

GL ACCOUNT	139.00
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BLG LPERMIT/92/168 J W NICOLL

BUILDING PERMIT

(Office Copy)

AUTHORITY

WESTERN BAY OF PLENTY DISTRICT COUNCIL

No. 92/168

Receipt No. _____

Date Permit Issued 20/03/92

OWNER

Name NICOLL, J, MR
Mailing Address P O BOX 98
CAMBRIDGE

BUILDER

Name F GIES
Mailing Address 10 KINGSLEY STREET LEAMINGT
CAMBRIDGE

PROPERTY ON WHICH BUILDING IS TO BE ERECTED/DEMOLISHED

SITE

Street No.
Street Name BEACH ROAD
Town/District KATIKATI
Riding KATIKATI

LEGAL DESCRIPTION

Valuation Roll No. 6816-735-02
Lot 2
D.P. DPS 54587
Section
Block
Survey District

DESCRIPTION OF PROPOSED WORK AND MAIN PURPOSE OF USE

GARAGE & HOUSE ALTERATIONS

FLOOR AREA

DWELLING UNITS

Whole Sq. Metres	51	Number Erected	0
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NATURE OF PERMIT

3

Enter Number in Box

1. NEW BUILDING — exclude domestic garages and domestic outbuildings
2. FOUNDATIONS ONLY
3. ALTERED, REPAIRED, EXTENDED — include conversions and resited buildings
4. NEW CONSTRUCTION OTHER THAN BUILDINGS — include demolitions
5. DOMESTIC GARAGES AND DOMESTIC OUTBUILDINGS
6. SMALL CHIMNEYS, APPLIANCES AND FIREPLACES

ESTIMATED VALUES \$	Building Plumbing Drainage	24,112.00 0.00 0.00
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TOTAL (INCLUDING G.S.T.) 24,112.00

THIS PERMIT APPLICATION HAS BEEN APPROVED SUBJECT TO THE FOLLOWING CONDITIONS;

- (A) 24 HOURS NOTICE IS TO BE GIVEN WHEN REQUESTING INSPECTIONS PRIOR TO POURING CONCRETE, FOUNDATIONS, FLOOR SLABS, BOND BEAMS, TERRACES, LINING OF FRAMING OR COVERING OF DRAINS.
- (B) PERMIT NUMBER IS TO BE QUOTED WHEN AN INSPECTION IS REQUESTED.
- (C) A COPY OF THE PLANS AND SPECIFICATIONS ARE TO BE ON SITE AT ALL TIMES WHEN THE INSPECTOR CALLS.

Authorised Officer Shuttle.....

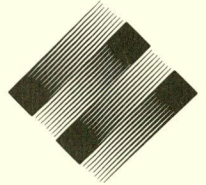
Insulate the dwelling additions to a minimum standard as per the attached schedule

NOTICE

Permit Fees to be paid at
time of application

Barkes Corner, Greerton, Tauranga
Private Bag 12803, Tauranga
Telephone: 075-718008. Facsimile 075-779820
Offices at Katikati and Te Puke

WESTERN BAY OF PLENTY DISTRICT COUNCIL



92/168

BUILDING ☐ PLUMBING ☒ DRAINAGE ☒

PERMIT APPLICATION FORM

Description of Proposed Work: *Fit Shower, basin, sink & WC to existing orchard utility connected to existing septic tank*
Road/Street Number: *195 Beach Rd* Area: *Kati Kati*

LEGAL DESCRIPTION	FLOOR AREA	ESTIMATED VALUE	
Lot No: <i>2</i> DP(S) No: <i>54587</i>	 m ²	Building	\$
Allot No: Section No:	DATE STAMP	Plumbing	\$ <i>1500</i> Labour \$ <i>520</i>
Valuation No: <i>6816-735-02</i>		Drainage	\$ <i>400</i> Labour \$ <i>125</i>
Land Area:		TOTAL	\$
Land Unit No: <i>1089-1865</i>		To be estimated at the discretion of the Environmental Services Officer	

90
49

OWNER	PLUMBER
Name: <i>J W Nichol</i>	Name: <i>K Purcell</i> Regd. No: <i>2193</i>
Address: <i>195 Beach Rd</i>	Address: <i>4 Park Rd</i>
<i>Kati Kati</i>	<i>Kati Kati</i>
Telephone: <i>5491377</i>	Telephone: <i>549 0711</i>

BUILDER	DRAINLAYER
Name:	Name: <i>K Purcell</i> Regd. No:
Address:	Address:
Telephone:	Telephone:

Payment of Fees By: OWNER ☒ BUILDER ☐ PLUMBER ☐ DRAINLAYER ☐

SIGNATURE OF APPLICANT	FOR OFFICE USE ONLY			
		Date	Permit No.	Fee
<i>K Purcell</i>	Building			
PERMIT NO.	Sanitary Plumbing and Drainage			<i>139.00</i>
	Building Research Levy			
ENDORSEMENTS <i>"Plumbing work installed & sealed in prior to permit application."</i>	Footpath Deposit			
	Vehicle Crossing			
	Water Connection			
	Proportion Water Rate			
	Sewer Connection			
	Stormwater Connection			
	District Lands Registrars Fee			
	Development Levy			

RECEIPT *93/24069* DATE *13/4/92* TOTAL \$ *139.00*

REVERSE OF FORM TO BE COMPLETED ALSO

SPECIFICATION OF SANITARY PLUMBING TO BE CARRIED OUT

	WC'S	BATHS	SHWRS	BASINS	SINKS	TUBS	WASHING MACHINES	URINALS	OTHER SANITARY FITTINGS	HOSE TAPS	HOT & COLD WATER SERVICES
INSTALL	☒		☒	☒	☒					☒	☒
RENEW											
ALTER											

together with all necessary wastes, soil-pipes and vent pipes

SPECIFICATION OF SANITARY WORK TO BE CARRIED OUT:

(cross out whichever is not applicable)

1. Construct new drain together with septic tank and effluent disposal system.
2. Construct new drain and connect to sewer or other approved outfall. *- exist. septic tank*
3. Construct stormwater drains.
- ~~4. Repair drain.~~
- ~~5. Extend drain.~~
- ~~6. Redirect drain.~~

REQUEST FOR COUNCIL SERVICES

Do you require a Water Connection

YES/NO

Do you require a Sewer Connection

YES/NO

Do you require a Kerb Crossing

YES/NO

APPROVED

Building Inspector *RAH* Date *2/4/72*

Town Planning Officer Date

HAVE YOU SIGNED THE APPLICATION?

	CHECK	
	Yours	Office
2 SETS OF SPECIFICATIONS	☐	☐
2 SITE PLANS: SCALE 1:100	☐	☐
(a) The position of the building in relation to the boundaries of the site. Note: With existing buildings uncoloured, proposed buildings edged in red or otherwise well defined.	☐	☐
2 SETS OF CONSTRUCTIONAL DRAWINGS: SCALE 1:100 OR 1:50 SHOWING:	☐	☐
(a) Elevations (site levels relative to floor levels)	☐	☐
(b) Cross Section	☐	☐
(c) Plans of all floors describing the function of each room showing all doors, windows and ventilation, fireplaces and chimneys. BUT for additions and alterations, the existing shall be shown separately and alongside the "proposed", to the same scale for comparison.	☐	☐
(d) Foundation details	☐	☐
(e) Structural details Note: Engineering Design Certificates where required	☐	☐
(f) Sufficient detail to establish the adequacy of light and ventilation, natural and artificial, to every kitchen, food-room, laundry, bathroom, water closet, shower, urinal and isolation compartment including sizes of windows, ventilating skylights, ventilating shafts and capacities of fans.	☐	☐
(g) Bracing calculations (3604)	☐	☐
(h) Proposed sewer and stormwater drains	☐	☐
(i) All existing and proposed sanitary fittings	☐	☐
(j) Have all sections on the front of this form been completed?	☐	☐

A RECEIPT FOR PERMIT FEES DOES NOT MEAN THE PERMIT IS APPROVED FOR ISSUE

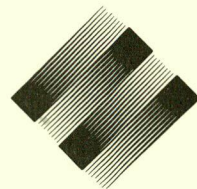
5718008
5788843

NOTICE

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time of application

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Offices at Katikati and Te Puke

WESTERN BAY OF PLENTY DISTRICT COUNCIL



92/168

BUILDING ☒ PLUMBING ☐ DRAINAGE ☐

PERMIT APPLICATION FORM

Description of Proposed Work: CONSTRUCTION OF GARAGE + HOUSE ALTERATIONS

Road/Street Number: BEACH RD KATIKATI Area: 51.04 HECTARES

LEGAL DESCRIPTION	FLOOR AREA	ESTIMATED VALUE	
Lot No: 2 DP(S) No: 54587	51.04 m ²	Building	\$ 27,112
Allot No: Valuation No: 6816 73502	DATE STAMP	Plumbing	\$ - Labour \$ -
Land Area: 1.851 HA.	9 MAR 1992	Drainage	\$ - Labour \$ -
Land Unit No: 1089-1865		TOTAL	\$ 27,112
		To be estimated at the discretion of the Environmental Services Officer	

