

CE 2008/0881



Warringah Council

Application For Construction Certificate

Made under the Environmental Planning and Assessment Act 1979,
Section 109 C (1b), 81 A (5)

Address the application to:

- The General Manager
Warringah Council
DX 9118 Dee Why
- Customer Service Centre
Warringah Council
Civic Centre, 725 Pittwater Road
Dee Why NSW 2099

If you need help lodging your application:

- Phone our Customer Service Centre on (02) 9942 2111 or come in and talk to us

To lodge your application:

- Phone quality application checker on 9942 2749 to make an appointment

Office Use Only

June 07

PART 1 Applicants Details

Applicant Details

It is important that we are able to contact you if we need more information.

Please give us as much detail as possible.

Mr Mrs Ms Other

Full Family name (no initials) (or Company)

Full Given names (no initials) (or A.C.N)

Postal address Postcode
We will post all letters to this address

Phone Alternate

Mobile Facsimile

Contact Person
Person who may be contacted to discuss the application during business hours

PART 2 Owner's Consent

Owner's consent

Every owner of the land must sign this form.

If the owner is a company, the form must be signed by an authorised director, and the common seal must be stamped on this form.

Alternatively a letter on company letterhead signed by authorised person/s.

If the property is a unit under strata title or a lot in a community title, then in addition to the owners signature the common seal of the body corporate must be stamped on this form over the signature of the owner and signed by the chairman or secretary of the Body Corporate or the appointed managing agent.

Alternatively a letter on strata management letterhead or minutes signed by Body Corporate Chairman.

Owner

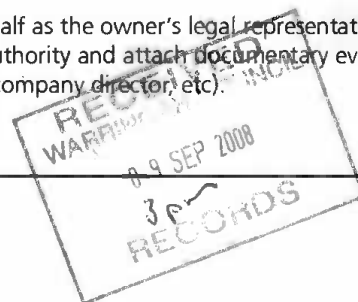
Address Postcode

As owner of the land to which this application relates, I consent to this application. I also consent for authorised council officers to enter the land to carry out inspections relating to this application.

Applicant Signature Date

Without the owner's consent, we will not accept the application. This is a very strict requirement for all applications. Please contact Council for confirmation of land ownership, according to our records.

If you are signing on the owner's behalf as the owner's legal representative, you must state the nature of your legal authority and attach documentary evidence (eg power of attorney, executor trustee, company director etc).



PART 3 Site Details

A. Location of Property Unit No. House No. 5 Street RONALD AVE
We need this to correctly identify the land. Suburb FRESHWATER
Real Property Description (e.g. Lot/DP, etc) LOT 8 D.P. 14564

B. Description of work Type Building Work Subdivision Work
Please describe briefly everything that you want approved by the council, including signs, hours of operation, use, subdivision, demolition etc.
INTERNAL ALTERATIONS, DECK EXTENSION AND NEW DOUBLE GARAGE WITH LANDSCAPING OVER

C. Estimated cost of work Estimated cost of work: \$ 253,000
Must be signed
The estimated cost of development or contract price is subject to a check by Council before final acceptance.
Council reserves the right to seek justification of the estimated cost from the applicant or by an appropriately qualified person.
RICHARD MONCKTON
Richard Monckton BALHONS
NAME (printed), & qualification SIGNATURE of qualified person certifying value of work

D. Development Consent Dev. Consent No. DA (Year) 2008 / (Number) 0624
Date of Determination 5 JUNE 2008

E. Building Code of Australia BCA Classification
This information is nominated on your development consent.

F. Builder Details Name TBA
Licence No.
OR
Owner/builder Permit

PART 4 Checklist & Declaration

All the details sought in the accompanying checklist must be provided.

**THE COMPLETED CHECKLIST MUST BE SUBMITTED WITH THIS APPLICATION.
FAILURE TO PROVIDE THE REQUIRED DOCUMENTATION OF AN ACCEPTABLE STANDARD WILL
RESULT IN YOUR APPLICATION BEING RETURNED.**

Declaration

If the applicant is a company or strata title body corporate, this declaration must be signed by a director or authorised delegate, under common seal.

I apply for approval to carry out the development or works described in this application. I declare that all the information in the application and checklist is, to the best of my knowledge, complete, true and correct.

I also understand that if the information is incomplete the application may be delayed or rejected or more information may be requested.

I acknowledge that if the information provided is misleading any approval granted 'may be void'.

Further I also certify that the plans and specifications submitted in support of this application are fully compliant with the relevant development consent.

I acknowledge that applications with significant variations to the Development Consent may be refused without discussion.

Applicant Signature Richard Monckton Date 3/9/08



Warringah Council

Construction Certificate Checklist

REQUIRED

SUPPLIED

DEVELOPMENT CONSENT COMPLIANCE STATEMENT (3 copies)

An itemised statement of compliance with all relevant conditions of your Development Consent. The conditions of your development consent will specify what additional information is required to lodge a Construction Certificate application.

YES NO - WHY NOT

PLANS (3 copies)

Plans must be drawn to scale in ink and on A4 or A3 size paper. (Larger plans will only be accepted on prior agreement of Council) Free hand, single line or illegible drawings will not be accepted.

YES NO - WHY NOT

- Three coloured copies of all plans must be submitted with your application
- Two A4 copies of each plan and diagrams must be supplied
- The following information should be included on all plans and documents:
 - Applicant's name, block/house/shop/flat number, street/road name, town or locality
 - Lot Number, section number, DP number. (Found on rate notice or land title)
 - Measurement in metric
 - The position of true north
 - Building, or parts of building to be demolished to be indicated in outline
 - Draftsman/Architect name and date
 - Coloured on elevations/sections as colour code below:
 - Brick – Red; Rooftiles – Orange; Concrete – Dark Green; Tile – Purple; Fibre Cement Sheets/Cement Render – Light Green; Glass & Glass Bricks – Light Blue; Sandstone – Light Brown; timber – Yellow; Steel, Galvanised Iron – Dark Blue.

SURVEY PLAN (3 copies)

Information should include:

YES NO - WHY NOT

- Plan to scale preferably 1:100.
- Plan to show all existing structures.
- Plan to show all trees greater than 5m in height &/or 3m in canopy spread. The exact location of any such tree, the RL at their base and their height and canopy spread.
- Location/position of all buildings/structures on adjoining land (showing street number and street address) and ridge heights of those buildings or structures at the boundary.
- Show the levels of the lowest floor, and of any yard or unbuilt on area belonging to that floor, and the levels of the adjacent ground.
- Levels – contour and spot levels (drawn at Australian Height Datum).
- Easements and rights of way (Council & Private).

SITE PLAN (3 copies)

A site plan is a birds-eye view of the existing and proposed development on the site and its position in relation to boundaries and neighbouring developments.

A site plan should include:

YES NO - WHY NOT

- Drawings to scale preferably 1:100.
- Location of the new and existing buildings in relation to site boundaries.
- Location/position of all buildings/structures on adjoining land (showing street number and street address).
- Location of any existing and proposed fences and landscaping features such as swimming pool, retaining walls, paved areas and driveways.
- Relative location of adjoining building.

REQUIRED**SUPPLIED****SITE PLAN (CON'T)**

- Location of any adjoining owner windows facing your development.
- Levels – contour and spot levels.
- Easements and rights of way including common or party walls.
- Existing stormwater drainage location.
- Location of vehicle access and car parking (indicating extent of cut and fill and gradients). Engineering details may be required.
- Zone boundaries if multiple zoning apply.
- Site safety and security fencing during construction.

Measurements including:

- Length, width and site area of land, both existing and proposed.
- Width of road reserve.
- Distance from external walls and outermost part of proposed building to all boundaries.
- Approximate distance from proposed building to neighbouring buildings.

SUBDIVISION, DRAINAGE AND ROADWORKS

If you are going to carry out work to do a subdivision (eg building roads or a stormwater drainage system):

- The details of the existing and proposed subdivision pattern (including the number of lots and the location of roads)
- The details of the consultation you have carried out with the public authorities who provide or will increase the services you will need (like water, road, electricity, sewerage)
- The existing ground levels and the proposed ground levels when the subdivision is completed
- Copies of any compliance certificates on which you rely
- Detailed engineering plans (3 copies). The detailed plans might include the following:
 - Earthworks
 - Roadworks
 - Road pavement
 - Road furnishings
 - Stormwater drainage (including onsite detention works/ water quality control ponds)
 - Water supply works
 - Sewerage works
 - Landscaping works
 - Construction
 - Management run
 - Traffic management plan
 - Soil and water management plan
 - Stormwater or on-site detention drainage plans in accordance with Councils "on-site stormwater detention specification" IIsax or drains model.

FLOOR PLAN (3 copies)

A floor plan is a birds-eye view of your existing and/or proposed layout of rooms within the development. Floor plans should include:

- Drawings to scale preferably 1:100.
- Outline of existing building/development on site (shown dotted).
- Room names, areas and dimensions.
- Window and door locations and sizes.
- Floor level and steps in floor levels. (RL's)
- Access for persons with a disability (if in a new public building).
- Location of plumbing fixtures (where possible).
- Wall structure type and thickness.

YES NO - WHY NOT

 N/A

REQUIRED

SUPPLIED

ELEVATION PLAN (3 copies)

Elevation plans are a side on view of your proposal. Drawings of all effected elevations (north, south, east and west facing) of your development need to be included in your application. Elevation plans should include:

- Drawings to scale preferably 1:100.
- Outline of existing building/development on site (shown dotted).
- Location/position of all buildings/structures on adjoining land (showing street number and street address).
- Exterior cladding type and roofing material/colour.
- Window sizes and location.
- Stormwater drainage pipes (downpipes and gutter).
- Chimneys, flue exhaust vents, duct inlet or outlet.
- Reduced levels (AHD) for Ridge & Floor as a minimum.

YES NO - WHY NOT

SECTION PLAN (3 copies)

A section(s) is a diagram showing a cut through the development at the most typical point. Sections should include:

- Drawings to scale preferably 1:100.
- Outline of existing building/development on site (shown dotted).
- Section names and where they are shown on plan (ie A/A B/B etc).
- Room names.
- Room and window heights.
- Details and chimneys, fire places and stoves.
- Roof pitch and covering.
- Site works, finished and proposed floor & ground levels in RL's (indicate cut, fill and access grades).
- Stormwater or on-site detention drainage plans in accordance with Councils "on-site stormwater detention specification" Isax or drains model.

SPECIFICATIONS AND STRUCTURAL DETAILS (3 copies)

A specification is a written statement that should include as a minimum:

- The construction of the building to specific BCA standards and materials to be used.
- Type and colour of external finishes.
- Whether the materials will be new or second-hand, and if second-hand materials are to be used, particulars.
- The method of drainage, effluent disposal and provision of water supply.
- Any other details relevant to the construction of the building.

Note: Three copies of the specification must be supplied.

ADVERTISING STRUCTURE/SIGN (3 copies)

If you are planning on erecting an advertising structure or sign you will need to supply the following:

- Details of the structure, materials to be used and how it will be fixed to the building.
- Its size, colours, lettering and overall design.
- The proposed location shown on a scale plan and building elevation.
- The amount and extent of light spill.

