



# PITTWATER COUNCIL

## CONSTRUCTION CERTIFICATE APPLICATION

Environmental Planning and Assessment Act 1979, Section 109C  
EP&A Regulation 2000, Clauses 139 (1) and 148

PO Box 882, Mona Vale NSW 1660

Tel: (612) 9970 1111

Fax: (612) 9970 7150

Internet: [www.pittwateriga.com.au](http://www.pittwateriga.com.au)

Email: [pittwater\\_council@pittwater.nsw.gov.au](mailto:pittwater_council@pittwater.nsw.gov.au)

Please tick one:

- ☒ New Construction Certificate  
☐ Modification of previously issued  
Construction Certificate  
CC 043/07

### SITE DETAILS

Unit/Suite:	Street No:	Street:
	83	Prince Alfred Parade
Suburb:	Lot No:	Deposit /Strata Plan:
Newport Beach	108	

### DEVELOPMENT CONSENT

Development Application No:	Determination Date:
100479/07	

### APPLICANT DETAILS

Name/Company:	Contact Person:
Huxley Homes Pty. Ltd.	Esperanza Moreno
Postal Address:	Contact Numbers:
10 Phillip Street	Phone (H/B): 9842 9819
Parramatta NSW 2150	Mobile:
	Fax: 9842 9890
Signature of Applicant:	Date:
	27/08/07

### OWNERS DETAILS

Name:	If Company, contact person:
Gay Nicholls	
Postal Address:	Contact Numbers:
14 Bray Street	Phone (H/B): 9966 1887
North Sydney	Mobile:
	Fax:

As the owner of the land to which this application relates, I consent to this application. I also give consent for the authorised Council Officer to enter the land to carry out inspections.

Signature of Owners:

Date:

Consent to lodge attached

SCANNED

3 SEP 2007

PITTWATER COUNCIL

If more than one owner, every owner must sign. If the owner is a company, the form must be signed by an authorised director and the common seal must be stamped on this application.

If the property has been recently purchased, written confirmation from the purchaser's Solicitor must be provided.

If the contracts have been exchanged for the purchase of the land, the current owner is to sign the application.

**DEVELOPMENT DETAILS**

Type of Work:	<input checked="" type="checkbox"/> Building Work
<b>OR</b>	
	<input type="checkbox"/> Subdivision Work
Description of proposal – (Provide brief, concise details):	
New 2 storey residence	

**WHO WILL BE DOING THE BUILDING WORKS?**

<input type="checkbox"/> Owner Builder	
Owner Builders Permit No: .....	
Copy of Owner Builders permit attached:	<input type="checkbox"/> Yes <input type="checkbox"/> No – to be provided with Notice of Commencement Form
<i>If you are an Owner-Builder for the residential building work exceeding \$5000 you must apply for a permit at NSW Office of Fair Trading, 1 Fitzwilliam Street, Paramatta NSW 2150 Australia. Tel: 61 2 98950111 Fax: 61 2 9895 0222.</i>	

**OR**

<input type="checkbox"/> Licensed Builder	
Builder's License Number 155010C	
Name of Builder: Huxley Homes Pty Ltd	Phone: 9842 9819
Contact person: Esperanza Moreno	Mobile: .....
Address: 10 Phillip Street Parramatta	Fax: 9842 9890
Insurance Company: .....	Insurance Certificate attached: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No – to be provided with Notification of Commencement form
<i>If you are using a licensed builder for residential building work exceeding \$12,000 you must obtain Home Building Act Insurance. A certificate of insurance must be provided with this application or submitted with the Notification of Commencement form.</i>	

**VALUE OF PROPOSED DEVELOPMENT**

Value of Works: \$ 388,245.00 (including full cost of labour and materials)

**DO YOU NEED TO PAY THE BUILDING INDUSTRY LONG SERVICE LEVY?**☒ Yes☐ No

*Only required if the development involves building works exceeding \$25,000.00.*

**OFFICE USE ONLY**

Fee Type	Cashier's Code	Fee Amount
Construction Certificate Application Fee	TCER	1485.66
Modification of Construction Certificate Fee	TCER	
Long Service Levy Fee	QLSL	1359
Driveway/Street Levels	ESTR	
Sec 94 Contributions		
Bonds/Guarantees		
Other Fees		
<b>TOTAL</b>		
Date of Receipt:	Receipt No:	Accepted By:
New Application Number issued (not required for modification of CC)		CC <u>0437/07</u>

**PRIVACY AND PERSONAL INFORMATION PROTECTION NOTICE**

Purpose of collection:	To enable Council to assess your proposal.
Intended recipients:	Council Staff/Consultants and any other relevant government agency that may be required to assess the proposal.
Supply:	The information is required by legislation.
Consequence of Non-provision:	Your application may not be accepted, not processed or rejected for lack of information
Storage:	Pittwater Council will store details of the application and any subsequent decision in a register that can be viewed by the public.
Retention period:	Hard copies of the application will be destroyed after 7 years and electronic records will be kept indefinitely.
Please contact Council if this information you have provided is incorrect or changes.	

R / 223166

# STATISTICAL RETURN FOR AUSTRALIAN BUREAU OF STATISTICS

What is the area of the land?	Area in square metres	521.6	
Gross floor area of existing building?	Area in square metres	120 m <sup>2</sup> approx.	
If no existing building, write "NIL"			
What is the existing building or site used for at present?	Main uses:	residence	
	Other uses:		
Does the site contain a dual occupancy?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Gross floor area of proposed building?	Proposed floor area in square metres	213.47	
What will the proposed building to be used for?	Main uses:	residence	
	Other uses:		
How many dwellings:			
Are pre-existing at this property?	Dwellings:	1	
Are proposed to be demolished?	Dwellings:	1	
Are proposed to be constructed?	Dwellings:	1	
How many storeys will building consist of?	Storeys:	2	
What are the main building materials?			
Walls		Roof	
Full Brick	<input type="checkbox"/>	Aluminium	<input type="checkbox"/>
Brick veneer	<input checked="" type="checkbox"/>	Concrete or slate	<input type="checkbox"/>
Concrete, masonry	<input type="checkbox"/>	Tile	<input checked="" type="checkbox"/>
Steel	<input type="checkbox"/>	Fibrous cement	<input type="checkbox"/>
Fibrous cement	<input type="checkbox"/>	Steel	<input type="checkbox"/>
Timber/weatherboard	<input type="checkbox"/>	Other	<input type="checkbox"/>
Cladding-aluminium	<input type="checkbox"/>	Unknown	<input type="checkbox"/>
Curtain glass	<input type="checkbox"/>		
Other	<input type="checkbox"/>		
Unknown	<input type="checkbox"/>		
Floor		Frame	
Concrete	<input checked="" type="checkbox"/>	Timber	<input checked="" type="checkbox"/>
Timber	<input type="checkbox"/>	Steel	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>
Unknown	<input type="checkbox"/>	Unknown	<input type="checkbox"/>



**APPLICANTS CHECK LIST**

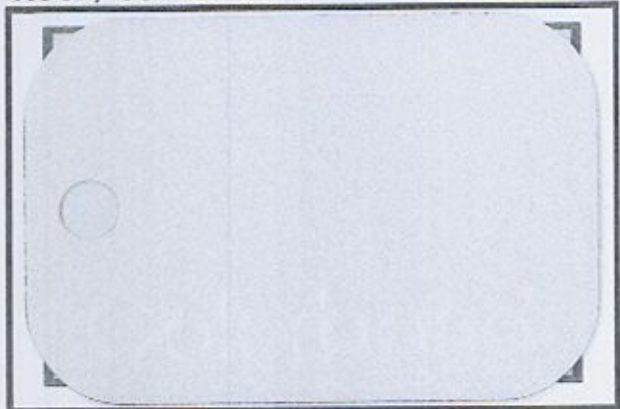
Note: This list is intended as a guide to the type of information to be submitted. Some items may not be required and Section B of the Conditions of Development Consent for the building works may specify further additional information required with submission of your Construction Certificate Application.	
Application Form –	<div><input checked="" type="checkbox"/> Owners Consent</div> <div><input checked="" type="checkbox"/> Applicant's Signature</div> <div><input checked="" type="checkbox"/> Long Service Levy</div> <div><input type="checkbox"/> Driveway/Street levels Application</div>
Supporting Documentation - (3 copies of each)	<div><input checked="" type="checkbox"/> Architectural Plans</div> <div><input type="checkbox"/> Quick Check Plans endorsed by Sydney Water</div> <div><input checked="" type="checkbox"/> Construction Specifications for Building Works</div> <div><input checked="" type="checkbox"/> Structural Engineer's Plans</div> <div><input type="checkbox"/> Structural/Geotechnical Certificates</div> <div><input type="checkbox"/> Landscape Plans</div> <div><input type="checkbox"/> Driveway Level Plans</div> <div><input type="checkbox"/> On-site Stormwater Detention Plans</div> <div><input checked="" type="checkbox"/> Drainage Plans on Site Storm Management</div> <div><input checked="" type="checkbox"/> Erosion and Sediment Management Plan</div> <div><input type="checkbox"/> Sydney Water Quick Check Plans</div> <div><input type="checkbox"/> Subdivision Work Plans</div> <div><input checked="" type="checkbox"/> Schedule of External Finishes/Colours</div> <div><input type="checkbox"/> Fire Safety Measures Schedule</div> <div><input checked="" type="checkbox"/> Form No. 2 – "Geotechnical Risk Management Policy for Pittwater"</div> <div><input type="checkbox"/> Details and location of fencing for Swimming Pool to comply with AS 1926-1986 "Fences and Gates for Private Swimming Pools"</div> <div><input type="checkbox"/> Specifications for construction of buildings in Bushfire-prone areas</div> <div><input type="checkbox"/> Security Deposit / Section 94 contributions</div> <div><input type="checkbox"/> Building Code of Australia - Alternative solution report that has been peer reviewed by a separate suitably qualified person</div>

DA COPY



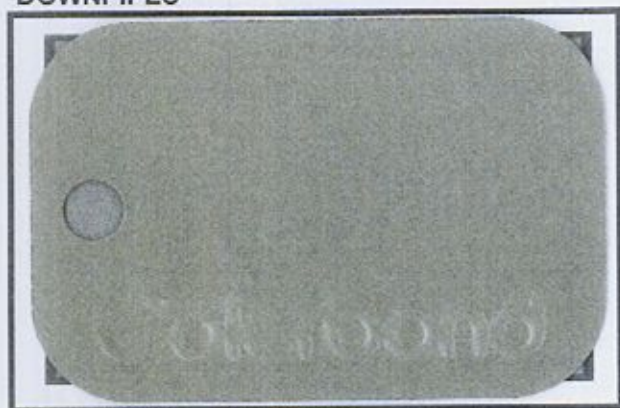
**EXTERNAL COLOUR SELECTIONS**  
Gay Nicholls  
Lot 108 (No 83) Prince Alfred Parade  
Newport Beach  
Job No 23225

**ROOF, GUTTER & FASCIA COLOUR**



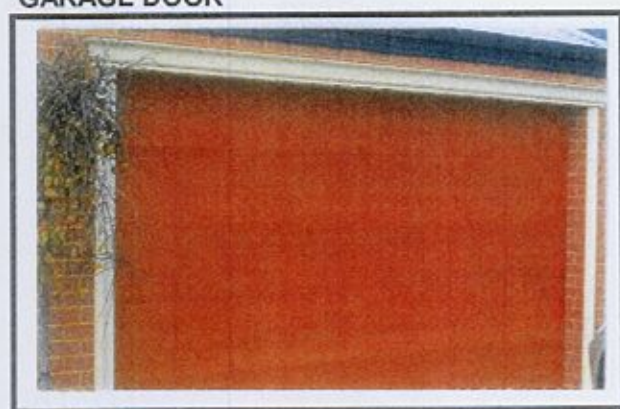
COLORBOND - SHALE GREY

**DOWNPIPES**



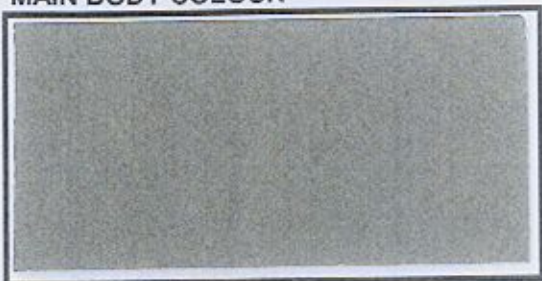
COLORBOND - BUSHLAND

**GARAGE DOOR**



GLIDEROL

**MAIN BODY COLOUR**



WATTYL URBAN GREY

**LINEA BOARD & GABLE PANELS**



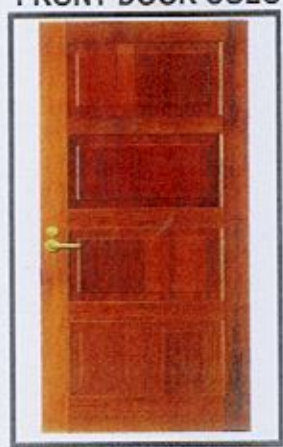
WATTYL URBAN GREY

**WINDOW COLOUR**



TREND ULTRA BLACK

**FRONT DOOR COLOUR**



WESTERN CEDAR



## CONSENT TO LODGE

DATE: 14 / 2 / 07

### To Whom It May Concern:

I/We, the undersigned hereby grant my/our permission to Huxley Homes Pty Limited of 10 Phillip Street PARRAMATTA NSW 2150, to submit Development, Construction Certificate and Subdivision Application (as applicable) to the Council or relevant authority for my/our property at the address indicated below.

\* This consent waives the requirement of Ordinance 29A of the Local Government Act regarding the power of entry of the Council or relevant authority, and grants the Council or relevant authority permission to enter the above property without first having given notice, for the purpose of carrying out all/any inspections appropriate to the application.

SITE ADDRESS: LOT No. L108 DP No. 13457

STREET, SUBURB: 83 PRINCE ALBERT PDE NEWPORT

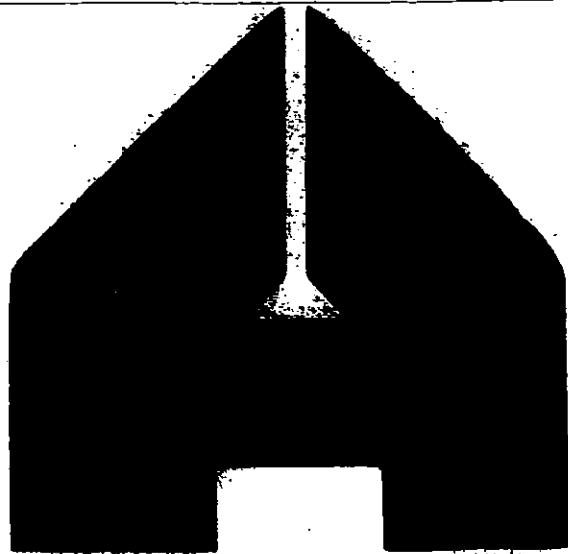
COUNCIL : PITTWATER

PROPRIETOR(S) CAMERON NICHOLS

PROPRIETOR(S) ADDRESS: c/o Huxley Homes Pty Limited  
10 Phillip Street  
Parramatta NSW 2150

PROPRIETOR(S) SIGNATURE: [Signature]

- NOTE: All Land owners appearing on the certificate of Title must provide their consent by signing this form



**HUXLEY HOMES**

LICENCED BUILDER 92052C

## GENERAL HOUSING SPECIFICATIONS

for the erection of a  
brick veneer residence

PLACE STICKER HERE

This is Annexure B referred to in the Building Agreement

dated \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

Signed by the Owner

In the presence of

Signature \_\_\_\_\_

Name: \_\_\_\_\_

Name \_\_\_\_\_

Address: \_\_\_\_\_

Signature \_\_\_\_\_

Name \_\_\_\_\_

Description: \_\_\_\_\_

In the presence of

Huxley Homes  
ABN: 41 106 443 216  
Licence No: 155010c

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Authorised Officer \_\_\_\_\_

Description: \_\_\_\_\_



HOUSING INDUSTRY  
ASSOCIATION

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1. GENERALLY

1.01 Extent of the Works: Shall be governed by the Contract Tender Letter and Working Drawings.

1.02 Provide: Means the supply and complete building in of specified materials, fittings, etc.

1.03 Regulations and Notices: The Contractor is to comply with the Building Code of Australia, the relevant State appendix thereto; and/or any amendments thereto; the requirements of Legally Constituted Authorities for Local Government and/or for services to the extent as provided for in the Contract Tender Letter. The Contractor is to give all notices, obtain all permits and pay all fees required by such Authorities. The Damage/Security deposits are to be paid by the Owner.

1.04 Insurance: Insurance of the works against fire will be effected by the Contractor. The Contractor shall at his own expense adequately insure against Public Risk and arrange indemnification in respect of his liability under the Workers' Compensation Act of New South Wales.

1.05 Labour and Materials: The Contractor is to provide all labour, materials, fittings and plant required to construct and complete the building as specified in the Contract Tender Letter. Materials to be the standard specified. Workmanship in each trade to be performed by tradesman of that particular trade and in conformity with current good building practice.

Notwithstanding that certain materials may herein after be specified, the Contractor reserves the right to substitute and/or alter any materials herein, however, they must comply with the relevant ordinances and/or Lending Authority concerned and be of no less a quality than the material they are substituting.

1.06 Set Out & Dimensions: The Contractor is to set out and maintain the work substantially in accordance with the drawing. Figured dimensions on plans are to be taken in preference to scale measurements. Unless otherwise stated, all dimensions are nominal. i.e. dimensions are to structural elements and do not include finished surfaces such as plasterboard, tiling etc.

- 1.07 **Plans and Specification:** If any alterations, amendments or variations to the said plans and specifications are required by any Governmental or semi-Governmental Authority the cost of such alterations, amendments or variations shall be charged to the Owner's account.
- 1.08 **Additional Work:** Should any additional work (as distinct from authorised extras and variations) not allowed for, or included in, or specifically excluded from the Contract Sum or this Specification, be required to be carried out because of site conditions, requirements of the Lending Authority and/or Statutory Authority, the cost of such work shall be to the Owner's account.
- 1.09 **Final Payment:** Final payment shall be by bank cheque on completion and before occupation. The Contractor shall not, under any circumstances, release the keys for the building until all outstanding monies have been paid by the Owner to the Contractor.
- 1.10 **Survey:** The Contractor shall allow the provisional sum as scheduled for the following survey work; (a) block peg out; (b) house set out; (c) identification survey when foundation walls complete; (d) final survey on completion of gutter and eaves. The Contractor shall not be responsible for maintenance of any survey pegs after the final survey is completed.
- 1.11 **Water:** Where water is available within two (2) metres of the property boundary, the Contractor will be responsible for all costs (except for excavation of rock) associated with connecting the water to the site. Where water is not available or the Supply Authority's main is further than two (2) metres from the property boundary, all costs associated with bringing water or the water service to the site shall be to the Owner's account. Unless otherwise specified in the tender, the contract includes up to ten (10) lineal metres of 19 mm water service from the main to the building.
- If water is not available the Owner shall, at the Owner's expense, supply adequate water to the site for construction purposes.
- 1.12 **Council's Footpath:** The Contract Sum does not include repair of damage to Council's kerb and gutter/footpath/roads or any private right-of-way/driveway caused by construction vehicles and/or work and the Contractor accepts no responsibility for damage to same. Should the Contractor be required to repair such damage, the cost shall be to the Owner's account.
- 1.13 **Existing Structures:** The Contractor (unless specified in the Contract Tender Letter) shall not be required to protect, repair or otherwise maintain any existing fences, structures, driveways or the like and the Contractor accepts no responsibility for any damage caused to same during the construction period.
- 1.14 **Access:** All weather access and storage must be available for delivery of materials by heavy vehicles onto the site and to within two (2) metres of the works. In particular, access must be available around the entire perimeter of the works for concrete delivery trucks to pour the floor slab. Any additional cost incurred by the Contractor through inadequate access or storage shall be to the Owner's account. Should inclement weather and/or inadequate site conditions cause, in the Contractor's estimation at the time, the pouring of the foundation floor slab to be impracticable without the use of a concrete pump, then the Contractor reserves the right to use such concrete pump and the cost of thereof is to be charged to the Owner's account.
- 1.15 **Provisional Allowances:** Works for which Provisional Allowances are listed at the end of this Specification will be charged at the scheduled rate or where no rate is provided at the Contractor's cost plus 10% for overheads, supervision and 10% for profit, and adjusted against the Provisional Allowance.
- 1.16 **Prime Cost Items:** Unless stated otherwise in the Tender, the Contractor shall supply and fix all PC. items shown on the working drawings and/or detailed in the Tender.
- 1.17 **Items to be Supplied by Owner:** For all items, stated in the Tender, to be supplied by the Owner or where, during the construction of the dwelling it is agreed between the Owner and the Contractor that the Owner shall supply any particular item, it is the responsibility of the Owner to arrange payment for, delivery of and protection (and/or insurance) against damage and theft of all these items. Delivery is to be made when requested by the Contractor, to the site.

