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TO: PALMERSTON NORTH CITY COUNCIL

Application for ☐ PIM (Section 30, Building Act 1991)

No. 35146

76028

☐ Building Consent (Section 33, Building Act 1991)

No. 35147

APPLICANT *

Name: Jacalyn Scott
Mailing Address: Plymtree RD4
Turitea Valley Palmerston North
Contact (Print name and position): as above

Mailing Address: as above

Phone: 06 356 9182 Fax: 356 9183

*Under section 30 of the Building Act 1991, the applicant must be the owner of the land on which building work is contemplated or a person who or which has agreed in writing, whether conditionally or unconditionally, to purchase the land or any leasehold estate or interest in the land, or take a lease of the land, while the agreement remains in force.

29 PROJECT LOCATION

Street Address: 27 La Lena Grove

LA9/29

Legal Description (as shown on Certificate of Title or Rates Notice)

Valuation Roll Number:

Lot: 15

D.P.

Section

PROJECT INFORMATION

New Building ☒

Alteration ☐

Demolition ☐

Being Stage 1 of an intended 1 stages.

Estimated Value (inclusive of GST) \$ 100,000

Intended Use(s) (in detail): Residential

\$ 170,000

checked 12/10/01
with owner

Floor Area (of New Building Work) 203 Square metres

Intended Life: Indefinite but not less than 50 years ☒

Specified as years

TEMPORARY VEHICLE ACCESS TO SITE

PROPOSED METHOD OF ACCESS

(Please tick one)

1. Planks across footpath and berm []
2. Metal across footpath and berm []
3. Plates across footpath and berm []
4. Other new crossing [x]

Applicant is responsible for any footpath, grass berm and services damage due to building activities. Any damage to footpaths, berms, etc. will be repaired by the Council and charged to the applicant. Alternatively, applicants may reinstate all damage themselves to Council standards. Approval will be required for any repairs from the Roading and Transport Unit. (Refer to Council Streetworks Officer.)

FOR COUNCIL USE

PIM P4 \$ 141.00
BC P4 \$ 246.25

Receipt Number:

1719344/-

Received: 1719736

25 Sept 01

- Baza -

☐ PLEASE SUBMIT ALL SUPPORTING DOCUMENTS IN DUPLICATE.

Name: Jacalyn Scott

Position: Owner

Signature: [Signature]

Date: 25/9/01

NOTES TO APPLICANTS

1. If this application relates to the construction of a residential building, which does not comply with the District Plan Residential Zone Separation Distance Requirements and neighbours consent has been granted, this application is also deemed to be an application for a Resource Consent, the cost of which is \$50.00.
2. The information in this application will be held by the Palmerston North City Council.
3. The information contained in this application will be held on a "public register" as defined by the Privacy Act 1993 and will be available for inspection and copying by members of the public in terms of the requirements of the Building Act 1991.
4. It is a mandatory requirement of the Building Act 1991 that the information required in this application be provided and the application cannot proceed unless all relevant information is provided.
5. You have a right to access to and, if necessary, correction of the information supplied in this application.

L49/29

Proforma Invoice

PALMERSTON NORTH CITY COUNCIL

Date: Fri 12 Oct 2001
Application No: 35147
Assessment No:
Property ID: 76028

Attention:
JACALYN SCOTT
PLYMTREE RD 4
TURITEA VALLEY
PALMERSTON NORTH

Pay At:

Fee	Description	Quantity	Paid/ Credited	Now Due
BIA	Building Industry Authority Levy		\$0.00	\$110.50
BRANZ	Building Research Assn NZ Levy		\$0.00	\$170.00
CCC	Code Compliance Certificate		\$0.00	\$35.25
DEP	Building Consent Deposit		\$246.75	\$0.00
INSP	Inspection Fee	9	\$0.00	\$634.50
MCA1	Microfilming Fee A3-A1	8	\$0.00	\$24.00
MCA4	Microfilming Fee A4	27	\$0.00	\$40.50
PRO	Process Administration		\$0.00	\$35.25
VC	Vehicle Crossing Inspection		\$0.00	\$35.25
				=====
Total				\$1085.25

351 4671

Advice of Completion of Building Work

Section 43 (1), Building Act 1991

FAO: John Hurley

To: Palmerston North City CouncilUnder Building Consent No: 35147From [Owner]: Jacalyn Scott**L49/29****OWNER DETAILS**Name: Jacalyn ScottMailing Address: 29 Leane CourtPNContact: on phoneContact Mailing Address: Phone: 06 336 9187 Fax: **PROJECT LOCATION**Street Address: 29 Leane CourtPalmerston NorthLegal Description: (as shown on Certificate of Title or Rates Notice)Valuation Roll Number: Lot: 15 D.P. 91210 Section

(Cross each applicable box and attach relevant documents)

You are hereby advised that:

☒

All

☐

Part only (as specified in the attached particulars)

of the building work under the above Building Consent is believed to have been completed to the extent required by that Building Consent

You are requested to issue:

☒

A final

☐

An interim

Code Compliance Certificate accordingly (except where a Code Compliance Certificate has been issued by a Building Certifier as stated below).

The attached particulars include:

Building Certificates

A Code Compliance Certificate issued by a Building Certifier

Producer Statements

Signed by or for and on behalf of the owner:

Name: Jacalyn Scott Position: OwnerSignature: Jacalyn Scott Date: 25/03/02

Note: Upon completion of this project, this form must be completed and returned to the Palmerston North City Council Building Services Section. This will enable a final inspection to be performed and a Code Compliance Certificate to be issued.



TO: PALMERSTON NORTH CITY COUNCIL

Application for ☐ PIM (Section 30, Building Act 1991)

No. 35146

76028

☐ Building Consent (Section 33, Building Act 1991)

No. 35147

APPLICANT *

Name: Jacalyn Scott
Mailing Address: Plymtree RD4
Turitea Valley Palmerston North
Contact (Print name and position): as above

Mailing Address: as above
021 672 008

Phone: 06 356 9182 Fax: 356 9183

*Under section 30 of the Building Act 1991, the applicant must be the owner of the land on which building work is contemplated or a person who or which has agreed in writing, whether conditionally or unconditionally, to purchase the land or any leasehold estate or interest in the land, or to take a lease of the land, while the agreement remains in force.

29 PROJECT LOCATION

Street Address: 27 La Lona Grove

L49/29

Legal Description (as shown on Certificate of Title or Rates Notice)

Valuation Roll Number: _____

Lot: 15

D.P. _____

Section _____

PROJECT INFORMATION

New Building ☒

Alteration ☐

Demolition ☐

Being Stage _____ of an intended _____ stages.

Estimated Value (Inclusive of GST) \$ 100,000

Intended Use(s) (in detail): Residential

Floor Area (of New Building Work) 203 Square metres

PHONE NUMBER

OWNER

BUILDER Lyndal Carter

PLUMBER

DRAINLAYER

BRICKLAYER

PLASTERER

A ☐

BUILD/FOUNDATION

B ☐

PLUMB/PRESLAB/SUB FL

C ☐

BUILD/PRESLAB/SUB FL

D ☐

BUILD/STRUCTURAL

E ☐

PLUMB/PRELINE

F ☐

BUILD PRELINE

G ☐

BUILD/POSTLINE

H ☐

BUILD/EXT CLADDING

I ☐

PLUMB/STORMWATER

J ☐

PLUMB/SEWER

K ☐

BUILD/FINAL

L ☐

PLUMB/FINAL

M ☐

PLUMB/EFFLUENT SYSTEM

N ☐

BUILD/VEHICLE CROSSING

DATE INSPECTED	REMARKS (Eg: stage reached with work)
14 Nov 01	FOUND: MEASURED OFF CRITICAL BOUNDARY TO CHECK SINKING GROUND VERY FIRM, FOOTINGS LARGER THAN NORMAL 2 RODS IN BOTTOM OF TRENCH & 1 x RD @ TOP - STARTERS @ 600 CS. PLUMBING THRU ALL NICELY PROTECTED. FAIR BIT OF TOP SOIL SCRIPPED OFF BUT FLOOR HEIGHTS OK - OK TO POUR
16-Nov 01	Drainage inspection good falls at the time of the inspection, will need to check at the time of Grout the pre "pour"
16-Nov-01	Pre slab all as per plan polythene permeable mesh and starters all okay Thickening slab as per Plan okay to pour

L49/29

12-4-12-01

Preline PD 200lbs poly OK
* hot line to be lagged.
* Amended plan required for additional
W.C/handbasin upstairs.

10/12/01

John

Building preline M/C. 14%. Rocwool in walls.
Bottom plate fixing and bracing panels
bolted with square washers. Three 2" nails
in place. Top floor mid span drawings
completed. Ceiling battens at 450 c/s.
Plywood bracing panels are being replaced
with B.R. 9's plus extra drawings & bottom bolts.
Top floor rafters to extended bedroom
require hangers.

8 JAN 02

DRAINAGE: RECORDED. STORMWATER MAIN LAST BIT
STILL TO CONNECT UP, SEWER OK. JH

12-2-02

FINAL INSPECTION. STAIR HANDRAILS COMPLETED.
GROUNDED FLOOR BATH & ENSUITE UNIT. WALL UNIT
SEAL COMPLETE. TWO RESTRAINTS ON CYLINDER,
(OPEN LEFT)

TO COMPLETE. COMPLETION ADVICE (PROVIDED)

✓ BATH - ENSUITE SAFETY GRASS ETC.

✓ DINING - LOUNGE EXT. DOORS ETC.

✓ ELECTRICAL COMPLETION

✓ TOP FLOOR VANITY FIX AND SEAL REQ.

✓ RAMADA COMPLETION CERT. (FREE FIRE.)

✓ LIFT EXTERNAL GULLY TRAP

21-2-02

CALL FROM GRAHAM ESSLINGTON RE PRODUCER

25-3-02

STATEMENTS FOR FREE STANDING FIRE. (WILL PROVIDE)

John

FINAL INSP. ALL BUILDING WORK COMPLETE.
LANDSCAPING 200MM+ BELOW THE BOTTOM
OF THE PLASTER. TERRACE 30MM BELOW
INTERNAL FLOOR SLAB.

DRIVE & VEHICLE CROSSING COMPLETE.

L49/29

Building Consent No:35147
Section 35, Building Act 1991

Name: JACALYN SCOTT
Mailing Address: PLYMTREE RD 4, TURITEA VALLEY, PALMERSTON NORTH
Contact: JACALYN SCOTT

The project is for New Building
Intended Use(s): ERECT 4 BEDROOM DWELLING AND ATTACHED GARAGE
Intended life: Indefinite but not less than 50 years
Value of Work: \$170,000.00

Street Address: 29 LA LENA GROVE, AOKAUTERE, PALMERSTON NORTH
Assessment No:
Legal:

Council's charges for this Building Consent are: \$1,296.75
Receipt number: 1719736 Date: 27Sep01 Amount: \$246.75
Total: \$246.75

THIS BUILDING CONSENT IS ISSUED SUBJECT TO THE FOLLOWING CONDITIONS

1: THE FOLLOWING APPLIES TO THIS CONSENT:-

Provide a manufacturers truss design and setout sheet to this office BEFORE pouring the floor slab. Slab thickening OR engineer details are to be provided for ANY load bearing partitions or posts.

NOTE! Extra fixings are required in high wind zones for purlins/battens, trusses, top and bottom plates. See enclosed guide.

Bathroom and ensuite windows LESS than 2M from the floor, and any other glazing LESS than 500mm from the floor, shall have safety glass in accordance with NZS 4223 1999.

The Hardibacker sheets are to be fixed to the manufacturers requirements

THIS IS NOT A BUILDING CONSENT: 35147

Page : 1

249/29

with particular attention to, flashing windows, doors, the bottom plate, and the bottom edge ground clearance.

Official Street Address is 29 La Lena Grove, Palmerston North. Please note a building line restriction applies to this property. The proposed dwelling is unaffected by this restriction.

2: The following inspections are MANDATORY, failure to notify the Palmerston North City Council Building Services Section of any of the required inspections will result in a Notice to Rectify being issued.

Building - Foundation
Plumbing Pre Slab/Floor
Building Preslab/Floor
Plumbing - Preline
Building - Postline
Building - External Cladding
Plumbing - Stormwater Drainage
Plumbing - Sewer Drainage
Building - Final
Building - Preline
Plumbing - Final
Vehicle Crossing

NOTES TO THE OWNER AND PERSONS UNDERTAKING THE BUILDING WORK

- Where building work is to be undertaken to which this Building Consent relates, and is not shown in detail on the approved plans and specifications, such building work is to be completed to acceptable building standards and to the requirements of the New Zealand Building Code 1992.
- Your Building Consent incorporates a number of prepaid inspections. These inspections are detailed in paragraph 2 above.
- Should it be necessary to carry out any additional inspections or there is a requirement to repeat any inspection, the owner will be charged for the additional inspection or repeat inspection at a rate of \$70.50 (GST INC) per inspection.
- Upon completion of all building work necessary to comply with the

THIS IS NOT A BUILDING CONSENT: 35147

Page : 2

L49/29

Building Code, the owner is required to apply to the Palmerston North City Council for a Code Compliance Certificate using the Building Work Completion Advice form provided.

Signed for and on behalf of the Council:

Name: SHAYNE HARRIS

PRINCIPAL BUILDING OFFICER

Signed:

Dated: ../../..

THIS IS NOT A BUILDING CONSENT: 35147

Page : 3

LA9/29

Project Information Memorandum No:35146
Section 31, Building Act 1991

Name: JACALYN SCOTT
Mailing Address: PLYMTREE RD 4, TURITEA VALLEY, PALMERSTON NORTH

The project is for New Building
Intended Use(s): ERECT 4 BEDROOM DWELLING AND ATTACHED GARAGE
Intended life: Indefinite but not less than 50 years
Value of Work: \$170,000.00

Street Address: 29 LA LENA GROVE, AOKAUTERE, PALMERSTON NORTH
Assessment No:
Legal:

Council's charges for this Project Memorandum are: \$141.00
Receipt number: 1719736 Date: 27Sep01 Amount: \$141.00
Total: \$141.00

1: This Project Information Memorandum is:

- Confirmation that the proposed building work may be undertaken,
subject to any requirements of the Building Consent - Attached.

2: Vicinity:-

- Palmerston North City Council records indicate areas of poor bearing in
this vicinity. Further investigation and/or an engineers report may be
required prior to placement of reinforcing.

3: Property Boundaries:-

- The owner of the property and the builder are responsible for the correct
siting of buildings or additions there-on, according to the District Plan
and the Building Code. The owner and the builder shall ascertain the

THIS IS NOT A PIM: 35146

Page : 1

L49/29

true position of survey pegs before building operations commence, or provide evidence of boundary siting when the first foundation inspection is made. Existing fences are not always on the true boundary.

Certification from a surveyor may be required to avoid future legal problems.

4: Information relating to other authorisations under any Act (other than the Building Act 1991) which must be obtained from Council in relation to the proposed project.

Official Street Address is 29 La Lena Grove, Palmerston North. Please note a building line restriction applies to this property. The proposed dwelling is unaffected by this restriction.

DAMAGE TO VEHICLE CROSSING-:

The owner will be responsible for all damage caused to the existing vehicle crossing, berm, kerb and footpath incurred during construction work.

LIGHT DUTY DISH VC

A light duty dish vehicle crossing, with grass berm, is required on completion of building, as per attached details.

- The Plumbers Gasfitters and Drainlayers Act 1976 requires that only Registered Drainlayers may undertake drainage work and that only Craftsman Plumbers may undertake plumbing work.

Signed for and on behalf of the Council:

Name: SHAYNE HARRIS

PRINCIPAL BUILDING OFFICER

Signed:

Dated: ../../..

THIS IS NOT A PIM: 35146

Page : 2



Electrical Certificate of Compliance

EWRB 551

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning or the replacing or repositioning of conductors (including fittings attached to those conductors).

No. **1224715**No. of attachments **49/29**

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer **Jaculum Scott**

Telephone

Fax

Address of installation **Lot 15 LE-LANE Drive P-North**Postal address of customer (if not as above) **Plumtree - P.O. 4 Tipton Hill P-North**

WORK DETAILS

☒ 4 No. of lighting outlets☐ 1 No. of ranges☒ 6 No. of socket outlets☐ 1 No. of water heaters

Was any installation work carried out by the homeowner?

☐ Yes ☒ No

Please tick (✓) as appropriate where work includes:

☒ Mains☒ Main earth☒ Switchboard☐ Electric linesDescription **New Dwelling**

Use sketch if necessary

**Wire & Fit out New House Dwelling
Consisting of 1x Water Heater****1x Range****4x Lighting Circuits****6x Heating Circuits**

CERTIFICATION OF WORK

I certify that the above electrical work has been carried out in accordance with the requirements of the Electricity Act 1992 and Electricity Regulations 1997.

ELECTRICAL WORKER DETAILS

Name

Malcolm Gore

Registration no.

E 1893

Company

Arrow Electrical Ltd

Signature

Date

14-01-02

CERTIFICATION OF ELECTRIC LINES

(to be completed where "Description of Work" includes "Electric Lines")

Name

Registration no.

Company

Signature

Date

INSPECTION DETAILS Electrical work requiring inspection by a registered electrical inspector

☐ New mains☐ Switchboard☐ Earthing system☐ Installation work in hazardous areas

I certify that the inspection has been carried out in accordance with the requirements of the Electricity Regulations 1997.

Name

John Fennell

Registration no.

L1471

Signature

Date

14-01-02**CUSTOMER COPY - THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED**

This form is approved by the Electrical Workers Registration Board (PO Box 10-156, Wellington. Freephone 0800 66-1000) for the purposes of the Electricity Regulations 1997.



Electrical Certificate of Compliance

EWRB 551

No. - 1155922

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning or the replating or repositioning of conductors (including fittings attached to those conductors).

No. of attachments

L49/29

CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer Jacylyn Scott

Telephone

Fax

Address of installation LOT 15 LE-LENA DRIVE P. North

Postal address of customer (if not as above)

WORK DETAILS

☐ No. of lighting outlets☐ No. of ranges☐ No. of socket outlets☐ No. of water heaters

Please tick (✓) as appropriate where work includes:

☒ Mains☒ Main earth

Was any installation work carried out by the homeowner?

☐ Yes ☒ No☐ Switchboard☐ Electric lines

Description

Use sketch if necessary

Temporary Power Connection

To Building Site

CERTIFICATION OF WORK

I certify that the above electrical work has been carried out in accordance with the requirements of the Electricity Act 1992 and Electricity Regulations 1997.

ELECTRICAL WORKER DETAILS

Name

MALCOLM GORE

Registration no.

E 1893

Company

ARROW Electrical LTD

Signature

[Signature]

Date

10-11-01

CERTIFICATION OF ELECTRIC LINES

(to be completed where "Description of Work" includes "Electric Lines")

Name

Registration no.

Company

Signature

Date

INSPECTION DETAILS

Electrical work requiring inspection by a registered electrical inspector

☒ New mains☐ Switchboard☐ Earthing system☐ Installation work in hazardous areas

I certify that the inspection has been carried out in accordance with the requirements of the Electricity Regulations 1997.

Name

[Signature]

Registration no.

E 1155922

Signature

[Signature]

Date

10-11-01

This form is approved by the Electrical Workers Registration Board (PO Box 10-156, Wellington. Freephone 0800 66-1000) for the purposes of the Electricity Regulations 1997.

CUSTOMER COPY - THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED

25x

L49/29

Proforma Invoice

PALMERSTON NORTH CITY COUNCIL

Date: Fri 12 Oct 2001
Application No: 35146
Assessment No:
Property ID: 76028

Attention:
JACALYN SCOTT
PLYMTREE RD 4
TURITEA VALLEY
PALMERSTON NORTH

Pay At:

Fee	Description	Quantity	Paid/ Credited	Now Due
PIMF	Project Information Memorandum		\$141.00	\$0.00
			Total	=====
				\$0.00

FACSIMILE TRANSMISSION

L49/29

P O Box 1803

PALMERSTON NORTH

Phone & Fax (06) 356 1800

OLLIVER BUILDING SERVICES LIMITED

===== TOTAL BUILDING AND DESIGN SERVICE =====

To PNCC Building Insp ATTENTION John Hutley
FROM Graeme Oliver DATE 11-10-01
TOTAL PAGES (including this page) 2 TIME 3.30

PLEASE PHONE (06) 356 1800 if this transmission is incomplete

Revised Scott bracing calcs
as requested.

L49/29

Gibco Wall Bracing Calculation Sheet A

single storey

Job Details

Name	J. Scott
Street and Number	Lafene Grove
Lot and DP Number	
City/Town/District	Palmerston North
Designer and date	Graeme Oliver 1 Sep 01

Building Specification

Location of Storey	single	
Floor Loading	2 kPa	
Foundation Type	slab	
Building Height to Apex (m)	6	
Roof Height above Eaves (m)	3	
Stud Height (m)	2.4	
Cladding Weight (top or single)	medium	
Cladding Weight (lower)	light	not applicable (single storey building)
Cladding Weight (subfloor)	light	not applicable (slab)
Roof Weight	light	
Roof Pitch (degrees)	25-45	
Room in Roof Space	yes	
Building Length (m)	18	Use roof length including eaves
Building Width (m)	15.4	Use roof length including eaves
Gross Building Plan Area (m2)	173	

Building Location

Wind Zone	High	Earthquake Zone	A
Region	R1		
Terrain	Inland		
Exposure	Exposed		
Topography	Moderate		

Bracing Units required for Wind

per m	subfloor	walls
W along	n/a	78 BUS/m
W across	n/a	78 BUS/m
Totals	subfloor	walls
W along	n/a	1201 BUS
W across	n/a	1404 BUS

Bracing Units required for Earthquake

per m2	subfloor	walls
E	n/a	7.6 BUS/m2
Totals	subfloor	walls
E along	n/a	1315 BUS
E across	n/a	1315 BUS

QUALITY TRUSSES & FRAMES

Page: ProdSt - 1

Job: 2596

Client: PlaceMakers
Phone:

Site: 2596
J SCOTT
LA LENA GROVE

Description: 2596 J SCOTT LA LENA GROVE

Phone:

MiTek 2000 2 100 g6t

Gang Nail Group Ltd

Thu Nov 01 16:55:23 2001

PRODUCER STATEMENT MiTek 2000(tm) ROOF TRUSS DESIGN

L49/29

Certification of MiTek 2000(tm) Design Program

The MiTek 2000(tm) roof truss design program has been developed by Gang-Nail Group Ltd for the design of Gang-Nail timber roof trusses in New Zealand. The truss designs computed by this program are prepared using sound and widely accepted engineering principles, and in accordance with NZS 4203, NZS 3603 and NZS 3604 as verification methods and acceptable solutions of the approved documents issued by the Building Industry Authority to satisfy the requirements of Clause B1 Structure of the Building Regulations 1992. This computer design for the proposed building complies with the relevant provisions of the NZ Building Code. This is subject to all proprietary products meeting their performance specification requirements, the provision of adequate bracing, fixings and the correct input of design data carried out by suitably trained personnel.

Summary of MiTek 2000(tm) Design Data and Output

The MiTek 2000(tm) computer design output for this job titled and located at the site identified on the top of this page is based on the following parameters entered into the program. The owner must ensure that the following job details below are current and relevant to the project before fabrication and erection of the Gang-Nail trusses.

Job Details

Roof Pitch	30.00 deg	Timber Inventory:	RP_No 1 Fr x50	Building Wind Zone:	High
Roof Material	Metal Tiles	Ceiling Material:	Standard	Design Wind Speed:	44.0 m/s
TC Dead Load	0.210 kPa	BC Dead Load:	0.200 kPa	Pressure Coefficient:	Cpe = -0.9
TC Restraints	400 mm centres	BC Restraints:	400 mm centres		Cpi = 0.3
Roof Live Load	Lu = 0.250 kPa	Truss Spacing:	900 mm		
	Lc = 1.0 kN	Standard Overhang:	200 mm		

These trusses must be fabricated and erected in accordance with the Gang-Nail manual. Proper erection bracing must be installed to hold the components true and plumb and in a safe condition until permanent bracing is fixed. All permanent bracing and fixing must be installed before any loads are applied. The specifications for timber shall be as shown on the output. The timber shall be standard gauged and treated to the requirements of NZMP 3840.

Truss List

Legend: * detail only, ? input only, Fox failed design, Unmarked trusses: designed successfully

Truss	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Span (mm)	Pitch (deg)	Spacing (mm)
J01	3076	30.00	900	J08A	2076	30.00	900	T04	6200	30.00	747
J01A	3076	30.00	900	J08B	2076	30.00	900	T04A	6200	30.00	747
J01B	3076	30.00	900	J08C	2076	30.00	900	T05	2364	15.00	678
J02	2176	30.00	900	J09	2553	30.00	900	T06	2364	15.00	678
J02A	2176	30.00	900	J09A	2553	30.00	900	T07	6000	30.00	900
J02B	2176	30.00	900	J09B	2553	30.00	900	T08	8000	30.00	699
J02C	2176	30.00	900	J09C	2553	30.00	900	T09	3890	30.00	900
J03	1276	30.00	900	J10	1853	30.00	900	T10	3890	30.00	794
J03A	1276	30.00	900	J10A	1853	30.00	900	T12A	3890	30.00	800
J03B	1276	30.00	900	J10B	1853	30.00	900	T13	10000	30.00	900
J03C	1276	30.00	900	J10C	1853	30.00	900	T14	2690	30.00	900
J04	2320	15.00	900	J11	1453	30.00	900	T16	3890	30.00	900
J05	2016	15.00	900	J11A	1453	30.00	900	T17	3890	30.00	900
J06	1420	15.00	900	J11B	1453	30.00	900	TG01	6000	30.00	900
J07	2976	30.00	900	J11C	1453	30.00	900	TG02	3700	30.00	900
J07A	2976	30.00	900	T01	8200	30.00	900	V01	2953	30.00	900
J07B	2976	30.00	900	T02	2080	15.00	740	V02	1153	30.00	900
J08	2076	30.00	900	T03	2080	15.00	740				

BC 35747

The computer design input has been carried out by:

Signed:

Date:

Name of Computer Operator:

Qualifications and Title:

Company: QUALITY TRUSSES & FRAMES

Verification / Acceptance of Input Data:

I have checked the input data against the construction drawings and specifications and verify that they are correct and suitable for this job.

Signed:

Date:

Name:

Company:

QUALITY TRUSSES & FRAMES

Page: ProdSt - 1

Job: 2596A Client: PlaceMakers Site: 2596
 Description: 2596 J SCOTT LA LENA GROVE J SCOTT
 LA LENA GROVE
 Phone:

MiTek 2000 2 100 g6f

Gang Nail Group Ltd

Thu Nov 01 16:57:34 2001

PRODUCER STATEMENT MiTek 2000(tm) ROOF TRUSS DESIGN

L49/29

Certification of MiTek 2000(tm) Design Program

The MiTek 2000(tm) roof truss design program has been developed by Gang-Nail Group Ltd for the design of Gang-Nail timber roof trusses in New Zealand. The truss designs computed by this program are prepared using sound and widely accepted engineering principles, and in accordance with NZS 4203, NZS 3603 and NZS 3604 as verification methods and acceptable solutions of the approved documents issued by the Building Industry Authority to satisfy the requirements of Clause B1. Structure of the Building Regulations 1992. This computer design for the proposed building complies with the relevant provisions of the NZ Building Code. This is subject to all proprietary products meeting their performance specification requirements, the provision of adequate bracing, fixings and the correct input of design data carried out by suitably trained personnel.

Summary of MiTek 2000(tm) Design Data and Output

The MiTek 2000(tm) computer design output for this job titled and located at the site identified on the top of this page is based on the following parameters entered into the program. The owner must ensure that the following job details below are current and relevant to the project before fabrication and erection of the Gang-Nail trusses.

Job Details

Roof Pitch	30.00 deg	Timber Inventory:	RP_No.1.Frx50	Building Wind Zone:	High
Roof Material	Metal Tiles	Ceiling Material:	Standard	Design Wind Speed:	44.0 m/s
TC Dead Load	0.210 kPa	BC Dead Load:	0.200 kPa	Pressure Coefficient:	Cpe = -0.9
TC Restraints:	400 mm centres	BC Restraints:	400 mm centres		Cpi = 0.3
Roof Live Load	Lu = 0.250 kPa	Truss Spacing:	900 mm		
	Lc = 1.0 kN	Standard Overhang:	200 mm		

These trusses must be fabricated and erected in accordance with the Gang-Nail manual. Proper erection bracing must be installed to hold the components true and plumb and in a safe condition until permanent bracing is fixed. All permanent bracing and fixing must be installed before any loads are applied. The specifications for timber shall be as shown on the output. The timber shall be standard gauged and treated to the requirements of NZMP 3640.

Truss List

Legend * detail only, ? input only, Tior failed design, Unmarked trusses: designed successfully

Truss	Span (mm)	Pitch (deg)	Spacing (mm)
CT01	3790	30.00	884
CT01A	3790	30.00	884
CT01B	3790	30.00	884

The computer design input has been carried out by:

Signed

Date:

Name of Computer Operator:

Qualifications and Title:

Company QUALITY TRUSSES & FRAMES

Verification / Acceptance of Input Data:

I have checked the input data against the construction drawings and specifications and verify that they are correct and suitable for this job.

Signed

Date:

Name

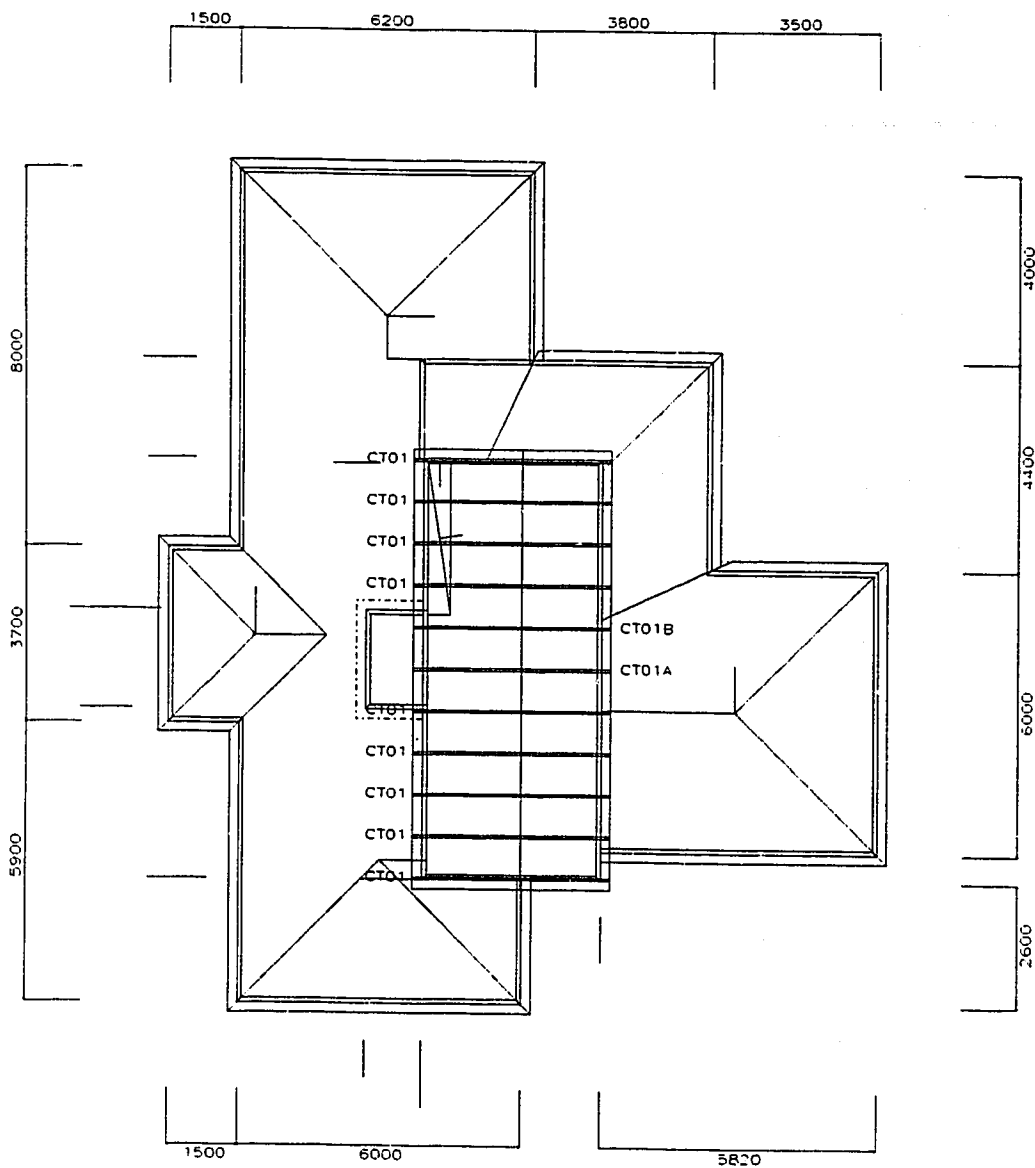
Company

This architectural floor plan shows a building with overall dimensions of 15000 units by 5820 units. The plan is divided into several sections with various rooms and corridors. Key features include:

- Dimensions:**
 - Overall width: 15000 units (divided into 5000, 3700, and 6000).
 - Overall height: 5820 units (divided into 1500, 6000, and 3800).
 - Internal horizontal dimensions: 2600, 6000, 1400, and 4000.
 - Internal vertical dimensions: 1500, 6000, and 3800.
- Rooms and Areas:**
 - Top Section:** Includes rooms labeled J01, J01A, J01B, J03, J03A, J03B, J03C, J02A, J02B, J02C, J01A, J01B, J01C, J01D, J01E, J01F, J01G, J01H, J01I, J01J, J01K, J01L, J01M, J01N, J01O, J01P, J01Q, J01R, J01S, J01T, J01U, J01V, J01W, J01X, J01Y, J01Z.
 - Middle Section:** Includes rooms labeled J04, J04A, J04B, J04C, J04D, J04E, J04F, J04G, J04H, J04I, J04J, J04K, J04L, J04M, J04N, J04O, J04P, J04Q, J04R, J04S, J04T, J04U, J04V, J04W, J04X, J04Y, J04Z.
 - Bottom Section:** Includes rooms labeled J05, J05A, J05B, J05C, J05D, J05E, J05F, J05G, J05H, J05I, J05J, J05K, J05L, J05M, J05N, J05O, J05P, J05Q, J05R, J05S, J05T, J05U, J05V, J05W, J05X, J05Y, J05Z.
- Corridors and Stairs:** Numerous corridors and stairwells are shown, connecting the various rooms and sections of the building.
- Structural Elements:** The plan shows a grid of structural columns and beams, with some areas highlighted in black, possibly indicating reinforced concrete or other structural features.

25X

L49/29



L49/29

PNCC

(Territorial Authority)



BUILDING CONSENT NO: P.S.2

BUILDING REGULATION CLAUSE

PRODUCER STATEMENT - CONSTRUCTIONISSUED BY: G W EDLINGTON
(N.Z. Home Heating Assoc. Certified Installer)

Installer No: 1018

TO: Jacalyn Scott
(Owner)

IN RESPECT OF: Installation of Solid Fuel Heater

AT: 29 La Sena Grove
Palmerston North
(Address)LOT: J W Edlington
(Certified Installer)DP:
has contracted toSO: Jacalyn Scott
(Owner/Developer)

to perform the above work as described.

I G W Edlington Certified Installer No. 1018 have
sighted Building Consent No. 35147 and believe on reasonable
grounds that the solid fuel heating appliance installation has been installed as per the above
Building Consent and the Heater Manufacturers Instructions.

SIGNATURE OF CERTIFIED INSTALLER: J W Edlington

DATE: 21.02.2002

EMPLOYMENT STATUS

(Complete as Applicable)

☐ SELF EMPLOYED☒ EMPLOYEE

Address:

Employer Name: Ramada Home Heating Ltd

Address: 606 Tremaine Avenue

Palmerston North

Ph No:

Ph No: 357.8675

RECEIVED
07 OCT 2001

FAC: Erren Hoper

Illustration to show proposed new vehicle crossing. (Please confirm receipt)

Lot 29
La Lona Grove

Owner: Jacalyn Scott
354 9182

64/677

Garage

5m

Footpath

Grass strip

proposed new crossing

Road

02-OCT-01 21:19

JACALYN SCOTT

64 6 3549183

P.01

L49/29

SPECIFICATION

OF WORK TO BE DONE AND MATERIALS TO BE USED IN THE ERECTION OF A 4
BEDROOM HOUSE IN LA LENA GROVE, PALMERSTON NORTH FOR J. SCOTT.

1. PRELIMINARY

1.1 Scope of work

- 1) The scope of work in this contract consists of the erection of a 2 storey 4 bedroom house with concrete slab floor, timber framed walls and roof, sheathed in stucco with steel roof and complete with all joinery and interior linings, trim and services as shown on the drawings and as specified herein.
- 2) The contract is to be run on a labour only basis.
- 3) The employer is to supply all carpentry materials. Subcontractors to supply on materials unless specifically noted otherwise.

1.2 Permits, notices and charges

- 1) Obtain a building consent and pay all charges in connection with same.
- 2) File notices and arrange for all inspections as required by local authority having jurisdiction over work.

1.3 By-laws and regulations

- 1) All work performed under this contract shall comply with all by-laws, regulations and standard specifications current at time of execution of the work
- 2) Nothing in the contract documents shall be interpreted to permit work forbidden by any of the above.

1.4 Materials & Workmanship

- 1) Materials and fittings shall be as specified and shown in the drawings. All materials shall be new and the best of their respective kinds. Where applicable they shall comply with the NZ. Standard Specification.
- 2) Workmanship shall be in accordance with the best trade practice. Work shall be accurately set out, structurally sound, true to line and face, and shall be neatly executed and finished. Make good to any work developing defects.

1.5 Site

- 1) The site is Lot 15.

2. EXCAVATION

449/29

2.1 Preliminary

- 1) Refer to the preliminary section of this specification which shall be read in conjunction with this section of the work

2.2 Scope of work

- 1) The excavation and back filling of all trenches for footings, piles and services.

2.3 Site clearance

- 1) Remove all vegetation, turf, logs, stumps and existing paving from below the works

2.4 Excavation

- 1) **Generally** Excavate for all footings, foundations and services to the depths required and the widths necessary to permit construction. All excavations shall be kept free from water.
- 2) **Unstable ground** If unstable ground is found in the excavations at the depths allowed for on the drawings continue to excavate until solid ground is reached. Fill to proper level with site concrete below footings and hard fill elsewhere. All such additional work shall be treated as an extra to the contract.

2.5 Hard fill

- 1) For fill over 400mm deep provide hard fill of clean well-graded river shingle, graded from 50mm down, and compact using mechanical vibrator using sufficient water to aid compaction. Finish with 25mm sand blinding top layer
- 2) For fill under 400mm deep provide 12mm pea metal base course.
- 3) Finish sand blinding or pea metal to a true and even level ready for placement of DPC and concrete slab.

2.6 General excavations

- 1) Excavate for all services as required, keeping excavations to minimum size practical. Keep all excavations free of water or fallen material. Provide and maintain all shoring, sheetings, planking and strutting, pumping or baling as required.

2.7 Back fill

- 1) Back fill using materials obtained from excavations. Thoroughly consolidate in layers not exceeding 150mm until existing ground level is reached.

3. CONCRETE

L49/29

3.1 Preliminary

- 1) Refer to the preliminary section of this specification that shall be read in conjunction with this section of the work.

3.2 Scope of work

- 1) Supply and placement of all concrete to slabs and footings including damp proof course and reinforcing to same.

3.3 Formwork

- 1) Formwork is to be provided for all concrete work throughout, except for site or fill concrete. All formwork shall be accurately constructed and securely braced so as to produce even faces and mortar tight joints.

3.4 Materials

- 1) **DPC** Lay 0.025mm polythene damp proof course below all slabs and seal against all footings and penetrations. Lap 150mm minimum at joints using pressure sensitive polythene tape and repair any punctures.
- 2) **Reinforcing** Reinforce all foundations and slabs as shown on drawings. Take care to ensure that all reinforcing is correctly located and securely held in place using PVC chairs, so as not to be disturbed during placement of concrete. Ensure all bends are accurately made. Lay and tie all reinforcements at corners and intersections to ensure continuity.
- 3) **Mesh** Provide 665 mesh to floor slabs where shown, with 30mm top cover to concrete. Mesh to be fully supported on PVC chairs at 1.000 centres each way.
- 4) **Concrete** Concrete shall be supplied by a certified ready-mixed concrete plant and shall conform to the required standards of NZSS 1900, chapter 9.3. Concrete shall have a minimum slump of 100mm and a crushing strength at 28 days of 17.5 MPa.
- 5) **Build in** all pipes, reinforcing, bolts, chases and rebates as detailed or required during construction. Collaborate with all other trades to determine the exact location of items to be built in. Wherever possible services should be taken under and not through foundations and footings.
- 6) **Garage door** Form 50mm fall over 200mm width on slab at garage door. Length of fall to be 100mm longer than door opening.

3.5 Placing and finishing of concrete

- 1) **Footings** As far as possible place all concrete to footings in one operation and thoroughly compact. Where required provide good key to any future pours by thoroughly roughening surface and cleaning off any loose or foreign matter.
- 2) **Finish** All concrete surfaces shall be left free from all bumps, ridges, holes, honeycombing or any other irregularity or defect. Finish slab to a dense, smooth finish with a power driven rotary steel float. Any of the above defects in exposed work shall be made good by the contractor at his own expense.
- 3) Sawcut slab into 10 metre square bays (100sq.m) after setting.

3.6 Protection and curing

- 1) Fresh concrete shall be protected against direct sunshine, premature drying, rain, frost, shock or any other detrimental factor until concrete is thoroughly hardened. After concrete has set sufficiently, properly cure by keeping surface and boxing continuously wet for at least seven days following placement.

4. CARPENTRY

LA9/29

4.1 Preliminary

- 1) Refer to the preliminary section of this specification which shall be read in conjunction with this section of the work.

4.2 Scope of work

- 1) The work consists of fixing of all framing, sheathing, joinery, hardware and finishing work specified below and shown on the drawings but not specified under other trades.

4.3 Finishing

- 1) Punch all nails in finishing work.
- 2) Fit all necessary beads, stops and fillets etc. required for the proper completion of the works.

4.4 Damp proof course

- 1) Between all timber in contact with concrete work place 3-ply bitumen fabric DPC for full width of timber.

4.5 Priming

- 1) Prime or oil all faces and laps of all exterior timber, except cedar weather boarding, and exterior timber joinery before fixing in position.

4.6 Framing timber

- 1) All timbers shall comply with the requirements of NZS 3602 and 3604 and the Timber Preservation Authority where appropriate.
- 2) For certain parts of the work species and grades of timber have been specified without alternative. Where no specific direction is given the species, grade, quality and preservative treatment shall be as specified in NZS 3602 for each situation.
- 3) Notwithstanding any of the above, no chemical free timber shall be used and all timber shall be suitable for its purpose and shall not have any defects likely to cause insufficient strength or durability.

4.7 Framing generally

- 1) Shall be selected No.1 framing to comply with NZS 3604. Shall be straight, true, rigid and securely jointed.
- 2) Use adequate size and number of nails, nail plates and bolts to produce good tight joints.

4.8 Wall framing

- 1) **Plates** shall be laid in long lengths, straight and true. Joints in length at corners and junctions shall be made over supports, close butted and connected with nail plates. At concrete slabs, bottom plates to exterior walls shall be fixed with *Lumberlok Bottom Plate Anchors* and *Ramset* 75mm pins at 1.200 max. centres and at not more than 200mm from each end. Alternatively 16mm *Dynabolts* or 12mm dia. *Trubolts* and at 900mm max. centres may be used. Interior walls may be fixed with 12mm dia *Dynabolts* or 75mm *Ramset* fixings at 900 max. centres, but using bolt fixings each side of doorway openings. All interior walls containing a bracing element shall, in addition to any other fixings, be bolted to concrete slab with 12mm dia. *Dynabolts* at each end of each wall bracing element. To timber floors bottom plates shall be fixed with not less than 2 100mm nails every 600mm and with galvanised straps connecting studs and plates to sub floor framing.
- 2) **Studs** Shall be 100 x 50 at 600 max. centres, in single lengths with three studs at corners and intersections. At outside wall external corners form a 50 x 50 recess in framing at

L49/29

corners to enable plaster sheathing to be rounded around corner. Use double studs at all openings with structural steel or timber lintels, with the inner stud cut short for the beam or lintel. At corners and intersections spike walls together at 600 centres through timber packing blocks. For openings with *Trifold* steel lintels use the number of trimmer studs as specified for particular situation.

- 3) **Dwangs** Provide 2 rows of dwangs with extra blocking to suit linings and fittings and as shown on the drawings.
- 4) **Lintels** and beams to be in accordance with NZS 3604 or as shown on the drawings. All timber or solid steel lintels to sit on jack studs. *Trifold* galvanised steel lintels to be light (L), medium (M) heavy (H) or 2 x heavy (2xH) as scheduled on drawings, with single (SS), double (DS) or triple (TS) studs as indicated.
- 5) **Bracing** Shall comply with NZS 3604 and shall be sheet bracing or Pryda angle brace as shown on floor plan and detailed in the "Schedule of bracing elements" at the back of this spec. The plan gives bracing number (as per "Schedule of bracing elements"), length of brace and number of bracing units supplied. Sheet braces shall be fixed as per manufactures instructions and angle braces shall be fixed with 60mm x 2.8 galvanised jolt head nails at three per plate and two per stud. Braces to be continuous from plate to plate.
- 6) **Ribbon plate** On top of all wall frames run ex 150 x 40 ribbon plate to line with ceiling battens.
- 7) **Window, door frames.** All window and door openings to have 50 x 50 run around inside face of opening to enable aluminium joinery to be recessed into framing.

4.9 First floor framing

- 1) Frame up first floor using 250 x 50 joists at 600mm maximum centres set out as shown on framing plan. Double joists below load bearing walls above.
- 2) Solid block where shown on drawings and provide 100 x 50 blocking between joists at 600mm centres for non load bearing walls above running parallel with joists.
- 3) Provide 100 x 50 blocking to edges of all flooring sheets.
- 4) Fix 100 x 100 tanalised pine post at front entry supported on Bowmac B17 rag set in 300 x 300 x 500 concrete pad. Sheath post with ex 25mm macrocarpa to build out to 200mm square post. Arris edges and joins in facings.

4.10 Flooring

- 1) To be 20mm High Density particle board flooring, in largest sheet sizes practical, fixed in accordance with manufacturer's instructions using 60 x 2.8 galv. Jolt head barbed shank flooring nails, and construction adhesive.

4.11 Roof framing

- 1) Frame up roof using *Gangnail* roof trusses at 900 max. centres, complete with special trusses for coved first floor ceilings and supporting first floor as shown.
- 2) Securely tie and brace trusses together using 100 x 50 runners and braces as required by NZS 3604.
- 3) Top chords of trusses to be tanalised. Fix extra 100 x 50 tanalised rafters (approx 1.200 long) between trusses for exposed rafter detail.
- 4) Form support for valley trays with 100 x 50 valley boards cut between rafters.
- 5) Above trusses fix Pryda diagonal Speed brace or similar where indicated. If using tensioners correctly tension to maintain building strength and squareness.

4.12 Ceiling framing

- 1) Fix *Winstone* steel ceiling battens screw fixed to underside of trusses or joists and into *Winstone* perimeter channel to all rooms and places at 600 max. centres.
- 2) Pack battens and channel as required below ceiling framing as required to get a true and even ceiling line.

449/29

4.13 Insulation

- 1) Walls Insulate all exterior walls, (except around garage) and interior walls around garage, with *R1.8 Batts* fitted tightly between framing or *R1.8 Rocwool* sprayed neatly between timber framing onto back of lining.
- 2) Ceilings Insulate all ceilings with *R2.4 Batts* fitted tightly between ceiling joists or *R2.4 Rocwool* sprayed neatly between framing onto top of ceiling lining.

4.14 Exterior sheathing

- 1) Sheath all exterior walls with *Hardies Hardibacker*, or where indicated with 7.5mm plywood bracing sheets. To all ground floor walls run *Hardibacker* or plywood continuous from bottom plate to top plate. To first floor exterior walls, run *Hardibacker* continuous from top of lower roof up to top plate.
- 2) All solid plaster shall comply with the recommendations of the BRANZ publication "*Good Stucco Practice*".
- 3) To all exterior walls fix heavy weight building paper over *Hardibacker* or plywood. Paper to run to top of top plate.
- 4) Then stretch 18 gauge x 50mm galvanised mesh over paper, packed out from backing with *Renderco "Solid plaster spacers"* and securely fix with galvanised staples. Provide double netting patches at all external corners returned on each face for 150mm and diagonal netting patches at head and sills of window and door openings. Plaster over with 3 coat plaster finish as follows, with the first 2 coats incorporating fibreglass fibre reinforcing in the mix.
- 5) Render and straighten with 1 part cement to 3 parts sand gauged with 5kg of hydrated lime to every bag of cement. Trowel first coat to a dense coat not less than 15mm thick. Form construction joints in first coat a not more than 4.000m in any one direction. Damp surface and apply second coat of 1:2 cement:sand then finish with Terylene texture final coat to employers approval.
- 6) Basewalls Plaster base walls straight & give 1 coat of splatter using a 1:3 ratio of cement to sand from 50mm below finished ground level.

4.15 Fascia and barge detail

- 1) There is no fascia. Neatly finish rafters and trusses 200mm outside line of exterior wall and line above with ex 100 x 25 TG&V soffit boarding. Finish walls between rafters with ex 100 x 25 timber fillet.
- 2) Finish gable ends by cantilevering roofing battens 200mm over end trusses, installing 100 x 50 end rafters and lining under battens with ex 100 x 25 TG&V boarding. Finish with ex 100 x 25 barge board.

4.16 Interior linings

- 1) Walls: Line garage with 6mm Bison board. Around bath fix 6mm Villa board fixed over 3mm packers. Around showers, WC, vanities and tub fix 10 sheets of *Gib Aqualine* and elsewhere allow to fix 9.5mm *Gib-board*, except where *Gib Braceline* is shown on drawings.
- 2) Ceilings: to garage to be 9.5mm Gib board and elsewhere to be 9.5mm *Gib Ultraline*.

4.17 Gibraltar board fixing

- 1) Fix all *Gib-board* with adhesive, 30 x 2.5 Gib-board clouts and 30mm x 6g gypsum screws according to manufacturer's instructions. Provide a galvanised iron metal angle to all external corners.
- 2) After all heavy hammering has been completed, stop all joints and nails with Gib-board bedding and finishing compounds. Use tape to all joints.
- 3) Finish ceilings to a first class paint quality and finish walls to wallpaper finish.

L49/29

4.18 Cornice

- 1) To be 50mm *Gib* cove to all rooms and places.

4.19 Skirting

- 1) To be 90 x 12 bull nosed *Customwood* to all rooms and places, except bathroom, WC and ensuite which shall have pine skirting to the same profile.

4.20 Shower & bath

- 1) **Shower** Allow to install, including screen and door.
- 2) **Bath** Install in timber cradle lined with 7.5mm *Villaboard* tile surround.

4.21 Hardware

- 1) Allow to install all door locks and latches, stops, towel rails, toilet roll holders and hooks etc. not specifically specified elsewhere.

4.22 Wardrobes and cupboards

- 1) **Wardrobes** Install 300mm wide x 18mm *Customwood* shelf in wardrobes supported on fixing rails with *Pryda* coat hanging rail to front edge.
- 2) **Linen cupboard** Allow to fit 5 rows of 18mm *Customwood* shelves 600mm wide, supported on ex 50 x 25 framing to linen cupboard. Construct 18mm *Customwood* shelf 100mm above floor supported on 100 x 50 framing for hot water cylinder.

4.23 Joinery

- 1) Fit exterior and interior joinery and fittings.
- 2) Build in frames plumb and accurately aligned, fixed through solid timber packers or proprietary metal fixings.

4.24 Garage door

- 1) **Door** to be Coloursteel sectional slide-over door in ex 200 x 25 tanalised frame. Form rebate in slab for garage door.

4.25 Clean up

- 1) At regular intervals during construction tidy site and sweep floors clear of all debris.
- 2) On completion clear all debris from building and site and leave clean and tidy.

5. JOINERY

449/29

5.1 Preliminary

- 1) Refer to the preliminary section of this specification that shall be read in conjunction with this section of the work.

5.2 Scope of work

- 1) The manufacture and supply of items customarily carried out in the joinery shop, but more specifically all exterior and interior timber joinery and joinery fittings. The fixing of such items is specified under 'Carpentry'.

5.3 Workmanship

- 1) The construction and assembly of all frames, doors, sashes, and fittings shall be appropriate to the nature of the job. Mortise and tenon, housings and doweling shall be used where practical, screws shall be used in preference to brads, and glue blocks used where required. All joints shall be accurately cut and fitted and all holes suitably stopped.
- 2) Verify all dimensions on site.

5.4 Exterior joinery

- 1) Refer Aluminium section of this specification.
- 2) **Garage door** specified under carpentry.

5.5 Interior doors

- 1) **Hinged doors** to be to sizes shown on drawings, paint quality hollow core doors hung in 25mm *Customwood* slimline frames with 40 x 12 fin planted stops. Hang on 1 1/2 pair 90 x 75 loose pin bronze butt hinges. Doors to service rooms to be as above but with finger jointed pine frames in lieu of *Customwood*.
- 2) Bi-folding lounge and linen cupboard doors to be hollow core PQ doors, in frames as for others.

5.6 Fittings

- 1) Employer to supply all fittings including: kitchen and pantry, bathroom vanities and laundry tub.

5.7 Stairs

- 1) Construct stairs from ex 50mm paint quality strings, rebated for 18mm *Customwood* risers and 25mm *Customwood* treads, all housed, wedged and glued together.
- 2) Balustrading to have ex 75 x 40 handrail at 900mm above line of stair nosing and 1.000 above landing floor. Support rail on ex 100 x 100 newel posts (side landing newel to support floor above) and ex 50 x 50 balusters with 100mm maximum gaps between.

6. ALUMINIUM JOINERY

LA9/29

6.1 Preliminary

- 1) Refer to the preliminary section of this specification that shall be read in conjunction with this section of the work.

6.2 Scope of work

- 1) Supply and installation of all exterior aluminium windows and doors, including glazing of the same.

6.3 Materials

- 1) All sections to be colour powder coated in accordance with standard specifications to a colour selected by employer from the standard range of colours.
- 2) Jamb liners to be ex 30mm PQ slimline - confirm size with carpenter for clearance of flashings.

6.4 Construction

- 1) Mitre all corners to frames and sashes and assemble using stainless steel screws.
- 2) Provide drainage holes as required and caulk all joints with a joint sealer to prevent leakage.
- 3) All units to have integral drip trays with drainage channel to exterior.
- 4) Units to be recessed 50mm into wall framing by running 50 x 50 around inside face of head and jamb trimmers to all aluminium units.

6.5 Glazing

- 1) All units to be supplied to site, factory glazed with thickness of glass appropriate to sizes of panes, but in no case less than that specified in NZS 4223. All glass to be set in PVC gaskets and wedges.
- 2) Bathroom and WC windows to have obscure glazing, to a pattern selected by employer.

6.6 Joinery units

- 1) **Windows** To be as shown on drawings. All sashes to be fitted with friction stays and double tongue handles, and have a PVC weather-stripping gasket to form a seal between sash and frame.
- 2) **Sliding doors** to run on ball bearing race wheels with nylon tyres and shall be weatherproofed with nylon pile strips to stop all air movement.
- 3) **Hinged doors** to be constructed from box section aluminium with top of crash rail 1.000 above floor.

6.7 Installation

- 1) Contractor to install all units in openings provided and secure to framework.
- 2) Aluminium joinery manufacturer to provide all flashings.
- 3) Flashings required to head, jambs and sills of all aluminium joinery units.
- 4) If required confer with designer to ensure flashings render all units fully watertight.

7. METAL TILE ROOFING

L49/29

7.1 Preliminary

- 1) Refer to the preliminary section of this specification which shall be read in conjunction with this section of the work.

7.2 Scope of work

- 1) The providing and fixing of the entire roof, complete with all caps, flashings, valleys and gutters to render the whole roof completely watertight.

7.3 Materials

- 1) **Building paper** - *Duroid* 1370mm self supporting heavyweight.
- 2) **Battens** - Gauged No.1 Radiata Pine
- 3) **Tiles** - *Colourtile* roof tiles, colour to be selected by employer.
- 4) **Flashings** - From 0.55mm BMT Coloursteel

7.4 Underlay

- 1) Lay building paper over rafters, running parallel with battens and staple in place.
- 2) Provide 100mm minimum head lap, and where required 300mm minimum end laps.

7.5 Roofing

- 1) Battens to be ex 50 x 50, set out to suit gauge of tiles and securely nailed to rafters as noted below. Cover entire roof with tiles and fix tiles and accessories in accordance with standard practice. Battens to be fixed with not less than 2 90mm power driven nails and with 3 nails for any fixing to the first and last 600mm of any rafter.
- 2) Touch up all exposed nail heads, coloured to match tiles.
- 3) Complete all caps and flashings etc. as the work proceeds to avoid working over tiles already laid.
- 4) Install Velux roof window flashings supplied by employer.

7.6 Guarantee

- 1) The roofing contractor shall furnish the employer with two guarantees covering the Tile roof:
- 2) A 10 year guarantee from the manufacturers to make good defects arising from faulty manufacture of materials.
- 3) A 5 year guarantee from the fixing agents to make good defects through poor or faulty workmanship in the fixing, or lack of water tightness.
- 4) Both guarantees shall also cover the repair and making good of any damage to ceilings, walls and floors etc. as a result of faulty materials or workmanship.

7.7 Completion

- 1) On completion remove all rubbish from roof, gutters and site.

8. PLUMBING

149/29

8.1 Preliminary

- 1) Refer to the preliminary section of this specification which shall be read in conjunction with this section of the work.

8.2 Scope of work

- 1) The work consists of carrying out all plumbing work shown on the drawings and specified for the complete installation of the sanitary, waste and stormwater systems, water reticulation and flashings to render the whole building completely watertight.

8.3 Regulations

- 1) All work and materials shall comply with the Drainage & Plumbing Regulations and all Local Authority by-laws.
- 2) In the event of workmanship, fittings or equipment being required by the Regulations or by-laws, but which are not specifically specified or shown on the drawings, the contractor must allow for the provision and fixing of all such items.

8.4 Fees, charges and notices

- 1) The Plumbing subcontractor shall file all notices and obtain all permits and approvals to proceed with the work. Plumber to give required notices to the appropriate authorities for inspecting and testing of the works.
- 2) Employer to pay all fees in connection with the same.

8.5 Materials and workmanship

- 1) All materials shall be new and the best of their respective kinds specified, and shall comply with NZ Standard Specifications governing their use and manufacture.
- 2) Workmanship shall be in accordance with the Plumbing & Drainage Regulations and shall be carried out by competent tradesmen with qualifications as laid down in the Regulations.
- 3) All hot and cold water pipes to be Polybutelene with proprietary fittings.

8.6 Trenches

- 1) Excavate and back fill all trenches as specified in "Excavation" section of this specification.

8.7 Conceal pipe work and support

- 1) All pipe work shall be concealed underground, under slabs, in ducts, or in timber wall or ceiling framing.
- 2) All pipes shall be adequately supported throughout their lengths both horizontal and vertical, so as to prevent sagging in any portion. Securely strap all pipe work to framing using purpose made heavy gauge straps of same material as pipe work being fixed.
- 3) Pipes passing through concrete to be wrapped in *Denso* tape.

8.8 Flashings

- 1) Flash generally in 0.55 BMT Coloursteel as necessary to render the building watertight, including garage door flashings.
- 2) All flashings shall accurately fit the work and shall be machine bent and in as long lengths as possible with all joints well lapped and sealed.
- 3) Note: Roof flashings specified under "Roofing", however where any pipes or vents pass through roof, flashing around these is to be done by the plumber.
- 4) Supply and installation of aluminium flashings specified under "Aluminium Joinery"

L49/29

8.9 Cold water supply

- 1) From Toby at street run 18mm PVC main to stop valve adjacent to house.
- 2) From there run 18mm main to hot water cylinder and 18mm feeder with 12mm diameter branches to all fittings and hose taps, in most economical runs, and using easy bends in preference to elbows.
- 3) Note: no 12mm to 12mm branches are acceptable.
- 4) Terminate all runs in brass wingbacks securely screw fixed to timber framing.

8.10 Hot water supply

- 1) Hot water cylinder to be mains pressure gas. (refer "Gas work" below.)
- 2) From hot water cylinder run 18mm main with 12mm branches to all fittings, excluding hose taps and w.c.'s, in most economical runs and using easy bends in preference to elbows.
- 3) Note: no 12mm to 12mm branches are acceptable.

8.11 Gas work

- 1) Install the following gas fittings, supplied by employer.
- 2) *Rheem* (or similar) 170 litre mains pressure H.W.C.
- 3) *Rinnai Slimline* (or similar) vented heater to lounge.
- 4) *Smeg* (or similar) large oven and hobs.
- 5) Allow to install, supplying all necessary flues, vents, valves, pipes and meters etc. and carrying out all work in accordance with regulations.

8.12 Waste pipes

- 1) All wastes shall be of rigid PVC tubing incorporating *Dux* or similar PVC traps. Pipes shall be in straight lines and changes of direction shall be made with easy bends. Fix cleaning eyes at changes of direction and junctions if required by the Regulations.
- 2) Provide separate waste pipe below sink for dishwasher.

8.13 Back vents

- 1) Back vent fittings in accordance with regulations, in PVC tubing.

8.14 Terminal vent

- 1) Erect 75mm dia. PVC terminal vent as required.
- 2) Vent shall be properly jointed, adequately supported and terminated 450mm above roof level with bird proof cowl.

8.15 Taps and fittings

- 1) Allow to install all taps and fittings supplied by employer.

8.16 Range hood and extract vents

- 1) Allow to run ducting from extract fans in bathroom and ensuite ceilings (fans supplied by employer and installed by electrician) to terminate through walls between rafters with bird proof grills. Ducting kit and grill supplied by employer.

8.17 Spouting

- 1) To be 1/4 round continuous coloursteel.
- 2) Allow to fix entire spouting system complete with all down pipes, brackets etc. in accordance with manufacturers instructions.

L49/29

8.18 Down pipes

- 1) To be 80mm diameter PVC securely clipped to building and sealed into stormwater drain.

8.19 Completion

- 1) **Testing** On completion the whole of the plumbing work shall be tested and left in perfect working order.
- 2) **Clean up** Remove all surplus materials, clean all sanitary fittings and leave clean and tidy.

9. DRAINAGE

449/29

9.1 Preliminary

- 1) Refer to the preliminary section of this specification which shall be read in conjunction with this section of the work.

9.2 Scope of work

- 1) The work consists of the complete installation and testing of the sewer drainage and stormwater drainage systems.

9.3 Regulations and permits

- 1) **Regulations** All work and materials shall comply with the Drainage and Plumbing Regulations and all Local Authority by-laws.
- 2) In the event of workmanship, materials or equipment being required by the regulations or by-laws, but which are not specifically specified or shown on the drawings, the contractor must allow for the provision and fixing of all such items
- 3) **Fees, charges and notices** Employer to obtain consent and pay all fees in connection with the same. Drainlayer to give required notices to the appropriate authorities for inspecting and testing of the works.

9.4 Materials and workmanship

- 1) **Materials** Provide all materials and fittings necessary for the complete installation of the drainage system as specified and as required by the regulations. Pipes shall be rigid PVC.
- 2) **Workmanship** All work shall conform to the best trade practice and comply with Plumbing & Drainage Regulations and Local Authority by-laws.

9.5 Trenches

- 1) **Excavate** and back fill all trenches to comply with the Plumbing and Drainage Regulations and the 'Excavation' section of this specification.
- 2) **Drains** shall not be disturbed during back filling. Excavations shall be wide enough to allow sufficient working room without standing on the pipes. Hand trim the excavation to provide full and even bearing.
- 3) **Co-operate** with electrician, plumber, gas worker and Telecom to include their services in trench from street to house.

9.6 Drains and fittings

- 1) **Drains** All drains shall be laid as straight as possible, with minimum number of joints and bends. Provide all bends and junctions etc. as required and shown on the drawings.
- 2) **Gully traps** To be rigid PVC complete with grating. Set gully 75mm minimum above finished ground level.
- 3) **Terminal vent** Provide connection for terminal vent and/or soil stack where shown on drawings. Connection shall be below ground level. See "Terminal vent" under "Plumbing" section.

9.7 Completion

- 1) **Testing** Drains shall not be covered until the whole system has been inspected, tested, and passed by the Local Authority Inspector.
- 2) The contractor shall make good at his own expense any defects revealed by the Inspector, and the drainage system shall be left in perfect working order.
- 3) **Clean up** On completion clean up the site, remove all surplus materials, and leave tidy.

FACSIMILE TRANSMISSION

L49/29

P O Box 1805

PALMERSTON NORTH

PHONE & FAX (06) 356 1800

OLLIVER BUILDING SERVICES LIMITED

===== TOTAL BUILDING AND DESIGN SERVICE =====

TO PNCC Building Insp

ATTENTION

John Hutley

FROM Graeme Oliver

DATE

11-10-01

TOTAL PAGES (including this page)

2

TIME

3.30

PLEASE PHONE (06) 356 1800 if this TRANSMISSION is INCOMPLETE

Revised Scott bracing calcs
as requested.

