

CARTERTON DISTRICT COUNCIL

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FILE NAME

P1m 060012.pdf

☐	APPLICATION FOR BUILDING PERMIT
☐	LAND INFORMATION MEMORANDUM (LIM)
☒	PROJECT INFORMATION MEMO (PIM)
☐	EARTHQUAKE PRONE BUILDING
☐	PLUMBING & DRAINAGE APPLICATION
☐	BUILDING CONSENT APPLICATION
☐	RESOURCE CONSENT
☐	
VALUATION NUMBER OR TP NUMBER	
18220 45517	

PIM No. 060012

OWNER Rhys Scott
APPLICANT Mike Quirke

VAL. No. 1822045517
ADDRESS 10 DAFFODIL GROVE

APPLICATION FOR BUILDING CONSENT

DATE REFERRED	DEPARTMENT	COMMENTS AND REQUISITIONS	APPROVED		PARTICULARS	SIGN	DATE
			NAME	DATE			
	PLANNING OFFICER		<i>M. H. Jones</i> 02-03-06		BUILDING		
	BUILDING INSPECTOR		<i>Mike Quirke</i> 2/3/06				
	DRAINAGE & PLUMBING INSPECTOR				DRAINAGE & PLUMBING		
	MISC.						

PROJECT Construct New Dwelling

BUILDING CONSENT DATE - 2 MAR 2006



CODE COMPLIANCE CERTIFICATE

Form 7 Section 95, Building Act 2004



The owner Name of owner: SCOTT RHYS JAMES Mailing address: PARKVALE, R D 2, CARTERTON 5951 Phone number(s): , 027 273 2400 Facsimile number and e-mail: ,	No: 060012 Issue date: 25/06/07
The building Street address of building: 10 DAFFODIL GROVE Legal description of land where building is located: LOT 5 DP 311131 Valuation number: 1822045517 Building name: New Dwelling	
Building work The following building work is authorised by this building consent: Construct New Dwelling Residential Dwelling	

Code compliance

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

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

Bruce Livingston
Building Control officer

On behalf of: **Carterton District Council**

Final Inspection

Applicants

Name: Rhys Scott Consent no. 060012

Job Address: Parkvale RD2, Carterton

Inspecting

Officer: Bruce Livingston Date of Inspection: 25/06/07

Has the Form 6 (Application for CCC) been received

Yes / No

Building Exterior

Subfloor Ventilation ☐

Decks - Structure ☐

Balustrades - Design ☐

- Height ☐

Steps/Stairs - Design ☐

- Handrail ☐

Flashings - Windows ☐

Landscaping and Ground levels ☐

Roof Warranty ☐

Gas Certificate ☐

Septic Tank ☐

Flashings - Roof ☐

Cladding ☐

Roofing and Fixings ☐

Gully Dishes ☐

Wastes to Gullys ☐

Terminals Vents ☐

Spouting - Downpipes ☐

Texture Coating Warranty ☐

Electrical Certificate ☐

Drainage Backfilling ☐

Building Interior

Service Area - Floors, Walls & Ceilings

• Kitchen ☐

• Bathroom ☐

• WC ☐

• Laundry ☐

Cooking Facilities ☐

Food Storage ☐

Laundering ☐

Smoke Alarm ☐

Nat. Ventilation ☐

Mech. Ventilation ☐

Lighting ☐

Ceiling Insulation ☐

Safety Glass ☐

Stairs:

• Design ☐

• Handrails ☐

Hot Water Cylinder:

• Venting ☐

• Valves ☐

• Seismic Restraint ☐

Supply Tank ☐

Traps & AAV's ☐

WC Pan:

• Fixings ☐

• Flushing ☐

• Silicone ☐

Water Temperature ☐

COMMENTS:

Ridge cap fitted all the items
fixed.

Name of agent: Ocean Building Nuhaka Mailing address: 6 Dorset Road, R D 2, Carterton Phone number: , 027 242 4841 Facsimile number and e-mail: ,	No: 060012 Issue date: 2/03/06
The owner	
Name of owner: R Scott Mailing address: R D 2, Parkvale, Carterton Phone number(s): , 027 273 2400 Facsimile number and e-mail: ,	
The building	
Street address of building: 10 DAFFODIL GROVE Legal description of land where building is located: LOT 5 DP 311131 Valuation number: 1822045517 Building name: New Dwelling	
Building work	
The following building work is authorised by this building consent: Construct New Dwelling	

This building consent is issued under section 51 of the Building Act 2004. This building consent does not relieve the owner of the building (or proposed building) of any duty or responsibility under any other Act relating to or affecting the building (or proposed building).

This building consent also does not permit the construction, alteration, demolition, or removal of the building (or proposed building) if that construction, alteration, demolition, or removal would be in breach of any other Act.

Compliance schedule

A compliance schedule is not required for the building.

Attachments

Copies of the following documents are attached to this building consent:

Mike Sims

Building Inspector

On behalf of: CARTERTON DISTRICT COUNCIL



Carterton District Council

WAIRARAPA

Project Information Memorandum

Section 31, Building Act 1991

Application

Ocean Building Nuhaka	No.	060012
6 Dorset Road	Issue date	02/03/2006
R D 2	Application date	6/01/06
Carterton	Overseer	Mike Sims

Project

Description	New (& prebuilt) House, Unit, Bach, Crib, Town House etc. Being Stage 1 of an intended 1 Stage Construct New Dwelling
Intended Life	Indefinite, but not less than 50 years
Intended Use	Residential Dwelling
Estimated Value	\$240,000
Location	10 DAFFODIL GROVE
Legal Description	LOT 5 DP 311131
Valuation No.	1822045517

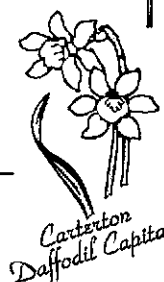
This project information memorandum is confirmation that the proposed building work may be undertaken, subject to the provisions of the Building Act 2004, and any requirements of the building consent.

Urban Low density zone, property result of land subdivision refer conditions resource consent 000040. Council holds no record of hazardous substances on the property.

Signed for and on behalf of the Council:

Name: *Mike Sims*

Date: 02/03/2006



Building Consent Checklist

Inspection Required	Comment	✓
Foundation		✓
Drains • Under Concrete Slab • Pre-polythene & mesh		✓
Concrete Floor		
Timber Sub Floor		
Blockfill		
Framing Fixings		✓
External Preline		✓
Pre Tiling – Wet Areas		✓
Interior Preline		✓
Interior Preline Plumbing		✓
Post Interior Lining		✓
Drains		✓
Brick ½ High		✓
C.C.C.		✓

GST No 50-721-108
Carterton District Council
PO Box 9 CARTERTON

Received with thanks by 1/01 4

6-01-06 11:48 Receipt no.119782

COPY *COPY* *COPY*

DR BC060012

Ocean Building Nuhak 2,562.80-

CQ BNZ CARTERTON

SCOTT CONTRACTORS 2,562.80

Total Receipted 2,562.80



APPLICATION FOR A PROJECT INFORMATION MEMORANDUM AND/OR BUILDING CONSENT

Section 33 or Section 45, Building Act 2004

Send or deliver your application to: Carterton District Council, PO Box 9, Holloway Street, Carterton. For enquiries, phone (06) 379 6626.

Application: I request that you issue a ☐ Project Information Memorandum ☐ Building Consent for the building work described in this application.

APPLICATION NUMBER 060012

THE BUILDING SITE		THE PROJECT/BUILDING WORK	
Street & no: <u>10</u>		Description: <u>New Dwelling</u>	
<u>Duffield Grove</u>			
Legal Description:		Intended use:	
		Intended life if less than 50 years:	
Valuation Number:		Floor area: <u>293 m²</u>	
<u>1822045517</u>		Total estimated value: \$ <u>240,000</u>	
Building name:		Of that plumbing & drainage value: \$ <u>15,000</u>	
THE OWNER		THE APPLICANT(AGENT)	
Name: <u>Rhys Scott</u>		Name: <u>Oreal Building</u>	
		Contact person: <u>Mike Phillips</u>	
Mailing address: <u>Rd 2</u>			
<u>Parkvale Carterton</u>		Mailing address: <u>6 Dunsen Rd</u>	
Phone(s): <u>027 2732400</u>		<u>Rd 2 Carterton</u>	
		Street address of registered office:	
Fax & e-mail:			
		Phone(s): <u>027 2424841</u>	
Please attach copy of certificate of title not older than 3 months as evidence of ownership. (LINZ appl. form attached.)		Fax & e-mail:	
Signature: <u>[Signature]</u>		Signature: <u>[Signature]</u>	
PROJECT INFORMATION MEMORANDUM (not required for building consent applications)			
The following matters are involved in the project (tick boxes applicable)			
☐ Subdivision		☐ New or altered access for vehicles	
☐ Alterations to land contours		☐ Building work over or adjacent to any road or public place	
☐ New or altered public utilities		☐ Disposal of stormwater or wastewater	
☐ New or altered locations and/or external dimensions of buildings		☐ Building work over any existing drains or sewers or in close proximity to wells or water mains	
☐ Other matters known to the applicant that may require authorizations from the territorial authority (specify)			

Certificate of Title (if not supplied)	\$20.00	GL730585
Building Deposit	\$1,500.	GL 730515
Plumbing & Drainage Deposit	\$350.	GL 730516
Building Research Levy	\$260.	GL 752142
Dept of Building & Housing Levy	\$47.280	GL 753142
TOTAL	\$2,527.280	

Receipt No. Date Paid

Date Application Submitted

RECEIVED

DATE

6/1/06

INITIALS

[Signature]

Invoiced 06/01/06

The following plans and specifications are attached to this application:		
[tick boxes applicable]		
☒ specifications	☒ calculations	☒ plans
☒ producer statement	☐ Other (please specify)	
[All plans and specifications must meet the minimum requirements set out in the regulations or required by the building consent authority]		

The building work will comply with the building code as follows:		
Clause [which of the following clauses will be involved in the proposed work?]	Means of compliance [refer to the relevant compliance document(s) or detail of alternative solution in the plans and specifications]	Waiver/modification required [state nature of waiver or modification or building code required]
☐ B1 Structure	3604 4229 N25	
☐ B2 Durability	3602 3604 "	
☐ C1-4 Fire	- see specification	
☐ D1 Access routes		
☐ D2 Mechanical installations for access		
☐ E1 Surface water	Soak pits see plan	
☐ E2 External moisture	E2/AS1	
☐ E3 Internal moisture	E3/AS1	
☐ F1 Hazardous agents on site		
☐ F2 Hazardous building materials		
☐ F3 Hazardous substances etc.		
☐ F4 Safety from falling		
☐ F5 Construction and demolition hazards		
☐ F6 Lighting for emergency		
☐ F7 Warning systems	HPM smoke alarms	
☐ F8 Signs		
☐ G1 Personal hygiene	G1/AS1	
☐ G2 Laundering	G2/AS1	
☐ G3 Food preparation and prevention of contamination		
☐ G4 Ventilation	G4/AS1	
☐ G5 Interior environment		
☐ G6 Airborne and impact sound		
☐ G7 Natural light	G7/AS1	
☐ G8 Artificial light		
☐ G9 Electricity		
☐ G10 Piped services		
☐ G11 Gas as an energy source		
☐ G12 Water supplies	G12/AS1	
☐ G13 Foul water	G13/AS1	
☐ G14 Industrial liquid waste		
☐ G15 Solid waste		
☐ H1 Energy efficiency	H1/AS1	



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Section 33 or Section 45, Building Act 2004

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Carterton. For enquiries, phone (06) 379 6626.

The following specified systems are existing, being altered, added to, or removed in the course of the building work:	existing	new	altered	added	removed
There are no specified systems in the building ☐	☐	☐	☐	☐	☐
Cable Car (including to individual dwelling)	☐	☐	☒	☐	☐
Automatic systems for fire suppression (for example, sprinkler systems)	☐	☐	☐	☐	☐
Electromagnetic or automatic doors or windows (for example, ones that close on fire alarm activation)	☐	☐	☐	☐	☐
Automatic or manual emergency warning systems for fire or other dangers	☐	☐	☐	☐	☐
Emergency lighting systems	☐	☐	☐	☐	☐
Escape route pressurisation systems	☐	☐	☐	☐	☐
Riser mains for Fire Service use	☐	☐	☐	☐	☐
Any automatic back-flow preventer connected to a potable water supply	☐	☐	☐	☐	☐
Lifts, escalators, travelators or other systems for moving people or goods within buildings	☐	☐	☐	☐	☐
Mechanical ventilation or air-conditioning systems	☐	☐	☐	☐	☐
Means of escape from fire	☐	☐	☐	☐	☐
Building maintenance units for providing access to the exterior and interior walls of buildings	☐	☐	☐	☐	☐
Emergency power systems for, or signs relating to, a system or feature specified	☐	☐	☐	☐	☐
Safety barriers	☐	☐	☐	☐	☐
Means of access and facilities for use by persons with disabilities which meet the requirements of section 118	☐	☐	☐	☐	☐
Hand-held hose reels for fire fighting	☐	☐	☐	☐	☐
Such signs as are required by the Building Code or by section 120	☐	☐	☐	☐	☐
Laboratory fume cupboards	☐	☐	☐	☐	☐
Audio loops or other assistive listening systems	☐	☐	☐	☐	☐
Smoke control systems	☐	☐	☐	☐	☐
Address where compliance schedule will be held:					
The maximum number of occupants that the building is designed for is:					
CONTACTS					
Designer/Architect			Structural Engineer		
Name			Name		
Address			Address		
Phone(s)			Phone(s)		
Fax & e-mail			Fax & e-mail		
Registration			Registration		
Builder			Other		
Name			Name		
Address			Address		
Phone(s)			Phone(s)		
Fax & e-mail			Fax & e-mail		
Registration			Registration		
Plumber			Drainlayer		
Name			Name		
Address			Address		
Phone(s)			Phone(s)		
Fax & e-mail			Fax & e-mail		
Registration			Registration		

The information you have provided on this form is required so that your building consent application can be processed under the Building Act 2004. The Council collates statistics relating to issued building consents and has a statutory obligation to regularly forward these to Statistics NZ. The Council stores the information on a public register which must be supplied (as previously determined by the Ombudsman) to whomsoever requests the information.
Under the Privacy Act 1993 you have the right to see and correct personal information the Council holds about you.

BUILDING CONSENTS FEES – Deposit only	BC and PIM	PIM only
Logburners and Demolition Permits, Signs, Pools, Re-piling	120.00	40.00
Sheds, Garages, Carports, Conservatories, Alterations/Additions to \$5,000	200.00	80.00
Sheds, Garages, Carports, Alterations/Additions to \$10,000	350.00	120.00
Sheds, Garages, Carports, Alterations/Additions to \$15,000	450.00	180.00
Granny Flats, Bach, Alterations/Additions over \$15,000	700.00	180.00
Transported dwelling	800.00	250.00
Dwellings to \$150,000	1,000.00	250.00
Dwellings to \$250,000	1,500.00	250.00
Dwellings over \$250,000	1,800.00	360.00
Commercial/Industrial/Agricultural to \$10,000	350.00	120.00
Commercial/Industrial/Agricultural to \$50,000	500.00	180.00
Commercial/Industrial/Agricultural to \$100,000	700.00	250.00
Commercial/Industrial/Agricultural to \$200,000	1,000.00	250.00
Commercial/Industrial/Agricultural to \$300,000	1,200.00	250.00
Commercial/Industrial/Agricultural to \$500,000	1,500.00	360.00
Commercial/Industrial/Agricultural to \$750,000	1,800.00	360.00
Commercial/Industrial/Agricultural to \$1,000,000	2,000.00	360.00
Commercial/Industrial/Agricultural over \$1,000,000	2,500.00	360.00
PLUMBING & DRAINAGE FEES – Deposit only		
Plumbing & Drainage to \$2,000	100.00	80.00
Plumbing & Drainage to \$4,000	150.00	80.00
Plumbing & Drainage to \$5,000	200.00	80.00
Plumbing & Drainage to \$7,500	250.00	80.00
Plumbing & Drainage to \$10,000	300.00	80.00
Plumbing & Drainage over \$10,000	350.00	80.00
Plus or minus assessed additional hourly input dependent on scale of project plus recovery of disbursements (eg. consultants reports) where applicable. The building consent fee does not include the cost of any structural or fire engineers assessment which may be required.		
BUILDING RESEARCH LEVY		
Construction \$20,000 and over a levy of \$1 per \$1,000 or part thereof is payable		
DEPARTMENT OF BUILDING AND HOUSING LEVY		
Construction \$20,000 and over a levy of \$1.97 per \$1,000 or part thereof is payable		
SERVICE FEES (Separate Form to be completed)		
Water Connection		Actual Cost
Sewer Connection		Actual Cost
Administration Fee		50.00
Combined Water & Sewer Connection		Actual Cost
Standard Vehicle Crossing		Actual Cost

Compliance Schedule change	\$80
Inspection hourly rate	\$80
Re-inspection fee	\$64 per inspection
Certificate of Acceptance	Building consent fee for the applicable building payable with lodgment plus actual cost charges at \$80 per hour payable on issue of certificate.
Reassessment fee (amended plans)	\$80 lodgment fee (includes 1/2 hour assessment) plus \$80 per hour over and above first 1/2 hour.
Unscheduled Building, Plumbing and Drainage Inspections	\$64
Structural Engineering or Fire Engineering Assessment/Peer review	Cost + 10%

NOTES : The issue of a building consent does not relieve the owner of any duty or responsibility under any other act. Please check with your local territorial authority regarding the requirement for other approvals required and fees payable. These may include: Consents under the Resource Management Act, Vehicle Access, Road openings, Health licensing, Liquor licensing, Trade Waste licensing

All charges inclusive of GST – All fees must be paid with Application



APPLICATION FOR A PROJECT INFORMATION MEMORANDUM AND/OR BUILDING CONSENT

Section 33 or Section 45, Building Act 2004

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CHECKSHEETS (Effective from 31 March 2005)

Minor Works (Freestanding/Inbuilt fires, and minor plumbing and drainage works)

This checksheet shows you the information that has to be supplied with your building consent application. Please attach **2 copies** of the following information (unless otherwise specified) with your completed Building Consent Application form.

Please tick each relevant box in the Customer Use column as you attach the information. Complete only the sections that are applicable to your project. A guidance document is available to help complete the section in the application form on 'means of compliance' for each building code clause

Once you have attached all the required information, please check for completeness as an incomplete application or lack of any supporting information will mean that your application cannot be accepted for processing.

1. GENERAL

Complete for all applications

Customer use		Office use
☐	a Application form (1 copy) Completed and signed by the owner or by an agent on behalf of the owner.	☐
☐	b Proof of ownership (1 copy) One recent copy of current certificate/s of title (i.e. not older than 3 months) or one copy of purchase agreement (if recently purchased) or one copy of relevant portions of current lease	☐
☐	c Location plan (1:100) showing: Physical location of the site in relation to streets or landmarks, north point and lot and DP number. Location of the building within the site and location of work within the building.	☐
☐	d Inspections and monitoring Details of proposed inspection regime including monitoring by council officers and other professionals eg architects, engineers, surveyors and certification to be supplied on completion.	☐
☐	e Application fee Applications will not be accepted without payment of the appropriate fees. Fees payable are set out in the published fee schedule of the council that has jurisdiction over the project site.	☐

2. FREESTANDING / INBUILT FIRES

Complete where the proposal is only for the installation of a fire appliance into an existing building

☐	a Floor plan (not less than 1:100) showing: - location of the solid fuel appliance in the dwelling, including proximity to any windows. If flue extends through or past a second storey, plans of the upper storeys are also required. - location and type of smoke detectors (required where none are currently installed or where existing need to be replaced or moved)	☐
☐	b Manufacturer's specifications - for correct installation and use of the solid fuel appliance - the specifications must relate to the specific make and model of fire being installed. Alternatively state the generic standard being applied.	☐
☐	c Flue details Where these are not included in the manufacturer's specifications	☐
☐	d Weatherproofing details Flashing details for the flue penetrations	☐
☐	e Secondhand appliances must have an acceptable Producer Statement Producer statements must be from an expert source, be on firms letterhead, state the residual durability of both the appliance and/or the flue, and be signed and dated.	☐

3. MINOR PLUMBING AND/OR DRAINAGE

Complete only for projects for plumbing/drainage projects that do not have associated building work (where the proposal includes plumbing and building work use the Single Residential Dwelling and Accessory Building Checksheet)

☐	a Existing floor plan (1:100) showing • location of fixtures, fittings and/or drainage • location and type of smoke detectors	☐
☐	b Proposed floor plan (1:100) showing • fixtures, fittings and hot water systems • if the building is more than one storey high with sanitary fixtures on the upper floors, provide an isometric layout showing wastes, pipes and falls • ventilation of sanitary rooms • location and type of smoke detectors	☐
☐	c Drainage plan (1:500) showing: (Note: if you have supplied drainage details for surface water disposal on the site plan, no drainage is required) • drainage layout with inspection bends and junctions indicated for both sewer and stormwater • any other drainage on site, including retaining wall field drains	☐

Single Residential Dwelling and Accessory Building

1. GENERAL as under 1. under Minor Works

2. DEMOLITION / REMOVAL

Complete for all projects involving demolition of significant parts of buildings or the demolition or removal of whole buildings.

Note: Where the project is only for the complete removal or demolition of a building you are not required to complete any further sections

☐	a Means of barricading the site Provide details of temporary barriers, gates which swing inwards or other means of restricting public access to the area	☐
☐	b Proposed tipping location for demolition materials (address/landfill)	☐
☐	c Hazardous building materials Provide safety plan detailing the safe handling and disposal of hazardous materials	☐
☐	d Site management plan covering management to control silt run off, noise and dust	☐
☐	e Proposed destination for relocated building:	☐
☐	f Access to and from the site including (use of kerb and crossings)	☐
☐	g Specify termination of existing services • Water • Sewer • Stormwater	☐
☐	h Details about the building such as: Number of storeys, type of materials the building is constructed of (note: Photographs of the building would be useful)	☐

Note: You will need to contact the relevant service authorities specified below to advise them of the extent of your work: Electricity, gas, drainage, water, transport, telecommunications, cable television or any other services that may be affected.

Note: Transportation of relocated building - You will be required to contact and provide details to Council's Transportation and Traffic Department.

