

BUILDING FILE

Code No. 253/4Subject DWG.Permit No 9242.Date 20/10/82.No. Sheets 19

TARANAKI COUNTY COUNCIL
BUILDING PERMIT APPLICATION FORM

To the County Engineer,
P.O. Box 56
NEW PLYMOUTH.

PERMIT NO: 9842

253/4

Sir,

I hereby apply for permission to Build Dwelling
at (House No. and Street) Hunter Place for (Owner) T. J. Riehl
of (Address) Pitcairn St. Oak according to locality plan
and detailed plans, elevations, cross-sections and specifications of building
deposited herewith IN DUPLICATE.

SITE: Lot No: 33 D.P. No: 12015 Section No: _____
Block No: _____ Survey District: _____ Area: 639 m²
PROPOSED BUILDING: Use - describe proposed purpose for which every part is used
or occupied: Dwelling

Estimated value of completed building \$ 75,000 (For assessment of Building
Research Levy)
Less value of Plumbing and Drainage \$ 6,000
Balance \$ 69,000 (For assessment of Building
Permit Fee)

Yours faithfully,

T. J. Riehl
BUILDER

Date: 14/10/82
Phone No: 511

Address: 31 Pitcairn St
Oak

Note: Fees according to the scale on back hereof must accompany application for
permit. Special plumbing and drainage application forms are required and where
applicable, separate permits must be obtained by the plumber or drainlayer before
a building permit will be issued

Date Received 14/10/82

FOR OFFICE USE

Fee paid (a) Building Permit \$ 155-00
(b) Building Research Levy \$ 75-00
(c) Water Conn. \$ _____
(d) Sewer Conn. \$ _____
(e) Kerb Crossing \$ _____
Val. Roll 14/10/82

Receipt No: 8079E
Check _____
Ordinances _____
P. & D. Regs _____
Building Regs _____
Fire Code _____
Structural Content _____
Water Connection _____
Kerb & Footpath Crossing _____
Regn. Cert (Bldgs over 320,000) _____

Remarks
V. Smeaton 5329

Initials
14/10/82
T. J. Riehl

Refer to plans and addendum to the specification in all instances. Should there be any contradiction between them, the plans and addendum override the standard specification.

PRELIMINARY & GENERAL

All work shall be carried out in accordance with this specification together with all relevant plans and details and comply with Local Body by-laws and New Zealand Housing Corporation and/or Department Maori & Island Affairs requirements.

INSURANCES

The Builder shall insure his workmen against all claims under the Worker's Compensation Act.

FIRE INSURANCE

Fire Insurance covering the Building during the course of construction shall be taken out with an Insurance Company.

COMMENCEMENT OF WORK

The contract to be commenced without undue delay and is to be carried out to bring about the completion at the earliest possible time.

SUB-CONTRACTORS

Sub-contractors work is the responsibility of the Builder. Their work must be given protection by the Builder, and any damage suffered by the lack of protection must be repaired at the expense of the Builder.

DAMAGE BY SUB-CONTRACTORS

Damage caused by Sub-Contractors, to the Builder's or other sub-contractor's work, shall be repaired by the Sub-Contractor concerned at his own expense, or an allowance to be made to the Builder or Sub-Contractor for repairing the damage to the Builder's satisfaction.

SETTING OUT WORK

The builder will be required to make good at his own expense any errors which may occur in the setting out of all work. Figured dimensions are to be taken in preference to scale.

ACCOMMODATION

The Builder shall provide shelter at all times for workmen's personal effects, etc., in a building other than the residence, in accordance with the requirements of the Department of Labour.

LATRINES

The Builder shall provide temporary closets for the workmen's use, maintain scrupulously clean, and remove at the completion of work.

STORAGE OF MATERIALS

Timber should be suitably stacked to avoid warping and adequate protection must be given to all materials, to keep them of a standard equal to that when bought.

COMPLETION OF WORK

In this specification and also on the Drawings, although it may not be especially mentioned or shown, each and every item, class detail or particular of work indicated, described or implied shall mean unless set forth, the providing and finishing of same, complete in every detail, and including all appurtenances, in order to leave the work in good order and complete. Any work that is deemed unsatisfactory by the designer shall be removed and made good.

CLEARING UP

At the completion of the contract, remove all rubbish caused by the operation of any Trade. Remove all temporary roads and deposits of concrete and gravel, fill in truck tracks, and generally leave the whole site clean.

Leave all floors broom clean, clean all glass inside and out and remove all paint marks and putty marks. Replace all cracked and broken glass.

Leave the house weathertight, clean and fit for immediate occupation.

BRICK VENEER

Construct brick veneer as shown on the drawings and in accordance with N.Z.S.S. 1900 Division 6.1. 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 1.5mm. Ties shall be non-corrodible metal or shall be galvanised after forming, with a zinc coating of not less than 560 g per m^2 . If of round bar they shall be of a minimum of 4.7 mm diameter; if of sheet metal they shall be of a minimum thickness of 1.5 mm and a minimum width of 25 mm.

Approved ties shall be spaced at not more than 500 mm horizontally and not more than 300 mm vertically. An air space of at least 38 mm shall be maintained between timber frame and veneer and where necessary weep holes shall be left every third joint for the discharge of water. 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 1.6 mm vermin proofing. Where shown build in bricksized 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.

BLOCKLAYERSUMMIT STONE

Summit stone units shall be as manufactured by Firth Concrete Industries Limited. All units to contain Onoda NN integral waterproofer. Colour to be white. Sand used for white mortar shall be best quality lime sand suitable for use in mortars. Cement used for white mortar shall be Onoda White Cement. Water shall be clean, fresh and free from harmful impurities in solution or suspension.

MORTAR

Mortar shall be batched in the proportions 1 part of cement to 4 parts of sand by weight and shall contain 5% by weight of Onoda NN to cement, gauged in with the mixing water. Mixing shall be carried out in an approved type of powered mixer of not less than .06 m^3 capacity. The mixing shall proceed for as long as is necessary to produce a uniform homogeneous mortar, but in no case for less than 3 minutes after all materials are in the mixer. All mortar not used within 90 minutes following mixing shall be rejected. With white mortar, a small amount of hydrated lime may be added to the mix if required.

PROTECTION OF SUMMIT STONE

Summit stone units shall be protected from weather by stacking them on planks or other supports free from contact with the ground, and covering with tarpaulins or polythene sheet to prevent staining on split faces until erected in the wall.

LAYING

All units shall be laid dry, on a full bed of mortar. Joints shall finish 10mm thick, sound and true to line. When the mortar has stiffened sufficiently, joints shall be tooled to give a smooth slightly recessed 'raked joint' finish using a window trowel. All corners shall be accurately constructed and the height of courses checked by a gauge rod as the work rises. The bonding of corners shall be such as to maintain symmetry in the appearance of the work. Closure units may be bolstered on site, but all return ends shall be factory supplied. When Tasman Stone or Summit Stone units are used as a veneer in cavity wall construction, they shall be securely attached to the frame of the structure throughout the full height of the veneer but not less than three corrosion resistant ties of approved type to each square metre wall surface. Continuous corrosion resistant metal bonding shall be built into the veneer at intervals not exceeding 600 mm in height. This bonding shall also be used under window openings etc, and be taken for 600 mm past the sides of such openings. The bonding shall be overlapped at joints, and taken around corners. Mortar droppings which fall on the wall ties in a cavity wall shall be removed, and temporary openings shall be provided to permit the removal of droppings from the bottom of the cavity. Where required to drain away moisture, weep holes shall be located in the first course above any damp proof course, the holes being approximately 60 mm high and located in the perpend. The completed walls shall finish true and plumb, with neat, sharp, clean joints of uniform appearance and weatherproofness.

NOTE When Summit Stone units are used as a veneer in cavity wall construction, there shall be an air space at least 37 mm wide, which shall be provided between the timber frame and the veneer. Provisions shall be made for drainage of this cavity.

CONCRETE BLOCKS

Blocks shall be standard concrete blocks class A to N.Z.S.S. 606 manufactured by Firth Concrete Industries Limited. All units shall contain Onoda NN integral waterproofer. Cement shall be of quality specified under concrete. Water shall be clean, fresh and free from harmful impurities in solution or suspension.

CONCRETE WORK

Concrete must attain a crushing strength of 1134 grams at 28 days and conform with the relevant N.Z.S.S. 1900. Chapter 9.3.

FORMWORK

Closely jointed, perpendicular, rigidly braced and so constructed as to allow easy removal without damage to concrete. Allow for all openings as required to accommodate air ventilation pipes, etc., when making up boxing.

All formwork supporting suspended and cantilevered slabs, etc., to be kept in position for a minimum of 21 days before removal.

REINFORCEMENT

Round mild steel rods free from mill scale or loose and excessive rust. Bend rods not less than 450 mm around angles and bind laps and intersections with 1.25 mm soft black iron wire. All laps to be 40 diameters with all ends hooked. Maintain rods in proper alignment whilst the concrete is being placed.

CONCRETE FLOORS, STEPS & TERRACES

Concrete entrance floors, entrance steps and terrace slabs shall have a minimum thickness of 75 mm laid with an even and constant weather fall to outside edge, and shall have 75 mm upstand at sides and back. Reinforced with 10 mm diameter rods at 380 mm centres both ways. Fill in around piles, chimney blocks and steps after concrete has set, and formwork removed, thoroughly ram around.

Hardfill under porch floors and steps. Where porches and steps are boxed and not filled use 10 mm steel at 380 mm or span opening with 665 mesh. Form entrance steps not less than 300 mm wide with rises of 150 mm or as indicated on drawings.

UPSTANDS AND TIMBER POSTS

Dimensions as shown on plan. Where independent post supports required construct concrete upstands bearing on reinforced concrete base pad. In top of upstand insert two 38 mm x 75 mm x 6 mm galvanised fixing straps for fixing post. Straps to be fish-tailed at end in concrete and stand 175 mm above upstand. Drill for two 12 mm bolts. (Similar or other approved method will be acceptable).

PILES

Piles shall be at least 600 mm x 200 mm x 200 mm precast pumice concrete and set into 600 mm x 600 mm x 100 mm footings at a minimum depth of 200 mm below ground level, or down to an approved horizontal solid bearing. Piles under all bearing partitions to have 380 mm x 380 mm x 150 mm footings.

All piles shall have 4.0 mm galvanised "U" wires run through holes precast in piles, for securing bearing plates. Piles shall be placed in rows. Maximum spacing shall be 1.400 mm centres in rows under bearers and 2.000 mm centres between rows for 125 mm x 50 mm and 2.400 mm for 150 mm x 50 mm joists.

No pile shall extend more than 1.400 mm above groundline and all piles exceeding 760 mm in length shall be reinforced with one 10 mm diameter steel rod.