L49/29

Gibb Wall Bracing Calculation Sheet A single storey

Job Details

Name	J. Scott
Street and Number	Calena Grove
Lot and DP Number	
City/Town/District	Palmerston North
Designer and date	Graeme Oliver 1 Sep 01

Building Specification

Location of Storey	single	
Floor Loading	2 kPa	
Foundation Type	slab	
Building Height to Apex (m)	6	
Roof Height above Eaves (m)	3	
Stud Height (m)	2.4	
Cladding Weight (top or single)	medium	
Cladding Weight (lower)	light	not applicable (single storey building)
Cladding Weight (subfloor)	light	not applicable (slab)
Roof Weight	light	
Roof Pitch (degrees)	25-45	
Room in Roof Space	yes	
Building Length (m)	18	Use roof length including eaves
Building Width (m)	15.4	Use roof length including eaves
Gross Building Plan Area (m ²)	173	

Building Location

Wind Zone	High	Earthquake Zone	A
Region	R1		
Terrain	Inland		
Exposure	Exposed		
Topography	Moderate		

Bracing Units required for Wind

per m	subfloor	walls
W along	n/a	78 BUS/m
W across	n/a	78 BUS/m
Totals	subfloor	walls
W along	n/a	1201 BUS
W across	n/a	1404 BUS

Bracing Units required for Earthquake

per m ²	subfloor	walls
E along	n/a	7.8 BUS/m ²
E across	n/a	7.8 BUS/m ²
Totals	subfloor	walls
E along	n/a	1315 BUS
E across	n/a	1315 BUS

L49/29

Gib® Wall Bracing Calculation Sheet A

single storey

Job Details

Name	J Scott
Street and Number	Lalena Grove
Lot and DP Number	
City/Town/District	Palmerston North
Designer and date	Graeme Olliver 1-Sep-01

Building Specification

Location of Storey	single	▼	
Floor Loading	2 kPa	▼	
Foundation Type	slab	▼	
Building Height to Apex (m)	6	▼	
Roof Height above Eaves (m)	3	▼	
Stud Height (m)	2.4	▼	
Cladding Weight (top or single)	medium	▼	
Cladding Weight (lower)	light	▼	not applicable (single storey building)
Cladding Weight (subfloor)	light	▼	not applicable (slab)
Roof Weight	light	▼	
Roof Pitch (degrees)	25-45	▼	
Room in Roof Space	yes	▼	
Building Length (m)	18		Use roof length including eaves
Building Width (m)	15.4		Use roof length including eaves
Gross Building Plan Area (m2)	173		

Building Location

Wind Zone	Low	Earthquake Zone
Region	R1 ▼	A ▼
Terrain	Inland ▼	
Exposure	Sheltered ▼	
Topography	Gentle ▼	Enter at least 'moderate' in a Lee Zone

Bracing Units required for Wind

per m	subfloor	walls
W along	n/a	41 BUs/m
W across	n/a	41 BUs/m
Totals	subfloor	walls
W along	n/a	631 BUs
W across	n/a	738 BUs

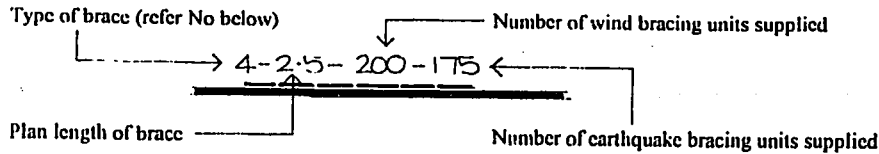
Bracing Units required for Earthquake

per m2	subfloor	walls
E	n/a	7.6 BUs/m2
Totals	subfloor	walls
E along	n/a	1315 BUs
E across	n/a	1315 BUs

Olliver Building Services Limited

Schedule of bracing elements

Refer floor plan or bracing plan for location, type, length and bracing units supplied for all braces



No	Type	Main bracing element	Secondary brace	Nail spacing	Wind Units/m	Earthquake Units/sq m
1	Gib 1	9.5mm Gib b'd one face 1.8m to 2.4m long	Diagonal steel brace		55	50
2	Gib 1	9.5mm Gib b'd one face 2.4m long and over	Diagonal steel brace		75	50
3	Gib 2	9.5mm Gib b'd both faces 1.8m to 2.4m long	Diagonal steel brace		75	60
4	Gib 2	9.5mm Gib b'd both faces 2.4m long and over	Diagonal steel brace		80	70
5	Gib 3	9.5mm Gib b'd both faces 1.2m long and over			65	60
6	BR1	Braceline on one face 1.8m to 2.4m long	Diagonal steel brace		70	60
7	BR1	Braceline on one face 2.4m long and over	Diagonal steel brace		90	75
8	BR2	Braceline on one face, fixed vertically 1.8m to 2.4m long			75	60
9	BR2	Braceline on one face, fixed vertically 2.4m long and over			85	60
10	BR3	Braceline on one face, fixed horizontally 1.8m to 2.4m long			60	45
11	BR3	Braceline on one face, fixed horizontally 2.4m long and over			95	65
12	BR4	Braceline on one face 0.9 to 1.2 long	6KN nail plate connecting end studs to bottom plate		100	85
13	BR5	Braceline on one face 1.200m long and over	6KN nail plate connecting end studs to bottom plate		115	85
14	BR6	Braceline on one face, 9.5 Gib b'd other, 1.200m long and over	2 x 6KN nail plates each end connecting studs to plates		150	110
15	BR7	Braceline on one face, 7.5mm plywood other, 900mm long and over	6KN nail plate connecting end studs to bottom plate		145	145
16	SP1	7.5mm plywood one face 900mm minimum wall length	6KN nail plate connecting end studs to bottom plate	150mm	100	100
17	SP2	7.5mm plywood one face 600mm minimum wall length	6KN nail plate connecting end studs to bottom plate	150mm	85	85
18	SP4	7.5mm plywood one face 450mm minimum wall length	6KN nail plate connecting end studs to bottom plate	75mm	70	85
19	SP8D	7.5mm plywood one face 900mm minimum wall length	2 x 6KN nail plates each end connecting studs to plates	150mm	125	135
20	SP5D	7.5mm plywood one face 1.200m minimum wall length	2 x 6KN nail plates each end connecting studs to plates	75mm	130	135

L49/29

21	SP10	7.5mm plywood one face, 1.800m minimum wall length, studs at 450ers	6KN nail plate connecting end studs to bottom plate	75mm	135	135
22	SP2G	7.5mm plywood one face, Gib board other face, 600mm minimum wall length	6KN nail plate connecting end studs to bottom plate	150mm	95	95
23	SP1G	7.5mm plywood one face, Gib board other face, 900mm minimum wall length	6KN nail plate connecting end studs to bottom plate	150mm	100	100
24	SP11G	7.5mm plywood one face, Gib board other face, 1.800m minimum wall length	6KN nail plate connecting end studs to bottom plate	150mm	140	120
25	SP6G	12mm plywood one face, Gib board other face, 900mm minimum wall length	2 x 6KN nail plates each end end studs to bottom plate	150mm	120	110
26	SP6GD	12mm plywood one face, Gib board other face, 900mm minimum wall length	2 x 6KN nail plates each end end studs to bottom plate	150mm	145	135
27	HBK1	Hardibucker 4.5mm sheet 1.200 to 1.800 long			85	70
28	HBK2	Hardibucker 4.5mm sheet 1.800 to 2.400 long			90	75
29	HBK3	Hardibucker 4.5mm sheet 2.4m long and over			105	80
30	HBK4	Hardibucker 4.5mm sheet 900mm and over	GN10 nail plate connecting end studs to bottom plate		110	85
31	HF3	6mm Hardiflex 2.400 long and over		200mm	105	90
32	HF4	6mm Hardiflex 900mm to 1.200 long	6KN nail plate connecting end studs to bottom plate	200mm	120	96
33	HF5	6mm Hardiflex 1.200 long and over	6KN nail plate connecting end studs to bottom plate	200mm	132	96
34	HF6	6mm Hardiflex 900mm to 1.200 long	Refer Hardies for strap fixings and nailing		120	110
35	HF7	6mm Hardiflex 1.200 long and over	Refer Hardies for fixings and nailing		145	118
36	HF8	6mm Hardiflex 900mm to 1.200 long	Refer Hardies for fixings and nailing		115	92
37	HF9	6mm Hardiflex (1.2 to 2.4) (2.4 and over)	Refer Hardies for fixings and nailing		130 135	105 115



449/29

PALMERSTON NORTH CITY COUNCIL
CODE COMPLIANCE CERTIFICATE No:10960
Section 43(3), Building Act 1991

Building Consent No: 35147

Owner Details

Name: JACALYN SCOTT

Mailing Address: PLYMTREE RD 4, TURITEA VALLEY, PALMERSTON NORTH

Contact: JACALYN SCOTT

Project Information

The project is for New Building

Intended Use(s): ERECT 4 BEDROOM DWELLING AND ATTACHED GARAGE

Intended life: Indefinite but not less than 50 years

Value of Work: \$170,000.00

Project Location

Street Address: 29 LA LENA GROVE, AOKAUTERE, PALMERSTON NORTH

Assessment No:

Legal:

Council Charges

Council's charges for this CODE COMPLIANCE CERTIFICATE :

This is a final code compliance certificate issued in respect of all of the building work under the above building consent

Signed for and on behalf of the Council:

Name: SHAYNE HARRIS

PRINCIPAL BUILDING OFFICER

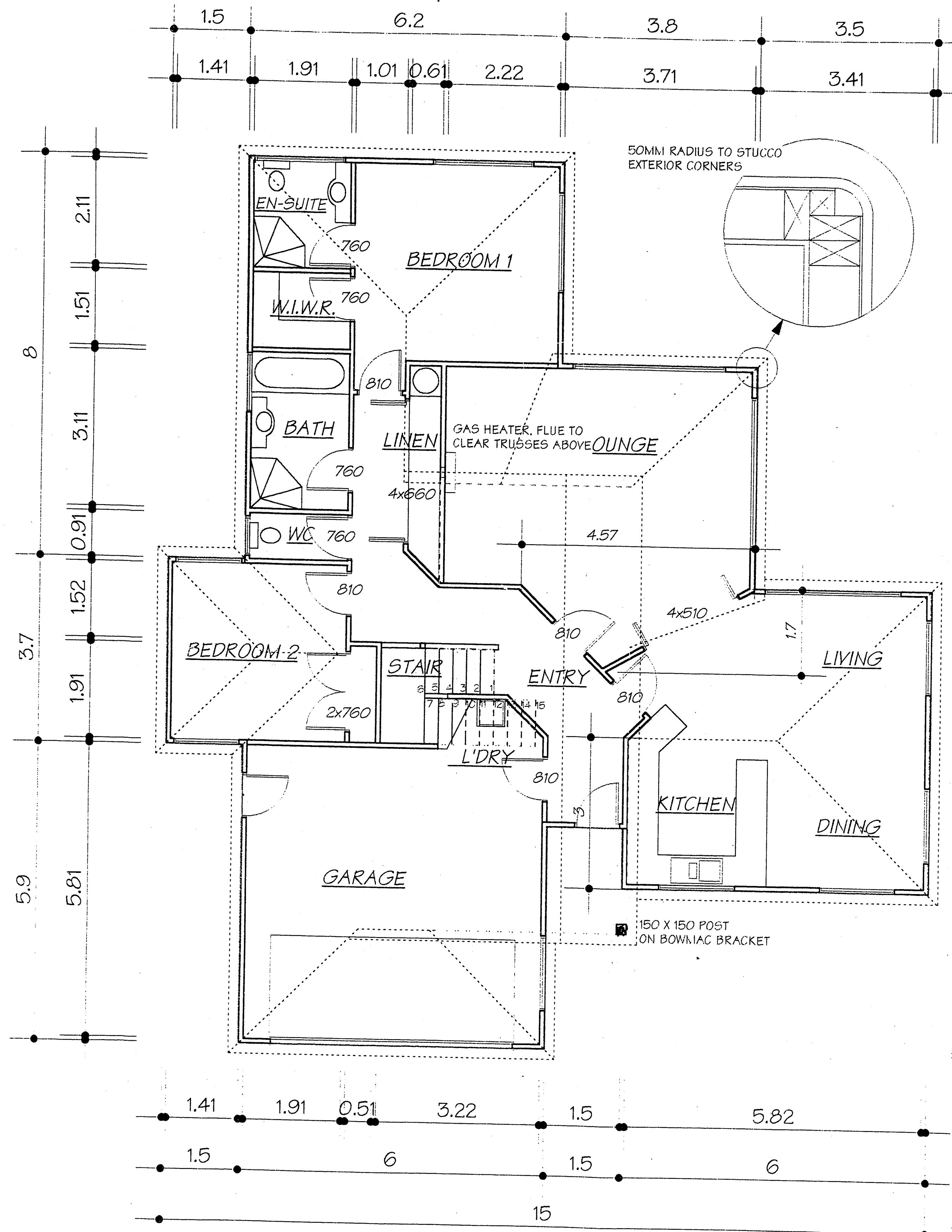
Signed: *Shayne Harris*

Dated: 27/3/02

FINAL CODE COMPLIANCE CERTIFICATE: 10960

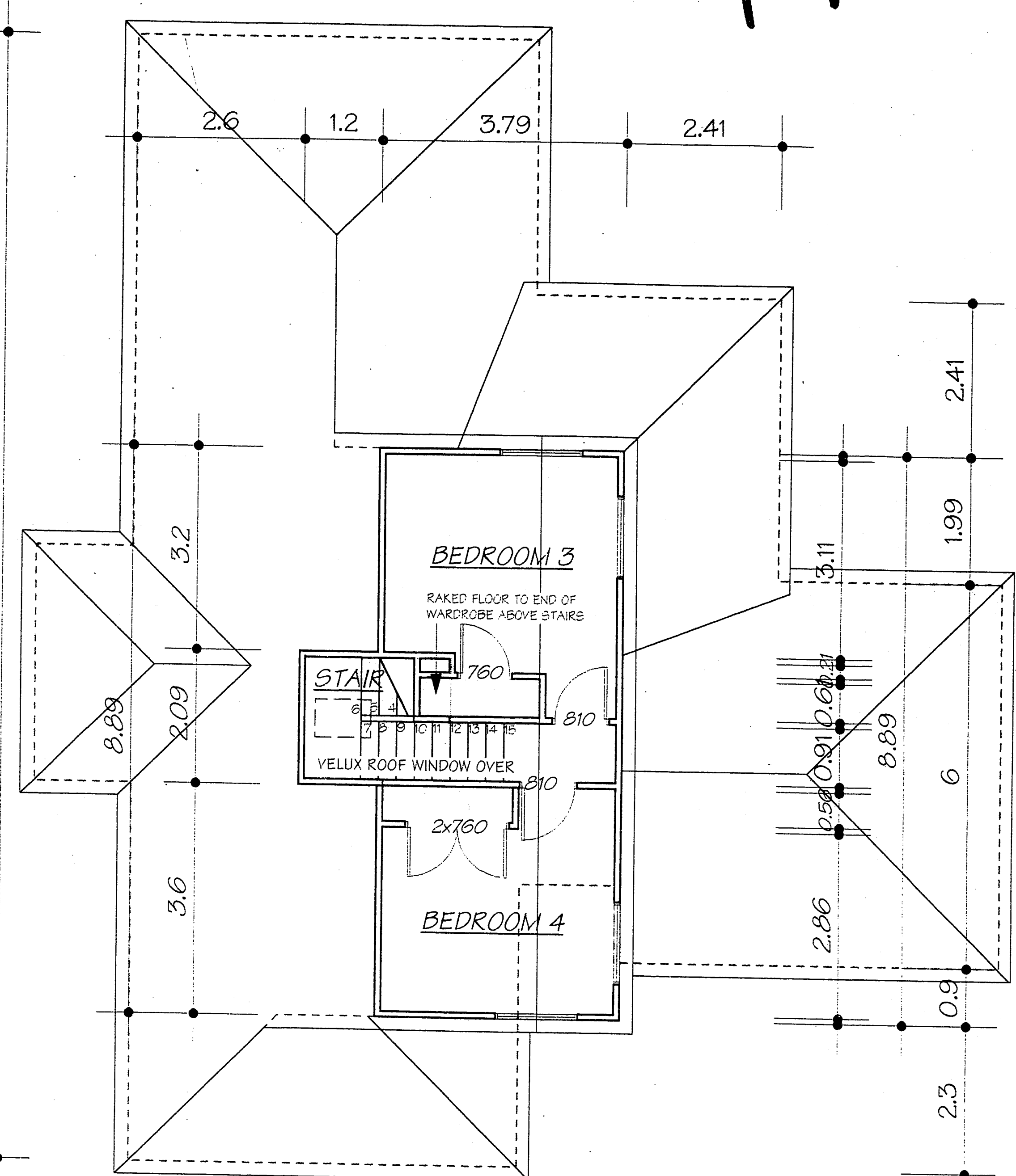
Page : 1

L49/29



GROUND FLOOR PLAN

172.75 SQ.M. G.F. AREA



FIRST FLOOR PLAN

31 SQ.M. F.F. AREA

PROPOSED HOUSE, LA LENA GROVE, P.N.,
FOR JACALYN SCOTT.

SEPTEMBER 2001

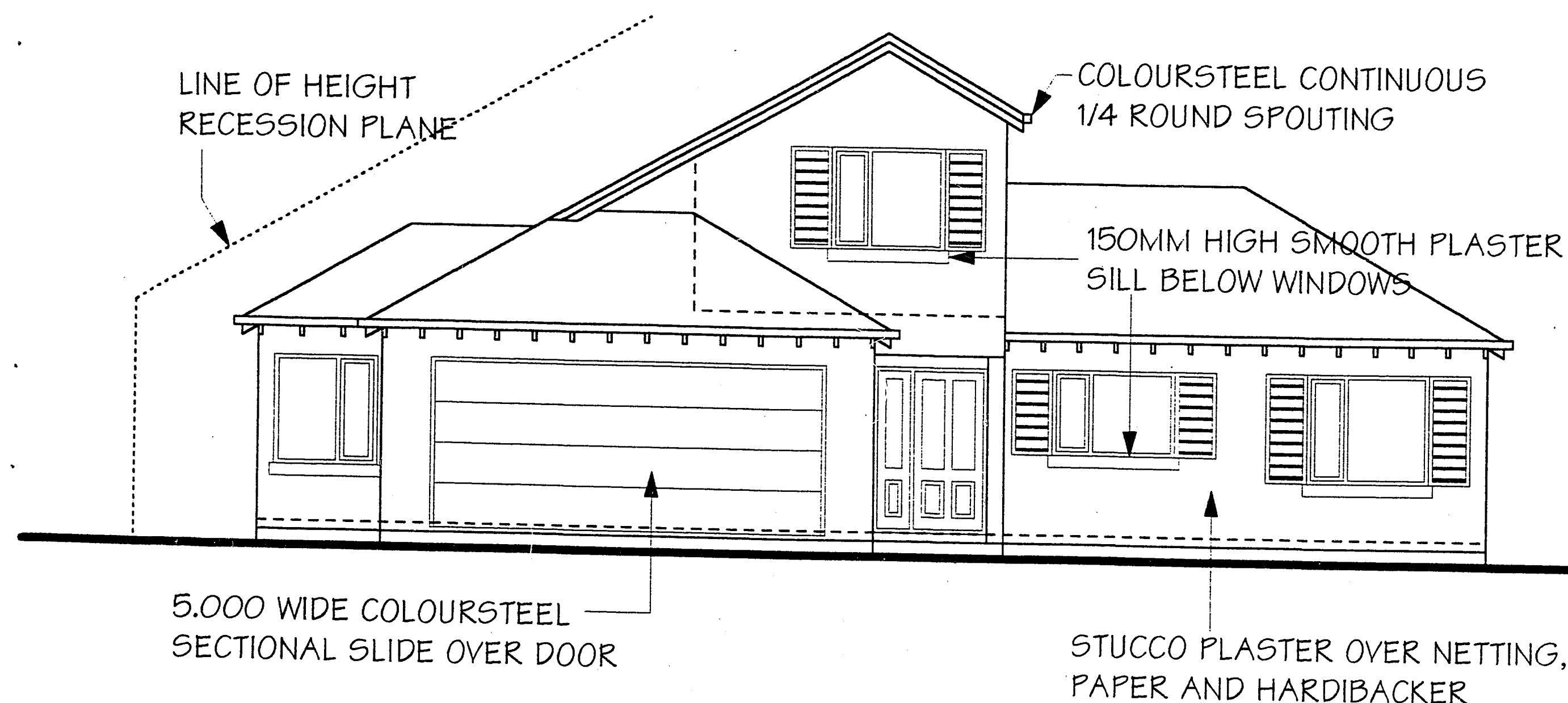
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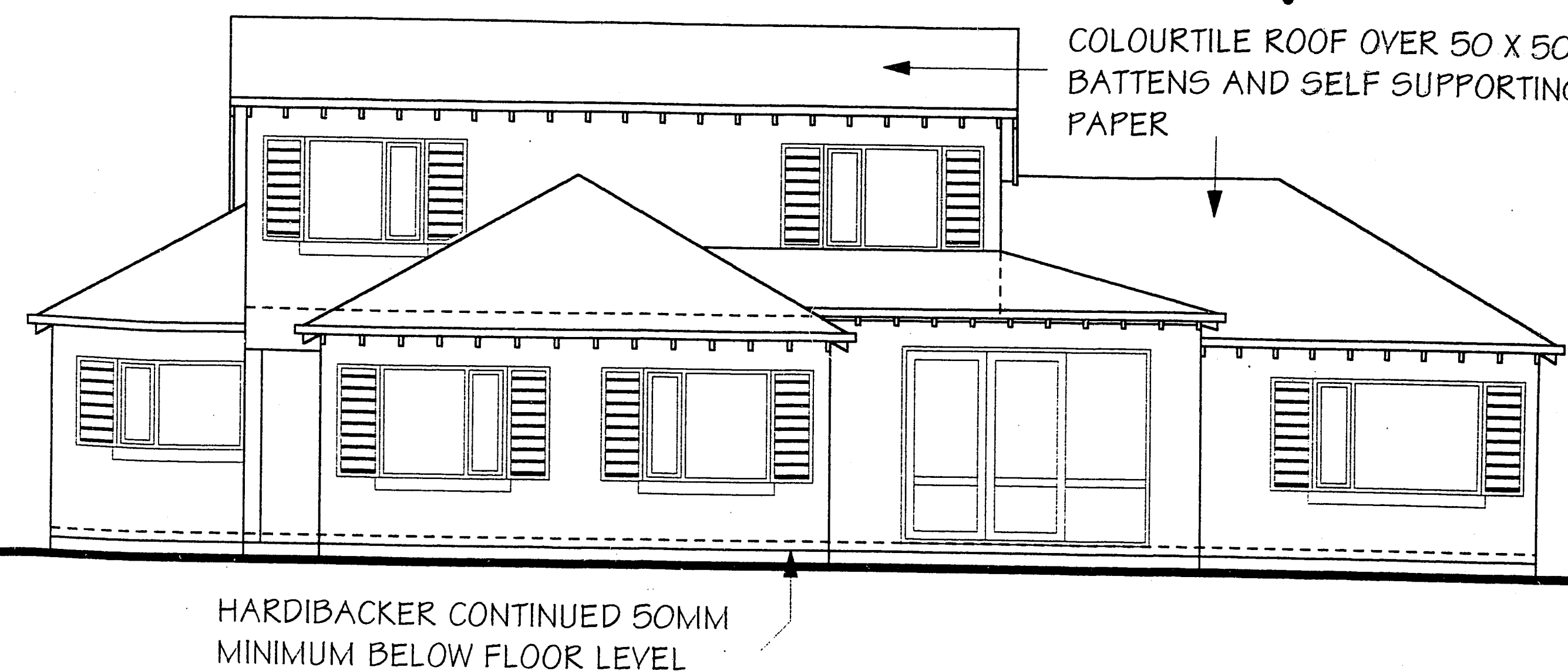
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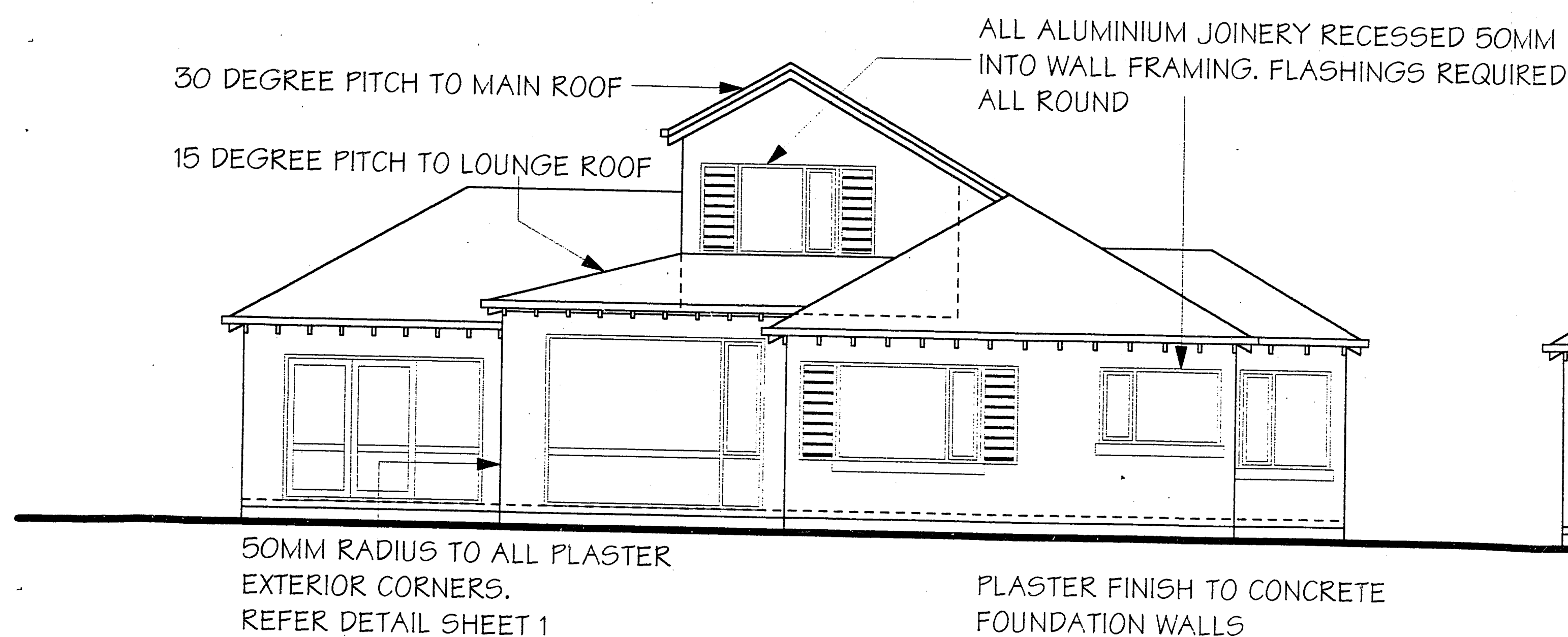
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NORTH EAST



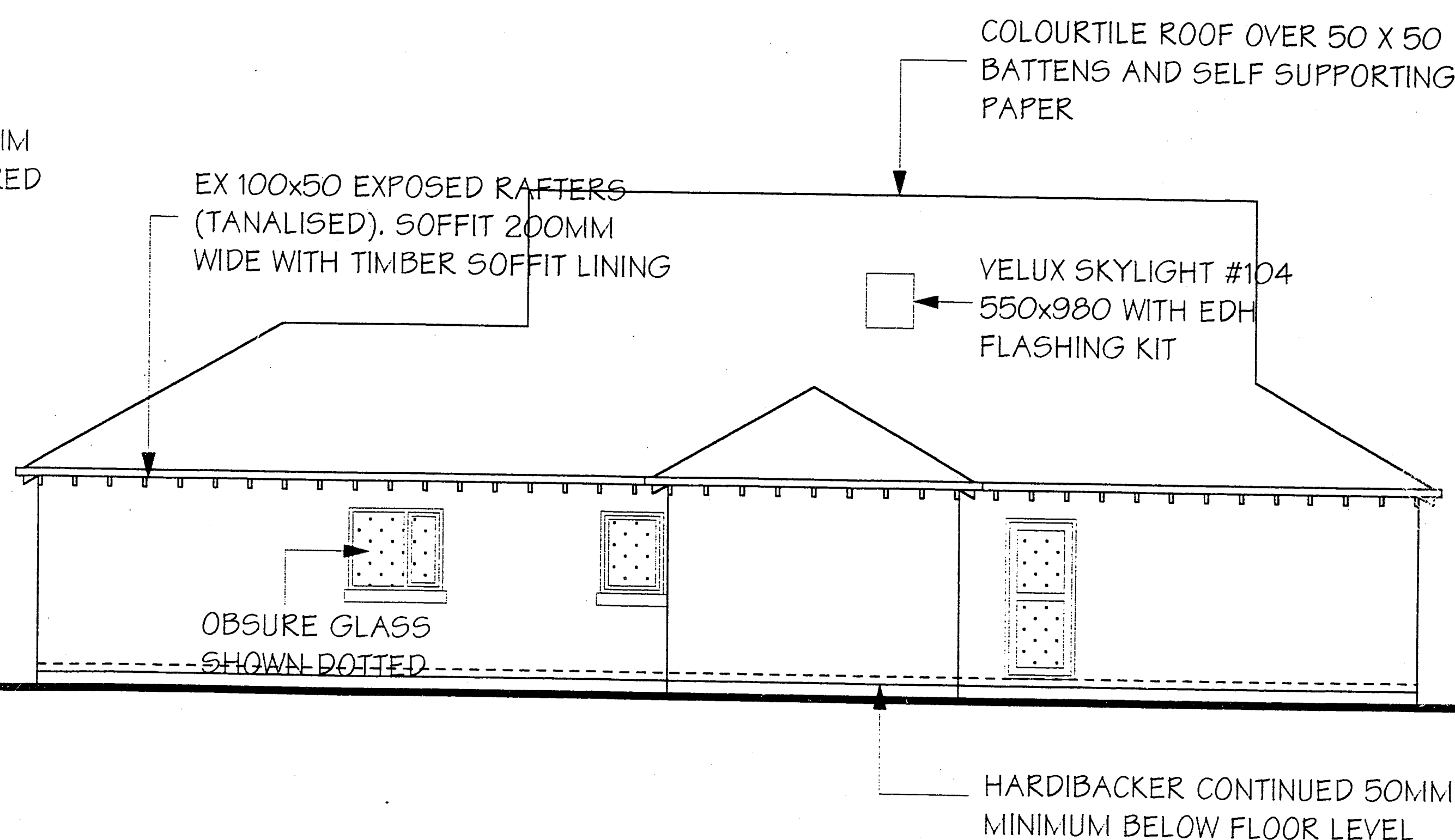
NORTH WEST



SOUTH WEST

ELEVATIONS

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SOUTH EAST

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FOR JACALYN SCOTT.

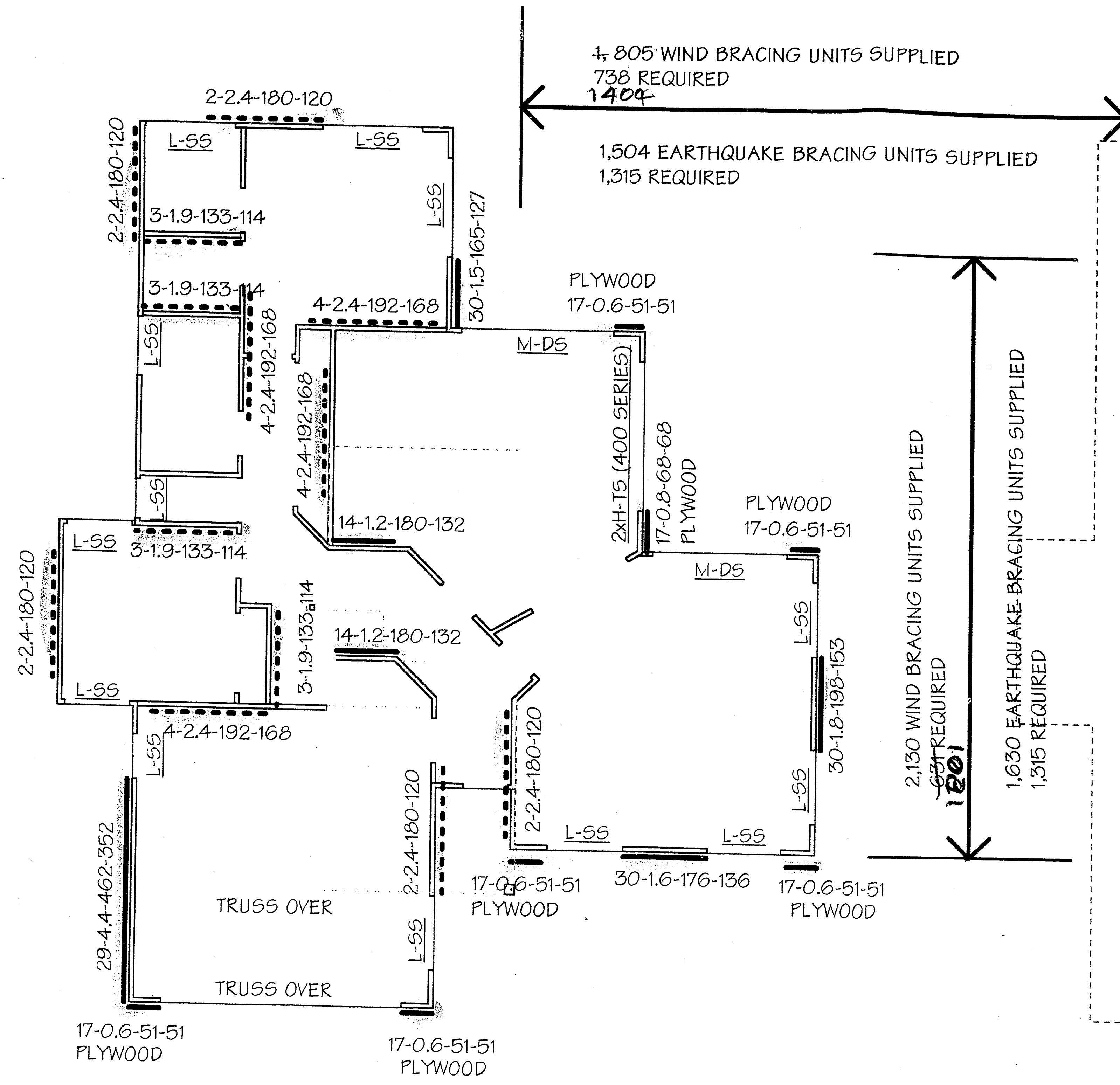
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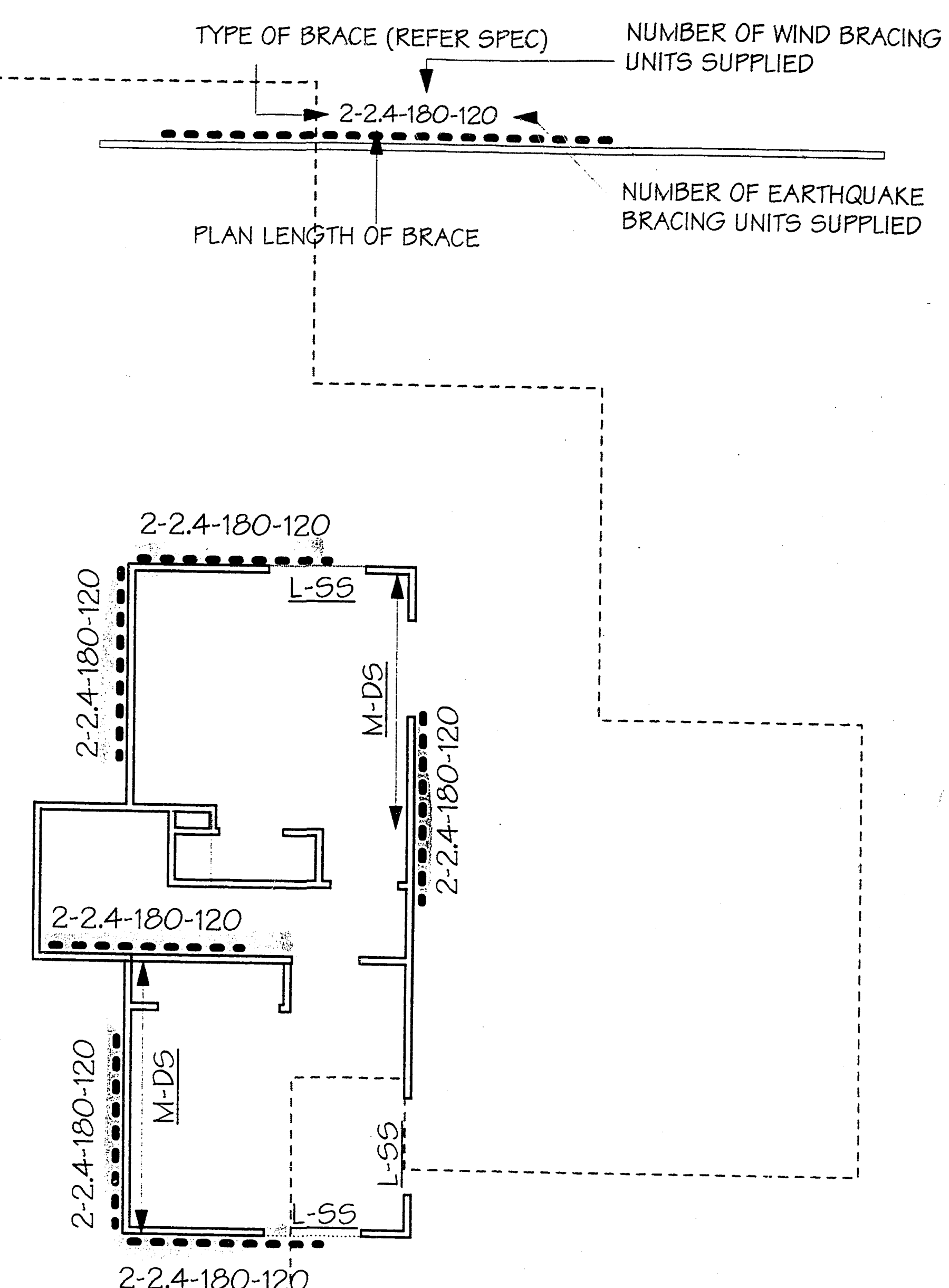
GRAEME Olliver
Architectural Designer

P.O. Box 1803
PALMERSTON NORTH
PHONE & FAX (06) 356 1800

L49/29 3



BRACING REFERENCE



ALL WALL LINTELS TO BE TRIFOLD 350 SERIES UNLESS SPECIFICALLY-NOTED OTHERWISE.
 LIGHT (L), MEDIUM (M), HEAVY (H) OR 2xH (DOUBLE HEAVY) ON SINGLE (SS), DOUBLE (DS) OR TRIPLE (TS) STUDS AS INDICATED -
 CANTILEVER STUDS TO BE AS ABOVE BUT PRECEDED BY A 'C'.
 E.G. CL-SS INDICATES LIGHT CANTILEVER LINTEL ON SINGLE STUD.

BRACING AND LINTEL PLANS

PROPOSED HOUSE, LA LENA GROVE, P.N.,
 FOR JACALYN SCOTT.

SEPTEMBER 2001
 COPYRIGHT

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 ARCHITECTURAL DESIGNER

P.O. Box 1803
 PALMERSTON NORTH
 PHONE & FAX (06) 356 1800

100MM SLAB REINFORCED WITH
665 MESH WITH 35MM COVER

250MM WIDE (MINIMUM) FOOTING
SET 300MM (MINIMUM INTO SOLID
GROUND AND REINFORCED WITH
1 D12 TO TOP, 2-D12 TO BOTTOM
AND D10 STIRRUPS AT 600MM CRS

2 D12 BARS, 1500 LONG
ACROSS CORNERS

300MM WIDE X 200MM THICK SLAB
THICKENING UNDER LOAD BEARING
INTERNAL WALLS. REINFORCE WITH
2xD12 BARS & D10 STIRRUPS AT 600CRS.

25MM DEEP SAWCUT

100MM SLAB REINFORCED WITH
665 MESH WITH 35MM COVER

50MM FALL OVER 300MM IN SLAB
AT GARAGE DOORS. FALL TO BE 100MM
LONGER THAN DOOR OPENINGS.

100MM SLAB TO FRONT ENTRY 75MM
BELOW FLOOR SLAB AT ENTRY DOOR
AND FALLING 40MM TO OUTSIDE EDGE

FOUNDATION PLAN

SCALE 1:100

PROPOSED HOUSE, LA LENA GROVE, P.N.,
FOR JACALYN SCOTT.

SEPTEMBER 2001
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GANG NAIL ROOF TRUSSES AT 900MM
MAXIMUM CENTRES. LAYOUT APPROXIMATE
ONLY. TRUSS MANUFACTURER TO SUPPLY
SHOP DRAWINGS FOR EXACT LAYOUT

GROUND FLOOR WALLS SHOWN DOTTED

TRIFOLD 400 SERIES 2xH LINTEL BEAMS
WITH TRIPLE STUD SUPPORTS EACH END
AND WITH JACK STUD UNDER POINT LOAD

SPECIAL ROOF TRUSS, DESIGNED
TO TAKE ROOF AND FLOOR LOAD. TRUSS
MANUFACTURER TO SUPPLY CALCULATIONS
TO BUILDING CERTIFIER.

250x50 FLOOR JOISTS AT
600MM MAXIMUM CENTRES

TRIFOLD MEDIUM 400 BEAM, SUPPORTING
WALL AND ROOF ONLY. DOUBLE STUD
SUPPORTS EACH END.

250 X 50 FLOOR JOISTS

SOLID BLOCKING OR
HERRING BONE STRUTTING

SPECIAL ROOF TRUSS, DESIGNED
TO TAKE ROOF AND FLOOR LOAD. TRUSS
MANUFACTURER TO SUPPLY CALCULATIONS
TO BUILDING CERTIFIER.

FLOOR JOIST AND G.F. TRUSS PLAN

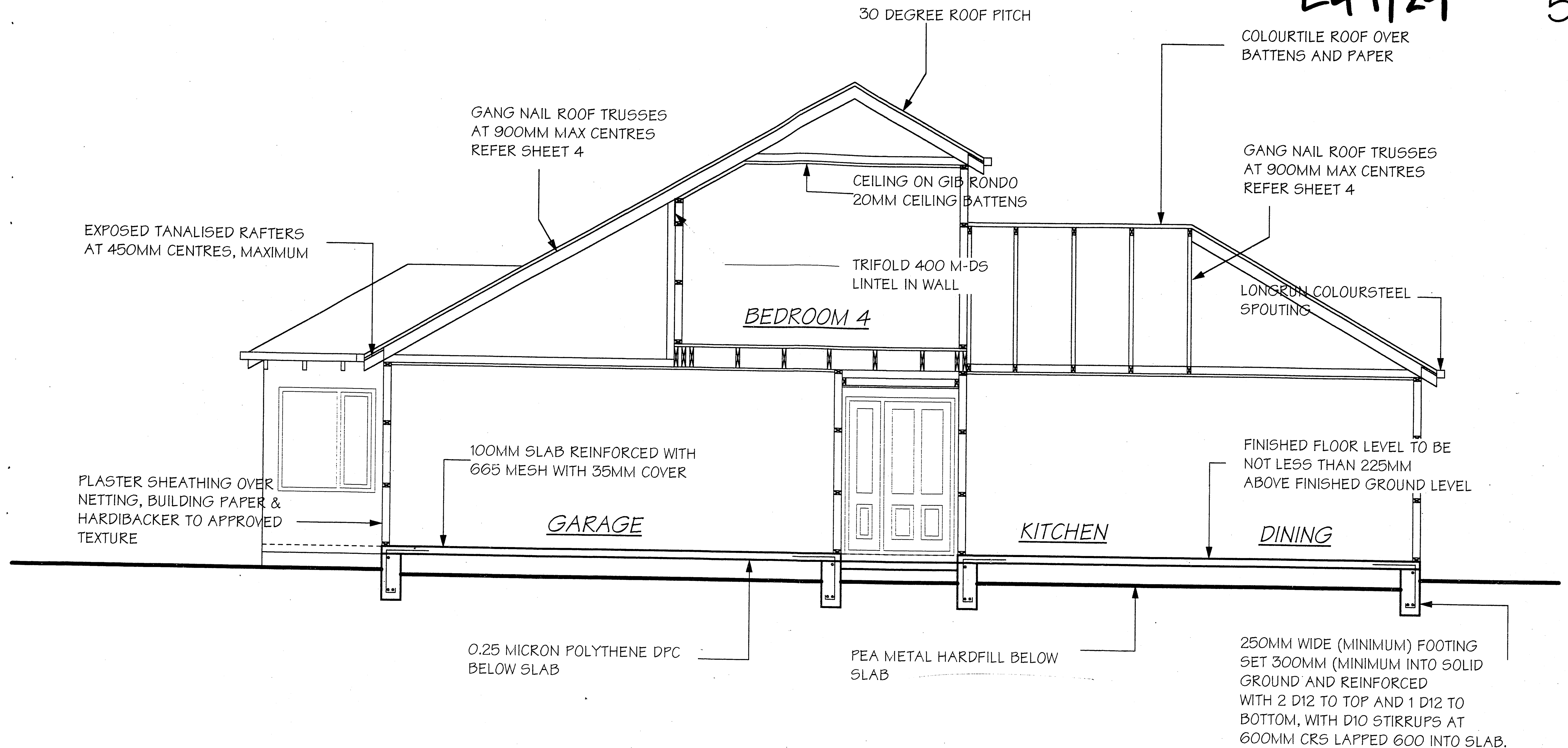
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ARCHITECTURAL DESIGNER

P.O. Box 1807
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L49/29

5



CROSS SECTION A-A

PROPOSED HOUSE, LA LENA GROVE, P.N.,
FOR JACALYN SCOTT.

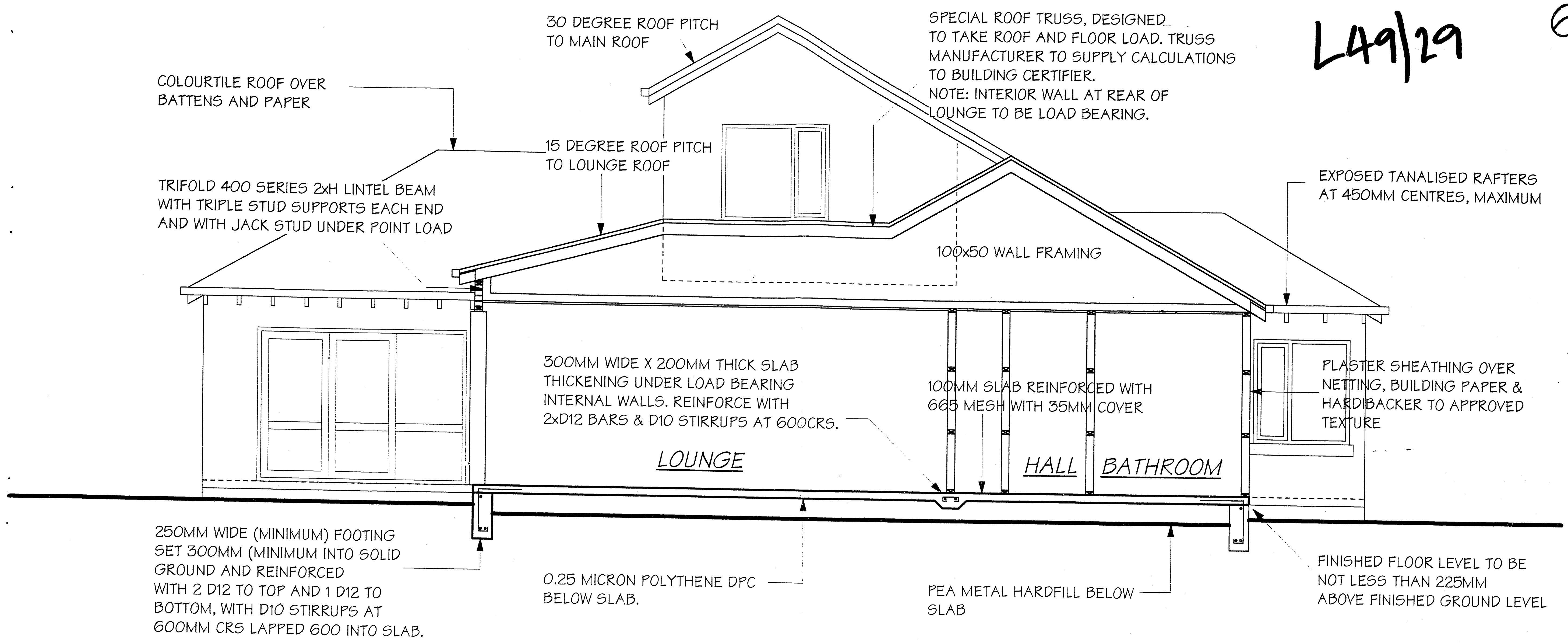
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CROSS SECTION B-B

PROPOSED HOUSE, LA LENA GROVE, P.N.,
FOR JACALYN SCOTT.

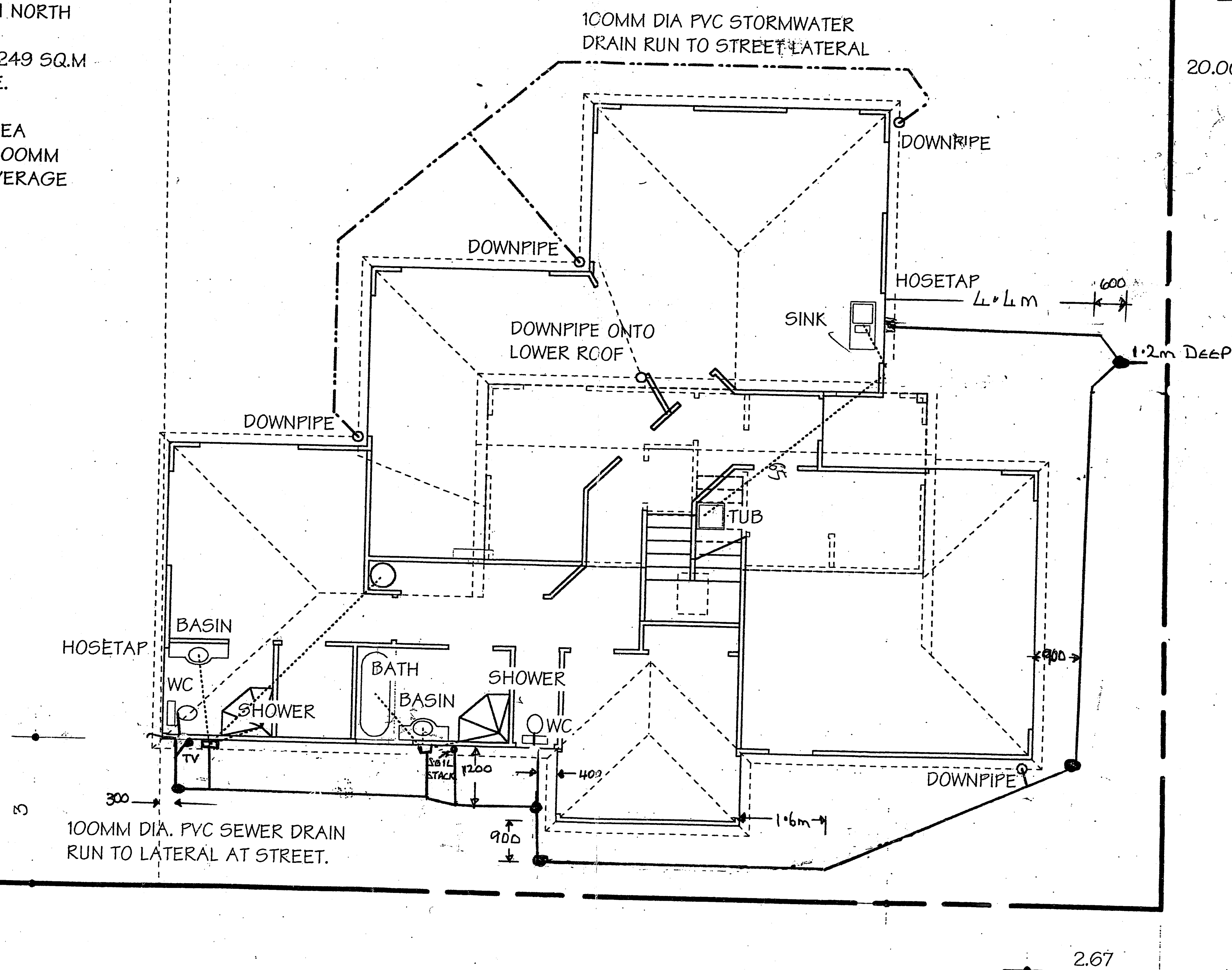
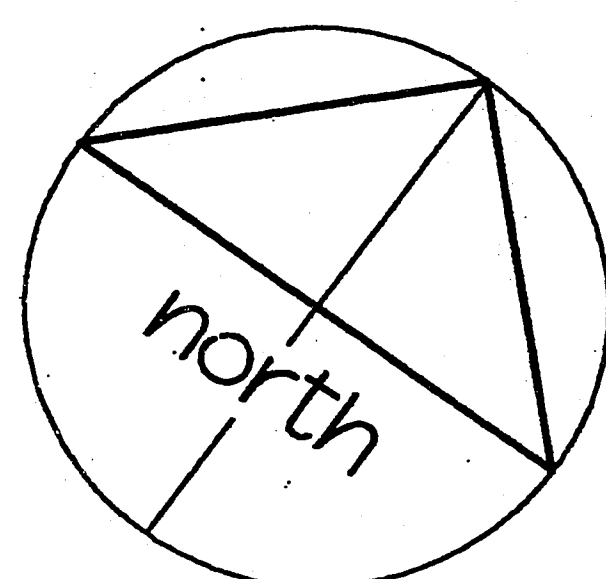
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ARCHITECTURAL DESIGNER

P.O. Box 1803
PALMERSTON NORTH
PHONE & FAX (06) 356 1800

SCALE 1:100

173 SQUARE METRE HOUSE AREA
2 SQ METRES SOFFITS OVER 600MM
175 SQ. METRE TOTAL SITE COVERAGE



STREET 29 LA LENA GROVE
OWNER SCOTT
LOT 15 DP
DRAIN LAYER
CONSENT No. 35147
INSPECTED BY P.L.
DATE COMPLETED 8 JAN 2000

249/29

29 LA LENA GROVE

BERS
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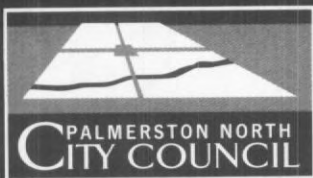
ED HOUSE, LA LENA GROVE, P.N.,
CALYN SCOTT.

SEPTEMBER 2001
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GRAEME OLLIVER
ARCHITECTURAL DESIGNER

P.O. Box 1803
PALMERSTON NORTH
PHONE & FAX (06) 356 1800

O. Box 1803
MERSTON NORTH
6) 356 1800



Private Bag 11034
Palmerston North
New Zealand
Telephone 64 6 356 8199
Web Site www.pncc.govt.nz

Working with
our Community
to Build
a Better City

Application for Project Information Memorandum and/or Building Consent

Section 33 or Section 45, Building Act 2004



YOUNG HEART
EASY LIVING
MANAWATU

The Building

Street address of building:

[for structures that do not have a street address, state the nearest street intersection and the distance and direction from that intersection]

29 LA KENA GROVE
PALMERSTON NORTH

Legal description of land and where building is located:

[state legal description as at the date of application and, if the land is proposed to be subdivided, include details of relevant lot number and subdivision consent]

LOT 15
DP 91210

Building name:
Location of building within site/block number:

[includes nearest street access]

Number of levels:

[include ground level and any levels below ground]

2

Level/unit number:
Area:

[total floor area; indicate area affected by the building work if less than the total area]

45.6m²

Current, lawfully established, use:

[include number of occupants per level and use if more than 1]

4 Bedroom Dwelling

Year first constructed:

[approximate date is acceptable eg: 1920s or 1960-1970]

2001

The Owner: [All contact persons must live in New Zealand]

Name of owner:

[eg, Mr, Mrs, Miss, Dr if an individual]

MR M DURBIN & MS J WESTLEY

Contact person:

[insert n/a if the applicant is an individual]

Mailing address:

29 LA KENA GROVE
PALMERSTON NORTH

Street address/registered office:
Phone numbers Landline:
Mobile:
Daytime:
After hours:
Email address:
Evidence of ownership is attached to this application:

☒ Certificate of Title

☐ Lease

☐ Agreement for Sale and Purchase

☐ Other document

Agent (only required if application is being made on behalf of the owner)**Name of agent:**

BRUCE BARRY ARCHITECTS LTD

Contact person:

BRUCE BARRY

[insert n/a if the agent is an individual]

Contact person:

[insert n/a if the agent is an individual]

Street address / registered office:

263 RUABING STREET P/N

Phone number:**Landline:**

356 5946

Mobile:

021 365 946

Daytime:**After hours:****Facsimile number(s):**

359 1840

Email address(es):

bruce@bba.net.nz

Relationship to owner:

ARCHITECT

[State details of the authorisation from the owner to make the application on the owner's behalf]

**First point of contact for communications with the council/
building consent authority:****Full name:****Mailing address**

AS ABOVE

Phone number(s):**Facsimile number(s):****Email address(es):****Application**

I request that you issue a

☒ Project Information Memorandum☒ Building Consent

For the building work described in this application [tick one or both as applicable]

**Signature of the owner / agent on behalf of and with the
authority of the owner:****Date:** 7/11/2007**PIM type**

3

Building consent type

3

Receipt number

2008 / 109965

Date received

16/11/07

04470

The Project [only required if application is being made on behalf of the owner]

Description of the building work:

[provide sufficient description of building work to enable scope of work to be fully understood; continue on a separate page if necessary, or refer to an attached document setting out the description]

EXTENSION OF BEDROOM 3 TO CREATE LARGER MASTER
BEDROOM INCORPORATING A NEW ENSUITE, WALK-IN
WARDROBE PLUS A PORTABLE SAUNA INSTALLATION, PLUS
NEW DECK

ALL MATERIALS USED FOR CONSTRUCTION WILL MATCH EXISTING
FINISHES & COMPLY WITH ALL REQUIREMENTS OF THE BUILDING
ACT 2005 AS SPECIFIED.

ROOF - GERARD COLORTILES

WALL CLADDING - SOLID PLASTER ON HARDBACKED ON CAVITY BATTENS

WINDOWS & DOORS - ALUMINIUM

Will the building work result in a change of use of the building?

☐ Yes

☒ No

If Yes, provide details of the new use:

Intended life of the building if less than 50 years:

[number of years]

List building consents previously issued for this project (if any):

Estimated value of the building work on which the building levy will be calculated

(including goods \$ 100,000 and services tax):

[state estimated value as defined in section 7 of the Building Act 2004]

Project information memorandum

The following matters are involved in the project: [tick the matters relevant to the project]

- ☐ Subdivision
☐ Alterations to land contours
☐ New or altered connections to public utilities
☒ New or altered locations and/or external dimensions of buildings
☐ New or altered access for vehicles
☐ Building work over or adjacent to any road or public place
☒ Disposal of stormwater and wastewater
☐ Building work over any existing drains or sewers or in close proximity to wells or water mains
☐ Other matters known to the applicant that may require authorisations from the territorial authority: [specify]

Building consent

The following plans and specifications are attached to this application:

[all plans and specifications must meet the minimum requirements set out in the regulations or required by the building consent authority]

2 SETS OF PLANS SHOWING EXISTING & MODIFIED
 2 SPECIFICATIONS
 2 SETS STRUCTURAL ENGINEER'S CALCS & DETAILS

The building work will comply with the building code as follows:

[if you're not sure which clauses are applicable, talk to the BCA or your architect]

Clause [tick relevant clause number of building code]	Means of compliance required [refer to the relevant compliance document(s) or detail or alternative solution in the plans and specification; if not applicable, put n/a]	Waiver/modification [state nature of waiver or modification of building code required; if not applicable, put n/a]
B1 Structure	NZS 3604, NZS 4203	
B2 Durability	B2/AS1, NZS 3604	
C1 Outbreak of fire	N/A	
C2 Means of escape	N/A	
C3 Spread of fire	N/A	
C4 Structural stability during fire	N/A	
D1 Access routes	D1/AS1	
D2 Mechanical installations for access	N/A	
E1 Surface water	E1/AS1	
E2 External moisture	E2/AS1	

E3 Internal moisture	E3/ASI	
F1 Hazardous agents on site	N/A	
F2 Hazardous building materials	F2/ASI	
F3 Hazardous substances and processes	N/A	
F4 Safety from falling	F4/ASI	
F5 Construction and demolition hazards	N/A	
F6 Lighting for emergency	N/A	
F7 Warning systems	F7/ASI SURE ALARMS	
F8 Signs	N/A	
G1 Personal hygiene	G1/ASI	
G2 Laundering	N/A	
G3 Food preparation and prevention of contamination	N/A	
G4 Ventilation	G4/ASI	
G5 Interior environment	N/A	
G6 Airborne and impact sound	N/A	
G7 Natural light	G7/ASI	
G8 Artificial light	N/A	
G9 Electricity	G9/ASI	
G10 Piped services	G10/ASI	
G11 Gas and energy source	N/A	
G12 Water supplies	G12/ASI	
G13 Foul water	N/A (EXISTING)	
G14 Industrial liquid waste	N/A	
G15 Solid waste	N/A	
H1 Energy efficiency	H1/ASI, NZS 4218	

Compliance schedule [do not fill in this section if the application is for a project information memorandum only]. Please tick.

The specified systems for the building are as follows:

- ☐ Automatic systems for fire suppression
- ☐ Automatic and manual emergency warning systems for fire or other dangers (other than a warning system for fire that is entirely within a household unit and serves only that unit)
- ☐ Fire doors - electromagnetic or automatic doors or windows (for example, ones that close on fire alarm activation)
- ☐ Emergency lighting systems
- ☐ Escape route pressurisation systems
- ☐ Riser mains for fire services use
- ☐ Automatic back-flow preventers connected to potable water supply
- ☐ Lifts, escalators, or travelators or other systems for moving people or goods within building
- ☐ Mechanical ventilation or air conditioning systems
- ☐ Building maintenance units for providing access to the exterior and interior walls of buildings
- ☐ Laboratory fume cupboards

- ☐ Audio loops or other assistive listening systems
- ☐ Smoke control systems
- ☐ Emergency power systems for, or signs relating to, a system or feature specified in any clauses 1-13

The following systems will be altered, added to, or removed in the course of the building work:

- ☐ Automatic systems for fire suppression
- ☐ Automatic and manual emergency warning systems for fire or other dangers (other than a warning system for fire that is entirely within a household unit and serves only that unit)
- ☐ Fire doors - electromagnetic or automatic doors or windows (for example, ones that close on fire alarm activation)
- ☐ Emergency lighting systems
- ☐ Escape route pressurisation systems
- ☐ Riser mains for fire services use
- ☐ Automatic back-flow preventers connected to potable water supply
- ☐ Lifts, escalators, or travelators or other systems for moving people or goods within building
- ☐ Mechanical ventilation or air conditioning systems
- ☐ Building maintenance units for providing access to the exterior and interior walls of buildings
- ☐ Laboratory fume cupboards
- ☐ Audio loops or other assistive listening systems
- ☐ Smoke control systems
- ☐ Emergency power systems for, or signs relating to, a system or feature specified in any clauses 1-13.
- ☒ There are no specified systems in the building.

Attachments:

The following documents are attached to this application:
 [Tick as applicable or put n/a if there are no attachments.]

- ☒ Plans and specifications [list]

2 SETS A3 DRAWINGS

2 SPECIFICATIONS

2 ENGINEER'S CALCS & DETAILS

- ☐ Project information memorandum
- ☐ Development contribution notice
- ☐ Certificate attached to project information memorandum

Contacts:**Designer/Architect:**

Business/name: **BRUCE BARRY ARCHITECTS LTD**
 Address: **P O BOX 4143 P/N**
 Daytime: **356 5946**
 Mobile: **021 365 946**
 After hours:
 Facsimile: **359 1840**
 Registration/qualification: **B ARCH ANZIA**

Structural Engineer:

Business/name: **KEVIN O'CONNOR & ASS.**
 Address: **71 Pitt St. P/N**
 Daytime: **356 7000**
 Mobile:
 After hours:
 Facsimile: **356 7007**
 Registration/qualification:

Engineer (identify practice college):

Business/name:
 Address:
 Daytime:
 Mobile:
 After hours:
 Facsimile:
 Registration/qualification:

Plumber:

Business/name: **TBA**
 Address:
 Daytime:
 Mobile:
 After hours:
 Facsimile:
 Registration/qualification:

Builder:

Business/name: **TBA**
 Address:
 Daytime:
 Mobile:
 After hours:
 Facsimile:
 Registration/qualification:

Drain layer:

Business/name: **TBA**
 Address:
 Daytime:
 Mobile:
 After hours:
 Facsimile:
 Registration/qualification:

Head Contractor / Site Manager:

Business/name:
 Address:
 Daytime:
 Mobile:
 After hours:
 Facsimile:
 Registration/qualification:

Other:

Business/name:
 Address:
 Daytime:
 Mobile:
 After hours:
 Facsimile:
 Registration/qualification:

Privacy Information:

The information you have provided on this form is required so that your building consent application can be processed under the Building Act 2004. The Council collates statistics relating to issued building consents and has a statutory obligation to regularly forward these to Statistics NZ. The Council stores the information on a public register which must be supplied (as previously determined by the Ombudsman) to whomsoever requests the information.

Under the Privacy Act 1993 you have the right to see and correct personal information the Council holds about you.

Code Compliance

The building consent authority named below is satisfied, on reasonable grounds, that -
(a) the building work complies with the building consent.

Council Charges

The Council's total charges payable on the uplifting of this code compliance certificate in accordance with the attached details are: \$0.00

This is a final code compliance certificate issued in respect of all of the building work under the above building consent

Signature:



Position: **PRINCIPAL / SENIOR BUILDING OFFICER**

On behalf of: **PALMERSTON NORTH CITY COUNCIL**

Date: **15 DEC 2008**

**Code Compliance Certificate
For Building Consent: 4470
Section 95, Building Act 2004**

The Building

Street Address of building: 29 LA LENA GROVE
PALMERSTON NORTH

Legal Description of land where building is located: LOT 15 DP91210

Current, lawfully established use: RESIDENTIAL ADDITIONS AND ALTERATIONS

Year first constructed: 14 AUGUST 2008

The Owner

Name of owner: DURBIN, MARK FREDRICK

Mailing Address: 29 LA LENA GROVE
PALMERSTON NORTH 5301

Street address/registered office:

Phone number:

Facsimile number:

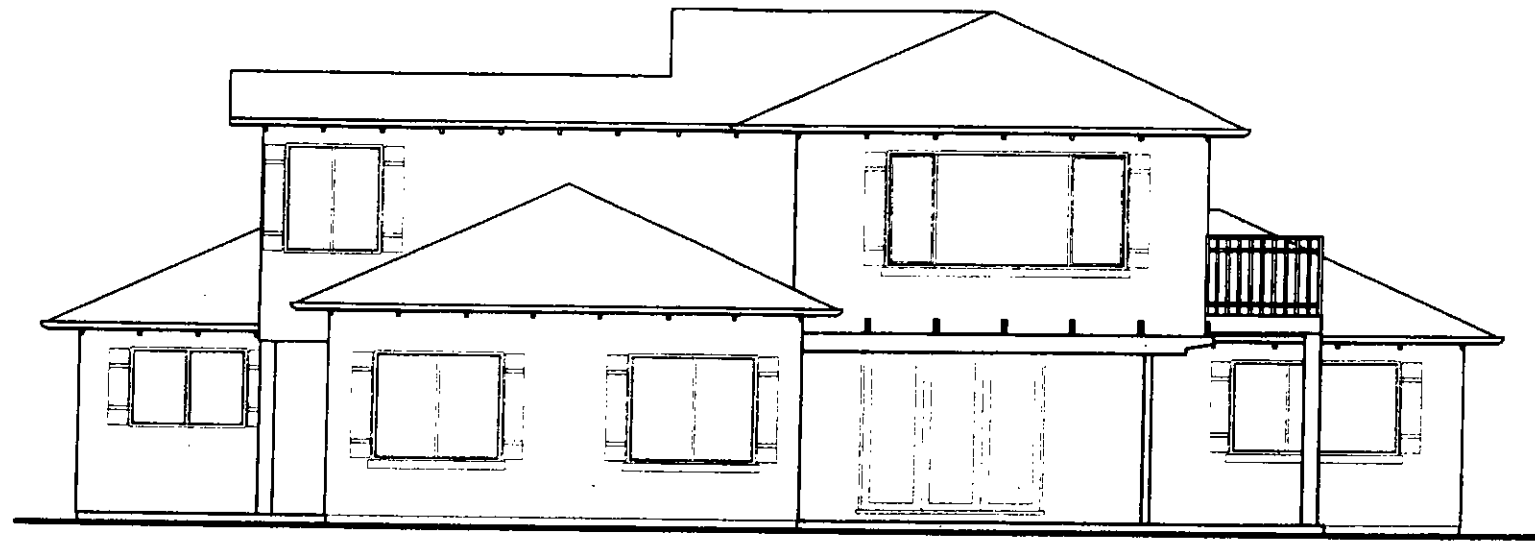
Email address:

Website:

Building Work

Building Consent number: 4470

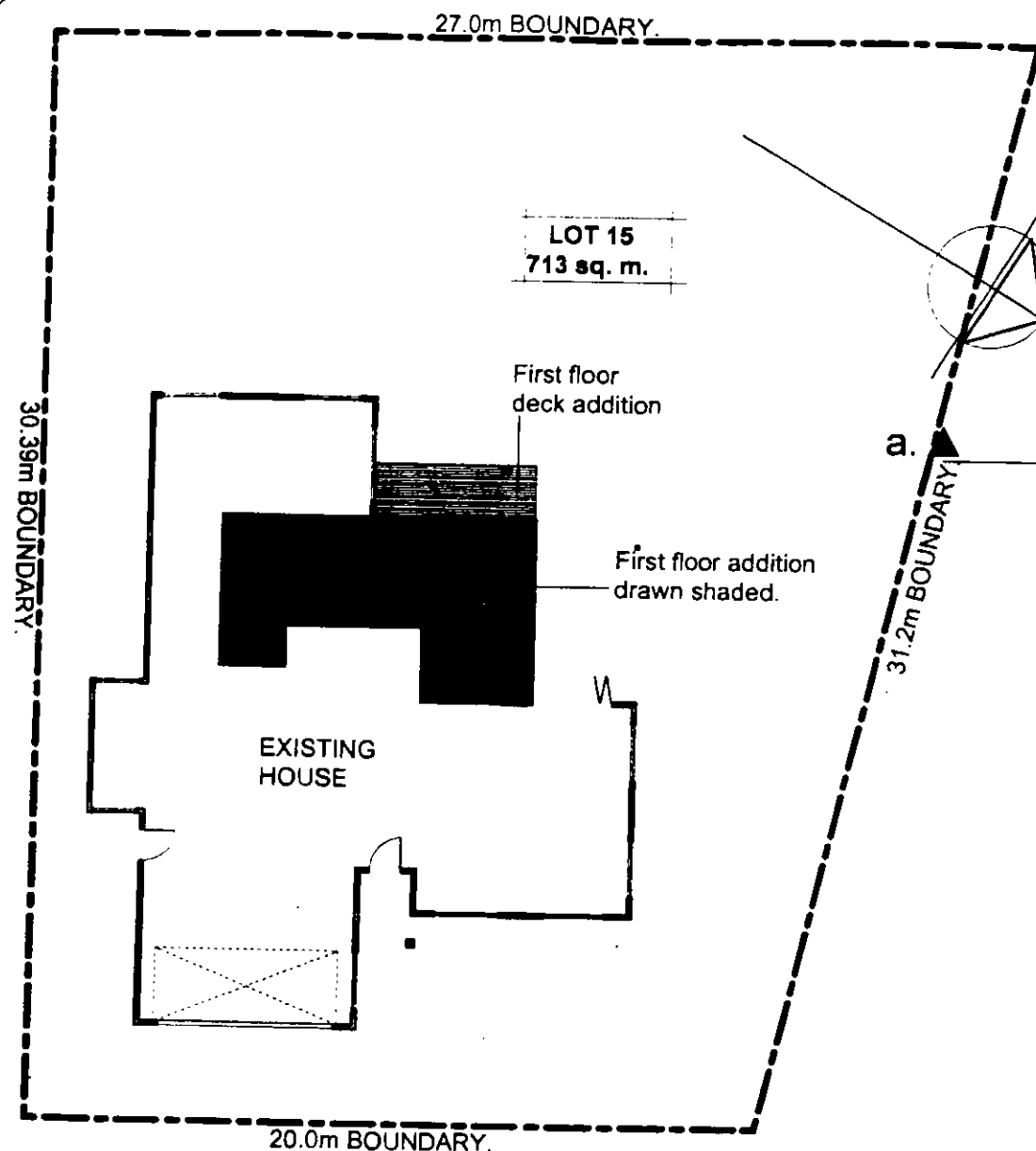
Issued By: PALMERSTON NORTH CITY COUNCIL



HOUSE ADDITIONS
for
MR M. DURBIN & MS. J. WESTLEY
at
PALMERSTON NORTH.

P.N.C. APPROVED

bba



29 LA LENA GROVE.

site plan.

SCALE 1:200.

SITE COVERAGE.

ALLOWABLE SITE COVERAGE = 713 X 35%
= 249.55 sq. m.

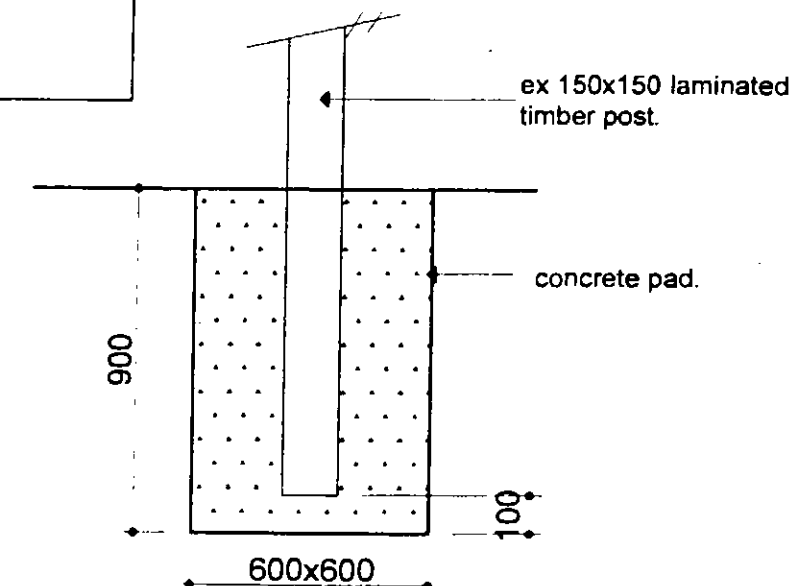
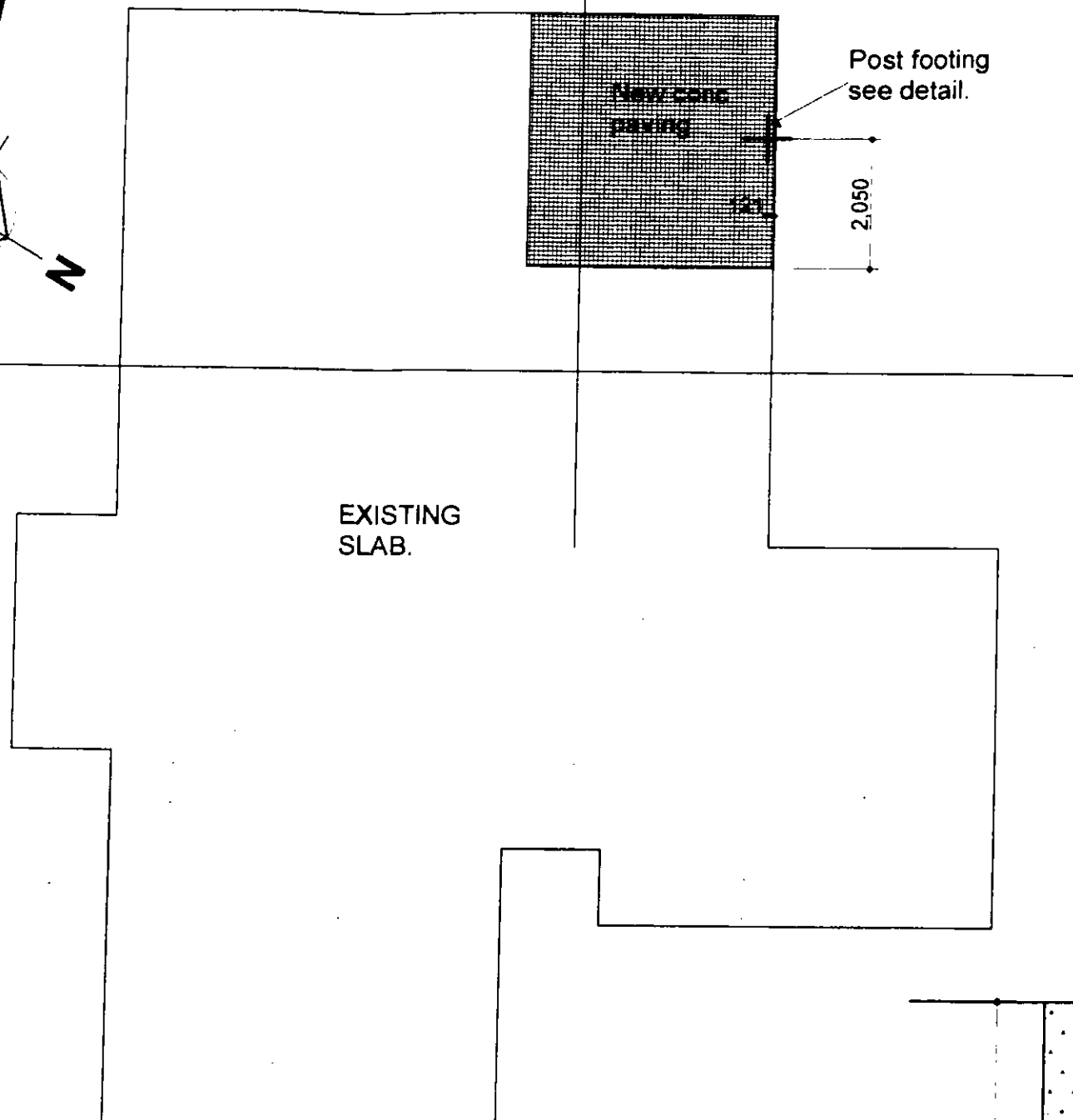
ACTUAL SITE COVERAGE = 181.0 sq. m.

foundation plan.

SCALE 1:100.

NOTE:

The Main Contractor shall be responsible for confirming the soil bearing capacity PRIOR to forming any boxing.



post footing.

SCALE 1:20.