N/A

FIRE SAFETY MEASURES SCHEDULE (3 copies)

- Proposed alterations to existing building (BCA Classes 2 to 9) to be accompanied by a fire safety measures schedule listing all existing and those proposed to be installed in the building including the standard of performance.
- For a new development (BCA Classes 2 to 9) a fire safety measures schedule listing all those proposed to be installed including the standard of performance.

N/A

REQUIRED**SUPPLIED****RESIDENTIAL FLAT BUILDINGS - DESIGN VERIFICATION**

- Provide a design verification from a qualified designer in which the Development Application was required under clause 50 (1A) of the Environmental Planning and Assessment, Act, 1978. The design quality principles set out Part 2 of State Environmental Planning Policy No - 65 Design Quality of Residential Flat Developments.

YES NO - WHY NOT

 N/A**HOME BUILDING ACT REQUIREMENTS**

In the case of an application for a construction certificate for residential building work (within the meaning of the Home Building Act 1989) attach the following:

- in the case of work by a licensee under the Act:
 - a statement detailing the licensee's name and contractor licence number, and
 - documentary evidence that the licensee has complied with the applicable requirements of the Act, or
- in the case of work done by an other person:
 - a statement detailing the person's name and owner-builder permit number, or
 - a declaration signed by the owner of the land, to the effect that the reasonable market cost of the labour and materials involved in the work is less than the amount prescribed for the purposes of the definition of owner-builder work in section 29 of the Act.

 N/A

A certificate purporting to be issued by an approved insurer under Part 6 of the Home Building Act 1989 to the effect that a person is the holder of an insurance contract issued for the purposes of that Part, is sufficient evidence that the person has complied with the requirements of that Part.



CONFIRMATION OF SUBMISSION OF ALL REQUIRED DOCUMENTATION.

Signature of Architect/Person Preparing Plans
(Confirming submission of all required documentation)

Date

OFFICE USE
Initials of Customer service
officer acceptig application.



Office Use Only - Part A*

Receipt No:	<input type="text"/>	Cashier Type 6600:	<input type="text"/>
Property No:	<input type="text"/>	Picked Up:	<input type="text"/>
C R No:	<input type="text"/>	Receiving Officer:	<input type="text"/>
Notes Number:	<input type="text"/>	Posted:	<input type="text"/>
Permit No:	<input type="text"/>	Inspection by:	<input type="text"/>
Date:	<input type="text"/> Rang: <input type="text"/>	Spoke to:	<input type="text"/> Time: <input type="text"/> pm/am
Level No:	<input type="text"/>	Total Amount Payable:	\$ <input type="text"/>

***Part A is a universal section, please use applicable boxes only**

Credit Card Details - Council Payment Fax No: 9942 2606

Please charge my: American Express Master Card Visa

Card Number: Expiry Date /

Card Holders Name Amount \$

Signature Phone () daytime

Please note that all Credit Card payments are subject to a 1% service fee.



TAX INVOICE RECEIPT

Receipt Date: 8/09/2008
 Receipt No.: 100028787
 Cashier Id: MIGLIJ

TE

R C & L M Monckton C/-
 10/246 Pacific Highway
 CROWS NEST NSW 2065

Please recycle your waste

Description	Property	Application	Reference	Amount
Receipt	132464	Rams	CC2008/0881	-\$1,800.00
	5 Ronald Avenue FRESHWATER NSW 2096			

Total Paid: -\$1,800.00
 Total Paid includes GST of: \$0.00

Amounts Tendered

Cash	Cheque	Db/Cr Card	Money Order	Agency Rec	Total
\$0.00	\$1,800.00	\$0.00	\$0.00	\$0.00	\$1,800.00

TE

PrintMessage

Rounding:	\$0.00
Change:	\$0.00
Nett:	\$1,800.00

Cheques Accepted Subject to Clearance

Credit Card Payments attract a Surcharge of 1%

Printed 8/09/2008 11:14:24 AM

Page 1 of 1

Red Rock design
redrock@zipworld.com.au

5 September 2008

Warringah Council
Civic Centre
725 Pittwater Road
Dee Why NSW 2099

Suite 21/ 50 Yeo Street
Neutral Bay 2089 NSW
P.O. Box 612 Neutral Bay
T - F (02) 9953 6006

**RE : 5 RONALD AVENUE HARBORD 2096 (DA 2008/0624)
Construction Certificate Application Consent Compliance Statement**

In relation to the development consent for the above property, I confirm that the following conditions of consent have been addressed with this construction certificate application ;

Condition 3 (Amended Plans)

Amended plans illustrating deletion of the balustrade above the garage with the area above the garage to remain non-trafficable.

Condition 5 (Stormwater To Be Gravity Fed)

A drainage plan has been submitted illustrating a gravity fed stormwater system that discharges to the Ronald Avenue kerb in accordance with the provisions of AS 3500.3.2

Condition 6 (Sydney Water Approval)

The approved consent plans have been submitted to Sydney Water for approval and stamping and these plans are submitted with this construction certificate application.

Condition 9 (Garage Floor Level)

Plans submitted with this application illustrate the garage floor lowered to RL 38.10

Condition 10 (Vehicle Crossings)

One vehicle crossing five metres wide has been illustrated on the enclosed plans.

Condition 14 (Damage To Public Infrastructure)

A dilapidation survey of council's assets including photographs and written record has been submitted with this construction certificate application.

Condition 19 & 20 (Structural Adequacy & Design Certificate)

A certificate prepared by a qualified structural engineer certifying the structural adequacy of the property and also certifying that the design is in accordance with all relevant Australian Standards has been enclosed with this construction certificate application.

Condition 40 (Protection of Trees)

Details of the protection methods of the remaining Banksia street tree have been provided.

Schedule of Minor Changes To Development Consent Plans

The following minor changes have been made to the construction certificate plans other than those changes requested in the conditions of development consent ;

Ground Floor Plan

- . Window 4 north elevation to bedroom no 3 reduced in size.
- . Proposed window 3 to south elevation bedroom no 4.
- . Door opening reduced to fit existing opening in family room west elevation.
- . High level family room window to north elevation removed.
- . Existing window opening width retained to laundry west elevation.

First Floor Plan

- . Kitchen configuration and south facing window retained without change.
- . Window and door configuration reduced on eastern side to suit existing openings.
- . Deck length reduced to west elevation.
- . Window to bedroom 1 retained on west elevation.
- . Existing concrete tiled hipped roof and awning over entrance retained without change.

Should you require any further information please do not hesitate to contact me.

Yours Sincerely



Richard Monckton
Red Rock design (Applicant)



Waddington Consulting Pty Ltd

ACN 130 522 851
Structural and Civil Engineering
Suite 6, Level 5
22 Central Ave, Manly
P.O. Box 1044
Manly NSW 1655

1 September 2008

P (02) 9976 0070
F (02) 9976 0095

Mr Philip Johnston
5 Ronald Ave
Harbord NSW

c/o
Redrock Design Suite 21, Level 1
5 Yeo St
Neutral Bay NSW 2089

Attention: Mr Richard Mondton

Dear Richard,

**Subject: Alterations & Additions at 5 Ronald Ave, Harbord
Certificate for Design & Structural Adequacy**

Please find attached engineering drawings 7183-S0.00, S0.01, S1.00, S1.01, S1.02, S2.00, S3.00, S3.01 relating to the proposed alterations and additions at 5 Ronald Avenue, Harbord.

I certify that the structural engineering design of the elements shown on the above-mentioned plans has been carried out in accordance with the BCA, relevant Australian Standards and normal engineering practice.

The existing residence consists of double storey full brick and concrete floor slab construction with a tiled roof. At the time of my initial inspection there was some spalling of the concrete and evidence of corrosion of the steel reinforcement. The remediation of the slab including the removal of all the magnesite underlay is included in the works for this project.

Overall, the structure appeared to be generally in good condition for its age and capable of withstanding the additional loading from the proposed additions if constructed in accordance with the above mentioned plans, the Building Code of Australia and relevant Australian Standards.

Please do not hesitate to contact me if you have any queries regarding this project or require any further structural engineering advice.

Yours sincerely,

Simon Waddington
MIEAust CPEng NPER (Structural)
Director
Waddington Consulting Pty Ltd

PROPOSED ALTERATIONS & ADDITIONS

at: 5 RONALD AVENUE, HARBORD 2096 NSW

for PHILIP JOHNSTON

STRUCTURAL DRAWINGS

7183-S0.00.....STRUCTURAL NOTES SHT 1 of 2
 7183-S0.01.....STRUCTURAL NOTES SHT 2 of 2
 7183-S1.00.....GARAGE & ROOF LEVEL SLAB PLAN
 7183-S1.01.....GARAGE DETAILS - SHEET 1 of 2

7183-S1.02.....GARAGE DETAILS - SHEET 2 of 2
 7183-S2.00.....GROUND FLOOR FRAMING PLAN
 7183-S3.00.....FIRST FLOOR & ROOF FRAMING PLANS
 7183-S3.01.....FIRST FLOOR & ROOF FRAMING DETAILS

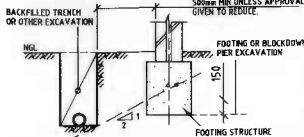
STRUCTURAL NOTES

GENERAL

- G1 THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT.
- G2 THE INFORMATION CONTAINED ON THESE DRAWINGS IS FOR STRUCTURAL ENGINEERING PURPOSES ONLY. IN ALL OTHER MATTERS, THE APPROVED ARCHITECT'S DRAWINGS SHALL TAKE PRECEDENCE. ALL DISCREPANCIES THAT COULD RESULT IN CHANGES TO THE STRUCTURAL DETAILS SHALL BE REFERRED TO THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
- G3 ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT AND CURRENT AUSTRALIAN STANDARDS AND WITH THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITIES.
- G4 DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED. TEMPORARY BRACING SHALL BE PROVIDED BY THE BUILDER TO KEEP THE WORKS AND EXCAVATIONS STABLE AT ALL TIMES.
- G5 THE BUILDER SHALL GIVE 48 HOURS NOTICE FOR ALL ENGINEERING INSPECTIONS. UNLESS NOTED OTHERWISE ALL LEVELS ARE IN METRES AND ALL DIMENSIONS ARE IN MILLIMETRES. ENGINEER'S DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS. ALL DIMENSIONS SHOWN SHALL BE VERIFIED BY THE BUILDER ON SITE.
- G6 THE STRUCTURAL COMPONENTS DETAILED ON THESE DRAWINGS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS AND LOCAL GOVERNMENT ORDINANCES.
- G7 WIND LOADS ARE DETERMINED IN ACCORDANCE WITH AS4549 FOR WIND CLASSIFICATION 'R0' WITH A TILED ROOF.

