

Sharalyn Fraser *Agency*

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CODE COMPLIANCE CERTIFICATE

SECTION 43(3), BUILDING ACT 1991

APPLICATION

R & P WAREING & S STEVENS	No.	020805
C/- 258A VICTORIA AVENUE	Issue date	16/08/02
PALMERSTON NORTH	Overseer	Barrie McLennan

PROJECT

Description	New Construction Being Stage 1 of an intended 1 Stages RETAINING WALL RECONSTRUCTION
Intended Life	Indefinite, but not less than 50 years
Intended Use	RETAINING WALL
Estimated Value	\$7,000
Location	179 TUTERE STREET, WAIKANAE
Legal Description	LOT 38 DP 42960 CT 14D/991
Valuation No.	1492045000

This is a final Code Compliance Certificate issued in respect of all the building work under the above building consent.

The property owner must follow and carry out the manufacturers prescribed maintenance procedures.

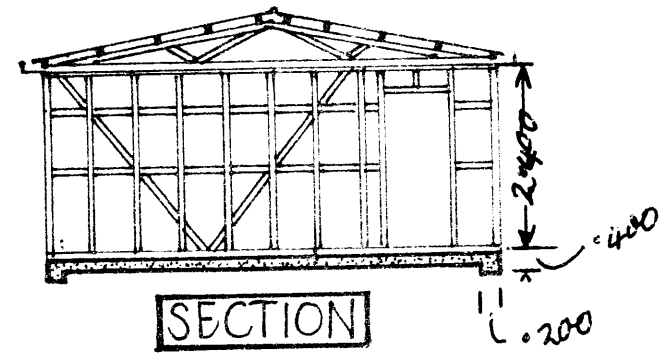
Signed for and on behalf of the Kapiti Coast District Council:

Name: 

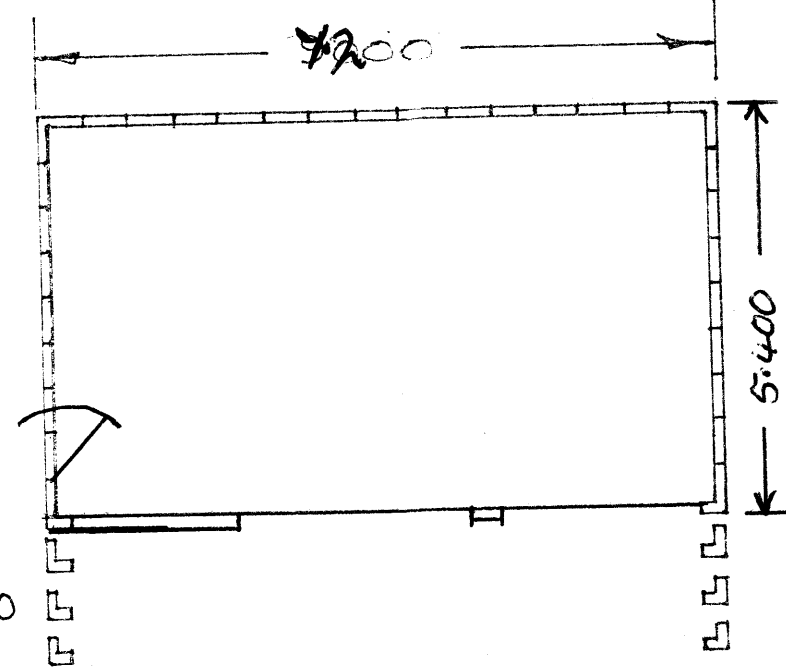
Date: 16-08-02

SKYLINE GARAGES

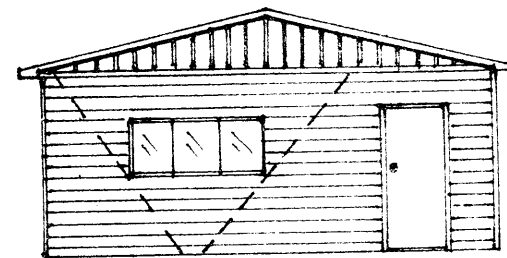
MANUFACTURED BY SKYLINE BUILDINGS LTD.



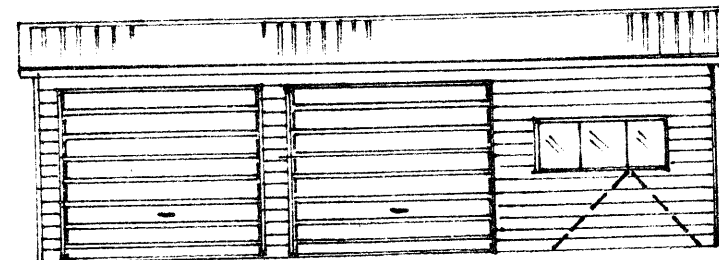
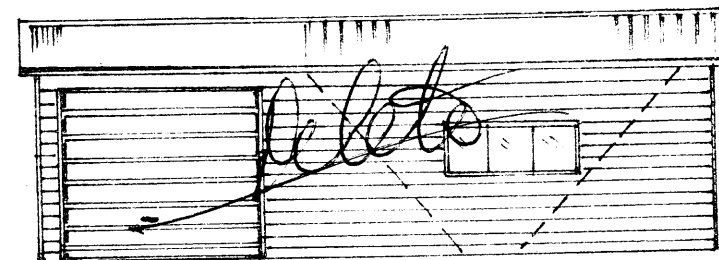
SECTION



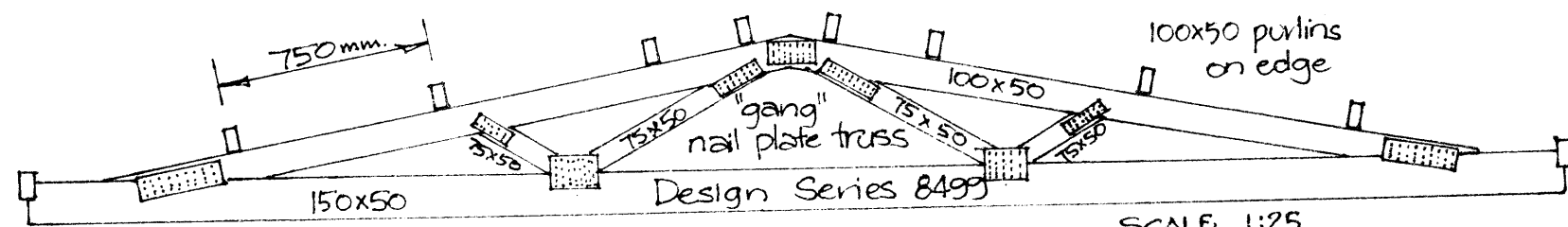
SCALE 1:100



ELEVATIONS



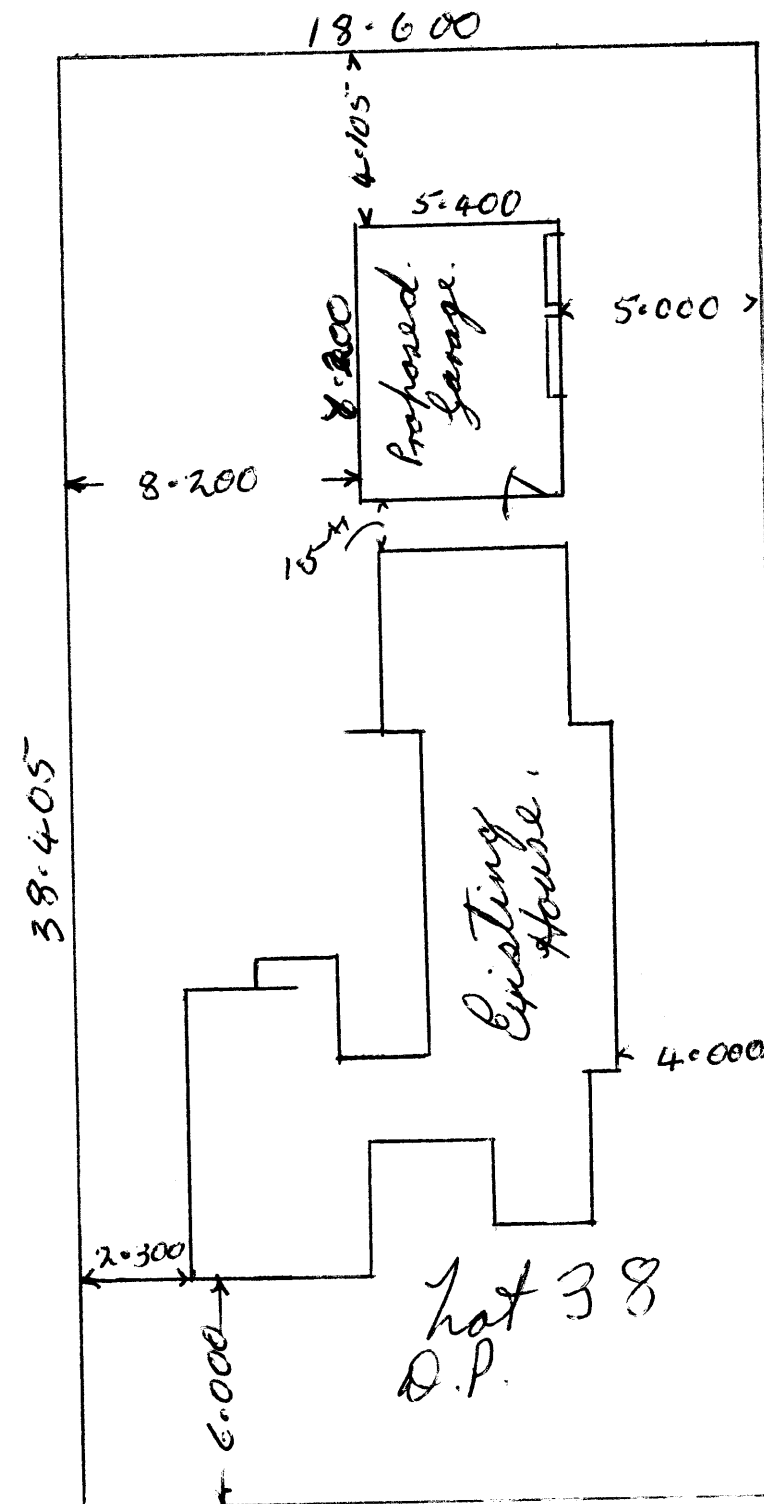
Reverse.



SCALE 1:25

SPECIFICATION:-

- FOUNDATIONS : 100mm thick concrete slab with reinforced footing or continuous ring wall.
- DAMPCOURSE : 2 ply d.p.c. under all plates.
- FRAMING : All timber is boron treated machine gauged pinus radiata. All framing is housed i.e. studs checked into plates & noes checked into studs. Studs at 600 centres, top & bottom plates and noes all 100x50.
- WALL BRACES : 75x50 cut in at 50° angle in opposed pairs. *Steel Angle Braces*
- DOOR BEAMS : 2 x 150x50 spiked together and supported on 100x50 trimmer studs.
- ROOF TRUSSES : Trusses 6 metres & under spaced at 2400 centres. Trusses over 6 metres spaced at 1800 centres.
- PURLINS : 100x50 on edge at 750 centres.
- TRUSS STIFFENERS : Up to 6 metres wide - one row 100x50, over 6 metres - two rows 100x50
- DRAGON TIES : 75x50 at 45° either side of centre truss - 24 gauge galvanised steel channel over top plate at each corner.
- SPOUTING : 24 gauge galv. gutters fixed each side. *DOWNPIPES: 75x50 galv. steel each end.*
- RIDGING : 26 g. galv. lead edged *DOORS: 26 g. galv. metal on overhead gear or (galv. roller doors.)*
- ROOFING : 26 g. galv. steel long-run roofing "SKYRIB".
- EXTERIOR SHEATHING : 26 g. galv. steel weatherboards

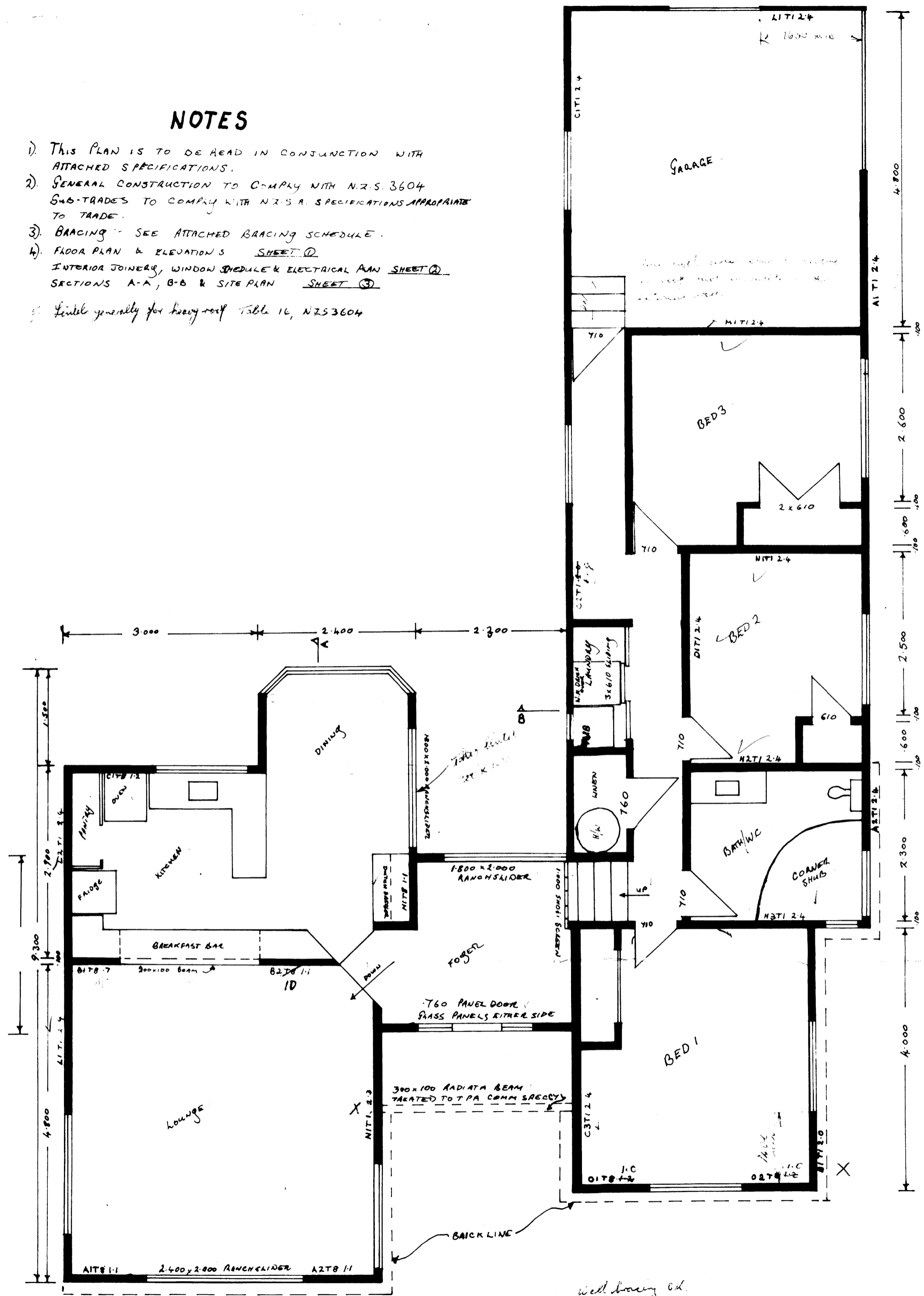


SITE PLAN SCALE 1:200

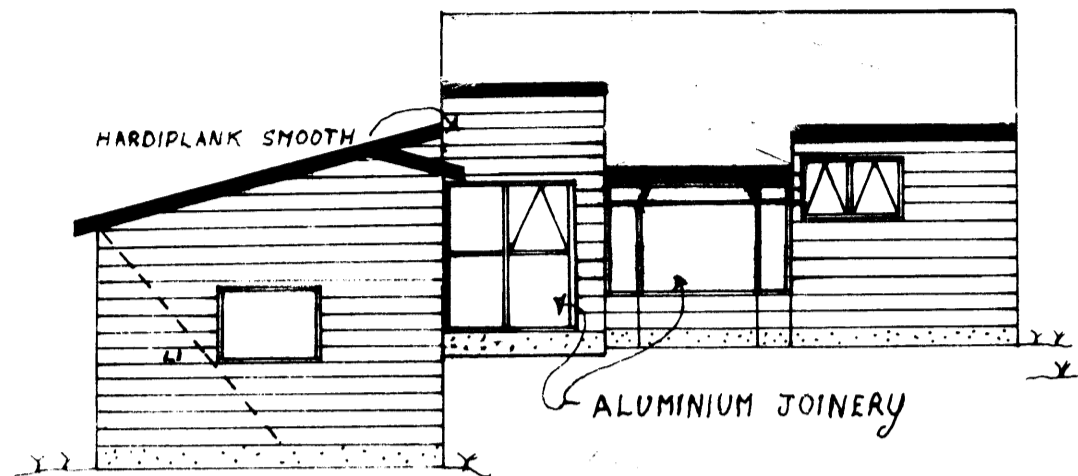
SIDE ENTRY GARAGE FOR *G. P. Bayllett*
 AT *179 Lutere St Waihanui Beach*

NOTES

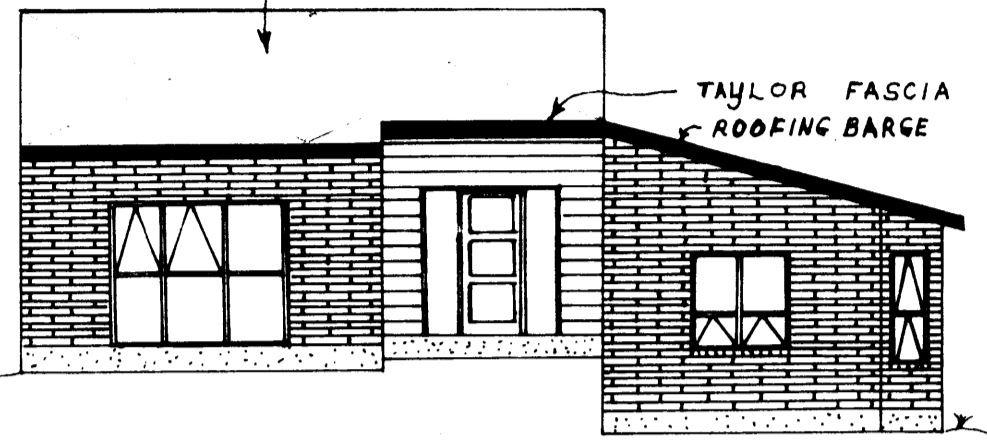
- 1) THIS PLAN IS TO BE READ IN CONJUNCTION WITH ATTACHED SPECIFICATIONS.
- 2) GENERAL CONSTRUCTION TO COMPLY WITH N.Z.S. 3604 SUB-TRADES TO COMPLY WITH N.Z.S.A. SPECIFICATIONS APPROPRIATE TO TRADE.
- 3) BRACING - SEE ATTACHED BRACING SCHEDULE.
- 4) FLOOR PLAN & ELEVATIONS SHEET (1) INTERIOR JOINERY, WINDOW SCHEDULE & ELECTRICAL PLAN SHEET (2) SECTIONS A-A, B-B & SITE PLAN SHEET (3)
- 5) Detail generally for heavy roof Table 14, N.Z.S. 3604



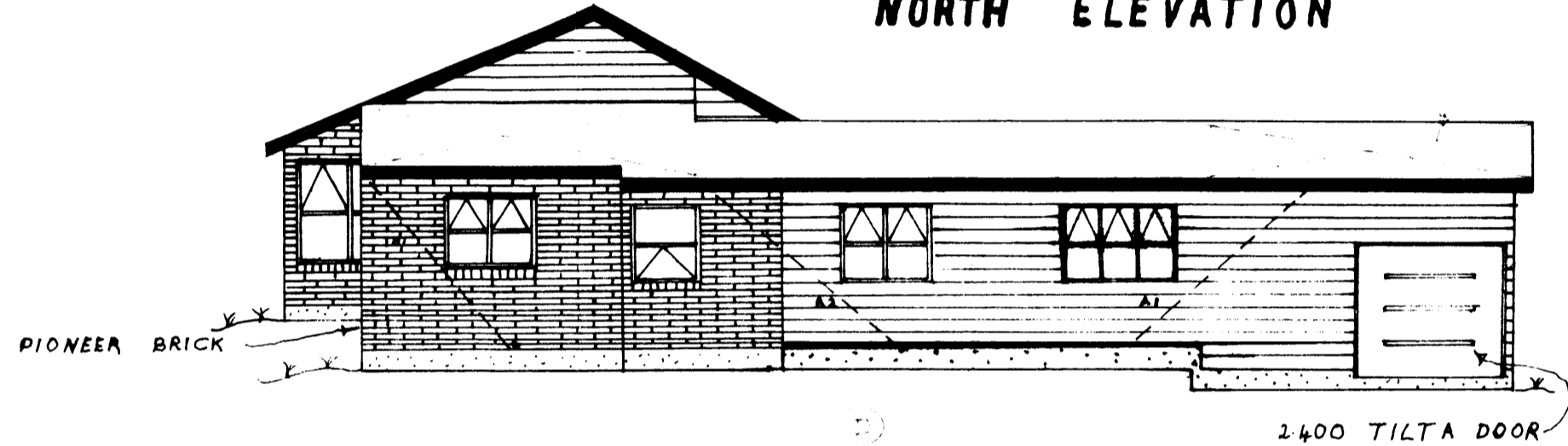
WEST ELEVATION



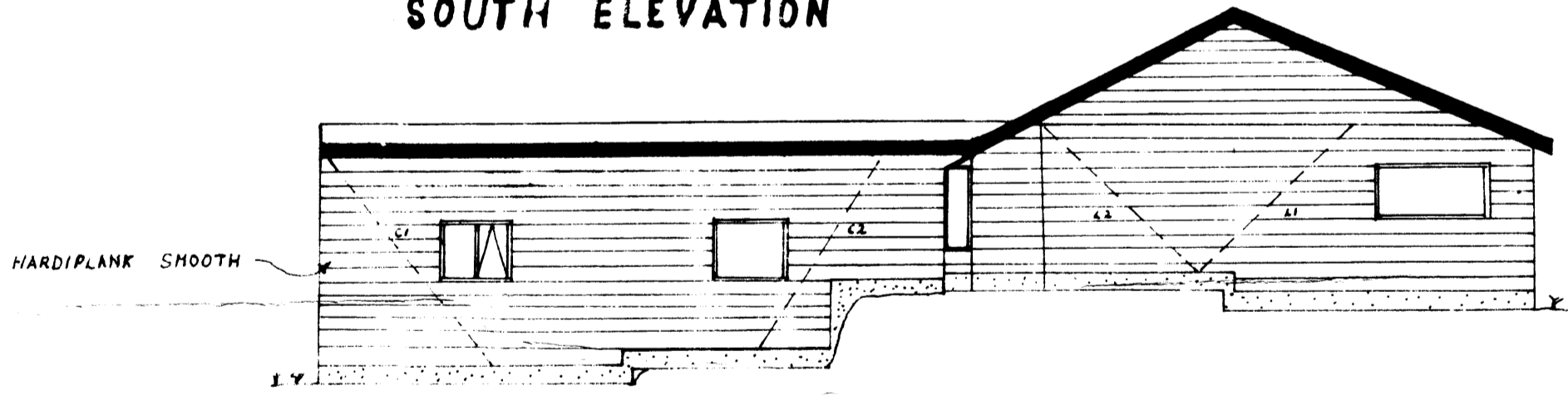
EAST ELEVATION



NORTH ELEVATION



SOUTH ELEVATION

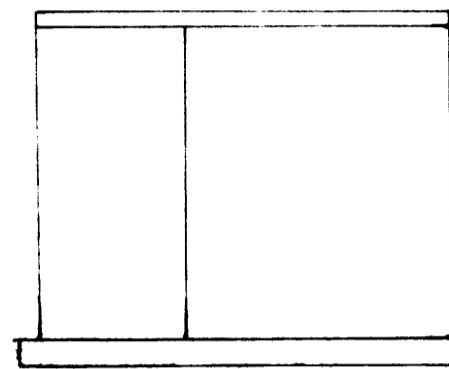
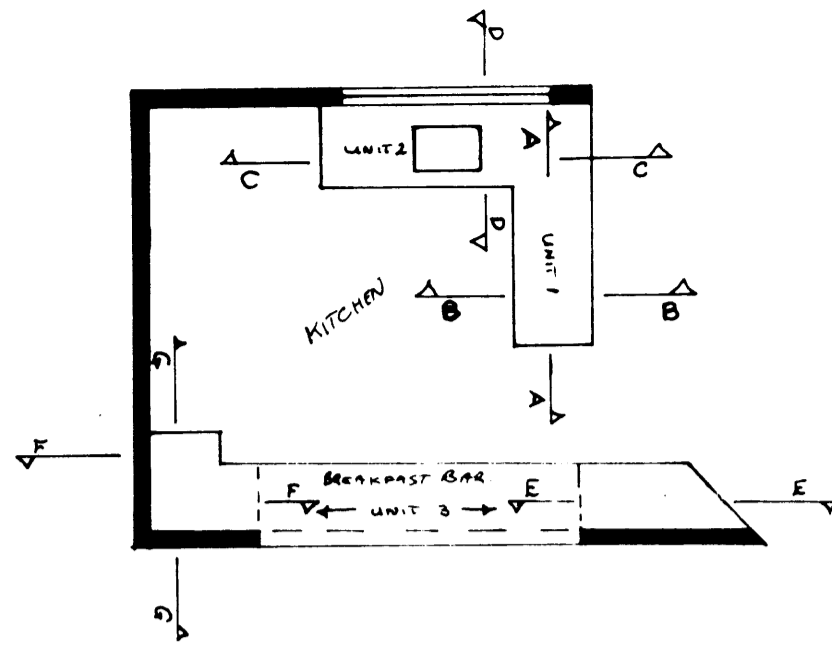


PROPOSED DWELLING FOR G & B BARTLETT
LOT 38 (179) TUTERE ST. WAIKANAE

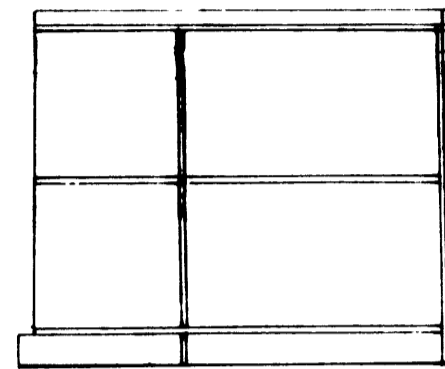
SCALE 1:50 & 1:100
 DRAWN: S.P.B.
 NOVEMBER 1983
 SHEET ONE OF THREE

S.P.B.
 9/12/83

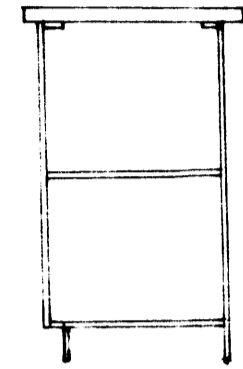
Use this plan in conjunction with the specifications and drawings to be prepared for the construction of the dwelling. The contractor is responsible for the construction levels.



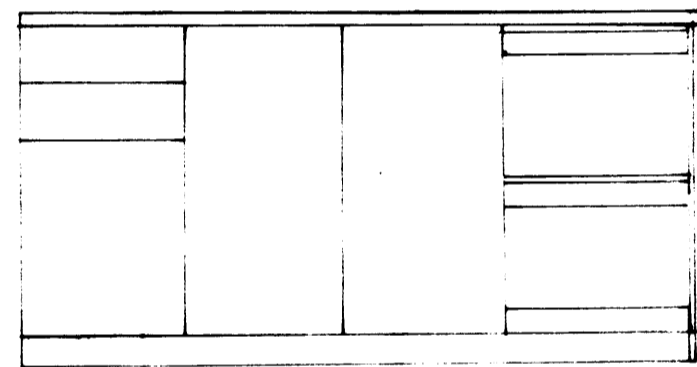
UNIT 1



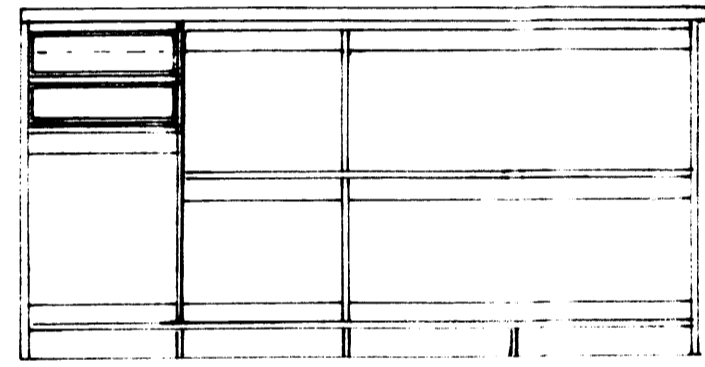
UNIT 1 A-A



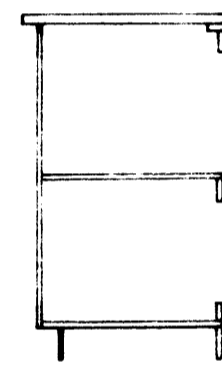
UNIT 1 B-B



UNIT 2



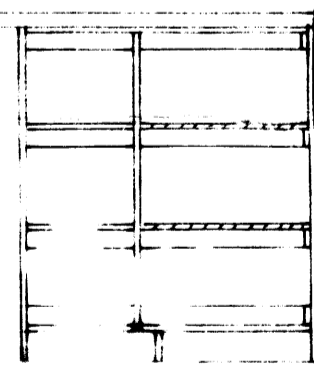
UNIT 2 C-C



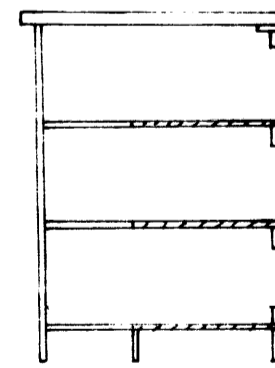
UNIT 2 D-D



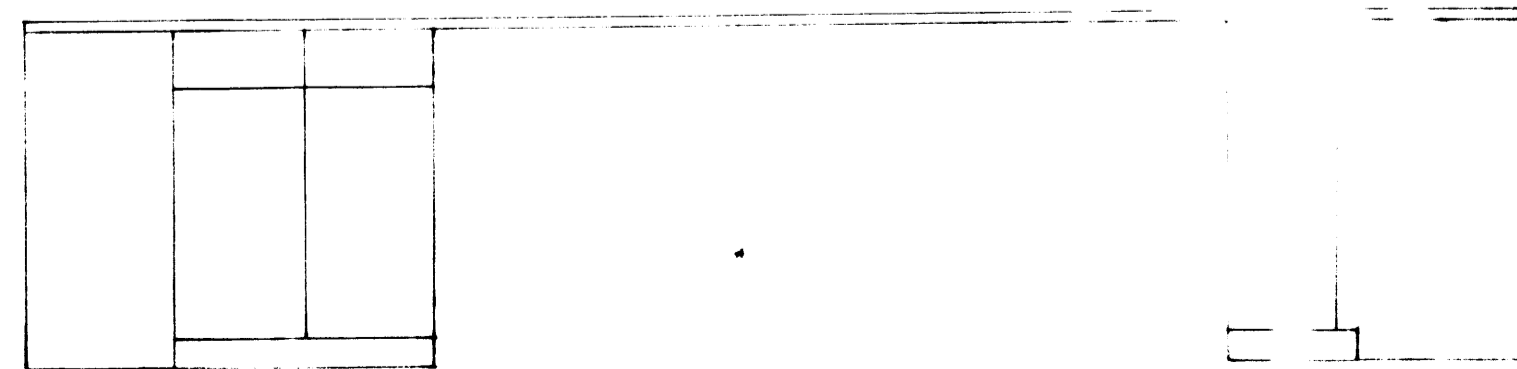
UNIT 3 E-E



UNIT 3 F-F



UNIT 3 G-G

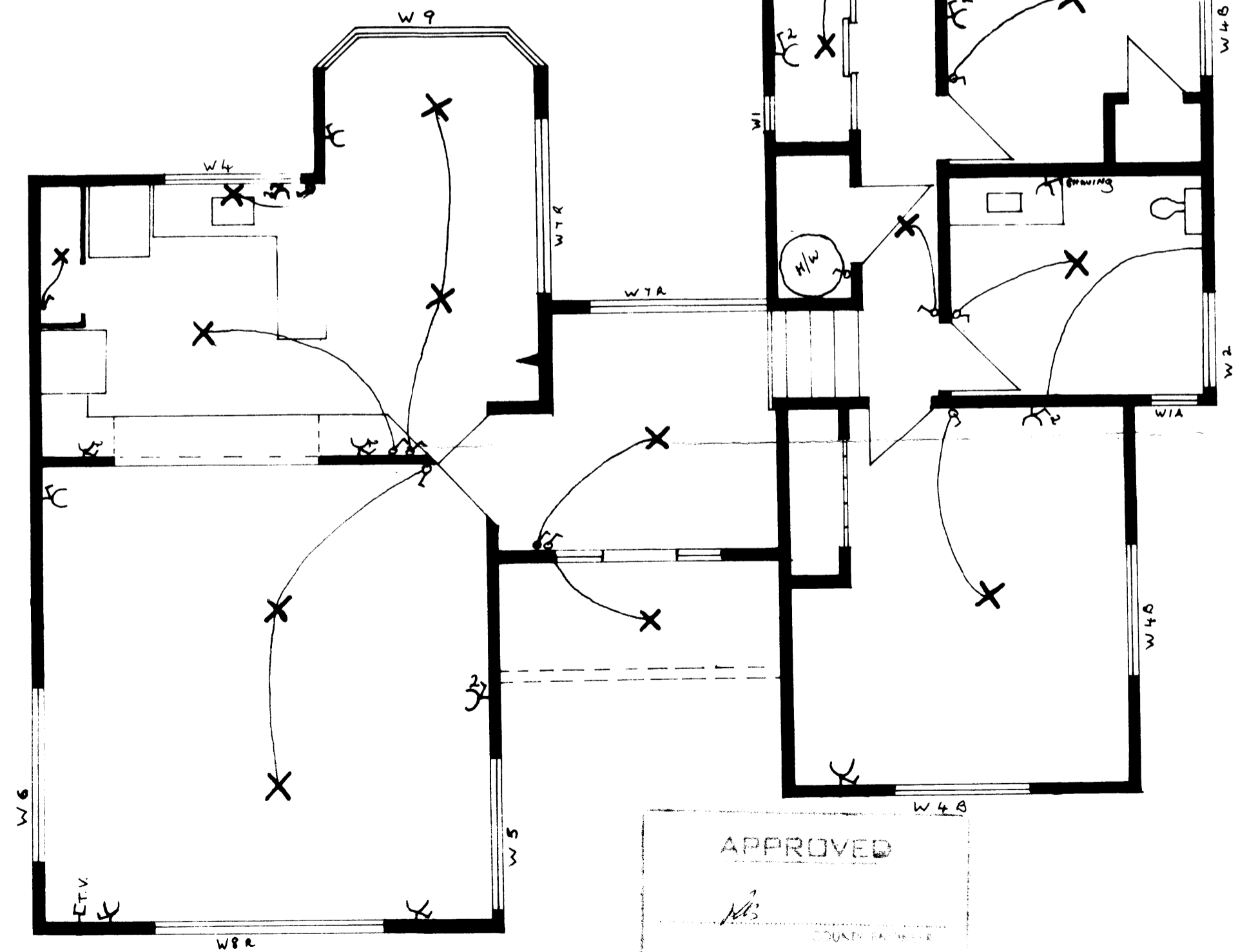


UNIT 3

SCALE 1:20

WINDOW SCHEDULE

	W	H	Qty
W1	500	600	1
W1A		1200	1
W2	1000	1200	1
W3	1200	1000	1
W3A		1200	1
W4	1400	800	1
W4A		1000	1
W4B		1200	3
W5	1600	1600	1
W6	1800	800	1
W6A		1200	1
W7R	1800	2000	2
W8R	2400	2000	1
W9	2400	1600	1



APPROVED
M.B.
 COUNTY ENGINEER
 DATE 8/12/83

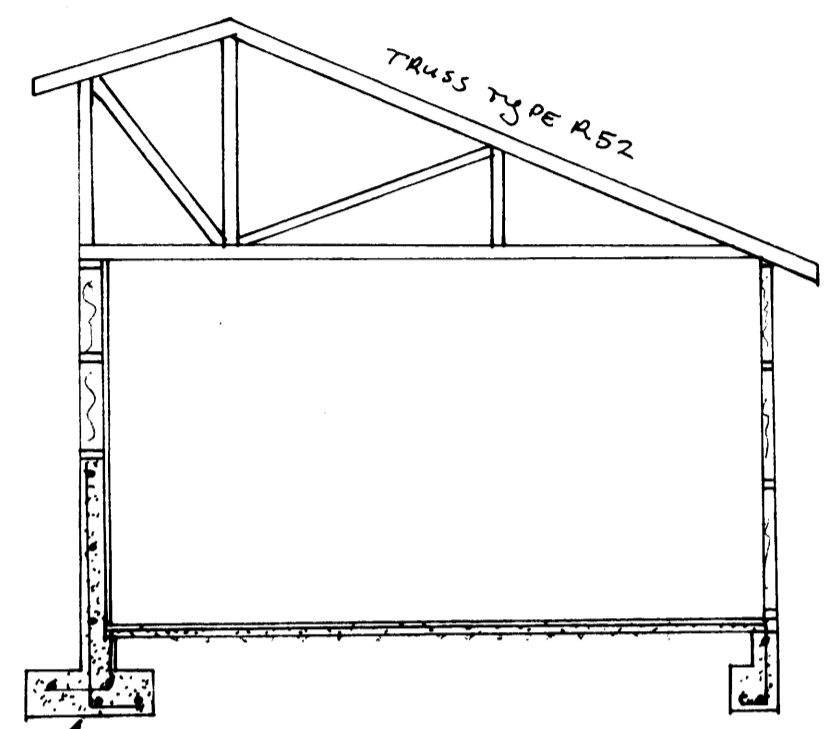
SCALE 1:50

ALL INFORMATION TAKEN FROM DRAWINGS BY C.E. ANDRESEN CENG. D.L.C., M.A.S.E.,
 B.I. MURPHY, R.N.Z.I.E., M.I. W.E. REGISTERED ENGINEER.

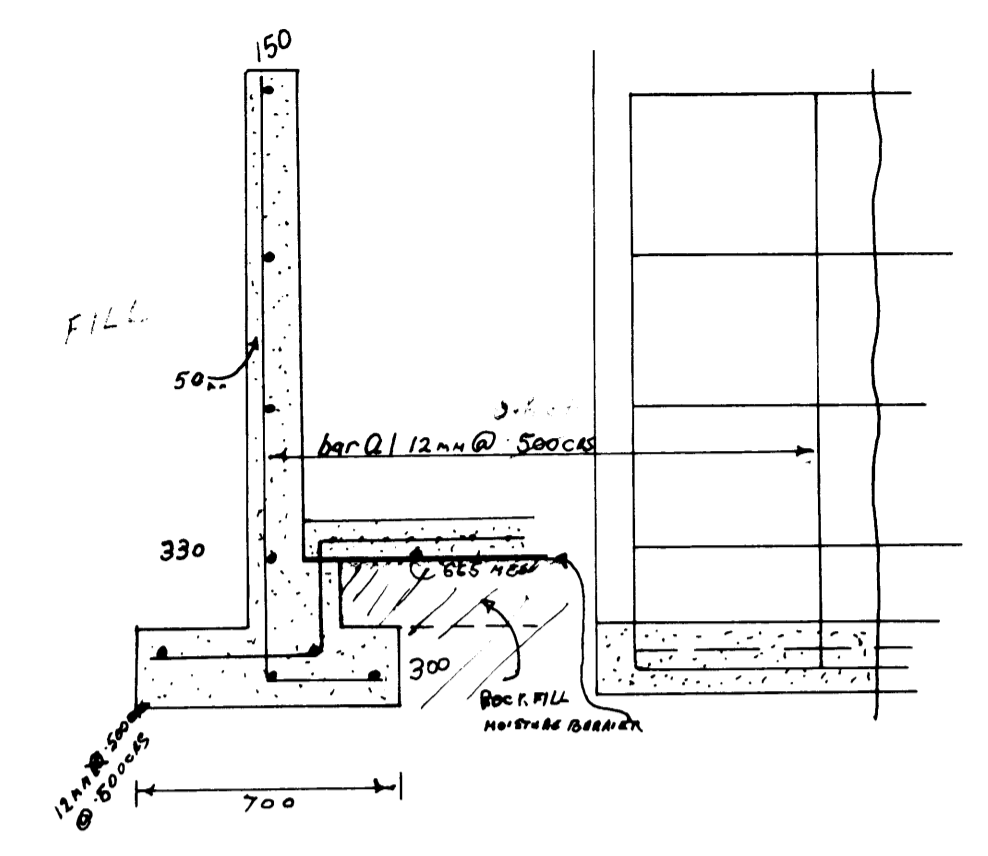
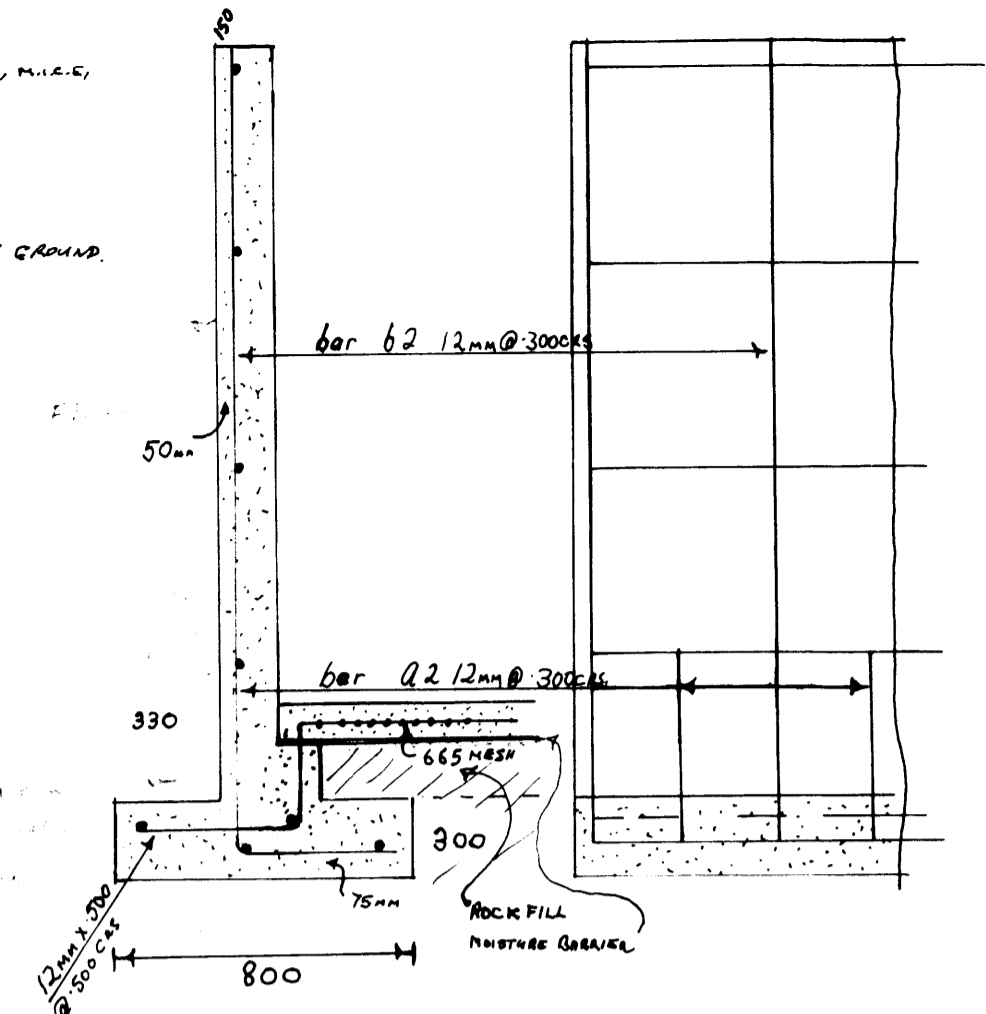
- NOTES:-
 1) ALL WORK TO COMPLY WITH N.Z.S. 3101 P. 1970
 2) CONCRETE TO BE 17 MPa AT 28 DAYS
 3) ALL FACES & BASE OF FOOTING TO BE POURED AGAINST APPROVED FIAM GROUND.

FOUNDATION-RETAINING WALL DETAIL.