3. FOUNDATIONS / FLOOR

Complete for all new buildings, for existing buildings where the footprint of the building will change or where an additional storey is being added

☐	a Site Plan (1:100) showing Dimensions of all boundaries, north point, finished floor levels, ground contours (extended to boundaries) and/or levels, site area, street name and number, lot and DP number, outline	☐
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	of building and distances to boundaries. Include on the site plan the designated wind zone of the site (e.g. specific design, very high, high, medium or low)	
☐	b Foundation plan (1:100/1:50) showing: • dimensions of all new foundations • sub-floor, including bracing • footing details (including reinforcing and connections) • if a concrete slab, show basic details including reinforcing and contractions joints • piles and footings (including reinforcing and connections) • if the addition is an upper storey show details on upgrading existing foundations, joints, piles, etc • indicate ventilation to sub floor spaces	☐
☐	c Subfloor bracing Provide subfloor bracing plan and calculations for all piled structures. Where the structure is specifically engineered, this should be included with the structural calculations Subfloor bracing plan and calculations are required where an additional storey is to be added.	☐
☐	d Foundation details Details including reinforcing and connections	☐

4. CONSTRUCTION

Complete for all new structures or alterations to existing structures

☐	a Existing floor plan (1:100/1:50) showing (for additions and alterations only) • all levels • all designated spaces • all removals • sanitary fixtures • smoke detectors	☐
☐	b Proposed floor plans (1:100/1:50) showing: • room dimensions • location of partitions • all designated spaces • all floors (new or altered) • location of sanitary fixtures • stairs, barriers, handrails, floor joists and beams • floor joist layout for each level with timber floors • smoke detectors	☐
☐	c Wall bracing plan (1:100/1:50) showing: Bracing details and calculations for wall bracing (also required for existing lower storeys where an additional storey is being added) Sub-floor bracing for decks projecting more than 2m from the house Location, type and number of bracing elements to indicate compliance with NZS 3604:1900 (include calculations) If the bracing was specifically designed by a structural engineer, provide calculations (required for specific design wind zones and lateral distribution of upper floor loads where lower storey bracing is provided in walls beyond the upper storey footprint)	☐
☐	c Sections and details (1:50/1:20/1:10) showing: • stairs, handrails, decks and decking • insulation systems and materials to floors, walls and roof • barriers providing safety from falling. Specific engineering design required where detail does not comply with NZBC B1/AS2 • framing sizes, beams, lintels, trusses including fixing and other structural items. Lintels carrying point loads, such as from girder trusses, require specific engineering design • roof cladding, eaves, fascias, gutters, flashings to openings • fire rated systems on all walls - closer than 1 metre to boundary • stud heights of rooms and total height from lowest ground floor level to top of ridge • truss layout supported by design certificate and design of fixing details and load path to ground • retaining wall details e.g. type, height of retained ground, relationship to boundary, waterproof membrane and proposed drainage.	☐

	• truss design details	
☐	d Fire report: For domestic dwellings of 4 storeys or more, or buildings providing more than one household unit.	☐

5. STRUCTURAL

Complete for all projects incorporating specific structural

☐	a Structural calculations If any design work required the services of a structural engineer, attach 2 copies of the calculations with this application along with structural drawings The calculations must be prefaced with information explaining the design philosophy and justification of assumptions and methodologies used in analysis	☐
☐	b Producer statements: If this application for consent relies on any producer statements certifying compliance with the New Zealand Building Code, a copy must be attached with this application. (Note all structural producer statements are required to have accompanying calculations)	☐

6. EXTERNAL

Complete for new buildings or existing buildings with alterations to the external shell

☐	a Elevations (1:100/1:50) showing: Accurate lines from boundary to boundary on each elevation, relevant District Plan daylight control lines, the maximum height on each elevation, location of door and window openings, fixed and opening sashes, sill heights, floor levels in relation to ground levels, exterior cladding nominated to all elevations, down pipes and spouting, ventilators to sub-floor area (suspended floors only)	☐
☐	b Risk assessment (Risk matrix in E2/AS1 may be used) Consider exposure, design and detailing to support appropriate selection of cladding	☐
☐	c Cladding details (1:50/1:20/1:10) Provide details around all penetrations, joinery and other junctions at a level appropriate to the level of risk e.g. roof/wall, balcony/ wall, junction of different types of cladding, backflashing details for cavity systems	☐
☐	d Product certification Supply copies of product certificates relied on as compliance documents	☐
☐	e Alternative solutions If the proposal uses products or systems that are not covered in the Acceptable Solutions of clause E2 of the building code provide supporting current information including independent test results (full signed reports), case studies, expert opinion (including evidence of experience/qualification, basis for forming opinion, and statement of independence) etc to demonstrate compliance	☐

7. SERVICES

Complete for all projects with new installation or alteration of plumbing or drainage services

☐	a Plumbing and Drainage plan (1:100) showing: <i>Note: If you have supplied drainage details for surface water disposal on the site plan, no drainage plan is required</i> • fixtures and fittings, hotwater system(s) • if the building is more than one storey with sanitary fittings on upper floors, provide an isometric layout showing wastes, pipes and falls • drainage layout with inspection bends and junctions indicated for both sewer and stormwater • any other drainage on site including council mains and retaining wall field drains • ventilation of sanitary rooms • calculations for sizing of downpipes	☐
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8. CHANGE OF USE

Complete for all existing buildings where the proposal involves forming a household unit where one did not exist before (Example: the conversion of a garage or shed into a residential unit)

☐	a Assessment of the building for compliance with the building code Section 115(a) of the Building Act 2004 requires that the work comply fully with all clauses of the building code.	☐
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APPLICATION FOR A PROJECT INFORMATION MEMORANDUM AND/OR BUILDING CONSENT

Section 33 or Section 45, Building Act 2004

Send or deliver your application to: Carterton District Council, PO Box 9, Holloway Street, Carterton. For enquiries, phone (06) 379 6626.

☐	b Reasonably practicable The above assessment must relate to all building code clauses. If the proposal is for the project to meet anything less than full compliance with any clauses, your application must clearly state your reasoning, with supporting documentation, and show how you will meet the highest level of compliance that can be considered reasonably practicable.	☐
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9. SPECIFICATIONS

Complete for all applications

Note: The specification must be specific to the project and cover all aspects of the proposed work.

☐	a Specification: General • elements of structure (size, spacing, timber treatment) • finish of fixings to meet durability requirements • plumbing and drainage materials and design that installation is to comply with • wet area surfaces • ventilation systems • flooring slip resistance for access routes • glazing • type of smoke detectors (including existing smoke detectors where they will remain)	☐
☐	b External claddings For each of the following claddings provide details of the product name, manufacturer, maintenance requirements and warranties offered • Building wraps • Wall claddings • Roof claddings • Membranes (roofs and decks) • Tanking • Joinery	☐

Multi Residential, Industrial or Commercial Buildings

1. GENERAL as under Minor Works

2. EXISTING BUILDING

Complete for all existing buildings

☐	a Existing floor plan (1:100/1:50) showing: • dimensions of internal floor plate • location exits • location and dimension of lift and lift car • location and dimensions of exit stairs • exit door sizes • location and dimension of toilets and cleaners sink	☐
☐	b Existing fire protection plan (1:100/1:50) showing: All specified systems	☐
☐	c Means of Escape From Fire Assessment of means of escape for the whole building including floor plans showing egress routes to safe place. The assessment must incorporate a statement that the assessor is suitably experienced/qualified and has carried out a site inspection as part of the assessment.	☐
☐	d Accessibility (for buildings/uses listed in Schedule 2 of the Building Act 2004) Assessment of access and facilities for people with disabilities for the whole building. The assessment must incorporate a statement that the assessor is suitably experienced/qualified and has carried out a site visit inspection as part of the assessment.	☐
☐	e Application for Discretion re Upgrades (pursuant to section 112(2) of the Building Act 2004) including • Supporting information as to why the project would not proceed if the building was	☐

	required to comply • Description of improvements proposed related to means of escape from fire and access and facilities for people with disabilities	
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3. CHANGE OF USE

Complete for existing buildings where the proposal will change the established use of all or part of the building

☐	a Fire assessment In addition to the assessment of means of escape documentation must also include assessment of the whole building for structural stability in fire and protection afforded to other sleeping areas and other property	☐
☐	b Structural assessment Assessment against non-specific codes (nz3604 and NZS 4229) or engineering assessment included as part of the structural specific design	☐
☐	c Sanitary facilities Assessment of existing facilities within the building comparative to current code and levels of amenity provided by the Acceptable Solutions.	☐
☐	d Additional household units An assessment of the building is required with respect to all building code clauses. If the proposal is for the project to meet anything less than full compliance with any clauses of the building code, your application must clearly state your reasoning, with supporting documentation, and show how you will meet the highest level of compliance that can be considered reasonably practicable.	☐

4. ACCESSIBILITY

Complete for all building with uses listed in schedule 2 of the building act 2004

☐	a Access and facilities for the disabled (1:100/1:50) for the whole building showing: • access routes • accessible toilet compartment • location and height of fittings (toilet pan, basin, urinal, shower) handrails on both sides • width of access routes • dimensions of toilet compartment • lift car controls • accessible stairs • accessible low height counters (including reception) • accessible car parks (for new buildings)	☐
☐	b Reasonably practicable Your proposal is required to fully comply with the building code. Where upgrading to fully comply with the building code for the above is not proposed you are required to supply supporting documentation making the case as to why it is not reasonably practicable to do so.	☐

5. FOUNDATIONS / FLOOR

Complete for all new buildings or existing buildings with new foundations or altered footprint

As under 3. under **Single Residential Dwelling and Accessory Building.**

6. CONSTRUCTION

Complete for new buildings and for projects with existing walls removed or new walls added

☐	a Proposed floor plans (1:100/1:50) showing: • location of partitions • room dimensions • all designated spaces • plan of complete floor showing where work is to take place	☐
☐	b Bracing plan (1:100/1:50) showing: • bracing details and calculations for wall bracing • location, type and number of bracing elements	☐



APPLICATION FOR A PROJECT INFORMATION MEMORANDUM AND/OR BUILDING CONSENT

Section 33 or Section 45, Building Act 2004

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	if the bracing was specifically designed by a structural engineer, provide calculations (required for specific design wind zones and lateral distribution of upper floor loads where lower storey bracing is provided in walls beyond the upper storey footprint).	
☐	c Sections and details (1:50/1:20/1:10) showing: - stairs, handrails, decks and decking - insulation systems and materials to floors, walls and roof - barriers providing safety from falling. Specific design required where detail does not comply with NZBC B1/AS2 - details of fire rated partitions from floor to underside of floor above (if more than one fire cell) - details of sound rated partitions and floor/ceiling construction - framing sizes, beams, lintels, trusses including fixing and other structural items. Lintels carrying point loads require specific design - roof cladding, eaves, fascias, gutters, flashings to openings - fire rated systems on all walls in relation to boundary distance (calculations required) - stud heights of rooms and total height from lowest ground floor level to top of ridge - truss layout supported by design certificate and design of fixing details and load path to ground - retaining wall details e.g. type, height of retained ground, relationship to boundary, waterproof membrane and proposed drainage.	☐

7. STRUCTURAL

Complete for all projects incorporating specific structural design

As under 5. under **Single Residential Dwelling and Accessory Building.**

8. EXTERNAL

Complete for all new buildings and for existing buildings where there are alterations to the external shell

As under 6. under **Single Residential Dwelling and Accessory Building.**

9. SERVICES

Complete for all projects with new installation or alteration of plumbing or drainage services

☐	a Plumbing and Drainage plan (1:100) showing: (note: if you have supplied drainage details for surface water disposal on the site plan, no drainage plan is required) - fixtures and fittings, hotwater system(s) - nominate plumbing/drainage design to be installed - if the building is more than one storey with sanitary fittings on upper floors, provide an isometric layout showing wastes, pipes and falls - drainage layout with inspection bends and junctions indicated for both sewer and stormwater - any other drainage on site including council mains and retaining wall field drains - ventilation of sanitary rooms - HVAC drawings - trade waste pre-treatment system - location and details of back flow prevention devices	☐
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10. FIRE

To be completed for all applications

☐	a Proposed fire protection plan (1:100/1:50) showing: (if applicable) - smoke alarm - sprinkler system - emergency lights - fire alarm sounders - any 'protected' path	☐
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	• thermal (heat) detectors • fire hose reels • fire alarms call points • 'open path' travel to exits • method or systems for fire rating penetrations through or between fire cells	
☐	b Fire report Discussing the philosophy behind the proposal and demonstrating compliance with the building code	☐
☐	c Alternative solutions Where the proposal is to meet the requirements of the building code by any means other than those covered in the Compliance Documents provide a supporting, current, signed design report including independent test results, calculations and/or computer modelling (indicating the validity of assumptions and applicability to project) consideration of various scenarios (indicating that they cover worst case scenarios) and comparison with the levels of safety offered by compliance with acceptable solutions. The designer must have established experience/qualifications. For alternative solutions that deviate significantly from acceptable solutions, independent peer review may be required.	☐
☐	d Reasonably practicable The proposal is required to meet full compliance with the building code. Where upgrading to fully comply with the fire clauses of the building code is not proposed you are required to supply supporting documentation, making the case as to why full compliance is not reasonably practicable	☐

11. SPECIFICATIONS

Complete for all applications

As under 9. under **Single Residential Dwelling and Accessory Building.**

12. COMPLIANCE SCHEDULE

Complete for all buildings that contain systems or features that are required to be listed on a compliance schedule

☐	a Existing compliance schedule Provide a copy of the existing compliance schedule and details of proposed changes. Confirmation that the building has a current warrant of fitness (1 copy of the current BWOF or confirmation from Council records).	☐
☐	b Specified systems For each specified system to be installed or altered provide details of the system and the proposed maintenance and testing regime for inclusion in the compliance schedule.	☐

13. SITE MANAGEMENT AND PROTECTION OF PUBLIC

Complete for all buildings

☐	a Gantries and hoardings Provide details of barriers for the protection of public and for restricting public access to site, details of gantries, scaffolding and hoardings	☐
☐	b Site management plan covering delivery and storage of materials, management to control silt run off, noise and dust, traffic management and parking	☐
☐	c Hazardous building materials Provide safety plan detailing the safe handling and disposal of hazardous materials	☐

14. HAZARDOUS SUBSTANCES AND PROCESSES

Complete for all projects where the building use involves the storage, or use of or processing with hazardous substances hazardous substances include explosive, radioactive, toxic or flammable materials and compressed gases.

☐	a Details	☐
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	Provide details of the materials used or stored, their hazardous substance classification (HSNO), individual container size and aggregate volume.	
☐	b Plans and specifications describing - spaces where hazardous substances are stored and used and the method of disposal of waste. - consideration of containment, pressure relief, electrical hazardous area zoning and ventilation.	☐
☐	c Fire report Include specific consideration of these activities	☐

15. FOOD PREMISES

Complete for all projects with an intended use including the manufacture, storage, preparation or sale of food products

☐	a Details - indication of type of business, including general food types to be prepared and beverages to be served - water supply and sewage disposal connecting to town supply. Full details will be required if private system proposed - number of staff - number of patrons (seated and standing) - full details of surface finishes in food preparation, cooking, servery, storage and dishwash areas - full details of location of all appliances and fixtures in food preparation, cooking, servery, storage and dishwash areas including fridges, freezers, joinery, plumbing fittings and extract hood - designation of proposed use for each area	☐
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Signs

1. **GENERAL** as under 1. under **Minor Works** and the following:

☐	a Site plan (1:100) showing: Dimensions of all boundaries, north point, finished floor levels, ground contours (extend to boundaries) / levels, site area, site coverage, street name and number, lot and DP number, outline of building, area of building, distances to boundaries	☐
☐	b Site: - public property - private property	☐
☐	c Details of sign - under verandah - horizontal - projecting - vertical - flashing - free standing - sky sign	☐
☐	d Construction How sign is constructed, the framework, dimensions, connection (how sign is fixed and what sign is fixed to. Details must be drawn to scale, freehand is not acceptable.)	☐
☐	e Structural calculations	☐
☐	f Height Above pavement level (minimum height 2.6m to base of sign)	☐
☐	g Distance from existing signs (minimum distance 2.4m)	☐

Temporary Building (including Marquees, stages over 1m in height, grandstand seating etc)

1. **GENERAL** as under 1. under **Minor Works** and the following:

☐	a Sanitary Facilities: • Number, Location and allocation to sexes • Facility for disabled person (public use)	☐
☐	b Scaled floor plan indicating: • Furniture layout/number of seats/bar facilities • Number and widths of exitways • Position of safety barriers	☐
☐	c Fire Report • Evidence of fabric standard test for flammability • Alerting devices (where occupancy exceeds 50 persons) • Emergency lighting (night time uses) • Impact of adjacent existing buildings • Egress paths lengths	☐
☐	d Structure - method of compliance • NZS 3604 (light timber frame) • Specific design including design specification for wind and fixing details and calculations • Producer statement	☐
☐	e Access • Aisle width for seating areas • Stair dimensions and construction • Handrails to stairs • Lighting and contrasting nosing to stairs • Seating accessible to people with disabilities	☐
☐	f Safety from falling • Barriers where possible to fall 1m or more (not required to front of stages) • Security to restrict public access to light towers etc	☐
☐	g Other authorisation that may be required • Land owner approvals (evidence required where applicant is not the owner) • Temporary Food Licence may be required if you are preparing, cooking or serving food • Special licence may be required for consumption of liquor at an event, where alcohol is sold, or tickets are sold	☐
Marquee – Guidelines (to be read in conjunction with the checksheet for temporary structures)		
☐	Structure: • Producer Statement plus calculations to show wind speed (3 second gust) for frames or fabric. • Base fixing requirements for frames (uplift/shear resistance) • Guy rope base fixing requirements (uplift/shear) - allow for friction/uplift if using above ground weights.	☐
☐	Fire Safety: • Ignitibility Index - compliance with Code? • Number of occupants and plan showing means of escape (including widths and locations) to a safe place. • Emergency exit signs are required over each exit. • Manual call points are required over each exit. • Rubbish bins to be over 1m from side walls • Lighting, shades and bulbs to be 600mm clear of fabric • Gas or solid fuel cookers or heaters to be over 1.5m from side wall/fabric. • Electric cookers or heaters to be over 1m from fabric. • No smoking in venue. • Fire warden(s) to be present and clearly identifiable. • Tables, chairs, seats, displays to be arranged to provide clear escape aisles.	☐

PIM - Project Information Memorandum

1. **GENERAL** as under 1. under **Minor Works** and the following:

☐	a Site plan (1:100) showing: Dimensions of all boundaries, north point, finished floor levels, ground contours (extend to boundaries) / levels, site area, site coverage, street name and number, lot and DP number, outline of building, area of building, distances to boundaries	☐
☐	b Drainage plan (1:100) showing: Proposed stormwater and wastewater disposal including connections to Council mains (not required if included on site plan)	☐
☐	c Elevations (1:100/1:50) showing: Accurate lines from boundary to boundary on each elevation, relevant District Plan daylight control lines, the maximum height on each elevation, location of door and window openings,	☐



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☐	floor levels in relation to ground levels, exterior cladding nominated to all elevations	☐
☐	d Vehicle access plans showing: • Location and extent of driveway relative to existing legal boundaries of the site, public footpath/roadway and, where relevant, other features (e.g. house, wall, fence, tree) that potentially effect visibility and manoeuvring • long-section (1:100) showing proposed levels and gradients along the centreline; on wide or tight-turning accesses, three long-sections along left, centre and right • location and area of parking spaces	☐

SETBACKS FOR BUILDINGS IN THE URBAN RESIDENTIAL ZONE

The following standards apply in respect of one dwelling unit per site or one granny flat per site in addition to an already existing dwelling house or dwelling unit or accessory buildings not exceeding a maximum size of 75m².

Front Yards: 4.5metres Side Yards: Both sides 1.5 metres Rear Yard: 3 metres

Maximum height 10 meters. No part of any building shall be higher than 3 metres plus the horizontal distance between that part of the building and the boundary of the site.

Maximum area of any lot which may be covered by buildings including accessory buildings is 40%.

The above standards apply to rear sites as well, except in the case of yard requirements. These may be reduced to 3 metres.

In the case of where multi residential units or dwelling houses are proposed on one site, the applicant will be required to contact the Council Office to obtain the correct development standards and consents.

RURAL ZONE

All buildings shall be setback at least 10 metres from any body of surface water. The disposal system of any septic tank or onsite sewage system shall be setback 20 metres from any body of surface water.

Residential and accessory buildings to be set back 8m from front and back boundary, 5m from side boundaries, and do not exceed 10m height.

Other buildings or structures to be set back 16m from front boundary, 12m from back boundary, 12m from side boundaries, and do not exceed 20m height.

Buildings or enclosures for the housing and keeping of animals in confinement shall not be within 150m from any residential building or less than 50m from any boundary of the site.

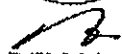
Please note: Before any building operations commence the owner must obtain authority in writing from Council's Roading Engineer for any work contemplated between the existing road formation and the boundary. This work includes crossings, drives, obstruction to water tables, footpaths, etc. Builders and owners are liable for any damage to footpaths or kerbing and channelling.



**COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952**



Search Copy


R.W. Muir
Registrar-General
of Land

Identifier 43820
Land Registration District Wellington
Date Issued 06 December 2002

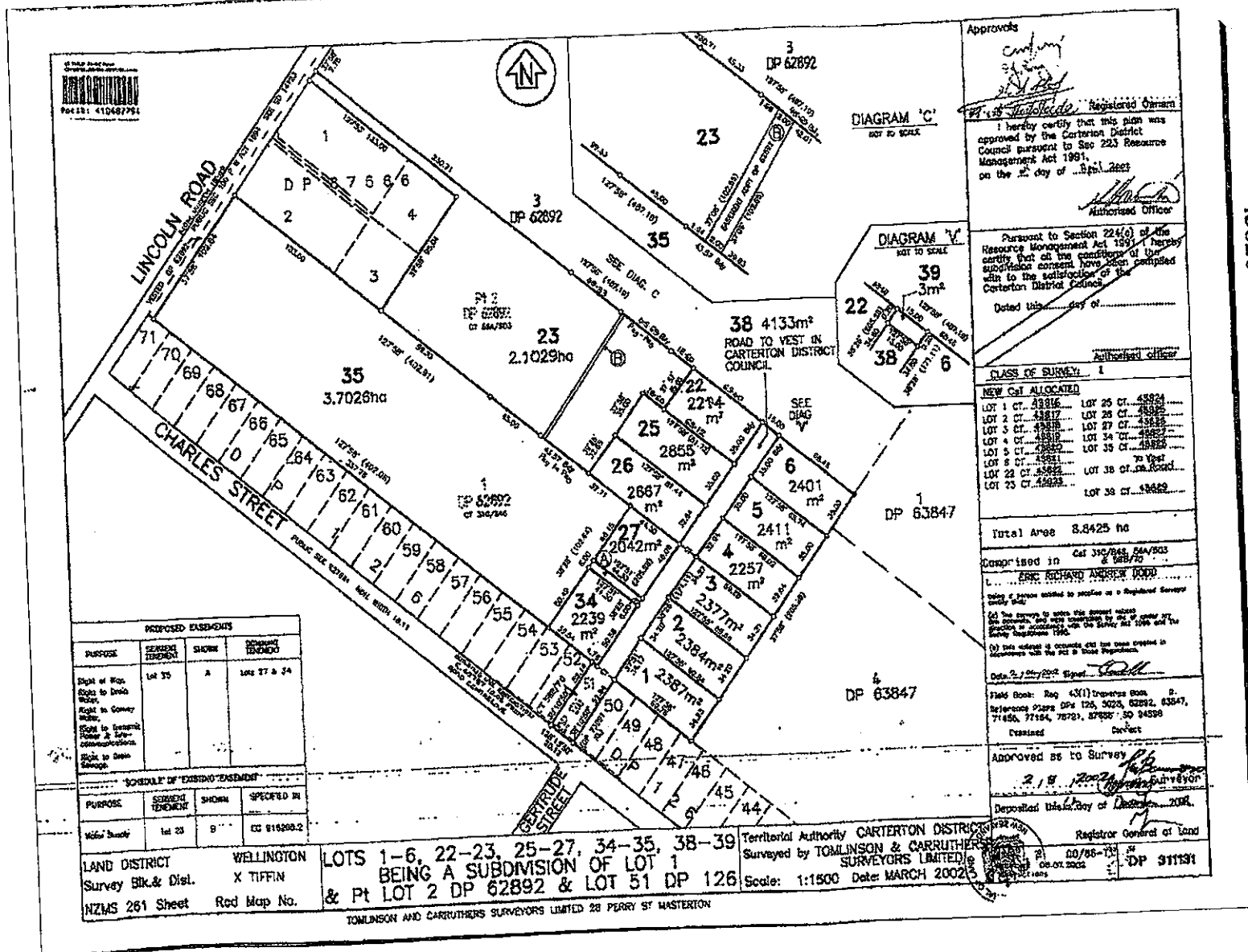
Prior References
WN56A/503

Estate	Fee Simple
Area	2411 square metres more or less
Legal Description	Lot 5 Deposited Plan 311131

Proprietors
Rhys James Scott

Interests

Appurtenant hereto is a right of water supply created by Transfer 916265.1 - 21.4.1988 at 2.53 pm
Appurtenant hereto is a right of water supply specified in Easement Certificate 916265.2 - 21.4.1988 at 2.53 pm
Appurtenant hereto are rights to sewer, electricity, telecommunications and water supply specified in Easement Certificate B737262.4 - 3.8.1999 at 3.15 pm
The easements specified in Easement Certificate B737262.4 are subject to Section 243 (a) Resource Management Act 1991
Land Covenant in Transfer 5426450.5 - 6.12.2002 at 9:00 am
6522886.2 Mortgage to Bank of New Zealand - 25.8.2005 at 9:25 am





Instrument Details

Instrument Type Mortgage
Instrument No 6522886.2
Status Registered
Date & Time Lodged 25/08/2005 09:25:23
Lodged By Lynnette Robin Margaret Theedom

Affected Computer Registers 43820
Land District Wellington

Mortgagors
Rhys James Scott

Mortgagees	Share
Bank of New Zealand	

Mortgage Details
Memorandum Number 2002/4130
Priority Amount(\$) 420,000.00

This mortgage incorporates the provisions of the above memorandum registered pursuant to section 155A of the Land Transfer Act 1952

Mortgagor Certifications

- I certify that I have the authority to act for the Mortgagor and that the party has the legal capacity to authorise me to lodge this instrument ☒
- I certify that I have the authority to act for the Mortgagee and that the party has the legal capacity to authorise me to lodge this instrument ☒
- I certify that I have taken reasonable steps to confirm the identity of the person who gave me authority to lodge this instrument ☒
- I certify that any statutory provisions specified by the Registrar for this class of instrument have been complied with or do not apply ☒
- I certify that I hold evidence showing the truth of the certifications I have given and will retain that evidence for the prescribed period ☒

Signature

Signed by Mark Edward Hinton as Mortgagor's Representative on 19/08/2005 11:18 AM

*** End of Report ***

CARTERTON DISTRICT COUNCIL**Building Consent Enquiry**

[Change](#), [Inspection Load](#), [Create Invoice](#), [Print Forms](#), [Print Letters](#), [Search](#), [Resource Consent](#)
[Search \(Change Log\)](#)

PIM/Consent No. 060012**The Building**

Valuation No 1822045517
General Property Enquiry
Street Address 10 DAFFODIL GROVE
Legal Description LOT 5 DP 311131
Building Name New Dwelling
Floor (m2) 293
Current use Residential Dwelling
Current Status Further information requested 13/01/06
Process Days To Date 2
Overseer Milan Hautler
Zone URBAN RESIDENTIAL

The Owner

Name R Scott
Contact Rhys Scott
Mailing Address R D 2
Parkvale
Carterton
Mobile Phone 027 273 2400

The Agent

Name Ocean Building Nuhaka
Contact Mike Quirke
Mailing Address 6 Dorset Road
R D 2
Carterton
Mobile Phone 027 242 4841

Relationship to Owner Applicant/Agent

Debtor BC060012

[Edit Debtor](#)

Balance \$ 2,562.80

Invoice 08292

First Point of Contact

Name Mike Quirke
Mailing Address 6 Dorset Road
R D 2
Carterton

Mobile Phone 027 242 4841

Building Work

Type of Work Construct New Dwelling
Intended use Residential Dwelling
Intended life INDEFINITE
Stats code 1100 New (& prebuilt) House, Unit, Bach, Crib, Town House e
Estimated value \$240,000
Resource Consent?
Dev Contrib Notice?