FOUNDATIONS & EARTHWORKS

- F1 FOUNDATIONS HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING INTENSITY OF 600kPa ON WEATHERED SANDSTONE BEDROCK. FOUNDATION MATERIAL TO BE CONFIRMED ON SITE. STEEPENED RAFT SLAB FOOTING DESIGNED FOR A CLASS 'A' SITE IN ACCORDANCE WITH AS 2870.
- F2 TOPSOIL INCLUDING GRASS ROOTS IS TO BE REMOVED FROM THE AREA TO SUPPORT SLABS AND FOOTINGS. FOOTINGS TO BE CONSTRUCTED AND BACKFILLED AS SOON AS POSSIBLE FOLLOWING EXCAVATION TO AVOID SOFTENING OR DRYING OUT BY EXPOSURE. TRENCHES TO BE DEWATERED & CLEANED OUT PRIOR TO CONCRETE PLACEMENT.
- F3 UNLESS OTHERWISE APPROVED BY THE ENGINEER, THE LIMITS OF EXCAVATIONS NEAR EXISTING FOOTINGS SHALL BE AS SET OUT IN THE DETAIL BELOW.



PRIOR TO ANY EXCAVATION NEAR EXISTING FOOTINGS, THE BUILDER SHALL DETERMINE THE DEPTH OF FOUNDED OF EXISTING FOOTINGS BY LOCAL INVESTIGATORY EXCAVATION. GENERAL EXCAVATION SHALL NOT PROCEED BELOW A LEVEL 100mm ABOVE THE UNDERSIDE OF EXISTING FOOTINGS UNTIL INSTRUCTION IS OBTAINED FROM THE ENGINEER ON PROCEDURES & PRECAUTIONS TO BE TAKEN.

- F4 CONTROLLED FILL SAND FILL UP TO 0.6m DEEP, WELL COMPACTED IN NOT MORE THAN 300mm THICK LAYERS BY A VIBRATING PLATE OR VIBRATING ROLLER. NON-SAND FILL UP TO 1.5m DEEP, WELL COMPACTED IN LAYERS NOT MORE THAN 150mm DEEP BY A MECHANICAL ROLLER. CLAY FILL SHALL BE MOIST DURING COMPACTATION.

REINFORCEMENT

- R1 ALL REINFORCING BARS SHALL BE GRADE 500M TO AS4671 UNLESS NOTED OTHERWISE. ALL WELLS SHALL BE GRADE 500M TO AS4671 AND SHALL BE SUPPLIED IN FLAT SHEETS.
- R2 REINFORCEMENT NOTATION SHALL BE AS FOLLOWS IN THE FOLLOWING ORDER:
 NUMBER OF BARS IN GROUP
 BAR GRADE AND TYPE
 1700x250
 SPACING in mm
 NOMINAL BAR SIZE in mm
- R3 REINFORCEMENT SYMBOLS:
 'N' - DENOTES GRADE 500 N BARS TO AS4671 GRADE N
 'W' - DENOTES GRADE 250 W HOT ROLLED PLAIN BARS TO AS1902
 'F' - DENOTES HARD-DRAWN WIRE REINFORCING FABRIC TO AS4671
 'M' - DENOTES HARD-DRAWN PLAIN WIRE TO AS1902
 'SL' or 'R1' - DENOTES WELDED GRADE 500 REINFORCING FABRIC TO AS 4671
- R4 SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN POSITIONS SHOWN OR OTHERWISE APPROVED IN WRITING BY THE ENGINEER. LAPS SHALL BE IN ACCORDANCE WITH AS 3603 AND NOT LESS THAN THE DEVELOPMENT LENGTH FOR EACH BAR AS SHOWN IN THE TABLE BELOW.

BAR DIA	SPLICE SCHEDULE	
	TENSION SPLICE LENGTH	COMPRESSION SPLICE LENGTH
N 12	47.5	47.5
N 16	75.0	60.0
N 20	100.0	75.0
N 25	125.0	90.0

- R5 REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY IN TRUE PROJECTION.
- R6 WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE ENGINEER.
- R7 FABRIC SHALL BE LAPPED 2 TRANSVERSE WIRES PLUS 50mm. BUNDLED BARS SHALL BE TIED TOGETHER AT 30 BAR DIAMETER CENTRES WITH 3 WRAPS OF THE WIRE.
- R8 SLAB REINFORCEMENT SHALL EXTEND AT LEAST 65mm ONTO MASONRY SUPPORT WALLS AND 50% OF BOTTOM REINFORCEMENT SHALL BE COGGED TO ACHIEVE ANCHORAGE AT SIMPLY SUPPORTED ENDS. IF THIS CANNOT BE ACHIEVED DUE TO COVER REQUIREMENTS THEN ALL THE BARS SHALL BE COGGED. FOR FABRIC THE LAST WELDED CROSS ROD SHALL BE LOCATED OVER THE WALL AND 50mm MINIMUM BEYOND THE FACE OF THE WALL.

REINFORCEMENT Cont

- R9 WHERE TRANSVERSE REINFORCEMENT IS NOT SHOWN PROVIDE NO.400 SPACED WHERE NECESSARY AND LAP WITH MAIN BARS 400mm UNLESS NOTED OTHERWISE. NO OPENINGS IN BEAMS OR COLUMNS SHALL BE MADE OTHER THAN THOSE SPECIFICALLY DETAILED. FOR OPENINGS IN SLABS UP TO 300mm SQUARE, THE REINFORCEMENT SHALL BE DISPLACED TO THE SIDES. FOR OPENINGS BETWEEN 300mm SQUARE AND 600mm SQUARE, THE REINFORCEMENT CROSSING THE PROPOSED OPENING SHALL BE CUT AND THE HOLES TAPPED USING 200 BARS TOP AND BOTTOM EXTENDING 150mm PAST EACH SIDE OF OPENING. OPENINGS LARGER THAN 600mm SQUARE SHALL BE DETAILED BY THE ENGINEER.
- R10 JOGGLES TO BARS SHALL COMPRISE A LENGTH OF 10 BAR DIAMETERS BETWEEN BEGINNING AND END UP AN OFFSET OF 1 BAR DIAMETER.
- R11 ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON MILD STEEL PLASTIC TIPPED CHAIRS, PLASTIC CHAIRS OR CONCRETE CHAIRS AT NOT GREATER THAN 1 METRE CENTRES BOTH WAYS, AND 600 EACH WAY FOR FABRIC. WHEN POURED ON GROUND AS FORTHWITH PROVIDE PLATES UNDER ALL BAR CHAIRS. PLASTIC TIPPED STEEL CHAIRS SHALL NOT BE USED ON EXPOSED FACES IN EXPOSURE CLASSIFICATION B1, B2 AND C ONLY PLASTIC OR CONCRETE CHAIRS.
- R12 SITE BENDING OF REINFORCEMENT SHALL BE AVOIDED IF POSSIBLE. WHERE SITE BENDING IS UNAVOIDABLE IT SHALL BE CARRIED OUT COLD, WITHOUT THE APPLICATION OF HEAT, AND IN ACCORDANCE WITH THE PRACTICE NOTE 'R10' OF THE STEEL REINFORCEMENT INSTITUTE OF AUSTRALIA USING MECHANICAL BENDING TOOLS.

ISSUED FOR CONSTRUCTION

The information contained on this drawing has been prepared for the exclusive use of the Client for this project. No liability or responsibility is accepted for use of this information by any third party or for any other project.

ISSUE	DESCRIPTION	BY	DATE
B	ISSUED FOR CONSTRUCTION	J. SW	29.09.06
A	ISSUED FOR TENDER PURPOSES ONLY	J. SW	25.02.06

Red Rock Design
 Suite 21, Level 1
 50 York Street, Neutral Bay NSW 2096
 PO Box 917, Neutral Bay NSW 2096
 Tel: Fax: (02) 953 0002
 Email: rredrock@redrock.com.au

Waddington Consulting Pty Ltd
 Chartered Professional Engineer
 5/11 Sussex and Civil Engineering Consultants
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PROJEC: PROPOSED ALTERATIONS & ADDITIONS
at: 5 RONALD AVENUE, HARBORD 2096 NSW
for: PHILIP JOHNSTON
DRAWING TITLE: STRUCTURAL NOTES-SHT 1 of 2

DESIGN	S.W.	DATE	JUNE 2006
DRAWN	J.C. <td>SCALE</td> <td>1:1</td>	SCALE	1:1
CHECKED	J.S.W. <td>DATE</td> <td>24.09.06</td>	DATE	24.09.06
DATE			
DATE			

7183-S0.00

CONCRETE

- C1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 CURRENT EDITION WITH AMENDMENTS. READY-MIX CONCRETE SUPPLY SHALL COMPLY WITH AS 1339. ALL CEMENT TO BE TYPE S1 PORTLAND.
- C2 MAXIMUM DRYING SHRINKAGE SHALL BE 600 MICRONS AT 56 DAYS. PROJECT CONTROL TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS 1973. NO ADJUSTIVES SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING.
- C3 CLEAR CONCRETE COVER TO ALL REINFORCEMENT SHALL BE AS FOLLOWS UNLESS SHOWN OTHERWISE.

LOCATION	CONCRETE GRADE (MPa)	CURT AGAINST GROUND	CURT IN FORMS WITH EXPOSURE	CURT IN FORMS & NOT EXPOSED
FOOTINGS	25	50	50	30
SLABS ON GROUND	32	40	40	25
SUSPENDED SLABS	32	40	40	25

- NOTE: WHERE CONCRETE IS POURED ON A VAPORPROOF MEMBRANE 0.2 mm MINIMUM THICKNESS, THE COVER TO CONCRETE CAST AGAINST GROUND MAY BE REDUCED BY 10 mm.
- C4 NO ADJUSTIVES OTHER THAN LOW RANGE WRA SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING.
 - C5 DEPTHS OF BEARS ARE GIVEN FIRST AND INCLUDE SLAB THICKNESS.
 - C6 CONCRETE SIZES SHOWN DO NOT INCLUDE THICKNESSES OF APPLIED FINISHES. FINISHES, NO FINISH WHICH DECREASES COVER IS ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
 - C7 FOR CHAMFERS, DRIP GROOVES, REGLES, ETC REFER TO ARCHITECT'S DETAILS, MAINTAIN COVER TO REINFORCEMENT AT THESE DETAILS.
 - C8 NO HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ENGINEER.
 - C9 CONSTRUCTION JOINTS AND CLOSING STRIPS SHALL BE USED TO CONTROL AND REDUCE SHRINKAGE CRACKING IN WALLS AND FLOORS, AND COLO JOINTS IN LARGE POURS. THESE JOINTS SHALL BE PLANNED IN ADVANCE, TO THE APPROVAL OF THE ENGINEER.
 - C10 THE FINISHED CONCRETE SHALL BE A DENSE HOMOGENEOUS MASS, COMPLETELY FILLING THE FORMWORK THOROUGHLY ENCASED THE REINFORCEMENT AND FREE OF STONE POCKETS. ALL CONCRETE INCLUDING SLABS ON GROUND AND FOOTINGS SHALL BE COMPACTED WITH MECHANICAL VIBRATORS.
 - C11 CURING OF ALL CONCRETE IS TO BE ACHIEVED BY KEEPING SURFACES CONTINUOUSLY WET FOR A PERIOD OF 7 DAYS, AND PREVENTION OF LOSS OF MOISTURE FOR A TOTAL OF 7 DAYS FOLLOWED BY A GRADUAL DRYING BUT APPROVED SPRAYED ON CURING COMPOUNDS COMPLYING WITH AS 3795 MAY BE USED WHERE NO FLOOR FINISHES ARE PROPOSED. POLYETHYLENE SHEETING OR WET Hessian MAY BE USED IF PROTECTED FROM WIND AND TRAFFIC.
 - C12 CONCRETE PIPES, ETC, SHALL ONLY BE LOCATED IN THE MIDDLE ONE THIRD OF SLAB DEPTH AND SPACED AT NOT LESS THAN 3 DIAMETERS AND SHALL NOT BE PLACED WITHIN THE REINFORCEMENT COVER.
 - C13 REPAIRS TO CONCRETE SHALL NOT BE ATTEMPTED WITHOUT THE PERMISSION OF THE ENGINEER.

