

Application for BUILDING PERMIT

(See Building By Law requirements on back of this form)

TAURANGA COUNTY COUNCIL

PRIVATE BAG,
TAURANGA.

To the COUNTY ENGINEER,
I hereby apply for a Building Permit to

ENTERED

No DWELLING No: 3359

TYPE

House

ERECT, ALTER, REPAIR, ADD TO, RE-ERECT or REMOVE
House, Flats, Commercial Units, Shed, Garage, etc.

At LOCATION

Beach Rd Katikati

For OWNER

Name

I Tangrey

Phone No

FEES PAID BY:

Postal Address

Fairview Rd Katikati

By BUILDER

Name

C & B Sutton Ltd

Phone No

Postal Address

Box 85 Katikati

SUBMIT IN SUPPORT OF THIS APPLICATION

Step 1.

1 SITE PLAN. plus 2 PLANS. plus 2 SPECIFICATIONS.

Siting of Building on Section
Distance from All Boundaries

Framing and Footings
Reinforcing

Materials, Size, Spacing

Step 2.

LOT No.

1

DP(s)

24390

VALUATION No.

6812-759-4

SECTION No.

Allot No.

Block No.

Survey District

Area

12 ha

Riding

LEGAL DESCRIPTION

See By Law 2.5.2. on back of this form.

Step 3.

~~I DO REQUIRE VEHICLE CROSSING~~
~~I DO REQUIRE WATER CONNECTED~~
(DELETE IF NOT APPLICABLE)

AREA OF BUILDING

335.64

Sq.m.

Exterior measurement

Step 4.

ESTIMATED VALUE

at the discretion of the Engineer

BUILDING

\$

88,000-00

PLUMBING

\$

2,000-00

DRAINAGE

\$

500-00

TOTAL

\$

85,500-00

Levy

FEES

\$175. —

\$56. —

\$28. —

\$86. —

Permit or Ref. No.

5097443/4458

Water

Crossing

Kerb Deposit

\$345. —

REC. No.

3828-30

Date

Step 5.

USE OF BUILDING (Dwelling, Rent, Spec. etc).

Dwelling

Step 6.

PLUMBING AND DRAINAGE ON
SEPARATE FORM

PLEASE SIGN:

Applicants Signature

[Signature]
18 May 81

Date of Application

BUILDING INSPECTOR:

Plans and Specifications Approved.

[Signature]

Date 22/5/81

TOWN PLANNING OFFICER:

Complies with Town Planning Scheme.

[Signature]

Date 22/5/81

Extracts from:—

**N.Z. STANDARD MODEL BUILDING BY LAW NZSS 1900
CHAPTER TWO — BUILDING PERMITS**

(Adopted by Tauranga County Council as County By Law, June 6th, 1968)

“ERECTION OF A BUILDING” includes the re-erection of a building and the reconditioning of a building and the making of any alteration, repair, or addition to any building heretofore or hereafter erected and the removal, either in whole or in part, of a building from any place within or without the Council district to any place within such district or from one position to another position on the same lot of land, and **“ERECT”** has a corresponding meaning. Provided that maintenance work other than structural shall not be deemed a repair.

BUILDING PERMIT REQUIRED

2.1.1 No person shall erect or commence to erect any building without first obtaining a building permit from the Engineer.

2.1.2 No person shall cause or permit the commencement of the erection of or the erection of any building if a building permit in that behalf has not first been obtained from the Engineer.

APPLICATION FOR PERMIT

2.3.1 Any person desiring to obtain a building permit shall make application at the office of the Engineer on the form provided for that purpose. The applicant or person acting on his behalf shall complete the form by filling in the particulars and signing the form.

CONTENTS OF APPLICATION

2.4.1 Every application shall set out:

- (i) The legal description and particulars of the site.
- (ii) The full name and address of the applicant, and of the person for whom the work is to be done, the locality of the proposed work, and the estimated value of the work.

2.4.2 Where not clearly shown or stated in the drawings and specifications required under clause 2.5, the following information shall be given as a signed statement on, or attached to the application form.

- (i) The proposed use or occupancy of every part of the building.

PLANS AND SPECIFICATIONS

2.5.1 Together with every application there shall be submitted to the Engineer, in duplicate, detailed plans, elevations, cross-sections and specifications, which shall together furnish complete details of design and qualities and descriptions of all materials of construction and workmanship, and which shall be of sufficient clarity to show to the satisfaction of the Engineer the exact nature and character of the proposed undertaking and the provision made for full compliance with the requirements of this bylaw and any other relevant bylaw for the time being in force.

