INsight development consultants pty ltd
accredited building certifiers & development managers

CONSTRUCTION CERTIFICATE

issued under the Environmental Planning and
Assessment Act 1979
Section 109C (1) (b), 81A (2) and 81A (4)

COUNCIL: Pittwater **CONSTRUCTION CERTIFICATE NO: 2004/05**

APPLICANT

Name	**Mr Brian Hampton**
Address	**PO Box 747, Newport NSW 2106**
Contact No: (telephone/fax)	**9918 7805**

OWNER

Name	**BC & AJ Hampton**
Address	**47 Attunga Road, Newport NSW 2106**
Contact No: (telephone/fax)	**9918 7805**

SUBJECT LAND

Address	**49 Attunga Road, Newport**
Lot No: **109**	DP: **752046**

DESCRIPTION OF DEVELOPMENT

Type of Work	☑ Building work	☐ Subdivision work
Description	**Dwelling and carport**	

P.O. Box 326 Mona Vale NSW 1660 **ph: 9999 0003** fax: 9889 4771 **mbl: 0414 579 341**
Suite 5, Heron Cove Marina, End of Queens Parade West, Newport NSW 2106
email: ins.dev@bigpond.net.au **ABN** 38 089 727 346

DEVELOPMENT CONSENT

Development Consent No:	**NO505/01**
Date of Determination	**23 August 2003**

BUILDING CODE OF AUSTRALIA

Building Classification	**1a & 10a**

BUILDER or OWNER/BUILDER Contractor License No./Permit No. in case of Owner Builder	**Hicks & Paine Pty Ltd** **No: 23873C**

$ VALUE OF WORK

Building/Subdivision	**$486,000.00**

DATE C.C APPLICATION RECEIVED

Date Received	**21 December 2003**

DETERMINATION

Decision	**Approved**
Date of Decision	**5 January 2004**

ATTACHMENTS	**Nil**

PLANS AND SPECIFICATIONS APPROVED/REFUSED
List plan no(s) and specifications Reference

1. **Architectural Details & Construction Specifications, Reference No. 49-01, 02(B), 03(C), 04(B), 05(A), 06(A), 07(B), 08(A) & 12(A), prepared by Harley Graham & Peter Paine, dated 1 August 2000.**
2. **Stormwater Details, Reference No. 30811, Drawing No. D01, prepared by MTK Consulting Engineers, dated 15 December 2003.**
3. **Driveway Access Design, Reference No. 30811-DW1 and Driveway Design Certificate, Reference No. 30811, prepared by MTK Consulting Engineers, dated 15 December 2003.**
4. **Schedule of Works and Sediment and Erosion Control Plan, Reference No's 30811 – E01 & E02, prepared by MTK Consulting Engineers, dated 15 December 2003.**
5. **Structural Details, Reference No. 30811 – S01, S02, S03, S04, S05, S06, S07, S08, S09, S10, S11, S12 & S13, prepared by MTK Consulting Engineers, dated 10 October 2003.**
6. **Landscape Plan, Reference No. 0102, prepared by Linda Lessing, Landscape Architect, endorsed January 5, 2004.**

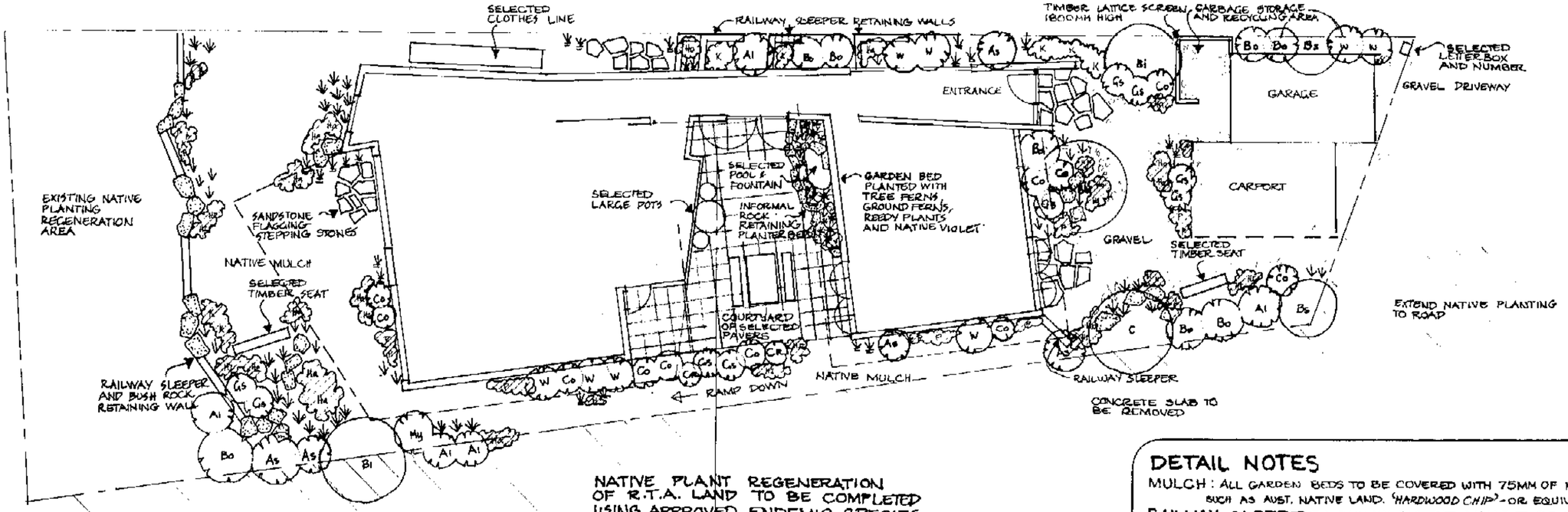
RIGHT OF APPEAL — *under S109K where the Certifying Authority is a Council an applicant may appeal to the Land and Environmental Court against the refusal to issue a Construction Certificate within 12 months from the date of the decision.*

CERTIFICATE

Certificate Final — I certify that the work if completed in accordance with these plans and specifications will comply with the requirements of S81A(5) of the Environmental Planning and Assessment Act 1979.

CERTIFYING AUTHORITY

Name of Certifying Authority	Insight Development Consultants Pty. Limited
Name of Accredited Certifier	Tom Bowden
Registration No	93
Contact No	(02) 9999 0003
Address	7 Kingsford Avenue, Eastwood NSW 2122
SIGNED	TBowden
DATE	5 JAN 2004



LANDSCAPE PLAN

SCALE 1:100

NATIVE PLANT REGENERATION OF R.T.A. LAND TO BE COMPLETED USING APPROVED ENDEMIC SPECIES

THIS REGENERATION IS TO BE COMPLETED USING PLANTS LISTED IN PLANTING SCHEDULE WITH ADDITIONAL SUITABLE PLANTS FROM THE FOLLOWING LIST: *Cupaniopsis anacardioides, Melaleuca armillaris, Kunzea ambigua, Allocasuarina distyla, littoralis, Leptospermum laevigatum, Dodonea triquetra, Hakea gibbosa, Lobelia alata, Leucopogon parviflorus, Muraltaera stipoides, Cymbopogon refractus.*

QUATITIES WILL NEED TO BE CALCULATED

DETAIL NOTES

MULCH: ALL GARDEN BEDS TO BE COVERED WITH 75MM OF NATIVE MULCH SUCH AS AUST. NATIVE LAND. *'HARDWOOD CHIP'* - OR EQUIVALENT.

RAILWAY SLEEPERS: RAILWAY SLEEPER WALLS TO BE CREOSOTED AND FIXED WITH REINFORCING ROD

GRAVEL: TO BE LAID TO 50MM DEPTH – 10MM FEATURE GRAVEL OR EQUIV.

IMPORTED SOIL: GARDEN BED IN COURTYARD AREA AND POTS TO HAVE SOIL MIX AUST. NATIVE LANDSCAPES *'PEAT AND PLANTER MIX'* OR EQUIV.

TREE PLANTING: EXCAVATE HOLES 800 x 800 MM AND BACKFILL WITH SOIL – AUST. NATIVES LANDSCAPES *'NATIVE LOW PHOSPHORUS MIX'* OR EQUIV. TREES TO BE STAKED WITH TWO HARDWOOD STAKES AND FIXED WITH HESSIAN TIES.

PROTECTION OF EXISTING PLANT REGENERATION AREAS: NO STOCKPILING OF MATERIALS OR RUBBISH TO OCCUR ON THE NATIVE PLANT REGENERATION AREAS.

MAINTENANCE: REGULAR MAINTENANCE TO BE CARRIED OUT FOR 12 MONTHS AFTER CONSTRUCTION. INCLUDING WEEDING, REPLACEMENT OF DEAD PLANTS, STAKING AS REQUIRED, FERTILIZING WITH SLOW RELEASE FERTILIZER – *'OSMOCOTE'* OR EQUIV., PEST AND DISEASE CONTROL AND WATERING 3 TIMES A WEEK IN SUMMER & INITIALLY AFTER PLANTING FOR 1 MONTH, WATERING ONCE A WEEK DURING OTHER PERIODS.

PLANTING SCHEDULE

SYMBOL	BOTANICAL NAME	SIZE AT MATURITY	QUANTITY	POT SIZE
TREES & TALL SHRUBS				
Bi	*Banksia integrifolia* COAST BANKSIA	15x10M	3	300MM
Bs	*Banksia serrata* SAW BANKSIA	10x7M	2	"
C	*Allocasuarina verticillata* DROOPING SHE OAK	8 x 5 M	1	"
✳	*Dicksonia antarctica* SOFT TREE FERN	7x4M	3	"
SHRUBS				
My	*Myoporum insulare* BOOBIALLA	4 x 2 M	1	250MM
Al	*Acacia longifolia* VAR. *sophorea*	4x3 M	5	"
As	*Acacia suaveolens* SWEET SCENTED WATTLE	2x1M	4	"
Co	*Correa alba* WHITE CORREA	2x1M	10	"
W	*Westringia fruticosa* COASTAL ROSEMARY	2x2M	8	"
Bo	*Banksia oblonga* FERN LEAVED BANKSIA	3x1.5M	8	"

SYMBOL	BOTANICAL NAME	SIZE AT MATURITY	QUANTITY	POT SIZE
GROUNDCOVERS				
Hm	*Helichrysum sp* COMMON EVERLASTING	200x200	5	140MM
	Dianella coerulea var VAR. *producta*	500x500	16	200 MM
	Lomandra longifolia	700x500	23	"
Hb	*Hibbertia scandens* YELLOW GUINEA FLOWER	300x1000	10	"
Kr	*Kennedia rubicunda* RUNNING POSTMAN	300x1000	7	140 MM
Hv	*Hardenbergia violacea* FALSE SARSPARILLA	300x1000	14	"
Pp	*Pandorea pandorana* WONGA WONGA VINE		10	"
Cr	*Correa reflexa* COMMON CORREA	1x1M.	1	200MM
Ah	*Actinotus helianthi* FLANNEL FLOWER	500x300	6	"
Gs	*Grevillea speciosa* RED SPIDER FLOWER	500x500	10	"
	Themeda triandra KANGAROO GRASS	500x300	30	"
Vh	*Viola hederacea* NATIVE VIOLET	200x1000	5	140MM
✳	VARIOUS GROUND FERNS		11	200 MM

I CERTIFY THAT THIS LANDSCAPE PLAN COMPLIES WITH THE CONDITIONS OF DEVELOPMENT CONSENT (PARTICULARLY CONDITIONS B45 AND B45a), AND PROVIDE FOR THE WORKS TO BE CARRIED OUT IN ACCORDANCE WITH DEVELOPMENT CONTROL PLAN No 28 – LANDSCAPE AND VEGETATION MANAGEMENT. THE PLANTING SCHEDULE INCLUDES UNDERSTOREY PLANTING OF SPECIES GROWING IN THE AREA & LOCAL INDIGENOUS SPECIES, WHICH, AFTER 3 YRS WILL IN CONJUNCTION WITH THE CANOPY PLANTING SCREEN 50% OF THE BUILT FORM, WHEN VIEWED FROM THE STREET.

5-1-04

LINDA LESSING. B.ARCH. UNSW.

NORTH

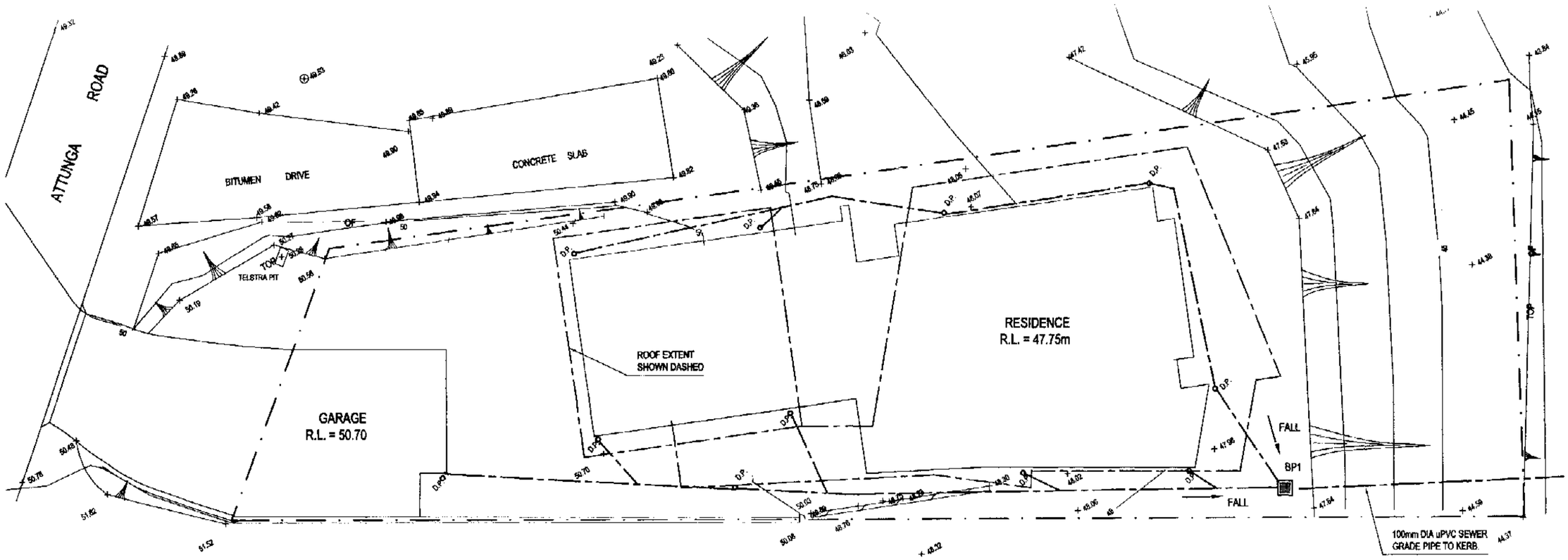
AMMENDMENTS:
A: 4·1·04
- ADDITIONAL DETAILS IN PLANTING SCHED
- DETAIL NOTES

LANDSCAPE PLAN

NEW BEACH HOUSE

49 ATTUNGA RD, NEWPORT.

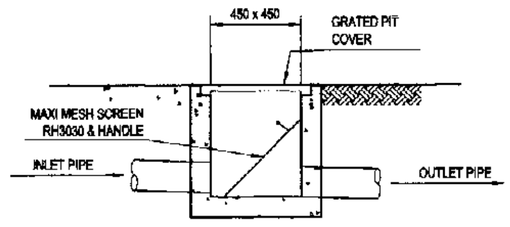
FOR: B & A HAMPTON	SCALE: 1:100
LANDSCAPE ARCHITECT: LINDA LESSING OF LESSING LANDSCAPES 5/31 MALVERN AVE, MANLY 2095 PH. 9977 7762	DATE: JAN, 2001
	JOB No: 0102



SITE PLAN

SCALE = 1 : 100

ALL NEW STORMWATER PIPES ARE TO BE 100mm DIA SEWER GRADE uPVC PIPES.
DISCHARGE FROM PIT BP1 TO BE PIPED DIRECTLY TO THE KERB.
ALL DOWNPIPES FROM THE GARAGE AND RESIDENCE
ARE TO BE DIRECTLY CONNECTED TO THE BOUNDARY PIT BP1.
DRAWING TO BE READ IN CONJUNCTION WITH THE PROPOSED LANDSCAPE PLAN,
ARCHITECTURAL PLAN AND THE SURVEY DRAWING.
REFER TO STRUCTURAL ENGINEERS DETAILS FOR RETAINING WALLS AND SLAB DESIGNS.
D.P. = DOWN PIPE



450 x 450 PIT BP1 DETAIL

SCALE = 1 : 20

NOTES: STORMWATER

1 - ALL PIPES TO BE 100mm Ø SEWER GRADE UNLESS NOTED OTHERWISE.
2 - ALL PIPES TO BE uPVC TO AS 1254-1973 UNLESS NOTED OTHERWISE.
3 - ALL DOWN PIPES TO BE LAYED AT 2 % MIN GRADE UNLESS NOTED OTHERWISE.
4 - ALL PIPES SHALL BE LAID ON A 75mm SAND BED, COMPACTED TO 100% S.M.D.D. BELOW PAVEMENTS. (NO COMPACTION REQUIRED BELOW LANDSCAPING) COVER TO SURFACE FROM TOP OF PIPE TO BE 300mm MINIMUM. BACKFILL TO BE ADEQUATELY CONSOLIDATED AROUND PIPES BY METHOD OF RAMMING AND WATERING IN. TRENCHES TO BE FILLED WITH GRANULAR MATERIAL AS SPECIFIED.
5 - DOWN PIPE LOCATIONS ARE INDICATIVE ONLY. LOCATIONS TO BE CONFIRMED WITH ARCHITECT PRIOR TO COMMENCEMENT WITH WORK.
6 - PROVIDE CLEANING EYES AT ALL DOWNPIPES.
7 - ALL PITS TO BE PRECAST OR CAST INSITU UNLESS NOTED OTHERWISE. CAST INSITU PITS TO HAVE 150mm THICK CONCRETE WALLS AND BASE. WALLS TO BE REINFORCED WITH 1 Y12 TOP TIE UNLESS NOTED OTHERWISE. CAST INSITU PITS GREATER THAN 1000 DEEP TO BE MINIMUM 900x800 AND TO HAVE 150mm THICK CONCRETE WALLS AND BASE. WALLS TO BE REINFORCED WITH Y12 AT 300 EACH WAY UNLESS NOTED OTHERWISE.
8 - ALL PITS GREATER THAN 1000mm DEEP SHALL HAVE STEP IRONS AS PER COUNCIL STANDARDS.
9 - ALL WORK TO BE IN ACCORDANCE WITH LOCAL COUNCIL STANDARDS AND SPECIFICATIONS.
10 - PRIOR TO COMMENCING ANY SITE WORKS THE CONTRACTOR SHALL IMPLEMENT EROSION CONTROL MEASURES TO EPA GUIDELINES AND COUNCIL SPECIFICATIONS. ALL MEASURES TO REMAIN IN PLACE UNTIL COMPLETION AND STABILIZATION OF THE SITE TO COUNCIL SATISFACTION.
11 - ALL LEVELS SHOWN ARE TO AHD
12 - ENSURE ALL PITS AND STORMWATER LINES ARE CLEAR OF EXISTING TREES AND TREE ROOTS.
13 - ALL EXISTING EARTHENWARE PIPES TO BE UPGRADED TO uPVC.

SITE CALCULATIONS

SITE AREA	533.6 SQ. M
EXISTING AREAS:	
RESIDENCE AND PAVING	170.5 SQ. M
TOTAL EXISTING AREAS	170.5 SQ. M. 32.0%
NEW FLOOR AREAS:	
PROPOSED RESIDENCE ROOF	204.1 SQ. M
PAVING AND GARAGE	56.7 SQ. M
TOTAL BUILT UPON AREA	260.8 SQ. M 48.9%

COUNCIL COPY

A3

Date	Rev.	Amendment:

DOCUMENT CERTIFICATION
Date : 15/12/2003
Michael Kelott
(For MK Consulting)

I am a qualified Structural/Civil Engineer.
I hold the following qualifications:
B.E.(Civil), MIEAust, C.P.Eng
Institute of Engineers Membership No. 642185
I hereby state that this drawing is in compliance with the conditions of the development consent, the provisions of the Building Code of Australia and/or relevant Australian/Industry Standards.

MK Consulting
Structural, Civil, Stormwater
ACN 605 578 841
ABN 58 605 578 841
PO Box 703
DEE WHY NSW 2099
Phone: (02) 9999 6922
Fax: (02) 9979 6263
e-mail : mtc@gunnet.net.au

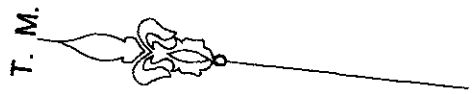
Project:
PROPOSED WORKS
at:
49 Attunga Rd
Newport

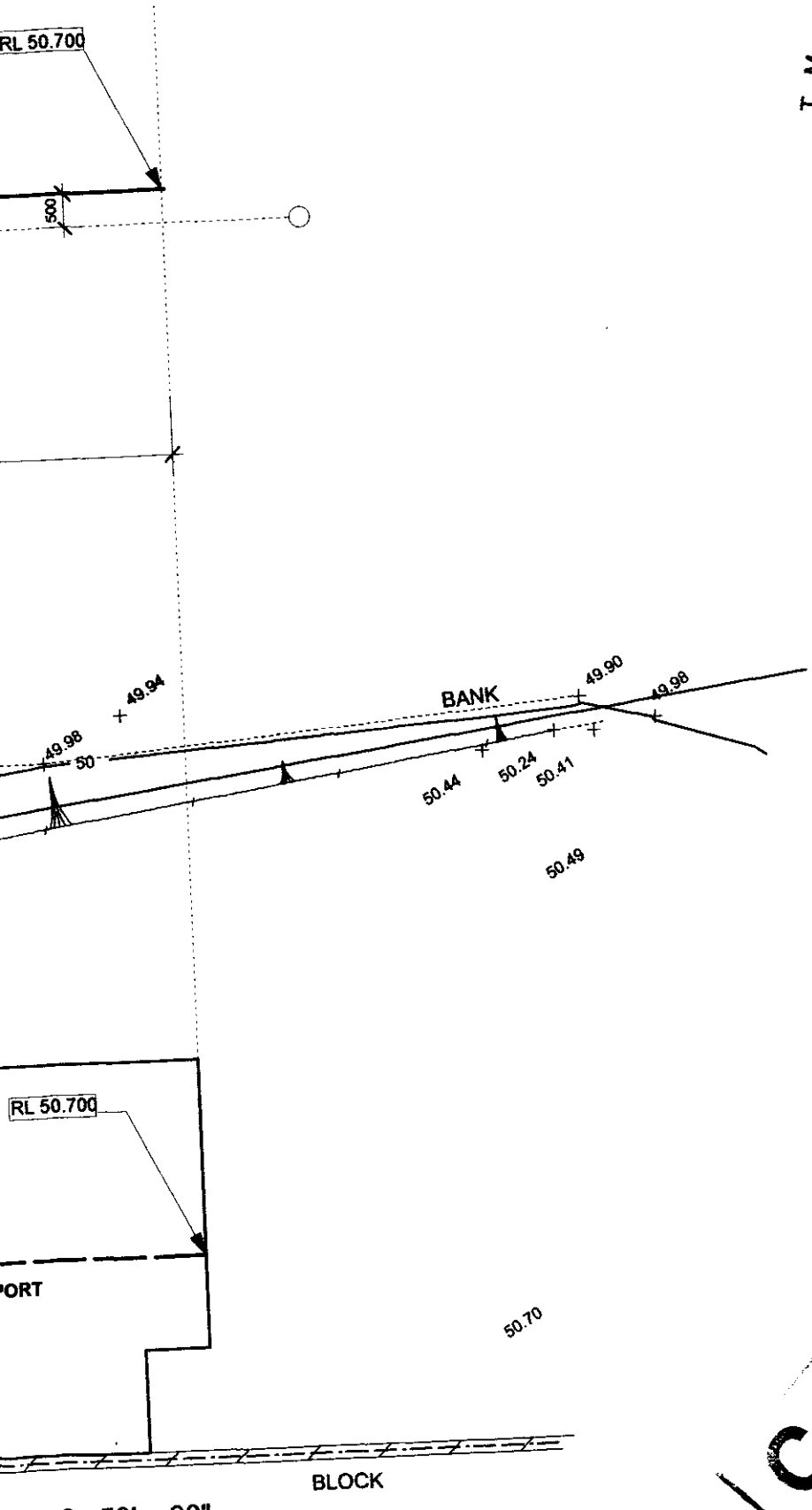
Drawing Title:
STORMWATER PLAN

Date:	Drawn:	Drawn.
DEC 2003	MK	F.P.
Job No.	Drawing No.	Rev.
30811	D01	-

NOTES:

1. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WITH WORK
2. GENERALLY IN ACCORDANCE WITH COUNCILS EXTRA HIGH PROFILE





COUNCIL COPY

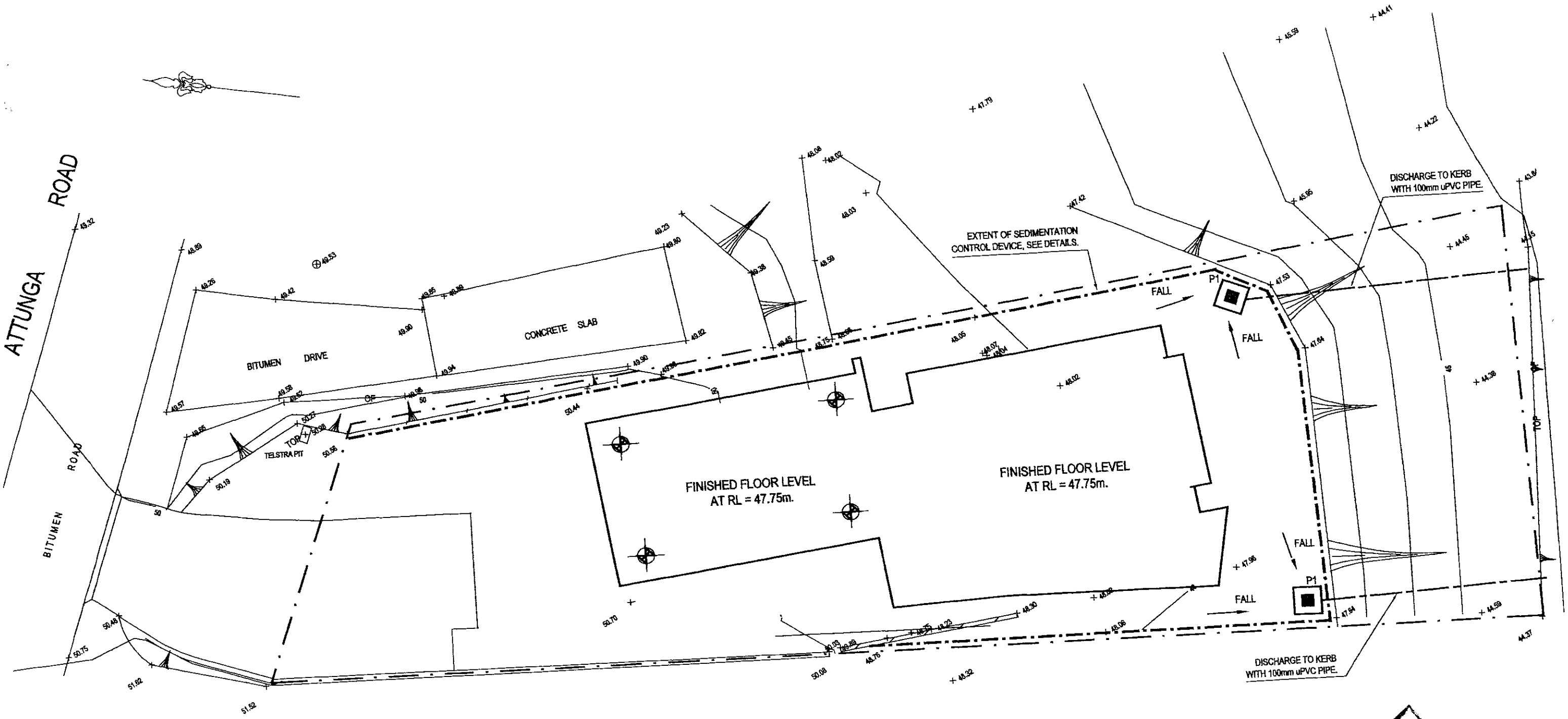
sulting
tural, Civil, Stormwater
05 578 841
3 605 578 841
x: 703
HY NSW 2099
: (02) 9999 6922
92) 9979 5263
: mtk@summit.net.au

Project: PROPOSED WORKS at: 49 attunga Rd Newport for: Mr and Mrs Hampton

Drawing Title: VEHICULAR ACCESS

Date:	Design:	Drawn:
NOV 2003	M.K.	F.P.

