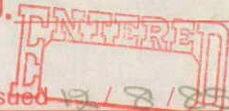


BUILDING PERMIT**AUTHORITY**Stats. No. **C** 045097

Office Copy)

Egmont County Council

No.

Receipt No. 5154Date Permit Issued 12/8/85**OWNER**Name L. A. KettlewellMailing Address el. 9 Hector PlaceOpunake**BUILDER**Name Healey HomesMailing Address P.O. Box 626Hawera.**PROPERTY ON WHICH BUILDING IS TO BE ERECTED/DEMOLISHED****SITE**

Street No. _____

Street Name Pohutukawa DriveTown/District OpunakeRiding Opunake**LEGAL DESCRIPTION**Valuation Roll No. 11970 - 461 - 36Lot 8 D.P. 12361

Section _____ Block _____

Survey District Borough of Opunake**DESCRIPTION OF PROPOSED WORK AND MAIN PURPOSE OF USE**Residence**FLOOR AREA**Whole
Sq. Metres75**DWELLING UNITS**Number
Erected

ESTIMATED
VALUES
\$Building
Plumbing
Drainage
TOTAL31,0004,00035,000**NATURE OF PERMIT (TICK BOX)****NEW BUILDING**

- exclude domestic garages and domestic outbuildings

**FOUNDATIONS ONLY****ALTERED, REPAIRED, EXTENDED**

- include conversions and resited buildings

**NEW CONSTRUCTION****OTHER THAN BUILDINGS** - include demolitions**DOMESTIC GARAGES****AND DOMESTIC OUTBUILDINGS****FEES APPLICABLE**Building Permit \$ 90 -
Street Damage Deposit . \$ _____
Building Research Levy .. \$ 35 -
Plumbing \$ 70 -
Drainage \$ _____
Sewer Connection \$ _____Water Connection \$ _____
Vehicle Crossing Levy ... \$ _____
M.S. Plumbing \$ _____
TOTAL: \$ 195 -

Receipt No. _____

Date of Payment 29/7/85Authorised Officer V. Dakin

Special Conditions: (In addition to those noted on reverse): _____

**NOTICE TO APPLICANT**

PERMISSION IS HEREBY GRANTED YOU to carry out the works as proposed in accordance with the drawings and other documents submitted, and with any conditions defined; such work to be subject to inspection at any time during progress and to be carried out in strict conformity with the requirements of the Council By-Laws.

IMPORTANT - YOU ARE FULLY RESPONSIBLE for any damage done to any works such as telephone cables, power cables, water mains, gas mains, sewers, pipes, footpaths, roads or other services.

Egmont County Council

No.

Inspector: M

File No.

Receipt No. 5154

Date Permit Issued 12 / 8 / 85

OWNER

Name L. A. Kettlewell

Mailing Address 21. 9 Hector Place

Opunake

BUILDER

Name Healey Homes

Mailing Address P.O. Box 626

Hawera

PROPERTY ON WHICH BUILDING IS TO BE ERECTED/DEMOLISHED

SITE

Street No.

Street Name Pohutukawa Drive

Town/District Opunake

Riding Opunake

LEGAL DESCRIPTION

Valuation Roll No. 11970 - 461 - 36

Lot 8 D.P. 12361

Section Block

Survey District Borough of Opunake

DESCRIPTION OF PROPOSED WORK AND MAIN PURPOSE OF USE

Residence

FLOOR AREA

Whole
Sq. Metres

75

DWELLING UNITS

Number
ErectedESTIMATED
VALUES
\$Building
Plumbing
Drainage
TOTAL

31,000

14,000

35,000

NATURE OF PERMIT (TICK BOX)



NEW BUILDING

- exclude domestic garages and domestic outbuildings



FOUNDATIONS ONLY



ALTERED, REPAIRED, EXTENDED

- include conversions and resited buildings



NEW CONSTRUCTION

OTHER THAN BUILDINGS - include demolitions



DOMESTIC GARAGES

AND DOMESTIC OUTBUILDINGS

FEES APPLICABLE

Building Permit	\$ 90
Street Damage Deposit	\$
Building Research Levy	\$ 35
Plumbing	\$ 20
Drainage	\$
Sewer Connection	\$

Water Connection	\$
Vehicle Crossing Levy	\$
M.S. Plumbing	\$
	\$
	\$
TOTAL:	\$ 195

Receipt No.

Date of Payment 29 / 7 / 85

Authorised Officer V. Dobson

Special Conditions:

Date Inspected

REMARKS (e.g. stage reached with work)

[illegible]

COMPLETED (Signature) _____ Date / /

EGMONT COUNTY COUNCIL

The County Engineer,
Egmont County Council,
P.O. Box 19,
OPUNAKE.

Valuation No. 11970-461-36
Date 29-7-85
Receipt No. 5154
Zone Residential

Application for Building Permit:

Site of Proposed Building: Pohutukawa Drive Road/Street
Legal Description of Property: Lot No. 8 D.P. No. 12361
Section No: _____ Block: _____
Survey District: Borough of Opake Area: _____
Name & Address of Owner: MRS. K.A. KETTUNIEK
of B. Kellouell 9 Hector Pl. Opake according to locality
Plan and detailed plans, elevations, cross-sections and specifications of building
deposited herewith in duplicate.
Proposed Work: Residence Floor Area: 75 sq metres
Builder: HEALEY HOMIES TAREANUI Address: P.O. Box 626 HAWKRIA
Craftsman Plumber: PENNIAL & JORDAN STRATFORD
Registered Drainlayers: PENNIAL & JORDAN

Application Fees

	Estimated Finished Value	Fees Payable with Application
Building	\$ <u>35000</u>	\$ <u>90</u> —
Sanitary Plumbing & Drainage	\$ <u>4000</u>	\$ <u>70</u> —
Building Research Levy on Finished Value (see back hereof for particulars)	\$ <u>35000</u>	\$ <u>35</u> —
Urban Water Connection Fee		\$
Urban Sewerage Connection Fee		\$
Urban Vehicle Entrance		\$
		\$ <u>195.00</u>

Signature and Address of Applicant: [Signature]

9 FAIRFIELD RD HAWKRIA

Phone Number 86379

Date 29/7/85

Note: Fees according to the scale on back hereof must accompany the application for permit. Special Plumbing and Drainage application forms are required and these must be made by Craftsmen Plumbers or Registered Drainlayers, before a permit will be issued.

For Office Use Only	Check:	Remarks:	Initials:
Ordinances			
P. & D. Regs			
Building Regs			
Fire Code			
Structural Content			
Water/Sewerage Connection			
Kerb & Footpath Crossing			
Regn. Cert (Bldg over \$20,000)			

Plans and specifications checked and approved subject to the following conditions:

Alex Ross

COUNTY OF EGMONT

Fees within Opunake Township:

Water Connection	\$100.00
Sewerage Connection	\$100.00
Vehicle Entrance	\$140.00

For the Information of the Applicants

Two copies of Plans and Specifications must be deposited, and one set will be returned together with the permit. All plans must be signed by the Architect, Engineer, or other person responsible for their productions.

Every applicant shall before the issue of a building permit, pay to the Council the following fees.

- Fees for building permit according to scale shown hereunder.
- Fees for sewer and water connections where Council services are required.
- Cost of vehicular crossing as required by Council.
- Building Research Levy according to the scale shown hereunder.

Scale Of Fees For Building Permits Contract Price of Estimated Value of Building

1	-	200	=	\$5.00	10,001	-	15,000	=	\$50.00
201	-	500		7.00	15,001	-	20,000		60.00
501	-	1,000		10.00	20,001	-	30,000		75.00
1,001	-	2,000		12.00	30,001	-	40,000		90.00
2,001	-	3,000		15.00	40,001	-	50,000		100.00
3,001	-	4,000		20.00	50,001	-	60,000		110.00
4,001	-	5,000		25.00	60,001	-	70,000		120.00
5,001	-	10,000		40.00					

For each \$20,000 in excess of \$70,000 an additional fee of \$10.00 is payable.

Drainage and Sanitation Plumbing fees

\$ 1 but not exceeding	\$200	...	...	...	...	...	...	...	\$ 6.00
201 but not exceeding	400	...	...	...	...	...	...	...	8.00
401 but not exceeding	600	...	...	...	...	...	...	...	10.00
601 but not exceeding	800	...	...	...	...	...	...	...	15.00
801 but not exceeding	1,000	...	...	...	...	...	...	...	18.00
1,001 but not exceeding	1,200	...	...	...	...	...	...	...	20.00
1,201 but not exceeding	1,400	...	...	...	...	...	...	...	25.00
1,401 but not exceeding	1,600	...	...	...	...	...	...	...	30.00
1,601 but not exceeding	1,800	...	...	...	...	...	...	...	35.00
1,801 but not exceeding	2,000	...	...	...	...	...	...	...	40.00
2,001 but not exceeding	3,000	...	...	...	...	...	...	...	50.00

Plus \$2.00 for each additional \$100 or part thereof. (\$20 per \$1000 extra)

Building Research Levy

A levy of \$1.00 per \$1,000 or part thereof of the whole value applies to all buildings valued at \$10,000 or more - e.g. a building valued at \$11,000 incurs a levy of \$11.00. The Council acts as a collecting agency for the Building Research Association of New Zealand and the levy should be paid together with the building permit fee.