STRUCTURAL STEEL

- S1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 4100 AND AS 1554 EXCEPT WHERE VARYED BY THE CONTRACT DOCUMENTS.
- S2 UNLESS NOTED OTHERWISE ALL MATERIAL SHALL BE:
 - GRADE 250 HOT-ROLLED PLATES COMPLYING WITH AS 3678.
 - GRADE 250 HOT-ROLLED PLATS, I.F.C. TUB. ANGLES, BOLTS OR 125x125x10 AND SMALLER COMPLYING WITH AS 3673.
 - GRADE 300PLUS UB, UPE AND ANGLES 125x125x10 OR 150x100x10 AND ANGLES.
 - GRADE 300 WB, W/C COMPLYING WITH AS 3679.
 - GRADE 250 HPS (HPS COMPLYING WITH AS 1162).
- S3 THROUGH COPIES OF WORKSHOP FABRICATION DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AT LEAST 7 DAYS PRIOR TO COMMENCEMENT OF FABRICATION AND PERMISSION TO USE OBTAINED PRIOR TO FABRICATION. PERMISSION TO USE DOES NOT RELIEVE THE BUILDER OF THE FULL RESPONSIBILITY FOR DIMENSIONS, FIT AND COMPLIANCE WITH ARCHITECTURAL AND ENGINEERING DRAWINGS.
- S4 BOLTS:
 - 4.6/5.8 COMMERCIAL BOLTS OF GRADE 4.6 TO AS 1191, S/NIG TIGHTENED 8.8/5.8 HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS 1252, S/NIG TIGHTENED.
 - 8.8/10 HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS 1252 FULLY TENSIONED TO AS 4300 AS BEARING JOINT.
 - 8.8/11 HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS 1252 FULLY TENSIONED TO AS 4300 AS A FRICTION JOINT WITH FACING SURFACES LEFT UNDATED.
 - ALL BOLTS SHALL BE HDG GRADE 8.8 UNLESS NOTED.
 - NO CONNECTION SHALL HAVE LESS THAN 2 BOLTS.
 - ALL BOLTS, NUTS & WASHERS TO BE GALVANIZED.
 - TB AND TB BOLTS TO BE INSTALLED USING APPROVED LOAD INDICATING WASHERS, OR BY TURN OF NUT CONTROL OF TENSIONING.
- S5 WELDING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS 1554.1. WELDING CONSUMABLES SHALL BE 4430X OR WOKX UNDO. ALL WELD SHALL BE 6 mm MIN SP CATEGORY U.N.O. CPW SHALL BE SP CATEGORY U.N.O. INSPECTION SHALL BE CARRIED OUT TO AS 1554.1 ALL GP/SP WELDS SHALL BE VISUALLY SCANNED. SP WELDS ALLOW FOR 10% VISUAL EXAMINATION UNDO. BUT WELDS SHALL BE COMPLETE PENETRATION WELDS TO AS 1554.
- S6 ALL DETAILS, GAUGE LINES ETC WHERE NOT SPECIFICALLY SHOWN ARE TO BE IN ACCORDANCE WITH AS DESIGN CAPACITY TABLES FOR STRUCTURAL STEEL AND AS STANDARDIZED STRUCTURAL CONNECTIONS. PLATES TO BE 10mm THICK EX-STANDARD SQUARE EDGE FLATS UNDO.
- S7 PROVIDE SEAL PLATES TO ALL HOLLOW SECTIONS. PROVIDE WET HOLES TO HOLLOW MEMBERS & DRAIN HOLES TO ALL MEMBERS TO BE HOT DIP GALVANIZED.
- S8 IT IS THE BUILDER'S RESPONSIBILITY TO ENSURE THAT STEELWORK IS SECURELY TEMPORARILY BRACED AS NECESSARY TO STABILISE THE STRUCTURE DURING ERECTION.
- S9 STRUCTURAL STEELWORK SHALL HAVE THE FOLLOWING SURFACE TREATMENT IN ACCORDANCE WITH THE SPECIFICATION:

ELEMENT	SURFACE CLEANING	PROTECTIVE COATING
INTERNAL	POWER WIRE BRUSHING or ABRASIVE GRIIT BLASTING	1 COAT INHIBITIVE ALLOYD PRIMER OR EQUIV. + TOP COAT ALL WEATHER GLOSS ACRYLIC
EXTERNAL	ABRASIVE GRIIT BLASTING (CLASS 2.5) or PICKLING	1 COAT BORNGANG ZINC SEALATE PRIMER OR EQUIV. + TOP COAT ALL WEATHER GLOSS ACRYLIC WITH UV PROTECTOR
EXTERNAL (ALU)	PICKLING	HOT DIP GALVANIZED

- S10 THE BUILDER SHALL PROVIDE ALL CLEATS AND DRILL ALL HOLES NECESSARY FOR FIXING STEEL TO STEEL AND TIMBER TO STEEL WHETHER OR NOT DETAILED ON THE DRAWINGS.
- S11 THE FABRICATION AND ERECTION OF THE STRUCTURAL STEELWORK SHALL SUPERVISED BY A QUALIFIED PERSON EXPERIENCED IN SUCH SUPERVISION, ENSURING ALL REQUIREMENTS OF THE DESIGN ARE MET.
- S12 ALL BEAMS AND RAFTERS SHALL BE FABRICATED AND ERECTED WITH NATURAL CAMBER UP.
- S13 ALL MEMBERS SHALL BE SUPPLIED IN SINGLE LENGTHS.
- S14 STRIKES SHALL ONLY BE PERMITTED IN LOCATIONS SHOWN ON THE STRUCTURAL DRAWINGS.

BLOCKWORK

- B1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 2900.
- B2 STRENGTHING OF MASONRY UNITS AND TYPE OF MORTAR SHALL BE AS FOLLOWS:
 - CHARACTERISTIC UNCOMPRESSED COMPRESSIVE STRENGTH $f_{cu} = 15 \text{ MPa}$
 - MORTAR CEMENT : LIME : SAND = 1 : 1 : 2.5-3
- B3 ONLY LOAD BEARING MASONRY WALLS ARE SHOWN UNDER CONCRETE SLABS.
- B4 OTHER THAN REINFORCED CONCRETE BLOCKWORK, MASONRY SUPPORTING SLABS AND BEAMS SHALL BE TROWELLED SMOOTH WITH MORTAR FILLING ALL JOINTS. TWO LAYERS OF HALTHROD SHALL BE PLACED FULL WIDTH ACROSS SUCH LOAD BEARING SURFACES EXCEPT WHERE PROPRIETARY BEARING STRIPS IS NOTED OR ALTERNATIVE DETAIL IS DOCUMENTED. THE HEADS OF LOAD BEARING WALLS SHALL NOT EXTEND ABOVE THE SOFFIT OF THE CONCRETE SLAB ABOVE.
- B5 ALL MASONRY SUPPORTING OR SUPPORTED BY CONCRETE FLOORS SHALL BE PROVIDED WITH VERTICAL JOINTS TO MATCH ANY CONTROL JOINTS IN THE CONCRETE.
- B6 NO ENCHES OR RECESSES ARE PERMITTED IN LOAD BEARING MASONRY WITHOUT THE APPROVAL OF THE ENGINEER.
- B7 PROVIDE VERTICAL CONTROL JOINTS AT 10 m MAX CENTRES GENERALLY, AND 5 m MAX FROM CORNERS FOR OUTCORNERS AND UNREINFORCED BLOCKWORK.
- B8 REFER TO CONCRETE NOTES FOR DE-PROPPING PRIOR TO CONSTRUCTION OF MASONRY WALLS ON SUSPENDED SLABS.
- B9 REINFORCED CONCRETE BLOCKWORK SHALL COMPLY WITH THE FOLLOWING, UNLESS NOTED:
 - PROVIDE CLEARANCE HOLES 100 mm SQUARE MINIMUM AT BASE OF ALL WALLS AND ROD CORER HOLES TO REMOVE PROTRUDING MORTAR FINS PRIOR TO GROUTING.
 - CORE FILLING GROUT SHALL BE - P_c = 20 MPa
 - MINIMUM CEMENT CONTENT = 200 kg/m³
 - SLOPE = 20 : 100
 - REINFORCEMENT PROJECTING FROM FOUNDATION OR SLABS INTO CORES, SHALL BE SET ACCURATELY IN PLACE USING TEMPLATES TO ALIGN WITH THE CENTRE OF THE LENGTH OF CORES AND WITH COVER AS NOTED, WHERE HORIZONTAL BARS ARE INDICATED, THE WEBS OF THE BLOCKS BELOW THE BARS SHALL BE CUT DOWN TO ACCOMMODATE THE BARS.
 - GROUT ALL CORES IN REINFORCED BLOCKWORK UNLESS OTHERWISE NOTED. HEIGHT OF BLOCKWORK TO BE GROUTED ON ONE DAY SHALL BE 2400mm.
 - GROUT SHALL BE PLACED IN LIFTS OF 1200mm MAXIMUM AND COMPACTED BY POKER VIBRATOR. A SHORT TIME SHOULD ELAPSE BETWEEN SUCCESSIVE LIFTS TO ALLOW PLASTIC SETTLEMENT TO OCCUR.
 - PROVIDE 50 mm COVER FROM THE OUTSIDE OF THE BLOCKWORK UNLESS NOTED.
- B10 BACKFILL TO RETAINING WALLS SHALL BE FREE DRAINING GRANULAR MATERIAL. PROVIDE SUBSO. DRAIN AT BASE OF WALL. DO NOT BACKFILL UNTIL 14 DAYS AFTER GROUTING, OR IF APPLICABLE, AFTER RESTRAINING SLAB CURE HAS BEEN PROVIDED AND CURED FOR 7 DAYS. BACKFILL SHALL BE COMPACTED TO 90% STANDARD MANNING DRY DENSITY AT OPTIMUM MOISTURE CONTENT ± 2%.