Deposit \$2,562.80
Building Consent/PIM Processing Fee \$1,850.00
DBH Levy \$472.80
BRANZ Levy \$240.00
Total Charges \$2,562.80

Status history

Formally received	6/01/06	RECEIPTED BY CASHIER
Invoiced	6/01/06	08292
Letter sent	6/01/06	
Further information requested	13/01/06	

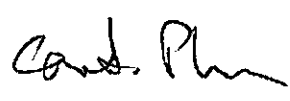
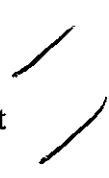
Builder Mike Quirke
Phone 027 242 4841
6 Dorset Road, R D 2, Carterton

Forms that should have been saved

Forms and Letters Actually Saved 06/060012LAPPBC.doc

Notes

Date 13/01/06
Officer Mike Sims

- 
- 
1. The fitch beam requires calculations to verify.
 2. The truss design needs to identify the point loads & verify any extra lintels required.
 3. The names of the tradesmen are required.

4. The plans need to be numbered and show the scale.
5. Show the slab height above FGL.
6. The foundation detail is illegible & needs to show where the flashing is, flashing tape & air seals, 2/012 rods at the bottom.
7. Are 100x50 or 75x50 purlins proposed?
8. We need a schedule of the proposed fixings for - B.P/floor, lintel stud, TP/stud & purlin/truss.
9. Show the proposed roof bracing.
10. Provide a copy of the fire specifications.
11. What is the proposed waterproofing under the tiling.
12. The specification is not specific to the job.

**Standard and
Non-Standard
Conditions**

No conditions applied to this consent

**Standard and
Non-Standard
PIM Notes**

Type Officer	PP Planning PIM Milan Hautler Urban Low density zone, property result of land subdivision refer conditions resource consent 000040. Council holds no record of hazardous substances on the property.
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<u>Inspections</u>	None found
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**Standard and
Non-Standard CCC Conditions**
None found

<u>Work to be Stopped and Notice to Fix Conditions</u>	None found
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<u>RM Certificate</u>	None found
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<u>Letter 1 and Letter 2 Paragraphs</u>	None found
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Napier Computer Systems Limited.

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Designed by: NCSWebTeam



Further information required

- ① The PITCH beam requires calculations to verify
- ② The truss design needs to identify the point loads & verify any extra lintels required
- ③ The names of the tradesman are required
- ④ The plans need to be numbered & show the scale
- ⑤ Show the slab height above F.A.L.
- ⑥ The foundation detail is eligible & need to show ; where the flashing is, flashing tape & air seals, 2 / Ø12 rods at the bottom
- ⑦ Are 100x50 or 75x50 purlins proposed
- ⑧ We need a schedule of the proposed fixings for - B.P / floor, lintel & stud, TP / stud & purlin / truss
- ⑨ Show the proposed roof bracing
- ⑩ Provide a copy of the fire specifications
- ⑪ What is the proposed waterproofing under the tiling
- ⑫ The specification is not specific to the job.

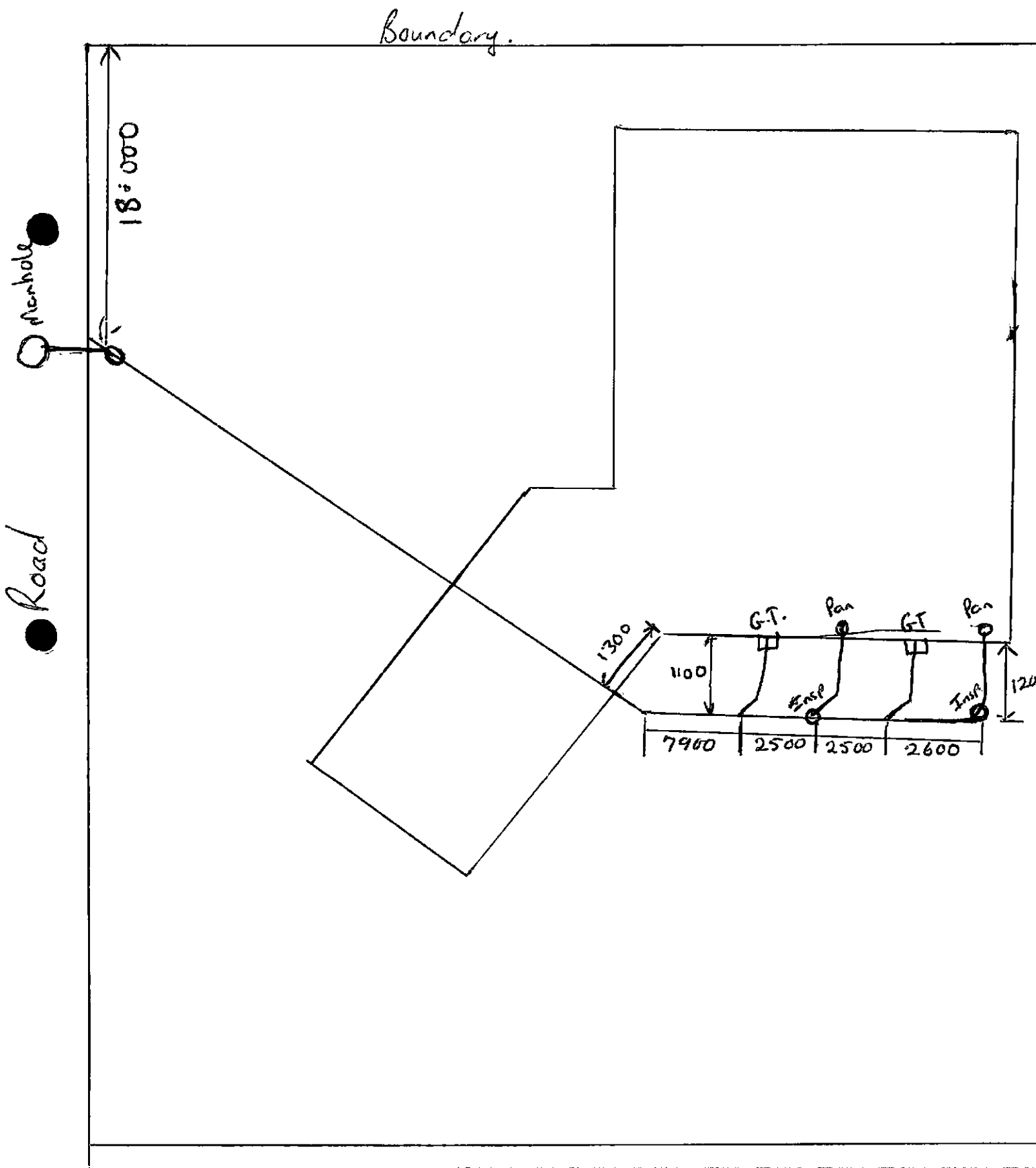
Address:
Memorial Square
P.O. Box 83
Carterton.

CARTERTON PLUMBERS LTD

Contact:
Ph: 06 379-8849
Fax: 06 379-6073
E-mail: cartplum@wise.net.nz

PLUMBING - ROOFING - WATER FILTRATION - DRAINLAYING - PUMPS

Completed drain Plan for Rhys Scott
Daffadil Grove.



CARTERTON DISTRICT
COUNCIL
APPROVED

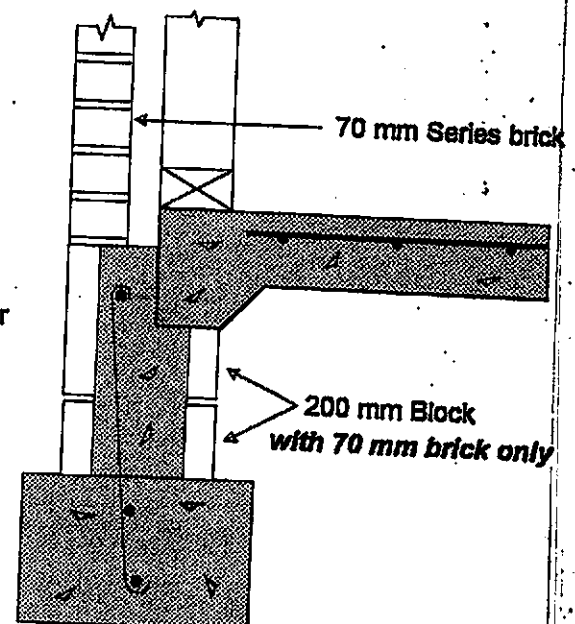
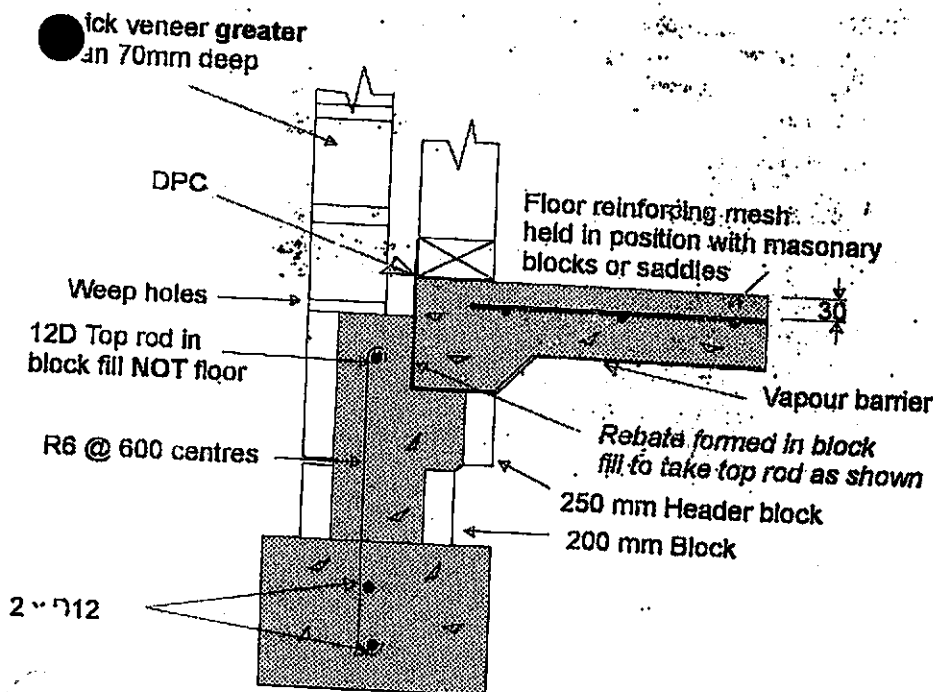
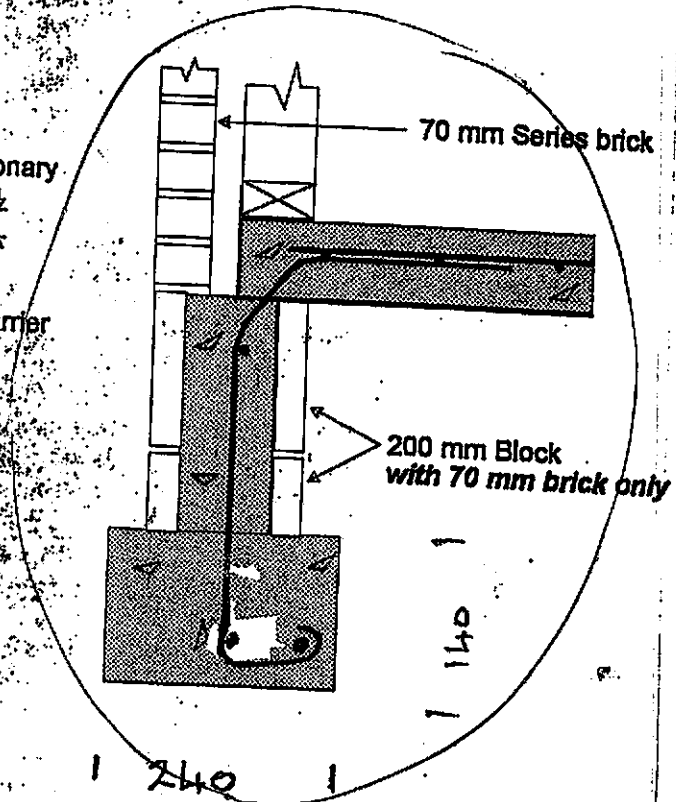
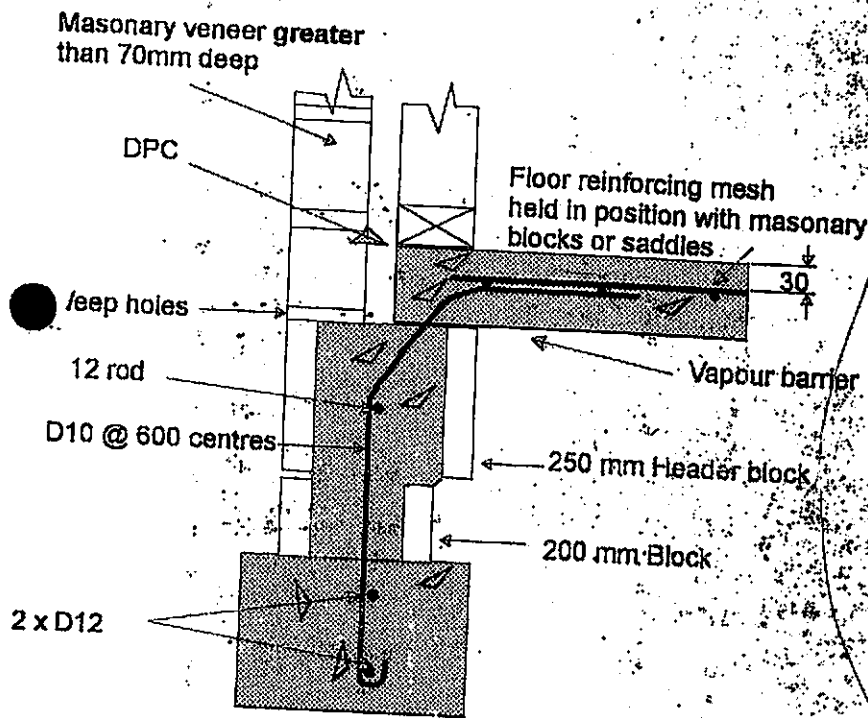
DATE _____

WPS
BUILDING INSPECTOR

021822412

AMENDED PLANS
APPROVED

DATED 15/3/06



Large Masonry

70 mm Masonry

060012

DISTINCTIVE SPECIFICATION

CARTERTON DISTRICT
COUNCIL
APPROVED

2/3/06
Mr R Scott

WVS
BUILDING INSPECTOR

Lot 10 Daffodil Grove

PRELIMINARY & GENERAL

SCOPE OF WORK

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

CONTRACT DOCUMENTS

- The following documents form this contract:-
 1. Builders Tender and Building Agreement (if applicable)
 2. This Specification and addenda pages.
 3. Working Drawings.

SITE

- The contract is based upon the site confirming with :
 1. Levels and or contours shown on the drawings together with specific foundation details drawn or specified. Refer also to last paragraph under DRAWINGS & SPECIFICATIONS below.

OR

2. Level site
- The sub soil supporting the foundations have a safe bearing pressure of not less than 100kPa as required by NZS 3604 CL 3.12 OR TO Local Authority requirements.
 - Where the sub soil is not of sufficient strength to meet the requirements of minimum foundations, all additional work, labour and materials to provide adequate foundations or bearing capacity shall become a variation of the Contract (this includes previously cultivated ground and filled sites)

DRAWINGS & SPECIFICATION

- This Specification is to be read in conjunction with the plans, working drawings and any other detailed drawings which may be issued.
- All figured dimensions shall be taken in preference to those scaled.
- All detailed drawings shall supersede those to smaller scale.
- If any error is found or inconsistency between the plan and specification, the drawing shall take precedence and such differences are

to be referred to the Designer for interpretation.

- The Designer is not liable for any differences between the levels shown on the plans and actual site levels (unless levels are supplied by a registered surveyor.)

BY-LAWS, TOWN PLANNING & BUILDING CONSENTS

- The whole of the works shall be carried out in accordance with NZS 3604 and amendments, and all relevant N.Z., Standards and shall conform to the current National Building Code.
- The Owner shall obtain Town Planning Consent and the Building Consent prior to the commencement of the work and pay all fees necessary for the carrying out of the Contract.
- The Owner may nominate, in writing, the Contractor as his/her Agent for applying for and picking up all consents.

NOTE: For housing, the owner is liable for up to four inspections from the Territorial Authority. Further inspections will be paid for by the Contractor.

INSURANCES

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

1. NEW WORK

Contractors "All Risk Insurance" or "Fire Insurance" insuring against loss or damage by fire, in the joint names of the Contractor and the Owner to the full insurable value.

2. PUBLIC LIABILITY INSURANCE

The Contractor shall carry Public Liability cover for \$1,000,000 for any one claim. This cover shall include excavation where applicable.

MAINTENANCE

- Where required by the agreement between the Owner and the Contractor. The Contractor shall undertake to remedy defects in material and workmanship which appear in the building within 31 days after completion.
- The Owner will notify the Contractor in writing of any items which require rectifying within 31 days.

VARIATIONS

- No variations shall be considered unless the Contractor prepares a separate estimate for such work.
- The Contractor shall be obliged to undertake any variation that the Owner has given approval by signing and returning the variation to the Contractor.

MONETARY ALLOWANCES

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

APPROVED

- Where the term 'or similar approved' is used, this shall be to the Owner or Designers approval.

TEMPORARY SERVICES

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

SETTING OUT

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

COMPLETION

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

- Refer to the addenda for any existing items or materials to be retained in alteration work.

CLAIMS AS TO OWNERSHIP OF MATERIALS

- The Contractor shall ensure that all materials delivered to the site to be fixed in place, are not subject to any reservation of title or to any claims by the providers of those materials, and that no conditions exist that could give rise to future claims.

MATERIALS SUBSTITUTION

- Where the use of Brand names are used in this Specification or on the drawings, substitution may be made, provided the substitute materials are of equal or better equality than the item being replaced.

SITE WORKS

PRELIMINARY

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

SETTING OUT

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

CLEARING THE SITE

- Clear of all vegetation over the area of the proposed building/s.

UNSTABLE GROUND

- Where loose, soft or otherwise unstable ground is encountered, the excavation depth is to be increased until solid bearing is reached. The Contractor shall notify the Designer or Owner before any such work is carried out.
- An extra to the Contract will be made for such work, and materials and labour shall be charged at an agreed day rate.

FOUNDATION EXCAVATIONS

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

CONCRETE FLOOR

1. Excavations:-
 - Remove vegetation and top soil over the whole of the building area as shown on the drawings, to a minimum depth as

- required by the local Body or Lending Authority.
 - Excavate for all foundations, ground beams or footings shown on plan to a solid bearing at a minimum depth below adjacent ground level as follows:
Firm Rock : 150 mm
Expansive Clay : 450 mm
Other materials : 300 mm
 - All excavations are to be level and shall be stepped for sloping ground.
2. Backfilling:
 - Backfill against exterior of foundations as required with clean excavated material well compacted.
 3. Filling under slab
 - Fill under all concrete floor slabs shall be well graded approved hard material.
 - This layer shall be well compacted and its surface shall be blinded with clean fines well rolled and consolidated.

INSPECTION

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

EXCAVATING

- Excavate site as shown on drawings.
- Care shall be taken in interpreting drawings and to maintain grade to Garage Doors as shown on the drawings but of 1 in 55 maximum or as required by the local authority.
- Spoil to be remove from site unless shown otherwise on drawings or addenda or as directed by Owner.

CONCRETE WORK

PRELIMINARY

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

ENGINEERING DRAWINGS

- Where Engineering Drawings are included in Contract Documents these shall take precedence over 'standard' specifications and details.

FORMWORK

- All formwork shall be set out and constructed to form concrete profiles as shown on the drawings or specified.

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

REINFORCING

- All reinforcing shall be free from loose flaking rust, mud, oil and other coatings.
- Fabricate from mild steel to NZS 3402P for plain bars or NZS 1693 for deformed bars.
- Reinforcing shall be as shown on drawings.
- Generally reinforcing in foundation walls shall be placed in the centre of the walls, unless otherwise noted on drawings.
- Laps in deformed bars shall be a minimum of 40 x diameter, and shall be staggered at random.
- Openings in foundation walls shall be trimmed with a minimum of 1-D12 bar extending not less than 600 mm beyond the edges of the opening.

CONCRETE

- Concrete manufacture shall comply with NZS 2086:1967 for ready Mix Concrete Production.
- Concrete shall be either Special Grade or High Grade as described in NZS 1900 Chapter 9.3.1981 have generally, for foundations, a minimum 28 day crushing strength of 17.5 Mpa.

Concrete Floor Construction

1. Foundations
 - Foundations are required around the perimeter of the floor slab
2. Level Site.
 - Foundations are to be of the size and details as required by the local authority.
 - Minimum requirements : shall have a depth of 300 mm below and a height to give a floor level of 225mm above the surrounding ground level. For a single storey 130 mm wide with 45 degree angle and 2-D12 rods.
3. Sloping sites
 - Foundation walls and footings shall be of a size and reinforced as shown on the drawings.
4. Vapour Barrier
 - Vapour barrier (under concrete floor slabs) where shown on the

drawings and as required shall consist of approved sheeting material.

- ~~Also to include sub-floor insulation 40mm "S" grade.~~
- Sheeting shall be "AHI" Moistop 737, Fletcher Duroid Dampguard, Permatherne of minimum 200 microns, Dampstop or ~~similar~~.
- All joints shall be lapped by not less than 150 mm and sealed with pressure sensitive tape.
- The vapour barrier shall be laid continuous, over prepared hardcore fill with sand blinding to the entire building area with not less than 100 mm projecting beyond the outer limit of the foundations unless detailed otherwise. It shall be sealed around all services or other projections with self adhesive plastic tape.
- Any defects in the barrier shall be repaired before any concrete is placed.

5. Floors

- Floors shall have a minimum thickness of 100 (refer NZS 3604 :CI E11.1) and shall be reinforced with 665 HRC welded mesh fabric lapped 225 mm at all joints.
- Floor slabs to be cast integrally with foundation walls.
- The surface shall be finished evenly and true to level with no abrupt changes.
- Finishing shall be carried out by floating to a smooth and even finish.
- Permissible floor slab tolerance shall be 6mm in a 3 metre length, plus or minus 5 mm from specified finished level.

6. Holding down Fittings.

- Lumberloc bottom plate fixing anchor installed to manufactures specifications.
- Locate first fixing not more than 300 mm from end of timber ..

CARPENTER

PRELIMINARY

- The whole of the works shall be carried out in accordance with and conforming

to the By-Laws and Regulations of the Local Authority, and to NZS 3604.

ENGINEERING DRAWINGS

- Where Engineering Drawings are included in the Contract Documents these shall take precedence over 'standard' specifications and details.

EXTENT OF WORK

- Comprises the supply and fixing of all timber work, linings, sheathings, fittings, finishings and hardware as shown to the best trade practice.
- Cut away for, attend on and make good after all other trades, including paperhanging.
- Provide and fix all necessary beads, stoops, fillets etc. as may be required.
- Leave all working parts in good working order.

