

STANDARD SPECIFICATION

FENNS BUILDERS LIMITED

1.0 PRELIMINARY AND GENERAL

1.1 GENERAL

This specification also covers all contractual obligations and materials for the proper completion of the building shown on the plans drawn by Fenns Builders. The standard of constructions shall be carried out in a workmanlike manner in strict accordance with the N.Z. Building Code and approved documents.

1.2 DRAWINGS

Figure dimensions are between rough framing and shall be used in preference to scale. Drawings to a larger scale to be read in preference to smaller scale. No guarantee is made that the drawings are correct in every detail and should there be any discrepancies in either the drawing or measurements, the Builder reserves the right to alter or amend to suit the contract in consultation with the plan drawer.

1.3 AMBIGUITIES

Should there be omission, doubts or ambiguity to the meaning of any part of the plans or specification the Builder will complete the portion of the contract to standard construction methods.

1.4 INTERPRETATION

The attached specifications and drawings show the extent of the work but there is no warranty expressed or implied that it shows each and every minor detail or item required to be included by the Builder. Materials shown and not specified must be of the kinds commonly used. The specification and plan are to be read as the plan being right.

1.5 PAYMENTS

Progress payments, variations etc. any legal requirements or terms of payment or details of such not covered in specification can be found in Fenns Builders Building Contract.

1.6 BUILDING CONSENT

The contractor shall obtain building, plumbing and drainage consents and pay fees in compliance with Territorial Authority requirements.

1.7 LAND OWNERSHIP AND SURVEY PEGS

It shall be the responsibility of the owner at his own expense in all things to correctly describe and indicate to the Builder the land upon which the said dwelling-house and works are to be erected and to locate, define and indicate to the Builder before commencement of such works the exact boundaries of the said land and all survey pegs and the owner hereby indemnifies the Builder against all costs, claims, expenses and damages which may arise from an incorrect or inaccurate description or indication of the land upon which the said dwelling-house and works should be erected or the boundaries thereof. If the pegs are not found the Owner must engage a surveyor to install new survey pegs. The Builder may if he so desires engage a surveyor to install new survey pegs and charge the Owner for any of the above costs on completion of contract.

1.8 SUB CONTRACTORS

This specification is divided into trade sections for convenience of reference only. While all reasonable care is taken to classify each trade no claims will be omitted by sub-contractors for work not specially mentioned in a trade section but is expressed or implied elsewhere. Sub-contractors shall inspect the work of other trades against which their work is to be placed and report immediately any defects. They shall not proceed until such defects have been remedied. Failure to inspect and report will be taken as evidence that such preparatory work is satisfactory.

1.9 PROTECTION OF WORKS

During the currency of the works, the works and materials upon the site shall be protected from all damage, in particular from the elements. Should the Builder or Sub-contractor fail to carry out this provision and damage take place, same shall be made good by the particular Contractor and any loss or expense incurred shall be deducted from monies due or which may become due.

1.10 CO-OPERATION

In addition to any items of work mentioned in the trade sections of this specification, each trade shall assist, arrange with, leave holes for and make good after every other trade as required.

1.11 SITE CLEARANCE AND ACCESS

The Owner shall arrange for and if necessary, an all weather metal access to the building site for haulage of all materials and plant, i.e timber, bricks, etc. for the carrying out of the contract. He shall also clear or be responsible for clearing of the actual site of all stumps, rocks and obstructions and have grass cut to a reasonable length. The Owner shall also remove all vegetation from the area to be covered by the building. In the case where the Owner has agreed to provide a level or excavated site for the erection of the building, any variation of level (from that agreed) found on commencing building operations and necessitating extra layout or materials will be charged as an extra to the Owner.

1.12 SITE PLAN AND SETTING OUT

Siting of dwelling is as per site plan but is subject to alterations if required by the Local Body Requirements.

1.13 LEVELS

The contractor shall check all levels on the site. Levels shown of the drawings are approximate only and shall not be taken as true. Tenders shall visit the site to ascertain site conditions as no extras will be allowed through failure to ascertain works required unless extra works required by Local Authority. The Builder reserves the right to amend the levels during the course of construction if in their opinion it will improve any facet of the dwelling.

1.14 VARIATION AND EXTRA WORKS

After the final approval of plans by the Owner, no variation or extra works shall be carried out by the Contractor except with the written authority of the Owner. Before such works are proceeded with, the owner shall pay for the same.

1.15 CLEAN UP AND MAKE GOOD

The site is to be left clean, at completion, of rubbish resulting from the works, and provision is to be made for the removal of same from the site.

The Owner will be responsible for the cleaning of all windows in the contract.

Sub-contractors for particular works shall be responsible for cleanups and removal of all rubbish resulting from their works. All returnable materials shall be neatly stacked ready for removal.

Upon completion of the works, the Builder shall make good any damage to adjoining properties, (eg fences).

Excavated soil on sites is the responsibility of the owners, unless otherwise specified.

1.16 MAINTENANCE

The Builder at his own expense shall maintain the completed building for a period of sixty days (60) days after the Owner has taken possession. The maintenance shall apply only in the case of defective materials or workmanship on the part of the Builder whether by sub-contract or otherwise. It does not include or cover the following:

- (i) Damage or defects caused by dampness or condensation due to normal drying out and setting (hairline cracks to wallboards, scotias, cornices, mouldings, concrete blocks etc.).
- (ii) Blemishes caused by negligence or fault by the Owner or his representatives through unnatural wear and tear.
- (iii) Any site development works.
- (iv) Any work undertaken by the Owner.

1.17 EXCAVATIONS

The whole of the area to be covered by the building shall be cleared of all rubbish vegetation and minimum 50mm topsoil.