BRICKWORK

- B1 ALL MATERIALS AND WORKMANSHIP TO BE TO AS 3700.
- B2 ONLY LOAD BEARING MASONRY WALLS ARE SHOWN UNDER CONCRETE SLABS.
- B3 MINIMUM CLAY BRICK COMPRESSIVE STRENGTH TO BE 20MPa. RATE OF ABSORPTION TO BE LESS THAN 150G/200MM AT THE TIME OF LAYING. CLAY BRICKS SHALL BE AT LEAST 30 DAYS OUT OF THE KILN AND WILL OBTAIN FULL WATER-WEIGHT UNLESS PROOF OF A MOISTURE EXPANSION LESS THAN 0.08MM IS PRODUCED. UNLESS NOTED OTHERWISE MORTAR FOR CLAY BRICKWORK IS TO BE CEMENT LIME SAND IN THE RATIO OF 1 : 1 : 6 AND THE WATER RETENTIVITY MUST BE AT LEAST 90%. NO ADJUSTIVES SHALL BE USED UNLESS APPROVED IN WRITING. BLOCKWORK IS TO BE ADEQUATELY CURED PRIOR TO CONSTRUCTION OF SUSPENDED SLABS OVER.
- B4 UNLESS NOTED OTHERWISE CLAY BRICKWORK IS TO CONTAIN MOVEMENT JOINTS 2000 WIDE AT MAXIMUM SPACING OF 10M (5M IN INDUSTRIAL USE) AND ARE TO CONTAIN A 10mm TYP IMPREGATED POLYURETHANE STRIP WHERE INTERNAL JOINTS IS INTERRUPTED BY STEEL FRAMES THE ABOVE JOINTING APPLIES TO EXTERNAL JOINTS ONLY.
- B5 ALL MASONRY SUPPORTING OR SUPPORTED BY CONCRETE FLOORS SHALL BE PROVIDED WITH VERTICAL JOINTS TO MATCH ANY CONTROL JOINTS IN THE CONCRETE.
- B6 NON-LOAD BEARING WALLS BUILT PRIOR TO POURING CONCRETE SHALL BE SEPARATED FROM CONCRETE ABOVE BY 16mm THICK CLOSED CELL POLYSTYRENE STRIP. WHERE BUILT AFTER CONCRETE IS POURED LEAVE 12mm CLEAR OF CONCRETE SOFFIT.
- B7 BRICKWORK SUPPORTING SLABS AND BEAMS SHALL BE TROWELLED SMOOTH WITH MORTAR FILLING ALL JOINTS. TWO LAYERS OF HALTHROD SHALL BE PLACED FULL WIDTH ACROSS SUCH LOAD BEARING SURFACES EXCEPT WHERE PROPRIETARY BEARING STRIP IS NOTED OR ALTERNATIVE DETAIL IS DOCUMENTED. THE HEADS OF LOAD BEARING WALLS SHALL NOT EXTEND ABOVE THE SOFFIT OF THE CONCRETE SLAB ABOVE.
- B8 ALL DOUBLE SKIN SOLID WALLS SUCH AS 230mm THICK BRICKWORK SHALL BE BONDED BY A HEADER COURSE EVERY 4th COURSE.

TIMBER

- T1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 1684 AND AS 1724.1.
- T2 TIMBER TO BE SEASONED & MINIMUM GRADE F7 UNLESS NOTED OTHERWISE.
- T3 ALL BOLTS, NUTS AND WASHERS FOR TIMBER CONNECTIONS TO BE HOT-DIP GALVANIZED & GRADE 4.6 WHERE POSSIBLE. BOLTS SHALL BE RETIGHTENED AT THE END OF THE MAINTENANCE PERIOD. BOLT HOLES SHALL BE DRILLED NO MORE THAN 1mm OVERSIZE. WASHERS UNDER ALL HEADS AND NUTS SHALL BE AT LEAST 2.5 x BOLT DIA.
- T4 MINIMUM BOLT SPACING BETWEEN TO BE 3x BOLT DIAMETER. MIN EDGE DISTANCE FOR BOLTED CONNECTIONS TO BE 4x BOLT DIAMETER. MIN END DISTANCE FOR BOLTED CONNECTIONS TO BE 5x BOLT DIAMETER.
- T5 MINIMUM TIMBER CONNECTIONS TO BE MINIMUM FINISHES IN ACCORDANCE WITH AS 1684 UNLESS NOTED OTHERWISE.
- T6 THE DOWN SHALL BE IN ACCORDANCE WITH AS 1684 SECTION 9 UNLESS NOTED OTHERWISE.
- T7 ALL TIMBER JOINTS AND NOTICES ARE TO BE 100mm MINIMUM AWAY FROM LOOSE JOINTS, SEVERE SLOPING GRAIN, GUM VENTS OR OTHER MINOR DEFECTS.
- T8 ALL TIMBER TO BE EITHER PLANTATION TIMBERS, TIMBER PRODUCTS MANUFACTURED FROM SUSTAINABLY MANAGED FORESTS OR RECYCLED TIMBERS.
- T9 EXTERNAL TIMBER SHALL BE EITHER HARDWOOD DURABILITY CLASS 1 OR 2 TO AS 1702 OR IMPREGNATED PINE GRADE F7, PRESSURE TREATED TO AS 1684 AND RE-THIRD PRIOR TO USE. SUPPLEMENTARY TREATMENT SHALL BE APPLIED TO ALL CUT SURFACES. SUPPLY SUPPORTING DOCUMENTATION FOR PRESERVATIVE TREATMENT.

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ISSUE	DESCRIPTION	BY	DATE
A	ISSUED FOR CONSTRUCTION	K SW	28.08.09
B	ISSUED FOR TENDER PURPOSES ONLY	P SW	23.07.09

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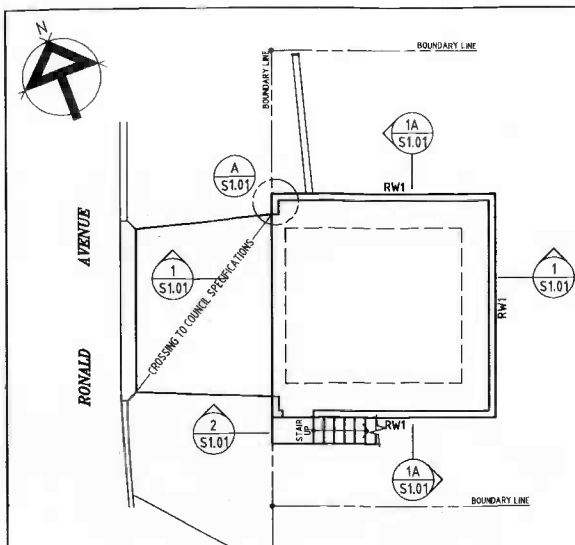
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PROJECT: **PROPOSED ALTERATIONS & ADDITIONS at 5 RONALD AVENUE, HARBDOR 2096 NSW for: PHILIP JOHNSTON**

STRUCTURAL NOTES-SHT 2 of 2

ISSUED FOR CONSTRUCTION

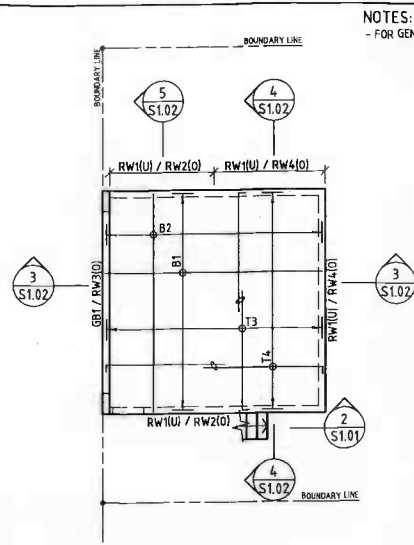
DESIGN	E.V.	DATE	JOB#	FILE#
BRANCH	T.T.	SCALE		
REVISION				
DATE				



GARAGE LEVEL SLAB PLAN

SCALE 1:100

1. ALL SLABS TO BE 110mm THICK THROUGHOUT, UNLESS NOTED OTHERWISE AND POURED OVER VAPOURPROOF MEMBRANE OVERLYING 20mm NOMINAL SAND BLINDING LAYER
2. ALL SLABS TO BE REINFORCED WITH SLB2 FABRIC TOP THROUGHOUT, UNLESS NOTED OTHERWISE, 30mm TOP & SIDE COVERS, PLUS EXTRA BARS AS SHOWN ON PLAN & SECTIONS.



ROOF LEVEL SLAB PLAN

SCALE 1:100

1. ALL SLABS TO BE 270mm THICK THROUGHOUT, UNLESS NOTED OTHERWISE.
2. REINFORCEMENT
ALL BARS NOT TAGGED IN LAYER (B1) TO BE N16-200
ALL BARS NOT TAGGED IN LAYER (B2) TO BE N16-200
ALL BARS NOT TAGGED IN LAYER (T3) TO BE N12-200
ALL BARS NOT TAGGED IN LAYER (T4) TO BE N12-200
3. REINFORCEMENT LAYERS:
B1..... DENOTES BOTTOM BARS LAID FIRST.
B2..... DENOTES BOTTOM BARS LAID SECOND.
T3..... DENOTES TOP BARS LAID THRD.
T4..... DENOTES TOP BARS LAID LAST.
4. DENOTES
(U)..... STRUCTURE UNDER
(O)..... STRUCTURE OVER

NOTES:
- FOR GENERAL NOTES REFER DRG No 7183-S0.00 & S0.01

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ISSUE	DESCRIPTION	BY	APP	DATE
B	ISSUED FOR CONSTRUCTION	JL	SWH	28.09.08
A	ISSUED FOR TENDER PURPOSES ONLY	JL	SWH	18.07.08

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PROJECT:
PROPOSED ALTERATIONS & ADDITIONS
at: **5 RONALD AVENUE, HARBORD 2096 NSW**
for: **PHILIP JOHNSTON**