SECTION B-B
 SCALE 1:50

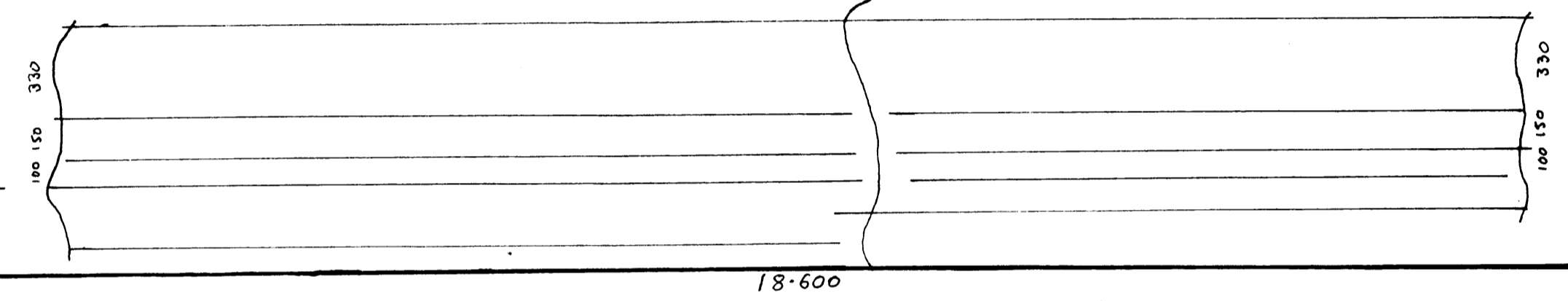
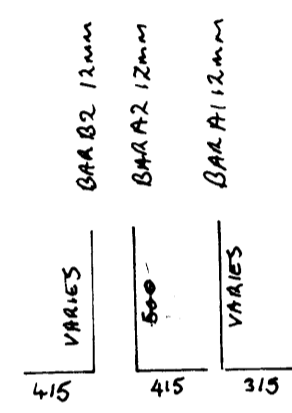


SCALE 1:20

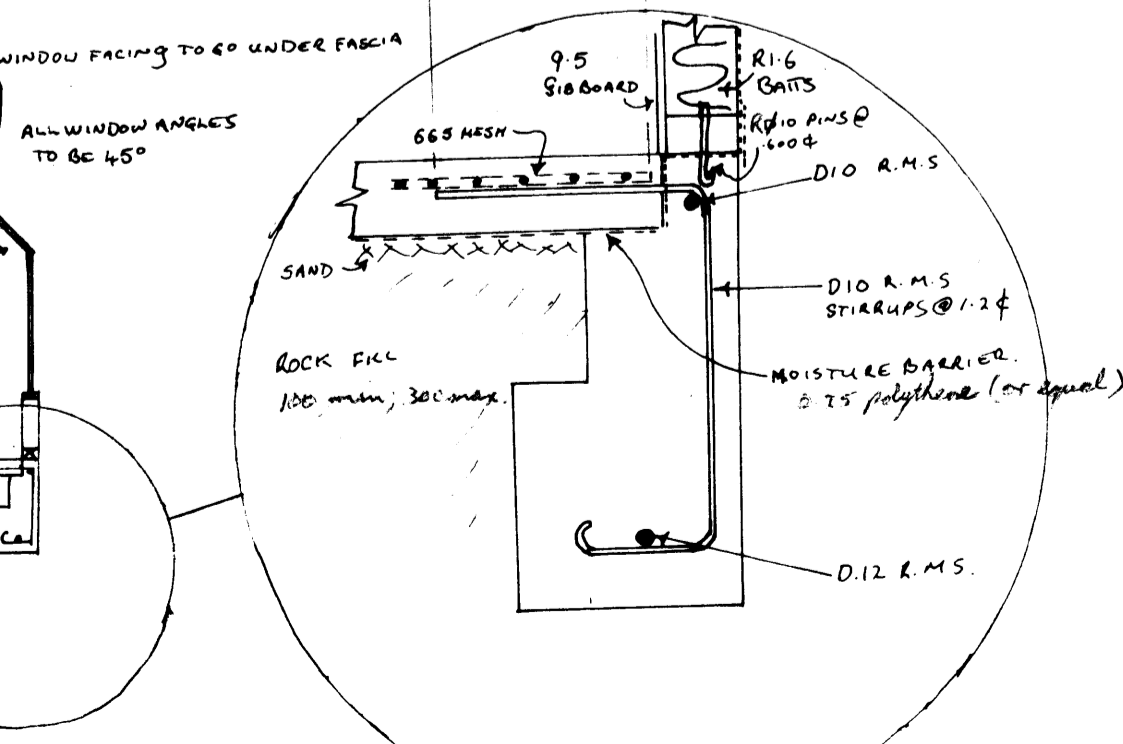
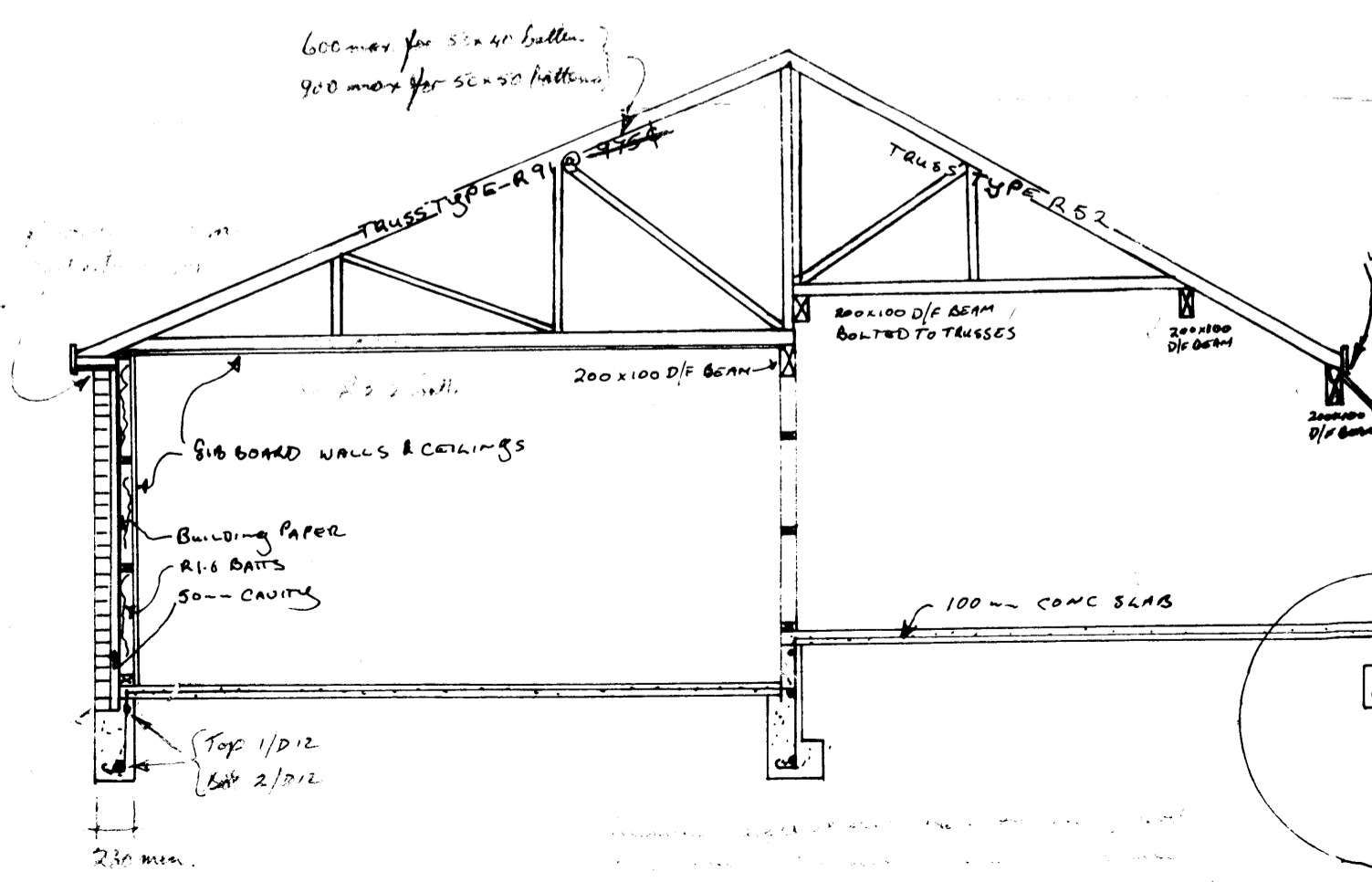


SECTION PT ELEVATION
 HEIGHTS 2000 TO 1500

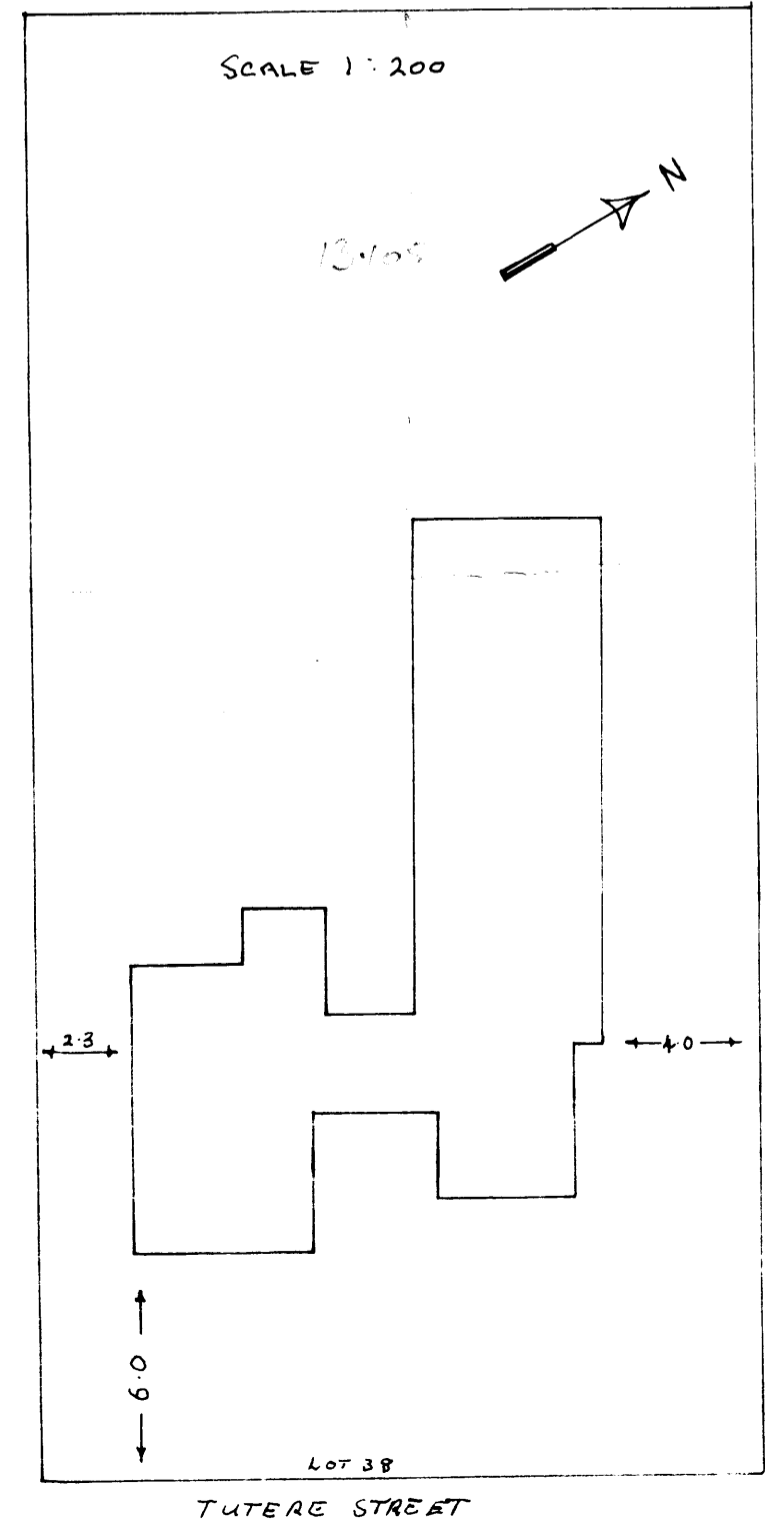
SECTION PT ELEVATION
 HEIGHT 1500 & OUT



SECTION A-A
 SCALE 1:50



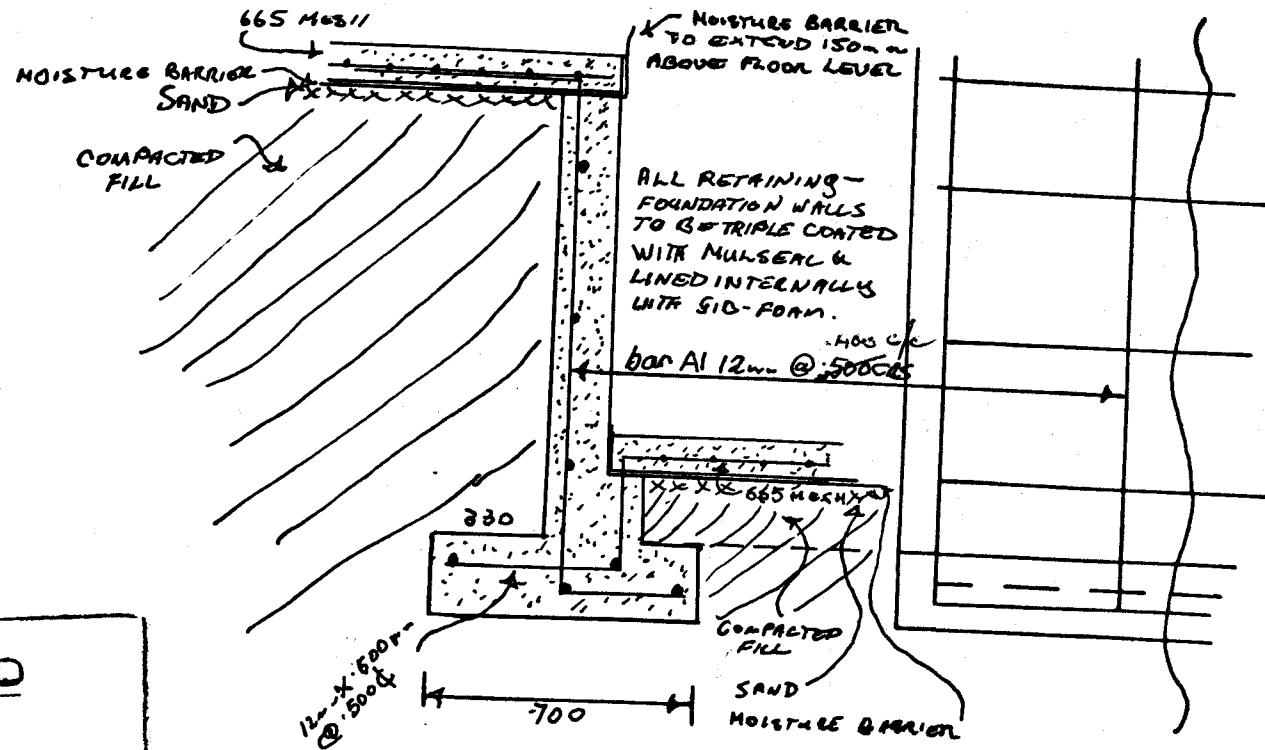
SITE PLAN



38.405

APPROVED
 [Signature]
 COUNTY ENGINEER
 DATE: 9/12/83

ADDENDUM TO FOUNDATION-RETAINING WALL DETAIL - TO SHOW INTERSECTION OF WALL AND FOYER FLOOR.

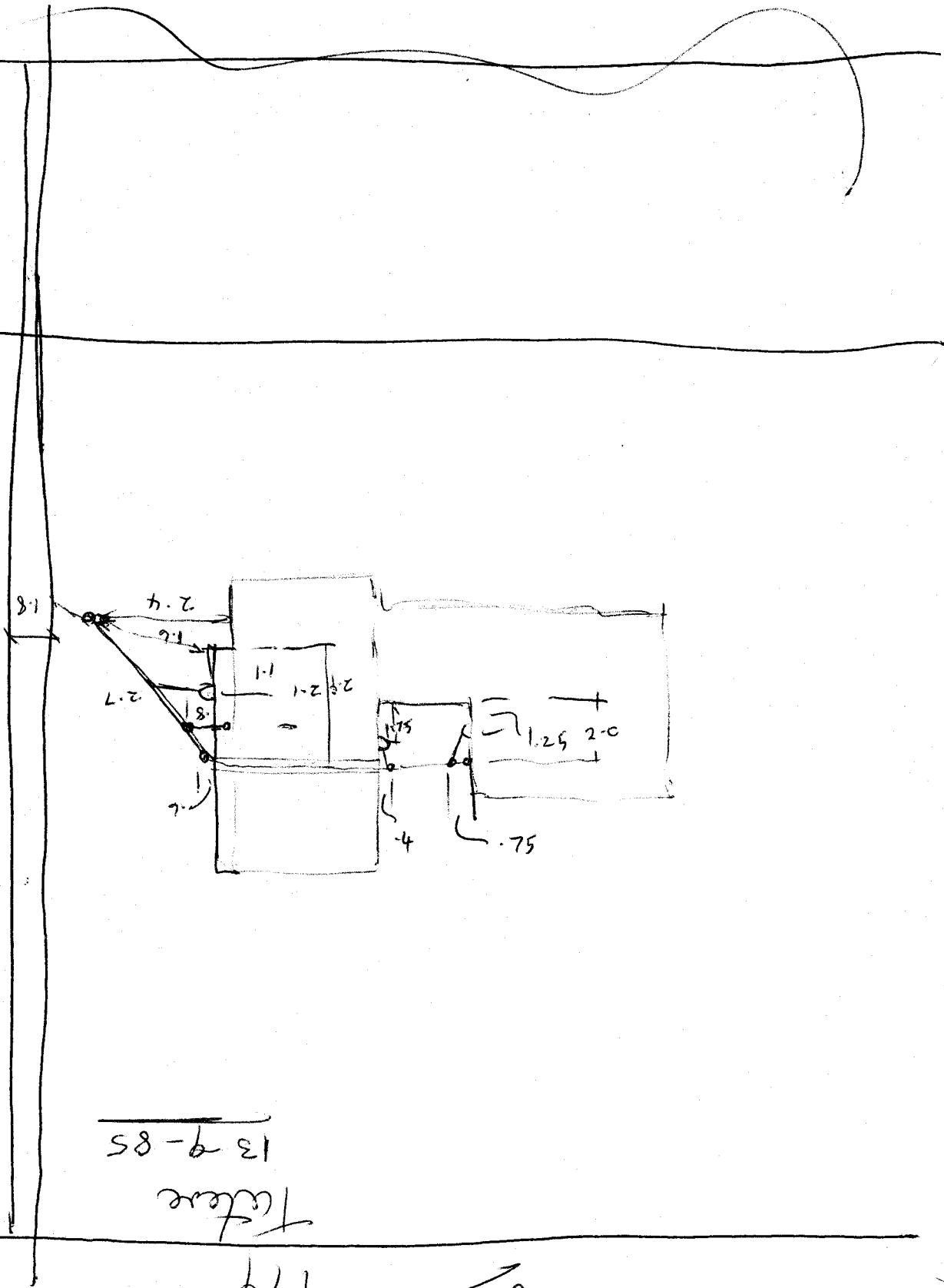


<p>APPROVED</p> <hr/> <p>CLERK ENGINEER.</p> <hr/> <p>DATE _____</p>

SCALE = 1-20

J. & B. Southcott

179 Tulse Street



139-85

Tafere

179

Borlett

PERMIT **W** No 6235

HOROWHENUA COUNTY COUNCIL

WAIKANAЕ DISTRICT COMMUNITY

PERMIT FOR A PLUMBER OR DRAINLAYER TO CARRY OUT PLUMBING OR DRAINAGE WORK

Mr J. Corder
P.O. Box 13010

Johnsonville (a licensed plumber or drainlayer), is hereby authorised to carry out the work described herein, and as set forth in the plan deposited with me, on the premises owned (or occupied) by

Mr G.P. Bartlett and situated in 179 Tutae Street Street (or Road), Waikanae being described as 60138 DP42980

Description of work: Complete plumbing to new dwelling

Estimated Value of work excluding materials:

Estimated Cost \$ 1400.00

Receipt No. 5001

Permit Fee \$ 90.00

Connection Fee \$

TOTAL \$ 90.00

Such work is to be carried out in strict accordance with the Plumbing and Drainage Regulations 1978 and Horowhenua County Council By-Law No. 9, and shall be completed on or before the _____ day of _____ 19_____

Date 19-10-84

County Engineer

This permit is issued subject to:

HOROWHENUA COUNTY COUNCIL WAIKANAЕ DISTRICT COMMUNITY Notice of Completion of Work and Request for Inspection

To: The Health Inspector,
Horowhenua County Council
LEVIN.

I HEREBY GIVE NOTICE that I have completed at premises situated at _____ Street/Road, owned by Mr _____ the plumbing/drainage works specified in Permit No. _____, issued on _____ 19_____, and I do hereby request that such works should be inspected.

Dated this _____ day of _____ 19_____.
Plumber/Drainlayer

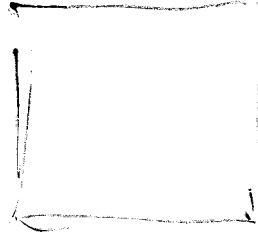
Address of Plumber: _____

FOR OFFICE USE ONLY

The works above referred to in Permit No. _____
I HEREBY CERTIFY that the work has been examined and found satisfactory.

Date: _____ 19_____.
Inspector

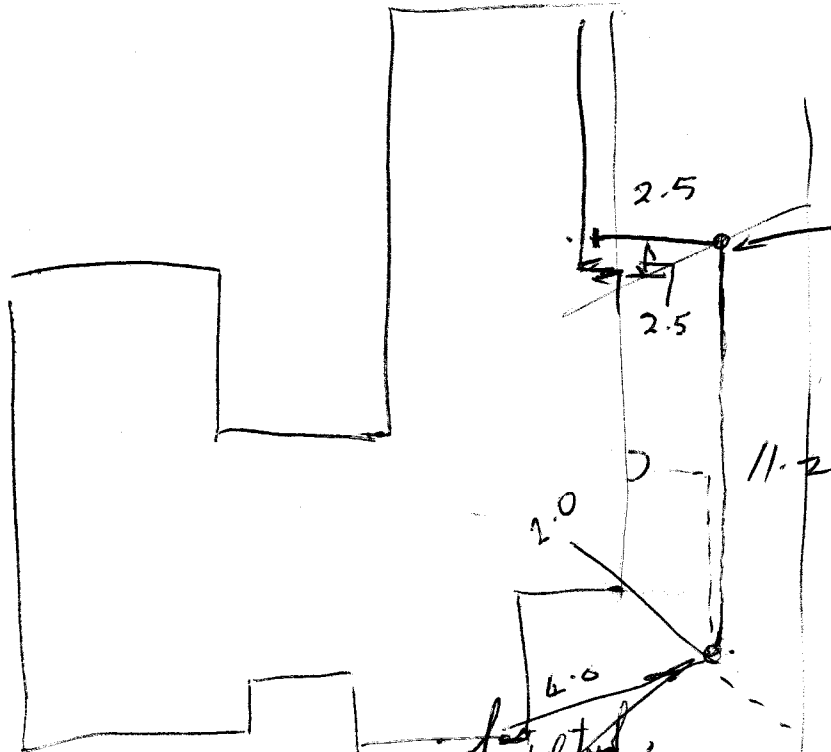
~~Bostell~~



179 Jutere St

20-2-89

DR ADDS.



300 Deck
but to be
built up
approx 300
more.

original
dropped to level,
with you have. 1.0m Deck

11.1

Drainage Work

General

DRAINAGE WORK

PRELIMINARY: All Trade Sections and subcontracts are subject to the N.Z.I.A. General Conditions of Contract and to all provisions

DRAINAGE WORK: All drainage work shall comply with all requirements of the N.Z.S. Plumbing Regulations and amendments which are currently applicable. All drainage work shall be carried out by properly qualified tradesmen and to the complete satisfaction of the Local Authority. Allow for any inspection fees by Local Authority. The Drainage Subcontractor shall obtain from the Local Authority a drainage certificate covering the sewerage part of the work and submit it to the Architect before commencing work.

PIPES: In g.e.w. or as required by the Local Authority. Jointing in accordance or as required by the Local Body requirements. Drains laid to even and regular falls with all necessary bends, inspection junctions, gully traps, cleaning eyes, inspection pipes, vent connections, etc. Drains as laid to be recorded on plan with cleaning eyes marked and dimensioned. Check all existing and new invert levels before proceeding.

SUPFACES: All existing road, footpath and other surfaces where disturbed shall be made good with backfilling to all trenches mechanically consolidated to existing standards to the complete satisfaction of the Architect and the Local Authority.

TESTING: All drains tested before covering in to the satisfaction of the Local Authority.

STANDARD: All sewerage and stormwater systems to conform to N.Z.S.S. 4452:1974.

PERMIT **W** N^o 7794

HOROWHENUA COUNTY COUNCIL

WAIKANAE DISTRICT COMMUNITY

PERMIT FOR A PLUMBER OR DRAINLAYER TO CARRY OUT PLUMBING OR DRAINAGE WORK

Mr M. K. K. K.
P.O. Box 50

P. K. K. K. (a licensed plumber or drainlayer), is hereby authorised to carry out the work described herein, and as set forth in the plan deposited with me, on the premises owned (or occupied) by

Mr B. K. K. and situated in 179 T. K. Street Street (or Road), Waikanae being described as Lot 38 D.P. 2960

Description of work: Install saw sewer Drain

Estimated Value of work excluding materials:

Estimated Cost \$ 200.00
Receipt No. 8912

Permit Fee \$ 40.00
Connection Fee \$
TOTAL \$ 40.00

Such work is to be carried out in strict accordance with the Plumbing and Drainage Regulations 1978 and Horowhenua County Council By-Law No. 9, and shall be completed on or before the _____ day of _____ 19_____

late 104.89

This permit is issued subject to:

County Engineer

HOROWHENUA COUNTY COUNCIL

WAIKANAE DISTRICT COMMUNITY

Notice of Completion of Work and Request for Inspection

The Health Inspector,
Horowhenua County Council
LEVIN.

HEREBY GIVE NOTICE that I have completed at premises situated at _____ Street/Road, owned by Mr _____ the plumbing/drainage works specified in Permit No. _____, issued on _____ 19_____, and I do hereby request that such works should be inspected.

dated this _____ day of _____ 19_____

Plumber/Drainlayer

Address of Plumber: _____

FOR OFFICE USE ONLY

works above referred to in Permit No. _____
HEREBY CERTIFY that the work has been examined and found satisfactory.

_____ 19_____

Levin

Inspector

PERMIT **W** No 6159

HOROWHENUA COUNTY COUNCIL

WAIKANAĒ DISTRICT COMMUNITY

PERMIT FOR A PLUMBER OR DRAINLAYER TO CARRY OUT PLUMBING OR DRAINAGE WORK

Mr C.E. Dron
To Edinell Avenue
Paraparaumu

(a licensed plumber or drainlayer), is hereby authorised to carry out the work described herein, and as set forth in the plan deposited with me, on the premises owned (or occupied) by

Mr G.P. Bartlett. and situated in 119 Tutae Street Street (or Road), Waikanae being described as lot 38 DP 42960

Description of work: Drainage to new dwelling

Estimated Value of work excluding materials:

Estimated Cost \$ 1100.00

Receipt No. 5001

Permit Fee \$ 42.00

Connection Fee \$ —

TOTAL \$ 42.00

Such work is to be carried out in strict accordance with the Plumbing and Drainage Regulations 1978 and Horowhenua County Council By-Law No. 9, and shall be completed on or before the _____ day of _____ 19_____

Date 10-8-84

County Engineer

This permit is issued subject to:

HOROWHENUA COUNTY COUNCIL WAIKANAĒ DISTRICT COMMUNITY Notice of Completion of Work and Request for Inspection

To: The Health Inspector,
Horowhenua County Council
LEVIN.

I HEREBY GIVE NOTICE that I have completed at premises situated at _____ Street/Road, owned by Mr _____ the plumbing/drainage works specified in Permit No. _____, issued on _____ 19_____, and I do hereby request that such works should be inspected.

Dated this _____ day of _____ 19_____ Plumber/Drainlayer

Address of Plumber: _____

FOR OFFICE USE ONLY

The works above referred to in Permit No. _____

I HEREBY CERTIFY that the work has been examined and found satisfactory.

Date: _____ 19_____ Inspector

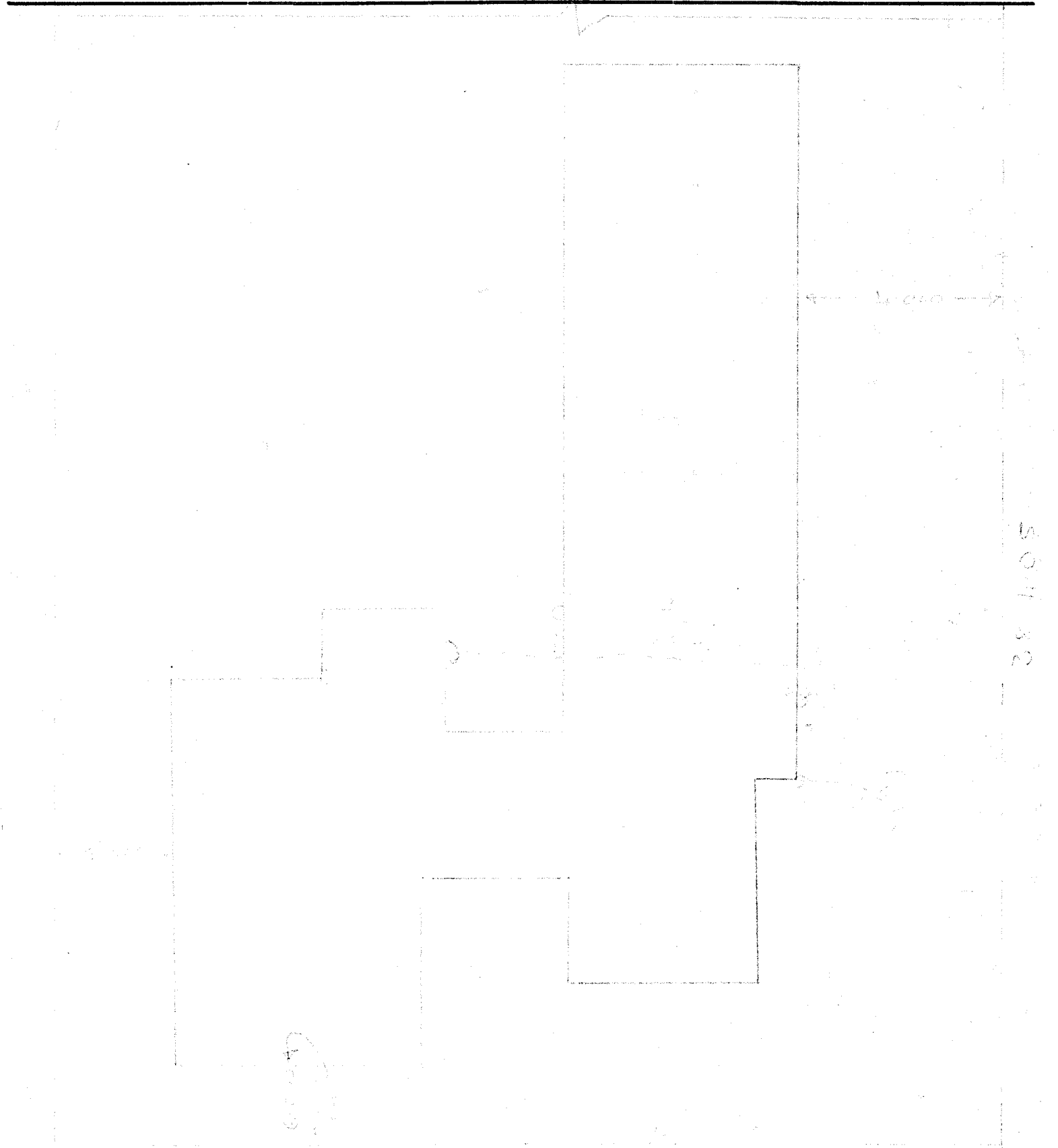
WAIKANAE DISTRICT COMMUNITY

PLAN OF ALLOTMENT - PROPOSED DRAINAGE LAYOUT

Showing existing buildings and drainage layout and proposed drainage layout to the sewer
Scale 1-100

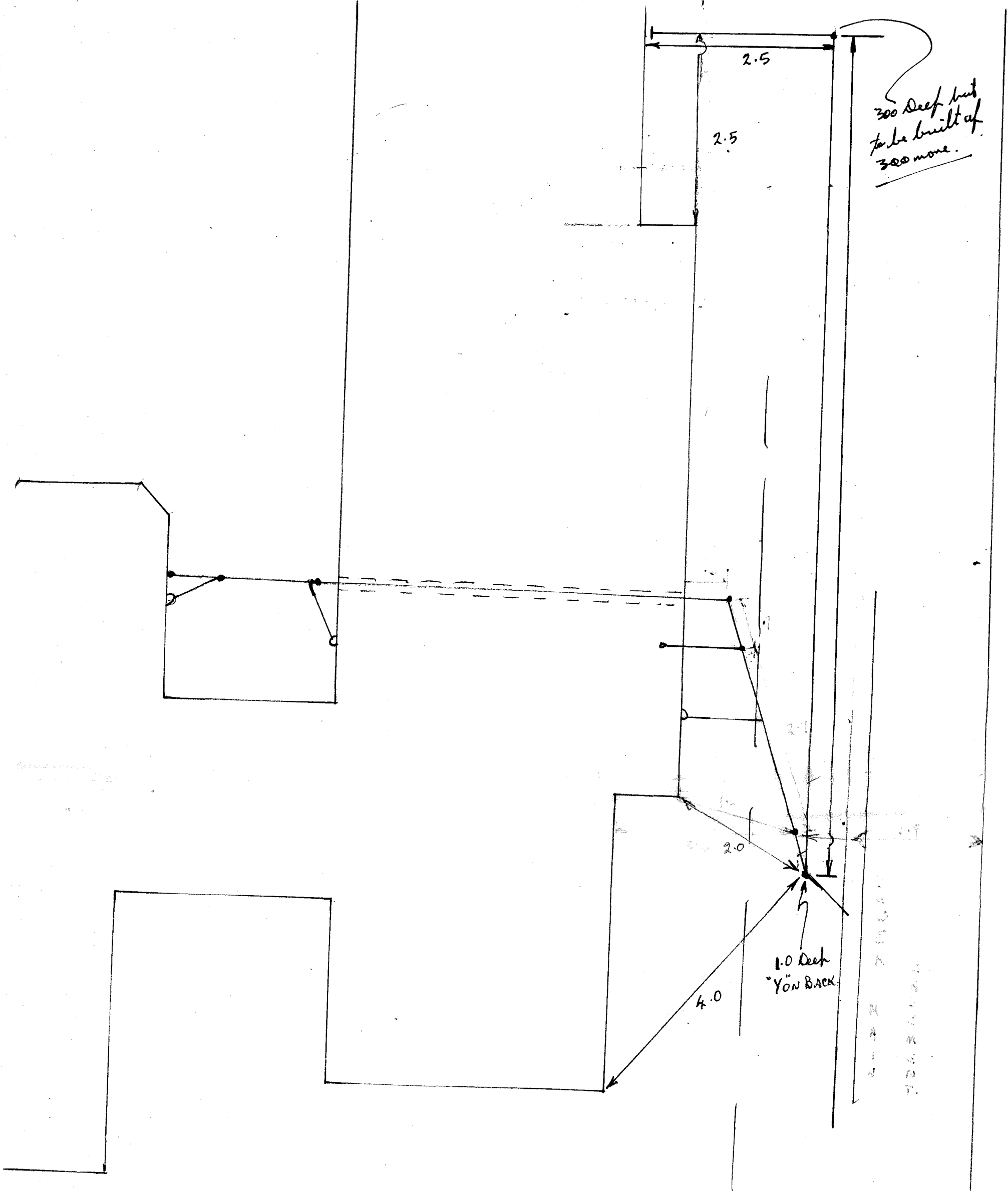
Boundary Lines to be shown thus: - - - - -

Frontage to Road



30.11.82

18.600 4' - 18.600 st →



179 TUTERE ST
 LOT 38
 D.P. 42960
 D/L DREN.
 13.9.85.

DA ADDS
 D/L KUNAC
 20-2-89

TUTERE ST

Horowhenua County Council

PERMIT No. 7794

LOCALITY Waikanae

DATE RECEIVED : : .

DATE ISSUED 10:4:89.

FEEs NOT TO BE PAID UNTIL REQUESTED BY OFFICE

APPLICATION FOR ~~PLUMBING~~ AND DRAINAGE PERMIT

OWNER'S NAME Bartlett

FOR OFFICE USE ONLY

REMARKS:

It is the responsibility of the owner and or builder to ensure that proposed building levels are compatible with existing sewer connection levels.

SCALE OF PERMIT FEES

Estimated Labour Value of Work	Fee Payable
	1 October 1986
Not exceeding \$200	\$33.00
In excess of \$200 but not exceeding \$300	\$44.00
In excess of \$300 but not exceeding \$400	\$55.00
For every \$100 or part thereof in excess of \$400	\$11.00

APPROVED

A. O. Hastings

For COUNTY ENGINEER

DATE 17-2-89

NOTE.—In all cases where septic tanks are installed the site and position must be first approved by the County Health Inspector.

Valuation Book No. _____

Date _____, 19____

Application For Plumbing and Drainage Permit

TO THE COUNTY HEALTH INSPECTOR,
Horowhenua County Council,
Bath Street,
Levin.

Postal Address:
Horowhenua County Council,
P.O. Box 542,
Levin.

I, the undersigned, do hereby apply for a permit to carry out DRAINAGE and PLUMBING work in accordance with the undermentioned particulars.

Description of Drainage and Plumbing Work To install a new
sewer drain for future wc

Allotment. Lot: 38 D.P.: 42960 Section: _____ Area: _____

Block: _____ S.D.: _____ Locality: Waikanae

Previous Owner { If Section has been recently transferred } Mr. Bartlett.

Frontage (Length) _____ (Name of Street or Road) 179 Tutara St

Water Supply (Description) _____

st. Material Value of Plumbing Work \$ _____ : Est. Labour Value of Plumbing Work \$ _____ :

st. Material Value of Drainage Work \$ 200 : Est. Labour Value of Drainage Work \$ 200 :

Total Value \$ 300 :

All work will be carried out in accordance with Horowhenua County Council's By-laws and the Drainage and Plumbing Regulations 1978 and Amendments.

Permit Fee Based on Labour Value \$ 40-00 Receipt No.: 8912

Water Connection Fee \$ _____ Receipt No.: _____

Full Name and Address of Owner: Mr. Bartlett.
179 Tutara St. Waik.

NOTE.—The following MUST accompany this Application:—

(a) Ground Plan of Building showing all drains, vents, sumps, septic tanks and sanitary fittings to be plotted on opposite page. For a sewer connection, complete enclosed carbonised form.

(b) Specifications of work materials to be used.

Plan showing drain should be drawn to scale of 1-100.

Stormwater drains should be shown (if any) in dotted lines.

Signature of Applicant: [Signature]

Address PO Box 1501 Paraparaumu Beach

Craftsman Plumber's Signature, Address, and Registered No. _____

Registered Drainlayer's Signature, Address, and Registered No. MP Kanae (4812)

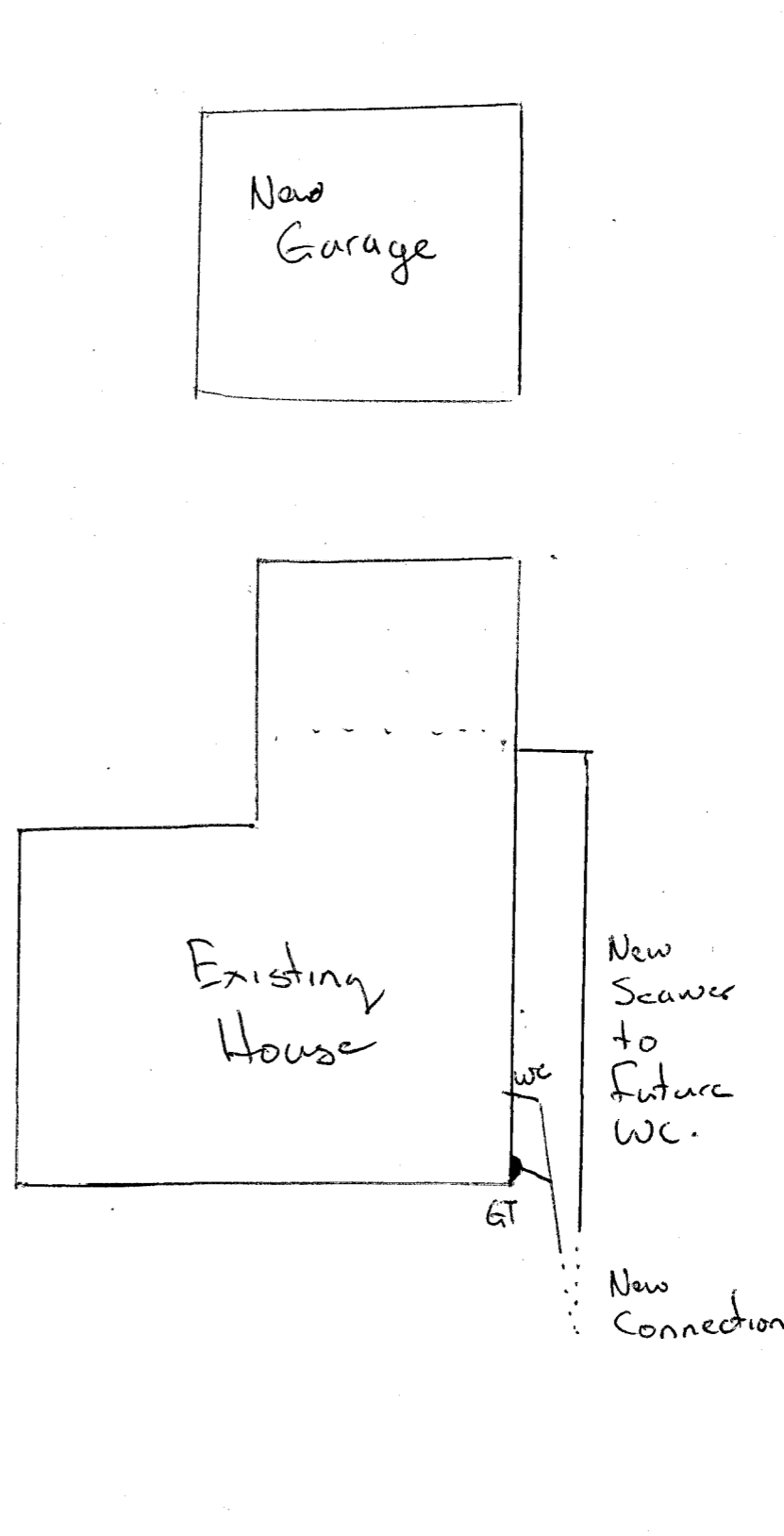
PLAN OF ALLOTMENT

Showing position of proposed buildings, Sanitary fittings, Drains, Gully traps, Inspection pipes and Ventilators, Septic tanks, Sumps, Irrigation trenches, Sewers and Stormwater drains, if any.

No Septic Tank or Effluent Drainage System may be installed within 3.3 metres of a dwelling or 1.5 metres of any boundary.

Boundary Lines to be shown thus: - - - - -

Frontage to _____ Road



Horowhenua County Council

PERMIT No. W6235

LOCALITY WAIKANAÉ

DATE RECEIVED : : .

DATE ISSUED 19:10:84

FEES NOT TO BE PAID UNTIL REQUESTED BY OFFICE

APPLICATION FOR PLUMBING AND ~~DRAINAGE~~ PERMIT

OWNER'S NAME G.P. & B.J. BARTLETT

FOR OFFICE USE ONLY

REMARKS:

PERMITS TO BE SECURED BEFORE WORK COMMENCES.
Plumber to sign values

SCALE OF PERMIT FEES

Estimated Labour Value of Work:	Fee Payable:
Not exceeding \$100	\$12
In excess of \$100 but not exceeding \$200	\$18
In excess of \$200 but not exceeding \$300	\$24
In excess of \$300 but not exceeding \$400	\$30

Plus \$6 for every \$100 or part thereof in excess of \$400.

APPROVED

J.C. Hawkins
For COUNTY ENGINEER

DATE 15-10-84

NOTE.—In all cases where septic tanks are installed the site and position must be first approved by the County Health Inspector.

Valuation Book No. 16940 / 70583

Date _____, 19____

PLAN OF ALLOTMENT

Application For Plumbing and ~~Drainage~~ Permit

TO THE COUNTY HEALTH INSPECTOR,
Horowhenua County Council,
Bath Street,
Levin.

Postal Address:
Horowhenua County Council,
P.O. Box 258,
Levin.

Showing position of proposed buildings, Sanitary fittings, Drains, Gully traps, Inspection pipes and Ventilators, Septic tanks, Sumps, Irrigation trenches, Sewers and Stormwater drains, if any.

No Septic Tank or Effluent Drainage System may be installed within 3.3 metres of a dwelling or 1.5 metres of any boundary.

Boundary Lines to be shown thus: - - - - -

I, the undersigned, do hereby apply for a permit to carry out DRAINAGE and PLUMBING work in accordance with the undermentioned particulars.

Description of ~~Drainage and~~ Plumbing Work

Full services to new dwelling + garage

Allotment. Lot: 38 D.P.: 42960 Section: _____ Area: _____

Block: _____ S.D.: _____ Locality: _____

Previous Owner { If Section has been recently transferred } NORMAN EVANS

Frontage (Length) _____ (Name of Street or Road) 179 TUTERAKI STREET

Water Supply (Description) _____

Est. Material Value of Plumbing Work \$2,000.00 Est. Labour Value of Plumbing Work ~~\$900~~ : 00 1,400

Est. Material Value of Drainage Work \$ Est. Labour Value of Drainage Work ~~\$1100~~ : 00

Total Value \$3400.00

All work will be carried out in accordance with Horowhenua County Council's By-laws and the Drainage and Plumbing Regulations 1978 and Amendments.

Permit Fee Based on Labour Value \$ 90.00 Receipt No.: 5001

Water Connection Fee \$ _____ Receipt No.: _____

Full Name and Address of Owner: G. P. & B. BARTLETT
24 PUAHIA ROAD, WAIKANAHE.

NOTE.—The following MUST accompany this Application:—

- (a) Ground Plan of Building showing all drains, vents, sumps, septic tanks and sanitary fittings to be plotted on opposite page. For a sewer connection, complete enclosed carbonised form.
 - (b) Specifications of work materials to be used.
- Plan showing drain should be drawn to scale of 1-100.
Stormwater drains should be shown (if any) in dotted lines.

Signature of Applicant: *G. P. Bartlett*

Address _____

Craftsman
Plumber's Signature, Address, and Registered No. J. CORDER LTD. 7 GANGES RD KIHANDALLAH
PO Box 13010 JULIE

Registered Drainlayer's Signature, Address, and Registered No. DREWS DRAINAGE

Frontage to _____ Road

2326

Duplicate Application.

H.C.C./D.1

Horowhenua County Council

PERMIT No. W6159

LOCALITY Waikanae Sewer.

DATE RECEIVED : : .

DATE ISSUED 10: 8: 84.

FEES NOT TO BE PAID UNTIL REQUESTED BY OFFICE

APPLICATION FOR ~~PLUMBING~~ AND DRAINAGE PERMIT

OWNER'S NAME BARTLETT.

FOR OFFICE USE ONLY

REMARKS:

SCALE OF PERMIT FEES

Estimated Labour Value of Work:	Fee Payable:
Not exceeding \$100	\$12
In excess of \$100 but not exceeding \$200	\$18
In excess of \$200 but not exceeding \$300	\$24
In excess of \$300 but not exceeding \$400	\$30

Plus \$6 for every \$100 or part thereof in excess of \$400.

APPROVED

A. C. Hawkins
For COUNTY ENGINEER

DATE 6-8-84

NOTE.—In all cases where septic tanks are installed the site and position must be first approved by the County Health Inspector.

Valuation Book No.

Date, 19

PLAN OF ALLOTMENT

Application For Plumbing and Drainage Permit

TO THE COUNTY HEALTH INSPECTOR,
Horowhenua County Council,
Bath Street,
Levin.

Postal Address:
Horowhenua County Council,
P.O. Box 258,
Levin.

Showing position of proposed buildings, Sanitary fittings, Drains, Gully traps, Inspection pipes and Ventilators, Septic tanks, Sumps, Irrigation trenches, Sewers and Stormwater drains, if any.

No Septic Tank or Effluent Drainage System may be installed within 3.3 metres of a dwelling or 1.5 metres of any boundary.

Boundary Lines to be shown thus: - - - - -

I, the undersigned, do hereby apply for a permit to carry out DRAINAGE and PLUMBING work in accordance with the undermentioned particulars.

Description of Drainage and Plumbing Work Drainage to new dwelling

Allotment. Lot: 38 D.P.: 42960 Section: _____ Area: _____

Block: _____ S.D.: _____ Locality: Waikanae

Previous Owner { If Section has been recently transferred }

Frontage (Length) _____ (Name of Street or Road) 179 TUIERE ST.

Water Supply (Description) _____

~~Est. Material Value of Plumbing Work \$~~ : ~~Est. Labour Value of Plumbing Work \$~~ :

Est. Material Value of Drainage Work \$ 1,800.00 Est. Labour Value of Drainage Work \$ 1,100.00

~~2,600~~

Total Value \$2,600.00

All work will be carried out in accordance with Horowhenua County Council's By-laws and the Drainage and Plumbing Regulations 1978 and Amendments.

Permit Fee Based on Labour Value \$ 70.00 Receipt No.: 5001

Water Connection Fee \$ _____ Receipt No.: _____

Full Name and Address of Owner: G. P. BARTLETT
24 PURIRI RD WAIKANAE

NOTE.—The following MUST accompany this Application:—

- (a) Ground Plan of Building showing all drains, vents, sumps, septic tanks and sanitary fittings to be plotted on opposite page. For a sewer connection, complete enclosed carbonised form.
- (b) Specifications of work materials to be used.
Plan showing drain should be drawn to scale of 1-100.
Stormwater drains should be shown (if any) in dotted lines.

Signature of Applicant: AS ABOVE

Address _____

Craftsman
Plumber's Signature, Address, and Registered No. _____

Registered Drainlayer's Signature, Address, and DREW 22/10/88

Frontage to _____ Road

Horowhenua County Council

PERMIT No. 15389
B102334

LOCALITY WAIKANAE

DATE RECEIVED 1 : 12 : 83. DATE ISSUED 24 : 6 : 84.

Fees not to be paid until requested by Office

SCALE OF FEES

For the examination of plans and specifications of any building and for the inspection of such building the following fees shall be payable according to the estimated value of the work.

In any dispute as to value, the County Engineer shall have the absolute determination of the value of the proposed work or building.

ESTIMATED VALUE OF WORK		FEES	
	Not exceeding	\$1,000	\$12.00
Over	\$1,000 and not exceeding	\$3,000	\$18.00
,	\$3,000 " " "	\$7,000	\$40.00
,	\$7,000 " " "	\$10,000	\$60.00
,	\$10,000 " " "	\$15,000	\$75.00
,	\$15,000 " " "	\$20,000	\$100.00
,	\$20,000 " " "	\$25,000	\$125.00
,	\$25,000 " " "	\$30,000	\$150.00
,	\$30,000 " " "	\$40,000	\$175.00
,	\$40,000 " " "	\$50,000	\$200.00
,	\$50,000 " " "	\$60,000	\$225.00
,	\$60,000 " " "	\$70,000	\$250.00
,	\$70,000 " " "	\$80,000	\$275.00
,	\$80,000 " " "	\$90,000	\$285.00
,	\$90,000 " " "	\$100,000	\$295.00
,	\$100,000 " " "	\$150,000	\$325.00
,	\$150,000 " " "	\$200,000	\$350.00

For every \$50,000 extra add \$50.00.

FEES PAYABLE FOR SPECIAL DUTIES

- For inspection required in the case of proposed structural alterations before plans for approval \$10.00
- For inspecting every detached stove, furnace, oven, close fire or forge erected subsequently to the building \$20.00
- For inspecting old timber before re-using the same in a new building \$10.00
- For any inspection that may be deemed necessary in connection with any building or work in respect of which no fee has otherwise been paid \$10.00
- For inspecting any timber or building outside the County prior to re-using or resiting within the County — actual expenses incurred.
- For structurally checking plans and specifications by Council's Engineers, an increase of 25% of the building permit fee based upon the total value of the work will be charged.