OWNER	PLUMBER
Name: IW + JD NICOLL	Name: Regd. No:
Address: BOX 144 PO BOX 98 KATIKATI CAMBRIDGE	Address:
Telephone:	Telephone:

BUILDER	DRAINLAYER
Name: F GIES	Name: Regd. No:
Address: 10 KINGSLEY STREET LEAMINGTON CAMBRIDGE	Address:
Telephone: (07) 8274591	Telephone:

Payment of Fees By: OWNER ☒ BUILDER ☐ PLUMBER ☐ DRAINLAYER ☐

SIGNATURE OF APPLICANT	PERMIT NO.	ENDORSEMENTS	FOR OFFICE USE ONLY		
			Date	Permit No.	Fee
		Insulate the dwelling additions to a minimum standard as per the attached schedule.	Building	345.00	
			Sanitary Plumbing and Drainage	27.10	
			Building Research Levy		
			Footpath Deposit		
			Vehicle Crossing		
			Water Connection	475	
			Proportion Water Rate		
			Sewer Connection		
			Stormwater Connection		
			District Lands Registrars Fee	16.00	
Development Levy	+ 2 Spec.				
			388.10		

RECEIPT 92/32665 DATE 20/3/92 TOTAL \$ 388.10

SPECIFICATION OF SANITARY PLUMBING TO BE CARRIED OUT

	WC'S	BATHS	SHWRS	BASINS	SINKS	TUBS	WASHING MACHINES	URINALS	OTHER SANITARY FITTINGS	HOSE TAPS	HOT & COLD WATER SERVICES
INSTALL											
RENEW											
ALTER											

together with all necessary wastes, soil-pipes and vent pipes

SPECIFICATION OF SANITARY WORK TO BE CARRIED OUT:

(cross out whichever is not applicable)

1. Construct new drain together with septic tank and effluent disposal system.
2. Construct new drain and connect to sewer or other approved outfall.
3. Construct stormwater drains.
4. Repair drain.
5. Extend drain.
6. Redirect drain.

N/A.

REQUEST FOR COUNCIL SERVICES

Do you require a Water Connection

YES/NO

Do you require a Sewer Connection

YES/NO

Do you require a Kerb Crossing

YES/NO

APPROVED

Building Inspector

Date

Town Planning Officer

Date

HAVE YOU SIGNED THE APPLICATION?

CHECK

Yours

Office

2 SETS OF SPECIFICATIONS

☒
☒

2 SITE PLANS: SCALE 1:100

☒
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(a) The position of the building in relation to the boundaries of the site.

Note: With existing buildings uncoloured, proposed buildings edged in red or otherwise well defined.

☐
☒

2 SETS OF CONSTRUCTIONAL DRAWINGS: SCALE 1:100 OR 1:50 SHOWING:

☒
☒

(a) Elevations (site levels relative to floor levels)

☒
☒

(b) Cross Section

☒
☒

(c) Plans of all floors describing the function of each room showing all doors, windows and ventilation, fireplaces and chimneys. BUT for additions and alterations, the existing shall be shown separately and alongside the "proposed", to the same scale for comparison.

☐
☒

(d) Foundation details

☒
☒

(e) Structural details

Note: Engineering Design Certificates where required

☒
☒

(f) Sufficient detail to establish the adequacy of light and ventilation, natural and artificial, to every kitchen, food-room, laundry, bathroom, water closet, shower, urinal and isolation compartment including sizes of windows, ventilating skylights, ventilating shafts and capacities of fans.

☒
☒

(g) Bracing calculations (3604)

☒
☒

(h) Proposed sewer and stormwater drains

☒
☒

(i) All existing and proposed sanitary fittings

☒
☒

(j) Have all sections on the front of this form been completed?

☒
☒

A RECEIPT FOR PERMIT FEES DOES NOT MEAN THE PERMIT IS APPROVED FOR ISSUE

Box 1444

Katikate

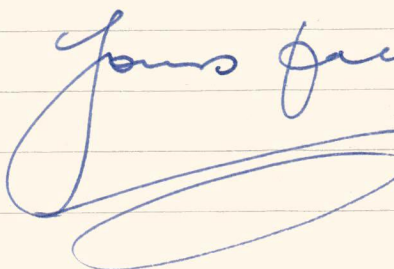
30th October 1992

Western Bay District Council
Private Bag
Katikate

For the attention of Mr Ross Hamilton

Dear Ross,

Since taking up residence at 195 Beach Road Katikate my wife and I have realised that we require an orchard amenity building with services to enable us to administer our orchard operations efficiently. Our permit application is for an orchard amenity building that will meet those requirements.

Yours faithfully,

(JOHN NICOLL)

Hold: 15/10/92

check
original
permit

Delay. due
to lack of
info

Drainage Permit No. _____

REGISTERED DRAINLAYER'S APPLICATION FOR DRAIN TEST

TO: TAURANGA COUNTY COUNCIL

PLEASE ARRANGE: AN APPOINTMENT FOR DAY Wed 28th Oct 1992 TIME 9 m
(24 hours Notice required)

The drainage work as shown below

at (Location) 195 Beach Rd Kati Kati

for (Owner) J Nichol IS COMPLETED AND
READY FOR FINAL
INSPECTION

Regd. Drainlayer K Purcell CONFIRMATION OF
APPOINTMENT

Postal Address: 4 Park Rd
Kati Kati

BY: _____

PHONE: _____

Date: 27-10-92

PLAN OF SYSTEM

I M P O R T A N T
24 HOURS NOTICE MUST BE GIVEN
FOR DRAINAGE TEST APPOINTMENTS

Plan over

Work Inspected and passed by INSPECTOR _____

This plan of completed job needed by inspector, day before test.

INSPECTION REQUEST FORM

PERMIT NO:

DATE: ...28/10/92...

OWNER:

...J. Nicol.....

BUILDER:

...K. Purcell.....

LOCATION:

...195 Beach Rd
...Kathkah'.....

TYPE OF INSPECTION:

...drainage.....

DAY:

...Wednesday... DATE: 28/10/92 TIME: ...am...

INSPECTORS COMMENTS:

OK

DATE: .../.../...

WESTERN BAY OF PLENTY DISTRICT COUNCIL

SPECIFICATION FOR MINOR BUILDING WORK

All work to be carried out to conform with the requirements of the N.Z.S.S. 1900 Building Code, the Drainage and Plumbing Regulations 1978, and District Code of Ordinances, and all other relevant legislation. The principles of good trade practice shall be observed.

TYPE OF BUILDING WORK:

NEW GARAGE +

Location:

BEACH RD KATIKATI

TYPE OF GROUND:

HOUSE ALTERATIONS

Owner:

JUST & D NICOLL

APPLICANT INDICATE BY TICKING WHICH DETAIL WILL APPLY TO YOUR BUILDING
(All measurements are in millimetres)

CONCRETE: All Concrete to be not less than 17.5 mpa @ 28 days.

FOUNDATIONS:

Continuous Concrete 250 mm wide x 350 mm deep with 12 mm rods and 6 mm stirrups @ 600 centres.

Piles @ Centres
in concrete pads

- | | |
|--|-----------------|
| ☐ 200 x 200 concrete |) |
| ☐ 125 x 125 sawn timber |) Tanalised C28 |
| ☐ 140 diameter round timber |) |
| (mm) | |

CONCRETE BLOCK WORKS:

In accordance with Councils Blockwork Code available on request. ☐

SUB FLOOR TIMBER:

Bearers: 100 x 75 ☐ 100 x 100 ☐ 150 x 100 ☐ other
Floor Joists: 100 x 50 ☐ 150 x 50 ☐ 200 x 50 ☐ other
@ 400 Centres ☐ 450 Centres ☐ 600 Centres ☐
Jack Studs: @ 1300 centres 100 x 75 other

EXTERIOR SHEATHING:

Sherboard ☐ Hardiplanks ☐ Weatherside ☐
Asbestos Sheet ☐ Masonary Veneer ☐ Other BRICK + HARDIFLOX
over lightweight breather underlay

FRAMING:

Timber: All timber to be graded in accordance with N.Z.S.S. 3631

Radiata Pine ☒ Douglas Fir ☐ Other
Treatment: Tanalised ☒ Boric ☐ Untreated ☐
Studs: 100 x 50 ☒ Other @ 400 centres ☐ 600 centres ☐
Bracing: Flat metal strap ☒ metal angle ☐ 150 x 25 checked in ☐
Roof Frame: Trusses: Brand and design No 2 x BARNER trusses spacing Centres
Rafters: 100 x 50 ☐ 150 x 50 ☒ 200 x 50 ☐ Other
Spacing
Purlins: 75 x 50 ☐ 100 x 50 ☐ 150 x 50 ☐ Spacing
Roofing: Galvanised Iron ☐ Metal Tiles ☐ Concrete Tiles ☒
Other ☐

PROPOSED GARAGE for J. NICOLL.

GENERAL:

All work shall comply with the requirements of the local authorities building bylaws and the provisions of NZSS 1990 and particularly NZS 3604. The contractor shall apply for and pay all necessary permits and fees.

