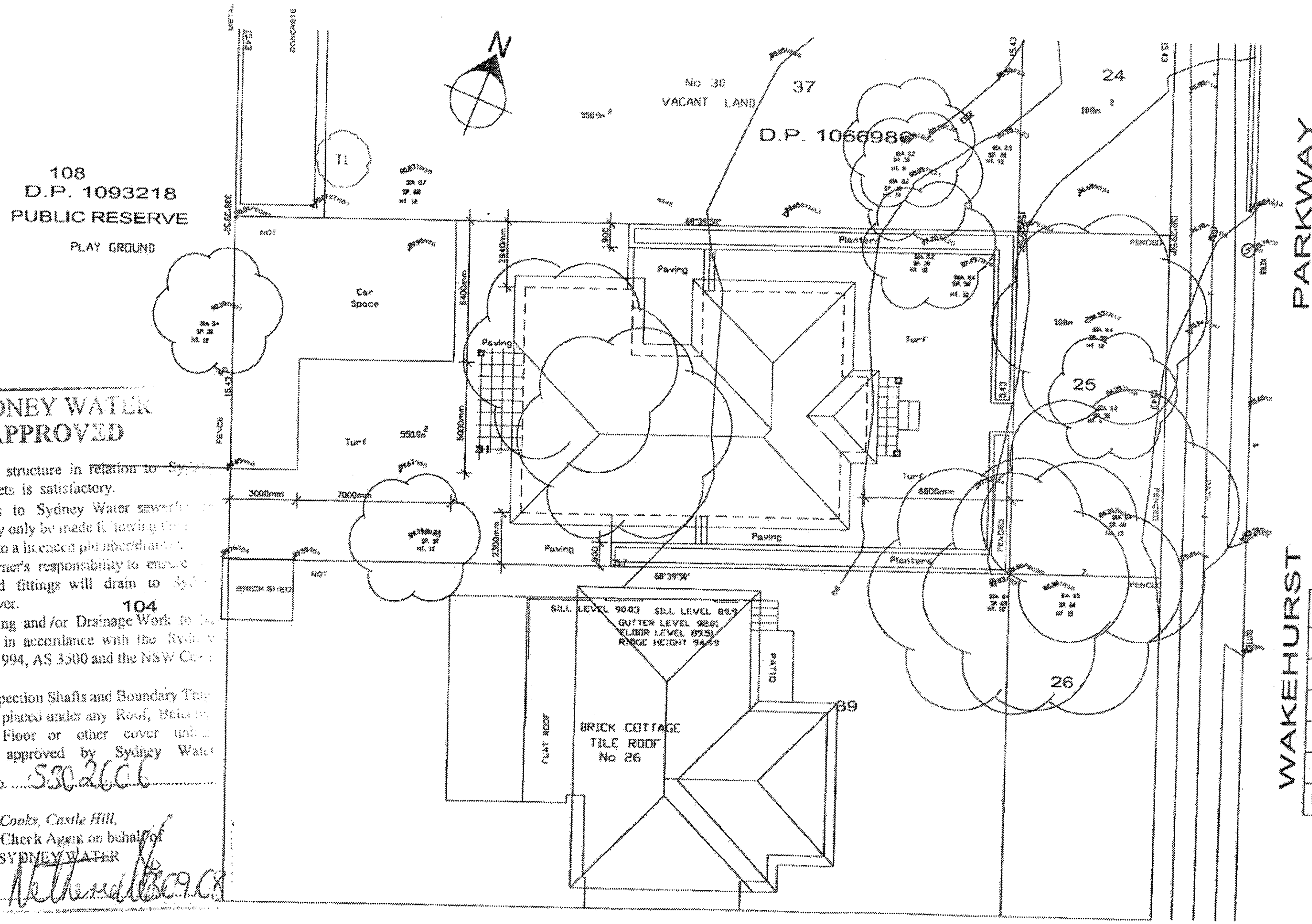
ORIGINAL



SYDNEY WATER APPROVED

1. Position of structure in relation to Sydney Water's assets is satisfactory.
2. Connections to Sydney Water sewerage services may only be made following the issue of a permit to a licenced plumber/drainer.
3. It is the owner's responsibility to ensure all proposed fittings will drain to Sydney Water's sewer.
4. Any Plumbing and /or Drainage Work to be carried out in accordance with the Sydney Water Act 1994, AS 3500 and the NSW Code of practice.
5. Gullies, inspection Shafts and Boundary Traps shall not be placed under any Roof, Balcony, Verandah, Floor or other cover unless otherwise approved by Sydney Water
6. Property No. 5502666

Cooks, Castle Hill,
Quick Check Agent on behalf of
SYDNEY WATER

BASIX SPECIFICATION
EXTERNAL WALLS - Ground Floor
Brick Veneer-Renderred Light Colour-R 2.0 Insulation
EXTERNAL WALLS - Upper Floor
Brick Veneer-Renderred-Light Colour-R 2.0 Insulation
INTERNAL WALLS - Ground Floor
Plasterboard over timber studs
INTERNAL WALLS - Upper Floor
Plasterboard over timber studs
FLOORS- Ground Floor
Concrete Slab-finishes as per Floor Plans
FLOORS-Upper Floor
timber-finishes as per floor plans
WINDOWS Aluminium -light colour Ground floor double glazing to all windows except Kitchen(south), Kitchen/family(west) and laundry
CEILINGS
Plasterboard R 2.0 Insulation
ROOF
Terracotta roof Tiles-Medium Colour-Sarked
HOT WATER
Gas instantaneous
AIR CONDITIONING
5 star reverse cycle air conditioning

SITE CALCULATIONS	
SITE AREA	550.9m2
PROPOSED BUILT UPON AREA	142.9m2
PROPOSED FLOOR AREA	
FSR	0.454
OPEN SPACE	
LANDSCAPED (Soft)	

All Dimensions are in millimetres
Written Dimensions preferred to scale
All measurements to be checked on site
All work to BCA and AS
NOT FOR CONSTRUCTION

B-02/08-Revised shadow diagrams
B-02/08-Revised car parking

Client: MR & MRS. J SMALL, PO BOX 71023, DUBAI UAE

Project: PROPOSED NEW DWELLING, 28 WAKEHURST PARKWAY, SEAFORTH

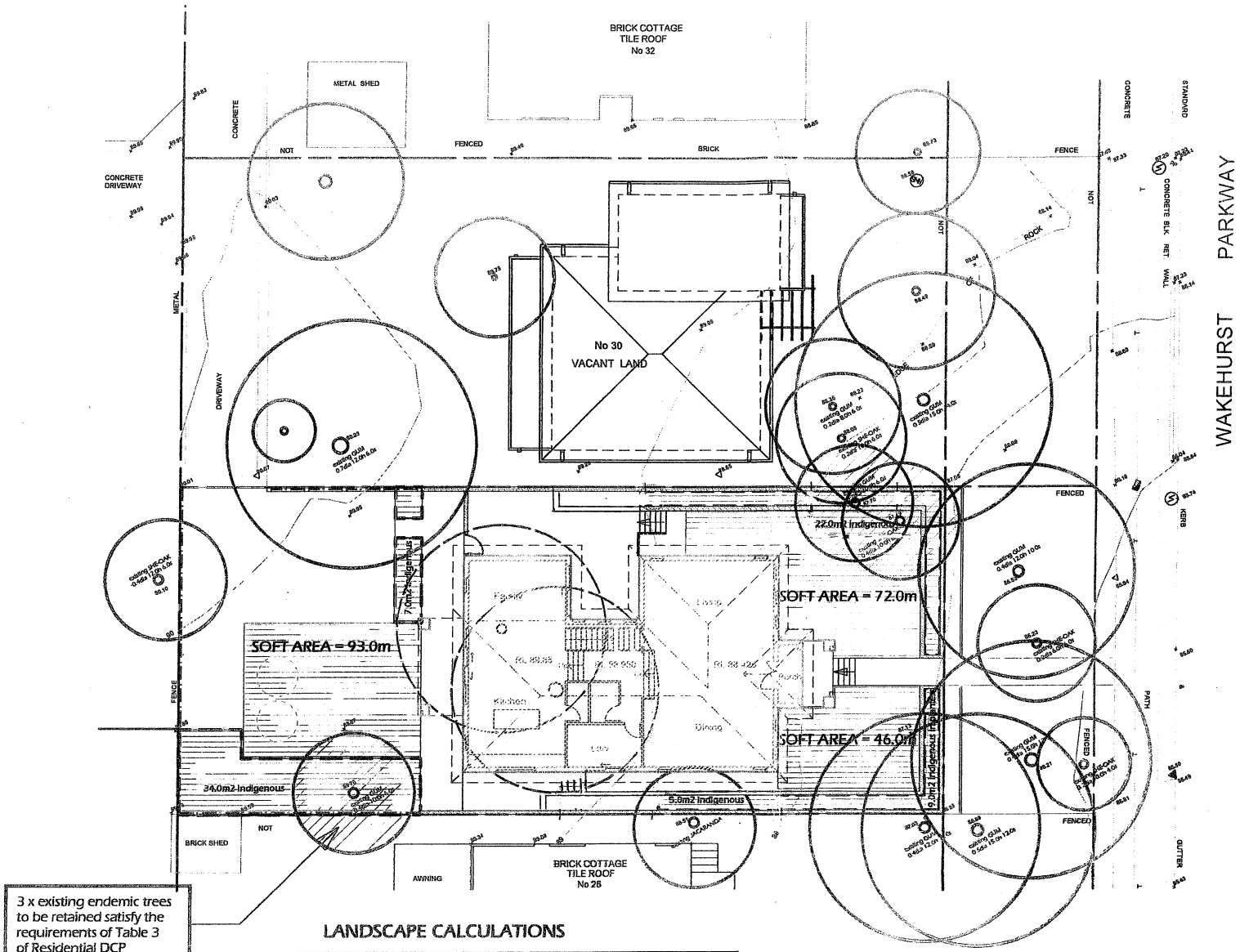
Drawing: SITE PLAN

DEVELOPMENT APPLICATION

PETER PRINCE architects

Drawn	Job No.
PP	07.001
Checked	Date
PP	Mar 08
Scale	Issue
1:200	C

Drawing No. DA01



3 x existing endemic trees to be retained satisfy the requirements of Table 3 of Residential DCP

LANDSCAPE CALCULATIONS

			Council requirements
SITE AREA	550.85m2		
soft landscape	211.00m2	38.30% of site	→ 35% of site
low water use indigenous garden area	75m2		BASIX requirements → 75m2

CONSTRUCTION CERTIFICATE
No. 08 / 147
These plans form part of the above Construction Certificate as issued by
Greg Hough of
Get Certified Building Services Pty Ltd
Accreditation No: BPB0186

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LANDSCAPE PLAN
1 of 2

Proposed New Dwelling
28 Wakehurst Parkway Seaforth

tramonte jensen
Office: Level 1, 722 Pittwater Road
Brookvale NSW Australia 2100
Postal: PO Box 296 Brookvale 2100
Telephone: (02) 9936 0100
Facsimile: (02) 9938 1711
Web: www.tramontejensen.com.au
registered landscape architects

issue E: S96 application
Drawing Number 531.01
Scale 1:200 @ A3 page size
0 1 2 3 4 5m
Date 12.09.2008
Checked Joseph Tramonte B.L.Arch AAILA RLA
Issue E

Landscape Architect:
Professions Board of Australia
059
Joseph Tramonte

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- no liability shall be carried forward by the Author should thisdrawing be used for any other purpose(ie. Construction Certification and/or Construction)
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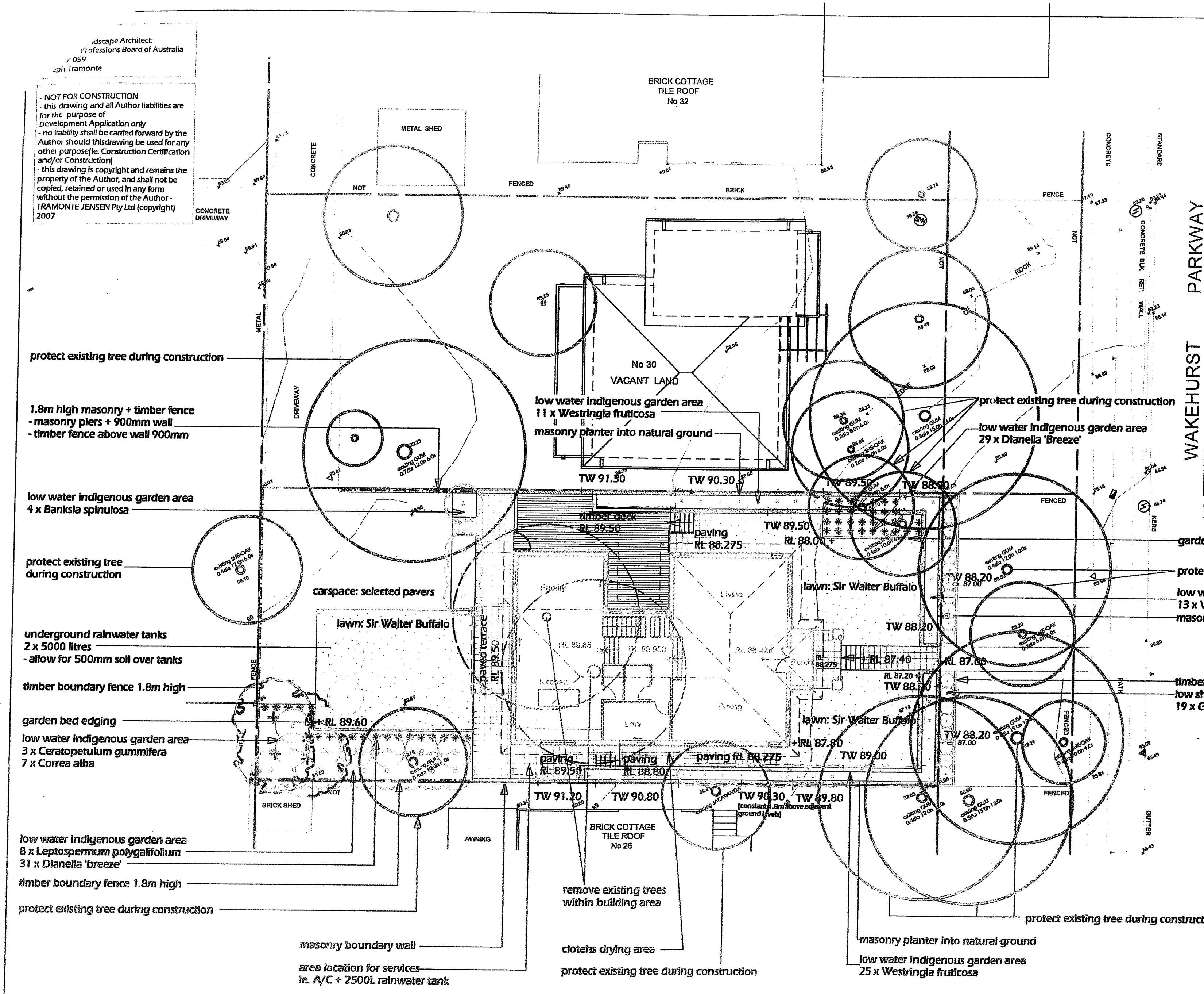