APPLICATION FOR BUILDING PERMIT

OWNER'S NAME S. P. & B. J. BARTLETT

FOR OFFICE USE ONLY

REMARKS:

*Brainj S. Lodele to come ✓
PID app. to come ✓ } Notes on app. 17/5/84*

APPROVED

R. T. Burling
COUNTY ENGINEER.

DATE 17/5/84

*3/1/84 S. Lodele
Stop work
W/E*

*Ron
checked Braintree
calls - otherwise
you have checked
+ a/c has been forwarded.*

Mr Les Waring

NOTE.—

1 All Plans and Specifications must be in Ink.

Valuation Book No. 14940/70538

Date 1-12, 1983

APPLICATION FOR BUILDING PERMIT

TO THE BUILDING INSPECTOR,
Horowhenua County Council,
Bath Street,
Levin.

Postal Address: Horowhenua County Council,
P.O. Box 258,
Levin.

I, the undersigned, do hereby apply for PERMISSION to erect BUILDINGS in accordance with the under-mentioned particulars in TUTERE ST WAIKANA E RIDING.

1. Type of Building: DWELLING a garage
Dwellings, etc.; additions or alterations.

Particulars of Building: Foundations: CONCRETE Walls: BRICK HAARDIPLANK Roof: GERARD OR MONIER

Total floor area: 134 sq. metres.

2. Purpose for which every part of Building is to be used or occupied. (Describing separately each part intended for use or occupation for a separate purpose)

3. Allotment: Lot: 38 D.P.: 42960 Section:

Area: 716 m² Block: SD. Locality:

4. Owner's Full Name: GRANT PETER & BARBARA JANE BARTLETT

Address: 24 PURIRI RD WAIKANA E

5. Previous Owner If Section has been recently transferred } NORMAN EVANS

6. Frontage (Length): 18.600 Name of Street or Road: TUTERE ST

7. Estimated Value of Building— \$ 32,000 : 00
Plumbing and Drainage— \$ 5,000 : 00 Total \$ 55,900 : 00

8. Fees \$ 200 : 00 No. of Receipt 5001

See Scales of Fees on Back Page.

Building Research Levy \$ 56 : 00 Footpath Damage Deposit \$ 300 : 00

All work will be carried out in accordance with Horowhenua County Council's By-laws.

NOTE:—The following MUST accompany this Application:—

Plans and Specifications in Duplicate to be provided.

Together with every application there shall be submitted to the Engineer, in duplicate, detailed plans, elevations, cross sections, and specifications, which shall together furnish complete details of design and qualities and descriptions of all materials of construction and workmanship, and which shall be of sufficient clarity to show to the satisfaction of the Engineer the exact nature and character of the proposed undertaking and the provision made for full compliance with the requirements of the By-laws including:

- (a) A Floor plan of each floor level;
- (b) An elevation of each external wall;
- (c) The type and location of each foundation element (for example; reinforced masonry foundation wall. Anchor pile, cantilevered pile, etc.);
- (d) Adequate information on all subfloor, floor, wall and roof framing, including the type and location of each subfloor brace, diagonal brace, and wall bracing element and the number of bracing units assigned to each wall bracing element;
- (e) The type and location of cladding, sheathing and lining.
- (f) Where a building requires Plumbing and Drainage Work, a separate application form must be filled in and Permit obtained before commencing any such work.

Signature of Applicant P. P. Bartlett as BUILDER or OWNER.

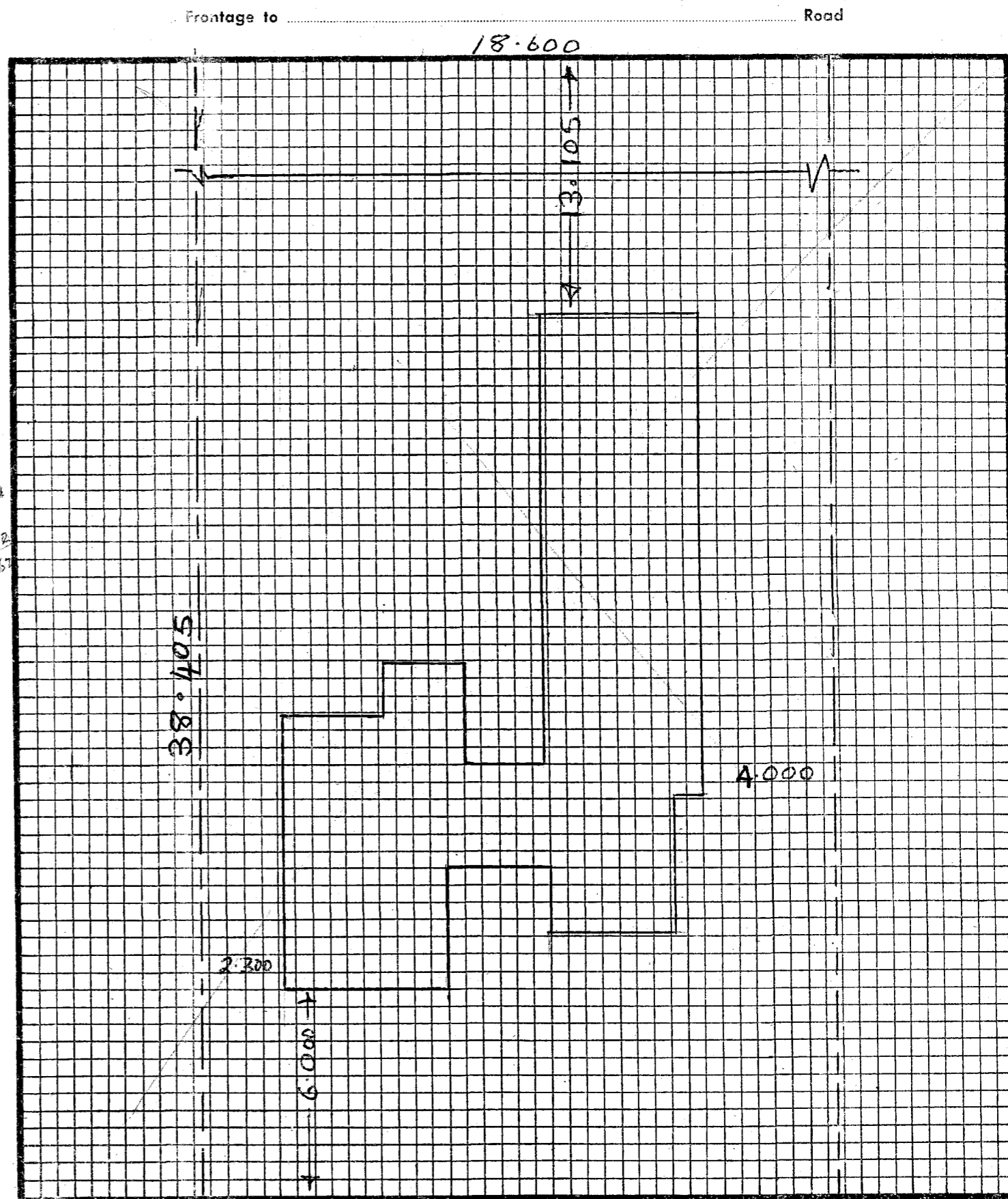
Address 24 PURIRI RD, WAIKANA E

Builder's Name and Address if not the applicant } no share

PLAN OF ALLOTMENT

Showing position of proposed building on such allotment.
NOTE.—Distances of each building from boundary lines must be clearly indicated.
(Scale: Two squares to one metre.)

Boundary Lines to be shown thus: -----
Generally DWELLINGS must NOT be ERECTED within 1.5 METRES of ADJOINING properties.



92

Horowhenua County Council

PERMIT No. 18
FO38622

LOCALITY Waikanae

DATE RECEIVED: 15 : 3 : 88 DATE ISSUED: 11 : 4 : 88

APPLICATION FOR BUILDING PERMIT

OWNER'S NAME Grant Bartlett

FOR OFFICE USE ONLY

REMARKS:

HOROWHENUA COUNTY COUNCIL
NOTE: This application is approved on condition that the building is not used for human habitation.

APPROVED
R. J. Laws
COUNTY ENGINEER
DATE 31-3-88

*check on site
No vehicle Ent.
Existing Garage.*

NOTE -
1. All Plans and Specifications must be in ink.

Fees not to be paid until requested by Office

SCALE OF FEES

For the examination of plans and specifications of any building and for the inspection of such building the following fees shall be payable according to the estimated value of the work.

In any dispute as to value, the County Engineer shall have the absolute determination of the value of the proposed work or building.

<u>ESTIMATED VALUE OF WORK:</u>	<u>FEES</u>
Not exceeding \$ 3,000	\$ 59.00
Over \$ 3,000 and not exceeding \$ 7,000	\$ 71.00
Over \$ 7,000 and not exceeding \$ 10,000	\$107.00
Over \$ 10,000 and not exceeding \$ 15,000	\$131.00
Over \$ 15,000 and not exceeding \$ 20,000	\$178.00
Over \$ 20,000 and not exceeding \$ 25,000	\$226.00
Over \$ 25,000 and not exceeding \$ 30,000	\$273.00
Over \$ 30,000 and not exceeding \$ 40,000	\$309.00
Over \$ 40,000 and not exceeding \$ 50,000	\$356.00
Over \$ 50,000 and not exceeding \$ 60,000	\$404.00
Over \$ 60,000 and not exceeding \$ 70,000	\$451.00
Over \$ 70,000 and not exceeding \$ 80,000	\$499.00
Over \$ 80,000 and not exceeding \$ 90,000	\$511.00
Over \$ 90,000 and not exceeding \$100,000	\$535.00
Over \$100,000 and not exceeding \$150,000	\$582.00
Over \$150,000 and not exceeding \$200,000	\$630.00
For every \$50,000 extra add	\$ 95.00

FEES PAYABLE FOR SPECIAL DUTIES

For inspection required in the case of proposed structural alterations before plans for approval	\$ 36.00
For inspecting every detached stove, furnace, oven, close fire or forge erected subsequently to the building	\$ 59.00
For inspecting old timber before re-using the same in a new building	\$ 36.00
For any inspection that may be deemed necessary for connection with any building or work in respect of which no fee has otherwise been paid	\$ 36.00
For inspecting any timber or building outside the County prior to re-using or resiting within the County — actual expenses incurred	
For structurally checking plans and specifications by Council's Engineers, an increase of 25% of the building permit fee based upon the total value of the work will be charged	

APPLICATION FOR BUILDING PERMIT

TO THE CHIEF HEALTH & BUILDING INSPECTOR,
Horowhenua County Council, or
Bath Street, Levin. Aputa Place, Waikanae.
Postal Address: Horowhenua County Council,
P.O. Box 542, Levin

PLAN OF ALLOTMENT

(Not required if appearing on other documents.)

Showing position of proposed building on such allotment.
NOTE — Distances of each building from boundary lines must be clearly indicated.
(Scale: Two squares to one metre.)

Boundary Lines to be shown thus: _____
Generally DWELLINGS must NOT be ERECTED within 1.5 METRES of ADJOINING properties.

I, the undersigned, do hereby apply for PERMISSION to erect BUILDINGS in accordance with the under-mentioned particulars in _____ RIDING

1. Type of Building: Double Garage Workshop Dwelling, etc.; additions or alterations.

Particulars of Building: Foundations: concrete Walls: Painted Galo Iron on Timber Frame Roof: _____

Total floor area: 38.88 sq. metres.

2. Purpose for which every part of Building is to be used or occupied. (Describing separately each part intended for use of occupation for a separate purpose) Garage, Storage, Workshop

3. Allotment: Lot: 38 D.P.: _____ Section: _____

Area: _____ Block: _____ S.D. _____ Locality: _____

4. Owner's Full Name: Grant Bartlett

Address: 179 Lutere St Waikanae Phone No. HOME: 34 295 BUS: _____

5. Previous Owner { If Section has been recently transferred } _____

6. Frontage (Length): 18.600 Site Address 179 Lutere St.

7. Estimated Value of Building only \$ 5850.00
Plumbing and Drainage — \$ _____ Total Estimated Value \$ 5850.00

8. Fees \$ 71.00 No. of Receipt 2179

Building Research Levy \$ _____ Footpath Damage Deposit \$ Prefer house permit.
All work will be carried out in accordance with Horowhenua County Council's By-laws.

NOTE:— The following MUST accompany this Application:—

Plans and Specifications in Duplicate to be provided.

Together with every application there shall be submitted to the Engineer, in duplicate, detailed plans, elevations, cross sections, and specifications, which shall together furnish complete details of design and qualities and descriptions of all materials of construction and workmanship, and which shall be of sufficient clarity to show to the satisfaction of the Engineer the exact nature and character of the proposed undertaking and the provision made for full compliance with the requirements of the By-laws including:

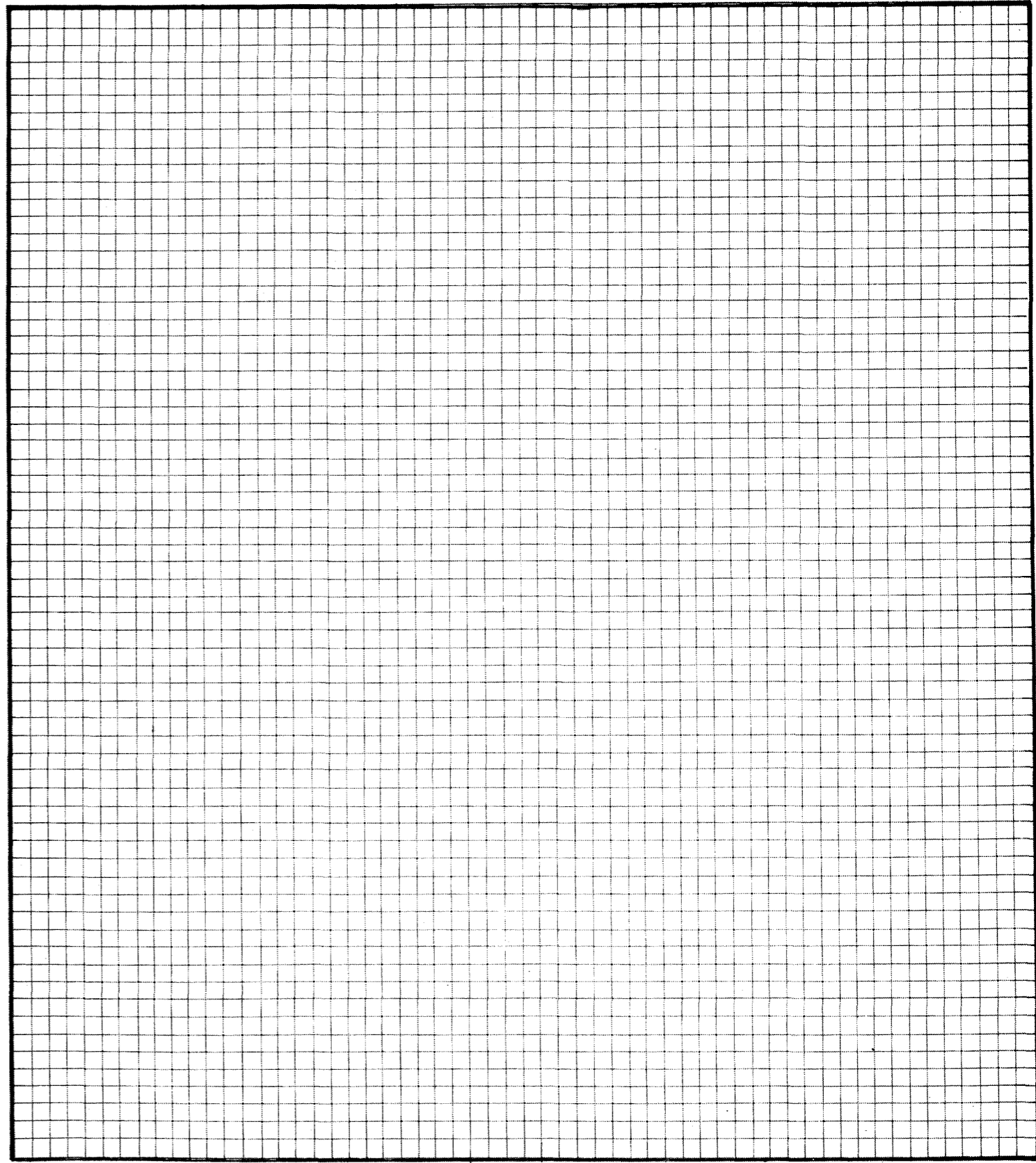
- (a) A Floor plan of each floor level;
- (b) An elevation of each external wall;
- (c) The type and location of each foundation element (for example; reinforced masonry foundation wall, Anchor pile, cantilevered pile, etc.);
- (d) Adequate information on all subfloor, floor, wall and roof framing, including the type and location of each subfloor brace, diagonal brace, and wall bracing element and the number of bracing units assigned to each wall bracing element;
- (e) The type and location of cladding, sheathing and lining.
- (f) Where a building requires Plumbing and Drainage Work, a separate form must be filled in and Permit obtained before commencing any such work.

Name (in Block Letters) GRANT BARTLETT

Signature of Applicant R. B. Freeman as BUILDER or OWNER

Address: 14 Oriwa St Waikanae Phone No. HOME 36818 BUS _____

Frontage to _____ Road



FOR COUNCIL USE:

DEPARTMENT	TICK FOR REFERRAL	COMMENTS	APPROVING OFFICER/ DATE
Resource Consents		NO R/C Issues	AM 27.6.02.
Plumbing and Drainage			
Building			26/6/02
Fire Design			
Compliance Schedule			
Structural			
Hazardous Substances			
Environmental Health			
Site- Footpath & Entrance Conditions			
			URB
<p>NOTES: Soft ground behind "A" walls. Probe disappears, also in front of "B" wall. Rear property supported by "B" wall is approx. 9-1.000. Stone block wall "B" sloping towards "B" wall. "B" wall is supported on soft ground, at present.</p>			



175 Rimu Road
Private Bag 601
Paraparaumu
Phone: [04] 9045700
Fax: [04] 9045830



5 Hagley Street
P O Box 50218
Porirua City
Phone: [04] 237 5089
Fax: [04] 237 1439

SCANNED

APPLICATION FOR BUILDING CONSENT

Section 33, Building Act 1991

To: Kapiti Coast District Council/Porirua City Council (delete one)
[Tick each applicable box and attach relevant documents in duplicate]

App. No. 020805

ANTICIPATED COMMENCEMENT DATE: 5/07/02 FINISH DATE: 12/07/02

Prop ID _____ Owner ID _____ Applicant ID _____

PART A : GENERAL

[Complete Part A in all Cases - Refer over for Part B, C and D, sign and date]

APPLICANT	PROJECT
<p>Owner Name: * Richard Leslie Wareing, Pamela Denise Wareing + Susan Stevens</p> <p>Mailing Address: % 258A Victoria Avenue Palmerston North</p> <p>Contact Name: Sue Stevens</p> <p>Phone: 3540922 wk 3587048 hm</p> <p>Cellphone No: 0274100303</p> <p>Fax: 063540935</p>	<p>New or Relocated Building <input type="checkbox"/></p> <p>Alterations or Additions <input type="checkbox"/></p> <p>Accessory Building or Fire <input type="checkbox"/></p> <p>Building demolition or Removal <input type="checkbox"/></p> <p>Intended use, e.g Dwelling, Carport, Garage etc Planning Dev</p> <p>Being stage 1 of an intended 1 stages.</p> <p>Estimated value (inclusive of GST) \$ 7000-00</p>
<p>*Under section 33 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.</p>	<p>Intended life: (of building)</p> <p>Indefinite but not less than 50 years <input type="checkbox"/></p> <p>Specified as _____ years</p>
<p>FOR COUNCIL USE</p> <p>Received: _____</p> <p>Application Fee: \$ 140</p> <p>Receipt No: _____</p> <p>Balance of Fees: \$ _____</p> <p>Receipt No: _____</p> <p>Date: _____</p> <p>NOTE: Balance of fees are payable on consent approval</p>	<p>PROJECT LOCATION</p> <p>Street Address (if any) 179 TUTERE Street WaiKanae.</p> <p>Legal description (as shown on certificate of title rates notice, if any)</p> <p>Lot 6038 DP 42960</p> <p>Valuation No. 1492045000</p>
<p>This application is for:</p> <p><input type="checkbox"/> Building Consent only, in accordance with Project Information Memorandum</p> <p><input type="checkbox"/> Both Building Consent and a project Information Memorandum</p>	

PART B : BUILDING DETAILS

(Complete Part B in all cases)

This application is accompanied by (tick each applicable box, attach relevant documents in duplicate):

- The drawings, specifications and other documents according to which the building is proposed to be constructed to comply with the provisions of the building code, with supporting documents, if any, including:
 - Building certificates
 - Producer statements
 - References to accreditation certificates issued by the Building Industry Authority
 - References to determinations issued by the Building Industry Authority
- Proposed procedures, if any, for inspection during construction

PART C : PROJECT DETAILS

(Complete Part C only if you have not applied separately for a project information memorandum)

- Location, in relation to legal boundaries, and external dimensions of new, relocated, or altered buildings
- New provisions to be made for vehicular access, including parking
- Provisions to be made in building over or adjacent to any road or public place
- New provisions to be made for disposing of stormwater and wastewater
- Precautions to be taken where building work is to take place over existing drains or sewers or in close proximity to wells or watermains
- New connections to public utilities
- Provisions to be made in any demolition work for the protection of the public, suppression of dust, disposal of debris, disconnection from public utilities and suppression of noise
- Any cultural heritage significance of the building or building site, including whether it is on a marae

PART D : KEY PERSONNEL

Designer(s): Hannah Wells

Building Certifier(s): _____

Builder/s P M Building Services

Registered Drainlayer: NA REG NO: _____

Craftsman Plumber: NA REG NO: _____

Other: _____

PLEASE NOTE

The information provided in support of this application is public and as such is freely available on request. However under Section 27(3) of the Building Act 1991 you may for security and/or copyright reasons request the plans and specifications pertaining to this application be marked as confidential by completing the following section

CONFIDENTIALITY

Plans and Specifications

I/We require that my/our:

1. plans
 2. specifications
- be treated as confidential in order to protect either:
3. the security of the building; and/or
 4. copyright

Signed: [Signature]

Signed for and on behalf of the Applicant:

Name: _____

Position: _____ Date: / /

SIZE OF BUILDING

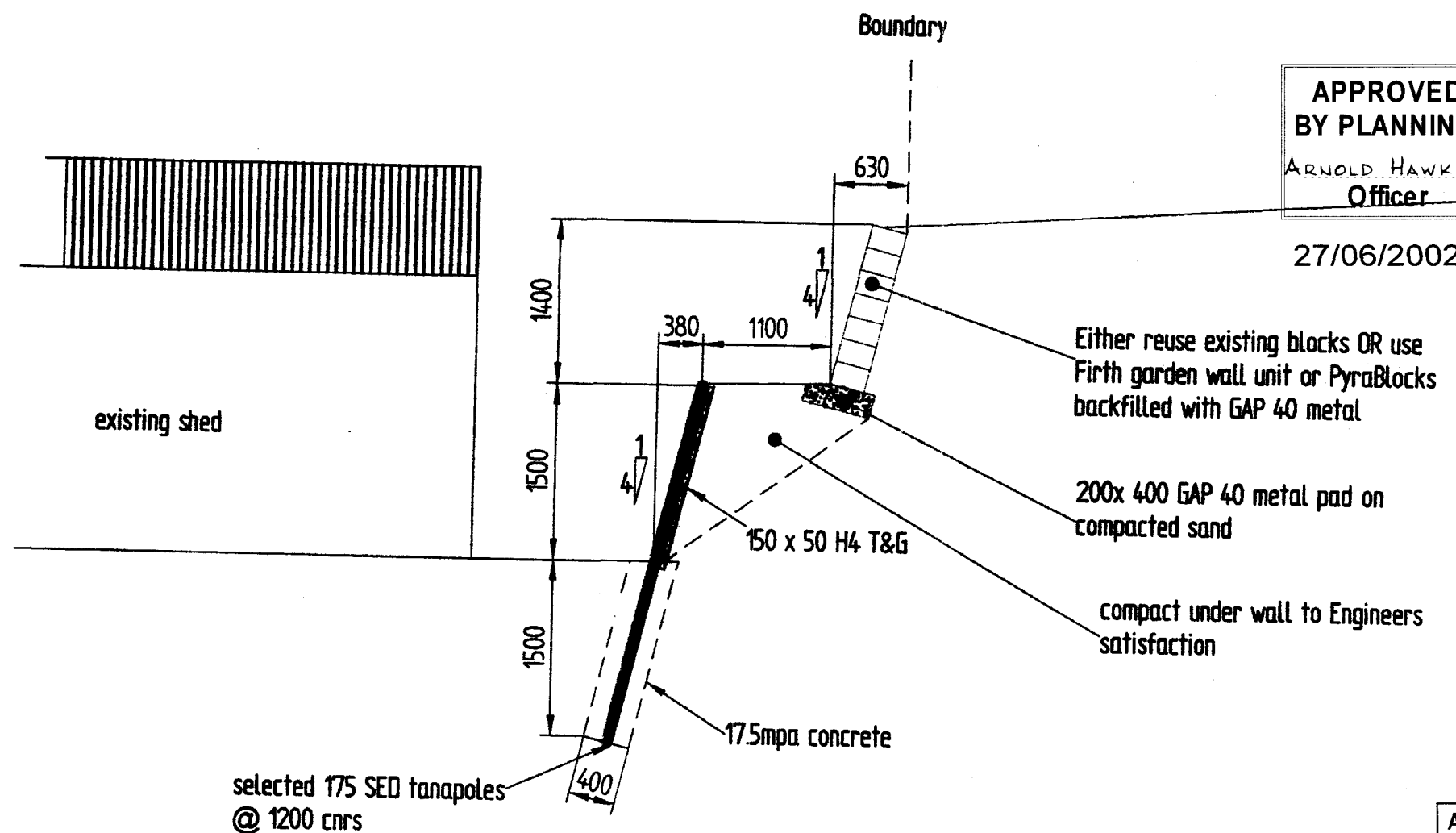
Floor area m ²
No of Stories
No of Units

FOR OFFICE USE ONLY

FEEES		APPLICATION DEPOSIT	\$ 140.00
Building	\$ 426.00	RECEIPT NO	954362
Sewer Connection	\$	DATE	10.06.02
Water Connection	\$	INVOICE NO	70100
Vehicle Crossing	\$	DATE	28.6.02
Damage Deposit	\$	RECEIPT NO	956771
Structural Checking	\$	DATE	8.7.02
Building Research Levy	\$	FEEES PAID BY:	R. L. Wareing
Development Levy	\$	(Westpac Chq)	
BIA Levy	\$	BUILDING CONSENT NUMBER	020805
Compliance Schedule	\$	DATE ISSUED	8.7.02
Digital Storage Fee	\$ 22.50	AUTHORISATION FOR REFUND OF DEPOSITS	
Certificate of Title Charge	\$	Deposit held =	\$
Photocopying	\$	Cost to Repair Damage Caused During Construction =	\$
SUBTOTAL	\$ 448.50	Total Balance to be Refunded	
Less Deposit Paid	\$ 140.00	Authority Number:	
TOTAL	\$ 308.50	Authorised:	DATE:
GST INCLUDED	\$		

Received with thanks by 10/01
 KAPITI COAST DISTRICT COUNCIL
 3-07-02 10:33 Receipt no. 956771
 COPY *COPY* *COPY*
 DR B000000
 WAREING & STEVENS 700.50
 R & P WAREING & S STEVENS 10 2500 UTC
 CC W
 R L WAREING 300.50
 VBL

Received with thanks by 17/01
 KAPITI COAST DISTRICT COUNCIL
 19-06-02 13:16 Receipt no. 954362
 COPY *COPY* *COPY*
 DR B0020005
 P D WAREING R L WARE 140.00
 R L WAREING P D WAREING: : : : :
 CC EFTPOS
 BNZ 140.00
 VBL



APPROVED
BY PLANNING
ARNOLD HAWKINS
Officer

27/06/2002

APPROVED
BY BUILDING
MARK FITZPATRICK
Officer

27/06/2002

Either reuse existing blocks OR use
Firth garden wall unit or PyraBlocks
backfilled with GAP 40 metal

200x 400 GAP 40 metal pad on
compacted sand

compact under wall to Engineers
satisfaction

All work carried out under
jurisdiction of producer
statement to meet the engineer
requirements fully.
Engineer to sign off work
supervision after construction

TYPICAL X SECTION OF NEW WALLS IN SAME LOCATION AS EXISTING

0274/459757

ALL COMPLETED AS PER ENGINEERS DESIGN
ENGINEERS SUPERVISION REPORT REQUIRED

VEHICLE CROSSING NO DAMAGE

BM 5/8/02

I PROMISED LEFT MESSAGE

CAUTION - DO NOT CONSTRUCT LOWER WALL WITHOUT FIRST DEMOLISHING UPPER WALL

Hamish Wells
CIVIL ENGINEERING CONSULTANT
Offices at 215a Rangitane Road Otaki

TMIPENZ
P O Box 188 Otaki
engineer@stra.co.nz
03-459-757 mob.
06-36 46728 wk
06-36 46729 fax

179 TUTERE RETAINING WALL REPLACEMENT

DRAWING SCALE	150
DATE	April 2002
SHEET	2 OF 2
JOB NO.	

APPROVED
BY BUILDING

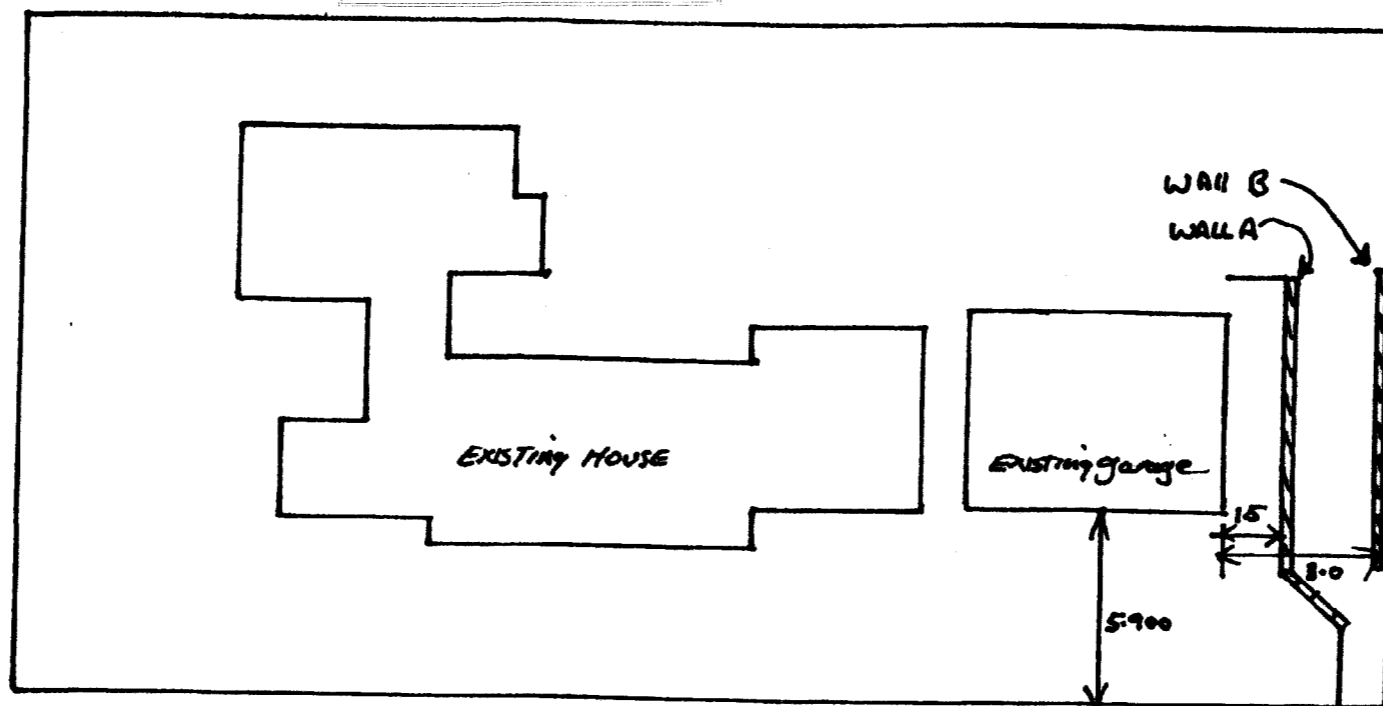
MARK FITZPATRICK
Officer

27/06/2002



CAUTION

Plans have been digitally reproduced and may not be to scale.



INDICATES WALL TO BE REMOVED AND REBUILT

APPROVED
BY PLANNING
ARNOLD HAWKINS
Officer

27/06/2002

SITE PLAN 1:200 179 TUTERE STREET
WAIKANAЕ

Wall A

This wall is an existing timber retaining wall built some 7 years ago. It was constructed with out a permit and is approximately 1.560 high at its highest point. It is under designed and is showing sings of some movement.

The proposal is to remove approximately 10.000 meters of the wall and replace with a timber wall as designed and supervised by Hamish Wells. The new wall is to be in the same location as the existing, and will have a finish height no greater than 1.450.

Not all of the existing timber wall is to be replaced only as shown on the site plan.

None of the existing wall is to be over 1.400 in height.

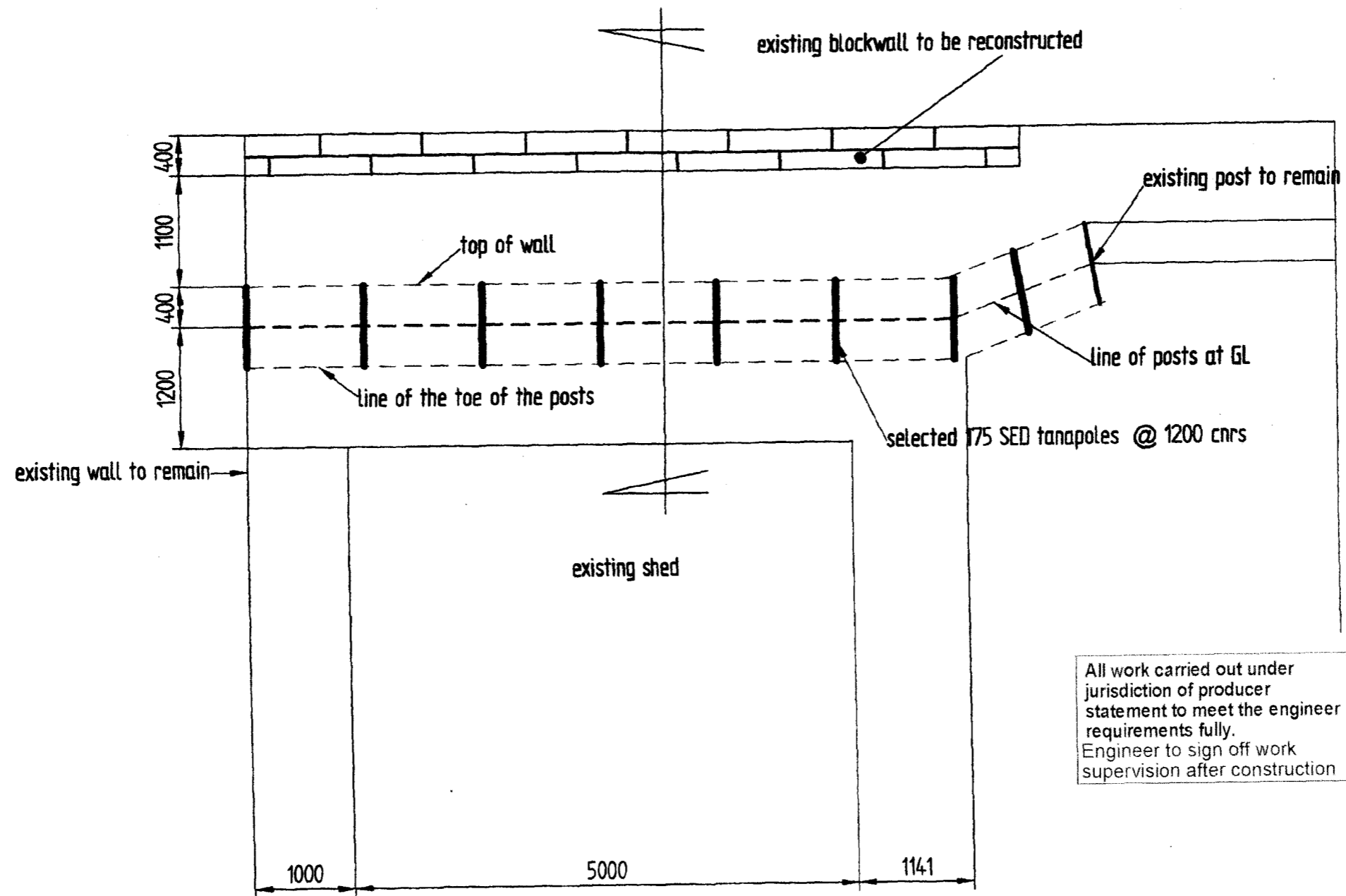
Wall B

This wall is an existing concrete earth backfilled retaining wall, when built is unknown. It was constructed with out a permit and is approximately 1.500 high at its highest point. It is showing sings of some movement and needs to be disassembled and relayed.

The proposal is to remove approximately 8.500 meters of the wall, reuse the concrete blocks and construct as per the design by Hamish Wells. The new wall is to be in the same location as the existing.

Finish height is to be no greater than 1.400 high.

Proposed Retaining Wall Reconstruction At 179 Tutere Street Waikanae. Lot 38



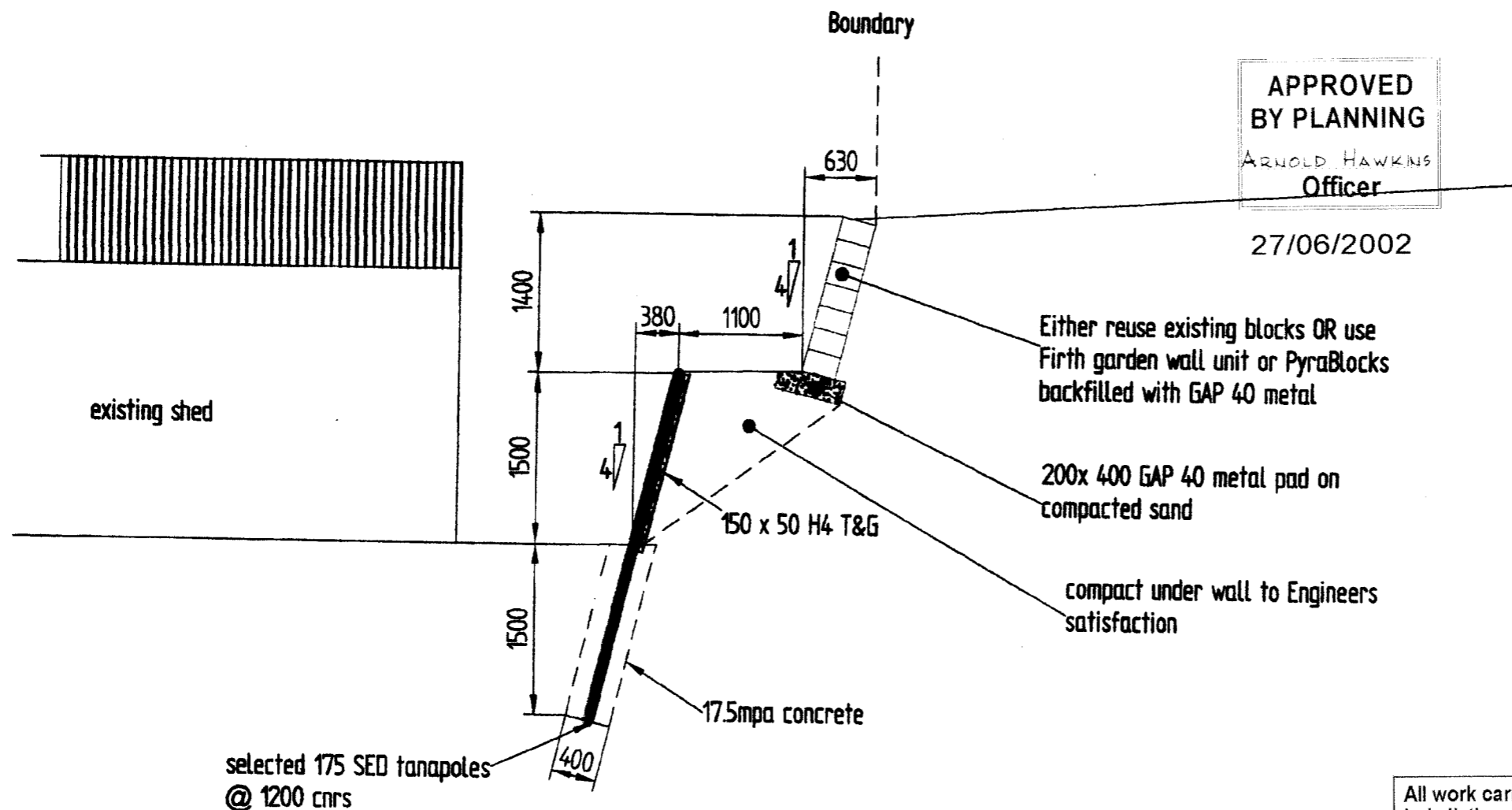
All work carried out under jurisdiction of producer statement to meet the engineer requirements fully. Engineer to sign off work supervision after construction

Hamish Wells
 CIVIL ENGINEERING CONSULTANT
 Offices at 215a Rangitapu Road Otaki

TMIPENZ
 P O Box 188 Otaki
 engent@ctra.co.nz
 025-459-757 mob.
 06-36 46728 wk
 06-36 46729 fax

179 Tutere Street Waikanae - retaining wall reconstruction

DRAWING SCALE	1:50
DATE	April 2002
SHEET	1 OF 2
JOB NO.	



APPROVED
BY PLANNING
ARNOLD HAWKINS
Officer

27/06/2002

APPROVED
BY BUILDING
MARK FITZPATRICK
Officer

27/06/2002

All work carried out under jurisdiction of producer statement to meet the engineer requirements fully. Engineer to sign off work supervision after construction

TYPICAL X SECTION OF NEW WALLS IN SAME LOCATION AS EXISTING

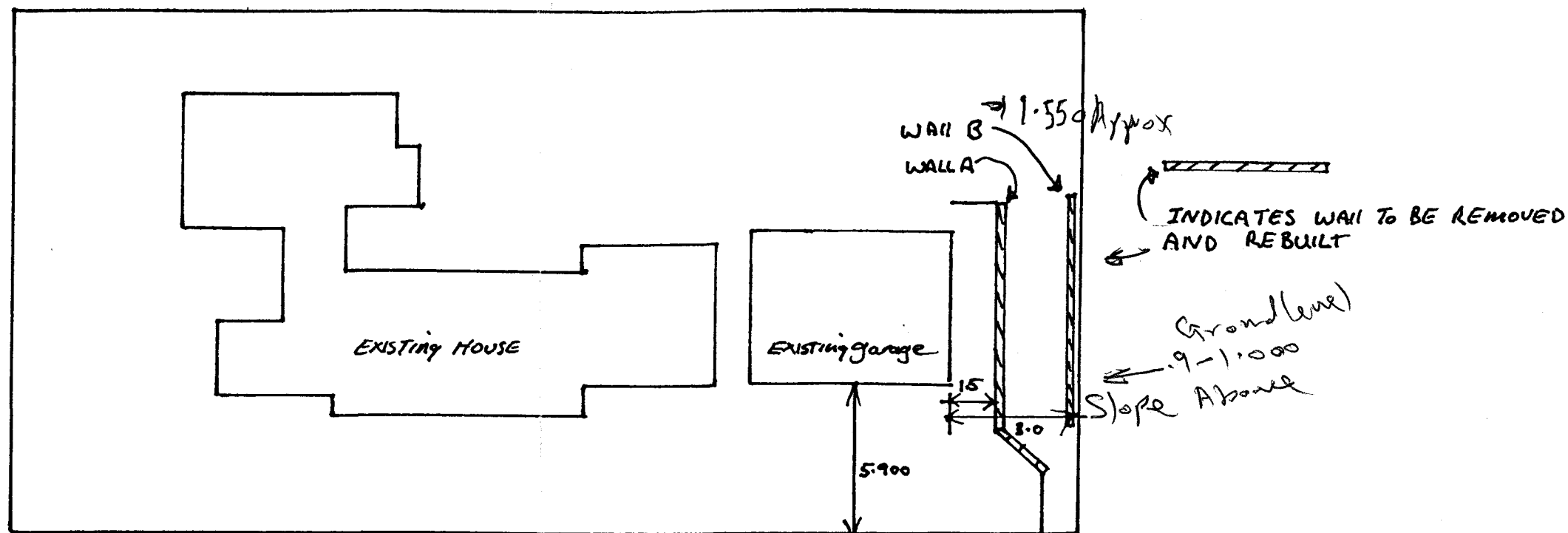
CAUTION - DO NOT CONSTRUCT LOWER WALL WITHOUT FIRST DEMOLISHING UPPER WALL

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06-36 46728 wk
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179 TUTERE RETAINING WALL REPLACEMENT

DRAWING SCALE	1:50
DATE	April 2002
SHEET	2 OF 2
JOB NO.	



SITE PLAN 1:200 179 TUTERE STREET
WAIKANAĒ

Wall A

This wall is an existing timber retaining wall built some 7 years ago. It was constructed with out a permit and is approximately 1.560 high at its highest point. It is under designed and is showing sings of some movement.

The proposal is to remove approximately 10.000 meters of the wall and replace with a timber wall as designed and supervised by Hamish Wells. The new wall is to be in the same location as the existing, and will have a finish height no greater than 1.450.

Not all of the existing timber wall is to be replaced only as shown on the site plan.

None of the existing wall is to be over 1.400 in height.

Wall B

This wall is an existing concrete earth backfilled retaining wall, when built is unknown. It was constructed with out a permit and is approximately 1.500 high at its highest point. It is showing sings of some movement and needs to be disassembled and relayed.

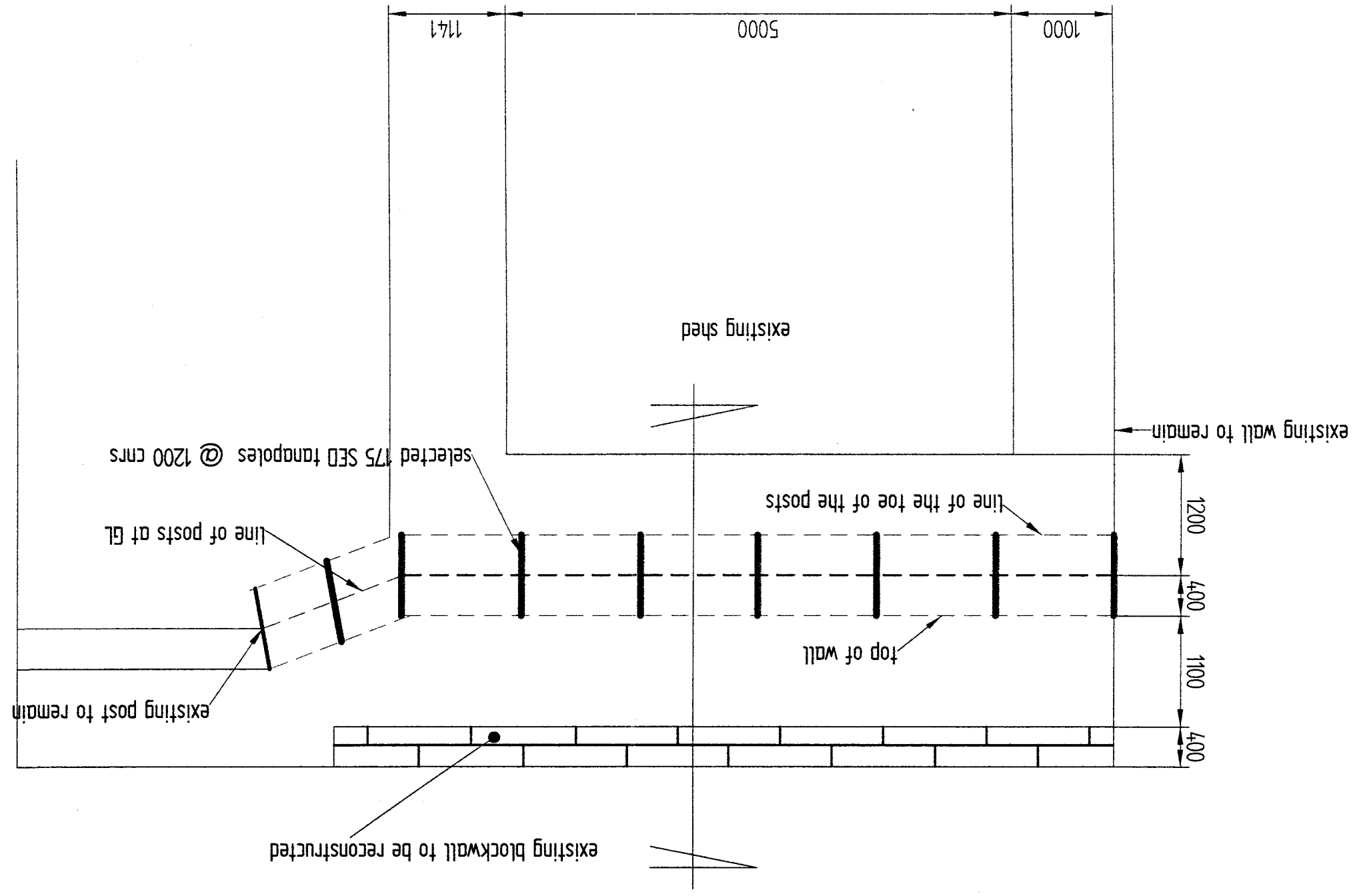
The proposal is to remove approximately 8.500 meters of the wall, reuse the concrete blocks and construct as per the design by Hamish Wells. The new wall is to be in the same location as the existing.