MAINTENANCE:

The maintenance period shall be for a period of 90 days after completion of the works.

FOUNDATION:

Excavate and provide foundations as shown on the drawings. All foundations must be taken down to solid ground having a bearing capacity of not less than 100k Pa (refer NZS 3604). Concrete shall have a 28 day crushing strength of at least 17.5m Pa. All reinforcing must be tied in place prior to pouring concrete. Excavate under all slabs to remove all topsoil and backfill with clean sand compacted in 100mm layers. All concrete slabs shall be laid on continuous polythene DPC and shall be reinforced as shown.

CARPENTRY:

All framing timber shall be C8 treated No. 1 Pine (No. 2 for nogs.). Finishing exterior timber shall be C7 treated dressing grade preprimed pine.

All timber sizes shall be as shown or where not shown shall comply with the relevant tables of NZS 3604. Fix interior and exterior sheathing. Supply and install new roofing and secure all flashings as necessary.

COMPLETION:

Clean down all work and remove all debris from the site at completion. Leave the whole of the works ready for occupation and all components fully working.

SHEET A
(CIRCLE whichever is applicable)

NAME: J. Nicoll

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 = 51 B.U.'s/m

EARTHQUAKE ZONE: A / B / C

E = 4 B.U.'s/m²

ROOF OR BUILDING LENGTH

BL = 9 m

ROOF OR BUILDING WIDTH

BW = 7.3 m

GROSS ROOF OR BUILDING PLAN AREA

GPA = 65 m²

EARTHQUAKE: B.U.'s ALONG AND ACROSS

E x GPA = 4 x 65 = 260 B.U.'s

WIND: B.U.'s ALONG

W x BW = 7.3 x 51 = 372 B.U.'s

WIND: B.U.'s ACROSS

W x BL = 9 x 51 = 459 B.U.'s

SKETCH PLAN (external and internal walls) :

SHEET B

1	2	3	4	5	6	7	8	
Total B.U.'s Required	Wall Line		Wall Bracing Elements Provided					
	Label	Minimum B.U.'s Required	Label No.	Type	Rating B.U.'s/m	Length (m)	B.U.'s Provided	
ALONG	A		1	CP9	108	2.4	260	
			2	CP3	86	1.2	103	
				Sub-total					363
	B		3	CP9	108	2.4	260	
			4	CP3	86	1.2	103	
				Sub-total					363
	C							
				Sub-total				
	D							
				Sub-total				
632	TOTAL		TOTAL					726
ACROSS	L		5	CP9	108	2.4	260	
			6	CP3	86	.6	52	
			11	HFI	110	1.2	132	
				Sub-total					444
	M		7	CP3	86	1.2	103	
			8	CP3	86	1.2	103	
			12	HFI	110	1.2	132	
				Sub-total					338
	N							
				Sub-total				
	O							
				Sub-total				
	P							
				Sub-total				
719	TOTAL		TOTAL					782

3604 FIX LIST

● **BRACING ELEMENTS**

● **Index of BRANZ Appraised
Components, Fixings & Bracing
Elements for use with NZS 3604:1990**



THE RESOURCE CENTRE FOR BUILDING EXCELLENCE

Products listed have been assessed for 'fitness for purpose' and compliance with the intended performance of NZS3604. Structural performance, durability, practicability of installation, and quality have been assessed to the proven quality of BRANZ APPRAISALS.

NZS 3604: 1990 WALL BRACING ELEMENTS
CLAUSE 6.9

PROPRIETOR			Primary Bracing Element	Secondary Bracing Element	Rating in bracing units per metre of element length		Basis for listing
NAME	PRODUCT	SPECIFICATION			Wind	Earthquake	
Winstone Wallboards Limited	Braceline	BR1	Board on one face. Length 1.8 - 2.4 m Length 2.4 m and longer	Diagonal brace	72 91	59 74	BRANZ Appraisal Certificate No. 177 (1990) & No. 200 (1991)
Winstone Wallboards Limited	Braceline	BR2	Board on one face, vertically fixed. Length 1.8 - 2.4 m Length 2.4 m and longer	N/A	75 86	59 50	BRANZ Appraisal Certificate No. 177 (1990) & No. 200 (1991)
Winstone Wallboards Limited	Braceline	BR3	Board on one face, horizontal fixing. Length 1.8 - 2.4 m Length 2.4 m and longer	N/A	61 94	46 65	BRANZ Appraisal Certificate No. 177 (1990) & No. 200 (1991)
Winstone Wallboards Limited	Braceline	BR4	Board on one face. Length 0.9 - 2.4 m max	Fixing as clause K4.5 or clause E13.2 (Fig E8)	91	85	BRANZ Appraisal Certificate No. 177 (1990) & No. 200 (1991)
Winstone Wallboards Limited	Braceline	BR5	Board on one face. Length 1.2 - 2.4 m max	Fixing clause K4.5 or clause E13.2 (Fig E8)	98	87	BRANZ Appraisal Certificate No. 177 (1990) & No. 200 (1991)
Winstone Wallboards Limited	Braceline	BR6	Board on one face, Standard 9.5 mm Gibraltar Board on other face. Length 1.2 - 2.4 m max	2-6 kN steel straps or fixing,s or 1 - 12 kN fixing at BOTH ends	142	112	BRANZ Appraisal Certificate No. 177 (1990) & No. 200 (1991)
Winstone Wallboards Limited	Braceline	BR7	Board on one face, 7.5 mm plywood on other face. Length 0.9 - 2.4 m max	Fixing as clause K4.5 or clause E13.2 (Fig E8)	124	148	BRANZ Appraisal Certificate No. 177 (1990) & No. 200 (1991)
Winstone Wallboards Limited	Standard 9.5 mm Gibraltar Board	GIB 1	Board on one face, Length 1.8 m - 2.4m max Length 2.4 m and longer	Diagonal Brace	55 75	50 50	BRANZ Appraisal Certificate No. 200 (1991)
Winstone Wallboards Limited	Standard 9.5 mm Gibraltar Board	GIB 2	Board on both faces, Length 1.8 - 2.4m max Length 2.4 m and longer	Diagonal Brace	75 80	60 70	BRANZ Appraisal Certificate No. 200 (1991)
Winstone Wallboards Limited	Standard 9.5 mm Gibraltar Board	GIB 3	Board on both faces, Length 1.2 m and longer	N/A	65	60	BRANZ Appraisal Certificate No. 200 (1991)

PROPRIETOR			Primary Bracing Element	Secondary Bracing Element	Rating in bracing units per metre of element length		Basis for listing
NAME	PRODUCT	SPECIFICATION			Wind	Earthquake	
James Hardie & Coy Pty Limited	Harditex	HTX 1	Board on one face. Length 0.9 - 1.8 m max	Fixing as clause K4.5 or clause E13.2 (Fig E8)	101	110	BRANZ Appraisal Certificate No. 229 (1992)
James Hardie & Coy Pty Limited	Harditex	HTX 2	Board on one face. Length 1.2 - 2.4 m max	Fixing as clause K4.5 or clause E13.2 (Fig E8)	116	96	BRANZ Appraisal Certificate No. 229 (1992)
James Hardie & Coy Pty Limited	Harditex	HTX 3	Board on one face. Length 1.2 - 2.4 m max	N/A	97	90	BRANZ Appraisal Certificate No. 229 (1992)
James Hardie & Coy Pty Limited	Harditex	HTX 4	Board on one face. Length 2.4 m and longer	N/A	103	90	BRANZ Appraisal Certificate No. 229 (1992)
James Hardie & Coy Pty Limited	Hardiflex 6 mm or 7.5 mm	HF 1	Board on one face. Length 1.2 - 2.4 m max	Fixing as clause K4.5 or clause E13.2 (Fig E8)	132	96	BRANZ Appraisal Certificate No. 229 (1992)
James Hardie & Coy Pty Limited	Hardiflex 6 mm or 7.5 mm	HF 2	Board on one face. Length 1.8 - 3.6 m max	N/A	93	79	BRANZ Appraisal Certificate No. 229 (1992)
James Hardie & Coy Pty Limited	Hardiflex 6 mm or 7.5 mm	HF 3	Board on one face. Length 2.4 m and longer	N/A	104	90	BRANZ Appraisal Certificate No. 229 (1992)
James Hardie & Coy Pty Limited	Hardiflex 4.5 mm	HF 10	Board on one face. Length 2.4 m and longer	N/A	108	80	BRANZ Appraisal Certificate No. 229 (1992)
James Hardie & Coy Pty Limited	Villaboard 6 mm	HV 1	Board on one face, Length 1.8 - 3.6 m max	N/A	87	83	BRANZ Appraisal Certificate No. 229 (1992)
James Hardie & Coy Pty Limited	Villboard 6 mm	HV 2	Board on one face, Length 1.2 - 2.4 m max	N/A	117	109	BRANZ Appraisal Certificate No. 229 (1992)
James Hardie & Coy Pty Limited	Hardipanel Feature Board 6.5 mm	HP 1	Board on one face, Length 1.8 - 3.6 m max	N/A	94	85	BRANZ Appraisal Certificate No. 229 (1992)