Job No:	Drawing No:	Rev:
30811	DW1	-



SITE PLAN

SCALE = 1 : 200

ALL NEW STORMWATER PIPES ARE TO BE 100mm DIA SEWER GRADE uPVC PIPES
OVERLAND FLOWS TO BE COLLECTED BY P1 TO THE REAR AND PIPED TO THE KERB AS DIRECTED
PROVIDE TARPAULINS OVER THE EXCAVATION FACE FIXED TO THE GROUND (OR WEIGHTED) BEFORE LEAVING THE SITE EACH DAY
THIS DRAWING TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS
ALL PITS TO BE 450 x 450 x 400 DEEP.

INDICATES TEST HOLE LOCATION PRIOR TO BULK EXCAVATION.
ENGINEER TO INSPECT TEST HOLES PRIOR TO EXCAVATION FOR DIRECTION

COUNCIL COPY

A3

DOCUMENT CERTIFICATION

Date: 15/4/2003

Michael Kelett .....

I am a qualified Structural/Civil Engineer.
I hold the following qualifications:
B.E.(Civil), MIEAust, C.P.Eng
Institute of Engineers Membership No. 842185
I hereby state that this drawing is in compliance with the conditions of the development consent, the provisions of the Building Code of Australia and/or relevant Australian/Industry Standards.

MTK Consulting
Structural, Civil, Stormwater
ACN 605 578 841
ABN 58 605 578 841
PO Box 703
DEE WHY NSW 2099
Phone: (02) 9999 6922
Fax: (02) 9979 5263
e-mail: mtk@summit.net.au

Project:
PROPOSED WORKS
at:
49 Attunga Rd
Newport

Drawing Title:
EARLY WORKS PLAN

Date:	Design:	Drawn:
NOV 2003	M.K.	F.P.

Job No:	Drawing No:	Rev:
30811	E01	-

SEDIMENT CONTROL:

1. INSTALL SEDIMENT CONTROL STRUCTURES IN LOCATIONS INDICATED ON DRAWINGS AND AS OTHERWISE REQUIRED TO CONTROL SEDIMENT DURING ALL EXCAVATIONS AND WHILST AREAS OF THE SITE ARE EXPOSED TO EROSION.

2. CONTROL STRUCTURES TO BE AS DETAILED OR AS OTHERWISE REQUIRED.

3. REVIEW CONTROL MEASURES AND MAINTAIN STRUCTURES DURING CONSTRUCTION. CONTROL STRUCTURES TO BE INSPECTED AFTER RAINFALL EVENTS AND CLEANED.

4. IF ADDITIONAL MEASURES ARE REQUIRED FOR EROSION CONTROL OR BY COUNCIL REQUIREMENTS REFER TO "URBAN EROSION AND SEDIMENT CONTROL" GUIDELINES PREPARED BY THE DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT.

SCHEDULE OF WORKS:

1. SILT FENCE AND ASSOCIATED WORKS INCLUDING INTERCEPTOR DRAIN IS TO BE INSTALLED BEFORE THE COMMENCEMENT OF ANY EXCAVATION.

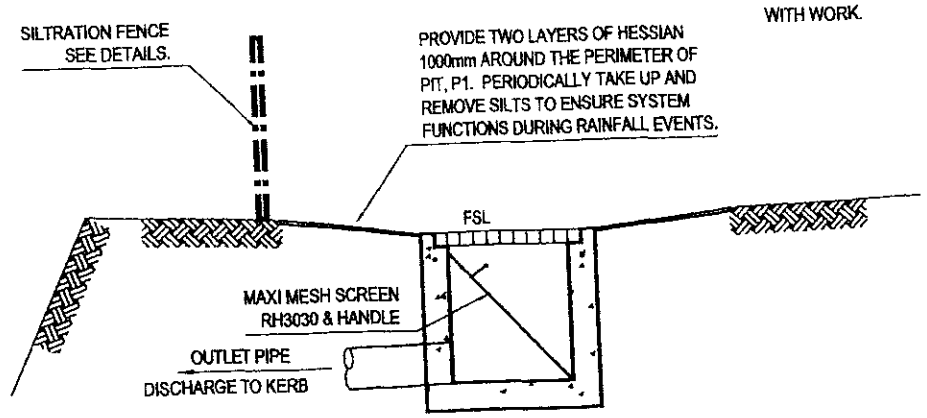
2. CUTS TO BE EXECUTED TO THE REQUIRED LEVEL USING CONVENTIONAL EXCAVATION MACHINERY. INITIALLY THE DEPTH OF FILL/CLAY IS TO BE ESTABLISHED TO ENSURE NEIGHBOURING PROPERTIES ARE NOT ADVERSELY AFFECTED. EARTH BATTERS TO BE A MAXIMUM SLOPE OF 1.0 m VERT. TO 1.7 m HORIZ. (OR AS PER GEOTECHNICAL REPORT). FOR BATTERS IN ROCK PROVIDE 2.0 m VERT. TO 1.0 m HORIZ. ROCK EXPECTED WITHIN 1.0m OF THE SURFACE. TEST HOLES ARE TO BE CARRIED OUT PRIOR TO BULK EXCAVATION

3. ANY PERMANENT RETAINING STRUCTURE IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERS DETAILS AND INSTRUCTIONS.

4. ALL PERMANENT RETAINING STRUCTURES ARE TO BE COMPLETED WITH MINIMUM DELAY FOLLOWING EXCAVATION.

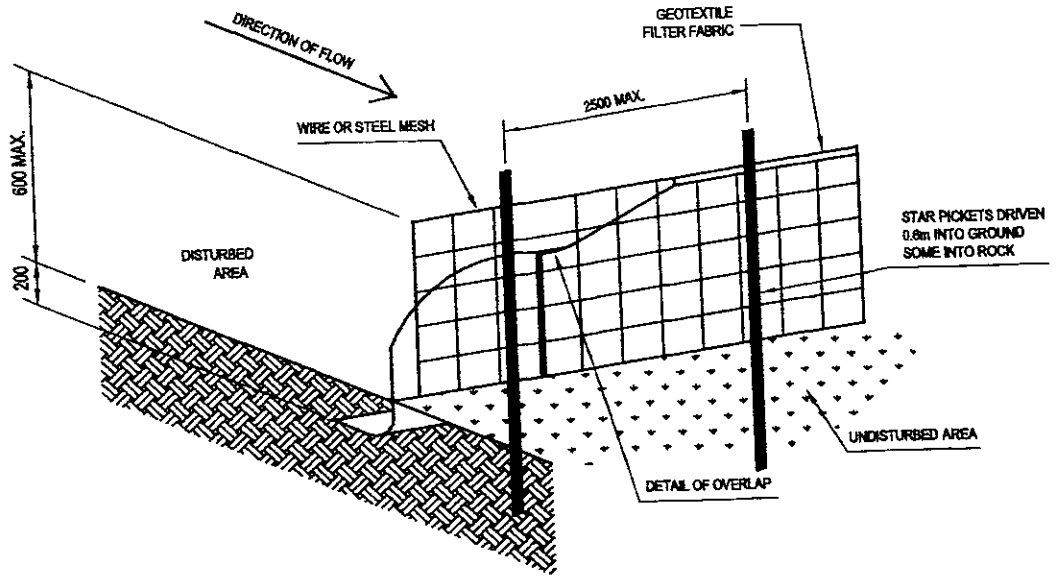
NOTES:

1. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WITH WORK.



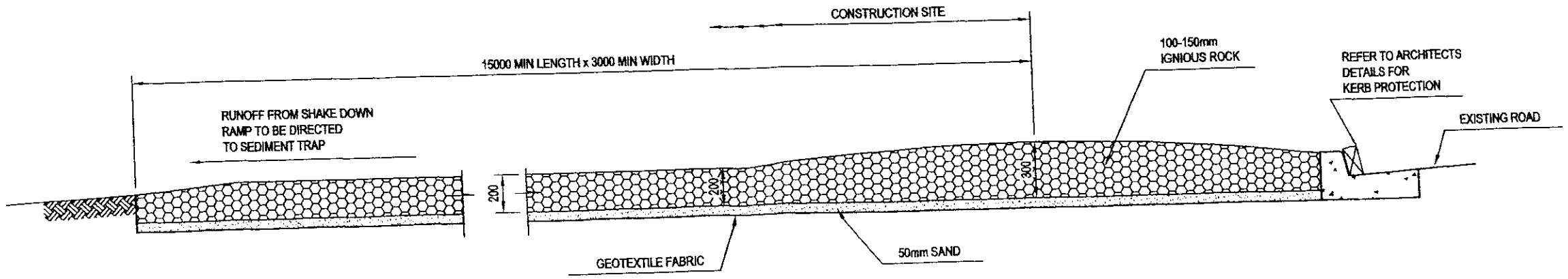
PIT P1

SCALE = 1 : 20



SILT FENCE DETAIL

SCALE = N.T.S.



TYPICAL RUBBLE SHAKE DOWN RAMP LONGITUDINAL SECTION

N.T.S.

A3

Date:	Rev:	Amendment:

DOCUMENT CERTIFICATION

Date: 15/12/2003

Michael Kelett.....

(For MtK Consulting)

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Drawing Title:
EARLY WORKS DETAILS

Date:	Design:	Drawn:
NOV 2003	M.K.	F.P.

Job No: 30811

Drawing No: E02

MASTER BUILDERS

HOUSING SPECIFICATION

• New South Wales •

INDEX

PLEASE NOTE

Additional issues to be considered during the application process

Site Waste Management and Minimisation Plan
The Energy Smart Homes Policy
Private Certification of Inspectors
Master Builders Quality System for Domestic Builders

Use of this specification does not automatically imply that the builder is a member of the Master Builder's Association. Ask your builder if he is an MBA member.

A. PRELIMINARIES

General	**A1**	It is hereby agreed that all clauses of the New South Wales Acceptable Standards of Domestic Construction as issued by the lending authority shall be indicated in and form part of the general specification relating to the proposed building and where there is any difficulty or variation between the conditions contained in either, the N.S.W. Acceptable Standards of Domestic Construction will prevail at all times.
Interpretations	**A2**	**Approved** - means approved by the Proprietor & where there is a lending body, also by that lending body. **Proprietor/s** - means the owner/s or other party or parties entering into Agreement with the Builder. **Provide** - means the supply and complete building in of materials, fittings or other items indicated. **Plans on the Job** - the Builder will maintain on the job a legible copy of the plans and specifications bearing the approval of the Authority concerned. **Dimensions** - figure dimensions take preference to scale.
Site Sign	**A3**	The Owner shall display in a prominent position a sign showing the Owners name and the Lot Number, before building commences. The builder upon commencement of the works shall display a site sign showing the name of licensee, the words 'Licensed (or Licd) Builder' and the number of the full licence.
Levels	**A4**	Contractor is to visit the site, note levels and allow any minor variations before the contract is signed as no allowance will be made once the work is commenced, except when provisional allowances have been made.
Surveys	**A5**	The land shall be block and peg surveyed before work commences. The cost of this survey shall be included in the price unless specified otherwise and any further surveys required will be met by the allowance shown on the P.C. Schedule.
Insurance	**A6**	Builder to insure as required against fire, storm and tempest in joint names of Owner, Builder and Lending Body. Builder to insure as required under Workers Compensation and Employers Liability Acts, and Home Warranty Insurance.
Notices and Fees	**A7**	The Builder shall obtain permits, pay fees and comply with all regulations of Local Government.
Variations	**A8**	Variations to drawings, specifications or services may not be made unless by agreement or otherwise in accordance with the building contract, and must be authorised in writing by the owner and agreed to by the builder. Special conditions or services required by Local Government or other authorities that vary the plans and specifications shall also be treated as extra work.
Items Supplied by Owner	**A9**	For all items stated in the Specification to be supplied by the Owner or where during construction of the dwelling it is agreed between the Owner and the Builder that the Owner shall supply any particular item, it is the responsibility of the Owner to arrange for delivery, payment, protection against damage and theft of such item.
Materials	**A10**	Generally to be sound and free of defects that might effect strength, durability and or external appearance.
Workmanship	**A11**	The work is to be carried out in a tradesmanlike manner.
Access by Owner	**A12**	The Owner or his/her representative will be allowed access to the building during normal working hours of the Builder or as otherwise agreed.
On Completion	**A13**	The Builder on completion will remove all surplus materials and construction debris from the site. The floors and windows will be cleaned, sashes and doors eased and locks oiled, gutters and drains cleared and all fittings tested.
Possession	**A14**	The Owner shall not occupy the completed building until the Builder has received a signed release from the Owner and settlement of the final account, then the Builder will provide the Owner with all keys properly labelled.

A. PRELIMINARIES (continued)

Defects Liability Period	**A15**	The Builder shall notify the Owner when the works are completed and ready for occupation. The Owner shall within seven days notify the Builder in writing of any items he considers require attention. These items shall be rectified before occupation of the Building. Other defects or faults which may appear shall be notified to the Builder in writing within a thirteen week period from the date completed. The Builder shall not be responsible for any normal settlement shrinkage.
Site Preparation	**A16**	The Owner, unless otherwise agreed, shall clear the Building Site, grub all stumps, roots etc. to a minimum distance of three metres outside the building lines (or to the boundaries of the allotment), remove spoil and provide all weather access for the Builder from the main thoroughfare to the proposed Building for Builders' vehicles and deliveries. Should the Builder be required to attend to these items then the cost is to be a Provisional Sum allowed under the contract.
Amenities	**A17**	The Builder shall comply with all Government and Local Government requirements in this regard.
Water	**A18**	Where water is not available at the commencement of the works, the Owner, unless otherwise agreed, shall arrange for sufficient supply for building purposes.
Electricity	**A19**	Power to be made available by the owner for building purposes. In the event that power is not available, the provision of same by the builder shall be an extra to the contract. In the event of the supply authority requiring any special installation work necessary to provide power to the building, this will be an extra to the contract.
Rock Excavation	**A20**	Should rock of any type be encountered in excavation, the cost of removal will be an extra pursuant to the provisions of the contract. The Owner is to be notified when rock is encountered.
WARNING		The parties must read Rock Excavation subject to reference clause 13 of BC4 Contract which is not altered by the above clause.
New Product Techniques	**A21**	Where products or techniques not mentioned is this specification are shown on plan they may be used if fixed or used in strict accordance with manufacturers instructions and only if approved by relevant authorities.

B. SITE CLASSIFICATIONS

B1 Site classifications are the basis for determination of some design requirements, eg. Design for wind and earthquake resistance, and slab / footing design.

B2 The design gust wind speed, as per AS4055 (or equivalent to AS1170.2), has been determined as ☐ m/s by .....

B3 Design for earthquake resistance is to be determined by a Practising Consulting Structural Engineer if the building site has a soil profile with more than 5m of soft clay, loose sand, silt or uncontrolled fill or if the structure is non-ductile.

B4 For slab / footing design, in accordance with AS2870, the site has been classified as Class ☐ by .....

B5 In the case of Class H,E and P Sites and filled Sites from Class A to Class P inclusive, special precautions may have to be taken in the design and construction of Concrete Footings. In these cases the Footings shall be designed by a Practising Consulting Structural Engineer.

B6 Site Classes shall be designated as follows:-

Foundation	Class
Most Sand and Rock Sites	A
Most Silt and Some Clay Sites	S
Moderately Reactive Clay Sites	M
Highly Reactive Clay Sites	H
Extremely Reactive Clay Sites	E
Filled Sites	A to P
Or silts or loose sands; landslip; mine subsidence; collapsing soils; or soils subject to erosion.	P

C. EXCAVATOR

Site Excavation C1 Excavate the site according to levels shown on the plans (Refer PC schedule and clause A20)

Trenches C2 For Class A, S and M sites only.

Excavate in natural ground to a minimum depth of 500 mm for class A and S and 600 mm for class M, for all beam footings, for walls to secure solid bottoms and even bearing throughout (Refer D3.1)

Bottoms to be levelled and stepped as necessary. At the completion of foundation, wall and piers, all excavations to be filled, well rammed to ground level and surplus soil spread evenly over the site unless otherwise directed by and agreed to in writing by the owner. Should pier and beaming or other variations to footings be required, this will be charged as an extra to the contract price. The Builder will obtain approval of trenches and reinforcement pursuant to the requirements of the relevant authorities before pouring concrete.

D. CONCRETOR

Generally D1 Concrete is to consist of 4 parts blue metal or other approved aggregate, 2 parts clean sharp sand, 1 part fresh Portland cement, and sufficiency of water, all well mixed mechanically. Concrete supplied ready mixed of an approved strength may be used.

Structural Engineer D2 Where reinforced concrete work is designed by a Structural Engineer, provision of the foregoing clauses will not necessarily apply. All such concrete and reinforcement shall be placed in accordance with such detail.

Concrete Footings D3 Provide reinforced concrete footings, as under external and fender walls. Refer to bricklayer for foundations under piers and sleeper piers. Unless indicated otherwise foundation concrete will be 20 mpa strength for both footings and slabs.

Footing Design

D3.1 **Design of Footing Systems**
Footing system shall be selected to suit the site classification and in accordance with the requirements of A.S.2870 - 1996, or otherwise in accordance with AS3600 - 1994.

D3.2 AS2870 designs shall not apply for:-

(a) Footings or slabs longer than 25m.

(b) Two storey construction with a suspended concrete floor at the first floor level or unless approved by a Practising Consulting Structural Engineer.

(c) Support of columns of fireplaces or other concentrated point loads or unless approved by a Practising Consulting Structural Engineer.

(d) Buildings including wing walls or masonry arches unless they are detailed for movement in accordance with TN61 "Articulated Walling" published by the Cement and Concrete Association of Australia.

(e) Slabs containing permanent joints, eg. Contraction or control joints.

(f) Two storey construction with a wall height, excluding any gable, exceeding 8m.

(g) Construction of 3 or more storeys.

(h) Single-leaf earth or stone masonry walls greater than 3m in height.

D3.3 Separate footings shall not be used unless the construction supported is structurally isolated from the rest of the building.

D3.4 Partial Rock Foundation.
Where part of the footings is on rock and part is on soil the design shall be referred to a Practising Consulting Structural Engineer.

D3.5 Rock Outcrop.
Where a footing encounters a single local rock outcrop or floater over a length less than 1 m, its depth can be reduced by up to one third provided that the amount of top and bottom reinforcement is tripled and extended 500 mm past the section with reduced depth.
Alternatively, the footing can be stepped or raised provided the structural stiffness is preserved.

D. CONCRETOR (continued)

Concrete cover on reinforcing steel shall be 40mm to unprotected ground or to an external surface, 30mm to a membrane in contact with the ground and 20mm to a surface that will adjoin the inside of the building.

Where splices occur in trench mesh, or individual bars, the lap length is to be at least 500mm. Where overlaps occur in fabric style reinforcement the lap length shall be a full panel of fabric; if the panel size differs between the sheets being lapped then the lap length is to be that of the wider panel.

Strip footings are to be set centrally under the walls, where practicable. Service penetrations are permitted through the middle third of the footing.

Any additional work required on the footings other than as stated in this clause (eg. Pier and Beams) as may be directed by the Local Council or Lending Authority will be chargeable to the Owner where at the direction of the Local Council or Lending Authority it becomes apparent that an alternative footing is required due to nature of soil or terrain then such alternative footing shall be designed by a Consulting Structural Engineer.

Pier & Beam Footings **D4**

Piers shall be of concrete in solid column form or as otherwise designed and nominated by the Structural Engineer. Piers must in all instances be taken to bottoms approved by the supervising Structural Engineer.

Beams must be reinforced concrete and a level bearing on piers. Architect's or Structural Engineer's design specified detail indicating dimensions of beams, piers and reinforcement and pier centres may be required by the Lending Authority.

Solid Rock Foundations **D5**

As specified under D 3.4.

Concrete Floors **D6**

Concrete floors if shown on plan to a detached laundry, detached WC or EC, garage and carport and wherever else shown on the drawings to be laid on levelled solid ground, well rammed and a minimum thickness of 100 mm. Provide concrete floors to bathroom, laundry, patio, terrace, landing, WC if shown on the drawings (Refer D7 for detail).

Suspended Concrete **D7**

All concrete slabs to separate areas within a building generally of timber floor construction (excluding garages) shall be suspended; solid fill forming is NOT permitted.
Temporary formwork must be removed.
Thickness and reinforcement of slabs shall be as set out in the following tables.
Slabs shall have a minimum bearing of 90 mm on at least two opposite sides.

TABLE 1: Concrete Slabs Inside Dwellings
Concrete F'c = 20 mpa (minimum requirement)

Internal Distance Between Walls up to (mm)	Slab thickness (mm)	Reinforcement: Fabric to AS 1304 (Ref. No.)	Reinforcing Bars to AS 1302: Main bars Size (mm)	Main bars Spacing (mm)	Tie Bars Size (mm)	Tie Bars Spacing (mm)
1,800 and less	100	F62	R 10	300	R 10	400
2,100	100	F 72	R 10	200	R 10	400
2,400	100	F 82	R 10	175	R 10	400
2,700	100	F 718	R 10	125	R 10	400
3,000	125	F 718	Y 12	175	R 10	300
3,300	125	F 718	Y 12	150	R 10	300
3,600	125	F 718	Y 12	150	R 10	300
3,900	150	F 818	Y 12	125	R 10	250
4,200	150	F 918	*Y 16	200	*R 10	250

*** Y = Structural grade deformed bar** *** R = Mild steel round bar**

D. CONCRETOR (continued)

TABLE 2: Concrete Patios, Balconies, etc. Outside Dwellings
Concrete F'c = 25 mpa (minimum requirement - SEE NOTE 8)

Internal Distance Between Walls up to (mm)	Slab thickness (mm)	Reinforcement: Fabric to AS 1304 (Ref. No.)	Reinforcing Bars to AS 1302: Main bars Size (mm)	Main bars Spacing (mm)	Tie Bars Size (mm)	Tie Bars Spacing (mm)
1,800 and less	100	F72	Y 12	300	R 10	400
2,100	100	F 82	Y 12	200	R 10	400
2,400	100	F 718	Y 12	150	R 10	400
2,700	120	F 718	Y 16	300	R 10	300
3,000	125	F 718	Y 16	250	R 10	300
3,300	125	F 918	Y 16	200	R 10	300
3,600	150	F 818	Y 16	200	R 10	250
3,900	150	F 1018	*Y 16	175	*R 10	250

*** Y = Structural grade deformed bar** *** R = Mild steel round bar**

NOTES TO TABLE 1 AND 2:

1. The slab thickness and reinforcement sizes and spacing comply with the strength and serviceability requirements of AS 3600. A slab thinner than shown with more reinforcement is not a satisfactory substitute.
2. Both tables apply only to single span slabs supported on continuous load-bearing walls.
3. The slabs will NOT support walls placed above the slab.
4. Reinforcement shall be set 20 mm from bottom and edges of slab with a minimum 50 mm bearing of reinforcement on supporting walls.
5. The Main Bars shall be laid in the direction of the shorter span. For fabric reinforcement with differing bar spacings, the more closely spaced bars are the Main Bars.
6. Concrete shall be placed with slip joints over supporting walls.
7. Provide top layer of F 72 fabric for spans up to 3000 mm and F 82 fabric for spans up to 3900 mm for the purpose of shrinkage crack control.
8. To meet durability requirements of AS3600 the characteristic strength of concrete (F'c) in above ground exterior environments is to be:-
   - 40 mpa for sites up to 1 km from the coastline
   - 32 mpa for sites between 1 km and 50 km from the coastline

For spans exceeding those indicated in Tables 1 and 2, slabs supporting walls, cantilever slabs or where beams and columns are used to support the slab, an Architect's or Engineer's details shall be submitted with the original plans and specifications. For compressed fibre cement sheet flooring see under Carpenter, Clause F3. Where plan does not indicate concrete steps cast in-situ, pre-cast concrete steps may be used.

Screeding **D8** Concrete floor where indicated on plan top be screeded with good fall to outlets, or level as required.

Paving **D9** The Builder is to provide concrete paving as shown on plan, to be of concrete, as previously specified and surface finished in one operation. Garage floor and car tracks 100 mm thick, and paths 75 mm thick. Paving to be laid with bituminous felt jointing strips, not more than 2 metres apart and to full thickness of concrete and rendering to be "V" jointed over same. Prepare for and lay paths to even grade true to line or curve. All concrete surfaces requiring other finishes to be left off screed.

D. CONCRETOR (continued)

Slab on Ground Concrete Floors D10 All concrete floor slabs where required to be on excavated ground or on solid filling, shall be minimum 100 mm thick and properly graded to outer edges or to suitable outlet where required. These slabs shall have reinforcement consisting of F72 hard drawn steel reinforcing fabric set 38 mm from top of concrete. The concrete slab is to be laid on a moisture proof membrane with 50 mm sand bed under. All membrane joints to be lapped a minimum of 200 mm. Turn up 150 mm at edges of slab at wall abutment. Levels of these floors shall be above adjacent ground surface to a minimum two brick course step down from top floor height and drainage shall be provided so as to ensure no accumulation of run-off or seepage water.
In any event to comply with Cement & Concrete Association's code, or Engineer's detail.

Protection from Termites D11 For slab on ground construction the risk of termite damage to the building is to be minimised by the provision of physical barriers and/or chemical treatment in accordance with AS3660.1.

This work is to be carried out by contractor(s) who are competent, experienced and licenced (if necessary) in the use of the product(s) concerned. The contractor(s) are to provide the owner and the Council with the applicable certificate for the work. At completion of the building a durable notice is to be fixed in a prominent location (eg. Meter box) indicating:-

- the method of protection
- the date of installation of the system
- where a chemical barrier is used, its life expectancy as listed on the National Registration Label
- the installer's or manufacturer's recommendations for the scope and frequency of future inspections for termite activity

E. BRICKLAYER

Workmanship E1 Set out as shown on scale drawings, build to gauge to suit bricks used, maintain bond, grout all joints in solid mortar. Bricks to be wetted before laying, where required. Footing courses to be grouted solid with cement mortar. All brickwork to be properly bonded, laid in full bed and all perpends filled, except where required for weep holes (see E18). All piers to be built solid and each course grouted as the work proceeds. Carry all work true and plumb to even gauge and in level courses to the full height and thickness required.

Bricks E2 Bricks are to be as selected (refer Addenda).

Precast Concrete Blocks E3 These blocks may be used for building purposes, feature walls or screen walls as shown on drawings, and are to be manufactured in strict accordance with the Standards Association standards for Concrete Block for Masonry Construction or Concrete Bricks, and are erected in accordance with the manufacturer's instructions.

Concrete bricks or masonry units shall not be wetted in any manner prior to laying and at cessation of each laying period the top course shall be covered to prevent moisture entering the bricks or units. They shall be protected from the weather until built into position by stacking free from contact with the ground and covered with some suitable material arranged to permit air circulation through the stack.

Block work construction of concrete masonry units shall comply with AS 3700.

Sand E4 To be clean, sharp and free from salt and/or vegetable matter.

Cement Mortar (Excluding Concrete Masonry) E5

Location	Portland Cement	Parts by Volume Hydrated Lime of Lime Putty Or Approved Product	Fine Aggregate (Sand)
Below dampcourse	1	1	6
Above dampcourse	1	2	9

Bonds & Joints E6 Brick to be laid in stretcher bond unless otherwise specified. Where stack bond used, brickwork is to be reinforced with an approved material in every fourth course. Joints in faced work to be raked, struck or ironed unless otherwise directed.