Excavate as required for all foundation, footings, posts, blocks, walls, water and drain-pipes, etc to the various depths for levels and grades required for the erection of the building. All footings to have a solid bearing and all to approval of Local Authority.

If included in the contract the Builder shall excavate for foundations or basement as indicated on drawings. All surplus soil shall be heaped on section where indicated for future use by Owner. Any surplus soil from excavation not required by the Owner will be carried off the site and cost of removal charged as an extra on completion of contract.

2.0 CONCRETE WORK

2.1 GENERAL CONDITIONS

Refer to Preliminary and General which also applies to this section of the work.

2.2 RELATED DOCUMENTS

All materials and workmanship shall conform to the following standards:

- * NZS 1900
- * NZS 2086:1967
- * NZS 3101:1982 Code of Practice for design of concrete structures
- * NZS 3104:1983 Concrete production
- * NZS 3109:1980 Concrete construction
- * NZS 3112:1974 Methods of test for concrete
- * NZS 3402:1974 Hot rolled steel bars for concrete reinforcement
- * NZS 4203:1984 Code of practice for general structural design

2.3 CEMENT

All cement shall be fresh cement of approved brand conforming with the NZS 3122:1974. It shall be kept absolutely dry prior to use.

2.4 AGGREGATES

Sand shall be siliceous, clean, coarse, sharp and free from silt, salt, organic or other material. Broken stone shall be crushed graded bluestone, maximum 20mm and shall be clean, hard and free from all deleterious matter and shall conform to NZS 3122:1974.

2.3 CONCRETE PROPORTIONS

Concrete for new work shall consist of one part cement to two parts sand to four parts broken stone, together with sufficient water to produce a good workable concrete. The quantity of cement shall not be less than 356 kg per m³ of concrete in place. Concrete shall be 17.5 MPa at 28 days or 15 MPa for paths and fence or timber retaining wall foundations.

2.4 READY MIXED CONCRETE

Shall comply with NZS 3104:1983 and NZSS 2086:1967.

2.5 GROUT TO BLOCKWORK

Shall be in accordance with the NZS 2086:1967.

2.6 MIXING

All mixing shall be done with the approved mechanical mixer. Ready mixed 'certified' concrete may be used and all shall conform to NZS 1900.

2.7 FORMWORK

Formwork shall be of timber of nonstaining quality, accurately and securely set up with adequate bracing and close joints. Fillet all external and internal angles. Formwork shall be removed without shock or vibration to the concrete after setting time in accordance with NZS 3109:1980 has been allowed.

2.8 BUILD IN

Build in all iron work, pipe sleeves, H.D. bolts, plumbing work, plugs, etc. as required. Box for and form all openings and recesses as required. Allow M12 holding down bolts complete with nuts and washers built into the concrete wall band, maximum 1000mm centres, for fixing plates, etc or as required and 300mm maximum from corner

2.9 PILES

Construct the various timber or concrete anchor piles, braced piles, cantilever piles and ordinary piles as shown on the drawings, set out as indicated on the foundation plan and supported on the concrete footings as detailed. All to be in accordance with NZS 3604:1990.

2.10 WATERPROOF MEMBRANES

Under all concrete slabs provide and lay 0.25mm polythene film membrane. Heat seal or tape joints using approved tapes and overlay and wrap around all penetrations through this membrane. Care shall be taken not to puncture and any such puncture shall be repaired by overlapping with a patch extending 150mm beyond the puncture in all directions. Tape in position. When pouring adequately protect the film from damage from boots, wheel barrows, planks and other damage. Repair all damage as previously specified.

2.11 FOOTINGS

Box for and reinforce concrete work as shown on the drawings. Allow for stepping the foundations down to ensure adequate bearing on undisturbed ground. Where foundations step down reinforcement shall be bent down and shall be continuous at this point.

2.12 REINFORCING STEEL

All reinforcing steel shall be plain, round, deformed bars under 10mm, mild steel bars of approved manufacture, complying with NZS 3402:1973 and NZS 3422:1974. All steel shall be bent cold without fracture, all starters hooked with 'standard' hooks and before being placed shall be cleaned free from all scale, loose rust and dust. Allow for 40 dia. laps, bind all intersections and splices with black annealed wire - 1.5mm. All reinforcement shall be placed and securely fixed strictly in accordance with the drawings.

2.13 SLABS

Lay 100mm thick concrete slabs over D.P.C. membrane. Either A. Reinforce with a single layer of ECONOMESH HRC mesh 25mm down from top of slab, lapping mesh joints 230mm and tie wire. or B. Lay no reinforcing and form shrinkage control joints on a 4m grid. Screed off and dust, trowel and finish off with a steel float.

2.14 PIPES UNDER FLOOR SLABS

Sub-contractors to check positions and ensure pipe installations are completed prior to pouring of concrete floor slabs.

2.15 LINTELS

form reinforced concrete lintels over all openings where and as required.

2.16 RETAINING WALLS

The design of retaining walls has been taken from Winstone Ltd "Guide to Concrete Masonry Retaining Wall Design" or reference should be made to attached Engineer's drawings etc.

3.0 BLOCKLAYING

3.1 GENERAL CONDITIONS

Refer to Preliminary and General which also applies to this section of work

3.2 RELATED DOCUMENTS

All Materials and Workmanship shall conform to the following standards:

- * NZS 1900
- * NZS 3101:1982 Code of practice for design of concrete structures
- * NZS 3102:1983
- * NZS 4203:1984 Code of practice for general structural design
- * NZS 4210:1981 Code of practice for masonry buildings, materials and workmanship
- * NZS 4229:1986 Code of practice for masonry buildings
- * NZS 4431:1978 Code of practice for earth fill for residential dev.