PROPRIETOR			Primary Bracing Element	Secondary Bracing Element	Rating in bracing units per metre of element length		Basis for listing
NAME	PRODUCT	SPECIFICATION			Wind	Earthquake	
New Zealand Plywood Manuf. Association	7.5 mm Standard Construction Plywood	CP3	Plywood on one face. Length 0.6 - 1.2 m	Fixing as clause K4.5 or clause E13.2 (Fig E8)	88	83	BRANZ Appraisal Certificate No. 224 (1992)
New Zealand Plywood Manuf. Association	7.5 mm Standard Construction Plywood	CP4	Plywood on one face with 9.5 mm Standard Gibraltar Board* on the other. Length 0.6 - 1.2 m	Fixing as clause K4.5 or clause E13.2 (Fig E8)	97	95	BRANZ Appraisal Certificate No. 224 (1992)
New Zealand Plywood Manuf. Association	7.5 mm Standard Construction Plywood	CP5	Plywood on one face. Length 0.9 - 1.8 m	Fixing as clause K4.5 or clause E13.2 (Fig E8)	94	92	BRANZ Appraisal Certificate No. 224 (1992)
New Zealand Plywood Manuf. Association	7.5 mm Standard Construction Plywood	CP6	Plywood on one face with 9.5 mm Standard Gibraltar Board* on the other. Length 0.9 - 1.8 m	Fixing as clause K4.5 or clause E13.2 (Fig E8)	100	99	BRANZ Appraisal Certificate No. 224 (1992)
New Zealand Plywood Manuf. Association	7.5 mm Standard Construction Plywood	BR7	Plywood on one face with Braceline* on the other. Length 0.9 - 1.8 m	Fixing as clause K4.5 or clause E13.2 (Fig E8)	124	148	BRANZ Appraisal Certificate No. 224 (1992)
New Zealand Plywood Manuf. Association	7.5 mm Standard Construction Plywood	CP9	Plywood on one face. Length 1.8 - 3.6 m	Fixing as clause K4.5 or clause E13.2 (Fig E8)	108	96	BRANZ Appraisal Certificate No. 224 (1992)
New Zealand Plywood Manuf. Association	7.5 mm Standard Construction Plywood	CP10	Plywood on one face with 9.5 mm Standard Gibraltar Board* on the other. Length 1.8 - 3.6 m	Fixing as clause K4.5 or clause E13.2 (Fig E8)	142	122	BRANZ Appraisal Certificate No. 224 (1992)

* Product of Winstone Wallboards Limited

+ New Zealand Plywood Association Members: Carter Holt Harvey Timber, Fletcher Wood Panels Ltd, H. T. Plywood Ltd, IPL (West coast) Ltd.

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WESTERN BAY OF PLENTY DISTRICT COUNCIL

**GENERAL SPECIFICATION FOR
RESIDENTIAL BUILDINGS**

I N D E X

	PAGE
GENERAL	WESTERN BAY OF PLENTY DISTRICT COUNCIL This Permit application has been approved subject to the following conditions: 1. 24 hours notice to be given when requesting inspections prior to pouring concrete in foundations, floor slabs, bond beams, lining of framing or covering in drains. 8
EXCAVATION & FILLING	7
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METALWORKER, SOLID PLASTERER & INSULATION	22 All work shall comply with NZSS 1900 and be carried out in accordance with the principles of good trade practice. 24
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GENERAL

1. SPECIFICATION: This specification is a General specification only and will therefore not cover all details. Any additional clauses inserted existing clauses altered or crossed-out, or any other changes that may be made to this Specification by the Owner and/or the Contractor should be initialled by both Contracting Parties (i.e. the Owner and the Contractor).

2. CONDITIONS OF TENDERING: The Lowest or any Tender is not necessarily accepted. The Contractor shall obtain all necessary permits, pay all fees required, and complete the work as shown and specified in accordance with the By-Laws and be passed by their respective Inspectors. The standard of construction shall be that laid down in N.Z.S. 1900 and all workmanship shall be in accordance with the principles of good trade practice.

3. THE WORK and the SITE: Consists of the satisfactory erection and completions of a:
.....
at
for

The Contractor shall supply all labour and materials - supply and maintain the required tools and plant, scaffolding (if required) - and generally complete the work in the best trade manner in accordance with the true intent and meaning of the accompanying Drawings and this Specification taken separately or collectively. All usual items and work shall be allowed for, even though not mentioned in the Specification or shown on the Drawings.

The Contractor and the owner shall ascertain the correct position of all boundaries and the position of the work according to the Site Plan.

4. INSURANCE: FIRE and EARTHQUAKE insurance to the full amount of the contract price, and WORKER'S COMPENSATION and PUBLIC RISK insurance with an approved insurance corporation shall be taken out by the Contractor and maintained until the completion of the work. The contractor shall maintain insurance on his own tools and plant, etc.

5. LIENS' ACT: This Contract is subject to the "Wages Protection and Contractors' Liens Act 1980" and its amendments.
6. LEVELS: Indicated ground levels shown on the Drawings are assumed to be approximately correct. All assumed and approximate ground levels shown on the elevations must be checked against the actual levels on the Site, Check wall heights and set-out of any steps. Check floor datum with Owner.
7. PROGRESS PAYMENTS: Progress payments shall be paid monthly on demand up to 90% of the estimated value of the work performed and the materials on the Site for the first two thirds of the Contract Sum, and thereafter at 85%. Up to 95% of the Contract Sum will be paid 31 days after completion, the balance of 5% to be paid at the end of the Maintenance Period - (i.e. days after completion).
8. VARIATION or EXTRAS: Any variations or extras shall be at a price agreeable to both the owner and the Contractor, recorded in writing, signed by both parties and attached to the Contract.
9. P.C. (Prime Cost) SUMS and PROVISIONAL SUMS: The Owner reserves the right to P.C. Sum and the accounts will be adjusted accordingly on completion.
10. CONTINGENCY SUM: The Contractor shall allow the sum of \$..... as a Contingency Sum for unforeseen work to be expanded as the Owner shall direct.
11. GENERALLY: All materials shall be the best of their respective kinds and all workmanship to be according to the best trade practices. All timbers shall comply with the requirements of the Model Building By-Laws N.Z.S. 1900 and its grading shall conform to N.Z.S. 3631 National Grading Rules.

All timber shall be treated against the effects of insect infestation and decay in accordance with the requirements of the N.Z. Timber Preservation Council and shall bear the "Woodmark" brand.

12. BY-LAWS: All work shall comply with the relevant requirements of the By-Laws of any Authority having jurisdiction over the work. Any matters mentioned in the By-Laws not specifically shown on the Drawings or mentioned in the Specification shall be deemed to be included in and part of the Contract for this work. Before making any deviations from the Drawings or Specifications in order to conform with these

requirements, the Contractor shall give notice to the Owner specifying the deviations proposed to be made, and the reason therefore and applying for instructions thereon:

Allow for giving all notices, for obtaining all licences and permits, for paying all fees and charges and for indemnifying the "Employer" against any fee or expenses arising through failure on the Contractor's part to comply herewith.

13. TEMPORARY WATER SUPPLY: From the Council's main, take a 19 mm dia, copper pipe to a point on the boundary determined by the Owner (Where the Toby Box will be installed) and provide a stand-pipe and hose tap for use during the building operations.

.....

14. TEMPORARY ELECTRIC POWER: Allow for the provision of all electric power required for the erection and completion of the building; the provision and maintenance of all temporary wiring, sub-boardk and switch gear in accordance with the Wiring Regulations, and for the removal therefore on completion of the work.

15. TEMPORARY CONVENIENCE: Provide a temporary convenience for use during building operations. Remove at completion - fill the hole and disinfect around.

The new W.C.'s and other lavatory fittings belonging to the new building shall not be used under any circumstances and if necessary shall be kept under lock and key until handed over in complete and clean condition on completion.

16. MAKE GOOD DAMAGE to EXISTING PROPERTIES, ETC: Allow for making good any damage to adjacent buildings, fencing, paving, gardens, plants and trees and to public utility services.

17. SUB-CONTRACTORS - MAKE GOOD: Allow for each trade attending upon performing all necessary jobbing for, and making good after all trades.

18. CLEAR AWAY and CLEAN at COMPLETION: Allow for clearing and carting away all packings, shavings, and waste matter which may collect from time to time, for broom sweeping all floors before joinery is brought in. At completion filling in all truck tracks, cleaning all roofs and gutters and leaving free from waste materials, remove wrappings and paper from sanitary fittings and

equipment and leaving linoleums and floors clean and free from cement, paint, stains and blemishes; replacing all cracked glass, thoroughly cleaning-off cement and putty, paint and dirt, and polishing all glass both sides, cleaning down thoroughly the whole of the building and the surroundings, and leaving the premises and site clean and fit for immediate use and occupation.

The Contractor shall take all necessary precautions to keep the works free from vermin and shall leave the building entirely vermin-proof at completion.