MATERIALS

- All materials shall be new unless otherwise specified and shall be the best of their respective kinds.
- All timbers shall be as specified and graded according to NZS 3631 and shall be in straight and in lengths as long as procurable.
- Wood based products to comply with NZS 3602, NZS 3604 C1 2.1 and any/all related documents.
- All treated timbers shall be in accordance with the Timber Preservation authorities Regulations.
- Framing timbers to which linings are to be fixed should be gauged to eliminate variation in size.
- Exposed exterior and interior finishing timbers, unless otherwise detailed, are to be machine dressed to a constant thickness and width.

WORKMANSHIP

- Workmanship of the best shall be employed in thoroughly securing and framing together spiking or bolting as may be required.
- All nails in exposed work are to be punched below the surface.

TREATED TIMBERS

- Treat all cut surfaces and bolt holes with full coating of concentrated preservative, e.g. copper-naphthenate or pentachlorophenol (in a light petroleum solution)

PAINT PRIMING

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

DAMP PROOF COURSE

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

TIMBER GRADES

- The Contractor shall allow for all timbers as specified below:
- Machine dressed timbers shall be thoroughly kiln dried or air seasoned to a moisture content of 12-18%.

General Framing Timbers.

- No.1 Framing Radiata (min H1.2 treated)

Exposed Beams and Rafters

- Clean Douglas Fir or Oregon

Trusses

- No.1 Framing Radiata (min H1 treated)

Exterior Finishing Timber

- Finger Jointed Radiata (H3 treated and preprimed)

Interior Finishing Timber

- finger jointed Radiata

Roof Framing

- Radiata (min H1 treated)

BUILDING PAPER

- Provide as specified in addenda, standard or fire retardant breather type building paper complying with NZS 2295 and secure to the exterior face of stud framing or sheet bracing material.
- Run building paper horizontally with upper sheets lapping over lower not less than 75 mm.
- Adequately secure to plates, bearers and studs, extending from upper side of top plate to the underside of the bearers or wall plates supporting the ground floor joists.
- Replace or adequately repair if punctured or torn, immediately before fixing exterior coverings.

WALL FRAMING

- Frame up for walls and partitions as shown on drawings.
- Studs shall be cut square at ends or true to angles of gable or sloped frames. Exterior studs shall be at 600 crs.
- All studs shall be continuous for full length from top to bottom plates including plates at roof level on gable frames.
- Fix ribbon plate to studs for fixing ceiling joists at gable end frames.
- Framing shall be generally cut of 100 x 50 No.1 Framing grade treated Radiata Pine.
- Top and bottom plates shall be of sizes complying with NZS 3602
- Studs shall be at 600crs with two rows of dwangs
- Where studs are not laterally supported by exterior cladding or interior linings complying with NZS 3604:sections 8&9, provide rows of dwangs or metal wallings at not more than 1350 mm crs.

LINTELS

- Lintels shall be of sizes shown on the drawings and complying with NZS 3604: Table 6.7.
- Lintels shall be supported at ends by checking trimmer studs not less than 15mm nor more than 20mm for 150mm deep lintels.
- Lintels not exceeding 250mm deep shall be supported by a 40 mm thick doubling stud.
- Lintels not exceeding 300mm deep shall be supported by 50mm thick doubling stud.
- Lintels shall be fixed to trimmer studs and trimmer studs to floor joists at the bottom with 25 mm wide galv straps or other similar fixings as required by NZS 3604.
- Refer also to the drawings and/or NZS 3604 : Fig 6.8
- All nailing of framing shall be as shown on the nailing schedule (NZS 3604: Table A1.)

CANTILEVERED LINTELS

- Cantilevered lintels shall be designed to Gang-Nail Design Charts or to Engineers requirements.

BRACING

(Refer NZS 3604: C1 6.3 including Fig. K1 and Table K1 for bracing requirements.)

- All bracing elements shall be located strictly in the positions shown on the drawings.
- Metal bracing shall be 22 x 22 x 1.2 mm galvanized steel angles
- Where angle braces are used, they shall be set in straight lines and saw cuts in framing shall only be of sufficient width and depth to neatly accommodate the bracing.
- Excessive depths of cuts will not be permitted and studs cut to excess depths will be removed and replaced.
- Braces shown on the drawings are those required to comply with NZS 3604.
- The Contractor may provide additional bracing to hold frames square and true during erection.
- The plan lengths of the bracing shall not be less than shown on the drawings.
- Linings fixed over the bracing and forming part of the bracing element, shall be fixed to framing ALL ROUND with fixings at centres as set out in the Nailing Schedule. (NZS 3604 : Table A1)
- Generally a Type 1 element requires the lining to be fully fixed on one face of the framing only, whilst types 2 & 3 require complete fixing of the lining on both sides of the framing over the area of the wall covered by the brace.
- Sheet bracing shall be of the materials shown and shall be fixed in the locations shown on the drawings, and according to the manufacturers instructions.
- In addition to the nail fixing required in the nailing schedules, sheet bracing elements shall be connected to bottom plates and joists or trimmer joists as shown in NZS 3604 : Fig.K1.
- Bottom plates shall be held down to slab floors with 12 mm dia. Bolts or proprietary fixings not more than 150 mm from the ends of the bracing element and at not more than 900 mm centres between the nail plates or similar fixings between bottom plates and end studs, all as shown on NZS 3604
- Internal walls acting as bracing elements shall be connected to exterior walls at the top plate level in accordance with NZS 3604 :C1 6. 9. 7.
- Top plates in walls containing bracing elements shall be butted together and jointed with metal connections in accordance with NZS 3604 : 6.. 7. 3.3.

TRUSSES

- Trusses shall be constructed to the standard designs of approved manufacturers.
- All trusses shall be certified by the fabricator as being constructed to the standards required by NZS 3604 C1. 10.2.
- Trusses shall be carefully handled and stacked on the site to prevent damage.
- Trusses shall be fixed to top plates with not less than 2 skewed 100 x 3.75 nails plus additional fixings to top plate and wall studs consisting of either two 4.9 mm wire dogs or an alternative fixing having 5kN capacity in tension against uplift at not more than 900 mm crs.
- Connect jack trusses to common trusses with connectors and blocking as detailed by the manufacturers.
- Provide 75 x 50 blocking between bottom chords, or fix ceiling battens as shown on the drawings.
- The Contractor shall be responsible to ensure correct lintel sizes are provided in accordance with truss layout. Beam sizes shall also be checked.

PURLINS AND TILING BATTENS

- Securely fix purlins and/or tiling battens as required in the Nailing Schedule NZS 3604 : Table A1, plus any additional fixings as required or shown.
- Purlins shall be fixed with lumberloc rolled spiral nails.
- Tiling battens shall be supplied and fixed by the Roofing Sub-Contractor and shall be of the sizes as required, and at centres to suit tiling materials.
- The General Contractor shall provide temporary members required to hold roof framing in position until tiling battens are fixed.

ROOF BRACING

- ~~Provide and fix roof bracing as required by NZS 3604~~

DWANGS AND BATTENS

- Provide dwangs around the perimeter of all ceiling areas and between ceiling joists or trusses as required by the ceiling lining manufacturer.

CEILING ACCESS

- Provide 600 x 600 minimum access hole sited in Garage immediately above main

house internal access trimmed with framing of the same size as the ceiling joists, in the ceiling where directed by the designer or in a location providing not less than 600 mm height between the top of the ceiling joists and any other roof members.

EAVES

- Frame up eaves as shown on drawings with 75 x 40 or similar sized ribbon plate fixed to wall framings and bearers at centres to suit soffit lining.

WARDROBES AND CUPBOARDS

- Frame up for wardrobes and other cupboards where shown on the drawings.
- Walk-in wardrobe; Allow for full length shelf with 300 mm square "Cubbie Holes" above to one wall. Provide a shelf in each wardrobe, 300 mm wide out of ex 25 mm timber, 18mm Customwood or similar.
- Shelves shall be supported by an ex 50 x 25 rail fixed under the shelf to the wall behind and a purpose made white powder coated aluminium coat rail along the front edge.
- The shelf shall be fixed 1600mm from the floor or at other height as directed or detailed.
- Provide vertical divisions for shelves over 2000mm long.
- Fix additional shelves as detailed or noted in drawings.
- Provide shelf and rail in coat cupboards as for wardrobes.
- Pantry cupboards shall be fitted with shelves out of white melteca or similar. Shelves shall be returned at sides of pantry if shown on the drawings, supported at corners. Provide 6 rows of shelving.

EXTERIOR CLADDING

- Where shown on drawings or included in the addenda, exterior sheathing shall be fixed as set out below.
- All materials shall be fixed according to the manufacturer's recommendations and details and according to the best accepted trade practices.
- All claddings shall be fixed over breather type building paper.
- All fixing nails shall be galvanized or other non-corrodible metal and as per the Nailing Schedule NZS 3604 : Table A1.

BRICK VENEER EXTERIOR WALL CLADDINGS

- Will be Monier 70 series Brick Veneer

- Cladding shall be fixed and finished in accordance with the manufacturers specifications and installation instructions by applicators approved by the manufacturers.
- A 40mm cavity is required between inside of bricks and wall framing.

SOFFITS

- Where shown on the drawings, line soffits with 4.5 mm Hardiflex. or as indicated in the Addenda.
- Lining shall fit close to wall framing and shall fit into grooved fascia at outer edge.
- Joints in sheets shall be set into extruded P.V.C. mouldings.
- Fix with galvanized shear point nails.

EXTERIOR FINISHING TIMBERS

- Supply and fix all exterior finishing timbers – fascias, barges, corner stops, scribes etc, as required to complete the works.
- Scribes shall be out of 12 mm timber.
- All other finishing timbers shall be generally out of 25 mm timber.
- Fascias to eaves shall be grooved to take soffit linings.
- Fascias and barges to roofs shall be out of suitable width timber.
- All joints in exterior finishing timbers shall be mitred and shall be primed before fixing.
- Mitres shall be neatly and accurately cut and fitted.

TILING

- Fix tiles to areas shown on drawings and/or specified in addenda.
- Fix tiles with purpose made gap filler adhesive.
- Allow 2 rows tiles around kitchen benches
- Both bathrooms to be tiled in entirety to a height of 2000mm and trimmed with metal tile edging.

INTERIOR LININGS

- All interior linings shall be fixed strictly according to the manufacturer's recommendations.
- Where shown in addenda the interior shall be lined with linings as set out below.

Gibraltar Board

- To wall areas unless otherwise shown, line with 9.5 mm Gibraltar Board fixed and finished in strict accordance with the manufacturers recommendations.
- All Gibraltar board fixings shall comply with 'Winstones' GIBALTAR BOARD

SYSTEMS Fixing and jointing Instructions publication.

- Where Gibraltar Board forms part of a wall bracing element or a ceiling diaphragm, they shall be fixed to framing all round and at intermediate framing as set out in the Nailing Schedule NZS 3604 : Table A.1.
- Except at bracing elements or ceiling diaphragms, linings may be fixed to framing using Gib Fixing adhesive with supplementary nailing.
- Fix expanded metal strips at external corners of linings.
- (WR) Gib Board shall not be fixed on ceilings or where a vapour barrier is required behind interior lining.

INTERIOR FINISHING TIMBERS

- Provide and fix all skirtings, architraves, scotias, reveals and other mouldings and beadings required to complete the works.
- Where finishing timbers are specified to be clear finished, they shall be Rimu or as specified.
- Else where they may be Rimu or finger-jointed treated Radiata Pine or other available.
- Joints in lengths of runs of skirtings or scotias shall be neatly and accurately mitred.
- At corner intersections, joints shall be neatly and accurately scribed to fit.
- Reveals shall be finished 19 mm timber unless otherwise specified.
- Skirtings shall be generally out of 75 x 12, beveled with grooved back.
- Windows shall have rebated jambs unless otherwise specified.
- Mitre corners and glue joints when fixing.
- Drill holes for fixing at ends of all finishing timbers and fix with 40 mm long panel pins.
- Scotias shall generally be 40 mm beveled scotia unless shown otherwise.

SHOWERS

- To Bathrooms allow "wet area" shower with single glass wall including hinged door, tiled walls and floor and "easy clean" trap set into sloping floor.
- Will use MARPEI MAPEGUM water proofing system with mapelastic wet are membrane BRANZ appraisal certificate no 484(2005)
- All work to be done by approved applicator to NZBC E3/AS1.

HARDWARE

- The Contractor shall allow in his tender, the P.C. sum for the supply of hardware shown in the Addenda

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

BUILT IN OVEN

Refer Kitchen Joinery.

HEATING APPLIANCES

- A separate contract for supply and installation of a "Kent Metro" to be included. All work to be in conjunction with main plumbing contractor.
- Provide hearth slabs as required.
- All heaters are to be installed strictly according to the Manufacturer's recommendation and the Local Authority requirements.
- Provide heat resistant linings and clearances from walls and fittings as detailed on the installation instructions provided with each unit.
- Hearth slabs shall be precast of sizes shown and with the surface finish as shown on the drawings or in the addenda.

GARAGE DOORS

- Supply and install Garage Door of size and type shown on the drawings.
- Door shall be provided with locks and all fittings and operating gear and shall be installed according to the manufacturer's details.
- Fit with automatic opening device.

LAUNDRY FITTINGS

- Install cupboard unit to accommodate stainless steel tub specified under 'Plumbing' and fit timber splashboard.

VANITY UNIT

- Install 2 off vanity units where shown on the drawings and arrange for the plumber to connect wastes, traps and taps.
- Vanity should be to the P.C. Sum shown on the addenda.

NAILING

- All nailing to comply with NZS 3604 Table A1.

FLASHINGS

- Arrange for the Window Manufacturer to provide machine folded flashings for exterior timber doors and windows out of 0.6mm galvanized steel.
- Provide flashings for heads and sills of windows and doors, and for jambs where no fascias are specified.
- Flashings shall be neatly fitted.
- Provide aluminium flashings over aluminium window and door frames.

JOINER

GENERAL

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

DOORS & FRAMES

- Doors shall be 1980mm high by 760mm wide shown on the drawings.

EXTERNAL DOORS.

(refer addenda)

- Supply and fit external doors as shown on the drawings.
- Hinged doors shall be of sizes shown on the drawings supplied to Aluminium Joiner by Owner.

INTERNAL DOORS

- Internal doors shall be 1980mm high x 38mm thick Pressed Panel Hollow core to be decided by owner.
- Surfaces shall be suitable for finish as required by Schedule or Addenda.
- Hang on three B.M.A. finish, 90mm loose pin butt hinges.
- Frames shall be out of 50 mm timber, rebated at jambs.
- Unless otherwise noted, jambs shall be suitable for paint finish and shall be rebated to receive linings.

ALUMINIUM DOORS

- Where shown on the drawings or addenda, supply and fix powder coated aluminium sliding or hinged doors complete with locks, rails, weather stripping and fittings.
- Door framing and framing to doors shall be neatly and accurately cut and fitted with mechanical jointers at corners.

- Frames shall be fitted with timber reveal linings and shall be fitted into openings according to the manufacturer's details.

ALUMINIUM WINDOWS

- Supply and install powder coated glazed aluminium windows
- Windows shall be of approved manufacture, and shall conform to NZS 4211 & NZS 3503.
- Sashes shall be awning type, hung on Interlock friction stays or top hung unless shown otherwise.
- Contractor to confer with manufacturer with regards to framing opening sizes.
- Unless otherwise specified or shown in the addenda, frames shall be supplied complete with factory fitted, ex 25mm timber reveal linings suitable for clear polyurethane finish, grooved to receive wall lings.

KITCHEN FITTINGS

- All cupboards and fittings shall be fabricated by competent tradesmen in a fully equipped factory, according to best joinery practices.
- The dimensions of all units are to be ascertained on site.
- Fabricate all joinery units as detailed on the drawings, with 90mm toe space
- Units shall be constructed with carcass work out of 18mm Melteca or approved alternative, cut and fitted to provide a rigid frame.
- Unless preformed drawers are used, all drawers shall have fronts and sides dovetailed. To be on drawer runners.
- Supply sink bench as shown on the plan. (refer to addenda and plans)
- The General Contractor shall take delivery of, and install all units, taking care not to damage any surface or fittings.
- He shall arrange to repair or replace any damaged fittings or surfaces.

ROOFER

PRELIMINARY

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

EXTENT OF WORK

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

METAL LONGRUN ROOF

To roof areas where shown on drawings.

- a) Materials
 - Long run 0.4mm corrugated color steel
- b) Underlay
 - Standard weight Building paper on 75mm roof netting
- c) Purlins
 - Cut purlins to manufacturer's recommendations from 75 x 50mm
 - Purlins to be fixed at maximum 900mm centres with first at 100mm from face of fascia.
- d) Ridges, Barges, Hips.
 - Soft edge ridge 50mm min cover
 - Standard square barge flashing
- e) Valleys
 - Construct and finish valleys where shown on drawings as recommended by roofing manufacturer.
- f) Flashings
 - Flash and overflash all projections through roofing.
 - All flashings to be coated to match roofing Materials.

SOLID PLASTER

PRELIMINARY AND GENERAL

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

MATERIALS

- Cement
 - Shall be approved brand N.Z. Portland cement.
- Sand
 - Shall be river sand, sharp and coarse grained and free from any foreign matter.
- Hydrated Lime
 - Shall be mill hydrated of an approved brand.
- Adhesion Agents
 - If used, shall be in accordance with the maker's instructions.
 - Plasticising agents shall be used strictly in accordance with the manufacturer's specification, may be used in lieu of hydrated lime.

WORKMANSHIP

- All the best trade practice. Generally, where plastering is required by drawings, it means finishing to 12mm thickness with a mix of one part cement to three parts sand

with 10 percent of hydrated lime added and finished to a straight and even surface with a wood float.

FOUNDATIONS

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

PORCH, STEPS AND TERRACE

(if shown)

- Plaster up in one operation.
- One coat 12 mm thick to terrace, 12mm thick to verticals and sides only.
- Wood float up then give light sweeps with a steel float to remove blemishes.

DRAINLAYER

PRELIMINARY

- Read and note all clauses under Preliminary and General of this specification where they apply to this trade.
- The whole of the works shall be carried out in accordance with and shall conform to N.Z. Building Code 1992 and approved documents.
- The sub-contractor shall pay all inspection and other fees necessary for the carrying out of the Contract.

EXTENT OF WORK

- a) Sewage Drains
 - Excavate for, provide, lay and backfill sewage drains from connection at boundary to fittings in accordance with reticulation as required or as detailed.
- b) Stormwater drains
 - Where required by the local Authority excavate for, provide, lay and backfill stormwater drains outfall to downpipes in accordance with reticulation as required or as detailed.

BY-LAWS AND PERMITS

- Obtain permits and pay all fees for the above work.
- All drainage work shall be carried out in accordance with the Drainage Regulations

under the Health Act and the Local Body by-Laws.

- The work shall be in strict conformity with the specific clauses in this Specification and all work shall be passed by the Inspector.
- All drains shall be tested and the excavations can only be filled in after the work has been passed.

MATERIALS

- Pipes shall be of sizes shown on drawings.
- UPVC plastic pipes unless otherwise shown
- Pipes shall comply with NZS 7649 and NZS 7650.
- They shall be true to shape and free from cracks and other defects.
- Pipes shall be laid and jointed in accordance with manufacturer's instructions.

LAYING DRAINS

- The drains shall be commenced at the point of outfall, and worked back to the highest point with at least 300mm cover.
- The whole of the drains shall be laid in a true and even grade at not less than 1:60 for 100mm dia. Pipes.

BACKFILLING

- When filling in trenches, care must be taken to ram carefully the first portion around the drains, the whole trench is then to be well filled, rammed and consolidated with water.
- The surface of the ground must be made to its original condition.

GULLY TRAPS

- Where shown on the drawings, install gully traps with grating and set in concrete.

PLUMBER & SHEET METAL WORKER

PRELIMINARY

- The General Conditions and Preliminary clauses of this specification shall apply to this section of the works.
- The whole of the works shall be carried out in accordance with and shall conform to the N.Z. Building Code 1992 and approved documents.
- The sub-contractor shall obtain all permits and pay all inspection and other fees necessary for the carrying out of this contract.

EXTENT OF WORK

- This trade comprises the supply and fixing of flashings, spoutings, downpipes, sanitary

fittings, and wastes, hot and cold water reticulation and drainage.

MATERIALS AND WORKMANSHIP

- All work shall be carried out in accordance with the Drawings, Specifications, Local Authority and Public Health Regulations.
- Water pipes and tubes shall be set out in straight runs of even gradients, avoiding all places where air locks are likely to occur.
- Use easy bends and unless unavoidable, elbow fittings are not to be used.
- Copper tubing is to be secured in position by copper straps.
- All piping, including water, waste and vents shall be concealed or as shown.

NOTICES.

- The Plumber shall give all necessary notices to the Local Authority for the inspection of work and testing of same.

FLASHINGS

- Flash in 0.45 BMT galvanized sheet steel necessary to render building water tight.
- All flashings shall accurately fit the work and shall be machine bent and cut in as long lengths as possible with all joints well lapped and soldered, beaded edges and fixed with 19.0mm flat head galv. nails at 75mm centres.
- Fit full length 0.45 aluminium flashings to all heads
- Flash and over flash all vents, chimneys and other projections through roofing and leave in a water tight condition.

DOWNPIPES

- At positions shown or required, fix downpipes, sealed into droppers from spouting and into stormwater drain.
- Fix to walls with purpose made fixing brackets supplied by manufacturer.

PIPING.

- Piping for water supplies shall be polybutylene piping.
- Allowance for 3/8 diameter Polybutylene pipe to ensuite shower and basin from Hot water cylinder.
- Piping laid in concrete shall be spirally wound with two layers of 'Densotape' or similar, wrapped in opposing direction
- No joints shall be made in polybutylene piping in concrete.
- Polybutylene piping laid underground shall be protected from damage from sharp objects.

- All joints in copper pipes shall be sacketted and brazed with 'Silfos'.
- Polybutylene piping shall be jointed only with special copper joint fittings manufactured by the makers of the brand of piping being used.
- Piping shall be installed in long lengths.
- Polybutylene should be continuous as far as possible, for the whole length of the system. Thread pipes through holes drilled through the centre lines of the framing.
- Where possible, pipes shall be curved to change direction, but where curving is not possible, standard elbows and tees shall be used.
- Support all piping at recommended centres with ready made clips.
- Standard fittings and couplings for copper and polybutylene piping shall be used, including couplings linking the two materials.
- Polybutylene piping may be used for both hot and cold water reticulation except for circulating pipes between wetback and boiler units and hot water cylinders.
- All piping shall be terminated at outlets with brass 'wingbacks' securely screw fixed to timber framing or solid backing.

COLD WATER SUPPLY.

- From the toby connection of the Local Authority water supply, lay 20mm or 15 mm i.d. pipe buried 450mm underground to an isolation Stop Cock located in a suitable toby box located against the building foundations.
- From Stop Cock run 20mm dia. Pipe to bath, with 12mm i.d. branches to sink/s, basins, tubs, washing machine, shower, W.C. flushing cisterns and dishwasher if required.
- From wall, use Qest Qickee supply set for connection to cistern and for exposed pipes to basins.
- Take 12mm i.d. branch to provide supply for exterior hose taps.
- Allowance for pumped fed rainwater and switch valve for mains supply when no rainwater is available.
- Allowance for grey-water removal and pump driven tap feed to gardens.

HOT WATER SUPPLY

- Gas water heater shall be Rennai manufacture and shall be installed in accordance with the maker's recommendations and the Local Plumbing Authority and Gas Supply Authority requirements.

- Provide and install flue for gas water heater in accordance with By-Laws and recommendations.
- Provide expansion pipe from storage heater, 20mm dia. Extended above the roof level with pressure relief valve as required, or with low pressure system, turn exhaust to discharge over storage tank if in suitable location.
- All piping conveying hot water shall be double lagged with plumber's felt, spirally wound and bound to prevent unraveling.
- Each layer of felt shall be wound in opposing directions.
- From expansion pipe, take branches to taps.
- Branch to sink shall be 12mm dia. Take 20mm dia. lead from expansion pipe to bath with 12mm branches off lead to shower first then to basins, tub, washing machine and dishwasher if required.
- The tub and washing machine branches may be taken from the sink lead if more suitable.
- Use Quest-Dux supply sets for exposed leads to basins.

VENTS.