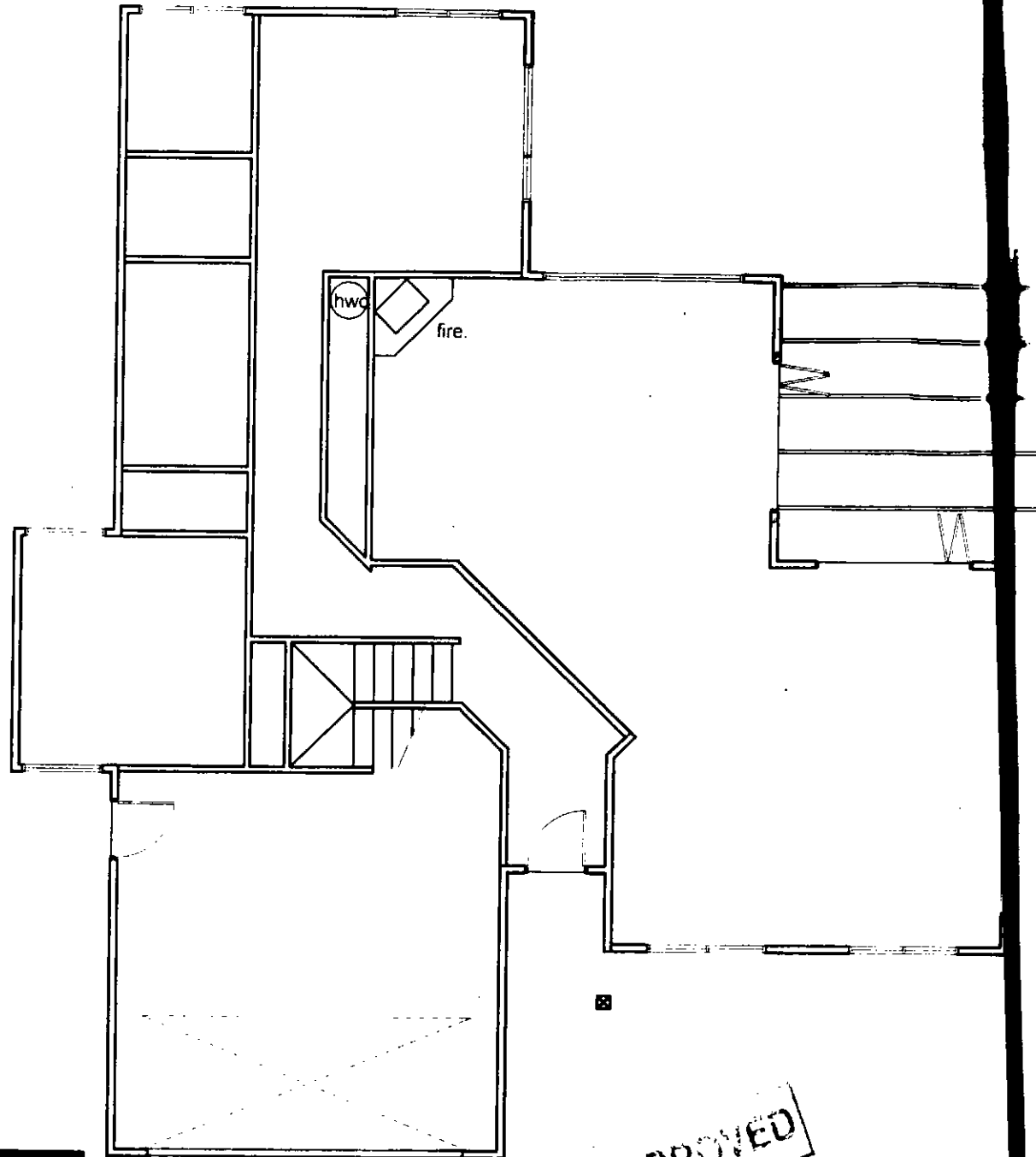
1.

SHEET
of 16 sheets
DURBIN-WESTLEY HOUSE.

P.N. APPROVED

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06 356 5946 06 359 1840
021 365 346 021 365 346



P.N.C. APPROVED

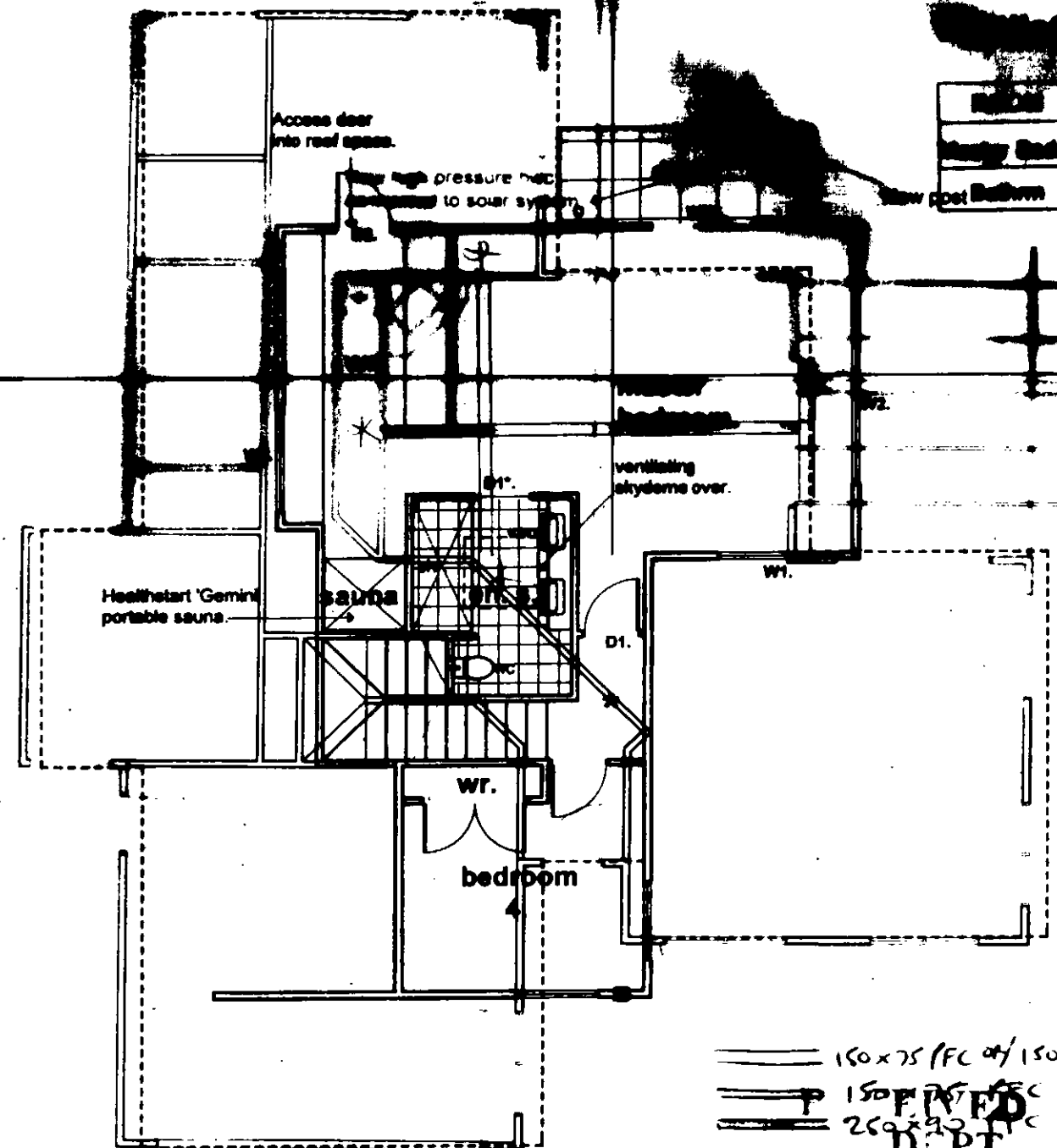
existing ground floor plan.

SCALE 1:100

bba

Building & Construction

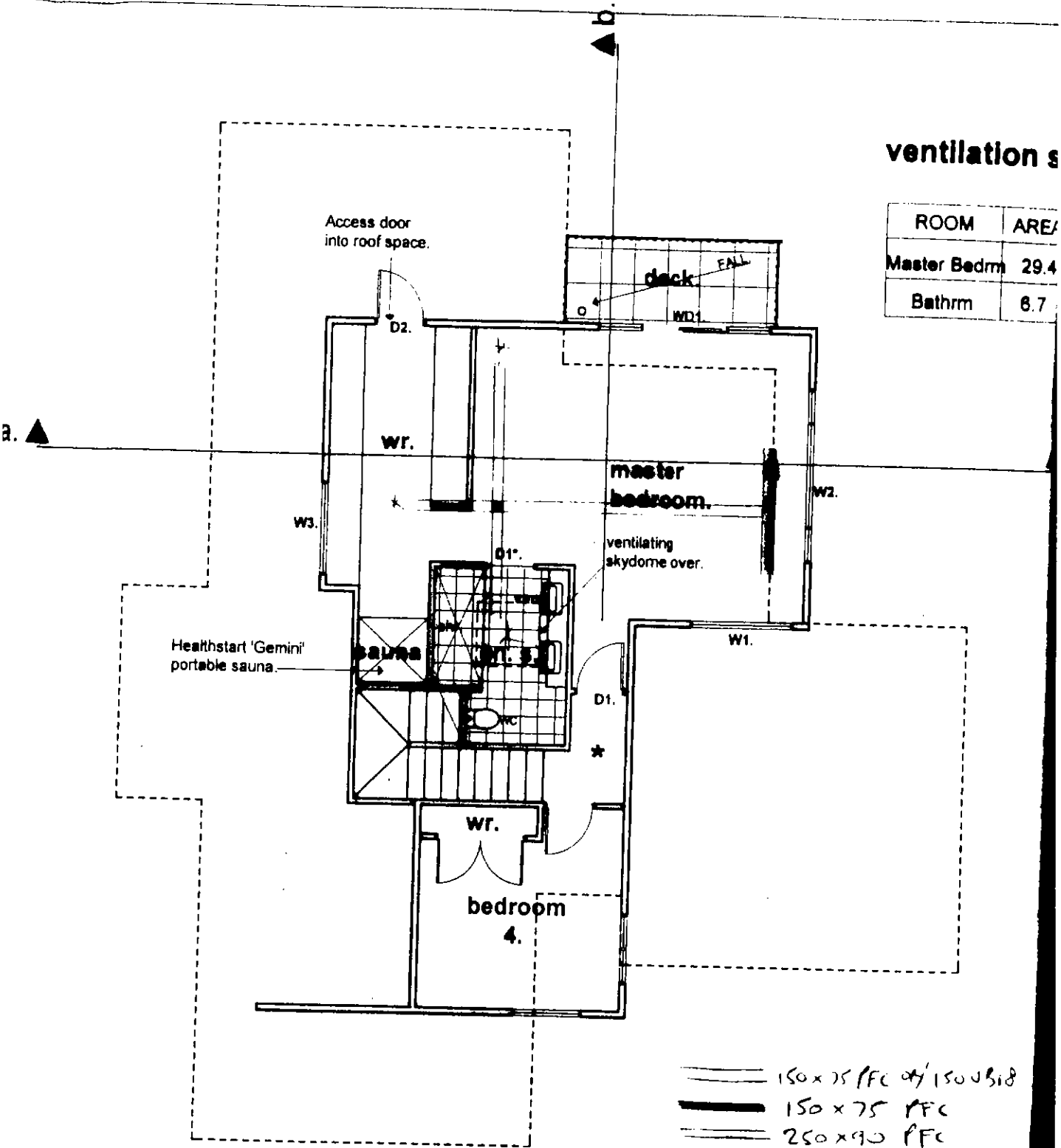
aa



modified first floor plan.
modified ground floor plan.

SCALE 1:100
* indicates ceiling mounted smoke alarm - see spec.

150x75 (FC of 150x518)
150x75 (FC of 150x518)
250x90 (FC of 250x90)
DEPT
1405 REG. NO. 1/1



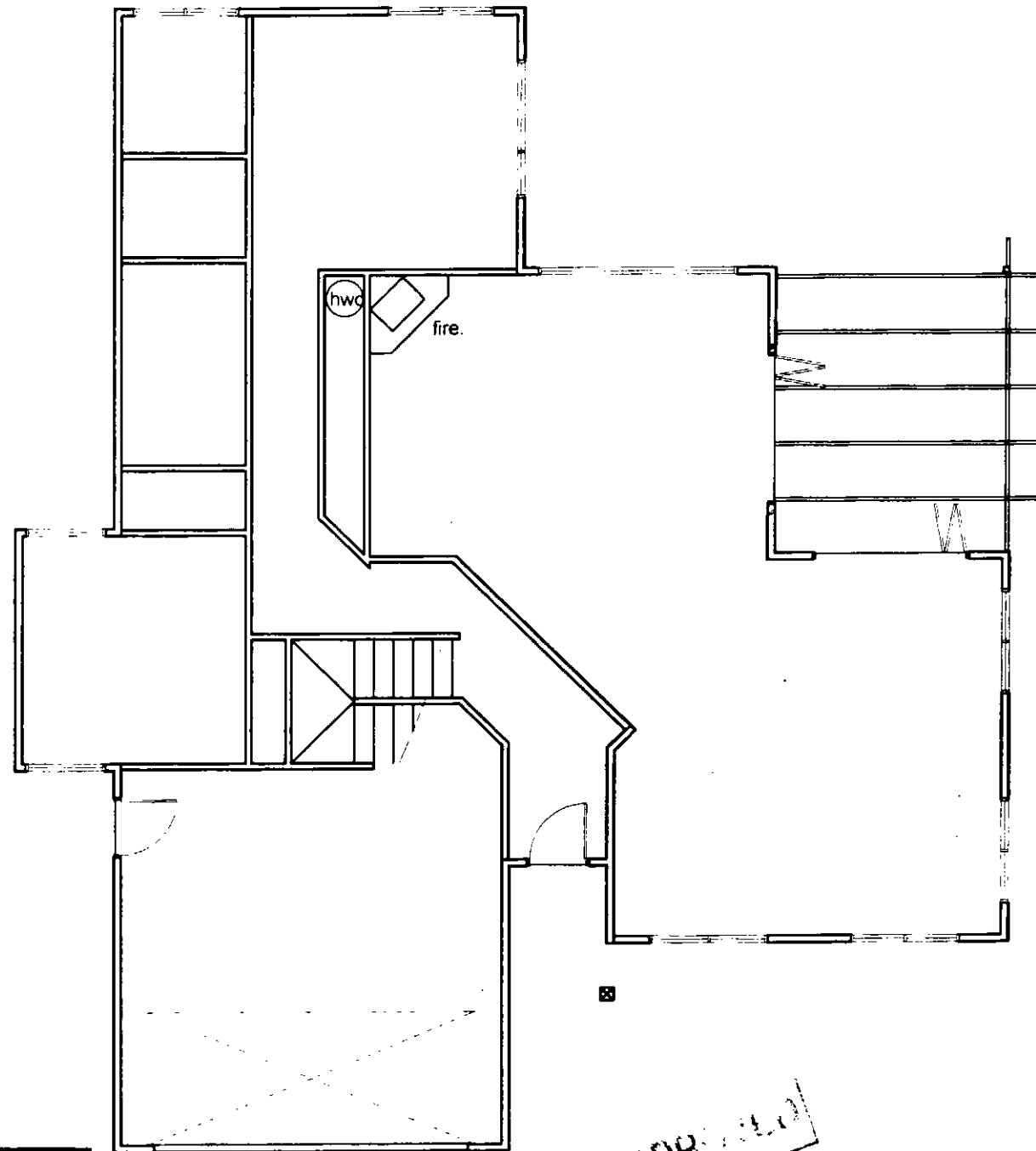
lan.

modified first floor plan.

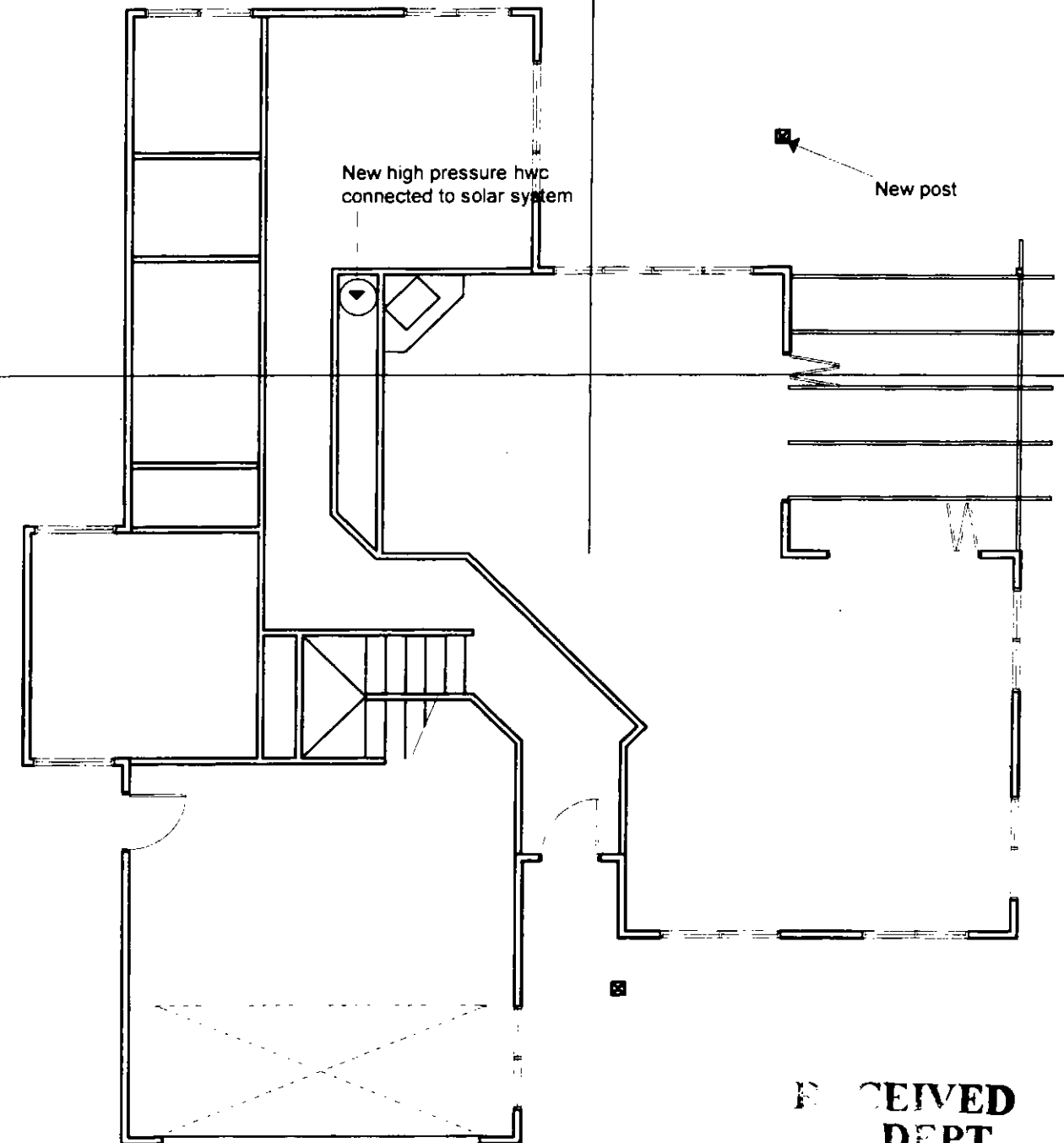
overlay for plan 2.

04470

04470



a. ▲



▲ a.

existing ground floor plan.

SCALE 1:100

modified ground floor plan.

SCALE 1:100.

RECEIVED
DEPT
28/11/07

SHEET
of 16 sheets
2.
DURBIN-WESTLEY HOUSE.

100 E. 1st Street
100 E. 1st Street
100 E. 1st Street

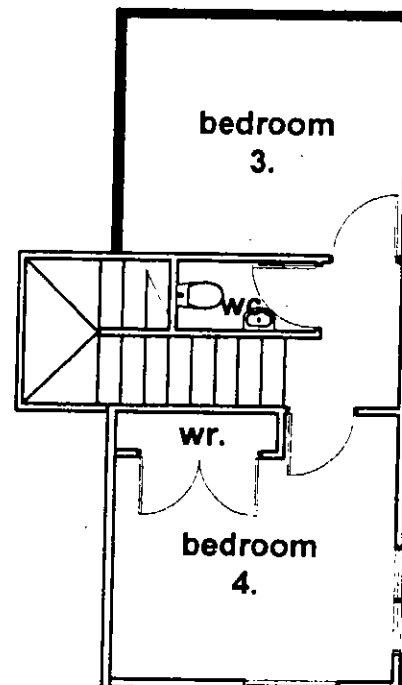
bba
ARCHITECTS

06 356 5946 06 359 1847
02 365 946 02 365 946

ventilation schedule.

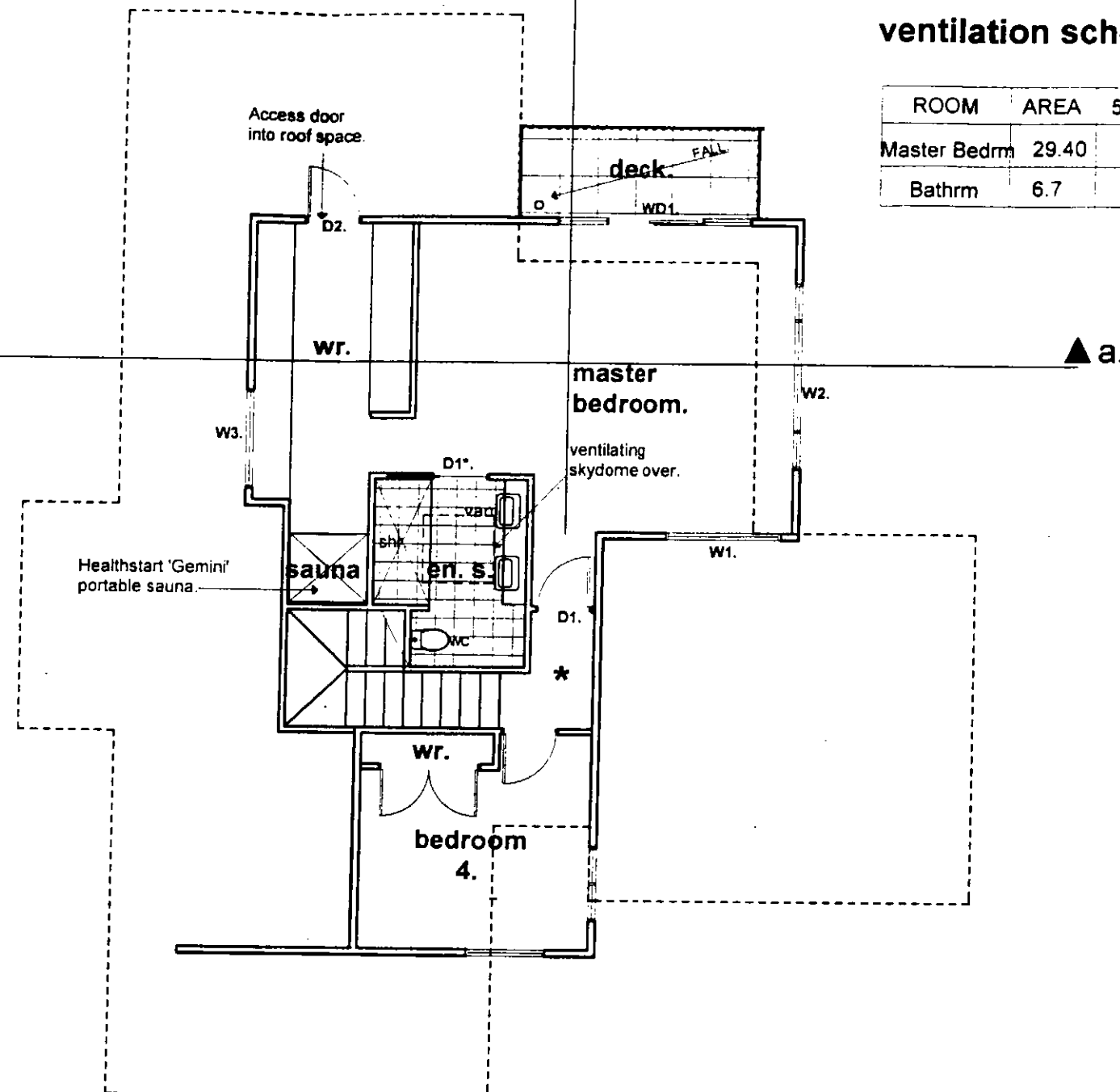
ROOM	AREA	5% REQD VENT	ACTUAL AREA
Master Bedrm	29.40	1.5	5.9
Bathrm	6.7	0.34	0.64

NOTE:
Gas fire relocated
to centre of lounge wall.



existing first floor plan.
SCALE 1:100.

a. ▲



modified first floor plan.
SCALE 1:100.

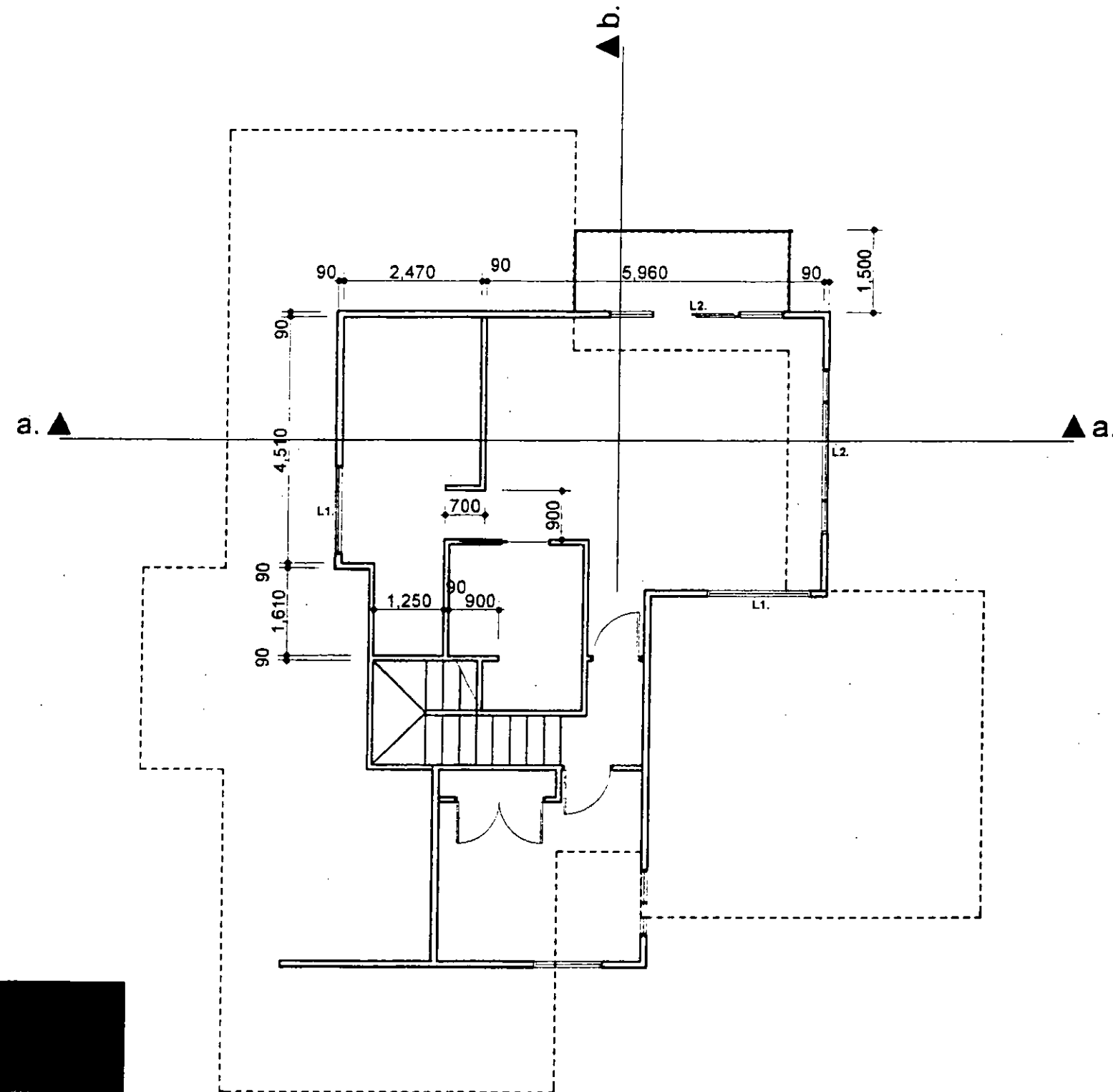
* Indicates ceiling mounted smoke alarm - see speci.

P.N. 01. APPROVE

SHEET
of 16 sheets
DURBIN-WESTLEY HOUSE.

3.

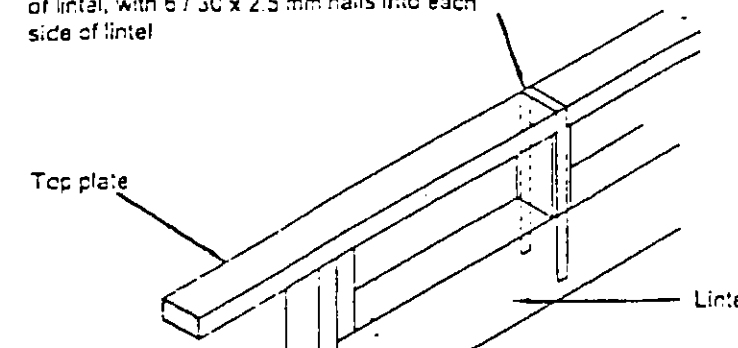
bba



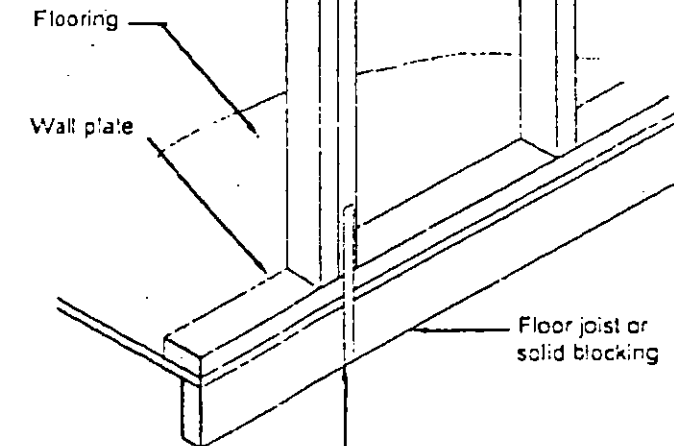
**first floor
wall framing plan.**
SCALE 1:100.

LINTEL TABLE.
L1 = 140x90(MSG8)
L2 = 240x90(MSG8)

25 x 1 mm strap taken over plate and 150 on each side of lintel, with 6 / 30 x 2.5 mm nails into each side of lintel

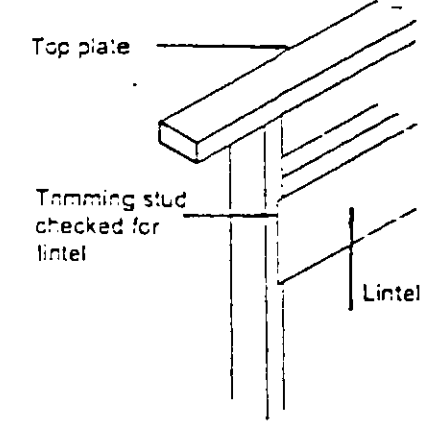


Fix studs together with 100 x 3.75 mm nails at 600 crs. with 2 / 100 x 3.75 mm immediately under the lintel



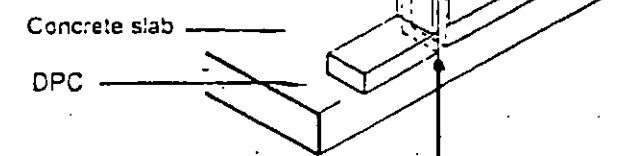
25 x 1 mm strap with 6 / 30 x 2.5 mm nails on one side only into both blocking and stud, or a 7.5 kN (tension) connection (see 8.6.1.8)

(A) DOUBLING STUD



(B) CHECKED STUD

Dowel or bolt plate to slab within 150 of stud



25 x 1 mm strap taken under plate and 150 up each side of stud, with 6 / 30 x 2.5 mm nails into each side of stud

NOTE - See section 4 for durability requirements.

lintel-stud fixing details.

NOTE:
Fix at each end of lintel using 3/90x3.15 power driven nails.

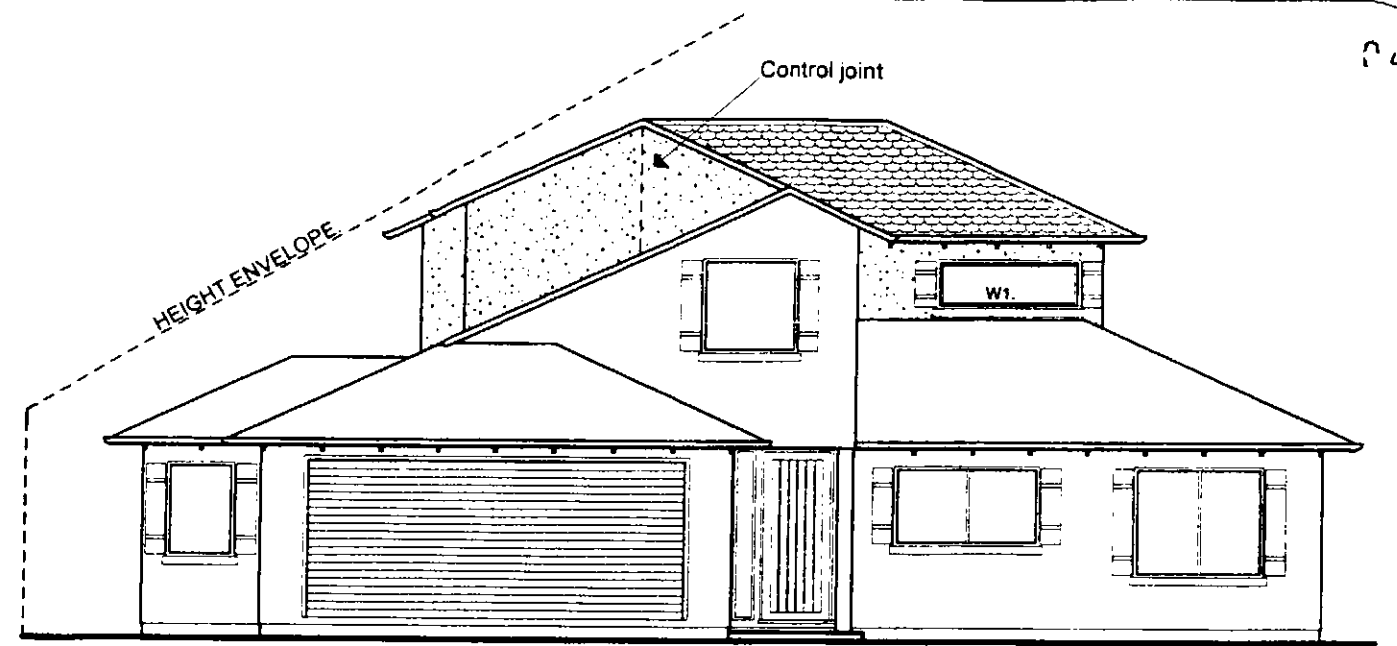
4.

SHEET
of 16 sheets
DURBIN-WESTLEY HOUSE.

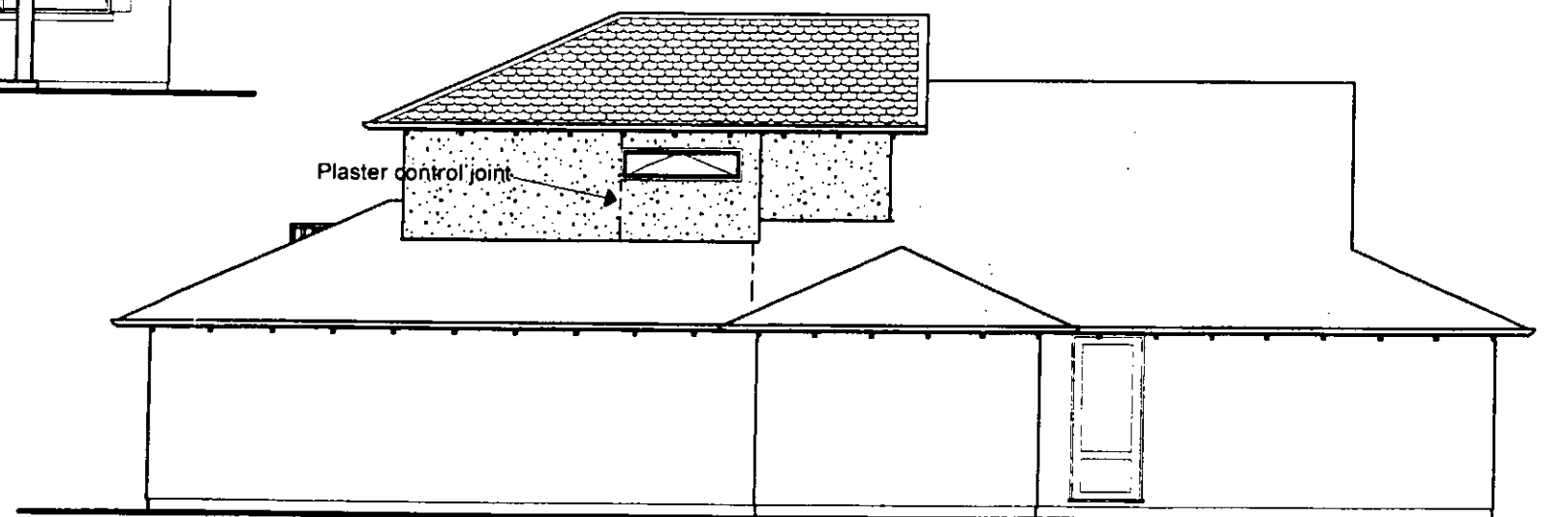
P.N.C. APPROVED

bba
BUILDING
BROKERAGE
ASSOCIATES

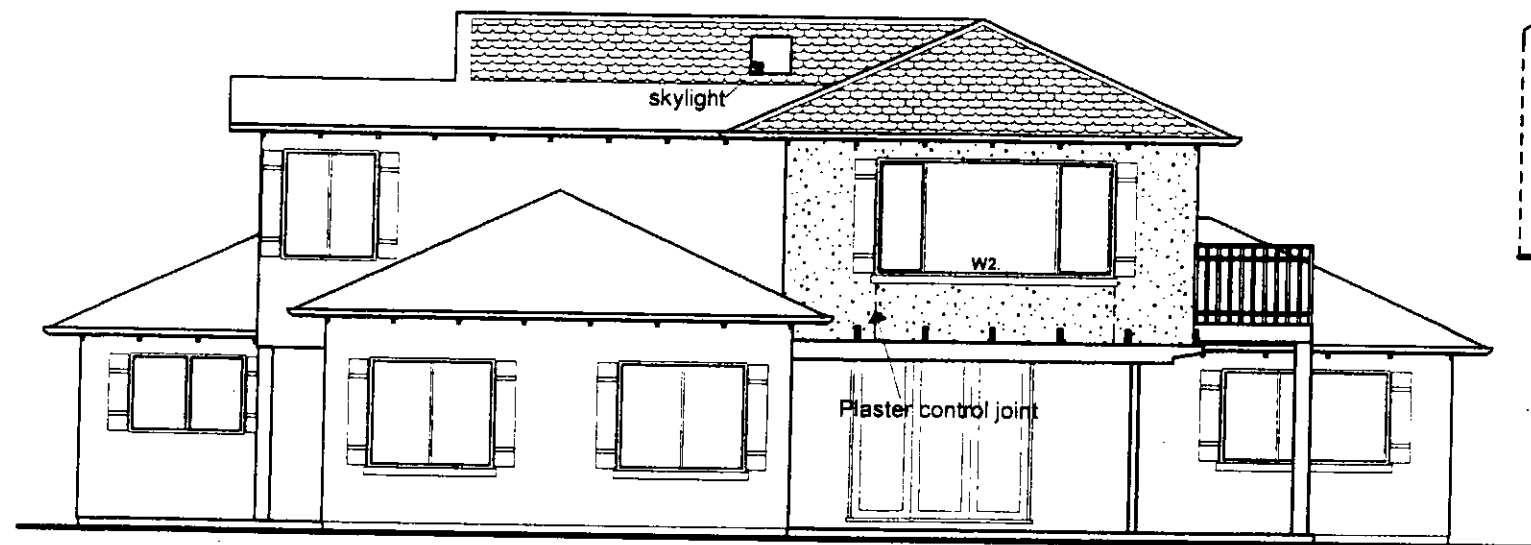
06 356 5946 06 359 1840
02 365 946 03 bruce@bba.net.nz



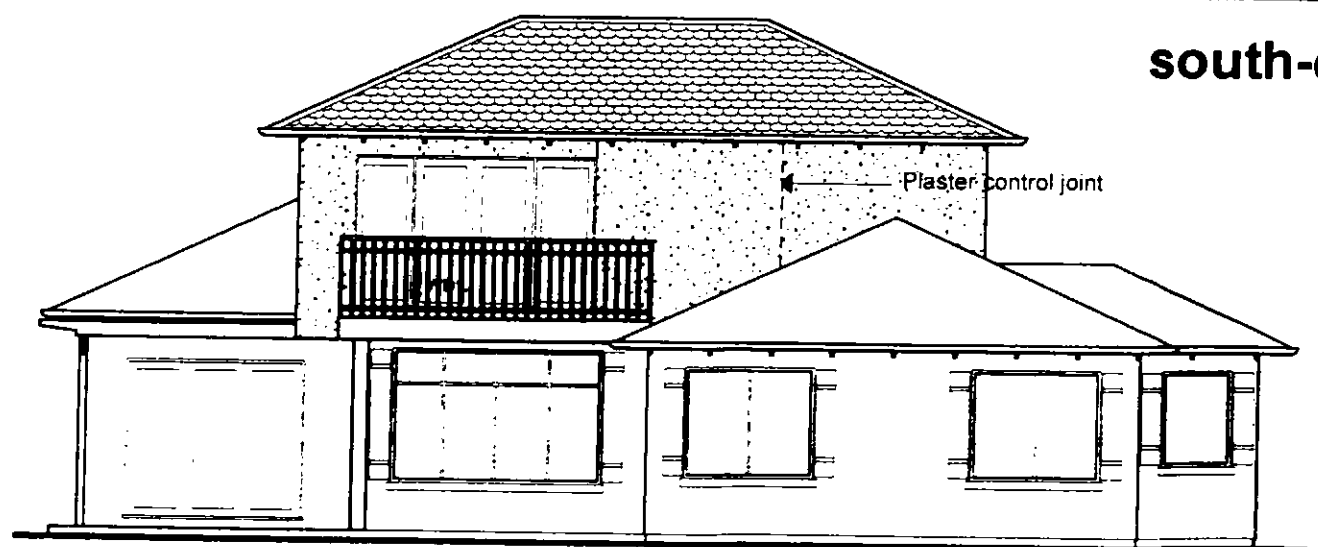
north-east elevation.



south-east elevation.



north-west elevation.



south-west elevation.

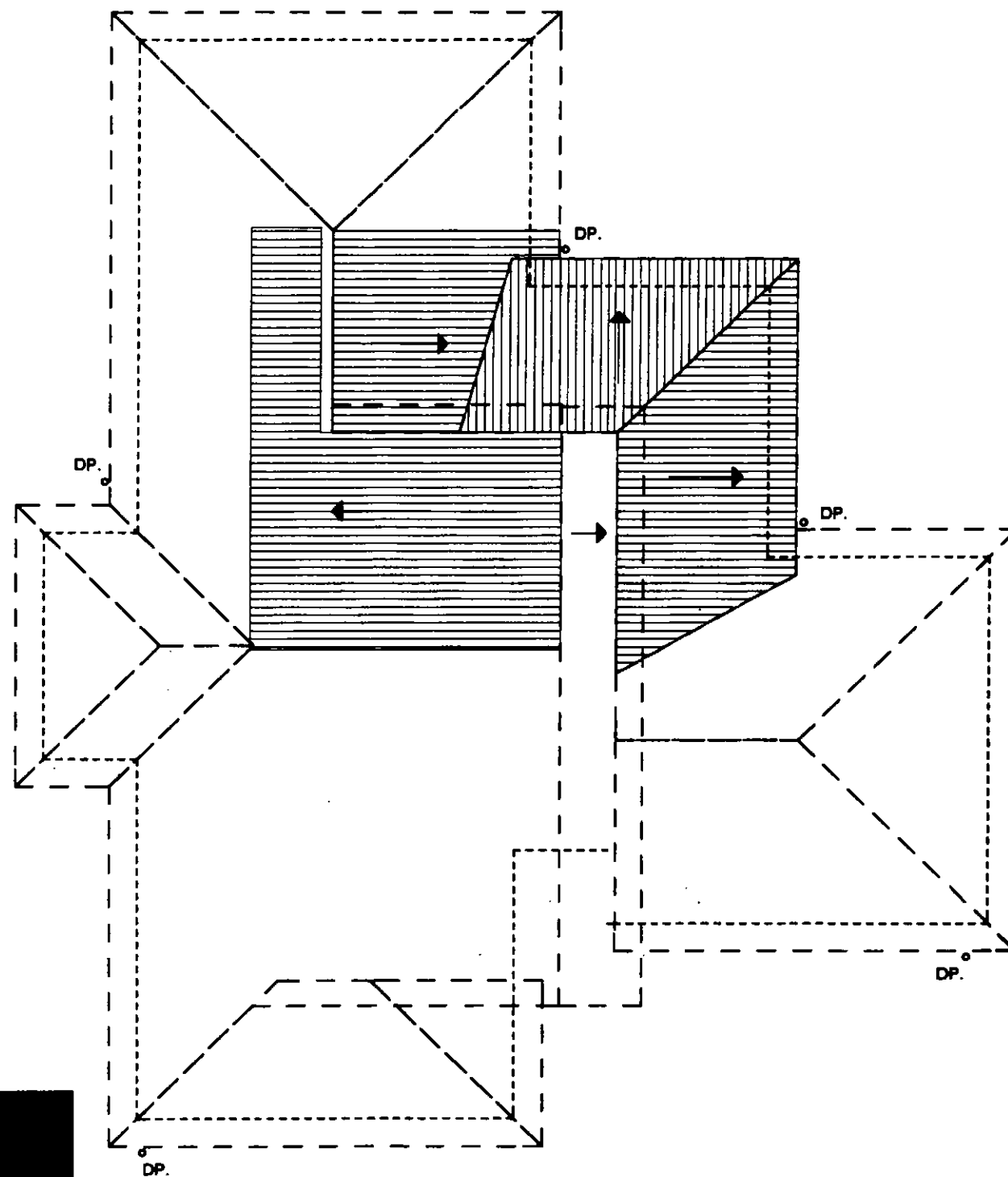
PRICE APPROVAL

5.

SHEET
of 16 sheets
DURBIN-WESTLEY HOUSE.

bba

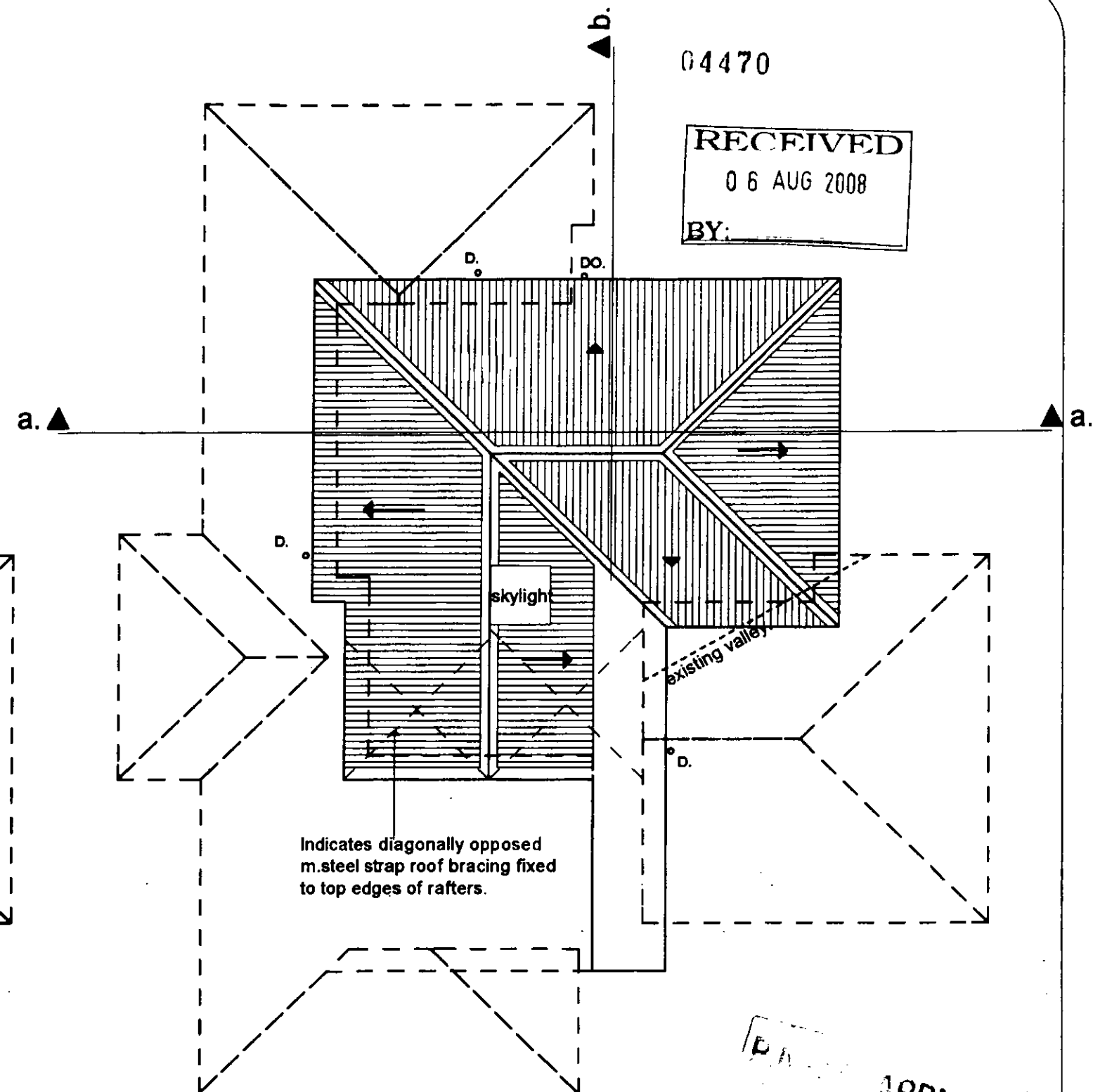
06 356 5946 06 359 1840
021 365 946 bruce@bba.net.nz



existing roof plan.

SCALE 1:100.
NOTES:

Arrows indicate direction of existing roof fall.
All roofing is Colortile.
DP. indicates existing downpipe.
Extent of demolished roof drawn shaded.



modified roof plan.

SCALE 1:100.

NOTES:

Arrows indicate direction of roof fall.
All roofing is Colortile to match existing.
All eaves & barge widths are to match existing
D indicates new 80 diam uPVC dropper.
DO. indicates deck outlet.
Extent of new roof drawn shaded.
Roof pitch to match existing (approx 25 degrees)

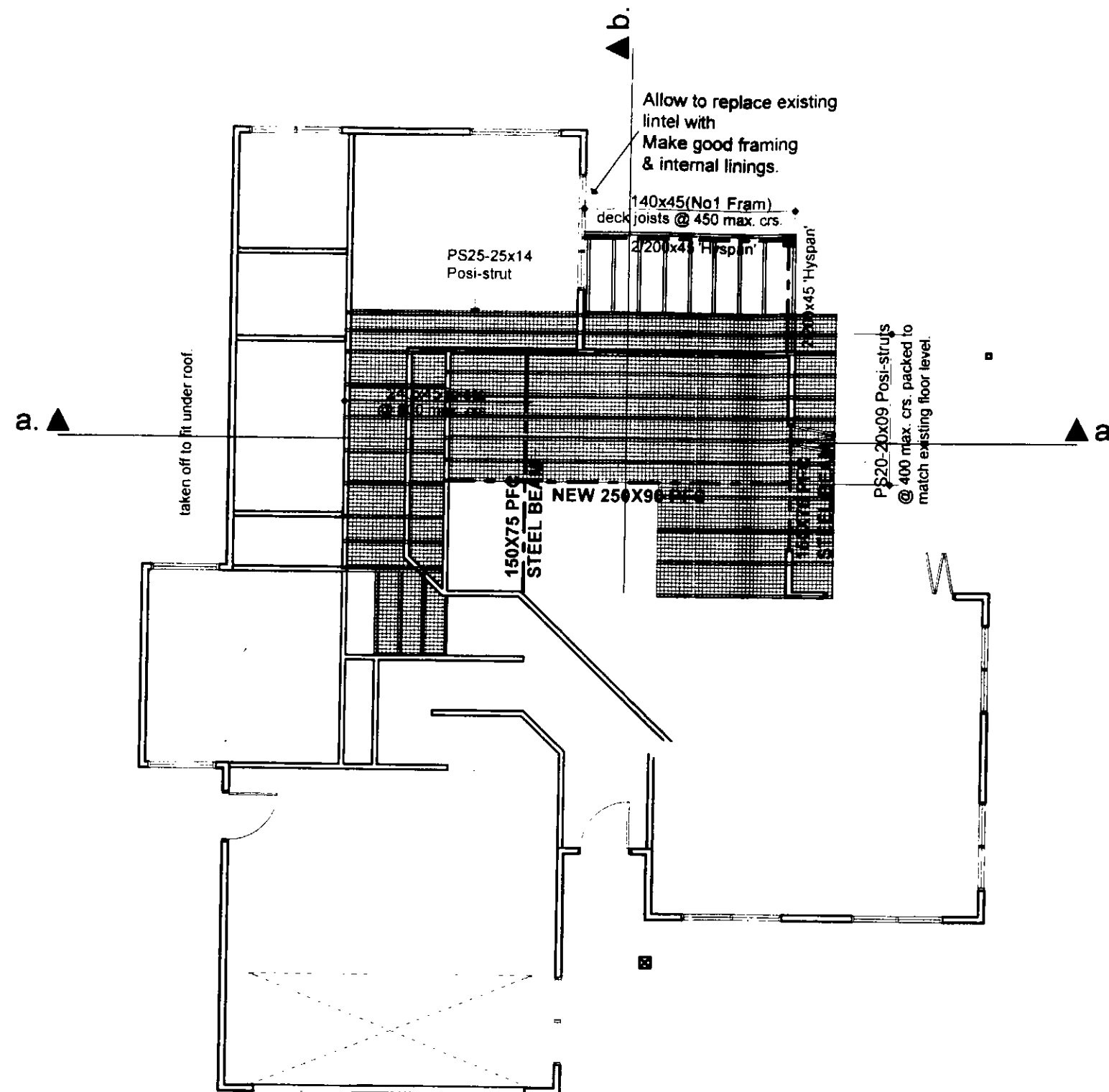
04470

RECEIVED
06 AUG 2008
BY:

APPROVED

SHEET
of 16 sheets
DURBIN-WESTLEY HOUSE.

6.



new floor joist plan.

SCALE 1:100.

NOTE:

All first floor house joists are 240x45 (No 1 Framing)
@ 600 max crs. unless shown otherwise & blocked
@ mid-span & wherever else required by NZS3604.

PROPOSED

SHEET
of 16 sheets
DURBIN-WESTLEY HOUSE.

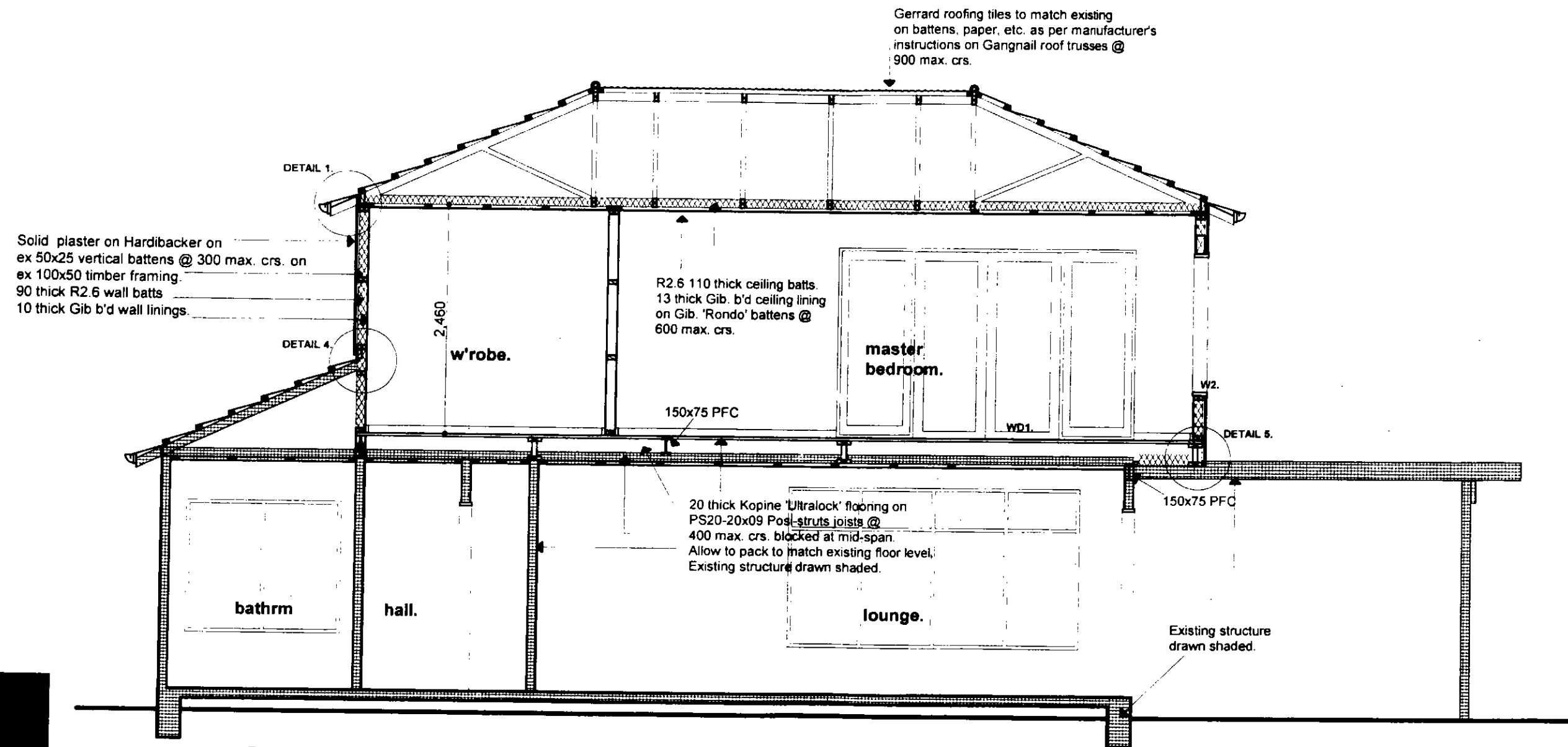
7.

2013/04/01 New Zealand
Building Code
Compliance Document

bba

BRUCE & BROS
ARCHITECTS

06 356 5946 06 359 1840
021 365 946 bruce@bba.net.nz



section a-a.
SCALE 1:50.

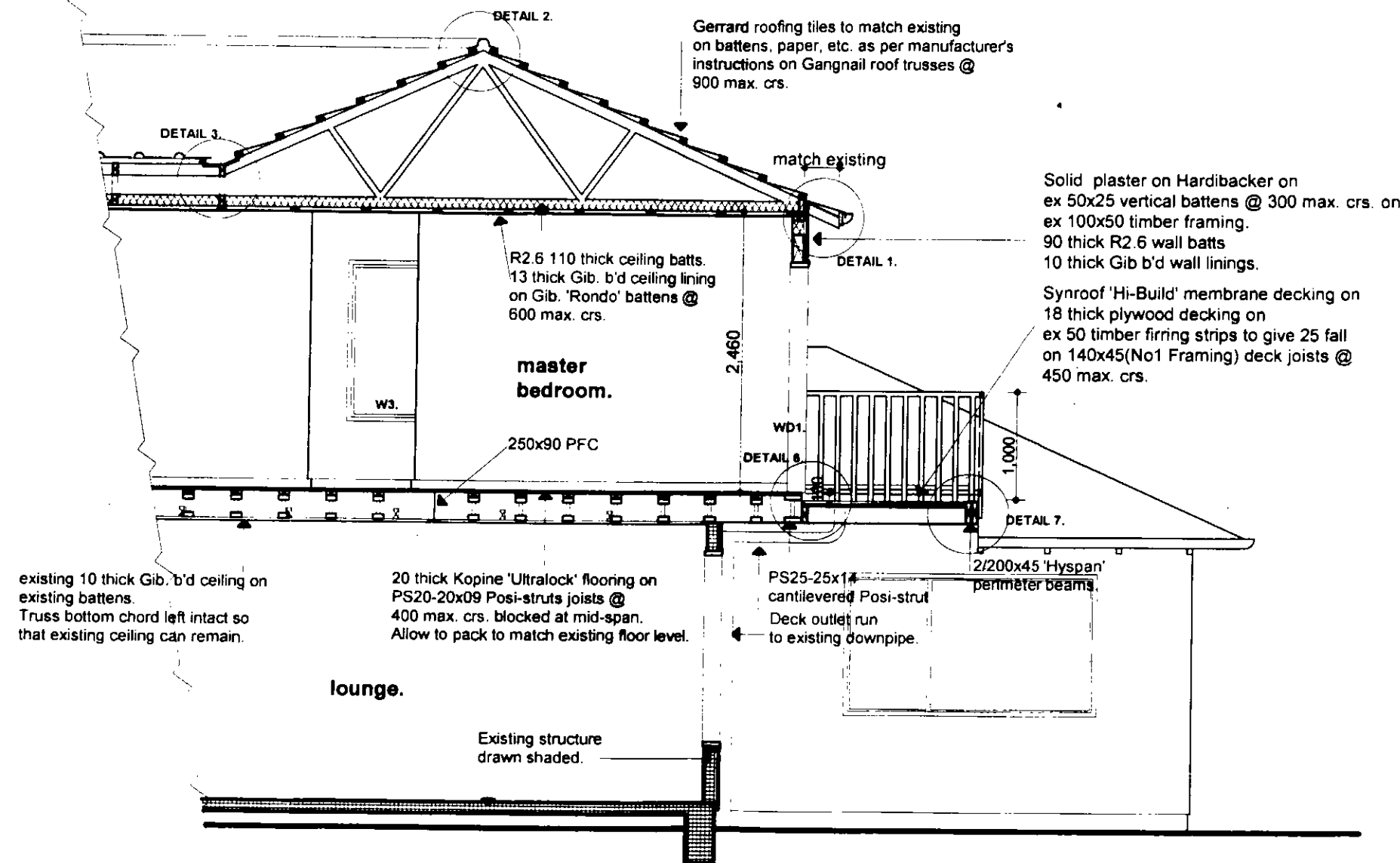
Architectural
Drawing
bba

bba
BRUCE BARNES
ARCHITECTS LTD

06 356 5946 06 359 1840
021 365 946 bruce@bba.net.nz

06 356 5946

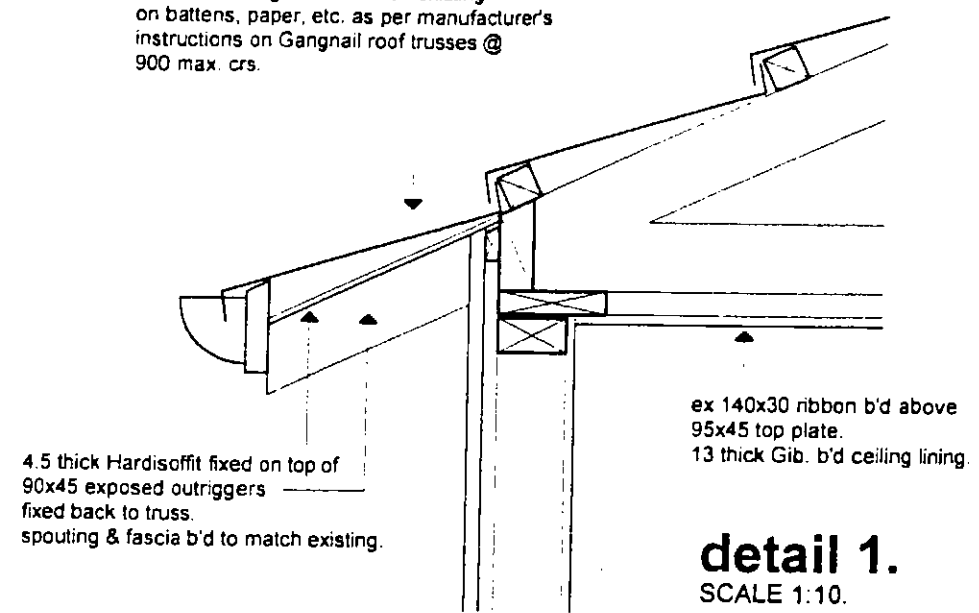
8.
SHEET
of 16 sheets
DURBIN-WESTLEY HOUSE.



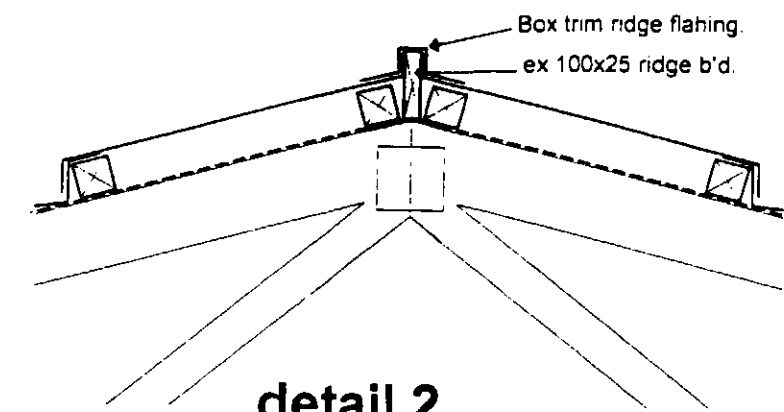
section b-b.
SCALE 1:50.

100% COPY

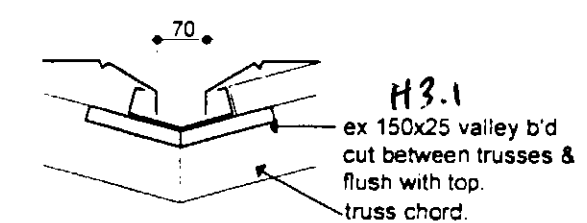
Gerrard roofing tiles to match existing on battens, paper, etc. as per manufacturer's instructions on Gangnail roof trusses @ 900 max. crs.



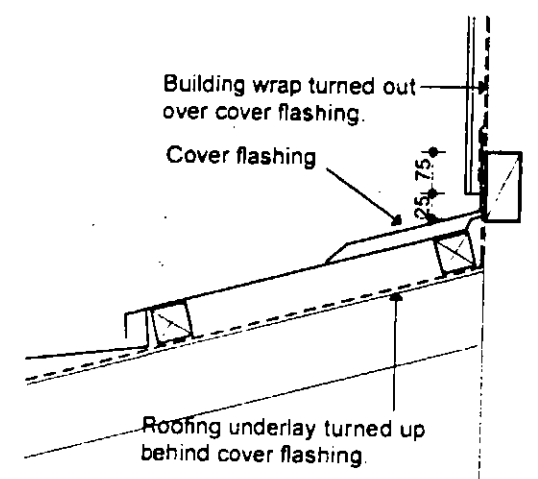
detail 1.
SCALE 1:10.



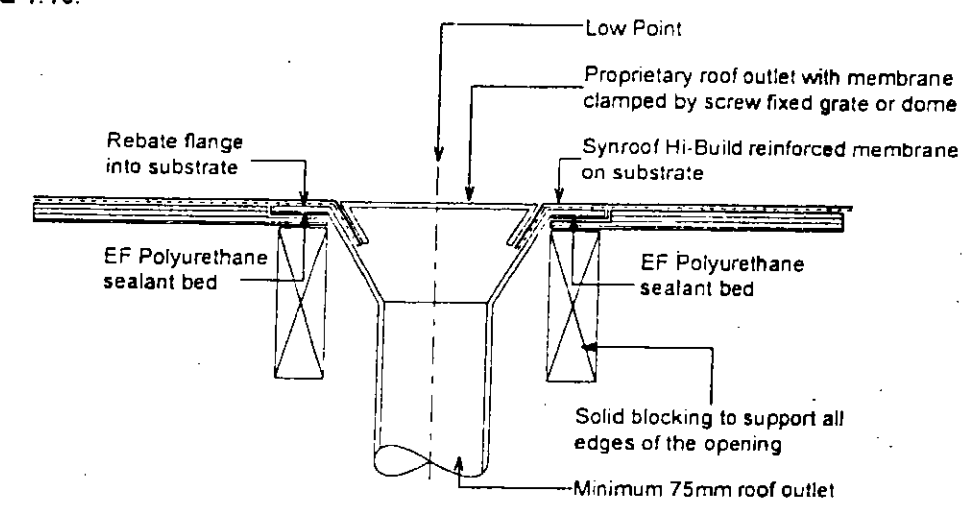
detail 2.
SCALE 1:10.



detail 3.
SCALE 1:10.

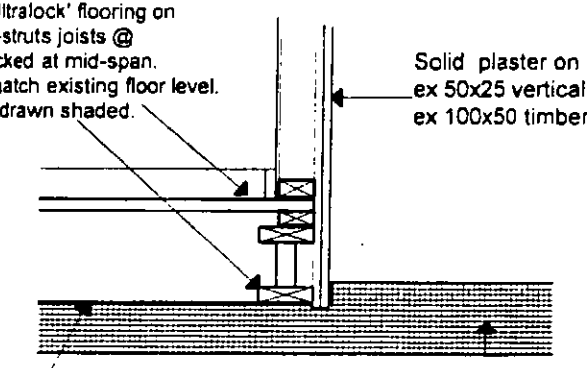


detail 4.
SCALE 1:10.

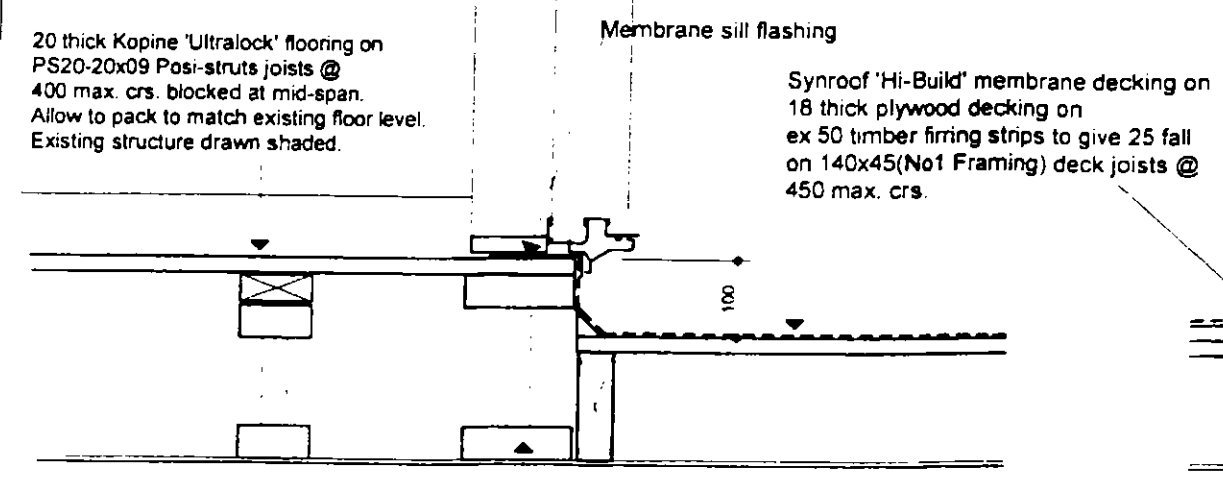


deck outlet detail.