E. BRICKLAYER (continued)

Brick Walls Piers & Engaged Piers — **E7**

Bearer piers of brick, solid filled concrete masonry units or concrete shall be built to a minimum of 200 mm x 200 mm up to 1500 mm high, spaced at not more than 1800 mm centres where 100 mm x 75 mm hardwood bearers are used. If any piers exceed this height the additional lower portion thereof shall be increased by a minimum of 50 mm all round. Tops of piers shall finish accurately at exact levels to give full bearings to bearers.

Engaged piers to a minimum of 200 mm x 90 mm spaced at not more than 1800 mm centres shall be bonded to all foundation and fender walls of either brick or masonry to support bearers and at similar centres to stiffen walls. 75 mm to 110 mm unsupported brick walls over 1200 mm high shall be certified by an Engineer as to their structural adequacy. All walling which acts as a retaining wall shall be designed as such and full particulars, including seepage control, shown on drawings.
Pipe columns or other steel supports may be used in lieu of masonry supports. Suitable fixings, and sealing the tube shall be welded or threaded to both ends for fixing to footings and to bearers or beams.

Brick Buildings — **E8**

External walls shall be built with two leaves of brickwork having a clear cavity of not less than 50 mm. Precast concrete masonry units may be used for external walls in clear cavity construction and for internal walls, all to be built in strict accordance with the manufacturer's instructions and to comply with the requirements of AS 3700. Single block external wall construction may be submitted for consideration by the Lending Authority which may require the external faces of the wall to be finished with an approved durable waterproof material.

Brick Veneer Buildings — **E9**

External walls shall have one leaf of brickwork providing a clear cavity of not less than 25 mm from timber frame. In single-storey construction the brick veneer shall be kept 10 mm clear below roof framing and/or eaves lining and 10 mm clear of window sills and door frame sills.
In two-storey constructions where hardwood timber is used in each floor framing the clear space shall be 20 mm on the first floor. For slab-on-ground construction it will not be necessary to provide the above clearances in single-storey buildings but in two-storey construction a clearance space of 10 mm shall be provided on the first floor. All load bearing framed walls and jamb studs to openings over 1800 mm wide and posts carrying point loads shall be adequately supported on piers where framed floor construction is used.

Wall Ties — **E10**

Wall ties for brick and brick veneer buildings shall be corrosion resistant and suitable for the environmental conditions of the building location. Ties shall be spaced at a maximum of 600 mm apart in both directions and at 300 mm around openings and edges of brickwork in accordance with AS 3700 - 1988 and have a duty classification as required by AS 2699 - 1984.
Wall ties, cavities and vermin-proofing shall be free from mortar droppings. Brick veneer buildings shall have wall ties set staggered, sloping downwards towards the outside and secured to wall studs.

Timber Frame Buildings — **E11**

Curtain or fender walls shall be one leaf thick and where required engaged piers as previously described shall be provided.

Veneered Walls — **E12**

All external veneer walls to be built in brickwork using stretcher bond and compo mortar from dampcourse upwards. Tie veneer to timber framing with approved wall ties (see E10). Clean cavities on completion and leave weep holes at dampcourse level.

Lintels — **E13**

Provide mild steel angles or bars of the following sizes over all brick openings. For lintels with a clear span of 1000 mm or more, each end of the lintel is to have a minimum bearing length of 150 mm. For shorter spans the minimum end bearing is to be 100 mm. All angles & bars in external walls to be primed or hot dip galvanised before fixing. Engineering tables for the use of steel beams & lintels are available from the Newcastle MBA.

Spans (mm)	**External walls** (mm)	**Internal Walls** (mm)
Up to 1,250	One 75 x 10 bar	One 75 x 10 bar
1,500	One 75 x 75 x 10 angle	One 75 x 50 x 10 angle
2,400	One 125 x 75 x 10 angle	One 90 x 65 x 10 angle
3,000	One 150 x 90 x 10 angle	Two 90 x 65 x 10 angle

NOTE: Spans over 3,000mm shall be in accordance with Architect's or Engineer's detail. Where roof truss construction is used the size of angles for spans over 1,500 mm shall be in accordance with Architect's or Engineer's detail. Other types of approved lintels may be used.

E. BRICKLAYER (continued)

Dampcourse	**E14**	On all brickwork, at level not higher than bottom of floor bearers, provide a continuous run of approved dampcourse material to full width of wall thickness, and to engaged piers and place under all ant capping. Dampcourse material is to be run in long lengths, lapping 150 mm at joints and full width at all intersections. To walls surrounding concrete and/or solid floors an additional run of dampcourse is to be laid, one full course above floor level and stepped down to meet lower dampcourse where other walls abut walls of bathroom, shower recess and laundry.
Termite Shields	**E15**	Continuous termite shields shall be provided at level of underside of bearers, over all foundation walls and piers, sleeper piers and fender walls etc., in accordance with the requirements of AS3660.1-1995. To be 0.5 mm galvanised steel sheet, or other approved material, projected at least 40 mm from the vertical faces of the pier or wall and turned down at angles of 1:1 slope. The shielding shall extend through to the external face of brick walls so that the edge is visible in the mortar joint. End joints of sheet metal shields shall be lock-seam jointed, welded and soldered, riveted and soldered, or butt-jointed and welded for the full length of the joint.
Sills	**E16**	Unless otherwise noted on plans, sills shall be brick on edge type with adequate fall.
Flashing	**E17**	Build in under all window sills flashing of approved material, to be turned up 25 mm at back of sill and 50 mm at each end of same. Flashing to be bent down across cavity and built 25 mm into outer leaf of external wall. Approved flashing is to be built in over all exposed window and external door openings. Where openings are under eaves projecting not less than 300 mm omission of this flashing may be approved. Provide flashing over meter box.
Weep Holes	**E18**	Perpend joints shall be left open in external brick walls spaced at approximately every 600 mm immediately over flashing to all exposed openings and above chimney tray, also to brick retaining walls and fender walls, etc., as required or directed.
Vermin Proofing	**E19**	In framed floor brick veneer constructions to be a continuous strip of 12 mm mesh galvanised wire netting fixed to bottom plate and carried across the cavity, and built into brickwork. This can be omitted in second storey construction. All wire to be left free of mortar droppings.
Access & Ventilation	**E20**	Adequate Access - Access to the entire under-floor area to provide for visual inspection of subfloor areas is to be provided in accordance with the requirements of AS3660.1-1995. A minimum clearance of 400 mm is required between finished ground level and any structural components or other obstructions. On sloping sites the minimum clearance may be reduced to 150 mm if the area is not more than 2 m from a point with conforming clearance. Where access is not possible, suitable physical or chemical termite barriers are to be provided. Below Floor - The space between the ground and the underside of the floor structure shall be thoroughly cleaned, ventilated and cross ventilated by evenly distributed openings in external and internal walls. The openings are to have an unobstructed area of not less than 73 mm x 100 mm or equivalent per 1000 mm run of wall. The full area is to be left open under internal doorways. Similarly, ventilation shall be provided under verandahs and/or suspended concrete floor slabs and no section of the under floor area shall be constructed in such a manner that it will hold pockets of still air.
Brick Steps	**E21**	Alternative to concrete steps as specified under "Concretor" and "Precast Concrete Steps" brick steps may be built to match foundation walls. To be built solid or, where side walls are provided, on well-consolidated filling. Treads ('going') are to be between 240 mm and 355 mm: risers between 115 mm and 190 mm. The 'Quantity' (twice the rise plus the going) is to be between 550 mm and 700 mm.
Completion	**E22**	Clean all exposed brickwork using approved method. Wash down with clean water and leave free from cement and mortar stains.
Foundation Door	**E23**	Provide access door if required, built into brickwork below bearer height. Door to be approximately 600 mm wide and fixed with a suitable padbolt.

F. CARPENTER

Refer to Schedule for timber species to be used

Timber Generally **F1**

Timber shall comply with the provisions of AS1720.2, AS 1684, and be of the class specified; reasonably straight grained and free from those defects which might affect its durability and/or strength. Sizes of timber for constructional purposes to be the nominal size mentioned with allowable tolerances as provided by the appropriate standard issued by the Standards Association of Australia. Scantlings to be in long lengths, accurately cut and fitted, well spiked and securely fixed.

Bracing and tie-down:

The amount of bracing and tie-down fixings required to suit the building design and the wind environment of the site are to be calculated in accordance with AS1684 or NSW Timber Framing Manual. Details of the bracing and tie-down design are to be shown on plan.

A minimum of two Type A braces are to be installed in each overall length of external wall. If this conflicts with the window layout, design advice from a Structural Engineer is required.

Additional fixings to resist wind uplift forces (other than the nomimal fixings in the standards) are required for buildings with sheet roofing and/or where the design gust wind speed for the site is 41m/s.

NOTE: All sizes specified are for hardwood stress grade F11 or better, unless stated otherwise. In the whole of Section F as an alternative to the timber sizes specified, timber framing may be constructed in accordance with the provisions of the National Timber Framing Code, or NSW Timber Framing Manual.

If the design wind speed or the nature of the building are outside the scope of AS1684 or NSW Timber Framing Manual then the frame, including bracing and tie downs, is to be designed by a Structural Engineer.

Floor Framing **F2**

All floors not specified to be concrete are to be framed at level shown. Plates and bearers are to be laid true and level.

Provide 100 mm x 75 mm bearers to support floor joists only, set on the edge of walls and piers as already specified at maximum 1,800 mm centres.

For bearers, continuous over two or more spans, supporting single-storey loadbearing walls, the following maximum spans apply:-

Bearer Size (mm)	Sheet Roofing				Tile Roofing			
	Raftered Roof	Trussed Roof, of span (m)			Raftered Roof	Trussed Roof, of span (m)		
		6	7.5	9		6	7.5	9
100 x 75	1.8	1.7	1.6	1.6	1.5	1.4	1.4	1.3
125 x 75	2.2	2.1	2.1	2.0	1.9	1.8	1.7	1.6
150 x 75	2.7	2.6	2.5	2.4	2.2	2.1	2.0	2.0

Provide 100 mm x 38 mm joists continuous over two or more spans or 100 mm x 50 mm joists supported at two points only (with double joists under walls) set on edge at maximum of 600 mm centres and fix to plates and/or bearers by double nailing at each crossing. Joists to be finished true and level.

Provide suitable centres over wider areas where shown on plan.

Unsupported spans exceeding 2,700 mm to have 50 mm x 50 mm herringbone strutting or solid blocking spaced at maximum of 1,800 mm centres. For spans in excess of 4,800 mm, an Architect's or Engineer's certificate as to structural adequacy is required.

Trim floor timbers as required around chimney and hearth, and stair openings.

Flooring **F3**

Strip Flooring: Suitable seasoned tongue and groove flooring with a finish thickness of:

☐ For joists at 450 mm centres..... 19mm

☐ For joists at 600 mm centres..... 25 mm

Shall be laid on joists, tightly cramped, with every board nailed at each bearing with nails punched below surface. Boards of nominal width of 75 mm shall be fixed with at least one nail at each joist, and boards exceeding 75 mm nominal width with two nails at each joist.

All flooring used in platform construction shall be sealed with a water repellent at time of fixing.

When flooring is to be used and finished for decorative purposes it shall not be laid until walls and roof are in a waterproof condition.

Flooring **F3 cont'd**

Flooring (or timber decking) laid in an exposed position, e.g. verandahs or decks, shall be nailed with galvanised nails.

NOTE: See Schedule for type of flooring to be used.

Sheet Flooring: Minimum height of sheet flooring above ground level and under floor ventilation shall be according to manufacturer's instructions.

☐ **Structural plywood:** Shall be manufactured in accordance with AS2269 and sheets stamped on the face side with manufacturer's name or trademark. Sheets shall be fixed in accordance with the manufacturer's instructions.

☐ **Particle board:** Board approved by the lending authority and bonded with phenolic resin to achieve a type "A" bond as defined in AS1859 for plywood may be used in platform construction or as fitted flooring; Boards shall be fixed in accordance with manufacturer's instructions. The perimeter of flooring shall be fully supported by joists or noggings. Other particle board flooring approved by the Lending Authority may be used providing it is a minimum of 2,100 mm above the ground, well ventilated and the building completely weatherproof prior to fixing of the floor.

Compressed fibre cement or approved product: Sheet flooring not less than 18 mm thick at a joist spacing of 600 mm, or 15 mm thick at a joist spacing of 450 mm with a density of not less than 1.85 g/cm^3, may be used in lieu of suspended concrete floors. Sheets shall be fixed in accordance with manufacturer's instructions to floor joists, adequately flashed and suitably finished.

Wall Framing **F4**

Plates are to be trenched to a depth of approximately 10 mm to provide uniform thickness where studs are to be fixed. Where plates are machine gauged to a uniform thickness trenching may be omitted. Wall sections are to be braced as per frame design details. Wall framing is to be seated on top of floor joist erected plumb and straight, and securley fastened at all parts.

Bottom and top plates

☐ For 100 mm studs provide 100 mm x 50 mm plates.

☐ For 75 mm studs provide 75 mm x 50 mm plates.

For tiled roofing, where roof trusses are placed more than 50 mm from a wall stud, the thickness of the top wall plate shall not be less than 75 mm.

Studs: To single storey or upper storey of two-storey building, not notched for bracing and not exceeding 2,400 mm in length, provide 100 mm x 38 mm or 75 mm x 50 mm.
To lower storey of two-storey building, not notched for bracing and not exceeding 2,400 mm in length, provide 100 mm x 50 mm as shown below, where supporting conventional roof construction.
Well block and securely fasten studs at all wall angles and intersections. Studs to each side of openings to be as shown below, where supporting conventional roof construction.

	Stress Grade F5	
Clear Opening	For single or top storey	For lower of two storey
Up to 900mm	75 x 50 or 100 x 38	100 x 50
1,800 mm	5 x 100 or 100 x75	100 x 75
3,600 mm	100 x 100	100 x 100

Studs are to be checked to receive heads over openings and trimmers under windows.

Heads: Where depth exceeds 150 mm, timber is to be seasoned. Heads are to be placed on edge and to be checked or housed into studs and not less than the sizes indicted below. Where practicable and for openings 3,600 mm and over heads are to be carried through and fixes to the adjoining stud or a secondary stud.

F. CARPENTER (continued)

In single-storey or upper storey walls, where supporting conventional roof construction:

Span	For tiled roof construction (mm)	For sheet roof construction (metal or fibre cement) (mm)
Up to 900mm	75 x 50 or 100 x 50	75 x 50
1,200 mm	100 x 50	75 x 50
1,500mm	125 x 50 or 100 x 100	100 x 38
1,800mm	175 x 50 or 150 x 75	125 x 50 or 100 x 100
2,100 mm	200 x 50 or 175 x 75	150 x 50 or 125 x 75
2,400mm	225 x 50 or 200 x 75	175 x 50 or 150 x 75
2,700mm	250 x 50 or 225 x 75	200 x 50 or 175 x 75
3,000 mm	300 x 50 or 250 x 75	225 x 50 or 200 x 75

For Tiled Roof Construction

In single-storey or upper storey walls, lintels/heads where supporting roof trusses spaced at 900 mm centres:

	Span of truss (mm)		
Span	6,000 mm	7,500 mm	9,000 mm
Up to 1,200 mm	125 x 50 or 150 x 38	150 x 50 or 175 x 38	150 x 50 or 175 x 38
1,500 mm	175 x 50 or 150 x 75	175 x 50 or 150 x 75	200 x 50 or 175 x 75
1,800 mm	200 x 50 or 175 x 75	225 x 50 or 200 x 75	225 x 50 or 200 x 75
2,100 mm	225 x 50 or 200 x 75	250 x 50 or 225 x 75	250 x 75
2,400 mm	250 x 50	250 x 75	300 x 50
2,700 mm	300 x 50	300 x 50	300 x 75
3,000 mm	300 x 75		

For Sheet Roof Construction (Metal or Fibre Cement)

	Span of truss (mm)		
Span	6,000 mm	7,500 mm	9,000 mm
Up to 1,200 mm	100 x 50	125 x 50 or 100 x 75	125 x 50 or 100 x 75
1,500mm	125 x 50 or 100 x 100	150 x 50 or 125 x 75	150 x 50 or 125 x 75
1,800 mm	150 x 50	175 x 50 or 150 x 75	175 x 50 or 150 x 75
2,100 mm	175 x 50 or 150 x 75	200 x 50 or 175 x 75	200 x 50 or 175 x 75
2,400 mm	200 x 50 or 175 x 75	225 x 50 or 200 x 75	250 x 50 or 200 x 75
2,700 mm	225 x 50 or 200 x 75	250 x 50 or 225 x 75	300 x 50 or 225 x 75
3,000 mm	250 x 50 or 225 x 75	300 x 50 or 250 x 75	300 x 75 or 250 x 75

F. CARPENTER (continued)

Nogging (Bridging): to be fixed between studs at not more than 1,200 mm centres. Where wall cladding is to be jointed theron, noggings are to be 38 mm thick and finished flush with the face of the studs. Where cladding is not to be jointed in such a manner, noggings may be 38 mm thick and finished not more than 6 mm behind the face of the studs.

Ceiling Joists: F5 Use 100 mm x 38 mm at maximum 600 mm centres. Fix trimmers to ceiling joists where required at maximum 600 mm centres. Where two lengths of joists are used they are to be lapped and well spiked together over partition walls. All to be secured to hangers with ceiling dogs or straps. Ceiling joists, where practicable, are to be at right angles to ridge and securely fixed to rafters to form a tie to prevent spreading of the roof.

Hangers: F6 To be provided so that the unsupported length of ceiling joist does not exceed 2,100 mm, double nailed to each ceiling joist and secured to side of rafters where practicable.

Seasoned F5 or Unseasoned

Up to 2,400mm	150 mm x 38 mm
2,401 mm to 3,000 mm	175 mm x 50 mm
3,001 mm to 3,600 mm	200 mm x 50 mm
3,601 mm to 4,200 mm	250 mm x 38 mm
4,201 mm to 4,800 mm	300 mm x 38 mm

Where length of hanger exceeds 4,800 mm the hanger is to be supported by a beam as for Strutting Beams and the size of hanger is to be governed by new span.
NOTE: Roof is not to be strutted off hangers or beam supporting hanger.

Roof F7 **Slope of roof** is to be as shown on plan and where practicable length of rafters to longest ridge is to be gauged to suit full tile courses. Roof timbers are to be seated on timber wall framing.

Rafters to be birds-mouthed over plates; accurately cut and fitted, positioned beside ceiling joists, and, together with all other timbers used in roof construction, are to be secured by double nailing at all parts where practicable.

Roof timbers to be of dimensions as under:

Rafters-Conventional roof construction: Tiled roof 100 mm x 38 mm unless otherwise specified at maximum 600mm centres. Profiled/corrugated metal roofing 100 mm x 38 mm at maximum 900mm centres.

Ridges and Hips - 150 mm x 25 mm.

Valleys - 150 mm x 38 mm.

Underpurlins - to be continuous over two or more spans. Tiled roof 125 mm x 75 mm at maximum spacing of 2,100 mm. Profiled/corrugated roofing 100 mm x 50 mm at maximum spacing of 2,100 mm.

Collar Ties - To be fixed to alternate pairs of rafters and be of the following sizes:

☐ Up to 4,200 mm - 75 mm x 38 mm stress grade F8 or 75 mm x 50 mm stress grade F5, fixed at each end with two 75 mm nails.

☐ Over 4,200 mm - 100 mm x 38 mm stress grade F8 or 100 mm x 50 mm stress grade F5, fixed at each end with an M10 bolt.

Struts: To be 100 mm x 50 mm up to a length of 1,500 mm spaced under purlins at maximum 2,100mm centres. Length up to 2,400 mm to be 75 mm x 75 mm. Struts must be seated on, or directly above walls and must be tightly fitted and securely fastened.

Strutting Beams: Where required to be 200 mm x 75 mm for spans up to 2800 mm for a tile roof, or 3800mm for sheet roofing. Steel beams designed by a Structural Engineer may be used as an alternative, particularly for longer spans. When placed in position they are to be packed up from the walls so as to be 12 mm above ceiling level.

NOTE: Strutting beams must not be used as hangers for ceiling joists nor to support hangers unless specifically so designed.

F. CARPENTER (continued)

Roof Timbers to Flat Roof, Skillion, Open Span Roof, etc. Unless indicated on plan, timber size to comply with National Timber Framing Code.

Roof Trusses are to be constructed and fixed in accordance with the Architect's/Engineer's detailed drawings, or truss manufacturer's instructions. Trusses are to be kept clear of all internal walls with a minimum clearance of 13 mm at point of maximum deflection after loading. Bottom chord of truss is to be fixed to top plate of internal walls by means of self-adjusting fastenings.

Valley Gutter Boards: To be 19mm thick and the full width of valley gutter. Where deep-ribbed valley gutter is specified, valley boards may be omitted.

Battens: To be nailed at all crossings.
To be 70mm x 35mm spaced at maximum of 900mm centres for corrugated metal roofing and at 750mm centres for corrugated fibre cement roofing.

Manhole **F8** Trim as required between ceiling joists for a manhole, 600mm x 400mm. Line the opening and provide a suitable cover.

Verandah Posts **F9** Verandah posts unless otherwise specified to be 100mm x 100mm or as specified Table 1 NSW Timber Framing Manual D.A.R or sawn finish as required checked at top for plate and secured to floor joists. Where fixed to concrete the base of the verandah post is to be supported on a galvanised metal dowel and stirrup or plate with dowel set in the concrete.

Verandah Plates **F10** For verandahs up to 2100mm wide roof beam to be 150mm x 50mm hardwood or 150mm x 75mm stress grade F5 where the unsupported length of plate does not exceed 2,100mm. Plates exceeding 2,100m but less than 3,000mm to be 200mm x 75mm hardwood.

Gables **F11** Form as shown on drawings. If needed project plates, purlins, ridges, etc., and provide suitable barge boards - with fillet at top scribed up to tiling or capped with fibre cement to allow for verge tiles to be pointed with mortar. Frame gable faces as specified for walls and cover as per details on plans. Line soffits as for eaves.

Eaves **F12** Project rafters at eaves to give soffit measured square and fix a suitable fascia to ends of rafters. Form a level soffit with a 4.5mm fibre cement sheet let into a groove at back of fascia, secured to 50mm x 38mm supporting sprockets, fixed at all joints and spaced immediately at a maximum 1,200 mm centres.

Provide all necessary cover and angle mouldings. Alternatively, line the underside of rafters with 4.5mm fibre cement, cover all joints with selected moulding.

Porch Roof **F13** To be constructed where shown on plan and of suitable materials. Porch supports to be securely fixed top and bottom.
Provide 25mm fascia round ready to receive eaves gutter.
Roof covering to match main roof unless otherwise indicated on plan.
Provide ceiling of fibre cement complete with cover and angle mouldings as required.

Metal Framing **F14** Metal framing shall be designed by a Structural Engineer in accordance with AS3623 and detailed on plan. The frame is to be assembled with fixings as per the design, or otherwise in accordance with the manufacturer's recommendations.
Damp proofing is to be provided between framing elements and any concrete or masonry elements that adjoin them, eg. between concrete floor slab and bottom plates.

F. CARPENTER (continued)

Metal Framing cont.

Electrical wiring, water pipes and other services passing through the frame are to be isolated from it by rubber grommets or other approved material. The frame is to be earthed.
Any on-site modifications to the frame, as designed (including additional holes for services), require the approval of a Structural Engineer.

G. JOINER

Generally G1

All fixing out timbers to be seasoned and free from those defects which might affect its appearance or durability. All to be D.A.R. accurately cut and securely fixed. Frames to be properly housed and framed, mouldings and trimmings only mitred or scribed. All surfaces to be prepared for painting or staining. External joinery to be inherently durable and primed on all faces at place of assembly.

External Door Frames G2

To all door openings provide solid rebated frames. All frames to be packed plumb and true and fixed securely to door opening studs or brickwork.

Internal Door Frames G3

To be solid rebated or out of 25 mm jamb linings with plant on stops.

Thresholds (see Schedule) G4

To be terrazzo / select hardwood / tiles or other selected material.

Doors G5

Hang front and rear doors with three 85 mm steel butts, and other doors, unless specified elsewhere, with two 85 mm steel butts. Where external doors are sheeted with plywood, waterproof, waterproof plywood only to be used, and painted on bottom before hanging.

To front entry a 2040 x 820 x 40 mm door or disabled entry door as specified. See addenda.

Fit lock and glaze as required. To rear entry a 2040 x 820 x 40 mm door.

Furnish with locks and furniture as per schedule.

Internal doors to be as selected; fitted with latch and suitable furniture, and clearance off the floor to be approx. 30 mm unless otherwise specified. Double doors to be as shown on plan and furnish with suitable furniture. Sliding doors to be provided where shown on drawings.

Provide approved sliding tracks and fix in accordance with the manufacturer's instruction. Tilting or roller type doors to be provided for garage where drawings indicate unless otherwise specified.

Windows G6

Provide windows as shown on drawings (aluminium or timber) all to comply with the relevant Standards Australia codes.

Flashings G7

Provide approved flashing under each window frame. The flashing is to be turned up 50 mm at each end and 25 mm at the back of the sill and be bent down across the cavity and built not less than 25 mm into the veneer wall.

Provide approved flashing over exposed door and window openings. The flashing is to be not less than 225 mm wide and extend 150 mm beyond each end of the openings bent down across the cavity and built not less than 25 mm into the veneer wall.

Provide approved flashing over meter box. The flashing is to be bent down across the cavity and turned down over angle weather strip.

All flashings are to be properly dressed at each change of direction and must not be cut at those parts.

Storm Moulds G8

Provide storm mould to external door, window and other openings as required.

G. JOINER (continued)

Architraves	**G9**	Provide architraves as selected to all door, window and other openings internally and externally where necessary.
Skirtings	**G10**	Provide skirtings as selected.
Kitchen Cupboards	**G11**	Kitchen cupboards to be as selected or in accordance with details supplied (refer to PC Allowances).
Linen Cupboards	**G12**	Frame up and fix a linen cupboard in position and to dimensions shown on plan. Fit with shelves and doors. Hang doors with two suitable butt hinges and furnish with approved catches and handles. Alternatively, a sliding door system may be provided.
Wardrobes	**G13**	If shown, to be constructed as detailed on plan.
Bathroom Cabinet	**G14**	Provide cabinet and / or as per schedule.
Bath	**G15**	Under exposed edges of bath provide a properly constructed frame or brick-up ready to receive covering as specified elsewhere. Make provision for the fixing of two approved vents or vent to external wall.

H. PLUMBER

Guttering	**H1**	Provide 114 mm x 0.60 mm zincalume guttering or as specified in Addenda to all eaves as shown on plans. Lap at joints 100 mm in direction of flow, seal and set with sufficient fall to downpipes where shown or directed, secure at 1200 mm maximum centres with zincalume brackets to rafters or fascia.
Downpipes	**H2**	Provide 100 mm x 50 mm x 0.60 mm zincalume downpipes or as specified in Addenda where shown on plans, well entered and sealed at joints, connected at head to gutter and entered at foot to stormwater. Fasten with astrigals.
Valleys	**H3**	Provide 450 mm x 0.60 mm zincalume valleys with edges turned up, with lap and seal joints.
Alternatives	**H4**	Rainwater goods of other profile or material may be used as specified in the plans.
Flashing	**H5**	Flash all pipes, vents, etc. entering through the roof with approved flashing.
Cold Water Service	**H6**	Lay on water from the Supply Authorities main to the boundary of the lot in copper tubing and provide a stop cock and hose cock. Extend with galvanised, copper tube or alternate as approved with the National Plumbing Code AS 3500 to house and provide a hose cock at wall of dwelling. Branch off to cistern, bath, shower, wash basin, wash tubs, sink, hot water unit and washing machine (see schedule). Piping concealed behind wall linings must be copper or as approved in AS 3500. Secure all piping with suitable holdfasts.
Hot Water Service	**H7**	Install 13 mm copper tube or alternate as approved by AS 3500 from Hot Water Service to all plumbing fittings requiring hot water. All water plumbing is to be carried out by a licensed plumber to the requirements and regulations of the Supply Authority.
Fittings	**H8**	Taps and tapsets are to be selected by the owner and a P.C. amount is allowed for in the P.C. schedule.
Gas Service	**H9**	The whole of the work to be carried out in accordance with the requirements of the Supply Authority. Where LP gas is to be installed it shall be in accordance with the requirements of the Australian Liquified Petroleum Gas Association.