Note:

Plans

The following metric plans and specification must be lodged in duplicate with all applications -

Locality sketch, site plan (showing distances from boundaries), floor plan, drainage plan, **four** elevations, cross sections, specifications.

For structures involving structural steelwork or beams, a registered Engineers Design certificate is required. All drawings shall be in duplicate, scales of 1:50 and 1:100 are recommended, single line sketches or pencil drawings will **not** be accepted.

EGMONT COUNTY COUNCIL
Accessory Building Specification

Date _____

SPECIFICATION FOR _____ (Type of Building)
TO BE CONSTRUCTED FOR _____ (Owners Name)
AT _____ (Address)

(This specification sheet may be used for simple wooden frame buildings which are accessory to residential buildings or farming. It will not be accepted for industrial, commercial or residential buildings. Additional specifications will be required to cover any omissions or special features such as high foundations, structural steelwork, reinforced concrete frames and beams, roof trusses etc.)

Foundations :

Piles: Size _____ Material _____ Size Footing _____
 Spacing in rows _____ Spacing between rows _____

Footings for Walls: Width of footing _____ Depth of Footing _____
 Wall thickness _____ Rods in footing dia. _____
 No. of Rods _____

Vertical reinforcing rods diam. _____ Spacing _____
Horizontal reinforcing rods diam. _____ Spacing _____

Floors - Timber:

Sleeper plates: Type of timber _____ Size _____
Floor Joists: Type of timber _____ Size _____ Spacing _____
Flooring: Type of timber _____ Size _____

Floors - Concrete:

Thickness _____ Reinforcing (if any) _____ Damp Proof
Course _____

Walls - Timber:

Plates, Top Type of timber _____ Size _____
Studs: Type of timber _____ Size _____ Spacing _____
Bracing: Type of timber _____ Size _____ Spacing _____
Dwangs: Type of timber _____ Size _____ Spacing _____
Plates: Bottom Type of timber _____ Size _____

Lintels - Timber:

Openings not exceeding 1350mm	Length _____	Size _____
Openings 1350mm to 1800 mm	Length _____	Size _____
Openings 1800mm to 2250mm	Length _____	Size _____
Openings 2250mm to 2700mm	Length _____	Size _____
Openings over 2700mm	Length _____	Size _____

Walls - Reinforced Concrete:

Thickness _____
Horizontal Reinforcing - diam. _____ Spacing _____
Vertical Reinforcing - diam. _____ Spacing _____

(If concrete wall panels are framed in reinforced concrete columns and beams then further detailed drawings and specifications are required.)

Walls - Masonry:

Type of blocks _____ Length _____ Depth _____
Thickness of wall _____
Vertical reinforcing _____ Horizontal reinforcing _____
Capping band - height _____ Width _____ N° of rods _____ Dia. _____
Columns: Width _____ Thickness _____ Spacing _____ N° of rods _____
Diam. _____ Stirrups - N° of rods _____ Diam. _____

Linings - Exterior

Full Details _____

Linings - Interior

Full Details _____

Roof:

Ceiling joists	Type of timber _____	Size _____	Spacing _____
Rafters	Type of timber _____	Size _____	Spacing _____
Struts	Type of timber _____	Size _____	Spacing _____
Purlins	Type of timber _____	Size _____	Spacing _____
Covering	Full Details _____		

Site:

Distance from road frontage _____ metres
Distance from side boundary _____ metres
Distance from back boundary _____ metres
Method of disposal of Sewage _____

Septic tank effluent disposal _____

Dimensions:

All dimensions to be in millimetres.

General:

The whole of the work shall be carried out in accordance with the best trade practice complete with all necessary joinery, glazing, flashing, scribing, facings, cover boards, spouting, downpipes, ridging, etc., with all exposed timber painted so as to present a reasonable exterior appearance. The Council's Building By-Law will be complied with all respects.

Signed _____ (Applicant)

Note:

A Floor Plan and elevation to a scale of 1:50 or 1:100 and a Site Plan are to be submitted in duplicate with the specifications.

HEALEY HOMES (Taranaki)
P.O. BOX 626
HAWERA
TELEPHONE 86379

GENERAL SPECIFICATION

GENERAL: Owners responsibility to ensure the correct position of all survey pegs, positioning of the home and consultation with main contractor on site to verify all measurements. The Owner shall ensure site access.

CONTRACT: The Contractor supplies and delivers all materials, labour, fittings, tools, plant etc, to complete the building as on the drawings and herein specified, in a tradesmanlike manner, in accordance with the local By-Laws. The Owner shall not select or supply any goods whatsoever other than supplied by Contractor.

SERVICES: Up to 5m for all services from the home.

TELEPHONE: Owners responsibility to arrange.

PERMITS: Contractor to comply with the Labour and Building By-Laws of the district and to apply for and obtain all necessary permits.

INSURANCE: Contractor shall cover by 'Fire Insurance' to 100% of value of buildings, and his employees (except sub-contractors) shall be covered by 'Employer's Liability'. Both policies held until buildings taken over by owner.

MATERIALS & WORKMANSHIP: All workmanship must be careful, thorough and in accordance with standard trade practice and all materials as specified, and in accordance with Local Body By-Laws and the NZS 3604:1978.

STABILITY: The Contractor shall carefully brace and support all parts of his work against damage by wind and also protect same from damage by water.

CARPENTER AND JOINER:

All materials are of good quality, laid true, leveled and in a tradesmanlike construction used to comply with the Local By-Laws.

FOUNDATIONS: 140mm S E D natural round or square E&B timber piles set on concrete pads as required by NZS 3604. Maximum length 600mm long on level section.

STRINGERS: To be 100 x 75mm on edge. All joints to be scarfed or alternatively but jointed with a nail plate fixed each side over solid bearings.

FLOOR JOISTS: Provide an even surface and 90mm nails to stringers and bearers. Joists over a solid bearing. Double joists under and exterior walls.

PLATER: Straight with nail-plates at joints, corners and intersections.

INTERIOR WALL PARTITIONS: Trower or similar partitioning according to NZS 3604.

ROOF FRAMING: 'Pryde' or 'Gangnail' trusses fixed as required NZS 3604. Fix 100mm x 50mm purlins at approximately 900mm centres.

BASEBOARDS: 2 only 150mm x 25mm rough sawn timber fixed horizontally approximately 20mm spacings, 100mm clear of ground on level section.

EAVES: Barge. Allow the rafters to overhang and cut off plumb. Fix prefinished Facia/Barge - Klass/Taylor facia gutter system. Scofit, boxed and lined with fibrolite sheets. Finished as detailed. Colour bone white standard.

EXTERIOR SHEETING: 300mm Hardiplank plain weatherboards. Lay boards with 30mm laps. All corners to be covered with galvanised soakers.

FLOORING: All floors to be covered with high density particle board nailed with all nails punched below floor surface. On completion of all trades, clean off bye wood to an even surface with a sanding machine. Floor Sanding - One cut only.

NOGGING: Nogging to be as required NZS 3604.

INSULATION: Floor, walls and ceilings insulated to Government thermal requirements. Walls, Gibfoil insulation board. Ceilings, Insulfluff.

CEILINGS: All ceilings, gibraltar board with Glamatex or similar. Provide 500mm x 500mm man hole.

SCOTIA & SKIRTING: No 8 Bevelled Scotia. No 21 Bevelled skirting, paint grade.

LININGS: Interior walls lined with 9mm Gibraltar board, nailed with 30mm galvanised flat heads on joints every 150mm and intermediate studs and nogging every 225mm. All stopping with Plaster of Paris filled to an even surface.

WARDROBES, LINE & HOTWATER: Full height walls and ceilings lined. Wardrobe 1,225mm hat shelf and hanger rail 160mm above floor. Line, 5 full width shelves at 400mm spacings. Hotwater, shelves as detailed. Provide doors.

KITCHEN CUPBOARDS ETC: Construct kitchen cupboards, and sink unit where shown on plan. Sinktop stainless steel.

JOINERY: All exterior doors, frames and sills and windows to be silver anodised aluminium fitted with 19mm reveals grooved to take lining.

DOORS: Interior paint grade flush doors in 30mm jambs grooved to take lining. Fit with standard hardware latch sets.

BATHROOM: Bath standard Plix 1525mm to be built in, framed and timber splash board provided. Fit Plix handbasin to wall on brackets, no vanity, no towel rail, no mirrors and no soap holders.

LAUNDRY: Provide fabricated stainless steel tub and standard timber cabinet.

ROOF: Galvanised corrugated steel roofing. Under roofing lay tightly stretched wire netting and on top of this lay building paper fixed to NZS 3604.