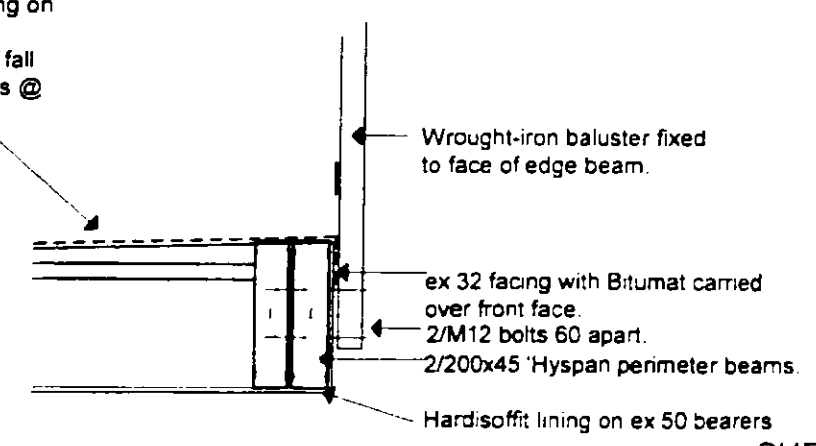
20 thick Kopine 'Ultralock' flooring on PS20-20x09 Posi-struts joists @ 400 max. crs. blocked at mid-span. Allow to pack to match existing floor level. Existing structure drawn shaded.



detail 5.
SCALE 1:20.

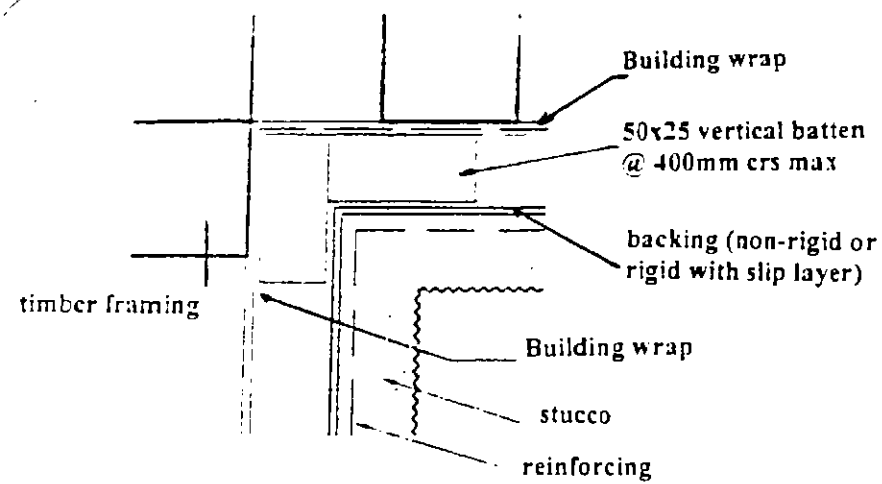


detail 6.
SCALE 1:20.

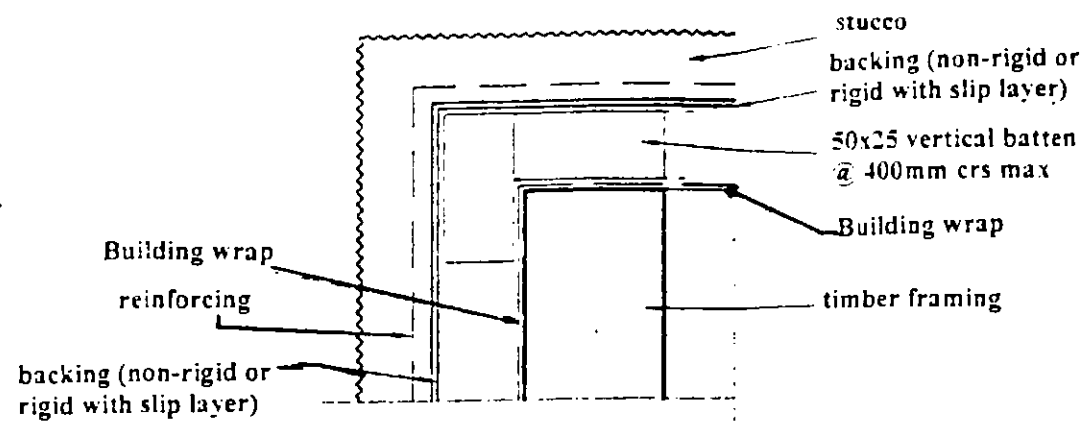


detail 7.
SCALE 1:20.

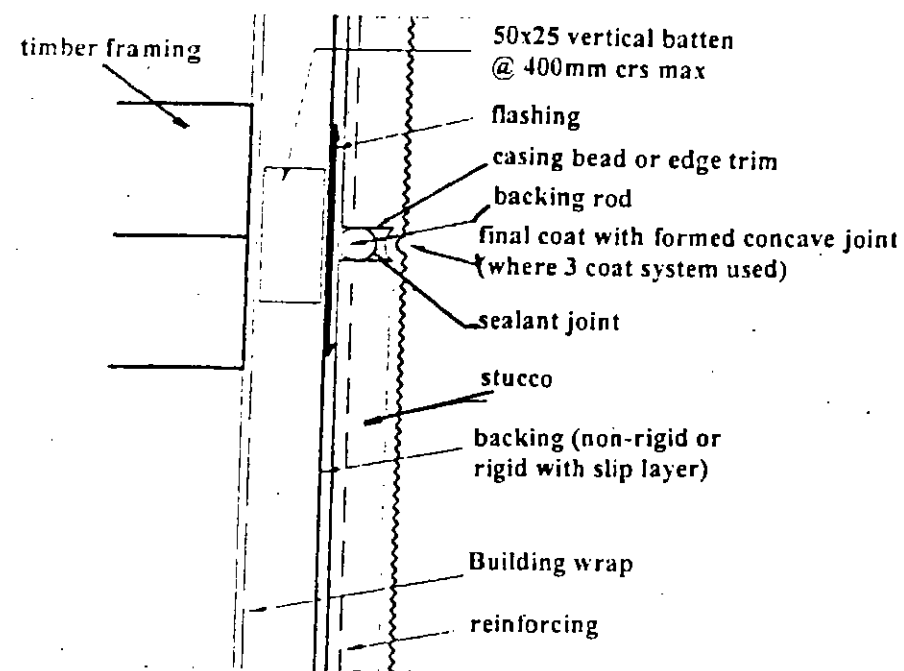
IPN APPROVED



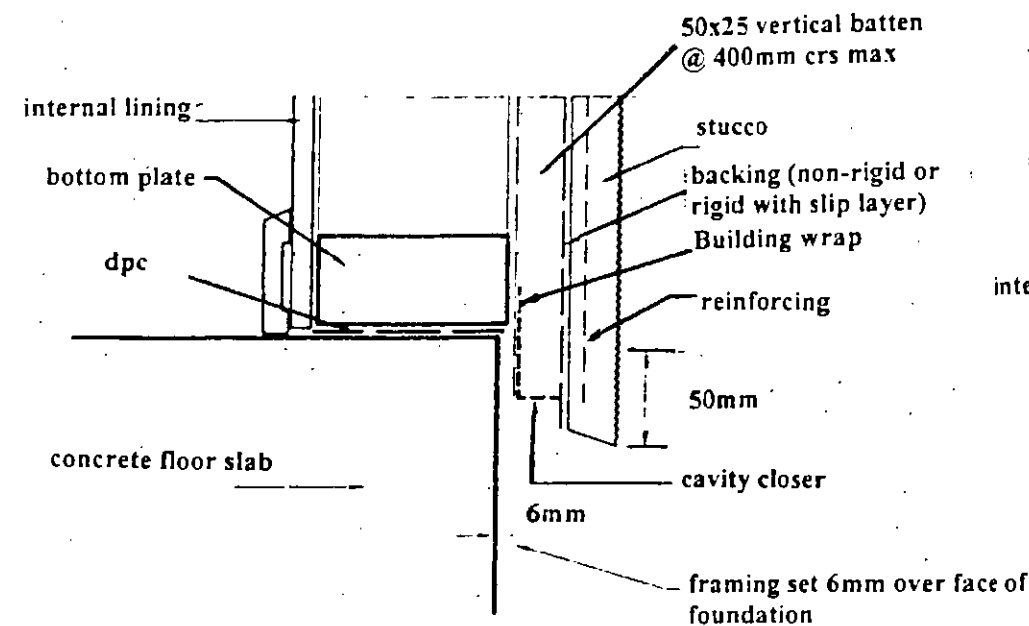
plaster internal corner detail.



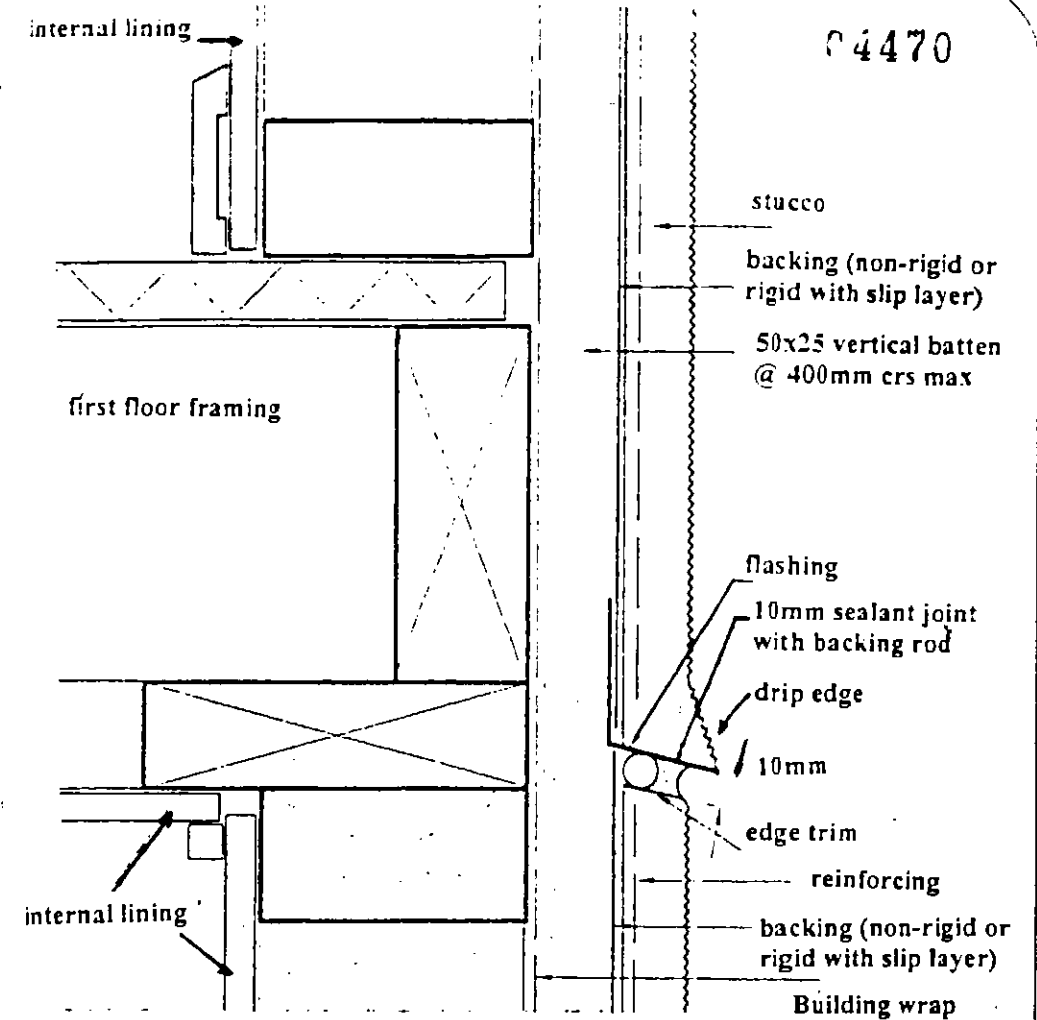
plaster external corner detail.



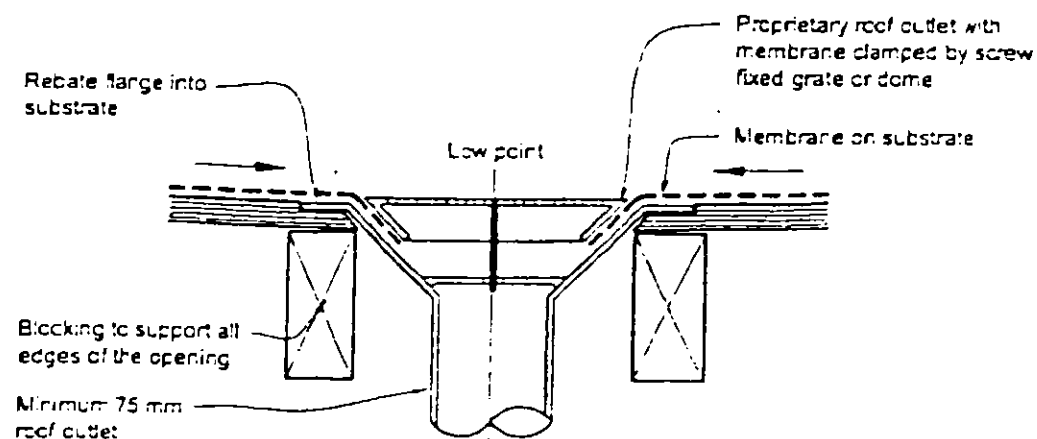
plaster vertical control joint



typical foundation detail.



plaster horizontal control joint



deck outlet detail.

APPROVED

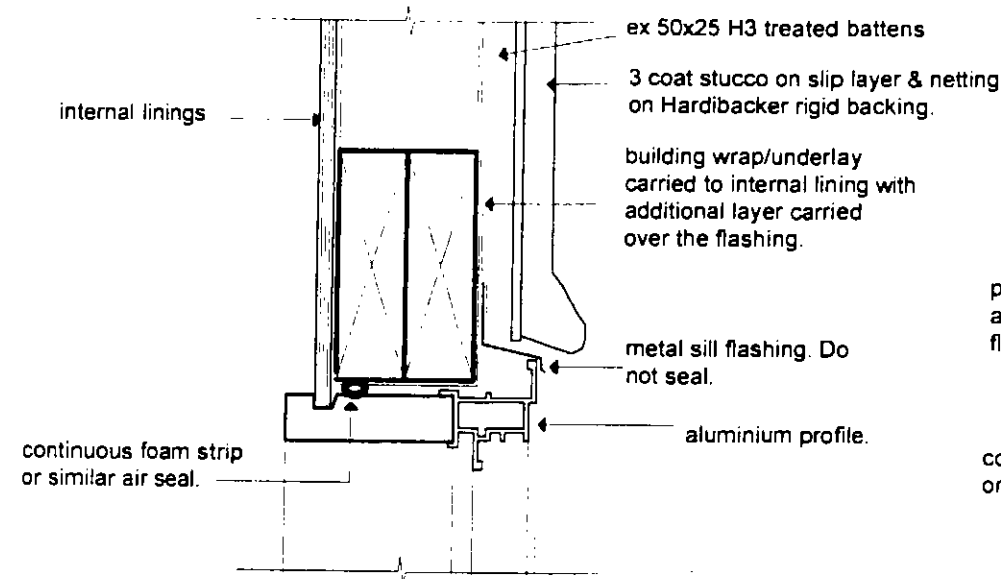
11.

SHEET
of 16 sheets
DURBIN-WESTLEY HOUSE.

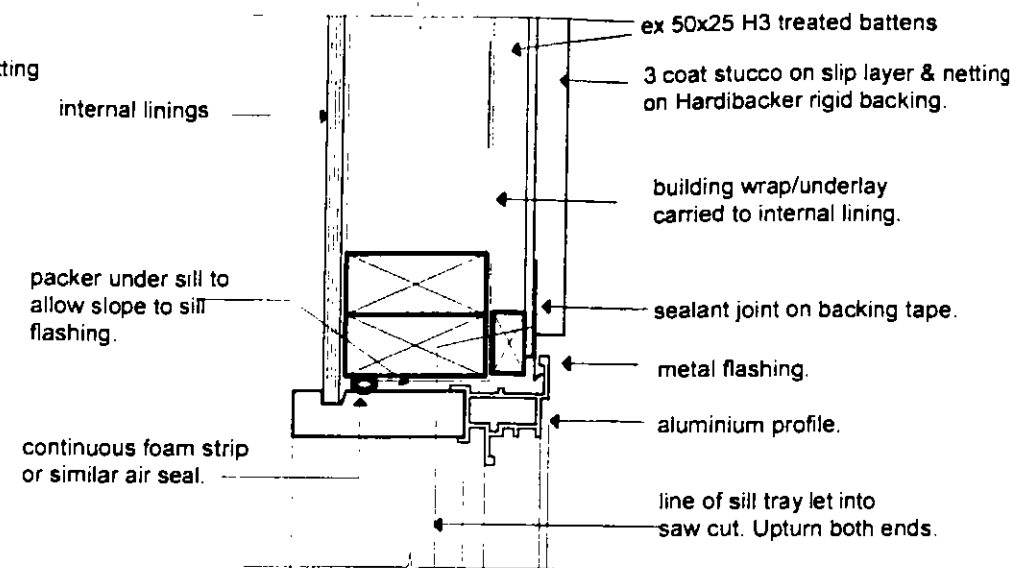
2nd Floor, 1st Floor
R. B. 1014
1014 1014 1014

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ARCHITECTS LTD

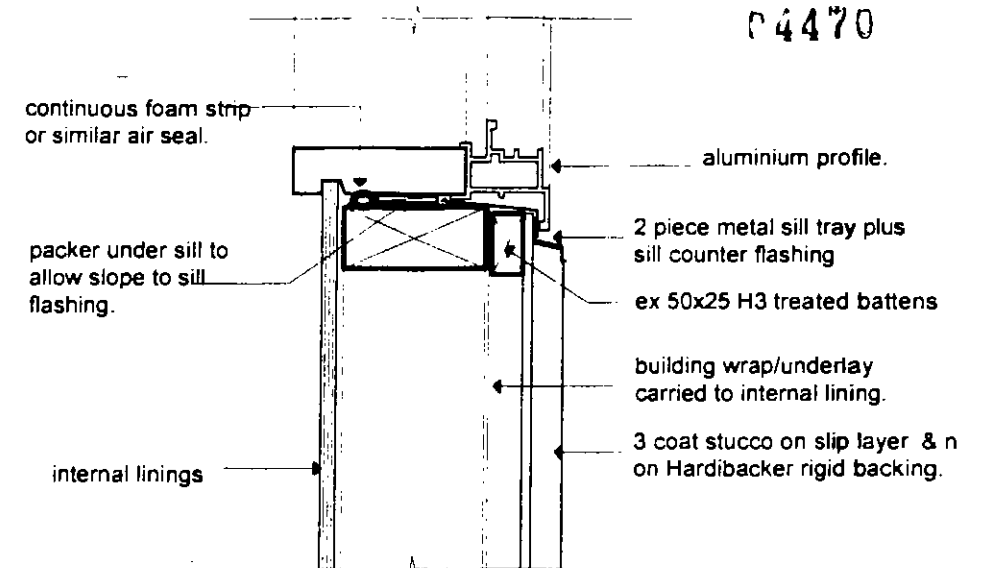
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021 365 946 06 359 1840



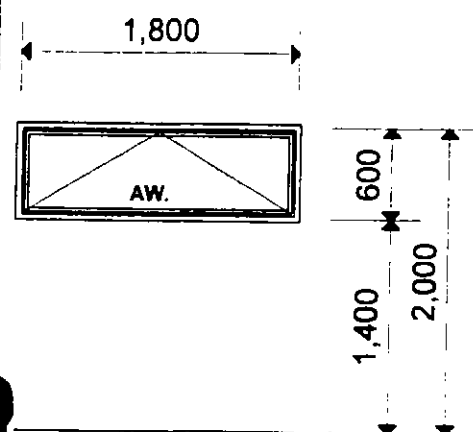
HEAD DETAIL.
SCALE 1:5.



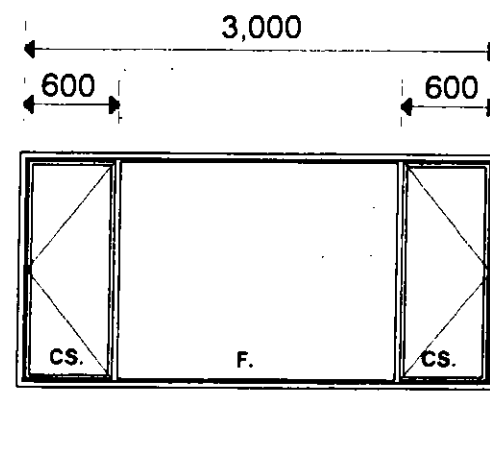
JAMB DETAIL.
SCALE 1:5.



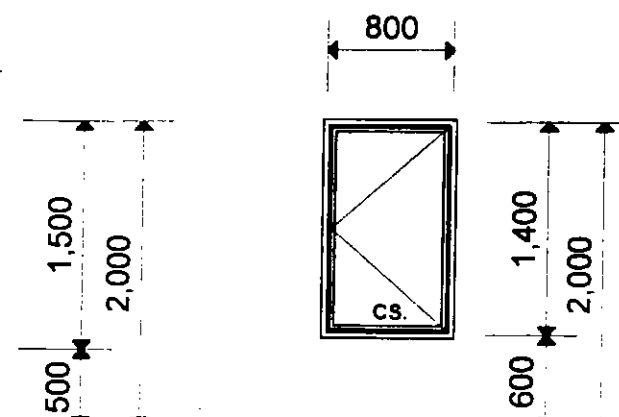
SILL DETAIL.
SCALE 1:5.



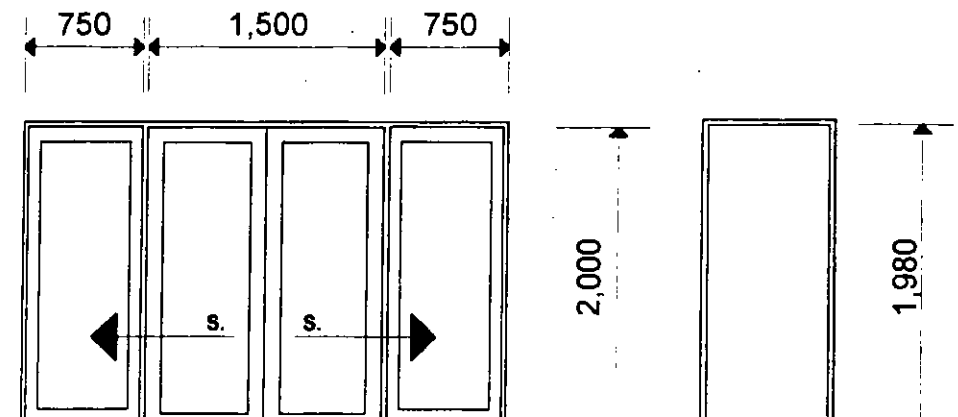
W1.



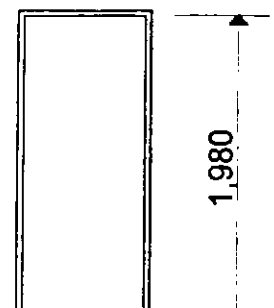
W2.



W3.



WD1.



D1. 810 WIDE.

D2. 1200 HIGH.
HOLLOW CORE,
FLUSH, PAINT
QUALITY DOORS

window & door schedule.

SCALE 1:50.

NOTES:

All dimensions **MUST** be confirmed by the Employer Prior to manufacturer.
All units viewed from the outside.
AW. Awning hung sashes.
F. fixed sashes.
CS. casement sash
S. sliding doors.
* indicates cavity slider.

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2018-2019
2020-2021

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2016-2017
2018-2019
2020-2021

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02 365 946 bruce@bba.net.nz

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12.

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DURBIN-WESTLEY HOUSE.

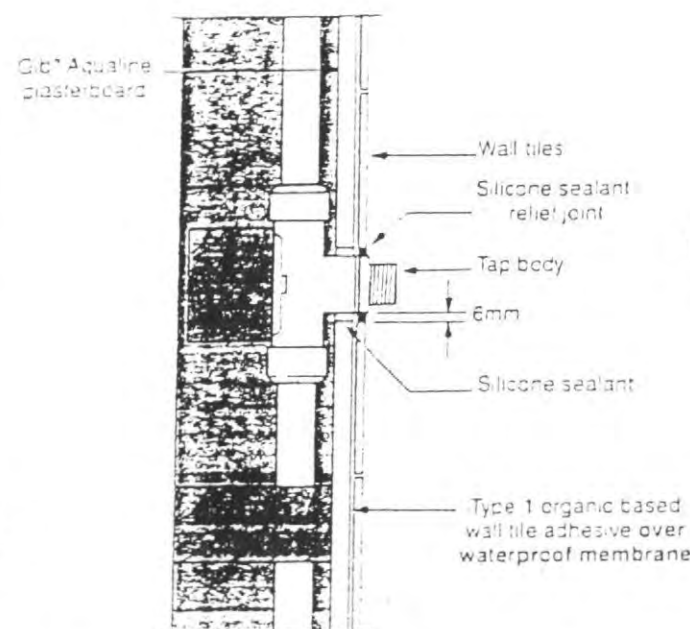


Figure 1 Typical Plumbing Penetration
(Where impact noise from pipes is an issue surface fix all pipes on resilient brackets).

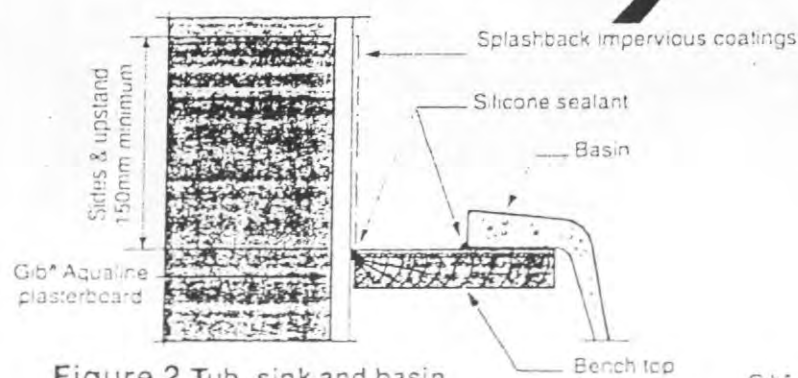


Figure 2 Tub, sink and basin

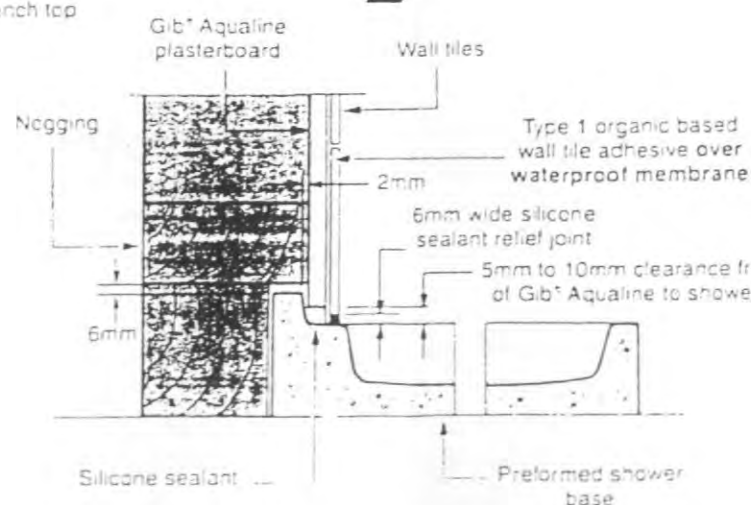


Figure 3 Preformed Shower Base Wall Junction
(Suitable where fire and sound ratings are not critical)

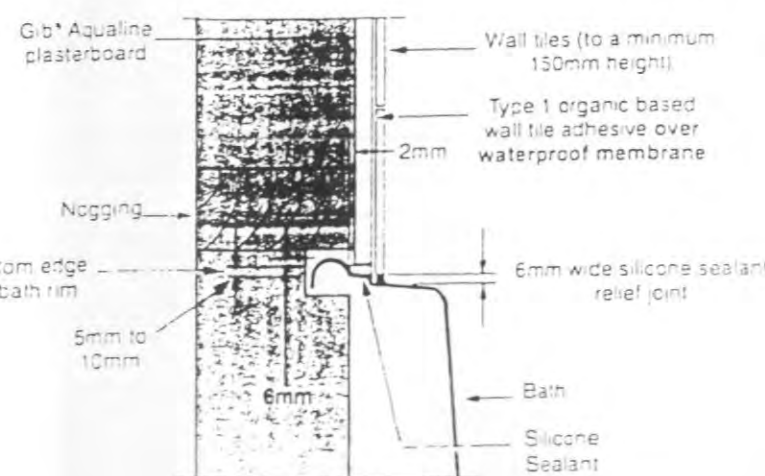


Figure 4 Bath Wall Junction Detail
(This detail is not permitted in Fire Rated or Noise Controlled areas)

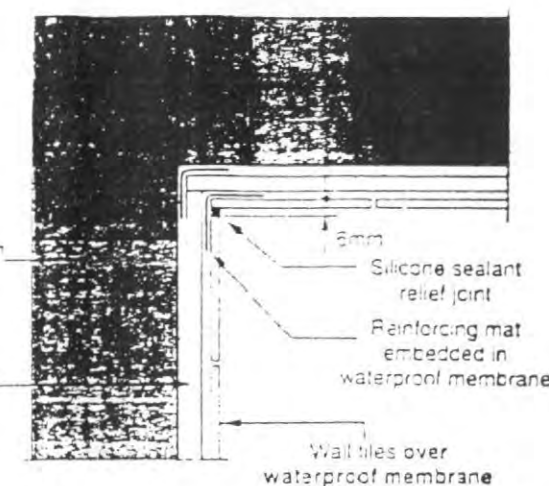
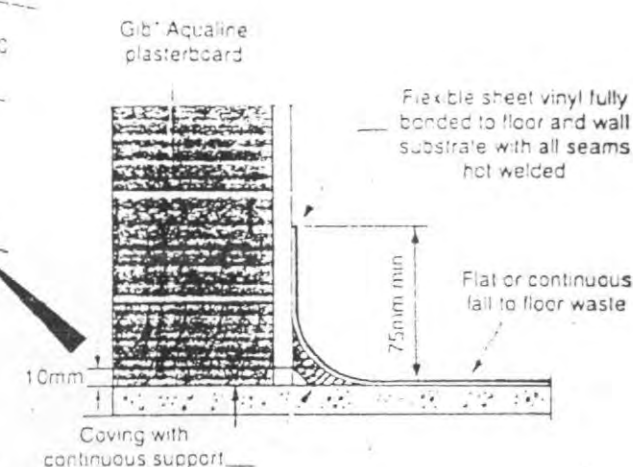
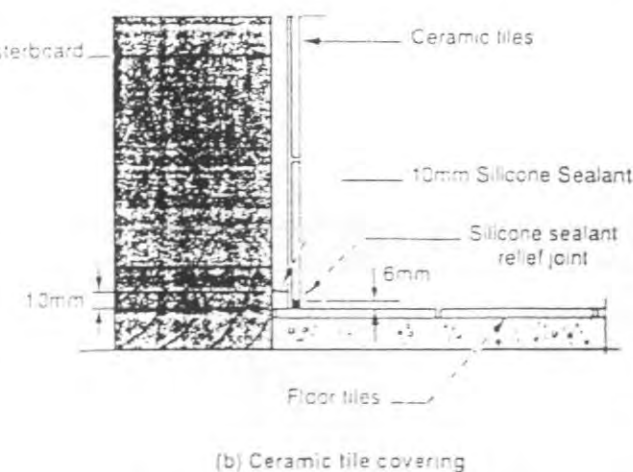


Figure 6 Tiled Shower - Internal Corner Detail



(a) Vinyl floor covering



(b) Ceramic tile covering

Figure 5 Wall to Floor Junctions
Bathrooms, Kitchens and Laundries

263 RUAHINE STREET
PO BOX 4143
PALMERSTON NORTH

bba
bruce barry
ARCHITECTS Ltd.

06 356 5946 06 359 1840
021 365 946 bba@bba.net.nz

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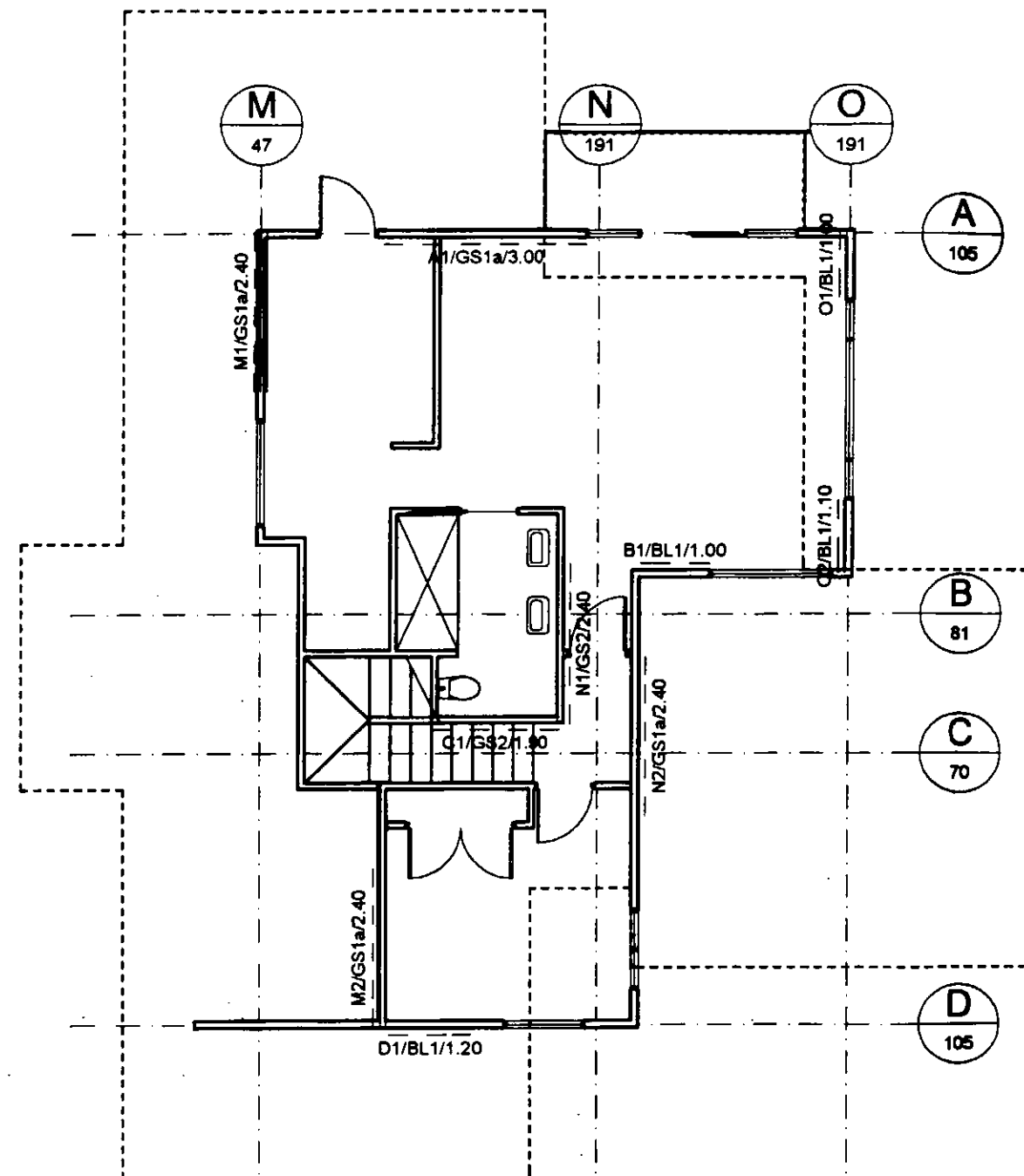
SHEET
of 16 sheets
DURBIN-WESTLEY HOUSE.

13.

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06 AUG 2008

BY:



BRACING CALCULATIONS

Building Height to Apex	7.0 m	Location of Storey	Upper of Two
Roof Height Above Eaves	2.0 m	Floor Load	2kPa
Stud Height	2.4 m	Roof Weight	Light
Roof Pitch	0 - 25 °	Cladding Weights:	
Hip Roof	No	- Subfloor	Concrete Floor
Building Length (BL)	12.0 m	- Lower Floor	Medium
Building Width (BW)	8.7 m	- Upper Floor	Medium
Wind Zone	High	Room in Roof Space	No
W along	64 BUs/m	Gross Plan Area (GPA)	74.4 m ²
W across	54 BUs/m	Earthquake Zone	A
W along x BW	556.8 BUs	EQ	6.7 BUs/m ²
W across x BL	648.0 BUs	EQ x GPA	498.5 BUs

ALONG

Bracing Line		Bracing Elements Provided					Wind		Earthquake	
Line Label	Min BUs Required	Brace No.	Brace Type	Brace Length	Brace Angle	Brace Height	Rating BUs/m	BUs Achieved	Rating BUs/m	BUs Achieved
A	104	A1	Other	3.0	0.0	2.4	75	225.0	65	195.0
B	80	B1	Other	1.0	0.0	2.4	125	125.0	115	115.0
C	70	C1	Other	1.9	0.0	2.2	90	186.5	80	165.8
D	104	D1	Other	1.2	0.0	2.4	125	150.0	115	138.0
Totals Achieved							W	656.8	E	587.3
Totals Required							W	556.8	E	498.5

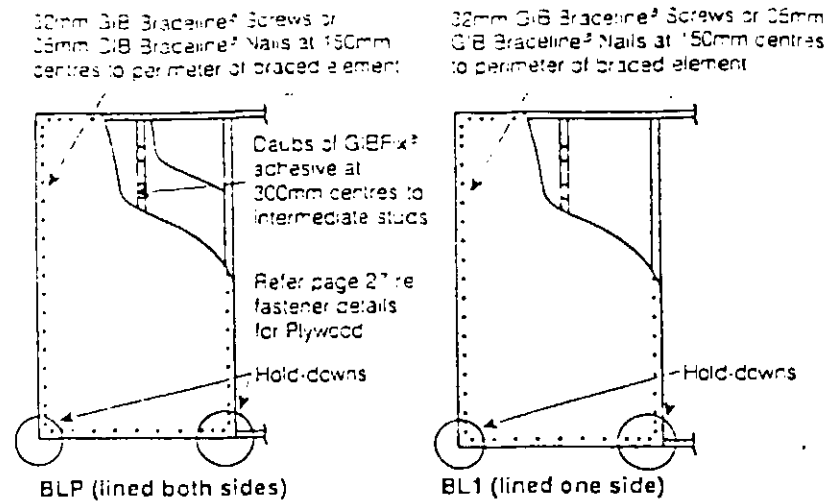
ACROSS

Bracing Line		Bracing Elements Provided					Wind		Earthquake	
Line Label	Min BUs Required	Brace No.	Brace Type	Brace Length	Brace Angle	Brace Height	Rating BUs/m	BUs Achieved	Rating BUs/m	BUs Achieved
M	46	M1	Other	3.6	0.0	2.4	75	270.0	65	234.0
N	190	N1	Other	2.4	0.0	2.4	90	216.0	80	192.0
		N2	Other	2.4	0.0	2.4	75	180.0	65	156.0
O	190	O1	Other	1.0	0.0	2.4	125	125.0	115	115.0
		O2	Other	1.1	0.0	2.4	125	137.5	115	126.5
Totals Achieved							W	928.5	E	823.5
Totals Required							W	648.0	E	498.5

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SHEET
of 16 sheets
DURBIN-WESTLEY HOUSE.

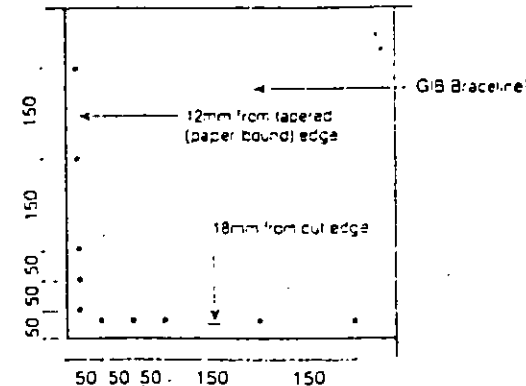
14.



Fixing the perimeter of a GIB Braceline® bracing element

Fasteners are placed no closer than 12mm to the tapered (paper bound) machine edge of the GIB® plasterboard sheets. Fasteners are placed no closer than 18mm to a sheet end or a cut sheet edge. For GIB Braceline® systems, fasteners are placed at 150mm centres around the bracing element perimeter, starting at 50, 100 and 150mm from the sheet corners.

Fastening pattern for GIB Braceline® bracing elements



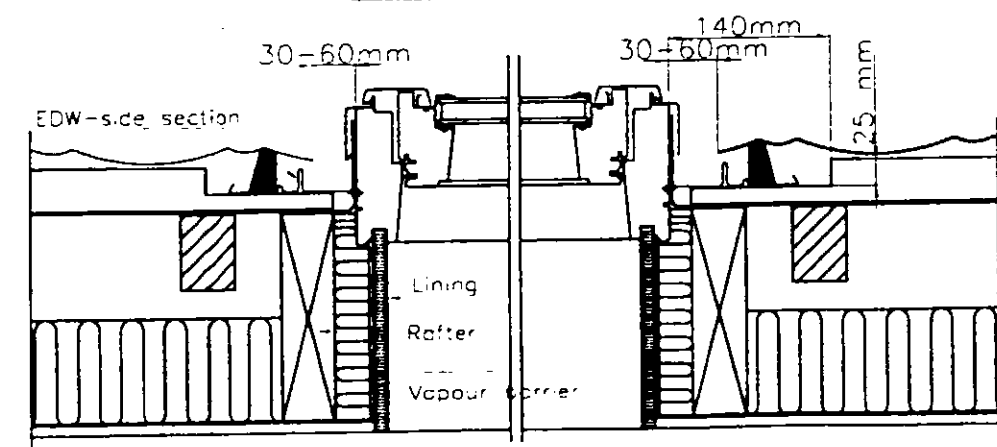
In order for GIB® systems to perform as tested, all components must be installed exactly as prescribed. Substituting components produces an entirely different system and may seriously compromise performance. Follow system specifications.

wall bracing details.

Notes:

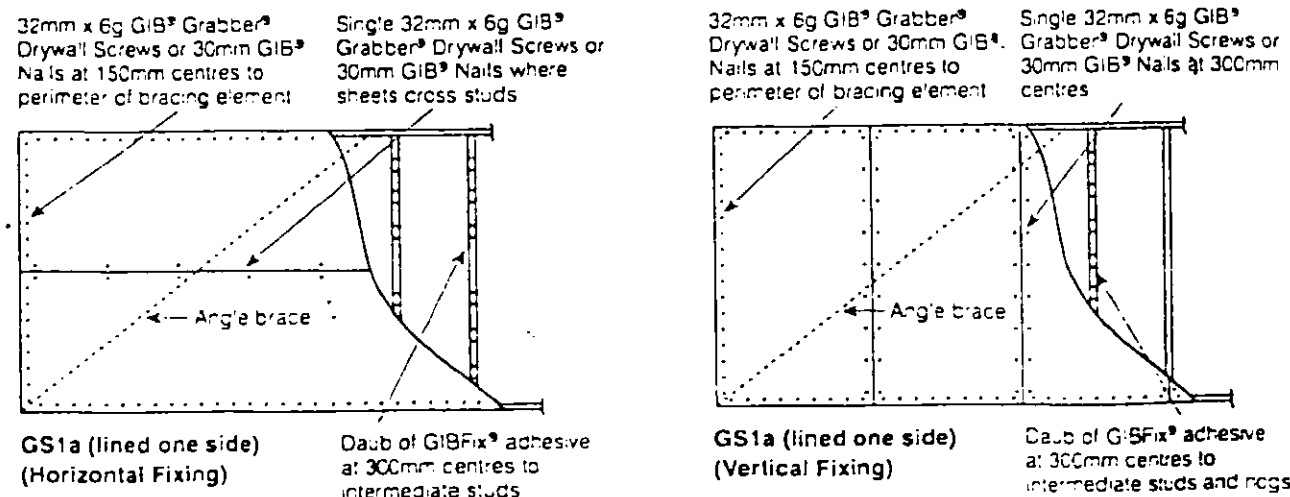
Additional thickness and/or corrosion protection is required in exposed and sheltered applications. (Consult NZS 3604:1999). To maintain a flush surface for the wall linings, it is recommended that hold down straps are checked into the framing.

Section B-B 1:5

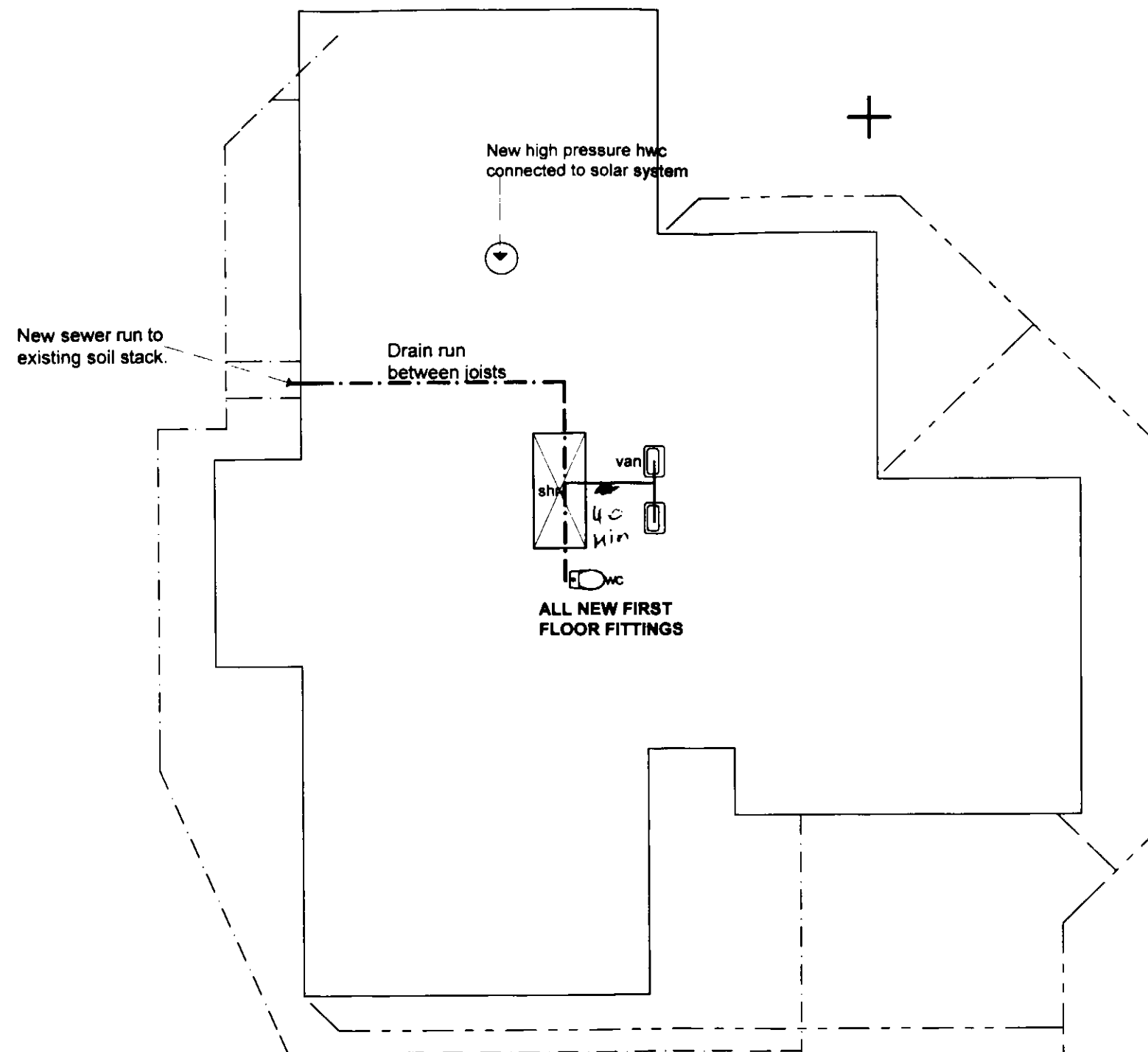


Velux ventilating skylight detail

For 10mm GIB® Standard Plasterboard and any other 10mm and 13mm GIB® plasterboard



04470



services plan.

SCALE 1:100.

NOTES:

- DP. indicates new 80mm diam. uPVC downpipe.
- GT. indicates existing gully trap.
- indicates existing sewer drain.
- - - indicates new 110mm diam uPVC sewer drain.
- indicates existing stormwater drain.
- - - indicates new 90mm diam uPVC stormwater drain.
- 40 indicates new 40 diam waste pipe.

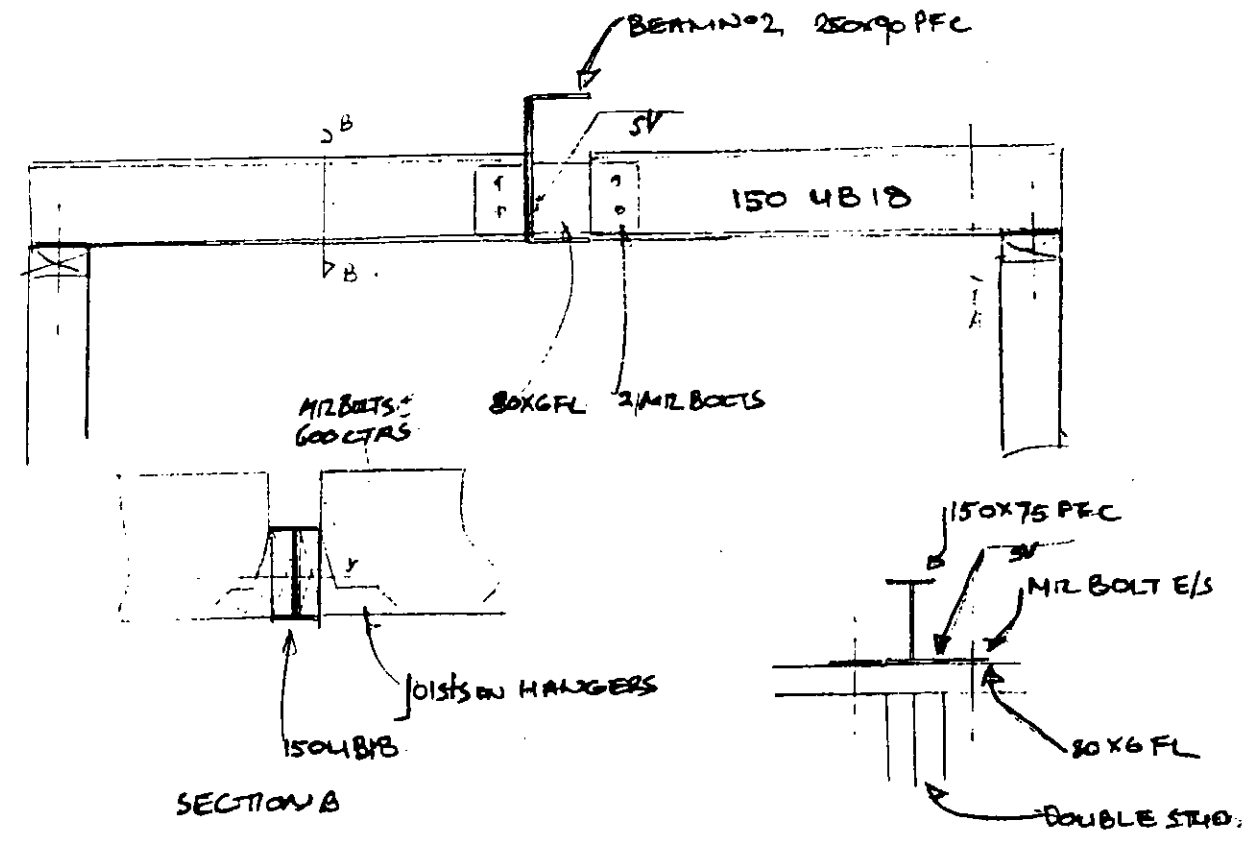
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DATE 28/11/07

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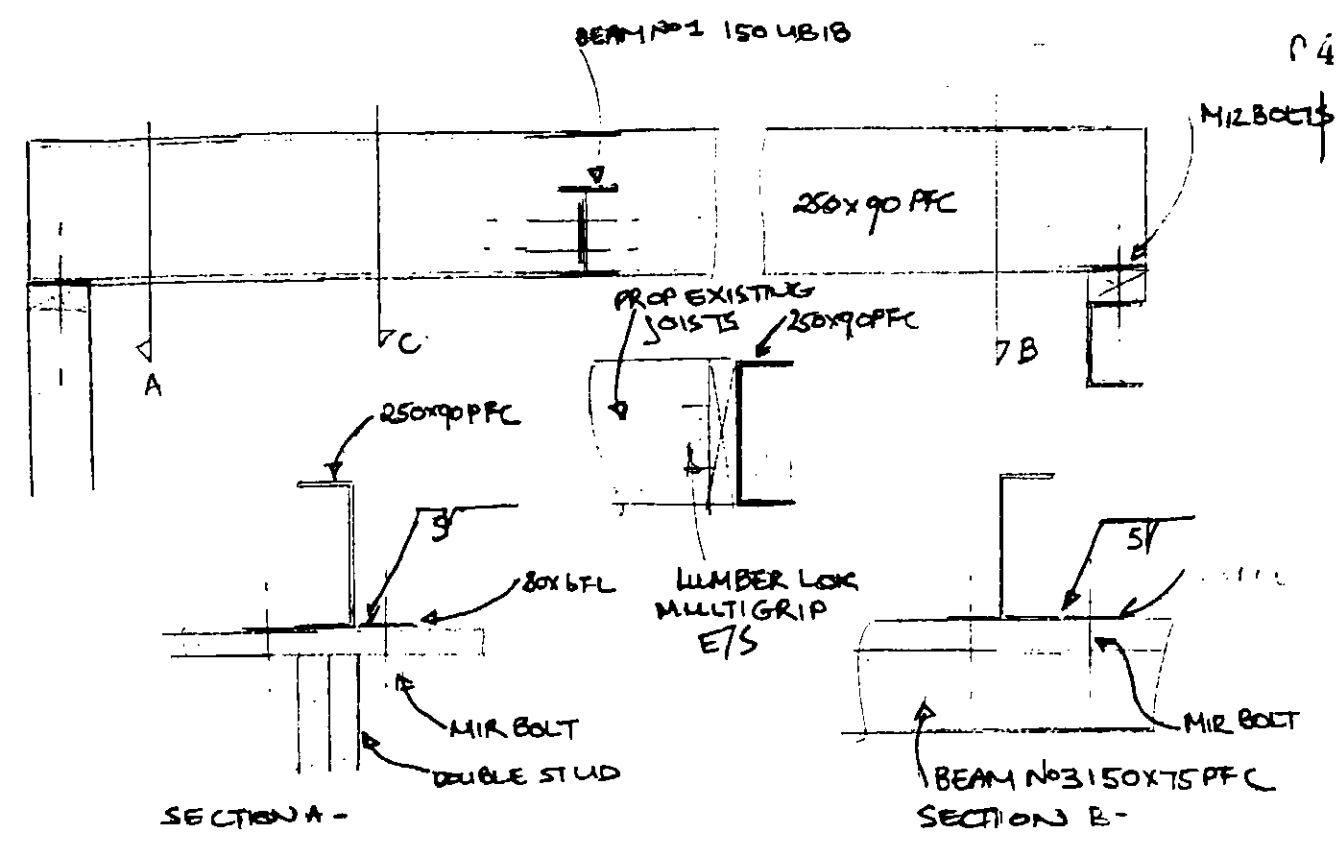
SHEET
of 16 sheets
DURBIN-WESTLEY HOUSE.

16.

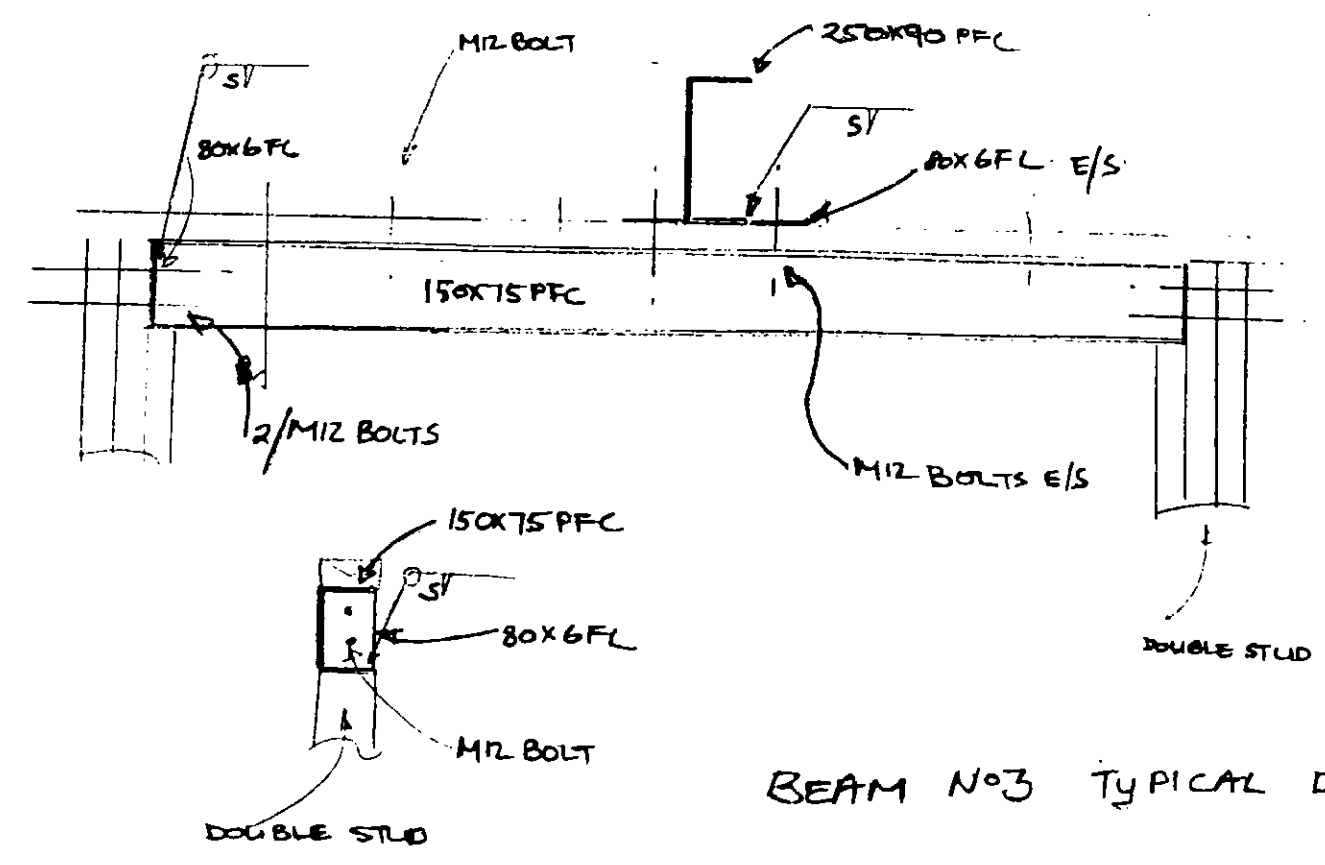
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BEAM NO 1 TYPICAL DETAILS



BEAM NO 2 TYPICAL DETAILS



BEAM NO 3 TYPICAL DETAILS

PAUSE APP

S1.

SHEET
of 16 sheets
DURBIN-WESTLEY HOUSE.

172.75 SQ..M. G.F. AREA

249/29

4

100MM SLAB REINFORCED WITH
665 MESH WITH 35MM COVER

250MM WIDE (MINIMUM) FOOTING
SET 300MM (MINIMUM) INTO SOLID
GROUND AND REINFORCED WITH
1 D12 TO TOP, 2-D12 TO BOTTOM
AND D10 STIRRUPS AT 600MM CRS

2 D12 BARS, 1500 LONG
ACROSS CORNERS

300MM WIDE X 200MM THICK SLAB
THICKENING UNDER LOAD BEARING
INTERNAL WALLS. REINFORCE WITH
2xD12 BARS & D10 STIRRUPS AT 600CRS.

25MM DEEP SAWCUT

100MM SLAB REINFORCED WITH
665 MESH WITH 35MM COVER

50MM FALL OVER 300MM IN SLAB
AT GARAGE DOORS. FALL TO BE 100MM
LONGER THAN DOOR OPENINGS.

100MM SLAB TO FRONT ENTRY 75MM
BELOW FLOOR SLAB AT ENTRY DOOR
AND FALLING 40MM TO OUTSIDE EDGE

FOUNDATION PLAN

SCALE 1:100

PROPOSED HOUSE, LA LENA GROVE, P.N.,
FOR JACALYN SCOTT.

SEPTEMBER 2001

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GANG NAIL ROOF TRUSSES AT 900MM
MAXIMUM CENTRES. LAYOUT APPROXIMATE
ONLY. TRUSS MANUFACTURER TO SUPPLY
SHOP DRAWINGS FOR EXACT LAYOUT

GROUND FLOOR WALLS SHOWN DOTTED

TRIFOLD 400 SERIES 2xH LINTEL BEAMS
WITH TRIPLE STUD SUPPORTS EACH END
AND WITH JACK STUD UNDER POINT LOAD

SPECIAL ROOF TRUSS, DESIGNED
TO TAKE ROOF AND FLOOR LOAD. TRUSS
MANUFACTURER TO SUPPLY CALCULATIONS
TO BUILDING CERTIFIER.

250X50 FLOOR JOISTS AT
600MM MAXIMUM CENTRES

TRIFOLD MEDIUM 400 BEAM, SUPPORTING
WALL AND ROOF ONLY. DOUBLE STUD
SUPPORTS EACH END

250 X 50 FLOOR JOISTS

SOLID BLOCKING OR
HERRING BONE STRUTTING

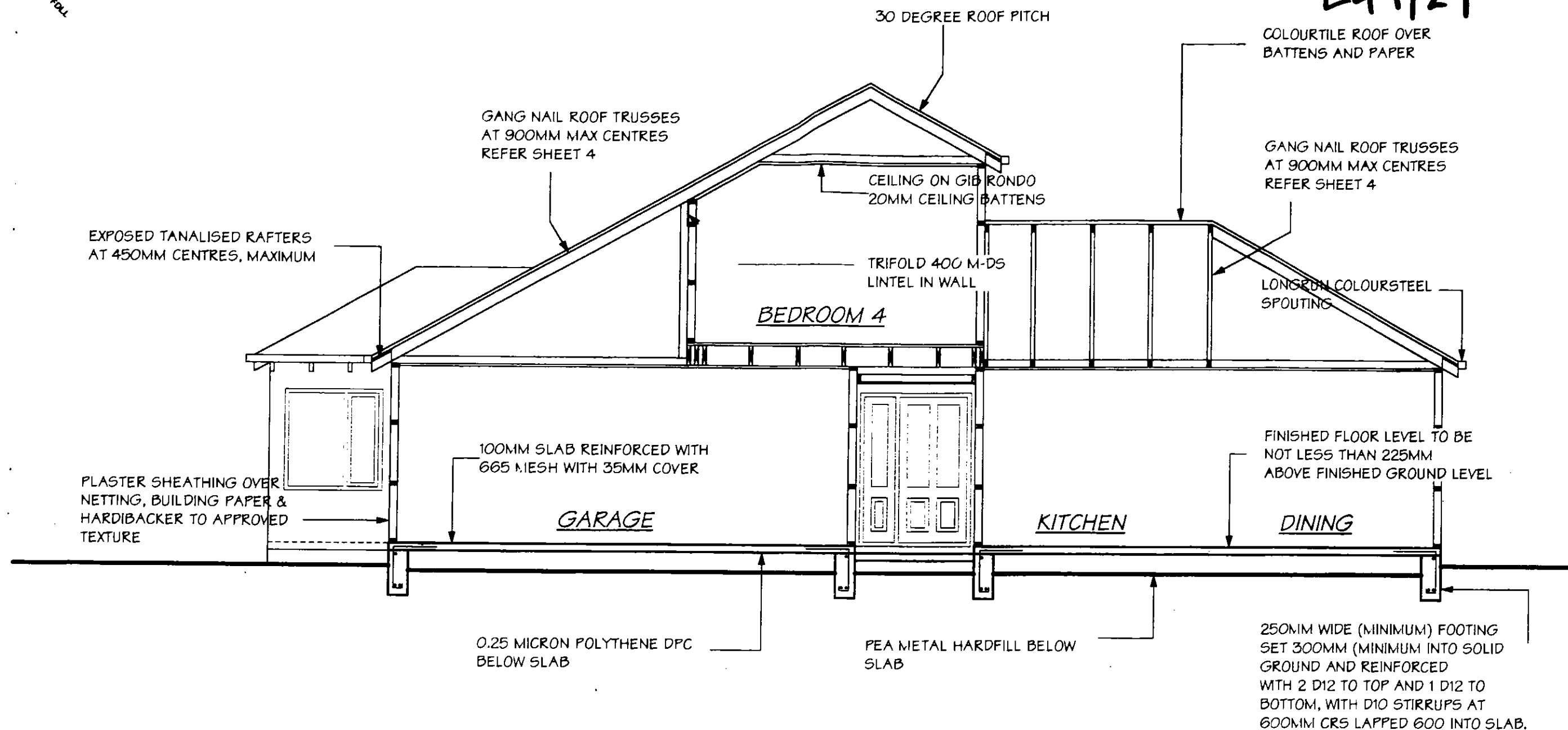
SPECIAL ROOF TRUSS, DESIGNED
TO TAKE ROOF AND FLOOR LOAD. TRUSS
MANUFACTURER TO SUPPLY CALCULATIONS
TO BUILDING CERTIFIER.

FLOOR JOIST AND G.F. TRUSS PLAN

SCALE 1:100

GRAEME Olliver
ARCHITECTURAL DESIGNER

P.O. Box 1803
PALMERSTON NORTH
PHONE & FAX (06) 356 1800



CROSS SECTION A-A

PROPOSED HOUSE, LA LENA GROVE, P.N.,
FOR JACALYN SCOTT.

SEPTEMBER 2001
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GRAEME Olliver
ARCHITECTURAL DESIGNER

P.O. Box 1803
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PHONE & FAX (06) 356 1800



BRANZ Appraised

Appraisal No.404 [2005]

BRANZ Appraisals

Technical Assessments of products
for building and construction

BRANZ APPRAISAL CERTIFICATE No. 404 (2005)

This Certificate replaces BRANZ
Appraisal Certificate No. 404 (2000)
issued 21 July 2000.

POLYFLAME AND GLASFLAME ROOF MEMBRANE SYSTEMS

Waterproofing Systems Ltd
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Palmerston North

Tel: 06 357 9148
Fax: 06 357 9410

Email: info@waterproofing.co.nz
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BRANZ Pty Ltd
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NSW 2100
Australia
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Fax: +61 2 9938 6911
www.branz.com.au



Product

1.1 Polyflame and Glasflame Roof Membranes are waterproofing membranes for nominally flat, pitched and curved roofs, gutters and parapets. They are installed as a single or multi-layer system with either a mineral chip finished product or a sand finished layer with UV protective paint as the top layer, or as a single layer system under heavy protection such as paving slabs or a topping screed.

1.2 Both the products are supplied as torch-on, reinforced, polymer-modified bitumen sheets in roll form. The membranes can also be mechanically or adhesive fixed.

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Scope

2.1 Polyflame and Glasflame Roof Membranes have been appraised as roof waterproofing membranes on buildings within the following scope:

- the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 with respect to building height and maximum floor plan areas; and,
- with building structures designed and constructed to meet the requirements of the NZBC; and,
- with roof supporting structures of timber framing with substrates of plywood; and,
- with substrates of suspended concrete slabs; and,
- situated in NZS 3604 Building Wind Zones, up to, and including 'Very High'.

2.2 Polyflame and Glasflame Roof Membranes have also been appraised for use as roof waterproofing membranes on specifically designed buildings within the following scope:

- with building structures designed and constructed to comply with the NZBC; and,
- with roof supporting structures of timber framing with substrates of plywood; and,
- with substrates of suspended concrete slab; and,
- subjected to maximum wind pressures (Refer Paragraph 8.2); and,
- with the weathertightness design of all junctions being the subject of specific design by the designer.

Note: The design of these junctions has not been appraised by BRANZ and is outside the scope of this Certificate.

2.3 Roofs waterproofed with Polyflame and Glasflame Roof Membranes must be designed and constructed in accordance with the following limitations:

- nominally flat, curved or pitched roofs constructed to drain water to gutters and drainage outlets complying with the NZBC; and,
- constructed to suitable falls (Refer Paragraph 14.3 and 14.4); and,
- with no integral roof gardens.

2.4 The design and construction of the substrate and movement and control joints is specific to each building, and therefore is the responsibility of the building designer and building contractor and is outside the scope of this Certificate.

2.5 The membranes must be installed by Waterproofing System Ltd approved installers in accordance with the Waterproofing System Ltd Technical Literature referenced in Paragraph 6.1.

Building Regulations

New Zealand Building Code (NZBC)

3.1 In the opinion of BRANZ, Polyflame and Glasflame Roof Membrane Systems, if designed, used, installed and maintained in accordance with the statements and conditions of this Certificate, will meet or contribute to meeting the following provisions of the NZBC:

Clause B2 DURABILITY: Performance B2.3.1 (b), 15 years. Polyflame and Glasflame Roof Membrane Systems meet this requirement. See Paragraph 10.1. Performance B2.3.1 (c), 5 years. Alugard, Sungard and Synroof Hi Build meet this requirement. See Paragraph 10.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.1 and E2.3.2. Polyflame and Glasflame Roof Membrane Systems meet these requirements. See Paragraphs 14.1 – 14.9.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Polyflame and Glasflame Roof Membrane Systems meet this requirement and will not present a health hazard to people.

3.2 This Certificate appraises an Alternative Solution in terms of New Zealand Building Code compliance. The membranes are an alternative to the membranes specified in NZBC Acceptable Solution E2/AS1, and an Alternative Solution subject to specific design for other buildings not covered within E2/AS1.

Technical Specification

4.1 Materials supplied by Waterproofing Systems Ltd are as follows:

Polyflame Sand Membranes

- These are torch-on membranes either 3.0 or 4.0 mm thick with a sanded upper layer and 180 - 200 g/m² non-woven polyester fabric reinforcement. They are designed to be used as a single or double layer system with UV protection. They are available in 10 m x 1 m rolls.

Polyflame Granule Membrane

- A 4.0 mm thick torch-on membrane with a mineral chip finished top surface and a thermofusible polyethylene foil film backing. Designed to be used as a single or a cap layer for double layer systems. It is available in grey/off white, dark grey/green or black mineral chip finish.

Glasflame Membrane

- A 2.0 or 3.0 mm thick membrane with a polythene top surface and 60 g/m² glassfibre mat reinforcement. It is available in 20 m x 1 m rolls and 10 m x 1 m rolls. It is designed to be used as a base sheet for double layer systems or as an underflashing.

Bituprime Primer

- A solvent-based, fast drying bituminous primer designed to penetrate concrete or plywood surfaces and provide a bondable surface. It is available in 20 litre cans.

Alugard UV Coating

- A fortified liquid membrane containing polished aluminum flakes. It is applied to sand-finished membranes as a UV protection.

Sungard UV Coating

- A non-fibred aluminum paint used as UV protection for sand finished bituminous membranes.

Synroof Hi Build UV Coating

- An acrylic high build membrane used for UV protection where a specific colour finish is required

DPC Tapes

- A tape used on all plywood joints under a single layer system. The tapes are 50 mm wide.

Polybond Adhesive

- A water-based bitumen adhesive used for glue fixing torch-on membranes to gutters, parapets and other difficult detailing areas.

Table 1: Membrane Systems

System	Single Layer	Double Layer	Protection Required
Polyflame Sand Membranes	4.0 mm		Alugard, Sungard, Synroof Hi Build, paving slabs or cement screeds
Polyflame Sand Membranes		2.0 or 3.0 mm Glasflame base layer with 4.0 mm top layer	Alugard, Sungard, Synroof Hi Build, paving slabs or cement screeds
Polyflame Granule Membrane	4.0 mm		Standard finish of material
Polyflame Granule Membrane		2.0 or 3.0 mm Glasflame base layer with 4.0 mm top layer	Standard finish of material

Handling and Storage

5.1 Handling and storage of all materials whether on or off site is under the control of the Waterproofing Systems Ltd trained installers. Dry storage must be provided for all products and the rolls of membrane must be stored in an upright position.