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

WASTES AND TRAPS

- Provide trapped wastes to all fittings of the sizes required by the Plumbing and Drainage regulations.
- Vent wastes where and as required by the regulations.
- Provide separate waste for washing machine, unless otherwise specified.
- Wastes may be polypropylene waste pipe system.
- Polypropylene wastes shall be complete with all couplings, seals, clips and other fittings.
- Where possible, waste pipes shall be concealed within the structure.
- Special care shall be taken to fix the wastes in unobtrusive positions.
- Provide cleaning eyes to all copper wastes.
- Where wastes pass through the foundation walls, pack and seal to allow expansion and prevent access of vermin.
- Wastes through concrete slabs shall be wrapped in 'Densotape or similar

FITTINGS.

- Supply and fix all fittings as shown on the drawings and in the addenda.
- Provide and fit all stopcocks, gate valves, etc. required for the water reticulation system..

W.C. pans

- Shall be vitreous china, washdown type, and shall be supplied and fitted complete with connector to waste, vent and double flap plastic seat.
- Supply and fit low-line dual-flush cistern, complete with sparge pipe, ball valve, ballcock and overflow.

Basins.

- Provide and install vitreous china, enameled steel or plastic basins as shown on the drawing or on the addenda.

Vanities.

- Arrange with the Carpenter to install two Vanity units as required. Provide taps and wastes. See addenda for PC sum.

Toilet Basin

- Allow proprietary wall mount vitreous China basins with chrome bottle traps to both toilets.

Tub.

- Provide and install a pressed or fabricated stainless steel tub on white Melteca cabinet.

Wet Area Shower.

- Allow an easy clean trap into tiled sloping concrete floor of bathrooms.

Sink Bench

- Sink supplied by joiner. Supply and connect plug and CP chain.
- Provide waste outlet for waste disposal unit if required. Connect up to waste.

Taps.

- All taps shall be marked Hot and Cold and unless otherwise shown on the addenda shall be Methven manufacture or other selected.
- Allow for the following from range:
 - Bath -Faucet
 - Sink - Faucet
 - Basins Basin tap
 - Shower Feltonmix mixer
(or similar -- refer addenda)
 - Tub Tub tap
 - Washing Machine - Washing machine tap
 - Outside taps -4 brass bib-cocks with hose ruffs.

FREESTANDING FIREPLACES.

- All units shall be installed strictly in accordance with the manufacturer's details and to the Local Authority requirements.
- Arrange with the Carpenter to provide all protective sheeting required around units.
- Installed as per attached drawings
- Sizes shall be as recommended by the manufacturer, with vents as recommended
- Provide and install flues, flue liners, spacers flashings, caps and stays required to complete the installation.

ELECTRICAL

PRELIMINARY

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

FEES

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

SCOPE OF WORK

- Carry out the whole of the electrical installations in strict accordance with the latest Electrical Wiring Regulations and Local Authority By-Laws.
- Provide all lighting and power points as shown on the drawings or as otherwise directed by the Owners.
- Install HPM battery operated smoke alarm to manufactures specifications as indicated on plan.

MATERIALS AND WORKMANSHIP

- All materials used shall be of approved British or N.Z. Standard Specification.
- Allow for all materials necessary to complete the Contract whether specified or not.
- All work shall be carried out by a Registered Electrician in accordance with regulations and best Trade practice and in a manner which will cause minimum inconvenience to other workmen and the work as a whole.
- All cutting away, drilling etc. of timber for the entry and routing of cables shall be kept to a minimum.

- All wiring shall be run in T.P.S. cable and shall be kept clear of thermal insulation in walls and ceilings.

CO-OPERATION

- Co-operate with the Building Contractor and other sub-contractors at all phases of the work.
- Give ample notice to enable the Contractor to arrange the necessary voids, chases etc..

COMPLETION & CONNECTION OF POWER

- Leave the work complete, pay all charges and arrange for all inspections and tests and for the connection of power to the works.
- It is the responsibility of the Electrical Contractor to ensure that no delay is caused to the job once the Contract is complete.

POWER BOARD SUPPLY

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

METER BOX

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

MAIN SWITCHBOARD

- Provide and install a recessed main switchboard, complete with all fuses, circuit breakers, switches, bell transformer and auxiliary equipment.

ELECTRIC STOVE

- Provide wiring and switches for electric cooker where shown on drawings.
- If separate oven and cooking top unit are to be installed, allow for wiring and switches for each unit.
- The Electrician is to allow for taking delivery of and installing cooking appliances as shown on the drawings and addenda.
- Allow in Contract the P.C. sum for the supply of cooking appliances as noted on the addenda.

HOOD OR AIR EXTRACT FAN

- Provide and install a range hood or air extract fan where shown on the drawings or referred to in the addenda, with switches and power for the operation of the same.
- The fan shall be of the size and type shown on the drawing or in the addenda.

- Allow the P.C. sum shown in the addenda for the supply of the range hood, installation to be included in the electrical contract.

HEATERS

- Scope heated towel rail.

POWER POINTS

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

LIGHTS

- Provide light points where shown on the drawings.
- The Contractor is to allow in his tender to provide recess down-light type fittings to all lights, with angled fittings to wall lights.
- All lights are to have flush wall mounted switches.
- All exterior lights shall be watertight fittings.
- Fittings under soffits shall be ball type.
- Allow for recessed lights.
- Auto Pantry light – provide automatic Pantry light.

LIGHT SWITCHES

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

AUTOMATIC GARAGE DOOR OPENERS

- Allow for automatic door openers if noted in the addenda.
- Electrical contractor to specify type and sum allowed when tendering.

SPECIAL FITTINGS

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

PAINTING**PRELIMINARY**

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

INSPECTION

- The Painting Contractor shall examine all surfaces and if not in proper condition for painting he shall notify the Building Contractor who will rectify to the Painters satisfaction.

STANDARDS

- Material and Workmanship shall comply with –

NZS 7703:1985 AS 1580:1980	Painting of buildings Methods of Tests for Paints, Related Materials
NZS 5807:1980	Identification by Colour Wording
BS 4800: 1981	Paint Colours
BS 5252: 1976	Building purposes Colour Co-ordination Building Purposes

SUPERVISION

- The Building Contractor and any representative of the Paint Manufacturers designated by the Building Contractor shall have access to the job and to materials being used during the progress of the work.

UNSUITABLE CONDITIONS

- No paint shall be applied to wet or uncured cement or plaster or to surfaces that are not clean, smooth, dry or free from all oil or grease.
- No painting shall be carried out in frost, fog, rain or dusty conditions.
- Preceding coats are to be thoroughly dry before applying next coat.

PUTTYING

- Surface cracks, nail holes etc. in woodwork shall be leveled up to surface of the work with linseed oil putty or other suitable filler after priming coat has been applied.

SANDPAPERING

- Each coat of paint when dry, is to be properly smoothed with sandpaper and dusted clean before application of succeeding coat.

PROTECTION

- The Contractor or Painter shall provide and lay adequate dust sheets to protect the floors and other surfaces.
- Varnish and enamel shall not be applied in the presence of dust.

WORKMANSHIP

- All work is to be executed in accordance with approved trade practice.
- Materials shall be evenly applied and primers well brushed into pores of the wood and into all crevices and quirks.
- No coat of paint shall be applied unless preceding coats are dry.

EXTERNAL WORK

- Paint all external woodwork usually painted with three coats in accordance with the following.
- Priming coat applied by Carpenter before erection.
- a) Stopping and rubbing down
 - After priming has set, stop all nail holes as detailed in General clauses, and rub down as required to obtain a satisfactory surface for undercoating
 - b) Undercoat
 - Apply undercoat as soon as possible after priming.
 - Tint undercoat if required.
 - Paint all glazing putties with, and tint undercoat to approximate colour of finished coat, but it shall be readily distinguished from same.
 - Paint to impinge slightly onto glass surface where applicable.
 - c) Finishing Coat
 - Apply one coat of Exterior Hi-Gloss in the colour selected, taking care to ensure that all undercoated areas receive a coat of paint.
 - If 'Bright Red' is selected, then two coats must be applied. Selection of dark colours for wood is not recommended.
 - d) Hardiflex Eaves, and Porch Linings
 - Shall be painted with two coats of Flat Acrylic paint in accordance with the manufacturer's instructions for first class work.
 - e) Metalwork

- All exterior metal-work should be thoroughly cleaned and free from dirt, grease or other surface imperfections.
- After thorough surface preparation has been completed, apply coats as specified in External Work (a) and (b) above.

f) Iron and Steel

- As recommended by paint manufacturer.

g) Galvanised Corrugated Steel Roofing (NOT COLORSTEEL)

- As specified under Roofer.

N.B. Apart from laps priming as specified under Roofer however, painting of any roofing material does not form part of the Contract.

INTERNAL WORK

In all painted rooms, the Contract allows for not more than three colours. Additional charge will be made for colours in excess of this number.

NOTE: Painting interior of any kitchen, laundry or other cupboards is not included in the contract.

a) Painted Wood Surface.

- After surface preparation has been completed, apply one coat of appropriate Intermediate Primer Undercoat, second coat of Intermediate Primer Undercoat and final coat of super Enamel or Super Satin, tinted as directed.

b) Polyurethane Wood Surfaces.

- After thorough surface preparation has been completed, all interior woodwork, excepting that which is scheduled to be painted, shall be stopped with tinted putty.
- Apply Sanding sealer or Satin clear as the first coat.
- Follow with two coats of Gloss Polyurethane or Satin Clear Polyurethane.

c) Gibraltar Board Walls to Wardrobes and Coat Cupboard.

- After necessary stopping and sanding has been completed, apply two coats of P.V.A. Flat Plastic Paint, tinted as specified.

c) Ceilings to all Service Rooms - (Kitchen, Bathroom and Laundry.)

- After necessary stopping and sanding has been completed, apply two coats of semi-gloss enamel.

d) Ceilings to other rooms (other than service rooms)

- After necessary stopping and sanding has been completed, apply two coats of Alkyd flat or Dulux Spring Plastic Paint.

COMPLETION

- On completion, the Contractor shall remove all empty cans or other debris arising out of this work, clean off all glass, free from paint spots and smears, in addition to the other areas so affected.

GLASS

GENERAL

- Glass and glazing must comply with NZS 4223.
- Glass must be free from blemishes and to the thickness required by the standard details.

NEW GLAZING WORK

- Supply and fix clear sheet glass to all new exterior joinery and porch screens, with exception of bathroom and toilet sashes and entry doors which will be glazed with white obscure glass of equal pattern

TIMBER WINDOWS AND DOORS

- All glazing must be carried out on site in dry conditions.
- Glass to be cut to fit inside rebates to give adequate cover, with due allowance for expansion, properly bedded in silicone and foreputtied with linseed oil putty, secured with metal sprigs prior to foreputtying.
- Foreputtying to be neatly finished off and must not encroach on glazing daylight.

ALUMINIUM WINDOWS AND DOORS

- To be fully glazed by Aluminium fabricator.

DOUBLE GLAZING

- Refer addenda for windows requiring double glazing.

TINTED GLASS.

- Refer addenda for windows requiring tinted glass.

MiTek Beam

intel supporting roof and ceiling only

DESIGN LOADS

Roof Live Load 0.25kPa, 1.0kN Point Load
Roof Dead Load 0.25kPa, Light
Ceiling Dead Load 0.20kPa, Standard
Seismic Zone A, B or C
Overhang of 750mm has been included
Spans are horizontal dimensions

JOB NAME: Rhys Scott
ADDRESS: Lot 5 daffodill Gr
Carterton
0
DATE: 1/03/2006
BEAM NAME: A

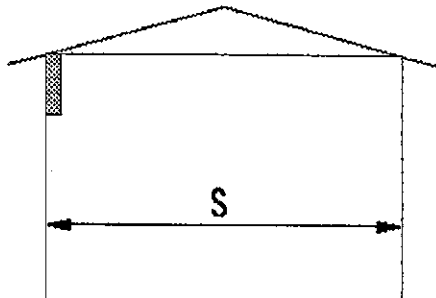
JOB DATA

Roof Weight Light
Ceiling Weight Standard
Wind Load High
Snow load NIL
Is The Roof Pitch Greater than 30 deg. No

Fitch Beam 

LOAD CONDITIONS

Roof Span (S) 6000 mm



Beam Span: 4800 mm
Beam Size: FB25H Fitch
Beam Camber: 8 mm

Certification of MiTek Beam Design Program

The MiTek Beam design program has been developed by MiTek New Zealand Ltd for the design of GANG-NAIL Beams and Lintels in New Zealand. The beam designs computed by this program are prepared using sound and widely accepted engineering principles, and in accordance with NZS 4203, NZS 3603 and NZS 3604 as verification methods and acceptable solutions of the approved documents issued by the Building Industry Authority to satisfy the requirements of Clause B1:Structure of the Building Regulations 1992. This computer design for the proposed building complies with the relevant provisions of the NZ Building Code. This is subject to all proprietary products meeting their performance specification requirements, the provision of adequate bracing, fixings and the correct input of design data carried out by suitably trained personnel.



MiTek New Zealand Ltd.

HOME OF GANG-NAIL® BUILDING SYSTEMS

NEW ENVIRONMENTAL STANDARDS FOR WOODFIRES

During 2004 the Minister for the Environment released New Zealand's first ever national environmental standards which included a specific standard regulating the installation of Woodfires with consent applications dated on or after 1st September 2005. In brief this means on the 1st September 2005 properties with a land area of less than two hectares becomes a clean air zone (like Christchurch has been for several years) and only woodfires that meet specific emission & efficiency criteria can be installed on these properties.

After 1st September 2005 New Zealand will have two distinct criteria for consumers wishing to install a woodfire determined solely by the size of the property their home is built on, irrespective of location or population density;

- **If your property is two hectares or larger** – You can install any woodfire that complies with AS/NZS4013:1999, which allows up to 4 grams of emission particles for every 1 kilogram of fuel burnt. This means you can install ANY Metro woodfire as the entire LTD and ECO range of Metros comply with AS/NZS4013:1999.
- **If your property is less than two hectares** – After the 1st September you can only install a woodfire which meets the new environmental standard of 1.5grams particulate per 1 kilogram of fuel burnt with a minimum space heating efficiency of 65%, which means you will only be able to install an "ECO" Metro as this meets the new 1.5gm/65% requirement (refer chart below).

LTD & ECO METROS

Metro have and are still developing an ever increasing range of "ECO" Metros which comply with the new 1.5gm/65% national standard to compliment the existing "LTD" Metros which have features that have made Metro New Zealand's leading woodfire brand. The Pros and Cons for these two varying models are;

ECO METROS – Utilise technically advanced combustion technology which involves a more complex firebox design resulting in higher combustion temperatures and lower emissions. But these additional complexities cost more making the ECO variant \$150 to \$300 more than its LTD equivalent, they have a shorter burn cycle so will not burn overnight due to burning hotter and faster, and some models cannot have wetbacks as an option.

LTD METROS – Offer a larger range of product choice at more competitive prices while retaining features like extended burn times and genuine wetbacks while meeting internationally accepted emission standards.

Clearly ECO Metros burn cleaner than LTD Metros, but it is yet to be proven what effect on our environment a reduction from 4gms to 1.5gms will have. All of Metros LTD models achieve emission levels well below 4gms and all ECO Metros released to date have achieved emission levels of less than 1 gram, significantly less than the new standard of 1.5gms. However unless installed and operated correctly on 'dry fuel' these tested emissions become irrelevant, as even ECO Metros fuelled with unseasoned or treated fuel will produce excessive particle emissions, therefore ongoing consumer education is required and all Metros must be fuelled and operated as detailed in the installation and operation manual supplied.

IN SUMMARY

New Zealand is adopting a national emission standard and manufacturers and consumers alike must comply with this standard. If you obtain a building consent application dated prior to the 1st September 2005 you can choose the woodfire type based on your desires, features or the size/price that suits your needs or budget. After the 1st September 2005, depending on the size of your property you may find the Metro with the features you wanted is no longer an option for you, or not at the price it was prior to 1st September!

2005 LTD & ECO EMISSIONS COMPLIANCE CHART			SELECT THE COLUMN DESCRIBING YOUR PROPERTY					
MODELS		Emissions/Efficiency	2 Hectares or More		Less than 2 Hectares		Urban Canterbury	
			4gms Max.		1.5gms Max./65% Min		1gms Max./65% Min.	
			APPROVED	Wetback	APPROVED	Wetback	APPROVED	Wetback
LTD METROS	LTD WEE RAD	2.3gms/71%	YES	✓	YES Up to 1st September 2005 (with a wetback)		NO	✗
	LTD RAD	3.3gms/63%	YES	✓			NO	✗
	LTD MEGA RAD	2.0gms/65.6%	YES	✓			NO	✗
	LTD PIONEER PED	2.3gms/71%	YES	✓			NO	✗
	LTD PIONEER REAR OUTLET	2.3gms/71%	YES	✓			NO	✗
	LTD XTREME PED	3.3gms/63%	YES	✓			NO	✗
	LTD ASPIRE PED	3.3gms/63%	YES	✓			NO	✗
	LTD MEGA PED	2.0gms/65.6%	YES	✓			NO	✗
	LTD PIONEER TRAD	2.3gms/71%	YES	✓			NO	✗
	LTD XTREME TRAD	3.3gms/63%	YES	✓			NO	✗
	LTD ASPIRE TRAD	3.3gms/63%	YES	✓			NO	✗
	LTD COMPACT INSERT	2.3gms/58%	YES	✓			NO	✗
	LTD HI OUTPUT INSERT	2.3gms/58%	YES	✓			NO	✗
ECO METROS	ECO WEE RAD	0.88gms/70.4%	YES	✓	YES	Note 1	YES	✗
	ECO RAD	TBA	YES	✓	Under Development		Under Development	
	ECO PIONEER PED	0.88gms/70.4%	YES	✓	YES	Note 1	YES	✗
	ECO XTREME PED	TBA	YES	✓	Under Development		Under Development	
	ECO ASPIRE PED	TBA	YES	✓	Under Development		Under Development	
	ECO TINY TRAD	0.72gms/78%	YES	✓	YES	Note 1	Approval no pending	
	ECO PIONEER TRAD	0.88gms/70.4%	YES	✓	YES	Note 1	YES	✗
	ECO XTREME TRAD	TBA	YES	✓	Under Development		Under Development	
	ECO ASPIRE TRAD	TBA	YES	✓	Under Development		Under Development	
	ECO INSERT	0.91gms/65%	YES	✓	YES	✗	Approval no pending	

ENVIRONMENT CANTERBURY (ECAN) - ECAN have imposed emission requirements for "Urban Canterbury" of 1gram/65% which is more stringent and takes precedence over the new national standard. ECAN's current Urban emission requirements were implemented Canterbury wide on the 1st January 2004, so are already in force.

NOTE 1 – At time of printing it is not certain if wetbacks will be an approved option for these models. It is probable, but additional testing is required to confirm, which is currently underway.

Job: 0812

Client: Carterton ITM Building centre
Phone:

Site:

Description:

Phone:

MITek 20/20 - Engineering 4.4 Beta2 (build 1597)

MITek New Zealand Ltd.

Printed: 08:10:18 02 Mar 2008

PRODUCER STATEMENT
MITek 20/20™ TRUSS DESIGN PROGRAM**Certification of MITek 20/20™ Truss Design Program**

The MITek 20/20™ truss design program has been developed by MITek New Zealand Ltd for the design of GANG-NAIL timber roof, floor and attic trusses in New Zealand. The truss designs computed by this program are prepared using sound and widely accepted engineering principles, and in accordance with NZS 4203, NZS 3603 and NZS 3604 as verification methods and acceptable solutions of the approved documents issued by the Building Industry Authority to satisfy the requirements of Clause B1: Structure of the Building Regulations 1992. This computer design for the proposed building complies with the relevant provisions of the NZ Building Code. This is subject to all proprietary products meeting their performance specification requirements, the provision of adequate bracing, fixings and the correct input of design data carried out by suitably trained personnel.

Summary of MITek 20/20™ Truss Design Data and Output

The MITek 20/20™ computer design output for this job titled and located at the site identified on the top of this page is based on the following parameters entered into the program. The owner must ensure that the following job details below are current and relevant to the project before fabrication and erection of the GANG-NAIL trusses.

Job Details

Roof Truss					
Timber Group:	DDPx45 No.1	Pitch:	20.000 deg	Std Overhang:	600 mm
Roof		Ceiling		Wind	
Material:	Light	Material:	Standard	Area:	High (44.0 m/s)
Dead Load:	0.250 kPa	Dead Load:	0.200 kPa	Pressure Coeff:	Cpe = varies; Cpl = -0.30, 0.20
Restraints:	900 mm centres	Restraints:	400 mm centres		
Live Load:	Qur = 0.250 kPa				
	Qc = 1.000 kN				

These trusses must be fabricated and erected in accordance with the GANG-NAIL manual. Proper erection bracing must be installed to hold the components true and plumb and in a safe condition until permanent bracing is fixed. All permanent bracing and fixing must be installed before any loads are applied. The specifications for timber shall be as shown on the output. The timber shall be standard gauged and treated to the requirements of NZMP 3640. Unless otherwise noted, this design assumes that the steel fixings and timber connectors are situated in a closed environment, as defined by NZS3604:1999 Section 4.

Truss List

Legend: * = detail only, ? = input only, ~~xxx~~ = failed design, Unmarked trusses = designed successfully, LB = lateral bracing required

Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)
ET01	1	10706	20.000	900	J03H	1	2687	20.000	900	T02	1	6600	20.000	900
ET02	1	5600	20.000	714	J04	1	1787	20.000	900	T03	1	10810	20.000	900
*HB01	1	8383	14.433	900	J04A	1	1787	20.000	900	T04	3	5600	20.000	714
*HB01A	1	8383	14.433	900	J05	1	3177	20.000	900	T05	1D	10700	20.000	900
*HB02	1	3819	14.433	900	J05A	1	3177	20.000	900	T06	1D	10820	20.000	900
*HB03	1	8488	14.433	900	J05B	1	3177	20.000	900	T07	2	10700	20.000	832
*HB04	2	5342	14.433	900	J06	1	2277	20.000	900	T07A	2	10700	20.000	832
J01	1	2627	20.000	900	J06A	1	2277	20.000	900	T07B	2	10700	20.000	832
J01A	1	2627	20.000	900	J06B	1	2277	20.000	900	T07C	6	10700	20.000	832
J01B	1	2627	20.000	900	J06C	1	2277	20.000	900	T08	1	8420	20.000	900
J01C	1	2627	20.000	900	J07	1	1377	20.000	900	T09	1	8400	20.000	900
J01D	1	2627	20.000	900	J07A	1	1377	20.000	900	T10	1	8614	19.370	900
J01E	1	2627	20.000	900	J07B	1	1377	20.000	900	T11	1	8420	20.000	900
J01F	1	2627	20.000	900	J07C	1	1377	20.000	900	T12	1	1537	-20.000	900
J01G	1	2627	20.000	900	*R01	1	1440	20.000	900	T13	1	8400	20.000	900
J01H	1	2627	20.000	900	*R01A	1	1440	20.000	900	T14	6	8400	20.000	894
J02	1	1727	20.000	900	*R02	1	913	20.000	900	T15	1	8400	20.000	900
J02A	1	1727	20.000	900	*R02A	1	913	20.000	900	T16	1	1200	-20.000	900
J02B	1	1727	20.000	900	*R02B	4	913	20.000	900	TG01	1	10700	20.000	900
J02C	1	1727	20.000	900	*R02C	4	913	20.000	900	TG02	1	10820	20.000	900
J03	1	2687	20.000	900	*R03	1	1500	20.000	900	TR01	1	10700	20.000	900
J03A	1	2687	20.000	900	*R04	1	7811	20.000	900	TR02	1	10700	20.000	900
J03B	1	2687	20.000	900	*R05	1	1090	20.000	900	TR03	1	10820	20.000	900
J03C	1	2687	20.000	900	*R05A	1	1090	20.000	900	TR04	1	10820	20.000	900
J03D	1	2687	20.000	900	*R06	10	1110	0.000	845	V01	1	3195	20.000	900
J03E	1	2687	20.000	900	*R07	1	6700	20.000	900	V02	1	1395	20.000	900
J03F	1	2687	20.000	900	*R08	8	1289	0.000	922	V03	1	1968	20.000	900
J03G	2	2687	20.000	900	T01	1	10700	20.000	900	V04	1	1068	20.000	900

Total quantity : 123

Job: 0812

Client: Carterton ITM Building centre
Phone:

Site:

Description:

MITek 20/20 - Engineering 4.4 Beta2 (build 1597)

MITek New Zealand Ltd

Phone:

Printed: 08:10:18 02 Mar 2006

The computer design input has been carried out by:

Signed: 

Date: 2.03.06

Name of Computer Operator:

Michael Buckethought

Qualifications and Title:

Detailer

Company:

Capital Precut Solutions

Verification / Acceptance of Input Data:

I have checked the input data against the construction drawings and specifications and verify that they are correct and suitable for this job.