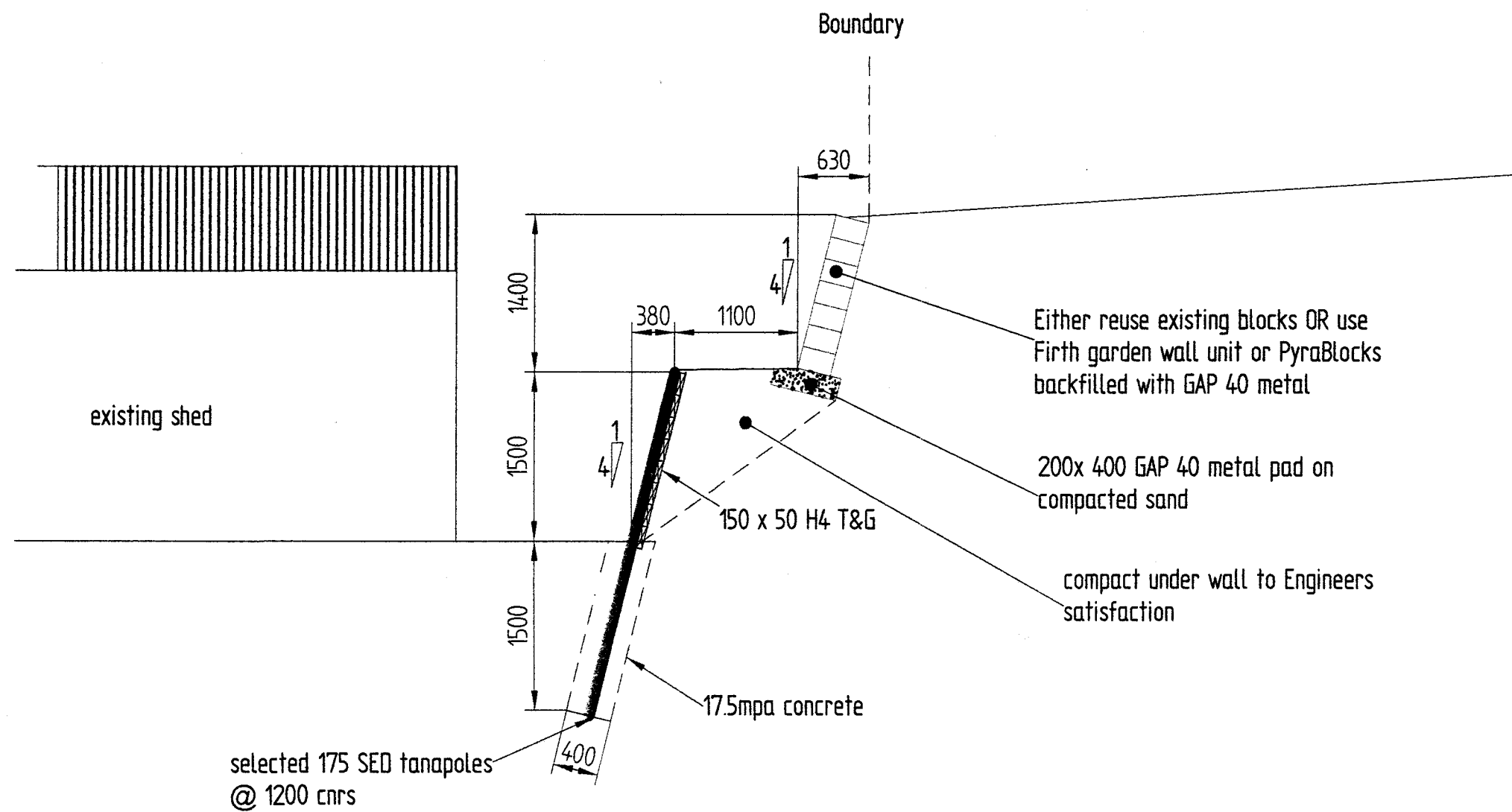
Finish height is to be no greater than 1.400 high.

Proposed Retaining Wall Reconstruction At 179 Tutere Street Waikanae. Lot 38

179 Tutere Street Waikanae - retaining wall reconstruction

DRAWING SCALE		1:50
DATED		April 2002
SHEET	OF	2
JOB NO.		





TYPICAL X SECTION OF NEW WALLS IN SAME LOCATION AS EXISTING

CAUTION - DO NOT CONSTRUCT LOWER WALL WITHOUT FIRST DEMOLISHING UPPER WALL

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Hamish Wells
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engnr@xtra.co.nz
025-459-757 mob.
06-36 46728 wk
06-36 46729 fax

179 TUTERE RETAINING WALL REPLACEMENT

DRAWING SCALE	1:50
DATED	April 2002
SHEET	2 OF 2
JOB NO.	



Project Information Memorandum

Section 31, Building Act 1991

Application

R & P WAREING & S STEVENS	No.	020805
C/- 258A VICTORIA AVENUE	Issue date	28/06/02
PALMERSTON NORTH	Application date	21/06/02
	Overseer	Barrie McLennan

Project

Description	New Construction
	Being Stage 1 of an intended 1 Stages
	RETAINING WALL RECONSTRUCTION
Intended Life	Indefinite, but not less than 50 years
Intended Use	RETAINING WALL
Estimated Value	\$7,000
Location	179 TUTERE STREET, WAIKANAE
Legal Description	LOT 38 DP 42960 CT 14D/991
Valuation No.	1492045000

This project information memorandum is confirmation that the proposed building work may be undertaken, subject to the provisions of the Building Act 1991, and any requirements of the building consent.

This project information memorandum includes:

- Information identifying relevant special features of the land concerned
- Details of relevant utility systems
- Details of authorisations which have been granted

Signed for and on behalf of the Council:

Name: 

Date: 28.6.02

PROJECT INFORMATION MEMORANDUM

Application Details

Applicant Name R & P WAREING & S STEVENS
Applicant Address c/o 258A VICTORIA STREET
 PALMERSTON NORTH
 (ATTN, S STEVENS)
Applicant Phone

Location 179 TUTERE STREET, WAIKANAE
Legal Description LOT 38 DP 42960 CT 14D/991
Proposal RETAINING WALL

Planning Requirements

Use permitted Permitted activity
Resource Consent granted None listed
Designations on property None listed
Easements None listed
Site subject to inundation Overflow fringe.
Coastal building line restriction N/A
relocatable zone N/A
Min floor level (50 year event) N/A
Recommended minimum
Floor level (100 year event) N/A
Yard and height requirements Comply
Tree/building preservation None listed
Other comments A portion of the front of the property is subject to the 1%(100 year) flood overflow fringe zone.

Note: Minimum floor levels must use Mean Sea Level Wellington Datum 1953. Certification that the floor level complies with the minimum floor level will be required from a registered surveyor prior to foundation inspection.

Special Features of the Land

- Potential erosion /
- Potential avulsion /
- Potential subsidence /
- Potential slippage /
- Potential alluvion /
- Potential inundation /
- Hazardous contaminants /
- Other features

Plumbing and Drainage Details

- Sewer available / connected
- Water available / connected
- Plan of existing services (if any)
- Location of sewer lateral
- Location and size of water toby
- Location of easments (if any)
- Location of public drains (if any)
- Stormwater disposal to
- P and D Notes

Services Plan

DISCLAIMER:

Specific interpretation of flood risk in any areas shown to be affected by flooding should be obtained by written request to the Wellington Regional Council or KCDC depending on area of responsibility.

The WRC and other agencies involved in the preparation of this plan assume no responsibility for any interpretation or action taken by any agency or individual in relation to the information provided on this plan.

The flood hazard information shown on this plan is based on the best available data at the time of preparation.

















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LEGEND



-  Fringe Extent (Waikanae)
-  Clifftop Erosion
-  Overflow Fringe
-  Overflow Path
-  Ponding
-  Ponding Fringe
-  River Corridor
-  Stopbank
-  Storage Area (Paraparaumu)
-  2% Extent (Paraparaumu)
-  1% Flood Extent (Paraparaumu)
-  Provisional 50yr (Paraparaumu)
-  Provisional 100yr (Paraparaumu)
-  Fill Control 50yr (Paraparaumu)
-  Fill Control 100yr (Paraparaumu)
-  Secondary Flow (Paraparaumu)

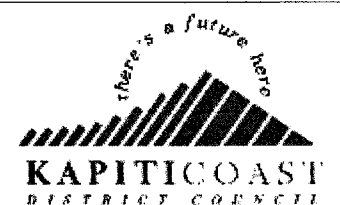
Map Drawn Date: 27/06/2002

Scale: A4 1:260

Date of Aerial Photography: December 2001

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FLOOD HAZARDS



COSTING SHEET

Application No: 020805
 Date: 21-6-02
 Site Address: 179 Lutera St

ADMIN = \$42 per hour
 PLAN VETTING = \$63 per hour
 INSPECTIONS = \$55
 DIGITAL SCANNING = \$22.50

TECHNICAL CONSULTANTS = Cost + 10%
 * Minor Works 1 = fire places, signs, minor plumbing and drainage
 * Minor Works 2 = sheds, parapools, carports
 * Minor Works 3 = garages, conservatories, swimming pools

CLASSIFICATION	\$ PROJECT VALUE	PLAN VETTING				TOT \$	CONSULTANTS				TOT \$	INSPECTIONS					TOT	SET FEE	PIM	CC C	DIG SCAN	TOT
		PI	D	Bld	EH		DP					Site	PI	D	Bld	EH						
1. Minor Works 1*	0 - 1,500																32	Nil	Nil			
2. Minor Works 2*	1501 - 4,000																74	63	Nil			
3. Minor Works 3*	4,001 - 10,000			2		\$21.50	2			\$21.50	1			2		\$165-	105	63	30		\$426	
4. House Adds	4,000 - 10,000																126	63	30			
5. House Adds	10,001 - 40,000																158	63	30			
6. House Adds	40,001 - 70,000																250	110	30			
7. House Adds	70,001 - 100,000																250	110	30			
8. House Adds	100,001 - 150,000																263	110	30			
9. House Adds	150,001+																263	110	30			
10. Dwellings	40,000 - 70,000																263	110	30			
11. Dwellings	70,001 - 100,000																336	110	30			
12. Dwellings	100,001 - 150,000																389	110	30			
13. Dwellings	150,001 - 200,000																441	158	30			
14. Dwellings	200,001 - 250,000																546	158	30			
15. Dwelling	250,001 - 300,000																683	158	30			
16. Dwellings	300,001 - 350,000																784	158	30			
	350,001+ \$50 per additional \$10,000 value																					
17. Comm/Ind	0 - 10,000																126	63	30			
18. Comm/Ind	10,001 - 50,000																210	63	30			
19. Comm/Ind	50,001 - 90,000																315	110	30			
20. Comm/Ind	90,001 - 130,000																420	110	30			
21. Comm/Ind	130,001 - 170,000																578	110	30			
22. Comm/Ind	170,001 - 210,000																788	110	30			
23. Comm/Ind	210,001 - 250,000																840	186	30			
24. Comm/Ind	250,001 - 290,000																998	186	30			
25. Comm/Ind	290,001 - 330,000																1,208	186	30			
26. Comm/Ind	330,001 - 370,000																1,418	186	30			
27. Comm/Ind	370,001 - 410,000																1,628	220	30			
28. Comm/Ind	410,001 - 450,000																1,838	220	30			
29. Comm/Ind	450,001 - 500,000																2,048	220	30			
	500,001+ \$150 per additional \$100,000 value																					

Approved by
 [Signature]
 Date: [Signature]

CONSENT DATA INPUT REQUIREMENTS

REQUIRED INSPECTIONS		STANDARD ADDENDA			
14	/	32	/	21	
1	/	2	/	22	
17		3		23	
7		4		23A	
16		5		24	
2		6		25	
3		7		26	
18		8		27	
4		8A		28	
8		8B		29	
5		9		30	
20		10		31	
21		11		32	
19		12		33	
9		13		34	
11		14		37	
13		15		38	
15	/	16		39	
		17		40	
		18		41	
		19		42	
		20		43	

STANDARD CONSENT CONDITIONS
35
36

NON STANDARD ADDENDA

Protect neighbouring property

SITE CHECK SHEET

NAME: R. & P. Wareing & S. Stevens
 SITE ADDRESS: 170 Tutere St, Waik LOT: 38 DP: 42960
 PROJECT: Retaining Wall Reconstruction CONSENT NO: 020805
 BUILDER: P M Bldg Services CONTACT NO:

**WORK CANNOT PROCEED PAST EACH STEP UNTIL THAT STEP HAS BEEN INSPECTED,
 APPROVED AND THIS FORM SIGNED BY THE RELEVANT INSPECTOR**

FOUNDATIONS

Date: 29-6-02 Officer: *[Signature]*

Approved building consent documents on site: YES / NO

SITING:

- | | | | |
|--|--|---|--|
| <input type="checkbox"/> Front yard | <input type="checkbox"/> Left hand side yard | <input type="checkbox"/> Conforms with approved plan | YES / NO |
| <input type="checkbox"/> Rear yard | <input checked="" type="checkbox"/> Right hand side yard | <input checked="" type="checkbox"/> If no, has new site plan been requested | YES / NO |
| <input type="checkbox"/> Minimum floor level | <input type="checkbox"/> Footing size | <input type="checkbox"/> Foundation wall reinforcing | <input type="checkbox"/> |
| <input type="checkbox"/> Pile hole size | <input checked="" type="checkbox"/> Footing reinforcing | <input type="checkbox"/> Foundation wall size | <input type="checkbox"/> |
| <input type="checkbox"/> Anchor pile size | <input checked="" type="checkbox"/> Subfloor vents | <input type="checkbox"/> Specific design | <input type="checkbox"/> |
| <input type="checkbox"/> Pile hole spacing | <input checked="" type="checkbox"/> Steps/stairs | <input type="checkbox"/> If yes, has Engineer inspected | <input checked="" type="checkbox"/> YES / NO
<input checked="" type="checkbox"/> YES / NO |

Has a Site Instruction been issued? Yes / No

Instruction No:

Is a reinspection required? Yes / No

Proposed date of follow up inspection

Labels in place? Yes / No

Producer Statement Yes / No / N/A

COMMENTS

ENGINEERS SUPERVISION REPORT REQUIRED.
OK TO CONTINUE
IN PLACE AS PER ENGINEERS DESIGN

FINAL INSPECTION

Building Exterior

CHECK PLANS

Subfloor - ventilation	<input type="checkbox"/>	Flashings - roof penet	<input type="checkbox"/>	Gulley dishes	<input type="checkbox"/>
Decks - structure	<input type="checkbox"/>	hips	<input type="checkbox"/>	Wastes to gullys	<input type="checkbox"/>
Balustrades - design	<input type="checkbox"/>	valleys	<input type="checkbox"/>	Terminals vents	<input type="checkbox"/>
height	<input type="checkbox"/>	gables	<input type="checkbox"/>	Spouting - Downpipes	<input type="checkbox"/>
Steps/Stairs - design	<input type="checkbox"/>	flues	<input type="checkbox"/>	Landscaping & ground levels	<input type="checkbox"/>
handrail	<input type="checkbox"/>	Cladding (ground clearance)	<input type="checkbox"/>	Texture Coating Warranty	<input type="checkbox"/>
Flashings - windows	<input type="checkbox"/>	Roofing & Fixings	<input type="checkbox"/>		
		(roofing warranty)			

Building Interior

CHECK FITTINGS

Service area floors & walls	<input type="checkbox"/>	Food storage	<input type="checkbox"/>	Water temperature	<input type="checkbox"/>
Stair design	<input type="checkbox"/>	Nat. ventilation	<input type="checkbox"/>	Solid fuel heater	<input type="checkbox"/>
Handrails	<input type="checkbox"/>	Mech. Ventilation	<input type="checkbox"/>	Supply tank	<input type="checkbox"/>
Barriers	<input type="checkbox"/>	Insulation	<input type="checkbox"/>	Trap seals & AA Valves	<input type="checkbox"/>
Lightings	<input type="checkbox"/>	Hot water cylinder flues	<input type="checkbox"/>	Cistern flushing	<input type="checkbox"/>
Laundrying	<input type="checkbox"/>	Hot water cylinder valves	<input type="checkbox"/>	WC pan connection	<input type="checkbox"/>
Cooking facilities	<input type="checkbox"/>	Hot water cylinder rest	<input type="checkbox"/>	Septic Tank	<input type="checkbox"/>
		Tempering valve	<input type="checkbox"/>	(engineers inspc report)	
				Windows - labels	<input type="checkbox"/>
				Safety glass	<input type="checkbox"/>

Footpath crossing installed	Yes/No	Berm damaged	Yes/No
Refund crossing deposit	Yes/No	Engineering site reports required	Yes/No
Stormwater & site drainage appear satisfactory	Yes/No	Engineering site reports received	Yes/No

Has a Site Instruction been issued? Yes/No NTR Instruction No.

Producer Statement Yes/No/NA

OK to issue final code compliance certificate. Yes/No

If an interim certificate is issued please list proposed conditions on the reverse of this form.

Is a reinspection required? Yes/No Proposed date of follow up inspection

Comments:

Bullitt / self.

- ✓ Bracing schedule
- ✓ P + D application

- ✓ Siding - bldg.
- ✓ Lt.
- ✓ D/C.

✓ Retaining wall - James check?

✓ Suggest control joints SR1 / south. / SR3, foyer / SR1 and foyer
Kit / lounge
Kitchen - this would then permit reduction to HRC 668 Floor
could be prone to random cracking otherwise.

~~"Landing beam" under garage / SR3; SR2 / south; foyer / Kit; foyer / BR1
lounge / kitchen
for "chapeiron" projections. - conflict with control joint.~~

- ✓ Roof bracing - 2 per plane
- ✓ Wall bracing
- ✓ Perimeter drain
- ✓ Transfer James' notes.

Phumlin & Damage Form.
✓ schedule

S P E C I F I C A T I O N

FOR

G. & B. BARTLETT

LOT 38 TUTERE ST

WAIKANAЕ

I N D E X

Pages	1 - 2	PRELIMINARY AND GENERAL
	3 - 4	EXCAVATION
	5 - 7	CONCRETE WORK
	8 - 10	BRICKLAYER
	11 - 22	CARPENTER
	23 - 25	JOINERY
	26 - 28	ROOF COVERINGS
	29	SOLID PLASTERER
	30 - 31	DRAINLAYER
	32 - 35	PLUMBER AND SHEET METAL WORKER
	36 - 38	ELECTRICIAN
	39 - 40	PAINTER AND GLAZIER
	41 - 42	APPENDIX A - LINTELS
	43 - 47	APPENDIX B - NAILING SCHEDULE

APPROVED

R. T. Sawley

COUNTY ENGINEER.

DATE 9/12/83

It is the responsibility of the owner and or builder to ensure that proposed building levels are compatible with existing sewer connection levels.

PRELIMINARY & GENERAL

1.01 SCOPE OF WORK

This Contract comprises the supply of all plant, materials, and labour necessary for the construction, completion and maintenance of the whole of the work specified herein and/or shown on the drawings.

1.02 CONTRACT DOCUMENTS

The following documents form this Contract:-

- (a) Builders Tender and Building Agreement
- (b) This Specification and Addendum Sheet
- (c) Working Drawings

1.03 SITE

The Contract is based upon the site conforming with :

- (a) Levels and/or Contours as shown on the drawings together with specific foundation details drawn or specified.
- or
- (b) Level site.

The sub soil is of sufficient strength as to necessitate only the minimum foundations requirement of the Local Authority or Lending Institution, unless otherwise drawn or specified.

Where the sub soil is not of sufficient strength to meet the requirements of minimum foundations, all additional work, labour and material to provide adequate foundations or bearing capacity shall become a variation to the Contract (this includes previously cultivated ground and filled sites).

1.04 DRAWINGS AND SPECIFICATION

This specification is to be read in conjunction with the plans, working drawings and any other detailed drawing which may be issued. All figured dimensions shall be taken in preference to those scaled. All detailed drawings shall supercede those to smaller scale.

If any error or inconsistency should appear in or between the drawings and specifications, the drawings shall take precedence and such differences are to be referred to the Designer for interpretation.

1.05 BY-LAWS AND PERMITS

The whole of the works shall be carried out in accordance with and shall conform to the By-Laws and Regulations of the Local Authority and the requirements of the Owner's Mortgagor.

The Contractor shall obtain all permits and pay all inspection and other fees necessary for the carrying out of the Contract.

Note: Crossing Fees - Upgrading Rights of Way

The Contractor shall pay necessary deposits or fees for sealing, vehicle crossing, etc, as required by the Local Authority only to allow permits to be uplifted. All such amounts are the liability of the owner, and such amounts as required charged as extra.

1.06 INSURANCES

Prior to commencing construction of the Contract, the Contractor shall purchase the following insurance for the period of the Contract (excluding maintenance).

- (a) Worker's Compensation Insurance as stipulated by the Act.
- (b) Contractor's "All Risk Insurance" or "Fire Insurance" insuring against loss or damage by fire in the joint names of the Contractor and the Owner to the full insurable value.

1.07 MAINTENANCE

Where required by the Agreement between the Owner and the Contractor, the Contractor shall undertake to remedy defects in material and workmanship which appear in the dwelling within 31 days after completion.

The Owner will notify the Contractor in writing of any items which require rectifying within 31 days.

1.08 VARIATIONS

No variations shall be considered unless the Contractor prepares a separate estimate for such work.

The Contractor shall not be obliged to undertake any variation until the Owner has given approval by signing and returning the variation to the Contractor.

1.09 MONETARY ALLOWANCES

A prime cost (P.C.) sum shall be varied by the substitution for the prime cost sum of the actual price paid by the Contractor for the particular work or materials supplied and the contract price shall be increased or decreased (as the case may be) by the amount by which such sum is varied. There shall be added to or deducted as the case may be, a sum representing such percentage as is normally charged by the Contractor, but in no case shall such percentage exceed ten per centum of such variation.

The P.C. sums referable to this Contract are specified in the attached addendum sheet.

1.10 TEMPORARY SERVICES

The Contractor shall provide and maintain all temporary services necessary for the work, and give notices and pay all dues in connection therewith.

1.11 SETTING OUT

The Contractor/or his employees shall be responsible for setting out the works as shown on the drawings and to maintain set out level pegs and control pegs during the currency of the Contract. Site boundary pegs are the Owner's responsibility.

1.12 COMPLETION

The Contractor/or his employees shall remove all rubbish and equipment accumulated during the construction of the house, remove all temporary work and leave all services in good order, rake out all rubbish from under floor, leave floors broom clean and windows whole and clear.

1.13 MATERIALS SUBSTITUTION

Where the use of Brand names are used in this specification, substitution may be made, provided the substitute materials are of equal or better quality than the item being replaced.

EXCAVATIONS**2.01 PRELIMINARY**

The whole of the works shall be carried out in accordance with and shall conform to the By-Laws and Regulations of the Local Authority.

2.02 SET OUT

Set out the whole of the excavations to the layout and overall dimensions as required.

2.03 CLEARING SITE

Clear off all vegetation over the area of the proposed building.

2.04 UNSTABLE GROUND

Where loose, soft or otherwise unstable ground is encountered, the excavation depth is to be increased until solid bearing is reached. An extra to the Contract will be made for such work.

2.05 FOUNDATION EXCAVATIONS

Excavation in accordance with the floor detail as shown on plan.

a) Timber Floor**i) Foundation Excavation**

Excavate for all foundations to a solid bearing at a minimum depth of 300mm below adjacent ground level.

All excavations are to be level and shall be stepped for sloping ground with minimum depth of 300mm below ground level.

ii) Backfilling

Backfill against all foundations as required with clean excavated material well compacted.

iii) Pile Excavation

Excavate for all piles shown on plan to a solid bearing at a minimum depth of 300mm below adjacent ground level.

b) Excavation Concrete Floor**i) Excavations**

Remove vegetation and top soil over the whole of the building area as shown on the drawings, to a minimum depth as required by the Local Body for lending authority. Excavate for all foundations shown on plan to a solid bearing at a minimum depth of 300mm below adjacent ground level.

All excavations are to be level and shall be stepped for sloping ground with minimum depth of 300mm below ground level.

ii) Backfilling

Backfill against exterior of foundations as required with clean excavated material well compacted.

iii) Filling Under Slab

Filling under all concrete floor slabs to the underside of the floor slab with hard material lacking fines. This layer shall be well consolidated and its surface shall be blinded with clean fines well rolled and consolidated.

2.06 INSPECTION

All excavations are to be inspected by the Local Authority and lending institution prior to placing any concrete or filling.

2.07 SEPTIC TANK

Where shown, indicated or otherwise required, excavate for a septic tank of the size required by the Local authorities. Excavate for effluent trenches and or soak pit as required.

CONCRETE WORK**3.01 PRELIMINARY AND GENERAL**

Note all clauses under preliminary and general of this specification which shall apply to this section of the work.

3.02 EXTENT OF WORK

Comprises the setting out, boxing and placing of concrete in the foundations, floor slabs, walls, beams and bands, and any other concrete work shown on the drawings.

3.03 MATERIALS

Concrete shall be ordinary grade concrete with a minimum specified crushing strength of 17.5 MPa after 28 days curing, unless stronger grade concrete is required by notes on the drawing.

Site mixed concrete shall consist of 4 parts coarse aggregate, 2 parts fine aggregate and 1 part of fresh Portland Cement. Maximum aggregate size shall be 20 mm.

Alternatively, properly graded and mixed, clean, sharp "all in" aggregates may be used, mixed in the ratio of 4½ parts aggregate to 1 part fresh Portland Cement. Care must be taken to ensure that measures of aggregates and cement are the same volume. Ingredients shall be mixed in a power driven mixer for 1½ minutes after all ingredients have been added.

Concrete shall contain 8 bags of cement to each cubic metre of placed concrete.

Water for concrete shall be fresh, potable quality, added only in sufficient quantity to make a stiff but workable mix.

Cement shall be fresh Portland Cement. It shall be carefully handled and stored away from moisture until used.

3.04 REINFORCING

Reinforce foundation walls, footings and beams as shown on the drawings. All main reinforcing bars shall be deformed bars. Tie bars between main bars may be plain round bars.

Reinforcing shall be neatly and accurately bent and placed as shown on the drawings. Tie all laps and crossings with 16 gauge black iron wire. Reinforcing shall be continuous around all corners and through steps in footings and walls. Generally, reinforcing in foundation walls shall be placed in the centre of walls, unless otherwise noted on the drawings.

Provide 75mm cover from natural ground under footings and 50mm cover from the sides of footings. Place concrete or plastic spacers to hold rods in position and to maintain cover.

Laps in deformed bars shall be a minimum of 40 x diameter, and shall be staggered at random.

Openings in foundation walls shall be trimmed with a minimum of ID12 bar extending not less than 600mm beyond the edges of the opening.

3.05 FORMWORK

Formwork generally shall be of 12mm minimum thickness plywood shutters or 25mm non-staining boarding. Formwork shall be so constructed that it can be easily removed without damaging the concrete.

Formwork shall be constructed true to line and level and shall be effectively propped, tied and strutted to prevent deformation or movement under the load of the wet concrete.

Form all openings in formwork for vents, conduits or ducts required.

3.06 FOUNDATIONS

Foundation footings, walls and reinforcing shall be as shown on the drawings. All footings shall be laid on a clean, level bed. See also section - Excavation.

While concrete is still green, place all bolts for holding down wall plates, bearers, braces, etc. Bolts for holding down wall plates shall be not less than 10mm dia., set not less than 75mm into the concrete, cranked for anchorage. They shall be set not more than 300mm for a corner or end of a wall and shall be spaced at not more than 1.4m centres. Each length of plate shall be held down with not less than 3 bolts.

Bearers shall be fixed to foundation walls or nib piers with 12mm dia., bolts set not less than 150mm into concrete.

3.07 PILES

Foundation piles shall be precast or cast-in-situ concrete parallel sided, tapered or circular. Piles shall be not less than 200mm across the base and not less than 150mm across the top.

Piles shall be set into concrete pads of widths and depths noted on the drawings. Concrete piles shall be carried up to heights to suit sub floor framing and the maximum heights noted below -

Cantilevered piles	600mm
Anchor piles	150mm
Ordinary piles supporting jackstuds	600mm
All other piles	1.5m

Unless otherwise noted on the drawings, piles shall be ordinary piles.

Piles shall be not less than 150mm above ground, and shall be set into concrete pads with not less than 75mm of concrete between the base of the pile and the ground.

Timber piles shall be of natural round timber treated to T.P.A.C2 specification and shall have a minimum diameter of 140mm.

Timber piles shall extend a minimum of 300mm above finished ground level and any cut ends shall be brush treated with preservative.

Timber piles may extend to the following heights above ground -

Cantilevered piles	600mm
Braced piles and ordinary piles	
directly supporting bearers	3.0m

All anchor piles must be concrete or masonry.

Timber piles shall be set into concrete footings as noted on the drawings.

3.08 CONCRETE SLABS

Where shown on the drawings, cast concrete slabs to porches and floors. Slabs shall be a minimum of 100mm thick and shall be reinforced with H.R.C. 665 mesh placed 40mm from the top of slab. Lap mesh 230mm at edges.

Before casting slabs (except porch slabs), blind hardfill with sand to a depth of 25mm. Lay vapour barrier of 0.10mm polythene or Moistop 737 underlay.

Joints shall be lapped 150mm and sealed with polythene tape. Vapour barrier shall be continuous across beams and footings as shown. Where pipes penetrate the vapour barrier they shall be wrapped with tape to provide a seal.

Care shall be taken whilst pouring concrete to ensure that the vapour barrier is not damaged. Tears shall be repaired before concrete is poured.

Slabs shall be screeded level with falls where shown on the drawings.

After the initial set has occurred, finish surface of slab with a steel float, taking care not to pull the aggregates or form ridges.

Care should be taken not to excessively work the surface, drawing excess laitance. Should this occur, the surface shall be treated with a hardening substance to prevent dusting.

Slabs shall be finished level with a tolerance of ± 4 mm in the length of a 3.0m straight edge.

Concrete shall be kept from premature drying out by keeping damp for a period of 5 days after pouring.

3.09 PLACING OF CONCRETE

Concrete shall be mixed as close to the work as possible and shall be placed from the mixer directly into the formwork. Concrete in formwork shall be compacted by means of immersion vibrators, handled by competent operators or by other suitable tools. Care shall be taken not to excessively work the concrete.

3.10 PORCH AND TERRACE FLOORS

Concrete slabs to be minimum 100mm thick supported on consolidated hardcore filling and laid with an even fall to exterior edges.

Supporting walls to be minimum 100mm thick concrete.

Steps to have treads and risers of size shown on drawings and to have minimum 100mm throat.

All reinforced as detailed on drawings. All concrete surfaces which are to be plastered are to be cross combed to form key for plaster.

BRICKLAYER4.01 PRELIMINARY AND GENERAL

Read and note all clauses under Preliminary and General of this specification where they apply to this trade. (These clauses shall also apply to veneer work of concrete block, split stone or similar materials.)

4.02 RELEVANT SPECIFICATIONS

All work shall be in accordance with the requirements of NZSS 1900 CH 6.2 and NZSS 1900 CH 6.1.

4.03 MATERIALS

- (a) Bricks: Bricks for external veneers and foundation walls shall be of the colour and type selected and shall comply with NZSS 366 Clay Building Bricks Grade A or B. All fair face brickwork shall be laid with their best face outwards.
- (b) Cement: Cement shall be ordinary Portland Cement and at the time of use shall comply with NZSS 1844 Portland Cement.
- (c) Plasticizers: Plasticizers shall be used in accordance with the manufacturer's instructions and no other additives are to be used in conjunction with these materials. On no account will further additions be made at the time of retempering mortars.
- (d) Water: Water shall be drinking quality and shall at the time of use be free from acids, alkalis and organic impurities.
- (e) Sand for Mortars: Sand used shall be clean, sharp and shall comply with the relevant clauses of NZSS 2129, 1967, Sands for Mortars, Plasters and External Renderings.

4.04 PREPARATION OF MORTAR

Mortar shall be prepared by mixing in an approved batch mixer. Measurement of materials shall be by volume in a suitably calibrated device. Mortar shall be mixed until a homogenous mass is obtained but for not less than 5 minutes. All mortar, whether on the boards or left in the mixer, shall be used within 90 minutes. Mortar not used in this time shall be discarded.

4.05 BRICKLAYING

Brick shall be laid in stretcher bond, true to line, level and plumb, and in accordance with best trade practice. All work shall be laid from the lowest corner and no corner shall be raised more than 1,000mm above wall line. Corners shall be racked back. On no account will tothing be permitted. All joints will be completely filled with mortar and the bricks shall be shoved into place at least 10mm and shall be disturbed as little as possible after initial positioning. Head joints shall be buttered on three edges, deeply furrowed joints will not be permitted and mortar shall be spread on the bed joint not more than three bricks ahead of laying the next course. Joints shall unless otherwise specified, be not more than 10mm thick and shall be tooled as directed as work proceeds. Where tapestry bricks are used, care shall be taken to use a tool slightly smaller than joint width to prevent pushing mortar into the brick striations.

4.06 BRICK VENEER

Construct brick veneer as shown on the drawings and in accordance with NZS 3604. Mortar and Workmanship shall be as previously specified. Veneer ties, and their anchorages, shall be designed and fixed so as to resist a lateral load in tension or compression of twice the weight of veneer which each tie supports, without elongation or shortening of the assembly by more than 1.2mm.

Ties shall be non-corrodible metal or shall be galvanised after forming, with a zinc coating. If of round bar they shall be of a minimum of 4.75mm; if of sheet metal they shall be of a minimum thickness of 1.3mm and a minimum width of 25mm. Sheet metal ties are preferred.

Approved ties shall be spaced at not more than 600mm horizontally and not more than 350mm vertically or 450 horizontally and 400 vertically. An air space of at least 40mm shall be maintained between timber frame and exterior veneer and weep holes shall be left every third joint for the discharge of water. Leave 5mm gap along the top of the veneer below the soffit to provide ventilation to cavities. Care shall be taken to maintain the air-space and upstand free of any mortar droppings, protruding joints, or pipes or electrical wire, junction boxes, etc. Incorporate galvanised 4 mesh 1.0mm vermin proofing. Where shown build in bricksize concrete vents as required. All facing work shall be kept clean as the work proceeds. On completion, all brick work shall be left in a clean state. Clean down with a weak acid solution to remove mortar stains.

4.07 SILLS

Sills to be brick on edge, quarry tiles, or concrete slabs brought to the underside of wooden sills, junction between to be filled with 'Hydroseal' and over-pointed with cement mortar.

4.08 BUILDING PAPER

Cover the whole of the external face of framing with breather type building paper, lapped 150mm at joints and fastened to framing with large headed galvanised clouts - (to be carried out by Carpenter). Veneer ties shall be fixed over the building paper. Fixing nails only shall penetrate through the paper.

4.09 VERMIN PROOFING

Build-in 100mm wide strips of approved galvanised wire mesh secured to bottom of wall plates with 19mm by 2.0mm galvanised wire staples carried across cavity and taken 25mm into work. Vermin proof dividing wall and wherever necessary to prevent entrance of vermin.

4.10 CHIMNEY BASE AND HEARTH

Construct pad and base walls for chimney, poured integrally with foundation walls. Walls shall be 125mm minimum thickness, reinforced with ID12 bar around top and D10 bars at not more than 200 centres both ways. Vertical reinforcing shall extend into the hearth slab, and shall be not more than 40mm from the top of the slab.

Place ID12 bar around the perimeter of the slab.

The hearth shall have a minimum thickness of 100mm and shall extend 500mm from the face of the fireplace.

Provide opening in hearth for tilt plate and opening in exterior wall for ashpit door where shown on the drawings.

4.11 PRECAST CONCRETE CHIMNEY

The Chimney shall be of standard construction. Type as shown on drawings. All mortar to joints composed as for brick chimney. Reinforce shaft from gathering to top of flue with four D16 rods, well grouted in. Laps where required are to be 40 diameters. (Laps are to be avoided where possible). Top of chimney shaft is to finish at least 225mm above ridge level.

4.12 FIRE BOX

Construct fire box in H30 fire bricks, laid on the flat and bonded together with 'Firecem'. The sides of the fire box shall be angled inwards to the rear. The back of the fire box shall be angled forwards towards the top and shall turn upwards below the level of the fire surround. The back shall be angled and turned to provide a throat of 100mm maximum. Form smoke shelf and parge to provide smooth air flow. Provide hobs for cast iron or steel plate grate.

4.13 SURROUND

Allow the provisional sum as shown in the addenda, for the supply and installation of a selected fire surround and hearth surfacing, unless details for special surround and hearth are shown on the drawings.

CARPENTER5.01 PRELIMINARY

The whole of the works shall be carried out in accordance with and shall conform to the By-Laws and Regulations of the Local Authority and Mortgage Institution.

The Contractor shall obtain all permits and pay all inspection and prepay other fees necessary for the carrying out of this Contract.

5.02 EXTENT OF WORK

Comprises the supply and fixing of all timber work, lining, sheathings, fittings, finishings and hardware as shown to the best trade practice.

Cut away for, attend on and make good after all other trades.

Provide and fix all necessary beads, stops, fillets, etc as may be required. Leave all working parts in good working order.

5.03 MATERIALS

All materials shall be new unless otherwise specified and the best of their respective kinds.

All timbers shall be as specified and graded according to N.Z.S.S. 169 and shall be in straight and in as long lengths as procurable.

All treated timbers shall be in accordance with the Timber Preservation Authorities Regulations.

Framing timbers to which linings are to be fixed should be gauged to eliminate variation in size.

Exposed exterior and interior finishing timbers unless detailed otherwise, are to be machine dressed to a constant thickness and width.

5.04 WORKMANSHIP

Workmanship of the best shall be employed in thoroughly securing and framing together spiking or bolting down as may be required.

All nails in exposed work are to be punched below the surface.

5.05 PAINT PRIMING

All exposed exterior woodwork including laps, rebates, mitred joints, etc, where paint finished shall be primed and where stain finished shall have one coat of stain as required.

5.06 DAMP PROOF COURSE

Lay an approved 3 ply bitumen fabric D.P.C. or other approved material under all timber which is in direct contact with concrete or masonry construction.

5.07 TIMBER GRADES

The Contractor shall allow for all timbers as specified below.

Machine dressed timbers shall be thoroughly kiln dried or air seasoned to a moisture content of 12 - 18%.

Sub Floor Framing	- B.A. Ht. Rimu or Tan Pine
General Framing Timbers	- Boric Treated No.1 framing grade Pinus Radiata or B.A. Rimu
Exposed beams, rafters, joists, trusses	- Clean Douglas Fir or Oregon

- Exterior Finishing Timbers - Heart or tanalised treated Rimu, Matai, or white Pine or as detailed on plans.
- Interior Finishing Timbers - Heart B.A. Rimu or finger-jointed Pinus where painted.

5.08 BUILDING PAPER

Provide breather-type building paper complying with NZS 2295 and secure to the exterior face of stud framing or sheet bracing material.

Run building paper horizontally with upper sheets lapping over lower not less than 75mm. Adequately secure to plates bearers and studs, extending from upper side of top plate to the underside of the bearers or wall plates supporting the ground floor joists.

Replace or adequately repair if punctured or torn, immediately before fixing exterior coverings.

5.09 SUB FLOOR FRAMING

Lay bearers across piles and foundation walls in the sizes indicated on the drawings.

Fix bearers and jack studs to ordinary piles with 4mm dia galv. wire passing through the pile, wrapped over bearers, or 200mm up jack studs and securely fixed to the timber with not less than 3 galv. staples per fixing.

Fix bearers or plates across cantilevered piles with 12mm dia. bolts or rods set into piles. Provide nuts and washers to bolts, to secure timbers or by clenching down rods. Bearers to be joined over supports with 45 minimum landing otherwise bearers shall have minimum landing of 90mm.

Fix braces to anchor piles with m12 bolts.

Bearers shall be laid in straight lines and packed level off piles. Where possible packing shall be avoided, but where required provide full support to bearers. Malthoid packing must not exceed 3 layers. Where greater depth packing is required, it shall consist of accurately gauged timber set under the bearer, and shall be securely fixed to prevent displacement.

5.10 FLOOR JOISTS

Floor joists shall be of the sizes noted and at centres indicated on the drawings.

Gauge joists level and in straight lines. Provide minimum landing of 32mm on their supports. Make all joints over supports except for cantilevered joists. Joists may be butted over supports except joists to which diagonal bracing is attached. These joists and every 3rd joist, shall be lapped 300mm over the centre of a support or shall have a 300mm timber flitch plate centred on the joint and connected to each joist with 4/100mm nails to each joist, (alternatively 2 connectors each having a capacity of 3kN.).

Provide double joists under all bearing walls. Double joists may be separated by 50mm packings at not more than 600mm centres. Non load bearing walls shall be over joists or may be supported by 100 x 50 blocking between parallel joists, at each end of the wall, at each side of door openings and at not more than 1.2m centres.

Fix 25mm thick boundary joists as trimmers to the ends of all joists as indicated on drawings, or fix other support as detailed on the drawings or permitted by NZS 3604.

Provide full depth blocking or herring bone strutting at the mid span of all joists exceeding 2.4m span as indicated on the drawings. All joists shall be fixed to supporting bearers, beams or plates as required by the nailing schedule, with additional fixings as shown on the drawings.

Provide doubling between joists at the line of all joints in flooring and for ceiling linings where the joists are for an upper floor.

5.11 WALL FRAMING

Frame up for walls and partitions as shown on drawings. Studs shall be cut square at ends or true to angles of gable or sloped frames. All studs shall be continuous for full length from top to bottom plates including plates at roof level on gable frames. Fix ribbon plate to studs for fixing ceiling joists at gable and frames.

Framing shall generally be out of 100 x 50 or 75 x 50 No.1 Framing grade treated Radiata pine.

Top and bottom plates shall be sizes complying with Tables 18 and 19 of NZS 3604 and as shown on the drawings. Studs shall be of sizes and at centres shown on the drawings and as required by Tables 12, 14 and 15 of NZS 3604.

Provide 2 rows of doublings in the height of each wall to provide stiffness to framing and support for linings.

5.12 LINTOLS

Lintols shall be of sizes shown on the drawings and complying with Table 16 of NZS 3604, Appendix A.

Lintols shall be supported at ends by checking trimmer studs not less than 15mm nor more than 20mm for 100mm deep lintols. Lintols not exceeding 200mm deep, shall be supported by a 50mm thick doubling studs. Lintols not exceeding 300mm deep, shall be supported by a 75mm thick doubling studs. Lintols shall be fixed to trimmer studs and trimmer studs to floor joists at the bottom with 25mm wide galv. straps or other similar fixings as required by NZS 3604.

Refer also to the drawings and/or Fig 41, NZS 3604.

All nailing of treated framing shall be as shown on the nailing schedule.

5.13 BRACING

All bracing elements shall be located strictly in the positions shown on the drawings.

Metal bracing shall be 22 x 22 x 1.2mm galvanised steel angles or pairs of 22 x 22 x 1.2mm galvanised steel strip braces, fixed to top and bottom plates and studs, as shown on the nailing schedule.

Where angle braces are used, they shall be set in straight lines and saw cuts in framing shall only be of sufficient width and depth to neatly accommodate the bracing. Excess depths of cuts will not be permitted and studs cut to excess depths will be removed and replaced.

Bracings shown on the drawings are those required to comply with NZS 3604. The Contractor may provide additional bracing to hold frames square and true during erection.

The plan lengths of the bracing shall be not less than shown on the drawings.

Linings fixed over bracing and forming part of the bracing element, shall be fixed to framing ALL ROUND with fixings at centres as set out in the nailing schedule.

Generally, Types 1 and 3 bracing units require the lining to be fully fixed on one face of the framing only whilst Types 2 and 4 require complete fixing of the lining on both faces of the framing over the area of wall covered by the brace.

Sheet bracing shall be of the materials and shall be fixed in the locations shown on the drawings. In addition to the nail fixing required in the nailing schedules, sheet bracing elements shall be connected to bottom plates and joists or trimmer joists as shown in Fig. 47 of NZS 3604.

Bottom plates shall be held down to slab floors with 12mm dia. bolts or proprietary fixings not more than 150mm from the ends of the bracing element and at not more than 900mm centres between with nail plates or similar fixings between bottom plates and end studs, all as shown on Fig. 67 of NZS 3604.

Internal walls acting as bracing elements, shall be connected to exterior walls at top plate level, either directly or by a framing member in the line of the wall, at right angles to the exterior wall. Connections shall be made using nail plates or 25 x 1mm steel straps with 6/30 x 2.5 f.h. nails into each member.

Top plates in walls containing bracing elements, shall be butted together and jointed with metal connections as above. See addenda and drawings for nail plate sizes and number of steel plates required at each connection. See also Clause 6.7 K and figure 43 in NZS 3604.

5.14 POSTS AND BEAMS

Where shown on the drawings, erect posts and beams out of sawn timber, treated to TPA C7 Specification. Posts shall be anchored to concrete base pads with 50 x 6mm galvanised steel, fishtailed straps, 450mm long set 225mm minimum into concrete, each side of posts. Fix posts to plates with 2/12mm dia. galvanised bolts. Connect posts to beams with 50 x 6 x 400 long galvanised steel plates each side and 2/12mm diameter galvanised bolts through plates into each member, or as otherwise detailed on the drawings.

5.15 ROOF AND CEILING FRAMING

Frame up for roof as shown on the drawings. Where roof trusses are used, they shall be constructed in a properly equipped factory using nail plates at all joints.

5.16 TRUSSES

Trusses shall be constructed to the standard designs of the manufacturer noted on the drawings or to equivalent design of other approved manufacturers.

All trusses shall be certified by the fabricator as being constructed to the standards required by the designers (Pryde or Gang Nail) as required by NZS 3604; 10.2.3.

Where alterations to standard designs are required to fit the construction, the design amendment is to be carried out by the original truss designer and the fee for this work is to be allowed for in the tender.

Trusses shall be carefully handled and stacked on the site to prevent damage. Damaged trusses shall be removed from the site or repaired to the satisfaction of the designer or fabricator.

Trusses shall be fixed to top plates with 2 skewed 100 x 3.75 nails plus additional fixing to top plate and wall studs consisting of 4mm dia. wire dogs or 4mm dia. galv. wire ties wrapped over top chord and stapled to studs or other plate connectors. Multigrip anchors, galv. steel straps or similar.

Connect jack trusses to common trusses with connectors and blocking as detailed by the manufacturers.

Provide 75 x 50 blocking between bottom chord, or ceiling battens, as shown on the drawings.

5.17 FRAMED ROOFS

Frame up for roof as shown on the drawings. Rafters shall be birdsmouthed over top plates to not more than $\frac{1}{4}$ of their depth. Fix to 25mm ridge board. The ridge board shall be the full depth of the rafter. Fix rafters to ridge as shown in the nailing schedule.

Rafters shall be fixed to top plates with 2/100 x 3.75mm skew nails, plus additional fixings securing rafters to studs and top plate as shown on the drawings. These shall consist of 4mm dia. galv. steel dogs, or 4mm dia. galvanised wire wrapped over rafter and stapled to studs, or proprietary steel plate connectors. - Multigrip anchors or similar, used according to the manufacturer's recommendations. Fix 25 x 150 timber cleats to each pair of rafters directly under the ridge with 4/75 x 3.15 nails to each rafter.

Fix under purlins, collar ties, purlin struts, chocks and strutting beams and ceiling joists as shown on the drawings.

Nailing at all joints shall be as shown on the nailing schedule.

The feet of each pair of rafters shall be connected by a ceiling joist at the top plate level, unless shown otherwise on the drawings. Ceiling joists shall have a minimum bearing on their supports of 32mm. At joints, Ceiling joists shall be lapped 150mm over supports and spiked together or shall be butted and flitched with 300mm long member to match joists. Nailing shall be as required in the Nailing Schedule.

Fix ceiling runner across ceiling joists as shown on the drawings. Runners shall be supported off packing on to top plates of walls, and shall be held vertical at ends. Hang ceiling joists from runners with 50 x 50 timber hangers on alternate sides of runner or with proprietary metal hangers.

Ceiling joist and runner sizes shall be of size shown on the drawings and complying with Tables 23 and 24 of NZS 3604.