FOUNDATION (See plans)

(a) Footings for brick, stone and concrete foundation walls shall be of concrete of adequate bearing area to support safely the loads imposed as determined from the character of the soil. Unless specially designed, such footing shall be reinforced with not less than the number and size of rods as set out in Table 1 below:-

TABLE 1. MINIMUM REINFORCEMENT OF CONTINUOUS CONCRETE FOOTINGS

HEIGHT OF BUILDING IN STOREY'S	WIDTH OF FOOTINGS	REINFORCEMENT
1	Not exceeding 150 mm. Exceeding 150 mm.	One 16 mm rod Two 12 mm rods.
2	Not exceeding 200 mm. Exceeding 200 mm.	Two 12 mm rods Three 12 mm rods.
3	Not exceeding 225 mm. Exceeding 225 mm.	Two 16 mm rods One 16 mm rod and Two 12 mm rods

VAPOUR BARRIER

The vapour barrier shall consist of .010 polythene and shall be rolled directly on top of the sand and laid parallel to the direction of pour. The joints to be lapped a minimum of 150 mm and can be left unsealed. Any damage to the vapour barrier shall be repaired before placing concrete. Seal the barrier with self-adhesive plastic tape around all services and ensure that this seal remains intact.

FOUNDATION WALL AND FLOOR SLAB

The continuous foundation wall and floor slab are to be of ordinary grade concrete, complying with Chapter 9.3 N.Z.S.S. 1900 and to a 1134 grams per 6.45 mm² crushing strength at 28 days. Foundation wall to be 125 mm thick resting on solid bearings not less than 300 mm below permanent ground line and finishing not less than 200 mm above the ground line. Reinforce the foundation wall with one 16 mm diameter rod at top and bottom. Provide 6 mm rods vertical ties at 600 mm centres hooked over top and bottom rods. No filling to be compacted against the foundation walls until they have cured for at least 21 days. The floor slab shall have a minimum thickness of 100 mm and shall be thickened beneath the main longitudinal bearing partitions. Reinforce the slab with 10 mm diameter rods at 380 mm centres both ways. Hot and cold water supply pipes must not be embedded in the slab but may be laid below the slab and brought through with the pipes wrapped with lagging or encased in a plastic sleeving to prevent a bond between the concrete and the piping.

FINISHING

Floor slab surface shall be floated to an accuracy of 6 mm in 3.000 mm with no abrupt changes. Final finishing shall be carried out with bull or power floats. Curing shall be commenced immediately after final finishing and shall continue for at least 14 days and shall comprise one of the following:-

1. Application of a suitable membrane curing compound which shall not impair bond of floor coverings.
2. Covering the slab with waterproof building paper or polythene sheets.
3. Covering with wet sacks, hessian or sand.

FLOOR COVERINGS

Floor coverings are not included in the contract but in rooms where carpets are to be installed timber inserts may be provided, for future installation of the carpet.

CARPENTERGENERAL

Carry out all work as shown and specified in a workmanlike manner in accordance with best trade practice. Work not specifically detailed or mentioned shall be carried out in a similar manner.

TIMBER GRADING

As per N.Z.S.S. 169. Timber is to be either native, or treated pinus radiata of grades approved for the Specifications. All plates, studs and dwangs to be thickened and unless stated to the contrary, all dimensions refer to sawn sizes.

SCHEDULE OF TIMBERS

<u>LOCATION</u>	<u>TIMBER</u>	<u>SIZES</u>	<u>SPACING</u>
Sleepers	B.A. Ht. Rimu or Matai	100 mm x 75 mm	
Floor joists	B.A. Ht. Rimu or Matai	125 mm x 50 mm or 150 mm x 50 mm	450 mm
Flooring	Native timber of heart T. & G. or treated equivalent grade	75 mm x 25 mm or 100 mm x 25 mm	
Bottom Plates	B.A. Ht. Rimu or P.T. or Boric	100 mm x 50 mm	
Top Plates	Pinus as the case requires B.A.O. Rimu or Boric Pinus	75 mm x 50 mm 100 mm x 50 mm or 75 mm x 50 mm	
Studs (Framing)	B.A.O. Rimu or Boric Pinus	100 mm x 50 mm or 75 mm x 50 mm	
Studs (Window Openings)	B.A.O. Rimu or Boric Pinus	75 mm x 50 mm	450 mm c.c.
Braces	B.A.O. Rimu or Boric Pinus	See Specification	
Trimmers	B.A.O. Rimu or Boric Pinus	See Specification	
Lintels	B.A.O. Rimu or Boric Pinus	See Specification	
Dwangs	B.A.O. Rimu or Boric Pinus	100 mm x 50 mm and 75 mm x 50 mm	680 mm c.c. 600 mm c.c.
Ceiling Joists	B.A.O. Rimu or Boric Pinus	100 mm x 50 mm	
Ceiling Runners	B.A.O. Rimu or Boric Pinus	200 mm x 25 mm and 75 mm x 50 mm	
Purlins	B.A.O. Rimu or Boric Pinus	75 mm x 50 mm	700 mm c.c.
Rafters (with purlins)	B.A.O. Rimu	100 mm x 50 mm	
Iron roof	Boric Pinus	125 mm x 50 mm	600 mm c.c.
Rafters (Sarked)	B.A.O. Rimu	100 mm x 50 mm	
Iron roof	Boric Pinus	125 mm x 50 mm	600 mm c.c.

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STUDS

Studs shall be cut squarely on top and bottom and shall be securely nailed to plates with two 100 mm spikes to each end. Maximum spacing 600 mm. Window opening studs to be 100 mm x 50 mm for openings not greater than 1200 mm and 100 mm x 75 mm with lintels checked in 12 mm at each end for openings to 2,000 mm.

LINTEL BEAMS

Provide lintels of full frame thickness and generally 25 mm deep for every 300 mm of span. Lintels to openings exceeding 1,200 mm to be supported at both ends on full length 100 mm x 50 mm members spiked to trimmer studs.

TRIMMERS

Bottom trimmers 100 mm x 50 mm or to window openings exceeding 2,700 mm to be not less than 100 mm x 75 mm.

POST OF BEAM CONSTRUCTION

Construct to standard or special details as shown on plan. Posts 100 mm x 100 mm strapped at foot to concrete base or upstands provided under "Concretor". Posts and beams shall be joined by standard galvanised "H" strap of 75 mm x 6 mm arms fixed to each side of beam. Fix straps with not less than 12 mm diameter galvanised bolts and nuts.

DWANGS

Cut in between studs in partitions 50 mm thick dwangs full partition width where required for linings, etc.

Dwangs shall be at not more than 680 mm centres.

Dwangs for ceilings linings of Pinex softboard with 75 mm x 50 mm solid at 600 mm centres, or with 50 mm x 25 mm strapping at 300 mm centres. For fibrous plaster ceilings a row of dwangs down the centre and around the outside edge is required. For Pinex Tiles or Planks 50 mm x 25 mm strappings at 300 mm centres to be provided.

BRACING

Each exterior wall and each bearing partition shall be braced with 100 mm x 50 mm solid braces or 150 mm x 25 mm cut in flush at an angle of approximately 45° , one brace to every 9,000 mm² of wall area where practicable.

DRAGON TIES

150 mm x 25 mm carried over the top of ceiling joists where wall bracing is not practicable.

CEILING JOISTS

Set out ceiling joists at not more than 450 mm c.c. and lap at least 150 mm over partitions well spliced together at passings. Trim for ceiling access trap in position shown on plan. Dwang ceilings to suit ceiling sheets but generally at not more than 600 mm c.c. Provide 100 mm x 50 mm ceiling runners to all spans to 2,400 mm. For spans over 2,400 mm provide a 200 mm x 25 mm on edge with 75 mm x 50 mm nailed to the ceiling joists and to the 200 mm x 25 mm.

ROOF FRAMING

Set out rafters at centres and pitch specified on the plans in single lengths, birdsmouthed over top plates and securely nailed at all points of contact and attachment. Strut and brace the roof as shown on the cross-section.

Fly rafters to gables to be sprocketed from main rafters set back from the end wall the equivalent distance the fly rafter overhangs.

PURLINS

Fix 75 mm x 50 mm purlins, set to suit roofing sheets but at not more than 760 mm centres. Purlins shall be double spiked to rafters with two 100 mm nails.

EAVES

Form eaves of 75 mm x 37 mm framing or as drawn. Fix to underside of soffit and porch ceilings 4.7 mm thick fibrolite securely fixed in position, and let into fascia board in groove provided. Cover joints with an extruded plastic or aluminium moulding.

FASCIA BOARDS

Fit to eaves 150 mm x 25 mm fascia securely fixed to 50 mm false fascia spiked to rafter tails. Mitre all joints and angles.

Where sheets are cut on the site, the untreated edges shall be given a brush applied coat of approved water-proofer as recommended by the Manufacturers.

FLOOR SANDING

On the completion of the job and just prior to handing over to the occupants machine sand the entire floor area. Where corners are not readily accessible to the machine they are to be hand scraped and sanded.

CEILING LININGS

All ceilings unless specified to the contrary, shall be lined with 12 mm Pinex insulation board "V" jointed with stock timber button mould or other approved jointing medium.

Set out sheets in sizes to form uniform panels in each room, and fix to manufacturers instructions. Lightly punch all nail heads below the sheet surface to allow stopping of the nail holes.

Where applied to sloping ceilings, strap underside of rafters with gauged 75 mm x 50 mm at 450 mm centres, dwang for joints, and solid pack at all ceiling margins.

- (a) Provide ceiling access in laundry or in a position as shown on plan.
- (b) Ventilate ceilings of enclosed interior passages or lobbies with regulation vent shaft as may be required by Local Authority.

FIBROUS PLASTER CEILING (Where applicable)

Line all ceilings with 12 mm thick fibrous plaster sheets with joints 6 mm open, securely fixed with wadding or glue to ceiling joists. Stop all holes and joints with plaster of paris and trowel to smooth even surface. Fibrous plaster ceilings are not to be nailed.

WALL LININGS

Unless otherwise specified or shown on plan or schedule, supply, fix and stop 9 mm Gibraltar Board to all interior walls and partitions throughout the house, including passages and cupboards.

WARDROBES

Line all walls with flush jointed Gibraltar Board. Provide each wardrobe with full length galvanised iron pipe hanging rail (19 mm diameter up 1.500 mm and 25 mm diameter over 1.500 mm) and a shelf 300 mm x 25 mm particle board fixed as directed. When shown on plan for top cupboards (Trunk) with particle board flooring and either side hung or sliding doors, with main Wardrobe doors 1.800 mm high.

LINEN CUPBOARD

Line as for wardrobes. Fix five rows of full width shelves, the first row 450 mm from floor and thereafter 300 mm apart. Support shelving on 50 mm x 35 mm ledges.

HOT WATER CYLINDER CUPBOARD

If not supplied by Joiner, frame and line as for wardrobes. Above cylinder fix two slatted shelves 350 mm apart and to full width of cupboard. First shelf to be as near the top of the H.W.C. as practical. Space slats 12 mm apart. Provide timber stand for cylinder as required by plumber.

