50mm
	600mm centres	100x38mm	100x50mm
HANGERS	2 1 centres		
	2.1m to 3 0m	175x38mm	200x38mm
	3 0m to 3 6m	200x38mm	225x38mm
	3 6m to 4 2m	225x38mm	250x38mm
	4.2m to 4 8m	250x38mm	275x38mm
WIND BRACING A S 1684 as appropriate for Wind velocity for buildings type "A and B" to be Evenly distributed throughout			
FLAT ROOF ☐	SPANS	HARDWOOD	OREGON or PINE
RAFTERS	Up to 2 4m	125x50mm	150x50mm
	2 4 to 3 0m	150x50mm	150x50mm
	3 0 to 3 6m	175x50mm	175x50mm
	3 6 to 4 2m	200x50mm	225x50mm
	4 2 to4 8m	225x50mm	250x50mm
	4 8 to 5 4m	275x50mm	275x50mm
	5 4 to 6 0m	300x50mm	300x50mm
BATTENS		75x38mm	75x38mm
RIDGE BEAMS TO OPEN SPANS	up to 3 0m	200x100mm	225x100mm
Fall of roof to be not less than50mm in 3 0m span and to be herringbone strutted or solid blocked full depth of joists Where span exceeds 2 7m for subsidiary roofs fall is to be not less than 13mm per 300mm of span Roof to be sarked and ventilated	3 0 to 3 6m	225x100mm	250x100mm
	3 6 to 4 2m	250x100mm	275x100mm
	4 2 to 4 8m	275x100mm	300x100mm
VERANDAH BEAMS	up to 2 1m	150X50MM	150X75MM
	2 1 to 3 0m	200X75MM	200X75MM
VERANDAH POSTS		100X100MM	100X100MM

JOINER

DOORS AND WINDOWS GENERALLY All timber sizes are nominal and tolerances only as provided by the appropriate Australian Standards listed here For door frames and jamb linings – doors and windows – AS1288 – 89 Frames to be properly fitted and joined together with linings mouldings and trimmings properly mitered or scribed All defects and marks filled and ready for painting, with approved primer or a priming oil including a wood preservative

JAMB LININGS Lining to be a minimum of 38mm thick solid rebated to all door openings Where return plaster reveals occur, linings are to be 75 x 50mm rebated Linings to openings not having doors or to have swing doors are to be 25mm thick timber securely fixed

DOORS AS1904 AS2588, AS2689 Fit accurately to door frames hang front and rear doors with three 100mm steel butts and other doors unless otherwise specified with two 88mm steel butts. Height of doors to be 2040mm

To front entry a 2 040m x 820mm x 40mm door with selected lock and furniture

To rear entry fit 2 040m x 820mm x 40mm door with selected lock and furniture

Internal doors to be 2.040m x 820mm x 35mm flush panel with selected lock and furniture

Double doors to be 2 040m x 820mm x 40mm rebated together with mortise lock and furniture

Fit sliding doors and tracks where shown on plans

Any variations to door sizes must be shown on plan as a separate item

GARAGE DOORS to be ☐ Tilt ☐ Roll ☐ Other

☐ AUTOMATIC GARAGE DOOR OPENER ☐ Owner ☐ Builder

WINDOWS AS2146 AS2147 ☐ Casement ☐ Hopper ☐ Double Hung To be approved stock construction out of solid rebated material Head and stiles are to be out of material having and end section of not less than 5000mm square mullions and transoms not less than 6250mm square rebate in all cases are to be of such depth as to ensure complete weather proofing Sills minimum 75mm thick sunk, weathered and throated tallow wood or other species of hardwood Window units and combination window wall units may have sills not less than 50mm thick.

SASHES Sashes are to be manufactured from sash stock material not less than 38mm thick. Where glass weight of 3mm or heavier is indicated for use (see under Glazier) 44mm sash and stock material should be used unless a mechanical sash adjuster is provided then 35mm material can be used All units to be supplied with furniture

☐ ALUMINIUM FRAMED AS2047 AS2048 as shown on plans. Type and manufacturer as selected fitted with all furniture and fixed in accordance with the particular manufacturers recommendations Heads and sills to be flashed Frames and sashes must be fitted in conformity with good building practice

ARCHITRAVES Provide architraves of standard section to all door window and other openings internally

SKIRTINGS Provide skirtings of standard section

STORM MOULDS Fix to all window frames and outside doors where appropriate

KITCHEN CUPBOARDS Provide properly constructed floor and wall cupboards in position and to dimensions indicated on plan Floor cupboards to have raised floors with toe space under front face. Cover bench tops with materials as selected Doors to be accurately fitted and hung and finished with selected catches and handles All cupboards are to be securely fixed in position and neatly finished at wall and floor intersections

BUILT IN CUPBOARDS Frame up and fix cupboard/s in position and to dimensions shown on plan Provide doors and door furniture as selected

BATHS. Under exposed edges of bath provide a properly constructed frame ready to receive covering specified elsewhere Or build brick-on-edge walls in classification "M4" mortar and leave ready to receive tiles as specified under "Tile layer Make provision for the area under bath to be properly drained and ventilated

BATH AND SHOWER RECESS If bath and shower recess are to be lined with laminate or water proof material a timber frame is to be constructed If tiling is called for refer to "tile layer" in this specification

STAIRS & HANDRAILS Provide stairs and handrails where shown all as per B C A Housing Provisions Parts 3 9 1 & 3 9 2

CONCRETE STAIRS To engineers detail

FENCER

FENCING By ☐Owner ☐Builder

TYPE	SITUATION
☐ Brick as detailed	☐Front
☐ Colourbond as per manufacturers specification	☐Sides
☐Timber as detailed	☐Rear
☐ Other/	☐Other

DRAINER

NOTE Drain pipes must not be taken through the footings of the buildings All seepage and soakage water is to be effectively dealt with and diverted clear of the building Trenches for drains must not be within 600mm of footings of buildings where running parallel to same

☐SEWERED APEAS A drainage system from pedestal pan and from wastes or all fittings to be provided and connected to the sewer main and all to be in accordance with the Rules and Requirements of the Authority for Water Supply and Sewerage Yard gully at rear of building to be provided Allow for mm drainage CERTIFICATE OF COMPLIANCE IS TO BE PRODUCED AT COMPLETION OF WORK

☐UNSEWERAGED AREAS A drainage system to be provided from all fittings and from grease-trap in accordance with the requirements of the Local Authority concerned Drains must be excavated to provide even falls throughout and with a minimum cover of 300mm Lay 100mm socketed stoneware pipes pr approved P V C pipe to take soil/water from wastes of washtubs, bath shower wash basin and grease trap All drains are to be laid so that water is discharged or adequately absorbed joint all pipes as required by Local Council concerned The Builder is to ascertain and allow for the Council s requirements in this regard An approved grease trap with lid is to be provided and placed in position shown to take water from the sink. Top of trap to be slightly above the finished ground, or nearby paving level All drainage work from fittings to the drainage line outside the building to be performed in accordance with the Rules and Requirements of the Water Supply and Sewerage Authority for sewered areas A Certificate of Compliance to be produced in respect of this work by the builder Allow for Drainage

☐A SEPTIC TANK ☐A HOLDING TANK ☐OTHER of approved design and capacity is to be installed in accordance with the manufacturers specifications and also with the requirements of the Local Authority concerned If any rock encountered during installation of tank to be chargeable extra.

ROOF WATER DRAINS ☐To be connected to existing ☐Roofwater drains to be allowed for and laid Drains to be approved P V C pipe laid to an even and regular fall so as to have a minimum cover of 100mm Connect drainage lines to downpipes with suitable bend and discharge at least 3m clear of building into absorption pits or into street gutter or right of way when required by Local Council concerned Allow for mm drainage

PLUMBER

RAINWATER PRODUCTS AS2179 AS2180 or B C A PART 3 5 2

GUTTERS ☐Zincalume ☐Colourbond ☐Other to be provided for all eaves set in position with sufficient fall to downpipes All joints and angles joined using brackets and sealant as per manufacturers recommendations

DOWNPIPES ☐Zincalume ☐Colourbond ☐Other in positions to allow free flow of water from all gutters and connected to stormwater drainage fixed to wall surface using appropriate fittings ☐ Gutters and down pipes to be affixed in accordance with manufacturers recommendations

VALLEYS To be 6mm thickness Zincalume 450mm wide and fixed to valley boards with edges beaded well lapped and sealed at joints

FLASHING Flash around chimney stacks exhaust flues and wherever else required with approved lead or specific made flashings Stepped or wall flashings to be taken through full width of brick wall turned up internally and dressed down to overlap roof flashing

SANITARY PLUMBER (All areas) Provide connections to laundry tubs kitchen sink vanities basins bath toilets and floor waste all in accordance with the requirements of water and sewerage authority
WATER SERVICE AS3500 Provide copper pipe from authorities main to boundary install water meter and connect to one garden hose cock yard gully kitchen bathrooms laundry toilets and hot water service Internal piping to be ☐copper ☐other all properly secured and finished with necessary flanges, cover plates etc Provide for fixing of toilets vanities baths showers kitchen sink dishwasher and laundry tubs as shown on plan
FLOOR WASTES Provide drainers grates to all floors as required
HOT WATER SERVICE AS3500 Install and connect hot water tank as selected to all points Piping to be lagged as required

☐GAS SERVICE The whole of the work to be carried out as per requirements of the Local Supply Authority The Plumber is to be responsible for the gas service from fence alignment including fixing of the meter and cover for same

ROOFER

GENERALLY AS2050 AS2049 AS1684
TILE ROOFING Provide all roofs with first quality roofing tiles Tiles may not be used on roofs having a slope less than 1 4 5 Where pitch of rafters is less than 1 2 75 terra cotta Marseilles pattern 1 3 7 Swiss pattern 1 3 3 concrete tiles are used the roof shall be sarked with double faced aluminum foil covered reinforced fabric as per AS1736 Between 1 3 7 and 1 4 5 slope perimeter of roof shall be provided with an anti-ponding board or device to ensure that all water will be discharged into eaves gutter a clear space must be provided between edge of the device and the lowest side of the first batten so as to allow a free flow of water into the gutter
Where one section of the roof discharges into a lower section the discharge is to be widely distributed, and the roof is to be fully sarked Elsewhere where a spreader is used the roof shall be sarked from the point of discharge to eave with a minimum width of 1800mm approved sarking
Cover ridges and hips with all capping starters and apex caps necessary and bed all capping and verge tiles on mortar and point with coloured cement mortar