Under purlins shall be fixed in the position and of the sizes shown on the drawings and according to Table 25 of NZS 3604.

Under purlin struts shall be located at centres and of sizes shown on the drawings, and in accordance with NZS 3604; 10.3.8.

Fix strutting beams where shown on the drawings. Beams shall be kept 25mm clear of the top of ceiling joists with packings at the supports. Strutting beams shall be of the sizes shown on the drawings and as required by Table 26 of NZS 3604.

5.18 PURLINS AND TILING BATTENS

Securely fix purlins and/or tiling battens as shown on the drawings. Purlins shall be set out equally along the length of the rafter at centres not greater than shown on the drawings. Fix purlins to rafters with nailing as required in the Nailing Schedule; plus any additional fixings as required on the drawings.

Tiling battens shall be of the sizes shown on the drawings, and at centres to suit tile materials. Tiling battens shall be supplied and fixed by the Roofing Sub-contractor. The General Contractor shall provide temporary members required to hold roof framing in position until tiling battens are fixed.

5.19 ROOF BRACING

Provide and fix roof bracing as shown on the drawings and required by NZS 3604. Roof plane bracing shall consist of pairs of 25 x 1.2mm steel strap bracing fixed to each truss or rafter at crossing point and to the top plate of external walls. Bracing may be fixed to either the top or underside of rafters.

Where shown on the drawings, fix roof space bracing.

Braces shall consist of a single member, or pairs of 100 x 50 members, spaced 50mm apart and nailed together through blocking pieces not more than 1.000 apart. Braces shall be fixed to blocking between rafters or ridge at the top and a 100 x 50 brace runner at the bottom, connected to ceiling framing.

Bracing and blocking shall be fixed as set out in the Nailing Schedule.

Where shown on the drawings, hip end jack trusses or jack rafters on heavy hip roofs, shall be braced from the top plate to an internal wall bracing element above the level of the ceiling joists. Brace with 100 x 50 timbers on the flat, fixed to end wall framing, each truss chord or ceiling joist it crosses and to the wall bracing element, as shown in figures 55 and 56 of NZS 3604.

5.20 DWANGS AND BATTENS

Provide dwangs around the perimeter of all ceiling areas and between ceiling joists or trusses at 900mm centres. Dwangs shall be 75 x 50 fixed on edge. Where battens for ceiling linings are shown on the drawings, they shall be of the sizes and at the centres shown on the drawings.

Trim for ceiling access manhole where shown on the drawings. The access hole shall be not less than 500mm x 600mm and shall be trimmed with framing of the same size as the ceiling joists.

5.21 PLATFORMS IN ROOF SPACE (Water Tank Stand)

Frame up for tank stand over bearing wall or as shown and detailed elsewhere on the drawings. The tank stand shall consist of 50mm thick timber laid on flat and fixed to ceiling joists. Provide 100 x 50 cleats on flat around the tank overflow tray to prevent sliding.

5.22 EAVES

Frame up for eaves as shown on drawings with 75 x 50 ribbon plate fixed to wall framings and 50mm trimmer fixed to ends of rafters.

Fix 75 x 50 soffit bearers at 600mm centres. Where soffit bearers lie along side rafters, they shall be spiked together.

5.23 WARDROBES AND CUPBOARDS

Frame up for wardrobes and other cupboards where shown on the drawings.

Where shown on the drawings or noted in the addenda, trim for cupboards over wardrobes and linen and broom cupboards, etc. Over cupboards shall generally be the same width as the cupboards below.

Provide a shelf in each wardrobe, 300mm wide out of ex 25mm timber, particle board or coreboard. Shelves over 1.5m long, shall be supported by an ex 75 x 25 rail fixed to the wall behind below the shelf, and a c.p. hanger to the framing above. The shelf shall be fixed 1.6mm from floor or at other height as directed or detailed. Fix 20mm c.p. hanging rail below shelf, 1.525mm from floor, with c.p. brackets at each end. Rails over 1.5m long, shall have bracket at mid-span fixed to shelf above. Fix additional shelves as detailed or noted on drawings.

Provide shelf and rail in coat cupboards as for wardrobes.

Linen cupboards shall have slatted shelves out of 50 x 25 timber fixed with 12mm gaps between slats. Fix slats to 25 x 50 battens. Shelves shall be loose laid, resting on battens fixed to side walls. Provide 5 tiers of shelves to each linen cupboard.

Pantry cupboards shall be fitted with shelves out of 25mm timber. Bottom shelf shall be 100mm above floor, and 450mm deep. Provide 2 additional shelves 450mm deep and 400mm apart. Upper shelves shall be 250mm deep and 280mm apart, starting 400mm above lower shelves. Provide 4 rows of upper shelves. Shelves shall be returned at sides of pantry as shown on the drawings, supported at corners.

5.24 HOT WATER CYLINDER CUPBOARD

Frame up for hot water cylinder cupboard where shown with stand for cylinder framed up out of 100 x 50 timber with ex 25mm timber decking. The stand shall be framed up at a level to suit the cylinder model and installation.

Cylinders connected to wetback heaters, shall be at a level to suit heights of boiler connections, and shall be as high as possible. Cistern models shall also be as high as possible.

Check with Plumber for details of type of cylinder and height required for cylinder stand.

If cylinder is fixed at floor level, provide slatted shelves above cylinder top. Provide slatted shelves at side of cylinder if shown on drawings. Shelves shall generally be 250mm apart.

5.25 EXTERIOR CLADDINGS

Exterior claddings shall be as shown on the drawings and set out on the addenda. All materials shall be fixed according to the manufacturer's recommendations and details and according to the best accepted trade practices. All linings shall be fixed over breather type building paper. All fixing nails shall be galvanised or other non-corrodible metal as noted on the addenda. Unless otherwise noted, all nails in timber cladding, shall be punched below the surface.

Weatherboards shall be out of 25mm timber, bevelled back, rusticated, or skew cut as noted on the drawings. Generally, bevelled back and rusticated weatherboards shall be out of 200 or 250 mm wide timbers. All laps, butt joints and mitres, shall be primed before fixing. Weatherboards shall be fixed to framing with 1/60 x 2.8mm nails just above the lap, to each stud, except just below the rebate groove.

Horizontal laps shall be not less than 23mm for weatherboards with a rebate of not less than 25mm and 32mm for non rebated weatherboards. All weatherboards shall have an anti-capillary groove at the lap.

All end joints shall be mitred and made over studs, with bored holes for nailing at end joints and corners. Mitre external corners or fit with cover boards and scribes or rebate plugs, as shown on the drawing and noted in the addenda.

Internal angles shall be neatly scribed. Unless of Redwood or Cedar, all weatherboards shall be treated.

Pinex Weathersides and Hardieplanks cladding, shall be fixed as recommended by the manufacturers, with soakers at joints, internal and external angles. Sheet cladding (Hardieflex) shall be of thickness shown on the drawings. Where cladding forms part of a bracing element, it shall be fixed as previously described and as required by NZS 3604; 6.9.4., and as shown in the Nailing Schedule. Cladding shall be fixed according to the manufacturer's recommendations and as required by the Nailing Schedule. Unless noted otherwise, vertical joints between linings shall be set in extruded P.V.C. mouldings. Horizontal joints shall be flashed with a galvanised Z flashing tucked 50mm behind upper sheet and carried 20mm down over lower sheets.

Where shown, or noted on drawings, seal joints with a non-slump elastomeric sealant, applied as recommended by the makers, with surfaces primed as recommended.

Vertical boards and battens and shiplap boarding shall be fixed where shown. Both types of cladding shall be fixed to 50 x 40 dwangs or 75 x 40 timber walings at not more than 480mm centres.

Claddings shall be in continuous lengths.

Vertical boards and battens shall have weather grooves not more than 12mm from each edge and shall be fixed with not more than 6mm between boards. Unless noted otherwise, the timber for boards and battens shall be Redwood or Cedar, out of 200 x 25mm boards with battens out of 75 x 25, fixed below the boards. Nails for fixing shall be anodized aluminium. Ship-lap boarding shall be of suitable available timber. Laps shall be a minimum of 30mm with weather grooves on each face of laps.

See Bricklayer for requirements for brick or stonework veneer.

5.26 SOFFITS

Where shown on the drawings, line soffits with 6.0mm Hardiflex. Lining shall fit close to wall framing and shall fit into grooved fascia at outer edge. Joints in sheets shall be set into extruded P.V.C. mouldings. Fix with galvanised shear point nails.

Other soffit linings shall be as shown on the drawings, fixed according to standard trade practice.

5.27 EXTERIOR FINISHING TIMBERS

Supply and fix all exterior finishing timbers - fascias, barges, corner stops, scribes, etc., required to complete the works. Scribes shall be out of 12mm timber. All other finishing timbers shall generally be out of 25mm timber. Fascias to eaves shall be grooved to take soffit linings. Fascias to windows and exterior doors shall be out of 75mm wide timber unless otherwise noted. Fascias and barges to roofs shall be out of suitable width timber.

All joints in exterior finishing timbers shall be mitred and shall be primed before fixing. Mitres shall be neatly and accurately cut and fitted.

5.28 TIMBER DECKS

Where shown on the drawings, construct timber framed decks with plates fixed to wall framing as shown. Connect deck joists to wall plate with galvanised metal connector plates as shown. All fixing nails and bolts used shall be galvanised. Erect posts and beams to carry decks as detailed. All deck framing timbers, including joists, beams, posts, decking and balustrade, shall be treated to TPA C7 specification or better.

5.29 FLOORING

Lay high density, temporary water proofed, flooring grade particle board or T & G flooring as shown on the drawings. Joints in sheet flooring shall be made over supports. Where necessary, provide 75 x 50mm dwangs between joists to support joints. Fix flooring to joists not less than 10mm from edges around all edges of the sheets and at each intermediate joist at centres shown in the Nailing Schedule.

Where floor is required to act as a diaphragm, sheets shall be not less than 1,200 x 2,400, except where the building size prevents a full size sheet being used.

Where the flooring is to remain exposed, set out sheets to form a pattern and set contrasting timber strips between sheets where required in the addenda or shown on the drawings.

Timber strip flooring shall be tongue and grooved boarding closely cramped at joints. Generally, the timber shall be Rimu or Tawa. Minimum finished thicknesses shall be as required by Table 10 of NZS 3604 for the spacing of the joists.

Boards that do not have end matched joints, shall be joined only over joists. All joists shall be staggered. End matched boards may be joined between joists, provided that each length of unjointed board shall span between 2 or more joists and there shall be 2 or more unjointed boards between end jointed boards.

5.30 FLOOR SANDING

At the completion of the works, all nails in floor shall be punched and the floors shall be sanded to provide a smooth even surface. Where floors are to be varnished, they shall be finished with a fine paper. Particle board floors should be sanded with a rotary type sander. Care must be taken to avoid excess depth of sanding.

5.31 INTERIOR LININGS

All interior linings shall be fixed strictly according to the manufacturer's recommendations. See Schedule of Linings for materials. All lining material must be carefully handled and stacked on site to prevent damage.

5.32 GIBRALTAR BOARD

Where shown on the drawings and on the Schedule of Linings, line walls with standard 9.5mm Gibraltar Board or 9.5mm Gibfoil.

Sheets may be fixed horizontally or vertically, according to the details provided by the manufacturer, except that where the lining forms part of a wall bracing element, dwwanging must be provided at all edges of the sheets. Linings to exterior walls and ceilings, shall preferably be Gibfoil. Standard Gibraltar Board may be used but they must be fixed over a polythene vapour barrier. Where Gibraltar Board forms part of a wall bracing element or a ceiling diaphragm, they shall be fixed to framing all round and at intermediate framing as set out in the Nailing Schedule.

Except at bracing elements or ceiling diaphragms, linings may be fixed to framing using Gib Fix adhesive with supplementary nailing.

Leave gaps between joints in sheets. Where wallpaper is to be applied, stop joints and nails with 4F stopping plaster or Gibstopping compound, feathered out approximately 100mm each side of joint and trowelled to a smooth even surface. Where walls are to be painted, joints and corners should be finished using Gib Bedding compound, Perf-a-Tape and Gib finishing compound with stopping feathered out at edges. After stopping has set, sand lightly to a smooth surface using 120 grit abrasive paper. Fix timber or expanded metal strips at external corners of linings.

5.33 PINEX INSULATING BOARD

Where shown on the drawings or on the Schedule of Linings, line ceilings with 12mm pre-primed Pinex insulating board. Sheets shall be set out to form a pattern on the ceiling. Fix to roof framing or battens as shown with double angled nails or galvanised clouts as recommended by the manufacturer. At joints, sheets shall be veed and rebated and shall have a moulding inserted in the rebate. Joins in mouldings shall be mitred or scribed to suit. All fixing nails shall be stopped with 4F plaster and shall be lightly rubbed with a piece of scrap lining to provide a textured surface.

5.34 PINEX TILES, PLANKS AND PANELS

Where shown on the drawings and Schedule of Linings, fix Pinex tiles, planks or panels to walls or ceilings.

Linings shall be fixed to battens at ceilings as shown, stapled to framing as recommended by the manufacturer.

5.35 PRE-FINISHED WALLBOARDS (Formica wallboard, Seratone, etc.)

Where shown on the drawings, line walls and ceilings with pre-finished wallboards. Linings shall be fixed to framings with wallboard adhesive stik pads or similar. All joints shall be set in extruded P.V.C. mouldings.

Where linings are fixed in shower cubicles, the back and edges of sheets shall be primed for 100mm in from the edges before fixing.

Set the edge of sheets against baths into extruded P.V.C. bath-flash moulding, bedded down onto the edge of the bath in white butylmastic sealant. Clean off excess sealant.

Where a wall bracing element occurs, prefinished wallboard lining shall be fixed over the Gib Board or Hardboard lining forming part of the bracing element.

5.36 HARDBOARD

Where shown on the drawings or Schedule of Linings, line walls and ceilings with 4.5mm or 6mm standard or oil tempered hardboard, fixed according to the manufacturer's recommendations. Joints shall be veed and butted or set into P.V.C. mouldings as specified. Except where used as part of a wall bracing element, linings may be fixed using wallboard adhesives.

5.37 PANELLING

Where shown on the drawings or Schedule of Linings, line walls and ceilings with selected plywood or solid timber panelling. Plywood shall be fixed with wallboard adhesive and or nailing with joints set in extruded P.V.C. moulding, butt jointed or with timber moulding between joints as specified. Where the sheets are butt jointed or have a jointer bead, the edges shall be planed to provide a true joint.

Shiplap or other solid timber lining shall be secret nailed. All boards shall be fixed true and plumb.

5.38 INTERIOR FINISHING TIMBERS

Provide and fix all skirtings, architraves, scotias, sillboards and other mouldings and beadings required to complete the works.

Where finishing timbers are specified to be clear finished, they shall be Rimu heart or figured as specified. Elsewhere they may be Rimu or finger-jointed, treated Radiata Pine or other available.

Joints in lengths of runs of skirtings or scotias shall be neatly and accurately mitred. At corner intersections, joints shall be neatly and accurately scribed to fit. Inaccurately fitted joints will be rejected.

Sillboards shall be out of 25mm timber, neatly fitted to jambs and mullions.

Skirtings shall generally be out of 100 x 25, bullnosed with grooved back.

Architraves shall be out of 50 x 25mm timber bullnosed with grooved back. Mitre corners and glue joint when fixing.

Drill holes for fixings at ends of all finishing timbers and fix with 40mm long panel pins. Any splits which occur through failure to drill holes or the use of excessively large nails, shall be glued to prevent later opening up. Split timbers may be rejected.

Before fixing in place, all finishing timbers shall be hand sanded to a satisfactory and acceptable finish.

Scotias shall generally be 40mm standard pattern. Where shown on the drawings, provide pelmets over sliding doors and windows as detailed, or described on the addenda.

5.39 SHOWER

Frame up for shower where shown on drawings. Recess framing around shower tray to keep lining 5mm out from the upstand of the shower tray or pack framing out 5mm all round. Carry framing across the front of the cubicle.

Trim opening for sliding or folding door as shown on the drawing and in the addenda, and carry lining around jambs and sill.

5.40 BATH

Frame up cradle for bath out of 100 x 50 or 75 x 50 timber. Check out studs around top as necessary to house bath lip and allow P.V.C. bath-flash moulding to be seated on rim of bath.

5.41 SWITCHBOARD

Trim opening for switchboard and form box to carry switchboard with provision for the board to be hinged for access to wiring at the rear. Line the inner faces of switchboard box with Firestop Gib Board or 2 layers of 9.5mm Gib board. Fit door to face of switchboard with catch.

5.42 BATHROOM CABINET

Trim opening in wall in Bathroom to fit a recessed Cabinet. The cabinet shall be of the type and size noted on the addenda or other selected cabinet. The lining around the cabinet shall be neatly fitted to the sides of the cabinet.

5.43 INSULATION

Ground floor timber floors shall be insulated with Sisalation 737 or similar with perforations, laid over joists with 100mm drape between joists, placed before flooring is laid.

Insulate all exterior walls with R 2.0 fibreglass wall batts, placed in wall cavities. Line ceilings with R 2.2 fibreglass batts placed in cavities of framing or over ceiling joists.

5.44 HARDWARE

The Contractor shall allow in his tender, the P.C. sum for the supply of Hardware shown in the addenda. The Contractor shall allow for taking delivery of and fixing of all items supplied from the P.C. sum. See also Preliminary and General. Items to be charged against P.C. sums shall include door latches, locks and furniture, window fasteners for windows other than aluminium or J.M.F. windows, cupboard catches and pulls, sliding door tracks and fittings, towel rails, wardrobe rails and other similar items, but shall not include nails, bolts, screws, hinges, or similar connecting devices or fixings.

5.45 BUILT-IN OVEN

If shown on the drawings, frame up for built-in oven unit. The framing shall be out of 75 x 50 timber on edge or flat if shown. Frame up to the sizes shown on the drawings or to suit the selected unit, from installation leaflet provided. Provide shelves and vents as required and indicated on the leaflet.

5.46 HEATING APPLIANCES

Where shown on the drawings, make provision for the installation of built-in or free standing metal fireplaces or supplementary water heaters. Provide hearth slabs as required. All heaters are to be installed strictly according to the recommendations of the manufacturers and the Local Authority requirements. Provide heat resistant linings and clearances from walls and fittings as detailed on the installation instructions provided with each unit. Hearth slabs shall be precast of sizes shown and with the surface finish as shown on the drawings or in the addenda.

5.47 GARAGE DOORS

Supply and install Garage doors of the sizes and types shown on the drawings or in the addenda. All doors shall be provided with locks and all fittings and operating gear and shall be installed according to the manufacturer's details.

5.48 VANITY UNIT

Install vanity unit where shown on the drawings and arrange for the plumber to connect wastes, traps and taps. Vanity shall be to the P.C. sum shown in the addenda.

5.49 NAILING

All nailing to comply with Appendix B attached.

5.50 FLASHINGS

Arrange for the Plumber to provide machine folded flashings for exterior doors and windows out of machine folded 0.6mm galvanised steel. Provide flashings for heads and sills of windows and doors, and for jambs where no fascias are specified. Flashings shall be neatly fitted. Provide isolation strip where galvanised flashings are fixed over aluminium window frames.

JOINERY6.01 GENERAL

All dimensions of windows and joinery fittings shall be ascertained on site. The Joiner shall provide opening sizes in framing for windows or other units as required, to ensure proper fitting when delivered to site.

6.02 DOORS AND FRAMES

Doors shall be 1.980m high by the widths shown on the drawings.

6.03 EXTERNAL DOORS

Supply and fit external doors as shown on the drawings. Hinged doors shall be of sizes shown on the drawings. Generally, external doors shall be solid core, exterior quality flush doors. Frames shall be out of solid timber 50 mm thick, rebated and grooved for weathering. Sills shall be out of solid timber, rebated and throated for weathering. Hang on 1½ pairs of 90mm butt hinges. Doors shall have clashing strip at both sides.

6.04 INTERNAL DOORS

Internal doors shall be .980 high x 40mm thick, hollow core, flush doors. Surfaces shall be suitable for finish as required by Schedule. Paint quality doors may be plywood, hardboard or bisonboard faced. Hang on 1½ pairs B.M.A. finish, 90mm loose pin butt hinges. Doors shall have clashing at lock stile. Frames shall be out of 40mm timber, rebated at jambs or out of 25mm timber with planted stops. Unless otherwise noted, jambs shall be suitable for paint finish. Unless otherwise stated, jambs shall be rebated to receive linings.

6.05 ALUMINIUM DOORS

Where shown on drawings, supply and fix anodised aluminium sliding or hinged doors. Doors shall be complete with locks, rails, weather stripping and fittings. Door frames and framing to doors shall be neatly and accurately cut and fitted with mechanical jointers at corners. Frames shall be fitted with timber reveal linings and shall be fitted into openings according to the manufacturer's details.

6.06 WINDOWS

All windows shall be fabricated in properly equipped workshops by competent tradesmen fully qualified to fabricate and assemble the type of windows specified.

6.07 ALUMINIUM WINDOWS

Supply and install anodised aluminium windows as shown on the drawings. Windows shall be of approved manufacture. Details of window sizes and installation shall be supplied by the selected manufacturer before work is commenced to enable openings to be made to suit. Standard sized windows shall be used unless non-standard sizes are called for. Sashes shall be awning type, hung on Interlock stays or top hung or side hung, hung on stainless hinges as shown.

Sashes and frames shall be mitred at corners and securely fixed with mechanical jointers to hold the frames true and square. Joints shall be sealed with small joint sealant. Sashes shall close against flexible neoprene weather stripping all round. Frames and sashes shall have slots to allow infiltrating water to pass to the outside. Windows shall be supplied complete with glazing and ready for installation. Where required, double glazing shall be provided using Thermopane glazing units. Sashes shall be fitted with a pair of wedge fasteners to each sash and Securilock fittings where specified on the addenda.

Unless otherwise specified, frames shall be supplied complete with factory fitted, ex 25mm timber reveal linings, grooved to receive wall linings. Unless otherwise noted on the drawings or in the addenda, reveal linings shall be suitable for paint finish.

6.08 J.M.F. WINDOWS

Where shown on the drawings, supply and install J.M.F. timber windows of sizes shown. Where possible and unless noted otherwise, the windows shall be from the range of standard sizes.

The windows shall be Sundyne window Range 2, improved frame system, with a flexible P.V.C. airseal strip at sashes. All windows shall be supplied factory pre-primed. All windows shall be manufactured by licensed fabricators and shall conform to the standard details and specifications of the J.M.F. Group. Sashes shall be awning type, hung on Interlock stays and shall be supplied with a pair of wedge fasteners to each sash. Frames shall be grooved to receive linings, unless otherwise specified. All fixed glass panels shall be glazed by the dry bead system. Sashes shall be putty glazed.

Unless fixed glass sizes are such that the manufacturer recommends otherwise, all windows shall be factory glazed. The manufacturer shall arrange for necessary site glazing. Glazing should be float glass or polished plate. Glass shall be of the thickness recommended according to the size of the panes and exposure of the site.

Any broken or cracked glass shall be replaced before the building is handed over.

6.09 STANDARD TYPE TIMBER WINDOWS

Where shown on the drawings, supply and fix timber windows of standard joinery manufacture. All windows shall be constructed to the standards accepted as being best trade practises.

Frames shall be out of solid timber, rebated, grooved and throated for weathering. Rebates at jambs, heads and mullions, shall be 12mm minimum. Provide 15mm rebate on exposed sites.

Sashes shall be top hung, side hung or awning type hung on Interlock stays, as shown on the drawings.

All fixed glass panels shall be bead glazed into frames.

All windows shall be glazed in the factory, unless the sizes of fixed panels are such that the glass may be broken. In these cases, the Joiner shall arrange for these windows to be glazed on site.

6.10 KITCHEN FITTINGS

All cupboards and fittings shall be fabricated by competent tradesmen in a fully equipped factory, according to best Joinery practices. The dimensions of all units are to be ascertained on site.

Fabricate all joinery units as detailed on the drawings, or allow the provisional sum shown in the addenda for these fittings.

Units shall be constructed with carcass work out of 25mm timber, cut and fitted to provide a rigid frame.

Unless preformed drawers are used, all drawers shall have fronts and sides dovetailed.

Provide sink and bench tops as shown with the tops coved to upstands at rear and sides as shown. Formica tops shall have stainless steel sink bowls 510 x 355 bonded and sealed into bench.

The finish to carcass work, door and drawer fronts and shelves, shall be as shown on the drawings or in the addenda. Unless otherwise required, shelves shall be out of 25mm timber, coreboard or particleboard suitable for painting.

All bench and cupboard units shall be backed with hardboard or bison board.

Standard proprietary kitchen units - Hostess, Glenkora, etc., shall be manufactured to the designs and standard of the designers.

The General Contractor shall take delivery of, and install all units, taking care not to damage any surfaces or fittings. He shall arrange to repair or replace, any damaged fittings or surfaces.

ROOF COVERINGS7.01 PRELIMINARY

The whole of the works shall be carried out in accordance with and shall conform to the By-Laws and Regulations of the Local Authority.

7.02 EXTENT OF WORK

This trade consists of the supply and fixing by approved fixers, of roofing and accessories.

7.03 CORRUGATED GALVANISED IRON ROOF

To roof areas where shown on drawings.

a) Materials

The corrugated Galvanised Iron shall be 0.45mm gauge with min, 1½ corrugation side laps and one length from ridge or hip to gutter.

b) Purlins

Fix over rafter at max. 750mm centres for 0.45mm gauge corrugated galvanised iron roofing 75mm x 50mm purlins on flat.

c) Underlay

Over Purlins stretch galvanised 50mm mesh wire netting securely fixed with galvanised staples. Over netting fix heavy quality building paper.

d) Fixing

Fix corrugated galvanised iron roofing with minimum 1½ corrugation side laps. Fix alternative corrugations at fascia and every fourth corrugation elsewhere with lead head nails. Iron to project at fascia to give 40mm drip at spouting.

NOTE: Before fixing corrugated iron all laps and corrugated iron covered with ridging to be primed with Dulux Primer for galvanised iron.

e) Ridges and Hips

Fix over all ridges and hips 450mm wide by 0.45mm gauge galvanised iron lead edged ridging. Fix through corrugated iron into purlins with lead head nails at every alternative corrugation in roofing.

f) Barge

Finish at barge with 0.45mm gauge square edge moulding lapping the roofing at least 2 corrugations.

7.04 GALVANISED IRON TRAY ROOFING

To roof areas where shown on drawings.

a) Materials

The galvanised iron tray roofing shall be either 300mm or 400mm 0.60mm gauge galvanised steel continuous from ridge to gutter with all down-turns and stop ends.

b) Underlay

Over Purlins stretch galvanised 50mm mesh wire netting securely fixed with galvanised staples. Over netting fix heavy quality building paper.

c) Fixing

Form stop ends to all sheets where shown on drawings to obtain a full 50mm turn up of tray with all ends flattened against the turn up. No dipping of the pans in front of the turn ups will be acceptable.

The roofing shall be fixed with galvanised steel strip clip continuously fastened to every purlin, with an additional galvanised steel single side fix clip used at every fixing around the perimeter of the roof area. Form downturns to gutter edges of roof to approximately 20 degrees to the horizontal. Fit all ridge or hip cappings as required.

7.05 CONCRETE ROOF TILES

To roof areas where shown on drawings.

a) Materials

The tiles shall be Monier "Centurion" (colour as selected by owner).

b) Underlay

Over the whole of roof area fix underlay of 6.8kg saturated roofing felt. Lap over all hips, ridges and over fascia board far enough to give drip into gutter. Where the rise of the fascia above rafter top could cause ponding, an anti-ponding board or a device giving similar results should be provided.

Fix battens to a maximum gauge of 350mm. Size of batten shall be not less than that shown on the drawings, with rafter spacing up to 450mm centres 50mm x 25mm, between 450mm and 600mm centres 50mm x 37mm, between 600mm and 900mm centres 50mm x 50mm battens.

c) Tiling

Lay tiles to a minimum head of 75mm. Secure every eaves course tile, every top course tile, all perimeter tiles with 57mm x 25mm galvanised clouts on 50mm x 2.5mm battens and 76mm - 25mm galvanised clouts on 50mm x 37mm and 50mm x 50mm battens. Secure every alternative tile within the body of the roof.

The first course of Monier Tiling shall be fixed so as to provide an adequate projection over the fascia into the gutter.

d) Valleys

Cut Monier tiling neatly and cleanly to the rake of the valley leaving a gap of 75mm to 100mm between the cut edges.

e) Hips

Fix starter hip tiles at the foot of all hips. Cut Monier tiling closely to the rake of the hip. Cover all hips with Monier ridge tiles to colour as specified, bedded and struck pointed in cement mortar coloured to blend in with tiles. Hip and ridge tiles must be bedded solid only at the ends or at the junction of hip and ridge. Starter hip ridge and every alternative ridge to be mechanically secured.

Cover all ridges with Monier ridge tiles of selected colour bedded and pointed to match the tiles. The end ridge and every alternative edge must be mechanically secured. All ridge tile mortar must have weep holes fitted when mortar is still wet.

f) Mortar

All bedding mortar shall be specially mixed mortar and for this purpose shall consist of 4 parts clean sharp sand and 1 part cement and C.P. 30 or similar at the rate of 1.52 litres to 1 bag of cement. The mortar to be coloured to match tiling.

7.06 METAL ROOF TILE

To roof areas where shown on drawings.

a) Materials

The tiles shall be Harveytile or similar (colour selected by owner).

b) Underlay

Over the whole of the roof area fix underlay of an approved roofing felt. Lap over all hips, ridges and over fascia board to give drip into gutter.

c) Battens

Cut battens to manufacturer's recommendations from 75mm x 50mm giving 2 battens. Battens to be fixed at maximum 363mm centres with first batten 330mm from face of fascia.

d) Tiling

Lay tiles as recommended by manufacturer fixing to each tiling batten as work proceeds.

e) Ridges, Barges, Hips

Finish all ridges, hips and barges where shown on drawings, with coated cappings.

f) Valleys

Construct and finish valleys where shown on drawings as recommended by roofing manufacturer.

g) Flashings

Flash and over flash all projections through roofing. All flashings to be coated.

SOLID PLASTERER8.01 PRELIMINARY AND GENERAL

Read and note all clauses under Preliminary and General of this specification where they apply to this trade.

8.02 WORK INCLUDED

The solid plastering or trowelling of all interior floor slabs, the front and back porch slab and steps, also terrace if shown.

8.03 MATERIALS

Cement: shall be as specified under "Concretor".

Sand: shall be river sand sharp and coarse grained and free of any foreign matter.

Hydrated Lime: shall be mill hydrated of an approved brand.

Adhesion Agents: if used shall be in accordance with maker's instructions.

Plasticising agents, used strictly in accordance with the manufacturer's specification, may be used in lieu of hydrated lime.

8.04 WORKMANSHIP

All to the best trade practice. Generally, where plastering is required by drawings, it means finishing to 12mm thickness with a mix of one part cement to three parts sand with 10% of hydrated lime added and finished to a straight and even surface with a wood float.

8.05 FOUNDATIONS

Concrete foundation walls shall be prepared by removing projections, making good any defects, straightening and finishing with a dash coat of 1 to 3 cement and sand applied to give a regular and satisfactory coverage. Texture finish as shown.

8.06 CONCRETE FLOORS (Main) See Drawings

Co-operate with Concretor and allow for plastering of main floor. Float up to true level and steel float finish to remove pattern. Do not over-trowel. A hard dense finish is required.

8.07 PORCH AND STEPS AND TERRACE (if shown)

Plaster up in one operation. One coat 12mm thick to terraces and porch slabs, 12mm thick to verticals and sides, etc. Wood float up then give light sweeps with steel float to remove blemishes.

8.08 VENTS

Supply and install pre-cast concrete or other suitable ventilators in foundation walls where shown.

8.09 COMPLETION AND CURING

Leave all work complete and clear away all plaster droppings. Keep work damp and maintain all finishes to the completion of the work.

DRAINLAYER9.01 PRELIMINARY AND GENERAL

Read and note all clauses under Preliminary and General of this contract where they apply to this trade.

9.02 EXTENT OF WORK

Work in this section of the contract comprises all surfaces and foul water drainage up to above ground level to connect to Plumber's work. Include all pipes and specials, fittings, construction of manholes, all gully traps and connections for terminal vents, soil and waste pipes. The Drainlayer shall confer with the Plumber and shall arrange with the Contractor before the foundations are laid to fix the exact position of all connections of wastes and drains.

9.03 STANDARD OF WORK

The whole of this work shall be carried out by experienced tradesmen to the satisfaction of the Owner and the Local Council Drainage Inspector. Shall conform to the requirements of the Drainage and Plumbing Regulations of 1978, and the Local Council Specification. The Contractor shall allow accordingly should conflict exist. Obtain all permits, service all notices and pay all fees required and arrange for all tests.

9.04 MATERIALS

All materials shall be the best of their respective kinds.

General drains shall be 100mm diameter first class glazed earthenware with rubber ring joints. Where the Engineer approves in writing, plastic drainage pipes may be used. Pipes shall be laid and jointed as recommended by the manufacturers.

9.05 CONNECTION TO EXISTING DRAINAGE

The Drainlayer is responsible for verifying the position and depth of the connection and commence laying his drains from this point.

9.06 DRAIN TRENCHES

The excavation of trenches for drains shall be accurately made with base clean and true to grade so that no unnecessary filling is required. Adequate width shall be allowed in accordance with depth of drain to enable laying and jointing to be properly carried out. Trenches shall be kept firm and dry and shall be opened up only in lengths that can be protected, utilised and refilled within a reasonable time.

All drains shall have a minimum cover of 500mm.

9.07 LAYING OF DRAINS

All drains are to be laid with the full length of the pipe bearing on the base. Pipes shall be laid and have the rubber rings secured with stainless steel tie wires as the work progresses. All changes in direction are to be carried out with purpose made fittings. Where the ground is unstable, the drains shall be laid on a concrete bed, minimum thickness 100mm, reinforced with 2 D12 rods and R10 U bars at 600mm centres. After the drain has been laid, bend U bars over, place 2 D12 rods longitudinally and completely surround the drain with 100mm of concrete. Provide additional support as shown on the drawings.

Provide inspection fittings at each change of direction, change of grade, junction of branch drains or at distances required by the Local Authority.

9.08 FALL IN DRAINS

The whole of the soil and stormwater drains are to be laid to a regular and even fall. The fall shall be not less than 1:60 for 100mm dia. drains.

9.09 FITTINGS

The plan shows the layout of the system. Additional fittings that are normally required such as inspection points and inspection bends, etc, that may be required but are not specifically shown, must be allowed for by the Drainlayer to comply with normal practice under the regulations or special requirements of Local Council.

9.10 GULLY TRAPS

Gully traps shall be approved type, minimum 100mm diameter and shall be set level on a 75mm concrete bed, haunched to the side of the trap. No more than 4 waste pipes shall discharge into each gully trap. Provide ceramic, dished gully trap riser, complete with cast aluminium grating. The riser shall be bedded into the gully trap with cement mortar and shall be carried 75mm above the surrounding ground or paved area.

9.11 SEWER AND STORMWATER CONNECTIONS

Arrange for the Council to connect drain to sewer and stormwater where provided and pay all charges in connection therewith. If shown on the drawings provide single compartment septic tank in strict accordance with the requirements of the Local Authority.

9.12 COMPLETION

Properly backfill all trenches, consolidate as filling proceeds and leave area in a tidy state.

PLUMBER AND SHEET METAL WORKER10.01 GENERAL

The General Conditions and preliminary clauses shall also apply to this section of the works.

10.02 SCOPE

The Plumber shall provide all materials, plant and labour necessary for the proper completion of the plumbing work in conformity with local By-Laws, the Drainage and Plumbing Regulations 1978, and according to the intent of this specification, including such items not specifically mentioned herein, but which are necessary for a thoroughly workmanlike job. Upon completion, the whole of the works shall be left watertight and to the satisfaction of the Authorities and the Supervisor. Give all notices to arrange for, and pay for, all permits and organise all inspections of the works by the Local Authority.

10.03 MATERIALS AND WORKMANSHIP

All materials and fittings used in this trade shall comply with the requirements of the relevant current N.Z.S.S. or, where no such specification exists, with the requirements of the relevant current B.S.S. Notwithstanding the foregoing requirements, all materials and fittings shall comply with the requirements of the Local Authority and with best trade practice.

10.04 FLASHINGS

All notched roof flashings shall be supplied and fixed by Roofing trade. All other flashings at windows, doors and vents through roof, etc., shall be 0.6mm gauge galvanised steel, machine folded to the required shapes with all joints, junctions, etc., soldered.

10.05 SPOUTING AND GUTTERING

Supply and install metal or P.V.C. spouting and guttering as shown on the drawings or noted on the addenda. Metal guttering shall be of the type and size shown on the drawings and shall be fixed with clips to match profile. Dimond or similar, fascia gutters and straightline spouting, shall be fixed using concealed gutter brackets.

All spouting and gutters shall be fixed to fall not more than 1:600 with clips and fixings at centres recommended by the manufacturers.

Provide outlets in gutters where shown, with the gutter sole dished towards the outlet.

Provide outlets from downpipes from gutters. Downpipes shall be P.V.C. or seamed galvanised steel as shown on the drawings and addenda. Hold out from wall with standard brackets.

P.V.C. Spouting shall be of the type shown on the drawings and shall be complete with all brackets, stop ends, jointers and downpipe outlets. Erect according to the manufacturer's recommendations. Supply and fit P.V.C. downpipes where shown, complete with all brackets.

All downpipes shall discharge into stormwater drains. Carry downpipe below the top of the drainpipe, pack around to hold in place and haunch between drain and downpipe with cement/sand compo.

10.06 PIPING

Piping for water supplies shall be drawn copper or polybutylene piping (Qest Dux or similar approved).

All piping laid in concrete shall be protected by wrapping in Densotape or similar, for its full length. Piping laid in concrete shall be drawn copper tube or polybutylene, spirally wound with two layers of Densotape or hair felt, wrapped in opposing directions. No joints may be made in polybutylene piping in concrete. Polybutylene piping laid underground shall be protected from damage by sharp objects.

All joints in copper pipes shall be socketted and brazed with Silfos. Polybutylene piping shall be jointed only with special jointing fittings manufactured by the makers of the brand of piping used. Preference shall be given to Qest-Dux piping and Qicktite fittings in polybutylene. Piping shall be installed in long lengths. Polybutylene piping should be continuous as far as possible, for the whole length of the system. Thread pipes through holes drilled through the centre lines of framing. Where possible, pipes shall be curved to change direction but where curving is not possible, standard elbows and tees shall be used. Support all piping at recommended centres with ready made clips. Standard fittings and couplings for copper and polybutylene piping, shall be used, including couplings linking the two materials. Polybutylene piping may be used for both hot and cold water reticulation, except for circulating pipes between wet back and boiler units and hot water cylinders. Where wet back or boiler units provide supplementary heating of hot water, the first 600mm of pipe from the cylinder shall be copper. Where instantaneous gas water heaters are installed, the first 200mm of piping on the inlet and outlet shall be copper.

10.07 COLD WATER SUPPLY

From the toby connection of the Local Authority water supply, lay 20mm or 15mm i.d. pipe, buried 450mm underground to an isolation Stop Cock located in a suitable toby box located against the building foundations. Where a high pressure water reticulation system is specified, supply and fit a NEFA 3 in 1 stopcock and ~~preset NEFA pressure reducing feed valve~~, or other suitable valves. From feed valve, take 20mm or 15mm i.d. lead to hot water cylinder and 20mm or 15mm i.d. branch, or branches, to service other cold water outlets, terminating at the bath. From this 20mm i.d. branch, take 12mm i.d. branches to sink, basins, tubs, washing machine, shower and W.C. flushing cisterns. From wall, use Qest Qickee supply set for connection to cistern and for exposed pipes to basins.

From main supply, ~~before the pressure reducing valve~~, take 12mm i.d. branch to provide supply for exterior hose taps. Provide stopcock on supply line to hot water cylinder.

Where a low pressure water supply is specified, using a water storage tank, lay 20mm i.d. pipe underground from toby to isolating stopcock with 12mm branches for exterior hose taps and 12mm branches to sink and flushing cisterns. The 20mm dia. main shall reduce to 12mm i.d. before entering the storage tank. Supply and install one 135 litre Nura rotational moulded polythene supply tank in roof space where shown, complete with tray, overflow, 12mm ball valve and ballcock, lids and other fittings. Take 20mm dia. outlet from tank leading to hot water cylinder and bath, with 12mm branches to basins, tub, washing machine, and shower. Note the 20mm dia. lead, or leads, should be carried to the second to last outlet on any branch. The final branch to outlets may be 12mm dia. The whole of the cold water system shall be charged to test for leaks before linings are fixed.

10.08 HOT WATER SUPPLY

Supply and install a hot water storage cylinder where shown on the drawings. The hot water cylinder shall be electric or gas and shall have the storage capacity shown on the drawing and addenda. Where specified, the cylinder shall have connectors for supplementary boiler or wet back heaters. Unless specified otherwise, storage heaters shall be standard storage heaters, Zip manufacture, complying with current N.Z. Standards in all respects. Heaters shall be cased and lagged and shall be fitted with drain pipe. Gas water heaters shall be Rheem manufacture and shall be installed in accordance with the maker's recommendations and the local Plumbing Authority and gas supply authority requirements. Provide and install flues for gas water heaters in accordance with By-Laws and recommendations.

Provide expansion pipe from storage heater, 20mm dia., extended above the roof level with pressure relief valve as required, or with low pressure system, turn exhaust to discharge over storage tank if in suitable location.

All piping conveying hot water shall be double lagged with plumbers' felt, spirally wound and bound to prevent unravelling. Each layer of felt shall be wound in opposing directions.

From expansion pipe, take branches to taps. Branch to sink shall be 12mm dia. Take 20mm diameter lead from expansion pipe to bath with 12mm branches of lead to shower, basins, tub and washing machine. The tub and washing machine branches may be taken from the sink lead if more suitable. Use Qickee supply sets for exposed leads to basin.

10.09 VENTS

Provide all vents from fittings as required by the regulations. Vents shall be in copper or P.V.C. Provide and install terminal vent in seamless material from branch on sewer and extend above roof level. Fix bird proof grilles to all vents.

10.10 WASTES AND TRAPS

Provide trapped wastes to all fittings. Wastes shall be of the sizes required by the P & D regulations. Vent wastes where and as required by the regulations.

Wastes may be copper or Dux polypropylene waste pipe system.

Polypropylene wastes shall be complete with all couplings, seals, clips and other fittings.

Where possible, waste pipes shall be concealed within the structure. Special care shall be taken to fix the wastes in unobtrusive positions. Provide cleaning eyes to all copper wastes. Where wastes pass through foundation walls, pack and seal to allow expansion and prevent access of vermin. Wastes through concrete slabs shall be wrapped in Densotape or similar.

10.11 FITTINGS

Supply and fix all fittings as shown on the drawings and in the addenda.

W.C. Pans: shall be vitreous china, washdown type, and shall be supplied and fitted complete with connector to waste, vent, double flap plastic seat - Dux or similar. Supply and fix Dux, centre flush, low-line cistern, complete with sparge pipe, ball valve, ballcock and overflow.

Bath: shall be enamelled cast iron, enamelled pressed steel, or plastic as shown or noted and shall be fitted onto cradle provided by the carpenter. Baths shall be first quality, free from chips or other blemishes.

Basins: Provide and install, vitreous china basin on c.i. brackets or plastic basins as shown on the drawing or on the addenda. Basins shall be provided with integral overflows. Plastic basins shall be recessed or surface mounted and shall be complete with skirted front as noted.

Vanity: Arrange with Carpenter to install a Vanity unit as required. Provide taps and wastes. See addenda for P.C. sum.

Tub: Provide and install a pressed or fabricated stainless steel tub, on brackets or cabinet as shown. See addenda for requirement.

Shower Tray: Shower trays shall be pressed stainless steel of the sizes shown, with 100mm high upstand all round.

Sink Bench: Provide a stainless steel sink bench of the size and type shown on the drawing or on the addenda, complete with 510 x 355 bowl. Provide waste outlet for waste disposal unit if required.

Taps: All taps shall be marked Hot and Cold. Taps shall be H.M.C. manufacture, or other selected. Allow for the following:-

Bath - faucet S383 x 20mm Starlight

Sink - swivel faucet - S343 x 15mm Starlight

Basins - S623 x 15mm Starlight

Shower - Feltormix mixer

Tub - S483 x 15mm Starlight

Washing Machine - S413F x 15mm x 20mm Starlight

Outside taps - 2 brass bibcocks with hose ruffs

Provide and fit all stopcocks, gate valves, etc., required for the water reticulation system.

10.12 WETBACK HEATERS, BOILER UNITS, FREESTANDING FIREPLACES

Where shown on the drawings and noted in the addenda, provide and install supplementary water heating units or freestanding fireplaces. All units shall be installed strictly in accordance with the manufacturers details and to the Local Authority requirements. Arrange with the Carpenter to provide all protective sheeting required around units. Copies of details of installation requirements published by the manufacturers, shall be submitted to the local authority before installation is commenced. All piping from wet back or boiler units to hot water cylinders, shall be copper. Sizes shall be as recommended by the manufacturer, with vents as recommended.

Provide and install all flues, flue liners spacers, flashings caps and stays, required to complete the installation.

ELECTRICIAN11.01 PRELIMINARY AND GENERAL

Read and note all clauses under Preliminary and General of this Specification where they apply to this trade.

11.02 FEES

Pay all fees and charges and obtain all necessary permits for this trade.

11.03 SCOPE OF WORK

Carry out the whole of the electrical installations in strict accordance with the latest Electrical Wiring Regulations and Local Authority's By-Laws. Provide all lighting and power points as shown on the drawings or as otherwise directed by the Owners.

11.04 MATERIALS AND WORKMANSHIP

All materials used under this Contract shall be of approved British or New Zealand Standard Specification. Allow for all materials necessary to complete the contract whether specified or not. All work shall be carried out by a Registered Electrician in accordance with regulations and best trade practice and in a manner which will cause minimum inconvenience to other workmen and the work as a whole. Do all cutting away, drilling, etc., and with timber cut the minimum only away for the entry of cables. All wiring shall be run in T.P.S. cable and shall be kept clear of insulation in walls and ceilings.

11.05 CO-OPERATION

Co-operate with the Building Contractor and other sub-contractors in all phases of work. Give ample notice to enable the Contractor to arrange the necessary void, chase data, etc.

11.06 COMPLETION AND CONNECTION OF POWER

Leave the work complete, pay all charges and arrange for all inspections and tests and for the connection of power to the works.

It is the responsibility of the Electrical Contractor to ensure that no delay is caused to the job once the Contract is complete.

11.07 POWER BOARD SUPPLY

Arrange with the Power Board, allow for and pay all fees for the connection of an underground or overhead supply to the residence. Arrange for any power poles required to carry overhead power lines.

11.08 METER BOX

Provide and install meter box where shown. Confer with Carpenter for trimming same. The meter box shall be recessed into wall and shall have a weather-proof cover.

11.09 MAIN SWITCHBOARD

Provide and install a recessed main switchboard, complete with all fuses, circuit breakers, switches, bell transformer, and auxiliary equipment. Arrange with the Carpenter to provide a cabinet for switchboard.

11.10 ELECTRIC STOVE

Provide wiring and switches for electric cooker where shown on the drawings. If separate oven and cooking top unit are to be installed, allow for wiring and switches for each unit.

The Electrician is to allow for taking delivery of and installing cooking appliances as shown on the drawings and addenda. Allow in contract the P.C. sum for the supply of cooking appliances as noted on the addenda.

11.11 HOOD OR AIR EXTRACT FAN

Provide and install a range hood or air extract fan where shown on the drawings with switches and power for the operation of same. The fan shall be of the size and type shown on the drawing or in the addenda. Allow the P.C. Sum shown in the addenda for the supply of the range hood.

11.12 SHAVER POINT

Provide a point for electric shaver where shown on the drawing if also noted on the addenda.

11.13 SINK DISPOSAL UNIT

Provide wiring and switch for waste disposal unit to be fitted in sink if shown on the drawings or noted in the addenda.

11.14 HEATERS

Provide and install electric heaters, complete with Thermostats, where shown on the drawings. Heaters shall be the size and type shown on the drawings.

11.15 WATER HEATER

Allow for the connection of the water heater to the electrical system. Provide and install 1,500 watt, or other suitable sized element and thermostat to hot water cylinder provided by the Plumber. Provide switch for water heater on adjacent wall and flexible, metal sheathed cable to Element box.

11.16 POWER POINTS

All wall plugs shall be 230 volt, 10 amp 3-pin flush type with switches. Generally, install plugs 300mm above floor or 225mm above bench top. Points to washer, dryer and refrigerator - 1200mm from floor. The exact position of all power points shall be determined on the job by the Owner. Allow for the power points in the locations shown on the drawings. All power points are to be switch type.