Technical Literature

6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for the Polyflame and Glasflame Roof Membranes. The Technical Literature must be read in conjunction with this Certificate. All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Certificate must be followed.

General

7.1 Polyflame and Glasflame Roof Membranes are for use on roofs, gutters and parapets where an impervious waterproof membrane is required to prevent damage to building elements and adjoining areas. The products can be used on new or existing buildings. Waterproofing Systems Ltd should be consulted as to the suitability of any existing substrates prior to using Polyflame or Glasflame Roof Membranes.

7.2 The effective control of internal moisture must be considered at the design stage due to the impermeability of the membranes. Refer to BRANZ publication "Good Practice Guide - Membrane Roofing".

7.3 The 2.0 mm or 3.0 mm thick Glasflame membrane is designed for use on roofs and gutters as the first layer of a double layer system and all areas requiring detailing such as upstands, protrusions, rainwater heads and outlets. The Polyflame membrane can be used as the top layer of a double layer system, or as a single layer system, see Table 1.

Structure

8.1 Where mechanical fasteners or adhesive fixing is used within the higher wind uplift roof areas (as defined by Figure 10.16 and 10.17 of NZS 3604) on buildings in the 'High' and 'Very High' Building Wind Zones, the fasteners or adhesive fixings must be at maximum 200 mm centres. All other roof areas or the whole roof on buildings in the 'Low' or 'Medium' Building Wind Zones may have mechanical fasteners or adhesive fixings at maximum 300 mm centres. The higher wind uplift roof areas are all roof areas adjacent to roof edges, ridges and hips, and generally for a distance of 1.5 metres away from the roof edge, ridge or hip. It should be noted that all membranes in all Building Wind Zones, including the base layer in two-layer systems, must be fully bonded for a distance of 200 mm from the roof perimeter.

8.2 Polyflame and Glasflame fully bonded single and double layer systems are suitable for use in areas subject to maximum wind pressures of 10 kPa Ultimate Limit State.

Substrates

Plywood

9.1 Plywood must be treated to H3 (CCA treated). LOSP treated plywood must not be used. Plywood must comply with NZBC Acceptable Solution E2/AS1 Paragraph 8.5.3 and 8.5.5. Where specific design is used (i.e. outside the scope of E2/AS1) the plywood thickness and fixing size may increase and centres may decrease to meet specific wind loadings. Timber framing must comply with NZS 3604, or where specific engineering design is used, the framing shall be of at least equivalent stiffness to the framing provisions of NZS 3604, or comply with the serviceability criteria of NZS 4203. In all cases, framing must be provided so that the maximum span of the substrate as specified by the substrate manufacturer is met and all sheet edges are fully supported.

Concrete

9.2 Concrete substrates must be to a specific engineering design meeting the requirements of the NZBC, such as concrete construction to NZS 3101.

Existing Construction

9.3 A thorough inspection of the substrate must be made to ensure it is in fit condition and does not contain any materials that will adversely affect the performance of the membrane.

9.4 Repairs must be undertaken, where applicable, to ensure the substrate is sound, the joints are sealed, and the flashings are sound. Plywood substrates must be checked for screw fixings, and if necessary refixed as for new plywood.

Durability

Serviceable Life

10.1 Polyflame and Glasflame Roof Membranes are expected to have a serviceable life of at least 15 years, provided they are designed, used, installed and maintained in accordance with this Certificate and the Technical Literature.

10.2 Alugard, Sungard and Synroof Hi Build are expected to have a serviceable life of at least 5 years provided they are used, installed and maintained in accordance with this Certificate and the Technical Literature.

Chemical Resistance

10.3 Industrial air pollutants and windborne salt deposits should not significantly affect the durability of the membranes. However, the long term properties of the material may be affected by contact with petroleum-based products such as oils, greases and solvents.

Maintenance

11.1 The membrane roof system, including any areas with a UV coating applied, must be regularly (at least annually) checked for damage, rubbish, debris or coating breakdown. Damage, such as small punctures and tears must be repaired and coatings reapplied as recommended by Waterproofing Systems Ltd.

11.2 Special care must be taken when inspecting the membrane roof systems to ensure the continuing prevention of moisture ingress, and repairs must be undertaken where required.

11.3 Drainage outlets must be maintained to operate effectively.

Outbreak of Fire

12.1 Separation or protection must be provided to the membranes and plywood substrate from heat sources such as flues and chimneys.

12.2 NZBC Acceptable Solution C/AS1 Part 9 and Verification Method C/VM1 provide methods for separation and protection of combustible materials from heat sources.

Spread of Fire

13.1 The membranes may be used on roofs of buildings intended for all Purpose Groups, including SC and SD, subject to the requirements of NZBC Acceptable Solution C/AS1 Part 7, Paragraph 7.11.1.

13.2 The membranes may be used for cladding fire-rated roof construction, providing the roof construction complies with the requirements of NZBC Acceptable Solution C/AS1 Part 7.

External Moisture

14.1 Roofs must be designed and constructed to shed precipitated moisture. They must also take account of snowfalls in snow prone areas.

A means of meeting code compliance with NZBC Clause E2.3.1 is given by the Technical Literature which aligns with details in NZBC Acceptable Solution E2/AS1.

14.2 When installed in accordance with this Certificate and the Technical Literature, Polyflame and Glasflame Roof Membranes will prevent the penetration of water and will therefore meet code compliance with Clause E2.3.2. The membranes are impervious to water and will give a weathertight roof.

14.3 Roof falls must be built into the substrate and not created with mortar screeds applied over the membrane.

14.4 The minimum fall to roofs is 1 in 40 and gutters are 1 in 60. All falls must slope to an outlet. Inadequate falls will allow moisture to collect and increase the risk of deterioration of the membrane.

14.5 Allowance for deflection and settlement of the substrate must be made in the design of the roof to ensure falls are maintained and no ponding of water can occur.

14.6 Polyflame and Glasflame Roof Membranes are impermeable; therefore a means of dissipating construction moisture must be provided in the building design and construction to meet code compliance with Clause E2.3.6.

14.7 Drainage flanges must be used for any outlet and must be fitted with a grate or cage to reduce potential sources of blockages. An overflow must be provided where the roof does not drain to an external gutter or spouting.

14.8 Penetrations and upstands of the membranes must be raised above the level of any possible flooding caused by the blockage of roof drainage.

14.9 The design of details not covered by the Technical Literature is subject to specific weathertightness design and is outside the scope of this Certificate.

Water Supplies

15.1 Polyflame and Glasflame Roof Membranes have not been assessed for roofs used for the collection of potable water.

Installation Information

Installation Skill Level Requirement

16.1 Installation of the membranes must be completed by trained installers, approved by Waterproofing Systems Ltd.

16.2 Installation of substrates must be completed by tradespersons with an understanding of roof construction, in accordance with instructions given within the Waterproofing Systems Ltd Technical Literature and this Certificate.

Preparation of Substrates

17.1 Substrates must be dry, clean and stable before installation commences. Surfaces must be smooth and free from nibs, sharp edges, dust, dirt or other materials such as oil, grease or concrete formwork release agents. All surface defects must be filled to achieve an even and uniform surface.

17.2 The relative humidity of concrete substrates must be 75% or less before membrane application. The concrete can be checked for dryness by using a hygrometer, as set out in BRANZ Bulletin No. 424.

17.3 The moisture content of the plywood and timber substructure must be a maximum of 20% and the plywood sheets must be dry at time of membrane application. This will generally require plywood sheets to be covered until just before the membrane is laid, to prevent rain wetting.

17.4 Substrates must be primed with Bituprime Primer and left to dry (4-5 hours) before the membrane is installed.

Membrane Installation

18.1 The membrane must be installed in accordance with the Technical Literature.

18.2 Plywood joints under a single layer must be taped with 50 mm wide DPC tape. All roof and wall junctions must have a 20 mm x 20 mm wooden fillet installed at the junction. Concrete substrate junctions must have a 20 mm x 20 mm cement mortar fillet installed. All external edges must be chamfered to a 5 mm radius to remove sharp edges.

18.3 The membrane must be unrolled without tension onto the prepared substrate and allowed to 'relax' for at least 30 minutes prior to installation.

18.4 The membrane is installed from the lowest point and each layer is installed across the roof fall allowing a 100 mm side overlap and a 150 mm end overlap. If a double system is being installed, the cap sheet layer must be offset against the base sheet layer.

Inspections

19.1 The Technical Literature must be referred to during the inspection of membrane installations by Building Consent Authorities and Territorial Authorities.

19.2 Critical areas of inspection for waterproofing systems are:

- Construction of substrates, including crack control and installation of bond breakers and movement control joints.
- Moisture content of the substrate prior to the application of the membrane.
- Acceptance of the substrate by the membrane installer prior to application of the membrane.
- Installation of the membrane to the manufacturer's instructions.

Health and Safety

20.1 Safe use and handling procedures for Polyflame and Glasflame Roof Membrane Systems are provided in the Technical Literature. The products must be used in conjunction with the relevant Material Safety Data Sheets for each membrane.

Basic of Appraisal

The following is a summary of the technical investigations carried out:

Tests

21.1 The following is a summary of the testing of Polyflame and Glasflame Membranes undertaken by BRANZ, and testing by other organizations as listed that has been reviewed by BRANZ and found to be satisfactory:

- BRANZ – Cyclic joint movement to ASTM D5849-95, and nail pull-through and spot bonding peel to ascertain load resistances.
- Bitumat Company – Q.U.V. to ASTM G-53; and softening point, penetration, low temperature flexibility, heat resistance of product after artificial ageing, and lap joints after artificial ageing for joint integrity and tensile strength of joint, all to UEAtc methods.
- Materials Science and Engineering Consultants, USA – breaking strength, ultimate elongation, load strain, water resistance, low temperature flexibility, water vapour transmission, dynamic impact, lap joint strength, strength after accelerated weathering and crack bridging capability to CGSB 37-GP-56M and various ASTM standards.

- Al Hoty-Stanger Ltd, Kingdom of Saudi Arabia - thickness, width, cold flexibility, low temperature, softening point, penetration, tear resistance, tensile strength, elongation, load strain, lap joint strength, heat resistance, static indentation, dynamic punching test, all to UEAtc methods; water absorption to ASTM D 570; compressibility; and resistance to hydrostatic pressure to DIN 1048.
- Bureau Veritas International - thickness, weight, flexibility, water absorption, permeability, elongation and shore hardness.
- Saudi Socotec - width, length, weight, thickness, resistance to heat, tensile strength, elongation, tear resistance, softening point, penetration, lap joint strength, cold pliability and puncture resistance all to UEAtc methods.
- Saudi Veritas Ltd - tensile strength, softening point, penetration, cold flexibility, thickness, width, weight, flow, elongation, tear resistance and puncture resistance.

Other Investigations

- 22.1 A durability opinion has been provided by BRANZ technical experts.
- 22.2 Installation of the membranes has been assessed by BRANZ for practicability of installation and found to be satisfactory.
- 22.3 The Technical Literature has been examined by BRANZ and found to be satisfactory.

Quality

- 23.1 The manufacture of the membranes has not been examined by BRANZ, but details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory. The manufacture of Polyflame and Glasflame Membranes has been assessed and registered as meeting the requirements of ISO 9001:2000 by SGS Yarsley International Certification Services Limited, Certificate Number EG04/040024QA.
- 23.2 The quality of the supply of products to the New Zealand market is the responsibility of Waterproofing Systems Ltd.
- 23.3 Quality on site is the responsibility of the Waterproofing Systems Ltd approved installers.
- 23.4 Designers are responsible for the building design, and building contractors are responsible for the quality of construction of substrate systems in accordance with the instructions of Waterproofing Systems Ltd and this Certificate.
- 23.5 Building owners are responsible for the maintenance of the membrane systems in accordance with the instructions of Waterproofing Systems Ltd and this Certificate.

Sources of Information

- AS/NZS 2269: 1994 Plywood - structural.
- BRANZ Good Practice Guide - Membrane Roofing, reprint October 2003.
- NZS 3101: 1995 The design of concrete structures.
- NZS 3604: 1999 Timber framed buildings.
- NZS 4203: 1992 General structural design and design loadings for buildings.
- Compliance Document for New Zealand Building Code External Moisture Clause E2, Department of Building and Housing, Third Edition July 2005.
- New Zealand Building Code Handbook and Approved Documents, Building Industry Authority, 1992.
- The Building Regulations 1992, up to, and including October 2004 Amendment.



BRANZ

In the opinion of BRANZ, Polyflame and Glasflame Roof Membrane Systems are fit for purpose and will comply with the Building Code to the extent specified in this Certificate provided they are used, designed, installed and maintained as set out in this Certificate.

The Appraisal Certificate is issued only to the Certificate Holder, Waterproofing Systems Ltd, and is valid until further notice, subject to the Conditions of Certification.

Conditions of Certification

1. This Certificate:
 - a) relates only to the product as described herein;
 - b) must be read, considered and used in full together with the technical literature;
 - c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
 - d) is copyright of BRANZ.
2. The Certificate Holder:
 - a) continues to have the product reviewed by BRANZ;
 - b) shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
 - c) abides by the BRANZ Appraisals Services Terms and Conditions.
3. The product and the manufacture are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ.
4. BRANZ makes no representation as to:
 - a) the nature of individual examples of, batches of, or individual installations of the product, including methods and workmanship;
 - b) the presence or absence of any patent or similar rights subsisting in the product or any other product;
 - c) any guarantee or warranty offered by the Certificate Holder.
5. Any reference in this Certificate to any other publication shall be read as a reference to the version of the publication specified in this Certificate.

For BRANZ

P Robertson
Chief Executive

Date of issue: 9 August 2005

L49/29

GIB Wall Bracing Calculation Sheet A

single storey

Job Details

Name	J. Scott
Street and Number	Lelona Grove
Lot and DP Number	
City/Town/District	P. Henson North
Designer and date	Crane Oliver 1-Sep-01

Building Specification

Location of Storey	single	
Floor Loading	24k	
Foundation Type	slab	
Building Height to Apex (m)	6	
Roof Height above Eaves (m)	3	
Stair Height (m)	2.4	
Cladding Weight (top or single)	medium	
Cladding Weight (lower)	light	not applicable (single storey building)
Cladding Weight (sub-floor)	light	not applicable (slab)
Roof Weight	light	
Roof Pitch (degrees)	25-45	
Room in Roof Space	yes	
Building Length (m)	10	Use roof length including eaves
Building Width (m)	15.5	Use roof length including eaves
Gross Building Plan Area (m ²)	155	

Building Location

Wind Zone	High	Earthquake Zone	A
Region	R1		
Terrain	Inland		
Exposure	Exposed		
Topography	Moderate		

Bracing Units required for Wind

per m	subfloor	walls
W along	n/a	76 BU/m
W across	n/a	76 BU/m
Totals	subfloor	walls
W along	n/a	1201 BUs
W across	n/a	1404 BUs

Bracing Units required for Earthquake

per m ²	subfloor	walls
E along	n/a	7.6 BU/m ²
E across	n/a	7.6 BU/m ²
Totals	subfloor	walls
E along	n/a	1315 BUs
E across	n/a	1315 BUs

25x10

BRACING FROM ORIGINAL CONSENT

NOTE: 'SINGLE' WITH ROOM IN ROOFSPACE

- ONLY 1315 REQUIRED IN LOWER AT THAT STAGE

QUALITY TRUSSES & FRAMES

Page: ProdSt - 1

Job 2596

Client: PlaceMakers

Site: 2596

Description: 2596 J SCOTT LA LENA GROVE

Phone:

J SCOTT

LA LENA GROVE

Phone:

McTek 2000 J 100 gff

Gang Nal Group Ltd

Thu Nov 01 16:05:23 2001

PRODUCER STATEMENT McTek 2000 (m) ROOF TRUSS DESIGN

L49/29

Certification of McTek 2000 (m) Design Program

The McTek 2000 (m) roof truss design program has been developed by Gang-Nal Group Ltd for the design of Gang-Nal timber roof trusses in New Zealand. The truss designs computed by the program are prepared using sound and widely accepted engineering principles, and in accordance with NZS 4203, NZS 3603 and NZS 3604 as verification methods and acceptable solutions of the approved documents issued by the Building Industry Authority to satisfy the requirements of Clause 81 Structure of the Building Regulations 1992. This computer design for the proposed building complies with the relevant provisions of the NZ Building Code. This is subject to all proprietary products meeting their performance specification requirements, the provision of adequate bracing, fixings and the correct input of design data carried out by suitably trained personnel.

Summary of McTek 2000 (m) Design Data and Output

The McTek 2000 (m) computer design output for this job listed and located at the site identified on the top of this page is based on the following parameters entered into the program. The owner must ensure that the following job details below are current and relevant to the project before fabrication and erection of the Gang-Nal trusses.

Job Details

Roof Pitch	30.00 deg	Timber Inventory	RP No 1 Fir x50	Building Wind Zone	High
Roof Material	Steel Tiles	Ceiling Material	Standard	Design Wind Speed	44.0 m/s
TC Dead Load	0.210 kPa	BC Dead Load	0.200 kPa	Pressure Coefficient	Cpe = -0.9
TC Restraints	400 mm centres	BC Restraints	400 mm centres		Cpi = 0.3
Roof Live Load	Lu = 0.250 kPa	Truss Spacing	900 mm		
	Lc = 1.0 m	Standard Overhang	200 mm		

These trusses must be fabricated and erected in accordance with the Gang-Nal manual. Proper erection bracing must be installed to hold the components true and plumb and in a safe condition until permanent bracing is fixed. All permanent bracing and bracing must be installed before any loads are applied. The specifications for timber shall be as shown on the output. The timber shall be standard gauged and treated to the requirements of NZMP 3640.

Truss List

Legend: * detail only ? input only. Tax failed design. Unmarked trusses designed successfully

Truss	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Span (mm)	Pitch (deg)	Spacing (mm)
J01	3076	30.00	900	J08A	2076	30.00	900	T04	6200	30.00	747
J01A	3076	30.00	900	J08B	2076	30.00	900	T04A	6200	30.00	747
J01B	3076	30.00	900	J08C	2076	30.00	900	T05	2364	15.00	678
J02	2176	30.00	900	J09	2553	30.00	900	T06	2364	15.00	678
J02A	2176	30.00	900	J09A	2553	30.00	900	T07	6000	30.00	900
J02B	2176	30.00	900	J09B	2553	30.00	900	T08	6000	30.00	900
J02C	2176	30.00	900	J09C	2553	30.00	900	T09	3690	30.00	900
J03	1276	30.00	900	J10	1853	30.00	900	T10	3690	30.00	794
J03A	1276	30.00	900	J10A	1853	30.00	900	T12A	3690	30.00	900
J03B	1276	30.00	900	J10B	1853	30.00	900	T13	10000	30.00	900
J03C	1276	30.00	900	J10C	1853	30.00	900	T14	2680	30.00	900
J04	2320	15.00	900	J11	1453	30.00	900	T16	3690	30.00	900
J05	2016	15.00	900	J11A	1453	30.00	900	T17	3690	30.00	900
J06	1420	15.00	900	J11B	1453	30.00	900	T001	6000	30.00	900
J07	2676	30.00	900	J11C	1453	30.00	900	T002	3700	30.00	900
J07A	2676	30.00	900	T01	6200	30.00	900	V01	2553	30.00	900
J07B	2676	30.00	900	T02	2080	15.00	740	V02	1153	30.00	900
J08	2076	30.00	900	T03	2080	15.00	740				

BC 35747

The computer design input has been carried out by:

Signed

Date

Name of Computer Operator

Qualifications and Title

Company

QUALITY TRUSSES & FRAMES

Verification / Acceptance of Input Data

I have checked the input data against the construction drawings and specifications and verify that they are correct and suitable for this job.

Signed

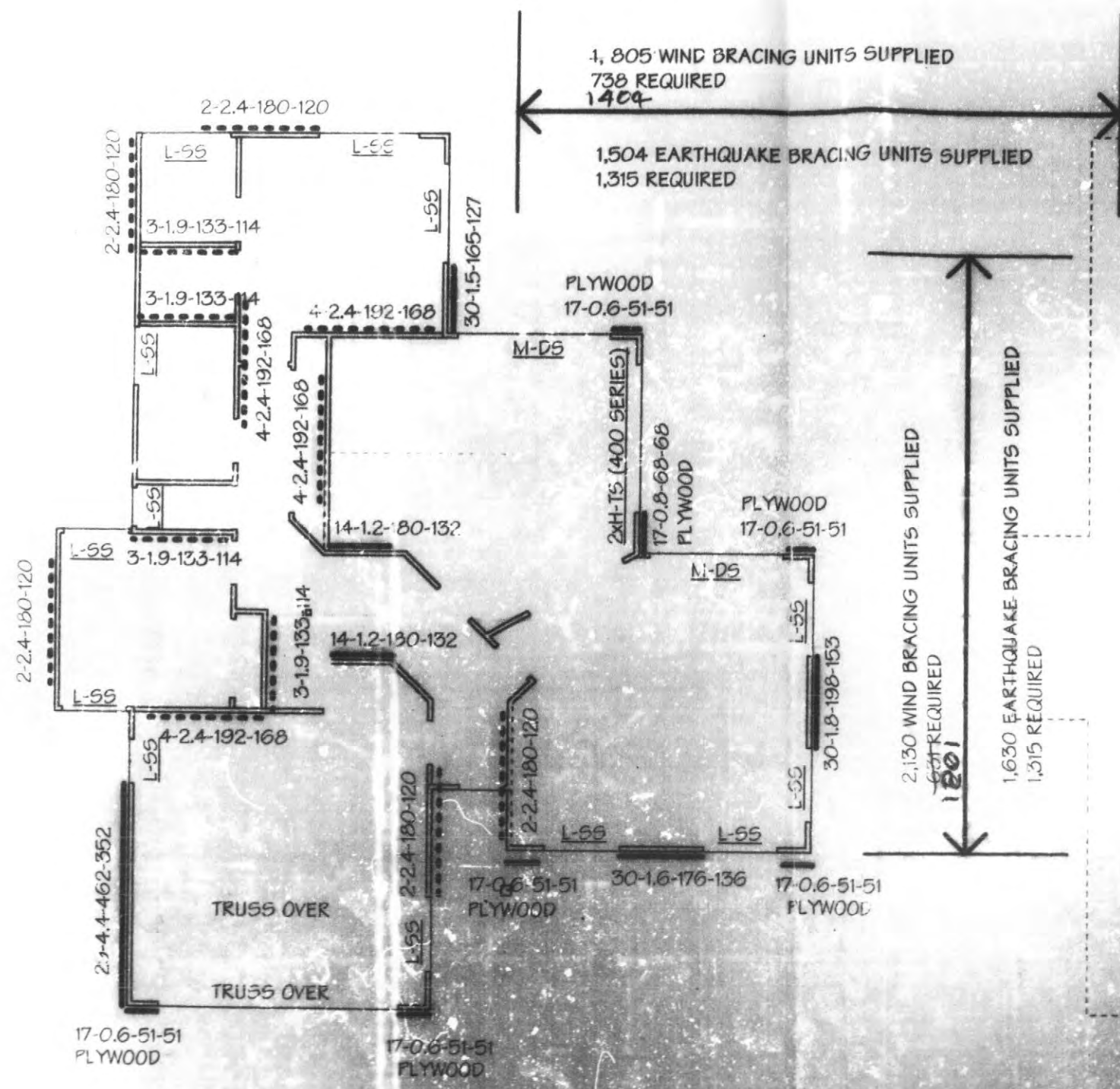
Date

Name

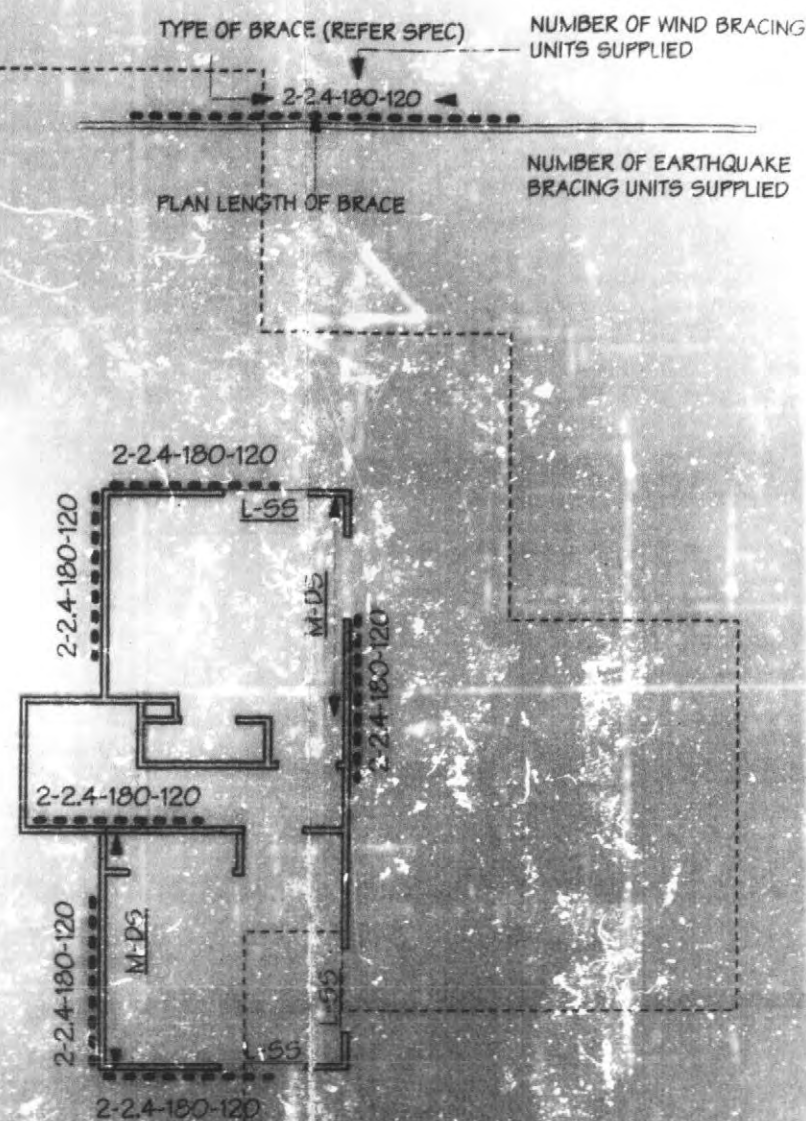
Company

25x10

L49/29 3



BRACING REFERENCE



ALL WALL LINTELS TO BE TRIFOLD 350 SERIES UNLESS SPECIFICALLY NOTED OTHERWISE. LIGHT (L), MEDIUM (M), HEAVY (H) OR 2xH (DOUBLE HEAVY) ON SINGLE (SS), DOUBLE (DS) OR TRIPLE (TS) STUDS AS INDICATED. CANTILEVER STUDS TO BE AS ABOVE BUT PRECEDED BY A 'C'. E.G. CL-SS INDICATES LIGHT CANTILEVER LINTEL ON SINGLE STUD.

BRACING AND LINTEL PLANS

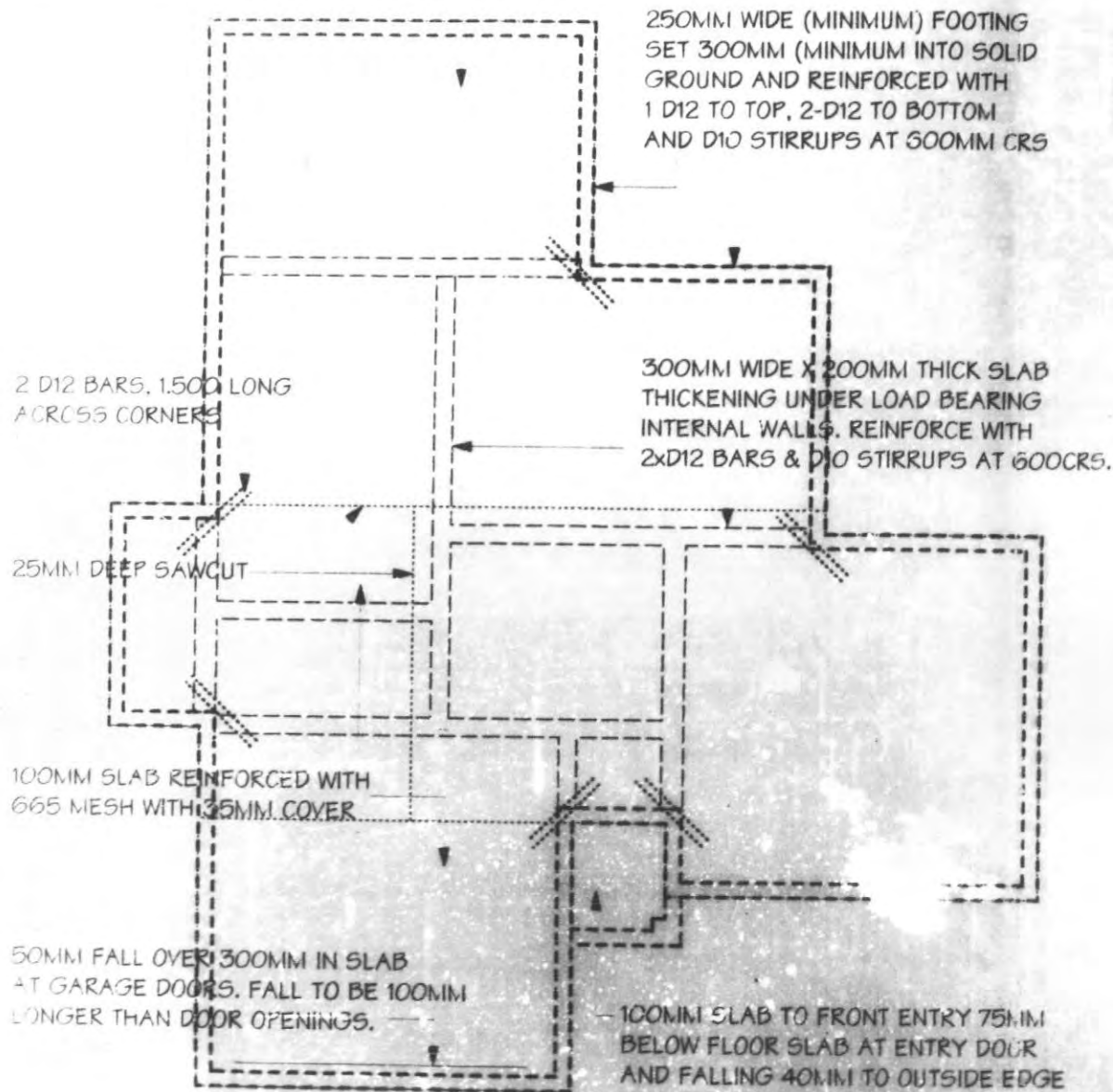
PROPOSED HOUSE, LA LENA GROVE, P.N.,
FOR JACALYN SCOTT.

SEPTEMBER 2001
COPYRIGHT

GRAEME OLLIVER
Architectural Designer

P.O. Box 1803
PALMERSTON NORTH
PHONE & FAX (06) 556 1800

100MM SLAB REINFORCED WITH
665 MESH WITH 35MM COVER



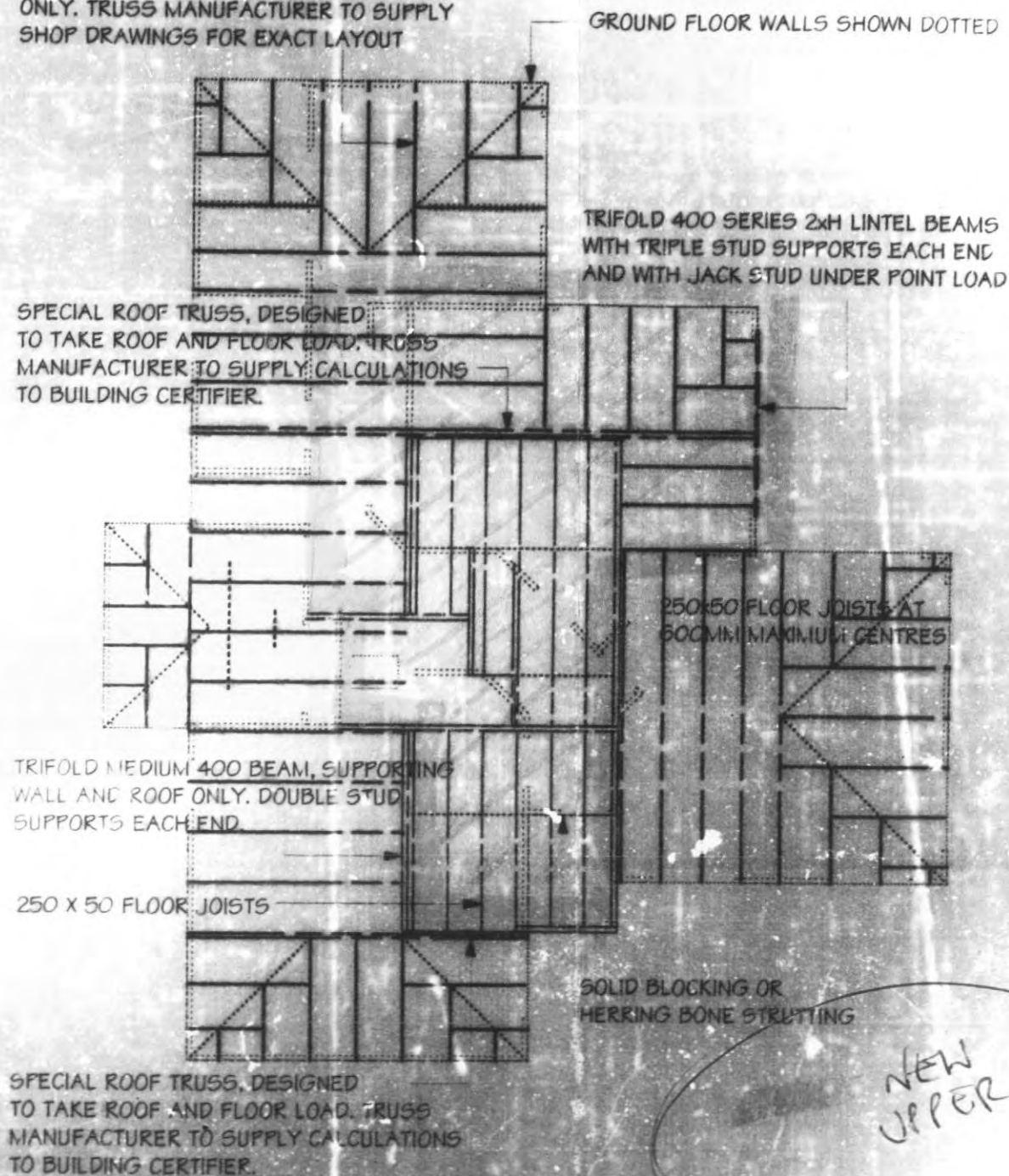
FOUNDATION PLAN

SCALE 1:100

PROPOSED HOUSE, LA LENA GROVE, P.N.,
FOR JACALYN SCOTT.

SEPTEMBER 2001
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GANG NAIL ROOF TRUSSES AT 900MM
MAXIMUM CENTRES. LAYOUT APPROXIMATE
ONLY. TRUSS MANUFACTURER TO SUPPLY
SHOP DRAWINGS FOR EXACT LAYOUT



FLOOR JOIST AND G.F. TRUSS PLAN

SCALE 1:100

GRAEME Olliver
Architectural Designer

P.O. Box 1803
Palmerston North
Phone & Fax (06) 356 1800

249/29

4

NEW
UPPER

NZsolar

New Zealand

04470

Your Solar Hot Water Specialist's **Specifications**

NZ Solar equipment has been tested and has the AS/NZS2712.2002 Standard. (the impact test was not applied and is shown on the header) **Compliance Certificate was issued on the 18 September 2006**

● All equipment meets and exceeds ISO 9001 Standards

All NZ Solar systems can be configured to maximise the requirements of the customer. By using the glass evacuated tubes there is inbuilt flexibility in the design of your new system. The tubes can be configured in banks of 20, 24 or 30 giving total flexibility of power output and installation size.

Due to the special thermal heat pipe inside a vacuum tube allowing for heat transfer the heater can dispense with the water feeding into the vacuum tube.

This delivers many advantages:

- v Massive power production
- v High efficiency
- v Long service life
- v Fast start and
- v Outstanding resistance to freezing and temperature strain

P.N.C.C. APPROVED

All qualities that are, not only desirable, but absolutely necessary in New Zealand's extremely variable climate.

The NZ Solar heating systems feature excellent thermal characteristics, high operating temperatures, all-weather application and very high reliability (tried and tested in good working order at temperatures as low as -50C).

NZsolar

New Zealand

04470

For normal NZ Solar heat tubes:

- v Degree of Vacuum: $>5 \times 10^{-3}$ Pa
- v Coating: Aluminium Nitride
- v Absorption coefficient: >0.93
- v Emissivity: <0.08
- v Starting Temperature: $<25^{\circ}\text{C}$
- v Maximum Temperature: 250°C
- v Freeze Proof: -50°C
- v Service Life: 15-20 years
- v Wind Resistance: 30m/s (grade 11)
- v Hail Proof: 25mm
- v Glass Material: Concentrated borosilicate glass
- v Absorber Plate: Copper Profile
- v Size of Single Tube: (mm) 58x1800
- v Weight of a Single Tube: 2.0 kg
- v Size of Condenser end: (mm) 14x50
- v Heating-up coefficient: $>95\%$
- v Recommended flow rate of 2/3 litres per minute

Glass-evacuated Tube Solar Water Heater



NZsolar

New Zealand

04470

Advantages of NZ Solar Glass-evacuated Tube Solar Water Heater

- v Uses AL-N/AL heat adsorption coating on the vacuum tubes; this provides high heat absorption with a low emission rate.
- v The water inlet and outlet points are located at the lower parts of the water cylinder to reduce calorific loss.
- v Superior all glass vacuum heat collection tubes.
- v The inner body of the cylinder is SUS304 food grade stainless steel for corrosion resistance, longer life, non-pollution of the water....clean and hygienic.
- v Ultra-strong insulation properties of the high-density urethane layer between the cylinders
- v An Electronic controller is mounted at a convenient point within the house. This allows the homeowner to assess at a glance what the water heating system is doing.
- v A microcomputer controls the water temperature bringing electricity to boost the solar system on days of continual unfavourable weather patterns.

NZ Solar Unit Sizes & Weights:

Number of Heat Tubes	Width	Length	Weight
20 tube panel	1650mm	1950mm	60kg
24 tube panel	2000mm	1950mm	70kg
30 tube panel	2450mm	1950mm	85kg



nz solar

New Zealand

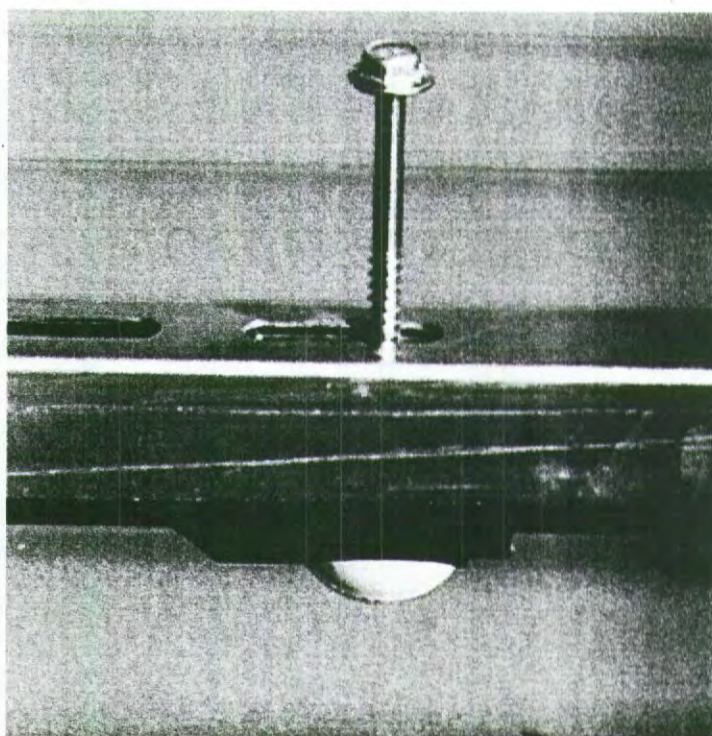
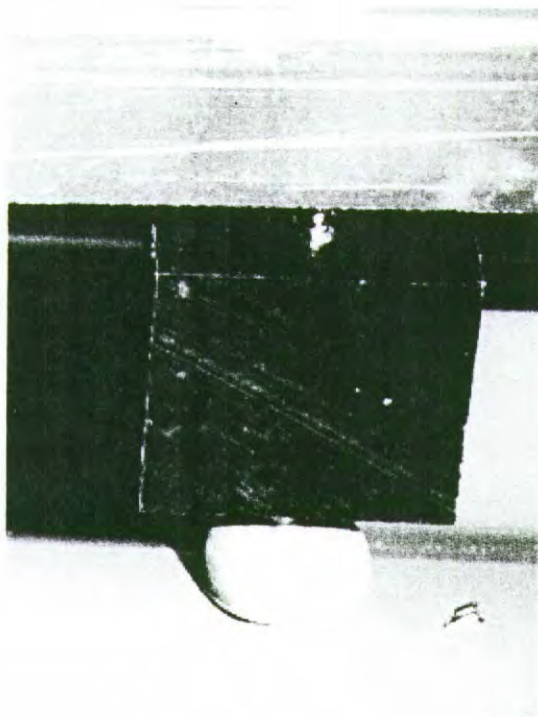
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Collector Mounting

The collector is mounted by using the stainless steel bolts, rubber domed washer and the black plastic spacers (which are UV resistant) provided. (see Figure 7)

Depending on the type of roof Unistrut or some type of additional mounting brackets may be necessary (this can be supplied as an extra cost)

Make sure clear silicon sealer is used round head of bolt and where domed washer meets roof



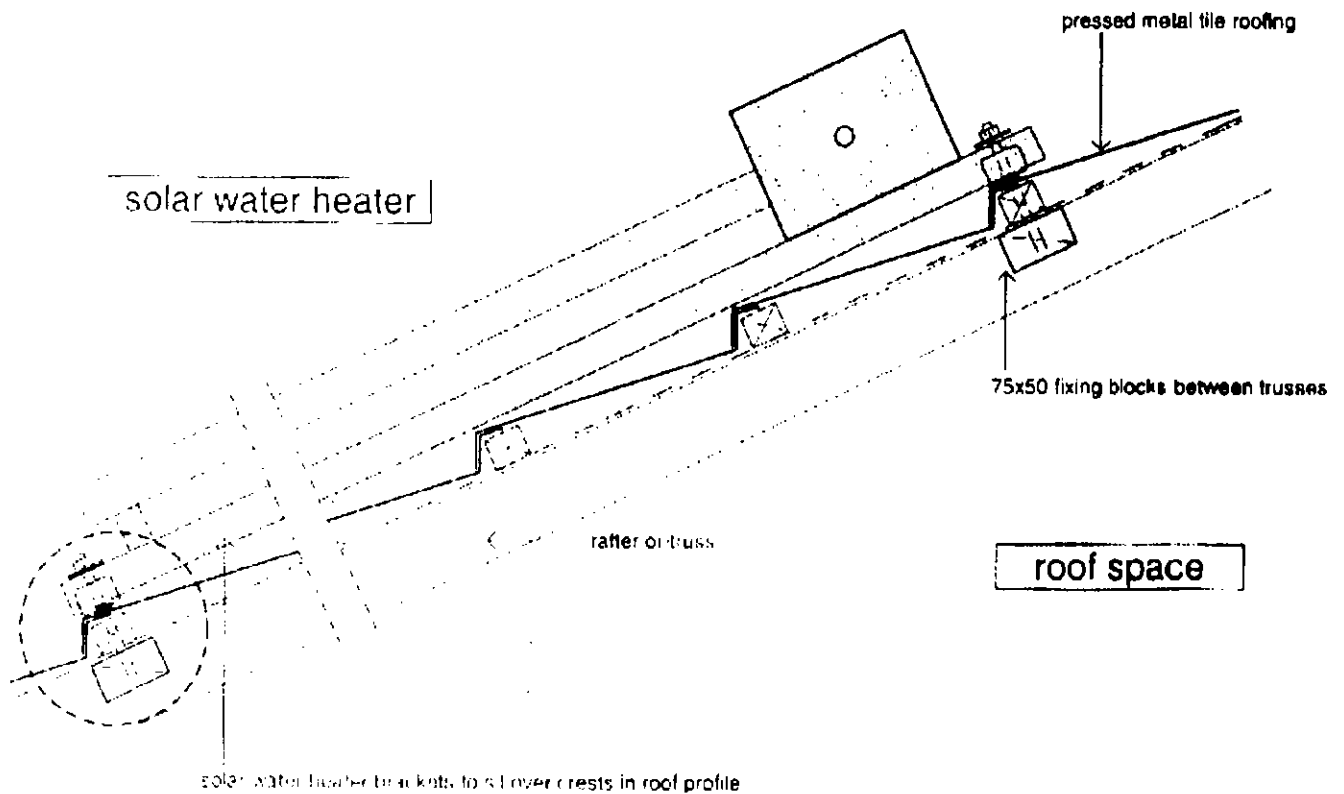
Use stainless steel bolt, plastic spacer block and rubber domed washer supplied
(Space Block are made from UV Resistant material) Make sure you have fixing under roof



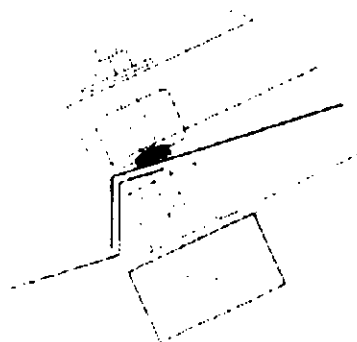
NZsolar
New Zealand

04470

NZ Solar
solar water heater fixing detail
1:10



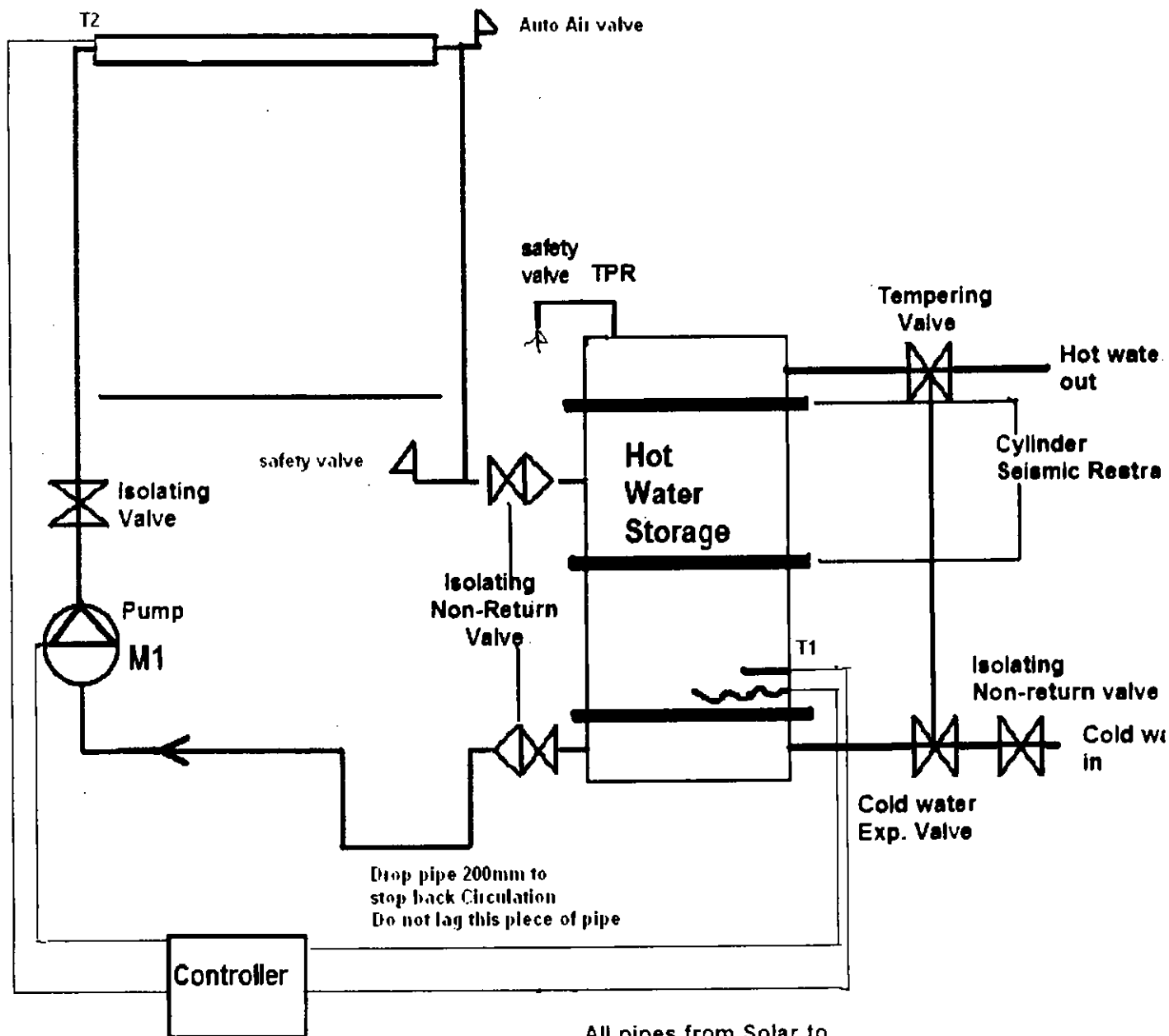
Feed and return pipes to the panels to be sealed
using proprietary synthetic rubber (Dektile) fittings



S & S coach screws through Solar water heater rail on
UV resistant Nylon block on Neoprene washer
through roofing through 75 x 50 fixing block

Weight of Header and 30 Heat Tubes 80KG

Pipe & wiring set out for Mains Pressure



All pipes from Solar to Hot water Cylinder and Hot Pipes round Cylinder to Lagged with Climaflex Lagging

Notes:

- Non Return Valves are Caleffi Ball Stop Valves
- Auto Relief Valve are Caleffi Solar valves
- Auto Air Valve is a Caleffi Solar auto Air Vent
- Pump is a Wilo-Star-Z 25mm
- Isolating Non Return Valve are Apex or similar
- All Installation work to be done to AS/NZS 3500.5:2000 (3.25 to 3.31.4)
- And the electric supply to comply with AS 3000 and with NZECPs
- Roof fixing to be as per NZ Solar roof fixing details
- Pipe work to and from Cylinder to be in copper pipe

Manwatu ITM (Truss Plant)

Producer Statement : Page 1

Job: A71097

Client: Lyndon Currie
Phone:

Site: L.C. Builders Ltd.
29 La Lene Grove

Description: A71097

Building Consent No:

MITek 20/20 - Engineering 44 Gormerai St (Suite 1307-61)

MITek New Zealand Ltd

Palmerston North

Phone:

Printed: 13/03/2019 10:02

04470

PRODUCER STATEMENT MITek 20/20™ TRUSS DESIGN PROGRAM

Certification of MITek 20/20™ Truss Design Program

The MITek 20/20™ truss design program has been developed by MITek New Zealand Ltd for the design of GANG-NAIL timber roof, floor and attic trusses in New Zealand. The truss designs computed by this program are prepared using sound and widely accepted engineering principles, and in accordance with NZS 4203, NZS 3603 and NZS 3604 as verification methods and acceptable solutions of the approved documents of the New Zealand Building Code to satisfy the requirements of the Building Regulations 1992: Clause B1 - Structure. This computer design for the proposed building complies with the relevant provisions of the NZ Building Code. This is subject to all proprietary products meeting their performance specification requirements, the provision of adequate bracing, fixings and the correct input of design data carried out by suitably trained personnel.

Summary of MITek 20/20™ Truss Design Data and Output

The MITek 20/20™ computer design output for this job titled and located at the site identified on the top of this page is based on the following parameters entered into the program. The owner must ensure that the following job details below are current and relevant to the project before fabrication and erection of the GANG-NAIL trusses.

Job Details

Roof Truss

Timber Group: ddf msg10 x45

Roof

Material: Light
Dead Load: 0.250 kPa
Restraints: 1200 mm centres
Live Load: Q_{ur} = 0.250 kPa
Q_c = 1.000 kN

Pitch: 25.000 deg

Celling

Material: G1b Board 12mm
Dead Load: 0.200 kPa
Restraints: 600 mm centres

Std Overhang: 600 mm

Wind

Area: High (44.0 m/s)
Pressure Coeff: C_{pe} = varies; C_{pi} = -0.30, 0.20

These trusses must be fabricated and erected in accordance with the GANG-NAIL manual. Proper erection bracing must be installed to hold the components true and plumb and in a safe condition until permanent bracing is fixed. All permanent bracing and fixing must be installed before any loads are applied. The specifications for timber shall be as shown on the output. The timber shall be standard gauged and treated to the requirements of NZS 3640:2003. Unless otherwise noted, this design assumes that the steel fixings and timber connections are situated in a closed environment, as defined by NZS3604:1990 Section 4.

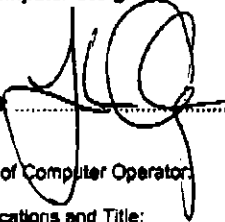
Truss List

Legend: * = detail only, ? = input only, — = failed design, Unmarked trusses = designed successfully, LB = lateral bracing required

Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)
?ET01	1	4590	25.000	900	J01B	1	2572	25.000	900	*HB02	1	4463	18.249	900
HT01	1	5600	25.000	900	J02	1	1672	25.000	900	*R01	1	1386	25.000	900
HTG01	1	5600	25.000	900	J02A	1	1672	25.000	900	*R01A	1	1386	25.000	900
T01	1	5190	25.000	900	J02B	1	1672	25.000	900	*R01B	1	1386	25.000	900
T01A	1	5190	25.000	900	J02C	1	1673	25.000	900	*R02	3	913	25.000	900
T02	1	5600	25.000	900	J02D	1	1673	25.000	900	*R02A	3	913	25.000	900
T03	1	5600	25.000	900	J02E	1	1673	25.000	900	*R03	1	855	25.000	757
CT01	4	5000	25.000	795	J02F	1	1672	25.000	900	*R04	1	1755	25.000	757
J01	1	2572	25.000	900	J03	3	1673	25.000	757	*R05	1	2550	25.000	757
J01A	1	2572	25.000	900	*HB01	2	4467	18.249	900	*R06	1	5190	25.000	900

Total quantity : 40

The computer design input has been carried out by:

Signed: 

Date: 24-10-07

Name of Computer Operator:

J. CLOUGH
T.E.

Qualifications and Title:

Company:

Manwatu ITM (Truss Plant)



Verification / Acceptance of Input Data:

I have checked the input data against the construction drawings and specifications and verify that they are correct and suitable for this job.

Signed:

Date:

Name:

Company:

04470

06 349 1840



MANAWATU BUILDING SERVICES

Site Address:

L.C. Builders Ltd.
28 La Lena Grove
Palmerston North

Drawn By:

For Building Consent
Building Truss Layout

Date:

24 Oct 2007

Scale:

1:100

Drawn:

Standard

System:

MITEK 3220

Roof Pitch:

25.0 Deg

Roof Material:

Light

Ceiling Material:

Gib Board

Wind Zone:

High

Roof Snow Load:

0.000 kPa

Truss Centre:

900 mm

Roof Live Load:

0.250 kPa

Floor Live Load:

1.5 kPa

Wind Speed:

44 m/s

MITEK logo

MITEK

Sheet:

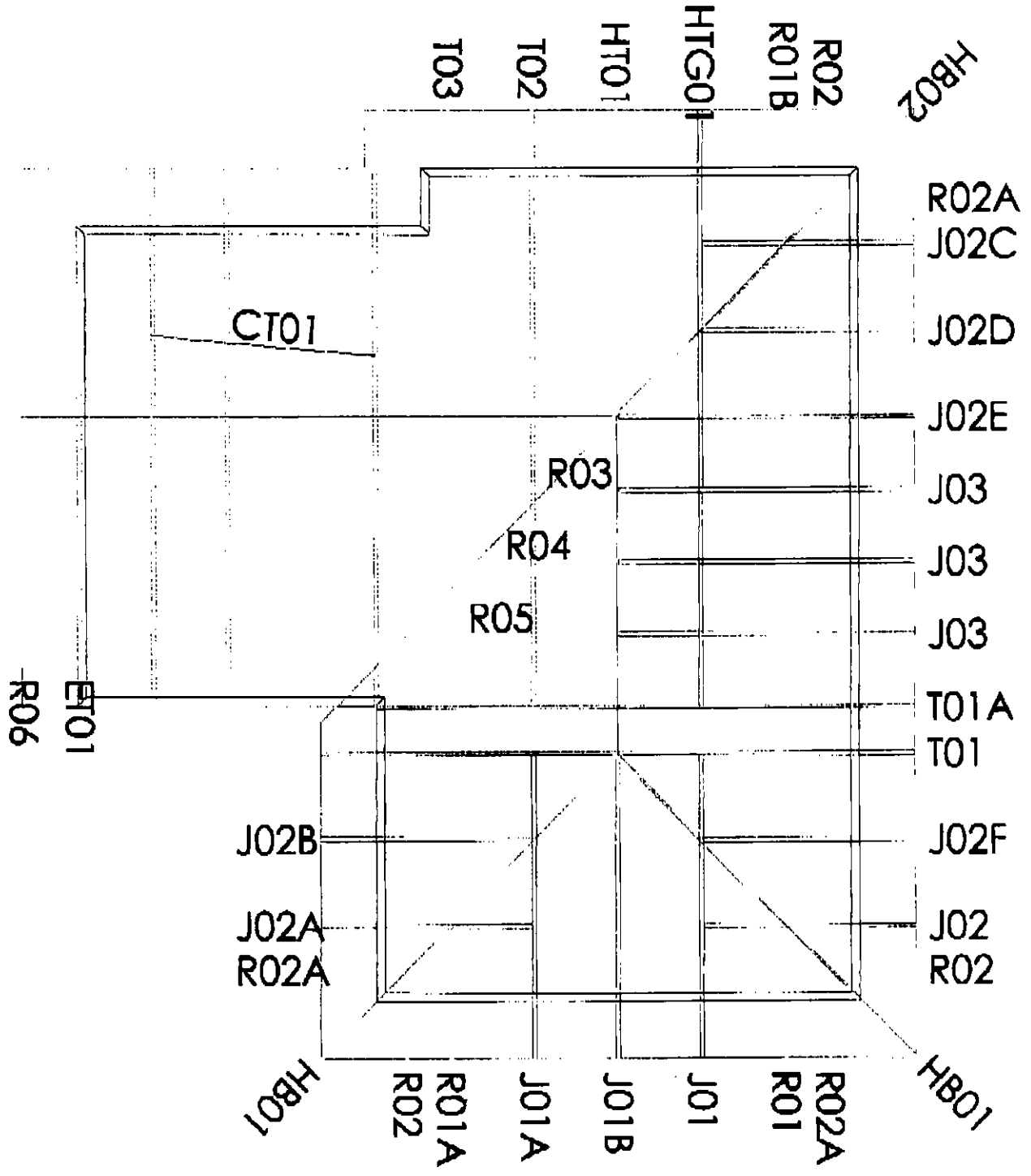
1

Drawn:

A71097

Drawn:

1



**HOUSE ADDITIONS FOR
MR DURBIN & MS WESTLEY
PALMERSTON NORTH**

SPECIFICATION

OF WORK TO BE DONE

AND

MATERIALS TO BE SUPPLIED

IN CONNECTION WITH

A

HOUSE ADDITIONS

FOR

MR M DURBIN & MS J WESTLEY

AT

PALMERSTON NORTH

INDEX

TRADE SUMMARY

PR	PRELIMINARIES	Page 1 - 6
AD	ALTERATIONS AND DEMOLITIONS	Page 7
CA	CARPENTER	Page 8 - 16
RO	ROOFER	Page 17 - 19
MR	MEMBRANE DECK	Page 20 - 21
PLU	PLUMBER & DRAINLAYER	Page 22 - 24
EL	ELECTRICIAN	Page 25 - 28
MW	METAL WINDOW MANUFACTURER	Page 29 - 31
GL	GLAZIER	Page 32
SP	SOLID PLASTERER	Page 33 - 34
PA	PAINTER	Page 35 - 37
TL	TILER	Page 38 - 40
	SLIP RESISTANCE SCHEDULE	Page 41

TRADE SUMMARY

PROJECT: HOUSE ADDITIONS FOR MR M DURBIN & MS J WESTLEY

CONTRACTOR:

Preliminaries	\$.....
Demolitions	\$.....
Structural Steel Worker	\$.....
Carpenter	\$.....
Roofer	\$.....
Membrane Deck	\$.....
Plumber & Drainlayer	\$.....
Electrician	\$.....
Metal Window Manufacturer	\$.....
Glazier	\$.....
Solid Plasterer	\$.....
Painter	\$.....
Tiler	\$.....
Monetary Allowances	\$.....
Total Tender Price (exclusive of GST)	\$.....

PRELIMINARIES**PR 01 PRELIMINARIES**

The employers are Mr M Durbin and Ms J Westley.

PR 02 SITE

The site is at 29 La Lena Grove, Palmerston North. All contracting parties are advised to visit and inspect the site prior to tendering as no claims will be allowed on the basis of ignorance of conditions under which the work will be executed.

PR 03 EXTENT OF WORK

The work consists of the supply of labour and all materials not specified to be supplied by the Employer, together with services for the house additions as drawn and specified leaving the same complete and ready for occupation.

PR 04 ACTS AND REGULATIONS

Comply with the N.Z. Building Act 2004 and all relevant Acts and Regulations pertaining thereto.

PR 05 BUILDING CONSENTS

The Employer will obtain all required building consents and pay all fees in relation to this contract.

PR 06 CODE COMPLIANCE CERTIFICATE

The Main Contractor shall arrange for the issuing of the Code Compliance Certificate once the final completion inspection has been carried out and prior to presenting the Employer with the final progress payment claim.

PR 07 SITE INSPECTIONS

The Main Contractor shall liaise with the Local Authority Building Inspectors with respect to site inspections to be carried out as required.

PR 08 STANDARD OF WORK

Workmanship shall conform to good trade practice and the relevant codes of practice and only competent workers shall be employed. The Contractor shall attend on, cut away for and make good after all trades.

Unless otherwise stated in the contract documents, the Contractor shall supply all labour, materials, services, equipment and plant required for the proper execution of the works. Defective work, materials and fittings shall be replaced at the Contractor's expense.

PR 09 MATERIALS AND FITTINGS

Unless otherwise provided in the contract documents, all materials and fittings shall be new and of normal size and pattern suitable for their purpose, complying with the relevant by-laws and NZ Standards.

All materials and fittings **MUST BE THE BRANDS SPECIFIED**. Substitution of materials or fittings shall be made only with the written authority of the Employer or his agent.

PR 10 TRADE SECTIONS

This specification has been divided into Trade Sections for convenient reference only and it shall not be construed that each trade section is a complete and separate contract.

All Sub-contractors must refer to the Preliminaries section of this Specification, which is equally binding on all trades.

Whilst reasonable care has been taken to classify relevant items under each trade no claims will be admitted from sub-contractors for work not specifically mentioned in a trade section, but which is provided for either expressly or implied elsewhere in the specification or shown on the drawings.

PR 11 GUARANTEES

Whenever required under the Trade Sections or otherwise by this Specification the Contractor shall provide written guarantees for the conditions and periods stated. Where the contract fails to specify the terms of the guarantee those terms shall be to the effect that the material or process shall withstand undue deterioration and perform the service intended.

At the Employer's request the Guarantor shall remedy any fault or deterioration to the standard required by this contract. If the Contractor fails to provide the required guarantee before certified completion he shall still be liable to the terms of this clause.

PR 12 WEATHER & WATER TIGHTNESS

A guarantee is required from the Contractor for a minimum period of 2 years covering the weather tightness of the additions and affected existing structure and the water tightness of all liquid supply and disposal systems and fittings to the extent of work undertaken.

This general guarantee is in addition to any specific guarantees required. Failure to provide the guarantee will not reduce liability under the terms of the guarantee called for in that specified section of work.

PR 13 MONETARY ALLOWANCES

Allow the following Provisional Sums in the contract price.

Wardrobe System	\$ 1,200.00
Balustrade	\$ 2,500.00
Tiles (supply only)	\$ 65.00 per M ²

PR 14 EMPLOYER SUPPLIED ITEMS

The Employer will arrange for all flooring in the contract (except tiles for en suite) plus the following listed items.

Hardware

- a) Door locks and latches including furniture
- b) Towel Rail
- c) Mirror
- d) Door Stops

Plumbing items

- a) all taps including shower rose and mixing valves
- b) portable sauna
- c) vanity unit
- d) Hot water cylinder

Electrical Fittings

- a) All light fittings
- b) Heated Towel rail

Installation of all Hardware, Plumbing and Electrical fittings will be the responsibility of the respective sub-trades and will be included in their tender submission.

PR 15 CONDITIONS OF CONTRACT

The work shall be carried out as set out in the contract documents consisting of the Drawings and Specifications prepared by and for Bruce Barry Architects Ltd.

PR 16 INSURANCE

The Main Contractor shall take out Insurance's against fire, theft, miscellaneous risks, public liability and claims for personal injury or death, and damage to property.

The policy shall cover all Employer supplied fixtures and fittings delivered to the site during the construction period and shall remain in place until completion of the contract.

The Main Contractor shall submit the above Insurance documents to the Employer for verification prior to the commencement of the contract.

PR 17 SCAFFOLDING

The Main Contractor shall supply all scaffolding for all sub trades. All scaffolding erected for the work is to be in strict accordance with the Scaffolding Act and with OSH requirements.

PR 18 CONTRACT COMMENCEMENT AND COMPLETION

The Contractor is required to commence work within a reasonably short time of acceptance of a tender. The Contractor must submit an estimated completion date with his tender and endeavour to complete all contract works within this time frame.

PR 19 SANITARY CONVENIENCES

The Main Contractor shall arrange with the Employer for the use of existing toilet facilities for the duration of the contract. Maintain in a clean and hygienic condition throughout the contract.

PR 20 CLEANING

All contracting parties are required to clean up after the completion of their respective works and remove all waste materials and the like from the building site. All glass shall have stickers removed and all surfaces within the house thoroughly cleaned before completion of the contract and possession by the Employer.

PR 21 AMBIGUITIES

Should there be any ambiguity or doubt as to the meaning of any portion of the drawings or specifications, the contracting parties shall submit written particulars of such items with their tender so that any adjustments may be made before acceptance of a Tender.

PR 22 DIMENSIONS

The Contractor shall be responsible for checking all dimensions and any discrepancies referred to the Architect, before commencing work.

PR 23 PROTECTION

Allow for the protection of any finished surfaces by other trades. Immediately report and make good any damage that may occur.

PR 24 INFERIOR WORKS

The Employer may suspend any work that is not up to standard. The Contractor concerned shall rectify such works within 10 days of notice of defect. If this work is not carried out within the stipulated time, the Employer has the right to suspend the persons involved and nominate another Contractor to complete the works and deduct the costs from the original contract.

PR 25 DEFECTS LIABILITY PERIOD

The Defects Liability period shall apply for eight (8) weeks after reaching the stage of Practical Completion. The Employer shall notify the Contractor of any defects during this period. Remedial work shall be carried out within ten (10) working days of receipt of notice or at such times as will avoid unnecessary inconvenience to the Occupiers. The costs of such remedial works shall be borne by the Contractor.

PR 26 PROGRESS PAYMENTS AND RETENTIONS

The Contractor shall prepare and submit monthly progress payment claims to the Employer for payment.

The Employer shall deduct from the progress payments a performance defects liability retention of 10% of the claim. 60% of this retention will be released at practical completion and the remainder on completion of the 8 weeks defects liability period.

PR 27 MARKET FLUCTUATIONS

This contract shall be a fixed lump sum price contract without market fluctuations.

PR 28 VARIATIONS

The Employer shall be entitled to direct the Contractor to carry out Variations. No variation shall vitiate the contract. Variations will not be issued for extra work unless such work is clearly outside the spirit and meaning of the Contract documents.

Any cost implications arising as a result of an approved variation must be presented to the Employer in writing prior to undertaking such variations. No variations to the contract shall be carried out without the consent of the Employer or his agent.

PR 29 LEVELS

The Contractor must verify all levels with the Employer before any framework is set out and before any concrete is poured.

PR 30 HEALTH AND SAFETY ACT

Tenderers are required to submit a health and safety plan identifying but not limited to :

- Company's safety policy
- Company's safety training procedures
- Company's recent safety record
- Site safety management organisation
- Procedure for identifying and assessing hazards
- Procedure for recording of accidents
- Procedure for dealing with emergencies that may arise while employees are at work
- Procedure for monitoring health and safety performance.
- Procedure for monitoring the health of employees where they are exposed to hazards.

For the period between having access to the site and the issue of the Maintenance Certificate the Contractor agrees with the Employer to diligently fulfil his/her obligations under the Health and Safety in Employment Act. The Contractor will comply with the reasonable requests and site requirements of the Employer during the currency of the contract.

ALTERATIONS & DEMOLITIONS

Refer to Preliminaries section of this Specification, which is equally binding on all trades.

AD 01 SCOPE

The work of this trade is for the demolition and removal of existing structures, materials, fittings, services etc all as shown on the drawings, as further specified or as necessary to complete the contract. All fittings and materials requiring demolition are to be removed from the site and disposed of by the Contractor.

AD 02 EXTENT OF WORK

The summary and existing floor plans plus modified floor plans on Sheets 2 and 3 describes the extent of work but cannot be considered as a complete or comprehensive record of all work required. It is the Contractor's responsibility to ensure all work required is undertaken within the accepted tender price, whether on the contract drawings, or otherwise necessary to complete the contract.

The Contractor should note that the work required under this trade may be an integral part of his/her own work, and should allow for such in the Tender price. Refer to the Carpenter, Joiner, Roofer, Plumber and Electrician sections of this Specification.

AD 03 PROTECTION

Take adequate precautions during demolition to protect all existing linings and fittings not to be demolished and materials or fittings to be relocated, reused or retained in possession of the Employer. Make good at Contractor's own expense any damage caused during demolition work. In making good, the finish shall not be less than the condition of the finish to the adjoining existing work. Protect the work of other trades and take adequate precautions to maintain the structural integrity of the building where removals affect the structure.

AD 04 EXISTING SERVICES

The Contractor shall ascertain the location of all underground and/or overhead services that require any protection, and any damage to services will be made good at the Contractor's own expense. The location of the services on the contract drawings is to be considered as a guide only and no responsibility is to be attributed to the Employer or the Architect should such information be inaccurate or incomplete.

AD 05 COMPLETION

At completion remove all rubbish and debris resulting from the demolition works from the site.

CARPENTER

Refer to the Preliminaries section of this Specification, which is equally binding on all trades.

CA 01 SCOPE

This section includes the supply of all materials and labour, nails and general fixings, all plant and scaffolding plus all materials as further specified or shown on drawings.

CA 02 STANDARDS

The following standards shall apply unless stated otherwise in this Specification:

NZS 3601:1973	Timber Metric dimensions.
NZS 3602:2003	Code of Practice for Specifying Timber and Wood Based Products.
NZS 3603:1993	Timber Design Code.
NZS 3604:1999	Incorporating Amendments 1 & 2 Code of Practice for Light Timber Framed Buildings not requiring Specific Designs.
NZS 1491:1995	Finger Jointed Timber
AS/NZS 4364:2007	Timber Bonding Performance of Structural Adhesives
NZS 3617:1979	Profiles of Weatherboards.
NZS 3631:1988	National Timber Grading Rules.
NZS 3640:2003	Minimum Requirements of the NZPTA Council.
NZS 4203:1992	Code of Practice for General Structural Design and Design Loadings for Buildings.
NZ Building Act 2004	

CA 03 TIMBER

Timber species, grades and quality shall comply with the requirements and recommendations of the above standards where appropriate, unless otherwise stated.

Timber sizes shall be nominal call sizes unless specified as finished size (abbreviation :fin). Framing timbers shall be gauged to width and thickness. Exposed timbers shall generally have band saw finish.

Moisture content of framing timber shall be maximum 16% before fixing internal linings. Moisture content of external finishing timbers shall be 18% and internal finishing timbers 12%.