3.3 MASONRY UNITS

The minimum quality of masonry units shall be as specified in NZS 3102:1983 concrete bricks and blocks Class A.

3.4 LAYING CONCRETE BLOCKS

Concrete blocks must be laid as dry as possible. All blocks shall be laid in Mortar in courses true to line and plumb and level of all joints being completely filled with mortar not exceeding 10mm thick when the blocks are bedded in.

3.5 MIXING MORTAR

Adhere to NZS 3121:1980, NZS 3122:1974 and NZS 1900

3.6 MORTAR CONSTITUENTS

Mortar shall be composed of an approved Cement Hydrated Lime and Sand. Admixtures may replace lime, wholly or partially, if in the opinion of the Engineer, strength requirements will be maintained and bond between units will not be impaired. All admixtures shall be proportioned in accordance with the manufacturer's requirements. Sand shall be composed of clean non-angular particles with a size grading sufficient to produce a sound workable mortar without undue shrinkages. Mix proportions shall be as specified in NZS 3121:1980, NZS 3122:1974 and NZS 4210:1981.

3.7 BOND AT WALL INTERSECTIONS

Bond at wall intersections shall be provided by either lapping units in successive vertical courses or by equivalent mechanical anchorage.

3.6 FILLING OF MASONRY CAVITIES

(i) **MIX PROPORTIONS:** The materials used in filling masonry cavities shall be composed of an approved cement sand and coarse aggregate. Where 190mm blockwork is used, concrete of 10mm maximum size aggregate may be used. The mix shall be ordinary grade concrete with a minimum compressive strength of 17.5 MPa at 28 days as specified in NZS 3122:1974

Mix proportions for filling blockwork less than 190mm thick shall be composed of:

Cement	1
Sand	2
Coarse Aggregate	2
(12.7mm to 5mm)	

The water cement ratio shall not exceed 0.7

(ii) **BOND BEAMS:** Where bond beams (either poured concrete or bond blocks) are used the tops of unfilled cells below shall be covered to support the concrete fill, but not so as to destroy the bond between block courses or the beam and the blocks

Steel in bond beam shall be continuous and laps shall be not less than 40 times the diameter of the bars. Concreting beams over openings shall be continuous. All poured Concrete beams shall comply with NZS 3122:1974.

3.9 VENTILATION

Provide base ventilation of 400 sq mm of area, as near as possible to 50mm below floor joists. Vents to be 750mm from corners and not exceeding 1.8 apart.

4.0 BRICKLAYING

4.1 GENERAL CONDITIONS

Refer to Preliminary and General which also applies to this section of the work.

4.2 RELATED DOCUMENTS

All Materials and workmanship shall conform to the following standards.

- * NZS 3122:1974
- * NZS 3604:1990 Code of practice for light timber construction
- * NZS 4230:1985

4.3 WALL TIES

Brickwork is to be secured to timber frame with galv. steel ties, face fixed to framing so that building paper underlay is pierced only by the tie fixing nail.

Wall ties shall be spaced either:

- (i) Not more than 600mm horizontally and not more than 350mm vertically or
- (ii) Not more than 450mm horizontally and not more than 400mm vertically.

In no case shall the vertical spacing exceed four courses.

4.4 CAVITY

Bottom course of brickwork shall have open joints at 450mm centres to allow moisture to escape. Care must be taken to keep framing, wire ties and vermin proofing free from mortar droppings and at completion of works cavity and vermin proofing thoroughly cleaned.

4.5 MORTAR

Shall be in accordance with NZS 3112:1980 attaining a strength of 8.62 MPa at 28 days. Nominal proportions by volume 1 part cement, 1 part slaked lime, 4-6 parts sand. Proprietary admixtures may replace lime, wholly or partially on approval of supervisors.

4.6 SILLS

Shall be selected bricks on edge or purpose made sill bricks or tiles.

4.7 CO-OPERATION

On completion clean down the exposed faces of all brickwork and leave free from all defects, mortar stains, etc.

4.8 FLASHING TRAYS

To houses with basement garage or rooms weep holes shall be left at every second brick on the bottom course of bricks. An approved fixer is to provide a 200mm wide Butynol Flashing to top of Blockwork and Turned up framed wall 50mm.

5.0 CARPENTRY

5.1 GENERAL CONDITIONS

Refer to 'Preliminary and General' which applies to this section of the work.

All materials are to be aligned true to their various lines and levels and constructed in a proper tradesmanlike manner, to make the whole of the works a sound construction in accordance with NZS 3604:1990.

All timber work abutting or resting on masonry units, concrete or brickwork is to be protected with a bitumen-fabric damp proof course.

5.2 RELATED DOCUMENTS

All materials and workmanship shall conform to the following standards.

- * NZS 1900
- * NZS 2295:1969 Building paper
- * NZS 3601:1973 Metric dimensions for timber
- * NZS 3602:1975 Code of practice for specifying timber and wood based products for use in building
- * NZS 3603:1977 Code of practice for timber design
- * NZS 3604:1990 Code of practice for light timber frame buildings
- * NZS 3605:1977 Load bearing round timber piles and poles
- * NZS 3617:1979 Profiles of weatherboards fascia boards and flooring
- * NZS 3631:1978 Classification and grading of N Z timbers

5.3 WORKMANSHIP

All carpentry work shall be set up and constructed to the dimensions given. All work shall be according to the best trade practice. The carpenter shall set out and ensure the proper execution of the work carried out by other tradesmen and shall attend on make good for all other trades. He shall provide and fix all necessary plant and temporary structure including form work, centring, boxing, shoring, strutting and scaffolding and shall remove them as required, he shall provide and maintain any temporary coverings for any finished work subject to likely damage, he shall ensure the proper enclosure for the works during construction and shall clean up on completion.