SHOWER (Where applicable)

Build up the shower box as shown on the plan, and line the walls, unless otherwise specified with 4.7 mm Seratone or similar wall linings, to be glued to the studs and no nailing whatsoever will be permitted. Aluminium or plastic jointing corner moulds shall be used for all angles. In no circumstances whatsoever will any horizontal joints be allowed in shower box linings. All shower linings to be red lead primed on all edges and along the bottom of each sheet and for 300 mm up from the bottom on the back of each sheet. Provide a proper 6 mm airspace and water drip at the bottom of each sheet to prevent capillary attraction of water between the sheets and the shower base. Fix an approved soap recess in the shower wall.

BATH RISES

Form cradles for bath and frame up at the front of the bath with the timber set to a slope and line with the same wall linings as used elsewhere in the bathroom.

SPLASH BOARDS

Finish along the top of bath and tub with 4.7 Seratone 100 mm high or as shown, in white lead putty or other approved water-proofer mastic.

A P.V.C. bath mould to bottom edge on bath.

DOOR FRAMES

All door frames to be plumb and square to walls, having heads true to level. Exterior door frames to be out of 60 mm thick timber and sills out of 62 mm thick timber, solid rebated. Interior frames to be out of 25 mm thick timber with 50 mm x 12 mm planted stops or out of 25 mm - 12 mm thick timber solid rebated.

DOORS

EXTERIOR:- Front :- As shown on drawings.

Rear:- As shown on drawings.

Interior:- Hollow core flush. Hung as shown on plans.

All interior doors 2000 x 760 or 800 according to Local Body By-Laws. All W.C. single doors 2,000 x 600. Wardrobe doors as indicated.

FITTINGS

All fittings located and shown on Plan are to be as shown on plans.

BATHROOM CABINET

See drawings and/or addendum.

TUB CABINET

Provide and fix a tub cupboard to accommodate single S/S tub.

ALUMINIUM WINDOWS

Where indicated on drawings, supply and fix standard or custom-built anodised and glazed aluminium windows to patterns and code references marked on plan. Fix in strict accordance with manufacturers standard details and fixing instructions complete with all sub-frames, reveals, facings, mouldings and flashings.

ROOFER

All work shall be carried out by qualified tradesmen in an approved manner.

Building shall be left watertight and bird-proof, and all debris cleared from the site.

Iron brought on to the site, if not for immediate fixing, shall be stored under cover, or kept off the ground, and adequately protected from the weather to avoid condensation taking place between the sheets.

QUALITY AND GRADE

(a) All iron shall comply with the relative British Standard B.S. 3083 and N.Z.S.S. 1343, Class B.

(b) Thickness shall be not less than 0.45 mm or heavier where specified.

(c) Branded with the name or brand of the manufacturer, the class, the thickness and the weight of spelter.

UNDERLAY

Cover purlins with 1 mm, 50 mm mesh galvanised wire netting stretched taut and fastened to the purlins. Over netting and under the iron fix approved saturated building paper well lapped and secured with either the roofing nails or flat headed clouts.

ROOFING

Fix corrugated roofing complete with ridges, Barge Rolls, stop ends, 125 mm spoutings, downpipes, vents etc. Fix roofing sheets with 32 mm corrugation side lap, and 225 mm end lap; if pitch is less than 15 degrees and laps shall be increased to 300 mm. All laps to be paint primed before fixing.

Nail roof with lead-headed nails. Nail at top and bottom of sheets, at every second corrugation, and intermediately at every fourth corrugation on each purlin.

Fix 0.6mm lead-edge ridging and dress down into corrugation.

Fix 0.6mm galvanised iron-valleys with approved beaded edges.

Fix 0.6mm galvanised iron chimney flashings.

Other flashings 0.6 mm or 0.45 mm galvanised iron fixed according to usual trade practice.

PIPE LAGGING

All piping and fittings conveying hot water including the exhaust pipe up to the underside of the roofing and 900 mm of the cold water feed pipe adjacent to the cylinder shall be lagged with felt, tightly wrapped around the piping and secured.

TERMINAL VENT

Shall be 75 mm diameter cast iron, Fibrolite or P.V.C. carried up to the height demanded by the Local Authority, and fitted with a vermin cage galvanised after fabrication.

WASTES

All wastes to be P.V.C., Polypropylene or may be copper, depending on local council or loan companies requirements.

TRAPS

All traps where possible shall have unions at both ends and shall be installed in a manner allowing for complete removal. Sufficient cleaning plugs shall be provided.

LAUNDRY TUB

Provide and fit a single compartment Stainless steel tub to a tub cupboard supplied by the joiner, in position shown on plan.

TAPS

Chromed taps shall be fitted over sink, bath, wash basin, shower, tub and marked in each case either Hot or Cold. (Owner to advise type of washing machine, taps, if required, as an extra).

WATER CLOSET

An approved pan shall be screwed to floor with brass screws and fitted with hinged heavy plastic seat, Dux cistern, plastic flush pipe and overflow.

SHOWER (Where applicable)

Shower tray to be stainless steel, to be bedded in such a manner to ensure rigidity and unimpeded drainage from the tray. Cold water from low pressure pipe. A topliss mixer and C.P., shower rose.

SPOUTING

Fit to all eaves including external back porches 125 mm, 0.6 mm thick galvanised iron $\frac{1}{2}$ round spouting fitted on heavy duty brackets at not more than 900 mm centres, securely fixed to fascia and given proper falls to outlets. Spouting to be joined by rivetting and soldering. Prime the face of all laps, the inside and back of spouting before fixing to fascia.

DOWNPIPES

Provide 25 mm² of downpipe section to every 9m² of roof area.

Fit 0.6 mm thick galvanised iron seamed downpipes fitted with all necessary swan necks, etc., and strapped securely to blocks clear of the walls. Discharge over stormwater bonds.

HOT WATER CYLINDER

Supply and install a 181 litre copper Hot Water Cylinder in the cupboard as shown, fully lagged and encased. The element and thermostat to be supplied by the electrician. Set the cylinder on a stand 225 mm above the floor.

SUPPLY TANK

Supply and install plastic supply tank of a capacity not less than 68 litres complete with ball valve, tray and tray overflow from tank to discharge outside exterior walls. Alternatively supply and install a pressure reducing valve.

DRAINLAYER

The Sub-Contractor shall pay attention to that section of the General Conditions dealing with relations with other trades.

PAPER AND PAPERHANGER

The Sub-Contractor shall pay attention to that section of the General Conditions dealing with relations with other trades.

GENERAL

The painting may be done either by persons directly employed by the builder or by a suitable Sub-Contractor. Such sub-contractor shall be under direct control of the builder.

FINISH

In all cases, prior to the applications of a finishing coat, the recommendation of the manufacturer of the finishing coat shall be strictly adhered to, notwithstanding that the general terms "paint" has been used, and a minimum number of coats has been specified.

MATERIALS

All materials shall be first quality paint and delivered on the site in unbroken packages. No materials shall be mixed on any unprotected floor surfaces.

WORKMANSHIP

All work shall be of the highest standard and shall be performed by tradesmen. Paint shall not be applied to damp surfaces, and external painting shall not be done during frosty or other unsuitable weather. No painting to be carried out in dusty conditions. All care should be taken not to stain or mark any existing finish and all work to be left clean and clear. Each coat to be dry before succeeding coat applied, and where necessary rubbed down between coats. All damaged work to be rubbed down and recoated. Do all stopping as soon as priming has dried.

The Painting Contractor shall inspect all work prior to commencement and report immediately, in writing, to the Main Contractor any defects or irregularities which may adversely affect his finishes. All defects so reported shall be corrected prior to sub-contractor commencing. Failure by the Painting sub-contractor to inspect or report will be construed as an acceptance of dwelling and surfaces and any defects discovered at a later date will be remedied at the Painting sub-contractor's expense.

EXTERIOR WORK

All colours to owner's selection. All timber work primed before fixing. Stop all nail holes, etc., and give an undercoat and a finishing coat of exterior paint to all woodwork and metal work up to and including the spouting and barge rolls. Use an approved metal primer on metal work where painted. Give asbestos cement sheathing two coats of P.V.A. paint.

PREPARATION OF SURFACES

No painting, enamelling, distempering or similar finishing work shall be done on concrete, plaster, or similar surface unless and until such surfaces are in a suitable condition to receive the finish.

INTERIOR

All interior woodwork including sashes and frames shall be either stained or painted in accordance with directions from owner.

All nail holes throughout the house are to be stopped with putty. All woodwork to have one priming coat, one undercoat, one coat of good quality paint. Hardboard walls to receive one coat of sealer, an undercoat and one coat of good quality paint. Ceilings in kitchen, toilet, laundry and bathroom to have two coats top quality paint, as directed, other ceilings to have two coats of first quality paint, flat finish, brushed on. Interior of cupboards in kitchen not to be painted. Hinged cupboard doors shall be painted both sides.

The interior of all wardrobes to be given two coats of approved paint. The work generally is to be such as would be expected from experienced tradesmen and the job is to be left in a tidy state, to the satisfaction of the builder.

PAPERING

All walls to be sanded down and thoroughly sized before papering. Use only fresh paste containing an approved fungicide.

All papers trimmed, butt jointed, true and plumb, with all patterns in perfect register at joints.

Refer to plans and addendum to the specification in all instances. Should there be any contradiction between them, the plans and addendum override the standard specification.

PRELIMINARY & GENERAL

All work shall be carried out in accordance with this specification together with all relevant plans and details and comply with Local Body by-laws and New Zealand Housing Corporation and/or Department Maori & Island Affairs requirements.

INSURANCES

The Builder shall insure his workmen against all claims under the Worker's Compensation Act.

FIRE INSURANCE

Fire Insurance covering the Building during the course of construction shall be taken out with an Insurance Company.

COMMENCEMENT OF WORK

The contract to be commenced without undue delay and is to be carried out to bring about the completion at the earliest possible time.

SUB-CONTRACTORS

Sub-contractors work is the responsibility of the Builder. Their work must be given protection by the Builder, and any damage suffered by the lack of protection must be repaired at the expense of the Builder.

DAMAGE BY SUB-CONTRACTORS

Damage caused by Sub-Contractors, to the Builder's or other sub-contractor's work, shall be repaired by the Sub-Contractor concerned at his own expense, or an allowance to be made to the Builder or Sub-Contractor for repairing the damage to the Builder's satisfaction.

SETTING OUT WORK

The builder will be required to make good at his own expense any errors which may occur in the setting out of all work. Figured dimensions are to be taken in preference to scale.

ACCOMMODATION

The Builder shall provide shelter at all times for workmen's personal effects, etc., in a building other than the residence, in accordance with the requirements of the Department of Labour.

LATRINES

The Builder shall provide temporary closets for the workmen's use, maintain scrupulously clean, and remove at the completion of work.

STORAGE OF MATERIALS

Timber should be suitably stacked to avoid warping and adequate protection must be given to all materials, to keep them of a standard equal to that when bought.