All timber shall be treated in accordance with the Timber Preservation Council specification. The degree and type of treatment shall be appropriate to the end use of the timber as recommended by the T.P.C.

Finger jointed timbers used externally shall be primed before delivery to site.

CA 04 SCHEDULE OF TIMBERS

BUILDING ELEMENT	TREATMENT LEVELS
Posts in ground	G8 Grade <i>Pinus radiata</i> H5 treated.
Exterior wall framing	MSG 6 Grade <i>Pinus radiata</i> H1.2 treated.
Roof Framing, Trusses, Ceiling joists, Interior wall framing including bottom plates	MSG 8 Grade <i>Pinus radiata</i> H1.1 treated.
Plywood deck sarking	Cp-D Grade Construction Ply H3 treated.
Hybeams, Lintels, Cavity battens, Deck joists, Balcony framing	MSG 8 Grade <i>Pinus radiata</i> H3.1 treated
Interior finishing timbers	VSG 8 Grade dry finger jointed <i>Pinus radiata</i>
Unroofed decking, Framing supporting decks & balconies.	VSG 8 Grade H3.2 treated <i>Pinus radiata</i>

Use dry timber with the following moisture content:

<u>Category</u>	<u>M.C.Spec</u>	<u>90% of pieces</u>	<u>Extreme M.C.</u>
Framing	16%	14% - 18%	13% - 19%
Exterior joinery and finishings	17%	14% - 18%	13% - 19%
Interior joinery and Finishings, plywood	10%	8% - 12%	7% - 13%

The Contractor shall replace, at his own expense, any timber that shrinks or is damaged in finished work, caused through the use of imperfectly seasoned timber.

CA 05 CONCRETE

Provide new 75mm thick and 200mm thick around the perimeter concrete paving slab where shown on the foundation plan sheet 1. Provide ex 150x150 H5 treated laminated timber post set in concrete pad as shown detailed on sheet 1.

CA 06 STRUCTURAL STEEL

Provide structural steel beams where shown drawn on the floor joist plan sheet 7 and in strict accordance with the Engineer's details.

CA 07 ATTENDANCE ON OTHER TRADES

Wait on all other trades, cut and bore as they may require and fix all blocks and supports.

CA 08 FIXINGS

Fix, frame, truss, brace, nail, screw, bolt and fit all timber together in a tradesmanlike manner and in accordance with the best trade practice.

Accurately set out, neatly execute and finish all work; make good, or replace to the Architect's satisfaction, all work developing defects.

Use galvanised finishing to all fixings.

Fix all framing with annular threaded flat head nails.

Use brass or stainless steel fixings in all exterior joinery. Use brass screws compatible in style, material and finish to fix hardware supplied. Check that screws supplied with hardware conform to this specification before fixing.

Penetrate second or holding framing timber with nails to half their length. Increase nail lengths by 25% where second timber is Pinus Radiata.

Fix interior finishing timbers, linings, trim, etc. with brads of length three times the thickness of attached material with minimum length 19mm. Neatly punch all exposed nails below surfaces.

Attachments to concrete and blockwork shall be made by means of screws in approved proprietary plugs, or bolts, either built in or engaging in expanding sockets.

Interior wall plates to be fixed to concrete slab using Trubolts unless special fixing is required for bracing.

Cartridge fire fixing may only be used where directed and must not be used for fixing to steel. Fixings securing timber shall have aluminium discs under the head of the pin and shall not be located near the edge of the member. The charge must be adjusted so that the concrete surface around the fixing does not shatter.

CA 09 FINISH

All timber surfaces exposed to view except where elsewhere specified, shall be hand dressed to a smooth even surface. In addition, all doors, windows, interior finishing timbers and joinery fittings shall be hand dressed to a smooth even surface.

Remove all arises, all rough and uneven patches, hammer marks and other surface defects before painting is begun. No stains shall be shown on any timbers that are to have a natural or varnish finish.

Surfaces such as floors and roofs that are to receive a covering of sheet materials shall be brought to an even surface satisfactory for contact of such material.

CA 10 FRAMING

(a) General

Framing shall have all faces gauged to ensure accurate assembly. Where not shown otherwise, cross sections, spacing, lintels and bracing shall comply with NZS 3604.

Fixings to concrete shall be by M12 bolt with 50x50x3 washers built into concrete at 1.4m maximum centres for exterior wall plates and within 300mm of any corner, or by proprietary metal strap fixings built in.

Intermediate wall plates shall be fixed with 12mm Trubolts fixings at 900mm centres. All wall lengths shall have at least 2 fixings.

Fixings to steelwork shall be with bolts, studs or approved proprietary fastenings at not more than 600mm centres. All members shall have at least 2 fixings.

(b) Wall Framing

Frame for timber walls up to 2.7m high with 100x50mm framing at 450mm centres, up to 3.6m high with 100x100 at 450 max centres. Refer to the Wall Framing Plan Sheet 4. Framing shall be set out to suit linings and fittings. Plates shall be in long lengths, halved over supports at joints and at corners. All external angles and intersections shall be blocked and spiked together.

Brace wall panels with Pryde bracing where detailed. Refer Schedule. Fix Braceline Gibraltar board bracing panels where shown in bracing schedule and indicated on plans.

(c) Cavity Construction

To all new wall areas of additions 20mm wide cavity from treated ex 50x25 battens fixed vertically on 100x50 timber framing at 300 centres prior to fixing of Hardibacker cladding and solid plaster finish.

(d) Roof Framing

Construct roof as detailed on plans.

Fix Gangnail trusses at 900mm maximum centres plumb and fixed to framing with framing anchors. Stiffen with runners and brace as required.

Strap ceilings with Rondo metal strapping at 600 max centres set out to suit sheets and in accordance with the specific requirements of Winstones Ltd directions for fixing Gibraltar Board for paint finish.

(e) Floor Framing

Frame for first floor addition areas with PS20-20x09 Posi-struts joists at 400mm max centres blocked at mid span as shown on sheet 9 section b-b and floor joist plan sheet 7. Refer to the new floor joist plan sheet 7 for position of PS25x14 Posi-strut. Securely fix to plates and solid block as drawn and as required by NZS:3604 Clause 5.1.2.3.

CA 11 DAMP PROOFING

Fit Malthoid bitumen d.p.c. between timber and any concrete surfaces.

CA 12 BUILDING PAPER

Allow to supply and install Tyvek Homewrap to exterior wall framing of additions only, in strict accordance with the Manufacturer's instructions. Replace any damaged paper.

CA 13 INSULATION

All insulation products are to be in accordance with the requirements of NZBC Clause H1 Energy Efficiency and installed in strictly to the recommendations of NZS 4246: 2006.

To new ceiling areas supply and install 110mm thick R 2.6 fibreglass batts.

To new external walls supply and install 90mm thick R2.6 fibreglass batts.

CA 14 EXTERIOR WALL CLADDING

Line wall areas of additions as noted with Hardies Hardibacker sheets. Ensure framing is set out to suit sheets. Fix sheets as per Manufacturer's instructions, and leave ready to take plaster finish by others. Finish corners as detailed. Finish at windows as detailed.

CA 15 SOFFITS

Supply 4.5mm thick Hardisoffit soffit linings for additions and fix on ex 50x50 bearers in accordance with Manufacturer's instructions.

CA 16 DECK

Construct a deck using timber treatments and grades as specified for the Hyspan perimeter beam and deck framing and plywood, outside the new Master Bedroom where shown on the modified first floor plan as detailed on sheet 10 of the drawings. The Membrane applicator will provide and install the deck outlet as detailed.

Refer to Monetary Allowances for the PC sum of \$2,500 for supply and installation of selected wrought iron balustrade.

Plywood for the deck shall be 18mm thick H3 treated CD grade construction plywood complying with NZS 3614 Construction Plywoods; AS 2269 Structural Plywood and AS 2271 Exterior Plywood. Sheets shall be branded on back with Manufacturer's logo detailing grade, NZ standard, glueline treatment, glueline type and grade. Store, handle and fix plywood in accordance with Manufacturer's instructions taking care not to damage edges or corners.

Liaise with membrane applicator and lay sheets in areas that can be covered the same day. Plywood must not be left exposed to weather after fixing. Provide temporary covers as necessary. Where there is likelihood of plywood getting wet before membrane is laid tape all joints with approved tape and prime top surface of sheets with Nuraflux. Any plywood that has been exposed to weather shall be dried by approved methods to a moisture content of 15% at time of fixing of roofing. Provide moisture meter permanently on site to check moisture content.

Lay in maximum sized sheets with face grain at right angles to framing. Sheets shall be continuous over two or more spans. Lay in brick bond pattern with tight butt joints. All joints shall be made over framing. Remove all sharp edges and splinters from original and cut edges of sheets.

Fix sheets with 65mm stainless steel screws at 150mm centres around edges of sheets and at 200mm centres at intermediate supports. Stagger screws between sheets ie; nails at joints shall not be opposite each other. Fixings shall be 10mm in from edge of sheet. All screws shall be countersunk flush with plywood surface. Power driven nails may be used provided acceptable design data is obtained from the Manufacturer and that fixing is in accordance with their instructions. Staples are not permitted.

Fit ex 50 x 50 coving fillets at all upstands and junctions.

Fit over plywood where shaped timber battens are shown. Screw fix with hot dipped galvanised countersunk screws at 300mm centres with two screws 50mm apart.

CA 17 FLOORING

Flooring for additions shall be 20mm thick Kopine Ultralock flooring. Fix in large sheets in stretcher bond pattern with close butted joints in accordance with the Manufacturer's instructions.

Fix particle board flooring using glue and screw method. Screws shall be fixed at 150mm centres around edges of sheets and at 200mm centres at intermediate supports. Stagger screws between sheets ie; screws at joints shall not be opposite each other. Fixings shall be 10mm in from edge of sheet. All screws shall be flush with surface. Staples are not permitted.

In addition to the above the Carpenter shall supply and apply Sturdibond glue to edges of all sheets plus all top edges of floor joists.

On completion allow to sand with 40/80 grit paper and leave in a suitable finish for flooring trade.

CA 18 BRACING

See drawings for extent of roof and wall bracing. Supply and install galvanised steel wall and roof bracing.

NOTE: Special fixing requirements for sheet bracing refer to NZS 3604:1999 Incorporating Amendments 1 & 2.

CA 19 INTERIOR WALL LININGS

(a) Schedule of Linings

Line walls of en suite with Villaboard to a height of 1200mm and to ceiling height of the three shower walls.

Line remaining walls of en suite with 10mm Gib Aqualine.

Line all remaining walls of additions with 10mm Standard Grade Gibraltar Board.

Line ceiling of the en suite with 13mm Gib Aqualine.

Line remaining ceilings of additions and make good existing areas affected by the work with 13mm Gib board.

See bracing plan for extent of 10mm Braceline Gibraltar Board.

(b) Gibraltar Board

Fix all Gibraltar Board according to the Manufacturer's instructions using screw fixing to walls and screw and adhesive combination to ceilings.

Fix maximum sheet sizes as small patching of sheets will not be permitted.

Allow to fix perforated metal angle to all external corners.

All Braceline Gibraltar Board shall be fixed as required for sheet bracing by NZS 3604.

(c) Villaboard

Supply 9mm Villaboard wall linings and fix to the framing of all walls for tiling in strict accordance with the Manufacturer's instructions using an approved good quality solvent based adhesive.

CA 20 GIB STOPPING

All stopping shall be carried out under this trade heading by sub contractors skilled in this work and in strict accordance with the Manufacturer's instructions to suit Finish type 4.

The Gib stopper shall supply and fix all metal corner angles, 50mm Gib cove, tape etc using only the tools, methods and suitable compounds specified by the Manufacturer and as recommended for Gib Aqualine and standard grade Gib board.

CA 21 INTERIOR FINISHES

Supply and fix finishing timbers to match existing profiles throughout the house.

Protect and fit plumb and square with all joinery fittings. Finishing timbers shall, whenever possible, be in unjointed lengths between angles and ends of runs. Where running joints are inevitable, splay cut timbers. Mitre external angles and scribe internal angles.

Nails and brads shall be punched below the surface in all finishing work. Fix a 12mm bead at all corner junctions of fittings and walls.

CA 22 FLASHINGS

Liaise with the Metal Window Manufacturer as necessary to fix all new window and door joinery plumb and square and in proper alignment.

The Metal Window Manufacturer shall supply all flashings for heads, jambs and sills for fixing by the Carpenter. The Carpenter will provide all necessary dwangs and backing timber to accommodate flashings.

The roofer will supply and install all flashings associated with the roof except the Velux flashing kit which will be supplied by the Carpenter.

CA 23 VELUX SKYLIGHT

Create a timber framed and lined section in the ceiling of the en suite to accommodate the new ventilating skylight positioned as shown on the floor plan.

Supply one Velux VS606 1140x1180 manually operated skylight including operating rod, flashing kit etc and install into the roof over the en suite ceiling where shown in strict accordance with the Manufacturer's details. Refer to the details on sheet 15 of the drawings.

Liaise as necessary with the Roofer for flashing the skylight as detailed and specified by the Manufacturer ensuring the installation is completely water tight.

CA 24 HARDWARE

Take delivery and install the following hardware supplied by Employer:

- Door locks and latches including furniture
- Towel rail holders
- Cupboard Handles
- Door stops

CA 25 SHELVING

Allow the sum of **ONE THOUSAND TWO HUNDRED DOLLARS (\$1,200)** for the supply and installation of a white melamine faced customwood pre finished wardrobe system for the Master Bedroom as selected by the Employer.

CA 26 JOINERY & DOOR GEAR

See under Hardware clause above for supply by the Employer. The Carpenter shall supply all pre hung doors plus the various door gear units as necessary and fix in their respective locations in strict accordance with the Manufacturer's instructions.

CA 27 VANITY UNIT

The Carpenter shall install the new vanity unit supplied by Employer where directed.

CA 28 PORTABLE SAUNA

The Carpenter shall take possession of a portable sauna supplied by the Employer and install where directed. Liaise with the Electrician for power supply to the sauna.

CA 29 DOOR SILL

Provide a formed stainless steel sill to the Master Bedroom exterior doors.

CA 30 MIRRORS

Allow to install a mirror in the en suite as supplied by the Employer.

CA 31 SHOWER

Frame shower box and line walls to ceiling height with Villaboard. Glue and fix to frame as per Manufacturer's instructions with joints stopped flush for fixing tiles. The Tiler shall provide waterproofing membrane to the shower walls and floor.

CA 32 MISCELLANEOUS

Allow for all labour involved in the construction of miscellaneous items not specifically noted in this Specification but shown on drawings and vice versa.

CA 33 COMPLETION AND CLEARING

The Carpenter shall clear away all debris from his work.

ROOFER

Refer to the Preliminaries section of this Specification, which is equally binding on all trades.

RO 01 SCOPE OF WORK

The Roofer shall provide Gerard roofing tiles to match existing complete with all necessary accessories such as barges, ridges, flashings etc and fix in strict accordance with the Manufacturer's recommendations.

The Roofer shall supply and fix Flamestop 660 fire retardant self supporting underlay and wire netting for the roof areas according to the Manufacturers recommendations.

RO 02 STANDARDS

The following standards shall apply unless otherwise noted in this Specification:

NZS 3604:1999	Incorporating Amendments 1 & 2 Code of Practice for Light Timber Framed Buildings.
NZS: Pt 1	Specification for Roofing Tiles and their Accessories.
Pt 2	Code of Practice for Preparation of the Structure and the Laying & Fixing of Metal Roofing Tiles.

RO 03 MATERIALS

Roofing to be manufactured from galvanized steel to the following specification:

Base Steel	Thickness	=	0.39mm (26 gauge)
	Grade	=	G250
Zinc Coating	Weight	=	300g/m ² (0.98 oz/ft)
	Grade	=	ZM300 Phosphate conversion coat.
Total Substrate	Thickness	=	0.43mm (0.016 inches)

RO 04 WORKMANSHIP

All workmanship to be in accordance with best trade practice by licensed fixers and competent tradesmen fully familiar with local conditions.

Check all dimensions and the state of the fixing surfaces on site before commencing fabrication and report any discrepancies to the General Contractor that will interfere with performance and appearance of this section of the Contract. Ensure framing is set out to suit roofing. Do not proceed with roofing until all discrepancies and inadequacies have been remedied by the Contractor.

Protect all existing work and ensure that all prefinished surfaces are left with no damage of any kind.

It shall be the Sub-Contractor's responsibility to arrange for an inspection of the roof at completion of the work and to arrange with the General Contractor for responsibility for any damage done after this time.

The Contractor will be responsible for any damage or disfigurement to the roofing material occurring during the currency of the Contract.

RO 05 STORAGE & PROTECTION

The Roofer shall store roofing materials on site and take every precaution to protect the roofing from damage, scratches, etc. Any sheet so damaged shall be replaced at the Contractor's expense.

All debris must be removed from the roof surface at the end of each day during construction. Take extra care not to damage the coating when removing sharp fixings.

The Main Contractor will ensure that any workmen from other trades who have cause to be on the roof are wearing only soft soled shoes throughout the currency of the contract.

RO 06 FIXING

Provide ex 50 x 50mm tile battens and set out at centres to suit tile gauge. Fix securely to rafters. Co-operate with the Carpenter in determining the rafter length to finish with a full tile at the top.

Ridges, hips and barges shall be covered with purpose made accessories.

Fix the tiles with standard laps and fixed according to Manufacturer's instructions.

RO 07 FLASHINGS

All flashings associated with the roofing shall be provided and fixed by the Roofer. Liaise with the Carpenter for flashing of the Velux Skylight over the en suite as required to ensure a completely water tight installation.

RO 08 SPOUTING

Provide all spouting for the new roof as required to match existing. Fix gutter to fascia board using proprietary brackets set to fall towards downpipe at 900mm centres using 55mm galvanised spiral shank nails.

Form all stopends, outlets and droppers in the spouting as shown on the drawings.

RO 09 ELECTROLYSIS

Ensure that no dissimilar metals are in electrolytic contact.

RO 10 WARRANTIES

Supply the Employer with the following warranties from the roofing manufacturer on their approved form.

- a) 25 years against perforation due to corrosion
- b) 15 years against excessive fade
- c) 5 year guarantee against faulty workmanship causing leaks etc.

RO 11 COMPLETION

On completion sweep the roof clean and remove all debris from the roof and the site.

MEMBRANE DECK

Refer to Preliminaries section of this Specification which is equally binding on all trades.

MR 01 EXTENT OF WORK

This trade covers the supply and fixing of Bitumat Synroof Hi Build acrylic membrane to the new first floor deck including the deck overflow outlet.

The membrane applicator shall satisfy himself that the details shown on the drawings are appropriate for the roofing product or shall allow in his tender for the additional cost of any amendments to enable them to meet the guarantee requirements. Such amendments shall be submitted to the Architect for his approval before the work proceeds.

MR 02 ACRYLIC MEMBRANE

Membrane shall be Bitumat Synroof Hi Build acrylic membrane supplied in 29kg pails and reinforced as per the Manufacturers recommended system using Chopped Strand fibre approximately 160-300gsm. Pails shall bear the Bitumat mark and be stored in clean, dry and cool location.

Supply colour samples to the Employer for selection prior to ordering any materials.

MR 03 LAYING MEMBRANE DECKING

- (a) The membrane deck shall be fixed by experienced licensed applicators specially skilled in this work using adequate and proper equipment and methods in accordance with best trade practice, this Specification, and recommendations laid down and approved by the Manufacturer of the roofing system.
- (b) The contractor shall satisfy himself that the substrate is in a suitable condition for laying. The substrate shall be tongue and groove 18mm plywood glue and screw fixed and sheets laid in a staggered pattern. All nails punched home, edges chamfered, coving fillets fixed to all upstands, moisture content correct, and free from grit contamination or defects.
- (c) Do not lay membrane in wet or misty conditions or where the threat of rain is imminent or below 7 degrees C. Check substrate is dry (has maximum moisture content of 15%) at time of laying deck.
- (d) Prime substrate and allow to fully dry. Install membrane system as per Manufacturer's recommendations ensuring each coat is fully dry before installing next coat. Reinforce membrane using chopped strand fibre as per Manufacturer's specifications.

MR 04 OVERFLOW OUTLET

Provide and install the overflow outlet in the deck wher shown on the drawings and leave ready for the connection to downpipe.

Downpipes are specified under the Plumbing Section of this Specification. Co-operate with that trade in the application of these items and production of the required guarantee.

MR 05 COMPLETION

On completion of the deck installation carefully and thoroughly clean off and remove all scraps and other rubbish from the finished surface and leave in tidy order with the whole application waterproof and in first class condition.

An inspection of the finished deck is to be carried out with the Main Contractor, who will confirm the surface is free of all defects. Any damage that may occur after this inspection is to be made good at the Main Contractor's expense.

MR 06 GUARANTEE

Provide a guarantees on approved form covering both materials and fixing of the deck for a period of twenty (20) years and ten (10) years respectively from the end of the Maintenance Period.

PLUMBER & DRAINLAYER

Refer to Preliminaries section of this Specification, which is equally binding on all trades.

PLU 01 EXTENT OF WORK

This trade comprises the supply and fixing of flashings, downpipes, wastes and water supply to new hot water cylinder, shower and vanity unit. The following is a list of items supplied by the Employer and fixed by the Plumber:

- (a) existing wc
- (b) all taps including shower roses and mixing valves
- (c) vanity unit

All other plumbing materials including piping, ducting, wastes, traps, vents, stopcocks, valves, etc shall be supplied and fitted by the Plumber.

PLU 02 MATERIALS AND WORKMANSHIP

All work shall be carried out in accordance with the Building Act 2004 and may only be carried out by Craftsman Plumbers in accordance with the requirements of the Plumbers Gasfitters & Drainlayers Act 1976.

All materials shall be the best of their respective kinds. Water pipes and tubes shall be set out in straight runs of even gradients, avoiding all places where air locks are likely to occur.

Use easy bends and unless unavoidable, elbow fittings are not to be used. Copper tubing is to be secured in position by copper straps. All piping including water waste and vents shall be concealed unless specifically shown otherwise.

All piping to be selected Aquatherm Fusiotherm polypropylene PP-R 80.

Refer to AS/NZS 3879:2006 Solvent cements & priming fluids for PVC (PVC-U & PVC-M) & ABS pipes & fittings.

PLU 03 ELECTROLYSIS

Ensure that no dissimilar metals are in electrolytic contact.

PLU 04 WASTES AND TRAPS

All fittings are to be fitted with traps of regulation size of white PVC. Waste pipes shall be of unplasticised PVC. Where concealed in concrete, wrap in denso tape.

PLU 05 VENT PIPES

Vent pipes shall be provided by the Plumber and be Class S unplasticised PVC pipes. Vent pipe sizes shall be as required by the Building Act 2004.

Provide terminal vent where drawn. Penetrate the eaves and ring flash, cone flash and fit grille.

PLU 06 FLASHINGS

Fabricate and neatly fit all flashings as shown and as necessary to render the whole of the building water proof. Flashings shall be long lengths, neatly folded to profile with all raw edges folded under and welded. Fit straight and true with running joints lapped 150mm and sealed with silicone before pop riveting together.

NOTE: All other flashings associated with the roofing shall be supplied and fixed by the Roofer. Flashings to Aluminium window heads, jambs and sills shall be provided by the Metal Window Contractor and installed by the Carpenter.

PLU 07 HOT & COLD WATER SUPPLY

Extend existing water supplies to new fittings. Run supplies through 20mm Aquatherm Fusiotherm polypropylene PP-R 80 water pipes from Toby valve to DIN 8077 and DIN 8078 standards including all fusion welded fittings and accessories brand matched. Pipe shall be bedded, jointed and backfilled to full compliance with the Manufacturer's instructions.

A minimum of 300mm cover shall be maintained over all pipes and particular attention must be given to the bedding, side filling and backfilling of pipe trench.

Run supply through 15mm final branches to the following fittings.

Vanity hand basins
W.C. Cisterns
Shower

Run individual water supply to shower outlet.

PLU 08 HOT WATER CYLINDER

Allow to remove existing hot water cylinder and replace with new mains pressure water cylinder supplied by the Employer.

Liaise with the Electrician for wiring in cylinder.

PLU 09 VANITY HAND BASINS

Connect to water supplies and waste.

PLU 10 SHOWER

Connect water supplies to mixer and rose. Connect shower to waste.

Supply D101STILE Smartile into Smartwaste and install in base of tiled shower in strict accordance with the Manufacturer's instructions.

PLU 11 DOWNPIPES

Provide and fix 80mm dia downpipes to match existing. Fix pipes with straps to wall cladding as appropriate. Connect to stormwater drains.

Ensure that provision is made at foundation line where necessary to avoid offsets at that level.

PLU 12 OVERFLOW OUTLET

Connect up the deck overflow outlet supplied and installed into the deck by the membrane applicator. The top of the outlet shall be set at least 50mm below the top of the gutter. The cross-sectional area of the outlet shall be no less than the cross-sectional area of the downpipes serving the gutter.

PLU 13 COMPLETION

At completion of all work leave the plumbing system in perfect operating condition with all valves and cocks operating smoothly and with no leaks or drips. Leave all flashings thoroughly watertight and neatly finished. Remedy any leaks after complete testing of all pipework wastes and vents.

ELECTRICIAN

Refer to Preliminaries section of this Specification, which is equally binding on all trades.

EL 01 SCOPE OF WORK

The work in this section comprises the connecting up of the power supply, fitting of main switchboard, and wiring up of all new fittings plus installation of Smoke Alarms.

EL 02 STANDARDS

Documents referred to in this section include:

- Regulations
- Relevant Statutes
- NZ Interference
- Regulations, the Radio Interference Notice 1985

Regulations and Standards shall include all the relevant local territorial authority regulations and legal requirement for the work and the standards stated therein.

UNZ Wiring Regulations	1976 and all subsequent amendments
NZS 3019	
AS/NZS 3000:2000	
AS/NZS 3012	Systems for Construction & Demolition Sites
NZS 6401:2003	
AS 1997	Smoke Alarms
The NZ Building Act 2004	

EL 03 MATERIALS

All materials shall be of the best quality and of approved manufacture complying with the relevant N.Z. Standards.

EL 04 WORKMANSHIP

Registered Electricians shall carry out all work according to sound trade practice and shall cooperate with other trades as required.

EL 05 PERMITS

Notify the Supply Authority of the installation and obtain permission in writing before proceeding with any work. Pay all necessary permit fees and arrange all inspections.

EL 06 MAIN CABLE

Allow to inspect the existing switchboard and confirm that capacity is sufficient to accommodate all new work plus an extra 20% above the calculated loading allowing for any modifications to accommodate the above requirements.

EL 07 MINIATURE CIRCUIT BREAKER

Miniature circuit breakers shall conform to the following standards;

NZS 1279
AS/NZS 3000:2000
AS 3190
IEC60898
AS/NZS 60079:2000
IEC61009

Supply and install the appropriate circuit breakers as required.

EL 08 SMOKE ALARMS

Supply and install battery powered Smoke Alarms where shown on the modified floor plan. Smoke Alarms shall be tested or approved by a recognised national authority as complying with at least one of:

- UL 217
- CAN/ULC S531
- AS 3786
- BS 5446 Part 1

Alarms shall provide a hush facility with a minimum duration of 60 seconds and shall have a test facility readily accessible by the building occupants. Alarms shall be installed on or near the ceiling in accordance with AS 1670.6 and the Manufacturer's instructions.

EL 09 FITTINGS

Switches and socket outlets shall be flush type and match existing throughout the house.

Plugs shall be fitted direct to the outlet boxes. All socket outlets shall be double horizontal fittings. Sockets shall be mounted 300mm above floor generally and 200mm above bench tops.

For the purpose of tendering allow for the following schedule of outlets. Exact numbers and locations of outlets shall only be determined on site in consultation with the Employer, and cost adjustments made against the following schedule.

Master Bedroom

Recessed light fittings	6
Wall Mounted	2
Double power outlets	3
TV Outlet	1
Telephone jack	1

Wardrobe

Recessed light fittings	3
Single power outlet (for Sauna)	1

En suite

Recessed light fittings	3
Wall mounted light fitting	1
Power outlets (FRCD)	2
Heated Towel Rails	1

Hallway

Recessed light fittings	3
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Exterior Deck Lighting

Wall mounted light fittings	1
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EL 10 CIRCUITS

Wire outlets through 10 amp MCB's with maximum 10 lights per circuit.

Wire socket outlets through 15 amp MCB's with maximum 5 sockets per circuit.

EL 11 LIGHT FITTINGS

All light fittings will be selected by the Employer. The Electrician shall allow to install all fittings.

EL 12 BATHROOM POWER OUTLETS

Provide and install two PDL 591FRCD-30 single switched sockets in the en suite, one on either side of the vanity unit, where directed by the Employer.

EL 13 HEATED TOWEL RAIL

Allow to permanently wire in one heated towel rail where directed on site.

EL 14 MIRROR DEMISTER

Allow to supply one Hot Wire Mirror Demister to en suite. Size of demister to be determined by the size of the mirror. Take power feed from light circuit exiting the wall where the mirror is mounted.

Supply and fix a sponge tape backing with a 3mm clearance from the wall to allow air circulation. Staple or fix heater to the wall ensuring it is completely flat. Line up the power feed with the heater cold tail so the connection does not protrude from the wall.

DO NOT SCREW THROUGH THE HEATER AND ALLOW FOR EVEN CLEARANCE FROM THE WALL.

EL 15 UNDERTILE HEATING

Liaise with the Tiler and provide electrical supply to the thermostat for undertile heating.

EL 16 TELEPHONES

Allow for wiring to 1 jack point in the Master Bedroom where directed on site by the Employer.

EL 17 TELEVISION AERIAL

Allow to wire in one television outlet in the Master Bedroom where directed on site.

EL 18 HOT WATER CYLINDER

Liaise with the Plumber for disconnection of existing hot water cylinder and connection of the new mains pressure hot water cylinder to power supply.

EL 19 COMPLETION

At completion thoroughly check all work and arrange for test. Transfer name or user from Contractor to Owner only after tests have been completed to the entire satisfaction of the Supply Authority's Inspector.

METAL WINDOW MANUFACTURER

Refer to the Preliminaries section of this Specification which is equally binding on all trades.

MW 01 SCOPE OF WORK

This section includes the fabrication of all new external powder coated aluminium windows and doors complete with all necessary jamb liners, heads, Colorsteel flashings, hardware and fixings in compliance with NZS 3504

MW 02 STANDARDS

The following standards shall apply unless otherwise noted in this Specification:

NZS 3504 : 1979	Aluminium Extrusion Design
AS 3715/BS 6496	Surface Finish - Powdercoating
NZS/AS 1231	Surface Finish - Anodising
NZS 4211 : 1985	Specification for Performance of Windows
NZS 4223 : 1999	Code of Practice for Glazing in Buildings
NZS 4233 : 1999	Part 3 – Selection and Installation of Glass in Buildings

MW 03 MATERIALS

Aluminium sections shall be heavy duty domestic sections of 6063 alloy T5 Temper with 25 micron thick powder coat finish in colour to match existing. The frame section shall include a condensation channel on internal face. Sashes shall be of hollow box sections with clip in security glazing beads.

Jamb linings shall be finished 30mm thick finger jointed Pinus Radiata H1 treated.

MW 04 PERFORMANCE

Frames shall be designed to withstand a wind pressure of 750 Pa and the air leakage performance of level 8. The Manufacturer shall provide a test certificate stating compliance with the above standards. All frames shall have AAA labels stating DWP, Air Leakage Level and the brand name of the window.

MW 05 FABRICATION

Notify Employer of the proposed type of opening windows and associated Hardware to be used prior to fabrication.

Check measure all rough openings on site before assembling frames.

Assemble frames in accordance with good trade practice with tight mitred and screwed corners with silicone sealant behind joint.

Hang sashes on Interlock stays correctly sized for sash weight and the exposure conditions. Fit two double tongued fasteners to each sash.

MW 06 GLAZING

All window glazing to aluminium frames shall be installed by Window Manufacturer and shall comply with NZS 4223 Part 3:1999, refer to the Glazier section of this Specification.

All clear glass shall be ordinary quality with clean undamaged edges and surfaces. Obscure glazing shall be cast glass.

All glazing within 500mm of floor level must be 6mm thick Bondlite.

MW 07 FIXING

The Main Contractor shall be responsible for the fixing of windows in the structural openings. All openings shall be square and true to the agreed dimensions. All rebates shall be a true plane with clean unbroken faces to give sound bed for sealants.

Generally anchor bracket fixings and attachments shall be of stainless steel or other non ferrous metal of sufficient strength to perform the functions for which they are intended. All screws, nuts, bolts, rivets, and other miscellaneous fastening shall be stainless steel.

MW 08 HARDWARE

All door and window hardware to be supplied by the Metal Window Manufacturer. Supply to the Employer all proposed aluminium extrusions for approval prior to manufacture.

Windows - Sashes over 600mm to have two fasteners per sash. Any window protecting a drop greater than a metre as well as windows below 800mm above floor level and protecting a drop of more than a metre are to have restrictor stays fitted.

MW 09 FLASHINGS

All Colorsteel flashings at heads, jambs and sills of units shall be supplied by the Metal Worker and installed by the Carpenter.

MW 10 PROTECTION

Completed window frames, reveal and jamb linings shall be protected from damage until completion. Storage shall be under cover and in such a manner as to avoid strain.

MW 11 GUARANTEE

Provide guarantee for metal windows made out in the name of the Employer against non performance, faulty materials or workmanship, waterproofness and coating breakdown for a period of two years from the date of Practical Completion.

MW 12 COMPLETION

On completion each window unit shall be cleaned and left in perfect working order ready for occupation. All sealant marks, Manufacturers stickers and the like shall be removed and any damage to glazing, frames, liners or coatings shall be made good at the Contractor's expense.

GLAZIER

Refer to Preliminaries section of this Specification which is equally binding on all trades.

GL 01 SCOPE OF WORK

All glazing to metal windows and doors shall be provided and installed as part of the Metal Window Manufacturer's contract.

Glazing to Velux ventilation skylight shall be 6mm Bondlight glass.

Glazing to windows within 500mm of the floor shall be 6mm toughened glass.

GL 02 STANDARDS

The following standards shall apply unless otherwise noted in this Specification:

NZS 4233:1999 Code of Practice for Glazing in Buildings

NZS 4233:1999 Part 3 – Selection and Installation of Glass in Buildings

GL 03 WORKMANSHIP

All work shall be completed in accordance with sound trade practice.

GL 04 CLEANING

Thoroughly clean all glass on both sides and remove any debris as necessary at the completion of the work.

SOLID PLASTERER

Refer to Preliminaries section of this Specification which is equally binding on all trades.

SP 01 EXTENT OF WORK

The work consists of plastering the new wall surfaces as shown on Sheet 5 to match existing finish.

SP 02 PROTECTION

Care shall be taken to cover up and protect all other work throughout areas to be plastered during the progress of this work. The Contractor shall be held responsible for any damage which may occur from this clause.

SP 03 GENERAL

This work shall be carried out in accordance with best trade practice by competent craftsmen with equipment, materials and processes that are adequate for the purpose. Proportions of materials shall not be taken as arbitrary and the Architect reserves the right to vary the proportions to suit the characteristics of the available materials if tests disclose such variation to be necessary to produce the best results.

The source of the supply of the materials for plastering shall not be changed during the course of the contract without the Architect's approval.

SP 04 WATER

Water shall be drawn from approved supply.

SP 05 SAND

Where not otherwise specified, sand shall conform to NZS 2199, Sands for Mortars and Plasters. Sands shall be completely free of salt or other deleterious matter, obtained from one source and shall be of average colour obtainable in the vicinity of the Contract site.

SP 06 CEMENT

Where not otherwise specified, all cement shall be Portland Cement of New Zealand manufacture and shall conform to NZS 1844.

SP 07 PLASTICISING AGENT

Plasticising agent shall be Febmix or equal approved mortar plasticiser and shall be used in accordance with Manufacturer's instructions.

SP 08 MIXING

All plaster shall be properly mixed in an approved mechanical mixer and shall be used at once, and no more than can be used before initial set shall be mixed at any time. Re-tempering or re-mixing after plaster has set or gone off will not be permitted.

SP 09 STANDARDS & WORKMANSHIP

NZS 4252.1:2007

Code of Practice for Solid Plastering

All work is to be carried out in accordance with the above standard. All plastered surfaces shall be made perfectly level and plumb, well straightened to grounds, floated, trowelled and finished to a fine face free from cracks, blisters, water marks or other imperfections. Make good any damage caused by other trades. All work shall be in the finishes and profiles as shown on the drawings and specified below.

SP 10 SURFACE PREPARATION

All surfaces to be plastered shall be properly prepared.

SP 11 CONTROL JOINTS

Provide horizontal and vertical control joints at 4m centres in each direction as shown on the drawings and as detailed below.

SP 12 PLASTERING WORK

All surfaces are to be given a slurry of four parts sand to one part of cement thrown on to give a good key to subsequent coats. A second coat of one part cement, four parts sand and Febmix to Manufacturer's specification straightened and well combed for key. First and second coats shall average 12mm thickness.

Finishing coat shall be five parts of fine grey sand, one part cement and Febmix to Manufacturer's specification. This coat shall be approximately 4mm thick and be brought to a true and even surface with a wood float giving an approved finish free from blemishes, and of a consistent texture to take paint finish by others.

SP 13 COMPLETION

At completion leave all surfaces in first class condition for painting.

PAINTER

Refer to Preliminaries section of this Specification which is equally binding on all trades.

PA 01 SCOPE OF WORK

Allow to finish all new and existing surfaces as scheduled below:

- a) Exterior
 - All new and existing exterior plaster wall surfaces
 - All new and existing soffits
 - All new and existing exterior timber including timber joinery.
- b) Interior
 - Interior of all new exterior timber joinery
 - All new interior doors and frames, skirtings and scotias
 - All new walls and ceilings including inside wardrobe
 - Lounge room walls and ceiling area affected by relocation of existing fire
 - Any existing surfaces affected by the additions

NOTE: All metalwork including flashings, cappings, spouting, downpipes and roofing are prefinished materials and do not require painting.

PA 02 MATERIALS

All Resene paints shall be brought on to the job in their original sealed containers. All applications are to be in accordance with the Resene One Line Specification system for each relevant substrate.

All materials shall be applied in strict accordance with the Manufacturer's recommendations and shall only be thinned if necessary. All undercoats shall be those recommended by the Manufacturer of the paint products used.

PA 03 WORKMANSHIP

The work shall be carried out by competent tradesmen in accordance with good sound trade practice using tools and equipment which will ensure a first class job. All such workmanship shall comply with the requirements of NZS 2239 'Code of Practice for Painting'. The top and bottom edges of all sashes, facings, etc shall be painted and the same number of coats as the exposed surfaces. Paint on all putty and glazing beads shall impinge on the glass to provide a waterproof seal between the glass and putty or bead. Paint shall be applied by brush, except the finishing coat to Gibraltar board linings which shall be roller application.

PA 04 PREPARATORY WORK

Inspect and check that all work affecting this trade is satisfactory before proceeding. If there is any concern about the standard of finish for any substrate then such concerns are to be raised with the Main Contractor immediately.

No paint is to be applied until any problems are rectified. Application of any paint product constitutes acceptance of the finished surface and any subsequent problems which may arise will then become the responsibility of the Painting Contractor and any making good will be done at his own expense.

PA 05 PROTECTION

Take adequate precaution during and after painting, both inside and out, to protect the works from dirt, dust and other disfigurements and leave windows clean at completion.

PA 06 REMOVALS

Allow to remove all hardware and electrical fittings prior to commencement of painting and replace at completion.

PA 07 RUB DOWN

Allow to rub down between coats of finishes with fine glass paper or steel wool to remove raised grain in order to provide a smooth finish for the following coats.

PA 08 COLOUR SCHEME

All Interior and Exterior colours shall be given on the job.

PA 09 STOPPING

Timber - stop all nail holes, cracks and putty with linseed oil. Apply putty after application of priming coat of paint.

Gibraltar Board - See Carpenter section of this Specification for work to be carried out by separate Contractor. Check surface prior to painting to ensure level 4 finish has been achieved.

PA 10 SYSTEMS**Exteriors**

- (i) Fibrolite – apply one sealer coat then two coats of acrylic semi-gloss.

- (ii) All timber - prime with one coat of general purpose wood primer followed by one undercoat and two top coats oil based enamel in selected gloss finish.
- (iii) Solid Plaster – to new areas apply one coat Resene Limelok. To all new and existing solid plaster walls apply two thick coats of Resene X200 Hi build paint.

Interiors

- (i) Gib Aqualine Walls & Ceiling – apply one coat of Resene Sureseal followed by two coats selected acrylic paint.
- (ii) Gib Ceilings & Walls – apply one coat of Resene Broadwall sealer followed by two top coats of acrylic paint in selected finish.
- (iii) Painted Timber - apply one coat of general purpose primer followed by one undercoat and two top coats of oil based enamel paint in selected gloss finish.

PA 11 CUPBOARDS

Paint the interior of the master bedroom wardrobe wardrobe in three coat work as for walls and ceilings.

Shelves are pre finished melteca and do not require painting.

PA 12 MAKE GOOD

Make good all work done under this heading after all other trades. On completion of the job, remove all tins and rubbish, clean down all work, clean all glazing, fittings, etc, leave job free of all paint and stains.

TILER

Refer to Preliminaries section of this Specification, which is equally binding on all trades.

TL 01 SCOPE OF WORK

The Tiler shall allow to supply and install all wall and floor tiles to the en suite as scheduled in the Carpenter section CA 19 **Schedule of Linings** including all accessories, grouting, waterproofing membrane etc as further specified.

The Tiler shall also supply and install DEVI or similar approved mesh type under tile heating in the en suite as further specified.

Refer to **PR 13 Monetary Allowances** and allow the sum of \$65 per M² for the supply only of all wall and floor tiles as selected by the Employer.

The Tiler shall ensure that all floor tiles comply with the slip resistance schedule at the rear of this specification.

TL 02 STANDARDS

All work in this section to be undertaken by competent and experienced Tilers using the materials and the techniques recommended by the Tile Manufacturer. All surface preparations and tiling work to be in accordance with AS 3958 part 1 as modified by BRANZ "Good Tiling Practice".

Documents and standards to be observed in this section are:

AS 3958:	Ceramic Tiles Part 1; Guide to installation of ceramic tiles
BS 5385:	Wall & Floor Tiling
BS 5385.4:	Tiling in specific conditions
BS 5980:	Adhesives for use with ceramic tiles
BS 5980:	Ceramic Floor & Wall tiles
BRANZ Publication:	Good Tiling Practice

TL 03 GUARANTEES

Provide the Employer with a written two year guarantee for work under normal environmental and use conditions against failure of materials and execution at completion of the contract.

TL 04 UNDER TILE HEATING

Allow to supply and install a DEVI or similar mesh type under tile heating system as selected by the Employer complete with thermostat in the Ensuite. Confirm mesh type with Employer prior to ordering.

Liaise with the Electrician to wire in all necessary switches and/or thermostats.

TL 05 ADHESIVES

All tiles in wet areas to be laid using Mapei ULTRAMASTIC premixed, flexible, waterproof ceramic tile adhesive to BS 5980.

All remaining tiles to be laid using Mapei cement based ceramic tile adhesive to AS 2358 and BS 5385, part 4.

TL 06 GROUTING

Use Mapei Ultracolour grout for tiles. Confirm grout colour with Employer prior to ordering and installing tiles. Remove tile spacers.

Apply grouting mix to as large an area as can be worked before setting commences.

Work with a grouting tool back and forth until all joints are completely filled with no adhesive showing. Avoid damage to the surface of tiles using masking tape where necessary. Finish to depth of cushion and flush with surface to cushion edge and square edge tiles. Remove surplus grout with a damp cloth and tool the joints to finish the grout uniform in colour, smooth and without voids, pinholes or low spots.

TL 07 SURFACE PREPARATION

Confirm with the Main Contractor that the deflection of the timber floor is within the range of $1/360^{\text{th}}$ span.

Completely remove from the surface all existing finishes, punch nail heads and sand to a smooth, clean, dust and dirt free surface.

TL 08 LAYING TECHNIQUE

Before commencing work obtain approval from the Employer for the proposed layout of tiles, expansion joints and any other visual considerations of the finished work.

Ensure that all services and accessories are in place and located to suit the tile layout with the substrate required for tiling work. Commencement of the work will be construed as meaning the substrate and environment are accepted by the Tiler Layer as satisfactory.

Do not carry out tiling where the ambient temperature is below 5 degrees C or onto a substrate with a temperature higher than 40 degrees C.

TL 09 TILE FIXING

Apply adhesive, prepare and fix tiles by the method recommended by the adhesive manufacturer and tap them firmly into place.

TL 10 TILED SHOWER

All wall and floor tiling in showers to be installed as follows.

Bondcoat – Apply 1:2 ABACRETE: cement by weight

Screed/Render – Apply 3 or 4:1 sand:cement mixed with 1:3 ABACRETE:water (in the case of dense substrates or cold weather applications).

Waterproofing – Waterproofing membrane for walls and floor to be Superflex Bathroom applied in strict accordance with the Manufacturer's recommendation.

Adhesive – For Floors apply ABAFLEX
For walls apply ABA Multipurpose Powder (MPP)

Grout – ABA Flex Grout Ultrasmooth for joints 1 – 5mm

Movement Joints – Provide at junctions of horizontal and vertical surfaces, where fixtures interrupt tile surface, around perimeters and to break up large areas. Use ARDEX.

TL 11 PROTECTION

Protect tiles from damage. Liaise with the Main Contractor to ensure no tiles are disturbed by foot traffic for at least 24 hours after laying and after grouting. Provide protection to tiles by laying sheet material such as insulating board for the period between completion of laying and completion of the remainder of the contract works. All tiles damaged during the currency of the contract are to be replaced at the Contractor's own expense.

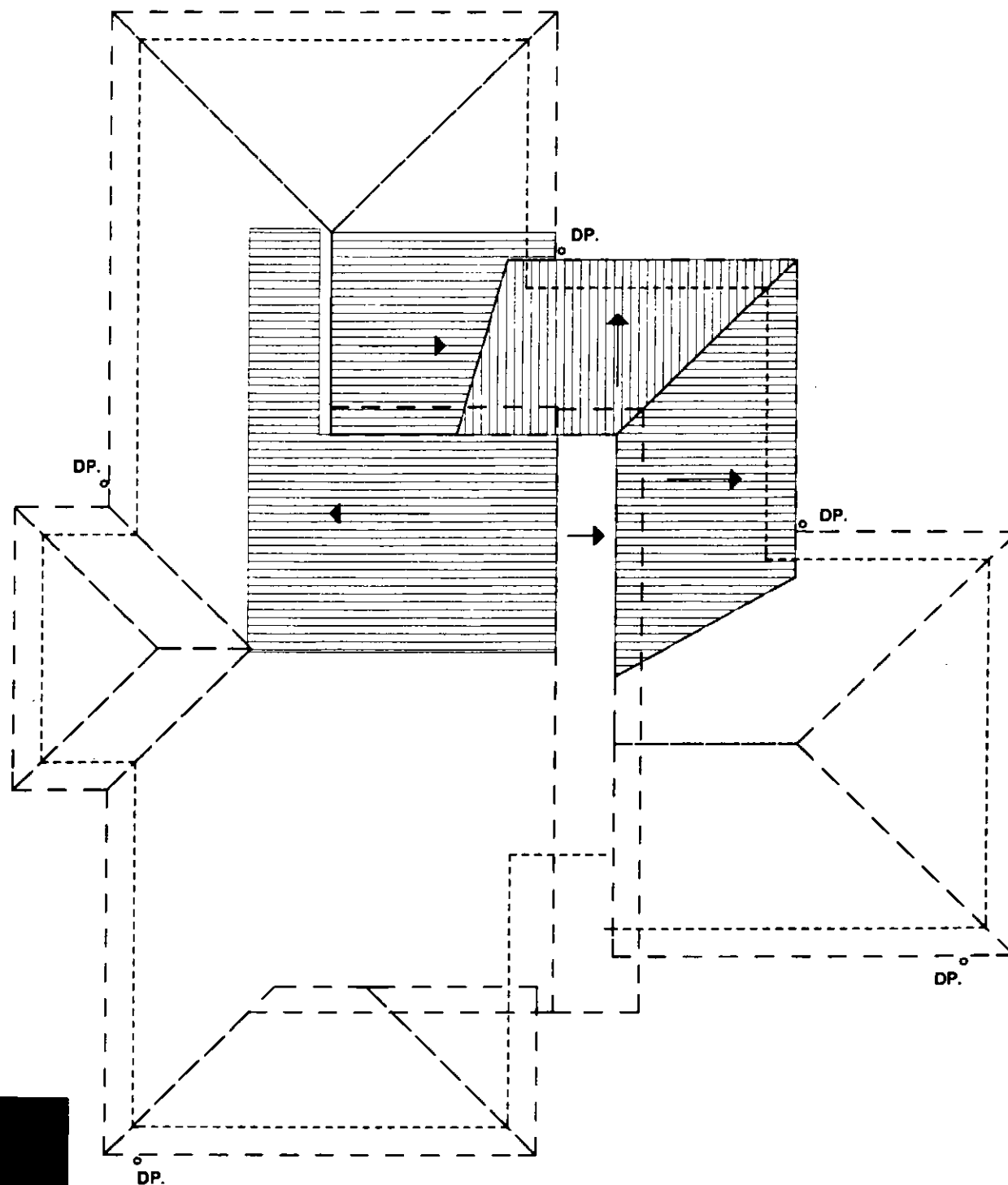
TL 12 COMPLETION

Upon completion of settling and grouting, thoroughly sponge and wash the tiles to leave them completely clean and without blemish. Finally polish glazed tiles with a clean dry cloth.

Remove all debris and unused materials and elements from the site.

SLIP RESISTENCE SCHEDULE

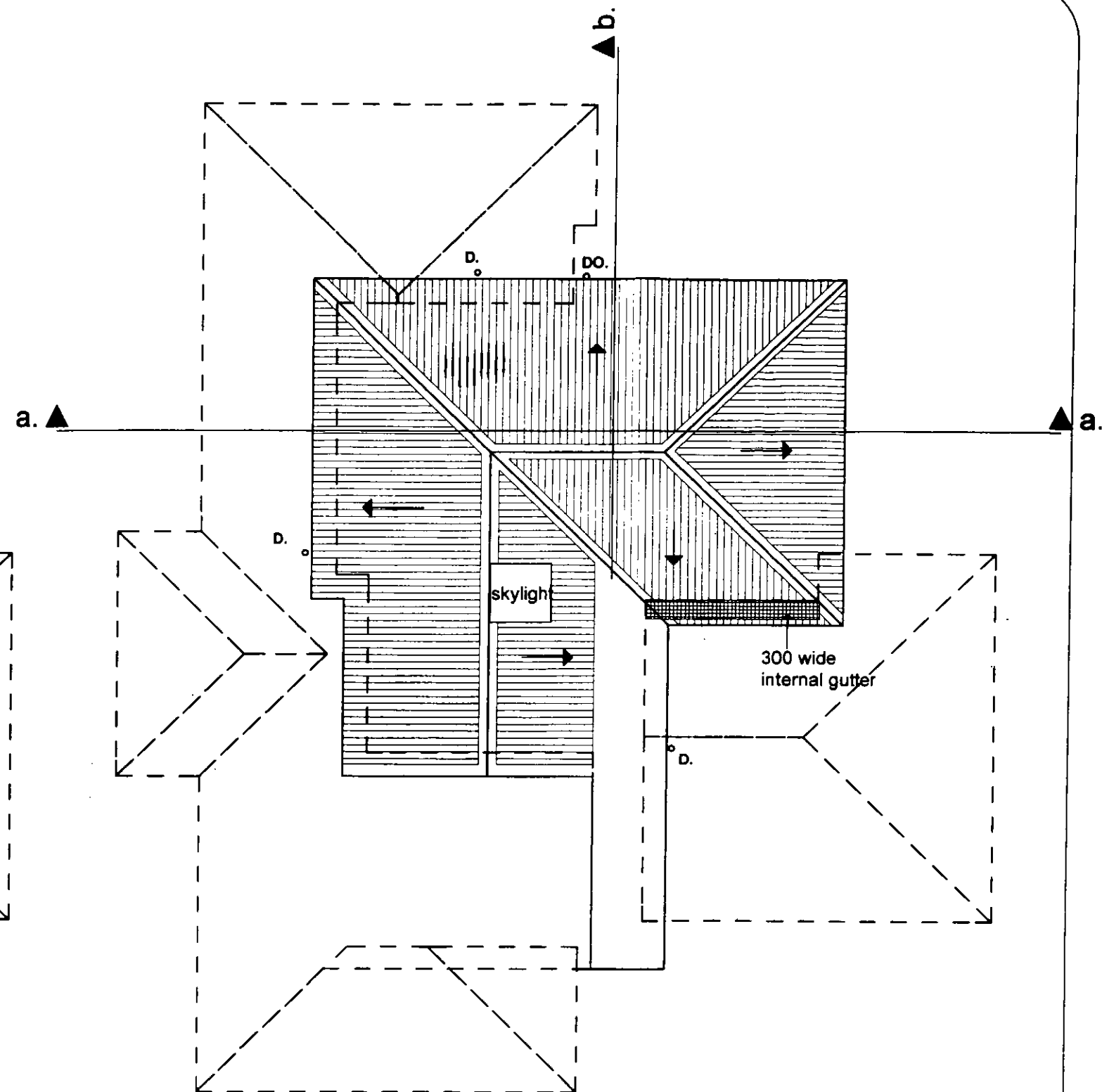
ROOM	FINISH	COEFFICIENT OF FRICTION	ACCEPTANCE
Bedroom	Carpet	0.55 – 0.70	Yes
En suite	Tiles	0.25 – 0.50	Yes
Exterior paved area	Broomed concrete class U2	0.65 – 0.85	Yes



existing roof plan.

SCALE 1:100.
NOTES:

Arrows indicate direction of existing roof fall.
All roofing is Colortile.
DP. indicates existing downpipe.
Extent of demolished roof drawn shaded.



modified roof plan.

SCALE 1:100.

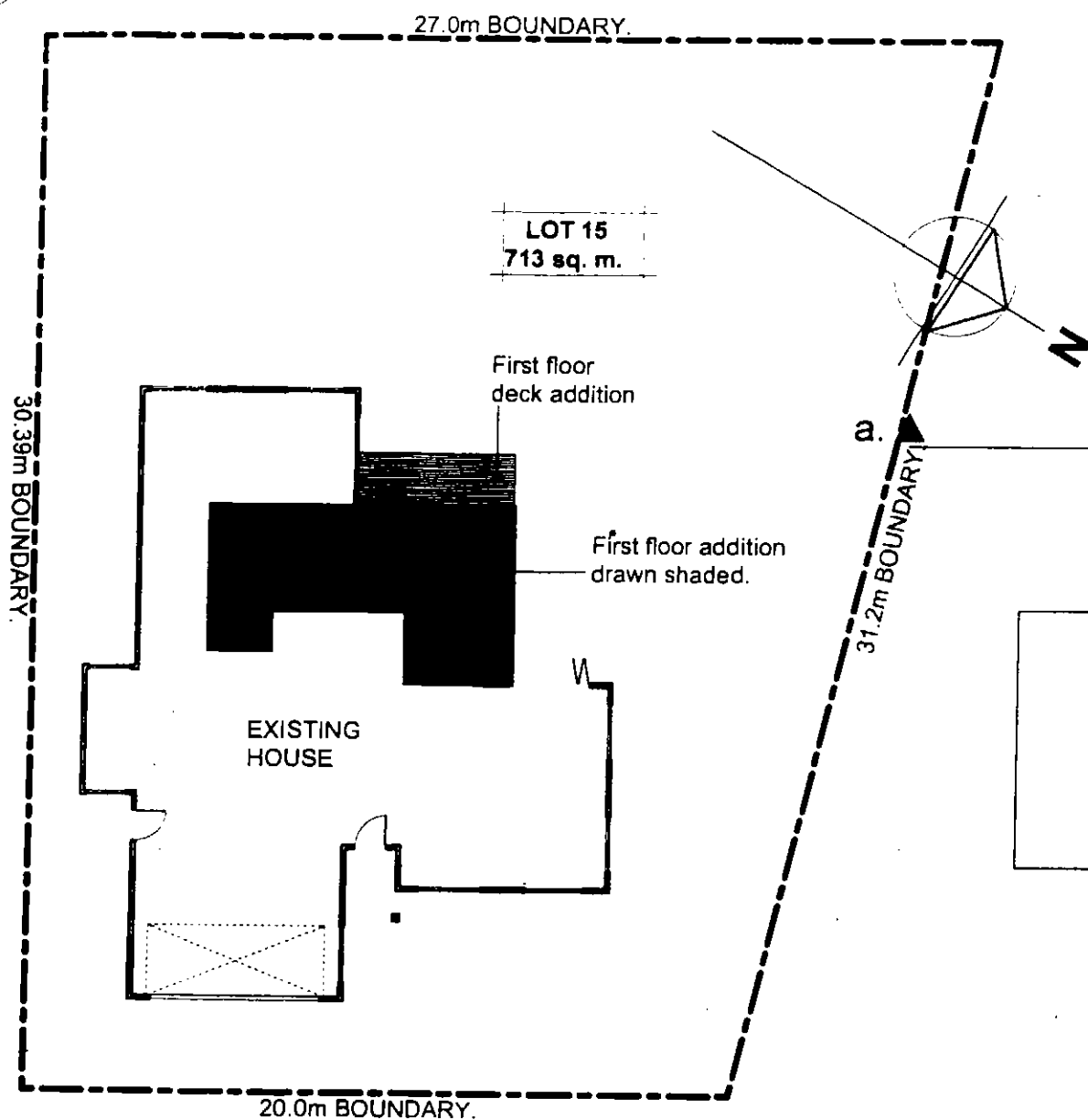
NOTES:

Arrows indicate direction of roof fall.
All roofing is Colortile to match existing.
All eaves & barge widths are to match existing.
D indicates new 80 diam uPVC dropper.
DO. indicates deck outlet.
Extent of new roof drawn shaded.
Roof pitch to match existing (approx 25 degrees).

SHEET
of 16 sheets
DURBIN-WESTLEY HOUSE.

6.

bba



29 LA LENA GROVE.

site plan.

SCALE 1:200.

SITE COVERAGE.

ALLOWABLE SITE COVERAGE = 713 X 35%
= 249.55 sq. m.

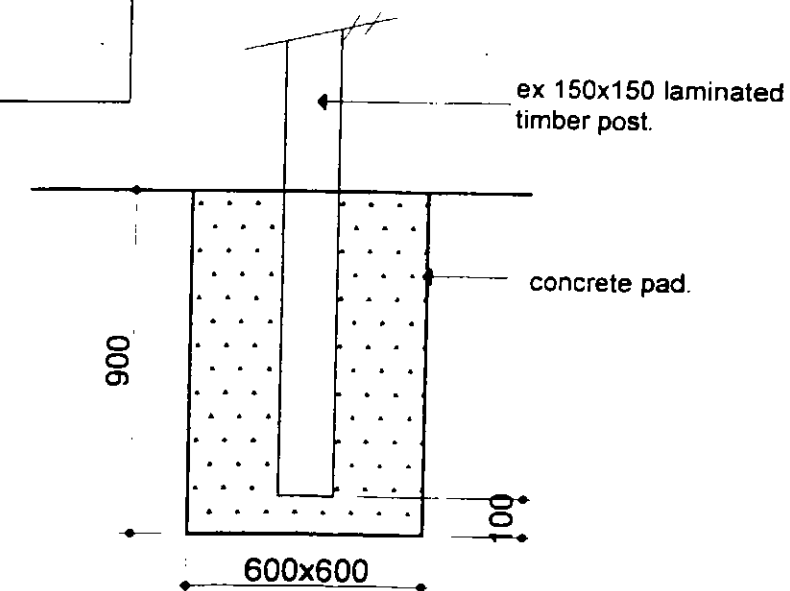
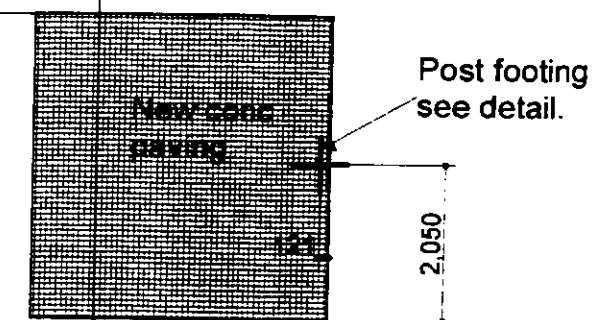
ACTUAL SITE COVERAGE = 181.0 sq. m.

foundation plan.

SCALE 1:100.

NOTE:

The Main Contractor shall be responsible for confirming the soil bearing capacity PRIOR to forming any boxing.



post footing.

SCALE 1:20.

1.

SHEET
of 16 sheets
DURBIN-WESTLEY HOUSE.

bba

06 356 5946 06 359 1840
021 365 546 Bruce & Co. Pty. Ltd.



engineering, surveying and resource management services



MARK DURBIN

29 LA LENA GROVE, PALMERSTON NORTH

04470

CLIENT

MR M DUBBINS

SUBJECT

House Additions - Beam Design

FILE No

107416

DATE

10/20/08 07

PAGE

OF

BY

CKD

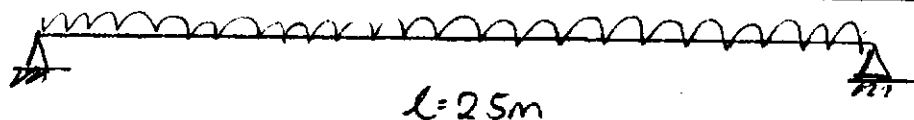
KEVIN O'CONNOR
& ASSOCIATES LTD

DESIGN BEAM N°1

RECEIVED

06 AUG 2008

BY:



DESIGN LOADS

$$\text{FLOOR } G = 0.5 \text{ kPa} \times 6.2m/2 = 1.55 \text{ kN/m}$$

$$0.15 \text{ kPa} \times 6.2m/2 = 4.65 \text{ kN/m}$$

$$126 \text{ U160} = 1.2(1.55) + 1.6(4.65) = 9.3 \text{ kN/m}$$

$$M^* = 9.3 \text{ kN/m} \times 25^2/8 = 7.3 \text{ kNm}$$

DESIGN FOR DEFLECTION

$$I_{req} = \frac{5(48)(2500^4)}{384 \times 200 \times 10^3 \times 7} = 1.74 \times 10^6 \text{ mm}^4$$

USE 150x75 PFC

$$I = 8.34 \times 10^6 \text{ mm}^4$$

$$P^* = G = 1.55 \text{ kN/m} \times 25m/2 = 1.94 \text{ kN}$$

$$Q = 4.65 \text{ kN/m} \times 25m/2 = 5.81 \text{ kN}$$

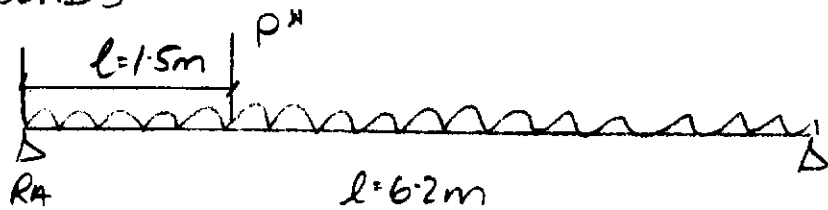
P.N.C.O. APPROVED

CLIENT	Mark Durbin				
SUBJECT	Alterations to House				
FILE No.	107461	DATE	PAGE	OF	BY
					SOPHIE
					CKD



Design Beam No 2

LOADS



$$P^* G = 1.94 \text{ kN} \\ Q = 5.81 \text{ kN} = 11.04 \text{ kN}$$

FLOOR LOADS:

$$G = 0.5 \text{ kPa} \times 1.5 \text{ m} = 0.75 \text{ kN/m}$$

$$Q = 1.5 \text{ kPa} \times 1.5 \text{ m} = 2.25 \text{ kN/m}$$

$$1.2 \times 1.5 Q = 4.3 \text{ kN/m}$$

$$M^* = 4.3 \text{ kN/m} \times 6.2^2 / 8 + 11.04 \times \frac{1.5 \text{ m} \times 4.7 \text{ m}}{6.2 \text{ m}} = 12.6 \text{ kNm}$$

Design for deflection

$$I_{req} = \frac{5(2.33)(6200^4)}{384 \times 200 \times 10^3 \times 7} + \frac{60 \times 10^3 \times 6200^3}{48 \times 200 \times 10^3 \times 7} \beta$$

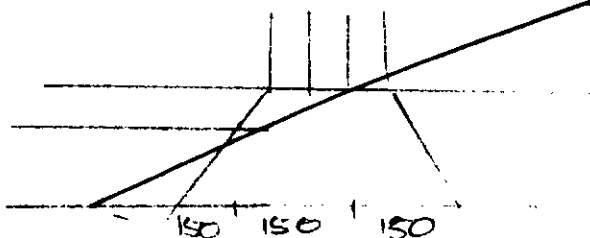
$$\beta = \left(\frac{1.5(3)}{6.2} - 4 \left(\frac{1.5}{6.2} \right)^3 \right) = 0.668$$

$$I_{req} = 32.0 \times 10^6 \text{ mm}^4 + 46.0 \times 10^6 \text{ mm}^4$$

USE: 250x90 PFC

not acceptable.

$$RA \quad G = 34 \text{ kN} \quad Q = 11.4 \text{ kN} \quad ULS = 21.8 \text{ kN}$$



$$PA = \frac{21.8}{.450^2} = 107 \text{ kPa}$$

= 70 kPa safe ok

CLIENT

Mr M Dublin

SUBJECT

House Additions - Beam design

FILE No.

107416

DATE

1 OCTOBER 07

PAGE

OF

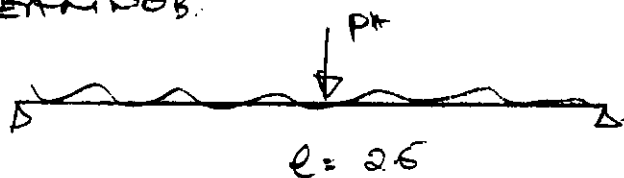
BY

Sople

CKD



DESIGN BEAM NO. 3.



LOADS $G = 0.5 \text{ kPa} \times 3.2 \text{ m} = 1.6 \text{ kN/m}$

FLOOR $Q = 1.5 \text{ kPa} \times 3.2 \text{ m} = 4.8 \text{ kN/m}$

WALL $G = 0.5 \text{ kPa} \times 2.7 \text{ m} = 1.35 \text{ kN/m}$

ROOF $G = 0.5 \text{ kPa} \times 1.5 \text{ m} = 0.75 \text{ kN/m}$

$Q = 0.25 \text{ kPa} \times 1.5 \text{ m} = 0.375 \text{ kN/m}$

$P^* G = 3.2 \text{ kN}$

$120 \text{ kN/m} = 19.86 \text{ kN}$

$Q = 9.97 \text{ kN}$

$120 \text{ kN/m} = 12(1.6 + 1.35 + 0.75) \text{ kN/m} + 1.6(4.8 + 0.375) = 12.7$

$M^* = 19.86 \text{ kN} \times 0.5/4 + 12.7 \times 2.5^2/8 = 22.3 \text{ kNm}$

DESIGN FOR DEFLECTION.

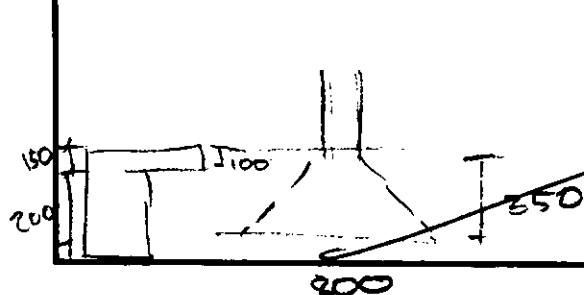
$I_{req} = \frac{5(706)(2500^4)}{384 \times 200 \times 10^3 \times 7} + \frac{1023 \times 10^3 \times 2500^3}{48 \times 200 \times 10^3 \times 7} = 4.93 \times 10^9$

$I_{HEX 75 PFC} = 8.314 \times 10^6$

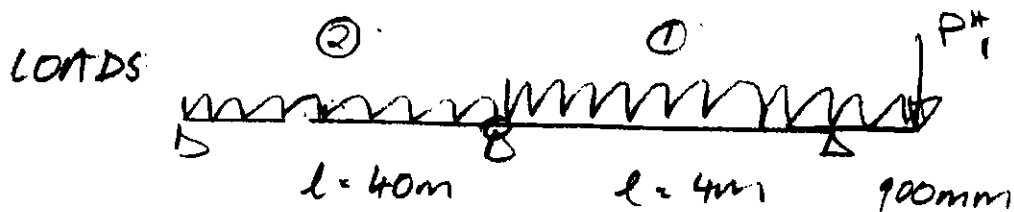
$R_A = R_B = 26 \text{ kN}$ footing width req. not acceptable

$b = \frac{26 \text{ kN}}{100 \text{ kPa} \times 0.8} = 0.325 \text{ m wide}$

PADS NOT REQUIRED.



DESIGN BEAM N°4



DESIGN SECTION 1

LOADS FLOOR $G = 0.5kPa \times 1.0m = 0.5kN/m$
 $Q = 2.0kPa \times 1.0m = 2.0kN/m$

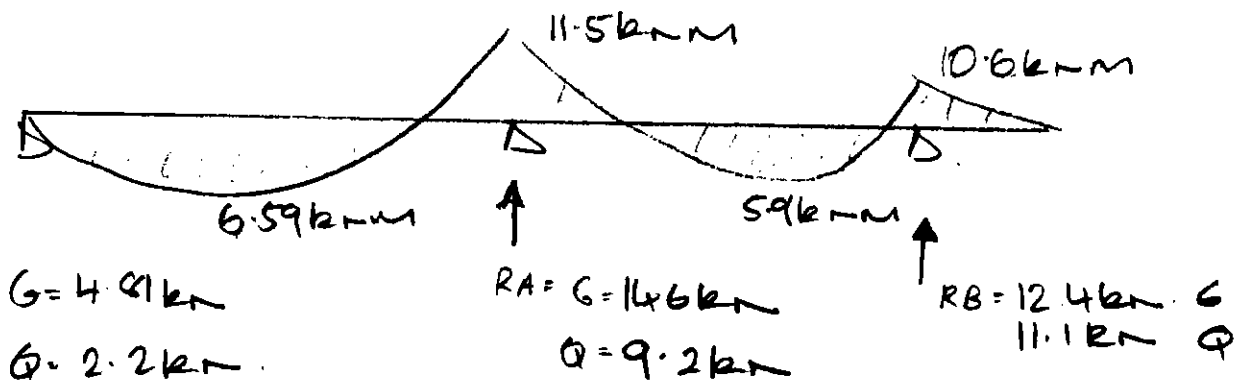
WALL $G = 0.5kPa \times 2.7m = 1.35kN/m$

ROOF $G = 0.5kPa \times 3.0m = 1.5kN/m$
 $Q = 0.25kPa \times 3.0m = 0.75kN/m$

$P^* G = 0.5kPa \times 3m \times 4.0m/2 = 3kN$
 $Q = 0.25kPa \times 3m \times 4.0m/2 = 1.5kN$

UDL 1 $G = (0.25 + 1.35 + 1.5) = 3.1kN/m$ $Q = (0.75 + 0.25) = 1.0kN/m$

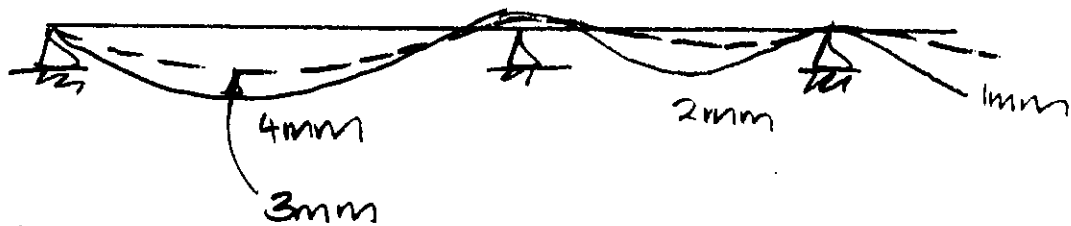
UDL 2 $G = 3.3kN/m$ $Q = 2.75kN/m$



CLIENT	M DUBBIN						
SUBJECT	Beams for Alterations						
FILE No	107416	DATE	16 July 08	PAGE	OF	BY	CKD
						SOPHIE	



DEFLECTIONS: 150KG PFC



— Ge 0.7Q
 --- G only.