LANDSCAPE DESIGN PRINCIPLES

+ retain existing endemic trees along Wakehurst Parkway frontage
+ provide landscape transition at boundary along Wakehurst Parkway
+ reduce landscape maintenance requirements by:
- providing low water use gardens
- use of low water turf species
+ provide useable open space areas

LANDSCAPE MATERIALS

Soilworks:
- cultivate landscape planting areas by ripping existing soil profile and incorporate soil additives to improve soil structure.
- all areas under canopy of existing trees shall be hand dug
- soil additive shall be equal to 'garden humus' mix
- mix-in 1 part 'garden humus' to 2 parts existing soil

Fertiliser:
- shall be slow release fertilisers incorporated into soil

Mulch:
- shall be recycled 'Forest Blend'

Plantstock:
- shall be well formed stock with leading shoots and true to form

Soil moisture:
- incorporate into soil layer approved wetting agents mixed into soil at manufacturers recommeded rate

Irrigation:
- connect 'drip-line' irrigation system for all landscape areas

Maintenance
- maintain landscape works for period of 12 months

PLANT SCHEDULE

Qty	Pot Size	Botanical Name	Common Name	Mature Size
		trees:		
3	75 litre	Ceratopetalum gummifera	NSW Xmas Bush	6-8m
		shrubs:		
4	200mm	Banksia spinulosa	Hairpin Banksia	2.5m
7	200mm	Correa alba	White Correa	1m
19	200mm	Grevillea buxifolia	Grey Spider Flower	1.5m
8	200mm	Leptospermum polygalifolium	Tea Tree	2.5m
49	200mm	Westringia fruticosa	Coast Rosemary	1m
		groundcovers:		
60	140mm	Dianella 'Breeze'	Dwarf Dianella	0.4m

note:
3 x proposed trees satisfy therequirements of Table 3 of Residential DCP

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LANDSCAPE PLAN
2 of 2

Proposed New Dwelling
28 Wakehurst Parkway Seaforth

tramonte jensen
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Postal: PO Box 298 Brookvale 2100
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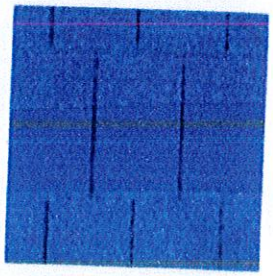
Facsimile: (02) 9938 1711
Web: www.tramontejensen.com.au
registered landscape architects

Issue E: S96 application
Drawing Number 531.02
Scale 1:200 @ A3 page size
0 1 2 3 4 5m
Date 12.09.2008
Checked Joseph Tramonte B.LArch AAILA RLA
Issue E

Colour Sample Board – 28 Wakehurst Parkway Seaforth

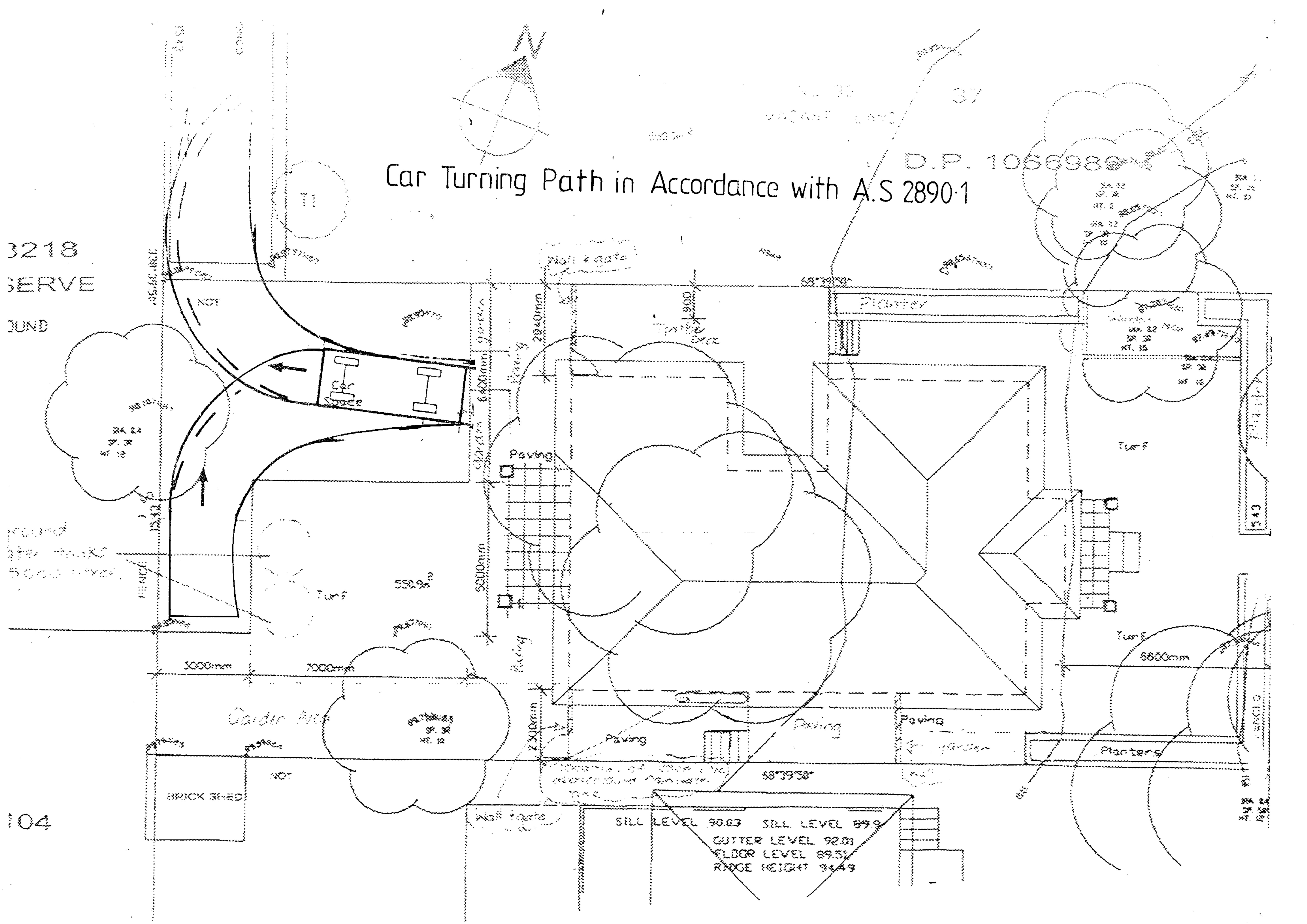
Granite Roof Tiles (or similar)



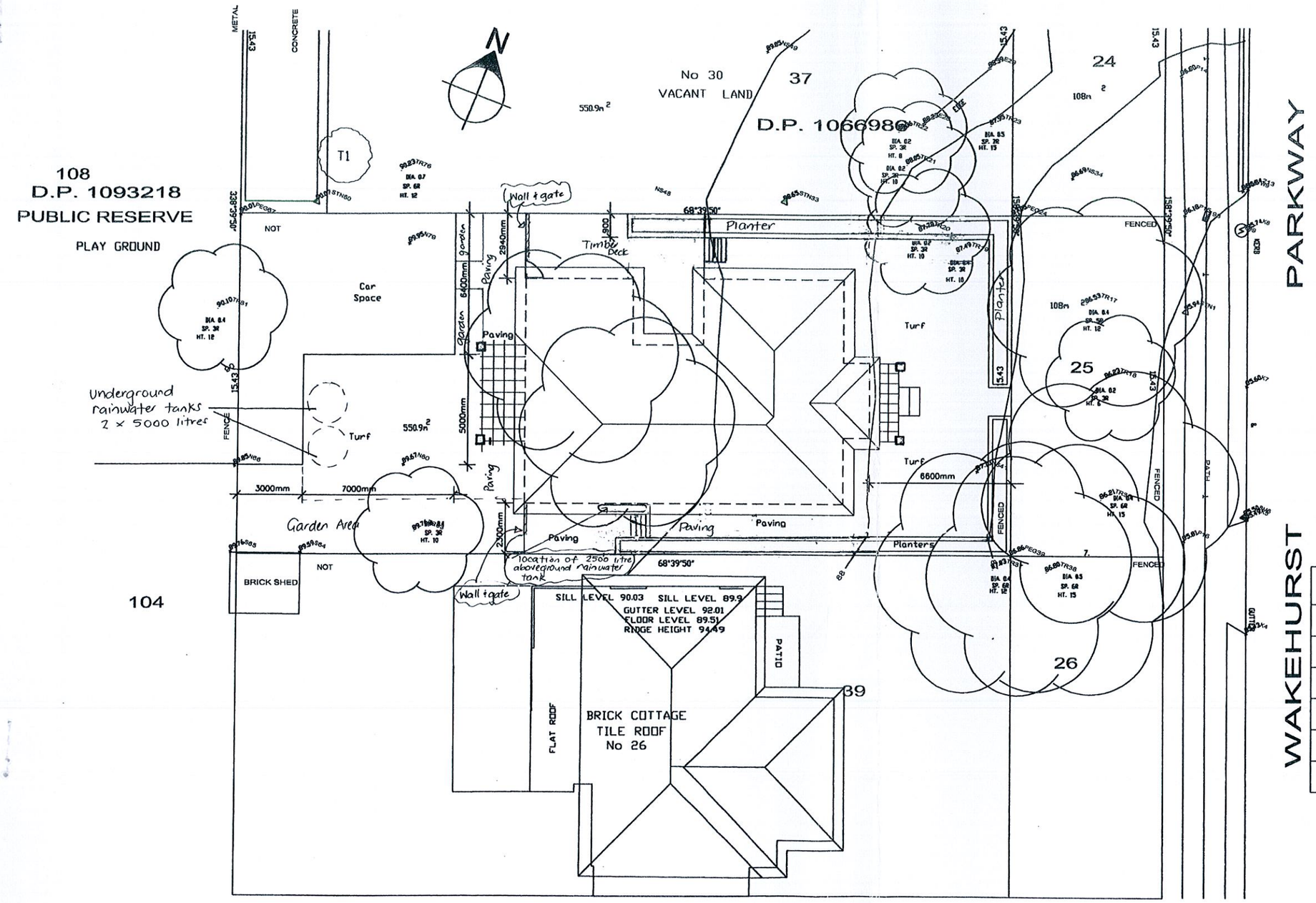
Rendered Walls	☐	Portland Stone	Dulux Weathershield
Windows	☐	White or similar	Dulux Weathershield

Dulux Mycolour®

** Colour reproduction can vary when viewing colours on your screen or printout.
Remember only Dulux Bases are formulated for tinting to the exact Dulux colour you select.
For complete satisfaction test your colour selection in your home using *Dulux* Sample Pots.