5.4 SUBFLOOR

Sub-floor jack studs are to be wire dogged to foundation piles with 2 4.9mm galv. wire dogs to piles and well stapled to the jack studs.

Bearers to be in long lengths, butter over jack studs or piles where joined, and supported with 100 x 50mm flitches. Sub-floor bracing to be diagonal, as required by NZS 3604:1990 and as directed by the local authority inspector.

5.5 SUBFLOOR

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Bearers to be in long lengths, butter over jack studs or piles where joined, and supported with 100 x 50mm flitches. Sub-floor bracing to be diagonal, as required by NZS 3604:1990.

5.6 FLOOR JOISTS

Floor joists to be on edge, set out to suit the flooring sheets, nailed with two 100mm nails at every crossing and trimmed as required for stairwell openings, slabs etc.

Double the floor joists at each end of the building. Floor joists spanning more than 2.5m are to be stiffened with solid bridging in rows at 2.5m centres maximum. Plates to be in long straight lengths. Bottom plates to be butt joined over continuous support. Top plates to be butt jointed and fastened with nail plates.

5.7 FLOORING

Flooring to be laid in large single sheets of high density particle board or T and G solid timber as per NZS 3604:1990. All joints and edges to be continuously supported by floor joists or nogging cut between the floor joists.

Nail the flooring to 60mm galv. jolt head nails at 150mm centres on the joints and at 300mm centres on intermediate floor joists.

On completion of the contract the floor nails are to be punched.

Care must be taken that the flooring is not stained by rust marks, tea or coffee stains etc.

5.8 FRAMING

Studs are to be set out to accommodate wall lining sheets and tables in NZS 3604:1990 and are to be held to the plates with two 100mm flat headed nails at each end.

Lintels are to be Trifold and to comply with NZS 3604:1990. Where built up trimmer studs are used, one 100 x 50mm stud is to be run up past the trimmer to the top plate and the remaining 100 x 50 or 100 x 25 is to run up to the underside of the lintel, and blocked above.

Nogging (dwangs) shall be 50 x 50mm min spaced in rows at 1.350m centres, maximum, set out to accommodate the wall lining sheets and where required drilled or notched for ventilation. They are to be nailed with two 75mm nails at each end.

The wall frames are to be assembled, squared, braced and erected. The bottom plates are to be straightened and fastened down the corners are to be plumbed both ways using a plumb bob and line and the top plates are to be held straight with temporary bracing until the ceiling and roof framing and bracing has been completed.

Ceiling joists to be on edge and spiked to the wall plates with two 100mm nails at each end. Where practicable, the ceiling joints are to come alongside rafters and to be spiked thereto.

Ceiling joists spanning more than 2.0m are to be stiffened with ceiling runners well spiked at every crossing. See NZS 3604:1990 tables.

Ceiling nogging or strapping to be set out to accommodate the ceiling lining sheets and cornices.

5.9 BRACING

Bracing to be let in flush with the face of the wall frames and raked as nearly as practicable to 45 degrees and not more than 55 degrees, from horizontal max.

To be positioned as shown on the drawings and the bracing calculation sheet.

5.10 ROOF

Trusses shall be made by an approved manufacturer. Allow trusses to set on top plate or beam and fix with 2 wire dogs from truss chord to top of stud.

Supply and fix the necessary ridge boards, hip rafters, valley rafters, valley boards, underpurlins, roof struts, strutting beams and collar ties and braces are required to complete the roof framing and as detailed on the drawings.

Purlins to be spaced to accommodate the roof covering material and ridging and fastened to the rafters with on 100mm nail and one 75mm skew nail at every crossing.

Ribbon Board to be nailed to the outside of the wallframes.

Soffit bearers to be nailed securely to each rafter overhang.

5.11 FRAMING SCHEDULE

Sub-floor jack	100 x 75mm	Radiata No 1GBT or T
Studs	100 x 75mm	Radiata No 1 G T
Sub-floor bracing	100 x 100mm min	Radiata No 1 G BT or T
Bearers Wall Plates	100 x 50mm or 70 x 50mm	Radiata No 1 G BT or T
Floor Joists	150 x 50mm or as detailed	Radiata No 1 G BT or T (at 400-600mm crs)

Herringbone Strutting	40x40mm	Radiata No 2 G BT (at 2.5m crs.)
Solid Bridging	joist depth x50	Radiata No 2 G BT (at 2.5 crs.)
	100x40mm	F5 Laser
Top and Bottom Plates	75x40mm	F5 Laser
	100x40mm	F5 Laser
		Douglas fir y grade
Studs	100x 40mm	F5 Laser (at 600 crs max)
Trimmer Studs	100x40mm	F5 Laser
Lintels Nogging (Dwangs)	75x40mm	F5 Laser
		(at two rows to walls)
	galv.metal angle	
	100x25mm	Radiata Merch BT (checked in flush)
Bracing	100x50mm	Radiata No 1 G BT (At 900 crs max)
Ceiling Joists	100x25mm	Radiata Merch BT
	100x 50mm	Radiata No 1 G BT (Diagonal)
Ceiling Bracing	75x50mm	Radiata No 2 G BT (At 1.8m crs max)
Ceiling Nogging	100x50mm	Radiata no 1 G BT (At 400-900mm crs)
Rafters	or as detailed	or douglas fir

Note Abbreviations used **BT**-Boric Treated **T** -H3 H4 H5 Pressure Treated

5.12 TRUSSES

As per manufacturers or Engineers design at max 900mm centres for a heavy roof or at max 1200mm centres for a light roof

5.13 LINTELS

LINTEL SIZE

OPENING WIDTH	LIGHT ROOF	HEAVY ROOF
Up to 1.25m	125x100mm	125x100mm
1.25 to 1.55m	150x100mm	150x100mm
1.55 to 2.15m	150x100mm	200x100mm
2.15 to 2.45	150x100mm	225x100mm
2.45 to 2.75m	200x100mm	250x100mm
2.75 to 3.05m	200x100mm	300x100mm
3.05 to 3.65m	250x100mm	

or use trifold metal lintel equivalent as per manufacturers specifications

5.14 EXTERIOR FINISH

All exterior joinery, exterior timber linings or trim and all end grain joints are to be given a coat of primer or stain prior to fixing.