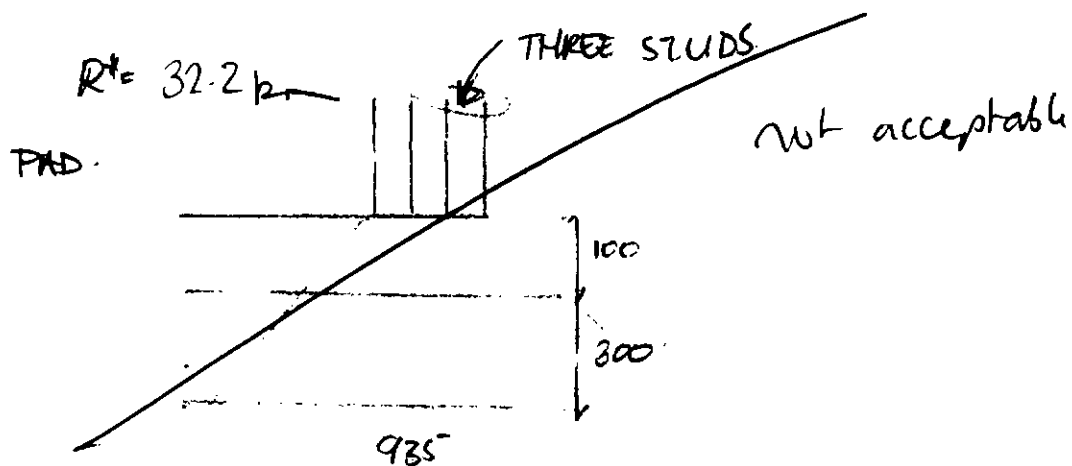
DESIGN CHECK FLITCH BEAM 2/250x45 & 200x10mm FL

$$I_{total} = \frac{240^3 \times 45}{12} \left(0.5\right)^{creep n} \left(\frac{1}{25}\right) + \frac{200^3 \times 10}{12} = 7.70 \times 10^6 \text{ mm}^4$$

$$\Delta = 8.314 / 7.7 = 1079 \quad \therefore \Delta = 4 \times 1.1 = 44 \text{ mm OK}$$

USE 2/240x45 & 200x10 FLITCH beam

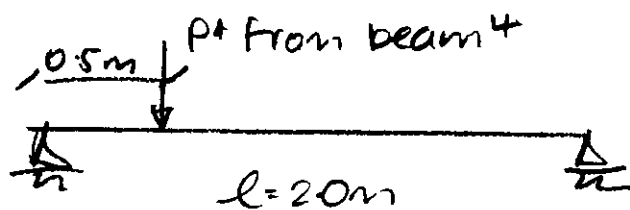
DESIGN FOUNDATIONS



$$PA = \frac{32.26 \text{ kN}}{0.935 \times 0.2 \text{ m}} = 172 \text{ kPa}$$

ultimate bearing capacity approx = $172 \text{ kPa} \times 3.205 = 197.5 \text{ kPa}$

DESIGN BEAM NO 5



$P^* \quad G = 12.4\text{kn}$
 $Q = 11.1\text{kn}$

$$1.2G + 1.6Q = 1.2(12.4) + 1.6(11.1\text{kn}) = 33\text{kn}$$

$$M^* = 33\text{kn} \times 0.5\text{m} \times 15\text{m} / 20\text{m} = 12.4\text{knm}$$

DESIGN FOR DEFLECTION

$$F_{req} = \frac{20.1 \times 10^3\text{N} \times 2000^3}{48 \times 8.0 \times 10^3 \times 5\text{mm}} = 84 \times 10^6\text{mm}^4$$

USE 200×100 WITH: $150 \times 6\text{mm FL}$

$$I = 93.63 \times 10^6\text{mm}^4$$

$$\phi M_{sx} = 0.9(300\text{MPa})(33.750 \times 10^3\text{mm}^3) = 9.1\text{knm}$$

$150 \times 6\text{mm FL}$

$$\phi M_{xx} = 5.7\text{knm} \quad 190 \times 90 \text{ MSG}$$

$$Z = 14.7\text{knm} \quad - \text{Bending ok}$$

Reactions:

$$RA = G = (12.4\text{kn} \times 15/2) = 9.3\text{kn}$$

$$Q = 8.32\text{kn}$$

$$1.2G + 1.6Q = 1.2(9.3) + 1.6(8.32) = 25\text{kn} \quad \text{EXISTING RING}$$

OK

CLIENT

BRENT HUGHES CONSTRUCTION

SUBJECT

FILE No.

1074611

DATE

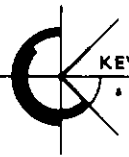
PAGE

OF

BY

SOPHIE

CKD

KEVIN O'CONNOR
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DESIGN CHECK BEAM NO 6.

LOADS

$$\text{WALL } G = 0.5 \text{ kPa} \times 2.4 \text{ m} = 1.2 \text{ kN/m}$$

$$\text{FLOOR } G = 0.5 \text{ kPa} \times 0.45 \text{ m} = 0.225 \text{ kN/m}$$

$$Q = 1.5 \text{ kPa} \times 0.45 \text{ m} = 0.675 \text{ kN/m}$$

$$\text{ROOF } G = 0.5 \text{ kPa} \times 0.9 \text{ m} = 0.45 \text{ kN/m}$$

$$Q = 0.75 \text{ kPa} \times 0.9 \text{ m} = 0.675 \text{ kN/m}$$

$$1.2 \text{ LLSD} = 1.2(1.2 + 0.225 + 0.45) + 1.5(0.675 + 0.225) \\ = 3.6 \text{ kN/m}$$

$$M^* = 3.6 \text{ kN/m} \times 30 \text{ m}^2 / 8 = 4.05 \text{ kNm}$$

DESIGN FOR DEFLECTION:

$$I_{req} = \frac{5(1.875)(3000^4)}{384 \times 130 \times 10^3 \times 3.5 \text{ mm}} = 43.4 \times 10^6 \text{ mm}^4$$

200x63 HYSpan.

$$I = 420 \times 10^6 \text{ mm}^4 \quad \text{OK FOR DEFLECTION.}$$

CLIENT

BRENT HUGHES CONSTRUCTION

SUBJECT

FILE No.

107461

DATE

PAGE

OF

BY

CKD

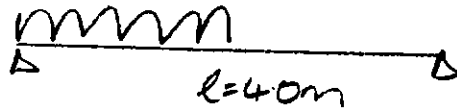
SOAHIE

KEVIN O'CONNOR
& ASSOCIATES LTD

DESIGN CHECK JOIST A

LOADS:

FLOOR



$$G = 0.5 kPa \times 2.3m / 2 = 0.575 kN/m$$

$$Q = 1.5 kPa \times 2.3m / 2 = 1.73 kN/m$$

$$1.26 \text{ LI5Q} = 1.2(0.575) + 1.5(1.73) = 3.3 kN/m$$

$$M^* = (3.3 kN/m \times 2m)(1m) \frac{(3m)}{4m} = 4.95 kNm$$

$$I_{REQ} = \frac{115 kNm \times 4000^3}{48 \times 80 \times 10^3 \times 3.5} \beta$$

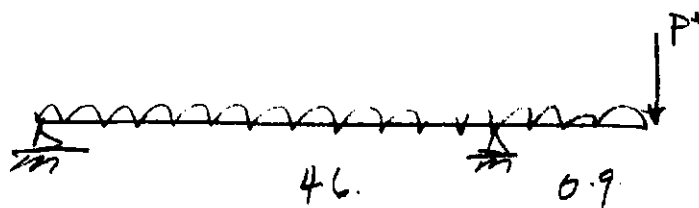
$$\beta = \left(\frac{(1)(3)}{4} - 4 \left(\frac{1}{4} \right)^3 \right) = 0.68$$

$$I_{REQ} = 37.23 \times 10^6 mm^4$$

$$I = 25.72 \times 10^6 mm^4 \quad 200 \times 50$$

NOTE BOLT TO SIDE OF EXISTING JOISTS.

1 DESIGN CHECK. CANTILEVERED JOISTS JOIST B



$P^* =$
 WITH $G = 0.5 \text{ kPa} \times 2.4 \text{ m} \times 3 \text{ m} / 2 = 1.8 \text{ kN}$

FLOOR $G = 0.5 \text{ kPa} \times 0.45 \text{ m} \times 3 \text{ m} / 2 = 0.34 \text{ kN}$

$Q = 1.5 \text{ kPa} \times 0.45 \text{ m} \times 3 \text{ m} / 2 = 1.01 \text{ kN}$

ROOF $G = 0.5 \text{ kPa} \times 0.9 \text{ m} \times 3 \text{ m} / 2 = 0.675 \text{ kN}$

$Q = 0.25 \text{ kPa} \times 0.9 \text{ m} \times 3 \text{ m} / 2 = 0.34 \text{ kN}$

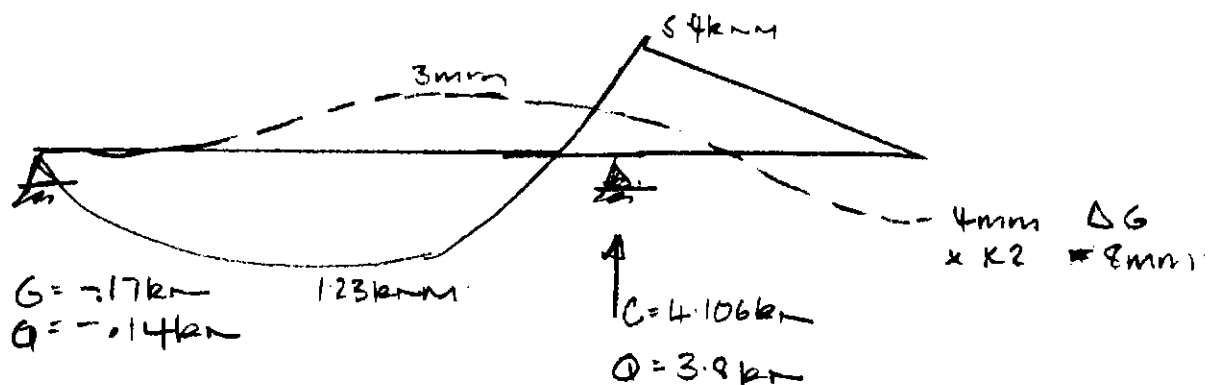
$P^* \quad 1.2G + 1.5Q = 1.2(1.8 + 0.34 + 0.675) + 1.5(1.01 + 0.34) =$

UDL $G = 0.5 \text{ kPa} \times 0.45 \text{ m} = 0.225 \text{ kN/m}$

$Q = 1.5 \text{ kPa} \times 0.45 \text{ m} = 0.675 \text{ kN/m}$

$1.2G + 1.5Q = 1.2(0.225) + 1.5(0.675) = 1.3 \text{ kN/m}$

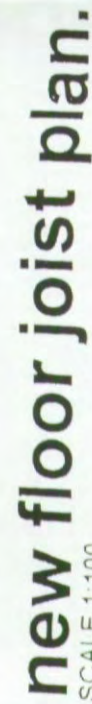
MICRO STRAIN ANALYSIS.



FOR 2/20045 HY SPAN JOISTS

$Q/Msx = 0.8 \times 0.8 \times 42 \text{ MPa} \times 0.6 \times 10^6 = 16.1 \text{ kN-m ok.}$

356 5946 ③ 06 359 1840
365 946 ③ bruce@bba.net.nz



SCALE 1:100.

NOTE:

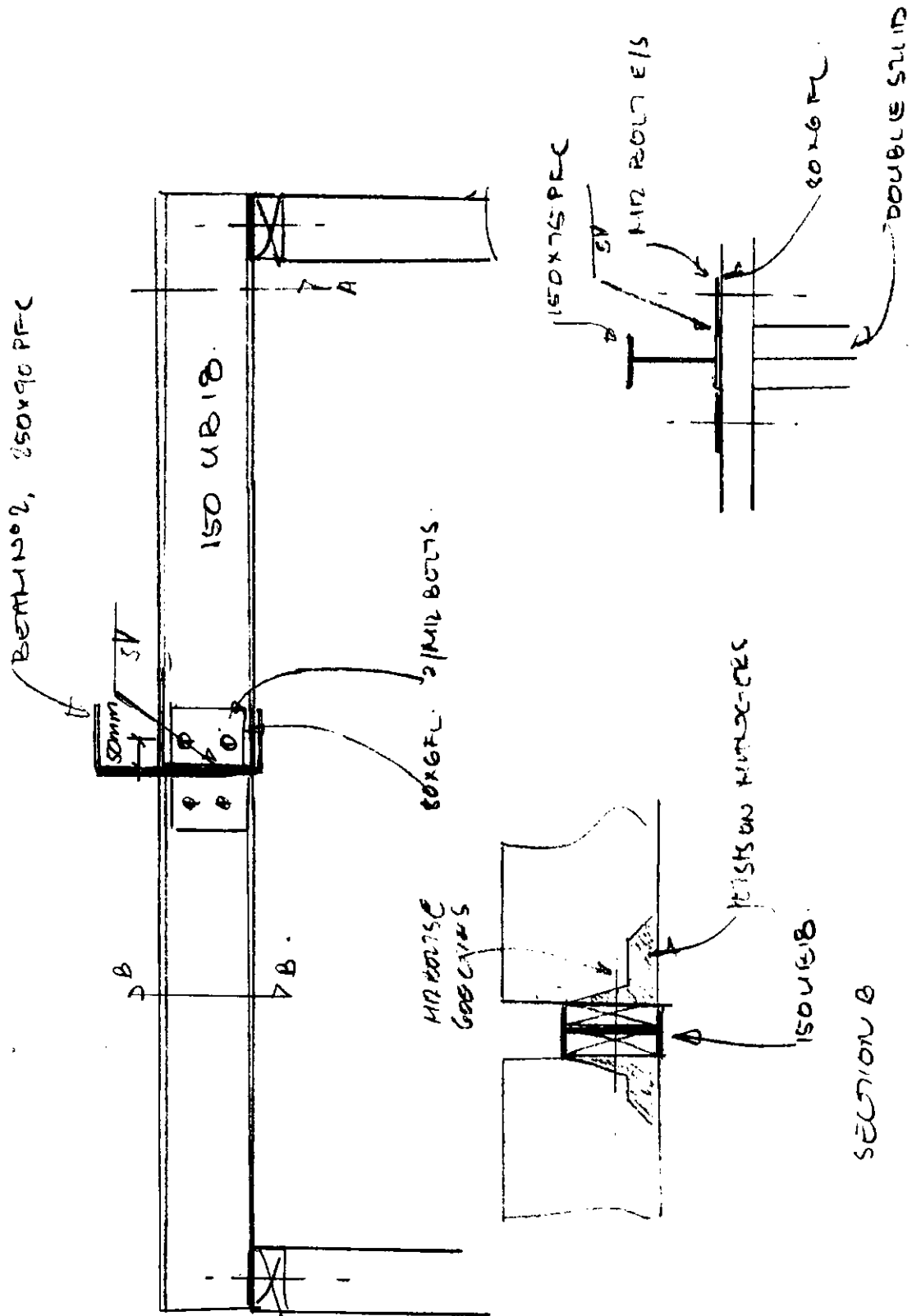
All first floor house joists are 240x45(No 1 Framing)
@ 600 max crs. unless shown otherwise & blocked
@ mid-span & wherever else required by NZS3604

63 RUAHINE STREET
BOX 4143
LIMERSTON NORTH

bbd
uce bary
RCHITECTS LTD.

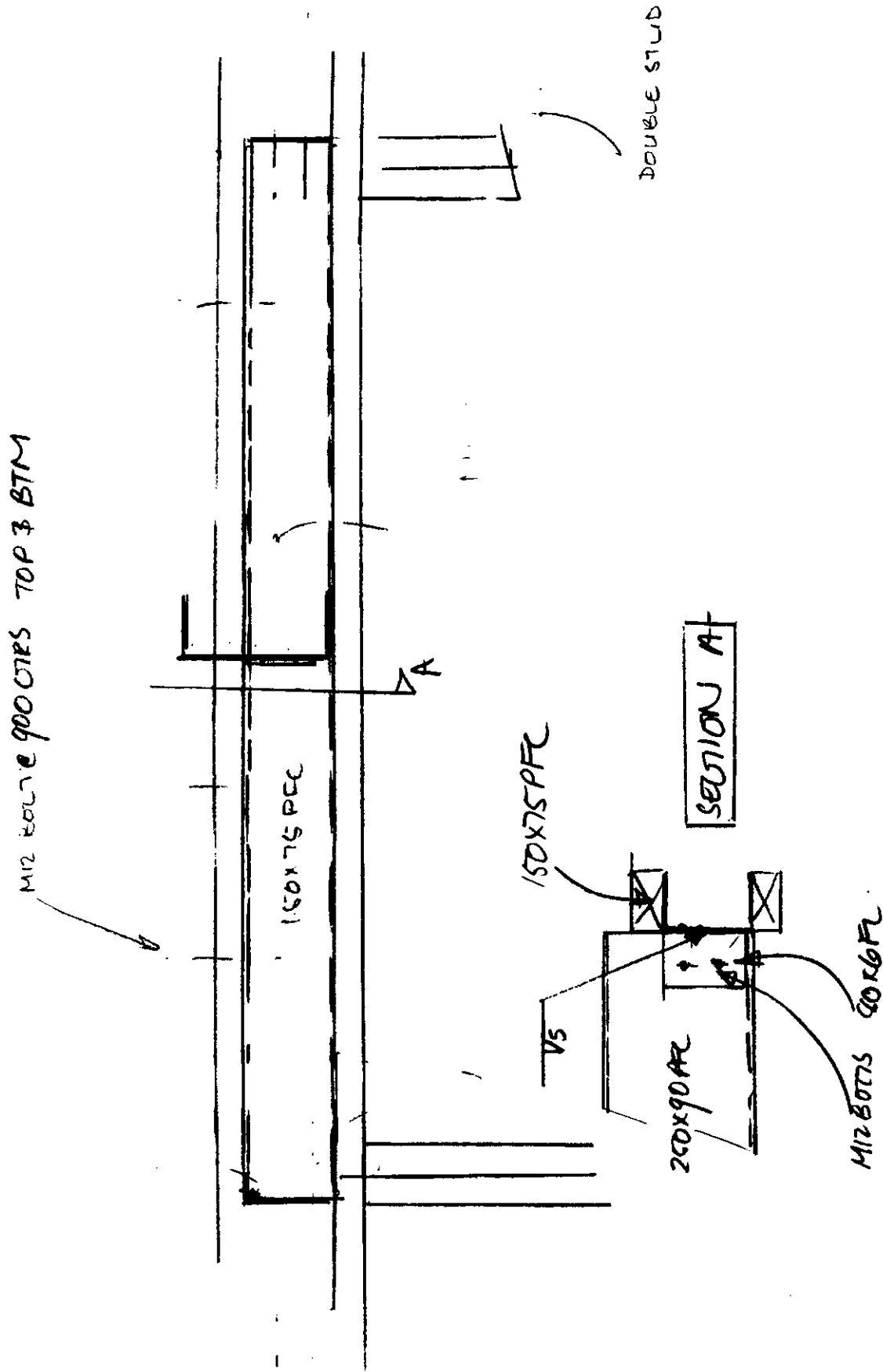
356 5946 ③ 06 359 1840
365 946 ③ bruce@bba.net.nz

CLIENT <u>M. Dwyer</u>					
SUBJECT <u>Beams for Alterations</u>					
FILE NO. <u>107416</u>	DATE	PAGE <u>SK2</u> OF	BY <u>SORMIE</u>	CKD	



BEAM N°1 TYPICAL DETAILS

CLIENT <u>M. Davlin</u>					
SUBJECT <u>New beams for Alterations</u>					
FILE No. <u>107416</u>	DATE <u>1.007.07</u>	PAGE <u>SK4</u>	OF <u>Sophie</u>	BY	CKD



BEAM N°3 TYPICAL DETAILS

CLIENT

Mark Duxon c/ Brent Hughes

SUBJECT

FILE No

107416

DATE

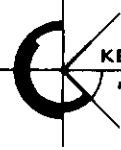
PAGE

OF

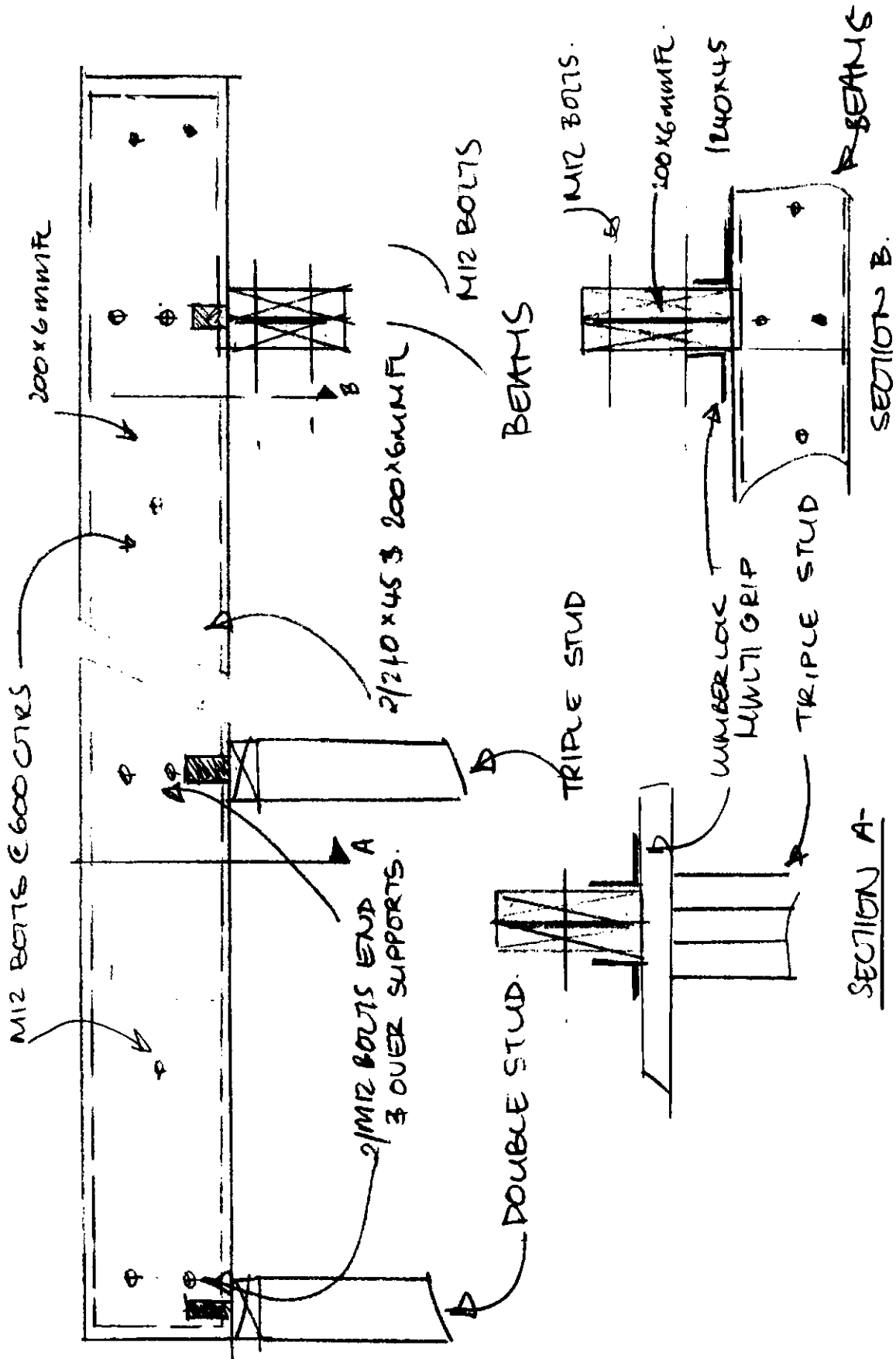
BY

Sophie

CKD

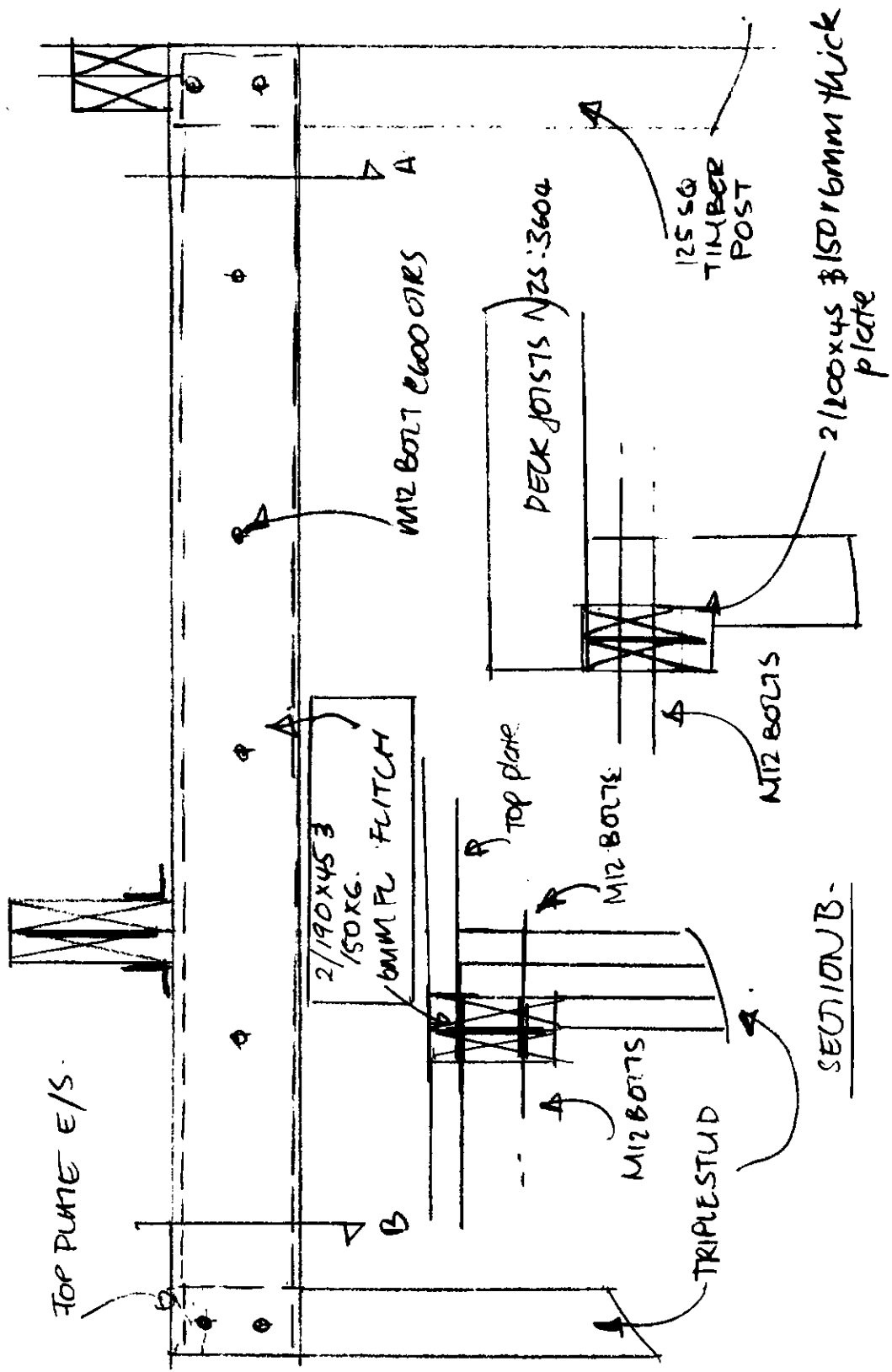


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& ASSOCIATES LTD



BEAM No 4 TYPICAL DETAILS

CLIENT	Mark Dublin & Brian Hughes				
SUBJECT					
FILE No	107416	DATE	PAGE 56 OF 56	BY	SKW
				CKD	



SECTION A-

SECTION B-

BEAM NOS TYPICAL DETAILS

CLIENT

BRENT Hughes

SUBJECT

29 LALUNA GROVE

FILE No

107461

DATE

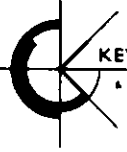
PAGE

SK7

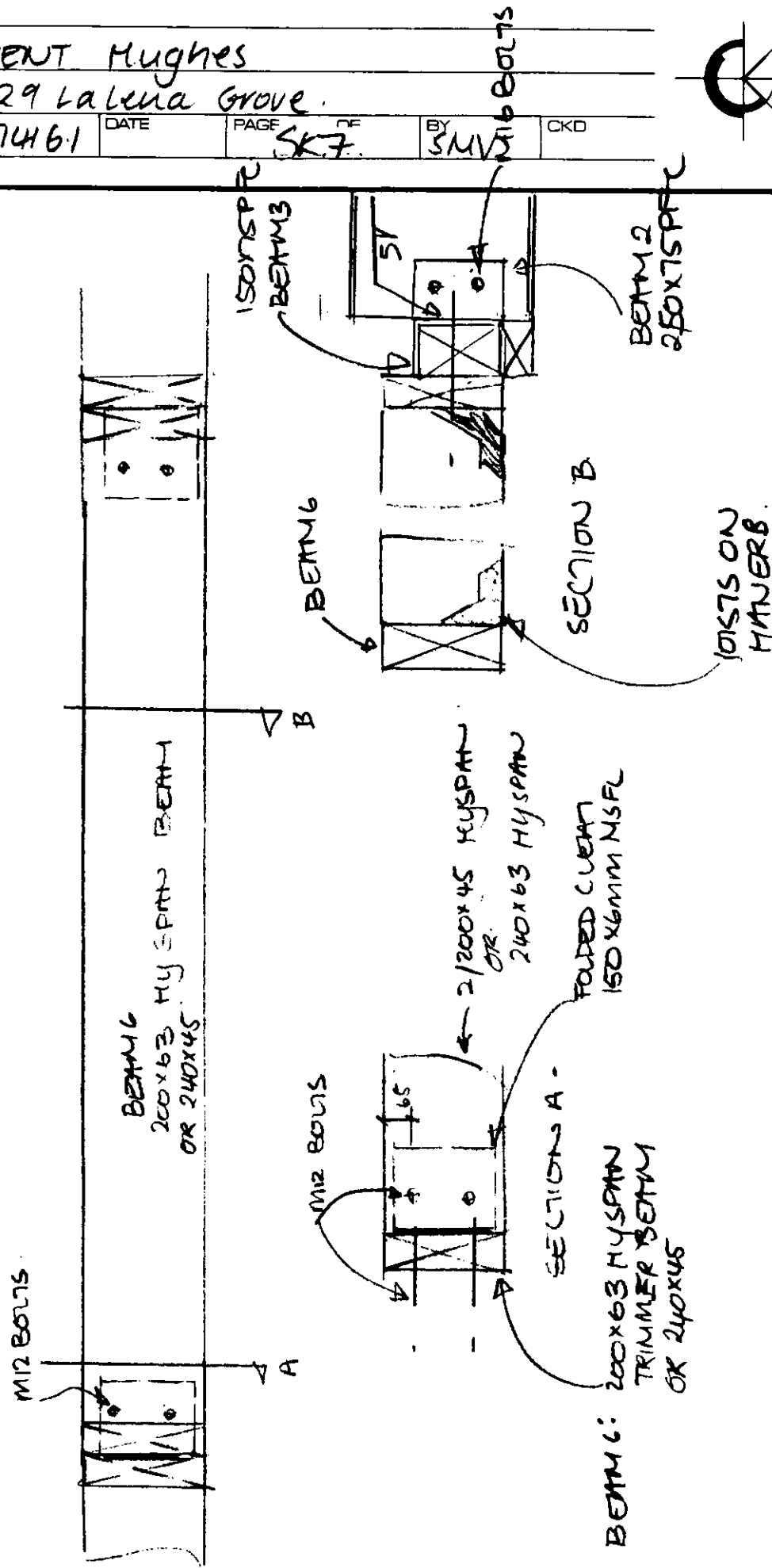
BY

SMV

CKD

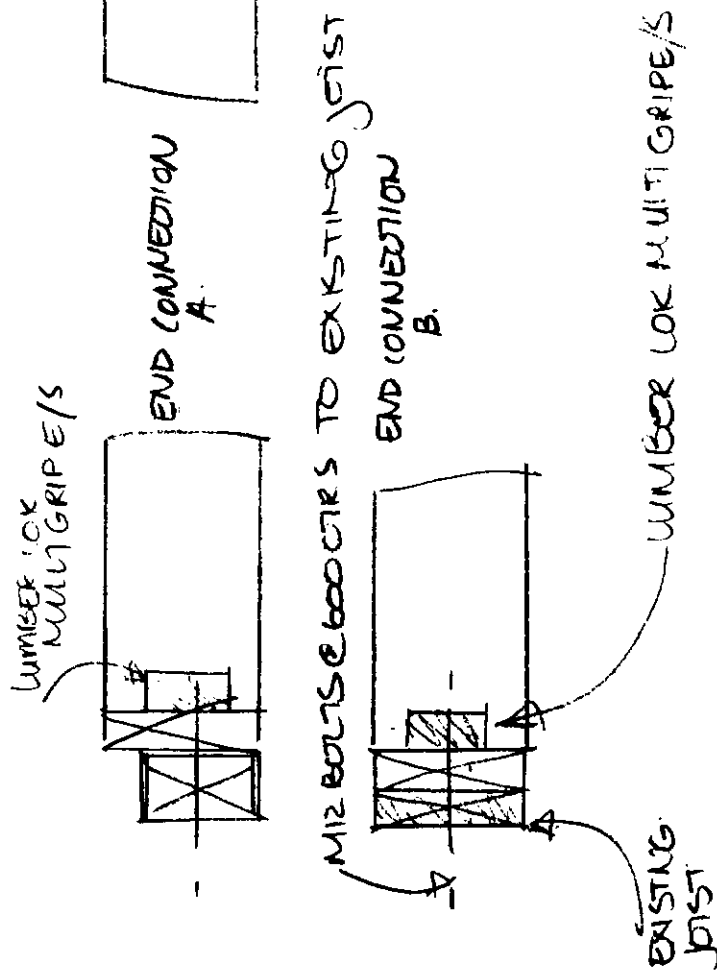
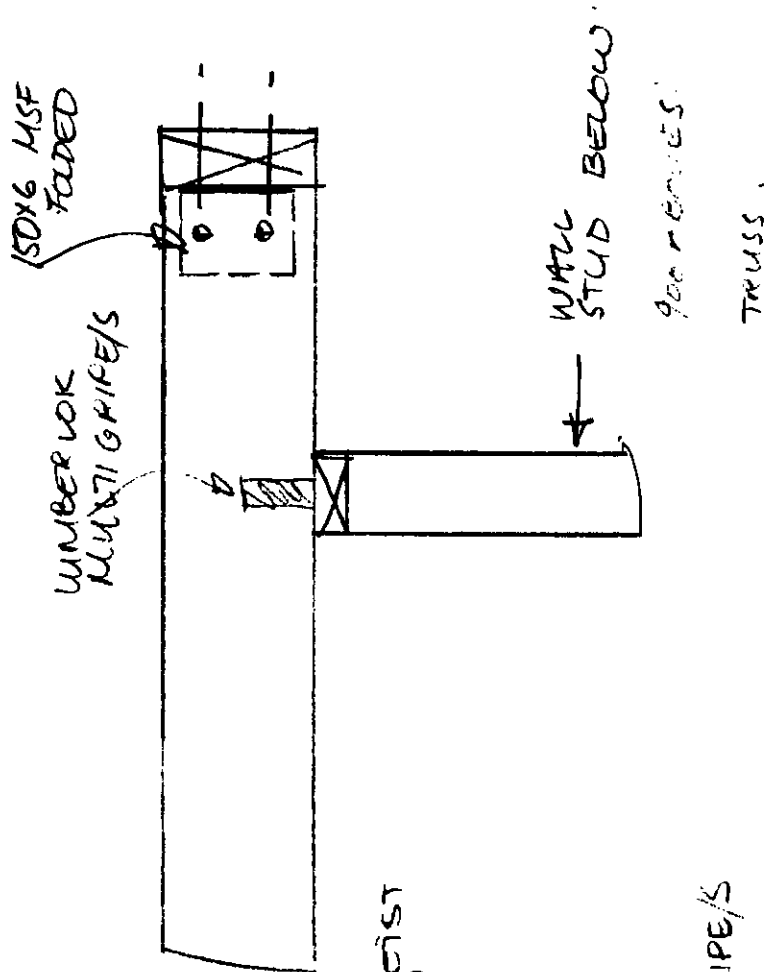


KEVIN O'CONNOR
& ASSOCIATES LTD



BEAM6 TYPICAL DETAILS

CLIENT	BREND HUGHES				
SUBJECT	29 LAIRN GROVE				
FILE No.	107416.1	DATE	PAGE 5 OF 8	BY SKB	CKD



JOIST DETAIL

END JOINT

Floor Joists

Supporting Floor Loads only

Design Deflection Limits

D.L.

L.L.

Dynamic Criteria

SPAN/300

SPAN/360

2 mm/1kN

OR 12.5 mm

OR 9 mm

HYSPAN SECTION D x B (mm)	FLOOR JOISTS SPACINGS (mm)									
	300		400		450		480		600	
	MAXIMUM SINGLE SPAN AND OVERHANG 'O/H' (m)									
	SPAN	O/H	SPAN	O/H	SPAN	O/H	SPAN	O/H	SPAN	O/H
150 x 36	3.6	0.9	3.0	0.9	2.9	0.9	2.9	0.8	2.7	0.7
150 x 45	3.8	1.0	3.3	1.0	3.1	0.9	3.2	0.9	3.0	0.8
170 x 45	4.4	1.2	3.8	1.1	3.6	1.0	3.7	1.0	3.4	0.9
200 x 36*	4.7	1.3	4.3	1.2	4.0	1.1	4.1	1.1	3.8	1.0
200 x 45	5.0	1.4			4.4	1.2	4.4	1.2	4.1	1.1
240 x 45	5.7	1.7	5.3	1.5	5.1	1.5	5.1	1.4	4.8	1.3
300 x 45*	6.7	2.1	6.3	1.9	6.1	1.8	6.0	1.8	5.7	1.7
360 x 45*	7.6	2.4	7.2	2.3	7.0	2.2	6.9	2.2	6.5	2.0
400 x 45*	8.1	2.6	7.7	2.5	7.5	2.4	7.4	2.4	7.0	2.2
	MAXIMUM CONTINUOUS SPAN AND OVERHANG 'O/H' (m)									
150 x 36	4.3	0.8	3.8	0.8	3.4	0.8	3.3	0.8	3.2	0.7
150 x 45	4.6	0.9	4.2	0.9	3.8	0.9	3.6	0.8	3.5	0.7
170 x 45	5.2	1.1	4.8	1.0	4.4	0.9	4.2	1.0	4.0	0.9
200 x 36*	5.5	1.2	5.1	1.1	4.9	1.0	4.7	1.0	4.5	0.9
200 x 45	5.8	1.3	5.4	1.2	5.3	1.1	5.1	1.1	4.9	1.0
240 x 45*	6.7	1.6	6.2	1.4	6.0	1.4	5.9	1.3	5.6	1.2
300 x 45*	7.8	2.0	7.3	1.8	7.1	1.7	7.0	1.7	6.6	1.6

Joists should be blocked at supports - see page 20 for details.

Joists marked with an * should be provided with mid-span blocking - see page 20.

Sub Floor Applications

Under normal conditions where adequate ventilation and clearance are provided Hyspan may be safely used for sub-floor applications without the likelihood of decay. (See the Durability statement on page 5)

Decks and Balconies

Overhanging floor joists or floor joists used for decks or balconies must be totally protected from wetting.

Design Criteria

The recommended maximum spans given for floor joists in the above table have been determined to meet serviceability criteria used for the preparation of single span floor joist tables in NZS 3604 and additional dynamic performance based criteria published in AS 1684.1 - 1999, Residential timber-framed construction, Part 1: Design criteria.

The dynamic performance based criteria given in AS 1684.1 limit the frequency of vibration of joists (limiting large spans) and the impact velocity of the floor (affecting small and medium spans).

Floor Rigidity

Hyspan floor joists designed to comply with the deflection limits specified have been found by the majority of users to provide sufficient dynamic rigidity. Some users however will have more demanding expectations and accordingly, it should be noted, that the above spans are maximum recommended spans. Those specifiers wishing to ensure higher rigidity can adopt one or more of the following measures,

- Use a deeper floor joist.
- Reduce the joist spacing.
- Use structural plywood flooring fixed to the joists with elastomeric adhesive and well nailed.
- Use a more rigid or thicker flooring.
- Fix crossing battens to the underside of the joists - even one batten mid-span or a series of crossing battens, as ceiling battens, will improve load sharing and hence floor rigidity.
- For further advice, telephone our enquiries number at the rear of this brochure.

Inspection Checklist –Project File Sign Off

Address: 307 Kahuterawa Rd Building Consent No.: 5702

Item to be inspected for completion: Complies with the NZ Building Code at the date of inspection	Yes	N/A	No	Details of Inspection & Comments: Comments must be made for Non-complying Items
Plumbing & Drainage Officer				
'As laid' Drainage plans been drawn?		X		
All the P&D conditions of the consent been signed off?	X			
All plans been updated or amendments received?	X			
Number of plans				Number:
Inspections carried out match amount charged?	X			
Plumbing & Drainage items signed off: Yes / No				
Date: 15/12/2008				
Plumbing & Drainage Signature: <u>BZC</u>				
Building Officer				
All plans been updated & amendments received?	X			
All Producer statements 'Construction' / 'Construction Review' been received as required in Condition of Building Consent?	X			
All energy certificates been received?	X			
Specified systems list been received?		X		
Compliance Schedule (CS)& Compliance Schedule Statement (CSS) required?		X		
Existing Compliance Schedule been amended?		X		
Vehicle crossing comply?		X		
Footpath and vehicle crossing photos been deleted from files?		X		
Footpath deposit be refunded?		X		
Inspections carried out match amount charged?	X			
Hazard forms been completed and registered?		X		
Section 72, 75 or Memo of Encumbrance Certificates registered		X		
All conditions of the consent been signed off?	X			
All files been purged?	X			
Building items signed off: Yes / No				
Date: 15/12/2008				
Building Officer Signature: <u>BZC</u>				
BRUCE CHURCHILL ADVANCED BLG. OFFICER				
Planning Officer				
Planning officer been informed if this work is a relocate?				Planners name:
Swimming pool administration officer				
Swimming pool administration officer been advised?				
Item to be inspected for completion:	Yes	N/A	No	Details of Inspection & Comments: Comments must be made for Non-complying Items
Administration Officer				
Any changes to the street address? (check on City View)				
File been amended if street address has changed?				
All inspections been billed?				
All bonds been refunded?				
Development Contribution paid?				
All fees been paid?				
Does the building require Compliance Schedule (CS)& Compliance Schedule Statement (CSS)(see Building Officer comments above)				
Administration items signed off:	Yes / No		Date: 15/12/2008	
Administration Officer Name: <u>Henry</u>	Administration Officer Signature: <u>[Signature]</u>		Date: <u>15/12/08</u>	
CCO issued? <u>15/12/08</u>	Yes / No		Date: <u>15/12/08</u>	

Inspection Checklist –Final – Building & Plumbing

Address: 29 La Lena Grove Building Consent No.: 4470

Tradesperson: Brent Hughes Tradesperson: _____

Reg.No.: _____ Contact Details: _____ Reg. No.: _____ Contact Details: _____

Date: 08/12/2008 Time: 1.30

Staged/Partial Inspection: _____ of _____

Item to be inspected for compliance: with the Building Act 2004, NZBC & Approved Documents Complies with approved plans & specifications	Outcome ¹			Details of Inspection & Comments: Comments must be made for: 1. Non-complying items 2. Items/work deviates from approved documents 3. Detail alternative solution & how compliance achieved
	Pass	N/A	Fail	
Advice of Completion received?				☒ Yes ☐ No
Conditions of consent/site instructions read?				☒ Yes ☐ No
Conditions of consent actioned ²	☒			
All required inspections passed	☒			
Electrical certificate of compliance provided	☒			
Gas certificate of compliance provided	☒			
Producer Statements as specified on building consent conditions provided	☒			
Waste water system inspected? ³		☒		
Exterior				
Photos taken (all sides of the building, e.g. where ground levels are questionable or may be built up when landscaping is done)				Yes / No Comments:
Landscaping	☒			not started / started ☒ completed
Floor heights (in relation to ground levels)	☒			
Chimney/flue height in relation to surrounding ridges & roof		☒		
Vents in chimney (Jetmaster fires)		☒		
Drainage⁴				
Finished height of gully dish ⁵		☒		Unpaved 100mm Paved 25mm
Terminal vent installed ⁶ & flashed		☒		Size ⁷ : mm
Vent cowl fitted		☒		
Discharge pipes to gullies ⁸		☒		
Sealed against gully dish		☒		
Sealed through foundation		☒		
Lids fitted to gully dish ⁹		☒		
Pipes discharge under gully grating		☒		
Stormwater				
Guttering fitted	☒			
Downpipes fitted and fixed to walls	☒			
Diffusers/spreaders (downpipes to roofs)	☒			
Overflows to internal gutters		☒		
Butynol correctly laid & glued		☒		
Surface drains/sumps (yards & drives)		☒		
Site water run off (sloping sites)		☒		
Watertank overflow piped away		☒		
Wall cladding				
Cladding painted & sealed	☒			
Gaps & cracks properly filled & sealed	☒			
Facings & scribes fitted & sealed	☒			
Warranty & guarantee certificates provided		☒		
Weep holes in brick clear		☒		
Vent gaps at top of brickwork		☒		
Lintel bars fitted		☒		
Venting				
Bathroom venting ducts exiting envelope		☒		
Ensuite venting ducts exiting envelope		☒		
Laundry venting ducts exiting envelope		☒		

Inspection Checklist –Building & Plumbing Final BC: _____

Item to be inspected for compliance: with the Building Act 2004, NZBC & Approved Documents Complies with approved plans & specifications	Outcome ¹			Details of Inspection & Comments: Comments must be made for: 1. Non-complying items 2. Items/work deviates from approved documents 3. Detail alternative solution & how compliance achieved
	Pass	N/A	Fail	
Kitchen venting ducts exiting envelope		X		
Subfloor				
Base boards & vent grills subfloor area		X		
Access subfloor area (with door)		X		
Subfloor ground levels (subfloor ground level must not be lower than exterior ground levels & spoil in the subfloor must be raked out evenly)		X		
Subfloor insulation		X		Type:
Ground vapour barrier laid in subfloor area ¹⁰		X		
Verandahs/Pergolas/Upper Level Decks				
Post / beam fixings as per plans	X			
Rafter / floor joist fixings as per plans	X			
Rafter / joist / ribbon board connections to building envelope as per plans	X			
Decks				
Exterior stairs (open stair gaps < 100mm)		X		
Handrails to all stairs		X		
Barriers (min 1m high, gaps < 100mm)	X			
Overflows to enclosed decks	X			
Glass barriers	X	X		(Branded / thickness mm)
Barrier stability	X			
Slip resistant surface (main entry decks)		X		
Overhead Glazing				
Branded safety glazing identified		X		
Retaining Walls/Excavations				
Retaining walls site works completed		X		
Barriers to retaining walls/site works		X		
Retaining wall drains cleanout access (house)		X		
Interior				
Paint & sealing of interior complete				Yes / No
Safety glazing window seats, hinged doors, low level glass	X			
Windows (general glazing checked)	X			
Fire Place				
Clearances checked		X		
Restraint fixings		X		
Vents in chimney (Jetmaster fires)		X		
Wetbacks¹¹				
Connected only to open vented cylinder		X		
Connections only with copper pipework		X		
Window Opening Restrictors (windows lower than 760mm from floor)				
Ground floor windows		X		
Upper level windows	X			
Kitchen				
Painting & sealing of kitchen complete		X		
Seal around bench complete		X		
Splash protection around sink complete		X		
Sink working		X		
Sink trap free of leaks		X		
Dishwasher trap above flood level of dishwasher		X		
Range hood vents to the exterior of the building		X		
HWC¹²				Type: open vented / <u>valve vented</u> / instantaneous
Valves¹³				

Inspection Checklist – Building & Plumbing Final

Item to be inspected for compliance: with the Building Act 2004, NZBC & Approved Documents Complies with approved plans & specifications	Outcome ¹			Details of Inspection & Comments: Comments must be made for: 1. Non-complying items 2. Items/work deviates from approved documents 3. Detail alternative solution & how compliance achieved
	Pass	N/A	Fail	
Open Vented Cylinder				
Isolating (3 in 1) valve ¹⁴		X		
Pressure reducing valve ¹⁵		X		
Drain valve ¹⁶		X		
Tempering valve ¹⁷		X		Temperature: °C
Cylinder restraints ¹⁸		X		
HW Cylinder overflow identified		X		Low Pressure systems / wet backs
Valve Vented Cylinder				
Isolating (3 in 1) valve ¹⁹	X			
Cold water expansion valve ²⁰	X			
Pressure limiting valve ²¹	X			
Drain valve ²²	X			
Temperature & pressure relief valve ²³	X			
Air gap to drain ²⁴	X			
Tempering valve ²⁵	X			Temperature: °C
Cylinder restraints ²⁶	X			
Instantaneous Water Heating				Type:
Water temperature ²⁷		X		Temperature: °C
Isolating valve ²⁸		X		
Solar Water Heaters				
Installed as per manufacturer's specifications	X			
Water temperature ²⁹	X			Temperature: 54. °C
Smoke Alarms				
Operational	X			
Hush facility	X			
Manufactured to an approved standard	X			
Located as per plans	X			
Stairs				
Handrail fitted	X			
Balustrade barrier		X		
Head room (2m min.)	X			
Branded safety glazing identified		X		
Min. tread, max. rise	X			
Interior Balconies				
Barriers (min. 900mm high, gaps < 100mm)		X		
Barrier stability		X		
Bathroom				
Wall paint & sealing complete		X		
Impervious floor seal complete		X		
Flexible seal to floor wall junctions (tiles)		X		
Branded safety glazing identified		X		
Seal around vanity, bath & shower		X		
Bath working		X		
Bath trap water seal visible		X		N/a – details ³⁰ :
Vanity working		X		
Vanity trap free of leaks		X		
Shower working		X		
Shower trap		X		Type: easi-clean / standard trap
Shower trap – standard trap water seal visible ³¹		X		
Shower cubicle watertight		X		
Splash protection complete		X		
Ventilation		X		
Toilet				
Wall paint & sealing complete		X		
Impervious floor seal complete		X		
Flexible seal to floor wall junctions (tiles)		X		

Inspection Checklist –Building & Plumbing Final

Item to be inspected for compliance: with the Building Act 2004, NZBC & Approved Documents Complies with approved plans & specifications	Outcome ¹			Details of Inspection & Comments: Comments must be made for: 1. Non-complying Items 2. Items/work deviates from approved documents 3. Detail alternative solution & how compliance achieved
	Pass	N/A	Fail	
Pan secured to floor		X		
WC working		X		
WC trap water seal		X		
Seal around toilet		X		
Seal around handbasin complete		X		
Splash protection complete		X		
Ventilation		X		
Ensuite				
Wall paint & sealing complete	X			
Impervious floor seal complete	X			
Flexible seal to floor wall junctions (tiles)	X			
Branded safety glazing identified	X			
Pan secured to floor	X			
WC working	X			
WC trap water seal	X			
Bath working		X		
Bath trap water seal visible		X		N/a – details ³² :
Vanity working	X			
Vanity trap free of leaks	X			
Shower working	X			
Shower trap	X			Type ~~easi-clear~~ / standard trap
Shower trap – standard trap water seal visible ³³		X		
Shower cubicle watertight	X			
Splash protection complete	X			
Ventilation	X			
Exterior Decks & Balconies				
Barriers (min 1m high, gaps < 100mm)	X			
Barrier stability	X			
Overflows to enclosed decks	X			
Glass barriers (glass grade, thickness & type)		X		
Slip resistant surface (main entry decks)		X		
Ceiling Space				
Access to space provided min. 600 x 500mm	X			
Insulation installed as per manufacturer's specifications	X			
Insulation away from downlights & flues	X			
Fan vent ducts connected	X			
Laundry				
Wall paint & sealing complete		X		
Impervious floor seal complete		X		
Flexible seal to floor wall junctions (tiles)		X		
Laundry tub working		X		
Laundry trap free of leaks		X		
Seal around tub		X		
Splash protection complete		X		
Ventilation		X		
Vehicle Crossing				
Crossing completed		X		
Swimming Pool/Spa Pool				
Pool inspection checksheet completed		X		
Notes³⁴:				

Inspection Checklist – Building & Plumbing Final

Item to be inspected for compliance: with the Building Act 2004, NZBC & Approved Documents Complies with approved plans & specifications	Outcome ¹			Details of Inspection & Comments: Comments must be made for: 1. Non-complying items 2. Items/work deviates from approved documents 3. Detail alternative solution & how compliance achieved
	Pass	N/A	Fail	
Product warnings & bans	☒ Pass	☐ N/A	☐ Fail	Officer: <i>BL CHURCHILL</i>
Amended plans required?	☒ Yes	☐ No	☐ No	
Amended specifications required?	☒ Yes	☐ No	☐ No	Signed: <i>BLA</i>
Reinspection required?	☒ Yes	☐ No	☐ No	
Site instruction/NTF issued?	☒ Yes	☐ No	☐ No	Date: 08/12/2008
Building final inspection passed?	☒ Yes	☐ No	☐ No	

¹ Pass = Compliance with approved plans & documentation, N/A = Not applicable to this project, Fail = Non-compliance with approved plans & documentation

² Verification required e.g. Engineer Certificates, Producer Statements, compaction reports, warranties, surveyor's certificates etc.

³ If no, issue site instruction and inform plumbing and drainage officer.

⁴ G13 AS2 Section 3.3.1

⁵ AS/NZS 3500.2.2:2003 Section 4.6.6.7

⁶ AS/NZS 3500.2.2:2003 Section 3.9.3.1

⁷ AS/NZS 3500.2.2:2003 Section 3.9.3.2 & Table 3.5

⁸ G13 AS 2 Section 3.3.1 & Fig. 3

⁹ G13 AS2 Section 3.3.1

¹⁰ NZS 3604:1999 Section 6.14.3

¹¹ G12 AS 1 Section 6.13

¹² G12 AS1 Section 6.0

¹³ G12 AS 1 Table 5

¹⁴ G12 AS 1 Fig. 7

¹⁵ G12 AS 1 Fig. 7

¹⁶ G12 AS 1 Fig. 7

¹⁷ G12 AS 1 Fig. 16 1m minimum copper pipe between storage water heater & tempering valve

¹⁸ G12 AS 1 Section 6.11.4 & Fig. 14

¹⁹ G12 AS 1 Fig. 8

²⁰ G12 AS 1 Fig. 8

²¹ G12 AS 1 Fig. 8

²² G12 AS 1 Fig. 8

²³ G12 AS 1 Fig. 8

²⁴ G12 AS 1 Fig. 8

²⁵ G12 AS 1 Fig. 16 1m minimum copper pipe between storage water heater & tempering valve

²⁶ G12 AS 1 Section 6.11.4 & Fig. 14

²⁷ G12 AS 1 Section 6.14

²⁸ G12 AS 1 Section 6.0

²⁹ G12 AS 1 Section 6.14

³⁰ If no water seal & if fixture is < 1.2m to a floor waste trap, then trap complies
If no floor waste trap, investigation required

³¹ If no water seal & if fixture is < 1.2m to a floor waste trap, then trap complies
If no floor waste trap, investigation required

³² If no water seal & if fixture is < 1.2m to a floor waste trap, then trap complies
If no floor waste trap, investigation required

³³ If no water seal & if fixture is < 1.2m to a floor waste trap, then trap complies
If no floor waste trap, investigation required

³⁴ Note any additional information, such as: cast in fixings, timber, etc.

Inspection Checklist –Scratch Coat

Address: 29 La Lena Gr Building Consent No.: 4470
 Tradesperson: David Hall Tradesperson: Brent Hughes
 Reg.No.: _____ Contact Details: _____ Reg. No.: _____ Contact Details: _____
 Date: 23/09/2008 Time: 10.30 Staged/Partial Inspection: _____ of _____

Item to be inspected for compliance: with the Building Act 2004, NZBC & Approved Documents B1, B2, E1, E2, F5 and NZS 3604:1999	Outcome ¹			Details of Inspection & Comments: Comments must be made for: 1. Non-complying Items 2. Items/work deviates from approved documents 3. Detail alternative solution & how compliance achieved
	Pass	N/A	Fail	
Conditions of consent/site instructions read?				(Yes) / No
Approved plans & specifications sighted? ²				(Yes) / No
Specific design/cladding detail noted?				(Yes) / No
Paper/netting/Rib Lathe inspection passed?				(Yes) / No
Special PPE required for this site			Yes (No)	Specify: steelcapped footwear / eye protection / dust mask Other:
System				Name:
Control joints in plaster coat as per plans	X			
Control joints sealed ³ (where no cracking profile used)	X			
Plaster coat & scratch even, neat & consistent, including around doors, windows & at base	X			
Seal around pipes & penetrations ⁴	X			
Plaster forced in behind facings	X			
No reinforcing/netting exposed	X			
Protection of pre-finished surfaces ⁵	X			
Notes⁶:				
Amended plans required?	Yes (No)			Officer: B L Churchill
Amended specifications required?	Yes (No)			
Reinspection required?	Yes (No)			Signed: <i>B L Churchill</i>
Site instruction issued?	Yes (No)			
Scratch coat inspection passed?	(Yes) / No			Date: _____

¹ Pass = Compliance with approved plans & documentation, N/A = Not applicable to this project, Fail = Non-compliance with approved plans & documentation.

² Approved stamped site plan, foundation plan, cross section drawings, truss layout and fixing detail, specifications, engineer detail, floor plan, drainage plan, effluent disposal site plan and detail

³ NZS 4251:Part 1:1998 Para 2.1.9.6

⁴ NZS 4251:Part 1:1998 Para 2.1.4.5.3

⁵ Check that plaster splash has been removed from pre-finished surfaces e.g. windows, powdercoated joinery, coloursteel roofs. Check that where plasterers are working over roofs, that protection is in place, so to avoid damage to roof

⁶ Note any additional information

Inspection Checklist –Paper Netting

Address: 29 La Lena Gr Building Consent No.: 4470
 Tradesperson: David Hall Tradesperson: Brent Hughes
 Reg.No.: _____ Contact Details: _____ Reg. No.: _____ Contact Details: _____
 Date: 12/09/2008 Time: 9.00 Staged/Partial Inspection: _____ of _____

Item to be inspected for compliance: with the Building Act 2004, NZBC & Approved Documents B1, B2, E1, E2, F5 and NZS 3604:1999	Outcome ¹			Details of Inspection & Comments: Comments must be made for: 1. Non-complying items 2. Items/work deviates from approved documents 3. Detail alternative solution & how compliance achieved
	Pass	N/A	Fail	
Conditions of consent/site instructions read?				(Yes) / No
Approved plans & specifications sighted? ²				(Yes) / No
Specific design/cladding detail noted?				(Yes) / No
Monolithic backing inspection passed?				(Yes) / No
Special PPE required for this site	Yes	(No)		Specify: steelcapped footwear / eye protection / dust mask Other:
System				Name: Stucco over cavity
Paper/wrap				Type: Duroid Black Weight: Heavy (Light)
Netting ³				Type: 20mm Crimped Galvanised
Fixed at 150mm centres on all battens				
Spaced off min. 6mm – 9mm				
Fitted tightly & evenly				
Diagonal netting to openings				
Control Joints				
Cut into netting @ 4m centres				
Cracking profiles in place				
Alternative detail				Details:
Flashings installed (all openings & penetrations)				
Rib Lathe				
Rib Lathe installed to manufacturer's specifications				
Notes⁴:				
Amended plans required?	Yes	(No)	Officer: B L Churchill	
Amended specifications required?	Yes	(No)		
Reinspection required?	Yes	(No)	Signed: <i>B L Churchill</i>	
Site instruction issued?	Yes	(No)		
Paper/netting backing inspection passed?	(Yes)	/ No	Date:	

¹ Pass = Compliance with approved plans & documentation, N/A = Not applicable to this project, Fail = Non-compliance with approved plans & documentation.

² Approved stamped site plan, foundation plan, cross section drawings, truss layout and fixing detail, specifications, engineer detail, floor plan, drainage plan, effluent disposal site plan and detail

³ NZS 4251:Part 1:1998

⁴ Note any additional information, such as: cast in fixings, timber, etc.

Inspection Checklist – Postline

Address: 29 La Lena Gr Building Consent No.: 4470
 Tradesperson: Brent Hughes Tradesperson: _____
 Reg.No.: _____ Contact Details: _____ Reg. No.: _____ Contact Details: _____
 Date: 12/09/2008 Time: 9.00
 Weather Conditions: wet (fine) Staged/Partial Inspection: _____ of _____

Item to be inspected for compliance: with the Building Act 2004, NZBC & Approved Documents B1, B2, C3, C4, E1, E2, F5, G4, G6 and NZS 3604:1999	Outcome ¹			Details of Inspection & Comments: Comments must be made for: 1. Non-complying items 2. Items/work deviates from approved documents 3. Detail alternative solution & how compliance achieved
	Pass	N/A	Fail	
Conditions of consent/site instructions read?				(Yes)/ No
Approved plans & specifications sighted? ²				(Yes)/ No
Approved plans include specific design detail?				Yes (No)
Preline inspection passed?	X			
Amended plans provided?				Yes (No)
Bracing				
Bracing sheet material (type & thickness)	X			10mm Braceline & Standard Gib
Size & location of elements as per plans	X			
Fixing of sheets	X			
Double sided bracing (e.g. GIB 2a&b, GIB 3, BR 6, BR7, BR8)	X			
Ceiling Diaphragm				
Size & location		X		
Fixing of sheets		X		
Fire Walls				
Sheet material (type & thickness)		X		
Fixing of sheets		X		
Size & location of elements as per plans ³		X		
Seal of penetrations		X		
Other Linings				
Walls (type & thickness) i.e villa board, ply, etc.	X			Villaboard
Ceilings (type & thickness)	X			10mm Gib
Air Noise				
Wall linings (type & thickness/double layered)		X		
Ceilings (type & thickness/double layered)		X		
Exterior joinery & glazing		X		
Safety				
Glazing	X			
Window restrictors ⁴		X		
Notes⁵:				
Amended plans required?	Yes	(No)		Officer: B L Churchill
Amended specifications required?	Yes	(No)		
Reinspection required?	Yes	(No)		Signed: 
Site instruction issued?	Yes	(No)		
Post Line inspection passed?	(Yes)	No		Date: 12/09/2008

¹ Pass = Compliance with approved plans & documentation, N/A = Not applicable to this project, Fail = Non-compliance with approved plans & documentation

² Approved stamped site plan, foundation plan, cross section drawings, truss layout and fixing detail, specifications, engineer detail, floor plan, drainage plan, effluent disposal site plan and detail

³ Check for approved fire seals i.e. intumescent sealer, flush boxes, fire collars, insulation & note types of protection.

⁴ F4 AS1 Section 4

⁵ Note any additional information, such as: cast in fixings, timber, etc.

Development Services Building Site Instruction Notice

To: BRONT HUGHES.

Address: 29 LA LENA GROVE

This notice relates to the building work being carried out under building consent number: 4470

The following building work **does not comply or is required to be carried out:**

① DETAIL TO DECK, PLASTER CLADDING JUNCTION WILL NOT PROVIDE ADEQUATE WATERPROOFING. MINIMUM HEIGHT TO UNDERSIDE OF CLADDING TO TOP OF DECK FINISHED HEIGHT IS TO BE 50MM. CLADDING IS TO OVERHANG FLOOR HEIGHT BY AT LEAST 50MM. NEW DETAIL TO BE PROVIDED.

☒ The work is to be carried out by 15 / 9 / 08

☒ An inspection of the completed works will be required
Please contact Palmerston North City Council Development Services when the work is completed.

Signed for and on behalf of the Council:

Name: B L CHURCHILL

Position: BUILDING OFFICER

Signature: B L C

Issue Date: 20 / 8 / 08

Inspection Checklist – Preline – Upper Level

Address: 29 La Lena Gr Building Consent No.: 4470
Tradesperson: Brent Hughes Tradesperson: _____
Reg.No.: _____ Contact Details: _____ Reg. No.: _____ Contact Details: _____
Date: 02/09/2008 Time: 1.30
Weather Conditions: wet / fine Staged/Partial Inspection: _____ of _____

Item to be inspected for compliance: with the Building Act 2004, NZBC & Approved Documents B1, B2, E1, C3, C4, E2, E3, F2, F4, F5, G4, H1 and NZS 3604:1999	Outcome ¹			Details of Inspection & Comments: Comments must be made for: 1. Non-complying items 2. Items/work deviating from approved documents 3. Detail alternative solution & how compliance is achieved	
	Pass	N/A	Fail		
Conditions of consent/site instructions read?				Yes / No	
Approved plans & specifications sighted? ²				Yes / No	
Approved plans include specific design detail?				Yes / No	
Approved plans include air/noise detail?				Yes / No	
Plumbing pre-line inspection passed? ³				Yes / No	
Preline lower storey inspection passed?				Yes / No	
Exterior					
Exterior cladding in place	X				
Exterior protected (where cladding is not in place)		X			
Roof					
Roof cladding & flashings ⁴	X				
Bracing					
Plan checked & wind zone confirmed	X			Low / medium / <u>high</u> / very high	
Brace bottom plate fixings	X			Type: D12 Coachscrews & 50mm Sq Washers/ Straps to joist	
Unit length as per plan	X				
Bracing limitations ⁵	X				
Roof bracing checked	X				
Bracing as per approved plans	X				
Bracing plan amended & approved		X		Details:	
Framing					
Bottom plate fixings	X			Type: Nails	
Floor plan as per approved plans	X				
Moisture content ⁶	X			MC Range 15 % - 16 %	
Lintels & beams as per approved plans	X				
Lintel/beam support & fixings	X				
Spacing (suitable for linings)	X				
Engineer detail as per approved plans	X				
Engineer design steel connections checked	X				
Fire Wall					
Fixings & straps		X			
Penetrations & electrical fittings ⁷		X			
Insulation					
Insulation walls	X			Type: Fibreglass Blanket	Grade: R 2.6
Insulation ceilings	X			Type: Fibreglass Blanket	Grade: R 4.0
Insulation in skillion roof		X			
Ply (roof & decks) thickness as per plans		X			
Safety Glazing					
Exterior windows	X				
Window restrictors fitted		X			
Doors		X			
Stairs		X			
Wet areas	X				
Wet Area					
Flooring substrate as per plans		X			
Waterproofing systems checked		X			

Inspection Checklist – Preline – Upper Level

Item to be inspected for compliance: with the Building Act 2004, NZBC & Approved Documents B1, B2, E1, C3, C4, E2, E3, F2, F4, F5, G4, H1 and NZS 3604:1999	Outcome ¹			Details of Inspection & Comments: Comments must be made for: 1. Non-complying items 2. Items/work deviating from approved documents 3. Detail alternative solution & how compliance is achieved
	Pass	N/A	Fail	
Notes⁸: Builder has dropped height of deck to achieve minimum clearance between cladding and deck. New detail to come from Bruce Bary Architect				
Amended plans required?	Yes	☒ No	Officer: B L Churchill	
Amended specifications required?	Yes	☒ No		
Reinspection required?	Yes	☒ No	Signed: 	
Site instruction issued?	Yes	☒ No		
Pre-line upper storey inspection passed?	☒ Yes	No	Date: 02/09/2008	

¹ Pass = Compliance with approved plans & documentation N/A = Not applicable to this project, Fail = Non-compliance with approved plans & documentation

² Approved stamped site plan, foundation plan, cross section drawings, truss layout and fixing detail, specifications, engineer detail, floor plan, drainage plan, effluent disposal site plan and detail

³ Where plumbing pre-line inspection has not been passed, site instruction to be issued detailing areas able to be lined & any other necessary actions

⁴ Roof is weatherproofed i.e minimum of ridge caps, barge rolls, barge flashings, apron flashings in place

⁵ Check bracing limitations in appropriate bracing manual (e.g. Limitations Page 8 GIB Bracing Systems)

⁶ Reference E2 / AS1, 11.2. Forest Research Institute recommends testing 10 studs, 6 ceiling battens & 6 lintels, 9 out of the 10 studs must be within the limits.

⁷ All penetrations shall be fire rated to ensure the integrity of the fire separation is not compromised

⁸ Note any additional information, such as: cast in fixings, timber, etc.

Inspection Checklist –Framing

Address: 29 La Lena Gr Building Consent No.: 4470
Tradesperson: Brent Hughes Tradesperson: _____
Reg.No.: _____ Contact Details: _____ Reg. No.: _____ Contact Details: _____
Date: 26/08/2008 Time: 10.30 Staged/Partial Inspection: _____ of _____

Item to be inspected for compliance: with the Building Act 2004, NZBC & Approved Documents B1, B2, E1, E2, F5, G4 and NZS 3604:1999	Outcome ¹			Details of Inspection & Comments: Comments must be made for: 1. Non-complying Items 2. Items/work deviates from approved documents 3. Detail alternative solution & how compliance achieved
	Pass	N/A	Fail	
Conditions of consent/site instructions read?				☒ Yes / No
Approved plans & specifications sighted? ²				☒ Yes / No
Approved plans include specific design detail?				☒ Yes / No
Concrete slab inspection passed?		☒		
Subfloor framing inspection completed?				
Special PPE required for this site	Yes	☒ No		Specify: steelcapped footwear / eye protection / dust mask Other:
Exterior				
Polythene fixed to bottom plate (brick veneer) ³		☒		
Concrete sealed (mulseal/ bitumous tarseal for brick veneer) ⁴		☒		
Fixings Exterior Walls⁵				
Bottom plate fixing type	☒			Nails
Bottom plate fixing spacings	☒			400 cntrs
Bottom plate brace straps & fixings ⁶	☒			
Ext. bracing sheets recessed into framing	☒	☒		(Batten cavity systems only)
Bracing set out as per plans	☒			
Lintel & beam high wind fixings	☒			
Top plate high wind fixings	☒			
Framing - Exterior				
Timber grade & treatment ⁷	☒			Laserframe Msg8 H1.2
DPC under exterior bottom plate	☒			
Stud size & spacing	☒			90x45 @ 600 cntrs
Double studs or blocking to openings for brick veneer ties	☒	☒		
Lintel & beam sizes	☒			
Blocking under girder trusses & beams etc.	☒			
Roof				
Timber grade & treatment ⁸	☒			Laserframe Msg8 H1.2
Truss/rafter set out ⁹	☒			900 cntrs
Truss/rafter fixings ¹⁰	☒			CT 400 Wind Straps & Z Nails
Purlin/batten set out (span & spacing) ¹¹	☒			To Suit Tiles
Purlin/batten fixings periphery & body ¹²	☒			
Interior				
Control joints/saw cuts in slab		☒		
Framing - Interior				
Timber treatment & grade	☒			Laserframe Msg8 H1.2
Internal lintel/beam sizes	☒	☒		
Blocking around penetrations for flashings	☒	☒		
Upper storey floor joists sizes & spans	☒			
Mid span blocking	☒			
Checks & notches in framing	☒	☒		
Strap fixings through floor	☒			D12 Coachscrews & 50mm Sq Washers
Fixings Interior Walls¹³				
Bottom plate fixing type	☒			Nails
Bottom plate fixing spaces	☒			400 cntrs

Inspection Checklist – Framing

Item to be inspected for compliance: with the Building Act 2004, NZBC & Approved Documents B1, B2, E1, E2, F5, G4 and NZS 3604:1999	Outcome ¹			Details of Inspection & Comments: Comments must be made for: 1. Non-complying Items 2. Items/work deviates from approved documents 3. Detail alternative solution & how compliance achieved
	Pass	N/A	Fail	
Bottom plate brace straps & fixings	☒	☐	☐	
Bracing set out as per plans	☒	☐	☐	
Internal lintel/beam fixings & support	☒	☐	☐	
Engr structural members as per plans	☒	☐	☐	
Engr structural fixings as per plans	☒	☐	☐	
Engr confirmation required?	☐	☒	☐	Yes ☐ No ☒
Notes¹⁴:				
SIN issued in regard to exterior deck height in relation to the interior floor & the waterproofing detail of the Stucco Cladding.				
Amended plans required?	☒	☐	No	Officer: B L Churchill
Amended specifications required?	☐	☒	No	
Reinspection required?	☒	☐	No	Signed: <i>B L Churchill</i>
Site instruction issued?	☒	☐	No	
Framing inspection passed?	☐	☒	No	Date:

¹ Pass = Compliance with approved plans & documentation, N/A = Not applicable to this project, Fail = Non-compliance with approved plans & documentation.