19. FIGURED DIMENSIONS shall be used in preference to SCALING OFF THE DRAWINGS:

The scale to which the Drawings are made shall only be made use of when no figured dimension are given either in the Drawings or Specification and the figured dimensions shall always be followed though they may not coincide with the scale of the Drawings. Whenever possible, dimensions shall be taken from the building.

16564

20. STABILITY: The Contractor shall brace and support all parts of the work against damage by wind, and also protect same from damage by water.
21. PROTECTION of WORKS: During the currency of the works, the works and materials particular from the elements. Should the Contractor fail to carry out this provision and damage takes place, same shall be made good by the particular Contractor and any loss or expenses incurred shall be deducted from monies due or which may become due.
22. FLUCTUATION in COST: Should there be either a rise or fall in the price of labour or materials between the date the quotation is submitted and completion of the works, adjustment to the Contract price shall be made accordingly, provided that the Contract price has been affected by such rise and fall in prices.
23. INSPECTION of COMPLETED WORKS: On completion of the works and prior to occupation by the Owner, the Owner shall in company with the Contractor or his appointee make final inspection of the works. Should occupation by the Owner take place prior to this inspection and approval, the Owner does same on his own responsibility and the Contractor is absolved from all liability for damage during such occupancy and the period of maintenance shall be taken from the date of occupation.
24. ADDENDUM CLAUSES to PRELIMINARIES and GENERAL: CONTRACTOR to inspect the site before making a firm quote.

[illegible]

EXCAVATION and FILLING

1. CLEAR SITE: Clear the whole of the building site and area to be excavated of vegetation and rubbish and allow to cart away. Remove top-soil from the building site and allow to deposit in a heap where it will not be buried under sub-soil that is subsequently excavated.
2. GENERAL EXCAVATIONS: Excavate for the site, levelling, terrace foundations, chimney base, posts, blocks, footings, steps, wall pipes etc., to the various depths, levels and grades required. Take base walls and footing down to a min. of 300 mm below the finished ground level and down to the solid. All sub-soil from foundations and other excavations is to be evenly spread or deposited on the site with falls as directed by the Owner. Secure and maintain the sides of all excavations, and keep clear of water and fallen material. In the event of excavations for foundations being taken out too deeply, such excess depth must be filled with concrete at the Contractor's expense.
3. BACKFILLING: Backfill around all foundation walls with selected thoroughly compacted clean dry fill, placed in 150 mm layers, and well rammed to five thorough consolidation. Replace a minimum of 100 mm of top soil as last layer to exterior and grade to existing levels.
4. HARDFILLING: Hardfilling under all concrete floors unless shown otherwise on the Drawings to consist of min. of 100 mm or 75 mm "all-in" metal or similar.
5. ADDENDUM CLAUSES to EXCAVATION and FILLING:

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CONCRETOR1. MATERIALS:

- (a) Cement: Shall be fresh, approved Port and cement, carefully stored away from damp in a weatherproof shed.
- (b) Sand: Shall be approved clean, silicious, sharp, coarse, free from loam, harmful amounts of salt, organic or other deleterious matter and graded from 5 mm down.
- (c) Coarse Aggregate: Shall be approved crushed blue metal, from the nearest quarry, and shall pass through 25 mm, 20 m, 12.5 mm and 6.5 mm sieves mixed in equal proportions, All aggregate must be free from harmful amounts of loam, dust and vegetable matter. Alternatively, natural gravel, grading from 20 mm to 5 mm may be used. If natural gravel is used. mix shall be 1:5 (cement-natural gravel).
- (d) Water: Shall be organically clean and fresh.>
- (e) Reinforcement: Shall consist of standard plain round steel rods, free from loose rust, paint and oil, with ends of all rods hooked and lapped for lengths equal to 40 diams. Unhooked rods shall be lapped 50 diams. Bend all horizontal rods not less than 600 mm around angles. All intersections of rods shall be bound together with 1.6 mm black soft wire.
- (f) Boxing: All concrete shall be cast in clean boxing strong enough to ensure that the finished surface is straight and true. Joints shall be tight enough to prevent leakage of liquid. Dressed boxing shall be used for exposed faces where plastering is not required - joints on there faces shall be straight and square and the boxing fixed horizontally. Form for all openings and chases as required.

- 2. CONCRETE MIX: All concrete work shall comply with N.Z.S. 1900, Chapter 9.3.

Concrete shall be ordinary grade concrete as specified in N.Z.S. 1900, Chapter 9.3a and have a minimum specified compressive strength of 17.5 MPa at 28 days standard cured.

Concrete shall be mixed in a mechanical mixer for not less than 1 1/2 minutes after all materials are in the mixing drum. Only sufficient water is to be used to make a stiff mix capable of being properly placed in the boxing. If 'ready mix' is used, it must comply with N.Z.S. 1900.

3. PLACING OF CONCRETE: All concrete is to be placed immediately after mixing and no concrete that has commenced to set will be allowed - (15 minutes is allowed after water is added to mix). Convey and deposit concrete so that no separation of ingredients takes place. Concrete shall be thoroughly vibrated and worked around all reinforcing. Construction joints shall be reasonably straight and square and shall be thoroughly cleaned before placing fresh concrete. Concrete shall not be dropped through a height greater than 1500 mm, and shall be deposited as nearly as possible in its final position.
4. REMOVAL OF BOXING: No boxing shall be removed within six days of pouring, and all work is to be kept thoroughly saturated with water until cured. Cut back all boxing tie wires behind the concrete face.
5. SLUMP: Concrete slump shall not exceed the following:

<u>Position</u>	<u>Vibrated</u>	<u>Hand Compacted</u>
Slabs	50 mm	75 mm
Walls	75 mm	100 mm

6. COVER TO STEEL: 50 mm to sides of foundation walls if boxed, otherwise 75 mm
75 mm to underside of steel in footings
75 mm and 50 mm to underside of steel in floor slabs.
7. HOLDING DOWN BOLTS: Cast in situ 10 mm dia.H.D. bolts hooked around top rods or with ragged end (where no reinforcing occurs) bedded 225 mm into concrete. Keep 225 mm from angles of walls, and at no more than 1350 mm at intermediate points, with a minimum of two bolts to any plate. Cast in all other bolts required.
8. FOUNDATIONS: Base walls shall be 125 mm wide if for single storey work, with a 250 X 150 mm footing resting upon solid bottom at least 300 mm below the adjacent ground. Reinforce the footing with 2x12 mm dia. rods and 6.5 mm links at 600 mm c/s, and the wall with one 12 mm dia, rod at the top.

Where two-storey the work shall be 150 mm wide with a 300 X 225 mm footing resting on solid bottom and at least 300 mm below the adjacent ground. Reinforce the footing with 3x12 mm dia. rods and 6.5 mm links at 600 mm c/s, and the wall with one 12 mm dia. rod at the top.

Where the foundation walls are more than 900 mm in height above the footings, the above-mentioned reinforcement shall be supplemented with 10 mm dia. rods at 750 mm c/s both ways, or where above 1800 mm - 10 mm at 300 mm c/s both ways. Alternatively 665 H.R.C. Mesh may be used. Building standard concrete ventilators at 1800 mm c/s, and at 750 mm from corners. Provide vents to local By Law and Health Dept Regulations. Provide base ventilation generally of .288% of base area. Vents to be as near as possible to 50 mm below floor joists.

FOUNDATIONS for concrete blockwork foundations over 1050 mm in height, the footings shall be 300 X 30 mm with two 12 mm rods one above the other with 75 mm clearance off the ground. Ties at 600 mm c/s.

For concrete blockwork foundations over 1060 mm in height, the footings shall be 300 X 300 mm with four 12 mm dia. rods stirrured at 600 mm c/s with 75 mm clearance off the ground.

Bond-beam at floor-joist height to have four 12 mm dia. rods or 2x20 mm, stirrured, and to have bonded piers up to 4500 mm c/s, reinforced with three 12 mm dia. rods and core filled.

Allow for 12 mm dia. starters projecting 600 mm from footing, three to each corner and at all openings, and at not more than a maximum of 1000 mm c/s for run of wall.

9. CONCRETE FLOOR SLABS: Shall be mm thick, reinforced with 668 H.R.C. Mesh, levelled off to screeds, cement dusted, and trowelled smooth with a power float. Concrete floor is to lay upon 75 mm of well wetted sand, which lays upon a properly lapped and jointed damp-proof course 0.25 polythene; allow for turn up at edges and all openings.

Note: Allow 31.5 X mm rebate at the top of the wall to take floor slab. Vents in brickwork for cavity ventilation where floors are concrete.

10. PILES: Shall be 125 x 125 timber tanalised to H5 Standard, shall be set under stringers at not more than 1350 mm c/s, and not more than 2100 mm between rows (for 150 X 150 mm joists). Allow for No. 8g galv. wire ties.

Where piles only are used, the base shall be sheathed with:

.....

and securely fixed to the face of the piles.

11. PORCHES and STEPS: Shall have 100 mm thick walls reinforced where necessary. Fill with good quality filling and pour 100 mm thick slab over. Allow for upstands under framed exterior walls, and cove at junction of slab.
12. CHIMNEY: Allow for 150 mm thick footing, 300 mm in solid ground and extending 150 mm beyond chimney base on every side, rein. 665.