☐TERRA COTTA TILES To be glazed and manufactured in accordance with AS2049 To be fixed to timber battens with approved fasteners every alternate tile all fixed in accordance with AS2050

☐CONCRETE TILES To conform to AS2050 and to be produced by manufacturers who provide a comprehensive guarantee and fixed in accordance with AS2050 Tiles are have an end lap of not less than 75mm Where fixing holes are provided every alternate tile in each course is to be fixed to battens with approved fastener Where holes are provided for nailing every tile in each third course is to be fixed with galvanised flat head nails at least 19mm into tile batten

☐CORRUGATED FIBRE CEMENT ROOFING To conform to AS1611 and fixed in accordance with AS1639 Minimum pitch of roof is to be 1 8 for large corrugations and 1 11 where rafter length can be covered with a single sheet Where pitch of roof is less than 1 6 in the case of large corrugations and 1 4 5 in the case of small corrugations, end laps shall be at least 225mm and sealed Sheets to be fixed with non corrosive hex head self drilling screws fitted with neoprene ceiling washers to each run of battens with side and end laps or other approved method in accordance with manufacturers instructions All necessary accessories are to be provided and the roof to be adequately bird proofed

☐CORRUGATED STEEL ROOF ☐Zincalume ☐Colourbond all sheets branded according to thickness All necessary accessories to be provided and the roof is to be adequately birdproofed Sheets to be fixed with 45mm non corrosive hex head self drilling screws fitted with neoprene ceiling washers to every alternate corrugation at ends and every fourth corrugation immediately All hips and ridges are to be covered with screws and washers Where pitch of roof is less than 1 4 5 minimum a material having effective vapour barrier and thermal insulation qualities is to be fixed to the underside of ceiling joists where a level ceiling surface is to be provided Where the ceiling is to follow the pitch of the rafters irrespective of the pitch of the roof the vapour/thermal barrier is to be fixed to the underside of the rafters **Lead flashing not to be used with Zincalume steel**

☐METAL DECK Metal deck roof with or without self locking ribs may be used provided it is fixed in strict accordance with manufacturers instructions (minimum slope 1 60)

☐SARKING To comply with AS1736 for pliable sarking & AS1903 + 1904 for reflective foil

ELECTRICIAN

To provide all labour and materials necessary 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 Supply Authority for connection from mains to meter boards All work to be in accordance with the S A Wiring Rules AS3006 as amended and the Insurance Council of Australia. Provide light points in positions shown on plan or to be determined Approved switch for each point is to be mounted in positions to be indicated Provided power points of flush type with 10amp switches in positions as shown on plan or to be determined

METER BOX. Provide box to enclose meters in accordance with the Requirements of the Authority concerned

SMOKE ALARMS AS3786 B C A PART 3 7 2 - Self contained smoke alarms are to be installed in suitable locations on or near ceiling in any storey Between each area containing bedrooms and the remainder of the building where bedrooms are served by a hallway, in that hallway or in each bedroom and the alarms are to be connected to the consumer mains power and have a standby power supply

CEILING AND WALL FIXER

CEILING ☐FIBROUS PLASTER ☐GYPSUM PLASTER BOARD

FIBROUS PLASTER. To be manufactured and fixed in accordance with AS2185 AS2186 Normal thickness of 10mm and sheets to be as large as practicable well dried before fixing Use galvanised clouts to affix to battens of 38 x 25mm timber spaced at 400mm centres nailed to ceiling joists Use double battens at all joints running parallel to the battens not more than 225mm apart Punch all clouts into plaster and stop Scrim from above and set joints flush

GYPSUM PLASTER BOARDS To be manufactured and fixed in accordance with Australian Metric Standards Nominal thickness of 10mm fixed with galvanised clouts or screw (specific made) and adhesive direct to ceiling joists at maximum 450mm centres or 13mm thick at 600mm centres clout head to be sunk and stopped with special cement Jointing and fixing must be strictly to manufacturers recommendations

CORNICES Provide cornices to above ceilings neatly mitered (scrimmed and set) at all angles in full wall lengths where possible

FIBRE CEMENT Provide to laundry porch and attached W C Ceilings Sheets of balanced pattern fixed to properly nogged and even surfaced solid backing

WALLS ☐FIBROUS PLASTER ☐GYPSUM PLASTER BOARD Provide to walls of lounge dining bedrooms hall kitchen bathroom Provide all necessary vents and set flush with wall surface

FIBROUS PLASTER. Use full length sheets where practicable All vertical joints must be backed with double studs and reinforced with sisal and/or plaster All joints to be left flush with surface Provide 38 x 38 x 5mm galvanised iron strip to full length of internal angles Fix sheets to wall framing at edges and intermediately with galvanised clouts punch below surfaces and stopped Neatly set all angles

Internal angles Internal angles from skirting to picture rail 19mm quad can be fixed

GYPSUM PLASTER BOARD Provide with full length sheets horizontally or staggered end joints to ceiling heights in accordance with manufacturers instructions Fix with galvanised clouts or screws (specific made) and adhesive at 225mm centres to studs Punch heads of clouts below surface and finish as for ceiling Internal angles from floor to ceiling to be set or may be covered by 25mm quad

☐WET AREAS All walls to wet areas approved water resistant sheets shall be used All internal wet areas to be completely waterproofed by a licensed applicator using propriety system designed for wet areas AS3740 (BCA 3 8 1) or as amended

PLASTERER. ☐ Cement Render ☐ Float and Set all internal brick walls to be cement rendered to a minimum thickness of 13mm in accordance with A S metric code

WATERPROOFER

BATHROOMS TOILETS AND LAUNDRIES All internal wet areas to be completely waterproofed by a licensed applicator using a proprietary accredited product designed for wet areas Membrane should be waterproof not water resistant Area to be waterproofed should be clear of all obstructions and thoroughly cleaned prior to application of product System must include upstands angles a turn should be provided at door thresholds Membranes should be dressed into floor waste outlets For concrete floors full shower base should be sealed Where sheet flooring is in use the whole area should be waterproofed Metal or other approved shower trays may be used in lieu of waterproof membranes to shower areas All shower trays to be installed to manufacturers instructions

ALL TO AS3740 or B C A PART 3 8 1

BALCONIES Balcony areas over internal habitable rooms to be treated under same guidelines as internal wet areas Accredited products should be used and applied by licensed waterproofing contractor and the manufacturers instructions be explicitly followed
Certificate showing type of membrane installation date name and license no of approved installer to be supplied on completion

TILELAYER

TILING AS3958 & 3958 1

FLOORS Provide ☐ bathroom and shower recess ☐ separate W C with floor tiles as selected
WALLS Provide wall tiles to - bathroom 1 4m or shower recess 1 8m or
To enclose bath and hobs above kitchen sink and hot plate of stove and W C Finish at top and salient angles with glazed edge tiles Provide vents to under bath Fix recess fittings (If printed heights are not crossed out they are to apply) Where other types of lining are used refer to Internal wall linings"

PAINTER

GENERALLY All paints stains, varnishes and water colours to be properly mixed, be of approved brands and brought to job in unopened containers Material used for priming is to be recommended by the manufacturers of the paints to be used All finishing colours are to be chosen by owner Do all necessary stopping after priming has been applied Rub down all surfaces to a reasonably smooth finish prior to the application of each successive coat of paint
EXTERNALLY Prime BEFORE fixing All dressed surfaces of all door and window frames, all external woodwork including underside and end of sills are to be primed before fixing
WOODWORK After priming all exposed woodwork to be given one coat of undercoat and one finishing coat of approved paint
IRONWORK Eaves gutters downpipes and service pipes and all wrought iron etc to be cleaned and given one coat of approved primer and one good coat of oil paint or a paint recommended for metal work
FIBRE CEMENT Clean and prepare all external fibre cement surfaces for colouring then give two coats of approved paint
INTERNALLY
WOODWORK all exposed woodwork to be prepared and given one undercoat and finished with two coats of aproved paint or wood stain to manufacturers recommendation
FIBROUS PLASTER AND FIBRE CEMENT To be prepared and given two coats of approved paint
GYPSUM PLASTER BOARD To be prepared and given two coats of approved paint
CEMENT RENDER to be given one coat sealer and two coats approved paint

GLAZIER

ALL WINDOW SASHES AND LIGHTS TO BE GLAZED All glass is to be back puttied well sprigged into primed or oiled rebates and weather puttied Glass is to be free of defects and of the weights and sizes set out below AS1288 to apply or PART 3 6 B C A 9 6 Housing Provisions

MAXIMUM SIZE OF SHEETS	GLASS THICKNESS (mm)
560 x 560mm or 760 x 460mm	2
700 x 700mm or 1000 x 500mm	2
760 x 760mm or 1250 x 600mm	3
900 x 900mm or 1500 x 700mm	3
1170 x 1170mm or 1500 x 970mm	4

Clean all glass on completion

VARIOUS TRADES

BRICK VENEER TIMBER SHRINKAGE GAPS _____ In two storey construction where timber with a low shrinkage is used in each floor framing 20mm clear space shall be provided to the underside of first floor window sill's Where unseasoned hardwood is used in each floor framing the above clearance shall be increased by 50% In concrete slab-on- ground two storey construction window sills on first floor require a space of 10mm the brick veneer shall be kept 10mm below roof frame In two storey construction where timber with a low shrinkage is used in each floor framing the Brick Veneer shall be kept 20mm clear below roof framing on the first floor Where brick gables are to be provided roof framing shall be kept to a minimum of 20mm clear for two storey Where

unseasoned hardwood is used in floor framing the clearances above shall be increased by 50% For slab-on-ground two storey construction a clear space of 10mm shall be provided in the first floor

EXTERNAL CLADDING

☐ WEATHERBOARDS Weatherboards with profiles as specified by Australian Standards are to be selected with a maximum moisture content of 15% in long lengths securely fixed with corrosion proof fasteners lapped a minimum 16mm and fitted with necessary angle moulds Boards exceeding 100mm in width to be double fixed at all bearing points All cladding to be prime coated all round prior to fixing Where vertical boarding is used it is to be fixed at not more than 600 mm centres and approved sarking is to be placed immediately behind the boarding and fixed to the framing