I. DRAINER

Generally	**I1**	All drainage work has to be carried out by a licensed drainer. Sanitary drains to comply with the by-laws and requirements of the authority concerned.
Stormwater	**I2**	Connect to ends of downpipes 90 mm P.V.C. pipe and drain roof water to street gutter where possible.

I. DRAINER (continued)

Where drainage to the street gutter is not possible, waters should be drained to an inter-allotment drainage easement where available, or otherwise to an absorption trench located 3m clear of buildings and property boundaries, to Council's requirements.

Sewerage I3 Drainage work shall be in accordance with authorities requirements.

Unsewered Areas I4 All work is to be carried out to the requirements of and a plan approved by the Council's Health & Building Surveyors for the Installation of Septic Systems and transpiration areas (see P.C. Schedule.)

Owner's Note I5 Unless a junction position is available from the appropriate authority at the time of tendering, the Builder is to allow for 30 metres of sewerage drains and the Owner will be responsible for cost in excess thereof.

It will be the Owner's responsibility if extra costs are incurred due to excavation through rock.

J. ROOFING

Tile Roofing J1 Terra cotta and Concrete roof tiles to be manufactured in accordance with the relevant Australian Standard and to be fixed in accordance with AS 2050.

Sarking shall be provided for all roofs where the design wind velocity is greater than 47 m/s. Sarking as required depending on roof pitch, length of rafter, or fire hazard or tile type in accordance with Manufacturer's recommendations.

Leave 10 tiles for future use.

Metal Roofing J2 All metal roofing to be fixed in accordance with manufacturer's instructions.

Corrugated Fibre Cement Roofing J3 Cover the roof with approved corrugated fibre cement sheets fixed in strict accordance with the manufacturer's instructions as approved and complete with all necessary accessories.

Provide all necessary flashings and ensure that the roof is birdproof.

K. INSULATION

(See Addenda)

L. ELECTRICIAN

(See Addenda)

Generally L1 The Builder is to arrange for connection of the mains to meter board (refer A19). The installation to house is to be carried out in accordance with the SAA Wiring Rules.

Outlets L2 The installation is to satisfy any test required by the Supply Authority on completion. Provide for the proper installation and connection of electricity to electric range, hot water unit, and other appliances (see Addenda). Provide light points and power outlets of number as indicated in Addenda. Approved switch for each light is to be mounted where indicated. Installation of light fittings if required, will be charged as an extra.

Meter Box L3 Provide box to enclose meters in accordance with the Requirements of the Authority concerned.

L. ELECTRICIAN (continued)

Alarms **L4** Self contained smoke alarms are to be installed on suitable locations on or near the ceiling in any storey:

a) containing bedrooms:

i. Between each area containing bedrooms and the remainder of the building, dwelling or sole occupancy unit: or

ii. Where bedrooms are served by a hallway, in that hallway; or

iii. In each bedroom and either i) or ii): and

b) not containing bedrooms.

The alarms are to be connected to the consumer mains power and have a standby power supply.

M. TILELAYER

(refer to Addenda)

Fixing	**M1**	Where applied to brick walls fix with mortar in the proportions of 3 parts sand and 1 part cement of fix with adhesive to cement render. To other areas tiles to be fixed over suitable sheet material with approved adhesive.
Floors	**M2**	Cover floor of bathroom and shower recess and other areas indicated on plan with selected tiles, set to an approved pattern.
Walls	**M3**	Wall tiles to be fixed to areas and heights as indicated in the Schedule.
Rates	**M4**	Owner's Note: These are allowed for 150 x 150 mm ceramic wall tiles and mosaic floor tiles only.
Shower Recess	**M5**	Shower recess to be installed in accordance with AS 3740.

N. CEILING AND WALL FIXER

Walls	**N1**	Fix in accordance with manufacturer's instructions. Recessed edge gypsum plasterboards to all internal walls, except as required in wet areas, or other type of panelling as indicated in Schedule and plans.
Cornices	**N2**	Fix suitable cornice to the above ceilings neatly mitred and scrimmed and set at all angles. (See Schedule).
Angles	**N3**	All external and internal angles to be neatly set straight and plumb.
Ceilings	**N4**	Fix in accordance with manufacturer's instructions recessed edge gypsum board or other suitable material to all internal ceilings.
Wall Sheeting (If requested in lieu of wall tiles)	**N5**	Fix in accordance with manufacturer's instructions.

O. PAINTER

Generally	**O1**	All paint to be supplied by reputable manufacturer. All paint to be applied in accordance with manufacturer's instructions. All colours are to be selected by owner from standard colour charts and shall consist of an industry standard number of colours.

O. PAINTER (continued)

Preparation 02 All surfaces shall be properly prepared.

All external woodwork that is not primed before delivery to the job site to be given a coat of external primer.

Primed woodwork to be checked and touched up, where necessary.

Externally 03 **Woodwork:** All exposed woodwork to be cleaned, prepared, primed, then given a coat of undercoat and finished with one coat of selected paint.

Ironwork: Gutters, DPs and pipe supports, meter box, vents and service pipes to be cleaned of dirt and grease and given one coat of metallic paint undercoat and given one final coat of selected paint all round.

Fibre Cement Sheeting: To receive two coats of flat plastic paint.

Internally 04 **Woodwork:** To be cleaned and prepared, then given a coat of primer, an undercoat and a coat of selected paint as finishing coat.

Alternatively, woodwork may be treated with an approved two-coat stain finish.

Walls & Ceilings: Where gypsum boards are used, prepare surfaces, apply two coats of selected plastic paint.

Fibre Cement Sheeting: To be thoroughly cleaned, then painted with two coats of approved flat plastic paint.

Completion 05 The Contractor shall remove all his equipment and empty paint tins and leave the job in a clean and neat condition. Fittings to be refixed and paint splashes to be removed from door handles, window fittings, switch plates, etc.

P. GLAZIER

Generally P1 All glass throughout is to be of approved manufacture, selected and installed in accordance with AS1288. Glass to be back puttied, sprigged into primed or oil rebates and weather puttied. Carefully trim and clean off all surplus putty on completion.

Remove broken glass and off-cuts and leave job in clean condition.

Q. COLUMNS

Q1 Install columns to dimensions indicated in plan and Schedule.

R. STEEL BEAM TABLES

R1 Engineering tables for the use of steel beams and lintels in housing are available in printed form from the Newcastle Master Builders' Association.

THE COUNCIL OF PITTWATER

APPROVED

DEVELOPMENT CONSENT PLAN

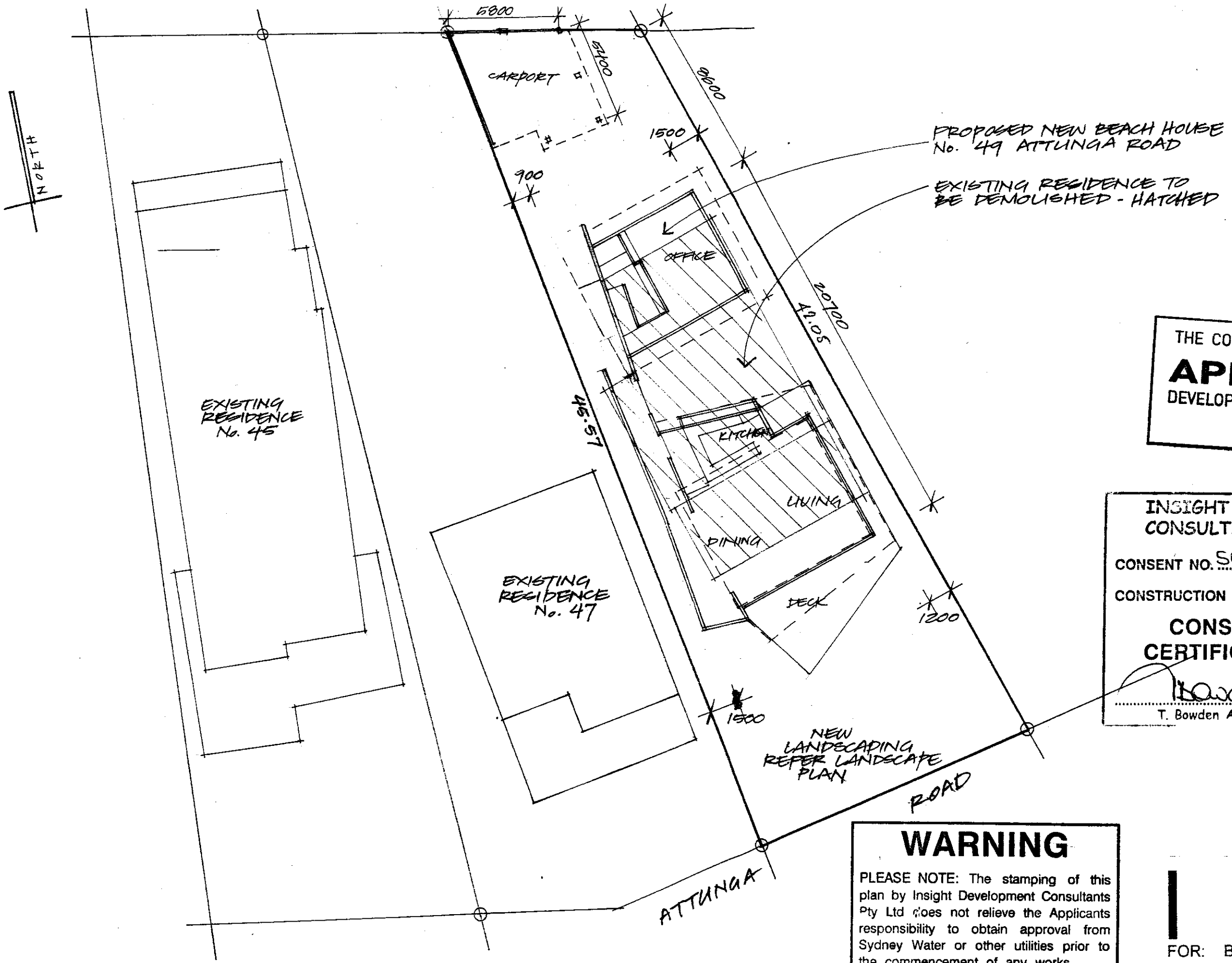
COUNCIL COPY

NEW BEACH HOUSE

49 ATTUNGA RD NEWPORT

FOR: B & A HAMPTON 1 AUG 2000

DESIGN: HARLEY, GRAHAM & PETER PAINE



THE COUNCIL OF PITTWATER
APPROVED
DEVELOPMENT CONSENT PLAN

INSIGHT DEVELOPMENT CONSULTANTS PTY LTD
CONSENT NO. 505/01 DATE 23/8/03
CONSTRUCTION CERT. NO. 2004/005
CONSTRUCTION CERTIFICATE PLANS
-5 JAN 2004
T. Bowden
T. Bowden Accreditation No. 93

WARNING

PLEASE NOTE: The stamping of this plan by Insight Development Consultants Pty Ltd does not relieve the Applicants responsibility to obtain approval from Sydney Water or other utilities prior to the commencement of any works.

Dial Before You Dig 1100

NEW BEACH HOUSE
49 ATTUNGA RD NEWPORT

FOR: B & A HAMPTON 1 AUG 2000
DESIGN: HARLEY GRAHAM & PETER PAINE

SCALE **1:200** DRAWING: **49-01**

SITE PLAN

45.0
46.0
47.0
47.64
48.0
1675
2800
1875
BOUNDARY
NORTH
BATH
STORE
T
WM
LAUND.
UNDER FLOOR AREA
STAIR
DECK OVER
COL
SINK
BAR
CUPBOARD
EFL 48.15
A
A
FAMILY ROOM
± 4960 x 7000
BEDROOM/STUDY
± 4.150 x 3.750
WARDROBE
GARDEN STORE
± 4800 x 4000
4000
600
1800
1000
WALKWAY OVER
LINE OF BUILDING OVER
3000
S/STONE GARDEN WALLS
BOUNDARY
9200
± 5,300
6200
45.0
46.0
47.0
48.0
49.0

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⊘ SMOKE ALARM

LOWER GROUND FLOOR PLAN 1:100

NEW BEACH HOUSE
49 ATTUNGA RD NEWPORT

FOR: B & A HAMPTON 1 AUG 2000
DESIGN: HARLEY GRAHAM & PETER PAINE

SCALE **1:100** DRAWING: **49-02** B

45.0 46.0 47.0 47.64

6400 16,700 MAX. 7800 2500

48.0 50.0 50.7

16.75 1875 1425 1175 1275 3000

NORTH

READING ROOM

HALL

ENTRY

LINE OF CLERESTOREY OVER

STAIRS

FOLDING DOORS

STAIR

DECK

LIVING / DINING
± 6000 x 7000
RL 51.10

KITCHEN

COURTYARD
GRASS

ROOF OVER

LINEN

ROBE

WC

SHWR

SHOWER

VB

BEDROOM 2.
± 5600 x 3300
RL 51.10

A

S.S & GLASS BALUSTRADE

ROOF OVER

7400

PORCH

WALKWAY

3000

BATTERED BANK

1430

1800 900

STEPPED STONE RETAINING WALL WITH PLANTING

50.0

± 1650 ± 5300

4100 9200 6200 8600

45.0 46.0 47.0 48.0 49.0

GROUND FLOOR PLAN 1:100

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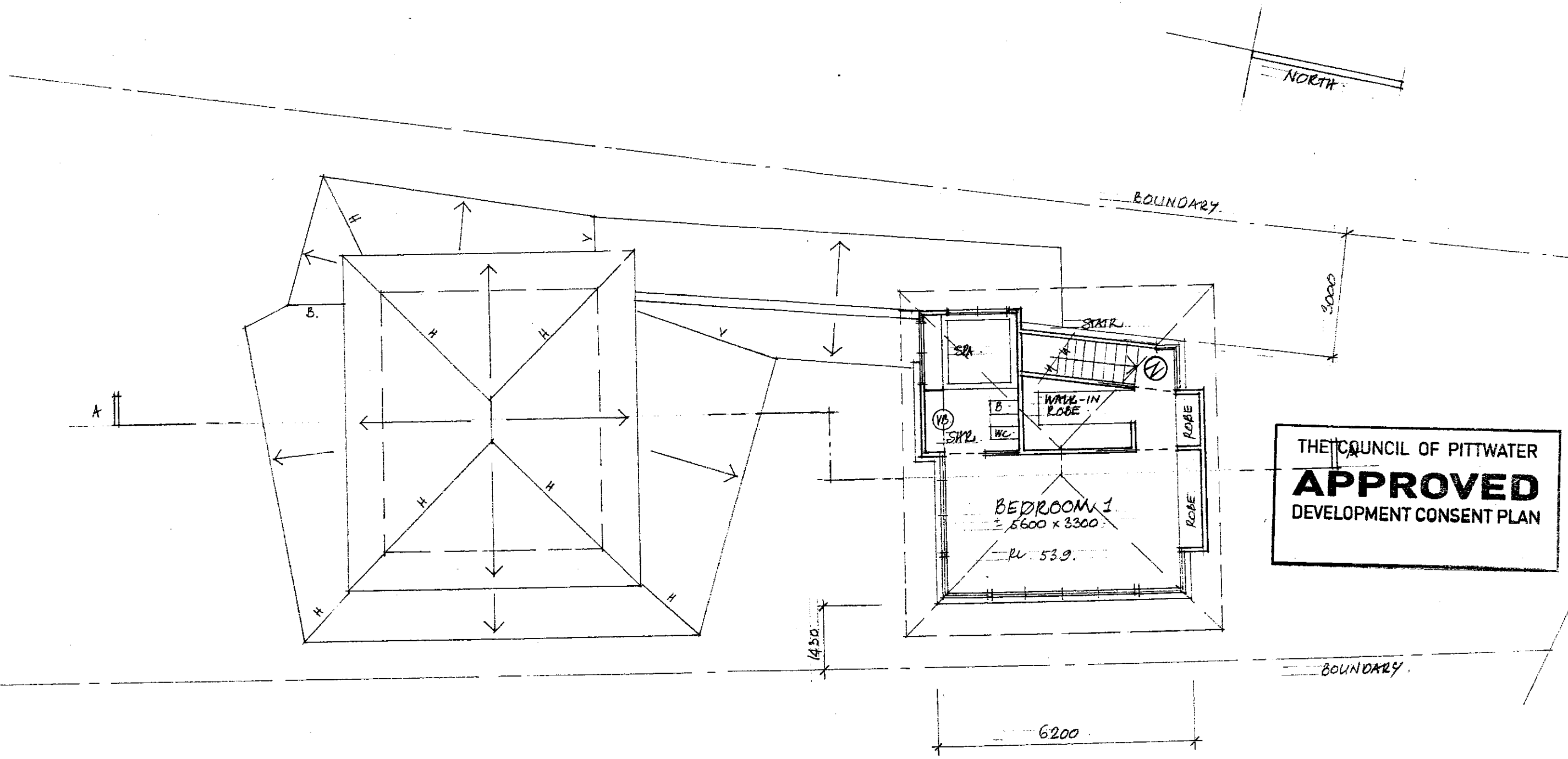
(Z) smoke alarm

NEW BEACH HOUSE
49 ATTUNGA RD NEWPORT

FOR: B & A HAMPTON 1 AUG 2000
DESIGN: HARLEY GRAHAM & PETER PAINE

SCALE **1:100** DRAWING: **49-03 C**



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DEVELOPMENT CONSENT PLAN

FIRST FLOOR PLAN SHOWING ROOF 1:100.

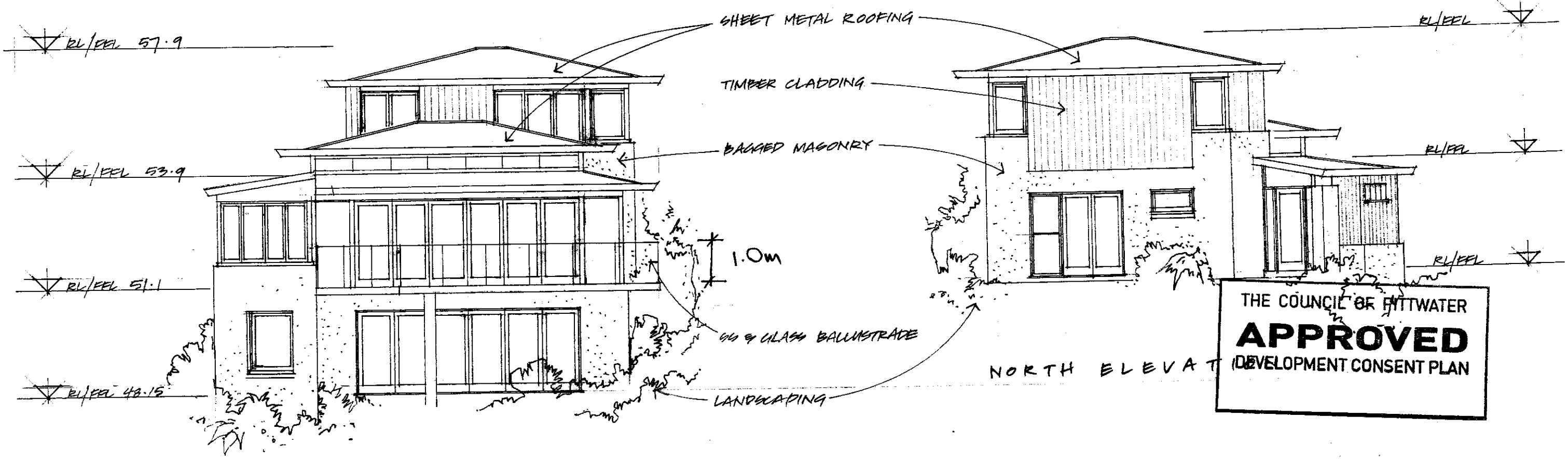
(H) smoke alarm

NEW BEACH HOUSE
49 ATTUNGA RD NEWPORT

FOR: B & A HAMPTON 1 AUG 2000
DESIGN: HARLEY GRAHAM & PETER PAINE

SCALE **1:100** DRAWING: **49-04** B

FIRST FLOOR PLAN SHOWING ROOF 1:100.



SOUTH ELEVATION

NORTH ELEVAT

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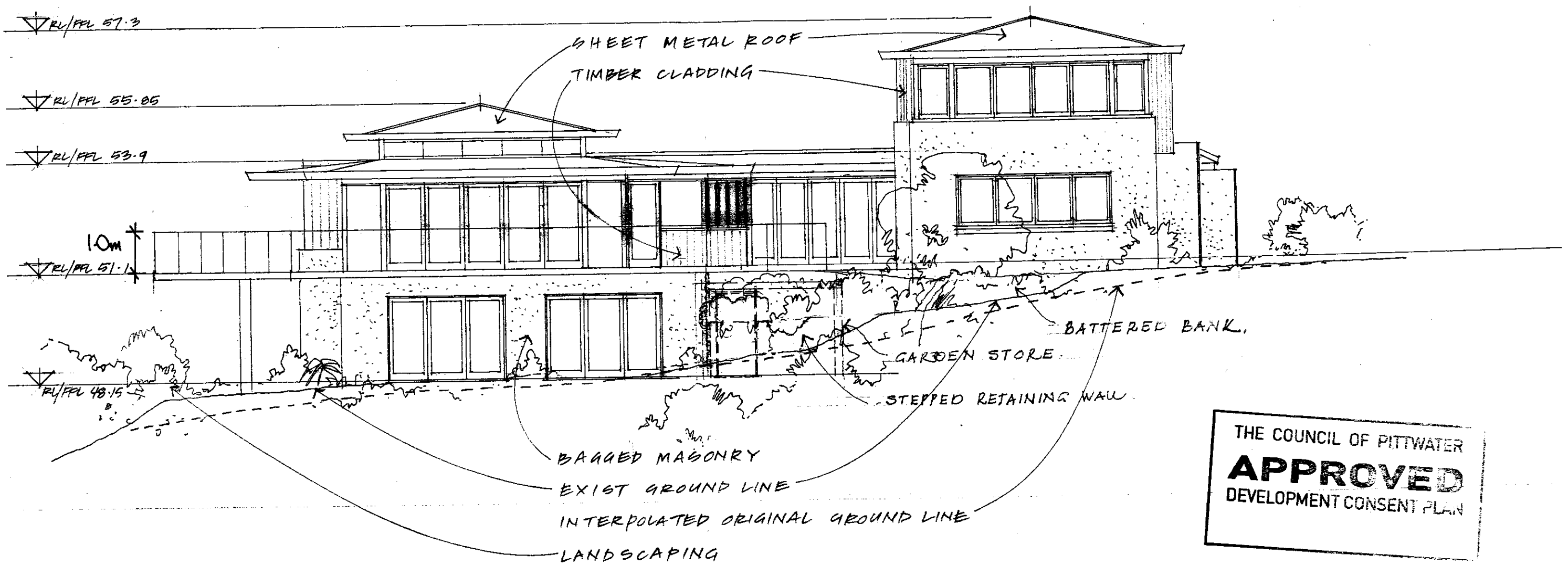
DEVELOPMENT CONSENT PLAN

NEW BEACH HOUSE
49 ATTUNGA RD NEWPORT

FOR: B & A HAMPTON **1 AUG 2000**
DESIGN: HARLEY GRAHAM & PETER PAINE

SCALE **1:100** DRAWING: **49-05** A

ELEVATIONS



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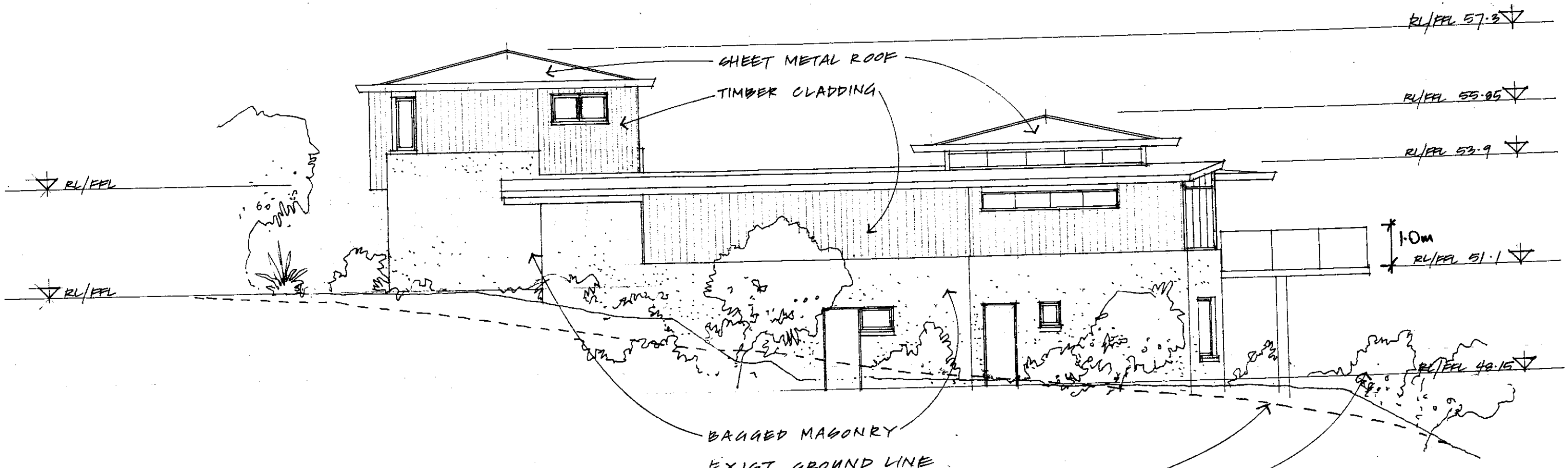
DEVELOPMENT CONSENT PLAN

NEW BEACH HOUSE
49 ATTUNGA RD NEWPORT

FOR: B & A HAMPTON **1 AUG 2000**
DESIGN: HARLEY GRAHAM & PETER PAINE

SCALE **1:200** DRAWING: **49-06 A**

EAST ELEVATION



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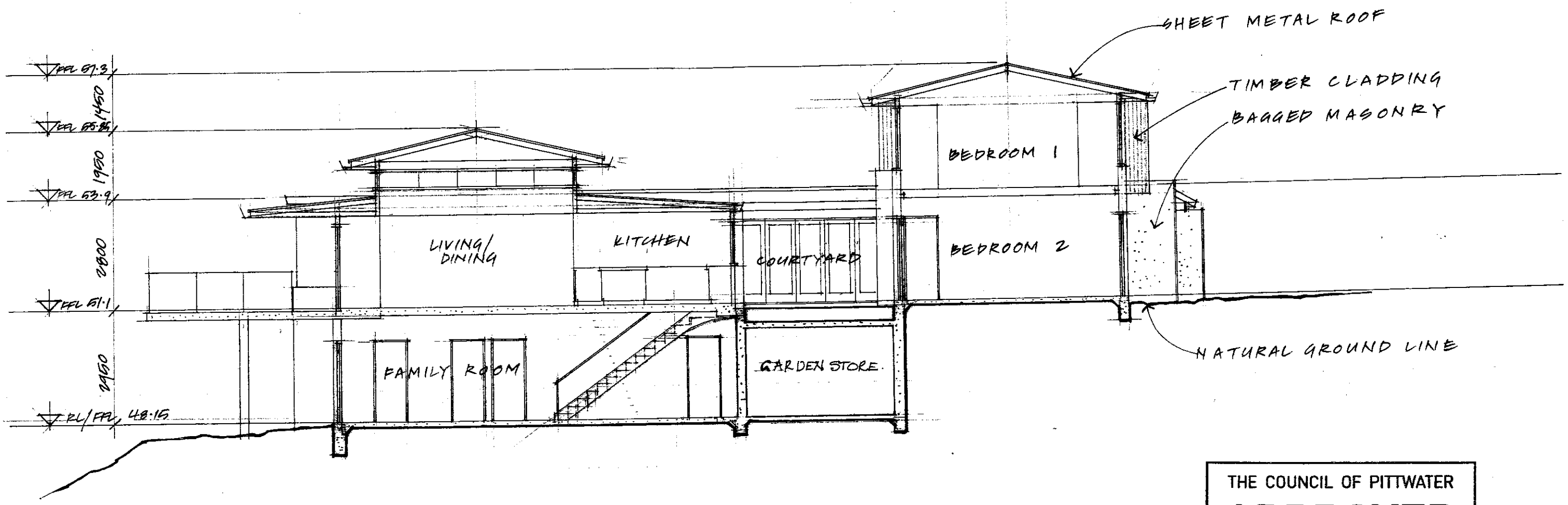
NEW BEACH HOUSE
49 ATTUNGA RD NEWPORT