N
Car Turning Path in Accordance with A.S 2890·1
D.P. 1066980
37
3218
SERVE
Planter
Paving
Turf
Car Space
2940mm
5200mm
3000mm
7000mm
6800mm
58°39'58"
Planters
BRICK SHED
104
SILL LEVEL 90.63
SILL LEVEL 89.9
GUTTER LEVEL 92.01
FLOOR LEVEL 89.51
RIDGE HEIGHT 94.49

ORIGINAL



BASIX SPECIFICATION
EXTERNAL WALLS - Ground Floor Brick Venner-Renderred Light Colour-R 2.0 Insulation
EXTERNAL WALLS - Upper Floor Brick Veneer-Renderred-Light Colour-R 2.0 Insulation
INTERNAL WALLS - Ground Floor Plasterboard over timber studs
INTERNAL WALLS - Upper Floor Plasterboard over timber studs
FLOORS- Ground Floor Concrete Slab-finishes as per Floor Plans
FLOORS-Upper Floor Timber-finishes as per floor plans
WINDOWS Aluminium -light colour Ground Floor double glazing to all windows except Kitchen(south), Kitchen/family(west) and laundry
CEILINGS Plasterboard R 3.0 Insulation
ROOF Terracotta roof Tiles-Medium Colour-Sarked
HOT WATER Gas Instantaneous
AIR CONDITIONING 5 star reverse cycle air conditioning

CONSTRUCTION CERTIFICATE
No. 087/47
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Greg Hough of
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Accreditation No. BPB0001

SITE CALCULATIONS	
SITE AREA	550.9m2
PROPOSED BUILT UPON AREA	142.9m2
PROPOSED FLOOR AREA	
FSR	0.45:1
OPEN SPACE	
LANDSCAPED (Soft)	

ABSA
Assr# 20350 Con# 46188375
Sign
Date 28-11-08

Dimensions are in millimetres
itten Dimensions preferred to scale
measurements to be checked on site
work to BCA and AS
T FOR CONSTRUCTION

B-02/08-Revised shadow diagrams
B-02/08-Revised car parking

Client
MR. & MRS. J SMALL
PO BOX 71023
DUBAI UAE

Project
PROPOSED NEW DWELLING
28 WAKEHURST PARKWAY
SEAFORTH

Drawing
SITE PLAN

DEVELOPMENT APPLICATION

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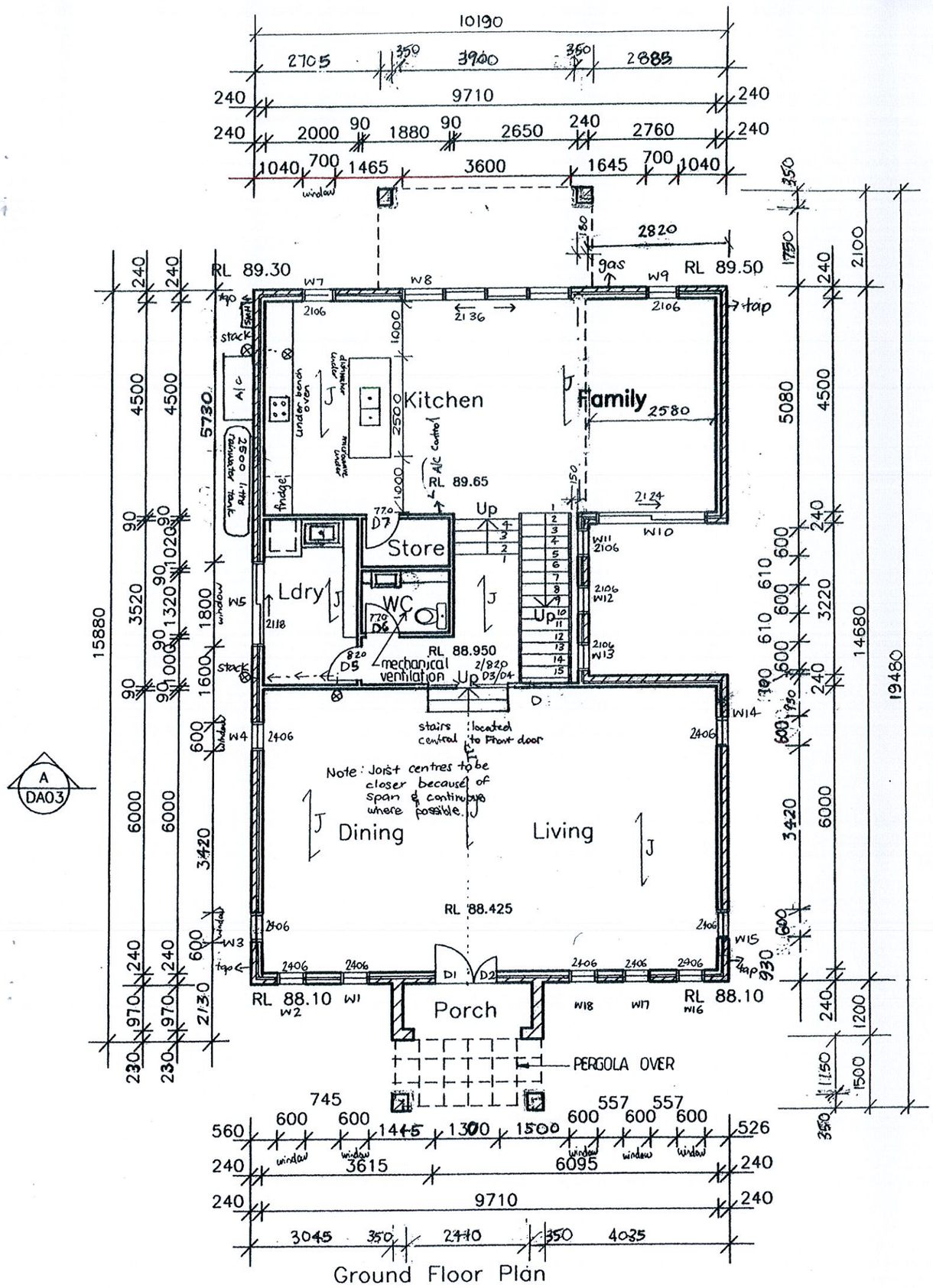
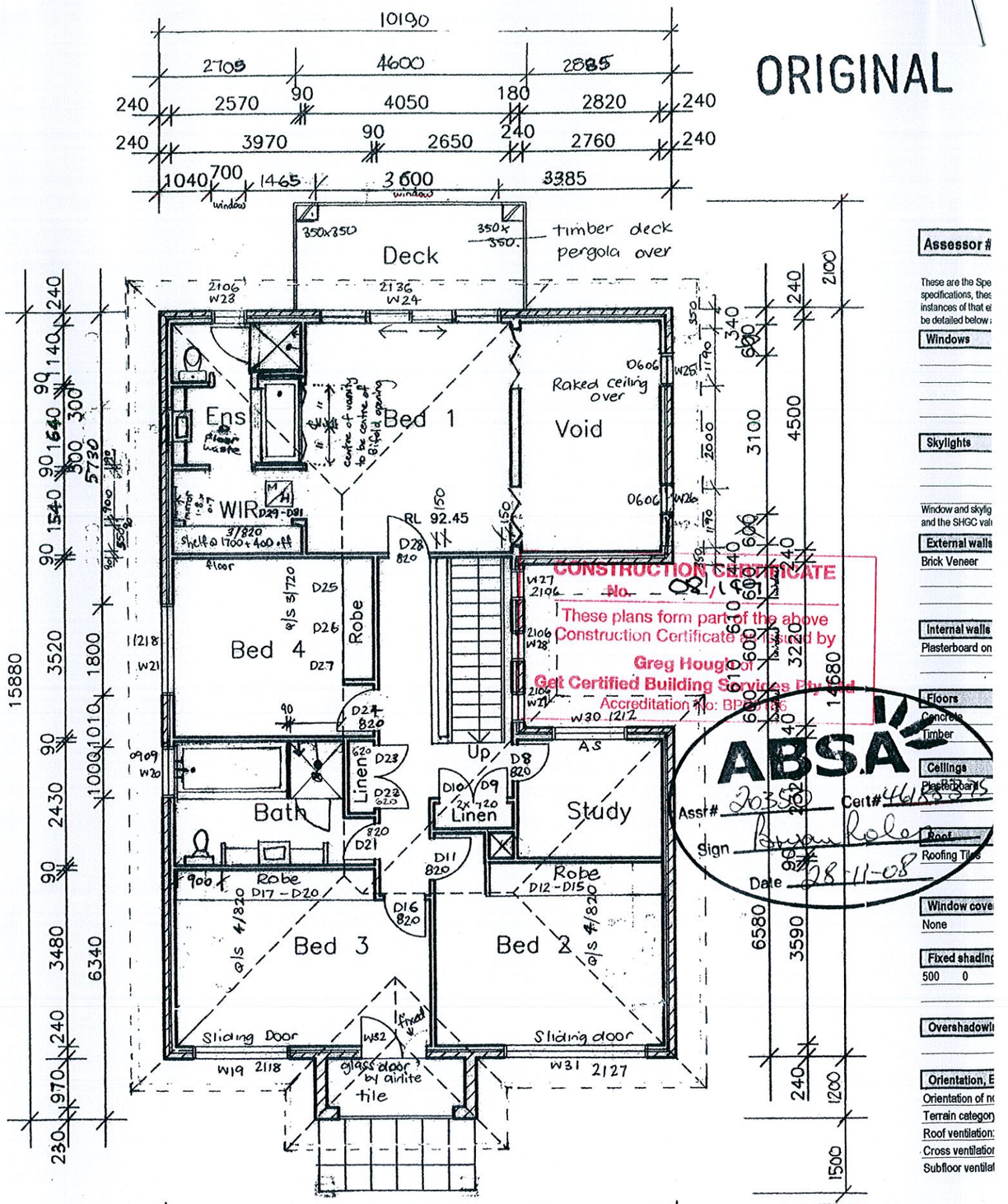
Drawn	Job No.
PP	07.001
Checked	Date
PP	Mar 08
Scale	Issue
1:200	C

Drawing No.
DA01

ORIGINAL



Ground Floor Plan



Upper Floor Plan

CONSTRUCTION CERTIFICATE
No. 08/1[illegible]
These plans form part of the above Construction Certificate issued by
Greg Hough of
Get Certified Building Services Pty Ltd
Accreditation No: BPB0[illegible]

ABSA
Assr# 20350 Cert# 4[illegible]
Sign Bryan Rolo
Date 28-11-08

ABSA
Assr# 20350 Cert# 4[illegible]
Sign Bryan Rolo
Date 28-11-08

Assessor #

These are the Spe specifications, thes instances of that el be detailed below

Windows

Skylights

Window and skylig and the SHGC val

External walls
Brick Veneer

Internal walls
Plasterboard on

Floors
Concrete
Timber

Ceilings
Plasterboard

Roof
Roofing Tiles

Window cove
None

Fixed shading
500 0

Overshadowi

Orientation, E
Orientation of n
Terrain categor
Roof ventilation:
Cross ventilatio
Subfloor ventilat

All Dimensions are in millimetres
Written Dimensions preferred to scale

Client
MR. & MRS. J SMALL

Project
PROPOSED NEW DWELLING

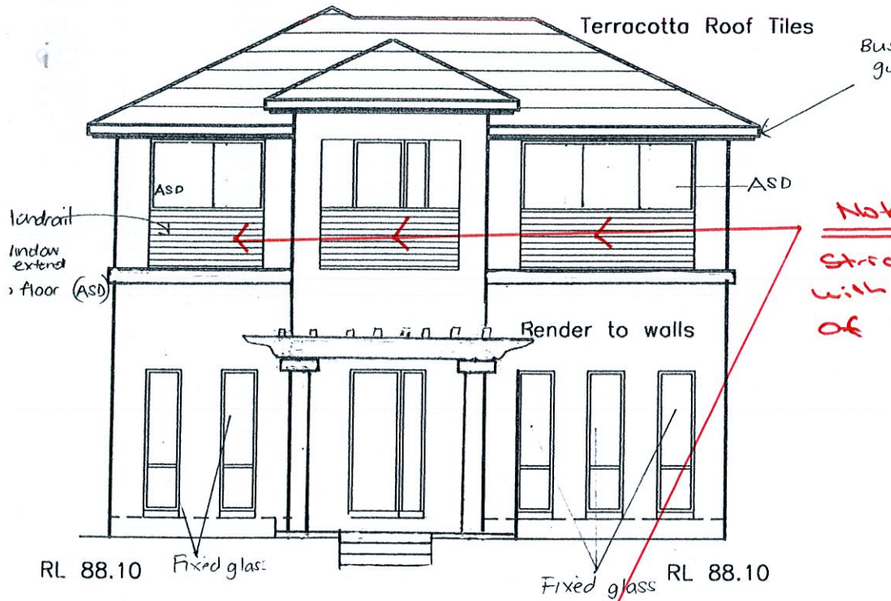
Drawing
FLOOR PLANS

DEVELOPMENT APPLICATION

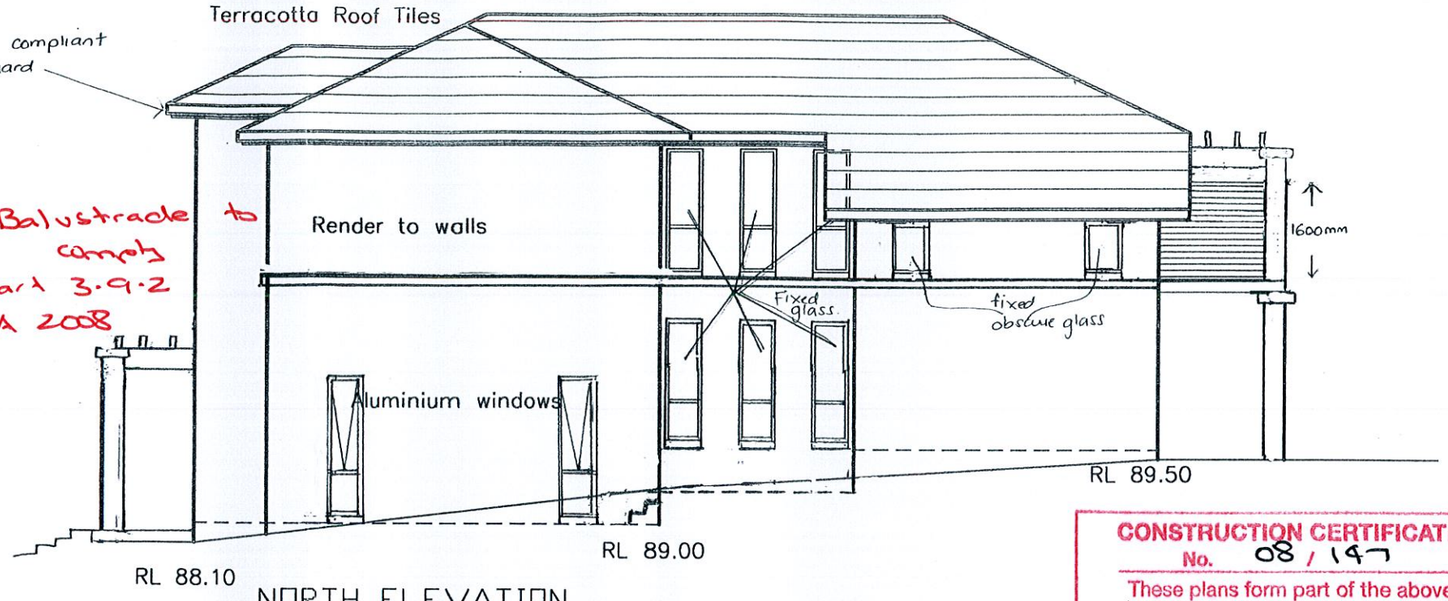
PETER PRINCI architects
ABN 34 315 485 678