Behind all wall cladding fit a breather type building paper lapped 100mm and carried up to top plate level.

Grooved fascia and barge boards are to be fixed to level and straight lines, mitred where joined and fastened with galvanised nails.

Wall areas are to be covered with exterior lining as shown on the drawings.

Soffits, verges and porch ceilings to be lined with flat fibre-cement sheets with plastic jointer moulds, or

Build in the various exterior joinery frame Flashings and Scribes etc.

Provide and fix a single piece Hardiflex sheet door for foundation access door and frame positioned as directed (for timber floors).

Fascia Ex 200 x 25mm or

Barge Boards 150 x 25mm Radiata Finger jointed and grooved
200 x 40mm for hardiflex
150 x 40mm or

Coloursteel preform metal Fascia and barge with concealed spouting behind.

Cladding Ex 200 x 25 Radiata finger jointed Rusticated preprimed weatherboards or

Ex 200 x 25 Cedar as above or

Hardiplanks, Flat hardiflex or

Soffit 4.5 mm Flat hardiflex or

Ex 75 x 25mm douglas fir

6.0 ALUMINIUM AND TIMBER JOINERY

6.1 GENERAL CONDITIONS

Refer to Preliminary and General which also applies to this section of work

6.2 RELATED DOCUMENTS

- * NZS 1900
- * NZS 3503:1978 Anodic oxide coatings on wrought aluminium for external architectural applications
- * NZS 3504:1979 Specification for aluminium windows
- * NZS 4203:1984 Code of practice for general structural design
- * NZS 4211:1985 Performance of windows
- * NZS 4223:1985 Code of practice for glazing in buildings

6.3 TIMBER JOINERY

Is to be Rimu, Cedar, Redwood or finger jointed Pine H3 (Dry seasoned)

6.4 ALUMINIUM JOINERY

Aluminium joinery should be stored on edge and protected from damage. Installed as per manufacturers specifications.

6.5 INTERNAL DOORS

Door jamb liners are to be grooved for gibboard and fixed plumb and true with wedges and well nailed with 75mm jolt head nails. Planted stops to be glued and nailed to head and stiles. Butt hinges loose pin 75mm 1 1/2 pairs to each door. Sliding doors to be hung plumb and true and fitted with a timber pelmet. All door sizes as per sizes shown on plan.

6.6 INTERNAL STAIRCASE

Stringers rimu or pine and customwood treads. Balustrades and hand rails shall be rimu or pine as selected by the owner

7.0 PAINTING

7.1 GENERAL CONDITIONS:

Refer to Preliminary and General which also applies to this section of work

7.2 RELATED DOCUMENTS

All materials and workmanship shall conform to the following standards:

- * NZS 7703:1985 The Paintings of Buildings
- * NZS 5807:1980 Industrial Identification by Colour Wording or other coding.
- * BS 5252:1978 Standard Colour Range.

7.4 WORKMANSHIP

All workmanship to be in accordance with sound trade practice and by a competent tradesman. Work to be finished to the contractors specification. Paint shall not be applied to damp surfaces and external painting shall be done only in suitable weather when there is not excessive dust present. All imperfections shall be removed with glass paper before applying each coat. All surfaces to be suitably prepared. All permanently covered surfaces shall be primed before erection. All work shall be free from brush strokes.

7.5 EXTENT OF WORK

The work as specified to be finished in the particular material or manner, and shall mean the provision of all preparatory work necessary to ensure proper finish, whether expressly mentioned or not. Leave everything clean at completion, with all debris and paint spots removed. Clean all grass.

7.6 RELATION TO OTHER TRADES

Inspect the work of other trades upon which material is to be applied and report any defect to the general contractor. Work shall not proceed until a satisfactory surface has been obtained. Failure to examine and report will be construed as acceptance that the preparatory work is satisfactory.

7.7 MATERIALS

Shall be the best of their several kinds and of approved brands and applied in strict accordance with the manufacturers instructions.

7.8 PREPARATION OF SURFACES

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

7.9 SPRAY PAINTING

Spray painting by any method other than by means of "airless" spraying is prohibited.

Particular attention is drawn to the possible damage from airborne spray paint to adjacent surfaces, vehicles or other property in the vicinity of, for which the Contractor will be held liable.

7.10 CEMENT SURFACES PREPARATION OF WORK

Clean entire surface thoroughly to remove all dirt, dust, fins, mortar splashes, loose and flaking paint. Check all surfaces subject to painting for mould, mildew efflorescence or moss and treat with an anti-efflorescent solution if necessary. Brush down to remove dust and loose material. Scrub down with detergent and water to remove any dirt, grease and other surface contamination. Rinse with clean water to remove all detergent. Allow to dry.

7.11 GALVANISED IRON: ROOFING, FLASHING, GUTTERING, DOWNPIPES

Clean down well. Carefully scrape off any loose and defective material to a firm edge/firm paint base, free from flaking paint, dust and dirt.