FOR: B & A HAMPTON **1 AUG 2000**
DESIGN: HARLEY GRAHAM & PETER PAINE

SCALE **1:100** DRAWING: **49-07** B

WEST ELEVATION



NOTE: TERMITE PROTECTION TO BE IN ACCORDANCE WITH AS3660.1

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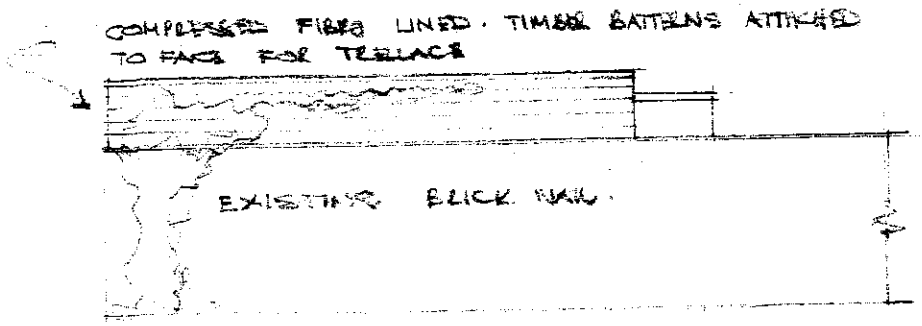
DEVELOPMENT CONSENT PLAN

NEW BEACH HOUSE
49 ATTUNGA RD NEWPORT

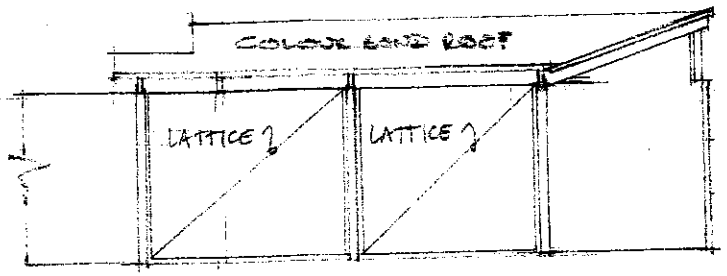
FOR: B & A HAMPTON **1 AUG 2000**
DESIGN: HARLEY GRAHAM & PETER PAINE

SCALE **1:200** DRAWING: **49-08 A**

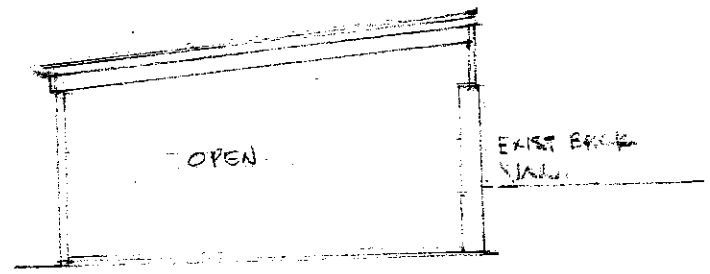
SECTION A-A



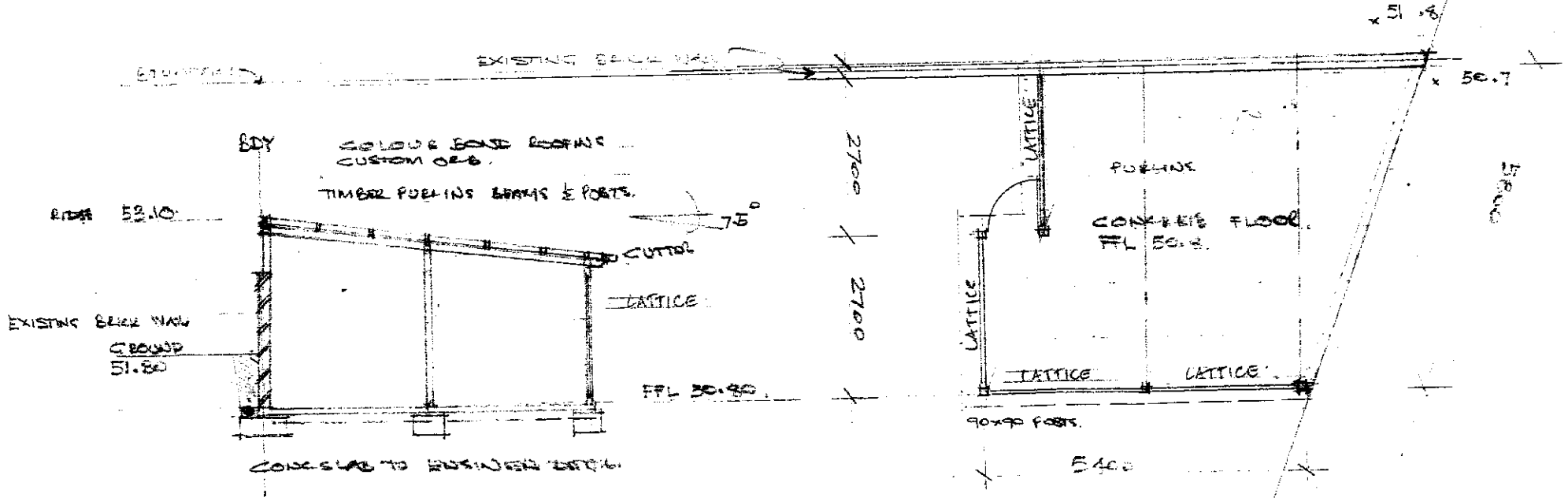
WEST ELEVATION



EAST ELEVATION



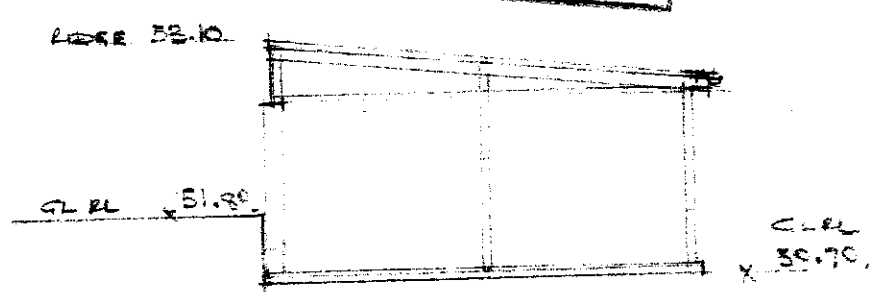
NORTH ELEVATION



SECTION

PLAN

CARPORT PLAN



SOUTH ELEVATION

THE COUNCIL OF PITTWATER
APPROVED
DEVELOPMENT CONSENT PLAN

NEW BEACH HOUSE
49 ATTUNGA RD NEWPORT

FOR: B & A HAMPTON 1 AUG 2000
DESIGN: HARLEY GRAHAM & PETER PAINE

DRAWING: 49-12 A

GENERAL NOTES:

GENERAL

G1. The drawings are to be read together with all Architects drawings and specifications.

G2. Dimensions shall not be obtained by scaling from the drawings. All setting out dimensions shall be verified and discrepancies shall be referred to the Engineer prior to commencement of work.

G3. Care is required during construction so that structural elements are not over stressed and that the works and excavations required therefore are kept stable at all times.

G4. Design, materials and workmanship are to be in accordance with current S.A.A standards and statutory authority regulations except where varied by these documents.

G5. Design live loads for floors are as follows:- Generally = 1.5 kPa.
Balcony = 3.0 kPa.

FOOTINGS

F1. Footings to be constructed and back filled as soon as possible following excavation to avoid softening by rain or drying out by exposure.

F2. Footings must bear 250 mm (minimum) into natural ground clear of organic material.

F3. If rock or variable bearing strata is encountered during excavation of the footings, all footings/piers are to be excavated to similar material. The Engineer is to be contacted for approval or review.

F4. Footings to be cast in approved material having an allowable capacity as follows:

Sand Foundations:

SA1. Required bearing capacity 100 kPa.
SA2. Trenches must be cleaned of all debris and hand compacted prior to placement of reinforcement.

Clay Foundations:

CL1. Required bearing capacity 150 kPa.
CL2. Trenches must be cleaned of all debris. Soft spots must be cut out and filled as per compacted fill notes, prior to placement of reinforcement.

Shale Foundations:

SH1. Required bearing capacity 400 kPa.
SH2. Excavation for footings into shale must be cast or capped with plain concrete on the same day as excavation.

Sandstone Foundations:

SS1. Required bearing capacity 650 kPa.
SS2. Scrape weathered surface to remove cleaved sandstone under footings.

COMPACTED FILL

CF1. Clear organic material and topsoil under proposed slabs/footings.

CF2. Filling shall be granular material compacted in not more than 200 mm layers to a minimum dry density ratio (AS 1289/E4.2 1982) of 98 percent. A Geotechnical Engineer must varify the compaction.

CF3. During clearing and excavation for slabs and footings cut out soft spots and fill as above.

STEEL

S1. All steel work to be grade 300 steel. Hollow sections to be grade 250 or 350 as appropriate. Design, fabrication and erection to be in accordance with AS 4100.

S2. Steel work shall have one of the following grades of corrosion protection:-

a. Thoroughly cleaned wire brushing, followed by two coats of zinc phosphate primer equivalent to Dulux Luxaprime applied by hand using brushes to achieve a total dry film thickness of 70 microns.

b. Preparation Blast clean to a minimum standard Class 2.5 in accordance with AS 1627 Part 4.
Primer 2-pack epoxy phosphate at dft 75 microns (Dulux Durepon P14).
Barrier Coat 2-pack epoxy micaeous iron oxide, dft 100 microns
Finish Coat 2-pack epoxy high gloss acrylic to dft 75 microns (e.g. Dulux Acrathane I F) in an approved colour.

c. Hot dipped galvanized to AS 4680
Where galvanized coating is broken on site make good Interzinc 52 Primer, two pack Intercure 420 and top coat with Interthane 990 by International Paints and apply the following surface coating:

Galmet Ketite Etch Primer, one coat 10 microns DFT
Galmet Keytite Steel Primer, 1 to 2 coats 25 mirrons DFT
Galmet Roof Paint, two coats 30 microns DFT

ELEMENT	SURFACE TREATMENT
INTERNAL ELEMENTS	'A'
EXTERNAL ELEMENTS AND ELEMENTS WITHIN EITHER SKIN OF EXTERNAL WALLS	'C'

S3. All bolts to be grade 4.6/S unless noted otherwise.
All bolts to be M16 bolts unless noted otherwise.
All bolts, nuts and washers are to be hot dip galvanized to AS 4680.

S4. All welds to be 6 mm continuous fillet welds unless noted otherwise.

S5. All cleat and base plates are to be 10 mm thick unless noted otherwise.

S6. Workshop drawings shall be prepared and two copies submitted to the engineer for review prior to fabrication commencement.

CONCRETE

C1. All workmanship and materials shall be in accordance with AS 3600.

C2. Concrete quality shall be as follows and shall be verified by tests.

ELEMENT	STRENGTH	SLUMP	MAX. AGG. SIZE
FOOTINGS	20 MPa	80 mm	20 mm
SLAB ON GROUND	25 MPa	80 mm	20 mm
INTERNAL SUSPENDED SLABS	32 MPa	80 mm	20 mm
EXTERNAL SUSPENDED SLABS Greater than 1 km from sea	32 MPa	80 mm	20 mm
EXTERNAL SUSPENDED SLABS Less than 1 km from sea	40 MPa	80 mm	20 mm
BLOCK INFILL	20 MPa	230 mm	10 mm

C3. Clear concrete cover to reinforcement shall be as follows unless otherwise shown-

ELEMENT	EXPOSURE CLASSIFICATION TO AS 3600	CLEAR COVER
FOOTINGS	N.A.	65 mm
SLABS - INTERNAL	A1	25 mm
SLABS - EXTERNAL Greater than 1 km from sea	B1	40 mm
SLABS - EXTERNAL Less than 1 km from sea	B2	45 mm
BEAMS & COLUMNS - INTERNAL	A1	30 mm
BEAMS & COLUMNS - EXTERNAL	B2	45 mm

C4. Sizes of concrete elements do not include thickness of applied finishes.

C5. Construction joints where not shown shall be to the approval of the engineer.

C6. Beam depths are written first and include slab thickness, if any.

C7. No holes or chases other than those shown on the structural drawings shall be made in concrete elements without the prior approval of the engineer.

C8. Reinforcement is represented diagrammatically it is not necessarily shown in true projection.

C9. Splices in reinforcement are not to be located in positions of maximum moment, any laps other than that shown shall be subject to the approval of the engineer. Where the lap length is not shown it shall be sufficient to develop the full strength of the reinforcement.

C10. Welding of reinforcement shall not be permitted unless shown on the structural drawings.

C11. Pipes or conduits shall not be placed within the concrete cover to reinforcement without the approval of the engineer.

C12. All reinforcing bars shall comply with AS 1302. All fabric shall comply with AS 1303 and AS 1304 and shall be supplied in flat sheets.

C13. Reinforcement symbols:
S - Grade 230S Deformed bar
C - Grade 410C Cold worked deformed bar
Y - Grade 400Y Deformed bar
R - Grade 230R Plain bar
F - Grade 450F Welded plain wire fabric
RF - Grade 500RW Welded ribbed wire fabric
The number immediately following these symbols is the number of millimeters in the bar diameter.

C14. Fabric reinforcement to be lapped 225 minimum at the ends and sides unless noted otherwise.

C15. All reinforcement shall be firmly supported on plastic chairs spaced at a maximum of 900 and 800 centres both ways under rod and fabric reinforcement respectively. Rods shall be tied at alternate intersections.

C16. Formwork must be cleaned of all debris prior to casting of concrete.

C17. Minimum stripping times for form work shall be as recommended in AS 1509 or as directed by the engineer.

C18. The finished concrete shall be a dense homogeneous mass, completely filling the form work, thoroughly embedding the reinforcement and free of air pockets. All concrete elements including slabs on ground and footings shall be compacted with mechanical vibrators.

C19. Curing of all concrete is to be achieved by keeping surfaces continuously wet for a period of 3 days, followed by prevention of loss of moisture for seven days followed by a gradual drying out . Approved sprayed on curing compounds may be used where no floor finishes are proposed. Polythene sheeting or wet hessian may be used if protected from wind and traffic.

C20. Shrinkage reducing admixtures such as 'Eclipse' or approved equivalent, if specified, must be added to mix prior to pour.

C21. Water reducing agents, if specified, must be added to mix prior to pour. No extra water to be added.

C22. Where vertical slab/beam surfaces are formed against a masonry (or other) wall, provide 10 mm (Ableflex) or styrene separation material.

BRICKWORK

BR1. Brickwork is to be constructed with mortar in the ratio 1:1:6, Cement:Lime:Sand and to be adequately cured prior to being loaded. Sand is to be clean with no clay content.
Masonry to be constructed to AS 3700.

BR2. Two layers of approved greased metal based slip material shall be used over all load bearing walls that support concrete slabs and placed on smooth brickwork or trowelled mortar finish. Non load-bearing walls shall have 10 mm compressible material and ties to the slab soffit.

BR3. No brickwork or blockwork shall be constructed on suspended slabs until all propping has been removed from the underside of the slab and the concrete has the specified 28 day cylinder strength verified by tests.

3R4. Control joints to be placed at a maximum of 8 m centres.

BR5. Exposure grade bricks to be used below damp proof course.

BR6. Separation control joint material between slabs and brick walls shall be: 10 mm Spandex External UNO.
Bitumastic fibreboard internal UNO.

BR7. Provide 316 stainless steel wall ties below DPC to AS.3700.
Ensure the following minimum standards are complied with:
Within 1Km of breaking surf or 100m of still water provide stainless steel wall ties above DPC to AS.3700.
In areas of heavy industrial pollution provide stainless steel wall ties above DPC to AS.3700.
All other areas provide galvanized wall ties above DPC to AS.3700.

BLOCKWORK

BL1. Concrete blocks shall have a minimum compressive strength of 15 MPa and conform to AS 1500. Mortar is to be 1:1/2:3, Cement:Lime:Sand. Masonry to be constructed to AS 3700.

BL2. Where cores of hollow blocks are to be filled, properly compacted concrete with 10 mm aggregate and 230 mm slump shall be used. Clean out openings must be utilized for all cores.

BL3. Location of actual starters is critical to suit block cores, allow 55 mm cover from the outside of blockwork. All reinforcement lap lengths to conform to AS 3600.

BL4. Control joints to be placed at a maximum of 8m centres.

BL5. Separation control joint material between slabs and blockwork walls shall be: 10 mm Spandex External UNO.

BL6. Retaining walls or any reinforced and concrete core filled block walls to be of Double 'U' Block Construction.
Bitumastic fibreboard internal UNO.

BL6. Retaining walls or any reinforced and concrete core filled block walls to be of Double 'U' Block Construction.

TIMBER

T1. All timber design and construction to be to AS 1720. AS 1684 is relevant to domestic construction in sheltered locations. All oregon to be grade F7 unless noted otherwise. All hardwood to be minimum grade F14. Exposed timber to be CCA treated radiata pine (to AS 1604) redried after full impregnation, or hardwood durability class 1 or 2.

T2. All joists to have blocking over support bearers and at maximum 3m centres.

T3. Roof trusses to be designed by the manufacturer to AS 1720. Pre camber to be an amount equal to dead load deflection u.n.o. Three copies of shop details to be submitted for review prior to commencing construction.

T4. All holes for bolts to be exact size. Washers to be used under all heads and nuts to be at least 2.5 times the bolt diameter. Bolts to be M16 grade 4.6 unless noted otherwise.

T5. Provide timber lintel over door openings of similar size to floor joists where required for spans up to 1800 mm.

T6. Treat all exposed cut ends with XJ Clear by Protim or approved equivalent.

INSPECTIONS BY ENGINEER

24 HOURS NOTICE IS REQUIRED BEFORE ANY SITE INSPECTION

1. Bearing strata of all footings prior to concrete pour.
2. Any reinforcement prior to concrete pour.
3. Timber and Steel framing prior to cladding.
4. Steel lintels after installation.

WARNING

PLEASE NOTE: The stamping of this plan by Insight Development Consultants Pty Ltd does not relieve the Applicants responsibility to obtain approval from Sydney Water or other utilities prior to the commencement of any works.

Dial Before You Dig 1100

INSIGHT DEVELOPMENT CONSULTANTS PTY LTD

Structural Details C.C. No: 2004/1003

PLEASE NOTE: The stamping of this plan by Insight Development Consultants Pty Ltd does not relieve the Structural Engineers of their responsibility to ensure the structural adequacy of this project.

COUNCIL COPY

A3

DOCUMENT CERTIFICATION
Date : 10/10/2003
Michael Kelett.....
(For MtK Consulting)

I am a qualified Structural/Civil Engineer.
I hold the following qualifications:
B.E.(Civil), MIEAust, C.P.Eng
Institute of Engineers Membership No. 642185
I hereby state that this drawing is in compliance with the conditions of the development consent, the provisions of the Building Code of Australia and/or relevant Australian/Industry Standards.

MTK Consulting
Structural, Civil, Stormwater
ABN 58 605 578 841
PO Box: 703
DEE WHY NSW 2099
Ph: (02) 9999 6922 Fax: (02) 9979 5263
e-mail : mtk@summit.net.au

Project:
PROPOSED WORKS
at: 49 Attunga Road
Newport
for: Mr & Mrs Hampton

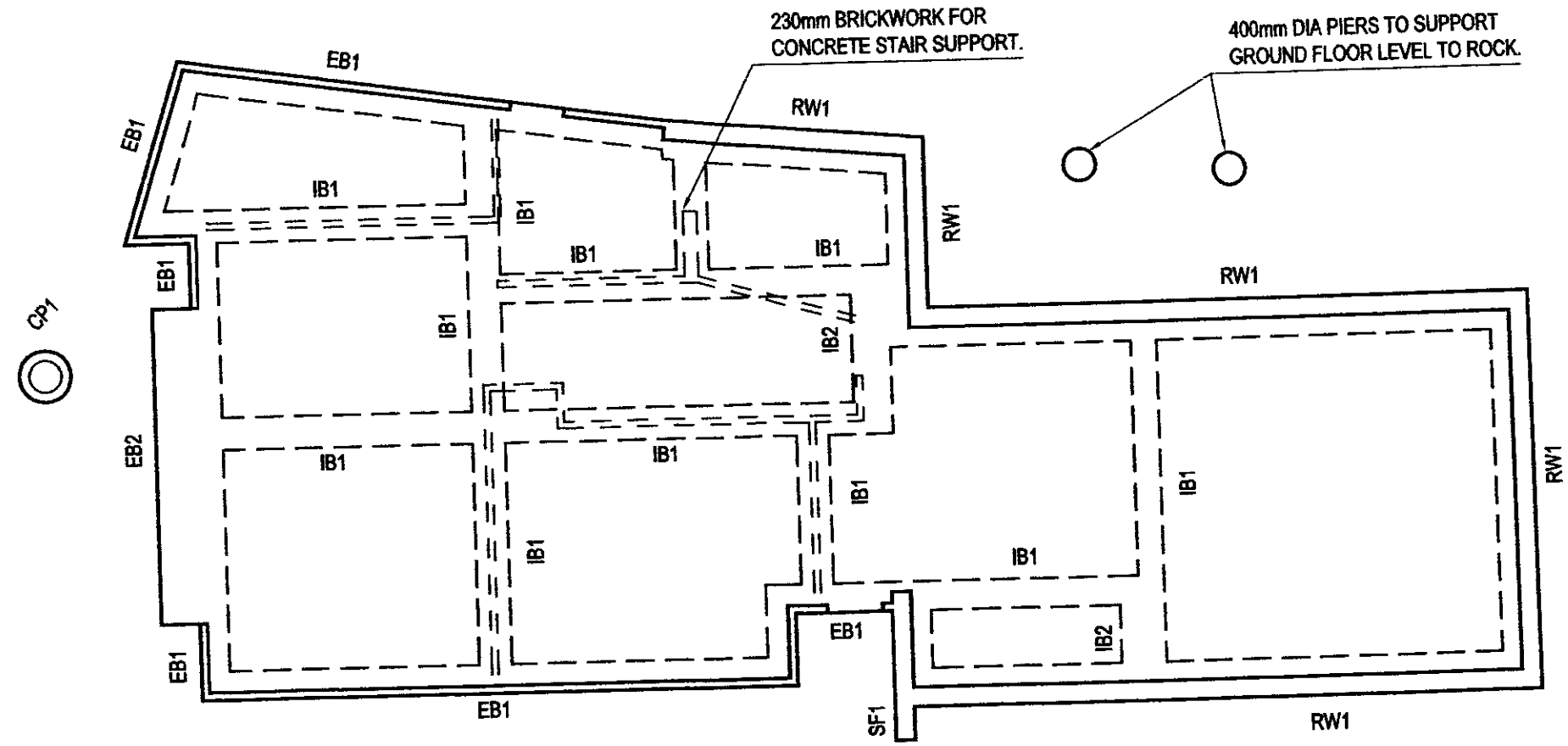
Drawing Title: GENERAL NOTES

Date:	Rev:	Amendment:
OCT 2003	M.K.	M.K.

Job No: 30811
Drawing No: S01
Rev: -

NOTES:

1. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WITH WORK.
2. FOR GENERAL NOTES AND DRAWING SCHEDULE REFER TO DRAWING NUMBER: S01.



LEVEL ONE PLAN

SCALE = 1:100

PROVIDE 120mm SLAB WITH F82 MESH TOP ONO.
REFER TO S03 FOR SLAB DETAILS.
REFER TO S04 FOR RETAINING WALL AND PIER DETAILS.
REFER TO ARCHITECTURAL DETAILS FOR STEP DEPTH AND WET AREA DETAILS.
PROVIDE 450mm THROAT FOR SETDOWN IN SLAB TYP.

NOTE: PROVIDE PIERS AT CORNERS AND BEAM INTERSECTIONS AND AT 1800mm MAX CENTRES WHERE NOT ON ROCK.

A3

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e-mail : mtk@summit.net.au

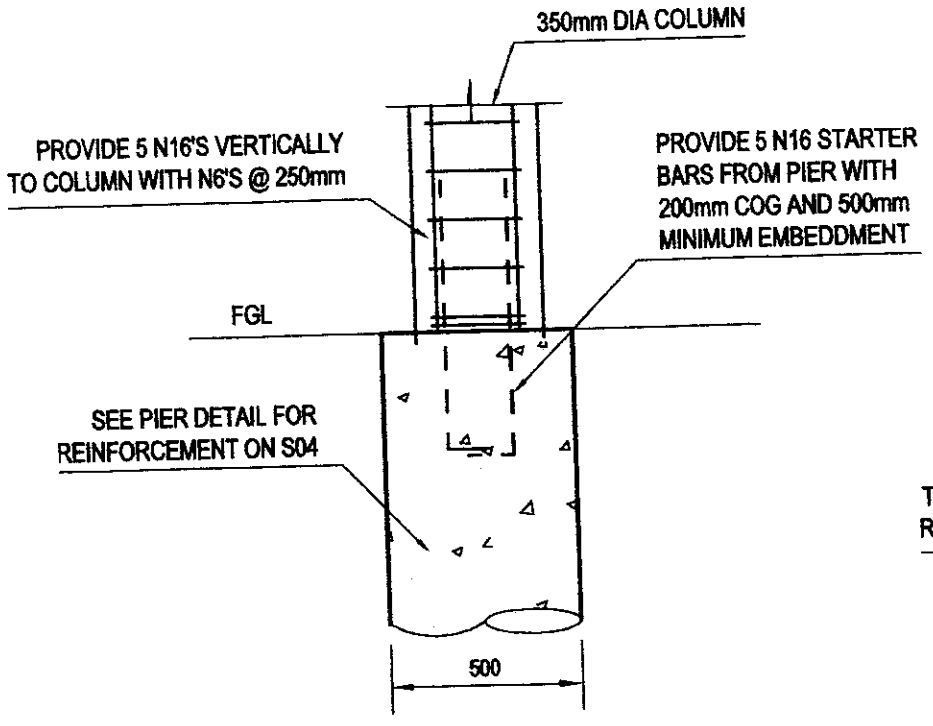
Project:
PROPOSED WORKS
at: 49 Attunga Road
Newport
for: Mr & Mrs Hampton

Drawing Title:
FOOTING PLAN

Date:	Rev:	Amendment:

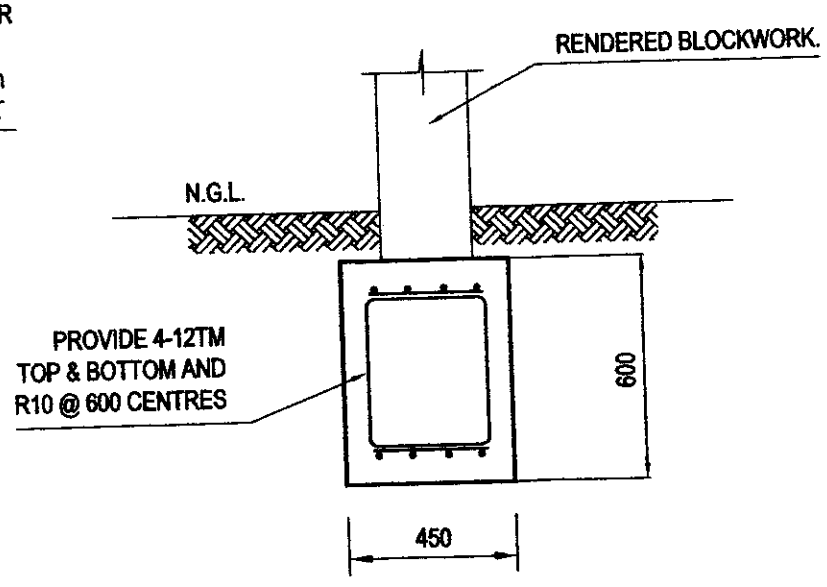
Date:	Design:	Drawn:
OCT 2003	M.K.	M.K.