11.17 LIGHTS

Provide light points where shown on the drawings. The Contractor is to allow in his tender to provide batten holder type fittings to all lights, with angled fittings to wall lights. All lights are to have flush wall mounted switches. All exterior lights shall be watertight fittings. Fittings under soffits shall be ball type.

11.18 LIGHT SWITCHES

Light switches generally, shall be 5 amp. all insulated P.D.L. micro-gap type or equal. Where indicated, fit flush type with plain flush plate. Fix switches generally 1200mm above floor. Provide dimmer switches where noted on drawings or required in the addenda.

11.19 SPECIAL FITTINGS

The Contractor shall allow in his tender for the supply of special light fittings to the value of the P.C. sum shown in the addenda. The Contractor shall allow in his tender for taking delivery of and fixing fittings supplied from the P.C. sum.

11.20 BELL

Provide transformer on switchboard for doorbell or chimes and provide wiring and bell push for the same. The bell or chimes are to be purchased from the P.C. sum allowance.

PAINTER AND GLAZIER12.01 PRELIMINARY AND GENERAL

Note all clauses under Preliminary and General of this specification which shall apply to this section of the work.

12.02 MATERIALS

In this specification, where the word "paint" is used, the reference shall also apply to varnish, unless obviously inapplicable.

Generally all materials shall be of N.Z. manufacture of approved brands. All paints and varnishes shall be delivered to the site in unopened cans. Paints shall be applied straight from the can, strictly according to the manufacturers recommendations. Any thinning of paint required shall be carried out strictly to the makers recommendations. Succeeding coats of paint shall be of the same brand, unless approved otherwise.

12.03 WORKMANSHIP

All work shall be carried out in accordance with good trade practice. Surfaces shall be clean and properly prepared before coating and work shall be in accordance with Code of Practice NZS 2239 "Painting of Building". Rub previously painted surfaces lightly with fine glasspaper between coats and wipe over with a tack rag to remove dust. All coats shall be laid off when finishing to remove brush marks. DO NOT PAINT OVER UNPUNCHED NAILS or other protruding fixings.

12.04 COLOUR SCHEMES

The Owner will select from standard colour charts, colours he will require and Contractor is to allow for picking out sashes, doors, porches or any other reasonable colour change required.

12.05 STOPPING

After priming, all nail holes or joints are to be stopped with linseed oil putty and cleaned off before undercoating. Varnished work is to be stopped with matching putty after first coat of sealer. Stop all nailholes and gaps in finishing timbers.

12.06 EXTERIOR PAINTING

Prime all exterior woodwork unless oil finish is specified. After priming, all external woodwork and adjacent metalwork such as flashings, spouting and downpipes, is to be given one good coat of undercoat followed by finishing coat of high gloss paint. (Acrylic or enamel). Wipe down all metal work with solvent before priming. Priming coat shall be well brushed in and all faces shall be covered, ends of laps and tops and sides of sashes, doors, etc. Sashes and doors shall be painted with enamel paint, not acrylic. Hardieflex lining to eaves, soffits shall be painted with 2 coats of P.V.A. Latex paint. Asbestos cement cladding (Hardieflex) shall be painted with 2 coats of acrylic gloss paint or shall be finished with other surface treatment as noted on the drawings or in the addenda.

Exterior concrete block walls (except foundation walls) shall receive 2 coats of Resene, or other approved, concrete block sealer or Masonry filler, well brushed into surface, and applied strictly according to the manufacturer's specifications.

12.07 OIL FINISH

Where shown on the drawings or noted in the addenda, exterior woodwork shall be finished with 2 coats of clear or pigmented Resene weathering oil. The first coat should be applied before or straight after the timber is fixed in place. The second coat should be applied after 4 or 5 weeks.

12.08 INTERIOR PAINTING

Refer to plan or addenda for surface finishes. Wall linings and ceilings shall be given one coat of undercoat and finished with two coats of approved flat or semi-gloss paint as required. Where full gloss is required in kitchens, laundry or bathroom, finishing coat shall be full gloss enamel. Doors shall be painted on both faces and ALL edges. Allow to paint Kitchen cupboard and laundry cupboard doors, carcass and shelves, unless pre-finished surfaces are specified.

12.09 VARNISHING

Where varnishing is required, such as to doors, architraves and skirtings, give one coat of approved sealer, followed by two coats of clear varnish lightly sanding between coats. Seal and varnish both faces and ALL edges of doors. Varnish shall be gloss, semi-gloss or flat polyurethane as required.

12.10 CONCRETE

To concrete or concrete block base walls, apply two coats of exterior quality P.V.A. paint of an approved type - gloss finish. Paint base walls only where noted on the drawings or in the addenda.

12.11 PAPERHANGING

Where shown on the addenda, hang wallpaper or lining paper to walls, cupboards and ceilings. All walls shall be sized before papering. Lightly sand walls where necessary to remove excess stopping or protruderances. Wallpapers shall be hung plumb and true with edges carefully butt jointed. Carefully match all patterns and check rolls before hanging for variations in shading across the rolls or other defects. Any mis-matched or faulty papers, will be rejected and replaced, including hanging, at not cost to the Owners.

12.12 ROOF (Painting roof is required only if noted in the addenda)

Allow roofing to weather and clean down with solvent before painting. Roof - if corrugated iron, prime all laps before fixing. For corrugated iron or galvanised trough section roofing, after fixing, prime roof with calcium plumbate galv. iron primer and then apply 2 good coats of approved roof paint.

12.13 GLAZIER

Glaze all sashes, glass doors or screens with appropriate weight glass properly fixed and puttied or beaded into rebates. Where required, glazing shall be selected obscure patterned glass.

12.14 MIRROR

Where required, provide a 6mm plate glass mirror and mount on bathroom cabinet door with mirror clips, or as otherwise directed.

12.15 COMPLETION

At completion, clean all paint marks off glass and other surfaces, touch all damaged paint work and leave the premises ready for occupation.

Table 16

LINTELS
1.5 kPa and 2.0 kPa floor loads

Maximum clear width of opening (span of lintel) (m)	Maximum span of member supported* (m)	Depth of lintel supporting:								
		Roof only where lintel thickness (mm) is: (Fig.40A)			Roof and walls only where lintel thickness (mm) is: (Fig. 40B)			All other cases where lintel thickness (mm) is: (Fig.40C)		
		50	75	100	50	75	100	50	75	100
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)

A Light roof

0.9	8.0	125	100	100	125	125	100	125	125	100
	12.0	150	125	100	150	125	100	150	125	100
1.2	8.0	125	100	100	150	125	100	200	150	125
	12.0	150	125	125	200	125	125	200	200	150
1.5	8.0	150	125	100	150	125	100	250	200	150
	12.0	200	150	125	200	150	125	300	250	200
1.8	8.0	150	125	125	200	150	125	250	200	200
	12.0	200	150	150	200	200	150	-	250	250
2.1	8.0	200	150	150	200	200	150	-	250	250
	12.0	250	200	200	250	200	200	-	300	300
2.4	8.0	250	200	150	250	200	200	-	300	250
	12.0	300	250	200	300	250	200	-	-	300
2.7	8.0	-	200	200	-	250	200	-	-	300
	12.0	-	250	250	-	300	250	-	-	300
3.0	8.0	-	250	200	-	250	200	-	-	-
	12.0	-	300	250	-	300	250	-	-	-
3.6	8.0	-	300	250	-	300	250	-	-	-
	12.0	-	-	300	-	-	300	-	-	-

* The greater of roof dimension S (see clause 6.4.3.), span of joists, span of under-purlins, or span of strutting beam, as appropriate:

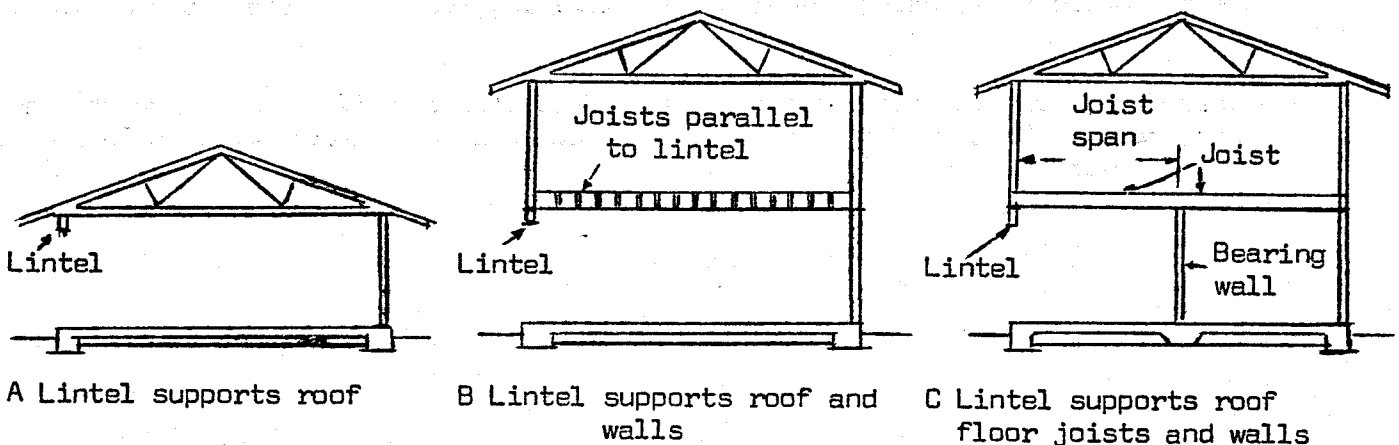


Fig.40 : Lintel loads for the purposes of Table 16

Table 16 (cont.)

LINTELS

1.5 kPa and 2.0 kPa floor loads

Maximum clear width of opening (span of lintel)	Maximum span of member supported*	Depth of lintel supporting:								
		Roof only where lintel thickness (mm) is: (Fig.40A)			Roof and walls only where lintel thickness (mm) is: (Fig. 40B)			All other cases where lintel thickness (mm) is: (Fig.40C)		
		50	75	100	50	75	100	50	75	100
(m)	(m)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)

B Heavy roof

0.9	8.0	125	125	100	150	125	100	150	125	100
	12.0	200	125	125	200	150	125	200	150	125
1.2	8.0	150	125	100	200	125	125	200	150	150
	12.0	200	150	125	200	200	150	250	200	200
1.5	8.0	200	150	125	200	150	125	250	200	200
	12.0	250	200	150	250	200	150	300	250	200
1.8	8.0	200	150	125	200	200	150	300	250	200
	12.0	250	200	200	250	200	200	-	300	250
2.1	8.0	250	200	200	250	200	200	-	300	250
	12.0	300	250	200	300	250	200	-	-	300
2.4	8.0	300	250	200	300	250	200	-	-	300
	12.0	-	300	250	-	300	250	-	-	-
2.7	8.0	-	250	250	-	300	250	-	-	300
	12.0	-	-	300	-	-	300	-	-	-
3.0	8.0	-	300	250	-	300	250	-	-	-
	12.0	-	-	300	-	-	300	-	-	-
3.3	8.0	-	300	250	-	-	300	-	-	-
	12.0	-	-	-	-	-	-	-	-	-
3.6	8.0	-	-	300	-	-	300	-	-	-

* The greater of roof dimension S (see clause 6.4.3.), span of joists, span of underpurlins, or span of strutting beam, as appropriate.

NOTE - Where a lintel supports one floor and non-loadbearing walls only then the lintel size may be obtained from the column headed "Roof and walls only" in Table 16B (heavy roof).

Table 30

NAILING SCHEDULE

Joint	Length (mm) x diameter (mm) and type	Number and Location
Subfloor framing		
Bearer to jackstud	100 x 3.75	2 (skewed)
Bearer to jackstud adjacent to cut-between brace...	100 x 3.75	4 (skewed)
Bearer end to cut-between plates	100 x 3.75	4 (skewed)
Bearer to top plate of wall framing	100 x 3.75	4 (skewed)
Flitch to each bearer end	100 x 3.75	4
Flitch to jackstud	100 x 3.75	4 (skewed)
Stud or jackstud to plate	100 x 3.75	2 (end nailed)
	or	
	75 x 3.15	4 (skewed)
Sheet material for subfloor brace to:	30* x 2.5 FH	
(a) Framing members at sheet edges		150 mm centres
(b) Intermediate supports		300 mm centres

Floor framing

Joist to plate or bearer	100 x 3.75	2 (skewed)
Lapped joint in joist	100 x 3.75	2 (each side)
Flitched joint in joist	100 x 3.75	4 (each end)
Herringbone strutting to joist	60 x 2.8	2 (skewed)
Solid blocking to joist	100 x 3.75	2 (end nailed)
	or	
	75 x 3.15	4 (skewed)
Joist to plate on foundation walls	100 x 3.75	12 (skewed) per 1.5 m length
Solid blocking between joists to plate or bearer...	100 x 3.75	4 (skewed)
Boundary joist to end of each joist	100 x 3.75	2 (end nailed)
Curtailed joist not exceeding 3m long to trimmer..	100 x 3.75	3 (end nailed)
Curtailed joist to trimmer when half housed	100 x 3.75	2 (end nailed)

Floor decking

Strip flooring not exceeding 75 mm wide to floor joist ..	2½ x finished thickness	1
Strip flooring not exceeding 100 mm wide to floor joist ..	2½ x finished thickness	2
Sheet decking (not exceeding 21 mm thick) to:	60* x 2.8	
	or	
	57* x 11.1	
	x 1.8 mm	
	staples	
(a) Supports at sheet edges		150 mm centres
(b) Intermediate supports		300 mm centres

* See clause A6

Table 30 (continued)

Joint	Length (mm) x diameter (mm) and type	Number and location
-------	--------------------------------------	---------------------

Wall framing

Stud to plate	100 x 3.75 or 75 x 3.15	2 (end nailed) 4 (skewed)
Double studs at openings, blocking and studs at wall intersections	100 x 3.75	600 mm centres
Doubling stud to doubled stud immediately under lintel ..	100 x 3.75	2
Lintel to trimming stud	75 x 3.15 or 100 x 3.75	4 (skewed) 2 (end nailed)
Bottom plate to floor framing at:	100 x 3.75	
(a) External walls and internal wall bracing elements ..		2 at 600 mm centres
(b) Internal walls		1 at 600 mm centres
Half joint in top plate	75 x 3.15	3
Sill or header trimmer to trimming stud for:	100 x 3.75	
(a) Trimmer not exceeding 2.4 m long		2 (end nailed)
(b) Trimmer not exceeding 3.6 m long		3 (end nailed)
Top plate 150 mm x 40 mm to 100 mm x 50 mm and top plate to lintel	100 x 3.75	2 at 500 mm centres
Dwang to stud	75 x 3.15 or 100 x 3.75	2 (skewed) 2 (end nailed)
Fishplate to straightened stud	60 x 2.8	4 each side of cut
Waling to stud	60 x 2.8	2
Ribbon board	100 x 3.75	2

Wall bracing elements

Diagonal bracing:		
100 mm x 25 mm brace to:	75 x 3.15	
(a) Plates		3
(b) Studs		2
Steel angle brace to:	60 x 3.15	
(a) Plates		3
(b) Studs		2
Steel strip brace to:	60 x 3.15	
(a) Plates		3
(b) Studs		1
Cut-between timber brace to stud	75 x 3.15	2 (skewed)
Sheet material to clause 6.9.2.2 and 6.9.6.2.	30* x 2.5 FH	
(a) Studs and plates at sheet edges		150 mm centres
(b) Intermediate studs		400 mm centres

* See clause A6.

~~Living (A)~~

LIVING AREA

SHEET A

(Circle whichever applies)

NAME: G. & B. Smith

ADDRESS: 179 Tutu Street
Waikanae

STOREY: Single or Uppermost
Lower of two or middle
of three
Lower of three

ROOF TYPE: Light / Heavy

ROOF PITCH: 0° - 25° / 26° - 45°

WIND AREA: High / Medium / Low

W = 33 B.U.'s/m

EARTHQUAKE ZONE: A B / C

E = 3⁵ B.U.'s/m

ROOF OR BUILDING LENGTH

BL = 7.7 m

ROOF OR BUILDING WIDTH

BW = 9.3 m

GROSS ROOF OR BUILDING PLAN
AREA

GPA = 63.8 m²

EARTHQUAKE: B.U.'s ALONG & ACROSS

ExGPA = ⁵ 33 x 63.8 = 319 B.U.'s

WIND: B.U.'s ALONG

W x BW = ~~33 x 9.3 = 306.9~~ B.U.'s

WIND: B.U.'s ACROSS

W x BL = ~~33 x 7.7 = 254.1~~ B.U.'s

SKETCH PLAN (external and internal walls):


AS

16/07/84

SHEET B

1 Total B.U.'s Required	2 Wall Line		3 Wall Bracing Elements Provided					8
	Label	Min. B.U.'s Req'd.	Label No.	Type	Rating B.U.'s/m	Length (m)	B.U.'s Provided	
ALONG 306.9 319	A	48 50	A1	8	67	1.1	73.7	
			A2	8	67	1.1	73.7	
			Sub-total					147.4
	B	41 70	B1	8	67	.7	46.9 10	
			B2	8.10	67	1.1	73.7	
			Sub-total					120.6-29
	C	30 54	C1	8	67	1.2	80.4	
			Sub-total					80.4
			D					
	Sub-total							
	TOTAL			TOTAL = 319				348.4-29

ACROSS 254.1 319	L	48 28	L1	1	42	2.4	100.8	
			L2	1	42	2.4	100.8	
			Sub-total					201.6
	M	35 92	M1	8	67	1.1	73.7	
			Sub-total					73.7
			N	1	42	2.3	96.6	
	O	41	Sub-total					96.6
			P					
			Sub-total					
	APPROVED							
	TOTAL			TOTAL				371.9


 COUNTY ENGINEER.
 DATE 16/5/84

~~WING (B)~~

BEDROOM AREA.

SHEET A

(Circle whichever applies)

NAME:

ADDRESS:

STOREY: Single or Uppermost
Lower of two or middle
of three
Lower of three

ROOF TYPE: Light / Heavy

ROOF PITCH: 0° - 25° // 26° - 45°

WIND AREA: High / Medium / Low

W = 33 B.U.'s/m

EARTHQUAKE ZONE: A / B / C

E = 3⁵ B.U.'s/m

ROOF OR BUILDING LENGTH

BL = 180 m

ROOF OR BUILDING WIDTH

BW = 46 m

GROSS ROOF OR BUILDING PLAN
AREA

GPA = 91.2 m²

EARTHQUAKE: B.U.'s ALONG & ACROSS

ExGPA = ⁵ 3 x 91.2 = ^{45.5} 273.6 B.U.'s

WIND: B.U.'s ALONG

W x BW = 33 x 4.6 = 151.8 B.U.'s

WIND: B.U.'s ACROSS

W x BL = 33 x 180 = 5940 B.U.'s

SKETCH PLAN (external and internal walls):

APPROVED

R/S

COUNTY ENGINEER.

DATE


16/5/84

SHEET B

1	2	3	4	5	6	7	8	
Total B.U.'s Required	Wall Line		Wall Bracing Elements Provided					
	Label	Min. B.U.'s Req'd.	Label No.	Type	Rating B.U.'s/m	Length (m)	B.U.'s Provided	
ALONG 273.6 455	A	140	A1	1	42	2.4	100.8	
			A2	1	42	2.4	100.8	
			Sub-total					201.6
	B	40	B1	1	42	2.0	84.0	
			Sub-total					84.0
			C	180	C1	1	42	2.4
	C2	1			42	1.9	79.8	
	C3	1			42	2.4	100.8	
	Sub-total					281.4		
	D		D1	1	42	2.4	100.8	
			Sub-total					100.8
			TOTAL					667.8

ACROSS 594.0 ✓	L	46 50	L1	1	42	2.4	100.8	
			Sub-total					100.8
			M	46 50	M1	1	42	2.4
	Sub-total					100.8		
	N	3x70 138 210			N1	1	42	2.4
			N2	1	42	2.4	100.8	
			N3	1	42	2.4	100.8	
	Sub-total					302.4		
	O	37 50	O1	8	67	12.0	80.4	
			O2	8	67	12.0	80.4	
			Sub-total					160.8-26
	P		APPROVED					Sub-total
			TOTAL					TOTAL = 638

TOTAL = 638 664.8


 COUNTY ENGINEER.
 DATE 10/5/84

Inspector: M _____

File No. _____

Receipt No. 12251

Date Permit Issued 9/6/84

OWNER

Name _____

Mailing Address _____

BUILDER

Name _____

Mailing Address _____

PROPERTY ON WHICH BUILDING IS TO BE ERECTED/DEMOLISHED

SITE

Street No. _____

Street Name _____

Town/District _____

Riding _____

LEGAL DESCRIPTION

Valuation Roll No. _____

Lot _____ D.P. _____

Section _____ Block _____

Survey District _____

DESCRIPTION OF PROPOSED WORK AND MAIN PURPOSE OF USE

FLOOR AREA

DWELLING UNITS

Whole Sq. Metres

Number Erected

NATURE OF PERMIT (TICK BOX)

- NEW BUILDING**
- include dwelling added, exclude domestic garages
- FOUNDATIONS ONLY**
- ALTERED, REPAIRED, EXTENDED**
- include conversions and resited buildings
- NEW CONSTRUCTION OTHER THAN BUILDINGS** - include demolitions
- DOMESTIC GARAGES AND DOMESTIC OUTBUILDINGS**

ESTIMATED VALUES
\$

Building	_____	_____
Plumbing	_____	_____
Drainage	_____	_____
TOTAL	_____	_____

FEES APPLICABLE

Building Permit	\$ _____	Water Connection	\$ _____
Street Damage Deposit ..	\$ _____	Vehicle Crossing Levy ...	\$ _____
Building Research Levy ..	\$ <u>56</u>	M.S. Plumbing	\$ _____
Plumbing	\$ _____		\$ _____
Drainage	\$ _____		\$ _____
Sewer Connection	\$ _____	TOTAL:	\$ _____

Receipt No. _____

Date of Payment _____/_____/____

Authorised Officer _____

Special Conditions: P+D not issued.

Bad Boy Reinspect.

VE & PL Final
still same 18-6-84

Date Inspected

REMARKS (e.g. stage reached with work)

<u>2/7/84</u>	<u>Soft spots to front foundation steel not positioned.</u>
<u>4/7/84</u>	<u>Soft spots excavated to solid steel ok. LHM.</u>
<u>11/9/84</u>	<u>General inspection part foundations poured, rest of</u>

- excavation partly filled with drift sand HM.
- 31/1/85 General inspection house closed in seems ok HM.
- 2/4/85 Pre-living inspection 1 brace missing from lounge HM.

Plumbing & Drainage Inspections

15-10-84 PL of slab insp OK HM Appointed.

13-9-85 Drain Test OK. PL Pipeline OK HM.

Final PL & Bld

21/6/88 No Vehicle Entrance.
Gully Trap to be completed.

Horowhenua County Council No. 13626

Inspector: M _____ File No. _____

Receipt No. 2119

Date Permit Issued 11/14/88

OWNER

Name G. Bartlett

Mailing Address 119 Tubero Street
Waikanae Beach

BUILDER

Name R. B. Freeman

Mailing Address 41 Oriwa Street
Waikanae

PROPERTY ON WHICH BUILDING IS TO BE ERECTED/DEMOLISHED

SITE

Street No. 119

Street Name Tubero Street

Town/District Waikanae

Riding Waikanae DC

LEGAL DESCRIPTION

Valuation Roll No. 14930/150

Lot 33 D.P. _____

Section _____ Block _____

Survey District _____

DESCRIPTION OF PROPOSED WORK AND MAIN PURPOSE OF USE

Private Garage / Workshop

FLOOR AREA Whole Sq. Metres 33

DWELLING UNITS Number Erected _____

ESTIMATED VALUES \$	Building	<u>5850</u>
	Plumbing	
	Drainage	
	G.S.T.	
TOTAL		<u>5850</u>

NATURE OF PERMIT (TICK BOX)

NEW BUILDING - exclude domestic garages and domestic outbuildings

FOUNDATIONS ONLY

ALTERED, REPAIRED, EXTENDED, CONVERTED, RESITED - include installation of heating appliances

NEW CONSTRUCTION OTHER THAN BUILDINGS - include demolitions

DOMESTIC GARAGES AND DOMESTIC OUTBUILDINGS

FEES APPLICABLE

Building Permit	\$ <u>1100</u>	Water Connection	\$ _____
Street Damage Deposit	\$ _____		\$ _____
Building Research Levy	\$ _____		\$ _____
Plumbing	\$ _____		\$ _____
Drainage	\$ _____		\$ _____
Sewer Connection	\$ _____		\$ _____
Vehicle Crossing Levy	\$ _____	G.S.T.	\$ _____
M.S. Plumbing	\$ _____	TOTAL:	\$ <u>1100</u>

Receipt No. 2119

Date of Payment 11/1/88

Authorised Officer _____

Special Conditions: _____

HOROWHENUA COUNTY COUNCIL

NOTE: This application is approved on condition that the building is not used for human habitation

Date Inspected	REMARKS (e.g. stage reached with work)
<u>12-4-88</u>	<u>Footings & slab - OK</u>

CODE COMPLIANCE CERTIFICATE

Section 95 Building Act 2004 [Form 7 – Building (forms) Regulations 2004]



Consent No: 190933

The Building			
Street address of building:	179 Tutere Street, Waikanae Beach	Building name:	N/A
Current, Lawfully established, use:	Residential Dwelling	Location of building within site/block number:	Internal
Level/unit number:	Single Level	Intended life of the building if 50 years or less:	-
Legal description of land where building is located:	LOT 38 DP 42960 CT 14D/991	Year first constructed:	1984
The Owner			
Name of owner:	Hunsley Karen Christine & Hunsley Robert	Street address /registered office:	N/A
Contact person:	As above	Phone numbers:	
Mailing address:	41 Oxford Street Paddington QLD 4064 AUSTRALIA	Landline:	0061 2142 3569194
Email address:	hunsleyr@gmail.com	Mobile:	-
Website:	-	Daytime:	-
		After hours:	-
		Facsimile number:	-
First point of contact for communications with the Kapiti Coast District Council:			
As above			
Building Work			
Building Consent No:	190933	Issued by:	Kapiti Coast District Council
Project Description:	Removal of old wood fire and installation of a new Metro Wee Rad (legs)		

Code Compliance

The building consent authority named below is satisfied, on reasonable grounds, that:

- (a) the building work complies with the building consent

Katharine Wheeler
Building Team Manager
On behalf of **Kapiti Coast District Council**

Date: 15 January 2020

Department	For Referral	Comments	Approving Officer / Date
Resource Consents (refer Form 161)			
Plumbing and Drainage BC2			
Building BC2	<input checked="" type="checkbox"/>		<i>MGB</i> 26/11/19
Fire Design BC8			
Compliance Schedule BC2 & BI6			
Environmental Health			
Other			
Reviews required BC2 and BC5		<i>Supervision reviewed</i>	<i>[Signature]</i> 28/11/19
NOTES:			

APPLICATION WORKFLOW COVERSHEET (Blue Folder)



Building Consent No.	190933
Building Project	Removal of old wood fire and installation of a new Metro Wee Rad (legs)
Location (Site Address)	179 Tutere Street, Waikanae Beach
Building Category	Circle appropriate category R1 R2 R3 C1 C2 C3

Received by
Kāpiti Coast District Council
at Paraparaumu
18 NOV 2019
By Time

Note: A signature confirms that the application contains sufficient information to enable compliance with the building code to be assessed.

	Name	Date
Vetted and formally received BC1	Joy	18/11/19
Payment taken and received by CSO BC1		
Data entered and invoiced by CSO BC1	Kirstie	19/11/19
Documentation prepared/scanned	Kirstie	21/11/19
Plan production and invoicing BC3	<i>Melissa</i>	<i>26/11/19</i>
Building Consent signed BC1	<i>Melissa</i>	<i>2/12/19</i>
BC, Approved plans and appropriate paperwork sent to applicant or agent with receipt by CSO BC3	<i>Angie</i>	<i>2/12/19</i>

CONSENT DATA INPUT REQUIREMENTS

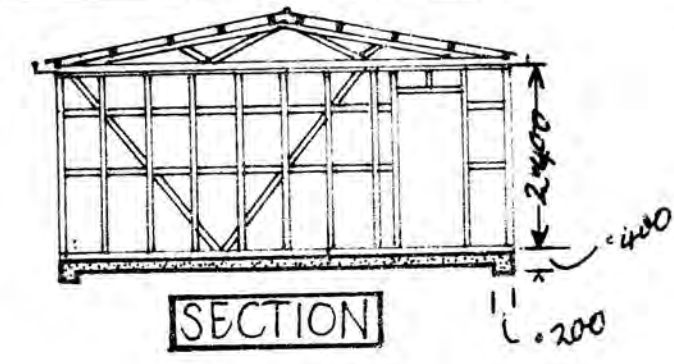
Please circle

Yes	<input checked="" type="radio"/> No	Compliance Schedule
Yes	<input checked="" type="radio"/> No	Restricted building work
Yes	<input checked="" type="radio"/> No	Owner Builder Owner Builder register: ED2526609
Yes	<input checked="" type="radio"/> No	Certificate for Public Use
<input checked="" type="radio"/> Yes	No	Natural Hazard Type: <i>ponding to n/a as woodburne</i>

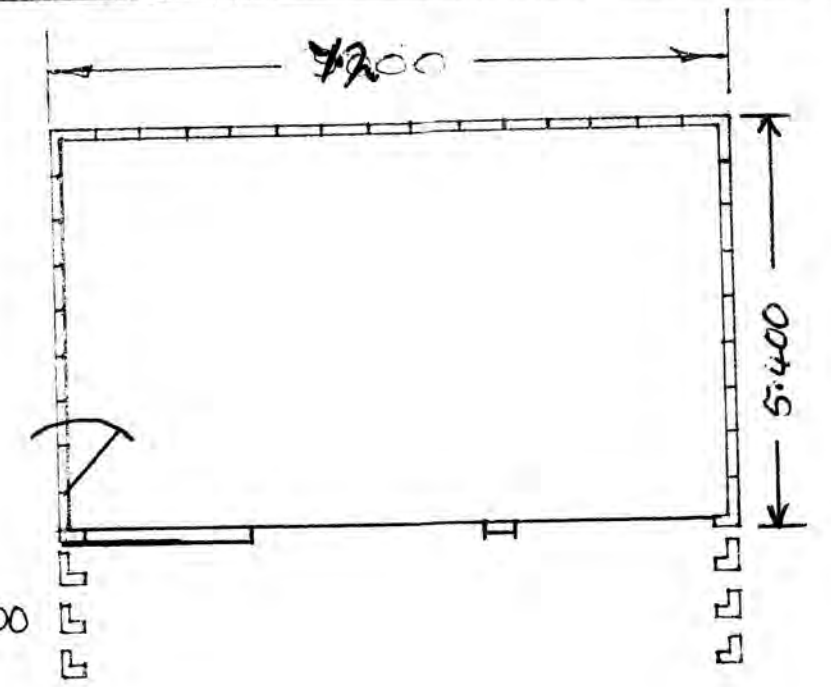
SKYLINE GARAGES

MANUFACTURED BY SKYLINE BUILDINGS LTD.

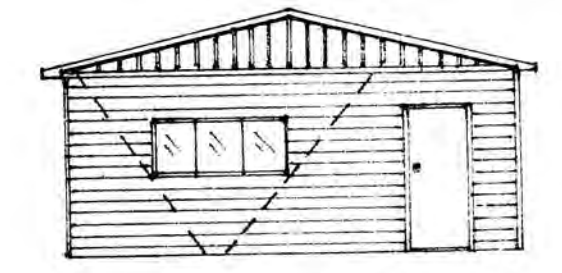
APPROVED BY
 BUILDING
 melissag
 OFFICER
 26/11/2019



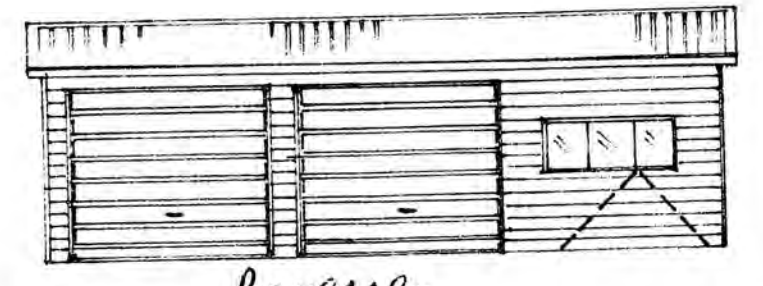
SECTION



SCALE 1:100



ELEVATIONS



Reverse.

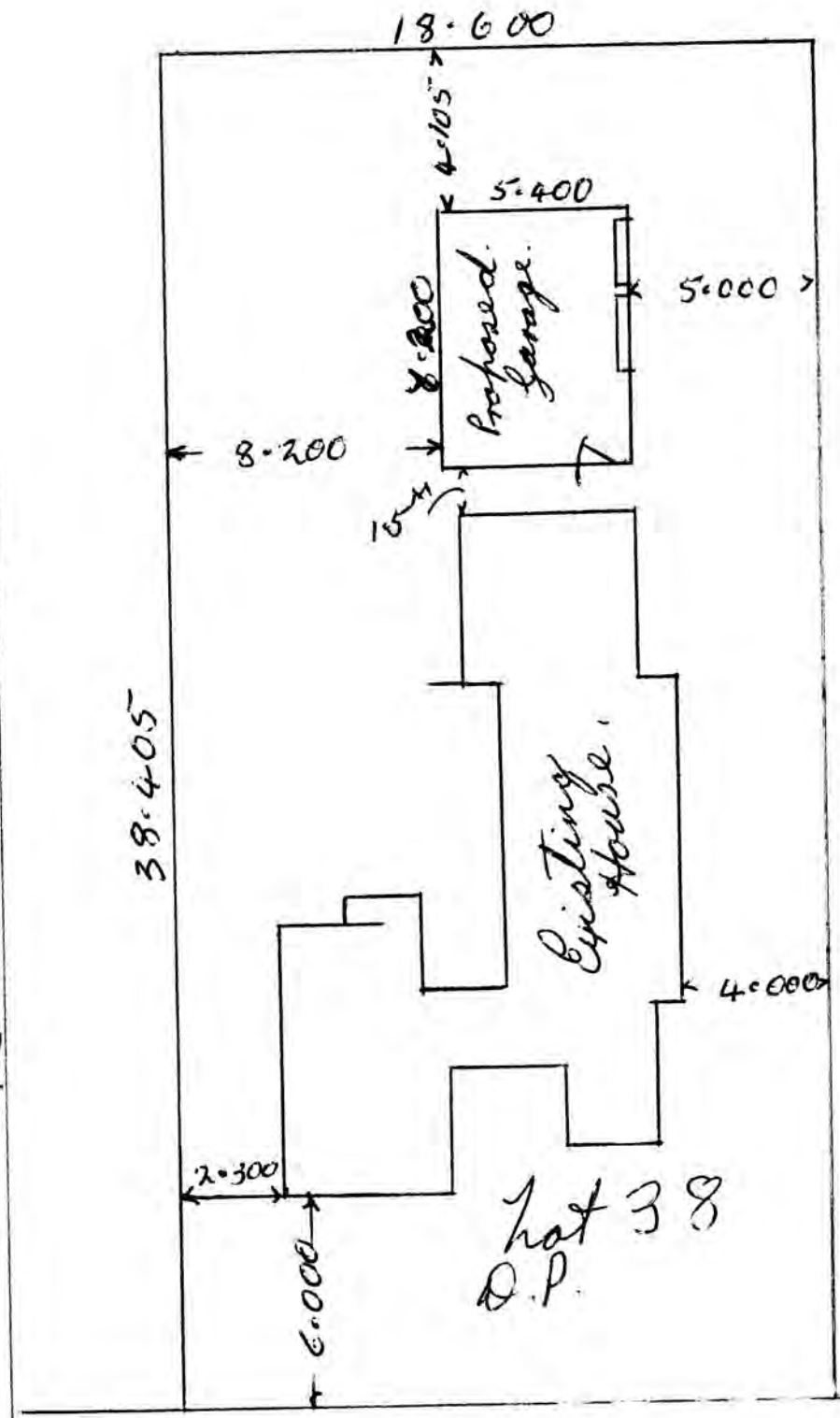


SCALE 1:25

Reference only

SPECIFICATION:-

- FOUNDATIONS : 100mm thick concrete slab with reinforced footing or continuous ring wall.
- DAMPCOURSE : 2 ply d.p.c. under all plates.
- FRAMING : All timber is borax treated machine gauged pinus radiata. All framing is housed i.e. studs checked into plates & noes checked into studs. Studs at 600 centres, top & bottom plates and noes all 100x50.
- WALL BRACES : 75x50 cut in at 50° angle in opposed pairs. *Steel Angle Braces*
- DOOR BEAMS : 2 x 150x50 spiked together and supported on 100x50 trimmer studs.
- ROOF TRUSSES : Trusses 6 metres & under spaced at 2400 centres. Trusses over 6 metres spaced at 1800 centres.
- PURLINS : 100x50 on edge at 750 centres.
- TRUSS STIFFENERS : Up to 6 metres wide - one row 100x50, over 6 metres - two rows 100x50
- BRACON TIES : 75x50 at 45° either side of centre truss - 24 gauge galvanised steel channel over top plate at each corner.
- SPOUTING : 24 gauge galv. gutters fixed each side. *DOWNPIPES: 75x50 galv. steel each end.*
- RIDGING : 26 g. galv. lead edged *DOORS: 26 g. galv. metal on overhead gear or (galv. roller doors.)*
- ROOFING : 26 g. galv. steel long-run roofing "SKYRIB"
- EXTERIOR SHEATHING : 26 g. galv. steel weatherboards



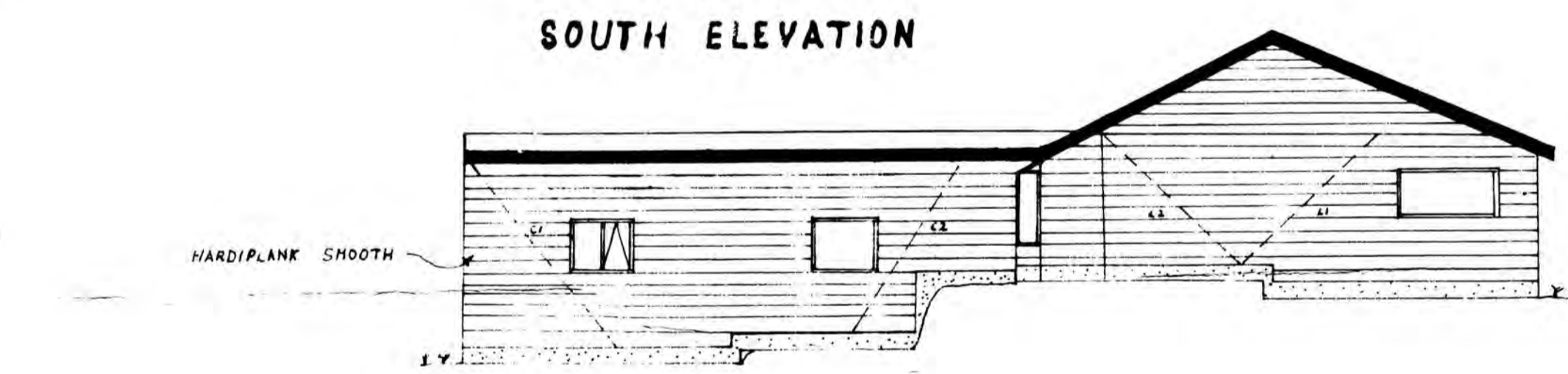
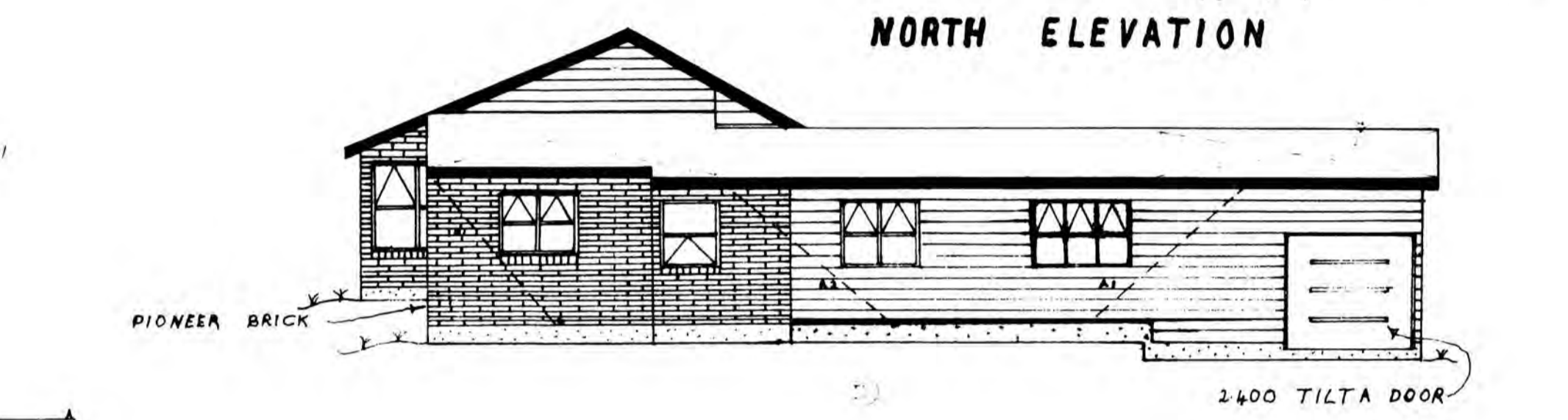
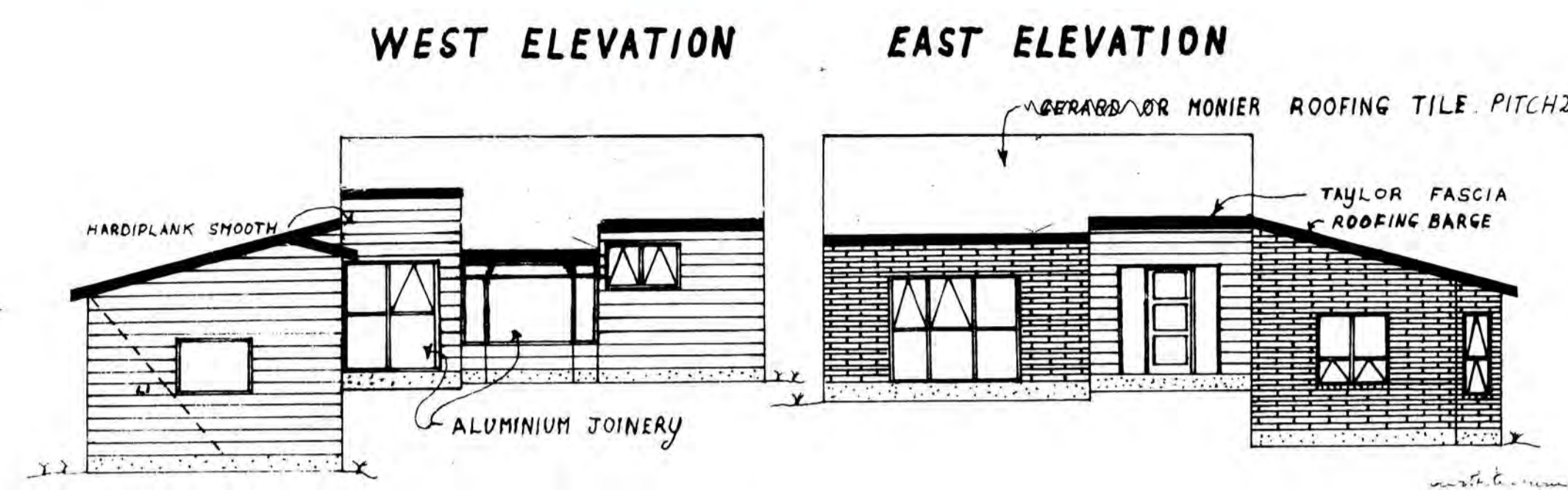
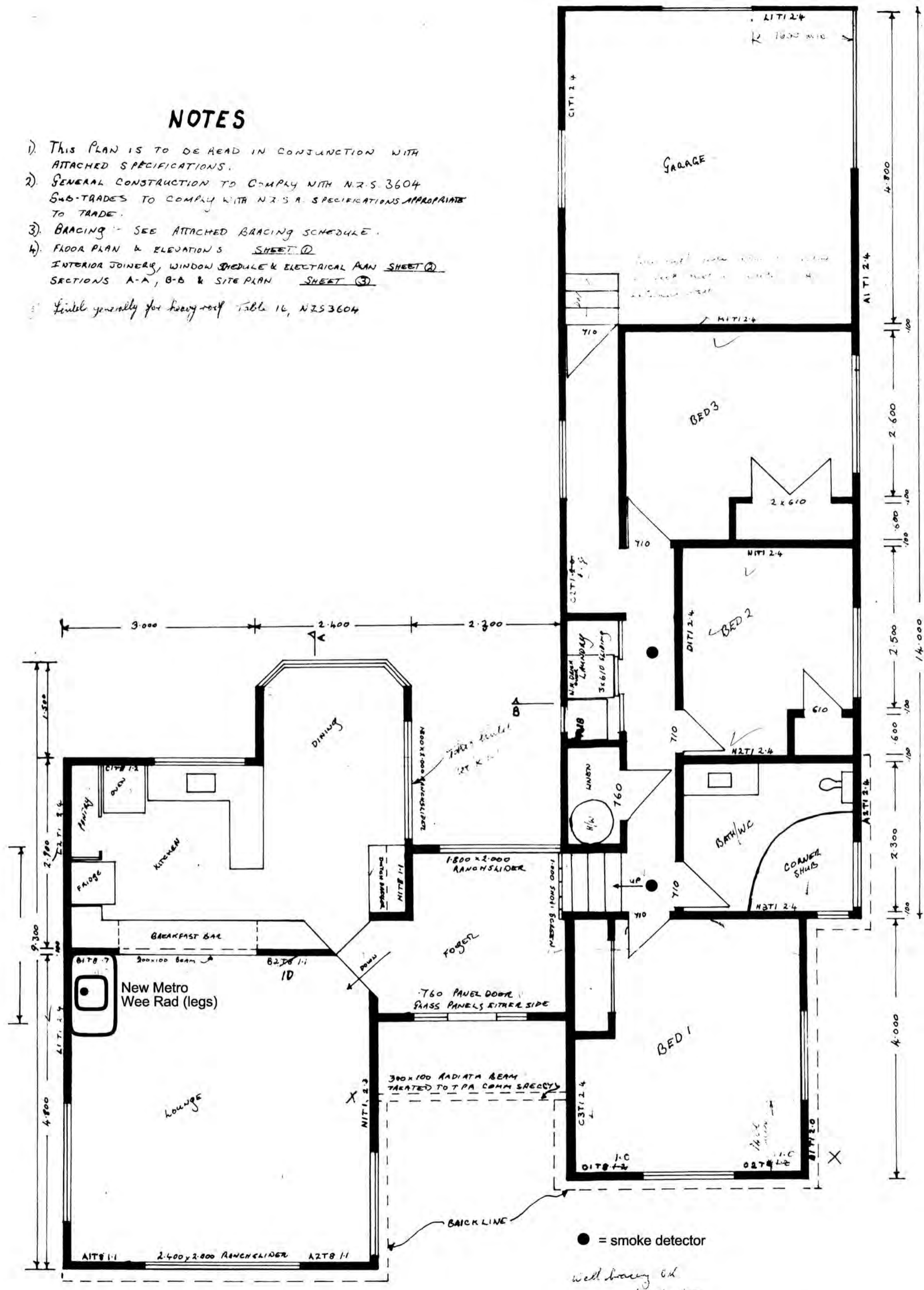
SITE PLAN SCALE 1:200

SIDE ENTRY GARAGE FOR *G. P. Bayllett*
 AT *179 Lutere St Waiharau Beach*

Section F7 of the New Zealand Building Code requires the installation of an approved smoke alarm system for detection and warning of fire.