COMPLETION OF WORK

In this specification and also on the Drawings, although it may not be especially mentioned or shown, each and every item, class detail or particular of work indicated, described or implied shall mean unless set forth, the providing and finishing of same, complete in every detail, and including all appurtenances, in order to leave the work in good order and complete. Any work that is deemed unsatisfactory by the designer shall be removed and made good.

CLEARING UP

At the completion of the contract, remove all rubbish caused by the operation of any trade. Remove all temporary roads and deposits of concrete and gravel, fill in truck tracks, and generally leave the whole site clean.

Leave all floors broom clean, clean all glass inside and out and remove all paint marks and putty marks. Replace all cracked and broken glass.

Leave the house weathertight, clean and fit for immediate occupation.

BRICK VENEER

Construct brick veneer as shown on the drawings and in accordance with N.Z.S.S. 1900 Division 6.1. 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 1.5mm. Ties shall be non-corrodible metal or shall be galvanised after forming, with a zinc coating of not less than 560 g per m^2 . If of round bar they shall be of a minimum of 4.7 mm diameter; if of sheet metal they shall be of a minimum thickness of 1.5 mm and a minimum width of 25 mm.

Approved ties shall be spaced at not more than 500 mm horizontally and not more than 300 mm vertically. An air space of at least 38 mm shall be maintained between timber frame and veneer and where necessary weep holes shall be left every third joint for the discharge of water. 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 1.0 mm vermin proofing. Where shown build in bricksized 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.

BLOCKLAYERSUMMIT STONE

Summit stone units shall be as manufactured by Firth Concrete Industries Limited. All units to contain Onoda NN integral waterproofer. Colour to be white. Sand used for white mortar shall be best quality lime sand suitable for use in mortars. Cement used for white mortar shall be Onoda White Cement. Water shall be clean, fresh and free from harmful impurities in solution or suspension.

MORTAR

Mortar shall be batched in the proportions 1 part of cement to 4 parts of sand by weight and shall contain 5% by weight of Onoda NN to cement, gauged in with the mixing water. Mixing shall be carried out in an approved type of powered mixer of not less than .06 m³ capacity. The mixing shall proceed for as long as is necessary to produce a uniform homogeneous mortar, but in no case for less than 3 minutes after all materials are in the mixer. All mortar not used within 90 minutes following mixing shall be rejected. With white mortar, a small amount of hydrated lime may be added to the mix if required.

PROTECTION OF SUMMIT STONE

Summit stone units shall be protected from weather by stacking them on planks or other supports free from contact with the ground, and covering with tarpaulins or polythene sheet to prevent staining on split faces until erected in the wall.

LAYING

All units shall be laid dry, on a full bed of mortar. Joints shall finish 10mm thick, sound and true to line. When the mortar has stiffened sufficiently, joints shall be tooled to give a smooth slightly recessed 'raked joint' finish using a window trowel. All corners shall be accurately constructed and the height of courses checked by a gauge rod as the work rises. The bonding of corners shall be such as to maintain symmetry in the appearance of the work. Closure units may be bolstered on site, but all return ends shall be factory supplied. When Tasman Stone or Summit Stone units are used as a veneer in cavity wall construction, they shall be securely attached to the frame of the structure throughout the full height of the veneer but not less than three corrosion resistant ties of approved type to each square metre wall surface. Continuous corrosion resistant metal bonding shall be built into the veneer at intervals not exceeding 600 mm in height. This bonding shall also be used under window openings etc, and be taken for 600 mm past the sides of such openings. The bonding shall be overlapped at joints, and taken around corners. Mortar droppings which fall on the wall ties in a cavity wall shall be removed, and temporary openings shall be provided to permit the removal of droppings from the bottom of the cavity. Where required to drain away moisture, weep holes shall be located in the first course above any damp proof course, the holes being approximately 50 mm high and located in the perpend. The completed walls shall finish true and plumb, with neat, sharp, clean joints of uniform appearance and weatherproofness.

NOTE When Summit Stone units are used as a veneer in cavity wall construction, there shall be an air space at least 37 mm wide, which shall be provided between the timber frame and the veneer. Provisions shall be made for drainage of this cavity.

CONCRETE BLOCKS

Blocks shall be standard concrete blocks class A to N.Z.S.S. 595 manufactured by Firth Concrete Industries Limited. All units shall contain Onoda NN integral waterproofer. Cement shall be of quality specified under concrete. Water shall be clean, fresh and free from harmful impurities in solution or suspension.

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MAINTENANCE

The maintenance period shall run for thirty days from the seventh day after notification from the Builder that the home is completed and ready for occupation. At the expiry of the maintenance period the Builder shall make good all defects in any part of any trade which are attributable to defective materials or faulty workmanship.

PERMITS AND FEES

The Builder shall obtain all permits from, and pay all fees demanded by Local Authorities before the commencement of the work.

SITE

It shall be the responsibility of the Contractor to inspect the site and to take into account any variations in ground levels or access thereto. It shall be the contractors responsibility to make allowance for all connections including stormwater etc. and to insure that all work is carried out in accordance with local body authorities by-laws and their recent amendments.

SUSPECT SITE

Where doubtful ground bearing or filled ground is found, all excavation, boxing, steel and concrete work required to reach a solid bearing in excess of 300 mm in depth will be charged at current ruling rates for such work as an extra to the contract price. Such extra cost will include any engineering, testing and draughting fees that may be required to meet the requirements of any Local Authority concerned.

EXCAVATION

Clear away all loose stones, rank vegetation and debris from the area of building operations, and excavate for all foundations etc., as indicated on plans, down to a solid bed, but not less than 300mm below permanent ground level.

BRICKLAYER

All work shall be in accordance with the requirements of N.Z.S.S. 1900 chapter 6.2. and N.Z.S.S. 1900 chapter 6.1.

MATERIALS

Bricks shall be of the colour and type selected and shall comply with N.Z.S.S. 366 Clay Building Bricks grade A or B. All fair face brickwork shall be laid with their best face outwards.

Cement shall be ordinary Portland Cement and at time of use shall comply with N.Z.S.S. 1844 Portland Cement. Plasticizers shall be used in accordance with the manufacturers instructions and no other additives are to be used in conjunction with these materials. On no account will further additions be made at time of re-tempering mortars.

Water shall be drinking quality and shall be free from acids, alkalines and organic impurities. Sand used for mortars shall comply with the relevant clauses of N.Z.S.S. 2129. 1907, Sands for Mortar, Plaster and External Renderings.

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 homogenous mass is obtained but for not less than 5 min. All mortar whether on the boards or left in the mixer shall be used within 90 min. Mortar not used in this time shall be discarded.

BRICKLAYING

Bricks shall be laid in stretcher bond true to line level and plumb, and in accordance with the best trade practices. All work shall be laid from the lowest corner and no corner shall be raised more than 900mm above wall line. Corners shall be racked back. On no account will toothing be permitted. All joints will be completely filled with mortar and the bricks shall be shoved into place at least 12mm and shall be disturbed as little as possible after initial positioning. Head joints shall be butted 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 brick striations.

VISUAL INSPECTION

(a) All units shall be sound and free from cracks or other defects that would interfere with the proper placing of the unit or impair the strength or permanence of the construction. Minor imperfection incidental to the usual method of manufacture, or minor chipping resulting from customary methods of handling in shipment and delivery, shall be made good by block-layer and not deemed grounds for rejection.

(b) Units that are intended to serve as a base for plaster or stucco shall have a sufficiently rough surface to afford a good bond.

MORTAR

Mortar shall be batched in the proportions - One part of cement to four parts of limesand by weight, and shall contain 5% by weight of Onoda NN to cement, gauged in with the mixing water. All mortar not used within 90 minutes following mixing shall be rejected.

LAYING

All blocks shall be layed dry using stretcher or stock bond with the thicker edge of the shell uppermost. The first course shall be fully bedded and succeeding courses face shell bedded. All cells shall be free of mortar droppings and debris. Joints to finish 10 mm thick, sound and true to line. Form all openings and chases. All corners shall be accurately constructed and the height of courses checked, by a gauge rod as the work rises. When the mortar has stiffened sufficiently, joints shall be tooled to a concave shape with a suitable tool.

The work shall finish neat, sharp clean joints of a uniform appearance and weatherproofness. Vertical control joints and weep holes (in external walls) will be in accordance with the instruction of the architect.

SOLID PLASTERER

The Sub-contractor shall pay attention to that section of the General Conditions dealing with relations with other trades.

MATERIALS

Cement shall be fresh. Sand shall be clean, sharp mixed 1-2 with 4.7 mm sieved sand.

WORKMANSHIP

All plaster shall be properly mixed and shall be used at once, and no more than can be worked off before an initial set would take place shall be mixed at any one time. Retempering or re-mixing after an initial set has taken place will not be permitted. All surfaces shall be properly prepared. Concrete surfaces shall be well scratched to roughen the surface, and shall be wetted prior to plastering. All plaster work is to be kept moist at all times by spraying with a hose when necessary.

STEPS, PORCH, FLOORS & TERRACES

These shall be woodfloated not less than 12 mm thick 1:3 cement and sand. Formcoved bases to upstands round off nosings and weather treads.

The underside of cantilevered landings and steps shall have all voids carefully filled with cement compo and then given a fine texture splashed coat.

PLASTER TO CONTINUOUS FOUNDATION

Fill in any broken edges, etc., and apply one coat of plaster and one dash coat.

CHIMNEY

Plaster chimney with one coat of plaster and one dash coat. Parge joints as work proceeds.

REPAIRS

All damaged or broken plaster work shall be repaired after the other tradesmen have finished their work. All drummy plaster cut out and replaced and the whole of this work on completion shall be left waterproof and in perfect order, without cracks, blisters, or marks of any kind, in clean condition and uniform in colour.