- 1.18 Finish as an Exhibition Home: The Contractor shall endeavour at all times to duplicate the finish and fittings in the corresponding exhibition home. However, the Contractor will not be held responsible for changes which occur due to variations in building practice and changes in the models of various fittings or materials.
- 1.19 Selections by Owner: If materials become unavailable during the course of the Building Work, the Contractor must notify the Owner and provide a recommendation for alternative materials. The Owner must provide the Contractor with the instructions within five (5) Working Days failing which the Contractor may make a substitution. Any substituted materials shall be charged as Prime Cost items in accordance with this Clause.

## 2. EXCAVATOR

- 2.01 Site: Unless allowed for in the contract sum, the owner is to clear the building site and grub all stumps, roots, etc. to a minimum distance of two (2) metres outside the building line or to the boundaries of the allotment, whichever is the less. Unless specifically allowed for in the contract sum the removal from site of roots, stumps, trees, undergrowth, excess fill and rubbish already on site is not the responsibility of the Contractor, but shall be stacked on site for removal by the Owner.
- 2.02 Rock or Shale: The Contractor shall allow for all excavation to be in clay or soil. Should rock, shale or any other material requiring the use of a compressor or other plant, be encountered during construction, the Owner shall pay extra for excavation and removal of such material and shall be charged at the Contractor's invoiced cost of labour and hire of compressor and/or other plant or equipment plus 10% for overheads and supervision and 10% for profit or as provided for in the Contract Tender Letter.
- 2.03 Trenches: Excavate for all footings, beams to raft slab, etc., to secure solid even bearing throughout. Should it be necessary to excavate deeper than 350 mm to secure solid bottoms and even bearing throughout, the additional cost shall be charged to the Owner's account or as provided for in the Contract Tender Letter.
- 2.04 Excess Fill: If piling or excavation is required the removal or spreading of excess filling resulting from such work shall be the responsibility of the Owner; if, however, such work is allowed for in the Provisional Allowances, the cost thereof shall be adjusted in accordance with Clause 1.15 hereof.

## 3. CONCRETOR

- 3.01 General: All concrete is to be ready mixed from an approved supplier. Compression strength of concrete shall be as noted in the Engineer's drawings.
- 3.02 Footings: Provide concrete footings in accordance with Engineer's details unless provided otherwise in the Contract Tender Letter.

SHOULD ADDITIONAL FOOTINGS OR PIERING BE REQUIRED BY SITE CONDITIONS, COUNCIL, LENDING AUTHORITY OR ENGINEER, THE ADDITIONAL COST SHALL BE TO THE OWNER'S ACCOUNT.

- 3.03 Filled or Unstable Ground: If, upon commencement of the works, the nature of the ground is considered unsuitable for the footing system shown on the drawings, then the Contractor shall engage a Structural Engineer to advise on the re-design of the footing system and construct same in accordance with the details provided by the Engineer. The cost of engaging the Engineer along with any additional work shall be charged to the owner's account. Refer Building Agreement.
- 3.04 Concrete Floor Slabs: Construct a concrete floor on the ground in accordance with the Engineer's detailed drawings; surface to be suitable to lay carpet. Where required, provide concrete floors to bathroom, laundry, external patios, terraces, garage and carport.

3.05 Concrete Slabs - Wet Area: Screed the concrete with a fall to outlets, or level as required and trowel the surface to floors of external patios, terraces and laundry where applicable to smooth and even finish.

3.06 Paths: Provide concrete paths if provided for in the Contract Tender Letter and indicated on plan. Lay Paths to even grades, true lines and curves. Provide joints in the paths at a maximum spacing of 2000 mm with bitumen impregnated felt jointing strips.

#### 4. PROTECTION FROM SUBTERRANEAN TERMITES

4.01 Barrier: Protect the structural elements to the work with a proprietary system which has current accreditation with the Australian Building Code Board, in accordance with AS.3660.1.

4.02 Certificates: The Contractor is to provide a Certificate in accordance with Australian Standard 3660.1.

4.03 It is incumbent upon the Owner to have the house inspected at least annually by a competent pest control operator and to comply with the operators advice.

THE OWNER'S FAILURE TO COMPLY WITH THIS CLAUSE WILL VOID ANY WARRANTY GIVEN IN RELATION TO THE CERTIFICATE.

#### 5. BRICKLAYER

5.01 General: All brickwork is to be accurately bonded, carried up true and plumb in level courses to various heights and thickness as shown on plans. Bricks of clay and/or shale origin are to be sound, hard and well burnt.

5.02 Face Bricks: Face bricks to be used for all wall and piers to exposed elevation(s). The Contractor shall endeavour to obtain bricks as selected by the Owner; however, if bricks supplied by the Manufacturer are not to the approval of the Owner, any dispute regarding colour, size, quality, etc. shall be between the Owner and the Manufacturer and the Contractor will be indemnified by the owner for any costs involved as a result of such dispute.

The quantity of bricks the Builder is to allow shall be calculated at the rate of 52 bricks per square metre of brick wall area.

Where special bricks are selected which result in the quantity used being in excess of the quantity so calculated, the additional cost of material and labour shall be charged to the Owner's account.

If bricks selected have to be hand blended on site, the cost to do this work shall be charged to the Owner's account.

Common Bricks may be used for all other work.

5.03 Mortar and Joining: Mortar shall comply with AS 3700 or Part 3.3.1 BCA 96 Housing Provisions. Joint tolerances shall be in accordance with AS 3700.

Coloured Mortar: Under no condition does the Contractor guarantee, nor does the Contractor accept responsibility for, the shade or the uniformity of colour where used in mortar.

5.04 Engaged Piers: To be as shown on the drawings.



- 5.05 Dampcourse: In concrete slab-on-ground construction a continuous cavity flashing shall be provided to the perimeter of the building, built in and securely fixed to the external wall, carried downward and across under the external leaf of brickwork. Weep holes to be provided at a maximum 1000 mm centres. Where an external cavity wall extends above an internal portion of the building, either a through flashing or a cavity gutter shall be provided immediately above the surface of the lower abutting section to prevent water penetration to lower walls or areas.
- 5.06 Veneer Wall: To be 110 mm brickwork providing a clear cavity of 25 mm from timber frame. Build in 3 mm galvanised veneer ties placed no further apart than 600 mm horizontally and 600 mm vertically. The brick veneer is to be kept 10 mm clear below roof framing and/or eaves lining and 10mm clear of window sills. All mortar joints on inside faces of walls are to be flush with brickwork. All mortar droppings are to be removed from wall ties and cavity before internal linings are fixed.
- 5.07 Arch Bars and Angle Irons: Brickwork over openings is to be supported on primed or galvanised mild steel bars or angles.
- 5.08 Flashing: Build in all flashing under window frames and above openings and meter box where required. Provide all necessary weep holes.
- 5.09 Cleaning: Clean all exposed brickwork with diluted spirits of salt and/or specified approved cleaner, wash down with clean water and leave free from cement and mortar stains.

## 6. STRUCTURAL FRAMING

- 6.01 Timber: Timber framing and flooring sizes shall conform to the Light Timber Framing Code AS1684 or AS7120.1.
- 6.02 Steel: Steel framing shall conform to the Manufacturers recommendations and AS3623.
- 6.03 Roof Framing: Slope of roof is to be as shown on plan. All roof members are to be seated on plates with roof loads transferred to the footings. Provide all rafters, hips, valleys, etc. as appropriate with all sizes and stress grades in accordance with AS1684 for timber and AS3623 for steel.
- 6.04 Flooring: Where shown on working drawings, cover floor joists with platform flooring in accordance with manufacturer's directions.
- 6.05 Floor Sander: Timber sheet flooring, where required is to be machine sanded to an even surface.

## 7. TIMBER FRAMED GROUND FLOORS

- 7.01 Generally: Where timber floors are shown on the drawings, the following clauses shall apply.
- 7.02 Concrete Footings: Provide concrete strip footings in accordance with the requirements of the Building Code of Australia/or the Engineer's details.
- 7.03 Foundation Walls: On concrete footings, build brick foundation walls to thicknesses shown on plans, up to the level of underside of the floor bearers. Build 230 x 110 mm engaged piers to support floor bearers and elsewhere as indicated on plans.
- 7.04 Sleeper Piers: Provide 230 x 230 mm brick sleeper piers built up off 350 x 350 x 150mm concrete pad footing or two courses 350 x 350mm brickwork. If any pier exceeds 1500 mm in height, the additional lower portion of that pier is to be 350 x 350 mm on 470 x 470 x 150 mm concrete pad or two courses 470 x 470 mm brickwork.
- 7.05 Floor Level: To comply with the drawings so as to provide not less than 200 mm from ground surface at any part to the underside of the floor bearers.
- 7.06 Access: Provide access under floors as shown on plan.

- 7.07 **Ventilation:** To foundation walls at a height immediately under bearers, build in 230 x 150 mm vents at 1500 mm centres. Similarly, ventilation is to be provided under verandahs and/or suspended concrete floor slabs and no section of the underfloor area shall be constructed in such a manner that it will hold still pockets of air.
- 7.08 **Dampcourse:** On all brick work and piers, at the level of the underside of floor bearers, provide an approved dampcourse. The dampcourse material is to be in long lengths, lapped 150 mm at joints and full width at intersections.
- 7.09 **Vermin Proofing:** In brick veneer, provide 10 mm mesh galvanised bird-wire built into brickwork taken across cavity and secured to bottom plate.

## 8. JOINER

- 8.01 **Generally:** Joinery material is to be MDF or timber of durable species, seasoned and free of those defects which might affect its appearance and durability. All to be accurately cut and fitted and securely fixed.
- 8.02 **Jamb Linings and Doors:** To all internal door openings provide door jamb linings. Jamb linings with planted on stops may be used. Provide doors as specified. Accurately fit to door jamb linings; hang front, rear and other doors, unless specified elsewhere with two 85 mm steel butt hinges. External doors to be as selected. Furnish with selected lock and furniture. Internal doors to be as selected of suitable width. Furnish with selected latch and furniture. External double doors are to be rebated together and suitably weathered. Provide where shown on plan, sliding door frame(s) complete with fittings and doors of selected width and furnish with selected furniture. Provide aluminium doors and frames, if shown on plan.
- 8.03 **Windows:** Provide windows from approved supplier and install these frames strictly in accordance with the manufacturer's recommendations.
- 8.04 **Architraves:** Provide architraves to all door, window and other openings internally.
- 8.05 **Skirting:** Provide skirting to all rooms except tiled areas.
- 8.06 **Kitchen Cupboards and Vanities:** Provide properly constructed floor and wall cupboards in position and to dimensions indicated on plan. Floor cupboards to have raised floors with tow space under front face. Cover top of floor cupboards with materials as selected. Provide doors as selected. Doors to be accurately fitted and hung and furnished with selected catches and handles.
- 8.07 **Built-In Cupboards:** Frame up and fix cupboard(s) in position and to dimensions shown on plan; provide particle board shelves 10 mm minimum thickness. Provide doors as selected and furnish with selected catches and handles.

## 9. ROOFER

- 9.01 **Tiles:** Cover the roof of the dwelling with first quality roofing tiles as selected. The tiles are to be fixed to approved battens of sizes appropriate to the spacing of rafters/trusses in accordance with manufacturer's recommendations. Cover hips and ridges with capping and all necessary starters and apex caps. Cappings and verge tiles are to be well bedded on lime mortar and neatly pointed with coloured cement mortar.
- 9.02 **Steel Roof Decking:** Where shown on plan, provide and install a steel deck roof together with accessories all in accordance with the manufacturer's instructions.

10. PLUMBER

- 10.01 Eaves Gutter: Provide 110 x 0.6 mm guttering to all eaves. Set in position with sufficient fall to downpipes and secure with brackets, if required, spaced at a maximum 1200 mm.
- 10.02 Downpipes: Provide downpipes as required. Connect each pipe to gutter and roof water drains and secure to walls at a maximum spacing of 2700 mm, minimum of two (2) each downpipe.
- 10.03 Valley Gutters: Selected valley gutters are to be fixed to valley boards with edges beaded, well lapped at joints. (Approved ribbed valleys may be fixed without valley boards.)
- 10.04 Flashing: Flash around chimney stacks, exhaust flues and wherever required with approved material dressed well down onto roof slopes and taken up vertical faces at least 75 mm. Wedge stepped flashing into brickwork with approved material and point with cement mortar.
- 10.05 Sanitary Plumber: Sewered and unsewered areas. Fit bath, basin, kitchen sink, wash tub, pan and floor grate to shower recess, in positions shown on plan. Provide waste pipes with traps to the above fittings and connect to the drainage system. The whole of the work to be performed in accordance with the rules and requirements of the Authority for water and sewerage.
- 10.6 Floor Wastes: Provide overflow outlet in bathroom and separate W.C. floors. Fit grating and wastes.
- 10.7 Water Service: Allow to connect a 19 mm mains cock to the supply main and two (2) metres of 19 mm pipe to the metering position within the property. Provide a stop cock and garden tap. Allow the length scheduled of 19 mm pipe to the house. Branch off with 19 mm pipe to hot water unit and with 12 mm pipe to bath, breaching piece to shower, basins, laundry tub, washing machine and kitchen sink. Properly secure all piping and provide flange at internal wall faces. Terminate over fittings with approved high pressure taps and with high pressure hose cocks to garden points. Provide for fixing cistern and hot water unit. Provide one garden tap on rear wall of house and one at meter position.
- If there is no town water and a tank is required, provide one garden tap only attached to external wall of house.
- Extend from hot water unit with pipe to points over bath, basins, showers, kitchen sink, laundry tub and washing machine. Terminate at these points with taps or cocks as required. Provide inlet stop cock to hot water unit.
11. DRAINER
- 11.01 Sewered Areas: Provide a drainage system from W.C. pan and from wastes of all fittings and connect to the sewer main, all to be in accordance with the rules and requirements of the relevant Authority. Provide at least one gully outside the building.
- 11.02 Septic System: Where applicable, provide and install a septic system to the requirements of the Local Authority and in accordance with the manufacturer's instructions.
- 11.03 Storm Water Drains: Provide 90 mm P.V.C. stormwater drains laid to an even and regular fall so as to have a minimum cover of 150 mm. Drains to discharge into street gutter where possible. Where outlets are shown within the site they are to discharge at least 3000 mm clear of the building into rubble packed sumps. Should on-site storage be required, work to be done in accordance with approved hydraulics detail; such work to be to the Owners Account unless provided for in the Contract Sum.

- 11.04 **Additional Requirements:** Should site conditions make it necessary to supply, in order to satisfy the appropriate Authorities, additional backvents, concrete encasing of drainage lines, sewer boundary walls, cast iron drainage wastes and any other requirements, such items shall be additional to the contract sum. The tender sum does not include excavation in rock or shale or the removal of excess filling resulting in the drainage installation and should such work be required, it shall be additional to the contract sum.

Where a Provisional Allowance is included in the tender for external drainage then the work executed shall be adjusted against the Provisional Allowance included in the contract sum and calculated at the rates scheduled or where no rate is provided, at the Contractor's invoiced cost plus 10% for overheads and supervision and 10% for profit.

## 12. ELECTRICIAN

- 12.01 **General:** 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 the Supply Authority for the connection from supply mains to meter board. Should connection of the mains be underground or special brackets or additional poles be required, the extra cost shall be charged to the Owner's account. Provide for the proper installation and connect scheduled number of light and power points in positions to be indicated. Connect all appliances indicated on plan to local Authority's requirements.

- 12.02 **Meter Box:** Provide box to enclose meters in accordance with the requirements of the Authority concerned.

- 12.03 **Smoke Detectors:** Provide smoke detectors to AS3786 and connect to mains power supply.

## 13. WALL AND FLOOR TILER

- 13.01 **Walls:** Supply and fix ceramic wall tiles to the extent shown on the detail drawings or mentioned in the tender documents.

Tiles are to be fixed with approved adhesive to AS2358, to a backing of approved materials.

- 13.02 **Floors:** Cover the floor surfaces indicated on the plan with selected ceramic floor tiles:-

a) Wet Areas - on a bed of mortar consisting of three (3) parts of sand and one (1) part of cement.

- 13.03 b) Living Areas - fix with an approved adhesive to AS2358.

**General:** SHADE VARIATION IS AN INHERENT FACTOR IN THE MANUFACTURE OF CERAMICS, PARTICULARLY IN DECORATIVE EFFECTS.

All ceramic tiles are subject to crazing. The degree of craze resistance varies from tile to tile, depending on the type of product and the method of fixing. No tiles are guaranteed against crazing. Fully glazed floor tiles with a high gloss finish are very susceptible to scratching during normal building operations; the Contractor does not guarantee that such scratching will not occur nor will the Contractor be responsible for any rectification thereof.

- 13.04 **Waterproofing Wet Areas:** Use a proprietary system which is approved for use in wet areas, shower recess bases, associated floors and wall/floor junctions which are to be tiled.

## 14.01 INTERNAL WALL LININGS

**General:** Line all walls, except to wet areas, with Gypsum plaster board. To wet areas approved water repellent sheets shall be used. Fit approved water proofing angle to internal corners of shower recesses.

14.02 Gypsum Plaster Board: Fix horizontally with full length sheets, end joints to be staggered, to ceiling heights. Sheets are to have recessed edges and be minimum 10 mm thick when fixed to studs spaced at up to 600 mm centres. Fixing is to be with galvanised clouts and/or approved adhesive and to be strictly in accordance with the Manufacturer's recommendations and AS2589. Internal and external angles from floor to ceiling to be set.

14.03 Ceiling Fixer: Provide Gypsum plaster board to all ceilings. Sheets to have recessed edges and to be a minimum of 10 mm thick in accordance with AS2588-1983. Fixing is to be with galvanised clouts and/or approved adhesive and be strictly in accordance with the Manufacturer's recommendations and AS2589.

14.04 Cornice: Set corners or provide 90 mm cove cornices to ceilings as required, properly fixed and set at all angles. Cornices to be in full wall lengths where practicable.

## 15. GLAZIER

15.01 General: All glass to be in accordance with AS1288 and installed in a tradesmanlike manner. Clean all glass on completion of work.

## 16. PAINTER

16.01 Generally all paint used shall be of a quality suitable for the purpose intended and the application shall be as per the manufacturer's recommendations. The colours used shall be as per Colour Schedule. All surfaces to be painted shall be properly prepared to manufacturer's recommendations.

## 17. COMPLETION

17.01 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. Gutter and drains to be cleared and the building generally to be left clean and fit for occupation.

## 18. PRIME COST AND PROVISIONAL ITEMS

18.01 PC Items: Unless stated otherwise in the Tender, the Builder shall supply and fix all PC Items shown on working drawings and/or detailed in Tender at no adjustment to the Owner.

### 18.02 Provisional Allowances

(i) Included in the Contract Tender Sum there may be PROVISIONAL ALLOWANCES for works detailed in the Tender letter.

(ii) In addition, and unless otherwise stated in the Contract Tender letter, the following PROVISIONAL ALLOWANCES are also included in the Contract Tender Sum:

1. Wall and floor tile allowance: (per square metre)	Lifestyle Specification	\$27.50
	Headstart Specification	\$19.50
2. Face brick allowance: (per 1,000 face bricks delivered to site)		\$330.00
3. Engineer's supervision and provision of Certificates		\$300.00
4. Surveyor's cost for set out, check and Final Survey and Certificates		\$475.00

18.03 Schedule of Rates: Unless specified otherwise in the Contract Tender letter, the following schedule of rates shall apply to items of work which are not specifically included in the Contract Tender letter:-

(i) Water Service - If the following work is required and such work is not specifically included in the tender letter, then such work shall be charged at the following rates:

- |   |          |
|---|----------|
| 1. Extend water service across road                                     | \$319.00 |
| 2. Road boring (only chargeable if developers conduit is not available) | \$297.00 |
| 3. Minimum charge for compressor if rock is encountered in 1. or 2.     | \$550.00 |
| 4. Additional 19mm water service (per metre)                            | \$22.00  |

(ii) Road Excavation - Excavation of rock or shale, if encountered, shall be charged at invoiced cost of labour and hire of compressor and/or other plant or equipment plus 10% for overheads and supervision and 10% profit. The minimum charge for rock excavation shall be:

\$550.00

(iii) Piering - If not included in Contract Tender Letter as a Fixed Price Item, if required by Structural Engineer, Principal Certifying Authority or Lending Authority, shall be additional to the Contract Sum, and charged at invoiced cost of labour, material, hire of boring machine, and/or other plant or equipment, plus 10% for overhead and supervision and 10% for profit and the cost of this work to be adjusted against the Provisional Allowance, if any, included in the Tender Sum.