Job No:	Drawing No:	Rev:
30811	S02	-



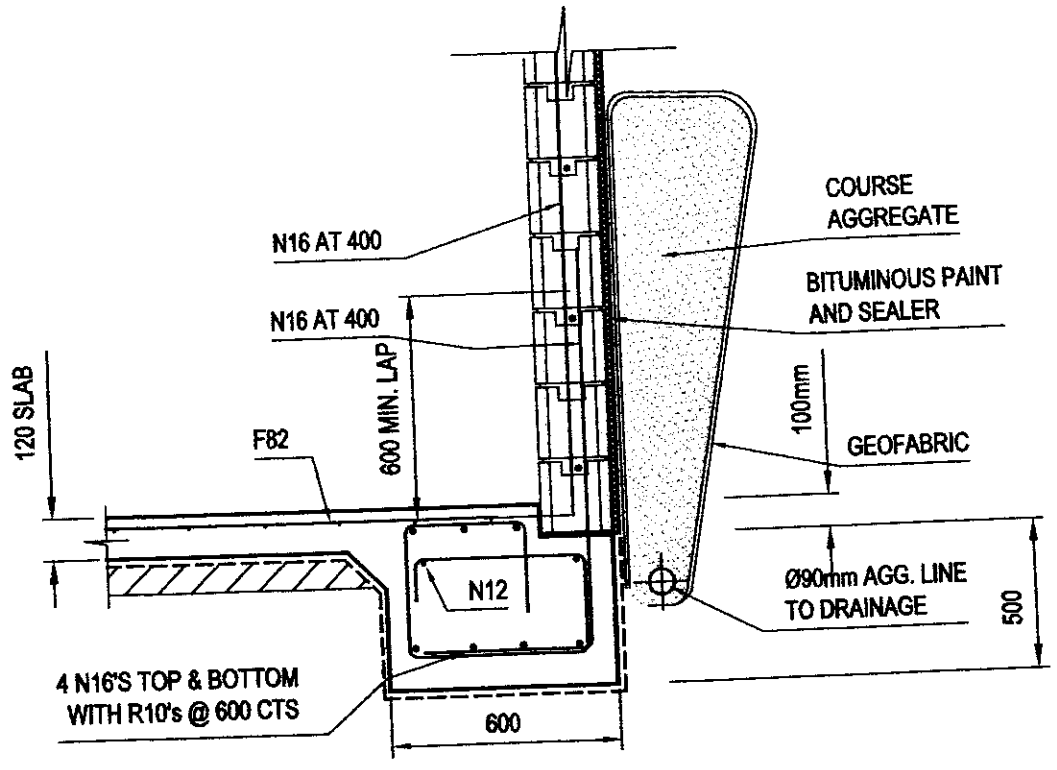
COLUMN/PIER DETAIL

SCALE = 1 : 20



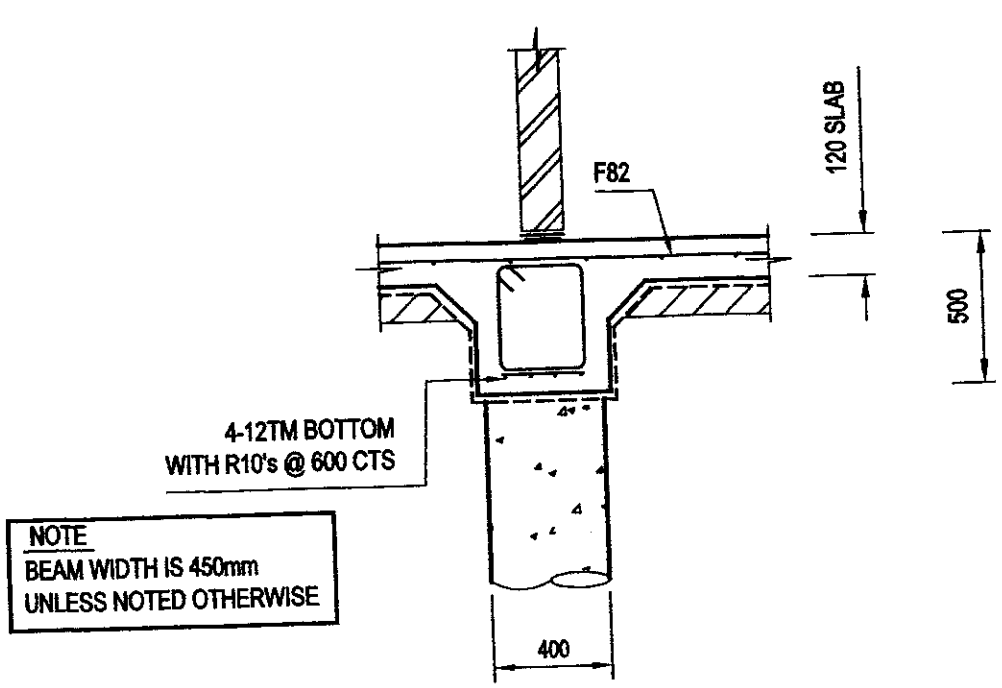
STRIP FOOTING SF1

SCALE = 1:20



TYPE 'RW1' BEAM

SCALE = 1 : 20



COG PIER REINFORCEMENT TO FOOTING

TYPE 'IB1' BEAM

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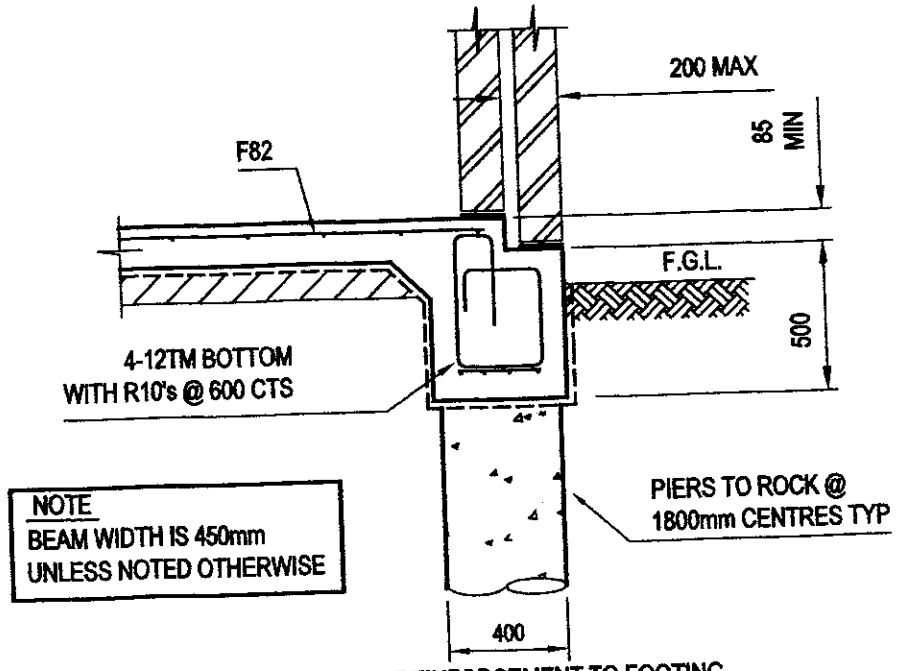

COG PIER REINFORCEMENT TO FOOTING

TYPE 'EB1' BEAM

SCALE = 1 : 20

NOTES:

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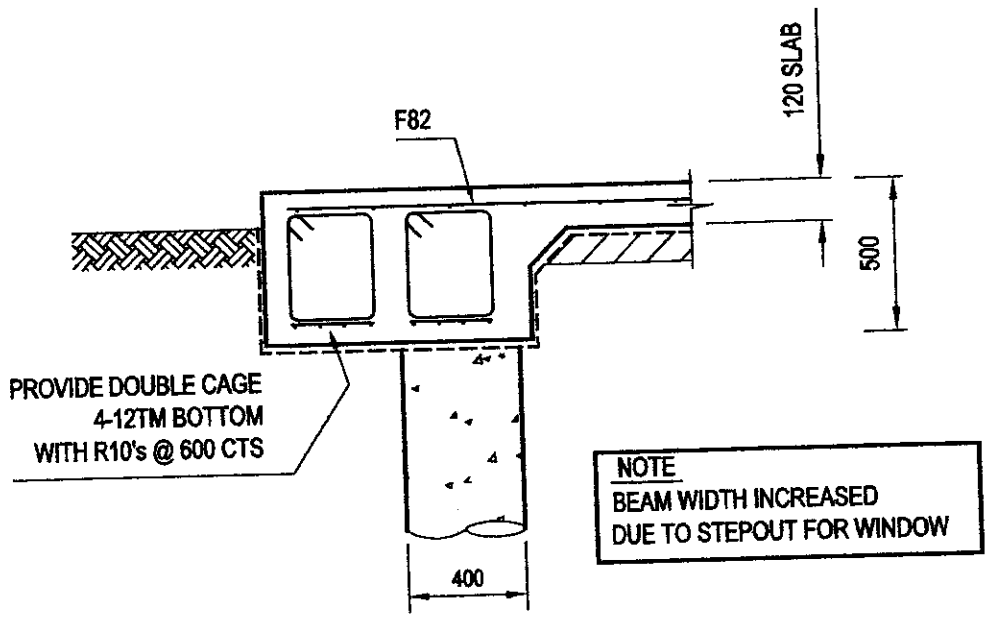
Project:
PROPOSED WORKS
at: 49 Attunga Road
Newport
for: Mr & Mrs Hampton

Drawing Title:
FOOTING DETAILS
SHEET ONE

Date:	Rev:	Amendment:

Date:	Design:	Drawn:
OCT 2003	M.K.	M.K.

Job No:	Drawing No:	Rev:
30811	S03	-



COG PIER REINFORCEMENT TO FOOTING

TYPE 'EB2' BEAM

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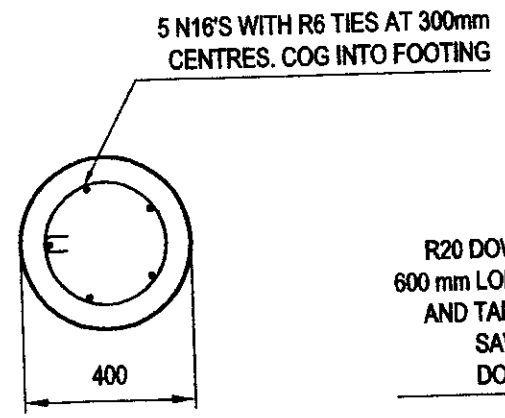
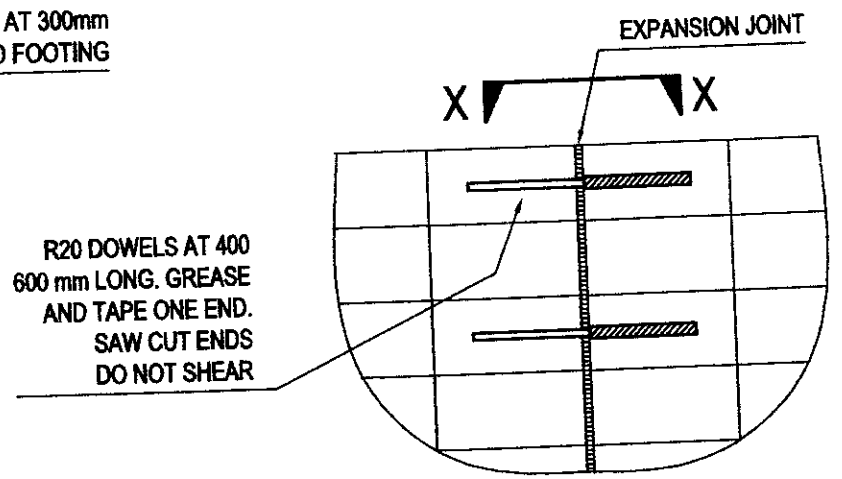


PIER DETAIL

SCALE = 1 : 20

(REINFORCEMENT NOT REQUIRED
WHERE DEPTH < 1000mm)



EXPENSION JOINT DETAIL

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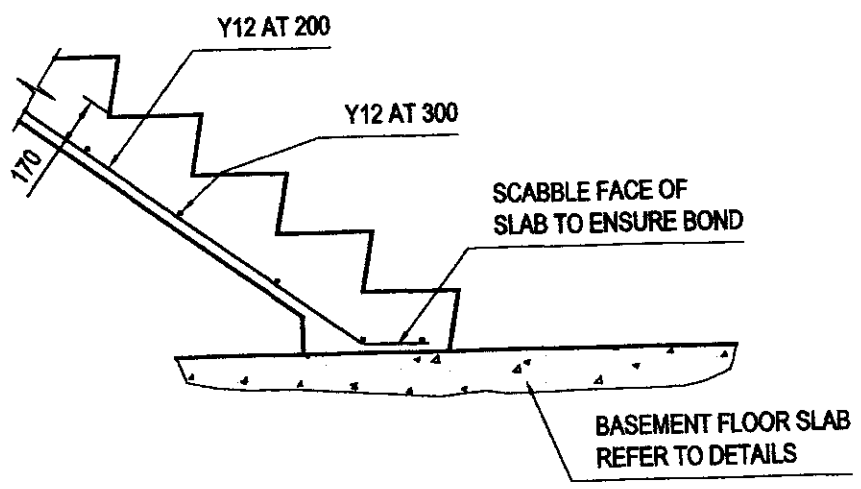

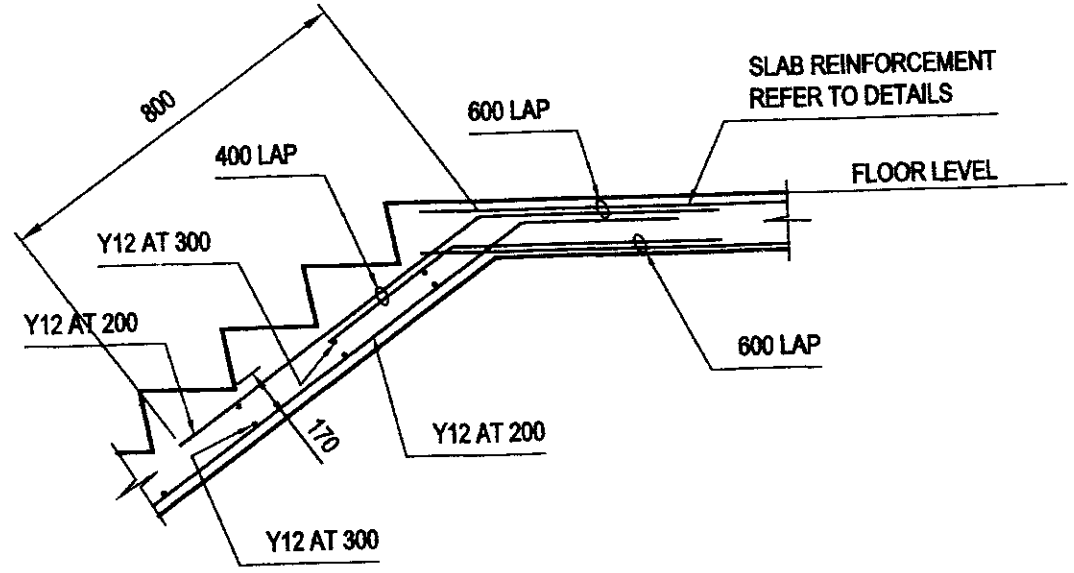

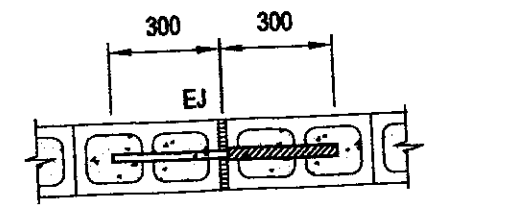

SECTION X

SCALE = 1:20

TYPICAL STAIR DETAILS

SCALE = 1 : 20

NOTES:

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Date:	Rev:	Amendment:

A3

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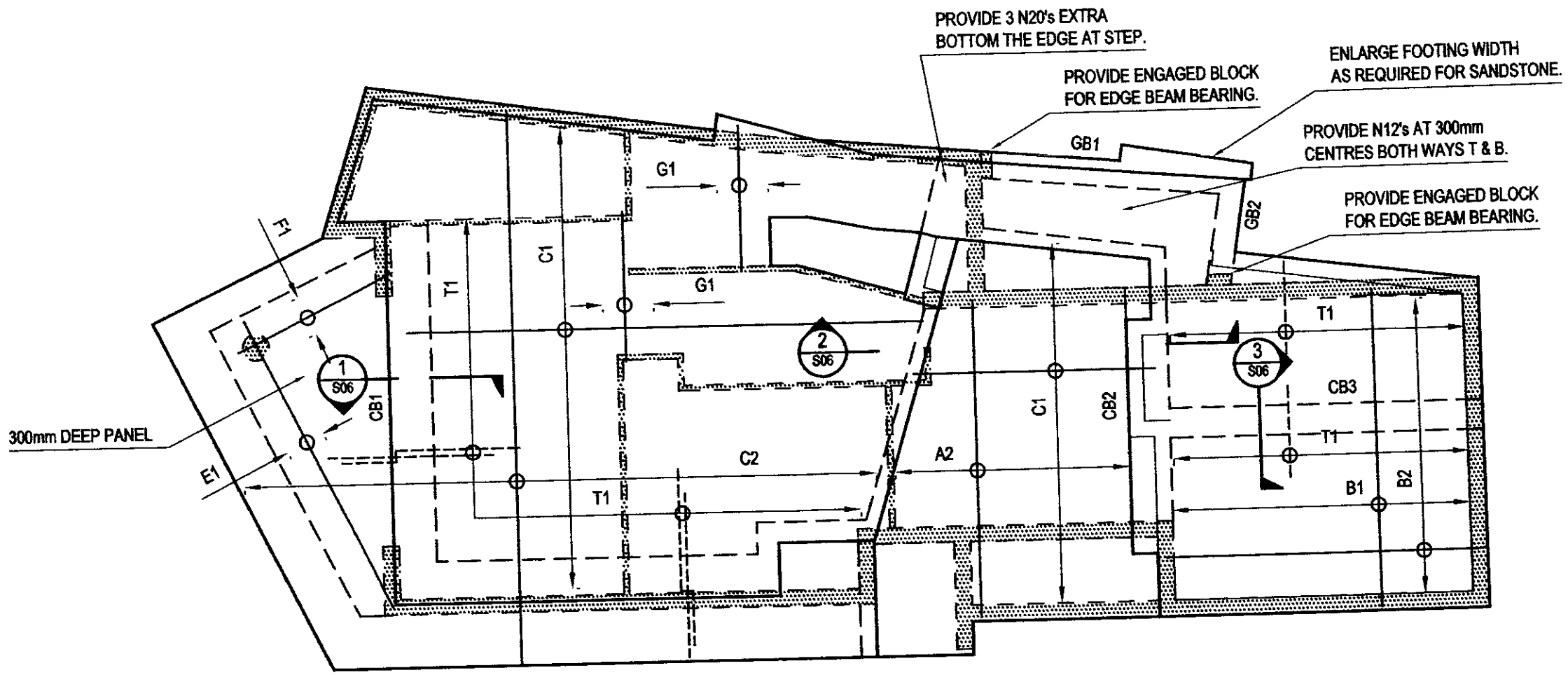
e-mail : mtk@summit.net.au

Project:
PROPOSED WORKS
at: 49 Attunga Road
Newport
for: Mr & Mrs Hampton

Drawing Title:
FOOTING DETAILS
SHEET TWO

Date:	Design:	Drawn:
OCT 2003	M.K.	M.K.

Job No:	Drawing No:	Rev:
30811	S04	-



GROUND LEVEL PLAN

SCALE = 1:100

PROVIDE 172mm SLAB WITH N12's @ 300mm CENTRES BOTH WAYS TOP ono.
BOTTOM STEEL AND ADDITIONAL TOP STEEL NOTED ON PLAN.
PROVIDE WATERPROOF MEMBRANE TO SLAB WHERE SUPPORTING SOIL.
REFER TO STEP DETAILS FOR REINFORCEMENT AT SLAB STEPS.
A2 = N12's @ 200mm CENTRES LAID SECOND.
B1 = N12's @ 300mm CENTRES LAID FIRST.
B2 = N12's @ 300mm CENTRES LAID SECOND.
C1 = N12's @ 200mm CENTRES LAID FIRST.
C2 = N12's @ 300mmCENTRES LAID SECOND.
E1 = 6 N20's @ 125mm CENTRES.
F1 = 6 N16's @ 125mm CENTRES.
G1 = 4 N16's @ 100mm CENTRES.
T1 = N12's @ 300mm CENTRES EXTRA TOP.

NOTES:

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Date:	Rev:	Amendment:

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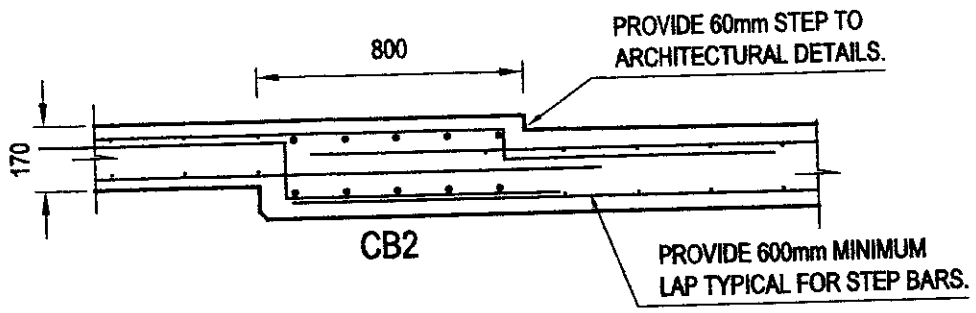
e-mail : mtk@summit.net.au

Project:
PROPOSED WORKS
at: 49 Attunga Road
NEWPORT
for: Mr & Mrs HAMPTON

Drawing Title:
GROUND FLOOR
PLAN

Date:	Design:	Drawn:
OCT 2003	M.K.	M.K.

Job No:	Drawing No:	Rev:
30811	S05	-



SECTION 1 / S05

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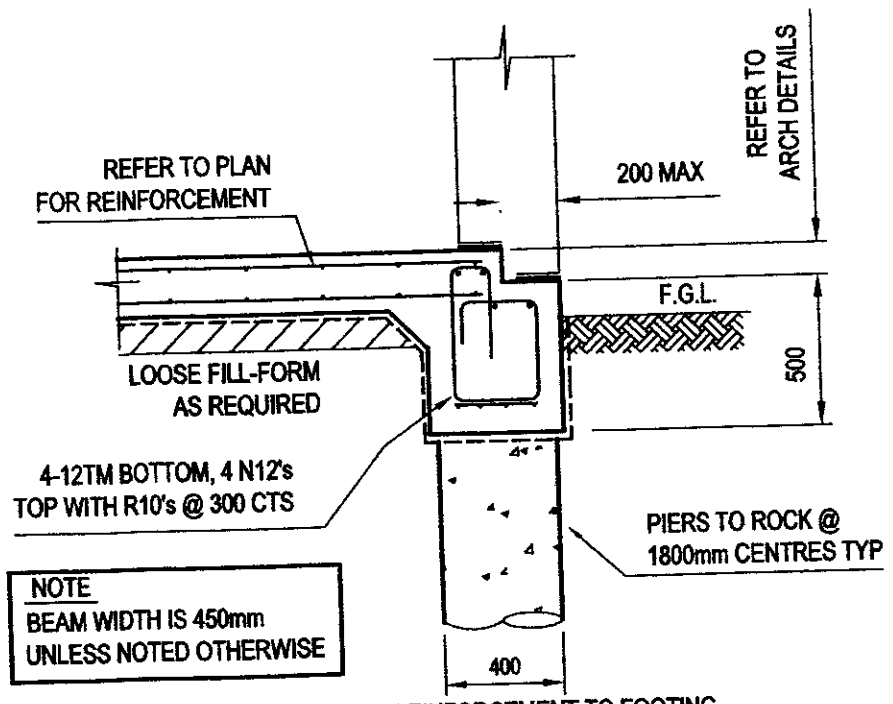


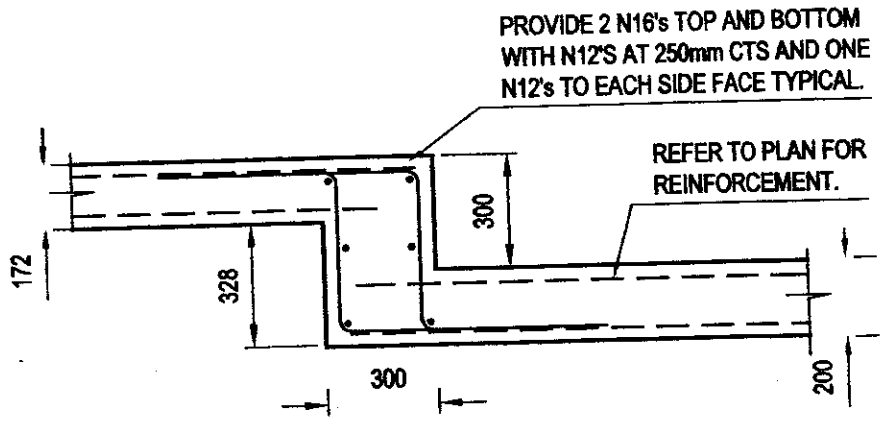
TYPE 'GB1' BEAM

SCALE = 1 : 20

GB2 SIMILAR WITHOUT RECESS

NOTES:

1. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WITH WORK.
2. FOR GENERAL NOTES AND DRAWING SCHEDULE REFER TO DRAWING NUMBER: S01.

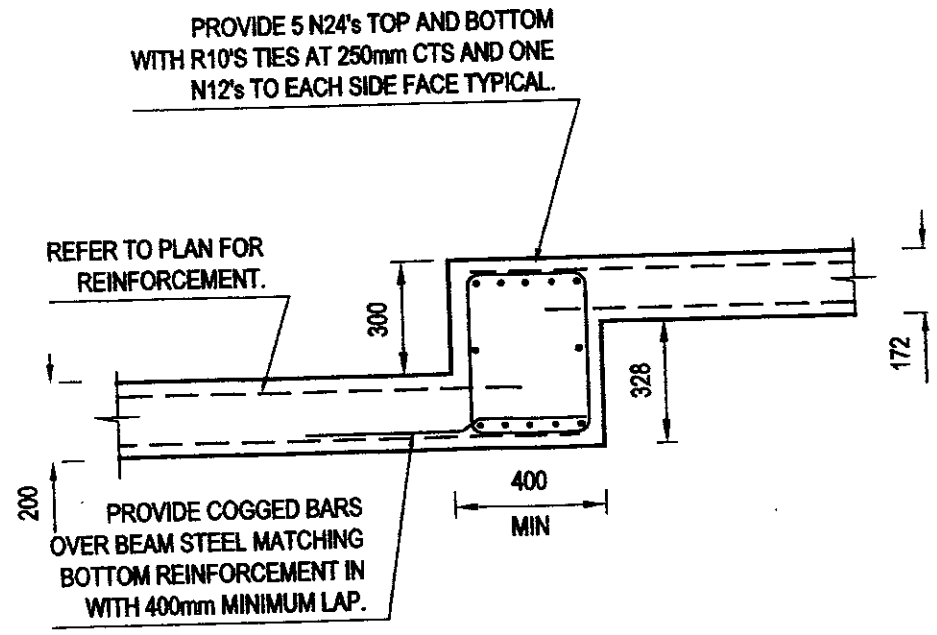


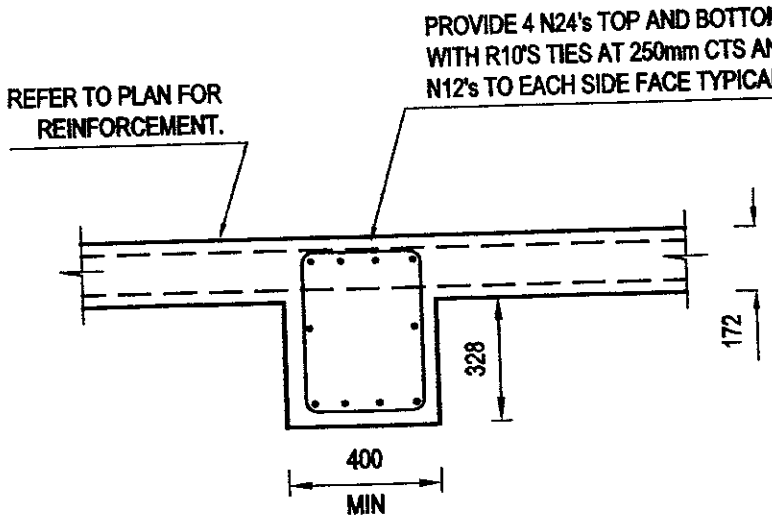
NOTE: SUPPORTING BRICKWORK NOT SHOWN.