<u>TIMBER SCHEDULE</u>	<u>SIZE</u>	<u>GRADES TO NZS 3604</u>	<u>SPACING</u>
Jack Studs	100 x 50	No 1 Tan C7 Pine	
Sleeper Plates	100 x 75	No 1 Tan C7 Pine	
Foundation Bracing	100 x 75	No 1 Tan C7 Pine	
Base Boards	150 x 75	No 1 Tan C7 Pine Pine-Rough Sawn	
Exterior Finishing Timbers	50 x 25	No 1 Tan C7 Pine	
Floor Joists	150 x 50	No 1 Boric Treated Pine	600
Top & bottom plates & studs	100 x 50	No 2 Boric Treated Pine	
Window Lintels up to 3600	2/300 x 50	No 1 Boric Treated Pine	
Window Lintels up to 3200	2/250 x 50	No 1 Boric Treated Pine	
Window Lintels up to 2400	2/150 x 50	No 1 Boric Treated Pine	
Window Lintels up to 1500	2/100 x 50	No 1 Boric Treated Pine	
Window Jacks	100 x 50	No 2 Boric Treated Pine	
Ceiling Runners- (truss roof)	75 x 50	No 2 Boric Treated Pine	2400
Dwangs	100 x 50	No 2 Boric Treated Pine	1200
Flooring	20mm High Density Particle Board		
Internal Door Jambs	30mm Paint Grade		

PLUMBER

WATERPROOF: Leave the building absolutely waterproof in every respect. Flash all openings through roof. Any part or parts not specified and necessary to make the building water-tight shall be as mentioned, with appropriate materials.

DOWN PIPES: Round - 80mm diameter P.V.C.

WATER PIPES PVC POLYBUTYLENE & HOT WATER: Main supply to house to be 19mm Alkathene. Polybutylene for hot and cold water fitted with all necessary bends, tees, elbows etc and with all joints to basin, sink, tub, and bath. Install an approved electric hot water cylinder 136 litre capacity with element and thermostat and all necessary connections. Cold water to WC.

WASTES: Baths, tub and sink to have PVC traps and wastes. All wastes to discharge over gully traps. All sanitary plumbing to be installed by a registered plumber by the Health Department and Sanitary Inspector.

TAPS: All taps, chromium plated signature bib and pillar cocks with indicators for 'Hot and Cold'. One hose tap and stop cocks to be brass.

W.C: To be installed complete with white earthen ware pan, seat etc. Low set flush cistern pipe, PVC pipes, fittings and vent.

DRAIN DIGGING: Drainlayers responsibility. Back fill after inspection.

DRAINLAYER:

DRAINAGE: Lay all necessary drains from traps and WC to town sewer. All pipes and connections to be 110mm PVC Drainage system laid to a true and even fall. The whole of the drainage and sanitary arrangements to comply with the By-Laws and to the satisfaction of the Sanitary Inspector.

PAINTER AND PAPERHANGER:

MATERIALS: All materials are of good quality and workmanship in a tradesmanlike manner. All woodwork to be sanded between coats. Exterior woodwork to receive one coat of first quality priming. Putty all nail holes and finish with two coats of approved paint.

HARDIPLANK, GABLE ENDS, SOFFIT, BASEMENT: Painted to standard colour scheme. Wardrobes, Linen Cupboard, Hot water Cupboard and Pantry interior unpainted.

COLOURS: Standard colour white, other colours or more than one in a room shall be extra.

WALLPAPER: All walls to be sealed before papering to samples enclosed.

ROOF: Painting of roof to be owners responsibility.

EXTRAS: All extras to be paid to Builder within 5 days of agreed price given. Payments not received will revert back to standard lines.

LEINS RETENTION MONEY: To be held for the purpose it is held for. Namely paying subcontractors that have not been paid, and not for maintenance. After a thirty day period, all money to be paid out. A 22% interest charge on all overdue money, including extras.

ELECTRICIAN:

The Electrician will make the necessary notification to the Local Power Board. All work to be carried out to the satisfaction of the Power Board and the Underwriter's Association.

METER PANEL:

Provide and fix one meter panel complete externally. Where required by Local Authority Fuse Panel internally.

- SWITCHES: Provide and fix switches to all light points.

LIGHTS: Provide and fix one light point to each room and hall where indicated on plan and two outside lights, all with lamps.

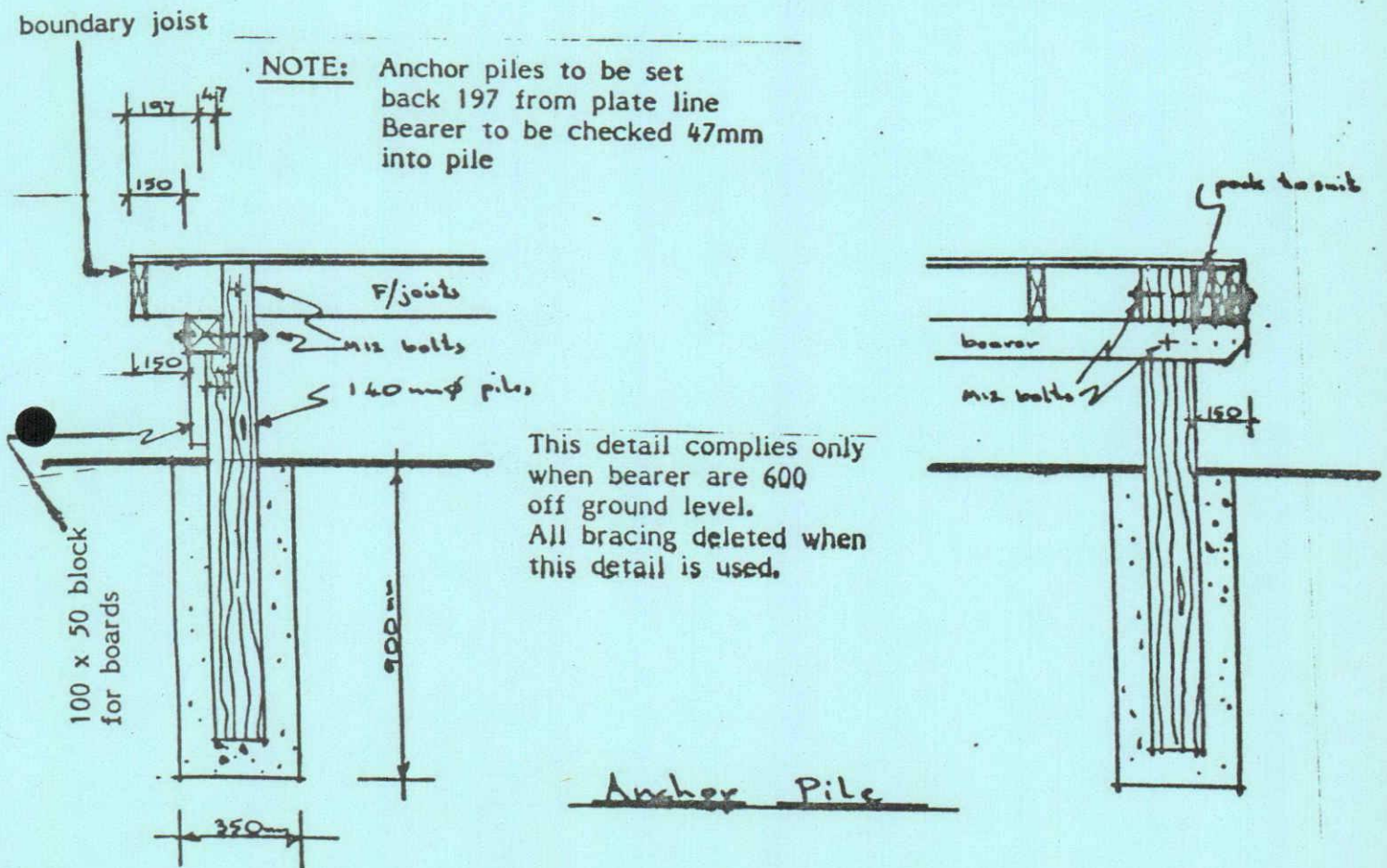
POWER: Provide and fix a total of 5 power points where indicated on the plan and make connections to hot water cylinder and stove.

STOVE: A Moffat Consul 3 plate electric stove installed where shown.