(iv) Occupation Certificate - Provision of Occupation Certificate issued under the Environmental Planning and Assessment Act 1979 under section 109C (i) and 109H if required by Owner or Lending Authority.

\$150.00

18.04 G.S.T.: The above prices include G.S.T.

18.05 Exclusions: Unless specifically mentioned in the Contract Tender Letter, the following items are not included in the Contract Tender Sum.

1. Car Tracks; Paths
2. Fences
3. Landscaping; Watering Systems
4. Removal of spoil from the site
5. Floor Coverings; Ceramic Tiles to Living Areas and Front Porch/Verandah
6. Burglar Alarms; C-Bus Minder System
7. Light Fittings; Curtains; Decorator Items
8. Pergolas; Courtyards, Barbeques
9. Dishwasher
10. Air Conditioning
11. Insulation - wall and ceilings





**Jack Hodgson Consultants Pty Limited**

CONSULTING CIVIL, GEOTECHNICAL AND STRUCTURAL ENGINEERS

ABN: 94 053 405 011

# **RISK ANALYSIS AND MANAGEMENT FOR PROPOSED REPLACEMENT HOUSE AT 83 PRINCE ALFRED PARADE, NEWPORT**



DIRECTOR: J.D. HODGSON, M. Eng. Sc., F.I. E. Aust., Nper3 Struc. Civil 149788

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**GEOTECHNICAL RISK MANAGEMENT POLICY FOR PITTWATER**  
**FORM NO. 1 – To be submitted with Development Application**

Development Application for <u>GAY NICHOLLS</u> Name of Applicant
Address of site <u>83 PRINCE ALFRED PARADE, NEWPORT</u>

*Declaration made by geotechnical engineer or engineering geologist or coastal engineer (where applicable) as part of a geotechnical report*

J Hodgson  
(insert name)

on behalf of

Jack Hodgson Consultants Pty Ltd  
(Trading or Company Name)

on this the 29/6/07 certify that I am a geotechnical engineer or engineering geologist or coastal engineer as defined by the Geotechnical Risk Management Policy for Pittwater and I am authorised by the above organisation/company to issue this document and to certify that the organisation/company has a current professional indemnity policy of at least \$2million. I have

Please mark appropriate box

- ☐ Prepared the detailed Geotechnical Report referenced below in accordance with the Australia Geomechanics Society's Geotechnical Risk Management Guidelines and the Pittwater Council Policy
- ☒ Am willing to technically verify that the detailed Geotechnical Report referenced below has been prepared in accordance with the Australian Geomechanics Society's Geotechnical Risk Management Guidelines and the Pittwater Council Policy
- ☐ Have examined the site and the proposed development alteration in detail and am of the opinion that the Development Application only involves Minor Development Alterations that do not require a Detailed Geotechnical Risk Assessment and hence my report is in accordance with the Policy requirements for Minor Development Alterations
- ☐ Provided the coastal process and coastal forces analysis for inclusion in the geotechnical report

**Geotechnical Report Details:**

Report Title: **RISK ANALYSIS & MANAGEMENT FOR PROPOSED REPLACEMENT HOUSE AT 83 PRINCE ALFRED PARADE NEWPORT**

Report Date: **26/6/07**

Author: **BEN WHITE**

Documentation which relate to or are relied upon in report preparation:

I am aware that the above geotechnical report, prepared for the abovementioned site is to be submitted in support of a Development Application for this site and will be relied on by Pittwater Council as the basis for ensuring that the geotechnical risk management aspects of the proposed development have been adequately addressed to achieve an "Acceptable Risk Management" level for the life of the structure (taken as at least 100 years unless otherwise stated and justified in the Report) and that reasonable and practical measures have been identified to remove foreseeable risk.

Signature

Name **Jack Hodgson**

Chartered Professional Status **MEngSc FIEAust**

Membership No. **149 788**





**GEOTECHNICAL RISK MANAGEMENT POLICY FOR PITTWATER**  
**FORM NO. 1(a) - Checklist Of Requirements For Geotechnical Risk Management Report for**  
**Development Application or Part V assessment**

Development Application for GAY NICHOLLS Name of Applicant  
 Address of site 83 PRINCE ALFRED PARADE, NEWPORT

*The following checklist covers the minimum requirements to be addressed in a Geotechnical Risk Management Geotechnical Report. This checklist is to accompany the Geotechnical Report and its certification. Form No. 1(a)*

Geotechnical Report Details

Report Title RISK ANALYSIS & MANAGEMENT FOR PROPOSED REPLACEMENT HOUSE AT 83 PRINCE ALFRED PARADE, NEWPORT  
 Report Date 26/6/07  
 Author BEN WHITE

Please mark appropriate box

- ☒ Comprehensive site mapping conducted 26/6/07  
 (date)
- ☒ Mapping details presented on contoured site plan with geomorphic mapping to a minimum scale of 1:200 (as appropriate)
- ☒ Subsurface investigation required
  - ☐ No Justification .....
  - ☒ Yes Date conducted 26/6/07
- ☒ Geotechnical model developed and reported as an inferred subsurface type-section
- ☒ Geotechnical hazards identified
  - ☐ Above the site
  - ☒ On the site
  - ☐ Below the site
  - ☐ Beside the site
- ☒ Geotechnical hazards described and reported
- ☒ Risk assessment conducted in accordance with Council's Policy
  - ☒ Consequence analysis
  - ☒ Frequency analysis
- ☒ Risk calculation
- ☒ Risk assessment for property conducted in accordance with Council's Policy
- ☒ Risk assessment for loss of life conducted in accordance with Council's Policy
- ☒ Assessed risks have been compared to "Acceptable Risk Management" criteria as defined in the Geotechnical Risk Management Policy for Pittwater
- ☒ Opinion has been provided that the design can achieve the "Acceptable Risk Management" criteria provided that the specified conditions are achieved.
- ☒ Design Life Adopted:
  - ☒ 100 years
  - ☐ Other ..... specify
- ☒ Development Conditions to be applied to all four phases as described in Pittwater
- ☒ Geotechnical Risk Management Policy have been specified
- ☒ Additional action to remove risk where reasonable and practical have been identified and included in the report

I am aware that Pittwater Council will rely on the Geotechnical Report, to which this checklist applies, as the basis for ensuring that the geotechnical risk management aspects of the proposal have been adequately addressed to achieve an "Acceptable Risk Management" level for the life of the structure, taken as at least 100 years unless otherwise stated, and justified in the Report and that reasonable and practical measures have been identified to remove foreseeable risk.

Signature J. Hodgson  
 Name Jack Hodgson  
 Chartered Professional Status MEngSc FIEAust  
 Membership No. 149 788





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26<sup>th</sup> June, 2007.  
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**RISK ANALYSIS & MANAGEMENT  
FOR  
PROPOSED REPLACEMENT HOUSE  
AT  
83 PRINCE ALFRED PARADE, NEWPORT**

**1. INTRODUCTION.**

1.1 This assessment has been prepared to accompany an application for development approval. The requirements of the Interim Geotechnical Risk Management Policy for Pittwater, June 2003 have been met.

1.2 The definitions used in this Report are those used in the Interim Geotechnical Risk Management Policy for Pittwater, June 2003.

1.3 The methods used in this Assessment are based on those described in Landslide Risk Management Concepts and Guidelines, March 2000, published by the Sub-Committee on Landslide Risk Management of the Australian Geomechanics Society and as modified by the Interim Geotechnical Risk Management Policy for Pittwater, June 2003.

1.4 The experience of Jack Hodgson spans some 50 years in many areas of Australia and in the Pittwater area, particularly in the last 30 years as Principal of Jack Hodgson Consultants Pty Limited.

**2. PROPOSED DEVELOPMENT.**

2.1 Demolish the existing house.

2.2 Construct a new house.

2.3 Construct a garage.

2.4 Details of the proposed house are shown on 5 drawings prepared by Huxley Homes numbered 23225 Issue B and with no date. Details of the proposed garage are shown on 6 drawings prepared by Barry T. Syme & Associates numbered E-01 to 06 and dated 28/5/07.





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### 3. DESCRIPTION OF SITE & SURROUNDING AREA.

3.1 The site was inspected on the 26<sup>th</sup> June 2007.

3.2 This property is located on the high side of the road and has a northerly aspect (Photo 1). A concrete driveway enters the centre of the frontage and runs up a stable cut batter for the road. Above the road batter the land surface slopes up to the house at angles of some 10 degrees and the driveway continues to a carport under the eastern end of the house (Photo 2). The house is partly located on a platform excavated out of the natural slope. The cut batters are accessed via the carport and are supported by an old brick retaining wall in poor condition at the northern side of the access door (Photo 3) and a newer well constructed concrete block wall at the southern side (Photo 4). The lower level is to the west of the carport. The main level of the house is supported on brick walls, brick piers and steel columns. A path runs across the rear of the house and the main floor level is some 0.3 metres above this path (Photo 5). The rear of the block continues to slope up to the rear boundary. The land surface of the block is grass covered and there are a number of small to medium trees scattered over the site (Photo 6).

3.3 Minor cracking was noted on the garage interior at the southern end of the eastern wall (Photo 7). Wider cracking was evident through the render on the eastern wall in the centre of the wall and at the southern end (Photo 8). Our records indicate the minor cracking resulted from a leaking down pipe and the wider cracking was due to the action of tree roots. The two offending trees were removed at least 10 years ago. No evidence of ground movement that could be related to landslides was present on the site.

3.4 The adjoining properties to the east and west do not present a risk of instability to the subject property. The property above to the south has been observed and appears stable.

### 4. GEOLOGY OF THE SITE.

4.1 The site is underlain by massively bedded, widely jointed sandstones, of the Upper Narrabeen Group which outcrop on the site. The Narrabeen Group Rocks are Late Permian to Middle Triassic in age with the early rocks not outcropping in the area under discussion. The materials from which the rocks were formed consist of gravels, coarse to fine sands, silts and clays. They were deposited in a riverine type environment with larger floods causing fans of finer materials. The direction of deposition changed during the period of formation. The lower beds are very variable with the variations decreasing as the junction with the Hawkesbury Sandstones is approached. This is marked by the highest of persistent shale beds over thicker sandstone beds which are similar in composition to the Hawkesbury Sandstones.



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4.2 The slope materials are colluvial at the surface and residual at depth. They consist of sandy loam topsoil over sandy clays and clays with rock fragments and some floaters through out the profile. The sandy clays and clays merge into the weathered zone of the under lying rocks at depths expected to be in the range from 0.6 to 3 metres.

### 5. SUBSURFACE INVESTIGATION.

One auger hole was put down in the approximate location shown on the Site Plan. The log of this hole is as follows: -

#### AUGER HOLE 1.

0.0 to 0.2 Black sandy organic topsoil  
0.2 to 0.4 Brown medium strength clays  
0.4 to 0.8 Yellow to mottled orange firm to Stiff Sandy Clay  
End of hole in stiff clays @ 0.8 metres.

### 6. DRAINAGE OF THE SITE.

#### 6.1 ON THE SITE.

The site has adequate drainage with no natural water courses.

#### 6.2 SURROUNDING AREA.

No natural water courses enter the site from the adjoining properties. Some sheet wash will enter the site from above during heavy downfalls.

### 7. GEOTECHNICAL HAZARDS.

#### 7.1 ABOVE THE SITE.

No geotechnical hazards likely to adversely affect the subject property were observed above the site.

#### 7.2 ON THE SITE.

7.2.1 The cut batters for the garage are a potential hazard before permanent support is in place (HAZARD ONE).

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### 7.3 BELOW THE SITE.

No geotechnical hazards likely to adversely affect the subject property were observed below the site.

### 7.4 BESIDE THE SITE.

No geotechnical hazards likely to adversely affect the subject property were observed beside the site.

## 8. RISK ASSESSMENT.

### 8.1 ABOVE THE SITE.

No geotechnical hazards likely to adversely affect the subject property were observed above the site.

### 8.2 ON THE SITE.

**8.2.1** The cut batters for the proposed garage will reach depths up to some 3.5 metres. Provided the recommendations in 10.2.2 & 10.7.4 are followed the likelihood of the cuts failing before permanent support is in place is assessed as 'Unlikely' ( $>10^{-4}$ ). The consequences to property of such a failure is assessed as 'Minor' ( $>0.1\%$ ). The consequences to life of such a failure are assessed as 'Medium' ( $<10^{-3}$ ). The risk to property is 'Low' ( $10^{-7}$ ). The risk to life is 'Low' ( $10^{-6}$ ).

### 8.3 BELOW THE SITE.

As no geotechnical hazards likely to adversely affect the subject site were observed below the site, no risk analysis is required.

### 8.4 BESIDE THE SITE.

As no geotechnical hazards likely to adversely affect the subject site were observed beside the site, no risk analysis is required.

## 9. SUITABILITY OF DEVELOPMENT FOR SITE.

### 9.1 GENERAL COMMENTS.

The proposed development is suitable for the site.

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### 9.2 GEOTECHNICAL COMMENTS.

The completion of the proposed development will create no geotechnical hazards.

### 9.3 CONCLUSIONS.

The site and the proposed development can achieve the Acceptable Risk Management criteria outlined in the Pittwater Interim Geotechnical Risk Policy provided the recommendations given in **Section 10** are undertaken.

## 10. RISK MANAGEMENT.

### 10.1. TYPE OF STRUCTURE.

The proposed development is structurally suitable.

### 10.2. EXCAVATIONS.

**10.2.1** An excavation to some 3.5 metres will be required to fit the garage. The material expected to be encountered in this cut can stand unsupported for short periods before permanent support is in place.

**10.2.2** Permanent support is to be installed as soon as possible after the excavation is complete. The cut batters are to be covered to prevent loss of moisture in dry weather and to prevent access of moisture in wet weather. Upslope runoff must be diverted from the cut faces by sandbag mounds or similar diversion works. Temporary support may be necessary depending upon the material encountered in the cuts, the likelihood of heavy rain and the length of period before permanent support is installed. The design Coefficient of Lateral Pressure is 0.6.

**10.2.3** It appears cut batter for the platform to fit the lower level of the new house is the same as that of the old house. If this is the case the existing retaining wall is to be removed and replaced with a wall designed to current engineering standards. On removal of the old wall see **10.2.2**. If the cut is in a different location the material expected in the cut will stand unsupported before permanent support is in place. See **10.2.2**.





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### 10.3. FILLS.

10.3.1 Filling may be required for levelling on the lower side of the house. All fills are to be placed in layers not more than 250 mm thick and compacted to not less than 95% of Standard Optimum Dry Density at plus or minus 2% of Standard Optimum Moisture Content.

10.3.2 The fill batters are to be at 1 Vertical to 1.7 Horizontal or supported by properly designed and constructed retaining walls.

10.3.3 Any retaining walls that are not free draining are to be back filled with non cohesive free draining material to provide a drainage layer immediately behind the wall. The free draining material is to be separated from the ground materials by geotextile fabric.

### 10.4. FOUNDATION MATERIALS AND FOOTINGS.

10.4.1 We recommend the house be supported on the firm to stiff clays of the natural profile. The design ultimate bearing pressures are 300kPa.

10.4.2 The material at the base of the garage excavation is a suitable footing material for the garage.

### 10.5. STORM WATER DRAINAGE.

10.5.1 All stormwater run off from the proposed development is to be collected and stored for domestic use and/or piped to the stormwater easement to the storm water system for the street through any Onsite Detention that may be required by council.

10.5.2 Sheet wash will move down the slope above the house during heavy down pours. This is to be collected on the uphill side of the proposed house and piped to the stormwater system for the house.

### 10.6. SUBSURFACE DRAINAGE.

Retaining walls are to have subsurface drains fitted with standpipes to permit flushing of system. Subsurface drains are to be connected to the stormwater system for the house.



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### 10.7. INSPECTIONS.

10.7.1 It is recommended that the foundation materials of all footing excavations be inspected and approved before concrete is placed.

10.7.2 It is recommended that all subsurface drains be inspected and approved before backfilling is completed.

10.7.3 It is recommended all backfill be inspected and approved before backfilling is complete.

10.7.4 It is recommended during the process of excavation the garage cut be inspected to confirm the subsurface materials are those expected and temporary support is not required.

### 10.8 MAINTENANCE.

10.8.1 The property is to be maintained in good order and in accordance with the guidelines set out in CSIRO BTF 18 "Foundation Maintenance and Footing Performance: A Homeowner's Guide" and the Australian Geomechanics Article "Landslide Risk Management Concepts and Guidelines" May 2002.

10.8.2 All standpipes are to be flushed out at intervals not exceeding 10 years.

## 11. GEOTECHNICAL CONDITIONS FOR ISSUE OF CONSTRUCTION CERTIFICATE.

It is recommended that the following geotechnical conditions be applied to the Development Approval:-

The work is to be carried out in accordance with the Risk Management Report VS 24552 dated 26<sup>th</sup> June 2007.

The Geotechnical Engineer is to inspect and approve the foundation materials of all footing excavations before concrete is placed.

The Geotechnical Engineer is to inspect and approve all subsurface drains before backfilling is completed.

The Geotechnical Engineer is to inspect and approve all backfill before backfilling is complete.

The Geotechnical Engineer is to inspect the cut during the excavation process be to confirm the subsurface materials are those expected and temporary support is not required.

DIRECTOR J.D. HODGSON, M Eng Sc., F.I.E. Aust., Nper3 Struc. Civil 149188  
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PO Box 589 Murrumbidgee NSW 2100  
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Jack Hodgson Consultants Pty Limited

CONSULTING CIVIL, GEOTECHNICAL AND STRUCTURAL ENGINEERS

ABN: 94 053 405 011

VR 24552.

26<sup>th</sup> June, 2007.

Page 8.

12. GEOTECHNICAL CONDITIONS FOR ISSUE OF OCCUPATION CERTIFICATE.

The Geotechnical Engineer is to certify the following geotechnical aspects of the development:-

The work has been carried out in accordance with the Risk Management Report VS 24552 dated 26<sup>th</sup> June 2007.

The foundation materials of all footing excavations were inspected and approved before concrete was placed.

All subsurface drains were inspected and approved before backfilling was completed.

All backfill was inspected and approved before backfilling was completed.

The cut was inspected during the excavation process to confirm the subsurface materials were those expected and it was determined whether temporary support was required.

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## Jack Hodgson Consultants Pty Limited

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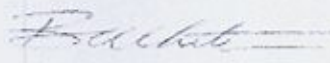
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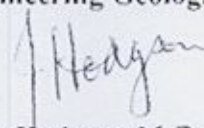
VR 24552.  
26<sup>th</sup> June, 2007.  
Page 9.

### 13. RISK ANALYSIS SUMMARY.

HAZARDS	Hazard One
TYPE	The cut batters for the garage failing before permanent support is in place.
LIKELIHOOD	'Unlikely' ( $>10^{-4}$ )
CONSEQUENCES TO PROPERTY	'Minor' ( $>0.1\%$ )
CONSEQUENCES TO LIFE	'Medium' ( $>10^{-3}$ )
RISK TO PROPERTY	'Low' ( $10^{-4}$ )
RISK TO LIFE	'Low' ( $10^{-6}$ )
COMMENTS	'Acceptable provided the recommendations in 10.2.2 & 10.7.4 are followed.'

JACK HODGSON CONSULTANTS PTY. LIMITED.

  
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AusIMM., CP GEOL.  
No. 222757  
Engineering Geologist.

  
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26<sup>th</sup> June, 2007.  
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Photo 1



Photo 2

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26<sup>th</sup> June, 2007.  
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Photo 3

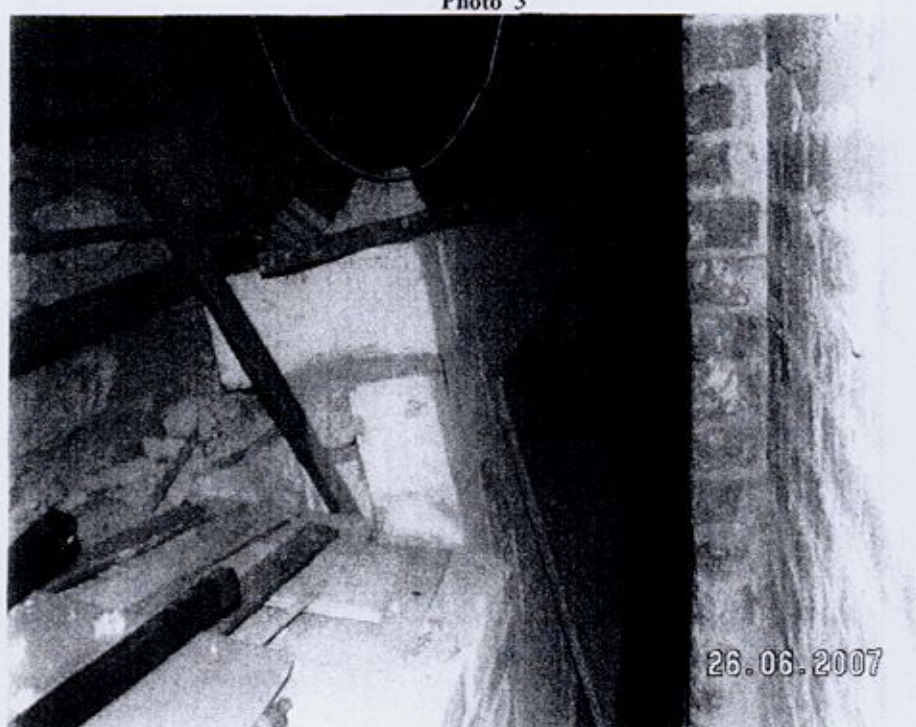


Photo 4



VR 24552.  
26<sup>th</sup> June, 2007.  
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Photo 5



Photo 6



VR 24552.  
26<sup>th</sup> June, 2007.  
Page 13.