Signed:

Date:

Name:

Company:

Job: 0812

Client: Carterton ITM Building centre

Site:

Description:

Phone:

Phone:

MITek 20/20 - Engineering 4.4 Beta2 (build 1697)

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Printed: 08:10:21 02 Mar 2008

TRUSS FIXING SELECTION REPORT

Truss List

Legend: * = detail only, ? = input only, ~~Fix~~ = failed design, Unmarked trusses = designed successfully

Truss	Qty	Span (mm)	Joint	Down (kN)	Uplift (kN)	Bearing	Fixing Qty Selected
ET01	1	10708	AL	0.587	0.450	Cross	No fixing selected
			T	2.499	1.956	Cross	No fixing selected
			AE	9.851	7.832	Cross	No fixing selected
ET02	1	5500	A			Wide	No fixing selected
*HB01	1	8383					
*HB01A	1	8383					
*HB02	1	3819					
*HB03	1	8468					
*HB04	2	5342					
J01	1	2627	B	2.005	1.448	Cross	1 Pair of Wire Dog Staples
			H	0.272	0.358	Butt	1 Pair of 3.15d Nails
			E	1.915	1.936	Cross	1 Pair of Wire Dog Staples
			F	0.748	0.982	Cross	1 Pair of Wire Dog Staples
			G	0.790	1.037	Cross	1 Pair of Wire Dog Staples
J01A	1	2627	F	0.872	0.265	Butt	1 Pair of 3.15d Nails
			D	0.385	0.520	Butt	1 Pair of 3.15d Nails
			E	4.276	2.608	Cross	1 Pair of Wire Dog Staples
J01B	1	2627	E	0.247	0.318	Butt	1 Pair of 3.15d Nails
			D	1.377	1.491	Cross	1 Pair of Wire Dog Staples
			F	4.140	2.371	Cross	1 Pair of Wire Dog Staples
J01C	1	2627	B	2.006	1.594	Cross	1 Pair of Wire Dog Staples
			F	0.252	0.331	Butt	1 Pair of 3.15d Nails
			D	1.904	1.922	Cross	1 Pair of Wire Dog Staples
J01D	1	2627	E	0.815	1.068	Cross	1 Pair of Wire Dog Staples
			B	2.074	1.948	Cross	1 Pair of Wire Dog Staples
			E	1.427	0.877	Butt	1 JH 47x90
			D	0.363	0.493	Butt	1 Pair of 3.15d Nails
J01E	1	2627	B	2.045	1.786	Cross	1 Pair of Wire Dog Staples
			E	0.250	0.325	Butt	1 Pair of 3.15d Nails
			D	1.984	2.012	Cross	1 Pair of Wire Dog Staples
J01F	1	2627	B	2.006	1.594	Cross	1 Pair of Wire Dog Staples
			F	0.252	0.331	Butt	1 Pair of 3.15d Nails
			D	1.904	1.922	Cross	1 Pair of Wire Dog Staples
			E	0.815	1.068	Cross	1 Pair of Wire Dog Staples
J01G	1	2627	G	0.920	0.468	Butt	1 Pair of 3.15d Nails
			E	4.526	3.137	Cross	1 Pair of Wire Dog Staples
J01H	1	2627	B	2.483	2.354	Cross	1 Pair of Wire Dog Staples
			F	1.858	1.175	Butt	1 JH 47x90
J02	1	1727	B	1.532	1.626	Cross	1 Pair of Wire Dog Staples
			D	0.506	0.050	Butt	1 Pair of 3.15d Nails
			C	0.800	0.741	Butt	1 Pair of 3.15d Nails
J02A	1	1727	B	1.584	1.760	Cross	1 Pair of Wire Dog Staples
			D	0.634	0.279	Butt	1 Pair of 3.15d Nails
J02B	1	1727	B	1.532	1.626	Cross	1 Pair of Wire Dog Staples
			D	0.506	0.050	Butt	1 Pair of 3.15d Nails
			C	0.800	0.741	Butt	1 Pair of 3.15d Nails
J02C	1	1727	B	1.584	1.760	Cross	1 Pair of Wire Dog Staples
			D	0.634	0.279	Butt	1 Pair of 3.15d Nails
J03	1	2687	A	1.572	0.592	Butt	1 JH 47x90
			F	0.272	0.358	Butt	1 Pair of 3.15d Nails
			C	2.009	2.057	Cross	1 Pair of Wire Dog Staples
			D	0.747	0.899	Cross	1 Pair of Wire Dog Staples
			E	0.790	1.033	Cross	1 Pair of Wire Dog Staples
J03A	1	2687	A	2.696	2.040	Butt	1 JH 47x90
			E	2.722	2.482	Butt	1 JH 47x90
J03B	1	2687	A	1.613	0.812	Butt	1 JH 47x90
			D	0.249	0.337	Butt	1 Pair of 3.15d Nails
			C	2.154	2.133	Cross	1 Pair of Wire Dog Staples
J03C	1	2687	A	1.573	0.738	Butt	1 JH 47x90
			E	0.252	0.328	Butt	1 Pair of 3.15d Nails
			C	1.998	2.043	Cross	1 Pair of Wire Dog Staples
			D	0.815	1.085	Cross	1 Pair of Wire Dog Staples
J03D	1	2687	B	2.109	1.968	Cross	1 Pair of Wire Dog Staples
			F	1.423	0.887	Butt	1 JH 47x90
			D	0.386	0.519	Butt	1 Pair of 3.15d Nails
J03E	1	2687	B	2.075	1.785	Cross	1 Pair of Wire Dog Staples
			E	0.237	0.314	Butt	1 Pair of 3.15d Nails
			D	2.039	2.062	Cross	1 Pair of Wire Dog Staples
J03F	1	2687	B	2.037	1.614	Cross	1 Pair of Wire Dog Staples
			F	0.255	0.334	Butt	1 Pair of 3.15d Nails
			D	1.965	1.972	Cross	1 Pair of Wire Dog Staples
			E	0.798	1.054	Cross	1 Pair of Wire Dog Staples
J03G	2	2687	B	2.109	1.968	Cross	2 Pair of Wire Dog Staples
			F	1.597	1.406	Butt	2 JH 47x90
J03H	1	2687	B	2.549	2.410	Cross	1 Pair of Wire Dog Staples
			F	1.743	1.256	Butt	1 JH 47x90
J04	1	1787	B	1.588	1.645	Cross	1 Pair of Wire Dog Staples
			D	0.524	0.052	Butt	1 Pair of 3.15d Nails
			C	0.827	0.778	Butt	1 Pair of 3.15d Nails
J04A	1	1787	B	1.817	1.777	Cross	1 Pair of Wire Dog Staples
			D	0.874	0.320	Butt	1 Pair of 3.15d Nails
J05	1	3177	B	2.402	2.151	Cross	1 Pair of Wire Dog Staples
			F	1.582	1.090	Butt	1 JH 47x90
			D	0.454	0.606	Butt	1 Pair of 3.15d Nails

Capital Precut Solutions

Fixing Report : Page 2

Job: 0812

Client: Carterton ITM Building centre
Phone:

Site:

Description:

Phone:

MITek 2020 - Engineering 4.4 Beta2 (build 1697)

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Truss	Qty	Span (mm)	Joint	Down (kN)	Uplift (kN)	Bearing	----- Fixing -----
J05A	1	3177	B	3.147	2.873	Cross	Qty Selected
			F	2.570	2.006	Butt	1 Pair of Wire Dog Staples
J05B	1	3177	B	3.147	2.873	Cross	1 JH 47x90
			F	2.570	2.006	Butt	1 Pair of Wire Dog Staples
J06	1	2277	B	1.861	1.809	Cross	1 JH 47x90
			D	0.670	0.066	Butt	1 Pair of Wire Dog Staples
			C	0.843	1.072	Butt	1 Pair of 3.15d Nails
J06A	1	2277	B	2.089	2.087	Cross	1 Pair of 3.15d Nails
			F	1.188	0.750	Butt	1 Pair of Wire Dog Staples
J06B	1	2277	B	1.861	1.809	Cross	1 Pair of 3.15d Nails
			D	0.670	0.066	Butt	1 Pair of Wire Dog Staples
			C	0.843	1.072	Butt	1 Pair of 3.15d Nails
J06C	1	2277	B	2.089	2.087	Cross	1 Pair of Wire Dog Staples
			F	1.188	0.750	Butt	1 Pair of 3.15d Nails
J07	1	1377	B	1.337	1.526	Cross	1 Pair of Wire Dog Staples
			D	0.402	0.040	Butt	1 Pair of 3.15d Nails
			C	0.438	0.513	Butt	1 Pair of 3.15d Nails
J07A	1	1377	B	1.332	1.585	Cross	1 Pair of Wire Dog Staples
			D	0.526	0.093	Butt	1 Pair of 3.15d Nails
J07B	1	1377	B	1.337	1.526	Cross	1 Pair of Wire Dog Staples
			D	0.402	0.040	Butt	1 Pair of 3.15d Nails
			C	0.438	0.513	Butt	1 Pair of 3.15d Nails
J07C	1	1377	B	1.332	1.585	Cross	1 Pair of Wire Dog Staples
			D	0.526	0.093	Butt	1 Pair of 3.15d Nails
*R01	1	1440					
*R01A	1	1440					
*R02	1	913					
*R02A	1	913					
*R02B	4	913					
*R03	4	913					
*R04	1	1500					
*R05	1	7811					
*R05A	1	1090					
*R06	10	1110					
*R07	1	6700					
*R08	8	1268					
T01	1	10700	A	6.533	5.141	Cross	1 CT400
			H	6.976	5.871	Cross	1 CT400
T02	1	5500	B	5.145	4.073	Cross	1 CT400
			F	6.149	2.871	Cross	1 Pair of Wire Dog Staples
T03	1	10610	B	2.929	2.753	Cross	1 Pair of Wire Dog Staples
			L	14.888	13.220	Cross	No fixing selected
			S	11.674	9.350	Cross	1 CT400
T04	3	5500	B	3.001	2.724	Cross	3 Pair of Wire Dog Staples
			F	3.001	2.724	Cross	3 Pair of Wire Dog Staples
T05	1D	10700	A	50.223	40.804	Cross	No fixing selected
			J	17.899	14.818	Cross	No fixing selected
T06	1D	10820	A	31.283	25.448	Cross	No fixing selected
			I	31.532	25.854	Butt	No fixing selected
T07	2	10700	K	5.356	4.489	Butt	2 JH 47x90
			I	4.697	4.178	Cross	2 CT400
			B	0.902	1.277	Cross	2 Pair of Wire Dog Staples
T07A	2	10700	K	5.024	4.145	Butt	2 JH 47x90
			I	4.726	4.189	Cross	2 CT400
			B	0.583	0.814	Cross	2 Pair of Wire Dog Staples
T07B	2	10700	J	4.949	4.572	Butt	2 JH 47x90
			H	4.717	4.095	Cross	2 CT400
T07C	6	10700	I	4.333	3.485	Butt	6 JH 47x90
			G	4.751	4.100	Cross	6 CT400
T08	1	6420	B	4.346	3.879	Cross	1 CT400
			F	4.346	3.879	Cross	1 CT400
T09	1	6400	B	7.206	6.268	Cross	1 CT400
			F	7.206	6.268	Cross	1 CT400
T10	1	6614	B	3.997	3.330	Cross	1 CT400
			F	4.174	3.085	Cross	1 Pair of Wire Dog Staples
T11	1	6420	F	2.742	2.201	Cross	1 Pair of Wire Dog Staples
			D	3.192	2.943	Cross	1 Pair of Wire Dog Staples
T12	1	1537	D	1.229	0.405	Cross	1 Pair of Wire Dog Staples
			B	1.429	1.690	Cross	1 Pair of Wire Dog Staples
T13	1	6400	A	3.885	3.048	Cross	1 Pair of Wire Dog Staples
			E	4.353	3.912	Cross	1 CT400
T14	6	6400	B	4.304	3.843	Cross	6 CT400
			F	4.304	3.843	Cross	6 CT400
T15	1	6400	D	2.930	2.875	Cross	1 Pair of Wire Dog Staples
			A	3.011	1.603	Cross	1 Pair of Wire Dog Staples
T16	1	1200	D	0.918	0.222	Butt	1 Pair of 3.15d Nails
			B	1.248	1.578	Cross	1 Pair of Wire Dog Staples
TG01	1	10700	B	10.585	9.644	Cross	1 CT200 pair
			I	11.598	10.318	Cross	1 CT200 pair
TG02	1	10820	A	11.648	10.095	Butt	1 Pair of MultiGrips
			H	12.069	10.335	Butt	1 Pair of MultiGrips
TR01	1	10700	B	6.964	5.945	Cross	1 CT400
			G	6.964	5.945	Cross	1 CT400
TR02	1	10700	B	6.962	5.946	Cross	1 CT400
			G	6.963	5.946	Cross	1 CT400
TR03	1	10820	A	5.066	4.308	Butt	1 JH 47x90
			F	6.520	5.168	Butt	1 JH 47x90
			J	1.650	0.974	Cross	1 Pair of Wire Dog Staples

Job: 0812

Client: Carterton ITM Building centre
Phone:

Site:

Description:

Phone:

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Truss	Qty	Span (mm)	Joint	Down (kN)	Uplift (kN)	Bearing	----- Fixing -----
TR04	1	10820	A	6.616	5.225	Cross	Qty Selected
			F	6.617	5.224	Butt	1 CT400
V01	1	3195	A			Wide	No fixing selected
V02	1	1395	A			Wide	No fixing selected
V03	1	1968	A			Wide	No fixing selected
V04	1	1088	A			Wide	No fixing selected

Fixing List

Qty	Selected Fixing	Cost
72	Pair of Wire Dog Staples	23.04
38	Pair of 3.15d Nails	4.18
29	JH 47x90	27.55
39	CT400	31.20
2	CT200 pair	1.80
2	Pair of MultiGrips	1.44
17	No fixing selected	
Total		89.01

Job: 0812

Client: Carleton ITM Building centre
Phone:

Site:

Description:

Phone:

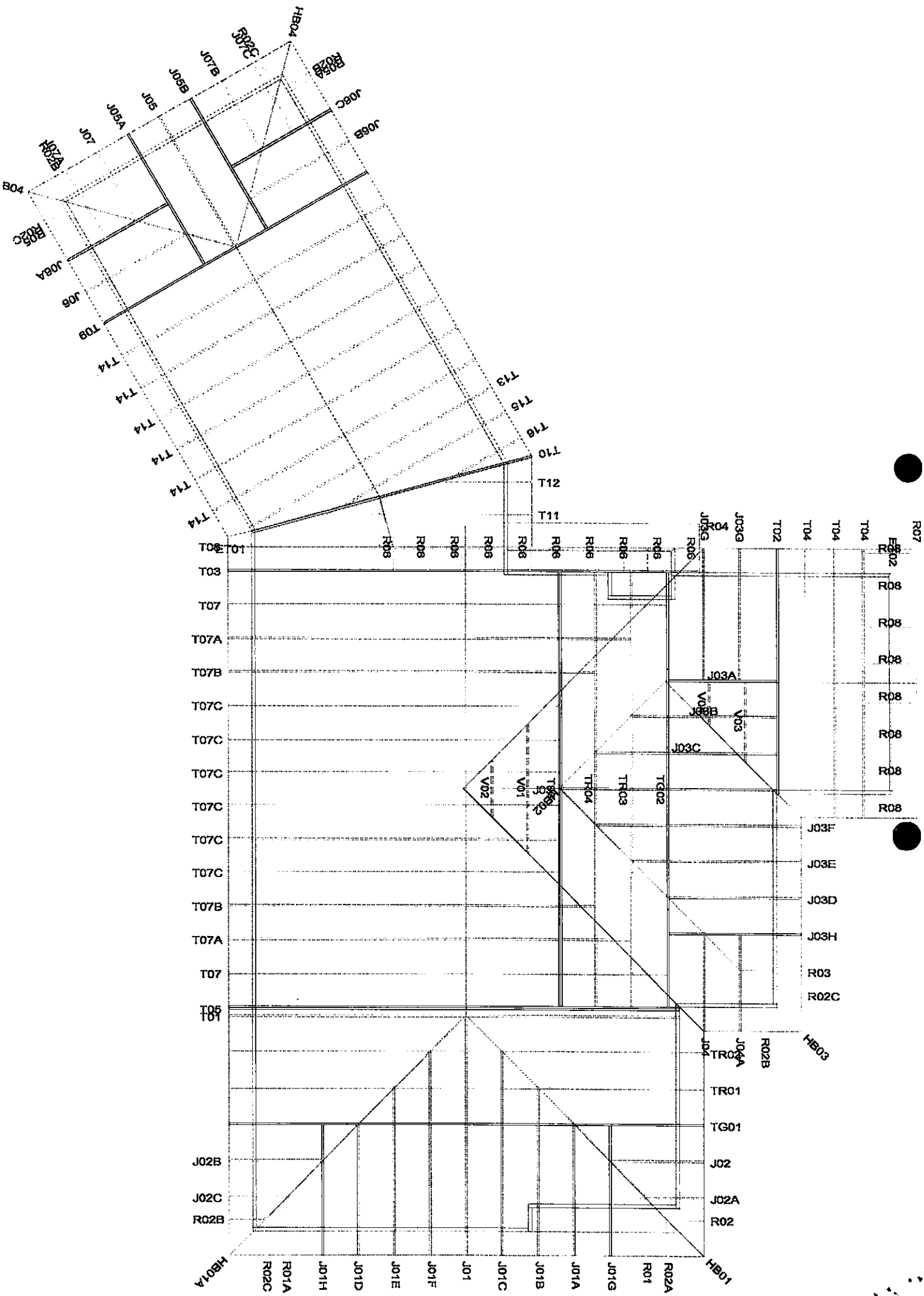
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Note:

- 1) Fixings have been selected based on loading only. Please check that selected fixings are practical for each situation and that appropriate nailing can be applied on site.
- 2) Truss with the strike through denotes failed to design.



GANGLAM

LINTELS

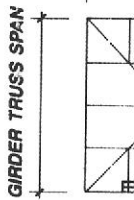
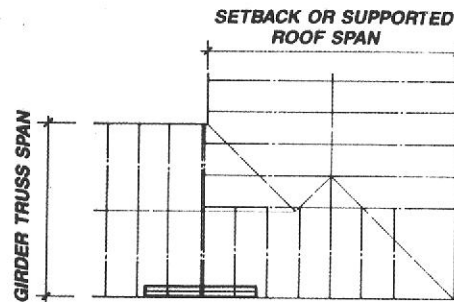
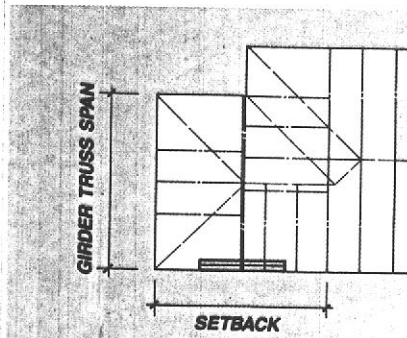


TABLE 7A:
GANGLAM LINTEL SUPPORTING GIRDER/SETBACK TRUSSES WITH LIGHT ROOF

LINTEL SIZE	SETBACK (m)	MAXIMUM LINTEL SPAN (m)										
		GIRDER TRUSS SPAN (m)										
150 x 100	1.2	2.04	1.95	1.87	1.80	1.74	1.69	1.64	1.60	1.56	1.48	1.42
	2.4	1.92	1.82	1.74	1.63	1.49	1.38	1.28	1.20	1.12	1.06	1.00
	3.6	1.83	1.66	1.47	1.32	1.19	1.09	1.00	0.92	0.86	0.80	0.75
	4.8	1.67	1.41	1.23	1.09	0.98	0.88	0.81	0.74	0.68	0.64	0.59
200 x 100	1.2	2.81	2.69	2.59	2.50	2.42	2.35	2.29	2.23	2.18	2.13	2.09
	2.4	2.69	2.56	2.45	2.35	2.27	2.16	2.02	1.90	1.80	1.70	1.62
	3.6	2.58	2.44	2.32	2.11	1.93	1.78	1.65	1.54	1.44	1.35	1.27
	4.8	2.49	2.27	2.01	1.81	1.63	1.49	1.37	1.27	1.18	1.10	1.03
250 x 100	1.2	3.58	3.43	3.31	3.20	3.11	3.02	2.94	2.87	2.80	2.74	2.69
	2.4	3.46	3.30	3.17	3.05	2.94	2.85	2.77	2.65	2.52	2.39	2.28
	3.6	3.35	3.18	3.04	2.91	2.73	2.53	2.36	2.21	2.08	1.97	1.86
	4.8	3.25	3.06	2.87	2.59	2.37	2.18	2.02	1.88	1.75	1.65	1.55
300 x 100	1.2	3.99	3.83	3.69	3.57	3.47	3.37	3.29	3.20	3.13	3.07	3.01
	2.4	3.87	3.69	3.55	3.42	3.31	3.20	3.11	3.03	2.95	2.88	2.82
	3.6	3.75	3.57	3.41	3.28	3.16	3.05	2.96	2.87	2.74	2.60	2.47
	4.8	3.66	3.45	3.29	3.15	3.03	2.89	2.69	2.51	2.36	2.22	2.10
350 x 100	6.0	3.55	3.35	3.18	3.03	2.78	2.56	2.36	2.20	2.05	1.92	1.81
	7.5	3.43	3.22	3.01	2.69	2.43	2.22	2.04	1.88	1.75	-	-
	10.0	3.26	2.99	2.52	2.22	1.99	1.80	-	-	-	-	-
	1.2	4.72	4.54	4.38	4.24	4.12	4.00	3.91	3.81	3.73	3.65	3.58
400 x 100	2.4	4.60	4.40	4.23	4.08	3.95	3.83	3.73	3.63	3.54	3.46	3.39
	3.6	4.48	4.27	4.09	3.94	3.80	3.68	3.57	3.47	3.37	3.21	3.05
	4.8	4.38	4.15	3.97	3.80	3.66	3.53	3.33	3.13	2.94	2.78	2.64
	6.0	4.27	4.04	3.85	3.68	3.46	3.19	2.96	2.76	2.59	2.44	2.30
450 x 100	7.5	4.15	3.91	3.71	3.37	3.06	2.80	2.59	2.40	2.24	2.10	1.97
	10.0	3.96	3.63	3.18	2.83	2.54	2.31	2.11	1.95	1.81	1.68	-
	1.2	5.46	5.24	5.07	4.91	4.77	4.64	4.53	4.42	4.32	4.23	4.15
	2.4	5.33	5.11	4.92	4.75	4.60	4.46	4.34	4.23	4.13	4.04	3.95
500 x 100	3.6	5.21	4.98	4.78	4.60	4.44	4.30	4.18	4.06	3.96	3.79	3.62
	4.8	5.11	4.85	4.64	4.46	4.30	4.15	3.96	3.72	3.52	3.33	3.16
	6.0	4.99	4.73	4.52	4.33	4.12	3.82	3.56	3.33	3.13	2.95	2.79
	7.5	4.87	4.60	4.37	4.04	3.69	3.39	3.14	2.92	2.73	2.56	2.41
550 x 100	10.0	4.67	4.35	3.84	3.43	3.10	2.83	2.59	2.40	2.23	2.08	1.95
	1.2	6.19	5.95	5.76	5.57	5.42	5.27	5.15	5.02	4.92	4.82	4.72
	2.4	6.06	5.81	5.60	5.41	5.25	5.10	4.96	4.84	4.72	4.62	4.52
	3.6	5.95	5.68	5.46	5.26	5.09	4.93	4.79	4.66	4.52	4.31	4.12
600 x 100	4.8	5.84	5.55	5.32	5.12	4.94	4.78	4.52	4.26	4.03	3.82	3.64
	6.0	5.72	5.43	5.19	4.95	4.72	4.38	4.09	3.84	3.61	3.41	3.23
	7.5	5.59	5.29	5.04	4.64	4.25	3.92	3.64	3.39	3.18	2.99	2.82
	10.0	5.39	5.00	4.44	3.99	3.61	3.30	3.04	2.81	2.62	2.45	2.30
650 x 100	1.2	6.92	6.66	6.44	6.24	6.07	5.91	5.77	5.63	5.51	5.40	5.30
	2.4	6.49	6.17	5.94	5.74	5.57	5.42	5.29	5.17	5.07	4.97	4.88
	3.6	6.68	6.39	6.14	5.92	5.73	5.56	5.41	5.26	5.06	4.84	4.63
	4.8	6.57	6.26	6.00	5.78	5.58	5.40	5.09	4.80	4.55	4.32	4.12
700 x 100	6.0	6.45	6.14	5.87	5.64	5.32	4.95	4.63	4.35	4.10	3.88	3.69
	7.5	6.32	5.99	5.72	5.24	4.82	4.46	4.15	3.88	3.64	3.43	3.24
	10.0	6.10	5.66	5.05	4.55	4.14	3.79	3.50	3.24	3.02	2.83	2.66
	1.2	7.56	7.35	7.13	6.91	6.72	6.54	6.39	6.24	6.11	5.98	5.87
750 x 100	2.4	7.00	6.66	6.41	6.19	6.01	5.85	5.71	5.58	5.47	5.37	5.27
	3.6	7.37	7.09	6.83	6.59	6.38	6.19	6.02	5.79	5.52	5.27	5.05
	4.8	7.29	6.96	6.69	6.44	6.23	5.90	5.56	5.25	4.99	4.74	4.53
	6.0	7.18	6.84	6.55	6.27	5.82	5.43	5.09	4.79	4.52	4.28	4.07
800 x 100	7.5	7.04	6.69	6.30	5.76	5.31	4.91	4.58	4.29	4.03	3.80	3.60
	10.0	6.83	6.22	5.56	5.03	4.58	4.21	3.89	3.61	3.37	3.16	2.98
	1.2	8.09	7.87	7.68	7.50	7.35	7.18	7.01	6.85	6.71	6.57	6.45
	2.4	7.51	7.14	6.87	6.64	6.44	6.27	6.12	5.99	5.87	5.76	5.66
850 x 100	3.6	7.91	7.66	7.45	7.25	7.03	6.82	6.58	6.26	5.97	5.72	5.48
	4.8	7.83	7.56	7.34	7.10	6.81	6.40	6.04	5.71	5.43	5.17	4.94
	6.0	7.74	7.47	7.23	6.81	6.33	5.91	5.55	5.23	4.95	4.69	4.46
	7.5	7.63	7.36	6.85	6.28	5.80	5.38	5.02	4.71	4.43	4.18	3.96
900 x 100	10.0	7.47	6.78	6.09	5.51	5.04	4.64	4.29	3.99	3.73	3.51	3.30