SCHEDULE OF TIMBERS (Continued)

<u>LOCATION</u>	<u>TIMBER</u>	<u>SIZES</u>	<u>SPACING</u>
Rafters Tile Roof	B.A.O. Rimu	100 mm x 50 mm	
	Boric Pinus	125 mm x 50 mm	450 mm c.c.
Rafters Decramastic or Harveytile Roof	Refer Addendum	100 mm x 50 mm	
Valley Ridge and Hip Blades	B.A.O. Rimu or Boric Pinus	150 mm x 25 mm or 200 mm x 25	
Collar Ties	B.A.O. Rimu or Boric Pinus	150 mm x 25 mm	
Barge & Fascia Boards	D.A.H.R. or equivalent	150 mm x 25 mm	grooved to take soffit lining
Under Purlins	Boric Pinus	100 mm x 50 mm	
		Iron roof	
		100 mm x 75 mm	
		Concrete tile roof	
Struts	Boric Pinus	100 mm x 50 mm	
		Iron roof	
		100 mm x 75 mm	
		Concrete tile roof	
Sashes	Cedar, Redwood, Oregon, Totara or suitable heart, or tanalised timbers		
Sills	D.A.H.R. or equivalent		
Architraves	D.A. Rimu	75 mm x 25 mm	
Skirting	D.A. Rimu	75 mm x 25 mm	
Scribers	Ht. Totara, Cedar or Tan. Rimu	50 mm x 12 mm	
Scotia	D.A. Rimu	25 mm x 12 mm	
Window Facings	Tan. Rimu or Ht. Rimu ex	75 mm x 25 mm	
Quad	D.A.H.R. or D.A.R. whichever is applicable ex	25 mm x 25 mm	

SIZE OF JOISTSMAXIMUM SPAN

100 mm x 50 mm	1.500 mm	
125 mm x 50 mm	2.000 mm	
150 mm x 50 mm	2.400 mm	
175 mm x 50 mm	2.900 mm)	
200 mm x 50 mm	3.200 mm)	
225 mm x 50 mm	3.600 mm)	To be herringbone braced with
250 mm x 50 mm	4.000 mm)	50 mm x 37 mm 2.400 c.c.
300 mm x 50 mm	4.800 mm)	

EXTERIOR SHEATHING (Refer to drawings)

Weatherboard - splaycut Cedar or Approved Finger Jointed Treated Radiata weatherboard or Bevel-back Heart Rimu or Matai or Treated Rimu, Matai or Kahikatea.

PRIMING

Prime all exterior finishing timbers, quads, scribes, facings, fascias, weatherboards, all exterior joinery, including rebates throats and Weathergrooves and all timber in near contact with concrete before building or fixing in. All mitres, laps and scribes to be set in Red lead and oil paint.

Use Red lead and linseed oil primer well brushed in.

DAMP COURSE

All woodwork throughout the building which would otherwise be in contact with concrete shall be laid on approved 3 ply fabric Damp proof course of sufficient width to prevent direct contact between the two.

PLATES AND SLEEPERS

Bottom and top plates shall be in long lengths, Top Plates, scarfed and dovetailed at all angles and junctions, and well nailed. All junctions are to be made over a bearing. Sleepers shall be securely fixed to piles with wire stapled around. Notch or drill top and bottom plates and dwangs to ventilate walls.

FLOOR JOISTS

Floor joists shall be gauged down on sleepers to uniform level and shall be well spiked.

Allow 300 mm laps at passings to every third pair well spiked to. Trim for all openings etc.
Maximum spacing 450 mm. Double joists under all bearing parti. Joists to be halved into trimmers
with trimmers being 25 mm thicker in width than the joists being and into it.

VAPOUR BARRIER

The vapour barrier shall consist of .010 polythene and shall be rolled directly on top of the sand and laid parallel to the direction of pour. The joints to be lapped a minimum of 150 mm and can be left unsealed. Any damage to the vapour barrier shall be repaired before placing concrete. Seal the barrier with self-adhesive plastic tape around all services and ensure that this seal remains intact.

FOUNDATION WALL AND FLOOR SLAB

The continuous foundation wall and floor slab are to be of ordinary grade concrete, complying with Chapter 9.3 N.Z.S.S. 1900 and to a 1134 grams per 6.45 mm² crushing strength at 28 days. Foundation wall to be 125 mm thick resting on solid bearings not less than 300 mm below permanent ground line and finishing not less than 200 mm above the ground line. Reinforce the foundation wall with one 16 mm diameter rod at top and bottom. Provide 6 mm rods vertical ties at 600 mm centres hooked over top and bottom rods. No filling to be compacted against the foundation walls until they have cured for at least 21 days. The floor slab shall have a minimum thickness of 100 mm and shall be thickened beneath the main longitudinal bearing partitions. Reinforce the slab with 10 mm diameter rods at 380 mm centres both ways. Hot and cold water supply pipes must not be embedded in the slab but may be laid below the slab and brought through with the pipes wrapped with lagging or encased in a plastic sleeving to prevent a bond between the concrete and the piping.

FINISHING

Floor slab surface shall be floated to an accuracy of 6 mm in 3.000 mm with no abrupt changes. Final finishing shall be carried out with bull or power floats. Curing shall be commenced immediately after final finishing and shall continue for at least 14 days and shall comprise one of the following:-

1. Application of a suitable membrane curing compound which shall not impair bond of floor coverings.
2. Covering the slab with waterproof building paper or polythene sheets.
3. Covering with wet sacks, hessian or sand.

FLOOR COVERINGS

Floor coverings are not included in the contract but in rooms where carpets are to be installed timber inserts may be provided, for future installation of the carpet.

CARPENTERGENERAL

Carry out all work as shown and specified in a workmanlike manner in accordance with best trade practice. Work not specifically detailed or mentioned shall be carried out in a similar manner.

TIMBER GRADING

As per N.Z.S.S. 169. Timber is to be either native, or treated pinus radiata of grades approved for the Specifications. All plates, studs and dwangs to be thicknessed and unless stated to the contrary, all dimensions refer to sawn sizes.

SCHEDULE OF TIMBERS

<u>LOCATION</u>	<u>TIMBER</u>	<u>SIZES</u>	<u>SPACING</u>
Sleepers	B.A. Ht. Rimu or Matai	100 mm x 75 mm	
Floor joists	B.A. Ht. Rimu or Matai	125 mm x 50 mm or 150 mm x 50 mm	450 mm
Flooring	Native timber of heart T. & G. or treated equivalent grade	75 mm x 25 mm or 100 mm x 25 mm	
Bottom Plates	B.A. Ht. Rimu or P.T. or Boric Pinus as the case requires	100 mm x 50 mm 75 mm x 50 mm	
Top Plates	B.A.O. Rimu or Boric Pinus	100 mm x 50 mm or 75 mm x 50 mm	
Studs (Framing)	B.A.O. Rimu or Boric Pinus	100 mm x 50 mm or 75 mm x 50 mm	450 mm c.c.
Studs (Window Openings)	B.A.O. Rimu or Boric Pinus	See Specification	
Braces	B.A.O. Rimu or Boric Pinus	See Specification	
Trimmers	B.A.O. Rimu or Boric Pinus	See Specification	
Lintels	B.A.O. Rimu or Boric Pinus	See Specification	
Dwangs	B.A.O. Rimu or Boric Pinus	100 mm x 50 mm and 75 mm x 50 mm	680 mm c.c. 500 mm c.c.
Ceiling Joists	B.A.O. Rimu or Boric Pinus	100 mm x 50 mm	
Ceiling Runners	B.A.O. Rimu or Boric Pinus	200 mm x 25 mm and 75 mm x 50 mm	
Purlins	B.A.O. Rimu or Boric Pinus	75 mm x 50 mm	760 mm c.c.
Rafters (with purlins)	B.A.O. Rimu	100 mm x 50 mm	
Iron roof	Boric Pinus	125 mm x 50 mm	900 mm c.c.
Rafters (Sarked)	B.A.O. Rimu	100 mm x 50 mm	
Iron roof	Boric Pinus	125 mm x 50 mm	500 mm c.c.

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STUDS

Studs shall be cut squarely on top and bottom and shall be securely nailed to plates with two 100 mm spikes to each end. Maximum spacing 600 mm. Window opening studs to be 100 mm x 50 mm for openings not greater than 1200 mm and 100 mm x 75 mm with lintels checked in 12 mm at each end for openings to 2.000 mm.

LINTEL BEAMS

Provide lintels of full frame thickness and generally 25 mm deep for every 300 mm of span. Lintels to openings exceeding 1.200 mm to be supported at both ends on full length 100 mm x 50 mm members spiked to trimmer studs.

TRIMMERS

Bottom trimmers 100 mm x 50 mm or to window openings exceeding 2,700 mm to be not less than 100 mm x 75 mm.

POST OF BEAM CONSTRUCTION

Construct to standard or special details as shown on plan. Posts 100 mm x 100 mm strapped at foot to concrete base or upstands provided under "Concretor". Posts and beams shall be joined by standard galvanised "H" strap of 75 mm x 6 mm arms fixed to each side of beam. Fix straps with not less than 12 mm diameter galvanised bolts and nuts.

DWANGS

Cut in between studs in partitions 50 mm thick dwangs full partition width where required for linings, etc.

Dwangs shall be at not more than 680 mm centres.

Dwangs for ceilings linings of Pinex softboard with 75 mm x 50 mm solid at 600 mm centres, or with 50 mm x 25 mm strapping at 300 mm centres. For fibrous plaster ceilings a row of dwangs down the centre and around the outside edge is required. For Pinex Tiles or Planks 50 mm x 25 mm strappings at 300 mm centres to be provided.

BRACING

Each exterior wall and each bearing partition shall be braced with 100 mm x 50 mm solid braces or 150 mm x 25 mm cut in flush at an angle of approximately 45° , one brace to every 9.000m² of wall area where practicable.

DRAGON TIES

150 mm x 25 mm carried over the top of ceiling joists where wall bracing is not practicable.

CEILING JOISTS

Set out ceiling joists at not more than 450 mm c.c. and lap at least 150 mm over partitions well spliced together at passings. Trim for ceiling access trap in position shown on plan. Dwang ceilings to suit ceiling sheets but generally at not more than 600 mm c.c. Provide 100 mm x 50 mm ceiling runners to all spans to 2.400 mm. For spans over 2.400 mm provide a 200 mm x 25 mm on edge with 75 mm x 50 mm nailed to the ceiling joists and to the 200 mm x 25 mm.

ROOF FRAMING

Set out rafters at centres and pitch specified on the plans in single lengths, birdsmouthed over top plates and securely nailed at all points of contact and attachment. Strut and brace the roof as shown on the cross-section.

Fly rafters to gables to be sprocketed from main rafters set back from the end wall the equivalent distance the fly rafter overhangs.

PURLINS

Fix 75 mm x 50 mm purlins, set to suit roofing sheets but at not more than 760 mm centres. Purlins shall be double spiked to rafters with two 100 mm nails.

EAVES

Form eaves of 75 mm x 37 mm framing or as drawn. Fix to underside of soffit and porch ceiling 4.7 mm thick fibrolite securely fixed in position, and let into fascia board in groove provided. Cover joints with an extruded plastic or aluminium moulding.

FASCIA BOARDS

Fit to eaves 150 mm x 25 mm fascia securely fixed to 50 mm false fascia spiked to rafter tails. Mitre all joints and angles.

BARGE BOARD

Fix 150 mm x 25 mm barge boards mitred at joints and well secured where gable roof is shown.

EXTERIOR WALLS

All exterior walls shall be covered from top plate to sleeper plate and to the tops of gables with an approved breather type building paper. Secure along all edges and at intermediate points not less than 300 mm c.c with horizontal laps at 50 mm and vertical laps of not less than 150 mm.

(a) WEATHERBOARDS:- Exterior walls shall be covered with bevel back 150 mm x 25 mm weatherboard or as shown on the plan. Gauge boards to show a uniform face and fix in long lengths. All joints primed and external corners to be mitred and all internal corners scribed. All joints to be staggered and separated by two full boards. Cedar and Redwood boarding to be fixed with galvanised nails.