NOTES

- 1) THIS PLAN IS TO BE READ IN CONJUNCTION WITH ATTACHED SPECIFICATIONS.
 - 2) GENERAL CONSTRUCTION TO COMPLY WITH N.Z.S. 3604 SUB-TRADES TO COMPLY WITH N.Z.S.A. SPECIFICATIONS APPROPRIATE TO TRADE.
 - 3) BRACING - SEE ATTACHED BRACING SCHEDULE.
 - 4) FLOOR PLAN & ELEVATIONS SHEET (1)
 - INTERIOR JOINERY, WINDOW SCHEDULE & ELECTRICAL PLAN SHEET (2)
 - SECTIONS A-A, B-B & SITE PLAN SHEET (3)
- Finish generally for heavy roof Table 14, N.Z.S. 3604



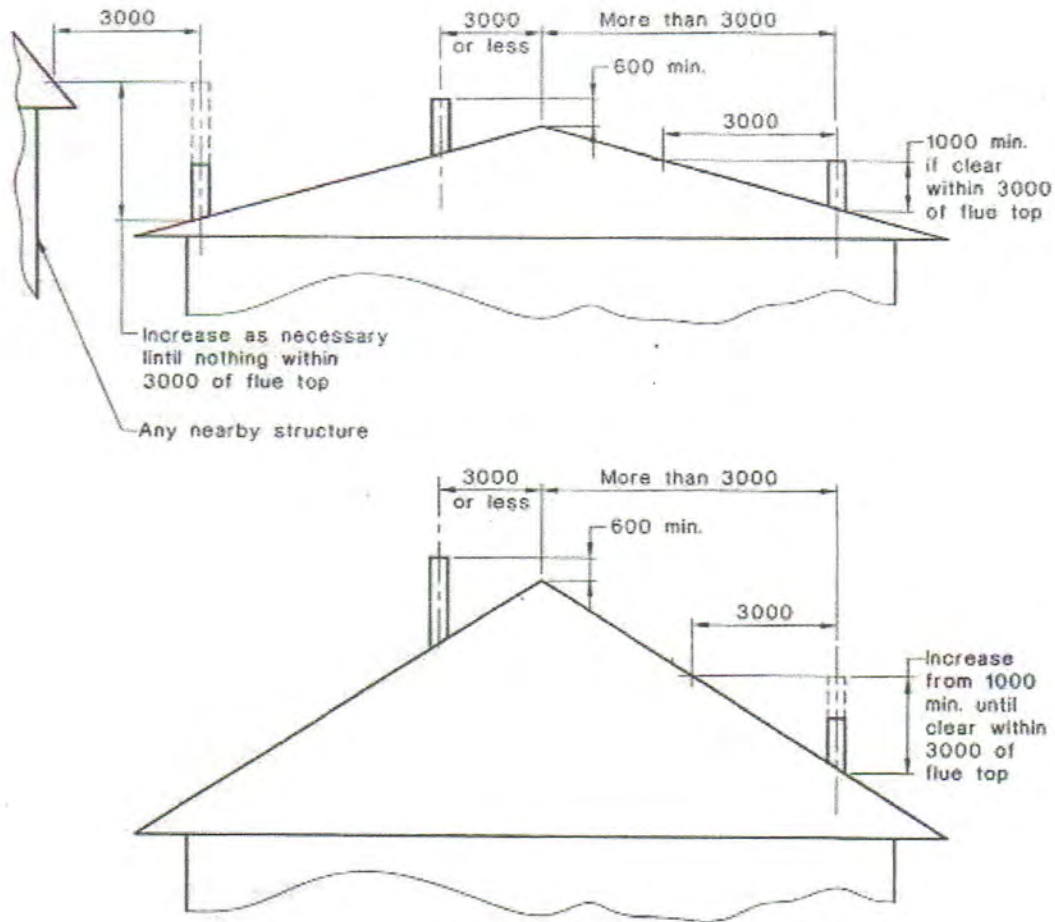
Handwritten notes and signatures:
 R.T. Bartlett
 9/12/83

PROPOSED DWELLING FOR G & B BARTLETT
LOT 38 (17) TUTERE ST. WAIKANAE

SCALE 1:50 & 1:100
 DRAWN: S.P.B.
 NOVEMBER 1983
 SHEET ONE OF THREE

AS/NZS2918:2001 specifies the following requirements:-

- Flue system exiting roof within 3m of ridgeline – not less than 0.6m above ridgeline.
- Flue system exiting roof more than 3m from ridgeline – not less than 1m above roof penetration.



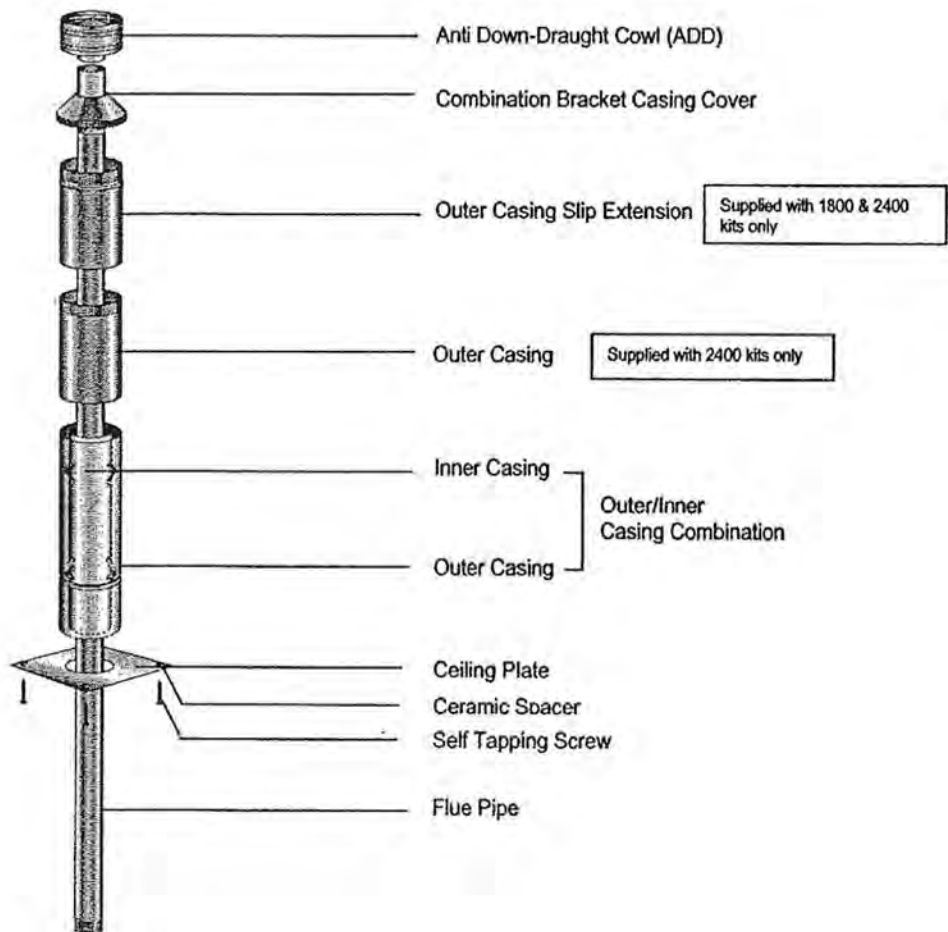
DIMENSIONS IN MILLIMETRES

FIGURE 4.9 MINIMUM HEIGHT OF FLUE SYSTEM EXIT

Additional information on flue systems is given in the following extract from AS/NZS2918:2001:-



150mm Free Standing Wood Fire Combination Cowl Flue Kit Installation Instructions Complies with AS/NZS 2918:2001





Mr Sweep Kapiti/Horowhenua Ltd
 PO Box 554
 Paraparaumu 5254
 P: 04 298 9862
 M: 027 4141 335
 E: info@mrsweep.co.nz

- Seismic restraint to be provided to appliance and flue as per manufacturer's recommendations and NZBC C/AS1, section 7.1.2.
- Solid fuel appliances – Permanent external supply of combustion air to be provided as per manufacturers' recommendations and NZBC G4/AS1.
- The penetration is no more than 300mm, and is being done under **schedule 1 of the Building Act 2004 Exempt Building Work section 14**

Emissions and efficiency rating for Metro Wee Rad Legs

Located at – ~~XXXXXX XXXXXXXX~~ 179 Tutere St Waikanae Beach

Emission – 0.62 g/kg

Efficiency – 70 %

Test Report No. – 130815

Signed

Dated

R Romain

15th Nov 2019

Roger Romain

Wood Fire Installation & Owner's Operation Manual



metrofires

Freestanding Wood Fires

Important information.....	2	Optional wetbacks.....	9
Assembling your Metro fire.....	2	Getting to know your Metro fire.....	10
Floor protector	4	Operating your Metro fire.....	10
Direct vent option.....	5	Cleaning and maintenance	11
Wetback and flue installation.....	6	Troubleshooting	12
Clearances and specifications	7	Metro Fires warranty	13
Important operation information	8	Replacement parts	14-15
Where to install a Metro fire in your home.....	9	Heating accessories.....	16



19 Oropuriri Road // New Plymouth 4312
 info@metrofires.co.nz // www.metrofires.co.nz

⚠️ WARNING! Important Information

- **WE HIGHLY RECOMMEND YOU READ THIS ENTIRE MANUAL AS INCORRECT OPERATION, MISUSE AND/OR LACK OF MAINTENANCE WILL VOID THE WARRANTY**
- The appliance and flue-system shall be installed in accordance with AS/NZS2918 and the appropriate requirements of the relevant building code or codes
- Any modification of the appliance that has not been approved in writing by the testing authority is considered to be in breach of the approval granted for compliance with AS/NZS4013 and will void the warranty
- The appliance must be installed correctly. We recommend a competent and suitably qualified NZHHA installer

All Metro wood fires comply with AS/NZS2918:2001 when installed in accordance with this manual. Please ensure you are fully conversant with the relevant standard and the contents of this manual. Correct installation is critical to the safe operation and performance of this wood fire.

Please take particular note of the following:

- It is recommended that Metro fires be installed with a Metro ECO flue system which has been developed to enhance the performance of Metro wood fires. Any alternative flue system must have a minimum flue pipe length of 4.2 metres of 150mm diameter flue pipe & have been tested to AS/NZS2918:2001
- The 150mm active flue pipe must be fully encased from the ceiling to the underside of the flashing cone at the top of the flue system, (i.e. there must not be any 150mm flue pipe exposed)

⚠️ CAUTION! Important Information

- Mixing of appliance or flue-system components from different sources or modifying the dimensional specification or components may result in hazardous conditions. Where such action is considered, the manufacturer should be consulted in the first instance
- Do not install a Metro fire if there is any sign of visible damage to the product
- This appliance must be regularly maintained.
- Use authorised Metro replacement parts only. The use of unauthorised parts may void the warranty
- This manual **MUST** be left with the home owner

- All flue pipe joints must be sealed and riveted. The bottom of the flue pipe in particular **MUST** be fully sealed into the flue outlet of the Metro fire
- In New Zealand, the Metro fire must be bolted through the floor protector into the floor to comply with the seismic restraint provisions of AS/NZS2918:2001
- All Metro's are extremely heavy, varying in weight from 75kgs up to 185kgs. During the installation process do not lift the appliance by yourself, and take care not to damage the panel coating
- Please take care when lifting the Metro fire into place onto the hearth or floor protector as point loading may break tiles and/or scratch surfaces.

Assembling your Metro wood fire

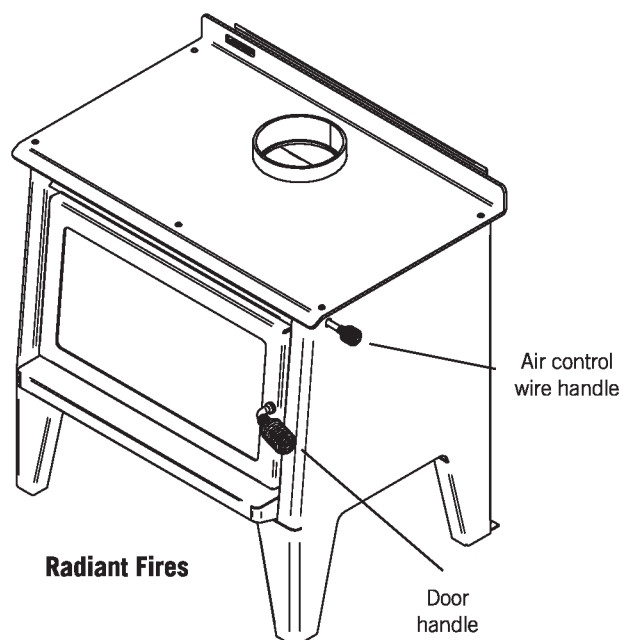
Please note: You should only assemble this wood fire if you are suitably experienced in wood fire assembly and installation. The Metro carton shows the model Metro you are about to install, enabling you to select the appropriate model's assembly instructions.

All Metro wood fires are packed in a single heavy-duty carton, and tek screwed to a wooden pallet. Having removed the packaging and located this manual, familiarise yourself with the illustrations on pages 2 & 3, and proceed as follows.

Metro radiant fires

These Metro's are supplied virtually fully assembled. Packed inside the firebox you will find bricks in a cardboard wrapper, a wire door handle and the air control wire handle.

- Remove the two tek screws located at the base of each rear leg which secure the Metro to the wooden pallet, and carefully 'walk' the Metro off the pallet
- Open the door fully and fit the side bricks to each side of the firebox. Location lugs are fitted to the base and rear wall of the firebox to retain the side bricks in position. Refer to Diagram 2
- Attach the door handle to the door latch assembly by screwing it on clockwise
- Attach the air control wire handle by screwing it on clockwise.



Assembling your Metro wood fire

Please note: You should only assemble this wood fire if you are suitably experienced in wood fire assembly and installation.

Metro pedestal and base model fires

To eliminate freight damage, the pedestal base has been packaged inside the firebox. To safely assemble your Metro, please proceed as follows:

- Lift off the top grill (convection models only) and place somewhere safe. Be careful not to chip the enamel coating or damage paint
- Open the door 45 degrees and lift the door off the hinge and place somewhere safe. Be careful not to damage the finish
- Remove the pedestal packed in a cardboard wrap
- Remove the pedestal mount plate

Note: The ECO Tiny Ped model utilises a slightly different pedestal to that detailed in Diagram 1. The rear panel on the pedestal must be turned around with the return fold facing back the opposite way. This then creates the mounting plate.

- Remove the pedestal heat shield

Note: For some models the pedestal heat shield may be taped to the rear heat shield. The ECO Tiny Ped's pedestal heat shield is pre-fitted.

- Remove the side bricks, door handle and the bolt bag
- Remove the 2 tek screws at the base of the inside of the firebox that fix the wood fire to the pallet.

It is recommended that 2 people work together with the next step:

- Grab the underneath top of the firebox door opening with one hand, holding the flue spigot with the other, slowly lift the front of the wood fire all the way back and rest the wood fire on its rear heat shield on the floor. Remove the packaging pallet.
- Fit the pedestal heat shield over the 4 bolts as shown in Diagram 1, with the open edge facing the front of the Metro (up)
- Position the pedestal with its front facing over the 4 bolts and fit the washers and nuts supplied, check to ensure the pedestal is correctly aligned and securely tighten the nuts.

It is recommended that 2 people work together with the next step:

- Grab the flue spigot with one hand and the other hand underneath the top of the firebox door opening, lift upwards standing the wood fire onto its pedestal
- Fit the side bricks to each side of the fire box. Location lugs are fitted to the base and rear wall of the firebox to retain the side bricks in position. Refer to Diagram 2
- Re-fit the door and top grill (Convection models only)

All Metro models

Check to ensure the top baffle is in its correct position in the top chamber of the firebox. It should be resting on four support lugs (two on each side of the firebox). The baffle must be hard back against the rear of the firebox with the "promet extension" (white board) or return front steel edge of the baffle facing forward as illustrated in Diagram 2.

Note: Some models feature a two-piece top baffle.

Diagram 1

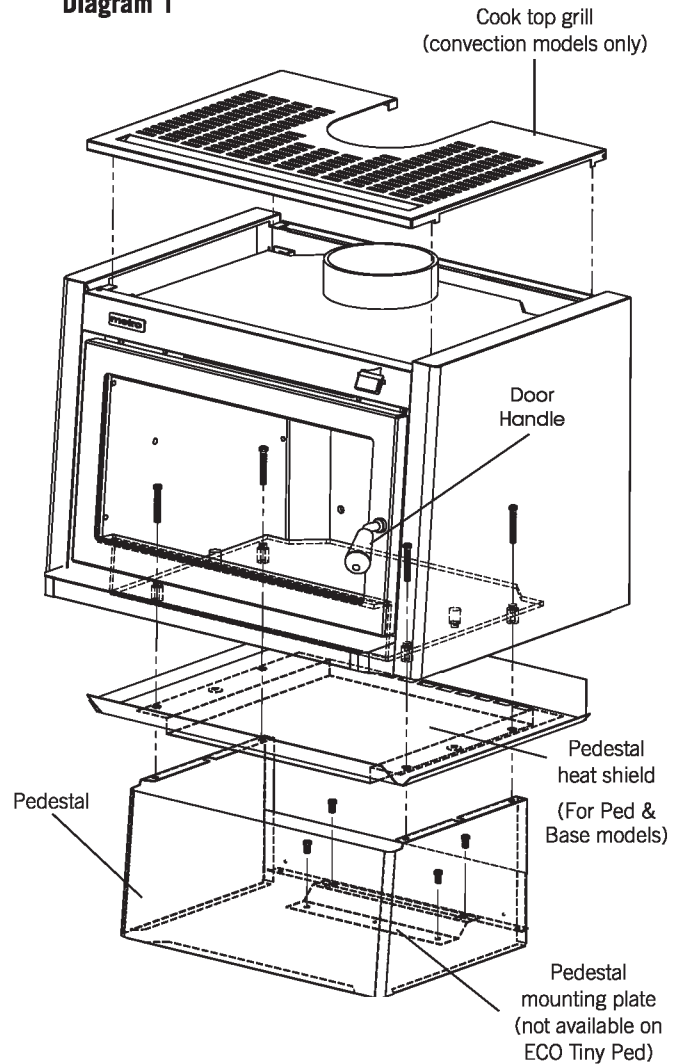
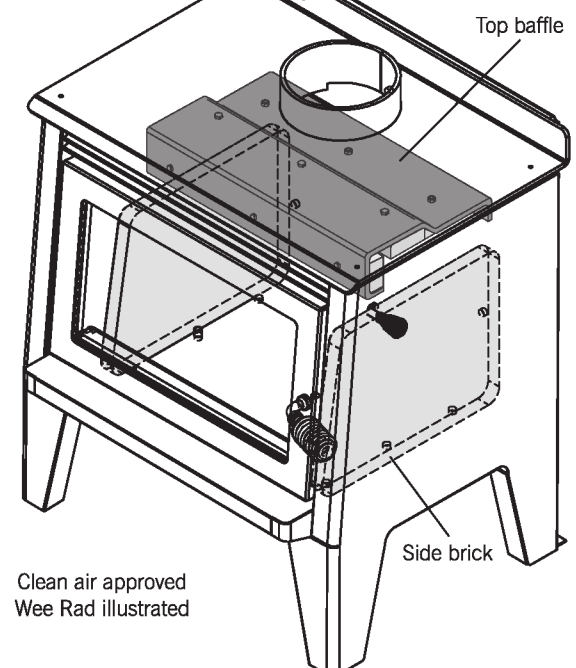


Diagram 2



Floor protector size, construction and fitting

Pioneer manufacture an extensive range of Pioneer 'Ash Floor Protectors' which comply with the minimum floor protector requirements of AS/NZS2918:2001, and can be installed with any freestanding Metro wood fire. Metro freestanding wood fires do not require an insulated floor protector as they comply with the minimum floor protector requirements of AS/NZS2918:2001. These minimum floor protector requirements are;

- They must be of adequate size to give appropriate wall, rear and front clearances/projections as detailed below and in the chart illustrated on page 7. Note;
- The floor protector must extend 200mm horizontally to the rear and each side directly below the door opening, and 300mm forward of the door opening
- The upper surface of the floor protector must be made of non-combustible material.

A suitable floor protector for a Metro freestanding wood fire is therefore any non-combustible material which could include;

- Ceramic tiles with grouted joints fixed directly to a hard base over timber flooring
- A sheet of toughened glass, panel steel etc. laid directly onto a wooden or other combustible floor.

Metro radiant fires

Lift the Metro fire onto the floor protector and using a suitable measuring device, ensure that the minimum wall clearances and front floor protector projections as detailed in the chart on page 7 are met or exceeded. Once the Metro's location on the floor protector is established and if the installation is within New Zealand, seismic restraint is required.

Using masonry anchors if the floor protector is on a concrete floor or coach bolts if a wooden floor, secure through the holes provided at the base, behind both rear legs.

Note: The anchors must pass through the floor protector and securely anchor the Metro to the floor.

Metro pedestal and base model fires

Lift the Metro fire onto the floor protector and using a suitable measuring device, ensure that the minimum wall clearances and front floor protector projections as detailed in the chart on page 7 are met or exceeded.

These models (excluding the ECO Tiny Ped) are supplied with a 'pedestal mounting plate'. Refer to Diagram 3. Once the location of this mounting plate is established, mark the seismic restraint points and shuffle the fire forward to allow securing of the mount plate through the floor protector into the floor using both of the two holes provided.

Use masonry anchors if the floor protector is on a concrete floor or coach bolts if a wooden floor. The fire can then be shuffled back into position and attached to the fixed mounting plate using the two M6 x12 bolts supplied.

Note: The anchors must pass through the floor protector and securely anchor the Metro to the floor.

Alternative Metro Mount Plate Installation

For installations when cosmetics of the mounting plate are not an issue, it is possible to 'invert' the mounting plate and use it as a means of bolting the Metro directly to the floor, through the floor protector. Refer to Diagram 3A and note;

1. Rotate the mount plate 180 degrees.
2. Secure the mount plate to the wood fires pedestal/base using the two M6 x12 bolts supplied.

You can then secure the Metro through the floor protector into the floor using the two seismic restraint holes in the rear edge of the mount plate. Use masonry anchors if the floor protector is on a concrete floor or coach bolts if a wooden floor.

Standard installation

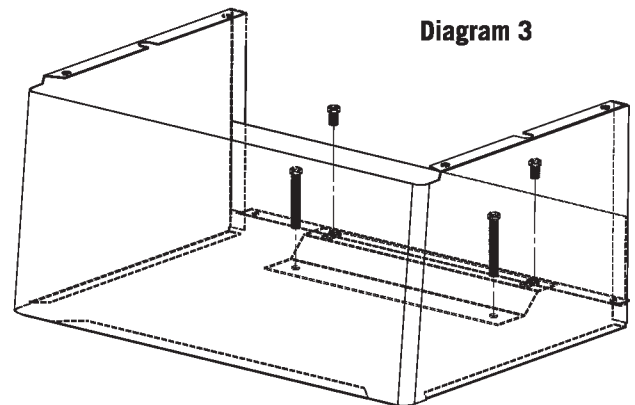


Diagram 3

Alternative installation

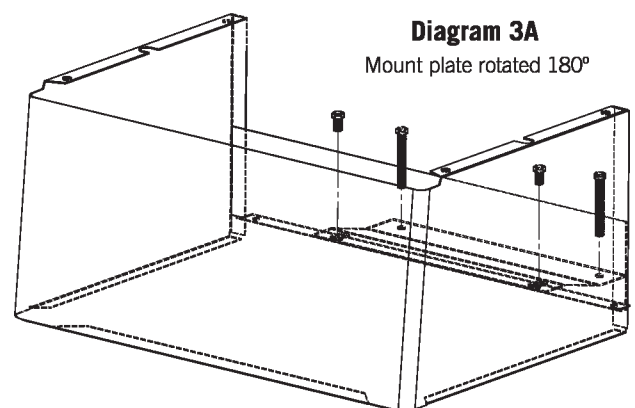


Diagram 3A
Mount plate rotated 180°

Flue installation

It is recommended that all Metro freestanding wood fires be installed with the energy efficient Metro ECO flue system which comes complete with a detailed installation manual. This installation manual must be presented with your application to gain consent with your local council.

A copy of the ECO Flue Systems installation manual can be downloaded from metrofires.co.nz, or a copy can be obtained from your Metro retailer. Any alternative flue system must comply with and be installed as detailed in AS/NZS2918:2001, and a copy of the installation manual must also be presented with your application to gain consent with your local council.

All Metro fires require a 150mm diameter flue. Please note:

- Metro ECO Flue Systems must be installed to allow unrestricted air supply from either the ceiling cavity for an ECO Base Flue Kit, or above the roof line if the Base & Option Kits are both installed
- The ECO Base Flue system must be installed into a 'vented' flat ceiling cavity, or have an ECO Option Kit added to the flue system to provide an external air supply

- Metro ECO Flue Systems shall be installed in accordance with AS/NZS2918:2001 and the appropriate requirements of the relevant building codes
- Any modification to this flue system that has not been approved in writing by the testing authority is considered to be in breach of all approvals granted
- The flue systems 150mm diameter flue pipe must terminate a minimum of 4.6 metres above the top surface of the floor protector
- All joints in the flue pipe must be sealed with Pioneer fire cement (or similar) and riveted. The base of the flue pipe must also be sealed into the Metro fires flue outlet. This is critical for optimum operation.

All Metro fires have been tested with a Pioneer double flue shield. For the Metro fire to be installed with minimal clearances as the clearance table on page 7 states, only the Pioneer double flue shield can be used. All other flue shields will invalidate the installation.

Direct vent option

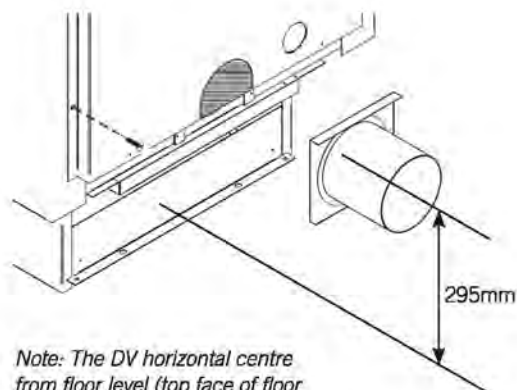
The ECO Euro Ped has the option to be installed as 'Direct Vent' appliance, drawing all primary and secondary combustion air from outside the home. Once connected, this venting option ensures the air that is heated within the home, stays in the home improving efficiency and reducing fuel usage.

Note: Connection of the Metro's direct vent inlet to outside the home is optional. If not connected this Direct Vent model still offers greatly improved performance and lower emissions due to the unique pre-heated air path for all primary and secondary combustion air that this model consumes.

Direct Vent Options

Three Direct Vent kits are available to connect the ECO DV Metro to an air supply from outside the home. The kits available include;

- DV WALL KIT – For installations when the Metro fire is installed against an outside wall
- DV FLOOR KIT– For installations onto a floor which has a free air supply below it
- DV CEILING KIT– For installations when the Metro fire is installed against an internal wall and on a concrete floor. The DV Ceiling kit goes into the wall cavity, up inside the wall into the ceiling cavity, where the air supply is drawn from.



Note: The DV horizontal centre from floor level (top face of floor protector/hearth) is 295mm

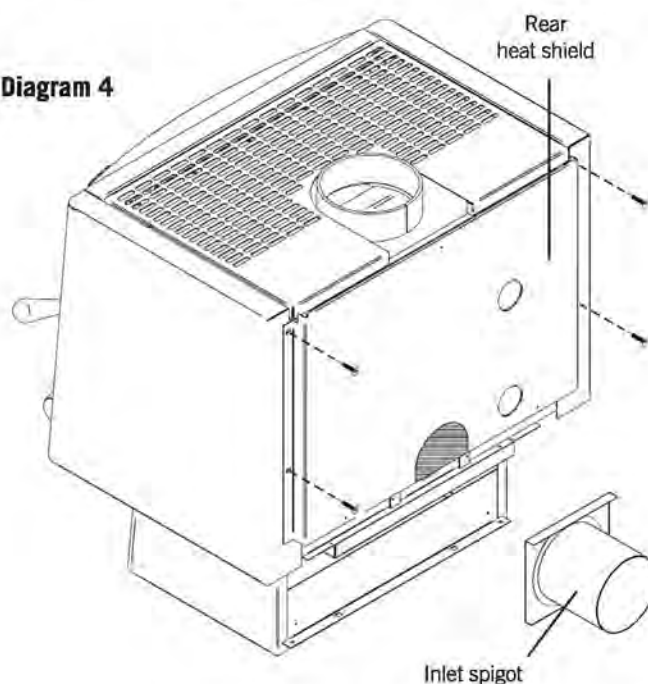
Installing the Direct Vent Option

Remove the rear heatshield from the Metro wood fire by unscrewing the four self-tapping screws illustrated in Diagram 4 and proceed as follows;

1. Remove the section of panel illustrated with a 'hatch', from the mid/ bottom section of the rear heatshield. This section to be removed has been pre-punched and only requires a few small tabs to be cut.
2. Take the 'inlet spigot' supplied in the Direct Vent kit and slide it fully down into position into the brackets provided on the rear of the firebox.
3. Re-fit the Metro's rear heatshield with the four screws.

The Metro wood fire is now ready for installation once you have pre-fitted the Direct Vent kit into the wall or floor. Full instructions for this procedure are supplied with the Direct Vent kits.

Diagram 4



Wetback installation

WARNING! Important Information

- **DO NOT** connect to an unvented hot water system
- Install in accordance with AS 3500.4.1 or NZS 4603 and the appropriate requirements of the relevant building code or codes.

CAUTION! Important Information

- Wetbacks must be connected with water before operating the fire and available to the wetback while the fire is in operation
- Wetback systems are not suitable for use in locations where the water supply has lime content. Lime build up inside the coil will eventually block the coil causing the wetback to fail
- Rainwater collection tanks installed lower than the wetback that use a water pump to supply the home, can cause problems if the pump is not operational. In these situations either the type of wetback or a roof header tank should be considered

Wetback	Suitable for models:
2kW Wetback 	<ul style="list-style-type: none"> • ECO Tiny Rad • ECO Tiny Ped
Side Wetback 	<ul style="list-style-type: none"> • Tiny Rad Woody • Wee Rad & Wee Rad Base • Wee Rad Woody • Wee Ped • Classic Rad
ECO Wetback 	<ul style="list-style-type: none"> • ECO Euro Ped
3kW Wetback 	<ul style="list-style-type: none"> • Xtreme Rad & Xtreme Rad Base • Xtreme Rad Woody • Xtreme Ped • Mega Rad • All LTD rural models
4kW Wetback 	<ul style="list-style-type: none"> • All LTD rural models

The R1 and R2 models cannot be fitted with a wetback.

Water heating is another key feature of your Metro wood fire; nearly all Metro models can be fitted with a wetback, which are designed to give maximum output with minimal effect on the operation of the fire. Only the Pioneer cast jacket wetback system should be fitted to your Metro; alternative wetbacks will void the Metro's emission approvals and may seriously affect the performance of the appliance and void its warranty.

Wetback connections are as follows, taken facing the Metro/wall; the return pipe connection is directly above the inlet connection. Heights for all models are illustrated and detailed opposite on page 7.

- ECO Tiny Ped and ECO Tiny Rad models are 92mm left of the flue centre
- The Tiny Rad Woody model is 184mm left of the flue centre
- Wee Series models are 226mm left of the flue centre
- The Classic Rad model is 184mm left of the flue centre
- All other models are 140mm left of the flue centre

All wetbacks are fitted to the inside rear wall of the firebox, with the exception of the Tiny Rad Woody, clean air Wee Series models and the Classic Rad model. Side wetback position for these models is to the outside left hand firebox wall. Please see the specific installation instructions in the 'Side Wetback' box for installation of a wetback into these appliances.

It is recommended the return pipe has a minimum rise of 1 in 12; performance will reduce as the distance to the storage cylinder increases.

To fit the wetback proceed as follows

1. Remove the rear panel of the Metro by removing the four pozi drive screws. Remove the two pre-punched knockouts from this panel.
 2. Two further knockouts will be visible on the inner rear heatshield, remove these also. Once these are removed 6mm nuts will be visible through the knockout holes.
 3. Open the Metro's door and locate two bolts securing the pressed washers which are visible on the left hand side of the firebox for both inlet and outlet connection points.
 4. A further three bolt heads will also be visible on the inside rear wall of the firebox; these are threaded into the 6mm thick firebox. Remove all three.
 5. Using the tube of sealant supplied with the wetback, apply a liberal bead of sealant around both the two connection pipes and also the outer circumference of the wetback which will face and press against the inside rear wall of the firebox. This will completely seal the wetback to the inside rear wall of the fire on installation.
- Ensure there is no gap between pipe and rear wall access holes. This cement must fully cure before appliance use.
6. Fit the wetback into the firebox and carefully pass the connection pipes through the holes in the rear of the firebox. Securely attach the wetback using the three bolts previously removed from the rear face of the firebox, fitting them through the slots provided in the wetback's jacket.
 7. The wetback is now ready for connection to the storage cylinder by a registered plumber.

Metro clearances and specifications (Minimum clearances shown are in mm, with a Pioneer double flue shield fitted)

Minimum clearances

All Metro wood fires comply with AS/NZS2918:2001. Minimum clearances shown below are detailed in millimetres, with a Pioneer double flue shield fitted to the appliance. Measurements are taken from the following reference points as illustrated:

- From the nearest combustible wall or surface (A, B, D, E, G, H)
- From the Metro's flue centre (A, B, C, D)
- From the Metro's cabinet/heatshield outermost point (E, F, G, H)
- To the edge of the ash floor protectors non-combustible surface (C, F, I, J, K, L, M)

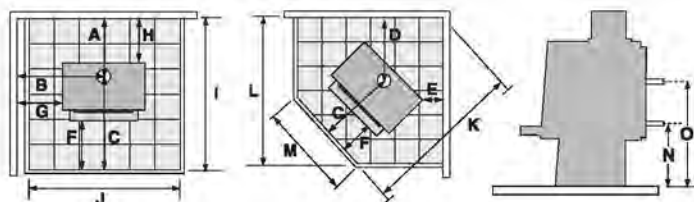
AS/NZS2918:2001 allows for a reduction in minimum clearances as detailed in Section 3, tables 3.1 and 3.2 of the standard.

Some Metro models have undergone additional testing which allows for reduced clearances. Please see the footnotes below the clearance table for the applicable models.

Wetback connections (taken facing the Metro/wall)

- ECO Tiny Ped and ECO Tiny Rad models are 92mm left of the flue centre
- The Tiny Rad Woody model is 184mm left of the flue centre
- Wee Series models are 226mm left of the flue centre
- The Classic Rad model is 184mm left of the flue centre
- All other models are 140mm left of the flue centre

Specifications were correct at the time of printing, but may alter and those detailed within should be used only as a guide. If in doubt, please consult your Metro retailer or metrofires.co.nz.



Clean air models	Minimum installation clearances with a Pioneer double flueshield fitted (mm)															Wetback		Dimensions		
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Width	Depth	Height		
ECO Tiny Ped	210	430	580	290	25	200	185	60	790	650	990	875	250	280	470	490	530	665		
ECO Tiny Rad	225	552	580	420	150	200	300	75	805	650	1165	925	250	280	470	505	530	665		
Tiny Rad Woody	251	568	580	382	110	230	310	100	831	650	1120	880	250	365	555	515	498	758		
R1	243	774	586	554	280	244	530	100	829	825	1370	1118	425	N/A	N/A	488	485	668		
R2	246	858	626	582	275	235	570	100	872	905	1449	1203	505	N/A	N/A	575	537	690		
Wee Rad ¹	251	568	580	455	150	230	260	100	831	825	1224	1015	425	295	485	615	501	688		
Wee Rad Base	271	678	580	489	180	230	370	120	851	825	1270	1049	425	295	485	615	501	691		
Wee Rad Woody	271	708	580	509	200	230	400	120	851	825	1285	1069	425	365	555	615	501	758		
Wee Ped ²	263	651	580	490	170	230	350	110	843	825	1274	1050	425	295	485	602	503	665		
Classic Rad ³	257	695	780	500	220	229	430	100	1037	728	1487	1168	328	393	583	530	707	680		
Xtreme Ped	251	624	630	441	110	227	280	100	881	907	1254	1065	507	312	502	688	554	721		
Xtreme Rad	251	650	630	458	100	227	280	100	881	907	1277	1077	507	312	502	740	554	743		
Xtreme Rad Base	251	650	630	458	100	227	280	100	881	907	1277	1077	507	312	502	740	554	743		
Xtreme Rad Woody	251	680	630	478	120	227	310	100	881	907	1292	1097	507	382	572	740	554	813		
ECO Euro Ped DV ⁴	230	585	625	495	170	200	250	80	855	905	1325	1120	505	325	515	670	575	715		
Mega Rad	285	720	728	497	100	224	300	130	1013	1006	1431	1227	606	300	490	840	659	744		
LTD rural models	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Width	Depth	Height		
LTD Wee Rad	251	548	580	425	120	230	240	100	831	825	1180	985	425	295	485	615	501	688		
LTD Wee Rad Base	251	658	580	489	180	230	350	100	831	825	1270	1049	425	300	490	615	501	691		
LTD Wee Rad Woody	271	708	580	509	200	230	400	120	851	825	1285	1069	425	360	550	615	501	758		
LTD Xtreme Rad	251	650	630	458	100	227	280	100	881	907	1277	1081	507	350	540	740	554	743		
LTD Xtreme Rad Base	251	650	630	458	100	227	280	100	881	907	1277	1081	507	350	540	740	554	743		
LTD Xtreme Rad Woody	251	680	630	478	120	227	310	100	881	907	1292	1097	507	420	610	740	554	813		
LTD Mega Rad	285	720	728	497	100	224	300	130	1013	1006	1431	1227	606	300	490	840	659	744		

The Wee Rad installed with a Pioneer double flue shield with the Wee Rad corner wing shields fitted allows for reduced clearances as follows:

¹ Wee Rad corner clearance (E) can be reduced to 120mm. This in turn also reduces clearances (D) to 425mm, (K) to 1180mm and (L) to 985mm. When fitting the corner wing shields, the Wee Rad itself must be installed to a corner clearance (E) of 120mm. The corner wing shields are then fitted which gives a wall to shield corner clearance of 100mm.

The following models installed with a Pioneer double flue shield with the side extensions fitted allows for reduced clearances as follows:

² Wee Ped corner clearance (E) can be reduced to 115mm. This in turn also reduces clearances (D) to 436mm, (K) to 1197mm and (L) to 996mm.

³ Classic Rad corner clearance (E) can be reduced to 180mm. This in turn also reduces clearances (D) to 460mm, (K) to 1430mm and (L) to 1127mm.

⁴ ECO Euro Ped corner clearance (E) can be reduced to 110mm. This in turn also reduces clearances (D) to 435mm, (K) to 1240mm and (L) to 1060mm.

WARNING! Important Information

- **WE HIGHLY RECOMMEND YOU READ THIS ENTIRE MANUAL AS INCORRECT OPERATION, MISUSE AND/OR LACK OF MAINTENANCE WILL VOID THE WARRANTY**
- Any modification of the appliance that has not been approved in writing by the testing authority is considered as breaching AS/NZS 4013 and will void the warranty
- Do not use flammable liquids or aerosols in the vicinity of this appliance when it is operating
- Never operate your Metro with the top grill removed
- Do not dry clothes on or near this appliance
- Do not use flammable liquids or aerosols to start or rekindle the fire OR store fuel within the Metro's specified installation clearances
- Never operate your Metro with the door ajar, except on initial start up
- Open the air control fully before opening the Metro's door.

CAUTION! Important Information

- This appliance should be maintained & operated at all times in accordance with this instruction manual
- This appliance should not be operated with cracked door glass, over worn, faulty or missing door seals
- Do not use driftwood, treated or unseasoned (wet) fuel, the use of most types of preservative treated wood as fuel can be hazardous and will damage your appliance
- Burning unseasoned (wet) fuel or incorrect operation on extended low burn cycles will cause excessive creosote to form. Creosote is very corrosive and excessive buildups will result in the flue pipe, flue spigot and upper burn chamber failing. Failure of the appliance and/or flue system due to creosote damage is not covered under warranty. The formation of such is not an appliance issue it is a fuel and operational issue
- This appliance must be regularly maintained and replacement parts must be authorised Metro parts only
- Do not empty ash into a combustible container.

Congratulations on the purchase of your Metro wood fire

This slow combustion appliance is designed to give you many years of warmth and service, subject to the following key factors. These key factors, if not adhered to are the major causes of unsafe installation, poor performance and flue blockages and potential product failure.

1. Your Metro wood fire must be installed correctly. Metro recommend a competent and suitably qualified NZHHA installer.
2. The only fuel to be used in this appliance shall be wood that meets the following criteria.
 - Less than 25% moisture content
 - Has not been treated with preservatives or impregnated with chemicals or glue,
 - Is not chipboard, particle board, or laminated board,
 - Is not painted, stained or oiled
 - Is not driftwood or other salt impregnated wood
3. The appliance shall be operated at all times in accordance with the "Installation and Operating Instructions" supplied with each appliance.
4. It is preferable that Metro wood fires should be installed with a Metro ECO Flue System.
5. Coal must not be used as a fuel.

Please also note the following important points:

- In New Zealand a building consent is required from your local building authority. The homeowner is responsible for obtaining this consent
- As correct installation is critical to the performance and safe operation of your Metro, it is recommended your Metro be installed by a NZHHA registered installer or a person suitably qualified in the installation of wood fires. Your Metro retailer will be able to arrange professional installation for you
- During the very first fire your Metro will give off an odour and fumes as the firebox paint cures. Do not be alarmed; open all windows and externally opening doors in that room and close any internally opening doors. This curing process will last for approximately one hour and is likely to happen this one time

- Properly seasoned (dry) timber is necessary for the Metro to operate efficiently; firewood that contains a high moisture content will result in flue pipe blockages, reduce heat output and create other issues.

Note: Once split, Softwood usually takes 12 months to season - Hardwood can take up to 24 months to season - Wood must be stored in a location that enables air circulation. Unseasoned wood stored in a closed woodshed without air circulation will still be unseasoned 12 months later.

- It is critical that the fire not be operated with over worn, faulty or missing door seals. Door seals will harden over time and become over-worn (3-4 year's) this will cause air to leak into the fire, causing the appliance to 'over fire'
- It is critical that the fire not be operated with over worn, faulty or missing bricks, baffle plate, promet extension (white board on the baffle plate)
- It is critical that the fire not be operated with cracked or broken door glass.

Please note, the above 3 points require regular inspection/maintenance (every time the ash bed is cleaned out, generally 3-5 times a season) and if not maintained will void the firebox warranty. A glowing firebox or lower fluepipe is just one sign you are over firing your appliance. Please ensure you keep your proof of purchase/receipt on any parts you purchase.

- For optimum performance fuel must be loaded so the logs lay "front to rear" in preference to laying across the width of the firebox. Spaces should be left between the logs to enable oxygen to get to as much of the surface of the fuel as possible
- A small hot fire loaded frequently is more efficient than a large fire burning on a low setting
- Your Metro is covered by a full unconditional 12 month warranty on replacement parts, and a 10 year firebox warranty.

Where to install a Metro wood fire in your home

Wood fires are usually installed in the main living area, which is the section of the home that is usually kept the warmest, being the area in the home most frequently occupied. However, before deciding on the best location for your Metro wood fire you may wish to consider:

- Water heating. If you are intending to have a wetback it is important that the wood fire is as close as practically possible to the water storage cylinder
- Split level homes are best heated when the wood fire is installed on the lower level, as the heated air will rise to the higher levels
- Building construction is another consideration. Specified clearances from walls, curtains etc must be maintained and you need to ensure no structural beams or internal gutters etc are directly above your preferred site. If you have a two storey dwelling you need to consider the second storey to ensure you don't have the flue directly outside a second storey window.

Generally, you can install your Metro in your home anywhere that suits you; Pioneer offer various fan systems to transfer heat to other sections of the home that are not heated sufficiently. It is necessary if using a fan system that the Metro you have purchased has sufficient output to heat the total area you wish to heat. Your Metro retailer or installer will be able to advise if you are uncertain.

Optional wetbacks

Water heating is another key feature of your Metro wood fire; nearly all Metro models can be fitted with a wetback, which are designed to give maximum output with minimal effect on the operation of the fire. Only the Pioneer cast jacket wetback system should be fitted to your Metro; alternative wetbacks will void the Metro's emission approvals and may seriously affect the performance of the appliance and void its warranty.

Other considerations are:

- Distance from your Metro to the storage cylinder will affect the amount of hot water produced
- Your climate & the manner in which you will 'fire' your Metro will determine the amount of hot water produced.

Note: Wetbacks are not suitable for use in locations where the water supply has lime content. Lime build up inside the coil will eventually block the coil causing the wetback to fail.

Cost Savings

Wetbacks can enable substantial power savings, dependent on the climate in the area in which you live. If you live in a cold climate you are likely to use your Metro for many months of the year, in which case a Pioneer wetback will reduce or even eliminate your water heating costs over those months. If however you live in a warmer climate and use your Metro for only a few hours a day over the colder months, electricity savings will be considerably less.

Water Pressure

A common misconception is that you must have a low-pressure system to have a wetback; this is not true. You must have a 'vented' system and high-pressure cylinders are usually not vented. However you can install an 'indirect' cylinder which contains a secondary coil inside the storage cylinder, enabling you to have a wetback while retaining a high-pressure system.

Wetback	Suitable for models:
2kW Wetback 	<ul style="list-style-type: none"> • ECO Tiny Rad • ECO Tiny Ped
Side Wetback 	<ul style="list-style-type: none"> • Tiny Rad Woody • Wee Rad & Wee Rad Base • Wee Rad Woody • Wee Ped • Classic Rad
ECO Wetback 	<ul style="list-style-type: none"> • ECO Euro Ped
3kW Wetback 	<ul style="list-style-type: none"> • Xtreme Rad & Xtreme Rad Base • Xtreme Rad Woody • Xtreme Ped • Mega Rad • All LTD rural models
4kW Wetback 	<ul style="list-style-type: none"> • All LTD rural models

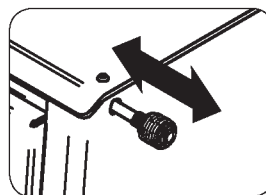
The R1 and R2 models cannot be fitted with a wetback.

Getting to know your Metro wood fire

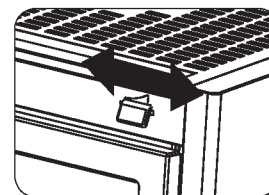
Operating your Metro fire is simple and you will quickly learn how to get the best from it. First take a minute to familiarise yourself with your new Metro.

- Raise the door handle anti-clockwise until the latch releases, and then slowly pull the door open. You will note that if you let the door go before it is at 90° to the appliance, it will fall closed. This is a safety feature that ensures the door cannot fall open if it is not latched securely. For the door to remain open, you must open it fully
- There is a single air control making your Metro fire easy to adjust. This control moves from left to right, which is 'low to high'.

All Metro radiant fires have a wire air control handle located at the upper right hand side of the appliance. Simply pull out to increase burn rate or push in to reduce burn rate.



Radiant fires air control



All other fires air control

All other Metro fires have an air control knob located on the upper front panel of the appliance.

Slide this control knob gently from right to left until you reach a stop. This is a pre-set 'low' position. Your Metro fire must not be operated at a lower burn rate than this pre-set low allows.

Operating your Metro wood fire

If your Metro has only been installed within the past few days, the fire cement seal at the base of the flue will not be fully cured. To ensure the cement sets without blistering it is recommended you burn 2-3 sheets of loosely crumpled newspaper at a time, approximately once every hour over a 6-8 hour period.

During the very first fire your Metro will give off an odour and fumes as the firebox paint cures. Do not be alarmed. Open all windows and externally opening doors in that room and close any internally opening doors. This curing process will last for approximately one hour and is likely to happen this one time.

Start up

Place a quantity of loosely crumpled newspaper on the base of the firebox until it is approximately half full of paper, or place firelighters on the base of the firebox. Add dry kindling and move the air control knob fully to the right, being the 'full open' position.

Light the paper at two or three locations across the front of the door opening and leave the door slightly ajar resting on the latch pin if necessary for a few minutes while the fire establishes. Once the kindling is burning well, open the door and add 2-3 small logs at a time until you have a well-established fire. Usually this will take approximately 30 minutes, during which time the air control should be set on "high" and the door should be closed, except for the initial few minutes and when fuel is being added.

Normal operation

Once the fire is well established, regulate the air control to achieve the desired burn rate and heat output. As you move the air control to the right, burn rate, firebox temperature and heat output will increase, if you move the control to the left they will decrease. Please note:

- Always open the air control fully prior to opening the door, then open the door slowly. Every time you refuel, leave the air control on 'high' for a minimum of 20-25 minutes
- When loading logs, place them end-on, 'front to back'; air spaces should be left between the logs to enable oxygen to get to as much of the surface of the fuel as possible
- Never use the door to force wood into the firebox, as this is likely to break the glass.

Extended burning (rural models only)

It is most important if your Metro is to be refuelled and turned down for an extended period, such as an overnight burn that you operate it correctly:

- The wood used as fuel for extended burning **MUST BE FULLY SEASONED (DRY)**. Once the fuel is loaded, the appliance must be operated on high for a period of at least 20 minutes to drive out residual moisture from the fuel (dry wood is usually 20% water content) and ensure surface area combustion.
- Do not turn the air control down lower than you need to, if you want the Metro to burn overnight, endeavour to obtain an 8 hour burn time, not 12 hours. It will take a few burns to find the correct location of your Metro's air control setting to achieve the length of burn cycle you desire as this setting is affected by several variables including fuel density, flue length and outside wind velocity.
- A smouldering fire over a long time frame is likely to deposit corrosive elements into your system which could be detrimental to your Metro.

⚠ CAUTION! Important Information

- If not operated correctly on extended burn cycles, your Metro is likely to incur flue blockages, corrosion of the upper baffle, lower flue pipe and firebox flue spigot. As these are not covered under warranty if they fail through improper use, it is important you operate your Metro correctly.