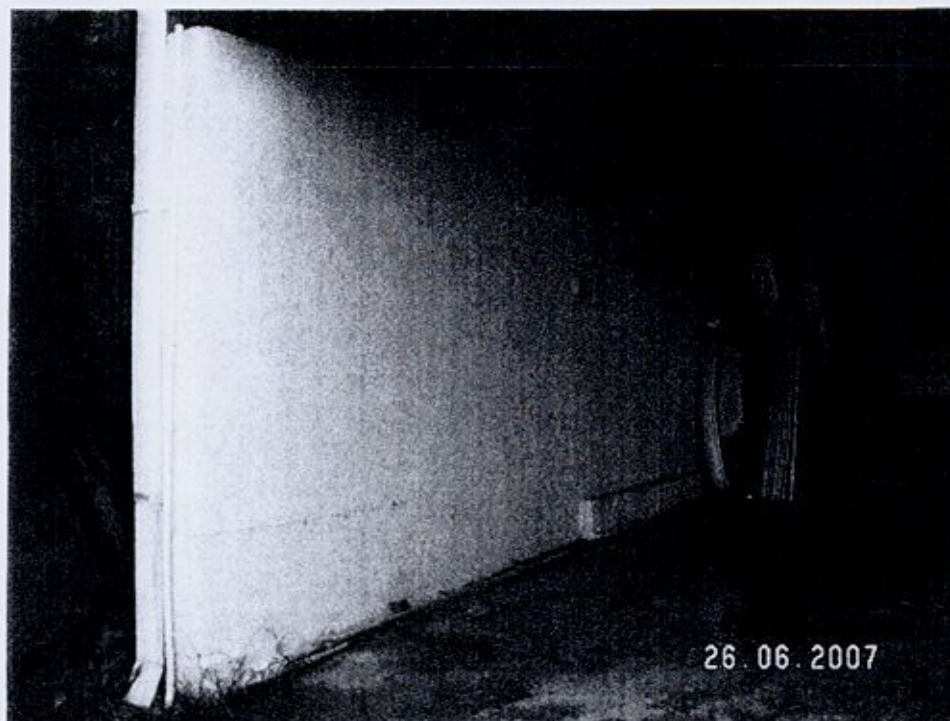


Photo 7

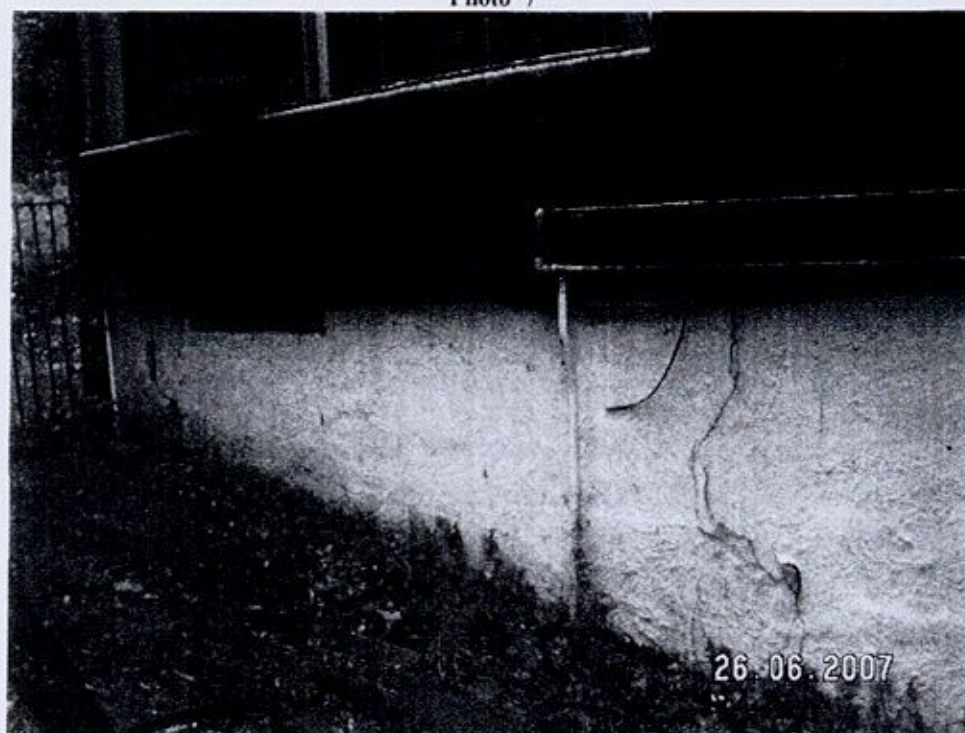


Photo 8



# **“GROWING MY WAY”**

## **TREE SERVICES**

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## **TREE MANAGEMENT REPORT**

**June 2007**

**Site:** Lot 108 in DP 13457  
83 Prince Alfred Parade  
Newport NSW

**Client:** Gay Nicholls  
14 Bray Street  
North Sydney NSW 2060  
Ph: 04712 335 052

**Commissioned:** Gay Nicholls

**Author:** Kyle A Hill  
Practising & Consulting Arborist  
Certificate of Horticulture, TAFE (1983)  
Certificate Advanced Tree Care TAFE (1994)  
Founder -Growing My Way Tree Services (1977)  
Member of International Society of Arboriculture  
National Arborists Association (USA)  
National Arborists Association of Australia



## 1 Summary

Gay Nicholls requested a Tree Management Report relating to seven (7) individual tree specimens all within the subject site. This document has been commissioned as a requirement by Pittwater Council to accompany the submission of all Development Applications. Two (2) DA's are to be submitted for the redevelopment of the subject site. One (1) is for the demolition & of the existing dwelling & construction of a new dwelling. The second DA (2<sup>nd</sup>) is the construction of a double garage at /near street level.

Kyle Hill, qualified Consulting Arborist, author, has prepared this report based on visual assessment undertaken on May 15 2006 & June 12 2007.

The report discusses the current condition of the seven (7) subject tree specimens identified & located by;

- Site Survey, author unknown;
- Architectural Plans, Elevations & Sections by Huxley Homes, dated 19/04/2007 & 10/05/2007;
- Observations & relevant data gathering on site by Kyle Hill

The aim of this report is to confirm the viability of the trees, relating to present & likely future health, vigour, condition etc. taking into consideration the potential impacts of the DA for the proposed alterations/additions.

This report will support the DA proposals in their present form. The removal & replacement of three (3) discussed tree specimens as a consequence of the proposals to be submitted is supported provided all recommendations are implemented.



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## 2 Introduction

This report contains observations & recommendations intended to assist in the management of the seven (7) tree specimens identified & discussed as being impacted or potentially impacted upon by the DA proposals (x2) within the subject property 83 Prince Alfred Parade. The DA proposals to be submitted do not impact upon any tree specimen within other private properties.

Pittwater Council is the sole consent authority. The planning instruments are Pittwater DCP 22 & the Pittwater LEP.

Kyle Hill, qualified Practicing & Consulting Arborist, author, has prepared this report based on visual assessment on May 15 2006 & June 12 2007.

The report discusses the current condition of all trees/groups of trees identified by;

- Site Survey, author unknown;
- Architectural Plans, Elevations & Sections by Huxley Homes, dated 19/04/2007 & 10/05/2007;
- Observations & relevant data gathering on site by Kyle Hill.

No trees other than that identified by the above methods have been discussed.

## 3 Methodology

Assessment of the tree has been from ground level by eye, using visual tree assessment (VTA) techniques developed by Claus Mattheck, in *The Body Language of Trees* (1994).

Assessment includes:

- Tree's current condition & likely future health.
- Species tolerance to root disturbance and/or development.
- Likely future hazard potential to persons & property.
- Tree's amenity value, such as significance, screening & habitat.

No root analysis, soil testing, 'Resistograph'<sup>®</sup> drilling or aerial canopy inspection was undertaken. See the following Appendices for further information:

- Appendix A            Glossary of common Arboreal terms.
- Appendix B            Tree Protection & Management.
- Appendix C            Survey & Site Plans, Elevations & Sections.



## 4 Observations

### 4.1 The Site

The subject site is approximately 521.60 square metres. The site is zoned 2(a) Residential A. Existing on the site is a single dwelling residence. Single dwelling residences surround the subject site on three (3) sides. Along the southern boundary is a public pathway.



Most existing tree specimens within the subject site are under the protection of the Pittwater Council "Tree Preservation Order" (TPO), the *Corymbia maculata* tree specimens are additionally protected by the "Threatened Species Conservation Act of 1997" as part of the Pittwater Spotted Gum Forest – an Endangered Ecological Community.

The existing & proposed dwelling location is the flattest portion of the subject site. The site slopes very steeply from the 25.00m contour line to the 19.00m contour line at the edge of Prince Alfred Parade. The existing driveway is to be demolished.

### 4.2 The Proposal

The proposal for re-development will be subject to the submission of two (2) DA's. One (1) DA for the demolition of the existing dwelling with a new dwelling as its replacement & a second (2<sup>nd</sup>) DA for the construction of a double garage located at/near street level in the northeast corner of the subject site. The existing driveway is to be demolished as it does not comply with gradient requirements & to upgrade it to comply would result in the net loss of most if not all *Corymbia maculata* & the *Eucalyptus punctata* which presently exist as a most significant group of established tree specimens.

Three (3) TPO protected tree specimens are required to be removed as a consequence of the proposed development. Tree 1 is a *Corymbia maculata*.



Pittwater Council policy when approval is granted for the removal of a *Corymbia maculata* is that it must be replaced with three (3) new same species specimens.

### 4.3 The Trees

#### Tree Summary Table:

#	ID	Height	Crown Spread	Ø (DBH)	CRZ	Age	Hth & Vig
1.	<i>Corymbia maculata</i>	15.0-15.5m	6.0-6.5m	0.54m	3.0m	Over mature	Fair-Good Fair-Good

Comments 2 x stems (@ 2.7m) display "wings", reaction wood likely to indicate an internal fracture/inclusion, CFDP > 70%

2.	<i>Corymbia maculata</i>	19.5-20.0m	3.0-3.5m	0.48m	2.5m	Over mature	Fair & Fair
----	--------------------------	------------	----------	-------	------	-------------	-------------

Comments Crown consists largely of epicormic shoots, Longicorn beetle larval wounding at multiple sites, CFDP <60%

3.	<i>Corymbia maculata</i>	15.5-16.0m	5.0-5.5m	0.31m	2.0m	Over mature	Good & Good
----	--------------------------	------------	----------	-------	------	-------------	-------------

Comments No faults noted, CFDP >90%

4.	<i>Eucalyptus punctata</i>	12.0-12.5m	6.0-6.5m	0.35m	2.0m	Over mature	Fair & Fair
----	----------------------------	------------	----------	-------	------	-------------	-------------

Comments Specimen is suppressed by Trees # 3 & #5, CFDP >70%

5.	<i>Corymbia maculata</i>	16.5-17.0m	6.5-7.0m	0.50m	2.5m	Over mature	Fair & Fair
----	--------------------------	------------	----------	-------	------	-------------	-------------

**Comments** Top has failed & been removed, Significant volume of medium Ø deadwood, CFDP <60%

6.	<i>Melaleuca quinquenervia</i>	12.5-13.0m	4.0-4.5m	0.36m	2.0m	Mature	Good & Good
----	--------------------------------	------------	----------	-------	------	--------	-------------

**Comments** Stem inclusions noted (@4.5m), CFDP = 100%

7.	<i>Callistemon salignus</i>	5.5-6.0m	4.0-4.5m	0.28m	1.5m	Mature	Fair & Fair
----	-----------------------------	----------	----------	-------	------	--------	-------------

**Comments** Tree has been previously topped & is suppressed by low light access, CFDP <70%

## 5 Discussion

Three (3) TPO protected tree specimens require removal & replacement as a consequence of the proposals to be lodged. Two (2) tree specimens not subject to the Pittwater Council "Tree Preservation Order" located on the eastern side of the existing residence are also proposed to be removed as they are undesirable species. The DA for the new residence requires **Trees 6 & 7** to be removed & replaced. Both are located adjacent to the common boundary with 81 Prince Alfred Parade. As can be seen from the detail in the "Trees Summary Table" **Tree 6** is in good health & vigour but **Tree 7** is in an advanced state of decline & has been classed as being in very poor health & vigour. As briefed by my client the owner of 81 Prince Alfred Parade has no objections related to these two tree specimens being removed & replaced. The second (2<sup>nd</sup>) DA (for the construction of the double garage) requires the removal & replacement of **Tree 1**. As previously alluded to this tree specimen by virtue of being a *Corymbia maculata* if approved for removal would require three (3) replacement specimens of the same species being planted within the subject site.

As can be seen from individual tree descriptions some of the retained *Corymbia maculata* tree specimens have significant defects or faults. **Tree 1** is noted to have twin stems with obvious "wings or ears" at the point of attachment to the trunk base. This is often an indication of an internal fracture having occurred with the tree responding by the creation of the "wings or ears" as compensation for compromised internal structural strength.



Tree 2 described as being only in fair health & vigour is located approximately 2.10m from the required excavation. This is marginally inside the specified minimal CRZ distance (2.50m) that the tree specimen would likely tolerate. The excavation required being slightly downhill of the tree specimen is likely to reduce any potentially adverse impacts. Excavation within the specified 2.50m CRZ minimal distance must be undertaken manually at least for the first metres depth, (1.00m). Any root that may be exposed greater than 0.05m (50mm) diameter is to be deemed as significant & must not be damaged or severed without the specific written authority of a suitably experienced & qualified consulting arborist. Certification (written & including photographs) of damage having been avoided is specified to be completed by a suitably experienced & qualified consulting arborist.

The demolition of the existing concrete driveway must be done with great care & finesse so as not to damage not only trunk tissue (bark) but more importantly significant diameter roots likely to be exposed when the concrete is removed. Again it is specified this operation must be certified (written & including photographs) of damage having been avoided is by a suitably experienced & qualified consulting arborist.

All retained tree specimens require some pruning (primarily removal of dead & dying branches) to reduce their potential to cause physical damage to persons & or property. The specifications required for the pruning to be completed can be prepared immediately upon DA approval. Pruning specifications will be in accordance with the *Australian Standard (AS4373.2007) for the Pruning of Amenity Trees*. Contractors chosen for the specified tree specimen removal & pruning must abide by the *WorkCover NSW Industry "Code of Practice" for Tree Workers*.

No excavated material of any form (top soil, subsoil etc) is to be incorporated within the specified PRZ (10 x DBH) for any retained tree specimen.

All retained tree specimens are long term established & in varying states of decline. As such the planting of an additional three (3) *Corymbia maculata* will act as long term insurance for the preservation of this tree species.

All retained tree specimens will require "Tree Protection", known as a *Tree Protection Zone (TPZ)*. Standard TPZ "Tree Protection" is best implemented preferably as group protection rather than as individual specimen protection. See **Appendix B** specifications for this site. Again Pittwater Council will require certification of TPZ as having been satisfactorily implemented.

New tree specimens are to be sourced from suppliers/growers that have stock produced to the **NATSPEC specifications** contained within the *Clark, Ross publications named in the Section, Recommended References*.



## 6 Recommendations

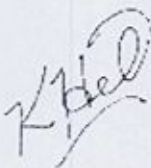
- Seek approval for both DA's
- Remove Trees 1, 6 & 7
- Prune retained tree specimens
- Any excavation within the specified CRZ of any retained tree specimen must be undertaken manually
- Excavation must be certified as not having damaged or severed roots of a significant diameter.
- TPZ required is standard as per Appendix B specifications
- TPZ is to be implemented as group isolation rather than individual tree specimen isolation
- Location of TPZ is not to be closer than specified distances CRZ from the tree trunk base centre.
- TPZ must be certified as satisfactory.

### General,

- All new tree specimens as part of the Landscape Concept Plan are to be sourced from growers/suppliers whose stock is produced to the standards specified & installed as per recommendations contained within the Ross Clark publications in Section 9 of this document.
- Photographic documentation of all tree specimens retained is recommended before commencement of construction works, at three (3) month intervals during construction, at the completion of construction as well as six (6) monthly intervals for a minimal period of twelve (12) months post construction.

If you have any questions relating to this report or implementation of recommendations, please contact Kyle Hill on 0412-221-962.

Yours faithfully,



Kyle A Hill (Practicing & Consulting Arborist)



## 7 Limitations on the use of this report

This report is to be utilised in its entirety only. Any written or verbal submission, report or presentation that includes statements taken from the findings, discussions, conclusions or recommendations made in this report, may only be used where the whole of the original report (or a copy) is referenced in, & directly attached to that submission, report or presentation.

## 8 Assumptions

Care has been taken to obtain information from reliable resources. All data has been verified insofar as possible; however, Growing My Way Tree Services, can neither guarantee nor be responsible for the accuracy of information provided by others.

### Unless stated otherwise:

Information contained in this report covers only the trees that were examined & reflects the condition of the trees at the time of inspection; and

The inspection was limited to visual examination of the subject trees without dissection, excavation, probing or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the subject trees may not arise in the future.

## 9 Recommended References

- Barrell, J. 1993. 'Preplanning Tree Surveys: Safe Useful Life Expectancy (SULE) is the Natural Progression', *Arboricultural Journal* 17:1, February 1993,
- Barrell, J. 1995, 'Pre-development Tree Assessments', in *Trees & Building Sites*, Proceedings of an International Conference Held in the Interest of Developing a Scientific Basis for Managing Trees in Proximity to Buildings, International Society of Arboriculture, Illinois,
- Dr. G. Watson & Dr. D. Neely, 'Trees & Building Sites', ISA Illinois USA 1995,
- Dr. N. Matheny & Dr. J.R. Clark, 'Trees & Development', ISA Illinois USA 1998 ,
- Phillip J. Craul, 'Urban Soil in Landscape Design', J. Wiley & Sons, New York USA 1992,
- Clark, Ross, 'A Guide to Assessment of Tree Quality'. NATSPEC/ Construction Information, Milson's Point NSW, 2003 &
- Clark, Ross. 'Purchasing Landscape Trees', Construction Information Systems Australia Pty. Ltd., Milson's Point NSW, 1996.

## 10 Selected Bibliography

- Hitchmogh, J.D. 1994. 'Urban Landscape Management', Inkata Press, Sydney.
- Mattheck, C. & Breloar, H. (1994) 'Body Language of Trees'. The Stationery Office. London.
- A54373.96 'Pruning of Amenity Trees', Standards Australia.
- BS5837-1991. 'Guide for Trees in Relation to Construction', Standards Board, UK.



## Appendix A Glossary

### Glossary of common Arboreal terms

<b>Age:</b>	<b>I</b>	<i>Immature</i> refers to a refers to a well-established but juvenile tree
	<b>SM</b>	<i>Semi-mature</i> refers to a tree at growth stages between immaturity & full size
	<b>M</b>	<i>Mature</i> refers to a full sized tree with some capacity for further growth
	<b>LM</b>	<i>Late Mature</i> refers to a full sized tree with little capacity for growth that is not yet about to enter decline
	<b>OM</b>	<i>Over-mature</i> refers to a tree about to enter decline or already declining
	<b>LS</b>	<i>Live Stag</i> refers to a tree in a significant state of decline. This is the last life stage of a tree prior to death

**Hth & Vig** Health & Vigour

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

Excellent (E), V. Good (VG), Good (G), Fair (F), Declining (D), Poor (P), Very Poor (VP)

**Vigour** refers to the tree's growth rate/condition as exhibited by the crown density, leaf colour, presence of epicormic shoots, ability to withstand disease invasion & the degree of dieback. **Classes are:**

Excellent (E), V. Good (VG), Good (G), Fair (F), Declining (D), Poor (P), Very Poor (VP)

**Useful Life Expectancy (ULE)** refers to any individual tree specimens potential life expectancy (viability) based on VTA assessment, three groups are described,

**Short** = Less than Five years

**Medium** = Five-Fifteen years

**Long** = more than Fifteen years

**Diameter at Breast Height (DBH)** refers to the tree trunk diameter at breast height (1.4 metres above ground level). DBH

**Critical Root Zone (CRZ)** refers to a radial offset of five (5) times the trunk DBH measured from the centre of the trunk. This zone is often the location of the tree's structural support roots

**Primary Root Zone (PRZ)** refers to a radial offset of ten (10) times the trunk DBH measured from the centre of the trunk. This zone often contains a significant amount of (but by no means all of a tree's) fine, non-woody roots required for uptake of nutrients, oxygen & water



**Tree Protection Zone (TPZ)** is a "No Go Zone" surrounding a tree to aid in its ability to cope with disturbances associated with construction works. Tree protection involves minimising root damage that is caused by activities such as construction. Tree protection also reduces the chance of a tree's decline in health or death & the possibly damage to structural stability of the tree from root damage.