- (i) For every building, except as set out in clause 2.6, with a framework or bearing-wall system wholly or partly subject to structural design under this bylaw, and in every other case where the Engineer may reasonably require it, there shall also be submitted to the Engineer such stress diagrams, computations, and other data as are necessary to show that the design complies with all the requirements of this bylaw and any other relevant bylaw in force:
- (ii) Computations shall be preceded by a brief report describing the bracing system and integration of the structure and the manner in which the designer expects it to function with a clear statement of all assumptions such as materials, stresses appropriate to the standard of supervision, and live, wind, and seismic loadings. Computations shall include a summation of dead, live, seismic, and other required loadings, floor by floor, and calculations of bents (or the equivalent) in each direction, and of any special features:
- (iii) Drawings of reinforced concrete work shall show clearly the dimensions of all members and the size, length, shape, position, and overlap of all reinforcement:
- (iv) Drawings of structural steelwork shall be complete working drawings showing in figured dimensions the exact length and position of each part in such detail that the steel may be supplied and the work fabricated from such drawings:
- (v) Detailed drawings shall be in such form and on such scale as the Engineer may consider necessary to ensure certainty of interpretation.
- (vi) All drawings other than detailed drawings shall be accurately, clearly, and indelibly executed to scale and shall be drawn in ink upon drawing paper or tracing cloth, or printed upon cloth or approved paper. Except in the case of detailed drawings all drawings shall be to scale of $\frac{1}{8}$ in. or $\frac{1}{4}$ in. to the foot.

2.5.2 The drawings shall be accompanied by a locality plan. This locality plan shall be drawn to scale and shall show the site of the building, together, with the land, streets, private streets, public places, private ways, public reserves and buildings immediately surrounding the site, and shall be sufficient to enable the Engineer to locate the precise situation of the site not only relative to the boundaries of its own land, but also relative to any buildings erected upon immediately adjoining lands.

2.5.5 In addition to the structural details, etc. required, the plans and sections shall show as regards every floor of the proposed building, the dimensions of rooms, the situation of flues, fireplaces, stoves, and chimneys, and the position of all the several parts of the building and every water closet, fuel store, washhouse, and all other appurtenances. The plan and section shall further show the proposed means of water supply, and the level of the lowest floor of the intended building and of the yard and ground belonging thereto, and also the means whereby it is proposed to deal with all stormwater and drainage.

2.5.6 When lodged, the application and drawings and other documents accompanying the application shall become the absolute property of the Council.

NOTE—Specifications should cover types, grading, spacing (centres) and sizes of materials. It is important that the position of existing foul drainage (especially gully traps, terminal vent, etc.) should be shown on the plans.

PERMIT MAY BE WITHHELD (without further notice) until Applicant fully complies with the above requirements.

Application for PLUMBING – DRAINAGE PERMIT

To the COUNTY ENGINEER,
TAURANGA COUNTY COUNCIL,
Private Bag,
TAURANGA.

I hereby apply for a permit to carry out Sanitary Plumbing and/or Drainage Work described below:—

✓ tick

OWNERS NAME <i>I. Tangney</i>	Phone No.
Postal Address <i>Fairview Rd Katikati</i>	
PLUMBER <i>R. Hava</i>	Phone No.
Postal Address	
DRAINLAYER <i>Keyne Drainage Contractors</i>	Phone No.
Postal Address	

PERMIT FEES PAYABLE BY

2 JOB LOCATION

Address *Beach Rd Katikati*

Lot No. *1* DP(s) No. *24390*

Val. No. (Rate Demand) *6812-759-4*

3 DESCRIPTION OF WORK

✓ tick

☒
☐

Sanitary Plumbing and/or Drainage of new dwelling

Sanitary Plumbing and/or Drainage for alterations

or (describe)

OFFICE USE ONLY

4 ESTIMATED COST of

PLUMBING ~~\$ 4000~~ 2000
DRAINAGE ~~\$ 1500~~ - 500

FEES \$ 56 \$ 28 \$ 84	PERMIT Nos. <i>5097443</i> <i>14458</i> <i>R. 3828-30</i> <i>10-6-81</i>
APPLICATION APPROVED Inspector Date	WORK INSPECTED APPROVED Inspector Date

Applicants Signature *[Signature]*

Date *18 May 81*

D. Kale Print

SPECIFICATION FOR

PROPOSED NEW RESIDENCE

FOR

MR & MRS I TANGNEY

KATIKATI

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PRELIMINARY & GENERAL

The contractor and his sub-contractors and all tradesmen employed on this contract are deemed to be familiar with all normal standards of workmanship and regulations (where applicable) and shall apply them to all phases of the work.

The minimum standard of quality for materials and workmanship required to fulfill this contract shall be set out in the appropriate clauses of all current and relevant specifications, codes of practice and all related documents listed therein. All these shall be taken together to establish the minimum acceptable standard for the construction and completion of the work forming this contract.

The detail drawings have been checked for compliance in design with all the documents mentioned above and no variation to the method of construction shown will be permitted except with the express written approval of the local authority.

For the information of the contractor, a list of all the relevant regulations and Standard Association documents as well as those issued by other authorities is set out in a schedule at the end of this specification. These shall be deemed to be part of this specification where applicable. It should be noted that where structural specifications apply, the details show the interpretation of the relevant clauses and the contractor is not expected to carry out the necessary calculations and structural design work since this has already been incorporated in the details as designed.

TRADE NAMES AND APPROVALS

Where any article or material is referred to by a trade name, this shall be deemed to mean the type of article or material so mentioned or any other type approved as equal thereto in price, quality, finish and durability and equally serviceable for the purposes intended.

GROUND LEVEL IN RELATION TO FOUNDATIONS

Excavation: Allow as shown on drawings for excavation for foundations and steps. Any variation from dimensions shown on drawings will be adjusted in terms of the contract document.

Foundations: Tenders shall be based on foundation heights above ground level as shown on the plan of ancillary works. The dimensions shown are assumed to be accurate to within a tolerance of plus or minus 75mm.