The chimney itself shall comply with N.Z.S. 1900 Chapter 7.

BRICKLAYER and BLOCKLAYER

1. MORTAR: (a) Shall consist of 4 parts clean sharp sand to one part of fresh Portland cement; mix on a watertight surface with clean water and an approved plasticiser, using proportions recommended by the manufacturers.
- (b) Shall consist of one part of lime to 9 parts of clean sharp sand; to be mixed with clean water and allowed to stand for 48 hours. Immediately before using gauge with fresh cement in the proportions of 2 parts of cement to 9 parts of lime and sand mix. Re-made mortar is not to be used. Colour may be added to mortar, but not more than 10% of the cement content.

2. BRICKS: Shall be

3. BRICKWORK: To be executed by skilled tradesmen. Bricks to be laid damp. Walls to laid true t line, level, plumb at corners, with perpends true and to be kept not less than 38 mm from timber framework. Allow for purpose-made pressed steel ties spaced at not more than 500 mm apart horizontally and not more than 338 mm vertically, to be well bedded into the wall and to be fixed to the timber framework with heavy gauge galv. clouts so as to have a fall to the bricks.

Allow for weep-holes in the bottom course at not more than 1200 mm c/s; build-in strips of approved vermin-stop with adequate laps; with fall to brickwork and secure to vermin plate with ruse-proof nails or staples. Flush-up the inside joints and allow no mortar to fall into the cavity. Build-in "grounds" of Ht Totara as required. Joints not to exceed 10 mm if possible.

Face joints to be

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4. SILLS: Sills to brickwork to be and shall have mastic joint underneath wooden sills.

5. CLEANING: Face of brickwork is to be kept clean; accidental splashes of mortar to be removed with weak solution of Spirits of Salts and Water (1-10).
6. BLOCKS: Concrete blocks shall be masonry units to requirements of N.Z.S.S. 595.
7. BLOCKWORK: Unless otherwise stated, blockwork is to be 200 mm hollow concrete blocks; to be laid level and true to line, with corners and perpends plumb. Blocks to be laid dry and to have in general, three 12 mm dia M.S. rods at corners with one 12 mm rod at each side of all openings and to have one 12 mm rod every for run of wall (Max 1000 mm c/s). Joints to be 10 mm and to finish concave. The work to conform the requirements of N.Z.S.S. 1900, Chapter t.2.
8. ADDENDUM to BRICKLAYER and BLOCKLAYER:

CHIMNEY:

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SURROUND:

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CARPENTER

1. MATERIALS: All timbers to be the best of their respective kinds and grades and to comply with N.Z.S.S. 3631 and local By-Laws. All dressed timber to be thoroughly dry; all framing, etc., having lining on both sides shall be gauged to an even width. All finishing timber shall be machine dressed, and interior finishing timber shall be sand-papered to a smooth surface in addition.

2. SCHEDULE:

All work shall be in accordance with N.Z.S. 3604.

<u>Component</u>	<u>Size</u>	<u>Kind & Grade</u>	<u>Remarks</u>
Bedplates	100 x 50	.....	
Bearers	100 x 75	.....	On edge
Jack Studs	100 x 75	.....	Braced with 100 x 75 where req'd.
Floor Joists	150 x 50	.....	450 c/s
Over Basements	200, 225, 250 or 300 x 50	.....	450 c/s. Size as req'd
Herring Bone	50 x 50	.....	
Bottom Plates	100 x 50	.....	
Top Plates	100 x 50	.....	
Studs	100 x 50	.....	Not exceeding 600 c/s
Dwangs	100 x 50	.....	3 rows
Braces	Metal Angle	.....	Cut-in, 45o
Braces	Flat Strap Sheet Bracey	.....	" " "
Ceiling Joints	100 x 50	.....	600 c/s max.
Runners	150 x 50 (to suit)	.....	

Rafters	100 x 50	.....	900 c/s
"	x 50	.....	450 c/s
Trusses	Brand	Design No.	
Ridges	200 x 25	.....	
Hips	200 x 25	.....	
Valleys	150 x 50	.....	
Valley Boards	150 x 25	.....	
Collar Ties	150 x 25	.....	1800 c/s max.
Underpurlins	150 x 50 (iron)	.....	Mid-span
"	150 x 75 (tiles)	.....	
Struts	100 x 50	.....	1350 c/s
Purlins	75 x 50	.....	750 c/s
Eaves Bearers	75 x 35	.....	500 c/s
Ribbon Plate	75 x 50	.....	
Fascia	.....	.....	
Flooring	ex. 100 x 25	.....	
"		20mm high Density Particle Board.	
Weatherboards	ex. ....	.....	
Architraves	ex. x 10 mm (fin.)	.....	
Skirting	ex. x 10 mm (fin.)	.....	
.....			
.....			

Beam Schedule:

Up to	950 mm	100 x 50	on flat
"	"	1350 mm	2/100 x 50) Check 12.5 mm into 100 x 75 stud
"	"	2000 mm	2/125 x 50)
"	"	2400 mm	2/200 x 50) Use 50 x 50 understud
"	"	3150 mm	2/250 x 50)

3. WORKMANSHIP:

- (a) Sub-floor: lay 3 ply malthoid dampcourse under all timber in contact with concrete or blocks.

Lay bearers on edge across timber piles and joints in bearers to be halved or played over solid bearing. Across bearers lay joists at not more than 450 mm c/s, with 300 mm laps where joined over bearing.

All fixings are to be in accordance with N.Z.S. 3604.

Double joists under exterior walls and user bearing partitions; securely spike to bearers, taking care to obtain an even top level.

Floor joists over basement to be
All joists spanning more than 2400 mm shall be properly stiffened with herringbone strutting or solid bridging not less than 35 mm thick, fixed at right angles to the floor joists. The distance between separate rows of strutting is not to exceed 2400 mm for live loads not exceeding 2.87 Kpa.

- (b) Framing: Plates to be in long lengths, straight and scarfed at joints. Studs to be straight, spaced at not more than 600 c/s and nailed to plates at both ends with two 100 mm nails at each end. Use three studs at corners, and nail-in three rows of nogs, the top row to line-up with the door trimmers, remainder evenly spaced; allow for extra nogs behind joinery fittings. Stud height average 2400 mm from floor to ceiling (Minimum).

Check in 150 x 25 mm braces for external walls, and 100x 25 mm for interior at approximately 450 using as a guide, one brace for 4500 mm of wall, two for 10,500 mm and one for every 7,500 mm of wall thereafter in the same wall.

Lay 100 x 50 mm ceiling joists at not more than 500 mm c/s, crown up and spike will to top plates. Over ceiling joists 150 x 50 mm (or size to suit) ceiling runner if the joists are more than 2400 mm long but not more than 3600 mm long. Above 3600 mm long, one runner for every 1800 mm of ceiling joist (runners evenly spaced).

Pitch roof ato, using rafters at c/s, neatly birdsmouth to ridge, (using 100 x 50 rafters), fit..... underpurlins at mid-span, strutted at 1350 mm c/s with 100 x 50 material. Securely nail on 150 x 25 mm collar ties at not more than 1800 mm apart. Wire down rafters at not more than 200 mm overhang from framework. Wire to studs or trimmers. For galv, iron roof, fix 75 x 50 mm purlins across rafters at not more than 750 mm c/s and spike at every passing with 100 mm nails; stretch 75 mm galv. netting tightly over purlins and secure with galv. staples; over netting lay approved building paper of a weight not less than 18 lbs per 100 sq. ft., lapped a minimum of 100 mm. In areas where this type of sarking is not permitted, sarking as approved by the local Building inspector must be used.

4. EAVES: Allow rafters to project as shown on the cross-section, cut off plumb and to a straight line, and allow for:-

- (a)
(b)

Fit fascia to a straight line and level, joints to be splayed and primed before fixing. Fascia to have groove for fibrolite. Line in-going porch ceilings and soffit with 4.5 mm flat hardiflex finished against the building with ex 50 x 25 mm bed-mould and cover the joints with "D" mould (primed before fixing)

5. FLOORING: Lay ex T & G flooring (under partitions), cramp tightly (not more than six boards at a time), and nail with two 50 mm floor brads to every joist, taking care to keep the end joints tight; punch brads below the surface ready for sanding; remove debris from beneath floor.

Alternative: Particle Board
Concrete - see Concretor, page 6, par 9.

6. EXTERIOR SHEATHING: Cover the whole of the exterior framed walls with approved building paper properly fixed and then sheath with

.....as shown in the drawings, and securely fix to studs. Prime all, including laps and joints, ready for Painter. Exterior corners mitred, joints splayed.

7. EXTERIOR JOINERY:

(a) Wooden: Sashes shall be type and shall finish not less than 45 mm thick. Frames shall be ex jambs and heads, ex 150 x 50 mm sills, ex 100 x 75 mm mullions, with ex 75 mm or 100 x 25 mm exterior facings. Frames and sashes to be constructed of approved quality timber, properly seasoned; to be mortised, grooved, rebated, throated and housed in accordance with the best trade practice. Frames, including joints, to be primed before assembly and installing. To be wedged and securely fixed level, plumb and square (sizes on plan),

Exterior Doors: Front

.....