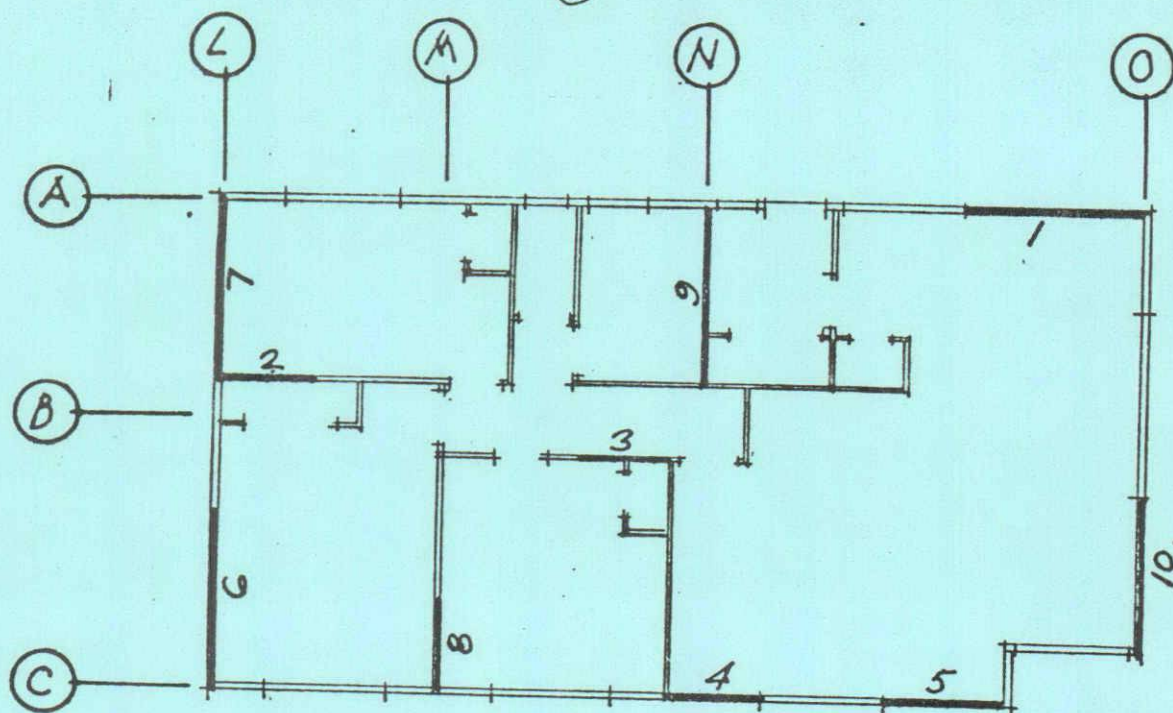
COMPLETION: On completion all to clear all debris and the like from the site.

BUILDER: Responsibility for tidying up section.

ANY AMENDMENTS TO THIS SPECIFICATION OR PLAN WILL BE SHOWN ON AN ADDENDUM.



⑤



Roof Pitch : 0-25.

Earthquake Zone: 8

$$W = 33.$$

E - 3

Roof Width B.W = 7.8m

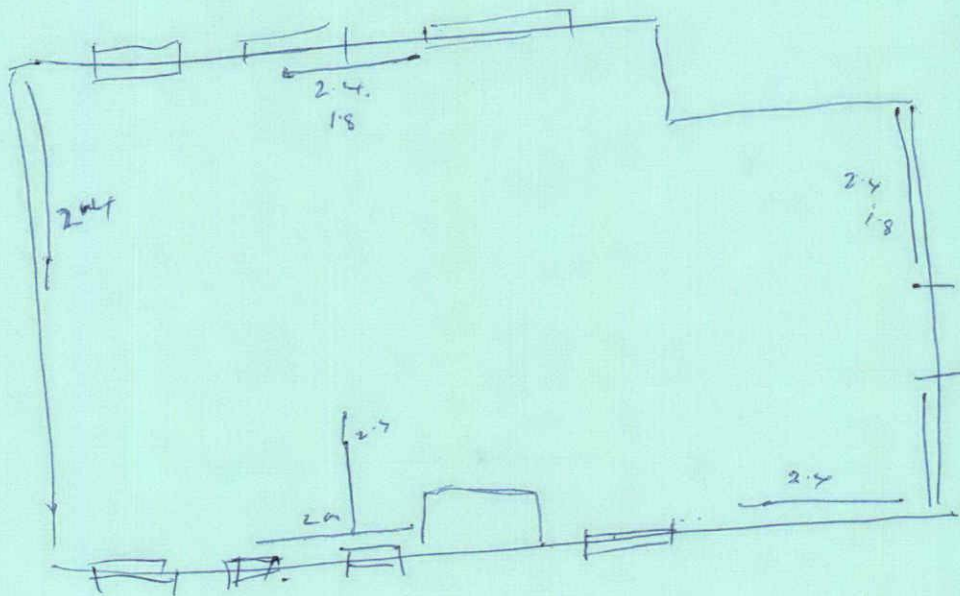
Gross Area = 102.26 m^2

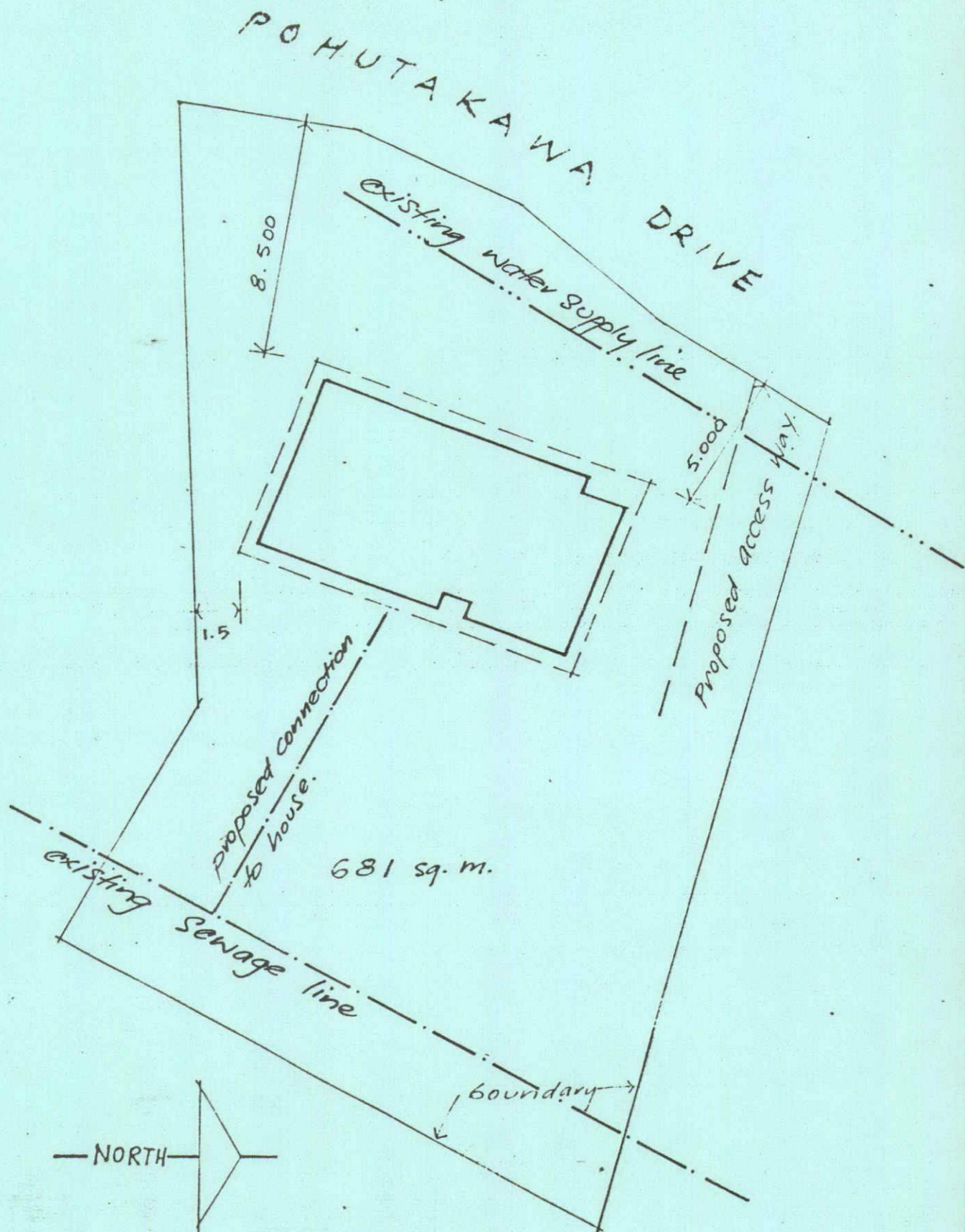
For Earthquake $L \times G_M = 3 \times 102.96 = \underline{\underline{308.88 \text{ B.U.S.}}}$
For Wind: read.

Along - $W \times BW = 33 \times 7.8 = 257.4$ B.U.s reqd.

~~Area~~ W & O.L. = $33 \times 13.2 = \underline{\underline{435.6}}$ B.U.S. reqd.

Total B.U.s Reqd.	Brace Line	Minimum B.U.s reqd.	Brace No.	Brace Type.	Rating B.U.s/m.	Length (m)	B.U.s Provided
Along	A	132	1	1	42	1.5×2.2 $= 3.3$	13.8.6
	B	70.	2	Trans.	T2 per 1.2m.	1.2	72
			3			1.2	72
	C	132	4	1	42	$1.5 \times 1.2 = 1.8$	75.6
			5	1	42	$1.5 \times 1.6 = 2.4$	100.8
308.88	Total	334.				Total.	459
Across	L	78	6	1	42	2.4	100.8
			7	1	"	2.4	100.8
	M	70.	8	Trans.		1.2.	72
	N	70.	9			2.3	142.6
	O	78	10	1	42	2.0	84.0
435.6	Total	296					500.2





HEALEY HOMES (Taranaki)
P.O. BOX 626
HAWERA
TELEPHONE 86379

LOT NO: 8

DPS NO: 12361

DATE DRAWN:

DRAWN BY:



WINSTONE

GIB FOIL— THERMAL INSULATION

CI/SIB

4- R17
APRIL 1981

PRODUCT INFORMATION

This document has been prepared as a guide to the designer, specifier and installer of Gib Foil insulation for use in building construction. Gib Foil is produced by Winstone Wallboards Ltd to provide thermal insulation and vapour resistance (vapour barrier) properties. Gib Foil comprises

standard Gibraltar Board with polished aluminium foil adhered to the reverse side.