To limit damage to the tree, protection within a specified distance of the tree's trunk must be maintained throughout the proposed development works. No excavation, stockpiling of building materials or the use of machinery is permitted within the TPZ

Using the *British Standard for Trees on Construction Sites* (BS5837), a TPZ is based on the age of the tree, young, middle aged or mature, the trunk diameter at D.B.H. & the tree's vigour. A TPZ is required for each tree or group of trees within five metres of building envelopes.

**Stem/bark inclusion** refers to a genetic fault in the tree's structure. This fault is located at the point where the stems/branches meet. In the case of an inclusion this point of attachment is potentially weak due to bark obstructing healthy tissue from joining together to strengthen the joint

**Decay** refers to the break down tissues within the tree. There are numerous types of decay that affect different types of tissues, spread at different rates & have different affect on both the tree's health & structural integrity

**Point of Attachment** refers to the point at which a stem/branch etc join

**Dead wood** refers to any whole limb that no longer contains living tissues (eg live leaves &/or bark). Some dead wood is common in a number of tree species.

**Die back** refers to the death of growth tips/shoots & partial limbs. Die back is often an indicator of stress & tree health

**One dimensional crown** refers to branching habits & leaves that extend/grow in one direction only. There are many causes for this growth habit such as competition & pruning

**Crown Foliage Density of Potential (CFDP)** refers to the density of a tree's crown in relation to the expected density of a healthy specimen of the same species. CFDP is measured as a percentage

**Epicormic growth/shoots** refers to growth/shoots that are/have sprouted from axillary buds within the bark. Epicormic growth/shoots are a survival mechanism that often indicates the presence of a current or past stress even such as fire, pruning, drought etc

**Over Head Powerlines (OHP)** Over head electricity wiring.

LVOHP Low Voltage Over head Powerlines

HVOHP High Voltage Over head Powerlines

ABC Aerial Bundled Cable



## **Appendix B Tree Protection & Management**

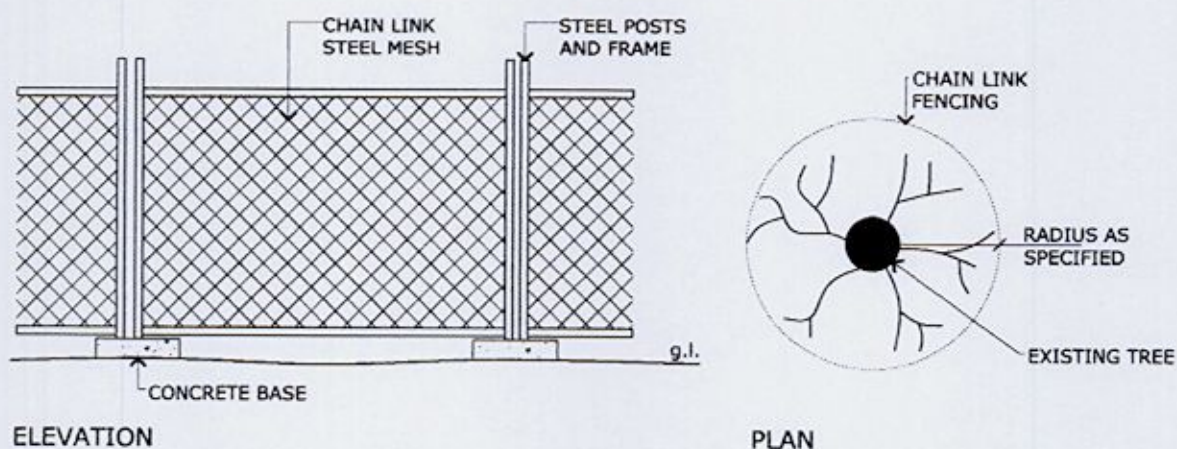
### **Tree Protection & Management Prior to & During Construction**

The installation of Tree Protection Zone (TPZ) fencing is to be carried out prior to commencement of all works. The most suitable fencing material is 1.8m tall chain link mesh with 50mm metal pole supports, see **detail 1: tree protection fencing**.

A mulch layer of composted leaf & woodchip to a depth of 75mm is required within the TPZ to aid in retention of soil moisture & to protect soil from contaminants. Water is to be applied by handheld or soaker/leaky hose within TPZ as required & in Accordance with Stage 3 Water Restrictions. Watering is to be carried out by either an Arborist or is to form part of the Builder's/Contractor's contract, with recommended fortnightly checks by an Arborist.

There is to be no stock piling of building material (including waste), machinery or any other item within TPZ of any retained tree. Access to personnel & machinery, & storage of fuel, chemicals, cement or site sheds is prohibited

Regular monitoring of protected trees during development works for unforeseen changes or decline, will aid in the success & longevity of the retained trees.



**detail 1: tree protection fencing**  
not to scale

---

## **Appendix C Site Survey & Plans, Elevations & Sections**



LOT 126  
DP 13457

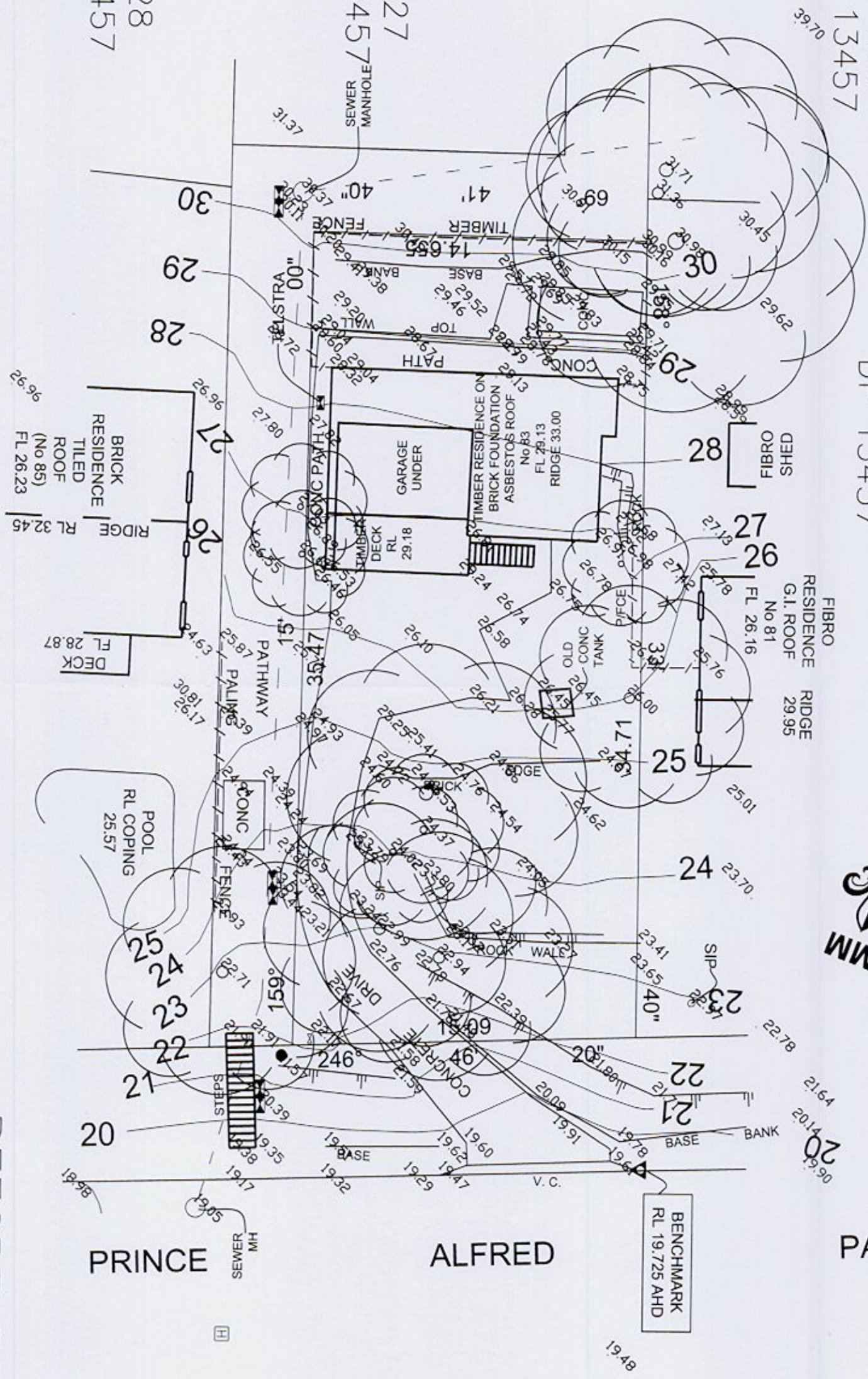
LOT 109  
DP 13457



PARADE

LOT 128  
DP 13457

LOT 127  
DP 13457



LOT 107  
DP 13457

# BEFORE DEMOLITION SITE PLAN

LOCALITY SKETCH U.B.D. REFERENCE: P 118, H8



PROPOSED BRICK VENEER RESIDENCE  
AT: LOT 108 No 83 PRINCE ALFRED PARADE  
NEWPORT BEACH  
FOR: MS NICHOLLS  
DP 13457

DRAWN: AR (SRP)		CHECKED
HAND	SCALE 1:200	
DESIGN	CUSTOM	
FACADE	CUSTOM	

DATE		AMENDMENTS
19/04/07	1ST DRAW (HH00170A)	A
10/05/07	2nd DRAW (HH00170B)	B
25/06/07	3rd DAW (V00170B/01)	C
26/07/07	VARIATIONS (DATED 12-7-07)	D

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ISSUE



DEMOLITION OF EXISTING HOUSE, GARAGE, SLABS, FOOTINGS, PATHS, TREES, GRUB OUT ROOTS, SHRUBS, GRASS INCLUDING THE DISCONNECTION OF ALL SERVICES AND THE REMOVAL OF ALL DEMOLITION CONTAMINANTS FROM THE SITE. BY OWNER.

LOT 126  
DP 13457  
COLD SOUTHERLY WINDS

SITE CALCULATIONS:  
SITE AREA: 521.6m<sup>2</sup>  
BUILT UPON AREA MAX 50%  
OR 260.80 m<sup>2</sup>  
PROVIDED: 172.37m<sup>2</sup> OR 33%  
L'SCAPE AREA MIN 50%  
OR 260.80m<sup>2</sup>  
PROVIDED: 306.10 OR 58.7%  
P.O.S MIN 80m<sup>2</sup>  
(MIN DIM. 3m)  
PROVIDED: 135.75m<sup>2</sup>  
(INCLUDES 1ST FLOOR BALCONY)

LOT 127  
DP 13457

LOT 128  
DP 13457

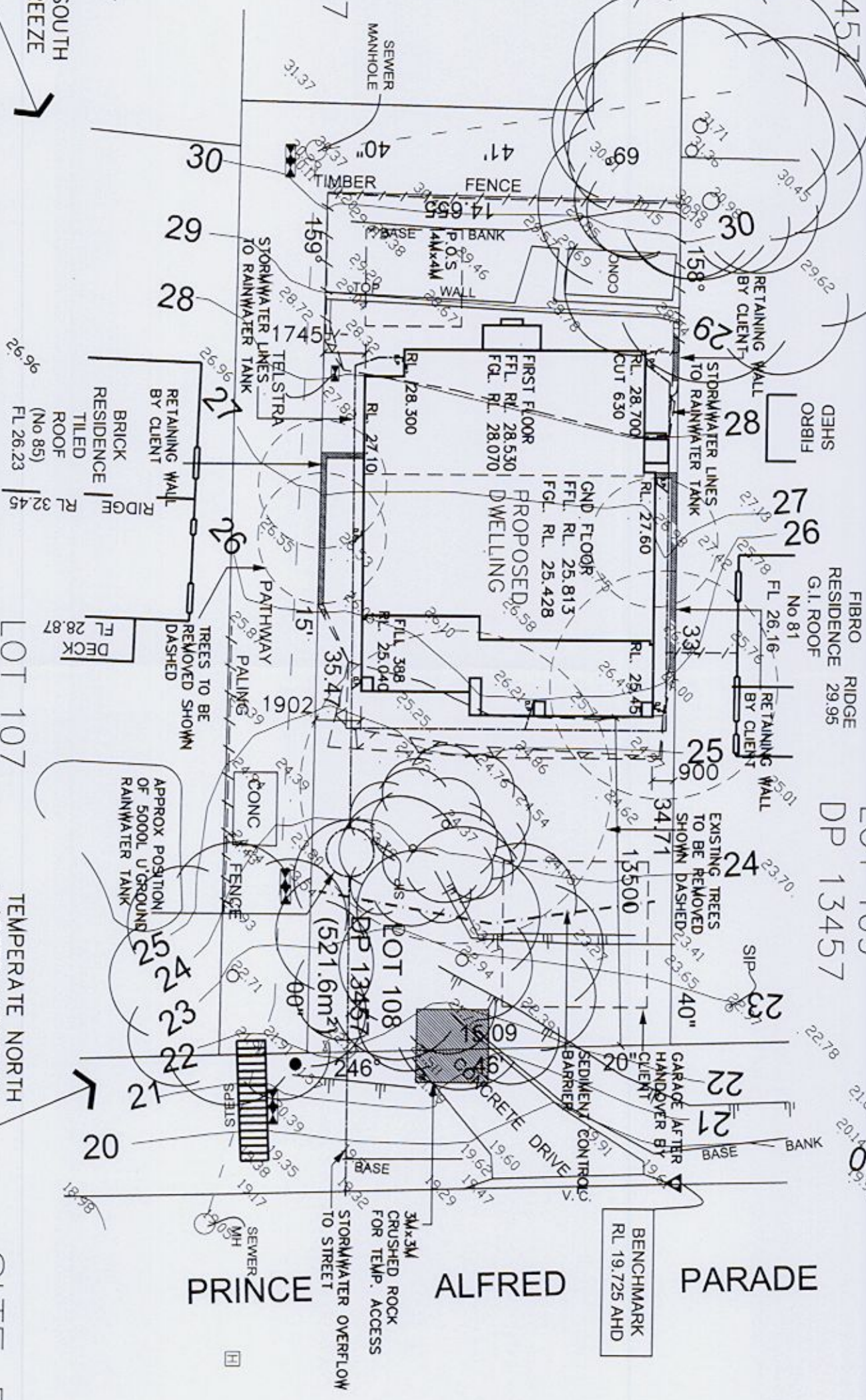
TEMPERATE SOUTH  
EASTERLY BREEZE

LOT 107  
DP 13457

LOT 109  
DP 13457

TEMPERATE NORTH  
EASTERLY BREEZE

- LEGEND
- WATER METER
  - TELSTRA PT
  - SEWER VENT
  - POWER POLE
  - BENCH MARK
  - GAS METER
  - SEWER INSPECTION POINT
  - STOP VALVE
  - SEWER MAN HOLE
  - ELECTRICITY BOX
  - FENCE LINE
  - HYDRANT
  - TREE



LOCALITY SKETCH



PROPOSED BRICK VENEER RESIDENCE  
AT: LOT 108 No.83 PRINCE ALFRED PARADE  
NEWPORT BEACH  
FOR: MS NICHOLLS  
DP 13457

DRAWN: AR (SRP)	CHECKED
HAND	SCALE 1:200
DESIGN	CUSTOM
FACADE	CUSTOM

DATE	AMENDMENTS	REV	DRN
19/04/07	1ST DRAW (HH00170A)	A	AR
10/05/07	2ND DRAW (HH00170B)	B	AR
25/06/07	3rd DAW (V000170B/01)	C	AR
26/07/07	VARIATIONS (DATED 12-7-07)	D	AR

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ISSUE D





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## Building Lasting Relationships

IDB No.

et.

3



67

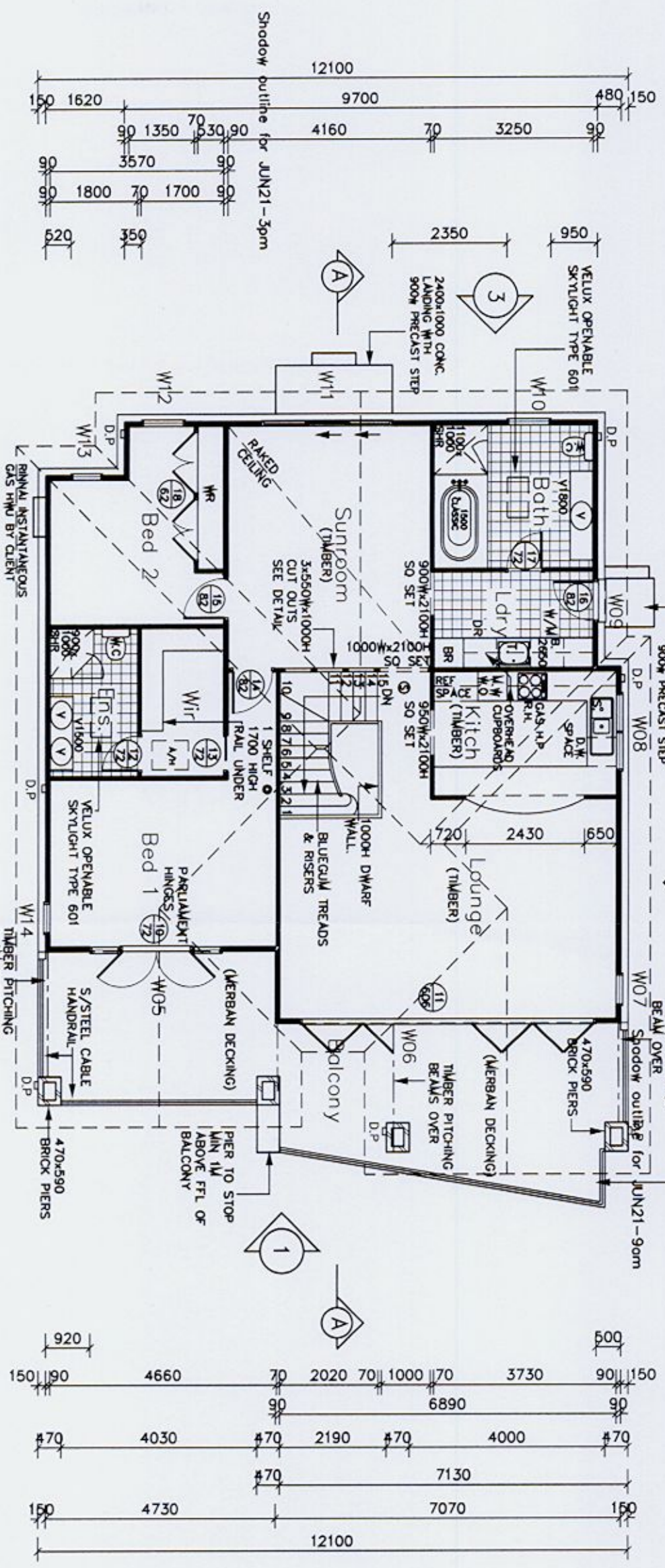
100

1



### Shadow outline

- PROVIDE PLUMBING, GAS AND ELEC CONNECTION POINTS FOR OWNER TO SUPPLY AND INSTALL A RINNAI HHS. AFTER HANDOVER



LOCALITY SKETCH

U.B.D.