(b) VERTICAL SHEATHING:- Asbestos coverline fitted in an approved manner shall be used where vertical sheathing is shown on plan.

(c) SHIPLAP AND BOARD & BATTEN:- Where shown cover walls with shiplap or Board & Batten. Dwang between studs with 50 mm x 50 mm at no more than 450 mm c.c. for fixing all vertical boarding, which shall wherever possible be fixed in single lengths with two nails per dwang. Both ends of all vertical boards to be painted with red lead paint. Use galvanised nails where boarding is either Cedar or Redwood. Punch all nails below the surface.

(d) BASEMENT CARPORT:- Line walls and ceilings of open carports with 4.7 mm asbestos or other approved fire resistant material with extruded aluminium jointer mould or timber batten, and a small timber cornice batten or mould at wall margins.

NAILS, BRADS, ETC.

Nails, brads, clouts and screws, etc. shall be of steel except where liable to corrosion in which case they shall be either galvanised or solid brass as applicable.

Linings of sheet materials shall be secured with 29.7 mm x 1.85 mm galvanised flat head clouts neatly hammered flush, except in the case of hardboard sheets which shall be fixed with 25 mm x 1.6 mm cadmium plated hardboard nails. All prefinished wall linings such as seratone, etc. to be glue fastened to the studs. (No nailing of prefinished lining will be permitted.)

Screws to be screwed tight but without stripping the hole. Use screws of appropriate material and pattern for fixing hardware.

TIMBER FINISH

External finishing timbers to be machine dressed. Internal finishing timbers and joinery fittings to be machine dressed and machine glass papered. Finish by hand in situations where a first class finish is called for, such as on a mantel piece.

Remove all arises all rough or uneven patches and any other surface defects from internal finishing timbers before painting or varnishing is begun.

FLOORING

Before laying flooring remove all trade debris from beneath the floor.

Lay flooring in long lengths, cut hard up to plates, tightly cramped and double nailed at each joist.

Where possible lay flooring continuously under all non bearing partitions. Straight under-cut butt joints shall be over a joist, drilling all butts before nailing, scatter all butt joints.

Floor nails to be 50 mm x 2.8 mm floor brads, punched as work proceeds.

Where end-matched flooring is used, no board shall span less than two joists. Matched ends joints falling on the same joists shall be separated by at least two floor boards.

On no account shall T. & G. Flooring be pre-laid.

PARTICLE BOARD FLOORS

The board shall be 19 mm thick high density water-proofed quality. Pre-lay with 6 mm clearance around all walls and nail perimeter of sheets at 150 mm centres and intermediate joists at 300 mm centres (nails shall be 50 mm galvanised brads for Rimu joists, or 62 mm galvanised brads for Radiata Pine joists). Punch all nails, with joints in as straight a row as possible. All joints between the sheets and the outside edges of sheets alongside fixed plates, must be supported on the joists or on 75 mm x 50 mm dwangs between the joists. 100 mm x 50 mm dwangs at 450 mm centres to be provided under any partition not supported directly on floor joists.

Timber insert strips shall be fixed at the joints only when especially specified or shown on plan. Otherwise all sheets shall be butt jointed true to line.

GENERAL

All drainage work is to be carried out by a licenced Drainlayer and shall be strictly in accordance with the Local Authority Regulations within whose district the building is erected.

Unless otherwise stated elsewhere, the quotation allows for connections to the authorised sewer and storm-water outlets.

MORTAR AND CONCRETE

Water, cement, sand and gravel shall be of the same grades and qualities as those specified in "Concrete Work". All mortar is to be composed of one part of cement and two parts sand, but 10% of the cement may be replaced by Lime to allow for easy working. Concrete is 1:2:4 normal mix.

GULLY TRAP

Gully trap shall be set on a concrete foundation and properly connected to drain. Concrete surrounds to gully trap are kept up 150 mm above ground and plastered with 2:1 sand cement trowelled smooth. A cast iron grating to be provided.

INSPECTION PIPES

These to be provided where required.

LAYING DRAINS

Drains shall be laid proceeding in lines as direct as possible, and with regular falls nowhere less than one in forty.

JOINTING W.C.

The joint between the water closet and the soil-pipe is to be made with bitumen or other approved mastic.

SEWERAGE DRAIN

This is to be 100 mm first quality salt-glazed sleeve-jointed or socketed pipes as allowed by the Local Authority, connected to the main or septic tank as the case may be. Allow sewerage drain from house to sewer main.

STORMWATER

To be disposed of according to Local Body Requirements, all stormwater must be carried out to the street channel or other authorised outlet, in either socketed pipes or field tiles set in concrete.

SEPTIC TANK

If necessary to be installed, construct in-situ a septic tank of capacity and design, or a pre-cast concrete unit, as required by the Local Health Authority. Installation shall be complete with removable access panel in roof slab of tank, and with all necessary cowed and vented fresh air inlets, and affluent drainage. Locate tank at regulation distance from house and boundaries. Provide effluent soak holes to Local Body requirements and back fill with top soil and turf as original ground.

FIELD TILE DRAINS

If shown on plan, excavate for, and lay and backfill a 75 mm earthenware field tile drain on a shingle bed, complete with required gradients, bends, and other fittings necessary for passing through foundation work.

GLAZIER

GLASS

Glazing to entrance doors, W.C. and bathroom windows and where else indicated on plans to be selected obscure glass. All glass over .65 metres² in area to be 900 grams of select glazing quality. Other glass to be 680 grams ordinary glazing quality.

GLAZING

Cut glass with due allowance for expansion, properly bed and back putty and secure with metal spring. Finish with quick setting putty.

Where fixed glazing and single panel doors are shown on plan, back puttying and bedding in of glass is required.

PIPE LAGGING

All piping and fittings conveying hot water including the exhaust pipe up to the underside of the roofing and 900 mm of the cold water feed pipe adjacent to the cylinder shall be lagged with felt, tightly wrapped around the piping and secured.

TERMINAL VENT

Shall be 75 mm diameter cast iron, Fibrolite or P.V.C. carried up to the height demanded by the Local Authority, and fitted with a vermin cage galvanised after fabrication.

WASTES

All wastes to be P.V.C., Polypropylene or may be copper, depending on local council or loan companies requirements.

TRAPS

All traps where possible shall have unions at both ends and shall be installed in a manner allowing for complete removal. Sufficient cleaning plugs shall be provided.

LAUNDRY TUB

Provide and fit a single compartment Stainless steel tub to a tub cupboard supplied by the joiner, in position shown on plan.

TAPS

Chromed taps shall be fitted over sink, bath, wash basin, shower, tub and marked in each case either Hot or Cold. (Owner to advise type of washing machine, taps, if required, as an extra).

WATER CLOSET

An approved pan shall be screwed to floor with brass screws and fitted with hinged heavy plastic seat, Dux cistern, plastic flush pipe and overflow.

SHOWER (Where applicable)

Shower tray to be stainless steel, to be bedded in such a manner to ensure rigidity and unimpeded drainage from the tray. Cold water from low pressure pipe. A topliss mixer and C.P., shower rose.

SPOUTING

Fit to all eaves including external back porches 125 mm, 0.6 mm thick galvanised iron $\frac{1}{2}$ round spouting fitted on heavy duty brackets at not more than 900 mm centres, securely fixed to fascia and given proper falls to outlets. Spouting to be joined by rivetting and soldering. Prime the face of all laps, the inside and back of spouting before fixing to fascia.

DOWNPIPES

Provide 25 mm² of downpipe section to every 9m² of roof area.

Fit 0.6 mm thick galvanised iron seamed downpipes fitted with all necessary swan necks, etc., and strapped securely to blocks clear of the walls. Discharge over stormwater bands.

HOT WATER CYLINDER

Supply and install a 181 litres copper Hot Water Cylinder in the cupboard as shown, fully lagged and encased. The element and thermostat to be supplied by the electrician. Set the cylinder on a stand 225 mm above the floor.

SUPPLY TANK

Supply and install plastic supply tank of a capacity not less than 68 litres complete with ball valve, tray and tray overflow from tank to discharge outside exterior walls. Alternatively supply and install a pressure reducing valve.

DRAINLAYER

The Sub-Contractor shall pay attention to that section of the General Conditions dealing with relations with other trades.

FOUNDATION (Continued)

- (b) Where owing to poor ground it is necessary to spread the footings, extra reinforcement and extra spread shall be provided to the requirements of the engineer.
- (c) Reinforced-concrete foundation wall for one-storey buildings shall not be less than 125 mm thick and shall, in addition to the reinforcement required in the footing, be reinforced with not less than one 12 mm rod at the top. For two and three storey buildings, reinforced concrete foundation walls shall not be less than 190 mm thick and shall be reinforced with not less than one 15 mm rod similarly placed. Where foundation walls are more than 900 mm in height above the footings the above-mentioned reinforcement shall be supplemented with 10 mm rods at 380 mm centre to centre vertically and horizontally or 665 mesh.

FIXINGS

Cast in 10 mm diameter hooked rods at 150 mm from all angles and then at 1400 mm centres for securing timber bearers and plates to foundation walls and porches, with a minimum of two fixings to any one plate. Rods to extend 230 mm into and 230 mm out of the concrete. Build in all other fittings or fixings as may be required.

VENTILATION

Provide approved 300 x 230 vents spaced 760 mm from all angles, 900 for Brick Veneer, and at 1800 mm centres. Minimum ventilation shall be 12 mm² of unobstructed air space per square 300 mm of ground floor area. Vents occurring at terraces to be provided with 150 mm pipes or equivalent as air ducts under terrace slab.

CHIMNEY BLOCK

The foundation to hearth and chimney shall be of concrete to the size required, carried down to solid ground. Fill block with solid material while pouring concrete. A 150 mm thick foundation pad excavated to solid bearing with a minimum depth of 200 mm, the pad to extend 150 mm to the rear and sides of the profile line of the chimney block. Reinforce walls and footings with three 12 mm rods and top with 10 mm rods at 380 mm centres both ways or 665 mesh.

CHIMNEY

Fit fireplace and pre-cast chimney as shown on plan. Reinforce flue with not less than four 12mm vertical rods symmetrically spaced at not more than 450 mm centres around the periphery. Chimney construction to conform to N.Z.S.S. 1900 Chapter 7: 24-35.

FIREPLACE SURROUND

Supply and fit stone or tile surround and hearth, as selected by owner, to the fireplace. Surround and hearth to be supported full length by concrete foundation. Allow for the complete supply and installation, including a Colonial pattern grate.

SEPTIC TANK (Where applicable)

Form a septic tank of concrete with 100 mm walls and 100 mm thick bottom. Form top with 175 mm removable slabs. All to be complete with inlet and outlet and mushroom vent. Installation and capacity to be in accordance with Health Inspector's requirements.