Regular duty plating

Heavy duty plating

Super heavy duty plating

Gib® Wall Bracing Calculation Sheet A**single storey****V1.2A****Job Details**

Name	Rhys Scott		
Street and Number	Daffodil Grove		
Lot and DP Number			
City/Town/District	Carterton		
Designer and date	Capital precut solutions	1-Nov-05	

Building Specification

Location of Storey	single	▼	<i>not applicable (single storey building)</i> <i>not applicable (slab)</i>
Floor Loading	2 kPa	▼	
Foundation Type	slab	▼	
Building Height to Apex (m)	6	▼	
Roof Height above Eaves (m)	3	▼	
Stud Height (m)	2.4	▼	
Cladding Weight (top or single)	heavy	▼	
Cladding Weight (lower)	light	▼	
Cladding Weight (subfloor)	light	▼	
Roof Weight	light	▼	
Roof Pitch (degrees)	0-25	▼	
Room in Roof Space	no	▼	
Building Length (m)	29		
Building Width (m)	21		
Gross Building Plan Area (m2)	265		

Building Location

Wind Zone	High		Earthquake Zone	
Region	R1	▼	A	▼
Terrain	Inland	▼		
Exposure	Exposed	▼		
Topography	Moderate	▼		

Bracing Units required for Wind

per m	subfloor	walls
W along	n/a	78 BUs/m
W across	n/a	78 BUs/m
Totals	subfloor	walls
W along	n/a	1638 BUs
W across	n/a	2262 BUs

Bracing Units required for Earthquake

per m2	subfloor	walls
E	n/a	5.2 BUs/m2
Totals	subfloor	walls
E along	n/a	1378 BUs
E across	n/a	1378 BUs

V1.2A

						Wind	Earthq.
Totals Achieved						2360	1791
						OK	OK
Totals Required (from Sheet A)						2262	1378

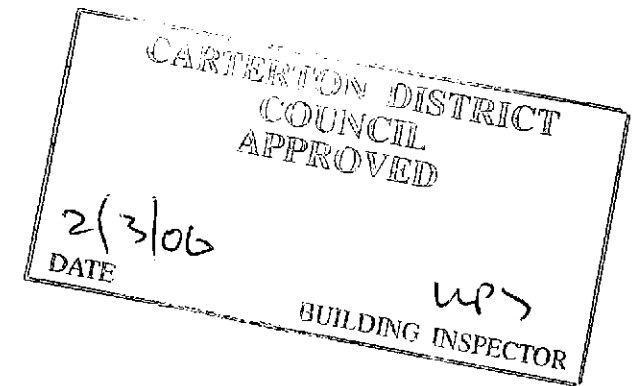
Gib® Wall Bracing Calculation Sheet B

single storey

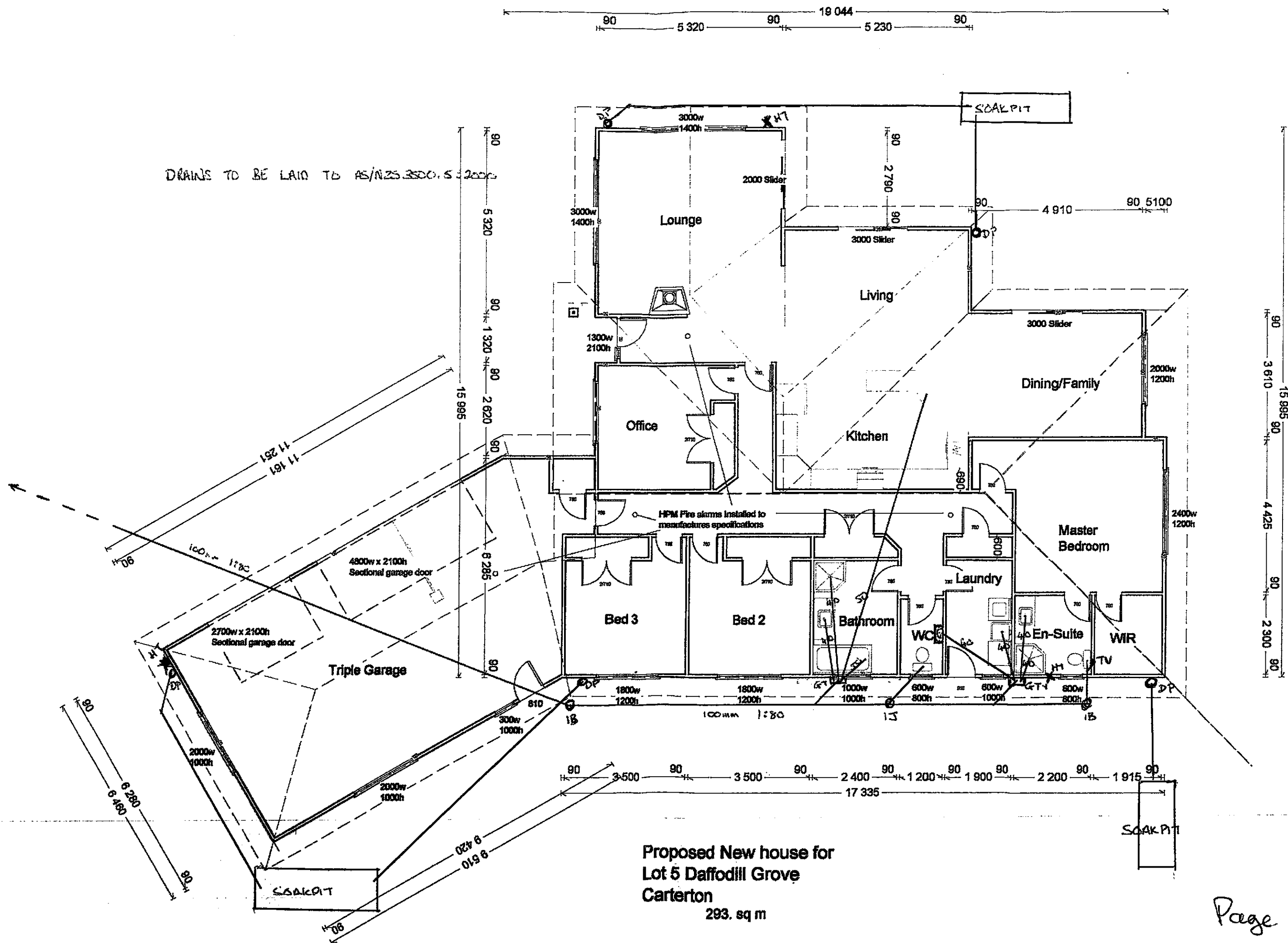
V1.2A

Along								
Wall or Bracing Line		Bracing Elements provided					Wind	Earthq.
1	2	3	4	5	6	7	8W	9EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Element Length L (m)	Element Height H (m)	BUs Achieved	BUs Achieved
A	enter	1	Gib®	BR5	▼ 1.6	2.4	184	136
		2	Gib®	BR5	▼ 1.6	2.4	184	136
		3		none	▼	2.4		
line totals		4		none	▼	2.4		
W	368	5		none	▼	2.4		
EQ	272	6		none	▼	2.4		
B	enter	1	Gib®	Gib1b	▼ 3.2	2.4	240	160
		2	Gib®	BR5	▼ 1.2	2.4	138	102
		3		none	▼	2.4		
line totals		4		none	▼	2.4		
W	378	5		none	▼	2.4		
EQ	282	6		none	▼	2.4		
C	enter	1	Gib®	Gib1a	▼ 2.4	2.4	132	120
		2	Gib®	Gib3	▼ 3.5	2.4	228	210
		3	Gib®	Gib3	▼ 5.6	2.4	364	336
line totals		4	Gib®	Gib3	▼ 4.6	2.4	299	276
W	1023	5		none	▼	2.4		
EQ	942	6		none	▼	2.4		
D	enter	1	Gib®	BR5	▼ 1.3	2.4	150	111
		2	Gib®	Gib1a	▼ 1.8	2.4	99	90
		3	Gib®	Gib1a	▼ 2.4	2.4	132	120
line totals		4		none	▼	2.4		
W	381	5		none	▼	2.4		
EQ	321	6		none	▼	2.4		
E	enter	1	Gib®	Gib1b	▼ 3.3	2.4	248	165
		2		none	▼	2.4		
		3		none	▼	2.4		
line totals		4		none	▼	2.4		
W	248	5		none	▼	2.4		
EQ	165	6		none	▼	2.4		
Totals Achieved							Wind 2397	Earthq. 1962
Totals Required (from Sheet A)							OK 1638	OK 1378

PROPOSED NEW DWELLING

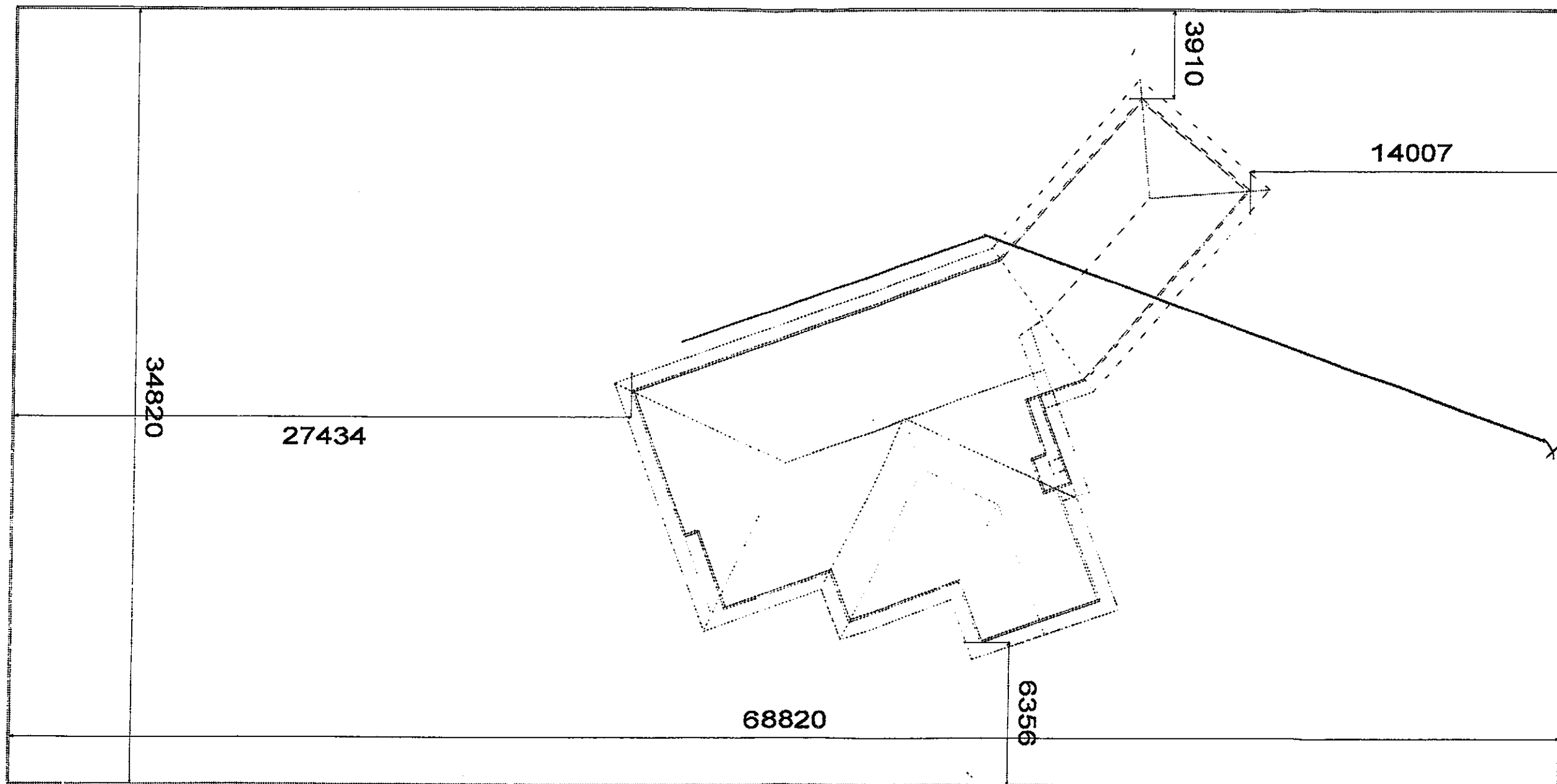


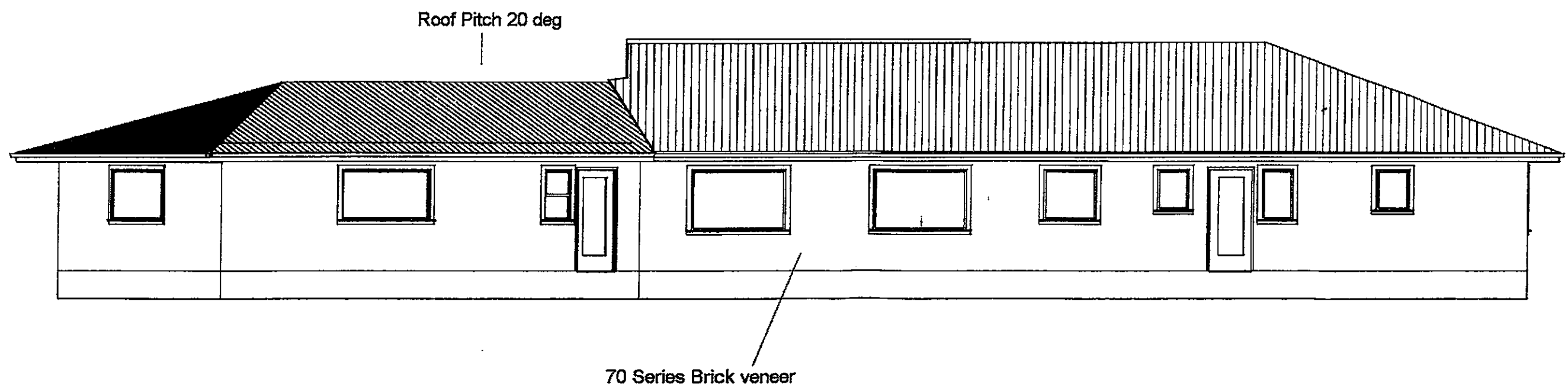
For Mr R Scott
Lot 5 Daffodill Grove
CARTERTON



Proposed New house for
 Lot 5 Daffodill Grove
 Carterton
 293. sq m

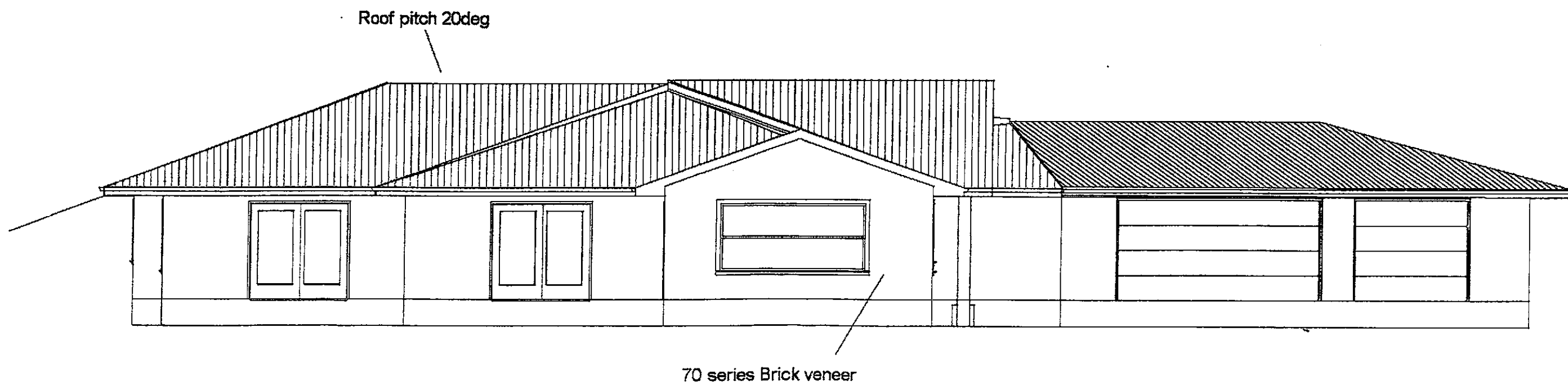
Daffodill Grove





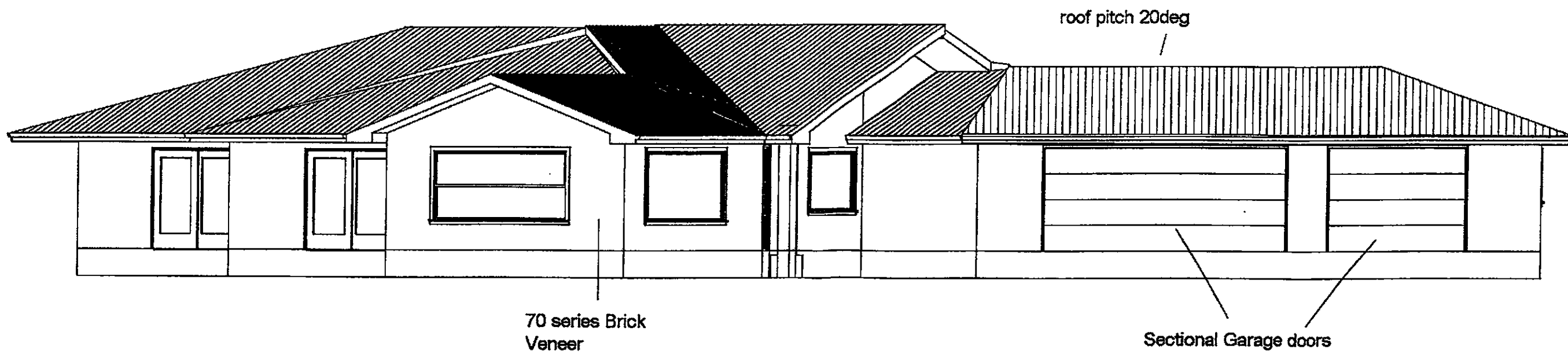
Scale 1:100

ELEVATIONS

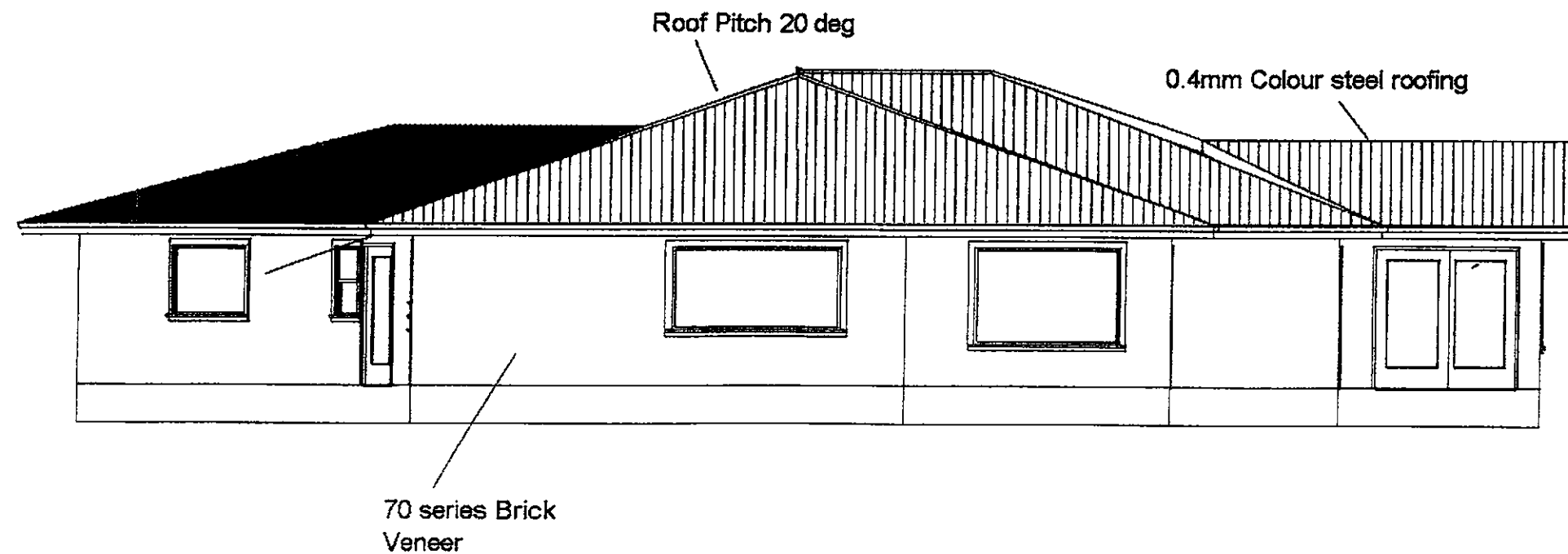


Scale 1:100

Page ④

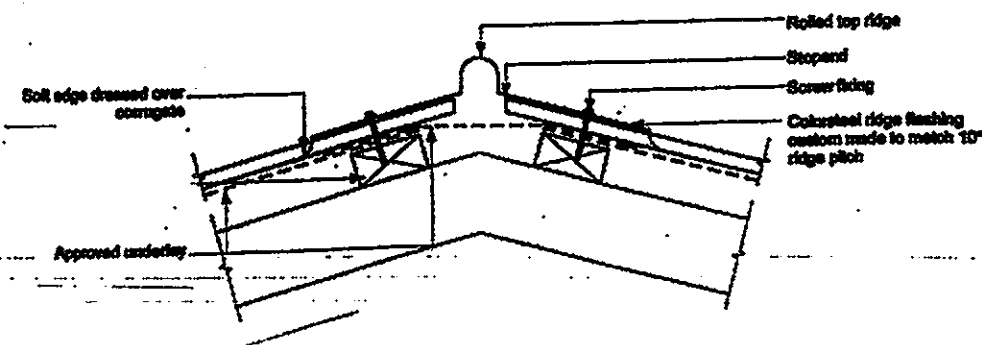


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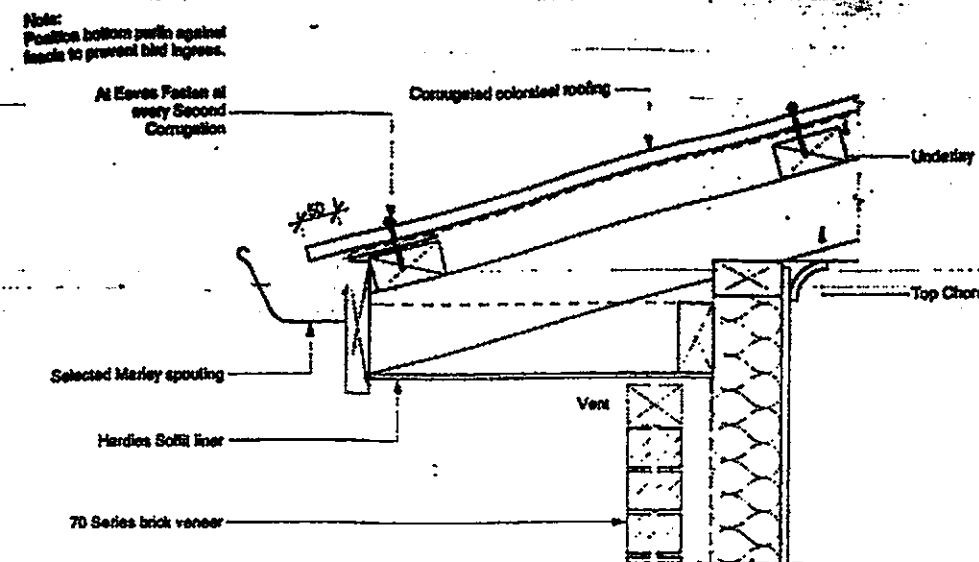