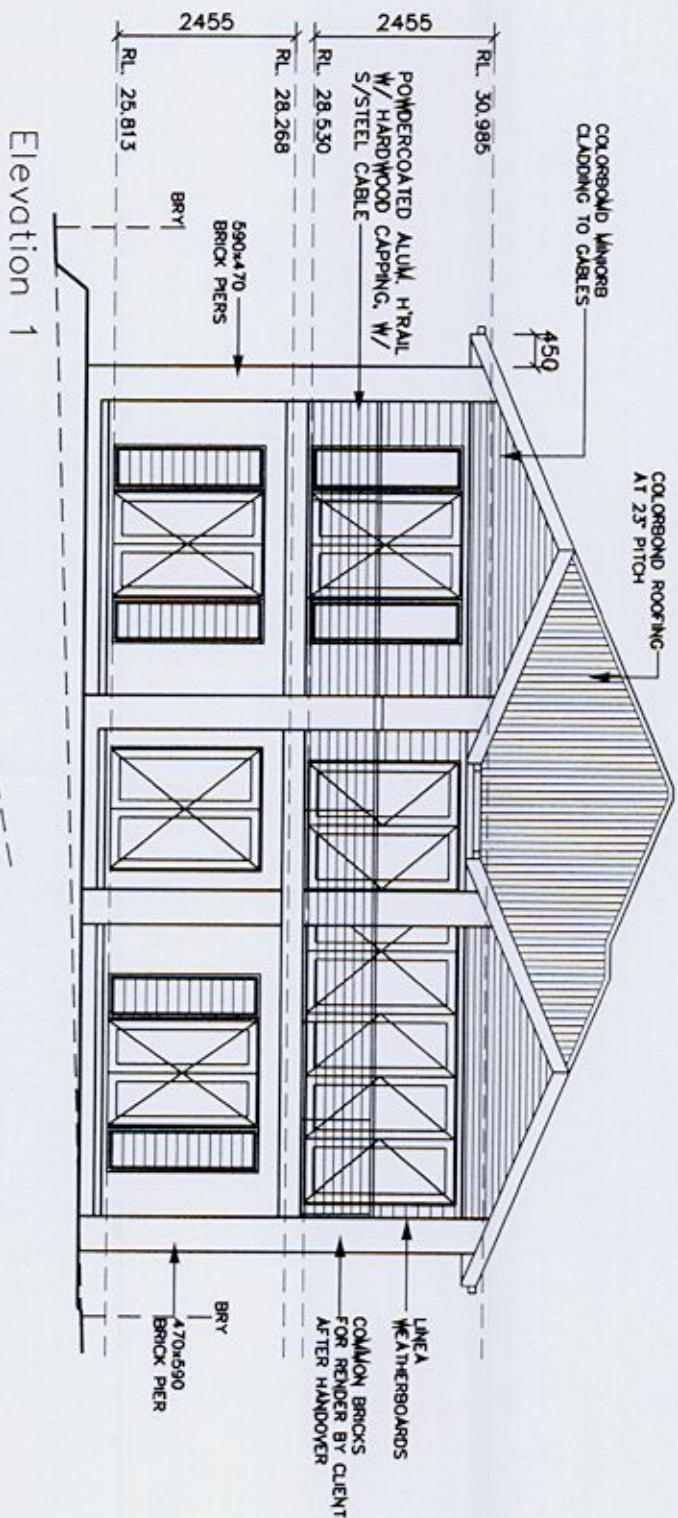
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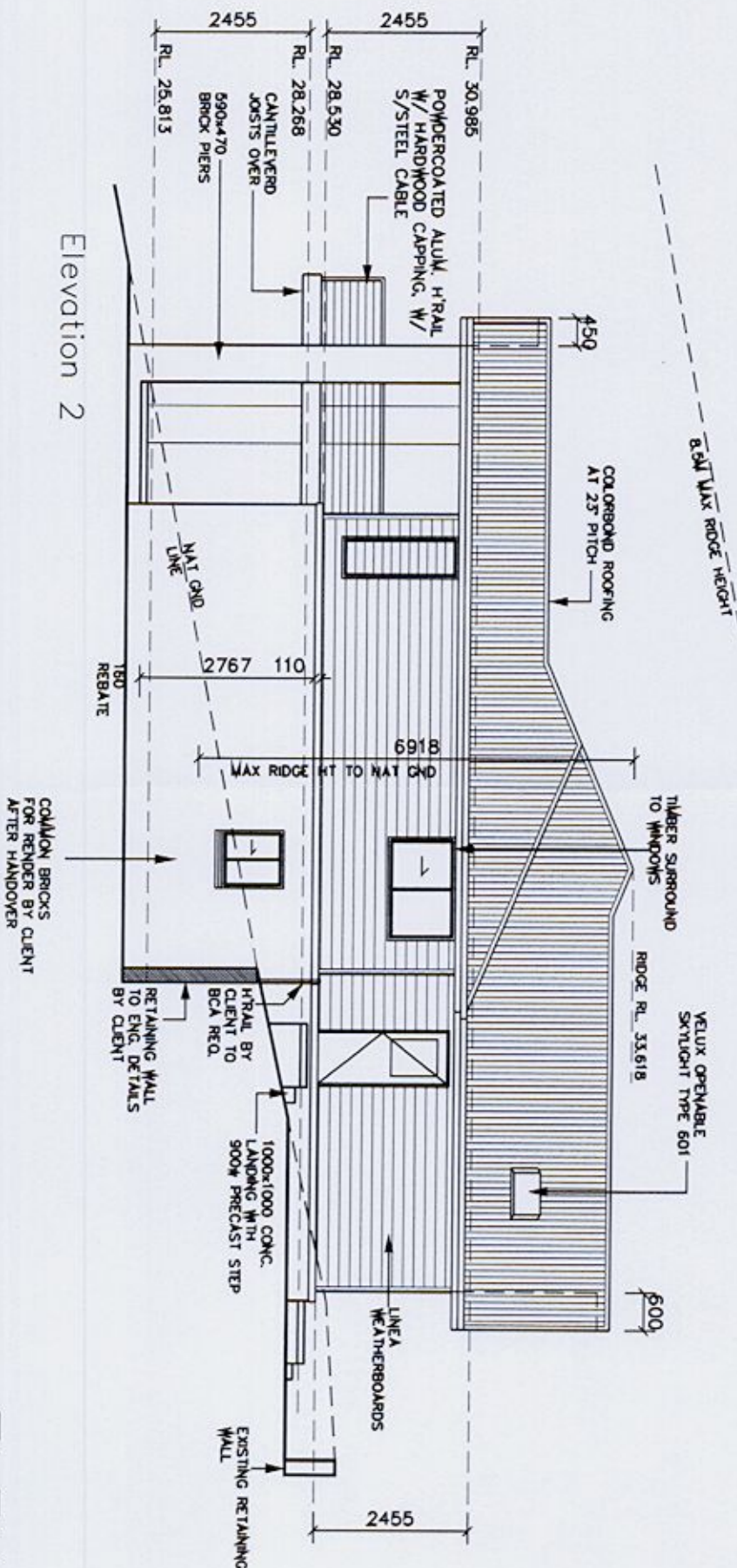
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---	-------------------------	-------------------





Elevation 1



Elevation 2

ELEVATIONS 1 & 2

LOCALITY SKETCH

U.B.D.  
REFERENCE: P 118, H8

PRINCE ALFRED PDE

108

PROPOSED BRICK VENEER RESIDENCE

AT: LOT 108 NO83 PRINCE ALFRED PARADE  
NEWPORT BEACH  
FOR: MS NICHOLLS  
D.P 13457

DRAWN: AR (SRP)

CHECKED

DATE

HAND

SCALE 1:100

19/04/07

DESIGN

CUSTOM

10/05/07

FACADE

CUSTOM

25/06/07

AMENDMENTS

1ST DRAW (HH00170A)  
2ND DRAW (HH00170B)  
3rd DRAW (V00170B/01)  
VARIATIONS (DATED 12-7-07)

REV

DRN

A  
B  
C  
D

AR  
AR  
AR  
AR

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10 Phillis Street

Perth WA 6000

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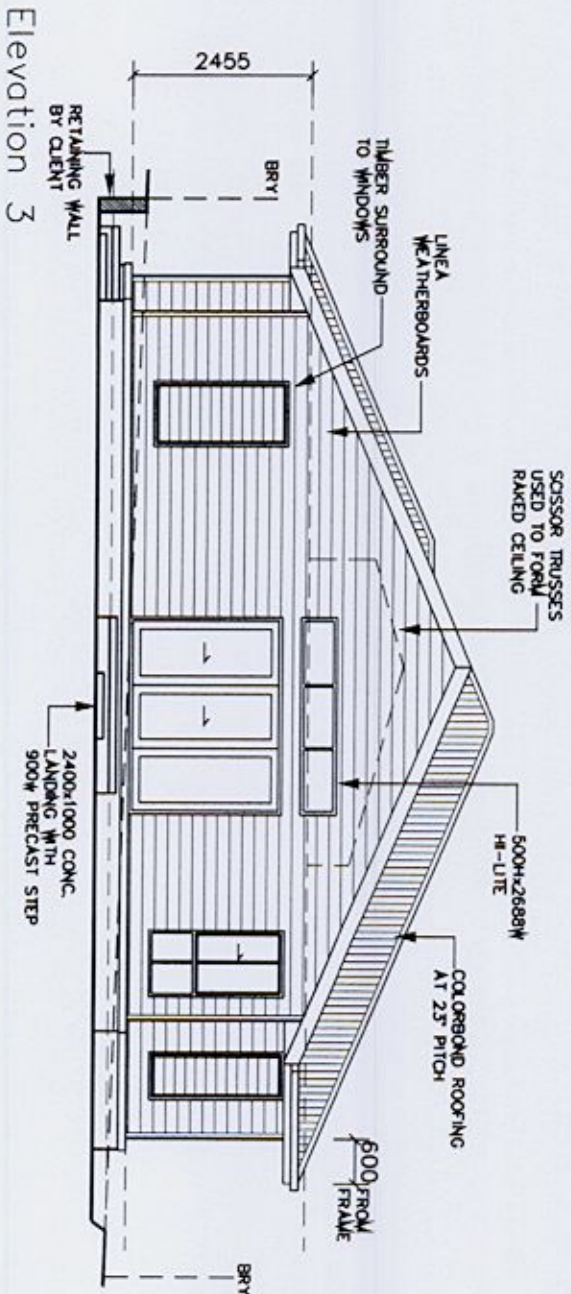
ISSUE

D

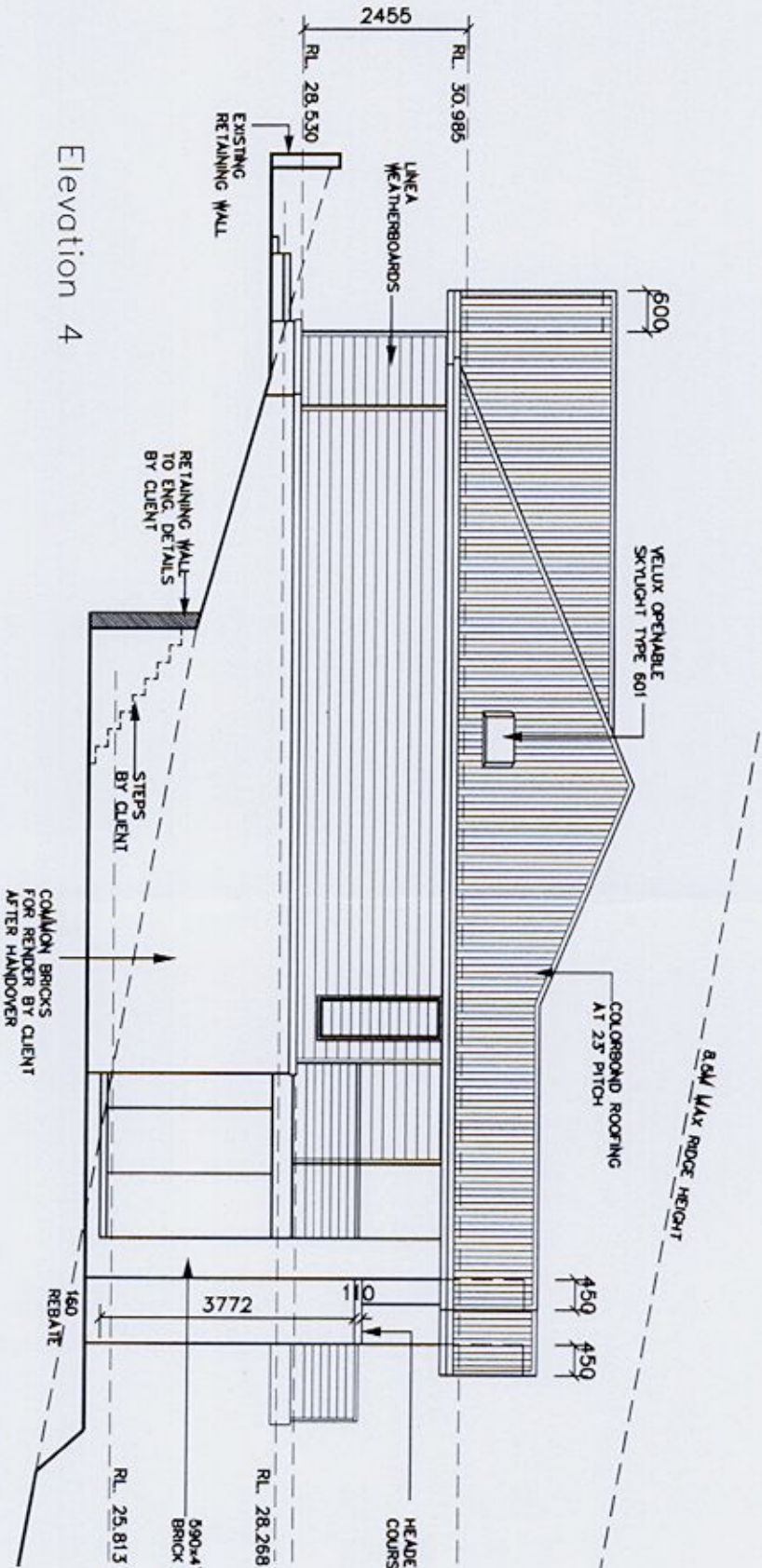
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Elevation 3



Elevation 4

# ELEVATIONS 3 & 4

LOCALITY SKETCH		U.B.D. REFERENCE: P 118, H8		PROPOSED BRICK VENEER RESIDENCE		DRAWN: AR (SRP)		CHECKED		DATE		AMENDMENTS		REV		DRN		WARNING@ copyright Huxley Homes Pty Ltd Reproducing or copying of these plans or drawings wholly or in part without prior permission will result in court proceedings.	
				AT: LOT 108 No.83 PRINCE ALFRED PARADE NEWPORT BEACH		HAND		SCALE 1 : 100		19.04.07		1ST DRAW (HH00170A)		A		AR		 <b>HUXLEY HOMES</b> Building Lasting Relationships	
				FOR: MS NICHOLLS D.P. 13457		DESIGN		CUSTOM		10.05.07		2nd DRAW (HH00170B)		B		AR			
						FACADE		CUSTOM		25.06.07		3rd DAW (V00170B/01)		C		AR			
										26.07.07		VARIATIONS (DATED 12-7-07)		D		AR			
								SOIL CLASSIFICATION P TERRAIN CATEGORY 3 (MS) SMELLING MULTIPLIER (MS) TOPOGRAPHICAL MULTIPLIER (MS) WIND DESIGN VELOCITY (VZ) NG										HUXLEY HOMES PTY LTD ABN 41106443216 Licenced Builder No. 155010C 10 Philip Street Parramatta NSW 2150 Ph. (02)98429888, Fax (02)98429890	
																		JOB No.	
																		23225 D	
																		ISSUE	



- BASIX NOTES:**
- PROVIDE CONNECTION FOR THE RETICULATION OF RECYCLED WATER, INCLUDING THE CONNECTION POINT FOR A BACK UP POTABLE WATER CONNECTION TO THE WASHING MACHINE STOP TAPS, TOILET FLUSHING AND FRONT AND REAR EXTERNAL TAPS COMPLETE WITH ONE WEATHERPROOF SINGLE POWER POINT FOR WATER TANK CONTROL UNIT ON A DEDICATED SINGLE PHASE CIRCUIT.
  - PROVIDE 5000L UNDERGROUND RAINWATER TANK INCLUDING: DIGGING HOLE, BACK FILLING OF TANK, TANK, FLOAT SWITCH, AUTOMATIC MAINS WATER BACKUP CONTROL UNIT, UNDERGROUND FIRST FLUSH SYSTEM, IN LINE WATER FILTER AND SUBMERSIBLE PRESSURE PUMP AND THERE CONNECTION TO TANK UNIT (TANK SIZE 2400x2400mm)
  - PROVIDE '3 STAR RATING' TAPS TO THE BASINS, VANITIES OR SHOWER HEADS AS PER THE DETAILED SPECIFICATION.
  - PROVIDE TOILETS WITH '4 STAR RATING' CAROMA COSMO PAN AND COSMO CISTERN.
  - RINKAI INSTANTANEOUS GAS HWU BY CLIENT AFTER HANDOVER
  - PROVIDE KITCHEN SINK MIXER WITH '3 STAR RATING'.
  - THE OWNER MUST INSTALL A FIXED OUTDOOR CLOTHES DRYING LINE AS PART OF THE DEVELOPMENT AS DEFINED IN THE BASIX SPECIFICATION.
  - PROVIDE REFRIGERATOR SPACE IN THE DEVELOPMENT SO THAT IT IS WELL VENTILATED, AS DEFINED IN THE BASIX SPECIFICATION.
  - PROVIDE 2 No. WHIRLY BIRD ROOF VENTILATORS IN POWDERCOATED FINISH IN COLOUR TO MATCH ROOF CLADDING WITH 4 No. TORCO 250x250 SNAP IN EAVE VENTS, ALL TO BE INSTALLED TO MANUFACTURERS RECOMMENDATIONS.
  - PROVIDE ANTI-CONDENSATION BLANKET TO UNDERSIDE OF ROOFING (INCLUDING ANTI-FLAP BOARDS) IN LIEU OF STANDARD AND ABOVE THE BCA.
  - PROVIDE RP3 – AUTOMATIC WEATHER SEAL/DRAUGHT EXCLUDER TO ALL SINGLE EXTERNAL HINGED DOORS AND INTERNAL ACCESS FROM THE GARAGE AND RP60 – AUTOMATIC WEATHER SEAL/DRAUGHT EXCLUDER TO ALL DOUBLE EXTERNAL HINGED DOORS WITH RP61 – DRAUGHT EXCLUDER PILE WEATHER STRIP (GRAY SELF ADHESIVE) TO THE STILES AND HEAD (WHERE APPLICABLE)
  - R1.0 INSULATION BATTS TO FLOOR BETWEEN HOUSE AND SUBFLOOR
  - R1.0 INSULATION TO WALL BETWEEN HOUSE AND SUBFLOOR.
  - R3.0 INSULATION TO CEILINGS OF LIVING AREAS.
  - MEDIUM WALL AND DARK ROOF COLOURS.
  - RECIRCULATING RANGEHOOD TO KITCHEN WITH MANUAL ON/OFF SWITCH.
  - GAS COOKTOP AND ELEC OVEN.