Gib Foil should not be used in damp or wet conditions or in direct contact with materials containing free-lime or cement.

STANDARD COMPLIANCE

Gib Foil complies with NZS 1340 'Specifications for materials for the thermal insulation of buildings' — Part 4 Reflective Foil Thermal Insulation Materials.

Means of compliance with NZS 4218P 'Thermal Insulation Requirements For Residential Buildings' are shown in sections B and C of this document.

SECTION A—PERFORMANCE

THERMAL EMITTANCE

= 0.03 ± 0.01

At room temperature as evaluated by CSIRO Division of Mechanical Engineering, Highett, Victoria, Australia.

TABLE 1

(Reproduced from NZS 4214) Thermal Resistance of an enclosed air space with Gib Foil on one face. $R = m^2 \cdot ^\circ C/W$

Heat Flow	Width of Air Gap (mm)			
	10	20	40	100 or more
Up	0.30	0.41	0.43	0.47
Horizontal	0.35	0.61	0.64	0.64
Down	0.45	0.65	1.10	1.60

FIRE HAZARD INDICES

(Tested to AS 1530 Part 3 1976)

Ignitability Index : 0
Spread of Flame Index : 0
Heat Evolved Index : 0
Smoke Developed Index : 0

A BRANZ test report is available upon request from Winstone Ltd.

CORROSION

(Tested to AS 1094: 1976)

No corrosion after 28 days at 100% RH and 60°C. Gib Foil does not burn, will not support the growth of fungus bacteria or vermin, and is not affected by age.

VAPOUR RESISTANCE

Gib Foil is widely recognised as a vapour barrier for use in conjunction with other forms of bulk insulation.

9.5 Gib Foil Vapour Resistance = 200 MNs/g

9.5 Gibraltar Board

Vapour Resistance = 0.4 MNs/g

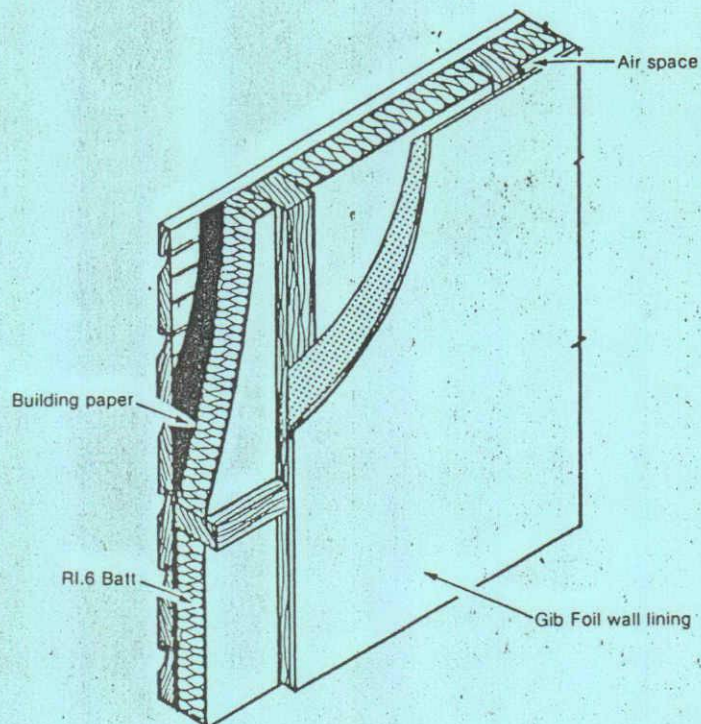
Gib Foil is not recommended for use as a vapour barrier in cool stores.

Wall thermal resistance (R) $\text{m}^2 \text{ } ^\circ\text{C/W}$

Studs at 600mm and 2 rows nogs

With Asbestos Cement weatherboard = $2.0 \text{ m}^2 \text{ } ^\circ\text{C/W}$

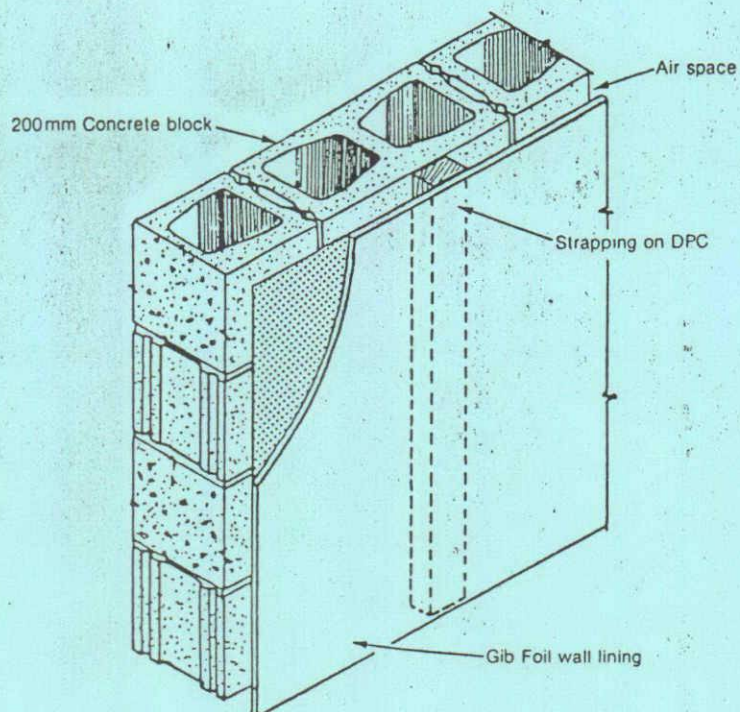
With timber weatherboard = $2.1 \text{ m}^2 \text{ } ^\circ\text{C/W}$



TYPE 'B' CONSTRUCTION

Wall thermal resistance (R) $\text{m}^2 \text{ } ^\circ\text{C/W}$

Thermal Resistance = $0.90 \text{ m}^2 \text{ } ^\circ\text{C/W}$



SECTION C—SPECIFIC THERMAL DESIGN

Gib Foil provides the wall insulation for a thermal envelope that has been the subject of a specific thermal design. Where compliance with NZS 4218P is obtained by specific thermal design, compliance with section 2 of that standard is not required.

The thermal envelope allowable under the specific design is as detailed in Table II and allows for any type of exterior wall and roof cladding.

The combinations have been shown to comply with the requirements of NZS 4218P. Where required the consulting engineer's report is available upon request from Winstone Limited.

LIMITATIONS

(Buildings outside the following limits would require checking to verify compliance).

- (a) Floor area exceeding 130m², glazed area not to exceed 70% total wall area.
- (b) Floor area exceeding 200m², glazed area not to exceed 60% total wall area.

- (c) Truss spacing not less than 900mm
- (d) Ceiling joist spacing not less than 450mm
- (e) Single storey construction only but including uninsulated basement areas such as garages.

TABLE II

Specific Thermal Design – Permitted Combinations

Ceiling Insulation	Wall Insulation	Floor Insulation
R 3.3 Fibreglass or 150mm Glass wool or 135mm Cellulose Fibre or 125mm Mineral Wool	Gib Foil	Draped Foil or Concrete Slab

"Note — The above table complies with NZS 4218P by means of the *Specific Thermal Design* option. In NZS 4218P *Specific Thermal Design* refers to a thermal design for a particular building. The tables derived above, however have been shown in the consultants report (No. 208963) to provide compliance with NZS 4218P for a very wide range of building shapes, colours, window details and for all NZ urban climates. Thus they may be used by local bodies to infer compliance with the *Specific Thermal Design* clause in NZS 4218P."

GIBALTAR BOARD PRODUCTS

Manufactured by Winstone Wallboards Ltd.