Back

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Access Doors: Where piled and battened foundations are used, provide a ledged door.

In continuous concrete and stepped foundations construct a door and frame, leaving complete with hasp and staple or tower bolt.

(b) Aluminium or Metal:

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Note: Provide and install flashings over all exterior joinery where exposed to the weather.

8. INTERIOR JOINERY: Frames to be ex 40 mm solid rebated.

Doors: (Sizes to plan). To be flush type, ply faced, with clashing strip.

To be quality for main
rooms, hung on 1 1/2 prs; 75 mm butts.

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To be paint quality for service rooms.

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9. LINING: All internal walls to be covered with 9.5 mm gib. board fixed with 30 mm F.H. galv. clouts at 150 mm c/s on edges and 225 mm c/s intermediate; to be lightly punched, and stopped with Plaster of Paris to a smooth surface ready for Painter.

Bathroom

Shower Recess

Fit architraves and skirting to all rooms, including wardrobes and cupboards; mitre neatly at external corners scribing at internal angles; punch all finishing nails and brads, ready for Painter.

10. MANHOLE: Form a 600 x 600 mm manhole in ceiling where directed, line with dressed timber and finish off with architrave properly mitred at corners; allow to stand over 10 mm.
11. WARDROBES: Allow for ex 300 mm shelf at door height and full width shelf at 1500 mm from floor, with clothes rail of 12.5 mm G.W.I. pipe supported on cleats, 100 mm below shelf.
12. LINEN CUPBOARD and/or H.W. CUPBOARD: Allow for 5 rows or ex 75 x 25 slatted shelves.
13. COAT CUPBOARD: Allow for ex 300 mm shelf, and 4 only hat and coat hooks..
14. BATHROOM CABINET: Allowed for bathroom cabinet to be installed where directed, size

.....
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15. SOAP RECESS: Allow for soap recess over bath, tub and in shower recess.

16. BATH: To be properly cradled and enclosed to have toe recess.

17. CEILINGS:

(a) To be of 9.5 mm fibrous plaster, properly slung and wadded and stopped smooth with Plaster of Paris, ready for the painter.

Fibrous plaster cornice to Owner's choice in the following areas:

.....

.....

remainder in wooden scotia, size
.....

(b) To be of:

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18. FITMENTS: Allow P.C. Sum \$....., for the following fitments, to be properly constructed and installed:-

Kitchen

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Bathroom

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Laundry

.....

Dining Room

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Lounge

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19. PELMETS: Allow for metres of
to toe following areas:-

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20. HARDWARE: Allow P.C. Sum \$ for supply only
of selected hardware. The Contractor to fix into
position.

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21. ADDENDA TO CARPENTER:

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METAL WORKER

Supply the following in exact lengths, sizes etc.

Contractor shall fix in position:-

- (a) Galvanised weather bars for door sills. Drill for countersunk head galvanised screws.
- (b) Supply and fix in position all other, rafter straps, etc, or as otherwise required but not shown.
- (c)
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SOLID PLASTERER

All solid plaster work to be 2-coat plaster:-

- (1) Min 6.5 mm thick base skim coat.
- (2) Min. 12.5 mm thick final coat.

External plaster work to have..... finish.

Where plastering on to smooth concrete or brick or block, the surface is to be roughened, or one coat of 'Vinstik' applied.

INSULATION

In compliance with Building Code no N.Z.S.S. 4218P, 1977.

See also B.R.A.N.Z. Publication Paper C1 - "A Construction guide to home Insulation 2nd Edition, 1978".

- (1) All exterior walls to be insulated with:-

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(2) All ceilings to be insulated with:-

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(3) All floors to be insulated with:-

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PLUMBER

1. GENERALLY: All materials shall be the best of their respective kinds, and all workmanship shall be in accordance with the best trade practice. The whole of the materials and workmanship shall conform to the Local Authority and Drainage and Plumbing Regulations 1978, and in accordance with N.Z.S. 671 and be passed by the local Health Inspector.

2. ROOFING: Fix gauge galv. cor. iron sheets, with side-lap of 1 1/2 corrugations and with sufficient end lap (i.e. 425 mm for 150), together with all necessary valleys, ridges and caps, to make a thoroughly watertight building in all respects.

 Prime laps with zinc chromate, or, before fixing. Other roofing

3. SPOUTING and DOWN PIPES: Shall be of gauge galvanised iron, or 133 mm quarter round section or Support on securely fixed suitable brackets at 900 mm c/s with fall graded to outlets. Downpipes to be 75 mm dia; to be constructed with proper offsets and shoes and to be supported by at least two galv, iron straps screwed to plugs in wall.

- 4.. FLASHINGS: Flash all openings through roof with 0.6 mm galv, iron or 4 lb lead as required

5. SHOES: Provide ex 0.5 mm galv. iron shoes for windows.

6. COLD WATER SUPPLY: Connect in 19.1 mm G.W.I. to supply at boundary. Supply and install Toby Box and stop cock at boundary and provide only standpipes with hose taps where directed. Continue supply inside building in 19.1 mm copper seamless tubing to bath and

'Ajax' valve, or to high pressure ball cock at supply tank; run branches in 12.7 mm copper to all fixtures requiring high pressure cold water supply. Low pressure supply to H.W. cylinder to be run in 19.1 mm copper.

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7. HOT WATER SUPPLY: Run supply from H.W. cylinder in 19.1 mm copper to bath and 12.7 to all fixtures requiring hot water supply.

NOTE: All hot water pipes shall be completely covered with spirally wound "Plumbers' Felt", tightly wrapped and secured in position with 0.7 mm copper wire wound at 100 mm pitch in opposite direction to lagging.

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8. TAPS: All shall be high pressure, chromium plated, streamlined, to be indicated and to have extensions as required.
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9. HOT WATER CYLINDER: Provide and fix one 180 litre electric hot water cylinder of approved make

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10. SANITARY FITTINGS: All sanitary fittings shall be free from all blemishes and fitted with plugs and chains and C.P. brass, grated waste connections.
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11. BATH, BASIN and W.C PAN: Provide and fix first quality
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bath, basin and W.C. pan. The W.C. pan shall be complete with double plastic seat and buffers, flush pipe and a 14 litre dual flush cistern.

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12. WASTES and VENTS: All fittings shall be complete with wastes and traps, (anti-vac. where in long runs and vented where necessary. Provide and fix a copper terminal vent where required complete with bird-proof cowl.
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13. SHOWER TRAY: Provide and fix a shower tray with trapped outlet, size with 150 mm upstands.
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14. CLEANING and PROTECTION: Thoroughly clean all sanitary fittings on completion of building with non-abrasive cleaner. Take due care to protect all work of other trades and all finished work of this trade.

15. ADDENDUM CLAUSES to PLUMBER:

WASH TUB:	Single/Double	Stainless Steel/Concrete
SINK BENCH:	Length	Stainless Steel/Formica

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DRAINLAYER

1. REGULATIONS and PERMITS: All Drainage work shall be carried out by a Licensed Drainlayer and to the requirements of the local Authority and of the Drainage and Plumbing Regulation 1978, demanded by such Local Authority in connection with such work.
2. DRAINLAYING GENERALLY: The spigot and socket of pipes shall be wiped to ensure that they are thoroughly clean; rubber rings also shall be free from dust, grease or dirt. All drainage pipes and fittings shall be set with a continuous solid bearing, the earth to be removed to accommodate the sockets. If soft or unsuitable ground is encountered, it shall be referred to the Local Authority for directions. Cover from permanent ground level to the top of the drain shall not be less than 450 mm.
3. EXCAVATION: Excavate for all drains to the widths required, to regular and even falls and leave with clean cut bottoms - to a min. depth of 600 mm. Backfall as described in Excavation (Sheet 4). Excavate for Septic Tank and soakholes as required.
4. LAYING of SOIL DRAINS: All changes in directions shall be made with inspection Junctions, Inspection Bends or 'Y' Junctions with cleaning eye. All runs of drains shall have Inspection Pipes set at 12.000 m intervals along the drain and fix cleaning eyes at ends of all drains. Connect up to the and allow for fresh air inlets as required.
5. SEPTIC TANK: Install a litre concrete Septic Tank of approved design and construction to the requirements of the Local Authority. Provide effluent soakage as required. Connect up to Seret Drain and provide all fresh air inlets. Check the exact position of the Septic Tank in relation to the building and the boundaries.
6. GULLEY TRAPS: All gulley traps shall be of the "closed" type with wastes discharging beneath the grating.
7. INSPECTION and TESTING: Allow for the inspection and testing of all new drains by the Local Authority before filling in the trenched.
8. ADDENDUM CLAUSES to DRAINLAYER:

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ELECTRICIAN

1. WORK and MATERIALS: All work and materials must comply with requirements of the Local Supply Authority. Give all necessary notices to the supply Authority and obtain any necessary permits for the permanent supply of Electric Power to this building.
2. SUPPLY LINE: Allow for overhead/underground supply to a point of entry (which shall be determined by the Local Authority engineer).