☐ FIBRE CEMENT ☐ OTHER EXTERNAL SHEET All fixed as shown on plan and in strict accordance with manufactures specifications

ENCLOSURE OF BATHS _____A bath shall not be enclosed unless it has a flange especially made for that purpose and complies with the following conditions

1 There shall be free air space all around between the bath and the enclosure
2 The floor of the bathroom shall extend throughout the enclosure That portion of the floor within the enclosure shall be not less than 12mm higher than the main portion of the bathroom floor shall be graded to a suitable floor grating and further provided with an outlet pipe through the riser to the main portion of the bathroom floor
3 All holes made in walls or the floor shall be properly closed and outlet pipes shall have suitable vermin proof gratings
4 The risers shall be of enameled iron terra cotta concrete bricks or composition slabs covered with glazed tiles or other approved impervious material In a timber framed structure the risers may consist of wooden membranes not less than 75mm x 50mm, rendered vermin and moisture proof by a covering of fibre cement sheeting or other approved impervious material applied both internally and externally except in the case of a riser which may be left unlined internally if so approved
5 Where the floor of the bathroom extends into the enclosure two ventilators at least 150mm x 75mm fixed in approved positions shall be furnished to ventilate the enclosed space and such ventilators shall be made of metal terra cotta stoneware concrete or other approved material and shall be rendered vermin-proof
6 Where the bath abuts against a wall or walls the finishing material of the wall shall overlap the upstaged of the bath and the joint shall be made watertight.

BUSHFIRE PRONE AREAS B C A PART 3 7 4 where a building is to be erected in a FIRE PRONE AREA AS3959 (Construction of buildings in bush fire prone areas) is to be followed

CONCRETE MASONRY WALLS

GENERALLY AS3700 B C A PART 3 3 2 - The masonry Contractor shall supply all labour materials and equipment necessary to complete the concrete masonry walls of this project in accordance with plans and specifications This work shall be properly co-ordinated with that of other trades All applicable local laws ordinances and codes shall be fully complied with All materials, workmanship and construction practices shall be of a standard not less than shown on plans or specified hereunder

CARE OF MASONRY UNITS masonry units shall be stacked so as to be clear of the ground and in wet weather covered with waterproof sheeting or otherwise kept dry At the end of each days work the top of the wall shall be protected from becoming excessively wet. The masonry units shall not be dampened prior to laying and shall be laid in a dry state

PROPERTY SPECIFICATIONS Mortar shall comply with AS3700 in all respects, as it applies to property specifications Locally available plasticizers may be used when approved and where tests show the mortar meets the requirements of these specifications

MORTAR PROPORTIONS Above damp proof course level 1 1 6 (Cement Lime and Sand)

INTERSECTING BEARING WALLS Intersecting block bearing walls should not be tied together in a masonry bond except at corners Instead one wall should terminate at the face of the other wall with a control joint at that point For tying non-bearing block walls to other walls approved non-corossive ties to be placed across thje joint between the two walls The ties are to be placed in alternate courses When one wall is constructed first the ties are to be placed in the wall allowed to project to be built in to the mortar joint of the second wall Where the two walls meet, the vertical joint is to be raked out to a depth of 15mm if it is exposed to view in the finished building and approved filler inserted into the recess

CONTROL JOINTS Control joints shall be located where shown and as detailed on the plans Control joints shall form a continuous vertical break from top to bottom of wall or from bond beam Provision shall be made for adequate lateral stability

(detail on plans) Joint shall be filled with mortar raked back 15mm and pointed up with a non-hardening plastic filler Plastic filler shall be tooled to match jointing No reinforcing shall be used across a control joint.

FOOTINGS the size and proportion of footings shall be based on an assessment of the load to be carried the bearing capacity of the foundation material and any other factors which may affect the stability and carrying capacity of the footing All to the approval and or design of supervising structural engineer

STANDARD FOOTINGS for general construction the footings as specified on page 3 may be used if no unusual ground conditions exist

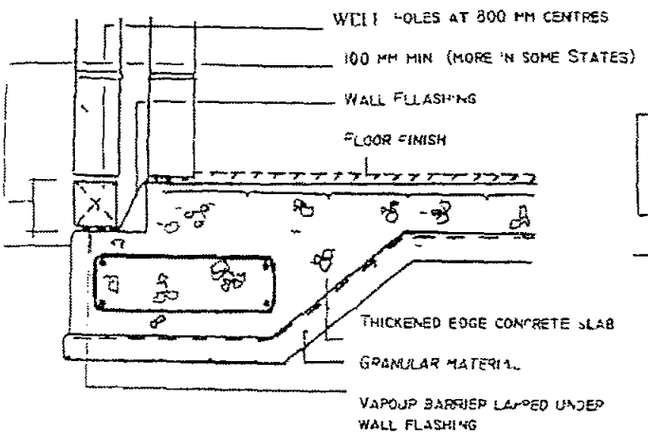
JOINT REINFORCEMENT B C A PART 3 3 2.3 Joint reinforcement shall be used at all window and similar openings in the first two bed joints under the sill except that it may be omitted when a bond beam is provided in this position The joint reinforcement shall extend at least 500mm beyond the reveals or to the end of the wall whichever distance is lesser Joint reinforcement used generally to control cracking throughout a wall shall be laid in the bed joints with vertical spacings not exceeding 600mm, except that it may be omitted within 600mm of a structural diaphragm or bond beam

BRACING DURING CONSTRUCTION Masonry walls constructed in locations where they may be exposed to winds during erection shall not be built higher than ten times their thickness unless adequately braced or until provision is made for the prompt installation of permanent bracing Back filling shall not be placed against foundation walls until they have been braced to withstand horizontal pressure or as required by supervising structural engineer

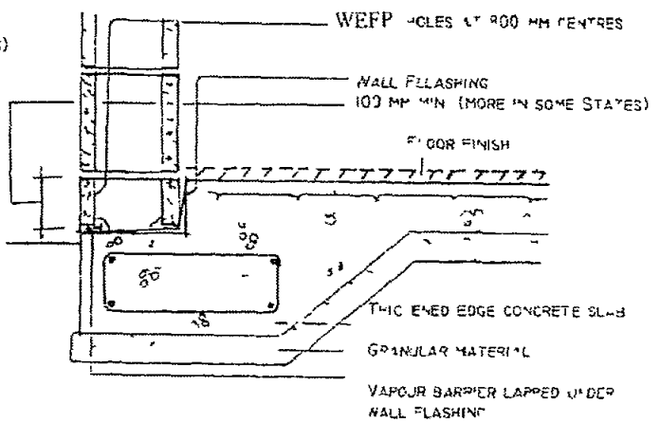
DECORATIVE SCREEN WALLS Screen walls used for decorative purposes shall carry no vertical loads other than their own weight. They shall be adequately anchored to suitable horizontal or vertical structural members in order to resist wind and any other lateral loads

WEATHER PROOFING B C A PART 3 3 4 - All single leaf concrete masonry walls exposed to the weather or below ground shall be adequately weather-proofed or water-proofed, using an approved product specifically designed for the purpose and applied in accordance with the manufacturers specifications

VAPOUR BARRIER. To be pigmented polythene sheet not less than 0 2mm thick taped and sealed at all joints



CAVITY WALL - SLAB ON GROUND



SINGLE SKIN WALL SLAB ON GROUND

The concrete block supplement is to take precedence over the specification if it conflicts in any way and all other parts of the specification are to be adhered to

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 are to be cleared and the building generally to be left clean and fit for occupation The Builder is to furnish the Owner with -

1 Notification of Completion
2 Certificate of Compliance re plumbing & drainage
3 All keys for all doors

It is the responsibility of the Builder to arrange any inspections necessary by council water board or Lending Authorities

WORK BY OWNER

WORK BY OWNER Work to be performed and completed by the owner and releases the builder from any responsibility and/or expense from any such work_____

_____

_____

_____

_____

_____

_____

_____

_____Signed by Owner

SCHEDULE OF ALLOWANCES

The builder is to allow the prime cost amounts set out in this schedule All amounts are retail prices and do not include the cost or cartage, freight, fixing or fitting, all of which is to be done and paid for by the builder as part of his contract

☐ Bath _____ $_____
☐ Vanity unit _____ $_____
☐ Wash basin _____ $_____
☐ Towel rail _____ $_____
☐ Soap holders _____ $_____
☐ Bathroom mirrors _____ $_____
☐ Shower screen _____ $_____
☐ Exhaust fan 200mm ☐ Bathroom ☐ Kitchen _____ $_____
☐ Exhaust hood over hot plates _____ $_____
☐ Kitchen cupboards including sink _____ $_____
☐ Stove/wall oven/hotplates ☐ Electric ☐ Gas _____ $_____
☐ Set of wash tubs complete ☐ Single ☐ Double _____ $_____
☐ WC suites _____ $_____
☐ Taps and fittings _____ $_____
☐ Seat _____ $_____
☐ Door furniture latchsets lock etc _____ $_____
☐ Entry door _____ $_____
☐ Security Door _____ $_____
☐ Wall and floor tiles _____ $_____
☐ Garage door _____ $_____
☐ Hot water ☐ Electric ☐ Gas _____ $_____
☐ Ceiling Fans _____ $_____
☐ Insulation _____ $_____
☐ Light fittings _____ $_____
☐ Dishwasher _____ $_____
☐ Hot water unit _____ $_____
☐ Water tanks _____ $_____
☐ Waste Treatment _____ $_____
☐ Agricultural Drains _____ $_____
☐ Storm Water Drains _____ $_____
☐ Sewer Drains _____ $_____
☐ Water Tanks _____ $_____
☐ Water Pumps _____ $_____
☐ _____ $_____
☐ _____ $_____
☐ _____ $_____
☐ _____ $_____