Prime with Galvanised Iron Primer. Apply two (2) coats 100% Acrylic Roof Paint at a rate of 12 to 12.5 m2 per litre.

7.12 TIMBER JOINERY AND WINDOWS

Clean and polish glass and apply one (1) coat with Wood Primer and allow to dry a minimum of 24 hours.

Apply one (1) coat All Purpose Undercoat. Apply one (1) coat High Gloss Enamel.

7.13 PLASTER AND GIB BOARD

Remove all efflorescence, plaster or mortar splashes. Stop all holes, cracks etc, allow to dry, lightly sand and dust off. Apply one(1) coat Pigmented Sealer and two (2) coats Acrylic.

8.0 PLUMBING

8.1 GENERAL CONDITIONS

Refer to Preliminary and General which also applies to this section of work.

All plumbing to be installed by a registered plumber and approved by the local authority.

All work shall be completed in accordance with the specifications, drawings and Health Department regulations. Water pipes shall be set out in straight runs of even gradient, where possible avoiding all places where air locks are likely to occur. Secure copper pipes in position with straps. All piping including water waste and vents shall be concealed.

8.2 RELATED DOCUMENTS

1 materials and workmanship shall conform to the following standards:

2 NZSS 671

8.2 FLASHING

Flash all openings through roof with appropriate materials and make the building water-tight. Any part or parts omitted from this specification, and necessary to make the building water-tight shall be taken as mentioned.

8.3 SPOUTING AND DOWNPIPES

Taylor fascia and concealed gutter system or refer to the drawings for the type of spouting and fascia. Downpipes to be P.V.C. or galvanised 0.45 gauge steel.

8.4 REDUCING WATER VALVE

A Pressure Reducing Valve is fitted as standard for high water pressure. Where pressure is insufficient, the local authority may require a holding tank to be installed by the plumber and charged as an extra

8.5 COLD WATER SUPPLY

Run a 20mm P.V.C. pipe from boundary to the building. Run 12mm copper pipes in house.

8.6 HOT WATER SUPPLY

Install an approved Hot Water Cylinder complete with element and thermostat in a removable position. Run 19mm copper pipe to bath and 12mm to other fixtures requiring hot water. Lag all pipes in walls and floors.

8.7 WASTES

Polypropylene or P.V.C. wastes and traps to be 40mm to bath, shower, tubs and sink. 30mm to basins. Discharge waste in gully traps.

8.8 W.C.

Install as standard, white earthenware pan, plastic system and seat. Install T,V. or back vent as required.

9.0 EXCAVATION AND LANDSCAPING

9.1 SCOPE OF EXCAVATION BY BUILDER

The builder will not carry out any work outside the building line of the house, as drawn in the site plan. Any excavation that takes place will be solely concerned with the foundations of the house. Any soil from this foundation excavation will be stockpiled on the section. As footings are dug the soil from them will be deposited just outside the building line. There is no allowance for the levelling of this material.

9.2 FOUNDATION HEIGHTS

The height of the building relative to ground levels will be determined by the builder when initial excavation takes place, and any subsequent extra costs needed for foundations due to sloping ground etc will be an extra. The owner will be liable for this extra cost, even if a variation order has not been signed, and hereby accepts the builders judgement to place the building as he sees fit. However the owner may be on site to determine where the building is to be placed, in which case he accepts full responsibility for the final house situation. In this case he will immediately receive a variation order if there is to be any extra costs, and this will be signed before construction continues. This cost will be invoiced and paid for at the floor down payment.

9.3 FURTHER EXCAVATION

No further excavation will be carried out, regardless of whether the state of the section at this point would be seen to be in breach of by-laws or building practices, or whether it is apparent that further earthworks will be required. It is the owners liability to ensure that the state of the section does not remain in this condition as it is part of his overall responsibility to contour and landscape the section.

9.4 LANDSCAPING OF SECTION

The builder does not undertake to carry out any landscaping work. The owner may request a list of landscape contractors from the builder. He is free to use any of these contractors or to find others. It is up to the owner to obtain quotes and make judgement on quality of work, and to actually employ his landscaper. The builder accepts no responsibility for any work carried out by these contractors, and does not guarantee the standard of workmanship of any of those whose names he has forwarded to the owner. It is up to the owner to obtain his own guarantee from the contractor that he has employed.

Landscaping work includes the following:

Garden shed	Fences and painting of them
Groundworks and excavations outside the building line	
Paths	Driveways

10.0 DRAINLAYING

10.1 GENERAL CONDITIONS

Refer to Preliminary and General which also applies to this section of work.

The drainage will be carried out in accordance with Public Health requirements.

10.2 RELATED DOCUMENTS

All Materials and workmanship shall conform to the following standards.

* NZSS 365

10.3 TRENCHES

Dig true to line and grade to a uniform width at bottom three times the diameter of the pipe with regular gradients. Cut bottoms of the trenches for collars, backfill and compact trenches at completion.

10.4 LAYING

Provide and lay in P.V.C. piping (of diameter as per regulations), complete with the necessary junction bends, inspection pipes, angles, gully traps, grease traps and chambers, buchan traps, etc, and all vents and fittings to ensure the system meets the Health inspectors requirements.

10.5 SEPTIC TANK

Construct septic tank to acceptable position and size as per regulations.

10.6 STORMWATER

Construct 100mm stormwater drains as shown on the drawings, or provide soakholes if this is acceptable to the local drainage inspector.

11.0 ELECTRICAL

11.1 SCOPE OF WORK

The work includes installation and provision of all electrical work as outlined in section 2 of the clients specification. This includes providing Meter board, and paying all fees to the local electricity supply authority. All work should comply with the N.Z. electrical wiring regulations, local power board requirements, fire under writers and current government legislation.