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3. METER and SWITCH BOARD CABINETS: (Exterior Meter Board). Provide and install where indicated on Plans, hinged, flush recessed type approved switch and meter board cabinets of suitable size and set at the required height. Hinge boards and set into walls (recess in wooden walls to be lined with fire-resistant material). Each item of the boards shall be clearly labelled or sign-written. Meter board to be glazed if required.

Sub-Main and Fuse-Board where directed:

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4. INSTALLATION of T.P.S. CABLES: Cables shall be placed in protected positions where they are not likely to be damaged by subsequent nailing of linings etc. Cables shall not be directly embedded in concrete or plaster work.

5. FLUSH PLATES and BOXES: Flush shall be adequately backed by a 25 mm dwang and fitted with the finished surface of the wall. Flush plates to be of plastic and to match their surroundings.

Use multi-gang where switches or sockets are grouped.

6. SWITCHES and SOCKETS: Switches may be either tumbler or rocker type and fixed generally at 1350 mm from floor. Socket outlets shall be 100 amp located 300 mm above floor in all main rooms, 1050 mm above floor in Kitchen and Laundry or where directed. All sockets must be provided with switches in a combined flush-plate. No circuit-breakers on heat-points.

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7. LIGHT POINTS:HEAT POINTS:

<u>Room</u>	<u>Lights</u>	<u>Wall Lights</u>	<u>No. of Outlets</u>
Lounge			
Dining			
Kitchen			
Back Porch			
Front Porch			
Laundry			
Bathroom			
Toilet			
Bedroom No. 1			
Bedroom No. 2			
Bedroom No. 3			
Bedroom No. 4			
Hall			
Passage			
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TOTAL			

8. SPECIAL FITTINGS: Allow P.C. sum \$ for the supply only of for fixing and connecting up as required. To all light points not allowed for Special Fittings, provide white conical shades.

9. ELECTRIC RANGE: Allow P.C. sum \$ for supply of selected Electric Range

10. WATER HEATING: Provide water heating circuit with controll switch on adjoining switchboard.

Provide an approved make of heating element and thermostat for fitting into the cylinder by Plumber.

Element shall be as recommended.

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11. RADIO (Earth and Aerial), T.V.: Provide and fix where directed aerial and earth plate. Provide separate earthing electrode.

Provide and fix T.V, connection where directed.

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12. TESTING: Carry out all testing as required by the Electrical Wiring Regulations and make ready for inspection by the Electrical supply Authority's Inspector.

13. THE OWNER SHALL SUPPLY:

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14. ADDENDUM CLAUSES to ELECTRICIAN:

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GLAZIER--

1. QUALITY: All glass shall be of British manufacture - any blemished or discoloured glass shall be replaced.

Transparent glass at eye level and above 600 mm shall be flat drawn, of 'selected glazing quality' or polished plate. Elsewhere 'ordinary' glazing quality, and of weights according to the following table (except as below).

- (a) Obscure glass shall be either double rolled rough cast to louvre blades and adjoining fixed glass or

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- (b) Mirror glass shall be 'silvering' quality.
 (c) Louvre blades shall be 5.5 mm thick drawn plate glass with arrises removed.
 (d) Wired glass shall be square wired glass.

2. SCHEDULE of GLASS SIZES:

2mm sheet glass for meter cupboard doors only.

3mm glazing glass up to 1500-1750mm (length and width combined).

3.3mm " " " " 1750-2000mm " " " "

4mm " " " " 2000-2500mm " " " "

NOTE: The nearer to square the greater the necessity for keeping the combined length and width to the minimum.

3. GLAZING: Before glazing into finished woodwork, prime or spirit seal the backs of all rebates according to the finish on members. Neatly cut glass, allowing tolerance around all panes. Back putty, sprig and putty into rebates.

Glazing beads shall be provided by 'Carpenter' and set in white lead, back puttied and securely bradded into frames. Where set into exterior window frames, set beads in "Sealistic" or similar approved water proof sizes:-

4. MIRRORS: Supply the following Mirrors to the following sizes:-

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5. PROTECTION and CLEANING: Protect the work of this and all other trades. Immediately glass has been fixed, apply a coat of whiting to the interior face. Clean and polish all exposed surfaces of glass and mirrors at the completion of the job.

6. ADDENDUM CLAUSES to GLAZIER:

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PAINTER-and PAPERHANGER

1. WORK: All work shall be in accordance with the best trade practice. All materials shall be the best of their respective kinds.
2. PREPARATION of SURFACES: It shall be the responsibility of the painter to ensure that all surfaces, including the surface of each successive coat, are in suitable condition to produce a first class job. Wash, dust, or otherwise clean down all surfaces (including undercoats), remove imperfections by filling, sandpapering, etc., and apply such sealers and/or neutralisers as are necessary in accordance with sound trade practice; such preparatory work being deemed to form part of this Contract. No paints containing oil shall be applied to damp surfaces. All timbers exposed to view or contact by hand shall be hand-dressed (see under 'Joinery').
3. PROTECTION of SURFACES: The painter must protect all surfaces to be clear varnished immediately they are placed, by giving a coat of sealer and varnish to all faces and edges; similarly, surfaces to be painted must be protected by priming coats.
4. EXTERIOR METALWORK: One coat of primer, one coat of approved undercoat and one coat of exterior quality gloss finish of approved manufacture; colour to Owner's choice.
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5. EXTERIOR METALWORK:
1st coat Zinc Chromate, or
2nd coat Exterior Gloss Finish
3rd coat Exterior Gloss Finish
Before priming or painting metal work, make sure that it is free from moisture, rust, scale and the galvanising or zinc spraying if sound.

6. EXTERIOR ASBESTOS CEMENT SHEETING:

1st coat Resene P.V.A. paint

2nd coat " " "

Apply as per manufacturer's instructions.

7. EXTERIOR PLASTER WORK: Paint as follows:

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7a EXTERIOR BLOCKWORK:8. INTERIOR WORK: Ceiling to have two coats of P.V.A. flat paint. Walls and ceiling in service rooms shall be semi-gloss enamel as follows: one coat primer undercoat, one coat of undercoat, one finishing coat.

Woodwork to have three-coat work. (Paint inside cupboards).

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9. CLEAR FINISH: Give two coats of approved sealer. Use tinted stopping to match finished work; sand down between coats with fine sandpaper, dust off; then apply two coats of approved satin finish/gloss clear varnish to the following surfaces:

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10. INTERIOR METALWORK: 1st coat Zinc Chromate primer

2nd coat Approved Undercoat

3rd coat Approved Semi-Gloss

NOTE: Allow the zinc chromate to dry hard before applying the next coat.

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11. WALLPAPER: Allow P.C. sum \$ per roll (average) for wallpaper to Owner's choice; hang straight and true, using plastic wallpaper paste with a recognised anti-mould additive.

To-be butt jointed.

Wardrobes to be papered/painted inside.

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12. MAKE GOOD: Make good paint work after all other trades. Make good to match surrounding work; all existing paint and varnish work which has been cut into or otherwise despoiled as a result of these building operations.

13. CLEAN DOWN: At completion of works, clean down all work, remove all spots and stains. touch up any blemishes, clean glass and leave the job in satisfactory and acceptable condition.

14. ADDENDUM CLAUSES to PAINTER and PAPERHANGER:

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15. PAINTING OF ROOF IS NOT IN CONTRACT.

16. STAINING: To the following areas, to be of
 two-coat finish:

COMPLETION: When the Painter has finished, the Contractor is to have the floor efficiently sanded and then dusted and left clean, ready for acceptance (see also Preliminaries and General).

SIGNATURE:

CONTRACTOR:

ADDRESS:

DATE:

INSULATION ALTERNATIVES WITH GIBALTAR BOARD IN ACCORDANCE WITH
NZS 4218/P AND NZS 4214 977 APPROVED BY THE STANDARDS ASSOCIATION OF NEW ZEALAND

WALL CONSTRUCTION	WALL INSULATION	CEILING FIXED ACROSS BATTENS	CEILINGS FIXED ACROSS JOISTS	FLOORS
All timber frame	Building Paper Gib Foil (Note 3)	R19 Fibreglass Batts laid over battens with Gib foil or 135 mm Macerated paper (Note 3)	Not appilcable (Note 3)	Under timber floor double sided per- forated foil (Notes 2 & 3)
All timber frame	Building paper R11 Batts (Note 3)	R11 Fibreglass Batts laid over battens with Gib foil (Notes 1 & 3)	R14 Fibreglass Batts (Note 3)	Under timber floor double sided per- forated foil (Notes 2 & 3)
Concrete block Strapped and lined	Gib Foil	R11 Fibreglass Batts laid over battens with Gib Foil (Notes 1 & 3)	R14 Fibreglass Batts (Note 3)	Under timber floor double sided per- forated foil (Notes 2 & 3)

Note 1 R11 Batts alone do not qualify

Note 2 Any concrete floor slab without embedded heating with minimum width greater than 4 metres and perimeter greater than 25 metres will meet the requirement

Note 3 Satisfactory for any type of external cladding.