PROVIDE AND FIX

The words 'provide' or 'fix' if used separately shall be deemed to mean 'provide and fix' unless expressly stated otherwise.

CLEARING UP

In respect of every unit, the contractor shall, at regular periods during construction, remove all broken tiles, wood, shaving and other combustible materials and general debris. At completion sweep all floors, clean all sanitary fittings, remove all paint and putty marks, replace all cracked and broken glass, and execute any other work either inside or outside or in the vicinity of the unit that in the opinion of the local authority is necessary or desirable to render it fit for immediate occupation.

TEMPORARY VEHICULAR CROSSINGS

The contractor shall supply, fix and maintain such temporary crossings as are necessary for the protection from damage of all kerbs, channels, footpaths, berms and public utility services over which vehicles in any way connected with or supply materials for the contract are required to or are likely to pass.

DAMAGE OR INJURY

The contractor shall take all precautions necessary to prevent accident, damage or injury to persons; shall pay any deposit required by the local authority or otherwise make good any damage to property; and at completion shall remove all temporary work.

EXCAVATION

CLEAR SITE AND REMOVE VEGETATION

Remove any vegetation and trees including roots situated in or adjacent to the ground to be covered by buildings or other works in the contract, including drives and paths, fences, drains and septic tanks and underground services.

No other trees are to be removed without instructions from the local authority.

Unless otherwise directed by the local authority, remove topsoil for an average depth of 230mm from such portions only of the site which are to be excavated and deposit in a heap where it will not be buried under subsoil that is subsequently excavated.

SETTING OUT

Set out all work in the contract as shown on the 'Site Plan'.

GENERAL EXCAVATIONS

Excavate for all site levelling, foundations, slabs, blocks, walls, paths, and drives, underground services, pipes etc., to the various depths, levels and grades required. Remove all soft spots and provide approved hardfill as necessary to low areas and consolidate well.

Sub-grade for paths shall be 75mm below finished ground level gradient. Drives 100mm below.

Where excavation reveals ground partly or wholly unsuitable for the type of foundation specified, contact the local authority immediately for further instructions.

All subsoil from excavations not required for backfilling shall be evenly spread or deposited on the site with falls as directed. Surplus spoil resulting from contractual operations shall be removed from the site only on written instructions.

Secure and maintain the sides of all excavations and keep clear of water and fallen material. In the event of excavations for foundations being taken out too deeply, such excess depth must be filled with concrete as specified for foundations at the contractors expense.

Notify the local authority when excavation is completed.

EXISTING DRAINS

Report any existing drains or other underground services encountered to the local authority.

ROCK

If rock is encountered during excavations, report same to the local authority which will instruct whether the rock is to remain or be removed. If to be removed, written consent from the local authority shall be obtained if the use of explosives is necessary, and the contractor shall comply with the requirements of regulations given under the Explosives Act 1957.

Any blasting of rock for any purpose whatsoever approved by the local authority shall be done prior to the pouring of foundations.

PUMPING

Perform all pumping, bailing, temporary drainage or any other work that may be necessary to keep excavations, site and buildings free from water during the building progress.

FILLING IN

Backfill and thoroughly consolidate around all footings and foundation walls immediately after stripping the boxing.

GROUND LEVEL IN RELATION TO FOUNDATIONS

Refer to the drawings for the minimum depths of excavations required for all foundations and other parts of the work in the contract.

CONCRETE WORK

CONCRETE STRENGTH

(a) Specified strength 17.5 MPa.

This strength concrete shall be used for the following parts of the work:

Floor slabs
Footings to all foundation walls
All foundation walls
All cells filled blockwork
All purposes not otherwise specified or detailed

(b) Specified strength 10.5 MPa.

This strength concrete shall be used for:

All footpaths which do not serve as vehicular access. Concrete surround to fencing posts where required by detail.

All concrete shall have an approved air entraining or workability agent in accordance with the manufacturers recommendations. Air entrainment shall be $4.5\% \pm 1.5\%$.

REINFORCEMENT

All reinforcement, unless shown otherwise, shall be of deformed bars but with a minimum yield stress of 275 MPa.

FOUNDATIONS

Where the ground is considered by the local authority to have an insufficient bearing capacity, the contractor will be instructed as to any variation in size of foundations or method of construction to be used.

Apart from the above provision, foundations shall conform to the detail drawings in all respects.

BLINDING CONCRETE

A 60mm layer of blinding concrete shall be provided under all wall footings.

DAMP PROOF COURSE (D.P.C.)

Provide as detailed on the drawings a D.P.C. layer of "Moistop" below all ground floor slabs, over blinding layer of fine sand.

All joints to be lapped 225mm and sealed with a 50mm wide pressure sensitive tape as recommended and approved by the manufacturer.

At all points of slab penetration by service pipes or reinforcement, form high sleeves of D.P.C. about pipe and securely seal with pressure sensitive tape.

Care must be taken throughout construction that the D.P.C. is not punctured by workmen, construction materials or equipment. Any defects shall be immediately made good.

PLACING OF CONCRETE

As per N.Z.S.S. 1900-Chapter 9.3(1964). No concrete shall be placed until the local authority has inspected and approved the excavations, placing of reinforcement, adjustment of the form work, and has recorded the levels. Concrete placed in violation of this provision will be liable to rejection and removal.