SECTION 2 / S05

SCALE = 1:20

NOTE: ADVISE ENGINEER IF BEAM WIDTH IS INCREASED





SECTION 3 / S05

SCALE = 1:20

NOTE: ADVISE ENGINEER IF BEAM WIDTH IS INCREASED

A3

DOCUMENT CERTIFICATION

Date: 10/10/2003

Michael Kelett.....

(For MtK Consulting)

I am a qualified Structural/Civil Engineer.
I hold the following qualifications:
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Institute of Engineers Membership No. 642185
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MTK Consulting
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ABN 58 605 578 841
PO Box: 703
DEE WHY NSW 2099
Ph: (02) 9999 6922 Fax: (02) 9979 5263
e-mail : mtk@summit.net.au

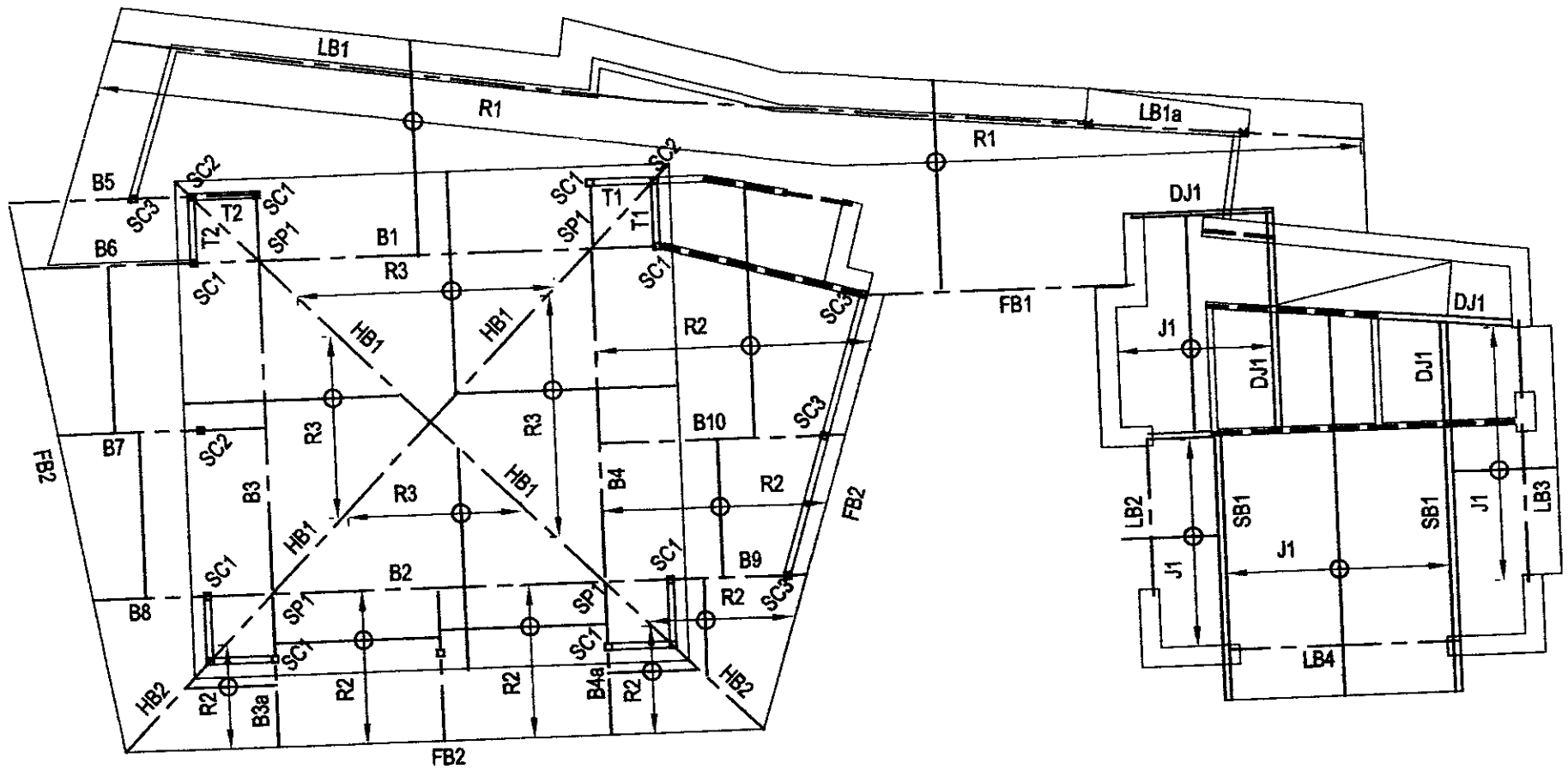
Project:
PROPOSED WORKS
at: 49 Attunga Road
NEWPORT
for: Mr & Mrs HAMPTON

Drawing Title:
GROUND FLOOR DETAILS

Date:	Rev:	Amendment:

Date:	Design:	Drawn:
OCT 2003	M.K.	M.K.

Job No:	Drawing No:	Rev:
30811	S06	-



FIRST FLOOR PLAN

SCALE = 1:100

LOAD BEARING WALLS SHOWN AS DASHED
PROVIDE STRAPPING TO LB1 AND LB1a FOR HOLD DOWN
PLY LINE INTERNAL FACE OF WALLS WHERE PANELS ARE GREATER THAN 900mm WIDE
PROVIDE A MINIMUM OF 150mm END BEARING ON MASONRY WALLS

MEMBER SCHEDULE	
MARK	MEMBER
ROOF MEMBERS	
B1, B2	250 UB 37 CRANKED BEAM
B3, B4	250 UB 37
B3a, B4a	250 UB 37 TAPERED
B5	200 UB 25
B6, B8, B9	TAPERED EXTENSION OF 250 UB 37
B7, B10, B11	TAPERED 250 UB 37
LB1	125 TFB (as top plate)
LB1a	125 TFB WITH 100 x 10mm PLATE TO BOTTOM FLANGE
T1, T2	STEEL TRUSSES, SEE DETAIL
R1, R2, R3	140 x 45 F7 RAFTERS AT 600mm CENTRES
HB1	2 / 190 x 45 F17 NAIL LAMINATED
HB2	TAPERED 250 UB 37
SC1	150 x 150 x 9 SHS
SC2	100 x 100 x 6 SHS
SP1	89 x 89 x 5 SHS
FB1	200 PFC
FB2	150 PFC

MEMBER SCHEDULE	
MARK	MEMBER
FIRST FLOOR MEMBERS	
LB2, LB3	180 PFC WITH 240 x 10mm FLAT PLATE
LB4	200 PFC WITH 240 x 10mm FLAT PLATE
J1	190 x 45 F17 @ 450mm CENTRES
J2	190 x 45 F17 @ 300mm CENTRES
SB1	200 UB 25

NOTES:

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A3

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Ph: (02) 9999 8922 Fax: (02) 9979 5263
e-mail : mtk@summit.net.au

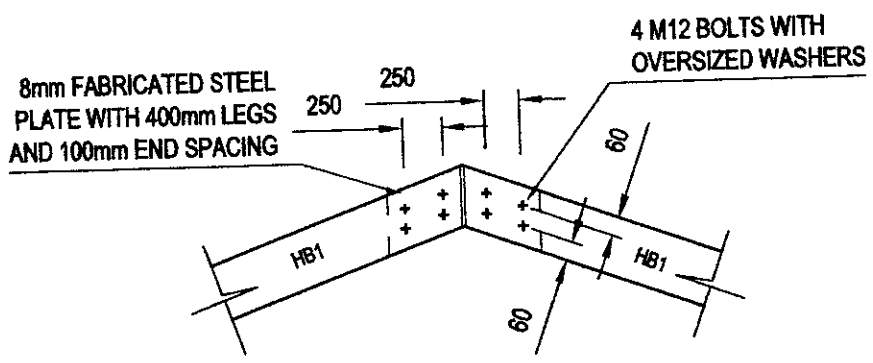
Project:
PROPOSED WORKS
at: 49 Attunga Road
NEWPORT
for: Mr & Mrs HAMPTON

Drawing Title:
LOWER ROOF & FIRST FLOOR PLAN

Date:	Rev:	Amendment:

Date:	Design:	Drawn:
OCT 2003	M.K.	M.K.

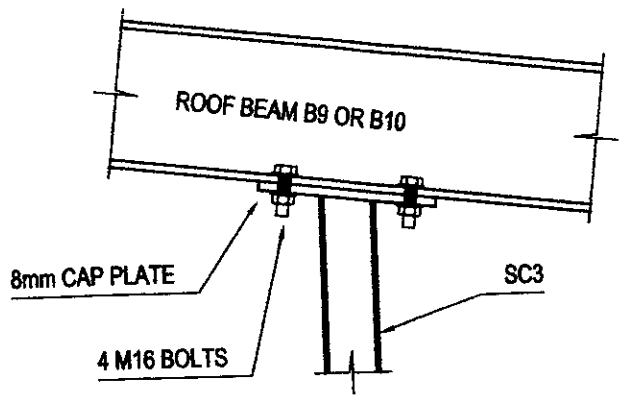
Job No:	Drawing No:	Rev:
30811	S07	-



HIP BEAM CONNECTION

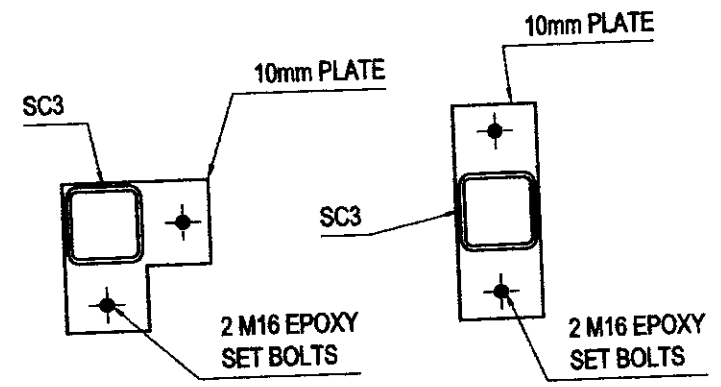
SCALE = NTS

NOTE : HIPBEAMS INTO & OUT OF THE PAGE OMITTED FOR CLARITY OF SKETCH



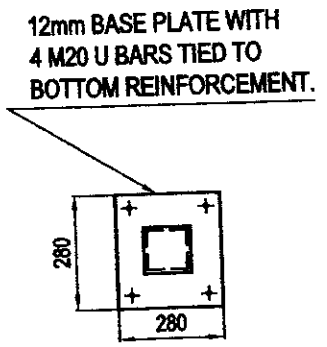
CONNECTION SC3 TO STEEL ROOF BEAM

SCALE = 1 : 20



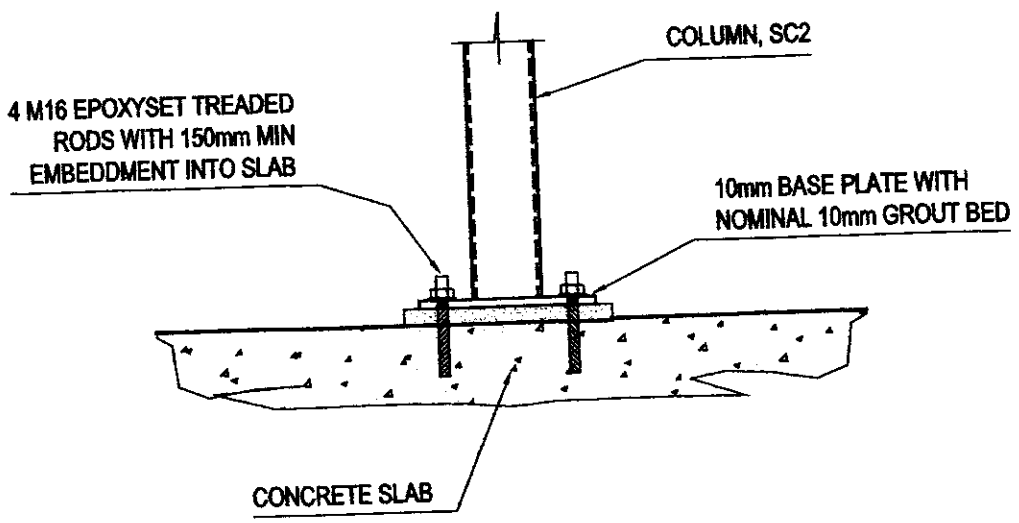
ALTERNATIVE BASE PLATE DETAILS

SCALE = 1 : 10



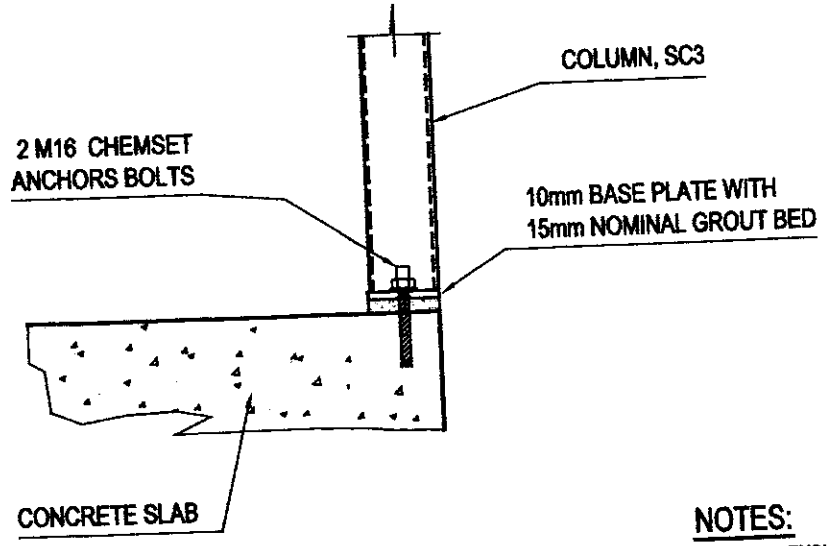
SC1 BASE PLATE DETAIL

SCALE = 1 : 20



COLUMN SC2 TO SLAB

SCALE = 1 : 10



BASE PLATE TO SC3

SCALE = 1 : 10

NOTES:

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A3

DOCUMENT CERTIFICATION

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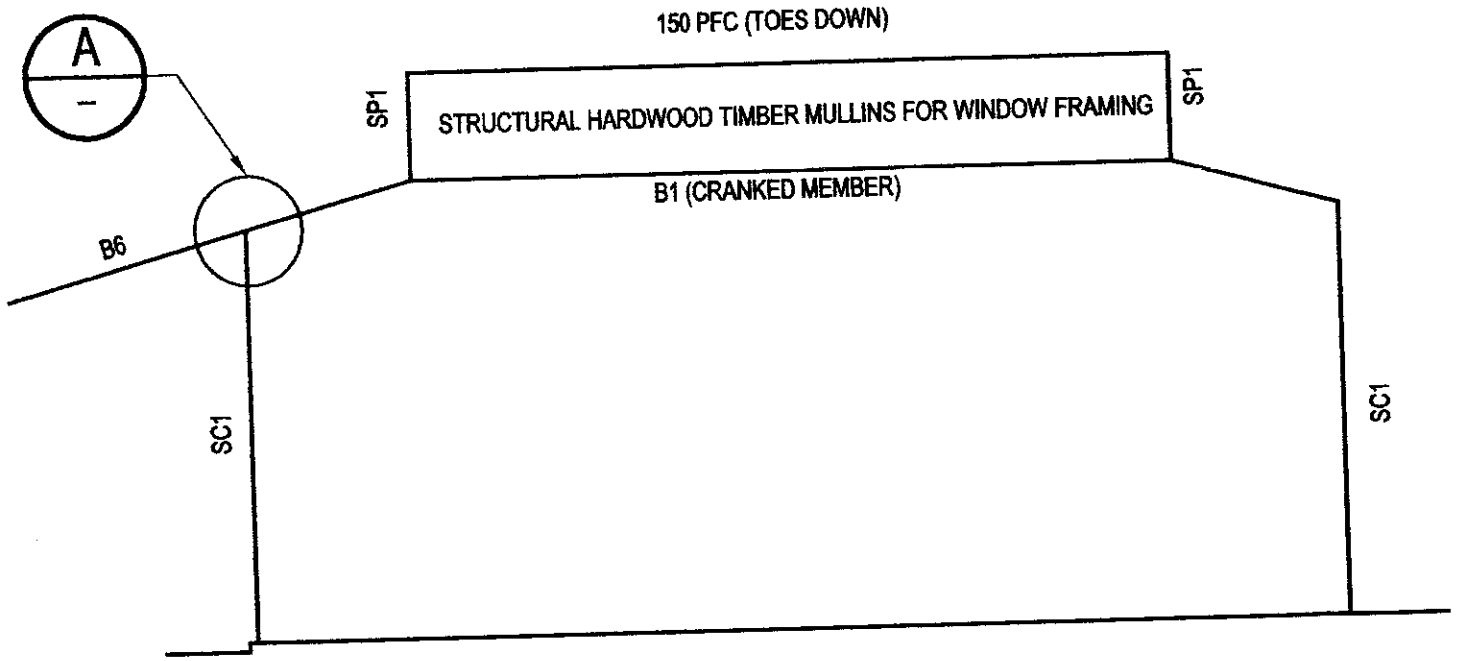
e-mail : mtk@summit.net.au

Project:
PROPOSED WORKS
at: 49 Attunga Road
NEWPORT
for: Mr & Mrs HAMPTON

Drawing Title:
LOWER ROOF & FIRST
FLOOR DETAILS

Date:	Rev:	Amendment:

Date:	Design:	Drawn:	
OCT 2003	M.K.	M.K.	
Job No: 30811		Drawing No: S08	Rev: -



ELEVATION OF BEAM B1

SCALE = 1 : 50

(BEAM B2 SIMILAR)

NOTES:

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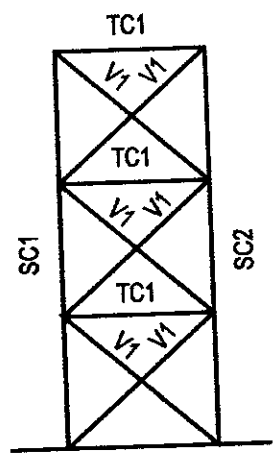
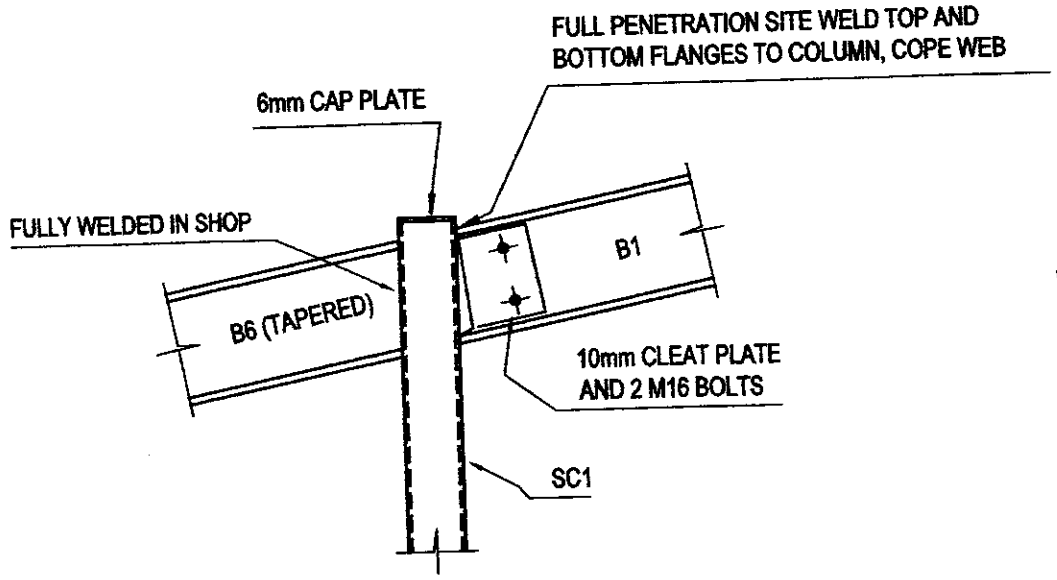


SC1 = 150 x 150 x 9 SHS
SC2 = 100 x 100 x 6 SHS
TC1 = 90 x 90 x 5 SHS
V1 = 75 x 75 x 5 SHS
ALL CONNECTIONS FULLY WELDED

ELEVATION OF WALL TRUSS, T1

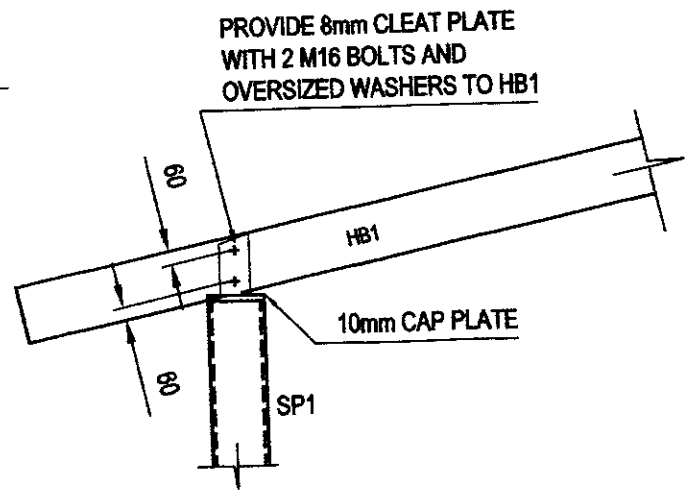
SCALE = 1 : 50

(T2 SIMILAR)



DETAIL A

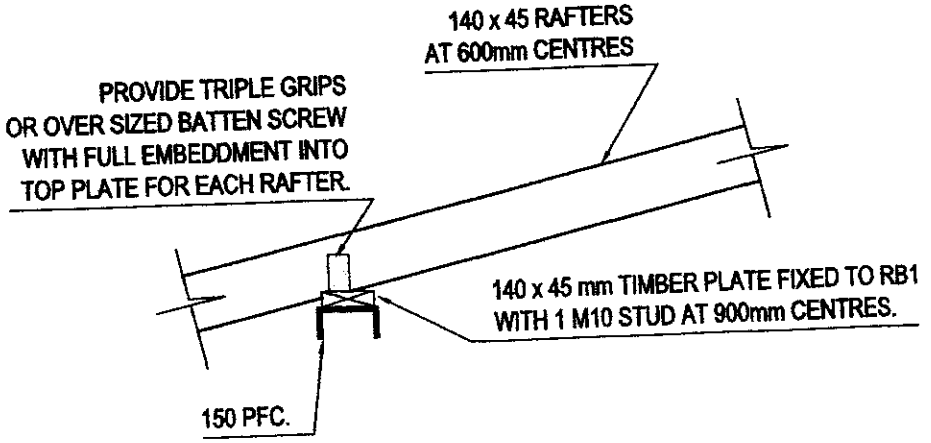
SCALE = 1:20



HIP BEAM HB1, CONNECTION

SCALE = 1 : 20

NOTE : RAFTERS OMITTED FOR CLARITY OF SECTION



LOWER ROOF RAFTER CONNECTION

SCALE = 1 : 20

PROVIDE 35mm THICK BATTERNS, SCREW FIXED TO EACH RAFTER TYP.

A3

DOCUMENT CERTIFICATION

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Project:
PROPOSED WORKS
at: 49 Attunga Road
NEWPORT
for: Mr & Mrs HAMPTON

Drawing Title:
LOWER ROOF & FIRST FLOOR DETAILS

Date:	Rev:	Amendment:

Date:	Design:	Drawn:
OCT 2003	M.K.	M.K.