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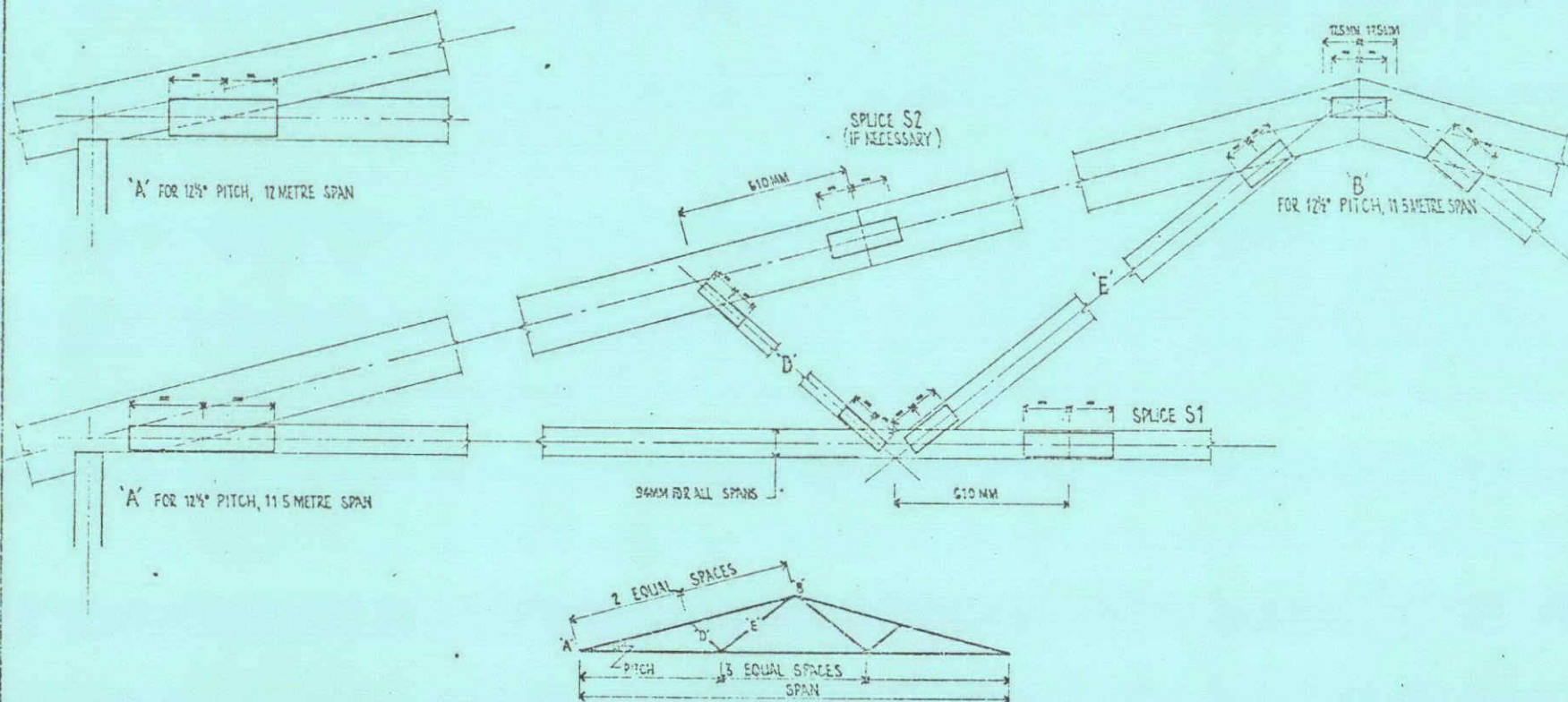
Branches and distributors throughout New Zealand.

The information contained herein is believed to be correct and no liability is accepted for any loss which may be sustained arising from the use of the information.

*Structure, foundation etc OK.
Specific design, report for house being built for thermal insulation*

AL NOTES:

1. IN TABLE BELOW, 8N MEANS ONE 8N PLATE ON EACH SIDE OF TIMBER.
2. CAMBER BOTTOM CHORD AT CENTRE 3MM PER 2000MM OF SPAN.



NOTES

1. Plates are "Pryde" type 1.2mm gauge galvanised steel applied to both sides of joints.
2. Plates are not recommended for highly corrosive atmospheres without further protection.
3. All plates symmetrical on joint except where shown otherwise.
4. Particular care must be taken to have clean timber for all small sizes of timber.
5. No changes shall be made to the details shown. Any variation will require specific re-design.
6. The Standard Trusses are designed to span full length between external walls without reactions from internal partitions. Therefore a gap of approximately 6mm should be provided between truss and all internal partitions during construction.

DATA

Pitch	12 1/2 OR 15
Span	5 METRE TO 10 METRES
Spacing	1 METRE O.C.
Cantilever	NIL
Overhang	750MM MAXIMUM
Roofing	EXHAUSTIVE 120N
Purlins	
Ceiling	G13 RD OR FIB. PLSTR.
TIMBER STRESS CLASS	PLUS DATA SELECTED AS DEFINED IN NZS 1800
ALUMINUM EQUIPMENT	NE 1 FRAMING (+200) AND CUPERTS (+100) AND
SHOWN IN BRACKETS	DOUGLAS FIR STIMBER GRADE (+100)
MOISTURE CONTENT	12% MAXIMUM

DESIGN

Dead load	385 Pa
Living roof plane	195 Pa
and ceiling plane	195 Pa
Live load	451 Pa OR 191 Pa
Wind load	522 Pa
Max. downward force each support	614N PER 100MM
Max. wind uplift at each support	1000N PER 100MM

NAIL DESIGN LOADS

Dead	80 N PER NAIL
Dead + live	100 N PER NAIL
Dead + wind / EQ	135 N PER NAIL
Dead + CONC. LL	
Plan	
Elevation	8 1/2 INCHES TYPICAL
Joints	8 1/2 INCHES TYPICAL
Stress diagram	

12 1/2° PITCH															
5M	5.5M	6M	6.5M	7M	8M	8.5M	9M	9.5M	10M	11M	11.5M	12M			
10'	13'	17'	22'	27'	26'	20'	30'	32'	34'	36'	38'	40'			
100	100	100	125	125	125	150	150	150	200	200	200	200			
1422	1245	1168	1346	1219	1118	1270	1168	1092	1371	1321	1245	1168			
100	100	100	100	100	100	100	100	100	100	100	100	150			
50	50	50	50	50	50	50	50	50	50	50	50	100			
50	50	50	50	50	50	50	100	100	100	100	100	100			
100	100	100	100	100	100	100	125	125	125	125	150	150			
1651	1524	1422	1295	1168	1067	1295	1219	1118	1041	1219	1143	1067			
100	100	100	100	100	100	100	100	100	100	100	100	150			
50	50	50	50	50	50	50	50	50	50	50	50	100			
50	50	50	50	50	50	50	100	100	100	100	100	100			
6NH	6NH	6NH	6NH	6NH	4N	4N	4N	4N	6N	6N	6N	6N			
8N	8N	10N	10N	12N	12N	14N	14N	14N	16N	16N	16N	12NH			
6N	6N	6N	6N	6N	8N	8N	8N	8N	10N	10N	10N	10N			
4N	4N	4N	4N	4N	6N	6N	6N	6N	6N	6N	6N	6N			
4NH	4NH	4NH	4NH	4NH	6NH	6NH	6NH	6NH	6NH	6NH	6NH	4N			
6NH	6NH	6NH	6NH	6NH	6NH	4N	4N	4N	6N	6N	6N	6N			

15° PITCH															
12M	11.5M	11M	10M	9.5M	9M	8.5M	8M	7M	6.5M	6M	5.5M	5M			
40'	38'	36'	34'	32'	30'	28'	26'	24'	22'	20'	18'	16'			
200	150	150	150	125	125	125	100	100	100	100	100	100			
1524	1168	1245	1346	1270	1372	1092	1219	1372	1524	1651	1778				
100	100	100	100	100	100	100	100	100	100	100	100	100			
50	50	50	50	50	50	50	50	50	50	50	50	50			
100	100	100	50	50	50	50	50	50	50	50	50	50			
125	125	125	100	100	100	100	100	100	100	100	100	100			
1219	1295	1372	1092	1194	1321	1422	1524	1651	1778	1906	2032	2210			
100	100	100	100	100	100	100	100	100	100	100	100	100			
50	50	50	50	50	50	50	50	50	50	50	50	50			
100	200	100	50	50	50	50	50	50	50	50	50	50			
4N	4N	4N	4N	4N	4N	4N	4N	4N	4N	4N	4N	4N			
12N	12N	12N	10N	10N	10N	10N	10N	8N	8N	8N	8N	8N			
8N	8N	8N	6N	6N	6N	6N	6N	6N	6N	6N	6N	6N			
6N	6N	6N	6N	6N	6N	6N	6N	6N	6N	6N	6N	6N			
6NH	6NH	6NH	6NH	6NH	6NH	6NH	6NH	6NH	6NH	6NH	6NH	6NH			
4N	4N	4N	4N	4N	4N	4N	4N	4N	4N	4N	4N	4N			

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254 FARNELL ROAD AUCKLAND 1.

DOMESTIC TRUSS
TYPE B
METAL ROOF
12 1/2° AND 15° PITCH

JOB REF: H12801
ISSUE: AUG. 1974
TRUSS REF: M 501

I, DONALD VICTOR ANDERSON, being registered under the provisions of the Engineers' Registration Act 1924, and currently holding an Annual Practising Certificate, hereby certify that I have supervised the design of and the computations for the Standard Trusses detailed on our Drawings numbered H2301/A501, A502, B501, B502, C502, D501, G501, G502, HT500, HT501, HT502, 1501, 1502, 1503, M501, M502, P400 and P600, P800 and P1000 and C501, issued July, August and September, 1974, H2464/HT503, HT504, and HT505 issued September 1975, and H2493/M601 issued November 1975.

I FURTHER CERTIFY that these Standard Trusses have been designed in accordance with sound and widely accepted engineering principles; that they have been designed to support the dead, live and wind loads as noted on the drawings, and further that I have ascertained to the best of my ability that the stresses and combinations of stresses in the various materials of construction under the above loads will not exceed the maxima to ensure safety and stability if constructed in accordance with these plans.