SURFACE FINISH

All exposed surface finish other than the top of floor slabs and insitu concrete at top of block walls shall have a uniform textured plastered finish.

All formwork for slab edges, blockouts and foundation walls for external walls shall be erected to give accurate lines and levels to the finished concrete.

FLOOR FINISH

Floor slabs shall be finished with a power compacting float to a smooth hard finish without excessive cement paste being worked to the surface.

The finished surface shall deviate not more than 5mm measured from a 3m straight edge used in any direction.

FASTENINGS AND OPENINGS

All bolts, fixings and built in steelwork shall be cast in concrete as shown on the drawings or specified, within the tolerance necessary for the particular fixture. No drilling or cutting of openings will be permitted except with the approval of the Engineer.

Where reinforcing rods foul bolts, sleeves or openings, the reinforcement shall be moved to one side or repositioned to the instructions of the Engineer.

Form recesses in floor slabs for external doors.

ELECTRICAL CONDUITS AND SERVICE PIPES

The contractor must ensure that all electrical conduits and service pipes are correctly positioned before casting concrete.

PLASTER FINISH TO CONCRETE FOUNDATION AT GROUND LEVEL

All concrete below blockwork and timber shall be given a sand-cement textured plastered finish.

CURING OF FLOOR SLABS

Curing shall be commenced immediately after final finishing and shall continue for a minimum of seven days.
This shall comprise one of the following:

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

BRICKLAYING

MATERIALS

Brick to exterior veneer walls and interior feature walls to be as shown on drawings.

All bricks delivered to site are to be free of discolouration, dirt dust or any other defect.

MORTAR

Mortar shall be composed of cement, lime and sand, all lime other than hydrated lime shall be slaked, mortar shall be mixed in the proportions listed below:

<u>Cement</u>	<u>Lime</u>	<u>Sand</u>
1	2/3 : 1	4 : 6

with a compressive strength of 8.6 MPa at 28 days.

WORKMANSHIP

The whole of the brickwork is to be built up by a skilled tradesman. All joints must be struck and joined with coloured mortar, angles and intersections shall be properly bonded not more than 9mm thick, the bricks shall be dry before use and all required openings and chases to be provided for as indicated on the plans. Joints are to be finished with concave joints to exterior raked back from face of brick an even 6mm.

WALL TIES

Veneer walls to be secured to wall framing with ties built in at 900mm horizontal centres and at angles, openings and end walls, and at 400mm centres vertically.

CARPENTRY

This section covers all timber framing, sarking, wall and ceiling linings, battens, board and batten sheathing, fascia boards, barge boards, scribes, fitting of all joinery, fitting of all finishing timber and attendance on all other trades.

TIMBER

All timber shall be graded to sizes specified or shown, free from defects which render it unfit for its purpose. All timber shall come from seasoned stocks or kiln dried, and stacked on strips for as long as possible before use. Framing timber shall have a maximum moisture content of 20%, and finishing timbers a maximum moisture content of 12%.

All interior timber shall be boric treated, and all exterior timber shall be Tanolith treated all in accordance with the 'Timber Preservation Authority' recommendations.

SCHEDULES OF TIMBERS

TABLE 1	
WALL (including braces and sarking to flat roofs and ceiling framing).	
TIMBER	GRADE
Rimu, Totara, Tanekaha, Heart Matai.	Building A
Matai, Kahikatea, Radiata Pine, Corsican Pine.	Building A or No. 1 Framing or equivalent. In Radiata Pine and Corsican Pine, No. 2 Framing is permitted for non-bearing positions. Preservative treatment is required in all cases.
N.Z. Grown Douglas Fir, Larch.	Equivalent to No. 1 Framing. Preservative treatment is not required.

TABLE 2	
WEATHERBOARDS, EXTERIOR SHEATHING AND FINISHING TIMBERS	
TIMBER	GRADE
Rimu, Tanekaha, Matai, Totara.	Dressing A Heart.
Rimu, Tanekaha, Matai, Totara, Kahikatea.	Dressing A treated.
Redwood, Western Red Cedar.	Imported equivalent to Dressing A Heart.
Radiata Pine	Selected out of treated Dressing grade free from spike knots and allowing only intergrown knots up to 38mm in diameter. Approved treated finger-jointed.

SCHEDULE OF TIMBERS (contd)

TABLE 3	
INTERIOR FINISH	
TIMBER	GRADE
Rimu, Totara, Tanekaha, Matai, Corsican Pine, Radiata Pine, Kahikatea.	Dressing A or equivalent, but see notes.
Notes:	
(i) Dressing A Matai treated may be used for internal finishing timbers and kitchen fittings.	
(ii) Window jamb linings shall be of DA Rimu, Tanekaha or finishing grade Radiata or Corsican Pine.	
(iii) Hollow-core doors, both cellular and rail types for interior use, shall have timber of Dressing A Rimu, or Radiata or Corsican Pine of Finishing grade. All timbers shall be treated.	
(iv) Approved finger-jointed timber of the grades specified above may be used for interior finishes which are to be painted.	