WINDOW SCHEDULE (STUD OPENINGS)

ID	CODE	HEIGHT (mm)	WIDTH (mm)	NOTES
W01	DF2	2100	1695	DOOR BY BUILDER
W02	CUSTOM	2100	2715	AL. DOORS LOUVRE SLITS
W03	ASF0909	987	897	AL. DOORS LOUVRE SLITS
W04	CUSTOM	2100	2715	AL. DOORS LOUVRE SLITS
W05	CUSTOM	2100	2715	AL. DOORS LOUVRE SLITS
W06	ABF2261/4L3R	2125	6065	ALUM. BI FOLDS
W07	LOUVRE	1854	654	
W08	ASF1016	1074	1604	
W09	DF1	2100	880	DOOR BY BUILDER
W10	LOUVRE	1854	897	
W11	ASD2126/3R	2125	2688	AL. SL. DOOR
W12	ASF1809T	1854	897	
W13	LOUVRE	1854	654	
W14	LOUVRE	1854	654	

LOCALITY SKETCH

UBD  
REFERENCE: P 118, H-8



PROPOSED BRICK VENEER RESIDENCE

AT: LOT 108 No.83 PRINCE ALFRED PARADE  
NEWPORT BEACH

FDR: MS NICHOLLS

D/P 13457

DRAWN: AR (SRP)

CHECKED

HAND

SCALE 1 : 100

DESIGN

CUSTOM

FACADE

CUSTOM

DATE

19.04.07

10.05.07

25.06.07

AMENDMENTS

1ST DRAW (GH00170A)

2nd DRAW (GH00170B)

3rd DAW (V00170B/01)

REV

A

B

C

DRN

AR

AR

AR

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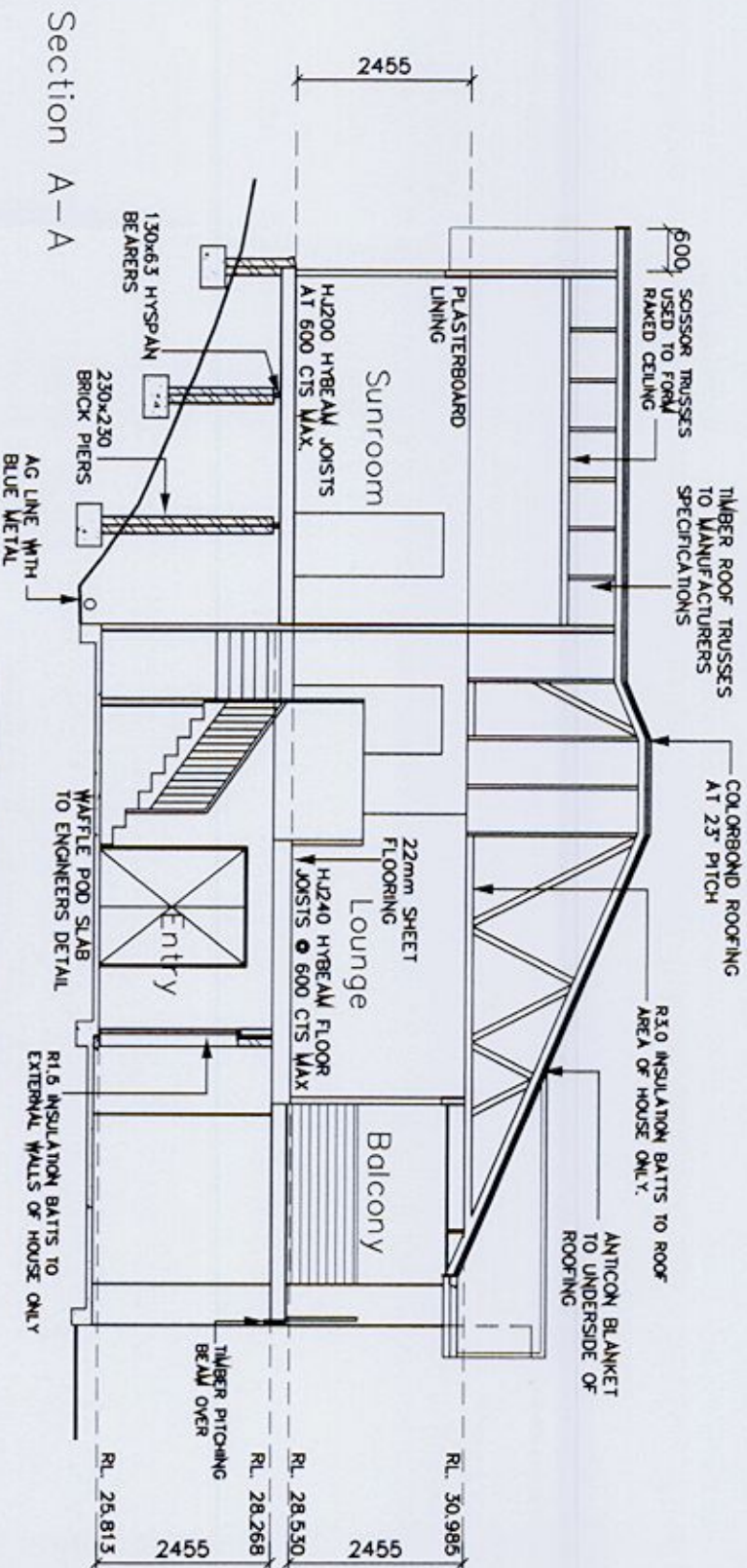
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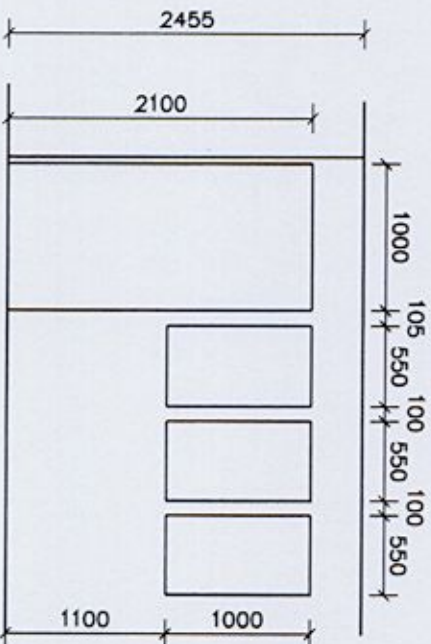
JOB No.

23225 D

ISSUE



Section A-A



Sunroom openings  
SCALE 1:50

SECTIONS



PROVIDE SITE DRAINAGE THROUGH THE USE OF AG. DRAINS TO EXCAVATED AREAS TO CREATE ADEQUATE PROVISION FOR THE DISPOSAL OF SURFACE WATER AWAY FROM THE HOUSE, YARD AND OTHER STRUCTURES WITHOUT DISCHARGE ONTO ADJOINING PROPERTIES. COMBINED WITH THE CONTOURING OF THE EXCAVATED AREAS TO ELIMINATE ANY SURFACE WATER PONDING AROUND THE HOUSE AND DIRECTING IT TO SURFACE DRAINAGE POINTS AND/OR CONTINUOUS BOX DRAIN TO THE FRONT OF THE GARAGE AND BASE OF CUT OR TOP OF RETAINING WALLS. ALL CONNECTED BY A SEPARATE 90mm UPVC CONNECTION TO THE STREET - BY OWNER.

LEGEND

WATER METER

TELSTRA PIT

SEWER VENT

POWER POLE

BENCHMARK

GAS METER

STOP VALVE

SEWER INSPECTION POINT

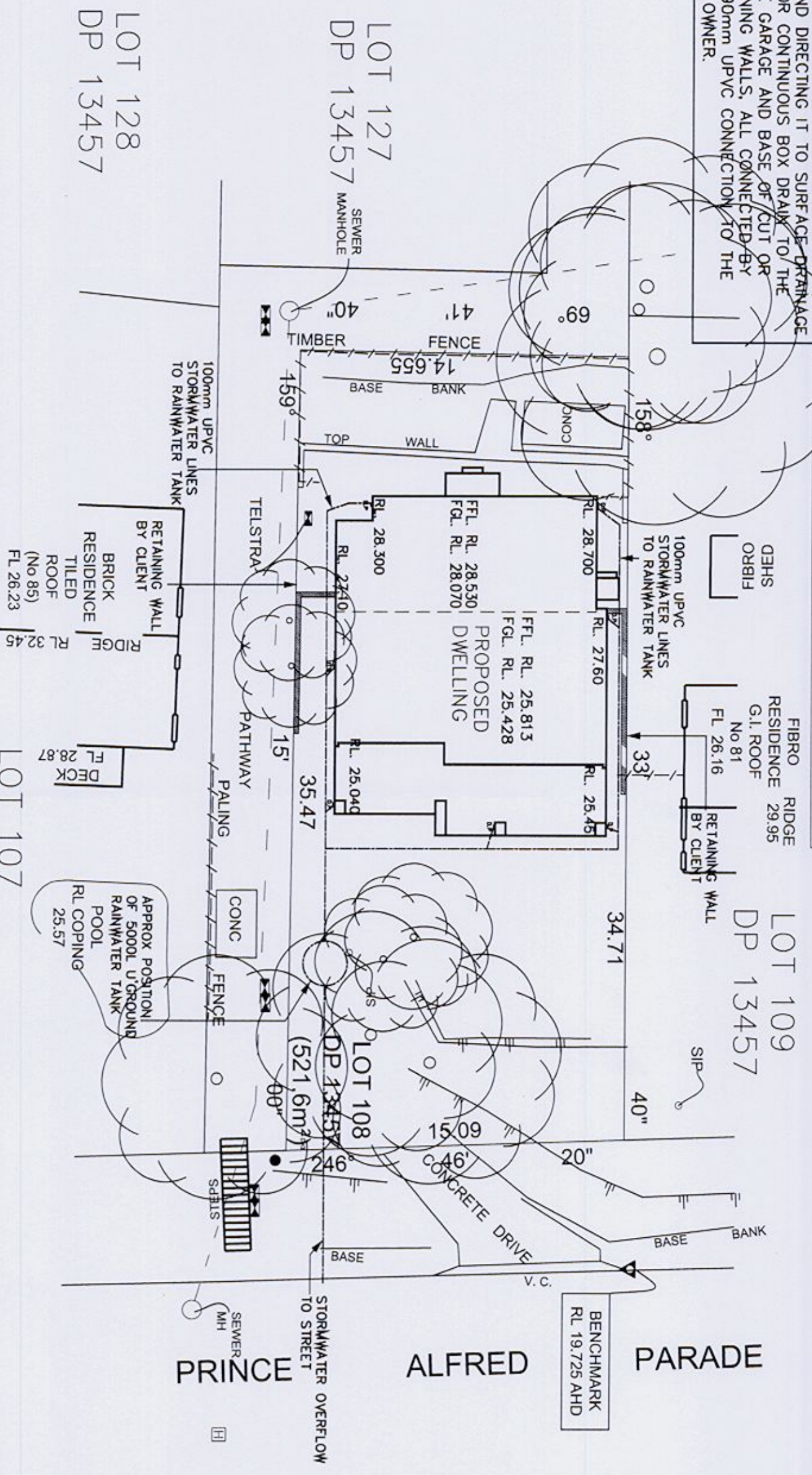
SEWER MAN HOLE

ELECTRICITY BOX

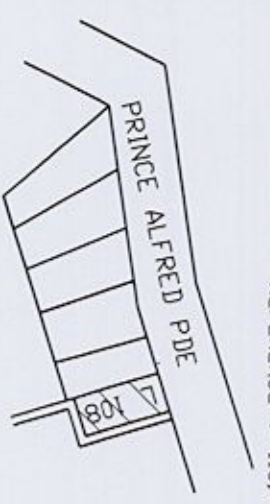
FENCE LINE

HYDRANT

TREE



LOCALITY SKETCH



PROPOSED BRICK VENEER RESIDENCE  
AT: LOT 108 No.83 PRINCE ALFRED PARADE  
NEWPORT BEACH  
FOR: MS NICHOLLS  
D.P. 13457

DRAWN: AR (SRP)	CHECKED
HAND	SCALE 1 : 200
DESIGN	CUSTOM
FACADE	CUSTOM

DATE	AMENDMENTS	REV	DRN
19/04/07	1ST DRAW (HH00170A)	A	AR
10/05/07	2nd DRAW (HH00170B)	B	AR
25/06/07	3rd DAW (VY00170B/01)	C	AR
26/07/07	VARIATIONS (DATED 12-7-07)	D	AR



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ISSUE D

# STORMWATER CONCEPT PLAN

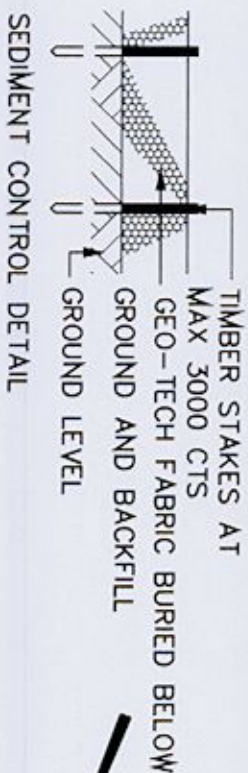
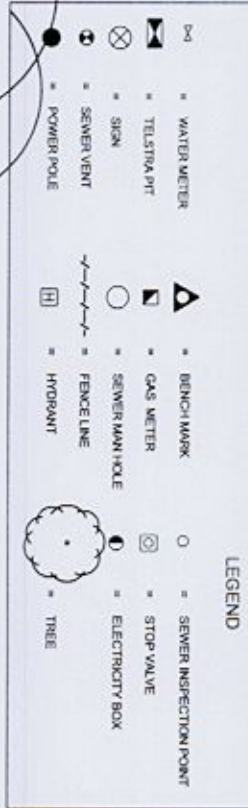
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PROVIDE TEMPORARY PANEL TYPE  
CONSTRUCTION FENCE TO HUXLEY  
HOMES CONSTRUCTION AREA.



LOT 126  
DP 13457

FIBRO RIDGE  
RESIDENCE No 81  
G.I. ROOF  
FL 26.16

LOT 109  
DP 13457

PARADE

BENCHMARK  
RL 19.725 AHD

ALFRED

PRINCE

LOT 127  
DP 13457

SEWER  
MANHOLE

41' FENCE  
14.655  
BANK  
TOP  
WALL  
ONOC

PROPOSED  
DWELLING  
F.F.L. RL. 28.530  
F.G.L. RL. 28.070  
F.F.L. RL. 25.813  
F.G.L. RL. 25.428

LOT 108  
DP 13457

CONSTRUCTION  
WASTE BIN  
246

3Mx3M  
CRUSHED ROCK  
FOR TEMP. ACCESS

LOT 128  
DP 13457

RETAINING WALL  
BY CLIENT  
BRICK  
RESIDENCE  
TILED  
ROOF  
(No 85)  
FL 26.23  
RIDGE  
FL 32.45  
DECK  
FL 28.87

LOT 107  
DP 13457

POOL  
RL COPING  
25.57

EROSION & SEDIMENT  
CONTROL PLAN

LOCALITY SKETCH

U.B.D.  
REFERENCE: P 118, H8

PROPOSED BRICK VENEER RESIDENCE  
AT: LOT 108 No.83 PRINCE ALFRED PARADE  
NEWPORT BEACH  
FOR: MS NICHOLLS  
DP 13457

DRAWN: AR (SRP)  
HAND: SCALE 1:200  
DESIGN: CUSTUM  
FACADE: CUSTUM

DATE: 19/04/07  
10/05/07  
25/06/07  
26/07/07  
AMENDMENTS: 1ST DRAW (HH00170A)  
2nd DRAW (HH00170B)  
3rd DAW (V00170B/01)  
VARIATIONS (DATED 12-7-07)

REV: A  
B  
C  
D

DRN: AR  
AR  
AR  
AR

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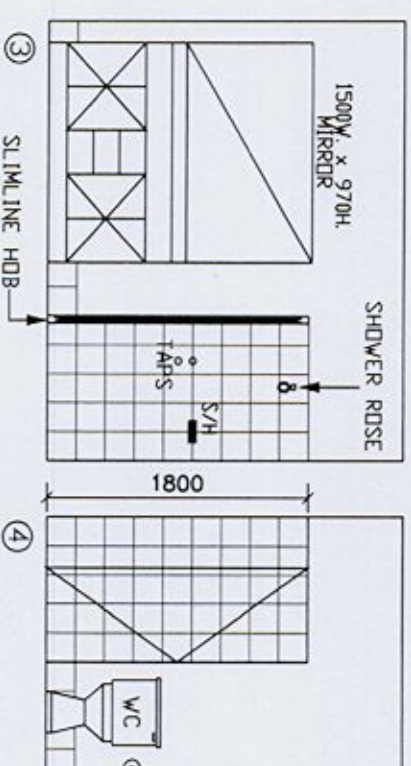
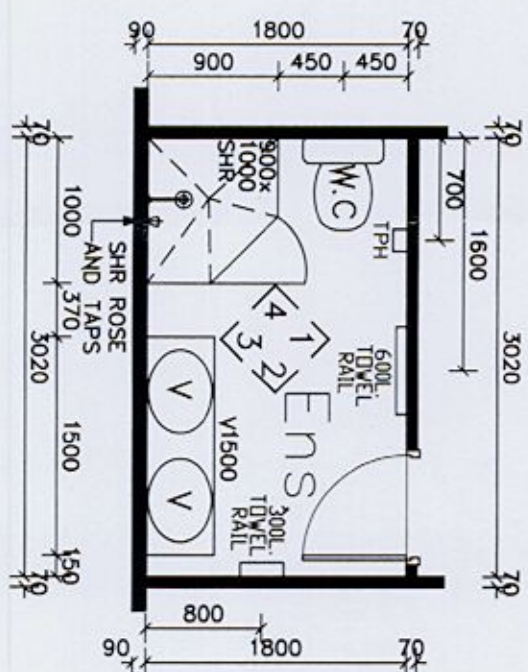
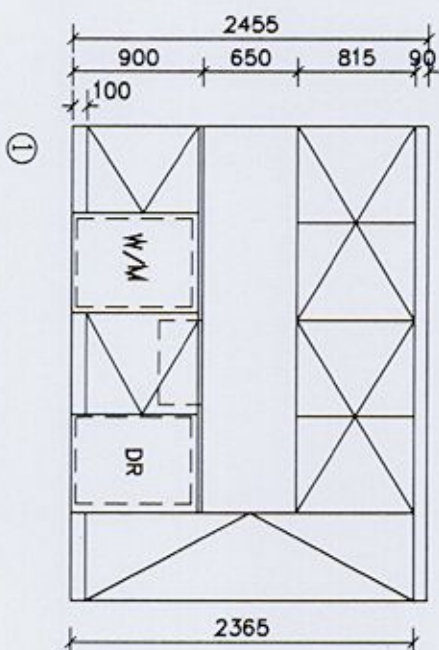
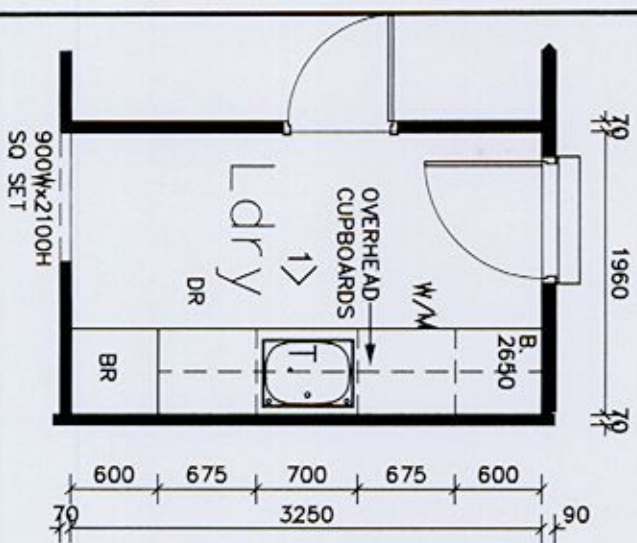
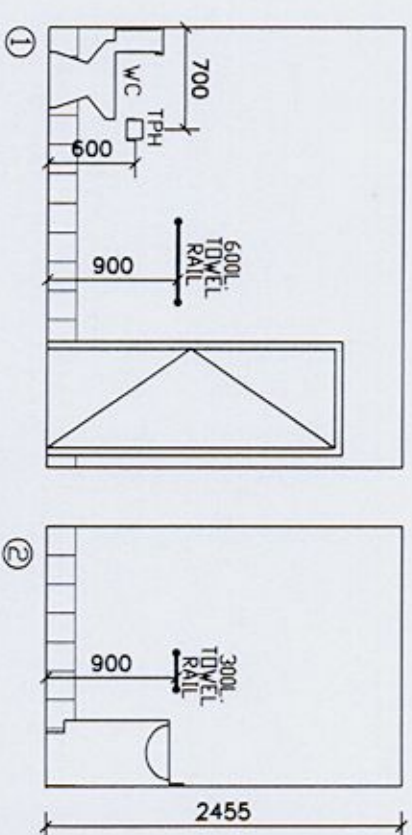
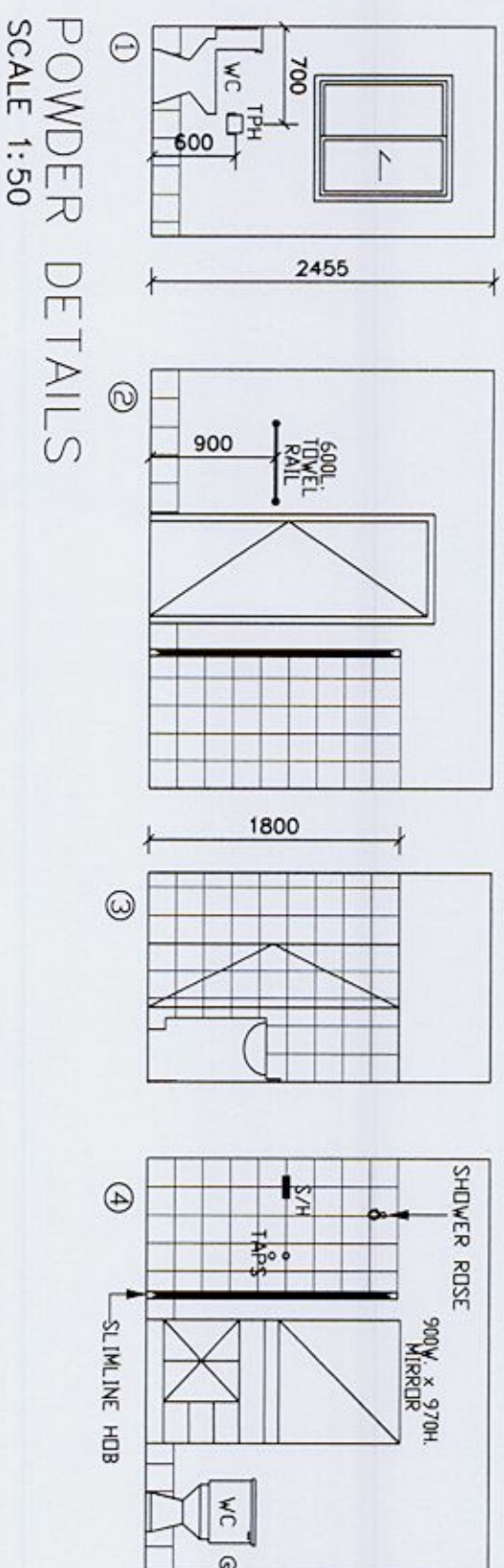
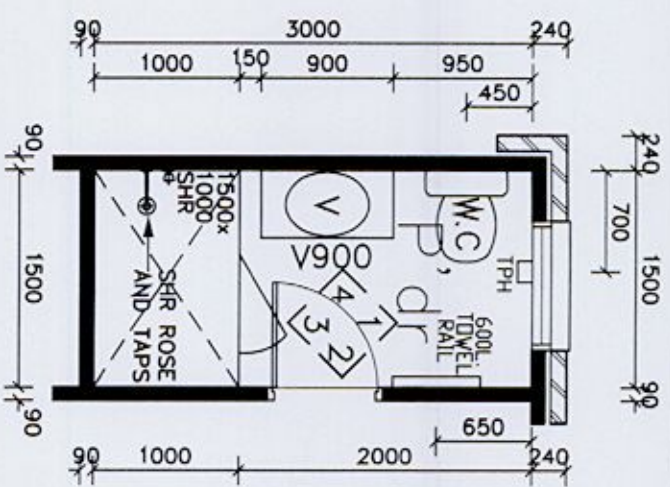
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ISSUE D