NOTE: This certificate does not cover the overall design of any building in which these trusses may be used.

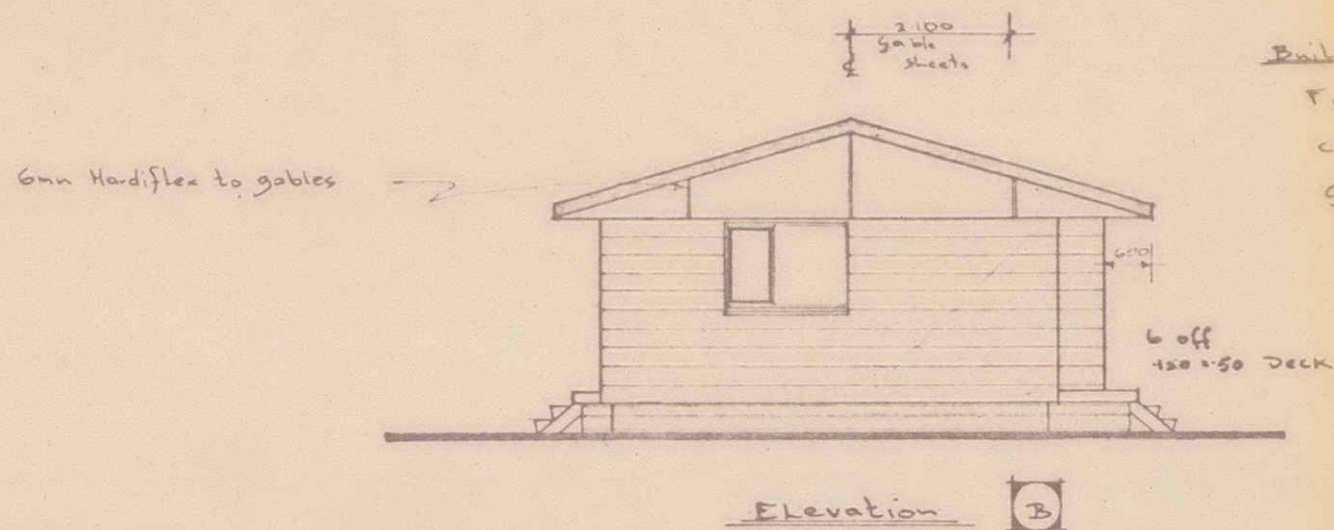
For and on behalf of:

D. V. Anderson

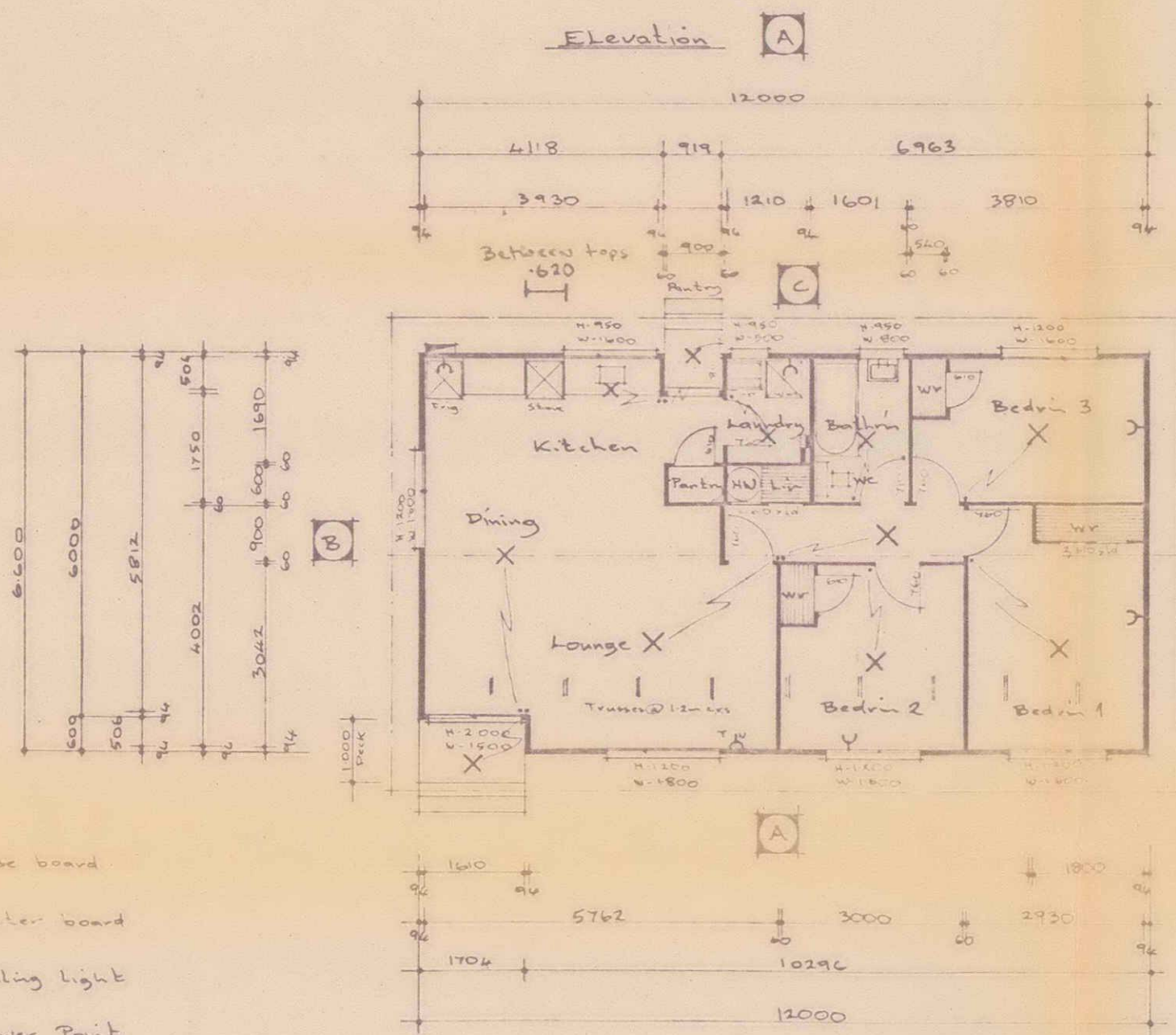
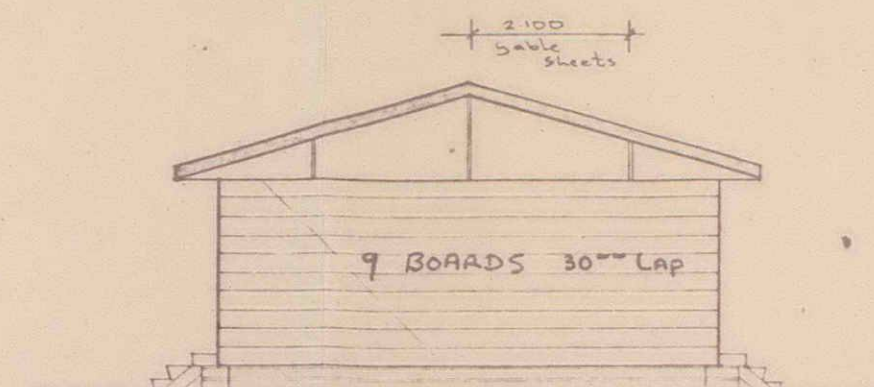
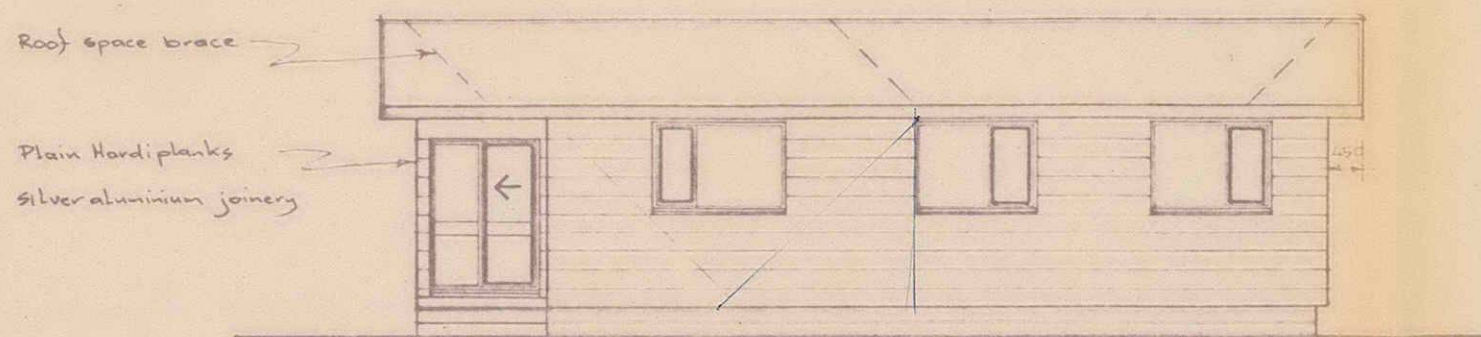
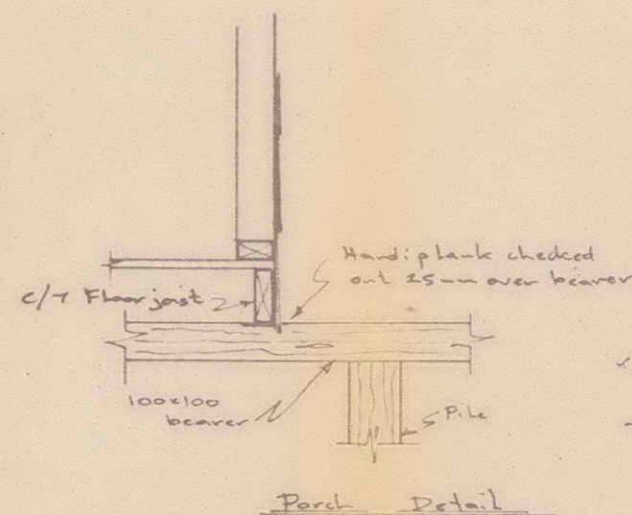
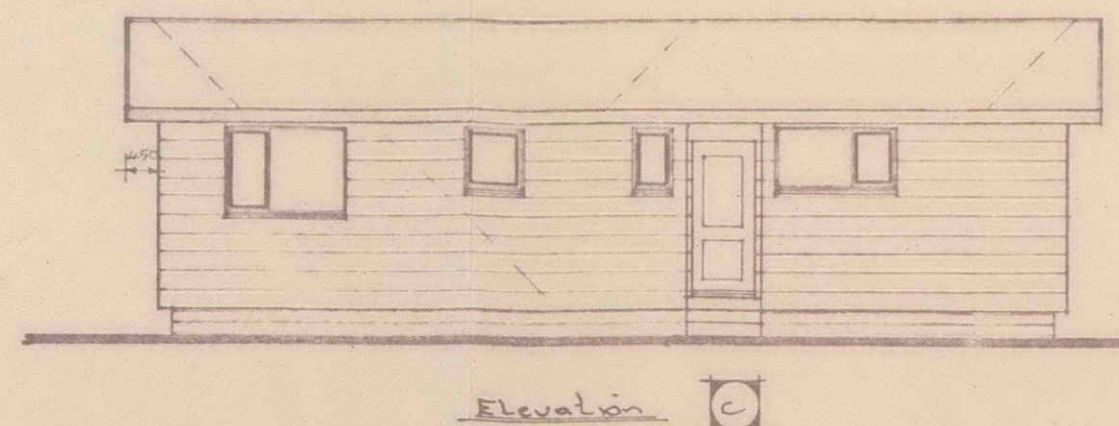
D. V. Anderson, B.E.
22.11.75