TABLE 4	
EXTERIOR JOINERY	
TIMBER	GRADE
Rimu, Tanekaha, Matai, Totara.	Dressing A Heart for frames, sills and sashes.
Rimu, Tanekaha, Matai, Totara, Kahikatea.	Dressing A treated for frames, sills and sashes.
Redwood, Western Red Cedar.	Clears; permitted for sashes only.
Radiata Pine.	Treated Clears for sashes and Mullions. For grading for jambs, sills and heads, see note (i) below. Approved treated finger-jointed.

FRAMING GENERAL

FRAMING

All materials to be best of their respective kinds, and grades, laid true to their various lines, and levels and constructed in a proper tradesmanlike manner, and in accordance with the best trade practice, and to comply with the local bylaws, and the drawings.

D.P.C.

Separate all concrete and block faces coming into contact with timber, with one layer of 3 ply Malthoid, with a minimum lap of 75mm.

CARPENTRY

FIRST FLOOR FRAMING

Frame for floor using floor joists of sizes shown on drawings, set out to suit flooring sheets, nailed with one 100mm nail, and one 75mm nail, at every crossing, and trimmed as required for stairwell openings etc.

Double the floor joists at each end of building, and under load bearing partitions.

Floor joists spanning more than 2.4m, are to be stiffened with herring bone strutting, at 2.4m maximum centres.

FLOORING

Supply and fix 20mm customfloor 600 high density floor boards, or as shown on drawings.

STAIRS

Closed Type: To be constructed with strings ex 250 x 50mm, treads ex 40mm thick and risers 25mm thick, treads and risers are to be housed 15mm glue wedged, and glue blocked to the strings. Nosing to be 30mm maximum. Supply ex 150 x 50 Rimu Handrails, and ex 100 x 100 rimu posts, or as detailed on drawings.

WALLFRAMING

Gauge all studs, plates etc., to a uniform width. Plates to be in long straight lengths. Bottom plates and wall plates to be butt jointed over continuous support, top plates to be half jointed, or butt jointed and fastened with 4N nail plates.

Space 100 x 50 studs at 600 centres maximum, with 100 x 50 noggings at 800 centres maximum. In addition provide and fix all noggings as required to accomodate the work of all trades.

Bowed studs to be straightened with saw cuts, wedges, and flitched with 100 x 25 strapping.

Lintels are to be checked 15mm minimum into solid trimmer studs. Where built up trimmer studs are used, one 100 x 50 stud is to be run up past the trimmer to the top plate, and the 100 x 50 remaining is to run up to the underside of the lintel.

TRIMMER STUDS

Single or top storey.

Openings up to	1.8m wide	100 x 50
	1.8 to 3.0m	100 x 75
	3.0 to 3.6m	100 x 100

Bottom of two storeys

Openings up to	0.9 wide	100 x 75
	0.9 to 1.8	100 x 75
	1.8 to 3.0	100 x 100
	3.0 to 3.6	100 x 100

Lintels in accordance with Table 5.

BUILDING PAPER

Building paper shall be approved breathing type saturated paper. Fix paper securely with laps, not less than 75mm at all joints, and along all edges, and at intermediate points.

BRACING

As per local authority requirements.

The wall frames are to be assembled, erected and braced. The bottom plates are to be straightened and fastened down, the corners are to be plumbed both ways, using a plump 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.

Table 5 (cont.)

LINTELS
1.5 kPa and 2.0 kPa floor loads

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

B Heavy roof

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

*The greater of roof dimension S span of joists, span of underpurlins, or span of strutting beam, as appropriate.

ROOF FRAMING

Frame for roof with rafters as per sizes and spacings shown on working drawings.

Rafters to be plumb cut to ridges, and hip rafters and birds mouthed to plates, and fastened with one 100mm, and one 75mm nail to the plates.

Fix the necessary ridge beams, hip beams, valley rafters, valley boards, underpurlins, struts, collar ties and cleats as required to complete the roof framing, and as detailed on the drawings.

ROOF BRACING

As per local authority requirements.

INSULATION

Insulation to be provided for in all external walls, and ceilings.

CEILINGS

Insulation shall be minimum of R14 fibreglass 'Batts' fitted as per manufacturers instructions.

WALLS

9.5mm gibfoil as specified under interior linings, or R11 Fibreglass 'Batts'. see working drawings.

EXTERNAL SHEATHING

Flat 'Hardiflex' sheets with hand textured 'Glamatex Esterno' finish and cover battens

To walls as detailed on drawings, fix 6 mm flat 'Hardiflex' asbestos cement sheet.

STORAGE

While awaiting use, the building boards shall be stacked flat on a level seating. When in the open the stacks shall be weighted on top and covered to protect from soiling. If sheets should become wet, they should be thoroughly dried before fixing.

FIXING

Drill and fix 7.5mm sheets with 55 x 2.8 gauge galvanised countersunk flat headed nail at 225mm centre, P.V.C. jointers to be omitted. Instead allow a 4mm gap between sheets and fill with 'Epoxycrete' or similar.

FINISH

Once sheets are fixed and adequately sealed at joints, apply 'Glamatex Esterno' hand finish as per manufacturers instructions. and fix ex 100 x 25 rough sawn tanalised pine battens fixed as directed. and as per elevations

EXTERIOR SHEATHING

UNDERSIDE OF ALL EAVES

These areas are to be lined with 4.5mm flat Hardiflex, with all sheets free of cracks or blemishes, fixed as specified by the manufacturers. All joints are to be covered with extruded aluminium beadings, and edges are to be set at least 6mm into groove of fascia board.