DESIGN	S.W.	DATE	ISSUED
DRAWN	JL	SCALE	1:100
CHECKED	JL	DATE	18.07.08
SIGNED			

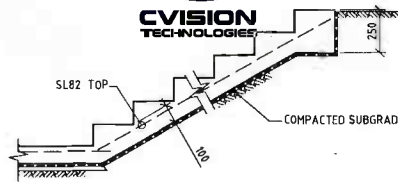
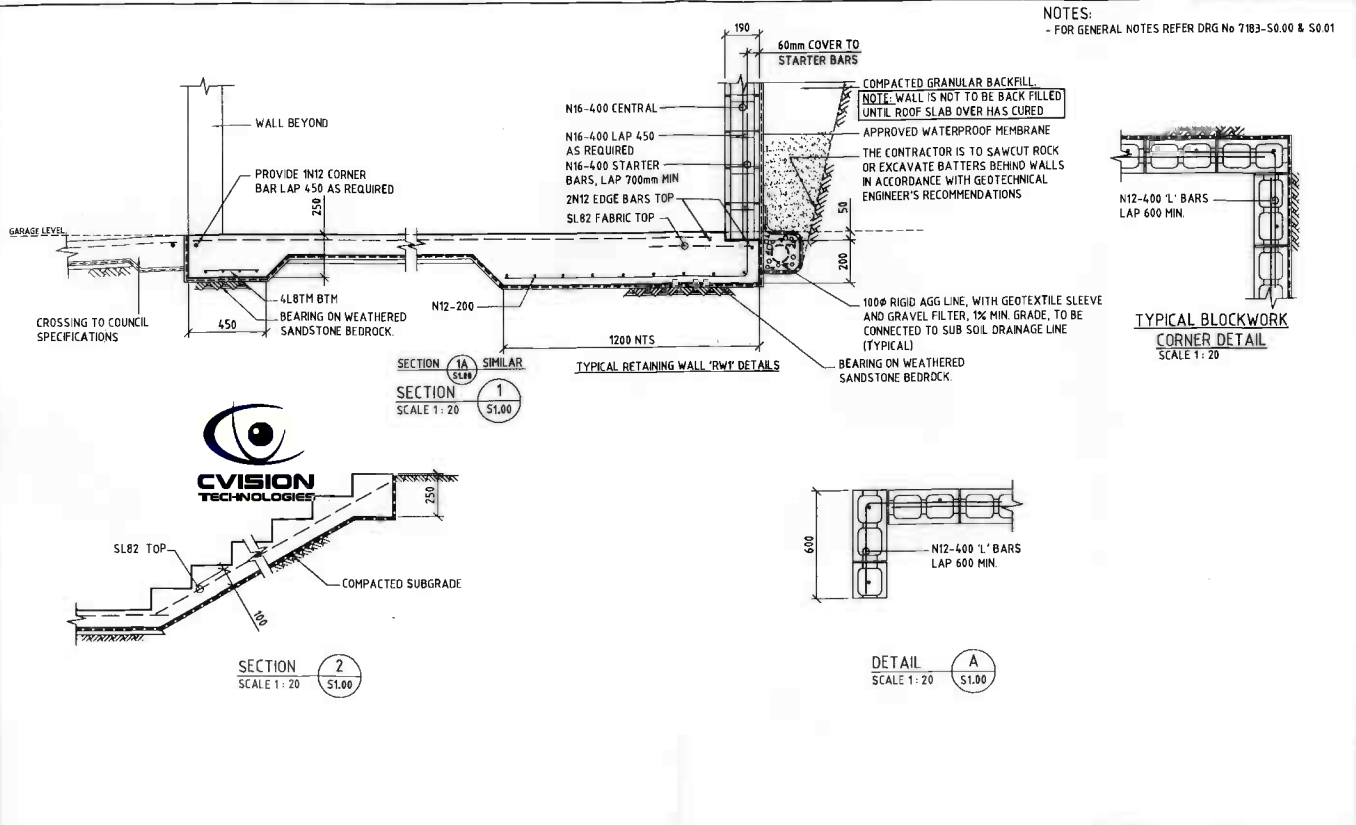
DRAWING TITLE:
GARAGE & ROOF LEVEL SLAB PLAN

DRAWING NO:
7183-S1.00

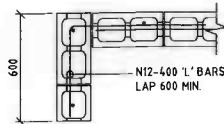
REV:
B

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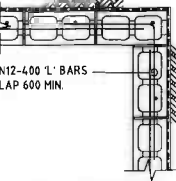
NOTES:
- FOR GENERAL NOTES REFER DRG No 7183-S0.00 & S0.01



SECTION 2
SCALE 1:20
S1.00



DETAIL A
SCALE 1:20
S1.00

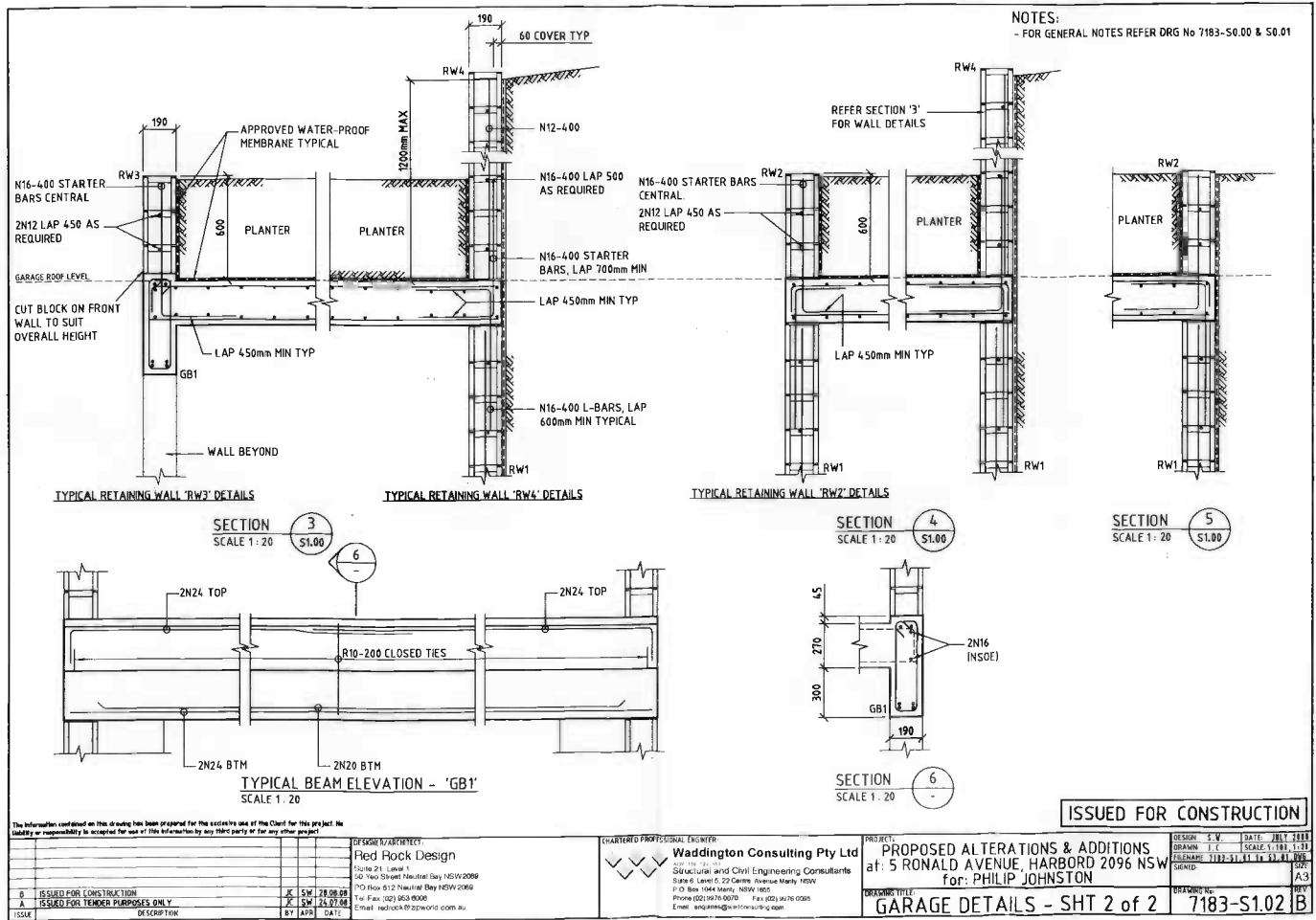


TYPICAL BLOCKWORK
CORNER DETAIL
SCALE 1:20

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ISSUED FOR CONSTRUCTION

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			DRAWING TITLE GARAGE DETAILS - SHT 1 of 2
ISSUE 0 ISSUED FOR CONSTRUCTION 1 ISSUED FOR TENDER PURPOSES ONLY	BY: S.W. DATE: 18.06.07 BY: S.W. DATE: 15.07.08		



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ISSUE	DESCRIPTION	BY	APPR	DATE
B	ISSUED FOR CONSTRUCTION	JC	SM	28.08.08
A	ISSUED FOR TENDER PURPOSES ONLY	JC	SM	14.07.08

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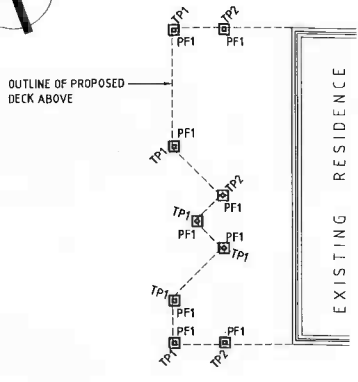
PROJECT:
PROPOSED ALTERATIONS & ADDITIONS
at: 5 RONALD AVENUE, HARBORD 2096 NSW
for: PHILIP JOHNSTON

DRAWING TITLE:
GARAGE DETAILS - SHT 2 of 2

DESIGN	DRAWN	CHECKED	DATE	SCALE
JC	SM	JC	28.08.08	1:20

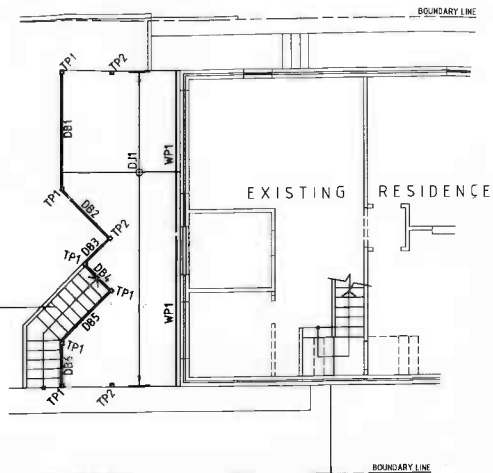
7183-S1.02

NOTES:
- FOR GENERAL NOTES REFER DRG No 7183-S0.00 & S0.01



FOOTING PLAN

- SCALE 1:100
1. ALL FOOTING PADS TO BEAR ON NATURALLY OCCURRING SANDSTONE BEDROCK OF MINIMUM SAFE BEARING VALUE 600 kPa.
 2. DENOTES
PF1 300 x 300 x 300 DEEP MASS CONCRETE PAD