ADDENDA

THIS IS THE SPECIFICATION REFERRED TO IN THE CONTRACT BETWEEN OWNER AND BUILDER AS SHOWN BELOW

Witness Signed (Owner)
Date

Witness Signed (Builder)
Date

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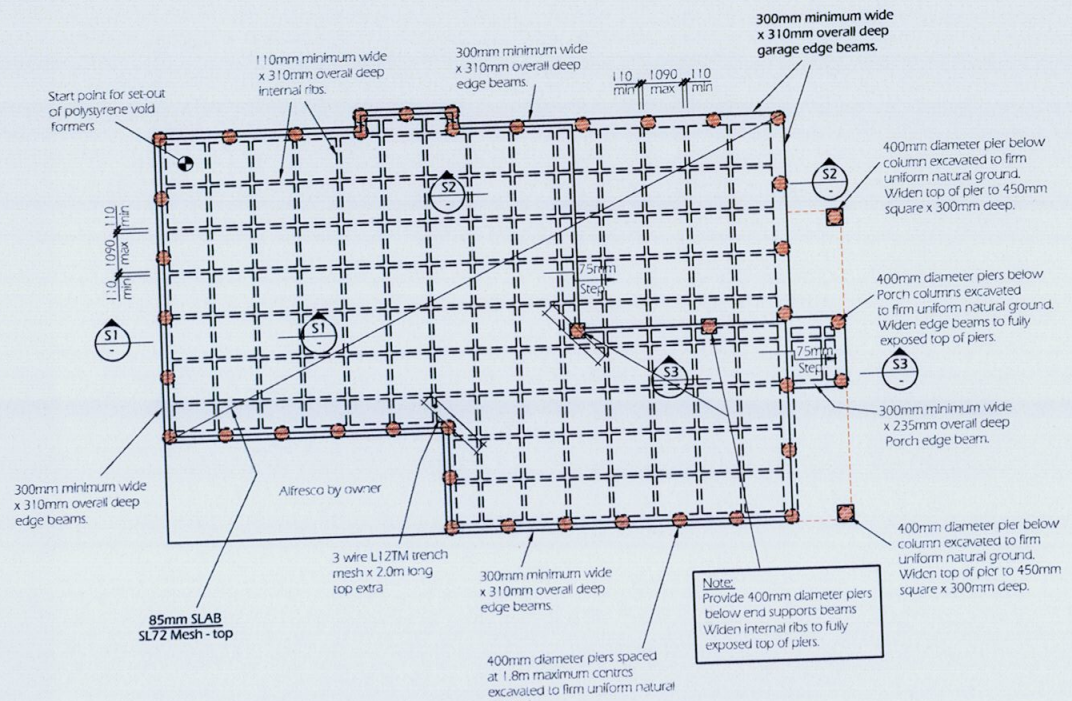
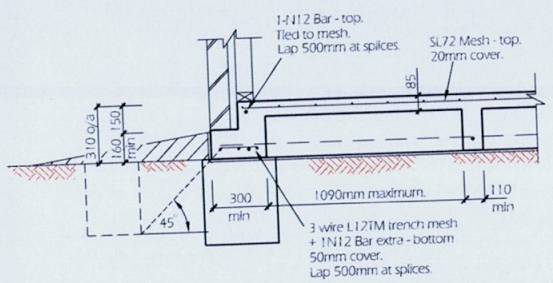


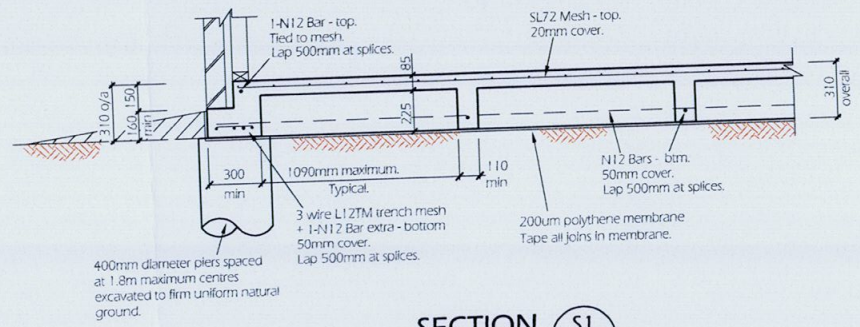
PLAN - FOUNDATION WAFFLE SLAB

Overlap fabric one whole uncut wire panel plus 25mm minimum at splices.

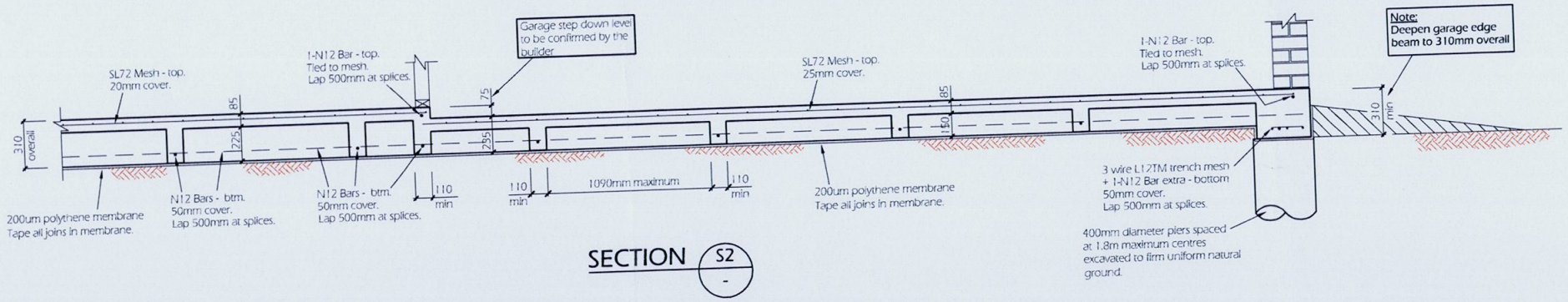


DETAIL - DRAINAGE TRENCH.

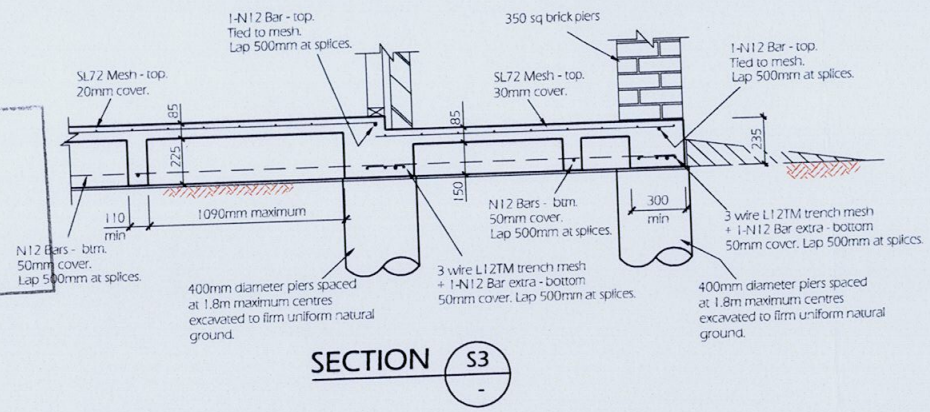
Note: Sides of drainage trenches to be kept at least 500mm or a distance equal to the depth of the trench away from the edge of the slab, otherwise provide piers at 2.4m maximum centres pitered to firm uniform natural ground at a level below the base of the trench.



SECTION S1 -



SECTION S2 -



SECTION S3 -

CITY PLAN SERVICES
Construction Certificate No. CC N101284
Approved 22 MAR 2010

NOTES:

1. This drawing is to be read in conjunction with the Architectural drawing and specification.
2. Workmanship and materials to comply with AS3600 and associated Australian Standards.
3. Characteristic concrete compressive strength in accordance with AS3600 to be 20MPa.
4. Concrete slump to be 80mm.
5. Concrete in slab to be mechanically vibrated during placing.
6. Cure concrete by keeping constantly damp for at least 5 days after placing.
7. Reinforcement to be supported on bar chairs spaced at every 5th wire in both directions.
8. During site excavation provide sufficient drainage around building area to ensure that all rain water run-off is diverted away from area and is not allowed to pond on completion of the slab. Fill around the edge to at least 120mm minimum above the underside of the edge beam and fall away from slab at a slope of 50mm in 1000mm.
9. Filling to be thoroughly compacted in shallow layers (150mm thick) by multiple passes of earth moving equipment.
10. Termite protection to be in accordance with AS3660.1-1995 and Council's requirements.
11. Construction requirements and site maintenance outlined in AS2870-1996 are to be followed. Performance expectations set out in AS2870-1996 Appendix B are acceptable. Refer also to CSIRO Information sheet 10-91 "Guide to House owners on foundation maintenance and footing performance" - a copy of which is available from our office.

ALL SLAB EDGE BEAMS ARE TO BE SUPPORTED BY 400mm DIAMETER PIERS SPACED AT 1.8m MAXIMUM CENTRES TO FIRM UNIFORM NATURAL GROUND WITH AN ALLOWABLE SAFE BEARING CAPACITY OF AT LEAST 300kPa. IF ROCK IS ENCOUNTERED IN TRENCHES OR PIER HOLES THE ENTIRE EDGE BEAM MUST BE PIERED TO IT.

The slab shown on this drawing have been designed for a class 'M' site in accordance with the requirements of AS2870 & AS3600 and if constructed in accordance with the details shown will be structurally adequate for a two storey brick veneer residence on this site.