INTERIOR LININGS

Line walls as specified in schedule of internal materials and finishes.

Interior wall linings to be generally 9.5mm Gibraltar board, fixed with vertical joints with flat head clouts, double nailed to studs and nogging. All nails, and joints are to be stopped up with stopping compound, finished to a smooth and even surface.

Shower linings to be selected 'Hardiglaze' sheet, with plastic jointers fixed as directed by manufacturers.

Skirtings to be scribed to the floor and internal corners, and mitred at external angles, and to be of sizes shown on drawings and/or schedule.

Coat cupboard and wardrobes to be fitted with one shelf ex 300mm wide, fixed 1.750 above floor level, and with a 20mm diameter galvanised pipe hanger below.

Linen, hot water and other cupboards to be shelved with slatted shelves ex 100 x 25, 12mm apart as directed.

Form recess between the studs for the switchboards and meterbox to positions shown on floor plan. Recess to be lined with fire resistant material and trimmed around as required.

Fix the sundry internal finishing mouldings as required. All internal finishing timbers shall be sanded to remove machine marks and on completion, shall be free from all hammer marks, splits or other defects.

FITTINGS

Construct the various cupboard and bench fittings as shown on the drawings to the kitchen and bathroom, all fittings to be of standard joinery construction. Shelves, cupboards and drawers to be as directed by the owner.

Inside of drawers and cupboards to be of white 'Beauty Board' of similar.

Formica and/or tiled bench tops to be of colour, and pattern selected by owner.

Formica tops are to be properly glued down.

JOINERY

WORKMANSHIP

Workmanship shall be to the best trade practice. Exterior timber joinery shall have meeting faces, and joints primed during assembly and shall be primed on all faces before installation. All timber shall be seasoned to suit the end use of the timber concerned, or as specified. Joinery shall at all times be protected from the weather.

EXTERNAL WINDOWS, DOORS AND FRAMES

All external windows and doors to be in timber joinery, in accordance with the drawings, and profiles to be as per standard metric timber joinery profiles.

All frames and sashes to be out of D. A. Heart Rimu, Totara or Matai jambs.

INTERNAL DOORS AND FRAMES

Internal door frames, shall be out of ex 150 x 40 and grooved to take linings.

Doors generally to be of sizes as shown on drawings, to be of selected flush panel solid core doors, and as shown on drawings.

Hang all interior doors on 1½ pairs of 75mm wide leaf butt hinges with loose pins and fix selected mortice latchsets.

ROOFING

CONCRETE TILES

Supply and fix selected concrete tiles, complete with matching ridge tiles, hip tiles, and barge tiles, as shown on drawings.

Tiles shall be fixed strictly to manufacturers specifications, and as shown on the drawings to provide a weatherproof finish.

Fix batten firmly over approved trusses or rafters over ragfelt underlay to roofs between $12\frac{1}{2}$ and $17\frac{1}{2}$ only.

FIXING OF TILES

Fix tiles by nailing with an approved type clout head hot dipped galvanised nail, except that hip and ridge tiles, shall be wired with galvanised wire of the size specified, or bedded in mortar with approved adhesion additive to manufacturers instructions. Fix verge tiles with hot dipped galvanised screws with galvanised washers bedded in mastic.

Alternatively fix with propriety metal clips.

BEDDING AND POINTING

Hip and ridge tiles shall be bedded and pointed in a 3:1 sand and cement composition.

Point tiles where specified with mortar pigmented to match resonably the body colour of the tiles.

GUARANTEE

A written 2 year guarantee, shall be issued to the owners by the roofing contractors, against faulty workmanship.

PLUMBING

GENERAL

The whole of the work shall be carried out in strict accordance with the local authority by-laws, and plumbing and drainage regulations, and shall be carried out by registered workmen only.

The plumbing contractor shall obtain all necessary permits for the work, and pay all fees in connection thereto.

EXTERIOR

FLASHINGS

Supply and fix all necessary flashings, lead caps, sill trays etc, in conjunction with the carpenter to make a thoroughly weatherproof job.

Care is to be taken in the fitting and fixing of flashings to ensure perfect efficiency. All flashings shall be accurately fitted into the work and shall be machine bent and cut flashing shall be in as long lengths as possible, all joints are to be well lapped and soldered.

SPOUTINGS AND DOWNPIPES

All spoutings to be as detailed on drawings with matching downpipes fixed as directed by the manufacturers.

Care shall be taken to ensure adequate outlets and downpipes are provided to avoid any overflows. Downpipes to be discharged into approved soakholes by 100mm $\varnothing$ P.V.C. pipe or as directed otherwise by the local authority.

WATER SUPPLY

Lay on cold water from main at street in 19mm diameter P.V.C. tubing. Provide and fix stop cocks in suitable accessible positions.

Take 19mm diameter copper tube branches to H.W.C. under sink heater, and 12mm diameter branches to each shower, basin, sink, bath, W.C. cistern, tubs and washing machine taps, and exterior hose taps.

HOT WATER SUPPLY

All piping in connections with hot water supply including vent pipe shall be copper. Provide and fix an approved 180 litre electric water heater with thermostatic control, fitted in accordance with the

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HOT WATER SUPPLY (contd)

manufacturers requirements, in position shown on the drawings.