² Approved stamped site plan, foundation plan, cross section drawings, truss layout and fixing detail, specifications, engineer detail, floor plan, drainage plan, effluent disposal site plan and detail

³ NZS 3604:1999 Section 7.5 Fig. 7.10 & Section 11.7.4.6 & Fig. 11.1

⁴ NZS 3604:1999 Section 7.5 Fig. 7.10 & Section 11.7.4.6 & Fig. 11.1

⁵ NZS 3604:1999 Section 7.5.12

⁶ Individually checked against approved plans & specifications

⁷ NZS 3602:2003 Table 1

⁸ NZS 3602:2003 Table 1

⁹ Checked against manufacturer's set out plan

¹⁰ Checked against manufacturer's fixing plan

¹¹ NZS 3604:1999 Table 10.9

¹² NZS 3604:1999 Table 10.9 & 10.10 & Figs. 10.16 & 10.17

¹³ NZS 3604:1999 Section 7.5.12

¹⁴ Note any additional information, such as: cast in fixings, timber, etc.

Inspection Checklist –Cavity

Address: 29 La Lena Gr Building Consent No.: 4470
 Tradesperson: Brent Hughes Tradesperson: _____
 Reg. No.: _____ Contact Details: _____ Reg. No.: _____ Contact Details: _____
 Date: 26/08/2008 Time: 10.30 Staged/Partial inspection: _____ of _____

Item to be inspected for compliance: with the Building Act 2004, NZBC & Approved Documents B1, B2, E1, E2, F5 and NZS 3604:1999	Outcome ¹			Details of Inspection & Comments: Comments must be made for: 1. Non-complying items 2. Items/work deviates from approved documents 3. Detail alternative solution & how compliance achieved
	Pass	N/A	Fail	
Conditions of consent/site instructions read?				Yes / No
Approved plans & specifications sighted? ²				Yes / No
Approved plans include specific design detail?				Yes / No
Framing inspection passed?				Yes / No
Special PPE required for this site	Yes	No		Specify: steelcapped footwear / eye protection / dust mask Other:
External bracing sheets checked into framing?				Yes / No
Building Wrap				
Type & weight	X			Type: Frameguard 2 Weight: <u>Heavy</u> / Light
Cavity Battens				
Set out as per plans	X			
Battens overhang bottom plate (min. 50mm)	X			
Min. cladding ground clearance as per plans	X			Upper Story
Type of battens	X			<u>Timber</u> / other Specify:
Timber grade & treatment (H3.1 min.)	X			
Fixing of battens ³	X			
Vermitt proof flashing at base	X			
Exterior Bracing Over Cavity				
Horizontal battens top (150mm x 19mm)		X		
Top batten fixing		X		
Horizontal battens bottom (75mm x 19mm)		X		
Bottom batten fixing		X		
Flashings				
Head flashings under battens	X			
Flexible (tape/building wrap) flashings	X			
Building wrap over head flashings	X			
Flashing of penetrations (e.g. meter boxes, water & gas pipes, electrical cables & fittings)	X			
Notes ⁴:				
Amended plans required?	Yes	No	Officer: B L Churchill	
Amended specifications required?	Yes	No		
Reinspection required?	Yes	No	Signed: <i>B L Churchill</i>	
Site instruction issued?	Yes	No		
Cavity inspection passed?	Yes	No	Date: 26/08/2008	

¹ Pass = Compliance with approved plans & documentation, N/A = Not applicable to this project, Fail = Non-compliance with approved plans & documentation.

² Approved stamped site plan, foundation plan, cross section drawings, truss layout and fixing detail, specifications, engineer detail, floor plan, drainage plan, effluent disposal site plan and detail

³ Check fixing of battens in accordance with approved plans & specifications i.e. E2 system or proprietary system

⁴ Note any additional information, such as: cast in fixings, timber, etc.

Address: 29 La Lena Grove -

Building Consent No.: 4470.

Tradesperson: Ken Allison

Tradesperson: APV Ashhurst

Reg.No.: _____ Contact Details: _____

Reg. No.: _____ Contact Details: _____

Date: 12/8/22 Time: 9-00.

Weather Conditions: wet fine

Staged/Partial Inspection: 1 - 1 of 2

Notes¹⁵:

Inspection Checklist – Preline Plumbing

Item to be inspected for compliance: with the Building Act 2004, NZBC & Approved Documents G12, G13 & AS/NZS 3500.2.2:2003	Outcome ¹	Details of Inspection & Comments: Comments must be made for: 1. Non-complying items 2. Items/work deviates from approved documents 3. Detail alternative solution & how compliance achieved
	Pass N/A Fail	
Amended plans required?	Yes/No	Officer: <i>Ross Marshall</i>
Amended specifications required?	Yes/No	
Reinspection required?	Yes/No	Signed: <i>[Signature]</i>
Site instruction issued?	Yes/No	
Pre-line plumbing inspection passed?	(Yes/No)	Date: <i>18-8-08.</i>

¹ Pass = Compliance with approved plans & documentation, N/A = Not applicable to this project, Fail = Non-compliance with approved plans & documentation.

² Approved stamped site plan, foundation plan, cross section drawings, truss layout and fixing detail, specifications, engineer detail, floor plan, drainage plan, effluent disposal site plan and detail

³ G12

⁴ G12 AS1 7.1.3 Generally horizontally 600mm centres & vertically 1.2m centers

⁵ NZS 4305: 1996 Section 3.2.1 Refer Table 5 below.

Table 5 – Acceptable maximum pipe lengths			
Nominal pipe size (mm)	10	15	20
Length (m)	25	12	7

⁶ NZS 4305: 1996 Section 3.5.1 Fig 2, 3.6.1 and 3.7.1 Fig 3

⁷ Refer H1 A/S 1 and NZS 4305:1996

⁸ G12 AS1 7.5.1

⁹ AS/NZS 3500.2.2:2003 Section 3.9.3.3

¹⁰ AS/NZS 3500.2.2:2003 Section 3.4 & Table 3.2

¹¹ AS/NZS 3500.2.2:2003 Section 3.3.5 Fig. 3.1

¹² AS/NZS 3500.2.2:2003 Section 7.12.3 Fig. 7.12 / G13 AS1 Section 4.7.2 & Fig. 8

¹³ AS/NZS 3500.2.2:2003 Section 4.6.7 & Fig. 4.2 & Table 4.4

32mm : 50mm/metre (max. permitted length of pipe 3.5m)

40mm : 25mm/metre (max. permitted length of pipe 3.5m)

50mm : 25mm/metre

65mm : 25mm/metre

¹⁴ AS/NZS 3500.2.2:2003 Section 9.2 Table 9.1 / G13 AS1 Section 6.2 Table 7

¹⁵ Note any additional information, including safety issues

Processing Checklist – Small Addition

Applicant Name: DURBIN / WESTLEY PIM No: 14470 BC No: 14470
Site Address: 29 LA LENA GROVE Date: 10/12/01

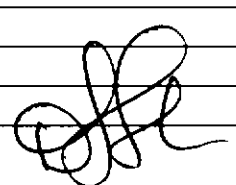
Notes¹:

- ① CONCRETE STRENGTH? ② JOISTS PS20-21 X 09?
- ③ RAILS ON CLIPS? DIRECT FIX?
- ④ CANTILEVER ~~BEA~~ POSTS OFF 700? VERIFY - (530 MAX?)
- ⑤ CUT DOWN TRISSES REE VERIFICATION BY MANUFACTURER
- ⑥ GABLE ROOFING ⑦ INTERNAL GUTTERS
- ⑧ OVERFLOW FOR GUTTER
- ⑨ Consent accepted on basis new internal beam posts will sit on existing slab thickenings

Item to be checked for compliance: with the Building Act 2004, NZBC & Approved Documents Note: N/A = this item is not applicable to this application and has not been assessed	Plans/Specs Checked			Details of Processing & Comments: Comments must be made for: 1. Non-complying items 2. Alternative solutions & how compliance with NZBC achieved
	Complies	N/A	Non-Complying	
Application checklist completed & attached?	☒			
Any outstanding Building Consents relating to property	☒			Record Building Consent Number/s: <u>BC 35147 - CCL 25/3/02</u>
Planning PIM detail				
Planning checklist completed & attached?	☒			
Planning requirements noted on consent/PIM?	☒			
Survey certificates required??	☒			
Is this a sloping site ³	☒			
Spot levels & floor heights & datum shown on plans		☒		
Min. floor heights for areas subject to flood shown on plans		☒		
Building PIM detail				
Classification of exposure zones determined? ⁴	☒			

Processing Checklist – Small Addition

04470

Item to be checked for compliance: with the Building Act 2004, NZBC & Approved Documents Note: N/A = this item is not applicable to this application and has not been assessed	Plans/Specs Checked			Details of Processing & Comments: Comments must be made for: 1. Non-complying items 2. Alternative solutions & how compliance with NZBC achieved
	Complies	N/A	Non-Complying	
Building PIM checklist completed & attached?	Yes	No		
Building requirements from PIM noted?	Yes	No		
Building consent detail				
Siting measurements from min. 2 boundaries shown	Yes	No		WELL INSIDE BOUNDARIES - PLANNING OK
Sloping site accurately shown on plan		✓		
Vehicle crossing required?	Yes	No		
Vehicle crossing application submitted ⁵		✓		
Foundations				
Engineer detail peer reviewed (by 2 nd engineer/PS1/2 provided)	✓			(Eng. to initial items checked) 
Engineer detail correctly shown on plans	✓		✗	
Concrete strength specified ⁶	✓		✗	Specified mPa: 17.5
Footing dimensions ⁷		✓		
Reinforcing size, type & cover shown		✓		
Foundation walls⁸				
Heights & dimensions of foundation walls shown		✓		
Reinforcing size, type & cover shown		✓		
Foundation height in respect of subfloor access, pile heights etc. ⁹		✓		
Ventilator set out ^{10&11}		✓		
Subfloor access door ¹²		✓		
Ordinary piles¹³:				
Footing dimensions ¹⁴		✓		
Pile dimensions shown on plans		✓		
Set out, spacing & treatment		✓		
Ordinary pile connections shown ¹⁵		✓		
Anchor piles^{16&17}:				
Footing dimensions		✓		
Pile dimensions shown on plans		✓		
Set out, spacing & treatment		✓		
Anchor pile connections shown (min. 12Kn)		✓		
Braced piles^{18&19}:				
Footing dimensions		✓		
Pile dimensions shown on plans		✓		
Set out, spacing & treatment		✓		
Braced pile connections shown (min. 12Kn)		✓		
Column/post footings^{20&21}:				
Footing dimensions	✓			
Post dimensions shown on plans	✓			

Processing Checklist – Small Addition

04470

Slab on Ground				
Concrete strength specified ²²		✓		Specified mPa:
Floor heights shown on plans ²³		✓		
Hardfill detail ²⁴		✓		
Damp proof membrane ²⁵		✓		
Connection to existing foundations shown on plans		✓		
Reinforcing: size, type, placement on plans		✓		
Supplementary reinforcing detailed on plans ²⁶		✓		
Shrinkage control joints detailed on plans ²⁷		✓		
Timber Treatment				
Timber grade & treatment schedule (for all timber) ²⁸	✓			
Framing				
Wind zone identified (so fixings can be checked) ²⁹	✓			HIGH
Exposure zones identified (so fixings can be checked) ³⁰	✓			
Bearer size & spans ³¹		✓		
Bearer fixing details to foundation walls shown on plans ³²		✓		
Joist size & spans ³³			✓	
Support for walls parallel with floor joists	✓		→	BC COND - SOLID BLOCKING
Flooring material specified	✓			KORING 20mm ULTRASON
Bottom plate fixing (walls) shown on plans ³⁴	✓			
Stud height & spacing ³⁵	✓			24 MGB 90X45 @ 600
Verandah post, beam & fixing detail shown on plans		✓		
Lintel sizes & specifications shown on plans ³⁶	✓			
Cantilever beams, corner window etc. ³⁷	✓		X	
Engineer details, incl. connections shown on plans ³⁸	✓		X	
Ceiling batten size, grade, spacing, span	✓		X	75 x 40
Wall & ceiling linings shown on plans	✓			13 CEILING / 10 WALL GIB
Framing set out suitable for linings	✓			600 & MAX.
Truss manufacturer's design certificate	✓		X	MANAWATU I T M
Truss manufacturer's set out detail ³⁹	✓			
Truss manufacturer's fixing detail ⁴⁰	✓			
Rafter size, spacing & span		✓		
Rafter fixing shown on plans ⁴¹		✓		
Underpurlin size shown on plans ⁴²		✓		
Strutting beams size shown on plans ⁴³		✓		
Struts loading on strutting beam or load bearing walls ⁴⁴		✓		
Purlin/batten size, spacing & span	✓			50 X 50 FOR TILES
Purlin/batten fixing detail specified	✓			
Skillion roof detail ⁴⁵		✓		
Building paper/wrap specified - walls ⁴⁶	✓			TYPICAL WRAP
Building paper/wrap specified - roof ⁴⁷	✓			HEAVY WEIGHT

Processing Checklist – Small Addition

04470

Roof cladding specified	✓			GERZARD ROOF TIER
Roof cladding suitable for min. roof pitches (length of sheet may effect min. pitch)	✓			25°
Internal gutters construction detail shown on plans	✓		✗	
Internal gutter overflow detail shown on plans	✓		✗	
Pergola/porch framing detail shown on plans		✓		
Pergola/porch fixing detail shown on plans		✓		
Deck joists size, spacing & span ⁴⁸	✓			
Saddle flashings fitted to deck joists ⁴⁹		✓		
Deck stringer spaced off cladding min. 12mm ⁵⁰		✓		
Fixing of deck barrier detail	✓			
Bracing				
Calculations incl. subfloor, decks	✓		✗	
Elements equally distributed throughout building	✓		✗	
Double sided bracing of exterior walls checked ⁵¹	✓		✗	
Interior walls: bracing limitations e.g. bathrooms ⁵²	✓		✗	
Roof bracing shown on plans	✓		✗	
Decks > 2m width bracing calculation provided ⁵³		✓		
Interior				
Insulation walls, ceiling & subfloor shown on plans	✓			R2.0 CEILING & WALL
Waterproofing detail showers, floors, decks/balconies ⁵⁴	✓		✗	
Ventilation (incl. all habitable spaces) ⁵⁵	✓			
Safety glazing detail bathrooms, window seats, etc.	✓			
Smoke alarms specified & shown on plans	✓			
Air noise: design, construction detail shown on plans		✓		
Air noise: producer statement – design received		✓		
Food preparation & prevention of contamination⁵⁶				
Sink & preparation surfaces		✓		
Cooking facilities (Oven &/or hobs)		✓		
Food storage (Refrigerator)		✓		
Wall linings		✓		
Exterior				
E2 risk matrix assessment checked	✓			7-12 -
Exterior cladding(s) specified	✓			STUCCO ON CAVITY
System specification provided	✓			
Cavity system details (batten size, fixing & treatment)	✓			
Control joints shown on plans (solid plaster)	✓			
Vermin proofing	✓			

Processing Checklist – Small Addition

Internal & external corner details		✓		
Junction details of dissimilar materials		✓		
Bottom edge clearances to ground levels and/or decks		✓		
Brick veneer cavity, fixing & waterproofing detail		✓		
Double studs or blocking to openings for brick veneer ties		✓		
Brick veneer lintel bars		✓		
Brick veneer shelf angles		✓		
Brick veneer panel widths ⁵⁷		✓		
Flashings⁵⁸				
Windows & doors ⁵⁹	✓			
Sill threshold flashing detail ⁶⁰		✓		
Soffit/wall junction flashing detail		✓		
Penetrations @ fixing points, pergolas, decks		✓		
Penetrations of electrical cables ⁶¹		✓		
Parapets - caps, walls, intersections, etc.		✓		
Intersections, roof walls, dissimilar claddings		✓		
Stairs & Barriers				
All stair construction detail shown on plans		✓		
All balcony, stair & landing barrier detail shown on plans		✓		
Stair min. tread max. rise specified ⁶²		✓		EXISTING
Slip resistant surface (main entry decks & stairs)		✓		
Plumbing⁶³				Plumbing Processing Officer: R. E. M.
Schematic layout provided – waste/drain		Yes/No		
Discharge length of pipes	✓			Plan
Discharge pipes venting	✓			B/C Condition
Water supply				
Type of material	✓			Fusiontherm - Spec's
Tempered hot water	✓			B/C Condition
Drainage				
Stormwater layout shown on plans	✓			
Gutter & outfall sizes in relation to roof size	✓			
Site stormwater/surface water collection & disposal detail (Erosion of sloping sites)		✓		
Sewer layout	✓			
Gully traps/ overflow relief gullies (ORGs)	✓			Existing - Plan
Sewer venting	✓			Condition on B/C
Effluent disposal				
Septic tank & effluent disposal design		✓		
Effluent disposal site plan		✓		
Proximity to water course(s) & buildings		✓		
Stormwater cut off drain above effluent bed shown on plans (Sloping sites)		✓		

Processing Checklist – Small Addition

04470

Application suspended for further information?	Suspended Date: 11-12-07 Suspended Date:	Lifted Date: 6-8-08 Lifted Date:
Structural - Application approved: Conditions & Inspections entered on CV?	Yes/No	Officer: [Signature] Signed: [Signature] Date: 7/8/08
Plumbing & Drainage - Application approved: Conditions & Inspections entered on CV?	Yes/No	Officer: Ross Marshall Signed: [Signature] Date: 28/11/07
Building - Application approved: Conditions & Inspections entered on CV?	Yes/No	Officer: [Signature] Signed: [Signature] Date: 6-8-08

Neville Mudgway
Senior Building Officer
14/8/08

¹ General notes and observations

² Refer to Policy BLG-001p siting of proposed buildings & Policy BLG-002p when to require surveyor's certificates as a condition of a resource consent

³ Sloping sites > 11°, refer to Tonkin Taylor report

⁴ NZS 3604:1999 Section 4.2 & Fig. 4.1 sea spray zone <500m from high tide mark, zones 1, 2 & 3

⁵ If vehicle crossing application is required and has not yet been submitted, this results in a 'non-compliance'

⁶ Where other than 17.5MPa concrete is specified, tag consent for delivery docket

⁷ NZS 3604:1999 Section 7.5 & Fig.s 7.12 – 7.14

⁸ NZS 3604:1999 Section 6.11 Fig.s 6.11 – 6.15

⁹ NZS 3604:1999 Section 6.4.1, 6.11.2, 6.14.4 Check that minimum pile heights and subfloor access will be satisfied, particle board floor required to be > 550mm above ground level

¹⁰ NZS 3604:1999 Section 6.14

¹¹ Maximum 750mm from corners and ends. Spaced at 1.8m centres maximum

¹² NZS 3604:1999 Section 6.11.7.3 openings in foundations walls exceeding 300mm any direction require one D12 trimming bar each side

¹³ NZS 3604:1999 Section 6.4 & NZS 3602. The minimum treatment for all timber in contact with ground is H5.

¹⁴ NZS 3604:1999 Table 6.1

¹⁵ NZS 3604:1999 Section 6.5.2 & Fig. 6.3 (min. 2 x skew nails & 2 wire dogs)

¹⁶ NZS 3604:1999 Section 6.9 & Fig.s 6.9 & 6.10

¹⁷ NZS 3604:1999 Section 6.4 & NZS 3602. The minimum treatment for all timber in contact with ground is H5.

¹⁸ NZS 3604:1999 Section 6.8 & Fig.s 6.6 – 6.8

¹⁹ NZS 3604:1999 Section 6.4 & NZS 3602. The minimum treatment for all timber in contact with ground is H5.

²⁰ NZS 3604:1999 Section 9.1 Table 9.1

²¹ NZS 3604:1999 Section 6.4 & NZS 3602. The minimum treatment for all timber in contact with ground is H5.

²² Where other than 17.5MPa concrete is specified, tag consent for delivery docket

²³ NZS 3604:1999 Section 7.5 & Fig.s 7.10 – 7.12

²⁴ NZS 3604:1999 Section 7.5.3

²⁵ NZS 3604:1999 Section 7.5.4 & Fig. 7.12

²⁶ NZS 3604:1999 Fig. 7.17

²⁷ NZS 3604:1999 Section 7.5.8.6

²⁸ NZS 3604:1999 Section 4.3.1 & NZS 3602:2003 Tables 1, 2 & 3

²⁹ NZS 3604:1999 Section 5.2 Fig. 5.1

³⁰ NZS 3604:1999 Section 4.2 & Fig. 4.1 sea spray zone <500m from high tide mark, zones 1, 2 & 3

³¹ NZS 3604:1999 Section 6.12 & Table 6.6

³² NZS 3604:1999 Section 6.11.9 & Fig.s 6.16 – 6.18

³³ NZS 3604:1999 Section 7.1 & Table 7.1

³⁴ NZS 3604:1999 Section 7.5.12

³⁵ NZS 3604:1999 Section 8.5

³⁶ Where proprietary lintels are specified, manufacturer's detail/specification tables copied & included on file. For timber lintels: Reference NZS 3604:1999 Section 8.6 & Tables 8.9 – 8.13

³⁷ Construction detail of corner window showing cantilever beams required

³⁸ Check load path from beam supports for slab thickening, piles and enlarged pile footings

³⁹ Check set out detail for girder trusses, etc., loadings requiring slab thickenings or pads/piles & pile footings

⁴⁰ Copy placed in "green" folder for on site checking

⁴¹ NZS 3604:1999 Tables 10.9 & 10.10 & Fig.s 10.5, 10.16 – 10.21

⁴² NZS 3604:1999 Table 10.6

⁴³ NZS 3604:1999 Table 10.7 & Fig. 10.12

⁴⁴ NZS 3604:1999 Fig.s 10.10 & 10.11

⁴⁵ Check for air gap over ceiling insulation

⁴⁶ NZS 3604:1999 Section 11.4

⁴⁷ NZS 3604:1999 Section 11.2

⁴⁸ NZS 3604:1999 Section 7 Table 7.1(b) 2kPa floor load

⁴⁹ NZBC E2 AS1 Section 7.2 Fig. 16

⁵⁰ NZBC E2 AS1 Section 7.2 Fig. 15

⁵¹ Double sided bracing e.g. GIB3 & BR6 braces not appropriate for exterior walls. Recessing of sheet bracing into wall framing on approved cavity systems.

⁵² Check bracing limitations in appropriate bracing manual e.g. GIB bracing systems Page 8. GIB Winstone Bracing limitations prohibit the use of bracing elements behind showers & baths, etc.

⁵³ NZS 3604:1999 Section 7.4.2 & Table 5.8 – light/light/light

⁵⁴ NZBC E3 AS1

Processing Checklist – Small Addition

04470

⁵⁵ NZBC G4 AS 1.3 Where opening windows do not provide adequate ventilation, detail of the alternative solution specified on plans

⁵⁶ NZBC G3 AS1

⁵⁷ NZS 3604:1999 Section 11.7.2.2

⁵⁸ NZBC E2

⁵⁹ Head, jamb & sill flashing details

⁶⁰ NZBC E2 AS1 Section 7

⁶¹ NZBC E2 AS1 Section 9.9.8 & Fig. 126

⁶² NZBCD1 AS1

⁶³ AS/NZS 3500.2.2:2003 & G13



TO: PALMERSTON NORTH CITY COUNCIL

Application for ☐ PIM (Section 30, Building Act 1991)

35146

☐ Building Consent (Section 33, Building Act 1991)

35147

APPLICANT

Name: Jacalyn Scott
Mailing Address: Plymtree Road
Turitea Valley Palmerston North
Contact (Print name and position): as above

Mailing Address: as above

021 672 008

Phone: 06 357 9182 Fax: 357 9182

*Under section 30 of the Building Act 1991, the applicant must be the owner of the land on which building work is contemplated or a person who or which has agreed in writing, whether conditionally or unconditionally, to purchase the land or any leasehold estate or interest in the land, or to take a lease of the land, while the agreement remains in force.

29 PROJECT LOCATION

Street Address: 27 La Lena Grove

L49/29

Legal Description (as shown on Certificate of Title or Rates Notice)

Valuation Roll Number: _____

Lot: 15

D.P. _____

Section _____

PROJECT INFORMATION

New Building ☒

Alteration ☐

Demolition ☐

Being Stage _____ of an Intended _____ stages.

Estimated Value (Inclusive of GST) \$ 100,000

Intended Use(s) (in detail): Residential

Floor Area (of New Building Work)

203

Square metres

OWNER

BUILDER

PLUMBER

DRAINLAYER

BRICKLAYER

PLASTERER

PHONE NUMBER

LYNDEN CUMBY

A ☐

B ☐

C ☐

D ☐

E ☐

F ☐

G ☐

BUILD/FOUNDATION

PLUMB/PRESLAB/SUB FL

BUILD/PRESLAB/SUB FL

BUILD/STRUCTURAL

PLUMB/PRELINE

BUILD PRELINE

BUILD/POSTLINE

H ☐

I ☐

J ☐

K ☐

L ☐

M ☐

N ☐

BUILD/EXT CLADDING

PLUMB/STORMWATER

PLUMB/SEWER

BUILD/FINAL

PLUMB/FINAL

PLUMB/EFFLUENT SYSTEM

BUILD/VEHICLE CROSSING

DATE INSPECTED	REMARKS (Eg: stage reached with work)
14 Nov 01	FOUND: MEASURED OFF CRITICAL BOUNDARY TO CHECK SOME GROUND VERY FIRM, FOOTINGS LARGER THAN NORMAL 2 RODS IN BOTTOM OF TRENCH & 1 x ROD @ TOP - STARTERS @ 600 C/S. PLUMBING THRU ALL NICELY PROTECTED. FAIR BIT OF TOP SOIL SCRIPPED OFF BUT FLOOR HEIGHTS OK - OK TO POUR 1 st
16 Nov 01	Drainage inspection good falls at the time of the inspection, will need to check at the time of the pre-pour
16 Nov 01	Pre slab: all as per plan polythene perimet. mesh and starters all okay. Thickness slab as per plan okay to pour

Planning Processing - Building Consent

Applicant Name: M Andriani & J Westley PIM No: 04470 BC No: 04470
Site Address: 29 La Lena Grove PN Date: 22/11/07

Item to be checked for compliance: with the PNCC District Plan & NZ Building Act 2004 Note: N/A = this item is not applicable to this application and has not been assessed	Plans/Specs Checked			Details of Processing & Comments: Comments must be made for Non-complying items
	Yes	N/A	No	
P.I.M been issued?	☒			
Plans / Information satisfactory?	☒			
Timeframes met from issue of P.I.M, (i.e. P.I.M issued pre 31 March 2005)	☒			Specify:
Development in accordance with project assessed for P.I.M?	☒			
New District Plan provisions come into effect since the P.I.M was issued?		☒		Specify:
New P.I.M required?		☒		
New non-compliances with the District Plan?		☒		Specify:
Resource Consent required for the project?		☒		
Resource Consent been 'Granted'?		☒		
Resource Consent still valid, <5yrs old?		☒		
Applicant advised & BCR applied?		☒		
'Development Contribution' payable?		☒		
Development Contribution payment condition of Building Consent?		☒		
Development Contribution been paid at 224 subdivision stage?		☒		
Building over 2 or more allotments?		☒		
Sec 75 required, BSO advised to forward to Claims Management?		☒		
Building over public or private easement?		☒		
PNCC Drainage engineer approved building over PNCC Easement?		☒		
Applicant been advised of 'Private Easement'?		☒		
Application suspended for further information?	Suspended Date: Suspended Date:			Lifted Date: Lifted Date:
Conditions entered on consent (CV checkboxes)?	Yes/No	Officer: <u>Mike</u>		Date: <u>22/11/07</u>
Application approved?	Yes/No	Signed: <u>[Signature]</u>		

PALMERSTON NORTH
CITY COUNCIL**PIM/Building Consent Application Checklist**Project Address: 29 La Lena Grove PNHLInterviewing Officer/s: Sooa Joe Date: 15/11/07

Building Officer

Application Documentation		Yes	N/a	No
Application type:	☐ PIM ☐ BC ☒ Combination PIM & BC			
Residential:	Two sets of plans and specifications provided	✓		
Commercial:	Three sets of plans and specifications provided		✓	
	Site confirmed on City View by applicant	✓		
	Legal Description Completed	✓		
	Proof of ownership matches applicant details	✓		
	Application form signed and dated	✓		
	Description of work accurate	✓		
	Value of work checked	✓		
	Compliance detail completed on application form	✓		
	Trades peoples' details filled out (back page)	✓		
	Application form completed & correct	✓		
Commercial:		Yes	N/a	No
	Demolition work – copy of Building Consent application to Information Services		✓	
	Building works on a public place		✓	
	Work likely to impact on road reserves (If yes, provide City Network handout)		✓	
	Fire analysis report for new buildings & alterations to existing buildings provided		✓	
	N Z Fire Service Design Review Unit, review required?		✓	
	Accessibility for new buildings & alterations to existing buildings addressed & checked on plans		✓	
Hazardous substances		Yes	N/a	No
	Test certifier location certificate/preliminary test certifier letter of approval provided		✓	
Plans		Yes	N/a	No
	Plans to standard i.e. to scale, no graph paper, no pencil drawings, no single line drawings	✓		
	Site plans show distance to a minimum of two boundaries (for all buildings) <u>2nd Storey addn</u>	✓	✓	
	Site plans show location of septic systems & distances to boundaries		✓	
	Slab & foundation detail shown on plans		✓	
	Datum shown		✓	
	Engineer detail shown on plans	✓		
	Drainage detail shown on plans	✓		
	Rooms Identified	✓		
	Smoke alarms shown on plans	✓		
	Windows shown on plans	✓		
	Ventilation (mechanical detail where no windows)	✓		
	Dimensions shown on plans	✓		
Cross Section		Yes	N/a	No
	Full cross section – min. 1 for garages	✓	✓	
	Full cross section – min. 2 for dwellings	✓		
	Finished floor levels shown on plans		✓	
	Stair, barrier, handrail detail & dimensions shown on plans <u>Existing</u>		✓	
Weather Tightness		Yes	N/a	No
	Flashing of windows, doors, junction, balcony, parapet, int/ext corner details shown on plans	✓		
Specifications		Yes	N/a	No
	Bracing schedule for walls/subfloor provided	✓		
	Truss design certificate & layout details provided	✓		
	Timber grade & treatment schedule provided	✓		
	Lintel schedule provided	✓		
	Exterior cladding system information provided	✓		
	Effluent disposal system (rural only) provided		✓	
	Relevant & comprehensive specifications provided	✓		

	Specific Design	Yes	N/a	No
	Engineer calculations & details provided	✓		
	Existing Vehicle Crossing	Yes	N/a	No
	Existing vehicle crossing shown on plans	✓		
	New Vehicle Crossing	Yes	N/a	No
	New crossing application completed		✓	
	Location of vehicle crossing distance to boundary shown on plans		✓	
	Width of vehicle crossing shown on plans		✓	
	Service Connections	Yes	N/a	No
	Application for service connections		✓	

Planning Officer	Planning Information	Yes	N/a	No
	North direction point & all boundaries shown	✓		
Show distances to two boundaries min		✓		
Show existing ground & finished floor levels		✓		
Street frontage identified	✓	✓		
Existing & proposed buildings shown	✓	✓		
Six metre living court shown		✓		
Any buildings over boundaries (Section 75) shown		✓		
Instant resource consent required for separation distances		✓		
Neighbour's consent form & plan provided & signed by all property owners		✓		
Site area & coverage details provided	✓			
Height recession zones shown on plans	✓			
Lot & DP number shown on plans	✓			
Proximity to stop banks shown		✓		
Demonstrated compliance to air noise schedules or acoustics report provided		✓		

Building Officer	For Office Use Only: Administration Information	Yes	N/a	No
	Letter of confirmation to applicant	✓		
Fees calculated	✓			
City View plan attached	✓			
Receipt number & fee code entered on application form	✓			
Risk assessment number entered on fees sheet	✓			
Building Officers time entered on fees sheet	✓			
Fees sheet dated & signed	✓			

Additional information required from applicant:
The extension is max 3m from the side boundary

PIM/Building Consent Site Visit Checklist

Building Consent No.: 04470

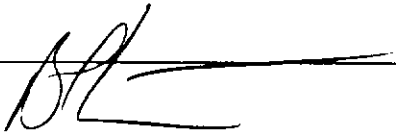
Address: 29 La Loma

Date: 3-12-07 Time Taken: 3/4 Hour

Site & address identified:	How? <u>City View and Onsite Visual</u>	Office Check Needed
Boundaries Clearly identified	<u>Yes</u> - How? <u>No pegs found - New fences in new Subdivision. Boundaries not an issue for this upper floor project</u> No - comment	
Building Platform identified	☐ Measured out by officer ☐ Pegged/marked out by owner/builder ☒ Estimated - comment <u>from Plans</u>	
Proposed building identified	☐ Measured out by officer ☐ Pegged/marked out by owner/builder ☒ Estimated - comment	
Effluent disposal site identified	☐ Measured out by officer ☐ Pegged/marked out by owner/builder ☐ Estimated - comment <u>Water tank siting - overflow</u> <u>Cut off drains required</u> <u>Cut off drains identified - comment</u>	
Restrictions (building &/or effluent disposal)	<u>Sloping site - comment</u> <u>Gullies/banks/cuttings likely to affect work - comment</u> <u>Streams/watercourses likely to affect work - comment</u> <u>Other parties affected - comment</u> <u>Other restrictions (e.g. overhead utilities, pylons, power & phone lines, forest, access, etc.) - comment</u>	
Vehicle crossing	Existing <u>Yes</u> /No Complies <u>Yes</u> /No Comment Required to be upgraded Yes/ <u>No</u> To be reinstated & new crossing installed New crossing required Yes/ <u>No</u> Crossing check sheet completed	
Damage	Yes/ <u>No</u> Comment	
Planning check attached	Yes/ <u>No</u> Comment <u>check with Planning why not</u>	
Wind Zone	☐ Low / ☐ Medium / ☒ High / ☐ Very High / ☐ Specific Design (SED) (Tick applicable zone)	

PIM/Building Consent Site Visit Checklist

Building Consent No.: _____

Notes:	
Lower floor may require extra Bracing to walls ? to support extra upper floor (which is existing)	
Photos taken: No	
Officer: BA2	Signature: 

Sketch:

**Building Consent No: 4470
Section 51, Building Act 2004**

49024 0533/19

The Building

Street Address of building: 29 LA LENA GROVE
PALMERSTON NORTH

Legal Description of land where building is located: LOT 15 DP91210

The Owner

Name of owner: DURBIN, MARK FREDRICK

Mailing Address: 29 LA LENA GROVE
PALMERSTON NORTH 5301

Contact person: BRUCE BARRY ARCHITECTS

Street address/registered office:

Phone number:

Facsimile number:

Email address:

Building Work

The following building work is authorised by this consent:

Project: EXTENSION OF BEDROOM 3 TO CREATE LARGER MASTER
BEDROOM WITH ENSUITE, WALK-IN WARDROBE PLUS A
PORTABLE SAUNA AND NEW DECK

Intended Use: RESIDENTIAL ADDITIONS AND ALTERATIONS

This building consent is issued under section 51 of the Building Act 2004. This building consent does not relieve the owner of the building (or proposed building) of any duty or responsibility under any other Act relating to or affecting the building (or proposed building).

This building consent also does not permit the construction, alteration, demolition, or removal of the building (or proposed building) if that construction, alteration, demolition, or removal would be in breach of any other Act.

THIS BUILDING CONSENT IS SUBJECT TO THE FOLLOWING CONDITIONS:

SOIL STACKS:

All penetrations for Soil Stacks to the Floor Joists are to comply with NZS 3604:1999 Section 7.1.7.

SOLID BLOCKING:

Solid blocking of floor joists under upper level walls to be in accordance with NZS 3604:1999 7.1.3.5

ENGINEERING:

Engineering details accepted on basis that new internal beam posts will sit on existing slab thickenings.

SOLAR HOT WATER HEATING:

All potable water pipework is to be installed by a Licensed Plumber. A Producer Statement PS.3 is required for the installation of the Solar Unit.

TEMPERED HOT WATER:

Hot water being delivered to any new or altered personal hygiene fixture must be tempered.

DOUBLE VANITY:

A vent is required on the wastepipe serving the double vanity in accordance with AS/NZS 3500.2 or NZBC G13/AS1

NEW DRAINAGE UPSTAIRS:

A vent is required to the upstairs drainage in accordance with AS/NZS 3500.2 or NZBC G13/AS1

THE FOLLOWING INSPECTIONS ARE MANDATORY, FAILURE TO NOTIFY THE PALMERSTON NORTH CITY COUNCIL BUILDING SERVICES SECTION OF ANY OF THE REQUIRED INSPECTIONS WILL RESULT IN A NOTICE TO FIX BEING ISSUED.

1 x FOUNDATIONS

1 x FRAMING

1 x CAVITY

1 x MONOLITHIC BACKING

1 x PAPER NETTING

1 x SCRATCH COAT

1 x PRELINE - UPPER LEVEL

1 x PRELINE - PLUMBING

1 x POSTLINE

1 x FINAL - PLUMBING & DRAINAGE

**NOTE: FURTHER INSPECTIONS MAY INCUR ADDITIONAL COST AT TIME OF
CODE COMPLIANCE CERTIFICATE ISSUE.**

Signature:



Position: **PRINCIPAL / SENIOR BUILDING OFFICER**

On behalf of: **PALMERSTON NORTH CITY COUNCIL**

Date:





Application for Code Compliance Certificate

Section 92, Building Act 2004

The Building consent

Building Consent number:

C4470

Issued by:

[Name of building consent authority that granted building consent]

Address of work:

The Owner: [All contact details must be in New Zealand]

Name of owner:

[eg, Mr, Mrs, Miss, Dr if an individual]

MFDURBIN JM WESTLEY

Contact person:

[insert n/a if the applicant is an individual]

N/A

Mailing address:

29 LA LENA GROVE

PALMERSTON NORTH

Street address/registered office:

Phone numbers

Landline:

06 3545 301

Mobile:

021 712 791

Daytime:

06 3545 301

After hours:

06 3545 301

Facsimile number:

06 3545 301

Email address:

marcdurbin@yahoo.com

Evidence of ownership is attached to this application:

☐

Certificate of Title

☐

Agreement for Sale and Purchase

☐

Lease

☐

Other document

The Agent: [Only required if application is being made on behalf of the owner.]

Name of agent:

[eg, Mr, Mrs, Miss, Dr if an individual]

Contact person:

[insert n/a if the applicant is an individual]

Mailing address:

Street address/registered office:

Phone numbers

Landline:

Mobile:

Daytime:

After hours:

Facsimile number:

Email address:

Relationship to owner:

[State details of the authorisation from the owner to make the application on the owner's behalf]

First point of contact for communications with the council/building consent authority:

Full name:

Mailing address:

Phone numbers:

[Landline]

[Mobile]

Facsimile number:

Email address

Application

All building work to be carried out under the above building consent was completed on:

The personnel who carried out the building work are as follows:

Business/name: BRUCE BARRY ARCHITECTS	
Address: 263 RUANINE STREET	
Daytime: 06 356 59 46	Mobile: 021 365 946
After hours:	Facsimile: 06 356 1840
Registration/qualification:	

Business/name: KEVIN O'CONNOR	
Address: 71 PITT STREET	
Daytime: 06 356 7000	Mobile:
After hours:	Facsimile: 06 356 7007
Registration/qualification:	

Business/name:	
Address:	
Daytime:	Mobile:
After hours:	Facsimile:
Registration/qualification:	

Business/name: APV PLUMBING LTD.	
Address: 22 MULGRAVE STREET ASHBURST	
Daytime:	Mobile: 0272413457
After hours: 063269346	Facsimile: 0
Registration/qualification:	

Business/name: BW HUGHES	
Address: 38 EAST STREET FEILDING	
Daytime:	Mobile: 0274446010
After hours: 063236110	Facsimile: 063236110
Registration/qualification:	

Business/name:	
Address:	
Daytime:	Mobile:
After hours:	Facsimile:
Registration/qualification:	

Business/name: BW HUGHES	
Address: 38 EAST STREET FEILDING	
Daytime:	Mobile: 0274446010
After hours: 063236110	Facsimile: 063236110
Registration/qualification:	

Business/name:	
Address:	
Daytime:	Mobile:
After hours:	Facsimile:
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Daytime:	Mobile:
After hours:	Facsimile:
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Business/name:	
Address:	
Daytime:	Mobile:
After hours:	Facsimile:
Registration/qualification:	

The following specified systems are contained on the compliance schedule for the building and, in the option of the personnel who installed them, are capable of performing to the performance standards set out in the building consent:

The specified systems for the building are as follows: (Applies to Commercial & Industrial Buildings only)

- ☐ **SS 1** - Automatic systems for fire suppression
- ☐ **SS 2** - Automatic and manual emergency warning systems
- ☐ **SS 3** - Electromagnetic or automatic doors or windows
 - ☐ **SS 3/1** - Automatic doors
 - ☐ **SS 3/2** - Access controlled doors
 - ☐ **SS 3/3** - Interfaced fire or smoke doors or windows
- ☐ **SS 4** - Emergency lighting systems
- ☐ **SS 5** - Escape route pressurisation systems
- ☐ **SS 6** - Riser mains for fire services use
- ☐ **SS 7** - Automatic back-flow preventers
- ☐ **SS 8** - Lifts, escalators, or travelators or other systems for moving people or goods within building
 - ☐ **SS 8/1** - Passenger-carrying lifts
 - ☐ **SS 8/2** - Service lifts
 - ☐ **SS 8/3** - Escalators and moving walks
- ☐ **SS 9** - Mechanical ventilation or air conditioning systems
- ☐ **SS 10** - Building maintenance units
- ☐ **SS 11** - Laboratory fume cupboards
- ☐ **SS 12** - Audio loops or other assistive listening systems
 - ☐ **SS 12/1** - Audio loops
 - ☐ **SS 12/2** - FM radio frequency systems and infrared beam transmission systems
- ☐ **SS 13** - Smoke control systems
 - ☐ **SS 13/1** - Mechanical smoke control
 - ☐ **SS 13/2** - Natural smoke control
 - ☐ **SS 13/3** - Smoke curtains
- ☐ **SS 14** - Emergency power systems for, or signs relating to, a system or feature specified in any clauses 1-13
 - ☐ **SS 14/1** - Emergency power systems
 - ☐ **SS 14/2** - Signs
- ☐ **SS 15** - Other fire safety systems or features
 - ☐ **SS 15/1** - Systems for communicating spoken information intended to facilitate evacuation
 - ☐ **SS 15/2** - Final exits
 - ☐ **SS 15/3** - Fire separations
 - ☐ **SS 15/4** - Signs for communicating information intended to facilitate evacuation
 - ☐ **SS 15/5** - Smoke separation

I request that you issue a code compliance certificate for this work under section 95 of the Building Act 2004.

The code compliance certificate should be sent to:

29 LA LENA GROVE
PALMERSTON NORTH

The code compliance certificate should be sent to:

Signature of the owner / agent on behalf of and with
the authority of the owner:



Name of person signing:

M.F. DURBIN

Date:

03-12-08

Attachments

The following documents are attached to this application:

[Tick as applicable or put n/a if there are no attachments.]

- ☐ Certificates from the personnel who carried out the work.
- ☐ Certificates that relate to the energy work
- ☐ Evidence that specified systems are capable of performing to the performance standards set out in the building consent



CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT 1952



R. W. Muir
Registrar-General
of Land

Identifier **WN59A/454**
Land Registration District **Wellington**
Date Issued 06 September 2001

Prior References
WN46D/694

Estate Fee Simple
Area 713 square metres more or less
Legal Description Lot 15 Deposited Plan 91210

Proprietors
Marc Frederick Durbin and Joan Martha Westley

Interests

5080225.21 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 6.9.2001 at 12:04 pm
Fencing Agreement in Deed 5080225.28 - 6.9.2001 at 12:04 pm
Land Covenant in Transfer 5125796.3 - 12.12.2001 at 3:42 pm
Fencing Covenant in Transfer 5125796.3 - 12.12.2001 at 3:42 pm
5216684.2 Mortgage to The National Bank of New Zealand Limited - 7.5.2002 at 10:47 am



ACCESS LOT 51
457 m²

LA LENA GROVE

52

17

34

33

18

41

42

43

50

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Electrical Certificate of Compliance

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning or the replacing or repositioning of conductors (including fittings attached to those conductors).

To be completed whether or not an inspection is required.

No. **2745613**No. of attachments **CUSTOMER INFORMATION - PLEASE PRINT CLEARLY**

Name of customer

DURBIN - WESTLEYPhone:

Address of installation

29 In LENA PLACE PALM NTHPostal address of customer (if not as above) **WORK DETAILS****14**

No. of lighting outlets

No. of ranges

6

No. of socket outlets

1

No. of water heaters

Please tick (✓) as appropriate where work includes:

☐ Mains☐

Main earthing system

Was any installation work carried out by the homeowner?

☐

Yes

☐

No

☐

Switchboard

☐

Electric lines

Description

**UNDERFLOOR HEATING -
INSULATED TONGUE RAIL**

It is recommended that test results be recorded here:

Visual Examination

☐

Earth Continuity

☒

Bonding

☐

Polarity

☒Insulation Resistance **1.00** MohmOther

If necessary attach any pages with sketches of work done

CERTIFICATION OF WORK

I certify that the above electrical work has been carried out in accordance with the requirements of the Electricity Act 1992 and Electricity Regulations 1997.

ELECTRICAL WORKER DETAILS

Name

D GROOMBRIDGE

Registration no.

TS 173

Company

GROOMBRIDGE ELECTRICAL

Signature

A. Groombridge

Date

29 - 11 - 08

Contact Ph No.

323 5687**CERTIFICATION OF ELECTRIC LINES**

(to be completed where a separate electrical worker has installed the electric line portion of the mains)

Name

Registration no.

Company

Signature

Date

Contact Ph No.

INSPECTION DETAILS Electrical work requiring inspection by a registered electrical inspector☐

New mains

☐

Switchboard

☐

Earthing system

☐

Installation work in hazardous areas

I certify that the inspection has been carried out in accordance with the requirements of regulation 41 of the Electricity Regulations 1997.

Name

Registration no.

Signature

Date

Daytime Contact
Ph No.



Electrical Certificate of Compliance

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning or the replacing or repositioning of conductors (including fittings attached to those conductors).

To be completed whether or not an inspection is required.

No. **2710498**No. of attachments **CUSTOMER INFORMATION - PLEASE PRINT CLEARLY**Name of customer **Mark Durbin**Phone: Address of installation **29 La Luna St. Palmerston Nth.**Postal address of customer (if not as above) **WORK DETAILS**☐ No. of lighting outlets☐ No. of ranges☐ No. of socket outlets☐ No. of water heaters

Please tick (✓) as appropriate where work includes:

☐ Mains☐ Main earthing system

Was any installation work carried out by the homeowner?

☐ Yes ☒ No☒ Switchboard☐ Electric lines

Description **Wire in A/c unit. Supply with 2.5mm² Twin + E T.P.S. through isolator Also install 1.5mm² Twin + E T.P.S. interconnecting cable Install 20 amp GPO a Label.**

It is recommended that test results be recorded here:

Visual Examination ☒Earth Continuity ☒Bonding ☒Polarity ☒Insulation Resistance **∞** MohmOther

If necessary attach any pages with sketches of work done

CERTIFICATION OF WORK

I certify that the above electrical work has been carried out in accordance with the requirements of the Electricity Act 1992 and Electricity Regulations 1997.

ELECTRICAL WORKER DETAILS

Name

John Hamley

Registration no.

E10444

Company

NZRS

Signature

[Signature]

Date

10/10/08

Contact Ph No.

0275629552**CERTIFICATION OF ELECTRIC LINES**

(to be completed where a separate electrical worker has installed the electric line portion of the mains)

Name

Registration no.

Company

Signature

Date

Contact Ph No.

INSPECTION DETAILS Electrical work requiring inspection by a registered electrical inspector☐ New mains☐ Switchboard☐ Earthing system☐ Installation work in hazardous areas

I certify that the inspection has been carried out in accordance with the requirements of regulation 41 of the Electricity Regulations 1997.

Name

Registration no.

Signature

Date

Daytime Contact Ph No.

d

26th November 2007

**Building Services
Palmerston North City Council
Private Bag 11-034
Palmerston North**

Attention: Phil Lightbourne

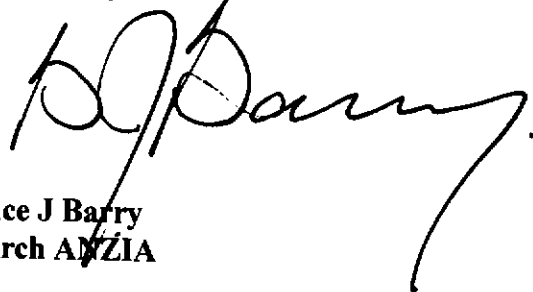
Dear Phil

Re: Building Consent Application for Mr Mark Durbin & Ms Joan Westley at 29 La Lena Grove, Palmerston North

I applied for a Building Consent on behalf of the above Client on 15th November 2007 and my information is that Mark Durbin paid the deposit last week.

Since then Mark and Joan have decided to include solar water heating panels. The attached details and amended drawings detail the system to be used. We would be grateful if this information could be included with the original documents submitted with the BC application.

Yours faithfully
Bruce Barry Architects Ltd



**Bruce J Barry
B Arch ANZIA**

INFO 26 Nov 07
BC 4470
FILE TO P&D.

04470

COMMUNICATION RECORD

OFFICE:

- ☐ Memorandum
☐ Telephone record
☒ File Note
☐ Minutes of Meeting

File No. _____
Date: 28/8/08
Time: 10:30
Page _____ of _____

To: _____ Recorded By: Roger
Copy to: _____
Subject: Ballustrade Fixing

Brett Hughes has asked if coach screws can be used to fix deck barrier ballustrades.

Because of the design of the deck/ballustrade (fixed at the walls at both ends + corner and x2 ballustrades) I have told him that the coach bolt fixing (Not engineers bolt) would be acceptable in this case.

I have written this as a record of the conversation and to let the inspector aware of this at the time of the next inspection.

Thanks
Roger.

Form D2

**Model Producer Statement PS3
Installation of Solar Water Heating System.**

Council: PNCC

Building Consent No: 4470

Producer Statement Issued By: KENNY ALLISON
(suitably qualified solar water heating system installer)

Address of installer: 22 MULGRAVE STREET, ASHBURST

Telephone Number for Installer: 027 2413457

Product and Model Number Installed: Survival SR36 (open circuit)

Supplier of Product: Stekfort

Registered Plumber (if applicable): K Allison

Registration No. 12425

Registered Electrician (if applicable):

Registration No.

Address of Property on which installed: 29 LA LORaine Close Palmerston North

Location of installation: North West Roof

Owner of Property on which installed: M. Durson

Property description: Lot 15 DP 91210

The system has been installed such that the requirements of the New Zealand Building Code have been met.

Plumbing work has been installed to meet the requirements of standard AS/NZS3500.4.

Registered Plumber Signature: [Signature] Date: 5-12-08

The solar water heating system described above has been installed on a dwelling on the named property according to the Code of Practice for Manufacture and Installation of Solar Water Heating Systems in New Zealand and the requirements of the Building Consent.

The system has been located as shown on the drawings provided with the Building Consent Application. A check has been made by a suitably qualified person to ensure that the system is located over suitably sound load bearing walls and strengthening of roof framing has been undertaken according to the guidelines provided by the system supplier and meets the requirements of Approved Document B1 of the New Zealand Building Code. The installation has been undertaken in terms of manuals and instructions from the Product Supplier who is a Solar Industries Association Accredited Supplier.

I certify that I have been appropriately trained in the installation of the named Product by the Product Supplier and operate under that Supplier's accreditation. As an independent solar water heating system installer I am covered by a current Professional Indemnity Insurance Policy to a current value of

2.2 million

2.2 million

Installer Signature: [Signature] Date: 5-12-08

NAME OF WORK BC # 4470

. 29 La Line Drive

proposed design from JWC to rely on compacted
basecourse under slab not acceptable.

Looking at existing plans. Thickenings exist under
internal walls - upon review these will be sufficient
to support new post loads without need for new posts.

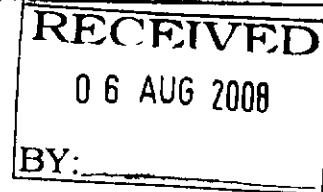
7/5/08. JH

beam support & details OK

04470

Bruce Barry - Bruce Barry Architects *Bruce Barry*

From: "Glen Withers" <glen.withers@pncc.govt.nz>
 To: "Bruce Barry - Bruce Barry Architects" <bruce@bba.net.nz>
 Sent: Tuesday, 29 July 2008 8:49 a.m.
 Subject: BC for 29 La Lena



Morning Bruce,

I was going through suspended consents recently and saw the Durbin consent at 29 La Lena Grove is still suspended.

This is simply a catchup to see how this is progressing. Please email me back or call me with an update.

My original email contained the following information requests:

1. Concrete strength 17.5 mPa?

2. Refer Page 2 of the Gangnail PosiSTRUT - "Posi-STRUT trusses supporting load-bearing walls are not covered by these charts and require special design. Please have the design verified/designed by MITEK. This will address the loadbearing walls and also the cantilevering of PS20 - 21 x 09 over 700mm when the cantilever tables show max of 530mm. - *Posi strut replaced with Huspan 200x45 @ 400x1RS*

3. Confirm Rondo battens direct fixed as Rondo clips will not provide sufficient lateral support for the trusses.

4. Provide verification the ground floor trusses may be cut down where it is proposed to accommodate the new upper level area. And any design for the remedial work done to the original trusses. (FYI: Quality Frames and Trusses did the original truss layout). *NOTE TRUSS TO BE COMPLETELY SUPPORTED BY WALL - UNDER TOP & BOTTOM PLATE.*

5. Gable bracing.

6. Details of the internal gutter. Sectional view? Fall? Overflow?

7. More even distribution of the bracing for the upper level i.e. bracing each way at the intersection of lines M and A.

8. As the ceilings in the lower will probably be removed I am going to recommend the ceilings be replaced as a diaphragm or the upper floor as a diaphragm to assist the stability. The lower floor was braced as a "room in roofspace" and this is, even though still under the 50%, a large addition to the dwelling and I want to ensure we address structural stability. *FLOOR WILL ACT AS DIAPHRAGM*

Regards,

GLEN WITHERS (aka FIDD) | Building Officer | Palmerston North City Council | Ph 06 356 8199 Ext. 7513 | Fax 351 4471

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29/07/2008

FACSIMILE

TO SOPHIE

FAX NO 356 7007

ORGANISATION

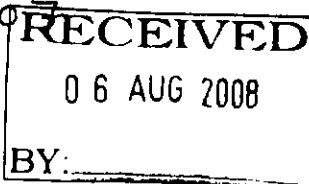
KEVIN O' CONNER

DATE 13.12.07

FROM ALEX CHISHOLM

FAX NO 351 4471

NO OF PAGES 1



B/C 4470 - 29 LA LENA GROVE -

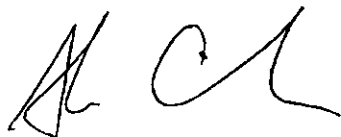
cc Bruce Barry 359 1840

SOPHIE, PLEASE RESPOND TO THE FOLLOWING
QUERIES SO THE CONSENT APPLICATION CAN
PROCEED:

FOR ALL OF THE MEMBER SUPPORTS, PLEASE
SUBMIT CALCULATIONS FOR POSTS - INCLUDING
MOMENT INDUCED BY ~~A~~ ECCENTRICITY O/C.
Please see Floor Plan - Floor joists (existing) will resist rotation,
which will be minimal.

AND SUBMIT DETAILS OF EXISTING FOUNDATIONS
AND HOW VERTICAL LOAD IS CARRIED BY
FOUNDATIONS - INCLUDING EXISTING LOAD

~~PLEASE~~ Please see calculations.
REGARDS



refr. existing plans
beam post - land on
slab thickness - O/C

calculations relying on
compacted hardfill for load
spread are unacceptable unless
compaction & depth of hardfill
is confirmed.

Document Centre 286 Transmission Report

G3 ID

64 6 3514525

Date/Time: 13/12/2007:14:56

Page: 1 (Last Page)

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Logo

PNCC

Document has been sent.

Document Size A4SEF



Private Bag 11034, The Square, Palmerston North, New Zealand P 64 6 354 5199 W www.pncc.govt.nz

FACSIMILE

TO SOPHIE FAX NO 356 7007
ORGANISATION KEVIN O' CONNER DATE 13.12.07
FROM ALEX CHUMLEY FAX NO 351 4471
NO OF PAGES 1

B/C 4470 - 29 LA LENA GROVE -

cc Bruce Barry 359 1840.

SOPHIE, PLEASE RESPOND TO THE FOLLOWING
QUERIES SO THE CONSENT APPLICATION CAN
PROCEED:

FOR ALL OF THE MEMBER SUPPORT, PLEASE
SUBMIT CALCULATIONS FOR POSTS - INCLUDING
MOMENT INDUCED BY ~~A~~ ECCENTRICITY

AND SUBMIT DETAILS OF EXISTING FOUNDATIONS
AND HOW VERTICAL LOAD IS CARRIED AT
FOUNDATIONS - INCLUDING EXISTING LOAD

REGARDS

AC

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SA: Send Again EN: Engaged

BC: Broadcast
RS: Relay Send
AS: Auto Send

MP: Multi Polling
BF: Box Fax Forward
TM: Terminated

RV: Remote Service
CP: Completed

04470

P.O. Box 687, NELSON,
NEW ZEALAND

PHONE (03) 547 7347
FAX (03) 547 2909
EMAIL: applied@rs.co.nz
WEB: www.appliedresearch.co.nz



Report 06/1481

September 18th, 2006

Page 1:1

Customer: New Zealand Solar Limited
P.O. Box 151
MOTUEKA

Compliance Certificate

Appliance: New Zealand Solar, 20 Tube Solar Collector
Standard Applied Type tests for collectors per AS/NZS2712:2002
Full Report Ref.: 06/1469

Based on the information and results obtained during testing and assessment, the New Zealand Solar, 20 Tube collector appeared to comply with the type testing requirements of AS/NZS2712:2002 for solar collectors. The impact test was not applied.

Our report 06/1469 gives details of the appliance, the assessment and the results obtained.

This report:

Prepared by: W.S. Webley

A handwritten signature in black ink, appearing to read "W.S. Webley", written over a horizontal line.

Approved by: W.S. Webley

A handwritten signature in black ink, appearing to read "W.S. Webley", written over a horizontal line.

Release Date:

18 September 2006

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Glen Withers

From: Sophie Vanderpump [Sophie.Vanderpump@koa.co.nz]
Sent: Tuesday, 29 July 2008 10:29 a.m.
To: Glen Withers
Subject: RE: 29 La Lena Grove

Thanks for that Glen, I will address these issues straight away.

Sophie Vanderpump

Telephone +64 6 356 7000
 Fax +64 6 356 7007
 Email sophie.vanderpump@koa.co.nz
 Website www.koa.co.nz

7 Pitt Street, PO Box 600, Palmerston North • ph 356 7000 • fax 356 7007



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From: Glen Withers [mailto:glen.withers@pncc.govt.nz]
Sent: Tuesday, 29 July 2008 10:15 a.m.
To: Sophie Vanderpump
Subject: 29 La Lena Grove

Morning Sophie,

Find attached a copy of the original fax sent by Alex Chisolm.

Regards,

GLEN WITHERS (aka FIDD) | Building Officer | Palmerston North City Council | Ph 06 356 8199 Ext. 7513 | Fax 351 4471

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29/07/2008

Glen Withers

To: sophie.vanderpump@koa.co.nz
Subject: 29 La Lena Grove
Attachments: img-7291108-0001.pdf

Morning Sophie,

Find attached a copy of the original fax sent by Alex Chisolm.

Regards,

GLEN WITHERS (aka FIDD) | **Building Officer** | Palmerston North City Council | **Ph 06 356 8199 Ext. 7513** | Fax 351 4471

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29/07/2008

Glen Withers

SENT 28/01/08

To: bruce@bba.net.nz
Subject: Consent 4470

Attachments: Original Info Request.pdf

Good afternoon Bruce,

This is a reminder regarding the suspension on Building Consent 4470 for extension to dwelling at 29 LaLena Grove, Palmerston North.

I have attached the original email from myself and an engineering query from the engineer David Smart. Should you have any queries regarding this suspension please contact me on 356 8199 or reply to this email.

Regards,

GLEN WITHERS (aka FIDD) : Building Officer | Palmerston North City Council | Ph 06 356 8199 Ext. 7513 | Fax 351 4471



Original Info
Request.pdf (74 ...)

FACSIMILE

TO SOPHIE

FAX NO 356 7007

ORGANISATION

KEVIN O' CONNER

DATE 13.12.07

FROM ALEX CHISHOLM

FAX NO 351 4471

NO OF PAGES 1

B/C 4470 - 29 CALENA GROVE -

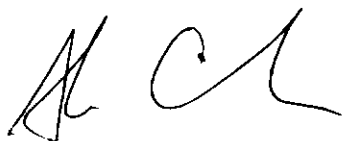
cc Bruce Barry 359 1840.

SOPHIE, PLEASE RESPOND TO THE FOLLOWING
QUERIES SO THE CONSENT APPLICATION CAN
PROCEED:

FOR ALL OF THE MEMBER SUPPORTS, PLEASE
SUBMIT CALCULATIONS FOR POSTS - INCLUDING
MOMENT INDUCED BY ~~A~~ ECCENTRICITY

AND SUBMIT DETAILS OF EXISTING FOUNDATIONS
AND HOW VERTICAL LOAD IS CARRIED BY
FOUNDATIONS - INCLUDING EXISTING LOAD

REGARDS



Glen Withers

To: bruce@bba.net.nz
Subject: Consent for 29 La Lena Grove

Dear Bruce,

BUILDING CONSENT APPLICATION 4470 FOR ALTERATIONS AT 29 LA LENA GROVE, PALMERSTON NORTH.

The application for the above project has been considered and to enable the processing to be completed, and the Building Consent issued, further information is required covering the following areas:

1. Concrete strength 17.5 mPa?
2. Refer Page 2 of the Gangnail PosiSTRUT - "Posi-STRUT trusses supporting load-bearing walls are not covered by these charts and require special design. Please have the design verified/designed by MITEK. This will address the loadbearing walls and also the cantilevering of PS20 - 21 x 09 over 700mm when the cantilever tables show max of 530mm.
3. Confirm Rondo battens direct fixed as Rondo clips will not provide sufficient lateral support for the trusses.
4. Provide verification the ground floor trusses may be cut down where it is proposed to accommodate the new upper level area. And any design for the remedial work done to the original trusses. (FYI: Quality Frames and Trusses did the original truss layout).
5. Gable bracing.
6. Details of the internal gutter. Sectional view? Fall? Overflow?
7. More even distribution of the bracing for the upper level i.e. bracing each way at the intersection of lines M and A.
8. As the ceilings in the lower will probably be removed I am going to recommend the ceilings be replaced as a diaphragm or the upper floor as a diaphragm to assist the stability. The lower floor was braced as a "room in roofspace" and this is, even though still under the 50%, a large addition to the dwelling and I want to ensure we address structural stability.

The amended plans may be emailed back to this address in PDF form or dropped into the Customer Services Centre in The Square.

Further processing of this application is suspended in accordance with Section 34 (2) (PIM)/Section 48 (2) (BC) of the Building Act 2004 until the information covering the above items is submitted to the Development Services Division, City Contact, at the Palmerston North City Council.

If you have any further queries, please do not hesitate to contact Glen Withers on 356-8199 ext. 7513 or via email at glen.withers@pncc.govt.nz.

Regards,

GLEN WITHERS (aka FIDD) Building Officer | Palmerston North City Council | Ph 06 356 8199 Ext 7513 | Fax 351 4471

Glen Withers

From: Bruce Barry - Bruce Barry Architects [bruce@bba.net.nz]
Sent: Tuesday, 29 July 2008 9:10 a.m.
To: Glen Withers
Subject: Re: BC for 29 La Lena

Hi Glen,
 With the passing of time, I hadn't realised you were still waiting on me for information.
 I will attend to it immediately.
 Regards,
 Bruce

— Original Message —

From: Glen Withers
To: Bruce Barry - Bruce Barry Architects
Sent: Tuesday, July 29, 2008 8:49 AM
Subject: BC for 29 La Lena

Morning Bruce,

I was going through suspended consents recently and saw the Durbin consent at 29 La Lena Grove is still suspended. This is simply a catchup to see how this is progressing. Please email me back or call me with an update.

My original email contained the following information requests:

1. Concrete strength 17.5 mPa?
2. Refer Page 2 of the Gangnail PosiSTRUT - "Posi-STRUT trusses supporting load-bearing walls are not covered by these charts and require special design. Please have the design verified/designed by MITEK. This will address the loadbearing walls and also the cantilevering of PS20 - 21 x 09 over 700mm when the cantilever tables show max of 530mm.
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Regards,
 GLEN WITHERS (aka FIDD) | Building Officer | Palmerston North City Council | Ph 06 356 8199 Ext. 7513 | Fax 351 4471
 This communication, including any attachments, is confidential. If you are not the intended recipient, please contact me immediately, delete this message, and do not copy or use any part of this communication or disclose anything about it. Thank you



Caution: The content of this email is confidential and may be legally privileged. If it is not intended for you, please email the sender immediately and destroy the original message. You may not copy, disclose or use the contents in any way. Thank You.

I am using the free version of SPAMfighter for private users.
 It has removed 1052 spam emails to date.
 Paying users do not have this message in their emails.
 Try [SPAMfighter](#) for free now!

29/07/2008

Glen Withers

From: Glen Withers
Sent: Tuesday, 29 July 2008 8:50 a.m.
To: 'Bruce Barry - Bruce Barry Architects'
Subject: BC for 29 La Lena

Morning Bruce,

I was going through suspended consents recently and saw the Durbin consent at 29 La Lena Grove is still suspended. This is simply a catchup to see how this is progressing. Please email me back or call me with an update.

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2. Refer Page 2 of the Gangnail PosiSTRUT - "Posi-STRUT trusses supporting load-bearing walls are not covered by these charts and require special design. Please have the design verified/designed by MITEK. This will address the loadbearing walls and also the cantilevering of PS20 - 21 x 09 over 700mm when the cantilever tables show max of 530mm.
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Regards,

GLEN WITHERS (aka FIDD) | Building Officer | Palmerston North City Council | Ph 06 356 8199 Ext. 7513 | Fax 351 4471
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29/07/2008

4470

DEVELOPMENT SERVICES DIVISION - CHARGE SHEET

BCA T-04b
Ver. 4
Date: 08/08/07

Project Number: 4470
Project Address: 29 LALENA GROVE

Person Making

Payment (FOH Use): MARK DURBINProject Description: 2ND STOREY ADDITIONProject Type Definition (circle): 0 1 2 3 4 5 6 7DATE:
15 NOV 07

OFFICER:

TYPE	CODE	V/G NO	AMOUNT
PIM	P3	020010-001	\$ 290.00
BUILDING CONSENT	P3	020009-001	\$ 430.00
SCANNING		030002-001	\$
INSTANT RESOURCE CONSENT		080002-001	\$
LAND USE CONSENT		080001-001	\$
CERTIFICATE OF TITLE		020004-001	\$
VEHICLE CROSSING		020014-001	\$
BUILDING CONSENT AMENDMENT		020009-001	\$
CERTIFICATE FOR PUBLIC USE		020010-001	\$
EXEMPT/UNAUTHORISED BDG WORK		020010-001	\$
CERTIFICATE OF ACCEPTANCE		020010-001	\$
FOOTPATH BOND (No GST)		99 99 99 2156	\$
SERVICE CONNECTIONS STORMWATER		030004-001	\$
SERVICE CONNECTIONS WASTEWATER		030004-002	\$
SERVICE CONNECTIONS WATER		030004-003	\$
			\$ 720.00

Comments:

Note: Administration Fees to be listed on the next page.

Building Consent DEVELOPMENT SERVICES DIVISION - CHARGE SHEET

14470
BCA T-04b
Ver: 4
Date: 08/08/07

ADMINISTRATION

Date	Time	Task	Who
20/11/07	0.25	make folder/load	June 11.
20/11/07	0.25	monitoring	Angela
	0.50	format/fees	
Total Hours	1	@ \$80.00 per hour	\$ 80

MANAGER/PRINCIPAL/SENIOR OFFICERS/STRUCTURAL ENGINEER

Date	Time	Task	Who
15 Nov 07	0.5	APP 15	PHIL
13.12.07	1.25	Structural not complete	ALEX CHRISTOM
7/8/08	1.5	Structural.	Daniel
14/5/08	0.25	Sign-off	Neville
Total Hours	3.5	@ \$140.00 per hour	\$ 525.

BUILDING/PLANNING OFFICERS/OTHER UNIT STAFF

Date	Time	Task	Who
28/11/07	1-25	P+D	Les M
28-1-08	0.25	SUB UPDATE	ETH
10-12-07	4	PROCESS	GEW
14-7-08	2	PROJECTS	ETH
Total Hours	7.5	@ \$120.00 per hour	\$ 900.00
SUB TOTAL LABOUR			\$ 1505.00
LESS DEPOSIT PAID			\$ 430.00
TOTAL LABOUR COST			\$ 1075.00

Building Consent DEVELOPMENT SERVICES DIVISION - CHARGE SHEET

TOTAL LABOUR COST (Carried forward)	\$1075.00
--	------------------

OTHER FEES		N°	
LEVIES:	DBH	\$1.97 / \$1000.00	\$197.00
	BRANZ	\$1.00 / \$1000.00	\$100.00
Code Compliance Certificate		\$65.00	\$65.00
Building Inspections		\$140.00 / Insp	10 \$1400.00
Scanning	A3	\$5.00 ea	25 \$125.00
	A4	\$3.00 ea	128 \$384.00
Vehicle Crossings		\$160.00 / Insp	\$
Legal Fee	Sect 75	\$650.00	\$
	Sect 72	\$290.00	\$
Producer Statement		\$60.00ea	\$
Compliance Schedule		\$95.00	\$
Compliance Schedule (amendment only)		\$55.00	\$
Footpath Bond (No GST)		\$1000.00	\$
Development Levy (pre 1/7/04)			\$

DEVELOPMENT CONTRIBUTIONS		
	City Wide Reserves	\$
	Roading	\$
	Water	\$
	Wastewater	\$
	Local Reserves	\$
	Stormwater	\$

SERVICES		
	Sewer	\$
	Water	\$
	Stormwater to Main	\$
	Stormwater to Kerb	\$
	Vehicle Crossings	\$

CONTRACTORS/CONSULTANTS	TASK	
		\$
		\$
		\$
		\$
		\$

TOTAL COST	\$3346
TOTAL FEE TO BE WAIVED (See Below)	\$ -
TOTAL TO BE INVOICED/PAID	\$3346

Fees entered into Ozone: (date)

Signed off by (BSO)

Building Consent DEVELOPMENT SERVICES DIVISION - CHARGE SHEET

14470

BCA T-04b
Ver: 4
Date: 08/08/07

Inspections Required

		Tick if applicable	N°
A	Foundation	✓	1
B	Ring and Pile Foundation		
C	Subfloor Building		
D	Underfloor Drainage		
E	Concrete Slab		
F	Framing	✓	1
G	Pre-cladding		
H	Cavity	✓	1
I	Monolithic Backing	✓	1
J	Paper – netting – rib lathe	✓	1
K	Scratch coat – stucco	✓	1
L	Half high brick		
N	Building preline	✓	1
P	Plumbing preline	✓	1
Q	Post line	✓	1
R	Drainage		
S	Building final	✓	—
T	Plumbing final	✓	1
U	Structural Pre-cast Concrete, i.e. Tilt slabs		
V	Blockwork – Pre Block fill		
W	Demolition final		
X	Swimming Pool		
Y	Engineer Observation		
Total Number of Inspections Charged			10