Drawn PP | Job No. 07.001
Checked PP | Date Sep 07
Drawing No. DA02

ORIGINAL

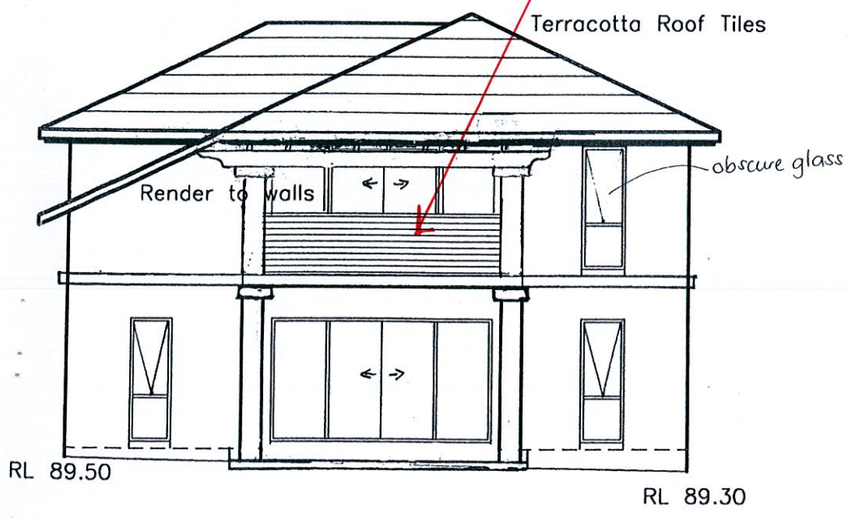


EAST ELEVATION

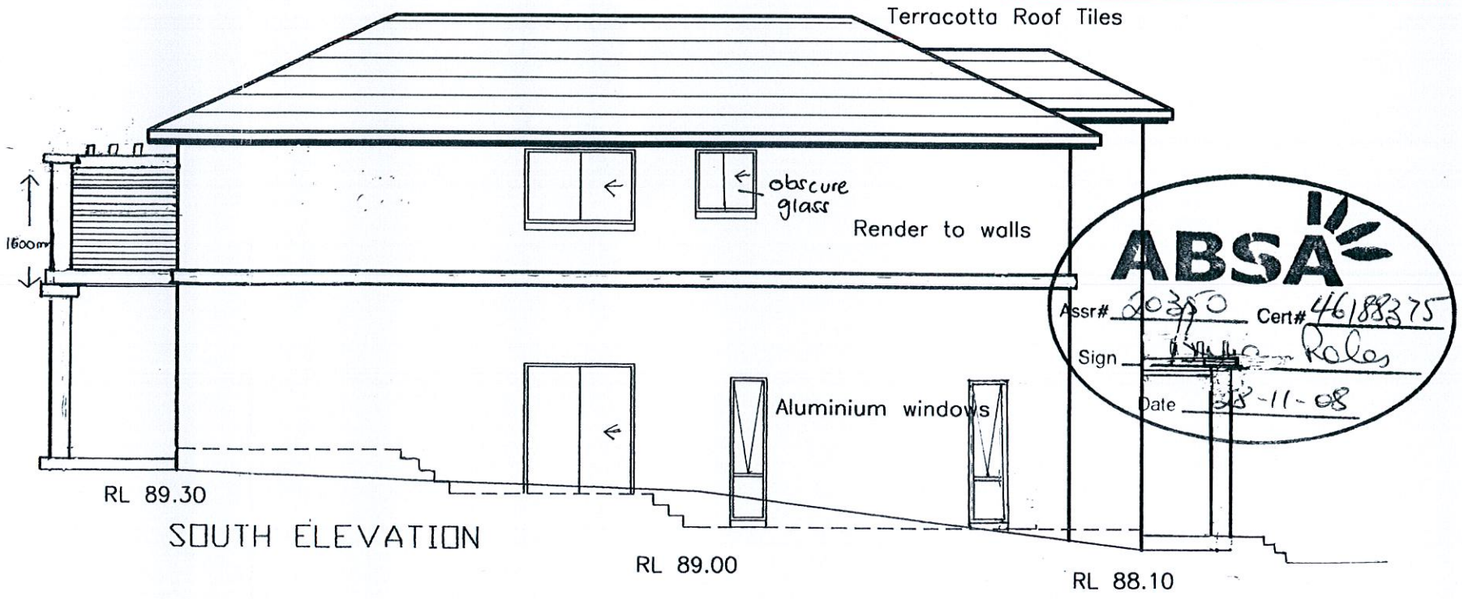


NORTH ELEVATION

Note. Balustrade to strictly comply with Part 3.9.2 of BCA 2008



WEST ELEVATION



SOUTH ELEVATION

CONSTRUCTION CERTIFICATE
No. 08 / 197
These plans form part of the above Construction Certificate as issued by
Greg Hough of
Get Certified Building Services Pty Ltd
Accreditation No: BPB0186

ABSA
Assr# 20350 Cert# 46188375
Sign Rolos
Date 28-11-08

Dimensions are in millimetres
itten Dimensions preferred to scale
measurements to be checked on site
work to BCA and AS
T FOR CONSTRUCTION

B-02/08-Revised side steps

Client
MR. & MRS. J SMALL
PO BOX 71023
DUBAI UAE

Project
PROPOSED NEW DWELLING
28 WAKEHURST PARKWAY
SEAFORTH

Drawing
ELEVATIONS

DEVELOPMENT APPLICATION

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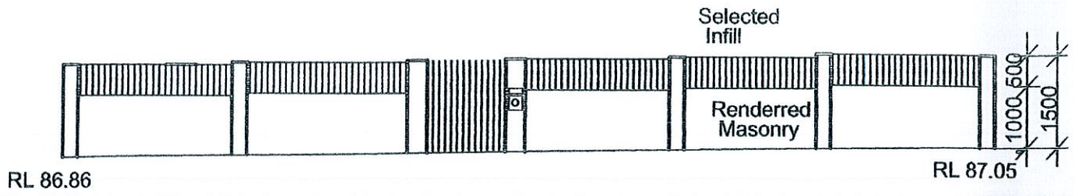
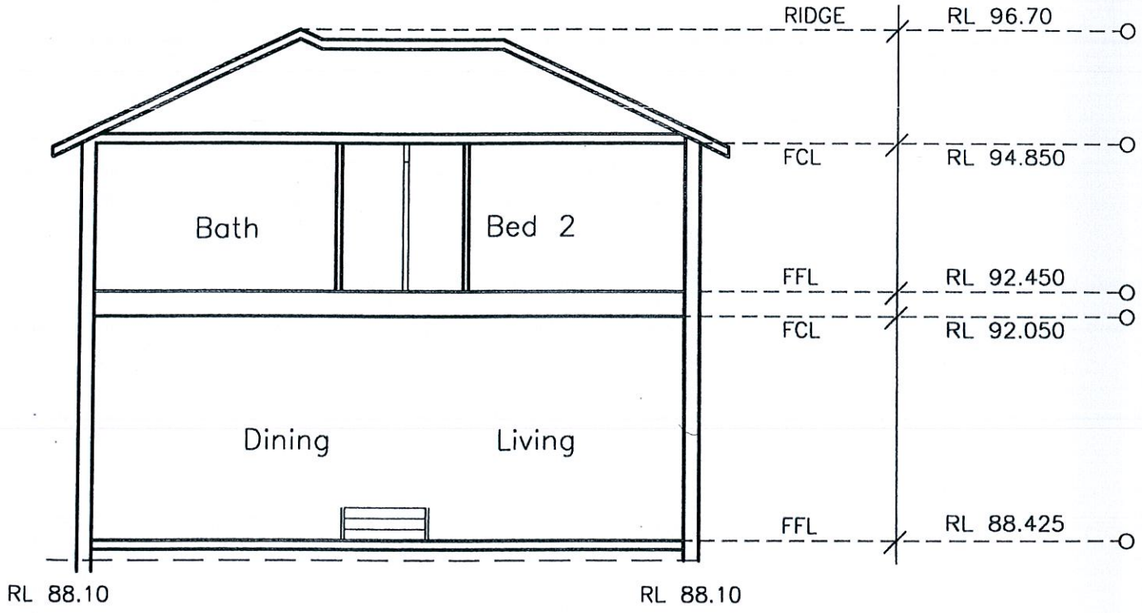
Drawn	Job No.
PP	07.001
Checked	Date
PP	Feb 08
Scale	Issue
1:100	B

Drawing No.
DA03

ORIGINAL



FRONT FENCE



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ABSA
Assr# 20350 Cert# 46188375
Sign Bryan Rolas
Date 28-11-08.

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measurements to be checked on site
work to BCA and AS
NOT FOR CONSTRUCTION

Client
MR. & MRS. J SMALL
PO BOX 71023
DUBAI UAE

Project
PROPOSED NEW DWELLING
28 WAKEHURST PARKWAY
SEAFORTH

Drawing
ELEVATIONS

DEVELOPMENT APPLICATION

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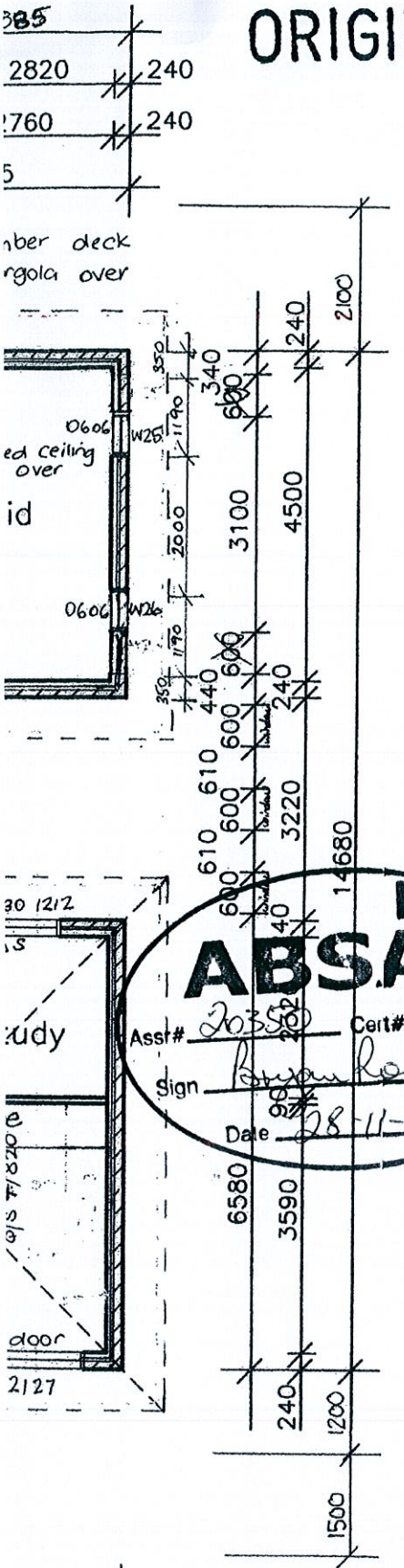
Drawn	Job No.
PP	07.001
Checked	Date
PP	Sep 07
Scale	Issue
1:100	A

Drawing No.
DA04

ORIGINAL



Assessor # 20350 **Certificate # 46188375** **Issued: 28-Nov-08**

Thermal Performance Specifications

These are the Specifications upon which the Certified Assessment is based. If details included in these Specifications vary from other drawings or written specifications, these Specifications shall take precedence. If only one specification option is detailed for a building element, that specification must apply to all instances of that element for the project. If alternate specifications are detailed for a building element, the location and extent of alternate specifications must be detailed below and / or clearly indicated on referenced documents.