Carry up exhaust from top cylinder and take 12mm branches to each vanity basin, shower mixer, tub, wahsing machine, bath and sinks.

All hot water pipes to be lagged with approved materials, tightly wired to pipes with approved copper wire.

FITTINGS

To be as selected by the owner.

DRAINLAYING

GENERAL

The Drainage Contractor is to provide and supply and do everything necessary to complete with drainage in conformity with the regulation of the Local Sanitary Inspector. The Drainage Contractor must execute all work that is shown on the Drainage Plan, but as necessary to comply with the regulations.

PERMIT

The Drainage Contractor is to apply and obtain a permit and pay all fees necessary to allow the connection to the Sewer System.

EXCAVATION

Excavate for any trenches, gully traps, drains etc., to depth required for approved laying of sanitary and stormwater drains.

- (a) Sewage drains shall be of 100mm glazed earthenware of rubber ring joints, or P.V.C. is approved by local authority.
- (b) Stormwater drains shall be of 100mm P.V.C. with all joints glued.

DRAINLAYING

Start from the outfall and as work proceeds, lay and solidly bed all drains to sizes and gradients required. All joints shall be flexible type, the invert shall be perfectly true and concentric with the proceeding pipe.

GULLY TRAPS

Gully traps are to be of approved manufacture set at level line to comply with local authority requirements.

STORMWATER DRAINS

Stormwater drain from downpipes are to be in 100mm P.V.C. with glued joints and are to be taken to point where shown on drawings for disposal to suit Local Body requirements.

COMPLETION OF WORK

The Drainage Contractor will ensure that all drains are free from rubbish, timber etc., before the sealing of Inspection openings is carried out he will be responsible for the clearance of any subsequent blockage which can be attributed to any material so left in the drains.

DRAINLAYING (contd)COMPLETION OF WORK(contd)

After all drainage work is inspected, tested to approval and passed by the Local Sanitary Inspector, refill the trench and leave the whole level at completion clean.

INSPECTION CHAMBERS

These are to be installed in sewer line to detail as required by the local authority in poured concrete with removeable concrete sealed lid.

TERMINAL VENT

This is to be located at head of each length of the drainage system as required by drainage regulations. Vent is to be in 100 P.V.C. and is to be concealed behind veneer complete with wire cowl to top.

ELECTRICAL

This contract includes the supply and installation of the electric wiring system complete.

The whole of the work shall be carried out strictly in accordance with the local authorities by-laws, and the Electrical Contractor is to obtain all permits from the supply authority. Pay all fees in connection therewith and arrange for all inspections required.

MAIN SUPPLY

The contractor is to arrange for a mains supply to the building, check conditions before tendering.

METERBOARD

Provide and set up where directed a meterboard and case, with all necessary equipment thereon neatly labelled. Provide and setup a switchboard panel with all necessary fuses, switches and main switches and hinged on one side.

WIRING

All cables shall be of 250 volts, complying with the B.S.S. 7 rubber insulated and P.V.C. cable and flexible cords for the electric power and lighting.

All plastic material for switches, flush plates, light sockets etc., shall be ivory or white or as selected by the owner.

All wiring is to be concealed in timber framing.

ELECTRICAL FITTINGS

To be in positions as shown on drawings, or as directed by the owner.

Allow to wire up the thermostatically controlled hot water cylinders, oven, hobs if installed, wastemaster, dishwasher, and rangehood if installed.

Light fittings to be supplied by the owner, or as directed.

EARTHING

Allow for earthing all metal wastepipes, and metal fittings as required by the regulations.

ELECTRICAL (contd)TELEVISION AERIAL

Install ribbon in wallframing of living room, and terminating under the eaves in approved position. Terminate in the living room where directed by the owner through an approved socket.

PAINTING AND PAPERHANGING

This specification to be read in conjunction with the Schedule of Associated Documents, the Schedule of Interior Finishes, and Schedule of Interior Colours.

EXTERIOR

PAINTED WORK

Apply primer to all timberwork to be painted before fixing in position. Primers to be of the same brand as undercoats and finishing coats.

No priming shall be exposed for more than four weeks before receiving the undercoat.

Prime all exterior finishing timbers on face and exposed edges, battens, facings, scribes and finishing members to eaves and verges shall be primed all four sides.

PRIMING

All timber in contact with concrete, brick or concrete masonry or metal shall be primed.

STOPPING

After all priming has set, stop all holes and defects with linseed oil putty and rub down as required to provide a satisfactory surface for undercoating.

UNDERCOAT

Apply an approved undercoat recommended by the manufacturer of the finishing coat.

STAINED WORK

Apply one coat of oil based stain to all exposed timber posts, beams etc.

All nail holes are to be stopped with coloured stopping.

PAINTING AND PAPERHANGING (contd)

INTERIOR

Allow to stain and polyurethane all timber work as scheduled and directed.

Gibraltar board wall surfaces to be wallpapered or painted as scheduled.

PREPARATION OF SURFACES

The contractor shall be responsible for ensuring that all surfaces to be painted including surfaces of undercoats, are in a suitable condition to enable a first class finish to be obtained. Wash, dust, scrape, brush or otherwise clean down all surfaces, remove imperfections by rubbing down fill cracks and depressions with approved filler, and apply such sealers, neutralizer or other materials as required in accordance with best trade practice.