CONCRETE SLABSITE PREPARATION

Remove all top soil and excavate to virgin ground shaping the ground levels with falls to the perimeter. If ground drains are necessary to control the level of the water table these shall be installed before placing granular fill and shall be charged as an extra to the contract at cost plus 10%.

GRANULAR FILL

A drainage layer of granular filling material shall be spread over the site to a level 150 mm below the finished floor surface and with an accuracy of plus or minus 12 mm. This material shall be approved river gravel or crushed rock particles not exceeding 10 mm and with not more than 10% passing a 10 mm sieve. It shall be clean and free from vegetable matter or any other material which would impair its function as a drainage layer.

SAND BINDING

The granular fill shall be blinded with a 50 mm layer of sand finishing 100 mm below the finished floor surface. This layer is required to prevent damage to the vapour barrier so that no coarse particles shall be permitted.

CONCRETE WORK

Concrete must attain a crushing strength of 1134 grams at 28 days and conform with the relevant N.Z.S.S. 1900. Chapter 9.3.

FORMWORK

Closely jointed, perpendicular, rigidly braced and so constructed as to allow easy removal without damage to concrete. Allow for all openings as required to accommodate air ventilation pipes, etc., when making up boxing.

All formwork supporting suspended and cantilevered slabs, etc., to be kept in position for a minimum of 21 days before removal.

REINFORCEMENT

Round mild steel rods free from mill scale or loose and excessive rust. Bend rods not less than 450 mm around angles and bind laps and intersections with 1.25 mm soft black iron wire. All laps to be 40 diameters with all ends hooked. Maintain rods in proper alignment whilst the concrete is being placed.

CONCRETE FLOORS, STEPS & TERRACES

Concrete entrance floors, entrance steps and terrace slabs shall have a minimum thickness of 75 mm laid with an even and constant weather fall to outside edge, and shall have 75 mm upstand at sides and back. Reinforced with 10 mm diameter rods at 380 mm centres both ways. Fill in around piles, chimney blocks and steps after concrete has set, and formwork removed, thoroughly ram around.

Hardfill under porch floors and steps. Where porches and steps are boxed and not filled use 10 mm steel at 380 mm or span opening with 665 mesh. Form entrance steps not less than 300 mm wide with rises of 150 mm or as indicated on drawings.

UPSTANDS AND TIMBER POSTS

Dimensions as shown on plan. Where independent post supports required construct concrete upstands bearing on reinforced concrete base pad. In top of upstand insert two 38 mm x 75 mm x 6 mm galvanised fixing straps for fixing post. Straps to be fish-tailed at end in concrete and stand 175 mm above upstand. Drill for two 12 mm bolts. (Similar or other approved method will be acceptable).

PILES

Piles shall be at least 600 mm x 200 mm x 200 mm precast pumice concrete and set into 600 mm x 600 mm x 100 mm footings at a minimum depth of 200 mm below ground level, or down to an approved horizontal solid bearing. Piles under all bearing partitions to have 380 mm x 380 mm x 150 mm footings.

All piles shall have 4.0 mm galvanised "U" wires run through holes precast in piles, for securing bearing plates. Piles shall be placed in rows. Maximum spacing shall be 1,400 mm centres in rows under bearers and 2,000 mm centres between rows for 125 mm x 50 mm and 2,400 mm for 150 mm x 50 mm joists.

No pile shall extend more than 1,400 mm above groundline and all piles exceeding 760 mm in length shall be reinforced with one 10 mm diameter steel rod.

FOUNDATION (See plans)

(a) Footings for brick, stone and concrete foundation walls shall be of concrete of adequate bearing area to support safely the loads imposed as determined from the character of the soil. Unless specially designed, such footing shall be reinforced with not less than the number and size of rods as set out in Table 1 below:-

TABLE 1. MINIMUM REINFORCEMENT OF CONTINUOUS CONCRETE FOOTINGS

HEIGHT OF BUILDING IN STOREY'S	WIDTH OF FOOTINGS	REINFORCEMENT
1	Not exceeding 150 mm. Exceeding 150 mm.	One 16 mm rod Two 12 mm rods.
2	Not exceeding 200 mm. Exceeding 200 mm.	Two 12 mm rods Three 12 mm rods.
3	Not exceeding 225 mm. Exceeding 225 mm.	Two 16 mm rods One 16 mm rod and Two 12 mm rods

SWITCH BOARD

Provide recess in position to be determined and line as required by the power supply authority.

FINISHING TRIM

EXTERIOR:- Finish external doors and windows with 50 mm x 25 mm facings and 50 mm x 12 mm scribes. Provide and fix all beads, fillets, etc. as customary and as required for a neat external finish.

INTERIOR:- Finish around all interior doors and windows with a standard pattern 50 mm architrave, mitred at the angles. Fit 25 mm sill boards to all windows.

Finish at all floor and wall angles with a standard pattern 75 mm skirting mitred and scribed as required.

Finish at all ceiling and wall angles with a 25 mm x 25 mm square scotia.

Provide and fix all other beads, quads, fillets, aprons, etc. as required for a neat internal finish throughout.

UNDER FLOOR ACCESS

Provide access door to under floor area at highest point in foundations except on front wall.

INTERNAL STAIRCASE AND LANDINGS

Take delivery of staircase units from Joiner and erect in position as shown on plan, including fixing of all curtail steps, newel posts, string caps, landing risers and nosing, winders etc.

Where purpose-made stair balustrades are to be installed take delivery of same and erect to suppliers fixing instructions as necessary.

Solid frame balustrading shall be constructed of gauged 100 mm x 50 mm plates, studs and dwangs as for standard wall framing. Height to top of capping 900 mm. Line frame with Gibraltar Board and finish under string.

Provide all necessary under-carriage framing. Construct half way landings as shown with 100 mm x 50 mm joists and flooring as for main floors. Neatly fit top risers and nosings.

PELMETS (if required)

(a) BUILT DOWN TYPE:- Built down pelmets over windows in rooms shown on plan. Finish with Gibraltar Board.

(b) BOX TYPE:- Make a fix over all sliding doors as shown on plan.

INSULATION

Where wall or ceiling insulation is provided for under schedule, the carpenter and special tradesman concerned shall attend upon one another for ensuring proper sequence and progress of works.

HARDWARE

See schedule of P.C. items for allowance for the supply of the following hardware and fittings:

Sash and fanlight stays, door locks or latches and furniture, cupboard and drawer pulls, coat hooks, door stops as required, towel rails, soap recesses and toilet roll holders, and shower curtain rails.

Take delivery of the above fittings and fix, leaving all working parts in free working order. Note sliding door sets for a main and wardrobe doors are not included in P.C. allowance for Hardware and fittings.

Allow to fix all other hardware not specifically mentioned but as customary and as required to complete the contract.

JOINER

All joinery to be constructed in accordance with the best methods of woodwork joinery using mortice and tenon, dovetail, tongue and groove, mitre or other approved methods.

FRAMES AND SASHES

Frames and heads to be out of 37 mm material and sill to be out of 150 mm x 50 mm. Sashes to be tenoned and assembled in an approved manner with waterproof glue and finished not less than 60 mm thick, to be rebated for glass, properly fitted and to have 10 mm grooves at sides, bottom and top. All exterior joinery to be primed on exterior surfaces before exposure to the weather. Sashes to be hung as shown on plan.

Fixed glass to be beaded in with timber beads.

Where sheets are cut on the site, the untreated edges shall be given a brush applied coat of approved water-proofer as recommended by the Manufacturers.

FLOOR SANDING

On the completion of the job and just prior to handing over to the occupants machine sand the entire floor area. Where corners are not readily accessible to the machine they are to be hand scraped and sanded.

CEILING LININGS

All ceilings unless specified to the contrary, shall be lined with 12 mm Pinex insulation board "V" jointed with stock timber button mould or other approved jointing medium.

Set out sheets in sizes to form uniform panels in each room, and fix to manufacturers instructions. Lightly punch all nail heads below the sheet surface to allow stopping of the nail holes.

Where applied to sloping ceilings, strap underside of rafters with gauged 75 mm x 50 mm at 450 mm centres, dwang for joints, and solid pack at all ceiling margins.

- (a) Provide ceiling access in laundry or in a position as shown on plan.
- (b) Ventilate ceilings of enclosed interior passages or lobbies with regulation vent shaft as may be required by Local Authority.

FIBROUS PLASTER CEILING (Where applicable)

Line all ceilings with 12 mm thick fibrous plaster sheets with joints 6 mm open, securely fixed with wadding or glue to ceiling joists. Stop all holes and joints with plaster of paris and trowel to smooth even surface. Fibrous plaster ceilings are not to be nailed.

WALL LININGS

Unless otherwise specified or shown on plan or schedule, supply, fix and stop 9 mm Gibraltar Board to all interior walls and partitions throughout the house, including passages and cupboards.

WARDROBES

Line all walls with flush jointed Gibraltar Board. Provide each wardrobe with full length galvanised iron pipe hanging rail (19 mm diameter up 1.500 mm and 25 mm diameter over 1.500 mm) and a shelf 300 mm x 25 mm particle board fixed as directed. When shown on plan form top cupboards (Trunk) with particle board flooring and either side hung or sliding doors, with main Wardrobe doors 1.800 mm high.

LINEN CUPBOARD

Line as for wardrobes. Fix five rows of full width shelves, the first row 450 mm from floor and thereafter 300 mm apart. Support shelving on 60 mm x 35 mm ledges.

HOT WATER CYLINDER CUPBOARD

If not supplied by Joiner, frame and line as for wardrobes. Above cylinder fix two slatted shelves 350 mm apart and to full width of cupboard. First shelf to be as near the top of the H.W.C. as practical. Space slats 12 mm apart. Provide timber stand for cylinder as required by plumber.

SHOWER (Where applicable)

Build up the shower box as shown on the plan, and line the walls, unless otherwise specified with 4.7 mm Seratone or similar wall linings, to be glued to the studs and no nailing whatsoever will be permitted. Aluminium or plastic jointing corner moulds shall be used for all angles. In no circumstances whatsoever will any horizontal joints be allowed in shower box linings. All shower linings to be red lead primed on all edges and along the bottom of each sheet and for 300 mm up from the bottom on the back of each sheet. Provide a proper 6 mm airspace and water-drip at the bottom of each sheet to prevent capillary attraction of water between the sheets and the shower base. Fix an approved soap recess in the shower wall.

BATH RISES

Form cradles for bath and frame up at the front of the bath with the timber set to a slope and line with the same wall linings as used elsewhere in the bathroom.

SPLASH BOARDS

Finish along the top of bath and tub with 4.7 Seratone 100 mm high or as shown, in white lead putty or other approved water-proofer mastic.

A P.V.C. bath mould to bottom edge on bath.

ELECTRICIAN

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The Sub-Contractor shall pay attention to that section of the General Conditions dealing with relations with other trades.

The electrician to obtain the necessary permit from the supply authorities and pay all fees.