POWELL FENWICK & JOHNSON,
Consulting Engineers.

B3

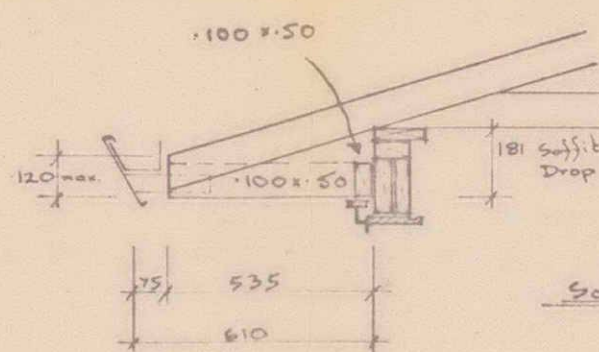
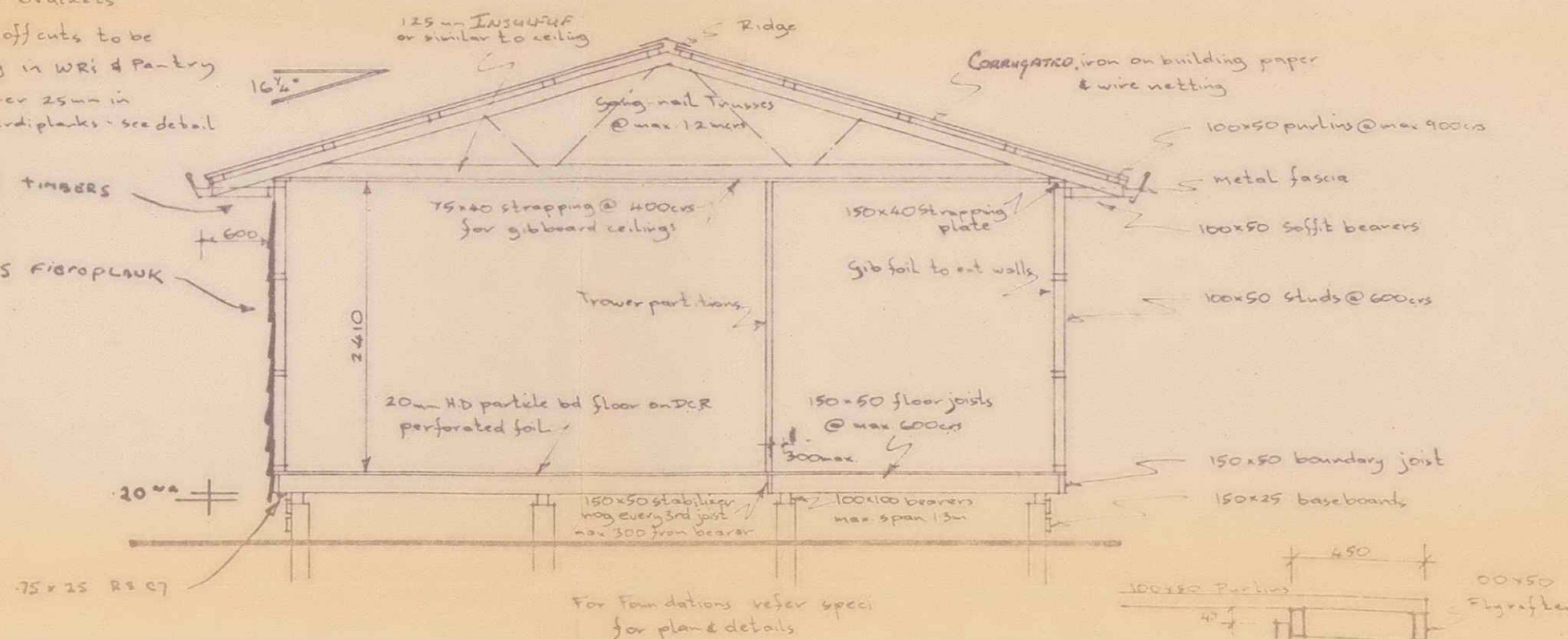
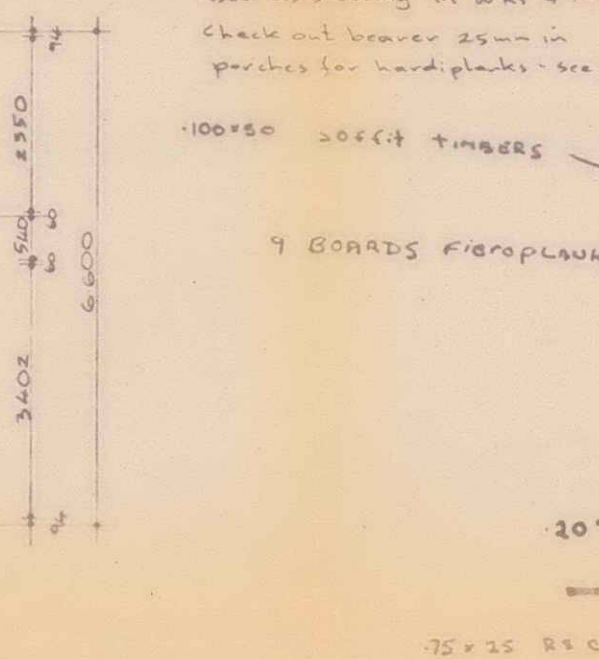


Builder's notes
 Fibrolite to gables supplied as 21 x 12 x 6mm cut sheets so joints are 21m apart.
 Gable ends to be framed up on site.
 Gable over lounge deck area to be supported by cantilevering a 150 x 50 gable plate from centre of gable.



- Legend
- ▬ Fume board
 - ▬ Melen board
 - X Ceiling light
 - Power Point

Builder's Note:
 75x40 Ceiling battens @ 400cs
 Ceiling to be glued and nailed.
 Nail gib ceilings - 200 cs to joints
 double nail @ 300 cs to rest.
 Sink top to be ragged out for moulding
 Tub & bath to have 150 x 25 splash boards
 Nogg for basin brackets
 Particle board offcuts to be used as shelving in W.R.I. & Pantry
 Check out beaver 25mm in pantries for hardiplanks - see detail



HEALEY HOMES

By A+V HEALEY PH 86379 HAWIERA.

Proposed New Home for
 At Lot DRS.

Floor Area: 77.6m² (835sq ft)
 Scales: 1:100, 1:50, 1:20

Drawn: R.S. Brookholme NZCID(Arch) Ph 66963 Hawke's Bay

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