BUILDING STANDARDS

NZS 4229 : 1986 Code of practice for CONCRETE MASONRY BUILDINGS

NZS 1900

NZS 3101:1982 C of p for the design of concrete structures

NZS 3109:1980 Concrete construction

NZS 3112:1980 Methods of test for concrete

NZS 3402:1973 Hot rolled steel bars for concrete reinforcement

NZS 3601:1973 Metric dimensions for timber

NZS 3603:1981 C of p for timber design

NZS 4203:1984 C of p for general structural design and design loading

NZS 4210:1981 C of p for masonry buildings: materials and workmanship

NZS 4431:1978 C of p for earth fill for residential development

NZS 3604 : 1990 Code of practice for LIGHT TIMBER FRAME BUILDINGS

NZS 2295:1969 Building papers (breather types)

NZS 3403:1978 Hot dipped galv corrugated steel sheet for building

NZS 3441:1978 Hot dipped zinc-coated steel coil and cut lengths

NZS 3602:1975 C of p for specifying timber and wood based products

NZS 3605:1977 Load bearing round timber piles and poles

NZS 3614:1971 The manufacture of construction plywood

NZS 3617:1979 Profiles of weatherboards, fascia boards, and flooring

NZS 3631:1978 Classification and grading of New Zealand timbers

NZS 4206:1973 Concrete interlocking roofing tiles

NZS 4211:1976 Performance of windows

NZS 4217:1980 Pressed metal tile roofs

NZS 4251:1974 C of p for solid plastering

NZS 5902:1976 Building drawing practice

and NZS 1900, 3109, 3601, 3603, 4203, 4210, 4431

JOINERY

NZS 3503:1978 Anodic oxide coatings on wrought aluminium for external architectural applications

NZS 3504:1979 Spec for aluminium windows

NZS 4211:1976 Spec for Performance of windows

NZS 4223:1985 C of p for glazing in buildings

and NZS 1900, 4203

PAINTING

NZS 5807:1980 Industrial I.D. by colour wording or other coding

NZS 7703:1985 The painting of buildings

BS 5252:1978 Standard colour range

NZS 2086:1967 Concrete

NZS 3104:1987 Concrete production

NZS 3121:1980 Concrete

NZS 3122:1974 Concrete

NZS 4230:1985 Bricks

TILE ROOF

NZS 2299:1969 Breather type building papers

and NZS 4206, 3601, 3602, 3604, 4203

KITCHEN SPECIFICATION

CLIENT Mr. & Mrs.