Job No:	Drawing No:	Rev:
30811	S09	-

NOTES:

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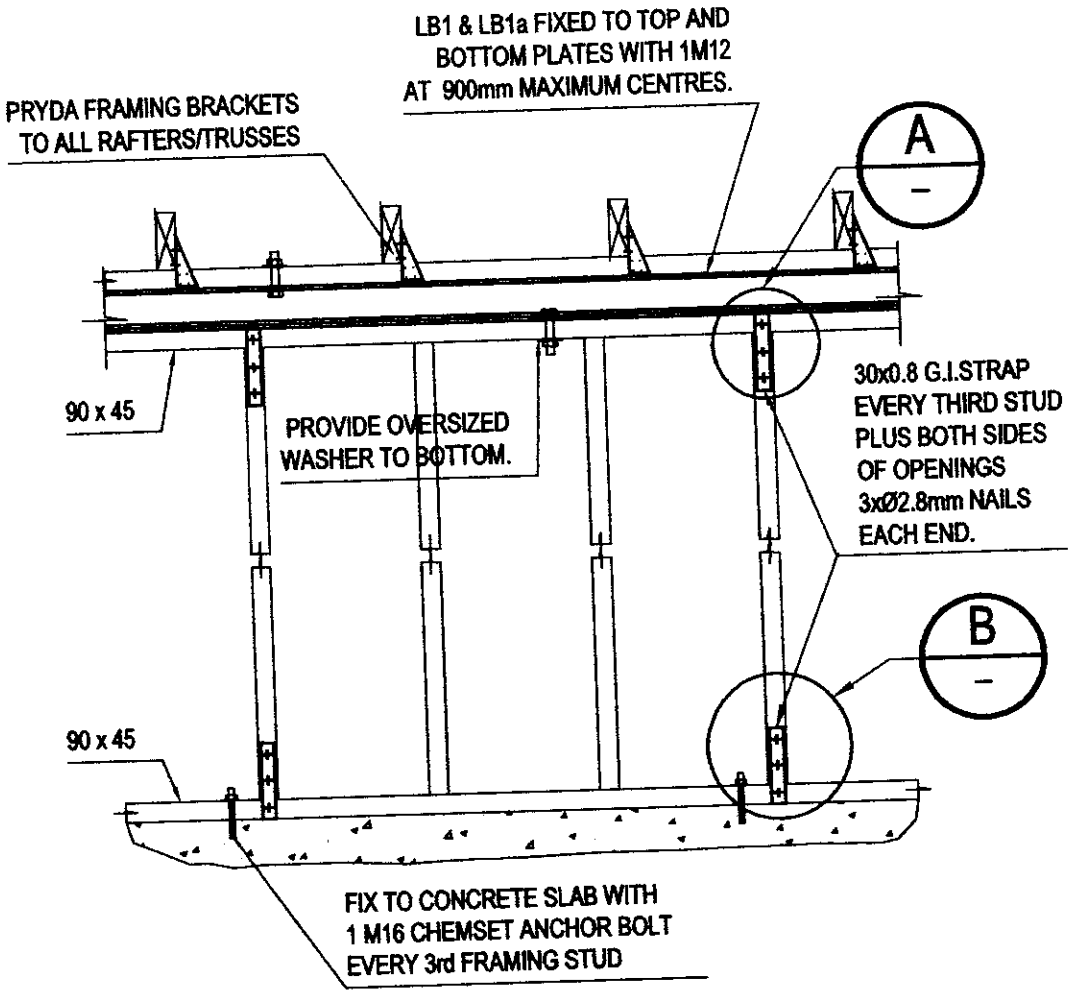
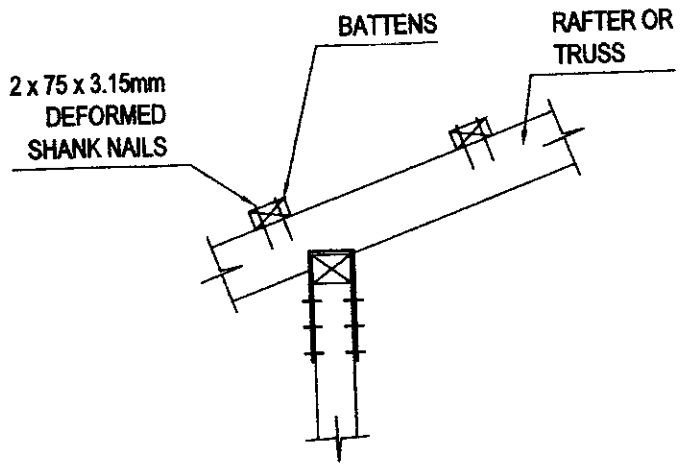


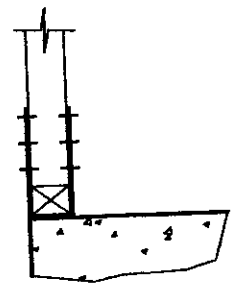
TYPICAL TIE DOWN DETAIL

SCALE = 1 : 20



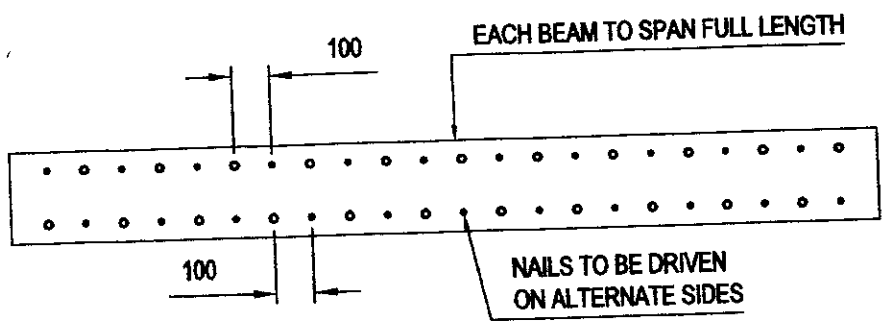
DETAIL A

SCALE = 1:20

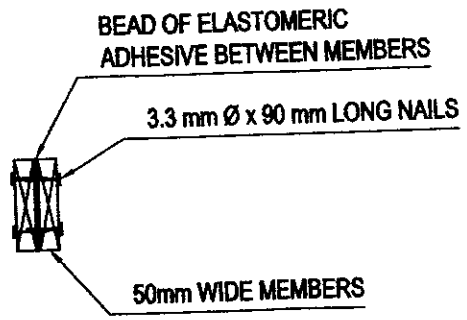


DETAIL B

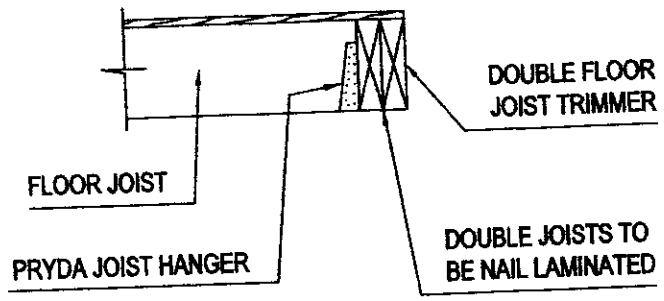
SCALE = 1:20



BEAM ELEVATION



BEAM SECTION



TRIMMER DETAIL

SCALE = 1 : 20

TYPICAL NAIL LAMINATED BEAM DETAIL

SCALE = 1 : 20

A3

DOCUMENT CERTIFICATION

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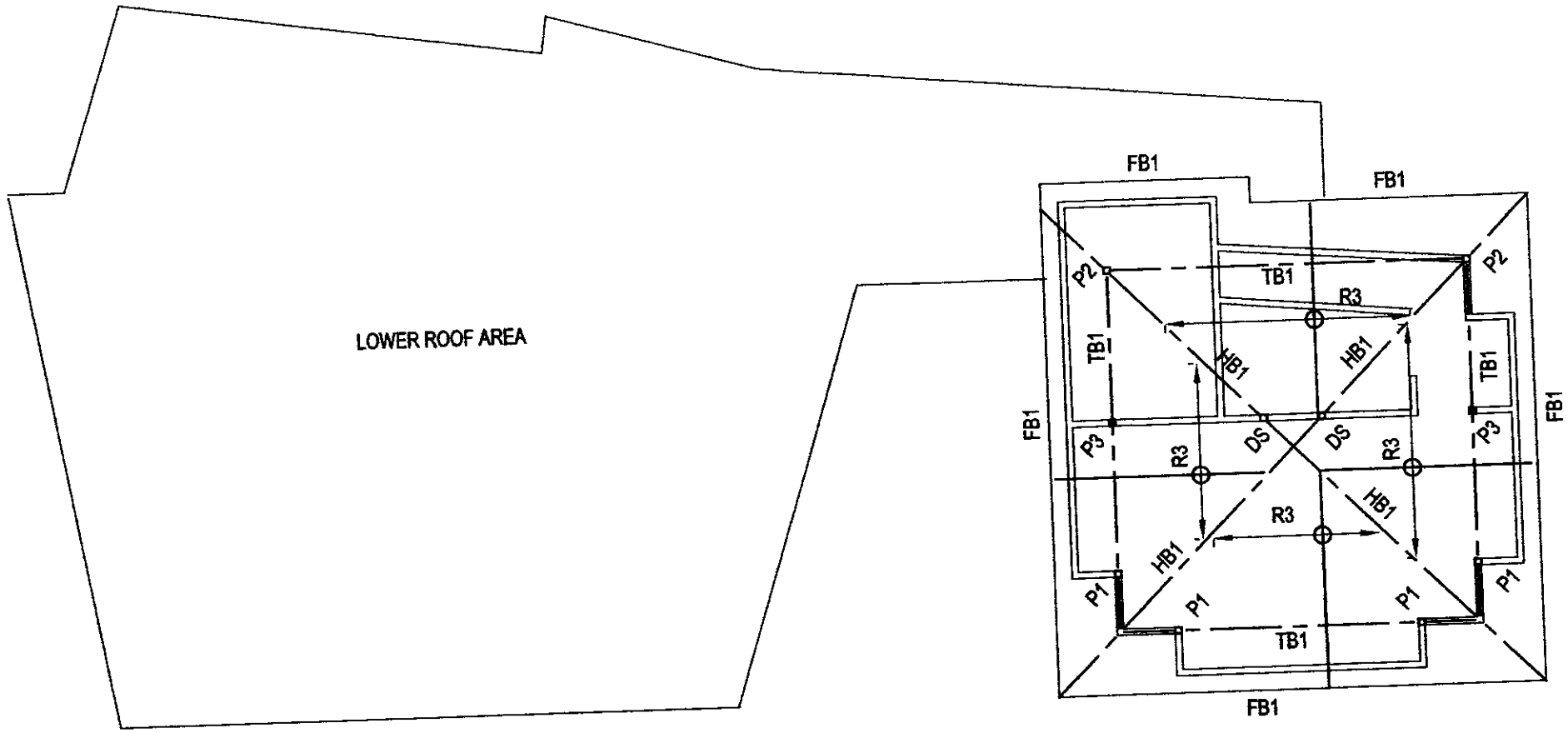
Project:
PROPOSED WORKS
at: 49 Attunga Road
NEWPORT
for: Mr & Mrs HAMPTON

Drawing Title:
BRACING DETAILS
GROUND FLOOR

Date:	Rev:	Amendment:

Date:	Design:	Drawn:
OCT 2003	M.K.	M.K.

Job No:	Drawing No:	Rev:
30811	S10	-



FIRST FLOOR ROOF PLAN

SCALE = 1:100

LOAD BEARING WALLS SHOWN AS DASHED
PROVIDE STRAPPING TO LB1 AND LB1a FOR HOLD DOWN
PLY LINE INTERNAL AND EXTERNAL WALLS FOR BRACING

MEMBER SCHEDULE	
MARK	MEMBER
FIRST FLOOR ROOF MEMBERS	
P1, P2	2/90 x 35 F17 WITH 10 x 90 mm PLATE
TB1	2/190 x 35 F17 WITH 190 x 10mm FLAT PLATE
R1	120 x 45 F17 @ 600mm CENTRES
VB1	2/190 x 45 F17 NAIL LAMINATED
FB1	140 x 35 F17 STRUCTURAL FASCIA
DS	DOUBLE STUD

NOTES:

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Date:	Rev:	Amendment:

A3

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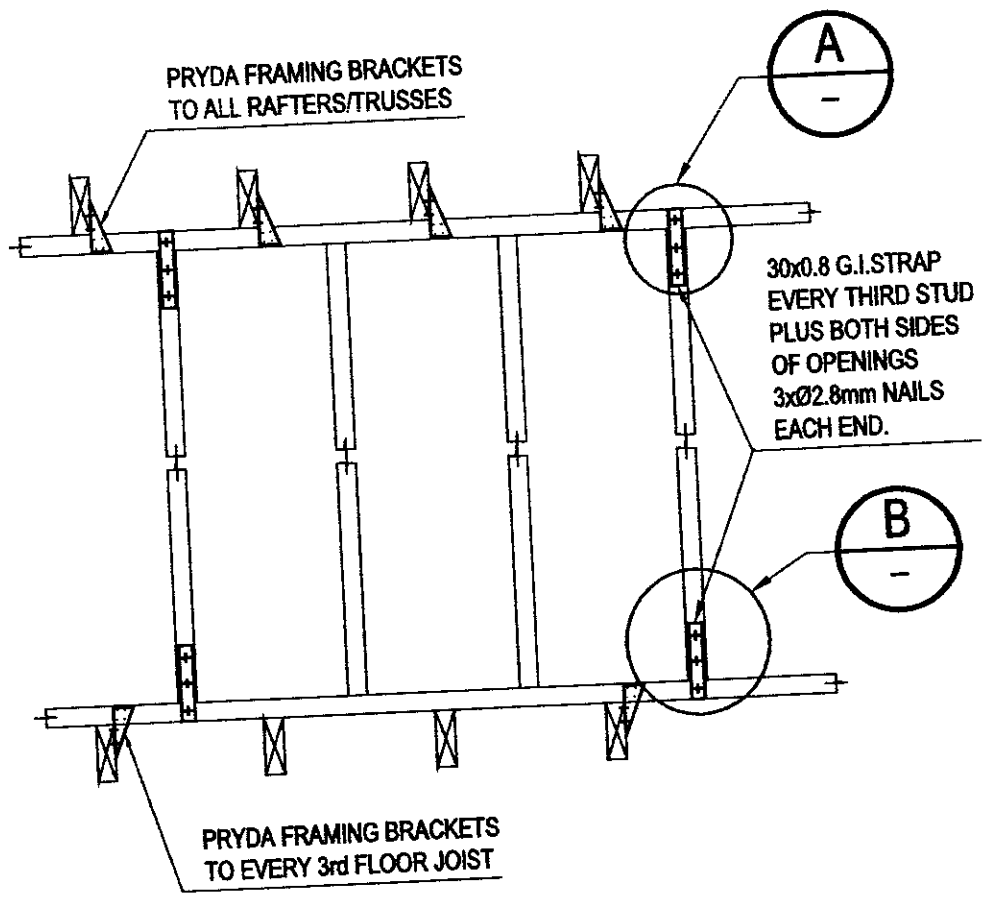
at: 49 Attunga Road
NEWPORT
for: Mr & Mrs HAMPTON

Drawing Title:
FIRST FLOOR
ROOF PLAN

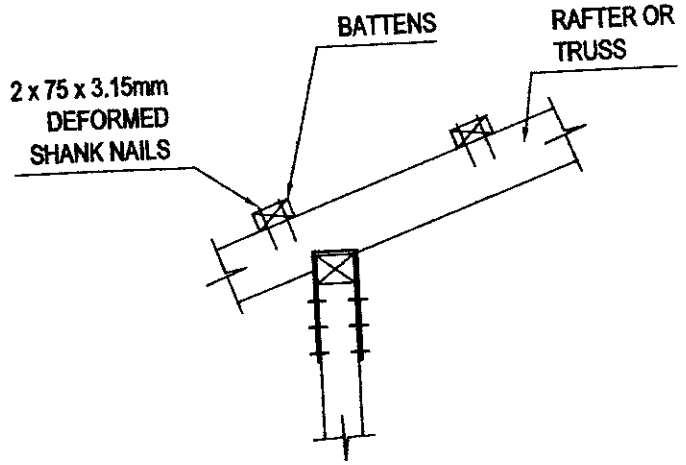
Date:	Design:	Drawn:
OCT 2003	M.K.	M.K.

Job No:	Drawing No:	Rev:
30811	S11	-



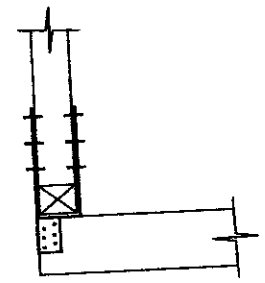
TYPICAL TIE DOWN DETAIL

SCALE = 1 : 20



DETAIL A

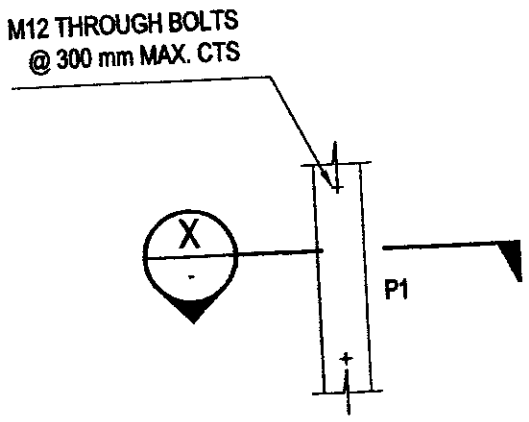
SCALE = 1:20



DETAIL B

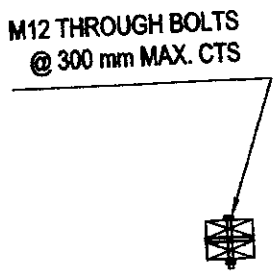
SCALE = 1:20

S03



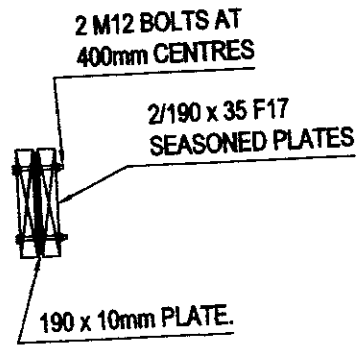
TIMBER COLUMN ELEVATION

SCALE = 1 : 20



DETAIL X

SCALE = 1:20



SECTION A

SCALE = 1:20

S10

PROVIDE 10mm CLEAT PLATE AND
2 M12 BOLTS TO SC1 AND FB2.

NOTES:

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A3

DOCUMENT CERTIFICATION

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Project:
PROPOSED WORKS
at: 49 Attunga Road
NEWPORT
for: Mr & Mrs HAMPTON

Drawing Title:
UPPER ROOF DETAILS
SHEET 1

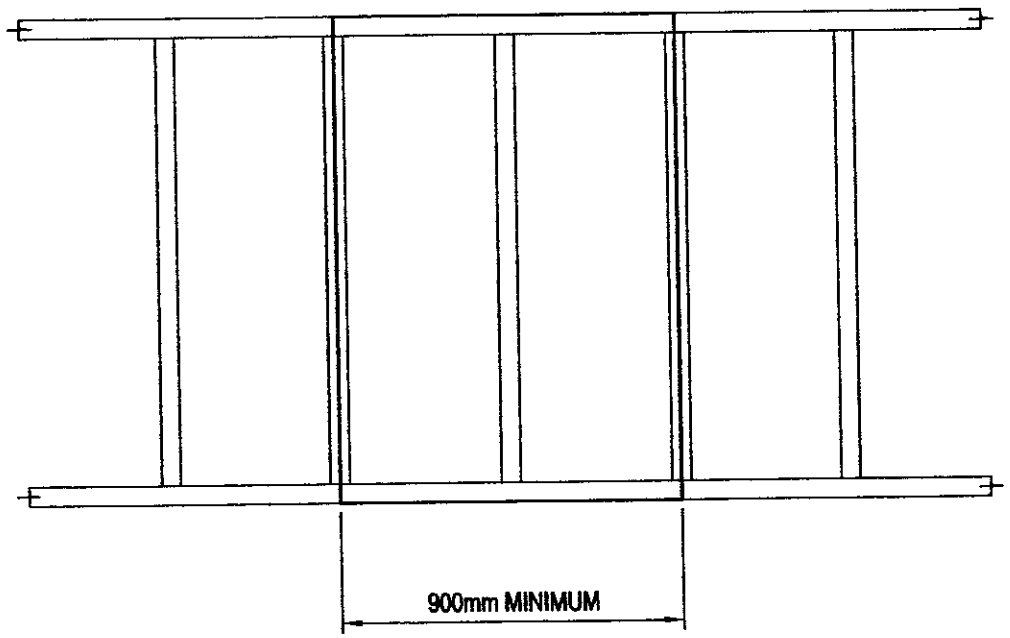
Date:	Rev:	Amendment:

Date:	Design:	Drawn:
OCT 2003	M.K.	M.K.

Job No:	Drawing No:	Rev:
30811	S12	-

PLYWOOD BRACING:

FIX PLYWOOD PANELS WITH GALVANISED FLATHEAD NAILS Ø2.8mm x 30mm LONG MINIMUM OR EQUIVALENT AT 50mm CENTRES ALONG TOP AND BOTTOM PLATES, 150mm CENTRES ALONG VERTICAL EDGES AND 300mm CENTRES ALONG INTERMEDIATE STUDS.
NAILS SHALL BE LOCATED A MINIMUM OF 7mm FROM PANEL EDGES.
POWER DRIVEN GALVANISED NAILS OR COATED STAPLES MAY BE USED WHERE THEY PROVIDE AT LEAST THE EQUIVALENT STRENGTH TO HAND DRIVES Ø2.8mm x 30mm LONG GALVANISED CLOUTS OR FLATHEAD NAILS. IN THE CASE OF POWER DRIVEN STAPLES, STAPLE SPACING SHALL BE 35mm CENTRES AT TOP AND BOTTOM PLATES, 100mm CENTRES AT VERTICAL PLYWOOD EDGES AND 200mm CENTRES ALONG INTERMEDIATE STUDS.



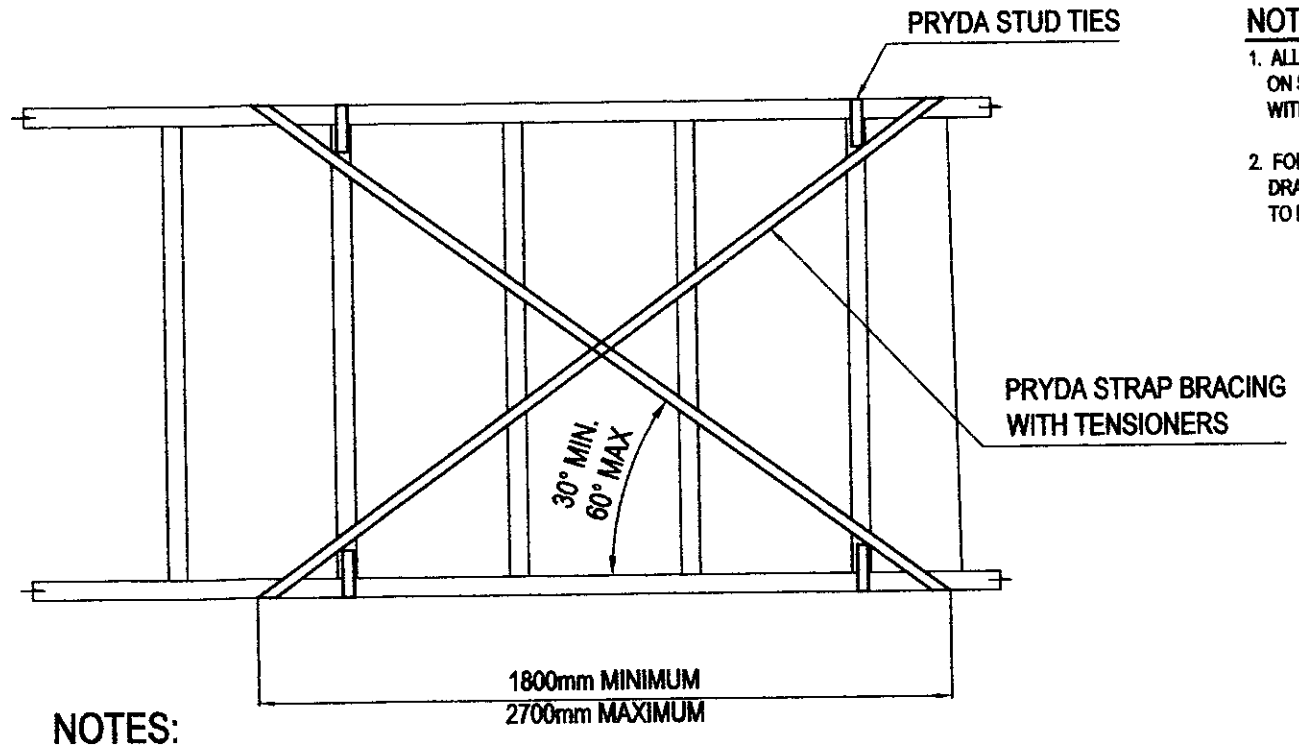
TYPE B - WALL BRACING UNIT

SCALE = 1 : 20

NOTES:

1. FOR PLYWOOD THICKNESS REFER TO TABLE.
2. FOR POWER DRIVEN NAILS AND STAPLES REFER ABOVE.
3. PANEL EDGES SHALL BE SUPPORTED BY STUDS.
4. NOGGINGS HAVE BEEN OMITTED FOR CLARITY.

PLYWOOD THICKNESS	
PLYWOOD STRESS GRADE	PLY THICKNESS FOR STUDS AT 450 CENTRES
F8	7.0mm
F11	6.0mm
F14	4.0mm
F27	4.0mm



NOTES:

1. FOR POWER DRIVEN NAILS AND STAPLES REFER ABOVE.
2. NOGGINGS HAVE BEEN OMITTED FOR CLARITY.

TYPE A - WALL BRACING UNIT

SCALE = 1 : 20

NOTES:

1. STRAIGHT JOINT TO NEW AND EXISTING WALL JUNCTIONS WITH TECHPRO TIES.
2. REPOINT FOUNDATION WALLS AROUND NEW OPENINGS WITH CEMENT MORTAR.
3. ORGANIC TERMITE TREATMENT TO BE CARRIED OUT TO PERIMETER OF ENTIRE BUILDING AND SUB-FLOOR AREAS. ANNUAL INSPECTIONS AND TREATMENT AS REQUIRED SHALL BE THE RESPONSIBILITY OF THE PROPRIETOR.
4. WALL FRAMING SHALL BE IN ACCORDANCE WITH AS 1684 TIMBER FRAMING CODE AND NSW TIMBER FRAMING MANUAL. 90x45 MGP 12 STUDS AT 450 CTS.
5. BRACE WALLS AND ROOF IN ACCORDANCE WITH AS 1684 TIMBER FRAMING CODE AND NSW TIMBER FRAMING MANUAL.
6. EXISTING GROUND FLOOR WALL BRACING FOR FIRST FLOOR ADDITION MUST BE UPGRADED TO COMPLY WITH AS 1684 TIMBER FRAMING CODE AND NSW TIMBER FRAMING MANUAL.
7. PROVIDE DOUBLE JOISTS BELOW ALL LOAD BEARING WALLS UNLESS NOTED OTHERWISE.
8. TIE DOWNS TO ROOF RAFTERS AND BEAMS SHALL BE IN ACCORDANCE WITH AS 1684 TIMBER FRAMING CODE AND AS 1170.2 WIND LOADING CODE.
9. TRIM FLOOR/ROOF OPENINGS WITH EQUIVALENT JOIST/RAFTER SIZES UNLESS NOTED OTHERWISE.
10. DOUBLE UP ALL BEARERS TO EXISTING GROUND FLOOR BELOW ALL LOAD BEARING WALLS UNLESS NOTED OTHERWISE.
11. PROVIDE BRICK PIERS WITH PAD FOOTINGS BELOW GROUND FLOOR AT ALL LOAD CONCENTRATION POINTS, COLUMNS AND POSTS IF NOT DIRECT TO DOUBLE BEARERS WHERE REQUIRED UNLESS NOTED OTHERWISE.
12. EXTERNAL/EXPOSED HYSPAN LVL OR TASBEAM MEMBERS TO BE SUITABLY PRESERVATIVE TREATED TO H3 LEVEL (AS 1604) THEN STAINED OR PAINTED.
13. EXTERNAL/EXPOSED HARDWOOD MEMBERS TO BE DURABILITY CLASS 2 OR BETTER (AS 1604) THEN STAINED OR PAINTED.
14. ENGINEER TO INSPECT AND CERTIFY ALL FRAMING AND BRACING PRIOR TO SHEETING.

NOTES:

1. ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WITH WORK.
2. FOR GENERAL NOTES AND DRAWING SCHEDULE REFER TO DRAWING NUMBER: S01.

A3

DOCUMENT CERTIFICATION

Date: 10/10/2003

Michael Kelett

(For MtK Consulting)

I am a qualified Structural/Civil Engineer.
I hold the following qualifications:
B.E.(Civil), MIEAust, C.P.Eng
Institute of Engineers Membership No. 642185
I hereby state that this drawing is in compliance with the conditions of the development consent, the provisions of the Building Code of Australia and/or relevant Australian/Industry Standards.

MTK Consulting
Structural, Civil, Stormwater
ABN 58 605 578 841
PO Box: 703
DEE WHY NSW 2099
Ph: (02) 9999 8922 Fax: (02) 9979 5263
e-mail : mtk@summit.net.au

Project:
PROPOSED WORKS
at: 49 Attunga Road
NEWPORT
for: Mr & Mrs HAMPTON

Drawing Title:
UPPER ROOF DETAILS
SHEET 2

Date:	Rev:	Amendment:

Date:	Design:	Drawn:
OCT 2003	M.K.	M.K.

Job No:	Drawing No:	Rev:
30811	S13	-

HOME BUILDING ACT 1989 REQUIREMENTS

Principal certifying authority has been advised of the requirements of Cl 78C of the Regulation ☑ Yes ☐ No

DATE THE BUILDING WORK IS TO COMMENCE: 9.01.04.

SIGNED

Applicant's Name: _____

Date: _____

SERVICE AGREEMENT

I, the undersigned, declare that I have the legal authority (express or implied) to engage a Principal Certifying Authority for the building works described in this document and verify that all information pertaining to such work is correctly stated on this form.

I understand that this Notice must be given to the relevant Local Council two (2) days prior to the intention to commence building work in accordance with S81A (2)(c) of the EP&A Act and verify that no building work will commence prior to the date given in the 'Date the Building Work is to Commence" section of this document.

As a condition of appointing the Principal Certifying Authority stipulated on this form, I agree to undertake the following responsibilities; to contact the PCA at the specified stages of development (as indicated below); to carry out building work in accordance with a current development approval; to notify the PCA of any intent to depart from the issued development approval as soon as the intention arises; and to verify all documents provided to the Private Certifying Authority are bona fide and correct in detail.

I agree to contact the PCA at the specified stages of development, but not limited to these stages, in order to obtain an inspection as follows:

* Siltation & Erosion Control Measures * Stormwater * Framework * Wet Areas * Completion *Any other stage as specified by the PCA.

I fully understand that failure to do so may result in the PCA issuing a Notice of Intention to Serve an Order.

Signature: _____ **Dated:** _____

Print Name: _____

On behalf of: _____

Address: _____

_____

_____