The installation shall comply with the requirements of the fire Underwriters Association and the Electrical Wiring Regulations, 1935, and amendments thereto. Draw in boxes, inspection elbows and tees shall be so located that all conductors are drawn from point to point without damaging the insulation or the conductor.

All cutting, drilling and fitting necessary for the Electrical installation is to be included in this work, but no work of other trades shall be cut into so that it may cause damage or injury to structural or finished work.

All work is to be protected from the weather in an approved manner and against possible injury during the progress of work.

All exposed screw-heads on fittings are to be of finish and pattern to match their surroundings.

All switches (flush type), power sockets (flush type), and other fittings shall be of first quality standard, placed as shown or directed.

Any special fittings shall be by special arrangements with the owner.

One complete set of approved wattage lamps shall be provided to all lighting points complete with standard pearl shade, or as indicated on drawings or addendum.

Power points are 10 amp. with switches.

CONNECTION - MAINS.

Supply mains shall enter a metal mains junction G.E.C. Pattern. The Contractor shall supply at the point of entry strong shackles insulator fixing for the attachment of aerial services.

SWITCHBOARD

This is to be neatly boxed in with door front as required by the Electrical supply authorities and is to be placed in back porch or in position required by Supply Authority.

Allow for possible increase of 20% in load to board and wiring. Clearly label all fuses.

EARTHING OF NEUTRAL

The neutral at the switchboard is to be bonded to the water main. Where P.V.C. is used, earth pipe to be fixed in ground near switch board.

WATER HEATER

Allow for the supply of an element and thermostat for hot water cylinder. Electrician to allow for connection to circuit and to provide isolating switch nearby. Arrange for testing.

LIGHT AND POWER POINT FITTINGS

Supply and install power points and lights as shown and indicated on the plan or as directed by the owner.

STOVE

Allow for the supply and installation of an electric range in complete working order.

T. V. AERIAL

Install hidden wiring in wall and provide outlet in position shown or as directed. Allow sufficient lead in the ceiling to reach determined position of aerial.

COVER PLATES

Light switch and power point cover plates to be flush white plastic. Switches to be of approved silent rocker type.

P.C. SUM

Should the sum not be wholly expended the balance shall be refunded to the Owner. Alternatively, should the P.C. sum be exceeded, the balance shall be an extra payable by the Owner to the Builder.

PAPER AND PAPERHANGER

The Sub-Contractor shall pay attention to that section of the General Conditions dealing with relations with other trades.

GENERAL

The painting may be done either by persons directly employed by the builder or by a suitable Sub-Contractor. Such sub-contractor shall be under direct control of the builder.

FINISH

In all cases, prior to the applications of a finishing coat, the recommendation of the manufacturer of the finishing coat shall be strictly adhered to, notwithstanding that the general terms "paint" has been used, and a minimum number of coats has been specified.

MATERIALS

All materials shall be first quality paint and delivered on the site in unbroken packages. No materials shall be mixed on any unprotected floor surfaces.

WORKMANSHIP

All work shall be of the highest standard and shall be performed by tradesmen. Paint shall not be applied to damp surfaces, and external painting shall not be done during frosty or other unsuitable weather. No painting to be carried out in dusty conditions. All care should be taken not to stain or mark any existing finish and all work to be left clean and clear. Each coat to be dry before succeeding coat applied, and where necessary rubbed down between coats. All damaged work to be rubbed down and recoated. Do all stopping as soon as priming has dried.

The Painting Contractor shall inspect all work prior to commencement and report immediately, in writing, to the Main Contractor any defects or irregularities which may adversely affect his finishes. All defects so reported shall be corrected prior to sub-contractor commencing. Failure by the Painting sub-contractor to inspect or report will be construed as an acceptance of dwelling and surfaces and any defects discovered at a later date will be remedied at the Painting sub-contractor's expense.

EXTERIOR WORK

All colours to owner's selection. All timber work primed before fixing. Stop all nail holes, etc., and give an undercoat and a finishing coat of exterior paint to all woodwork and metal work up to and including the spouting and barge rolls. Use an approved metal primer on metal work where painted. Give asbestos cement sheathing two coats of P.V.A. paint.

PREPARATION OF SURFACES

No painting, enamelling, distemporing or similar finishing work shall be done on concrete, plaster, or similar surface unless and until such surfaces are in a suitable condition to receive the finish.

INTERIOR

All interior woodwork including sashes and frames shall be either stained or painted in accordance with directions from owner.

All nail holes throughout the house are to be stopped with putty. All woodwork to have one priming coat, one undercoat, one coat of good quality paint. Hardboard walls to receive one coat of sealer, an undercoat and one coat of good quality paint. Ceilings in kitchen, toilet, laundry and bathroom to have two coats top quality paint, as directed, other ceilings to have two coats of first quality paint, flat finish, brushed on. Interior of cupboards in kitchen not to be painted. Hinged cupboard doors shall be painted both sides.

The interior of all wardrobes to be given two coats of approved paint. The work generally is to be such as would be expected from experienced tradesmen and the job is to be left in a tidy state, to the satisfaction of the builder.

PAPERING

All walls to be sanded down and thoroughly sized before papering. Use only fresh paste containing an approved fungicide.

All papers trimmed, butt jointed, true and plumb, with all patterns in perfect register at joints.

FLAT ROOFS

Small roofs, such as porches, bays, etc. may be covered with flat sheets of 0.6 mm galvanised iron, with rolls for each sheet width. Turn sheets up 50 mm at each side and 150 mm at ends under wall sheathing. Cover each roll with shaped capping piece of 0.6 mm galvanised iron well secured. Prime all undersides of flat sheets before fixing.

Use underlay of Building Paper as specified above.

PAINTER

General painting of roof should not be done until metal has weathered, but should, however, be painted after 6, and before 12 months.

This latter painting work to be performed independent of the main building contract.

PLUMBER

The Sub-Contractor shall pay attention to that section of the General Conditions dealing with relations with other Trades.

All plumbing work is to be carried out by a licenced plumber and shall be strictly in accordance with Local By-Laws.

WORKMANSHIP

Waterpipes and tubes are to be set out in straight runs of even gradients, avoiding all places where airlocks are likely to occur. Easy bends to be used throughout, and unless unavoidable, elbow fittings shall not be used. In order to prevent sagging and dragging, all tubing and tubulars are to be secured by purpose made heavy purpose straps, fixed to the structure wherever necessary and of the same metal as the tubing being used. All water pipes to be concealed wherever possible. All pipes at taps, valves and other water-letting appliances to be firmly secured by approved methods to prevent any movement of piping when such taps, valves, or appliances are operated. Tap fittings to have a wide wall flange, and no exposed threads or other unsightly arrangements to mar the appearance. Holes to be cut to minimum size to take pipes.

USE OF PLASTICS

The owner of the property for whom the work is carried out must be fully aware of the materials and fittings being used and that he is prepared to take full responsibility for any consequential failures which may subsequently occur.

COLD WATER SUPPLY

Unless otherwise stated elsewhere, the quotation allows for a cold water supply of up to 9,000 mm from the point provided by the Local Authority.

Lay on the cold water supply from the point provided by the Local Authority in copper piping or P.V.C. plastic with 12 mm branch to the bath, sink, handbasin, supply tank, W.C. and tub.

Lay on supply, to tank controlled by float valve, or pressure reducing valve.

All piping outside of the building is to be sunk 350 mm into the ground.

Provide two 12 mm garden taps with hose connections, where directed.

FLASHING OF FRAMES AND ROOF FLASHINGS

These are to be of 0.45 mm galvanised flat iron and fitted in accordance with standard building practice at all points as required to render the building watertight.

WASH BASIN

See addendum attached.

BATH

Fit white (R.V. Harvey type), bath in timber frame cradle, to be complete with plug and chain, or as stated in addendum.

PIPE RUNNING

From top of the water cylinder a 10 mm diameter expansion pipe shall be fitted and continued vertically up through the roof as a 12 mm diameter exhaust pipe terminating at height of not less than 600 mm above the roof. Branches 12 mm in diameter shall be taken from the expansion pipe to the laundry tub, basin, the bath and sink. A 12 mm diameter sludge pipe shall be taken from the bottom of the cylinder and fitted with a screwed brass cap.

DOOR FRAMES

All door frames to be plumb and square to walls, having heads true to level. Exterior door frames to be out of 50 mm thick timber and sills out of 62 mm thick timber, solid rebated. Interior frames to be out of 25 mm thick timber with 50 mm x 12 mm planted stops or out of 25 mm - 12 mm thick timber solid rebated.

DOORS

EXTERIOR:- Front :- As shown on drawings.

Rear:- As shown on drawings.

Interior:- Hollow core flush. Hung as shown on plans.

All interior doors 2000 x 760 or 800 according to Local Body By-Laws. All W.C. single doors 2,000 x 600. Wardrobe doors as indicated.

FITTINGS

All fittings located and shown on Plan are to be as shown on plans.

BATHROOM CABINET

See drawings and/or addendum.

TUB CABINET

Provide and fix a tub cupboard to accommodate single S/S tub.

ALUMINIUM WINDOWS

Where indicated on drawings, supply and fix standard or custom-built anodised and glazed aluminium windows to patterns and code references marked on plan. Fix in strict accordance with manufacturers standard details and fixing instructions complete with all sub-frames, reveals, facings, mouldings and flashings.

ROOFER

All work shall be carried out by qualified tradesmen in an approved manner.

Building shall be left watertight and bird-proof, and all debris cleared from the site.

Iron brought on to the site, if not for immediate fixing, shall be stored under cover, or kept off the ground, and adequately protected from the weather to avoid condensation taking place between the sheets.

QUALITY AND GRADE

(a) All iron shall comply with the relative British Standard B.S. 3083 and N.Z.S.S. 1343, Class B.

(b) Thickness shall be not less than 0.45 mm or heavier where specified.

(c) Branded with the name or brand of the manufacturer, the class, the thickness and the weight of spelter.

UNDERLAY

Cover purlins with 1 mm, 50 mm mesh galvanised wire netting stretched taut and fastened to the purlins. Over netting and under the iron fix approved saturated building paper well lapped and secured with either the roofing nails or flat headed clouts.

ROOFING

Fix corrugated roofing complete with ridges, Barge Rolls, stop ends, 125 mm spoutings, downpipes, vents etc. Fix roofing sheets with 32 mm corrugation side lap, and 225 mm end lap; if pitch is less than 15 degrees and laps shall be increased to 300 mm. All laps to be paint primed before fixing.

Nail roof with lead-headed nails. Nail at top and bottom of sheets, at every second corrugation, and intermediately at every fourth corrugation on each purlin.

Fix 0.6mm lead-edge ridging and dress down into corrugation.

Fix 0.6mm galvanised iron-valleys with approved beaded edges.

Fix 0.6mm galvanised iron chimney flashings.

Other flashings 0.6 mm or 0.45 mm galvanised iron fixed according to usual trade practice.