Issue	Date	App'd	DESCRIPTION
			REVISIONS

KNEEBONE, BERETTA & HALL PTY LTD
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Peter R. ANDRESEN B.E. M.I.E. Aust. C.P. Eng.
Member of The Association of Consulting Engineers Australia

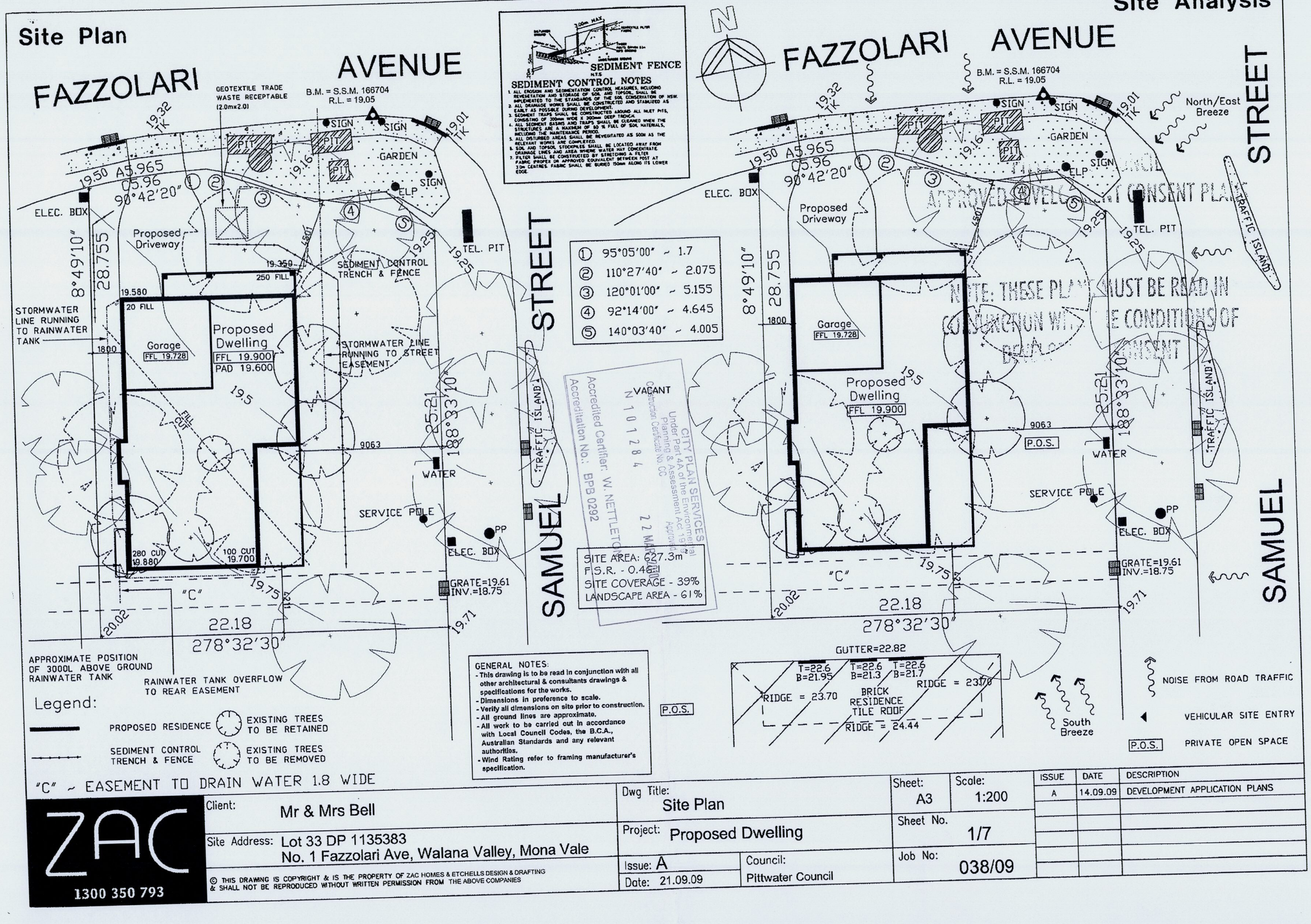
SCALE	1:100, 1:20
DATE	16-12-09
DRAWN	D Alwen
DESIGNED	P Andresen
APPROVED	

PROPOSED RESIDENCE AT
1 FAZZOLARI AVE, WALANA VALLEY, MONA VALE
For : MR & MRS BELL

FOUNDATION SLAB DETAILS

DRAWING NUMBER 86971-1
ISSUE

Site Plan



①	95°05'00" ~ 1.7
②	110°27'40" ~ 2.075
③	120°01'00" ~ 5.155
④	92°14'00" ~ 4.645
⑤	140°03'40" ~ 4.005

GENERAL NOTES:
- This drawing is to be read in conjunction with all other architectural & consultants drawings & specifications for the works.
- Dimensions in preference to scale.
- Verify all dimensions on site prior to construction.
- All ground lines are approximate.
- All work to be carried out in accordance with Local Council Codes, the B.C.A., Australian Standards and any relevant authorities.
- Wind Rating refer to framing manufacturer's specification.

Legend:
- PROPOSED RESIDENCE
- SEDIMENT CONTROL TRENCH & FENCE
- EXISTING TREES TO BE RETAINED
- EXISTING TREES TO BE REMOVED

"C" ~ EASEMENT TO DRAIN WATER 1.8 WIDE

Site Analysis

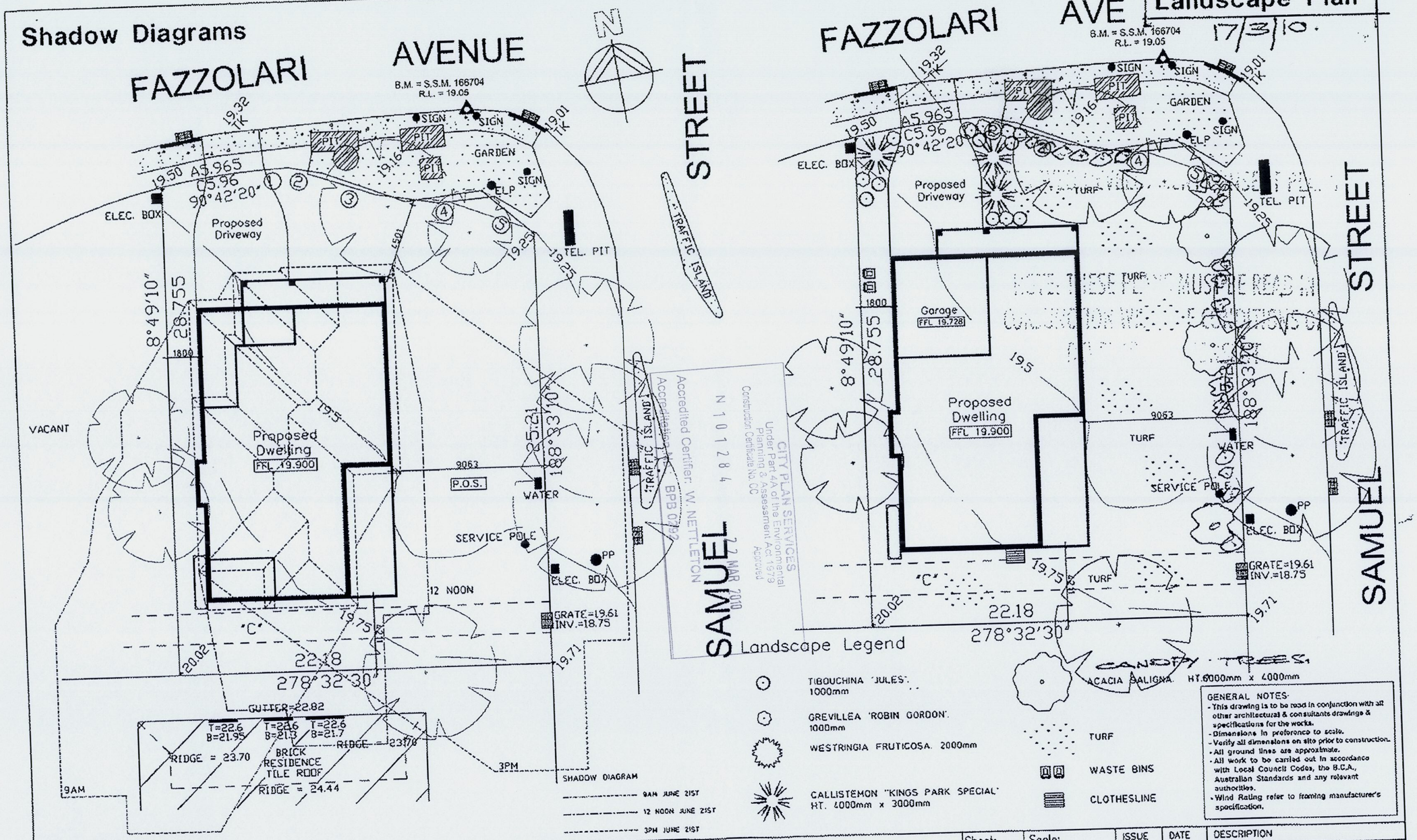
ZAC
1300 350 793

Client: Mr & Mrs Bell	Dwg Title: Site Plan	Sheet: A3	Scale: 1:200
Site Address: Lot 33 DP 1135383, No. 1 Fazzolari Ave, Walana Valley, Mona Vale	Project: Proposed Dwelling	Sheet No. 1/7	
	Issue: A	Council: Pittwater Council	Job No: 038/09
	Date: 21.09.09		

ISSUE	DATE	DESCRIPTION
A	14.09.09	DEVELOPMENT APPLICATION PLANS

REVISED
Landscape Plan
17/3/10.

Shadow Diagrams



Landscape Legend

- TIBOUCHINA 'JULES' 1000mm
- GREVILLEA 'ROBIN GORDON' 1000mm
- WESTRINGIA FRUTICOSA. 2000mm
- CALLISTEMON "KINGS PARK SPECIAL" HT. 4000mm x 3000mm
- TURF
- WASTE BINS
- CLOTHESLINE

CANOPY TREES:
ACACIA BALIANA HT.6000mm x 4000mm

GENERAL NOTES:
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- Dimensions in preference to scale.
- Verify all dimensions on site prior to construction.
- All ground lines are approximate.
- All work to be carried out in accordance with Local Council Codes, the B.C.A., Australian Standards and any relevant authorities.
- Wind Rating refer to framing manufacturer's specification.