Windows	Product ID	Glass	Frame	U value	SHGC	Area M	Detail
		Single clear	Aluminium				Throughout

Skylights	Product ID	Glass	Frame	U value	SHGC	Area M	Detail

Window and skylight U and SHGC values, if specified, are according to ANAC 2005. Alternate products or specifications may be used if their U value is lower, and the SHGC value is less than 10% higher or lower, than the U and SHGC values of the product specified above.

External walls	Construction	Insulation	Colour - Solar absorptanc	Detail
Brick Veneer		R2.0	Light -SA <0.475	As per plans

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs		None	As per plans

Floors	Construction	Insulation	Covering	Detail
Concrete		None	Ceramic Tile	As per plans
Timber			Carpet	
			Parquetry 10mm	

Ceilings	Construction	Insulation	Detail
Plasterboard		R3.0	As per plans

Roof	Construction	Insulation	Colour	Detail
Roofing Tiles		Foil (Sisalation)	Dark - SA > 0.7	As per plans

Window cover	Internal (curtains)	External (awnings, shutters, etc)
	None	None

Fixed shading	Eaves (width - inc. gutters, height above windows;	Verandahs, Pergolas (type, description)
	500	0

Overshadowing	Overshadowing structures	Overshadowing trees

Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north:	110	Living area open to entry:	Yes	Ventilated skylights:	No
Terrain category	Suburban	Living areas separated by doors:	No	Open fire or unflued gas heate	No
Roof ventilation:	Ventilated >2% of a	Stair open to heated areas:	Yes	Vented downlights:	No
Cross ventilation:	Standard	Seals to windows and doors:	Yes	Wall and ceiling vents:	No
Subfloor ventilation	On ground	Exhaust fans without dampers:	No		

ABSA
Assr# 20350 Cert# 46188375
Sign Bryan Rolfe
Date 28-11-08

ABSA
Assr# 20350 Cert# 46188375
Sign Bryan Rolfe
Date 28-11-08

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Drawn	Job No.
PP	07.001
Checked	Date
PP	Sep 07
Scale	Issue
1:100	A

Drawing No. DA02

GENERAL NOTES

G1 These drawings shall be read in conjunction with other consultants' drawings and specifications and with other such written instructions as may be issued during the course of the Contract. Any discrepancy shall be referred to the Engineer before proceeding with the work.
G2 All dimensions are in millimetres, UNO (unless noted otherwise).
G3 No dimension shall be obtained by scaling the drawings.
G4 All levels and setting out dimensions shown on the drawings shall be checked on site prior to the commencement of the work.
G5 During construction the structure shall be maintained in a stable condition and no part shall be overstressed.
G6 Waterproofing & sealing details shall be in accordance with Architect's details. All joints in concrete elements shall be suitably sealed or waterproofed.

FOUNDATIONS

F1 Assumed classification of site: M (Moderately Reactive Site) UNO.
F2 Footings have been designed for an allowable bearing pressure of 150 kPa UNO. All foundations must be stable and uniform throughout.
F3 Foundation material shall be inspected and approved for the above site classification and allowable bearing pressure by a Geotechnical Engineer before placing footing reinforcement.
F4 Footings shall be placed centrally under walls and columns, UNO.

LOADING

L1 Superimposed floor loads are generally in accordance with AS 1170.1 or as noted in Table L4.
L2 Wind loads are in accordance with AS/NZS 1170.2 as follows:
Region : A 2 Regional Wind Velocity, V500 : 45 m/s Category : 3, UNO.
L3 Earthquake loads are in accordance with AS 1170.4 as follows:
a = 0.08 S = 1.0 I = 1.0, UNO.
L4 Live loads & additional dead loads: (to AS/NZS 1170.1)

Area subject to loading	Live Load		Add. Dead Load
	Uniform	Point	
Floors - Internal	1.50 kPa	1.80 kN	0.50 kPa
Floors - External & Garage	3.00 kPa	1.80 kN	1.00 kPa
Roof Areas	0.25 kPa	1.40 kN	0.15 kPa

MASONRY

M1 All workmanship and materials shall be in accordance with AS 3700.
M2 Characteristic compressive strength of masonry (f'uc) = 24 MPa

Durability Requirements			
Mortar	Salt Attack Resistance Grade	Built In Component	Min. Cover to Reinforcement & Tendons in Grouted Cavities
M2	Protected	R1 (Galv'd 300 g/m^2 each side)	5
M3	General Purpose	R3 (Galv'd 470 g/m^2 each side)	15
M4	Exposure	R4 (Stainless)	30

M3 All masonry walls supporting slabs and beams shall have a pre-greased two layer galvanised steel slip joint between concrete and masonry.
M4 All masonry walls supporting or supported by concrete floors shall be provided with vertical joints to match any control joints in the concrete.
M5 Non load bearing walls shall be separated from concrete above by 12 mm thick closed cell polyethylene strip.
M6 Provide vertical control joints at 8 metres maximum centres, and 4 metres maximum from corners in masonry walls, and between new & existing brickwork.
M7 Masonry retaining walls are to be backfilled with either of the following material:
- Coarse grained soil with low silt content
- Residual soil containing stones
- Fine silty sand
- Granular materials with low clay content

REINFORCED CONCRETE

C1 All workmanship and materials shall be in accordance with AS 3600 current edition, except where varied by the contract documents.
C2 Concrete quality shall be as follows (subject to note C4 being satisfied):

Element	Slump mm	Max. Agg. Size mm	Cement Type	f'c at 28 Days MPa
Footings	80	20	Normal	20
Slabs on Ground	80	20	Portland	25
Suspended Floors	80	20	Type A	32

C3 Engineer to approve any admixtures used in concrete mix.
C4 Cover to reinforcement shall be obtained by the use of approved bar chairs. All chairs to be placed at 750 maximum centres.
C5 Minimum clear concrete cover to reinforcement including ties and stirrups (other than residential slabs on ground or footings) shall be as follows uno.

Exposure Classification	Minimum Cover (mm) Concrete Strength (f'c)				
	20 MPa	25 MPa	32 MPa	40 MPa	>50 MPa
A1	20	20	20	20	20
A2	(50)	30	25	20	20
B1	-	(60)	40	30	25
B2	-	-	(65)	45	35
C	-	-	-	(70)	50

For bracketed figures refer to AS 3600 current edition table 4.10.3.2
C6 Residential slab on ground and footings cover requirements:
(Minimum concrete grade N20)
- Unprotected ground: 40 mm
- External exposure: 40 mm
- Membrane in contact with ground: 30 mm
- Internal surface: 20 mm
- Strip & pad footing: 40 mm

C7 All concrete shall be mechanically vibrated. Vibrators shall not be used to spread concrete.
C8 Sizes of concrete elements do not include thickness of applied finishes.
C9 No holes or chases other than those shown on the structural drawings shall be made in concrete members without the prior approval of the Engineer.
C10 Construction joints where not shown shall be located to the approval of the Engineer.
C11 Curing of all concrete is to be achieved by keeping surfaces continuously wet for a period of 3 days, and prevention of loss of moisture for a total of 7 days followed by gradual drying out. Approved sprayed on compounds may be used where no floor finishes are proposed. Polythene sheeting or wet hessian may be used if protected from wind and traffic.
C12 Construction support propping is to be left in place where needed to avoid over stressing the structure due to construction loading. No masonry or partition walls are to be constructed on suspended levels until all propping is removed and the slab has absorbed its dead load deflection.
C13 Conduits, pipes, etc. shall only be placed in the middle one third of slab depth and spread at not less than 3 diameters.
C14 Reinforcement symbols :
N - Denotes deformed grade 500 normal ductility reinforcing bars to AS/NZS 4671.
R - Denotes plain round grade 250 normal ductility reinforcing bars to AS/NZS 4671.
SL - Denotes deformed grade 500 low ductility reinforcing mesh to AS/NZS 4671.
RL - Denotes deformed grade 500 low ductility reinforcing mesh to AS/NZS 4671.
L--TM - Denotes deformed grade 500 low ductility trench mesh to AS/NZS 4671.
C15 Reinforcement is represented diagrammatically; it is not necessarily shown in true projection.
C16 Splices in reinforcement shall be made only in positions shown or otherwise approved by the Engineer.
C17 Fabric reinforcement shall have splices made so that the overlap, measured between the outermost transverse wires of each sheet of fabric, is not less than the spacing of those wires plus 25 mm.
C18 Welding of reinforcement shall not be permitted unless shown on the structural drawings or approved by the Engineer.

STRUCTURAL STEEL

S1 All workmanship and materials shall be in accordance with AS 4100, AS 1163, AS 1554.1 and AS/NZS 4600.
S2 The structural design has been based on the following steel grades, UNO:
Hot rolled universal beams, columns, channels & angles: 300PLUS
Circular, square & rectangular hollow sections: C350/C450LO
Cold formed open DuraGal profiles: C400/C450LO
Cold formed lipped Cee & Zed purlins: G550/G500/G450
S3 The structural design has been based on MBPMA nominal size Cee & Zed lipped purlins. All purlin profiles shall be in accordance with the MBPMA specifications.
S4 Qualifications of welding procedures and personnel shall conform to Section 4 of AS 1554.1. Non destructive testing of welds shall include 100% visual inspection and additional testing as shown on the drawings.
S5 All welds shall be 6 mm continuous fillet type SP, UNO. All butt welds shall be complete penetration in accordance with AS 1554.1, UNO.
S6 Bolt designation:
4.6/S: Commercial bolts to AS 1111, snug tightened
8.8/S: High strength structural bolts to AS 1562, snug tightened
8.8/TB: High strength structural bolts to AS 1562, fully tensioned bearing joint to AS 1511
8.8/TF: High strength structural bolts to AS 1562, fully tensioned friction joint to AS 1511
All bolts shall be M16 8.8/S, with a minimum of 2 bolts per connection, UNO.
S7 High strength TF & TB bolts shall be installed using approved load indicator washers, or in accordance with the part turn method nominated in AS 4100.
S8 Gusset plates shall be 10 mm thick, grade 300PLUS steel, UNO.
S9 Concrete encased steelwork shall be wrapped with SL41 fabric and shall have a minimum of 50 mm cover, UNO.
S10 Steelwork not encased shall have the following surface treatment :

Exposure Classification	Steelwork Protection Required
A1 / A2	Power tool clean to AS1627 Class 1 1 Coat Alkyd Primer (Zinc Phosphate)
B1	Abrasive blast to AS1627 Class 2.5 1 Coat Inorganic Zinc Silicate
B2	Hot Dipped Galvanised to AS1650

S11 Where sealed tube members are hot dip galvanised, the fabricator shall provide drill holes as necessary.
S12 All transport and erection damage, site welds etc., shall be reinstated to an equivalent finish to adjacent steelwork

SITE PREPARATION FOR SLABS ON GROUND

P1 Strip topsoil containing organic matter. Proof roll fill sub grade and remove any soft zones.
P2 Where additional fill is required to the underside of slabs on ground, non cohesive materials such as sand and gravel dust shall be placed by "controlled" compaction in horizontal layers of 200 mm (loose) maximum depth. This fill shall be compacted to at least 95% of Standard Maximum Dry Density (SMDD).
P3 For slabs on ground, sand 50 mm approximate thickness is to be spread as a levelling layer and well watered down.
P4 Waterproof membrane unpunctured and taped at laps, is to be placed over the sand, sufficient membrane being provided at edges to return under brickwork. Where no brickwork, tape membrane to side of footing below ground.

FOUNDATION MAINTENANCE

FOUNDATION SOILS : All soils are affected by water. Silts are weakened by water and some sands can settle if heavily watered, but most problems arise on clay foundations. Clays swell and shrink due to changes in moisture content and the potential amount of the movement is implied in the site classification in Australian Standard AS2870, which is specified as follows:

A Stable (Non-reactive).
S Slightly Reactive.
M Moderately Reactive.
H Highly Reactive.
E Extremely Reactive.

CLASS A & S SITES : Sands, silts and clays shall be protected from becoming extremely wet by adequate attention to site drainage and prompt repair of plumbing leaks.

CLASS M, H & E SITES : Sites classified as M, H, or E shall be maintained at essentially stable moisture conditions and extremes of wetting and drying prevented. This will require attention to the following :

Drainage of the site : The site shall be graded or drained so that water cannot pond against or near the house. The ground immediately adjacent to the house shall be graded to a uniform fall of 50 mm minimum away from the house over the first metre. The sub floor space for houses with suspended floors shall be graded or drained to prevent ponding where this may affect the performance of the footing system. The site drainage requirements shall be maintained for the economic life of the building.

Limitations on gardens : The development of the gardens shall not interfere with the drainage requirements or the sub floor ventilation and weep hole drainage systems. Garden beds adjacent to the house should be avoided. Care should be taken to avoid over watering of gardens close to the house footings.

Restrictions on trees and shrubs : Planting of trees should be avoided near the foundation of a house or neighbouring house on reactive sites as they can cause damage due to drying of the clay at substantial distances. To reduce, but not eliminate, the possibility of damage, tree planting should be restricted to a distance from the house of :

1.50 x mature height for Class E sites
1.00 x mature height for Class H sites
0.75 x mature height for Class M sites

Where rows or groups of trees are involved, the distance from the building should be increased. Removal of trees from the site can also cause similar problems.

Repair of leaks : Leaks in plumbing, including storm water and sewerage drainage should be repaired promptly.

The level to which these measures are implemented depends on the reactivity of the site. The measures apply mainly to masonry houses and masonry veneer houses. For frame houses clad with timber or sheeting, lesser precautions may be appropriate.