GROUND FLOOR FRAMING PLAN

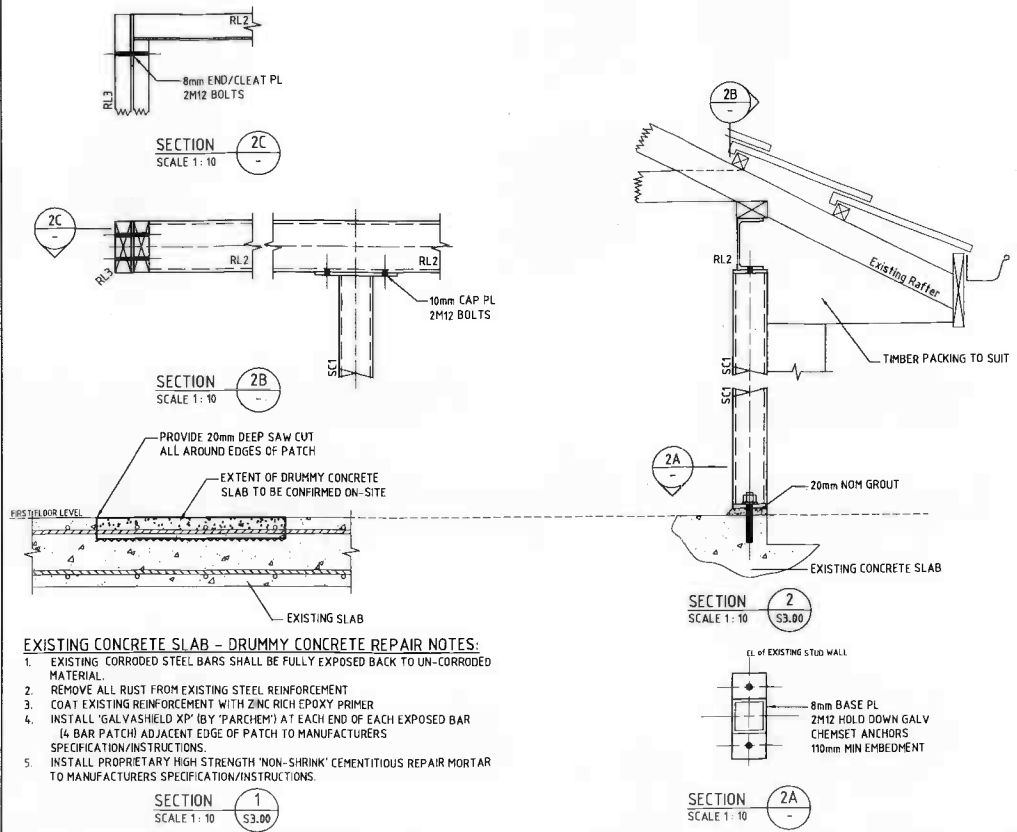
- SCALE 1:100
- MEMBER SCHEDULE**
- TIMBER POSTS**
 TP1 90 x 90 F7 (H3 TREATED), PROVIDE GALV POST BRACKETS EMBEDDED 150mm MIN INTO PAD FOOTING
 TP2 90 x 90 F7 (H3 TREATED), PROVIDE GALV POST BRACKETS EMBEDDED 150mm MIN INTO PAD FOOTING
- DECK BEARERS**
 DB1 2/240 x 45 F7 TREATED PINE
 DB2 to DB6 240 x 45 F7 TREATED PINE
- DECK JOISTS**
 DJ1 190 x 45 F7 TREATED PINE @ 450mm MAX CTS
- WALL PLATES**
 WP1 140 x 45 F7 (H3 TREATED) BOLTED TO EXISTING WALL WITH M12-450 MASONRY ANCHORS. POSITION ANCHORS WHOLLY WITHIN BRICKS NOT MORTAR TO MANUFACTURERS INSTRUCTIONS. PROVIDE 90mm MIN EMBEDMENT.

ISSUED FOR CONSTRUCTION

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DESIGN/ARCHITECT Red Rock Design Suite 21, Level 1 101 Two Street Neutral Bay NSW 2099 PO Box 812 Neutral Bay NSW 2099 Tel Fax: (02) 953 8000 Email: redrock@redworld.com.au	CHARTERED PROFESSIONAL ENGINEERS Waddington Consulting Pty Ltd Structural and Civil Engineering Consultants Suite 6, Level 5, 72 Central Avenue Merry NSW P.O. Box 1044 Merry NSW 1505 Phone: (02) 9976 0070 Fax: (02) 9876 0065 Email: enquiry@waddington.com.au	PROJECT PROPOSED ALTERATIONS & ADDITIONS at: 5 RONALD AVENUE, HARBORD 2096 NSW for: PHILIP JOHNSTON	DESIGN: S.W. DATE: 18.08.09	DRAWN: J.C. SCALE: 1:100
			CHECKED: J.C. DATE: 18.08.09	ISSUED: 11.09.09 BY: J.C. DATE: 11.09.09
B ISSUED FOR CONSTRUCTION A ISSUED FOR TENDER PURPOSES ONLY	J.S.W. 28.09.09 J.S.W. 25.02.08	DRAWING TITLE GROUND FLOOR FRAMING PLAN	SHEET NO. 7183-S2.00	OF SHEETS B

NOTES:
- FOR GENERAL NOTES REFER DRG No 7183-S0.00 & S0.01



- EXISTING CONCRETE SLAB - DRUMMY CONCRETE REPAIR NOTES:**
1. EXISTING CORRODED STEEL BARS SHALL BE FULLY EXPOSED BACK TO UN-CORRODED MATERIAL.
 2. REMOVE ALL RUST FROM EXISTING STEEL REINFORCEMENT
 3. COAT EXISTING REINFORCEMENT WITH ZINC RICH EPOXY PRIMER
 4. INSTALL 'GALVASHIELD XP' (BY 'PARCHEM') AT EACH END OF EACH EXPOSED BAR (4 BAR PATCH) ADJACENT EDGE OF PATCH TO MANUFACTURERS SPECIFICATION/INSTRUCTIONS.
 5. INSTALL PROPRIETARY HIGH STRENGTH 'NON-SHRINK' CEMENTITIOUS REPAIR MORTAR TO MANUFACTURERS SPECIFICATION/INSTRUCTIONS.

ISSUED FOR CONSTRUCTION

<p>The information contained on this drawing has been prepared for the exclusive use of the Client for this project. No liability or responsibility is accepted for use of this information by any third party or for any other project.</p>				<p>DESIGNER/ARCHITECT: Red Rock Design Suite 21, Level 1 50 Tito Street Neutral Bay NSW 2090 PO Box 612 Neutral Bay NSW 2090 Tel: Fax (02) 953 6008 E-mail: redrock@redrock.com.au</p>		<p>REGISTERED PROFESSIONAL ENGINEER: Waddington Consulting Pty Ltd Structural and Civil Engineering Consultants Suite 6, Level 6, 222 Centra Avenue Wiley NSW PO Box 1046 Merry NSW 1505 Phone (02) 9978 0070 Fax (02) 9978 0065 Email: enquir@waddington.com</p>		<p>PROJECT: PROPOSED ALTERATIONS & ADDITIONS at: 5 RONALD AVENUE, HARBORD 2096 NSW for: PHILIP JOHNSTON</p>		<p>DESIGN: S.W. DATE: JULY 1999 DRAWN: J.C. SCALE: 1:10 CHECKED: J.C. DATE: 11.11.99 ISSUED: J.C. DATE: 11.11.99</p>	
<p>RE-ISSUED FOR CONSTRUCTION - SECTION 3 BELIEVED</p>		<p>BY: J.C. DATE: 02.09.09</p>		<p>ISSUED FOR CONSTRUCTION</p>		<p>BY: J.C. DATE: 18.08.08</p>		<p>ISSUED FOR TENDER PURPOSES ONLY</p>		<p>BY: J.C. DATE: 21.07.08</p>	
<p>ISSUE</p>		<p>DESCRIPTION</p>		<p>BY: J.C. DATE:</p>		<p>DESCRIPTION</p>		<p>BY: J.C. DATE:</p>		<p>DESCRIPTION</p>	

DRAWING TITLE: **FIRST FLOOR & ROOF DETAILS**
DRAWING NO: **7183-S3.01 C**

NOTES:
- FOR GENERAL NOTES REFER DRG No 7183-S0.00 & S0.01



FIRST FLOOR FRAMING PLAN

SCALE 1:100

1. DENOTES

AREAS OF DRUMMY CONCRETE TO BE REPAIRED. EXTENT TO BE CONFIRMED ON-SITE. (REFER TYPICAL DETAILS)

MEMBER SCHEDULE

DECK BEARERS

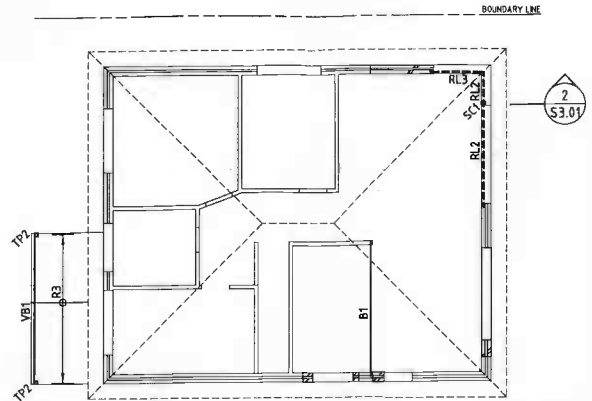
10B1 2/290 x 45 F7 TREATED PINE or 150 PFC GALV

DECK JOISTS

10J1 140 x 45 F7 TREATED PINE @ 450mm MAX CTS

WALL PLATE

WP2 140 x 45 F7 (H3 TREATED) BOLTED TO EXISTING WALL WITH M12-450 MASONRY ANCHORS. POSITION ANCHORS WHOLLY WITHIN BRICKS NOT MORTAR TO MANUFACTURERS INSTRUCTIONS. PROVIDE 90mm MIN EMBEDMENT.



ROOF FRAMING PLAN

SCALE 1:100

MEMBER SCHEDULE

STEEL COLUMNS

SC1 90 x 90 x 5.0 SHS

LINTELS

RL1 NOT USED

RL2 150 PFC

RL3 2/150 x 45 LVL

BEAMS

B1 200x45 LVL COUNTER BEAM TO SUPPORT HANGING BEAMS SIZE OF EXISTING HANGING BEAMS TO BE CONFIRMED PRIOR TO ORDERING B1.

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ISSUE	DESCRIPTION	BY	APP	DATE
C	ISSUED FOR CONSTRUCTION - KITCHEN WALL LAYOUT REVISED	K	SW	02/09/08
B	ISSUED FOR CONSTRUCTION	K	SW	28/08/08
A	ISSUED FOR TENDER PURPOSES ONLY	K	SW	03/07/08

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PROPOSED ALTERATIONS & ADDITIONS
at: 5 RONALD AVENUE, HARBORD 2096 NSW
for: PHILIP JOHNSTON

DESIGN	S.V.	DATE	JUN 11 2011
DRAWN	T.C.	SCALE	1:100
ENGINEER	1183-S0.01	11	11
SIGNED			
DATE			
ISSUE			
DESCRIPTION			

ISSUED FOR CONSTRUCTION

FIRST FLOOR & ROOF FRAMING PLANS

7183-S3.00

Red Rock design
redrock@zipworld.com.au
Neutral Bay 2089 NSW
P.O. Box 612 Neutral Bay
tel & fax (02) 9953 6006

5 September 2008

Warringah Council
Civic Centre
725 Pittwater Road
Suite 21/ 50 Yeo Street
Dee Why NSW 2099

RE : 5 RONALD AVENUE HARBORD 2096 (DA 2008/0624)
Dilapidation Survey of Council's Assets
Road Kerbs to Ronald Avenue and Lodge Lane

This written statement together with enclosed photographs taken during August 2008 describes and illustrates the condition of the existing road and nature strip to area's of council's assets directly to the east and west of 5 Ronald Avenue, Harbord 2096.

Photograph (1)

Overall streetscape view of road kerb to Ronald Avenue nature strip and existing street trees. The tree in the centre is to be retained and the tree to the right is to be removed in order to provide the proposed concrete vehicular road crossing to the development approved double garage constructed up to the western boundary of the subject property.

Photograph (2 & 3)

Detail of road kerb in location of existing street tree to be retained showing concrete kerb and gutter in good condition with only hairline surface cracking of concrete.

Photograph (4)

Detail of road kerb around location of street tree to be retained showing cracking of road kerb due to the proximity and growth of the street tree to the road kerb.

Photograph (5)

Detail of road kerb in location of existing street tree to be removed showing concrete kerb and gutter in reasonable condition with only hairline surface cracking of concrete.