ZAC
1300 350 793

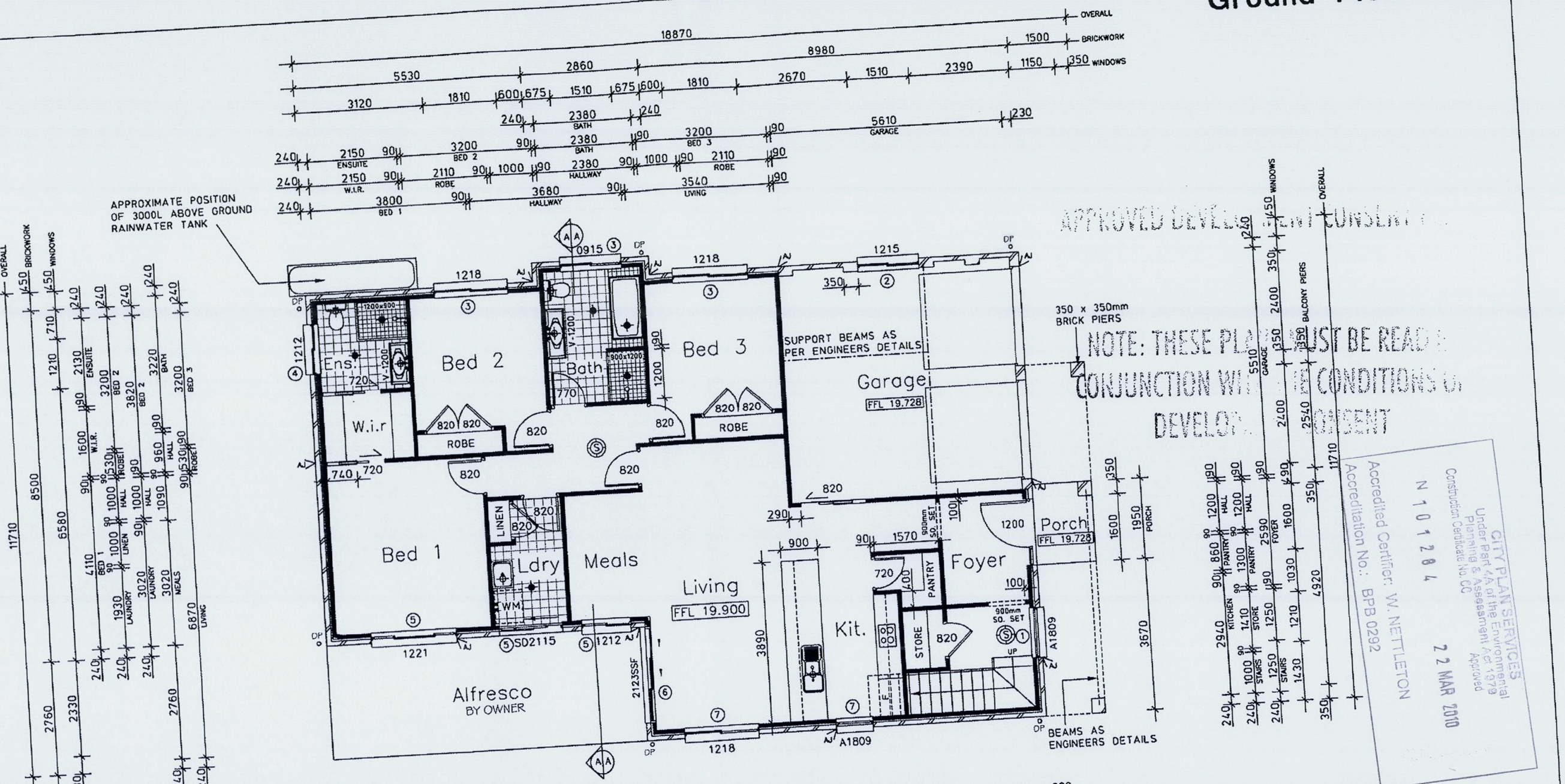
Client: Mr & Mrs Bell	Dwg Title: Shadow Diagrams		Sheet: A3	Scale: 1:200	
Site Address: Lot 33 DP 1135383 No. 1 Fazzolari Ave, Walana Valley, Mona Vale	Project: Proposed Dwelling		Sheet No. 2/7		
	Issue: A	Council: Pittwater Council	Job No: 038/09		
	Date: 21.09.09				

ISSUE	DATE	DESCRIPTION
A	14.09.09	DEVELOPMENT APPLICATION PLANS

Ground Floor Plan

SMOKE DETECTOR

AJ ARTICULATION JOINT



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

APPROVED DEVELOPMENT CONSENT

CITY PLAN SERVICES
Under Part 4A of the Environmental Planning & Assessment Act 1979
Construction Certificate No. CC
N 1 0 1 2 8 4
Accredited Certifier: W. NETTLETON
Accreditation No.: BPB 0292
Approved
22 MAR 2010

AREAS	
GROUND FLOOR PLAN	142.15m2
GARAGE	33.58m2
FRONT PORCH	2.93m2
FIRST FLOOR PLAN	143.54m2
BALCONY	19.24m2
TOTAL	341.44m2
ALFRESCO (BY OWNER)	21.14m2

GENERAL NOTES:
- This drawing is to be read in conjunction with all other architectural & consultants drawings & specifications for the works.
- Dimensions in preference to scale.
- Verify all dimensions on site prior to construction.
- All ground lines are approximate.
- All work to be carried out in accordance with Local Council Codes, the B.C.A., Australian Standards and any relevant authorities.
- Wind Rating refer to framing manufacturer's specification.

ISSUE	DATE	DESCRIPTION
A	14.09.09	DEVELOPMENT APPLICATION PLANS

ZAC
1300 350 793

Client: Mr & Mrs Bell

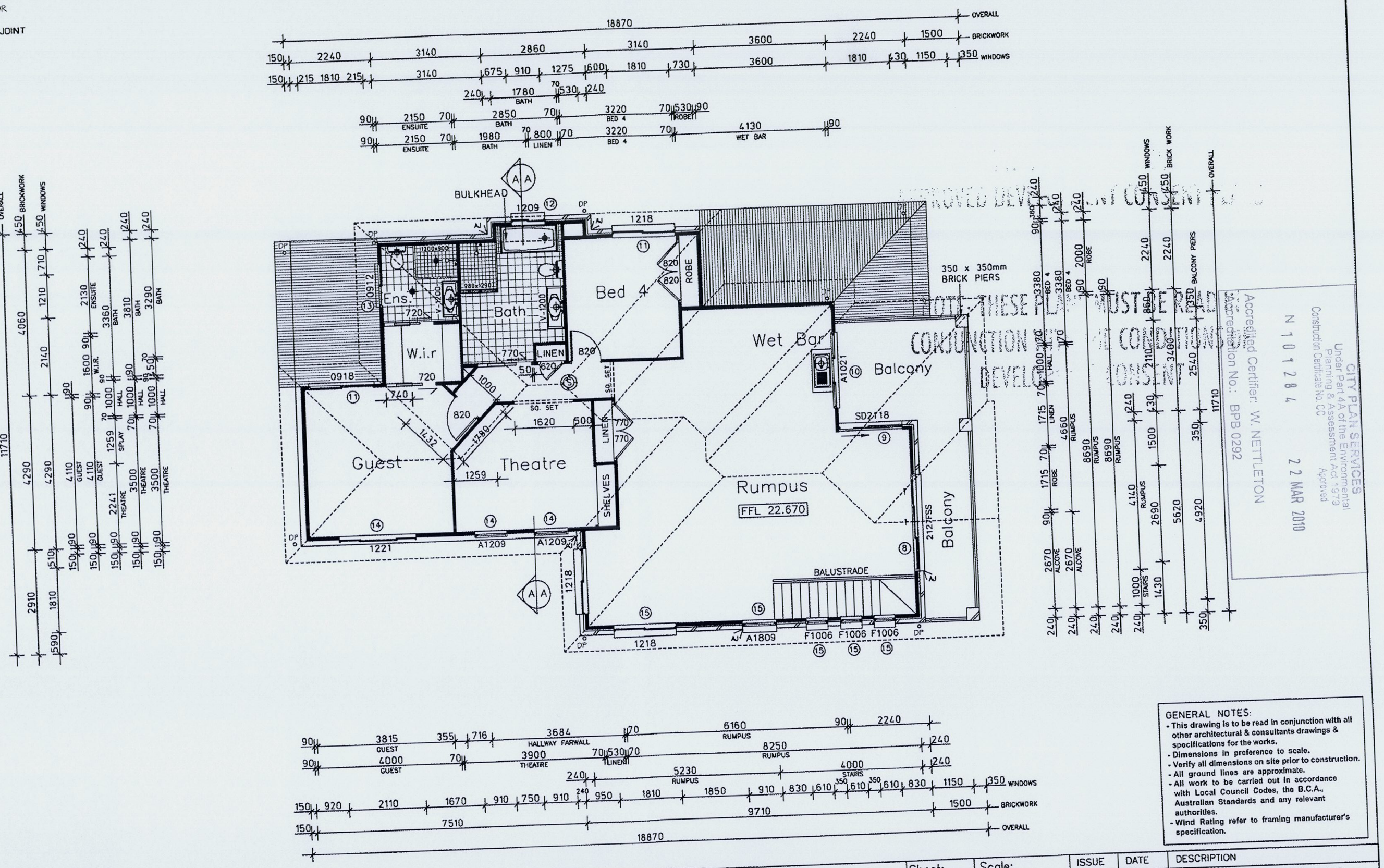
Site Address: Lot 33 DP 1135383
No. 1 Fazzolari Ave, Walana Valley, Mona Vale

Dwg Title: Ground Floor Plan
Project: Proposed Dwelling
Issue: A
Date: 21.09.09
Council: Pittwater Council
Sheet: A3
Scale: 1:100
Sheet No. 3/7
Job No: 038/09

First Floor Plan

SMOKE DETECTOR

AJ ARTICULATION JOINT



GENERAL NOTES:
- This drawing is to be read in conjunction with all other architectural & consultants drawings & specifications for the works.
- Dimensions in preference to scale.
- Verify all dimensions on site prior to construction.
- All ground lines are approximate.
- All work to be carried out in accordance with Local Council Codes, the B.C.A., Australian Standards and any relevant authorities.
- Wind Rating refer to framing manufacturer's specification.