CONSTRUCTION CERTIFICATE
No. 08/197
These plans form part of the above Construction Certificate as issued by
Greg Hough of
Get Certified Building Services Pty Ltd
Accreditation No. BPB0186

28 WAKEHURST PWY, SEAFORTH

A3 ORIGINAL SIZE

REV.	AMENDMENT DESCRIPTION	DATE
A	ISSUED FOR APPROVAL	27.11.08

Healey Castle & Associates
Civil & Structural Engineers
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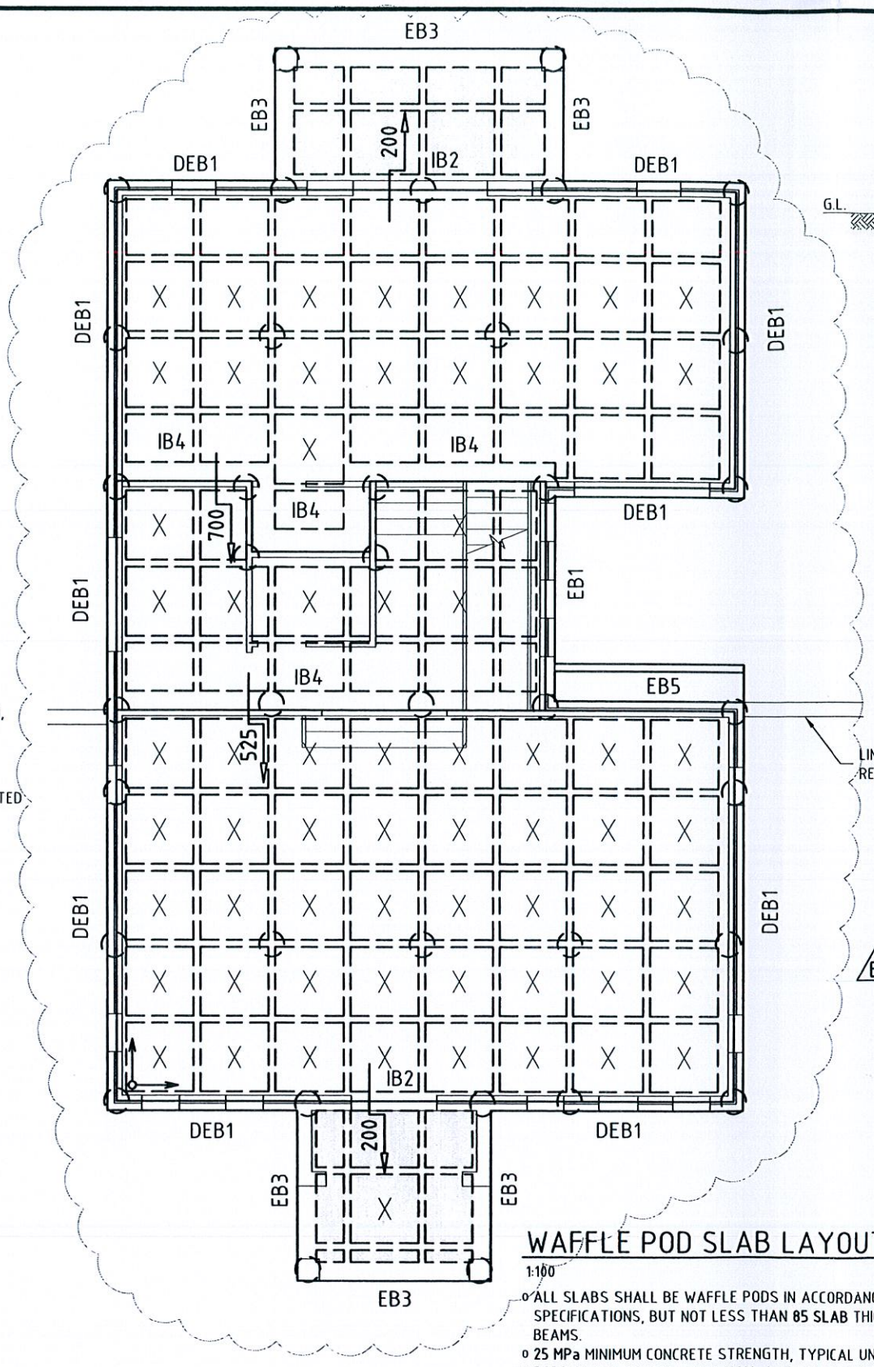
PROJECT:
PROPOSED NEW RESIDENCE
28 Wakehurst Parkway, Seaforth
for GREMMO HOMES

GENERAL NOTES

DESIGN: BDC	CHK:
APPROVED:	DRAWN: DMB
DATE: NOV 2008	SCALE: -
DRG No. 5518 - S01 - A	

LEGEND

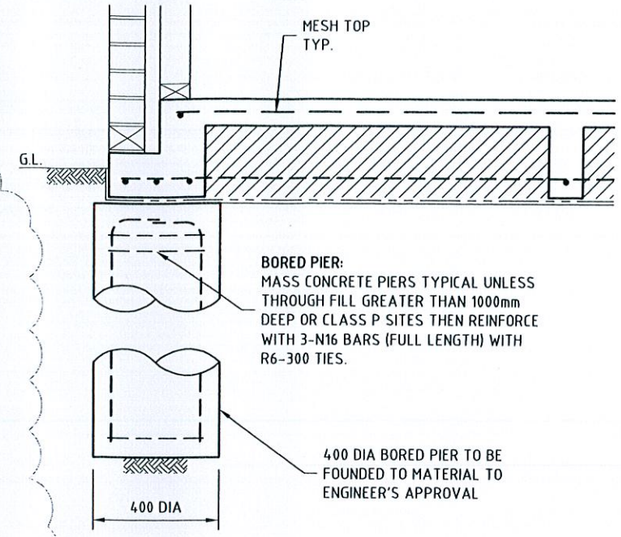
- DENOTES FULL 225 DEEP WAFFLE POD
- DENOTES CUT 225 DEEP WAFFLE POD
- DENOTES FULL 150 DEEP WAFFLE POD
- DENOTES CUT 150 DEEP WAFFLE POD
- DENOTES START POINT FOR LAYING OF WAFFLE PODS
- 80 — DENOTES HEIGHT OF STEP DOWN IN SLAB
- DENOTES 400 DIA CONCRETE PIER
- DENOTES START/END POINT OF DEEPENED EDGE BEAM
- DENOTES DISCONTINUOUS BEAM, REFER TO DETAIL
- 2-N12 (75 SPACING 1200 LONG) TRIMMERS TOP SHALL BE LOCATED 50 FROM ALL RE-ENTRANT CORNERS, TYPICAL



WAFFLE POD SLAB LAYOUT PLAN

1:100

- ALL SLABS SHALL BE WAFFLE PODS IN ACCORDANCE WITH THE MANUFACTURERS WRITTEN SPECIFICATIONS, BUT NOT LESS THAN **85 SLAB** THICKNESS WITH **310 DEEP** EDGE & INTERNAL BEAMS.
- **25 MPa** MINIMUM CONCRETE STRENGTH, TYPICAL UNLESS NOTED OTHERWISE.
- PODS SHALL BE 1090 x 1090 MAX., WITH 110 MIN WIDE INTERNAL BEAMS, UNO.
- SLAB REINFORCEMENT SHALL BE **SL82 MESH** TOP (30 COVER) MINIMUM WITH EXTRA BARS AS NOTED ON SECTIONS AND DETAILS.
- 2-N12 (1200 LONG) TRIMMERS TOP SHALL BE LOCATED AT ALL RE-ENTRANT CORNERS, TYPICAL.
- REINFORCEMENT COVER TO GROUND FLOOR SLAB SHALL BE AS FOLLOWS:
  - 40mm - TO UNPROTECTED GROUND
  - 40mm - EXTERNAL EXPOSURE
  - 30mm - TO A MEMBRANE IN CONTACT WITH GROUND
  - 30mm - INTERNAL EXPOSURE
- BORED PIERS SHALL BE SETOUT AS SHOWN ON PLAN & INSTALLED IN ACCORDANCE WITH NOTE.



BORED PIER DETAIL

1:20

LINE OF EXTERNAL RETAINING WALL REFER TYPICAL DETAIL

FOUNDATION NOTE

THE FOOTINGS SHALL BE FOUNDED ON **STIFF CLAY** MATERIAL WITH A MINIMUM SAFE BEARING CAPACITY OF **150 kPa.**

BORED PIER NOTE

BORED PIERS SHALL BE USED IN ACCORDANCE WITH THE FOLLOWING:

- SET OUT AS PER THE ADJACENT PLAN.
- FOUNDED OFF **VERY STIFF CLAY** THAT IS UNIFORM & STABLE THROUGHOUT.
- FOUNDED A MINIMUM OF **2000** BELOW EXISTING GROUND LEVEL.
- MINIMUM SAFE **END BEARING OF 400 kPa & SKIN FRICTION OF 20 kPa.**
- WHERE ROCK IS ENCOUNTERED, ALL PIERS TO BE FOUNDED OFF ROCK THAT IS UNIFORM & STABLE WITH A MINIMUM SAFE END BEARING OF **600 kPa.**

DESIGN CRITERIA

SITE SOIL CLASSIFICATION : **ASSUMED CLASS M** (REFER NOTE BELOW)
SITE WIND CLASSIFICATION : **N2**
EARTHQUAKE DESIGN CATEGORY: **H1**
CONSTRUCTION TYPE: **ARTICULATED MASONRY VENEER**
(MASONRY SHALL BE ARTICULATED IN ACCORDANCE WITH TECHNICAL NOTE 61 FROM THE CEMENT AND CONCRETE ASSOCIATION OF AUSTRALIA)
ROOF FRAMING: **MANUFACTURED TRUSSES (INTERNAL WALLS NON LOAD BEARING)**

NOTE: THE SUPERINTENDENT SHALL HAVE THE SITE SOIL CLASSIFICATION CONFIRMED (BY INSPECTION OF TEST PIER HOLE 1500 MIN DEEP OR TO AUGER REFUSAL, WHICHEVER IS LESS) BY THE ENGINEER PRIOR TO COMMENCING CONSTRUCTION.
WHERE THE CLAY EXTENDS FOR 1500 OR MORE THE SUPERINTENDENT SHALL HAVE THE SITE CLASSIFICATION CONFIRMED BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER PRIOR TO COMMENCING CONSTRUCTION.

EXPOSURE CLASSIFICATION

CONCRETE :
INTERIOR SURFACES : **A1**
EXTERIOR SURFACES : **B2**

MASONRY :
MASONRY DURABILITY REQUIREMENTS : **M2**

CONSTRUCTION CERTIFICATE
No. 08 / 147
These plans form part of the above Construction Certificate as issued by
Greg Hough of
Get Certified Building Services Pty Ltd
Accreditation No: BPB0186

A3 ORIGINAL SIZE

REV.	AMENDMENT DESCRIPTION	DATE
B	REVISED AS CLOUDED	15.12.08
A	ISSUED FOR APPROVAL	27.11.08

Healey Castle & Associates
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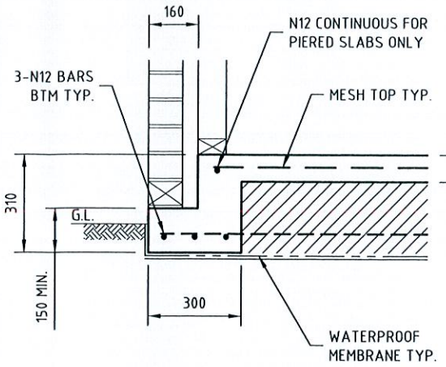
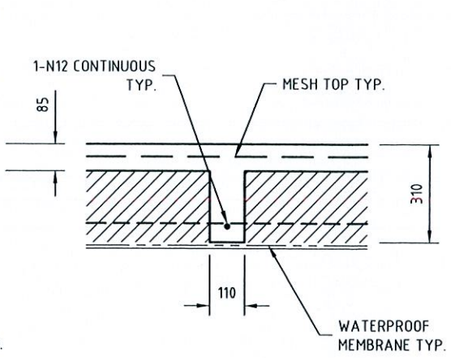
PROJECT:
PROPOSED NEW RESIDENCE
28 Wakehurst Parkway, Seaforth
for GREMMO HOMES

WAFFLE POD SLAB LAYOUT PLAN

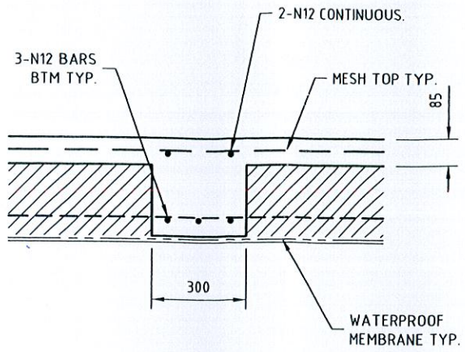
DESIGN: BDC	CHK:
APPROVED:	DRAWN: DMB
DATE: NOV 2008	SCALE: 1:100, 1:20
DRG No. 5518 - S02 - B	