Photograph (6)

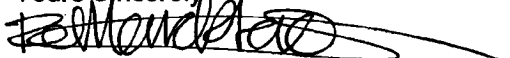
Overall streetscape view of road kerb to Lodge Lane at eastern side of subject property. Road crossing to be made redundant with proposed vehicular access from Ronald Avenue.

Photograph (7 & 8)

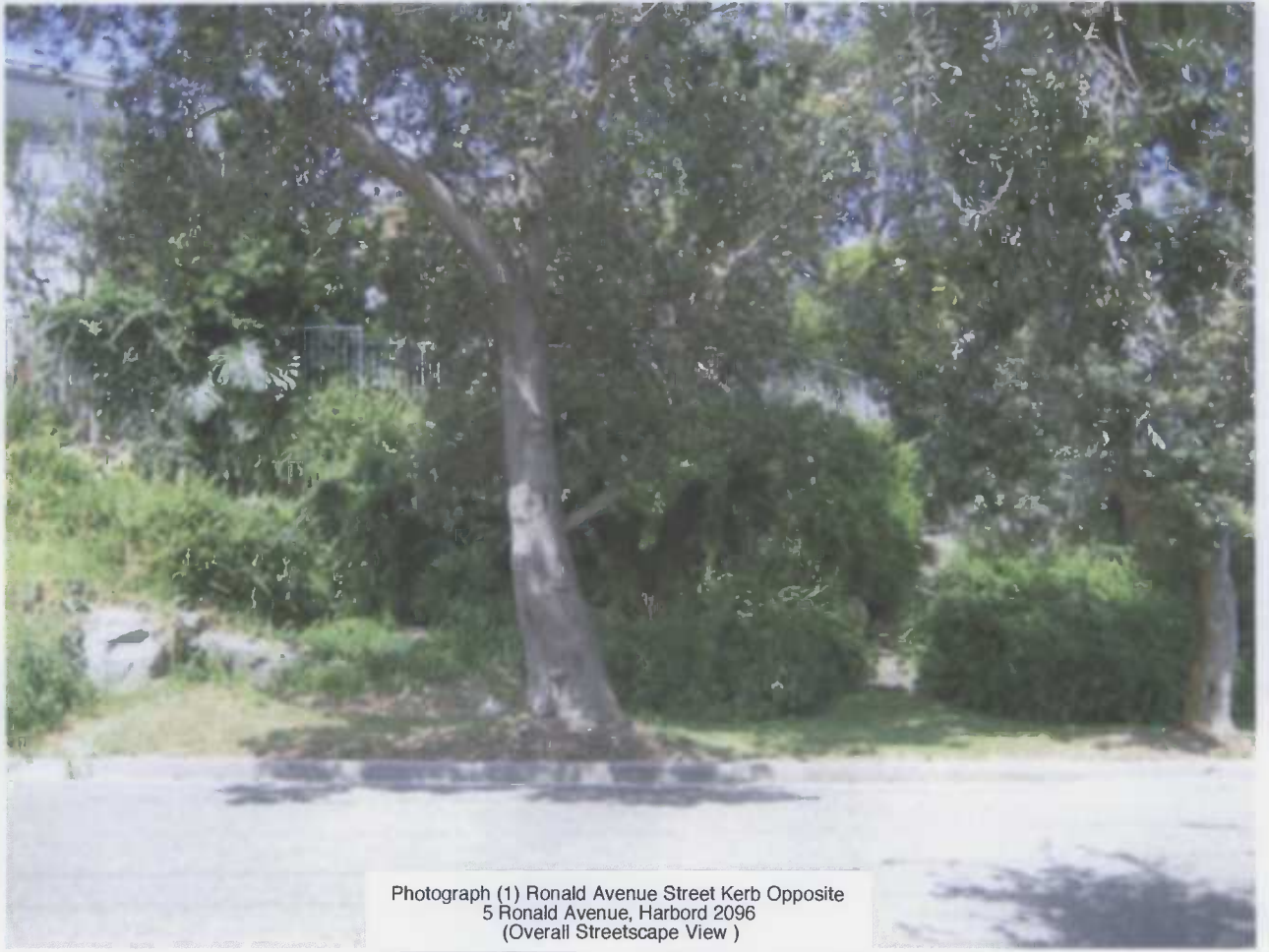
Detail of road kerb and existing road crossing showing concrete kerb and gutter in good condition with no surface cracking of concrete.

Should you require any further information please do not hesitate to contact me.

Yours Sincerely



Richard Monckton
Red Rock design (Applicant)



Photograph (1) Ronald Avenue Street Kerb Opposite
5 Ronald Avenue, Harbord 2096
(Overall Streetscape View)



Photograph (2) Ronald Avenue Street Kerb
(Kerb Detail Next To Street Tree To Be Retained)



Photograph (3) Ronald Avenue Street Kerb
(Kerb Detail Next To Street Tree To Be Retained)



Photograph (5) Ronald Avenue Street Kerb
(Kerb Detail Next To Street Tree To Be Retained)



Photograph (4) Ronald Avenue Street Kerb
(Kerb Detail Next To Street Tree To Be Removed)



Photograph (6) Lodge Lane Street Kerb
Opposite 5 Ronald Avenue, Harbord 2096
(Overall Streetscape View)



Photograph (7) Lodge Lane Street Kerb
(Kerb Detail Next To Road Crossing)



Photograph (8) Lodge Lane Street Kerb
(Kerb Detail Next To Road Crossing)

Schedule of Australian and Building Code of Australia Standards
5 Ronald Avenue Harbord NSW 2096
DA 2008/0624 (Determination Dated 5/6/08)

General

All construction to comply with the requirements of the Building Code of Australia, local government codes and relevant Australian Standards listed below.

This summary to be read in conjunction with drawings 01&03 (Issue C) September 2008

Demolition - All demolition to comply with A.S. 2601-1991

Concrete - To comply with A.S. 3600 Concrete Structures Code and AS 1379

Structural Steel - To comply with A.S. 4100 and AS 1554

Brickwork - Brickwork to comply with the S.A.A. code and A.S. 3700

Flooring - Flooring to comply with A.S. 1860 and A.S. 3740 & Part 3.8.1 of the B.C.A.

Windows and external doors - To comply with A.S. 1288-1994 A.S. 2688 1994 A.S. 1909-1998

Timber Framing - To comply with A.S. 1684 and A.S. 1720.1 Frame and Structure Code

Internal Linings - To comply with with A.S. 2588 and A.S. 2908.2

External Linings - To comply with A.S. 2908.2 1992

Staircase and Balustrade - To comply with Section 3.9.1 of the Building Code of Australia

Roof Covering - To comply with A.S. 4100.1-1994 and A.S. 4100.2 1994

Storm Water Drainage - To comply with A.S. 3500.3.1-1998 and A.S. 3500.3.2 - 1998

Termite Control - To comply with  - 1995

Plumbing and Drainage - To comply with A.S. 3500.3.2 - 1998

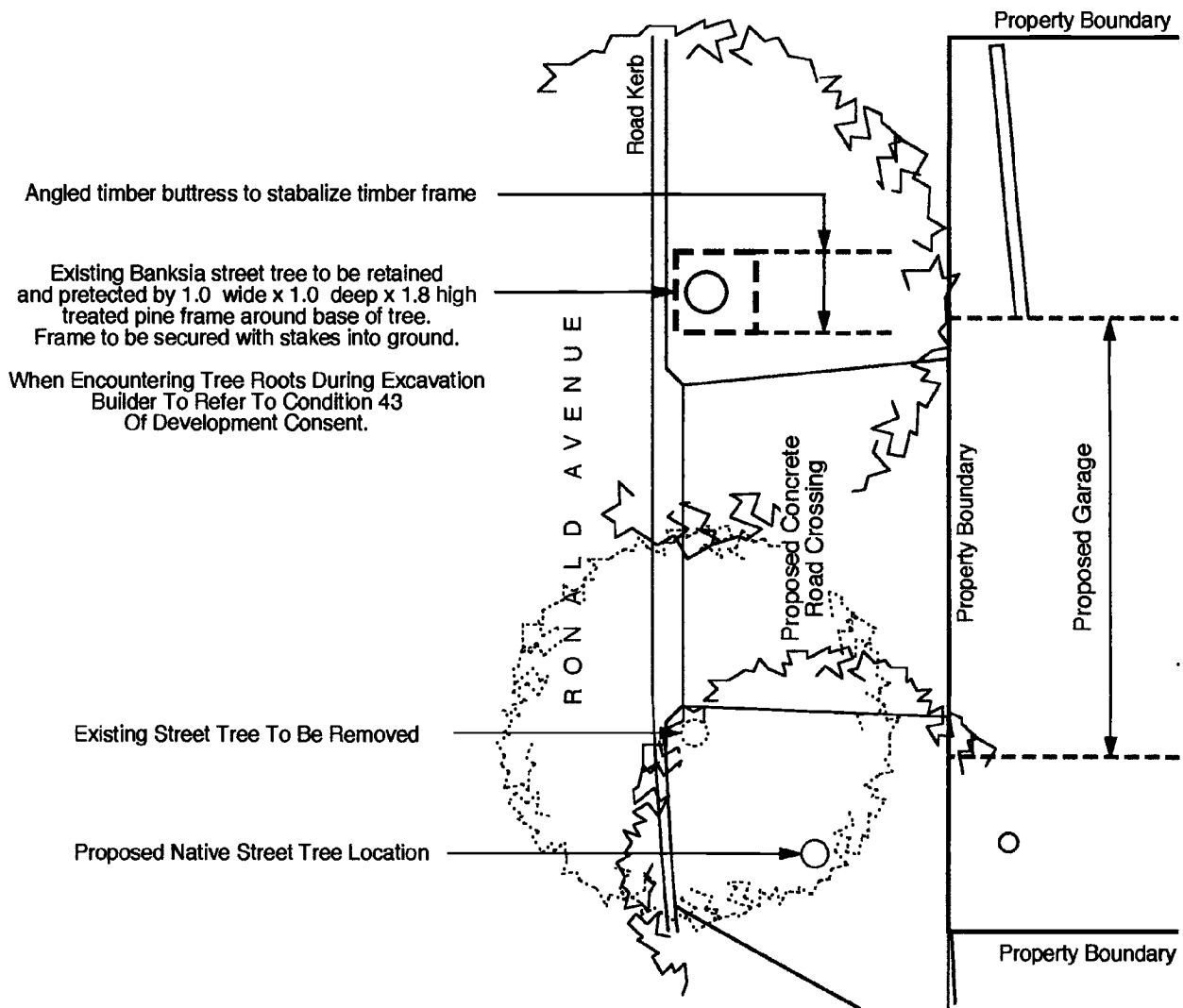
Electrical - To comply with A.S. 3000 - 1991

Smoke Alarms & Fire Safety Schedule

To comply with Part 3.7.2 of the Housing Provisions or A.S. 3786

An automatic fire detection and alarm system is to be installed into the dwelling and connected to the mains electricity supply and have a stand by power supply.

Each floor level of the dwelling will have a ceiling fixed smoke alarm located in each bedroom, hallway and living area.



TREE PROTECTION PLAN Scale 1 : 100

5 RONALD AVENUE
HARBORD 2096 NSW

DA2008/0624

September 2008

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