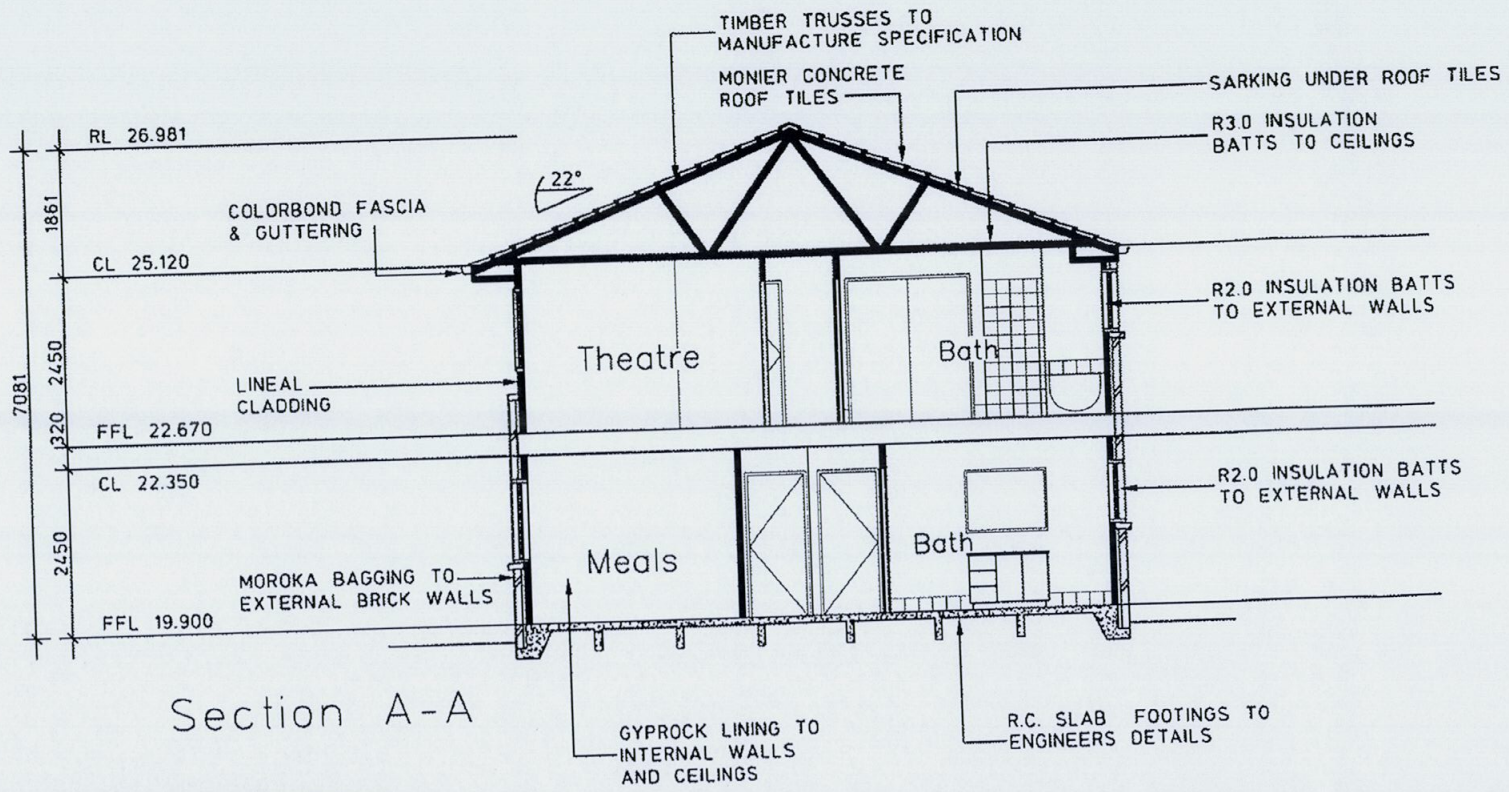
ZAC
1300 350 793

Client:	Mr & Mrs Bell
Site Address:	Lot 33 DP 1135383 No. 1 Fazzolari Ave, Walana Valley, Mona Vale

Dwg Title:	First Floor Plan	Sheet: A3	Scale: 1:100
Project:	Proposed Dwelling	Sheet No.	4/7
Issue: A	Council: Pittwater Council	Job No:	038/09
Date: 21.09.09			

ISSUE	DATE	DESCRIPTION
A	14.09.09	DEVELOPMENT APPLICATION PLANS

Section & Basix Information



Section A-A

INSULATION NOTES

R3.0 INSULATION BATTS TO CEILINGS

R2.0 INSULATION BATTS TO EXTERNAL WALLS

SARKING TO UNDERSIDE OF CONCRETE ROOF TILES

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CITY PLAN SERVICES
Under Part 4A of the Environmental Planning & Assessment Act 1979
Approved
Construction Certificate No CC N 101284
22 MAR 2010
Accredited Certifier: W. NETTLETON
Accreditation No.: BPB 0292

APPROVED DEVELOPMENT CONSENT PLANS

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

Lot 33, 1 Fazzolari Ave, Mona Vale

SUMMARY OF BASIX COMMITMENTS

This is a summary of the BASIX Commitments as detailed in the BASIX Certificate. Refer to the CURRENT BASIX Certificate for Complete details. For definitions refer to basix.nsw.gov.au

WATER COMMITMENTS			
Fixtures			
3 Star Shower Heads	Yes	3 Star Toilet	Yes
3 Star Kitchen Taps	Yes	3 Star Basin Taps	Yes
Alternative Water			
Rainwater Tank Size (L)	3000	Collected from Roof Area (m2)	143.8
Tank Connected To:			
All Toilets	Yes	Laundry W/M Cold Tap	Yes
One Outdoor Tap	Yes		

THERMAL COMFORT COMMITMENTS - Refer to next table

ENERGY COMMITMENTS			
Hot Water	Gas Instantaneous - 5 Star		
Cooling System	Living	None	-
	Bedrooms	None	-
Heating System	Living	None	-
	Bedrooms	None	-
Ventilation	1 x Bathroom	Fan ducted to exterior	Manual on/off
	Kitchen	Natural ventilation	N/A
	Laundry	Natural ventilation	N/A
Natural Lighting	Window/Skylight in Kitchen		Yes
	Window/Skylight in Bathrooms/Toilets		Yes to 4
Artificial Lighting (rooms to be primarily lit by fluorescent or LED lights)	Number of bedrooms	0	Dedicated: No
	Number of Living/Dining rooms	0	Dedicated: No
	Kitchen	No	Dedicated: No
	All Bathrms/Toilets	No	Dedicated: No
	Laundry	No	Dedicated: No
	All Hallways	No	Dedicated: No
OTHER COMMITMENTS			
Outdoor clothes line	Yes	Ventilated refrigerator space	No

Thermal Performance Specifications - BASIX COMMITMENTS

External Wall Construction	Insulation	Colour (Solar Absorptance)	Detail
Brick Veneer & Weatherboard	R1.5	Any	

Internal Wall Construction	Insulation	Detail
Plasterboard on studs	none	

Ceiling Construction	Insulation	Detail
Plasterboard	R2.5 to ceilings adjacent to roof space	

Roof Construction	Insulation	Colour (Solar Absorptance)	Detail
Concrete Tiles	Foil/Sarking	Any	

Floor Construction	Insulation	Covering	Detail
Concrete	none	As drawn (if not noted default values used)	

Windows	Glass and frame type	U	SHGC	Area sq m	Detail
Generic	Single clear Aluminium	6.44	0.75	56.47	

U and SHGC values are according to NFRC. Alternate products may be used if the U value is lower and the SHGC is less then 10% higher or lower then the above figures.

External Window Cover	Detail
Fixed shading - Eaves	Width includes guttering, offset is distance above windows
Width: 600 Offset: 450	Nominal only, refer to plan for detail
Fixed shading - Other	Verandahs, Pergolas (type and description)
Shaded areas as drawn	

Ventilation and Infiltration to Habitable Rooms			
Open fire no damper	no	Exhaust fans no dampers	no
Door and window seals	no	Vented skylights	no
Vented downlights	no	Fixed wall or ceiling vents	no

"No" means that the item was not included in the assessment and shall not be installed.

ZAC
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No. 1 Fazzolari Ave, Walana Valley, Mona Vale