Cooking

All Metro's are designed to enable cooking of soups, stews and casseroles etc, and your Metro will easily boil a flat bottom stainless steel kettle. The Radiant Series have a dedicated cooking top enabling large pots to be placed on the cook top, while all other models have a lift-off grill.

Note: Metro's supplied with a lift-off top grill have this feature to enable the grill to be removed for cleaning if you have a spill. The lift-off top grill must be left on when cooking, because if removed the wall temperatures next to the appliance may become excessive and the top of the firebox is generally too hot to cook on directly.

Cleaning and maintenance for your Metro wood fire

Your Metro fire will give you many years of efficient service with minimal maintenance if operated correctly using seasoned fuel. Your Metro fire must be regularly maintained and replacement parts must be authorised Metro fires parts only.

The Metro radiant fires are painted wood fires and coated with 'Pioneer Metallic Black' high temperature paint and will require periodic repainting to keep them looking their best.

All other Metro fires are coated with vitreous enamel. Vitreous enamel is extremely durable and designed to last the life of the appliance. As vitreous enamel is glass, a solid or heavy object dropped or banged against a panel could chip the enamel surface.

All model Metro fires can be cleaned with a soft cloth when the appliance is not in operation.

Door glass

Providing your fuel is properly seasoned, under normal operating conditions the air-wash design of the Metro's firebox will keep the door glass clear. If the glass requires cleaning you may use either a razor blade scraper or crumpled wetted newspaper dipped in wood ash rubbed over the glass.

If your door glass breaks it must be replaced with 5mm thick ceramic glass which is available from your local Metro retailer.

Door seals

Over time, usually 3-4 years, the door and glass seals will become hard and cause air to leak into the firebox, causing the appliance to 'over fire'. Your Metro retailer stocks replacement woven fibreglass door and glass seals, which need replacing when they become hard and over worn.

The door of your Metro is easily removed. Hold it in both hands and lift the hinge end of the door up and over the top hinge pin, then lower the door from the bottom hinge pin.

Side bricks

Hair-line cracks are not uncommon and are a result of the intense heat within the Metro's firebox, coupled with mechanical damage caused by accidental impact when fuel is being loaded. However if the side bricks become cracked to the extent that they start to break up, they must be replaced.

Door adjustment

Provision is available on both sides of the door for adjustment.

To adjust the hinge end of the door, open the door fully, loosen the top hinge nut and slightly lift the latch end of the door; you will see the hinge assembly move back 1-2mm which will usually be sufficient. Retighten, then repeat by loosening the lower hinge nut, this time applying a slight downwards pressure onto the door to move the lower hinge assembly back a similar distance, then retighten.

The door latch is also adjustable, as the latch pin on the right side of the firebox is fitted through a slot which enables the latch pin to be loosened, moved back and re-tightened.

Ash removal

Over a period of time ash will build up in the base of the Metro's firebox and require removal. The time this build-up takes depends on the density and cleanliness of your fuel.

To remove the excess ash your Metro should not be operating.

- Open the door, and using a hearth shovel or similar, empty the excess ash directly into a steel or non-combustible container.
- If the ash is not disposed of immediately, be careful where you store it, as the ash can retain heat for many days and become a fire hazard.
- You must leave a bed of ash in the base of the firebox approximately 10mm deep; this insulates the base of the firebox and improves combustion.

Top baffle

This is a 'sacrificial' wear part of the firebox and should be checked monthly. Usually only the promet (white board) front/underneath section needs to be replaced when it starts to disintegrate.

Note: Cracks in the promet are not uncommon and have no adverse effect on the operation of your Metro. These cracks are the result of intense heat coupled with expansion and contraction. Burning wood which is not properly seasoned, i.e. 25% moisture content or more, will over time cause the promet to disintegrate and require replacement.

Flue systems

Should be checked annually, particularly the bottom end of the lower flue section at its rear lock formed joint. If deterioration is noticed contact your Metro retailer or installer.

The flue pipe should also be swept a minimum of once a year, or as required during the winter season. If smoke enters the room when you open the Metro's door this usually indicates the flue pipe is becoming restricted and needs cleaning. The frequency of flue pipe cleans depends on many factors, with the main variables being:

- The seasoning of the wood. If not properly seasoned you will require frequent flue pipe cleans.
- The density of the wood. Softwoods generally result in more deposits building up in the flue pipe.

To clean the flue pipe of your Metro, proceed as follows:-

- Open the Metro's door fully, reach inside with the palm of your hand face-up and extended, lift the top baffle approximately 20mm, then lift it forward out through the door opening, placing it on a sheet of newspaper you have placed on the front of the floor protector. To prevent jamming, removal and replacement of the top baffle is best performed using both hands.

Note: Some appliances have a two piece top baffle.

- Close the door and slide the air control to the left.
- Once on the roof, remove the cowl from the top of flue system and sweep the flue pipe using a 150mm-diameter flue pipe brush as detailed in the instructions provided with the fluebrush.
- Once the flue pipe is clear, clean and refit the cowl. Remove the excess soot which has fallen into the firebox, leaving a layer of ash 10mm deep on the base of the firebox, then refit the top baffle.

Note: The baffle must be fitted so its rear is touching the back of the firebox; if uncertain refer to page 3 in the installation section at the front of this manual, which shows illustrations of the baffle location.

Troubleshooting your Metro wood fire

If your Metro is installed correctly, your fuel is dry and you operate your fire correctly, you will find it to be a pleasure to use. Metro's many years of experience within the wood heating industry has shown that dissatisfaction is mainly due to:

- unseasoned fuel
- faulty installation
- operational error
- or a combination of the above 3 points.

Correct operation

Modern day wood fires need to be operated hard and fast, more so than low and lazy to ensure the firebox and flue pipe runs hot and efficiently. If the fire and flue pipe is up to temperature it will perform extremely well, the smoke will draw up the flue pipe with ease, and the fire will produce good amounts of heat.

If the fire is operated on low a lot of the time, the door glass will run black, the flue pipe will tend to block up more frequently and the fire will end up smoking into the room when reloading. It's better to have a small fire running hard and fast, rather than a big fire running low and lazy.

The following may be of assistance if you are experiencing any problems with the operation of your Metro Fire.

Smoke enters the room when the Metro's door is ajar

(possible reasons and solutions)

Check flue pipe joins

If the flue pipe joins are not sealed correctly, the flue pipe will not draw as well as it should. The flue pipe join connecting into the flue spigot on top of the Metro is most critical, if this is not sealed correctly, smoke will enter the room when the door is ajar. To check this join is sealed correctly, run a match or lighter flame around the join. If the flame is sucked into the spigot then it is not sealed correctly. This check needs to be done when the fire is not going. Ensure you check the rear of the flue pipe/spigot join, as due to the seam in the flue pipe, this is the most common area for not being sealed correctly.

Ensure the fuel you are using is correctly seasoned

If you are burning unseasoned fuel (wet), the fire will cause nothing but problems. The Metro won't deliver much heat, it will be lazy, smoke will enter the room when the door is ajar, and the door glass will run black. Unseasoned fuel is the main contributor to excessive creosote deposits which can be corrosive to your appliance and flue system.

Flue pipe length is too short

Add more flue pipe as the longer the flue system, the better the draw of the flue pipe. Please note, if you did not purchase the Metro ECO Flue System, you will not have the ECO Cowl which increases draw. We highly recommend the Metro ECO Cowl is fitted as this will increase the draw. If you already have an ECO Cowl and smoke is still entering the room, please add another 600mm length of flue pipe.

Downdraft/Turbulence blockage

If you have checked all of the previous factors and the fire is still smoking into the room, it's possible there may be a down draft issue. Down draft is environmental and can be caused by many variables, and it is purely trial and error to ascertain the cause.

Air turbulence and/or negative air pressure influences around the flue termination can be caused by too close or overhanging trees or natural/artificial ridges etc. Address these where possible or look to extend the flue above the roofline.

Other options may be:

- 'H' Cowl, designed purely for downdraft issues, but if you have an ECO Cowl fitted as standard, you will also need to add another 600mm of flue pipe to compensate as the H Cowl is shorter in length
- Directional Cowl, designed for high wind areas.

Air control setting

Ensure the air control setting is on high before opening the door to reload, as this increases the draw up the flue pipe. Open the door slowly.

If your Metro did not smoke, but its starting too and is getting worse:

The flue pipe is in need of a clean. It is recommended that the flue pipe be cleaned every season, however if you are burning the fire on low a lot, or are using unseasoned fuel, flue pipe cleans will be required more frequently.

Other issues you may experience

I can smell smoke in the room after a low burn cycle

The smell is creosote that will be seeping through the flue pipe join or out of the flue spigot onto an external surface, thus creating the smell in your room. The cause will be either unseasoned fuel, fuel mass too large, incorrect operation on low burn cycles or a combination. Creosote is very corrosive and excessive buildups will result in the flue pipe and potentially the flue spigot and upper burn chamber failing. The formation of excessive creosote is not an appliance issue, it is a fuel and operational issue. Failure of flue pipe or firebox due to creosote build up is not covered under warranty as excessive creosote build up is only possible from either unseasoned fuel or incorrect operation.

The Metro is noisy as it heats up and cools down

There will always be some expansion and contraction noise as the Metro heats and cools. This can usually be reduced by loosening three nuts at the rear of the appliance. To remedy, locate the 25mm deep cavity at the rear of your Metro between the 'rear panel' and the 'inner rear heat shield'. You will see a 6mm nut and two 6mm bolt heads in this cavity. Using a 10mm ring or open ended spanner, loosen all three so they are finger tight only.

On all Metro freestanding fires the air channel that allows the combustion air to enter the fire is fitted to the top underneath of the door opening. It is fitted with two M6 bolts. Slightly loosen both of these bolts.

Note: This does not apply to the ECO DV models.

The Metro won't turn down as much as it did

The door itself may need readjusting, the hinge and latch is slotted and allows for movement. Loosening the hinge and moving it back a few mm will make the door seal tighter and stop air leaking into the fire. The door and glass seals may be in need of replacing, which is generally required every 3-4 years.

Familiarise yourself with the instructions on page 10 before proceeding with this maintenance.

Warranty details for your Metro wood fire

Metro wood fires are manufactured in New Zealand, using the highest quality of materials, workmanship and the latest manufacturing techniques, which is why we offer a full 10 year firebox warranty and a 1 year parts warranty for your peace of mind.

Metro Warranty

(NZ Consumer laws apply to this warranty)

Pioneer Manufacturing Limited (Pioneer) warrants the steel firebox against defective materials and workmanship which would render it unfit for normal domestic use, from the date of purchase by the original consumer, for a period of 10 years.

Components including panel coating, door retainers, door seals, glass, trim, baffle & bricks are warranted for a period of 1 year from the date of original purchase for normal domestic use against defective materials and workmanship.

All associated accessories including, but not limited to, fans, flue systems, flue shields, wetbacks, tool sets, ash pots etc, are covered by a 1 year warranty against defective materials and workmanship.

It is recommended, but not a condition of this warranty, that a full service/inspection of the Metro fire be carried out at the end of each winter season.

Warranty Conditions

- The Metro fire must be installed, operated and maintained strictly in accordance with the building code and this installation and operation manual
- The Metro fire must be installed and used in a domestic application
- This warranty covers appliance like for like replacement or repair at the manufacturer's discretion but excludes freight, travel, installation, labour and/or any other associated costs
- Pioneer or their agents are not liable for any loss or expense direct or indirect arising from the failure of any part or operation of the appliance
- Operation of this appliance in violation of the warnings in this operation and installation manual will void this warranty
- Your Metro fire must be regularly maintained and we recommended it is also serviced annually. Proof of servicing may be required. If a wood fire is not regularly maintained and serviced, the life span will be reduced. If your Metro wood fire has been neglected, by not being regularly maintained and serviced, warranty may be declined

CAUTION! Important Information

Note: The following 3 points require regular inspection/maintenance (every time the ash bed is cleaned out, generally 3-5 times a season) and if not maintained will void the firebox warranty. Please ensure you keep your proof of purchase/receipt on any parts you buy.


- It is critical the fire not be operated with over worn, faulty or missing door seals. Door seals will harden over time and become over-worn (3-4 year's) and will cause air to leak into the fire, causing the appliance to 'over fire'. Do not operate the fire with cracked, or broken door glass
- It is critical the fire not be operated with over worn, faulty or missing bricks, baffle plate or baffle extension (white board on or under the baffle plate)
- A claim under this warranty should be directed to the retailer who supplied the Metro fire. If this is not possible write directly to the manufacturer stating details of fault, model, serial number of your Metro, dated proof of purchase and name of retailer purchased from.

Warranty Exclusions

(This manufacturer's warranty does not cover)

- Service calls which are not related to any defect in the product (i.e. operational, installation or fuel issues). The cost of a service call will be charged if the problem is not found to be a product fault
- Defects caused by factors other than normal domestic use or use in accordance with the product's operation manual
- Defects caused through the product being operated in an 'over-fired' manner resulting in sections of the firebox operating excessively hot to the point that sections glow red. (Note – This will result in distortion of the firebox)
- Defects to the product caused by accident, neglect, misuse or act of God
- The cost of repairs carried out by non-authorized repairers or the cost of correcting such unauthorised repairs
- Required maintenance as set out in this manual.

Service under this manufacturer's warranty must be provided by a repairer authorised by Pioneer Manufacturing Ltd. Such service shall be provided during normal business hours.

 **IMPORTANT!** Complete and retain these details at time of purchase:

Purchase Date

Serial Number

Model

Colour

Retailer



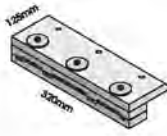
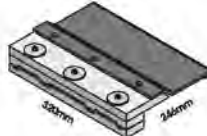

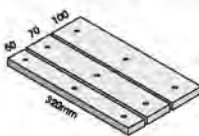
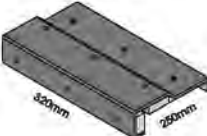

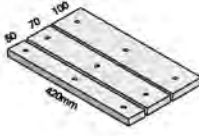
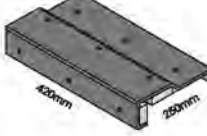
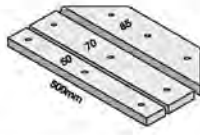
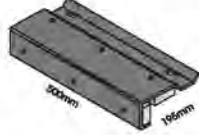

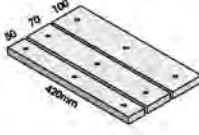
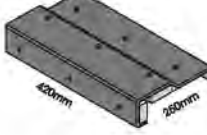

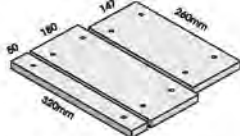
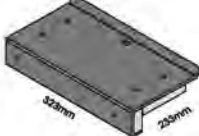
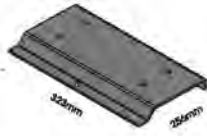

Parts guide for your Metro – Promet, baffles and wetback options

Your Metro wood fire must be regularly maintained and we recommended it is also serviced annually. If a wood fire is not regularly maintained and serviced, the life span will be reduced.

If your Metro wood fire has been neglected, by not being regularly maintained and serviced, with authorised Metro parts replaced as required, your warranty may be declined.

Listed below are the parts and product codes for your Metro wood fire. The promet/baffle should be regularly checked and must always be in place during the operation of your fire.

The baffle should be resting on four support lugs (two on each side of the firebox). It must be hard back against the rear of the firebox with the 'promet extension' (white board) or return front steel edge of the baffle facing forward.

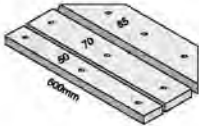
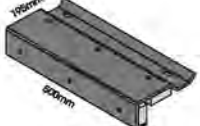


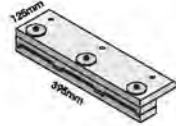
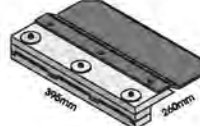

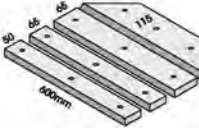
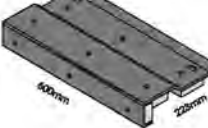



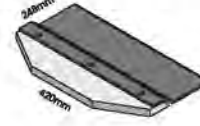




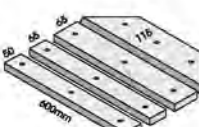

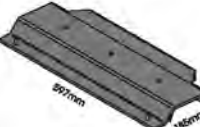

Model	Type of promet required / Type of steel baffle(s) required			Wetback options
<ul style="list-style-type: none"> • ECO Tiny Ped • ECO Tiny Rad 	ECO Tiny Promet 500-1550 	ECO Tiny Baffle 500-2050 	ECO 2kW Booster 450-0050 	
<ul style="list-style-type: none"> • Tiny Rad Woody 	Tiny Woody Promet Set 500-2004 	Tiny Woody Baffle 500-2504 	Side Wetback 450-0275 	
<ul style="list-style-type: none"> • R1 	Wee/R1 Promet Set 500-2005 	Wee/R1 Baffle 500-2505 	No wetback can be fitted to this appliance	
<ul style="list-style-type: none"> • R2 	Xtreme/R2 Promet Set 500-2010 	Xtreme/R2 Front Baffle 500-2510 	Xtreme/R2 Rear Baffle 500-2515 	No wetback can be fitted to this appliance
<ul style="list-style-type: none"> • Wee Rad • Wee Rad Base • Wee Rad Woody • Wee Ped 	Wee/R1 Promet Set 500-2005 	Wee/R1 Baffle 500-2505 	Side Wetback 450-0275 	
<ul style="list-style-type: none"> • Classic Rad 	Classic Rad Promet Set 500-2015 	Classic Rad Front Baffle 500-2520 	Classic Rad Rear Baffle 500-2525 	Side Wetback 450-0275 

Parts guide for your Metro – Promet, baffles and wetback options

Hairline cracks in the promet extension are not uncommon and will have no adverse effect on the operation and performance of your Metro wood fire. These cracks are the result of intense heat coupled with expansion and contraction and is normal wear and tear.

If the promet extension starts to break up and pieces fall into the firebox it must be replaced.

Note: Impact damage when loading wood and burning wood which is not properly seasoned, i.e. 25% moisture content or more, will cause the promet to disintegrate and require replacement. Always burn dry well seasoned wood and take care when loading wood into the firebox.

Model	Type of promet required / Type of steel baffle(s) required			Wetback options
<ul style="list-style-type: none"> • Xtreme Rad • Xtreme Rad Base • Xtreme Rad Woody • Xtreme Ped 	Xtreme/R2 Promet Set 500-2010 	Xtreme/R2 Front Baffle 500-2510 	Xtreme/R2 Rear Baffle 500-2515 	3kW Wetback 450-0100 
<ul style="list-style-type: none"> • ECO Euro Ped DV 		ECO DV Promet 500-1750 	ECO DV Baffle 500-2200 	ECO Wetback 450-0450 
<ul style="list-style-type: none"> • Mega Rad 	Mega Rad Promet Set 500-2020 	Mega Rad Front Baffle 500-2530 	Mega Rad Rear Baffle 500-2535 	3kW Wetback 450-0100 
<ul style="list-style-type: none"> • LTD Wee Rad • LTD Wee Rad Base • LTD Wee Rad Woody 		LTD Small Promet 500-1700 	LTD Small Baffle 500-2600 	3kW Wetback 450-0100 or 4kW Wetback 450-0150 
<ul style="list-style-type: none"> • LTD Xtreme Rad • LTD Xtreme Rad Base • LTD Xtreme Rad Woody 		LTD Large Promet 500-1850 	LTD Large Baffle 500-2650 	3kW Wetback 450-0100 or 4kW Wetback 450-0150 
<ul style="list-style-type: none"> • LTD Mega Rad 	Mega Rad Promet Set 500-2020 	Mega Rad Front Baffle 500-2530 	Mega Rad Rear Baffle 500-2535 	3kW Wetback 450-0100 or 4kW Wetback 450-0150 

Metro - Visit us online today www.metrofires.co.nz

Metro wood fire specifications

Metro have a Specifications Brochure available which details relevant compliance data for every model. This brochure is updated annually and details the minimum clearances and specifications for all models, which is generally required when applying for a building consent. See your Metro retailer to obtain a copy, or visit www.metrofires.co.nz

metrofires.co.nz

Visit the Metro website: metrofires.co.nz to view Metro's 'video demos' showing the latest in wood fire technology energy saving options. You can view the entire Metro product range, find out where your nearest Metro retailer is located or simply check out the latest specifications, installation requirements and emission and efficiency data for the Metro of your choice.



Pioneer heating accessories

Pioneer/Metro Fires offer a range of heating accessories designed to compliment your Metro wood fire. See below for some of the products within our heating accessory range. The range of accessories includes floor

protectors, heat transfer systems, child guards, baffles, bricks and more. For further details ask your Metro retailer for a copy of the Pioneer/Metro Fires heating accessories brochure, or visit www.metrofires.co.nz



ECO Flue Systems



Flashrites and Versatiles



Wetbacks



High Temperature Paint



Child Guards



Heat Transfer Systems



Universal Door Seal Kits



Fire Cement And Silicone



Corner and Wall Floor Protectors



Glass Tape



Door Seal Rope



Chubb Smoke Detectors

GoGet Inspection Audit Report

Consent No: **190933**

Applicant: **Mr Sweep Kapiti Horowhenua Ltd**

Site Address: **179 Tutere Street, Waikanae Beach**

Work Type: **Removal of old wood fire and installation of a new Metro Wee Rad (legs)**

Inspection Type: **Free Standing Solid Fuel Heater**

Inspection Outcome: **Pass**

Inspected By: **Trevor Christensen**

Inspection Date: **18 December 2019 10:30 a.m.**

Duration: **30 minutes**

Inspection Element	Status
Free Standing Solid Fuel Heater	Pass
Flue height Above ridge.	Pass
Flue support ceiling Very solid.	Pass
Roof No structural changes.	Pass
Ceiling plate In place	Pass
Seismic fixing Bolted down.	Pass
Flue flashing schedule one	Pass
Smoke detectors fitted Installed within 3m of all bedrooms	Pass
Make and model Metro wee rad.	Pass
Tempering Valve	N/A
Other All aspects relating to this inspection have been assessed and checked against the consented documentation and deemed to comply.	Pass



Taken at 10:21 AM on Wednesday 18/12/2019



Taken at 10:26 AM on Wednesday 18/12/2019



Taken at 10:26 AM on Wednesday 18/12/2019



Taken at 10:26 AM on Wednesday 18/12/2019



Taken at 10:28 AM on Wednesday 18/12/2019



Taken at 10:29 AM on Wednesday 18/12/2019

SITE NOTICE

Consent No: **190933**
Applicant: **Karen & Robert Hunsley**
Site Address: **179 Tutere Street, Waikanae Beach**
Work Type: **Removal of old wood fire and installation of a new Metro Wee Rad (legs)**
Building Category: **R1**

Inspection Type: **Free Standing Solid Fuel Heater**
Inspection Outcome: **Pass**
Inspected By: **Trevor Christensen**
Inspection Date: **18 December 2019**

Passed Items

Free Standing Solid Fuel Heater

Flue height	Above ridge.
Flue support ceiling	Very solid.
Roof	No structural changes.
Ceiling plate	In place
Seismic fixing	Bolted down.
Flue flashing	schedule one
Smoke detectors fitted	Installed within 3m of all bedrooms
Make and model	Metro wee rad.
Other	All aspects relating to this inspection have been assessed and checked against the consented documentation and deemed to comply.

KAPITI COAST DISTRICT COUNCIL

Consent No: 190933

Building Category: R1

Site Address: 179 Tutere Street, Waikanae Beach

Owner/Agent: Mr Sweep Kapiti Horowhenua Ltd

Inspections

The following inspections are required:

- 1 Free Standing Solid Fuel Heater
- 1 Total Inspections

Documentation

The following documentation is required:

- Application for CCC
- Solid Fuel Heater Installer's Checksheet



Statement of Compliance with the NZ Building Code

Consent No: 190933

ISSUED BY: **Kapiti Coast District Council**

PROJECT

Site Address: 179 Tutere Street, Waikanae Beach
Legal Description: LOT 38 DP 42960 CT 14D/991
Work Description: Removal of old wood fire and installation of a new Metro Wee Rad (legs)
Building Category: R1

OWNER

Name(s): Karen & Robert Hunsley
Address: 41 Oxford Street, Paddington, QLD 4064, Australia

-
- [P] Application for CCC received and accepted
 - [P] Consent description accurate and reflects amendments (if relevant).
 - [P] Confirm owner named on Building Consent application is current owner
 - [NA] Confirm new owner details and evidence of ownership are correctly documented
 - [P] Confirm all required inspections completed and documented in GoGet
 - [NA] If inspection(s) have been missed, have they been compensated for?
 - [P] If supervision was required for any inspection - did it occur?
Trevor c Free standing wood burner
 - [P] Work in accordance with approved consent and approved amendments
 - [NA] Have any notices to fix been uplifted?
 - [P] Supporting documentation required in building consent addenda received
 - [NA] Quality assurance documentation
 - [NA] Restricted building work
 - [NA] Additional information required and received
 - [NA] Compliance schedule issued
 - [NA] Earthquake prone building
 - [NA] Swimming Pool details updated
 - [NA] Warnings and Bans
 - [P] Approve to issue Code Compliance Certificate if all fees paid
 - [NA] Approve to issue Certificate for Public Use if all fees paid
 - [NA] Approve to issue Certificate of Acceptance if all fees paid
 - [NA] Supervision review

NOTES:

Inspections Prepaid:

Inspections Done:

On review of the documentation and inspection notes it can be considered on reasonable grounds that all work has been completed in compliance with the building consent.

Signed:

Name: Trevor Christensen

Position: Building Officer

Date: 13 January 2020

Building Consent Addendum to 190933

Application	Building Consent No. 190933
Mr Sweep Kapiti Horowhenua Ltd PO Box 554 Paraparaumu 5254	

Building	
Project Description:	Domestic Fireplaces Being Stage 1 of an intended 1 Stages Removal of old wood fire and installation of a new Metro Wee Rad (legs)
Intended Life of the building:	Specified as 50 years
Intended Use of the building:	Dwelling
Estimated Value:	\$4,000
Location:	179 Tutere Street, Waikanae Beach
Legal Description:	LOT 38 DP 42960 CT 14D/991
Valuation No:	1492045000

Contractor: Roger Romain - Mr Sweep PO Box 554, Paraparaumu : 027 414 1335

Specific requirements

1. There are no conditions.

Mr Sweep Kapiti Horowhenua Ltd
PO Box 554
Paraparaumu 5254

02 December 2019

Dear Building Consent Applicant / Building Owner

Approval of Building Consent – Solid Fuel Burner: 190933

Location: 179 Tutere Street, Waikanae Beach
Legal Description: LOT 38 DP 42960 CT 14D/991
Description: Removal of old wood fire and installation of a new Metro Wee Rad (legs)

I am pleased to inform you that the above **building consent** application has been **approved**. The building consent documents have been issued and are enclosed.

The building consent attached to this letter is consent under the Building Act 2004 to undertake building work in accordance with the plans and specifications that accompanied your application. Under section 49 of that Act, Council is satisfied that the provisions of the building code would be met if the proposed building work were completed in accordance with those plans and specifications. This consent does not affect any duty or responsibility under any other Act or permit any breach of any other Act.

Before starting any work please read ALL the building consent documents carefully and in full so that you, as the owner, understand the conditions under which the consent has been issued.

Whilst the life expectancy of the dwelling is 50 years, please note that the manufacturers of the fireplace/woodburner generally only specify a life expectancy of between five and 15 years for the appliance/flue etc.

Owner responsibilities

The owner is responsible for ensuring that:

- building work starts within 12 months of the approval of the building consent and that work progresses at a reasonable pace. The building consent will lapse if work is not started within 12 months, and a decision about code compliance must be made within 2 years
- the approved building consent documents are kept on site during construction and available for the District inspector at inspections
- ensuring all required inspections are completed and that a Code Compliance Certificate is obtained once the work has been completed. The list of supporting documentation required before issue of the Code Compliance Certificate and information on filling out the application form for code compliance certificate is attached. Failure to obtain a final

inspection and a code compliance certificate may affect your insurance cover and could affect future re-sale of your property.

- no work with noisy equipment is carried out before 7.30 a.m. or after 6 p.m. Monday to Saturday. During the week there may be workers on site from 6.30 a.m. quietly preparing for work. Work with noisy equipment is not permitted on Sundays and public holidays.
- an amendment to the building consent is obtained for any changes to the approved building consent, **prior** to that work being undertaken.
- endorsements on approved plans are complied with.
- advice in the general information section is complied with.
- all maintenance recommended by the manufacturers is carried out at the required intervals.

General requirements

1. The Building Inspector is to be given 24 hours' notice before carrying out the inspections on the attached list.
2. To arrange for any of the required inspections by the District Inspector, please contact the building inspectorate on 04 296 4700 between the hours of 8.00am and 4.30pm.

Note: Form 129 'Installers checksheet: Freestanding or inbuilt fire', and Form 515 'Application for Code Compliance Certificate' must be completed and ready for the inspector at the time of the final inspection.

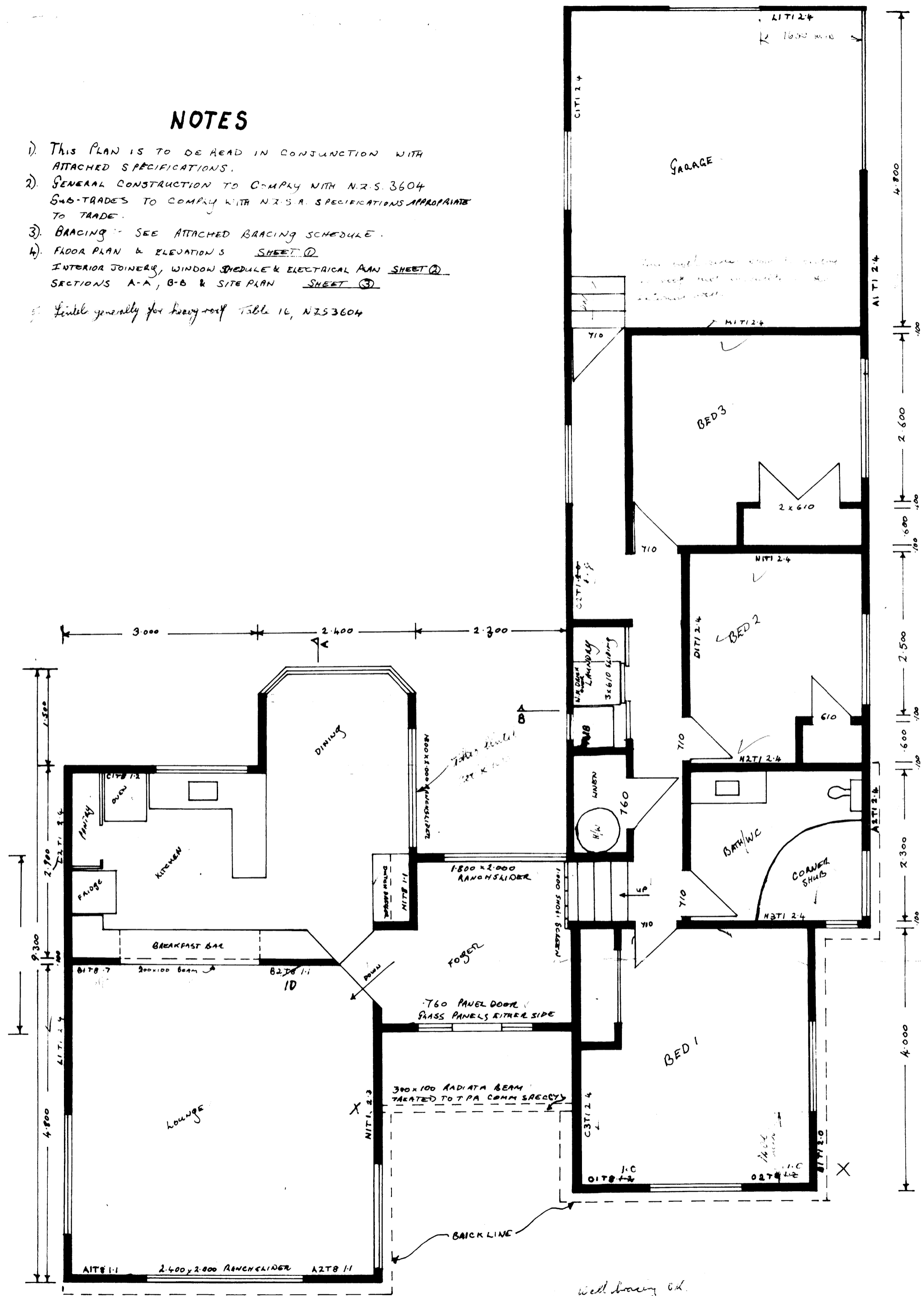
If you have any questions regarding your building consent or your responsibilities, please contact Kapiti Coast District Council on 04 296 4700 or toll free 0800 486 486.

Other reference material

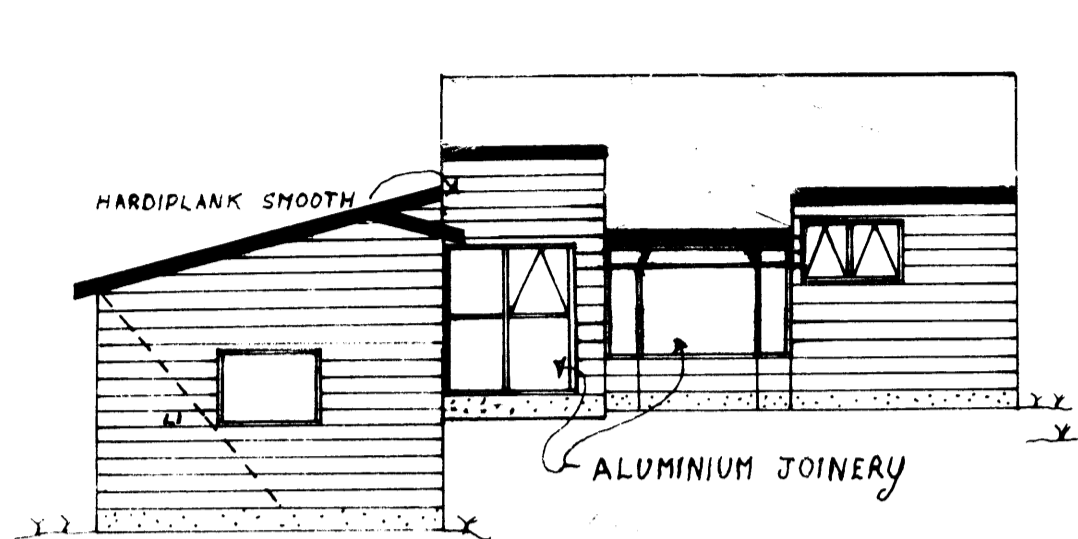
- Guide for completing an application for code compliance,
<http://www.kapiticoast.govt.nz/globalassets/regulatory/building/form-278a-guide-for-ccc-application.pdf>
- A guide to the inspection process
http://www.kapiticoast.govt.nz/globalassets/regulatory/building/form_559_a_guide_to_the_inspection_process.pdf

NOTES

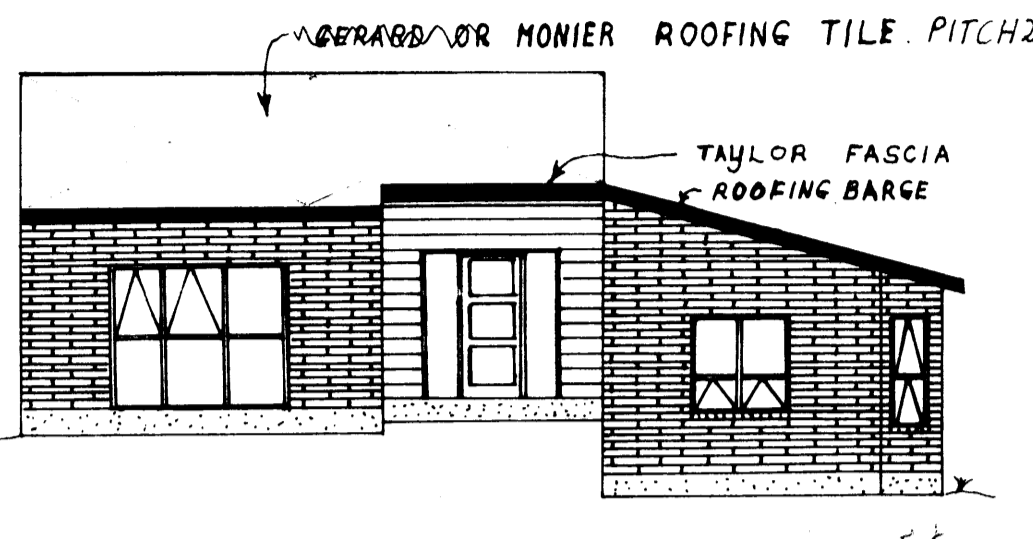
- 1) THIS PLAN IS TO BE READ IN CONJUNCTION WITH ATTACHED SPECIFICATIONS.
- 2) GENERAL CONSTRUCTION TO COMPLY WITH N.Z.S. 3604 SUB-TRADES TO COMPLY WITH N.Z.S.A. SPECIFICATIONS APPROPRIATE TO TRADE.
- 3) BRACING - SEE ATTACHED BRACING SCHEDULE.
- 4) FLOOR PLAN & ELEVATIONS SHEET (1) INTERIOR JOINERY, WINDOW SCHEDULE & ELECTRICAL PLAN SHEET (2) SECTIONS A-A, B-B & SITE PLAN SHEET (3)
- 5) Detail generally for heavy roof Table 14, N.Z.S. 3604



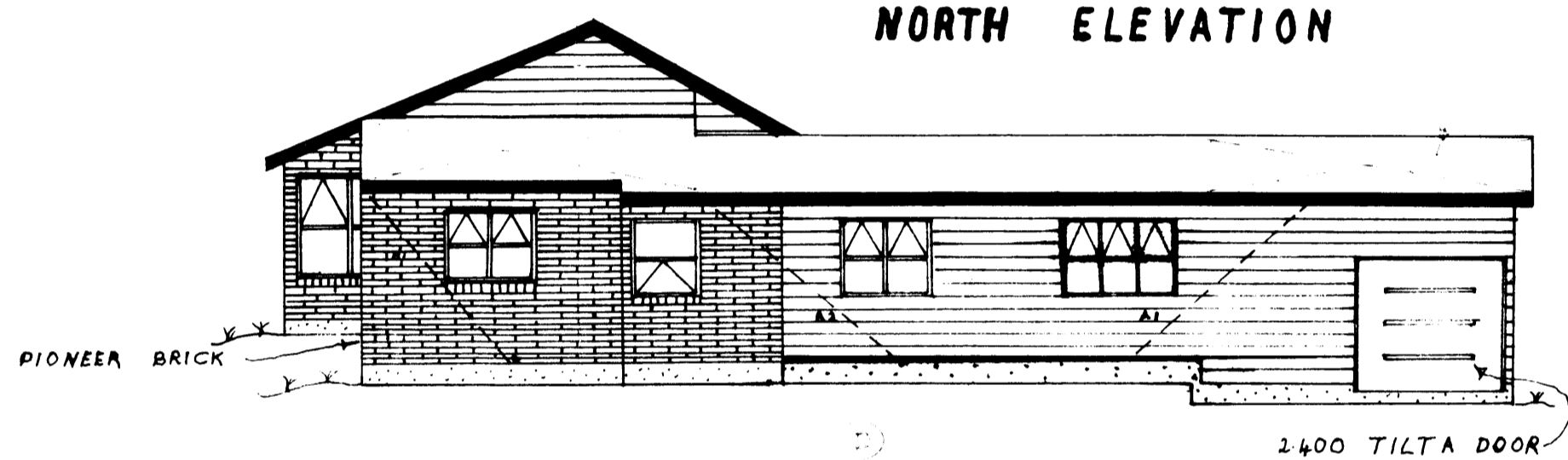
WEST ELEVATION



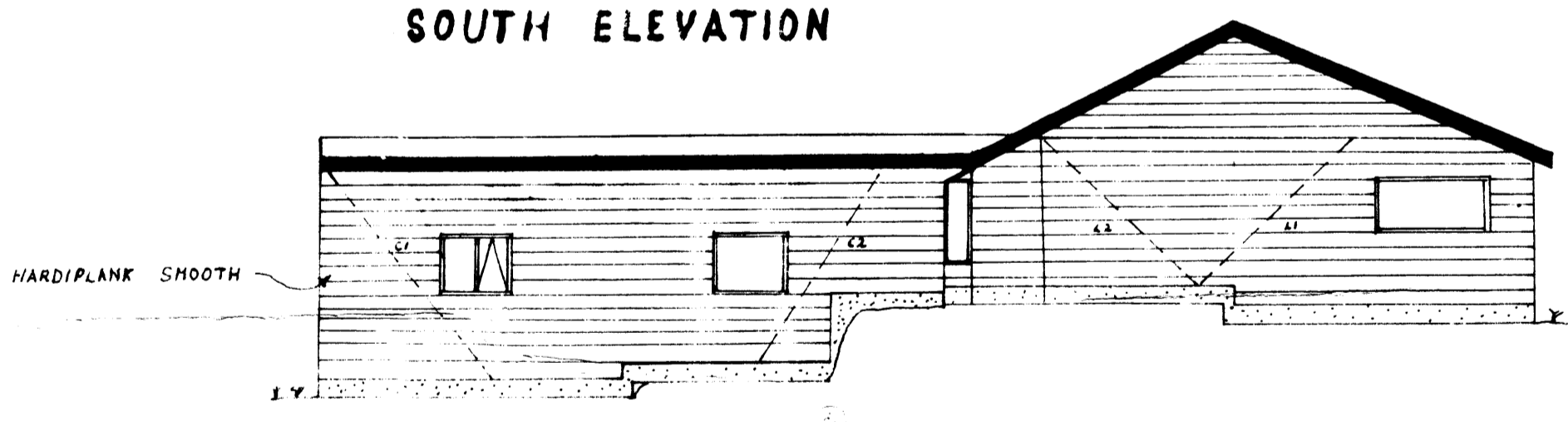
EAST ELEVATION



NORTH ELEVATION



SOUTH ELEVATION

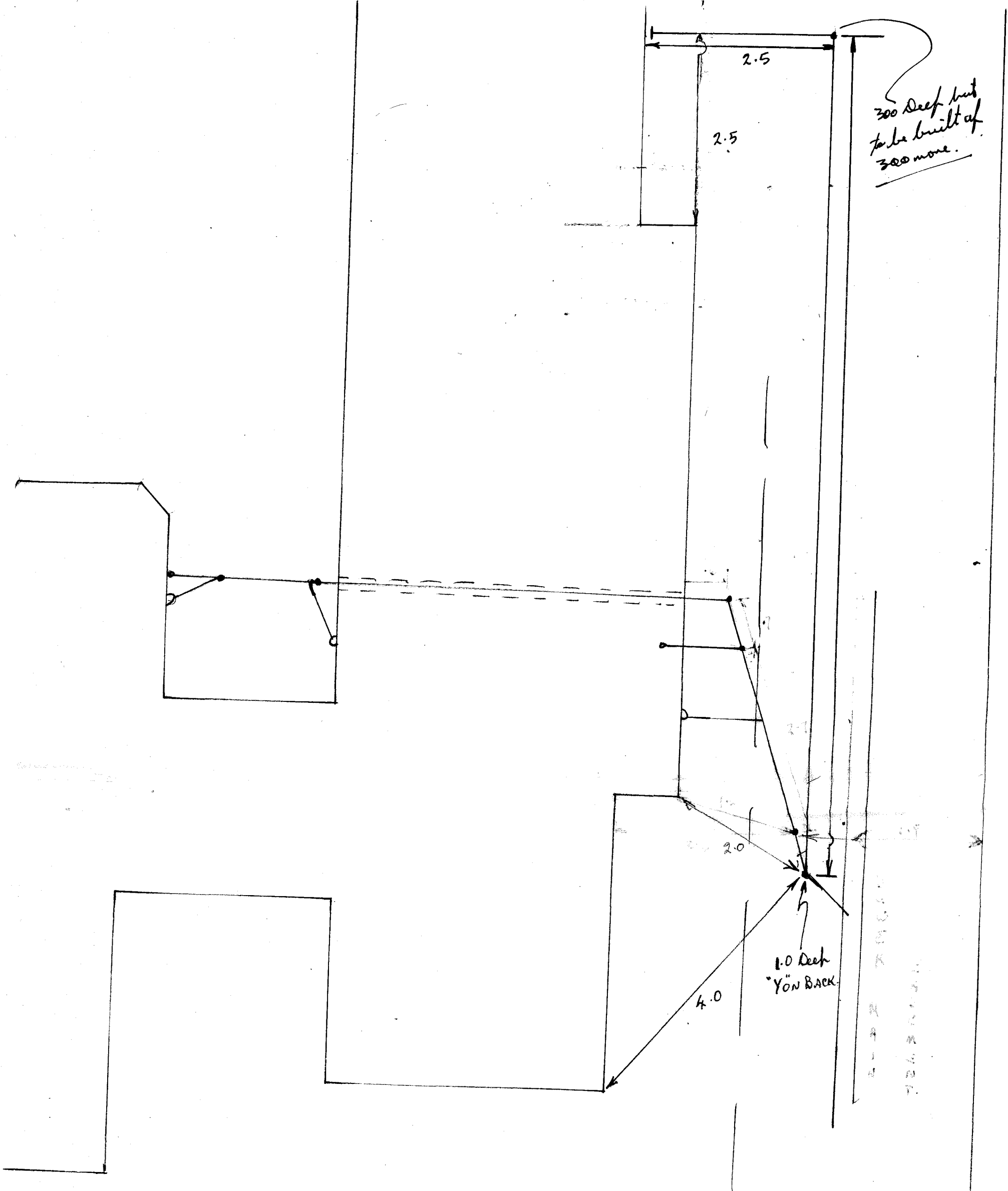


minimum the rest of window openings etc. as shown on plan
 have been standing on the ground level to the ground level

R.T. Bartlett
 9/12/83

Use this plan in conjunction with the specifications and window schedule for construction levels.

<p>PROPOSED DWELLING FOR G&B BARTLETT LOT 38 (179) TUTERE ST. WAIKANAE</p>	<p>SCALE 1:50 & 1:100 DRAWN: S.P.B. NOVEMBER 1983 SHEET ONE OF THREE</p>
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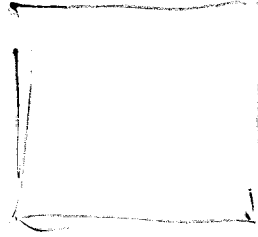


179 TUTERE ST
 LOT 38
 D.P. 42960
 D/L DREN.
 13.9.85.

DA ADDS
 D/L KUNAC
 20-2-89

TUTERE ST

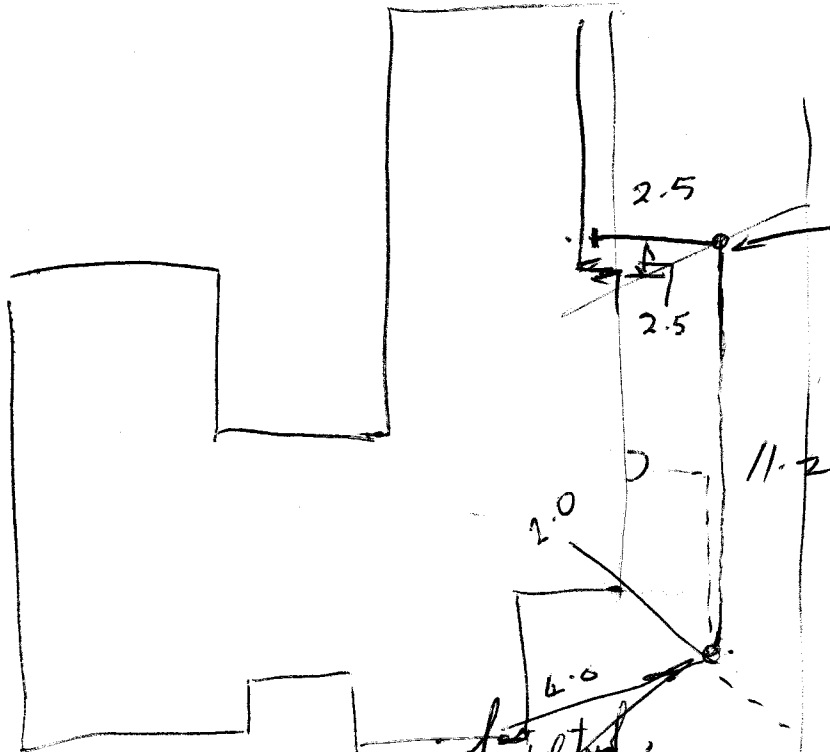
~~Bostell~~



179 Intere St

20-2-89

DR ADDS.



300 Deck
but to be
built up
approx 300
more.

original
dropped to level,
with you have. 1.0 m Deck