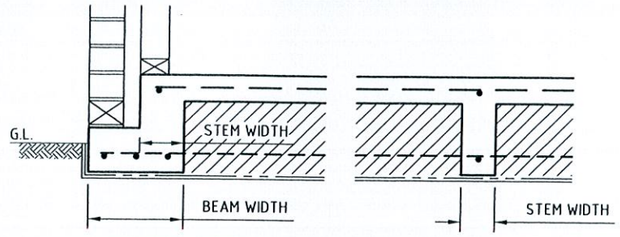
EDGE BEAM 'EB1'
1:20



TYPICAL INTERNAL RIB DETAIL
1:20

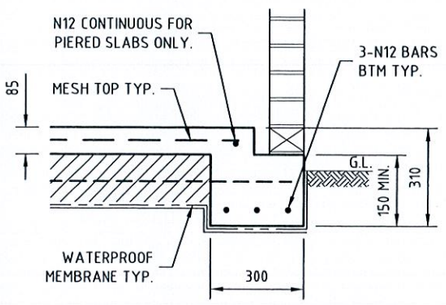


INTERNAL BEAM 'IB1'
1:20

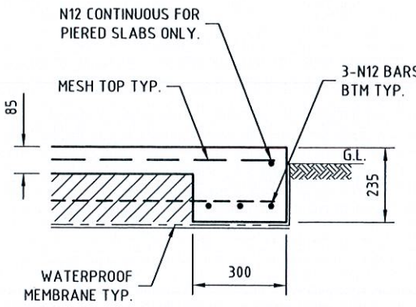


ADDITIONAL STEEL FOR EDGE & INTERNAL BEAMS

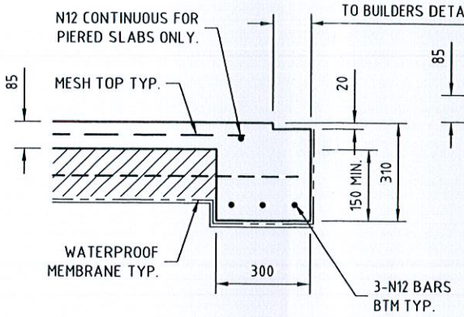
STEM WIDTH OR BEAM WIDTH	TOP STEEL (STEM WIDTH) (No. N12 BARS)	BTM STEEL (BEAM WIDTH) (No. N12 BARS)
110 TO 150	0	1
151 TO 220	1	2
221 TO 330	2	3
331 TO 440	3	4



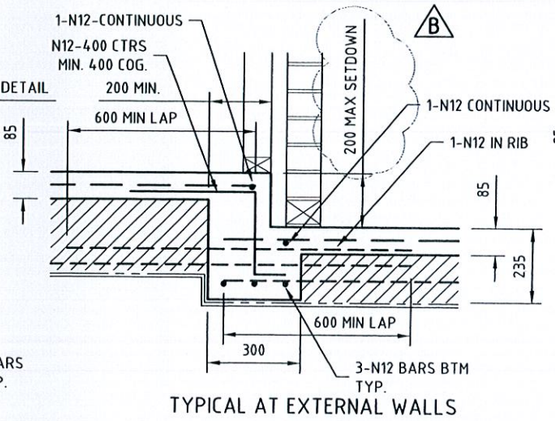
EDGE BEAM 'EB2'
1:20



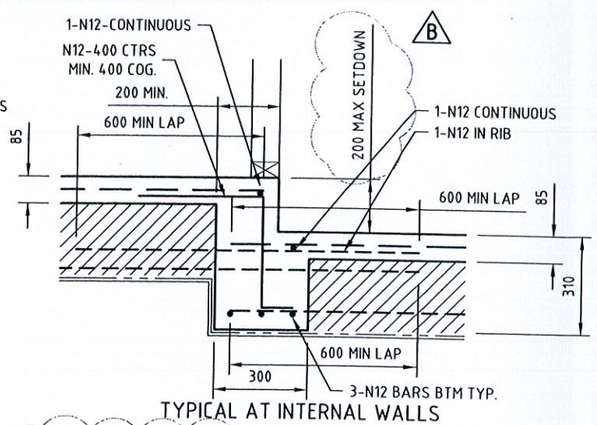
EDGE BEAM 'EB3'
1:20



EDGE BEAM 'EB4'
1:20

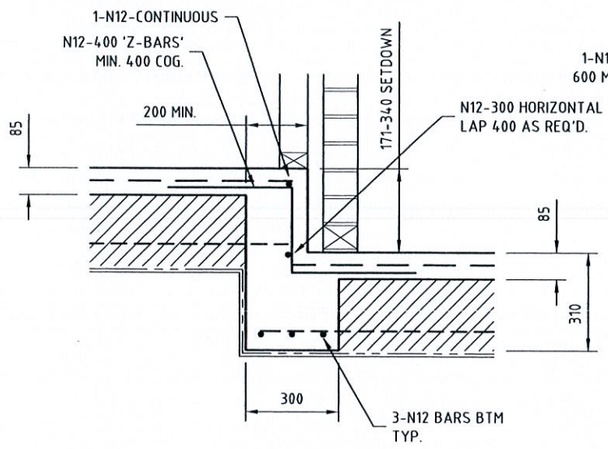


TYPICAL AT EXTERNAL WALLS

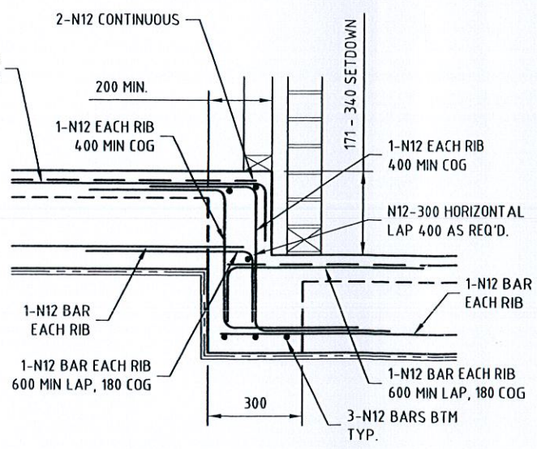


TYPICAL AT INTERNAL WALLS

INTERNAL BEAM IB2 (200 MAX SETDOWN)
1:20

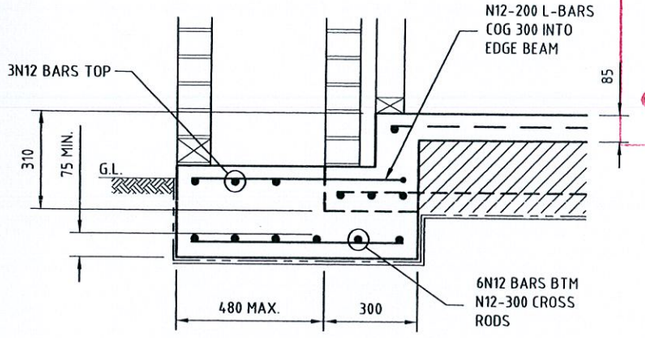


SLAB STEP DETAIL



INTERNAL RIB STEP DETAIL

INTERNAL BEAM IB3 (340 MAX SETDOWN)
1:20



EDGE BEAM EXTENSION
1:20

CONSTRUCTION CERTIFICATE
No. 08 / 147
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Get Certified Building Services Pty Ltd
Accreditation No: BPB0186

A3 ORIGINAL SIZE

REV.	AMENDMENT DESCRIPTION	DATE
B	REVISED AS CLOUDED	16.12.08
A	ISSUED FOR APPROVAL	27.11.08

Healey Castle & Associates
Civil & Structural Engineers

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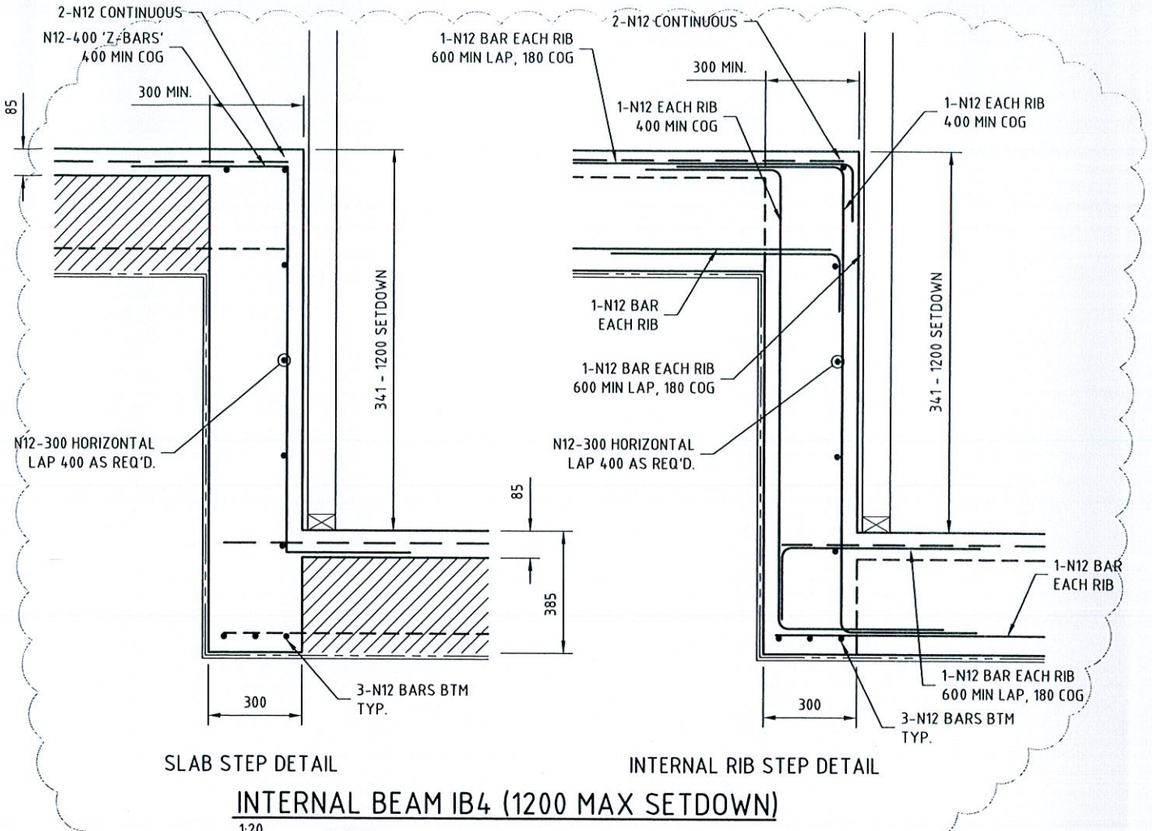
PROJECT:
PROPOSED NEW RESIDENCE
28 Wakehurst Parkway, Seaforth
for GREMMO HOMES

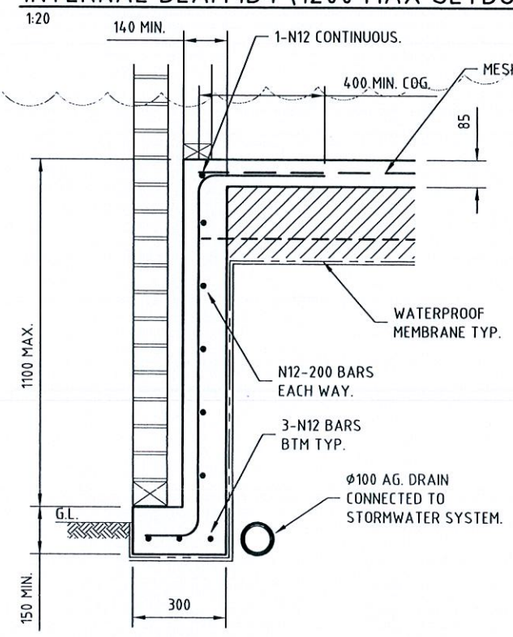
WAFFLE POD SLAB DETAILS SHEET 1 OF 2

DESIGN: BDC	CHK:
APPROVED:	DRAWN: DMB
DATE: NOV 2008	SCALE: 1:20
DRG No. 5518 - S03 - B	



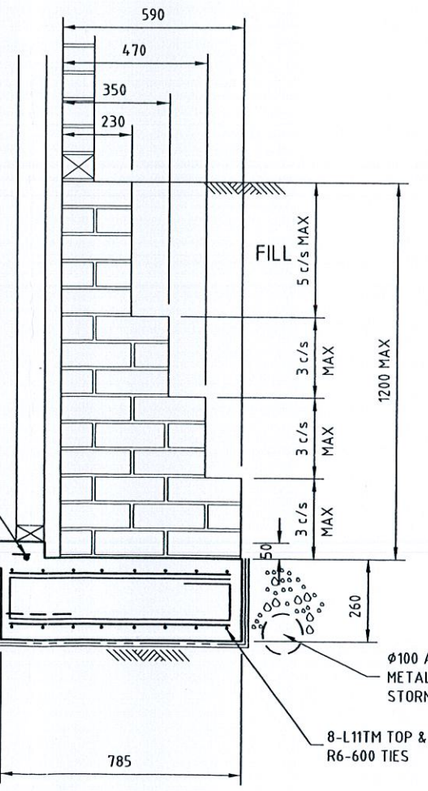
INTERNAL BEAM IB4 (1200 MAX SETDOWN)