Dwg Title: Section & Basix

Project: Proposed Dwelling

Issue: A

Date: 21.09.09

Council: Pittwater Council

Sheet: A3

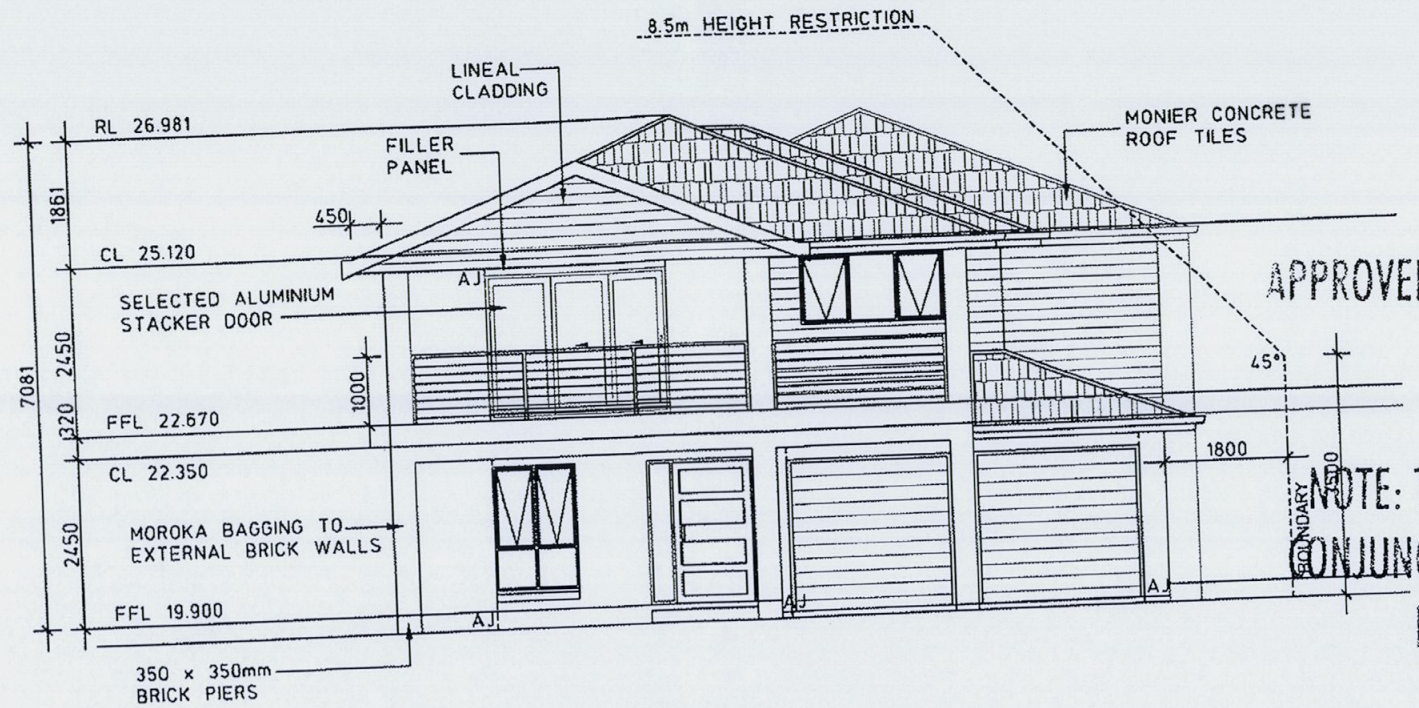
Scale: 1:100

Sheet No. 5/7

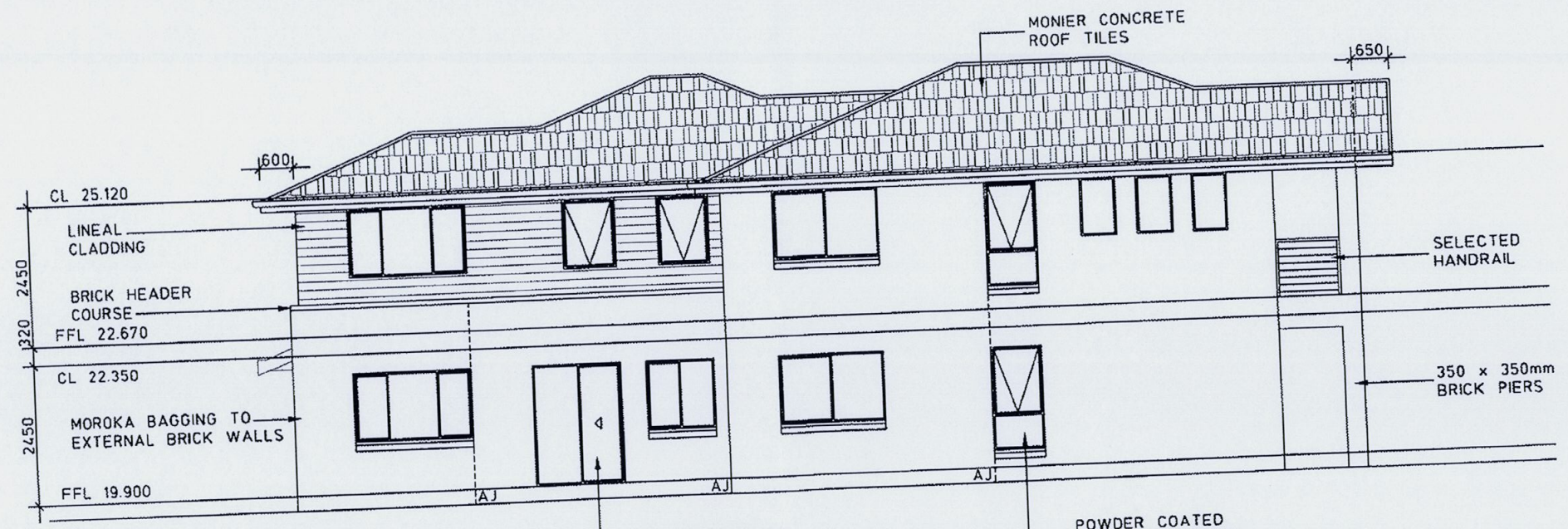
Job No: 038/09

ISSUE	DATE	DESCRIPTION
A	14.09.09	DEVELOPMENT APPLICATION PLANS

Elevations



Front Elevation (North)



Side Elevation (East)

APPROVED DEVELOPMENT CONSENT PLA

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Construction Certificate No. CC N 1 0 1 2 8 4
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Accreditation No.: BPB 0292
22 MAR 2010

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ISSUE	DATE	DESCRIPTION
A	14.09.09	DEVELOPMENT APPLICATION PLANS

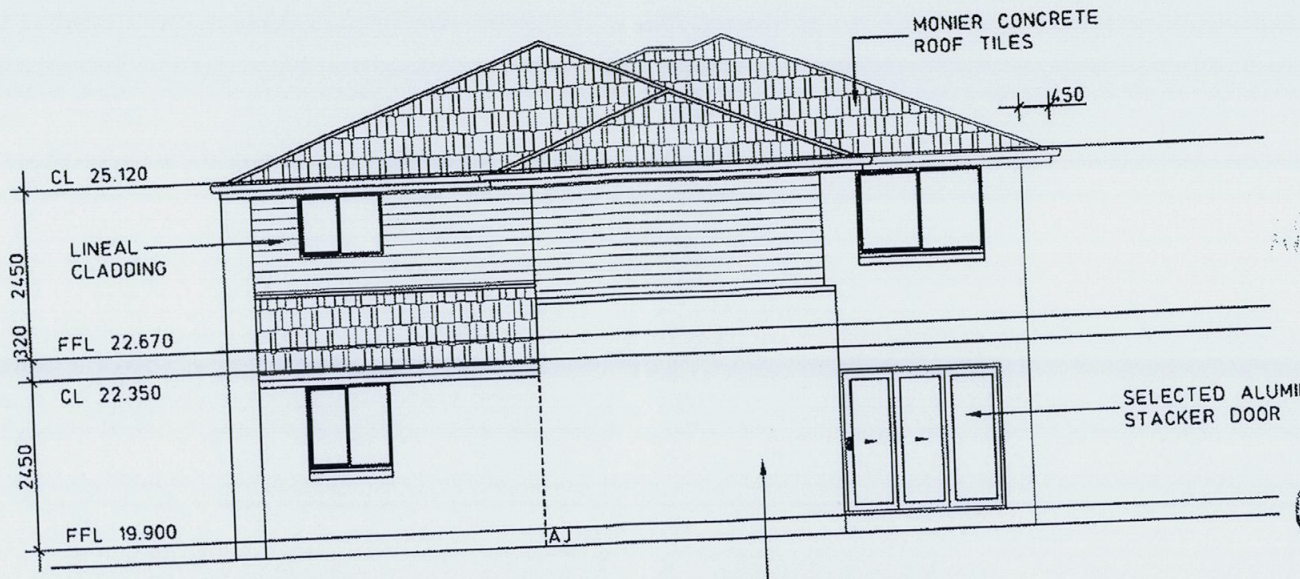
ZAC
1300 350 793

Client: Mr & Mrs Bell

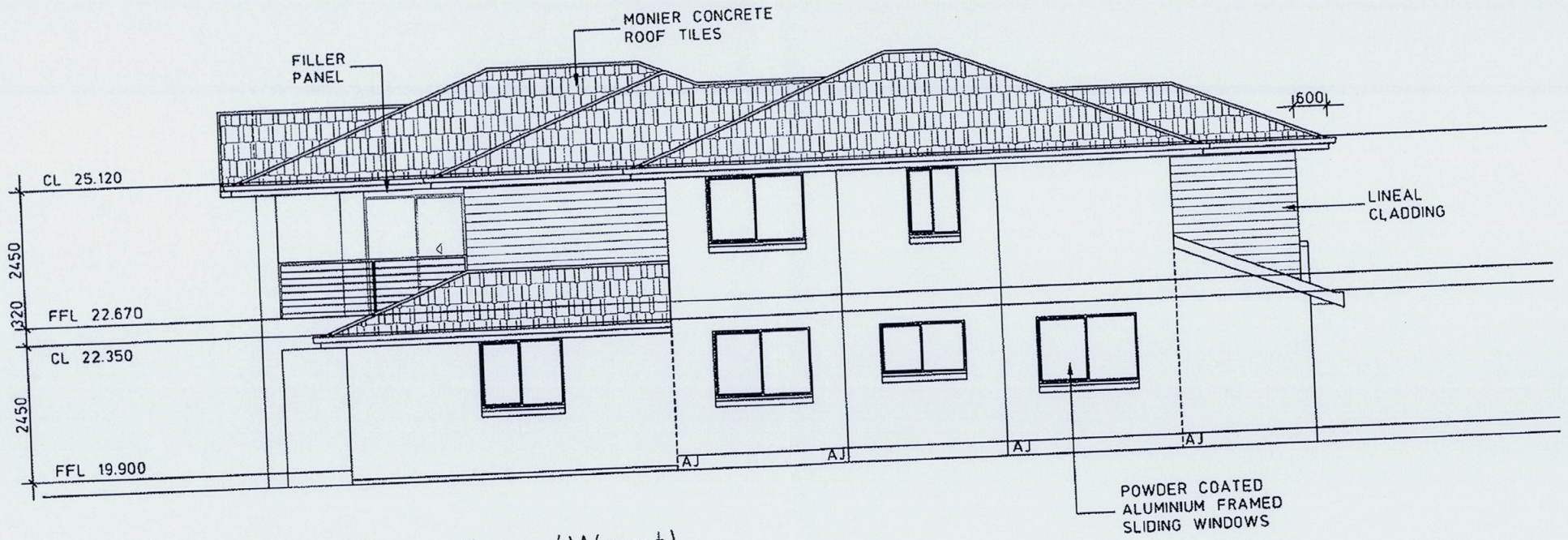
Site Address: Lot 33 DP 1135383
No. 1 Fazzolari Ave, Walana Valley, Mona Vale

Dwg Title: Elevations
Project: Proposed Dwelling
Issue: A
Date: 21.09.09
Council: Pittwater Council
Sheet: A3
Scale: 1:100
Sheet No. 6/7
Job No: 038/09

Elevations



Rear Elevation (South)



Side Elevation (West)

APPROVED DEVELOPMENT CONSENT PLAN

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Construction Certificate No. CC
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A	14.09.09	DEVELOPMENT APPLICATION PLANS

ZAC
1300 350 793

Client: Mr & Mrs Bell

Site Address: Lot 33 DP 1135383
No. 1 Fazzolari Ave, Walana Valley, Mona Vale

Dwg Title: Elevations
Project: Proposed Dwelling
Issue: A
Date: 21.09.09
Council: Pittwater Council
Sheet: A3
Scale: 1:100
Sheet No. 7/7
Job No: 038/09