DATE

ADDRESS

KITCHEN UNITS white textured low pressure laminate

APPLIANCE CENTRE

BREAKFAST BAR

STRAIGHT CROCKERY CUPBOARD

ANGLED CROCKERY CUPBOARD

GLASS TYPE TO CROCKERY CUPBOARD

PANTRY

FRIDGE OVERCUPBOARD

DRAWERS

MICROWAVE UNIT

UNDER BENCH OVEN UNIT

WALL OVEN UNIT

DISHWASHER SPACE

STANDARD UNDER BENCH UNITS

OPEN SHELF UNIT

RANGEHOOD UNIT

DOORS

TYPE

HANDLES

TOP

TYPE

EDGES

UPSTAND

TYPE OF SINKBENCH

STAINLESS STEEL INSERT

OTHER TYPE INSERT

NUMBER OF BOWLS

TILE INSERT

KITCHEN ACCESSORIES

POT DRAWERS

RUBBISH BIN

TEA TOWEL RAIL

COLANDER

CHOPPING BOARD

CUTLERY TRAY INSERT TO DRAWERS

OTHER JOINERY ITEMS

COOKBOOK UNIT

WINE RACK

EXTRA CUPBOARD

TRAY DIVISION

ELECTRICAL APPLIANCES TO BE SUPPLIED

STANDARD COOKER

DISHWASHER

OVEN

COOKTOP

RANGE HOOD

WASTE DISPOSAL

PLUMBING SPECIFICATION

CLIENT

DATE

ADDRESS

FITTINGS TO INSTALL MAIN BATHROOM

W.C PAN

W.C CISTERN

SHOWER BASE

SHOWER CUBICLE AND BASE

BATH

VANITY

TOILET HAND BASIN

HEAT LAMP

BATHROOM HEATER

HEATED TOWEL RAIL

ENSUITE BATHROOM

W.C.PAN

W.C.CISTERN

SHOWER BASE

SHOWER CUBICLE AND BASE

BATH

VANITY

HEAT LAMP

BATHROOM HEATER

HEATED TOWEL RAIL

TOILET UPSTAIRS

W.C.PAN

W.C.CISTERN

VANITY

TOILET DOWNSTAIRS

W.C.PAN

W.C.CISTERN

VANITY

KITCHEN AND LAUNDRY ITEMS TO INSTALL

DISHWASHER

WASTE DISPOSAL

SINK TYPE INSTALL

LAUNDRY TUB

TAPS AND MIXERS

MAIN B/ROOM VANITY

MAIN B/ROOM BATH

MAIN B/ROOM SHOWER MIXER AND FACEPLATE

MAIN B/ROOM SHOWER ROSE

TOILET HAND BASIN

DOWNSTAIRS TOILET VANITY

SINK BENCH

TUB TAPS

WASHING MACHINE

ENSUITE VANITY

ENSUITE SHOWER MIXER AND FACE PLATE

ENSUITE SHOWER ROSE

ENSUITE BATH

ALL PLUGS AND WASTE

DOMES FOR TAPS

GENERAL PLUMBING

HOT WATER PIPES ALL COPPER TUBE / COLD WATER PIPES ALL COPPER TUBE

SOIL WASTE VENT PIPE WORK

P.V.C

PIPE ROOF PENETRATION FLASHINGS

HOT WATER CYLINDER

GAS HOT WATER CYLINDER

SOAP DISPENSER

EXTERIOR TAPS

DOWN PIPES

DRAIN LAYING

FIRE TO INSTALL

GAS WATER HEATING

SPECIFICATION

CLIENT	Mr. Mrs.	DATE
ADDRESS		

EXTERIOR

PRIMARY CLADDING

OTHER CLADDING

ROOF

FASCIA

GARAGE DOOR

GARAGE DOOR OPENER

DECK

HOUSE EXCAVATION

INTERIOR

PLASTER CEILINGS

PLASTER CORNICE

GIBBOARD CEILINGS

GIBBOARD WALLS

GIBCOVE

SCOTIA mdf no 24 40mm bevelled to cupboards

STOPPING LEVEL level four for wallpaper finish

SKIRTING mdf no 2 60mm bevelled ,pine to wet areas

INSULATION WALLS CEILINGS

STAIR

FLOOR

SANDING OF FLOORS

SHOWER LINING

BATHROOM WALLS

EXTERIOR JOINERY

ALUMINIUM JOINERY powder coated aluminium

GROOVED LINER

FRONT ENTRY DOOR

BACK ENTRY DOOR

LAUNDRY DOOR

OBSCURE GLASS TYPE

SECURITY SCREEN DOOR

INTERIOR JOINERY

DOORS

SLIDING DOORS

SHOWER DOOR

SHOWER SIDE PANEL

JOINERY SPECIAL

PERMITS

COUNCIL PERMIT FEES INCLUDED IN PRICE

POWER CONNECTION INCLUDED IN PRICE

ENGINEERING FEES FOR HOUSE

PLANS PROVIDED BY FENNS DESIGN yes

GROUND

CONCRETE WORK CONCRETE TERRACE

PAVING RETAINING WALLS FENCES

BRICK WALLS STEPS

TILES TO KITCHEN, BATHROOM ENTRANCE

INTERIOR DECORATION

CARPET

VINYL

CURTAINS

WOOD BURNER WITH WET BACK

GAS HEATER WITH FLUE

PAINTING SPECIFICATION

CLIENT Mr. & Mrs. DATE

ADDRESS

INTERIOR ROOMS code: P stands for paint W stands for wallpaper n for nil
ceilings walls cupboards

KITCHEN

DINING

LOUNGE

FAMILY-RUMPUS

ENTRY

BED ONE

BED TWO

BED THREE

BED FOUR

BED FIVE

BATHROOM

ENSUITE

W.C

STAIRWELL

UTILITY ROOM /SEWING

WALK IN ROBE

GARAGE /STORE ROOM

LAUNRY

TYPE OF PAINT USED SERVICE ROOM CEILINGS ---Resene paints

TYPE OF PAINT FOR EXTERIOR ---acrylic gloss

TYPE OF PAINT USED INTERIOR WALLS---acrylic low sheen

TYPE OF PAINT USED ON OTHER CEILINGS ---flat enamel

INTERIOR FITTINGS

DOOR

DOOR FRAMES

SPECIAL DOORS

WINDOW FRAMES

STAIRS HANDRAIL

SKIRTING

SCOTIA

GIBCOVE

KITCHEN UNITS

WALLPAPER ALLOWANCE

TOP FORTY RANGE

EXTERIOR

CLADDING

GARAGE DOOR

GARAGE FLOOR

BASE

FRONT ENTRY DOOR

DECK

DECK HANDRAIL

STEPS

SOFFITS

WINDOW HEADS

ROOF

FENCE EXISTING

NEW FENCE

PERGOLA/POST

ELECTRICAL SPECIFICATION		
CLIENT	Mr. & Mrs.	DATE
ADDRESS		
WIRING FOR LIGHTS ONLY		
STANDARD BATTEN HOLDERS		
RECESSED		
SPOTS		
PENDANTS		
FLUORESCENT		
SECURITY INTERIOR		
WALL LIGHTS		
EXTERIOR SENSOR SPOT		
EXTERIOR STANDARD		
AUTO PANTRY		
TWO WAY		
DIMMERS		
SUPPLY OF LIGHT SHADES		
RECESSED		
SPOTS		
EYEBALL		
FLUORESCENT		
EXTERIOR SPOT SENSOR		
EXTERIOR STANDARD		
PENDANT		
OTHER SHADES		
WIRING AND SUPPLY OF POINTS		
SINGLE POWER POINTS		
DOUBLE POINTS		
SHAVER E.L.C.B TYPE		
DISHWASHER		
OVEN AND HOB		
RANGEHOOD/DOWNDRAFT		
MICROWAVE		
WASTE DISPOSAL		
STANDARD STOVE		
GARAGE DOOR OPENER		
BATHROOM HEATER		
HEATED TOWEL RAIL		
SPA BATH		
HEATERS		
CEILING FAN LIGHT		
T.V.POINT		
PHONE JACK		
DOORBELL		
STANDARD ELECTRICAL ITEMS SUPPLIED BY THE ELECTRICIAN		
WATERHEATING, THERMOSTAT AND VALVE, INTERNAL FUSE BOX		
TELEPHONE, POWER CABLE AND METER BOX SUPPLY-		
ELECTRICAL APPLIANCES TO BE SUPPLIED		
HEATED MIRROR	CEILING FAN LIGHT	
HEATED TOWEL RAIL	BATHROOM HEATER	
T.V AERIAL		