1:20



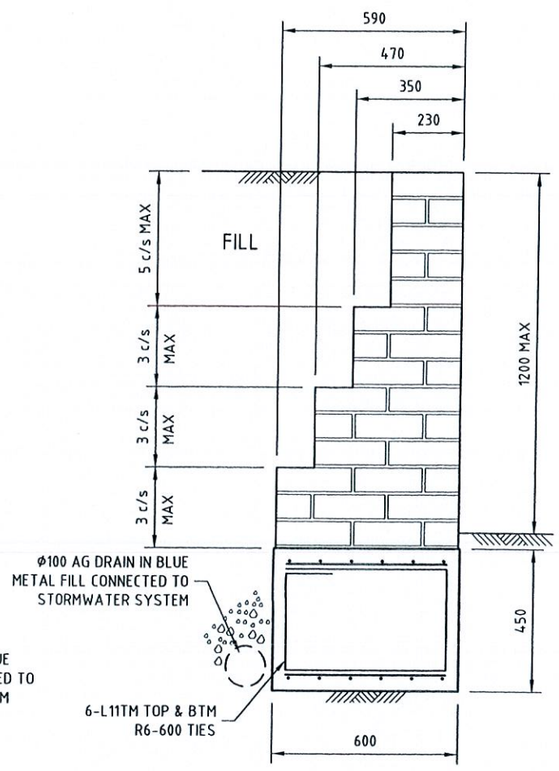
DROPPED EDGE BEAM 'DEB1'

1:20



EDGE BEAM EB5

1:20



TYPICAL EXTERNAL RETAINING WALL

1:20

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Healey Castle & Associates
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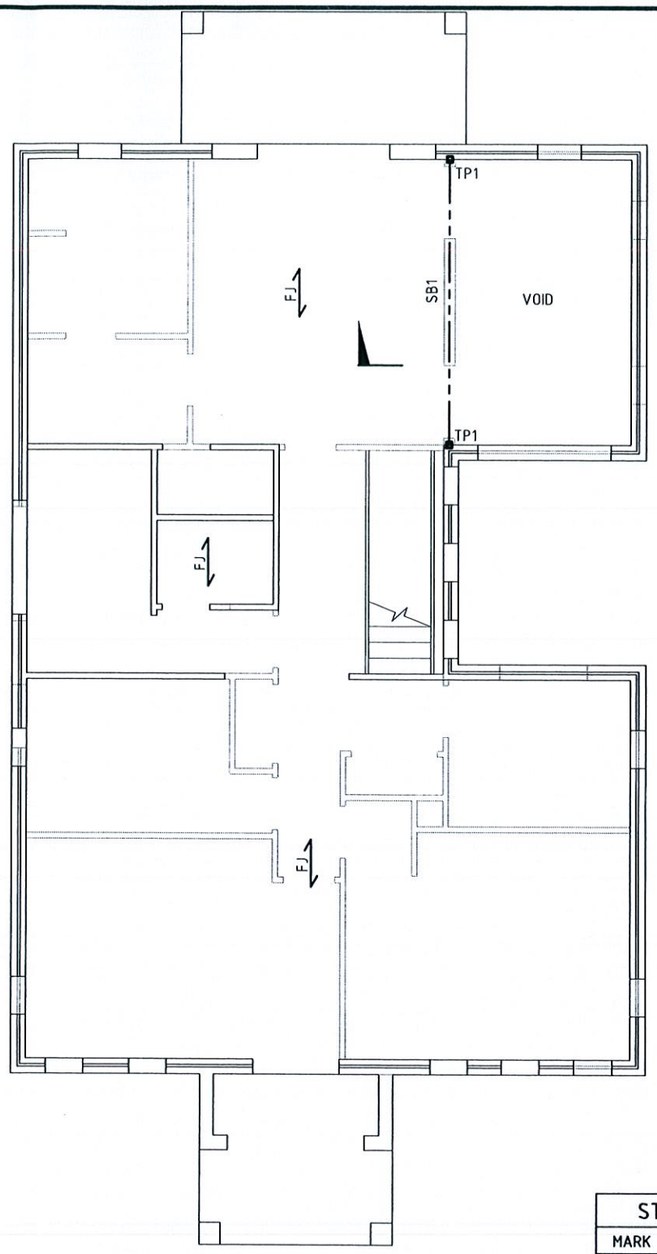
WAFFLE POD SLAB DETAILS SHEET 2 OF 2

DESIGN: BDC	CHK:
APPROVED:	DRAWN: DMB
DATE: NOV 2008	SCALE: 1:20
DRG No. 5518 - S04 - B	



FIRST FLOOR BEAM LAYOUT PLAN

1:100

FJ DENOTES FLOOR JOIST SPAN DIRECTION

RF DENOTES ROOF FRAMING SPAN DIRECTION (BY OTHERS)

'BP' - DENOTES 300 x 110 x 16 BEARING PLATE

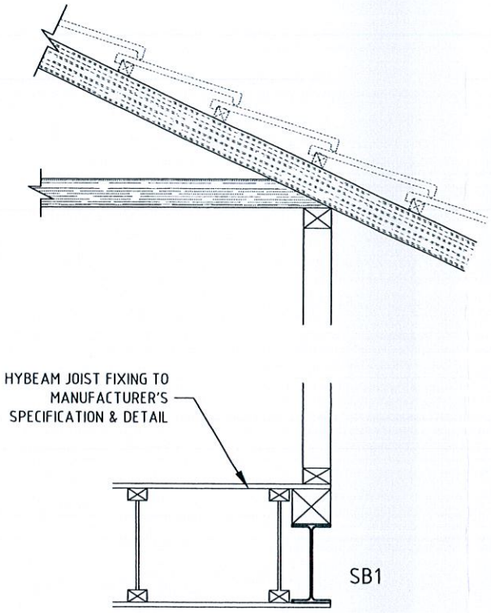
'A' - DENOTES 100 END BEARING

'B' - DENOTES 150 END BEARING

'C' - DENOTES 200 END BEARING

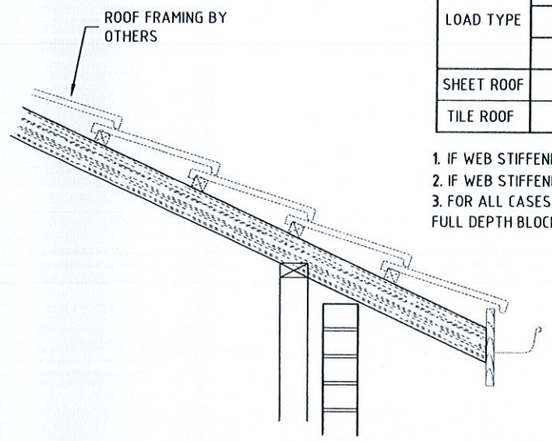
'D' - DENOTES 300 END BEARING

1



SECTION 1 1:20

RECOMMENDED MAXIMUM SPANS - FLOOR JOISTS FOR HOUSES				
HY JOIST SECTION CODE	SINGLE SPAN		CONTINUOUS SPAN	
	FLOOR JOIST SPACING (mm^2)			
	450	600	450	600
	RECOMMENDED MAXIMUM SPANS(mm)			
HJ200	4000	3600	4500	4200
HJ240	4500	4100	5100	4600
HJ246	4700	4400	5400	5000
HJ300	5500	5000	5900	5400
HJ360	6300	5800	6700	6100



DESIGN CRITERIA

LOADS: AS FOR FLOORS IN HOUSES, REFER 1170.1

LIVE LOADS: 1.5 kPA UNIFORMLY DISTRIBUTED OR 1.8 kN CONCENTRATED (PARTIAL AREA LOADS ALSO CONSIDERED)
PERMANENT LOADS: 1.0 kPA WHICH INCLUDES FOR NORMAL DEAD LOADS DUE TO ATTACHED CEILINGS, FLOORING AND PARTITION WALLS AND THE PERMANENT COMPONENT OF LIVE LOAD ASSOCIATED WITH FLOOR COVERINGS AND FURNITURE ETC.

DEFLECTION LIMITS:
LIVE LOAD DEFLECTION: SPAN/360 OR 9mm
PERMANENT LOAD DEFLECTION: SPAN/300 OR 12.5mm

FLOORING:
SPANS HAVE BEEN DETERMINED INDEPENDENTLY OF THE FLOORING TYPE USED AND ARE THEREFORE APPROPRIATE FOR STRIP FLOORING, PARTICLE BOARD FLOORING OR PLYWOOD FLOORING. STRUCTURAL PLYWOOD FLOORING GLUED AND NAILED TO JOISTS WILL IMPROVE RIGIDITY.

TILED FLOORS:
WHERE THICK BED MORTAR TILE OR SLATE FLOORS ARE TO BE INSTALLED THE PERMANENT LOAD ALLOWANCE SHOULD BE AT LEAST 1.5kPA. IN THIS INSTANCE A SIMPLE BUT CONSERVATIVE APPROACH IS TO REDUCE JOIST SPACINGS TO COMPENSATE FOR THE HEAVIER LOAD. MAXIMUM SPANS FOR JOIST AT 600 CTRS OR 450 CTRS GIVEN IN THE ABOVE TABLE SHOULD BE ASSUMED TO APPLY FOR JOISTS TO BE INSTALLED AT 450mm (OR 480mm) AND 300mm CTRS RESPECTIVELY AND CARRYING THE HEAVIER LOADING.

WATER BEDS:
WATER BEDS IMPOSE HIGHER THAN NORMAL PERMANENT LIVE LOAD (USUALLY ABOUT 2kPA, ALBEIT OVER A RELATIVELY SMALL AREA) PLUS OTHER DEAD LOADS. IN ORDER TO AVOID HIGHER THAN ACCEPTABLE LONG TERM DEFLECTIONS IT IS RECOMMENDED THAT JOISTS INTENDED TO SUPPORT WATER BEDS ARE SPACED AT EITHER 300 OR 400mm CTRS WITH MAXIMUM SPANS TAKEN FROM THE ABOVE TABLE FOR SPACINGS AT 450mm OR 600mm RESPECTIVELY.

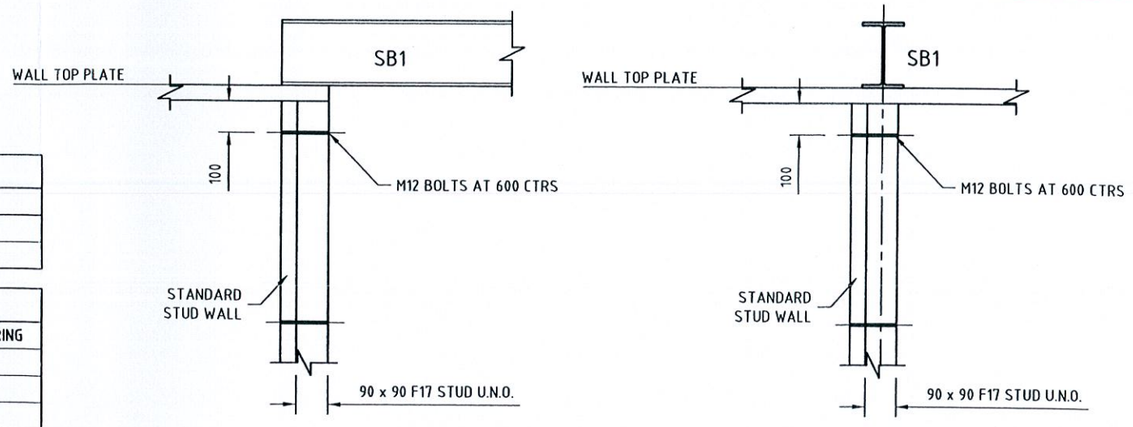
LOAD TYPE	JOIST SPACING (mm)			
	400	450	480	600
	MINIMUM BEARING (mm)			
SHEET ROOF	45	45	45	65[1]
TILE ROOF	65	65	65	90[2]

1. IF WEB STIFFENERS INSTALLED BEARING MAY BE REDUCED TO 45 mm.
2. IF WEB STIFFENERS INSTALLED BEARING MAY BE REDUCED TO 65 mm.
3. FOR ALL CASES BEARING MAY BE REDUCED TO 30mm IF CONTINUOUS FULL DEPTH BLOCKING OR COMPRESSION BLOCKS ARE INSTALLED.

CONSTRUCTION CERTIFICATE
No. 08/197
These plans form part of the above Construction Certificate as issued by
Greg Hough of
Get Certified Building Services Pty Ltd
Accreditation No: BPB0186

STEELWORK MEMBER SCHEDULE			
MARK	DESCRIPTION	SIZE	COMMENTS
TP1	POST	90 x 90 - F17	KDHW
SB1	BEAM	250 UB 25.7	GRADE 300PLUS

NON LOAD BEARING STEEL LINTEL SCHEDULE		
SPAN	LINTEL SIZE	MIN END BEARING
UP TO 900	75 x 6.0 EA	100
OVER 901 - 2400	150 x 100 x 8 (UA)	150
OVER 2401 - 3000	150 x 100 x 10 (UA)	150
OVER 3001 - 4200	150 x 100 x 12 (UA)	150
MAXIMUM HEIGHT OF BRICKWORK OVER LINTEL = 3000		
ALL EXTERNAL LINTELS TO BE HOT DIPPED GALVANISED		



TYPICAL TIMBER POST TP DETAILS

1:20

A3 ORIGINAL SIZE

REV.	AMENDMENT DESCRIPTION	DATE
A	ISSUED FOR APPROVAL	27.11.08

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PROJECT:
PROPOSED NEW RESIDENCE
28 Wakehurst Parkway, Seaforth
for GREMMO HOMES

FIRST FLOOR BEAM LAYOUT PLAN

DESIGN: BDC	CHK:
APPROVED:	DRAWN: DMB
DATE: NOV 2008	SCALE: 1:100, 1:20
DRG No. 5518 - S05 - A	