LAUNDRY DETAIL  
SCALE 1:50

ENSUITE DETAILS  
SCALE 1:50

## WET AREA DETAILS

LOCALITY SKETCH

U.S.D.  
REFERENCE: P 118, H:8

PROPOSED BRICK VENEER RESIDENCE  
AT: LOT 108 No.83 PRINCE ALFRED PARADE

FDR: MS NICHOLLS  
D.P 13457

DRAWN: AR (SRP)	CHECKED
-----------------	---------

HAND	SCALE
	1

DESIGN	CUSTOM
FACADE	CUSTOM

DATE

19JUL07	151 DRAW (HH00170A)
100507	2nd DRAW (HH00170B)

25.06.07	3rd DAY (V001708/01)
26.07.07	VARIATIONS (DATED 12-7-07)

REV	DRM
-----	-----

$\mathbb{D}$	$\mathbb{D}$
$\mathbb{D}$	$\mathbb{D}$

$\frac{A}{R}$	$\frac{A}{R}$
$\frac{D}{C}$	$\frac{D}{C}$

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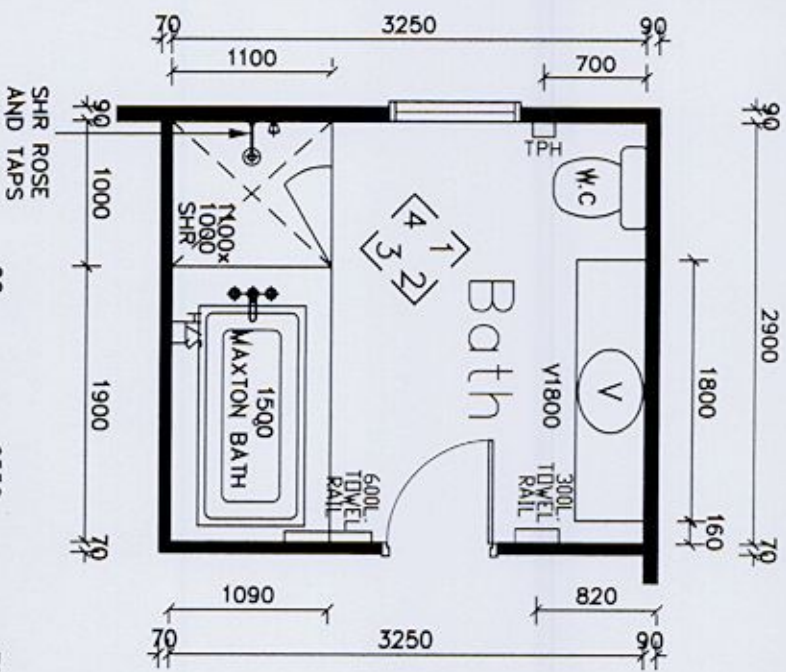
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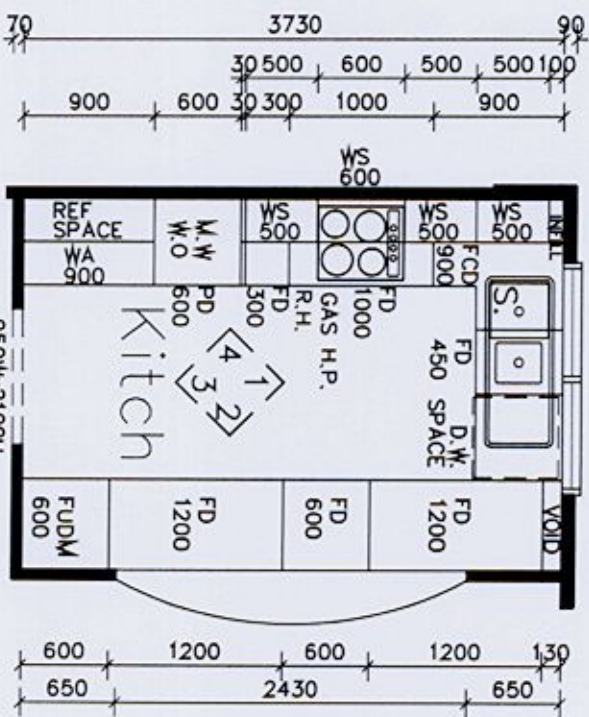
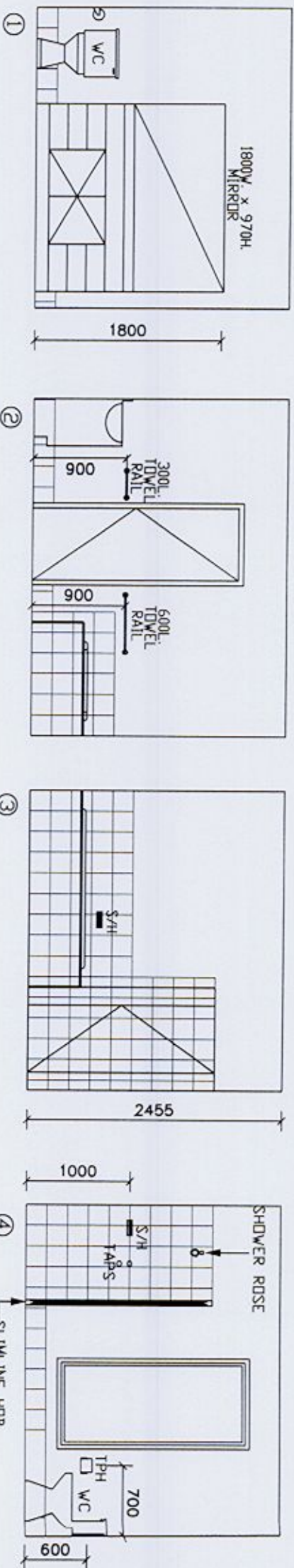
2325D

~~W. W. Hudey Jones, 23225 NICHOLLS, 23225 DINO, 2-7-00/2007-3-37-20-00~~

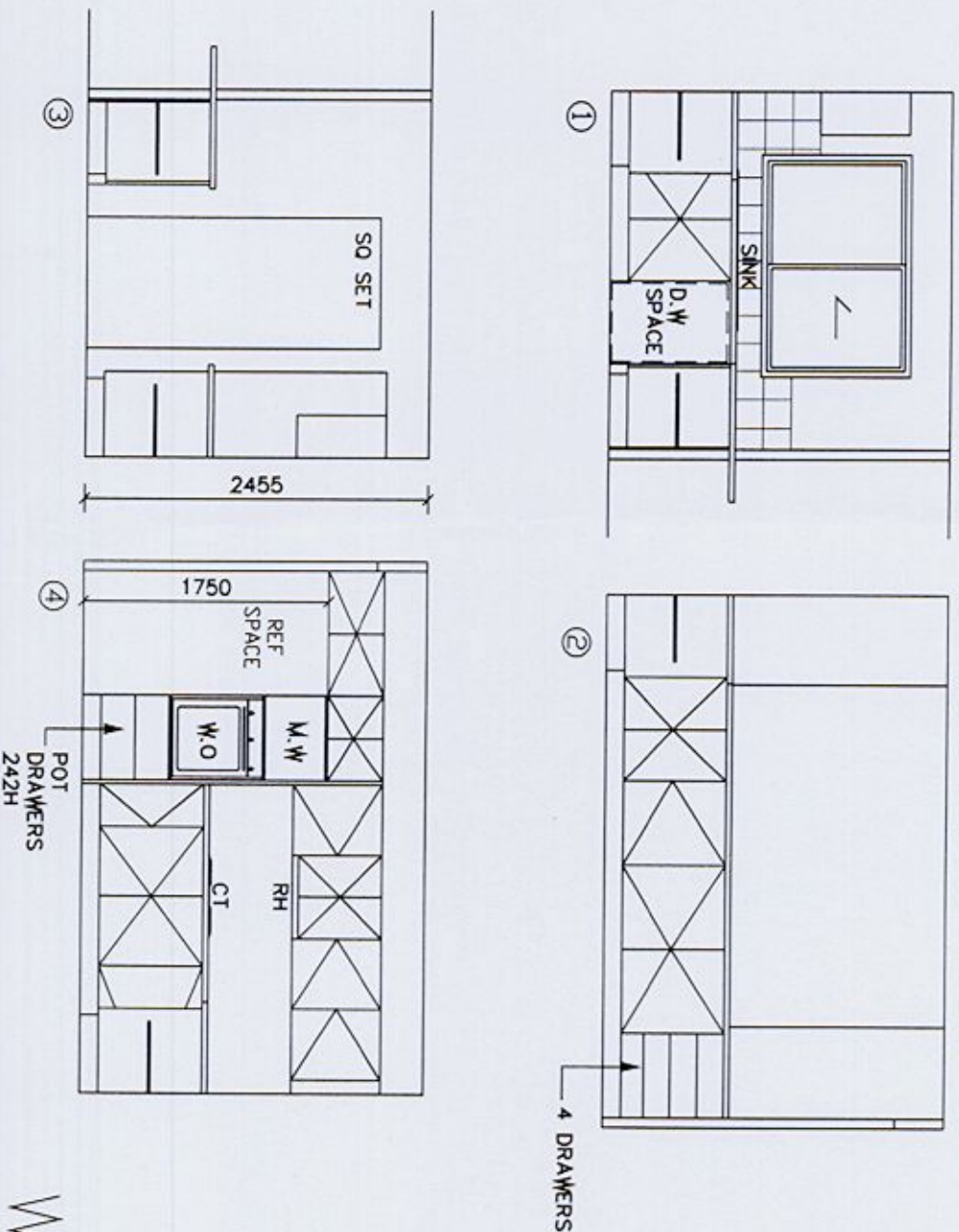




BATHROOM DETAILS  
SCALE 1:50



KITCHEN DETAILS  
SCALE 1:50



WET AREA DETAILS

LOCALITY SKETCH

U.B.D.  
REFERENCE: P 118, H8



PROPOSED BRICK VENEER RESIDENCE

AT: LOT 108 No.83 PRINCE ALFRED PARADE  
NEWPORT BEACH

FOR: MS NICHOLLS  
D.P. 13457

DRAWN: AR (SRP)

CHECKED

SCALE 1:50

DATE

19/04/07  
10/05/07  
25/06/07

AMENDMENTS

1ST DRAW (HH00170A)  
2nd DRAW (HH00170B)  
3rd DRAW (V00170B/01)  
VARIATIONS (DATED 12-7-07)

REV

A  
B  
C  
D

DRN

AR  
AR  
AR  
AR

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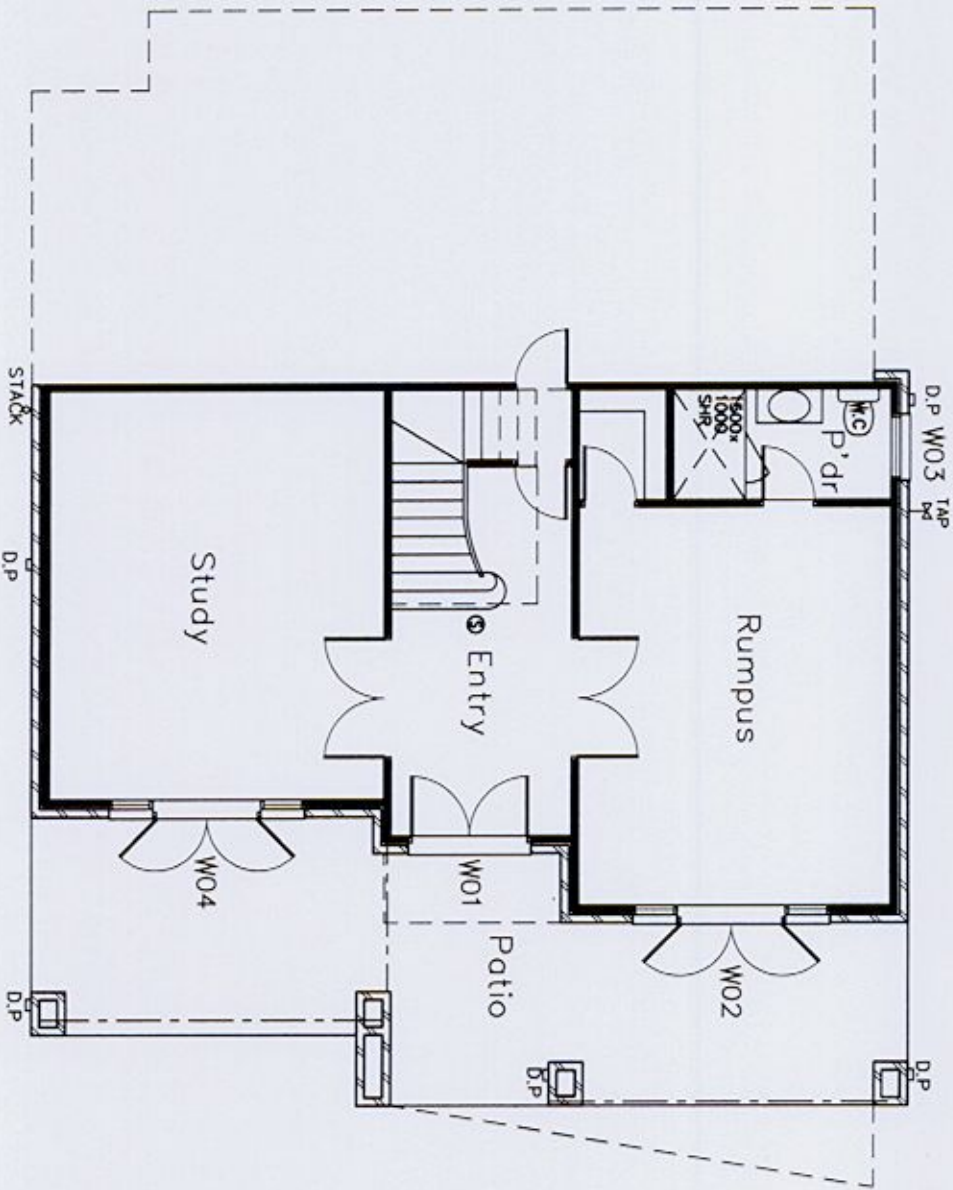
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23225 D

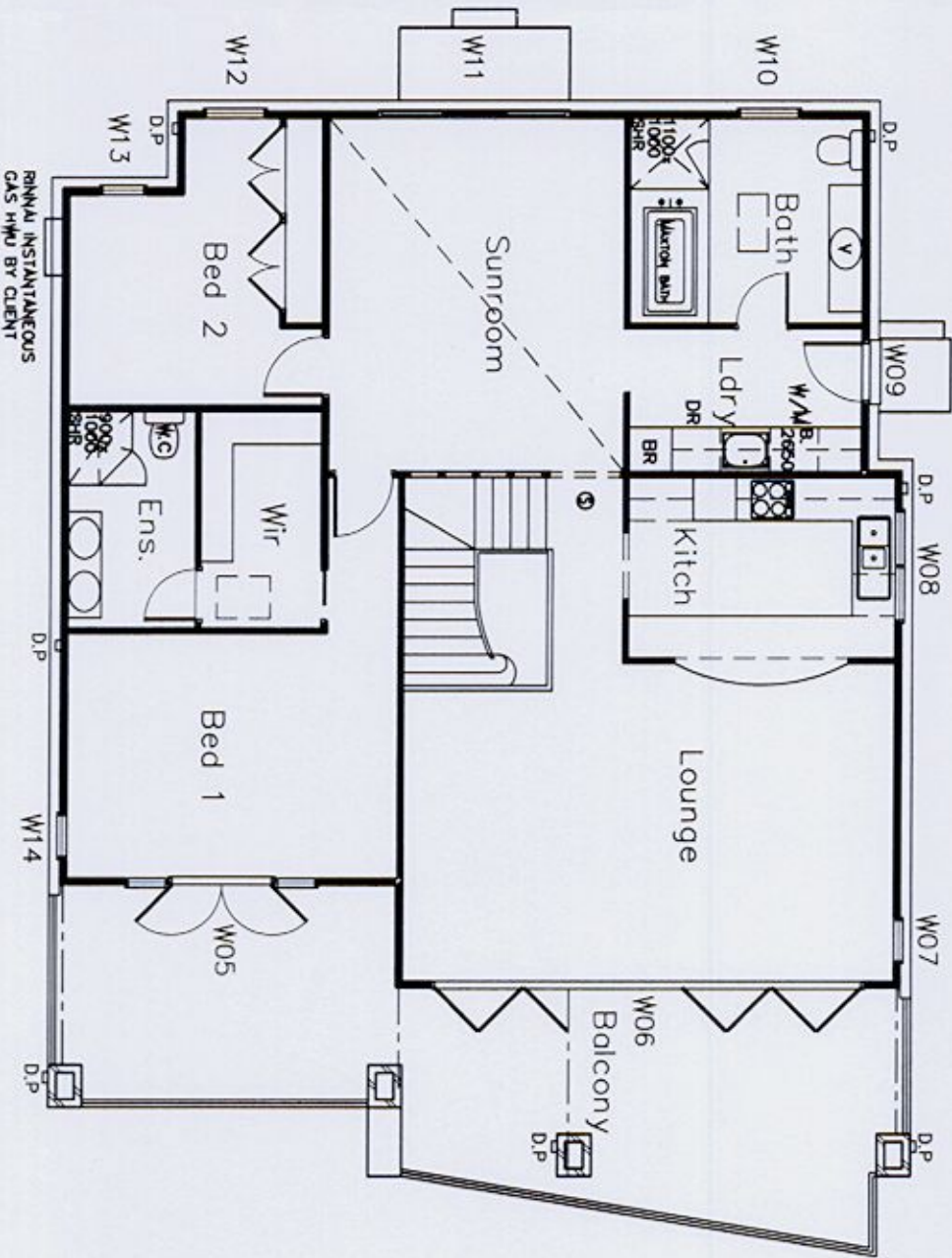
ISSUE



- RINKAI INSTANTANEOUS GAS HWU BY CLIENT AFTER HANDOVER
- RECIRCULATING RANGEHOOD TO KITCHEN WITH MANUAL ON/OFF SWITCH.
- GAS COOKTOP AND ELEC OVEN.



GROUND FLOOR PLAN



FIRST FLOOR PLAN

# ELECTRICAL LAYOUT

LOCALITY SKETCH U.B.D. REFERENCE: P 118, H-8		PROPOSED BRICK VENEER RESIDENCE AT: LOT 108 No.83 PRINCE ALFRED PARADE NEWPORT BEACH FOR: MS NICHOLLS D.P 13457		DRAWN: AR (SRP) CHECKED SCALE 1:100 DATE 19.04.07 10.05.07 25.06.07 26.07.07		AMENDMENTS 1ST DRAW (HH00170A) 2nd DRAW (HH00170B) 3rd DAW (V00170B/01) VARIATIONS (DATED 12-7-07)		REV DRN A AR B AR C AR D AR		WARNING© copyright Huxley Homes Pty Ltd Reproducing or copying of these plans or drawings wholly or in part without prior permission will result in court proceedings.	
PRINCE ALFRED PDE 108		SOIL CLASSIFICATION P TERRAIN CATEGORY 3 (H2) SHELDING MULTIPLIER (H2) TOPOGRAPHICAL MULTIPLIER (H1) WIND DESIGN VELOCITY (V2) N3		HUXLEY HOMES PTY LTD ABN 41106443216 Licenced Builder No. 155010C 10 Philip Street Parramatta NSW 2150 Ph. (02)98429888, Fax (02)98429890		Building Lasting Relationships		JOB No. 23225		ISSUE D	