GLAZING

GENERAL

Cut glass to fit rebates, with due allowance for expansion; secure with metal sprigs, properly bed and back putty, and except where beads are detailed, neatly finish with a quick setting putty.

Putty for glazing into metal windows shall be specially manufactured for that purpose. Glazing of aluminium windows and doors is to be performed by the manufacturer of the product in an approved manner.

DOORS

Doors shall be glazed in accordance with the details.

SASHES

Aluminium sashes shall be glazed with glass of equivalent thickness to the nearest timber sash size. Glaze in accordance with appropriate standard in Schedule of Associated Documents.

SCHEDULE OF ASSOCIATED DOCUMENTS

This is the list of relevant Standard Association documents as well as those issued by other Authorities referred to in Clause 1 of Preliminary and General of this Specification, and which are deemed to be part of this Specification where applicable.

NZS	Year	Title
<u>CONCRETE WORK</u>		
1844 (until superceded by 3122)		Portland Cement (ordinary and rapid hardening.)
3422	1972	Welded fabric of drawn steel wire for concrete reinforcement.
3423 P	1972	Hot rolled plain, round steel bars of structural grade for RC.
1051 (until superceded by 3111 & 3121)	1953	Concrete materials and methods of test.
1693 (until superceded by 3402 P)	1962	Deformed steel bars of Struct. Grade for RC.
1900 Ch. 6.2	1964	Construction required for buildings not requiring specific design masonry.
1900 Cp. 9.3A	1970	Concrete General Requirements, Design and Construction, Materials and Workmanship.
<u>BRICKWORK</u>		
1051	1953	Concrete materials and methods of test.
1900 Ch. 6.2	1964	Masonry.
1900 Ch. 7.	1964	Small Chimneys and Appliance Installation.
1900 Ch. 6.1	1964	Construction Requirements not requiring specific design Timber.
<u>CONCRETE MASONRY</u>		
595	1966	Concrete Masonry Units.
1900 Ch. 6.2	1964	Masonry.

NZS	Year	Title
<u>CARPENTRY</u>		
1900 Ch. 6.1	1964	Preliminary.
3631	1971	Classification and grading of N.Z. Timbers.
MP 3631	1971	National Timber Grading Rules.
282	1962	Asbestos Cement unreinforced flat sheets and corrugated sheets.
NZSR 26	1966	Fixing of corrugated Asbestos Cement Sheets.
495	1948	Profiles of Weatherboards, Flooring and Matching.
496	1952	Profiles of Mouldings and Joinery.
3612	1970	Interior Plywoods.
2295	1969	Building Papers breather type.
1103		Milled Paper Board.
1104	1953	Fibre Building Board (other than hardboard).
1105		Plaster and pumice cored paper covered wallboard.
3604	1978	Code of Practice for Light Timber Frame Buildings not requiring specific design.
<u>JOINERY</u>		
3631	(1971	Classification and grading of N.Z. Timbers.
MP 3631	(1971	Supplementary to above 3631.
496	1952	Profiles and Mouldings for Joinery.
632	1967	Kiln Drying of Timber.
3612	1970	Specification for Interior Plywood.
1158	1965	Doors.

NZS	Year	Title
<u>ROOFING</u>		
4206	1973	Concrete Interlocking Roofing Tiles.
282 NZSK-26		Asbestos Cement Sheets and the Fixing of corrugated asbestos cement sheets.
1343	1960	Galvanised Sheets (plain and corrugated).
BS.4868		Corrugated Aluminium Sheets.
<u>PLUMBING</u>		
	1959	Drainage and Plumbing Regulations 1959.
1755	1965	Light gauge copper tubes for water, gas and sanitation.
BS 416	1967	Cast iron spigot and socket soil, waste and ventilating pipes and fittings.
NZS 962	1951	Cast iron spigot and socket drain pipes and fittings.
917	1958	Installation of Thermal Storage electric water heaters.
720	1965	Thermal storage electric water heaters with copper cylinders.
	1969	Pt II Code of Practice by Rigid PVC Pipe Manufacturers Group of Plastic Institute of NZ.
1076 BS 1737	1952	Jointing materials and compounds for water, town gas, and low pressure steam installations.
7641	1971	Unplasticised PVC waste and ventilating pipe, fittings and accessories.
NZSS-7648 BS 3505	1968	PVC Water Pipes (Identification of grades/class by marks, etc.)
<u>SPACE HEATING</u>		
7421	1972	Installation of solid fuel burning and oil burning space heaters.

NZS	Year	Title
<u>DRAINLAYING</u>		
758	1961	Household Septic Tanks.
CP44		Disposal of effluent for same.
CP45		Maintenance of same.
BS4514		Unplasticised PVC soil and ventilating pipe, fittings and accessories.
<u>SOLID PLASTER</u>		
1844	1964	Portland Cement.
4251	1974	Code of Practice, Solid Plastering.
<u>FIBROUS PLASTER AND PLASTER CORED LININGS</u>		
1611		Fibrous Plaster Sheets.
<u>PAINTING AND PAPERHANGING</u>		
1056	1952	Ready Mixed Paint for Priming Coats.
2239	1968	Recommendations for the Painting of Buildings.
<u>GLAZING</u>		
2258	1969	Recommendation for Glass and Glazing.