Scale 1:100

Page 6



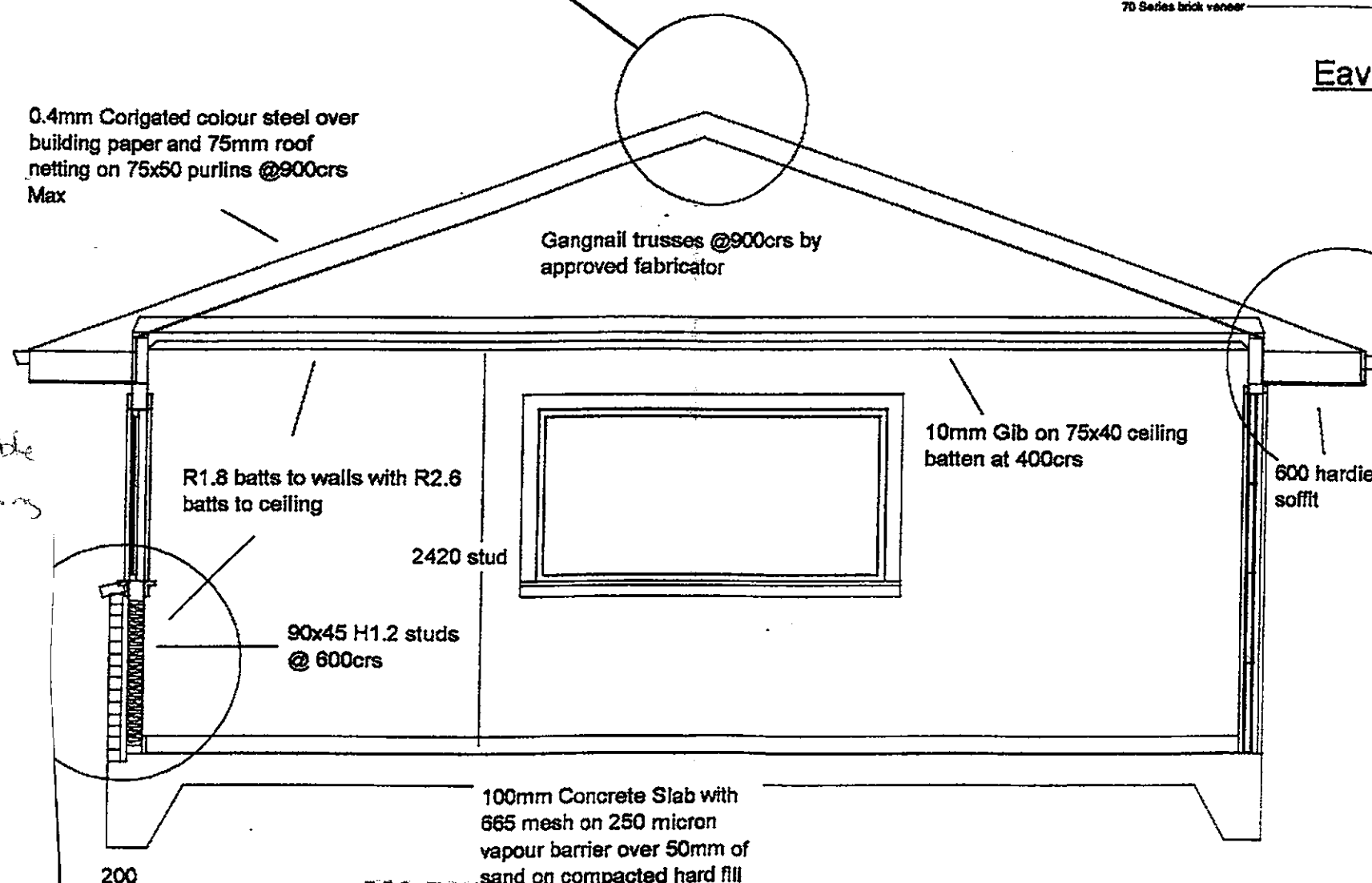
Ridge and hip Flashings
Scale 1:10



Eave detail for 70 Series brick
Scale 1:10

0.4mm Corrugated colour steel over building paper and 75mm roof netting on 75x50 purlins @900crs Max

Gangnail trusses @900crs by approved fabricator



no sealant in gap left between window face and brick sill

brick sill on slope (15° min.) with overhang (typically 30-50 mm)

20 mm gap

matchhold flashing under window with drip edge into cavity and extending 200 mm past each side of opening

no vent hole or weep hole required in perpend directly below window as flashing is not embedded in mortar joint

H3.1 treated tilting filler to ensure 15 mm min. drip edge is maintained for flashing

flexible flashing tape

Figure 4: Detail of window sill.

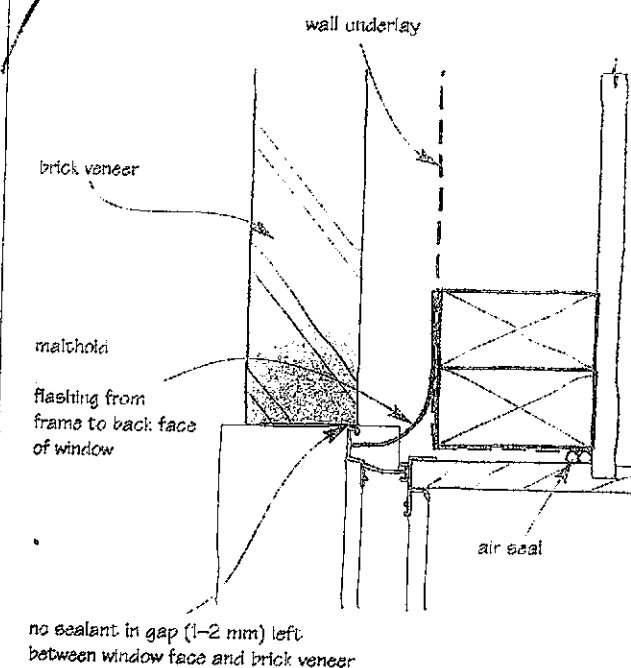
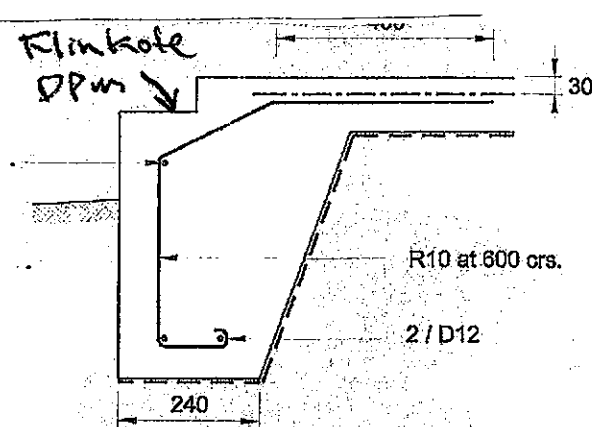
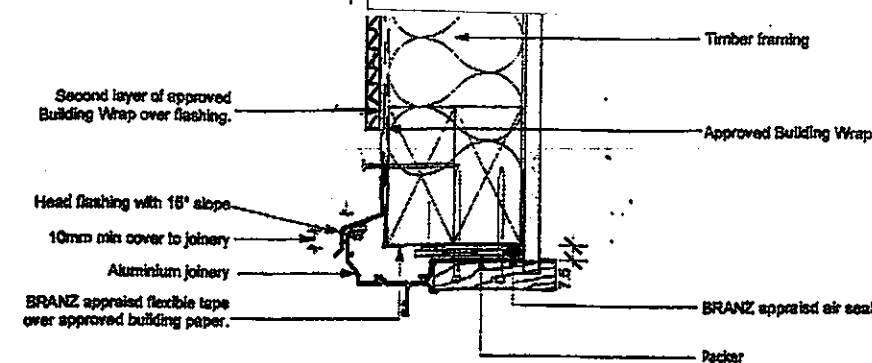


Figure 3: Detail of window jamb.



Head Flashing
Scale 1:5

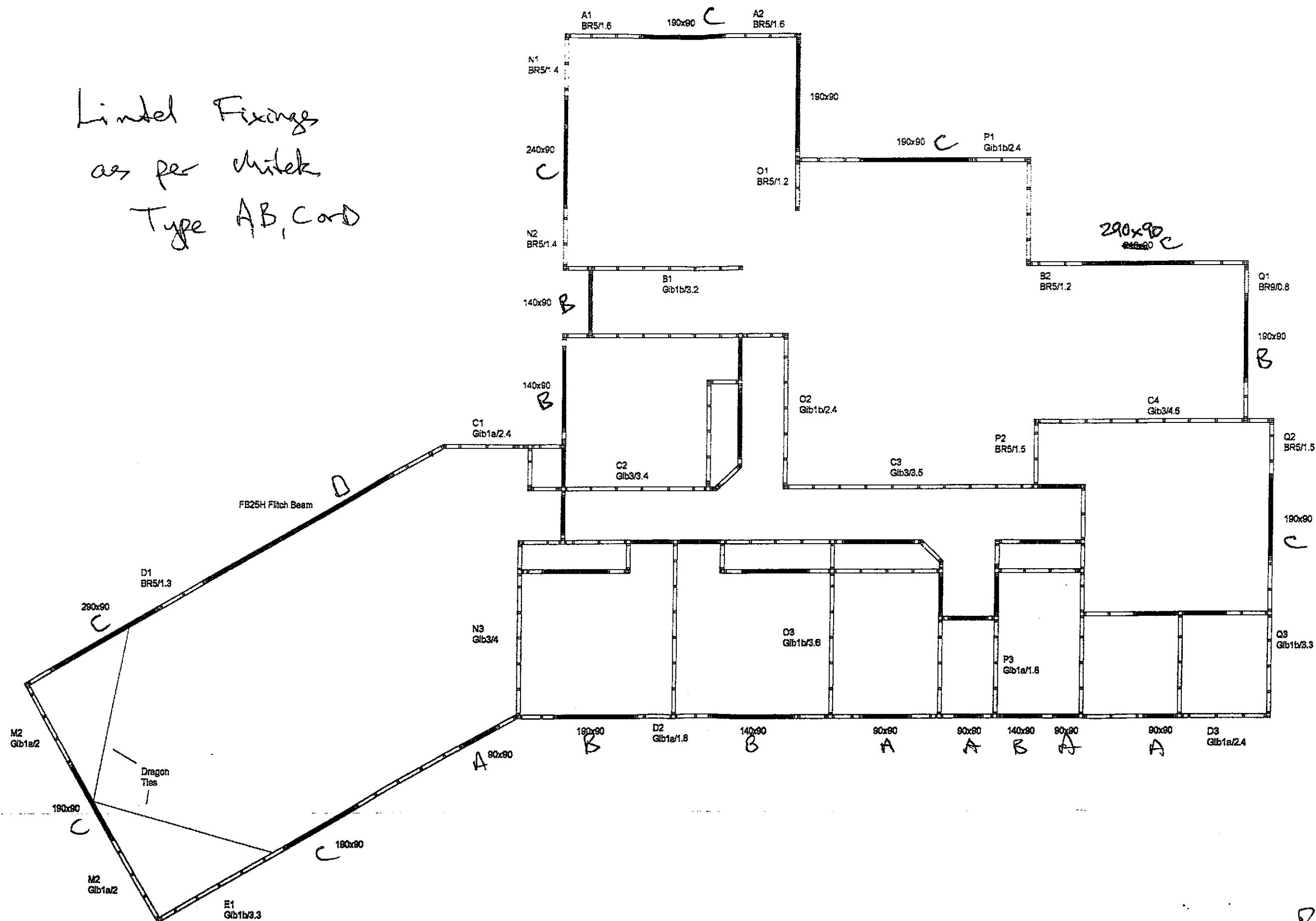
7.5.2 Finished floor levels and foundation edge construction

7.5.2.1

The finished concrete floor level of a slab-on-ground floor shall be a minimum height above the ground level as follows:

- Where the adjoining ground is protected by permanent paving:
 - Masonry veneer exterior wall covering: 100 mm where the adjoining ground adjacent to the permanent paving is at least 150 mm below floor level;
- Where the adjoining ground is not protected by permanent paving:
 - Masonry veneer exterior wall covering: 150 mm;

Lintel Fixings
as per detail
Type AB, C and





Applicants Name: Scott Consent no. 060012

Job Address: 10 Daffodil grove.

Inspecting Officer: Jim Taphin Date of Inspection: 13-06-06

Internal Preline

Exterior Cladding Finished	☐	Timber Treatments	☒
Bracing Element Fixings	☒	Ceiling Insulation	☒
Post Fixings	☐	Wall Insulation	☐
Moisture Content	<u>14 %</u>	Ceiling Battens	☒
Air Seals	☐		

COMMENTS: closed in with Paper, Windows
to be fitted

Internal Preline Plumbing

Plumber: _____

Pressure Test	☐	Joint Strain	☐
Visual Leak Check	☐	Pipe Support/ Clips	☐
Stacks	☐	Holes Notching	☐
Pipe Size	☐	Wastes	☐
Pipe Material	☐	Supply Tank	☐

COMMENTS: _____

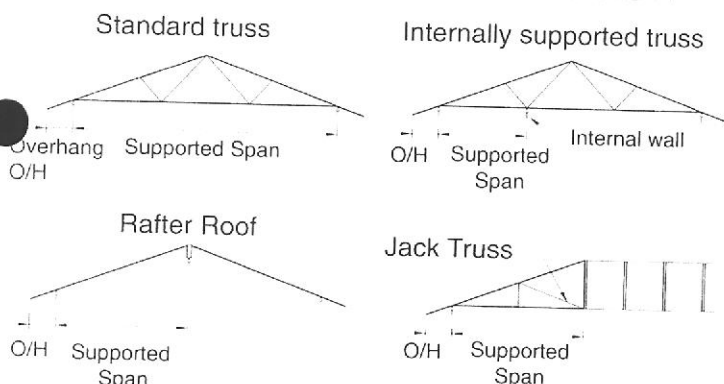


STUD TO TOP PLATE FIXING SCHEDULE (ALTERNATIVE TO NZS 3604:1999 TABLE 8.18)

NOTE:

- All fixings are designed for vertical loads only. Dead loads include the roof weight and standard ceiling weight of 0.20kPa. Refer to table 8.19, NZS3604:1999 for nailing schedule to resist horizontal loads.
- These fixings assume the correct choice of rafter/truss to top plate connections have been made. Refer to the **LUMBERLOK®** Truss Fixing Chart.
- Gable end wall top plate/stud connections require only 2x90x3.33 nails driven vertically into stud through top plate.
- All Fixings assume top plate thickness of 45mm maximum.
- Wall framing arrangements under girder trusses are not covered in this schedule.

LOADED DIMENSION DEFINITION



$$\text{LOADED DIMENSION} = \frac{\text{SUPPORTED SPAN}}{2} + \text{OVERHANG}$$

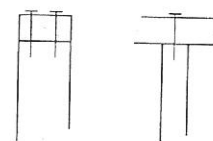
SELECTION CHART FOR FIXING LOADS - TOP PLATE TO STUD

Loaded Dimension	Light Roof Wind Zone				Heavy Roof Wind Zone			
	L	M	H	VH	L	M	H	VH
1.5	A	A	B	B	A	A	B	B
2.0	A	B	B	C	A	A	B	B
2.5	A	B	C	C	A	A	B	C
3.0	B	B	C	D	A	A	B	C
3.5	B	B	C	D	A	A	B	D
4.0	B	C	D	D	A	A	C	D
4.5	B	C	D	D	A	B	C	D
5.0	B	C	D	D	A	B	C	D
5.5	B	C	D	D	A	B	C	D
6.0	B	C	D	-	A	B	D	D

- All studs at 600 crs.
- For studs at 400 crs decrease loaded dimension by 33%.
- All trusses at 900 crs.
- For trusses at 1200 crs increase loaded dimension by 33%.

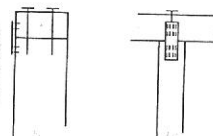
FIXING OPTIONS

FIXING TYPE A
0.7kN



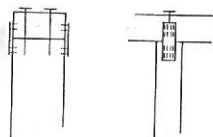
2/90x3.33 plain steel wire nails driven vertically into stud.

FIXING TYPE B
1.7kN



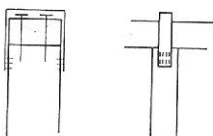
2/90x3.33 plain steel wire nails driven vertically into stud, plus single TYLOK 2T4 plate.

FIXING TYPE C
2.7kN

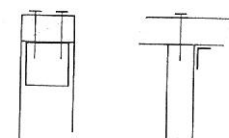


2/90x3.33 plain steel wire nails driven vertically into stud, plus pair TYLOK 2T4 plates.

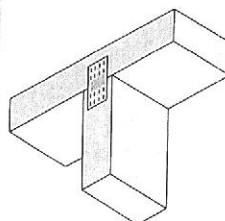
FIXING TYPE D
6.0kN



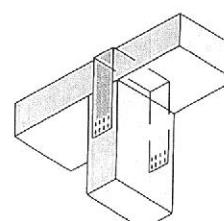
2/90x3.33 plain steel wire nails driven vertically into stud, plus TYLOK Stud tie.
OR
Sheet brace strap 400 with 6/30x3.15 nails each stud face.



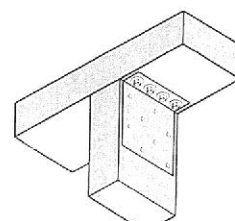
2/90x3.33 plain steel wire nails driven vertically into stud, plus 6kN Stud Anchor.



TYLOK 2T4



TYLOK STUD TIE
OR
SHEET BRACE STRAP 400



6kN STUD ANCHOR



HOME OF GANG-NAIL® BUILDING SYSTEMS

MiTek New Zealand Ltd.

AUCKLAND
PO Box 58-014, Greenmount
Phone: (09) 274 7109
Fax: (09) 274 7100

CHRISTCHURCH
PO Box 8387, Riccarton
Phone: (03) 348 8691
Fax: (03) 348 0314

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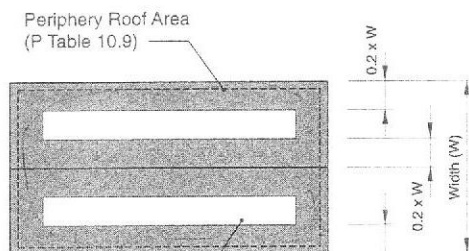
PURLIN & BATTEN FIXING CHART

02/4

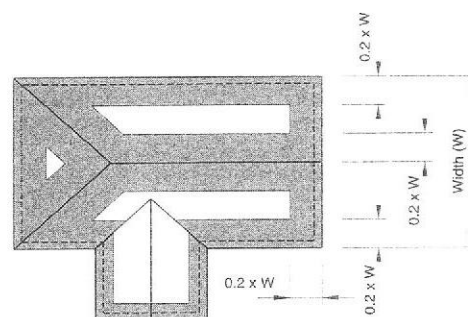
(COMPLIES WITH NZS 3604:1999 TABLE 10.10)

NOTE:

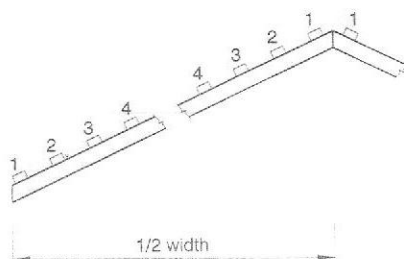
- ★ Max. truss overall roof span 12m
- ★ All purlin and batten sizes as NZS 3604:1999 Section 10.
- ★ These fixings assume purlin or battens are fixed over top of truss or rafter.



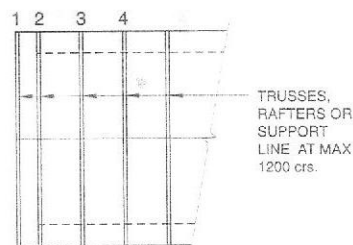
PLAN GABLE



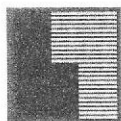
PLAN HIP ENDS



PURLIN LAYOUT (MAX 1200 crs.)



LAYOUT ON GABLE END



SELECTION CHART (minimum requirements)

1. **HEAVY ROOFS**
All purlins and/or battens use fixing Type A only on roof width (w) up to 12m.
2. **LIGHT ROOFS**
 - A. **BATTENS** - Max. span 1200
- Max crs. 400
- Roof width (w) up to 12m.
L & M wind loads use Type B fixing on all battens.
H & VH wind loads use Type C on all battens.
 - B. **PURLINS** - Max. span 1200, Max crs. 900 or
- Max. span. 900, Max crs. 1200
L & M wind loads use Type C fixing on purlin No.2 and Type B on all other purlins for all roof widths (w) up to 12m.
H & VH wind loads
1. On roof width (w) up to 8m;
Use Type D fixing on purlin No. 2 and Type C on all other purlins.
2. On roof width (w) up to 12m;
Use Type D fixing on purlins No. 2 & 3 and Type C on all other purlins.
 - C. **PURLINS AND BATTENS ON GABLE END**
- Max. span 1200, Max crs. 900 or
- Max. span. 900, Max crs. 1200
L & M wind loads use Type B fixing on support line No. 1, Type C on support lines No. 2, 3, & 4 and all other support lines as per Section A or B above.
H & VH wind loads use Type C fixing on support line No. 1, Type D on support lines No. 2, 3, & 4 and all other support lines as per Section A or B above.

STANDARD FIXING OPTIONS

FIXING DEFINITIONS

NAIL = Either 90 x 3.15 Power driven
or 100 x 3.75 Hand driven
SCREW = 100 x 10 gauge LUMBERLOK Purlin screw
WIREDOG = Either left hand or right hand LUMBERLOK wiredog.

FIXING TYPE A
0.40kN

1 NAIL



FIXING TYPE B
0.70kN

2 NAILS



FIXING TYPE C
1.20kN

3 NAILS

OR

1 NAIL + 1 SCREW



FIXING TYPE D
2.00kN

2 NAILS + 1 WIREDOG
OR
2 SCREWS

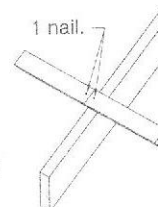


PURLIN / BATTEN SPLICE FIXING OPTIONS

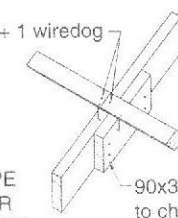
NOTE:

Skew nail when fixing to 35mm rafter or truss.

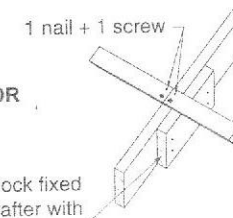
FIXING TYPE
A & B OVER
PURLIN SPLICE



FIXING TYPE
C & D OVER
PURLIN SPLICE



OR



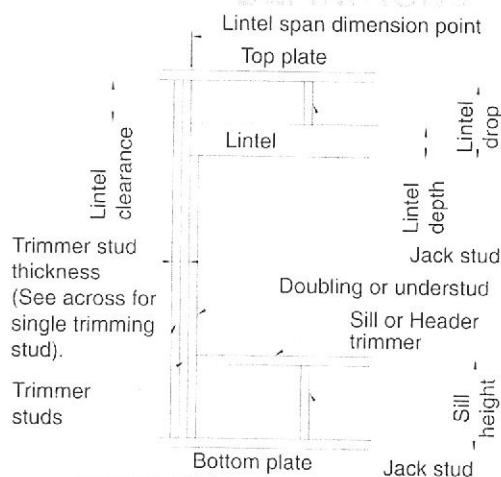
90x35mm block fixed to chord or rafter with 4/75mm nails.



LINTEL FIXING SCHEDULE

(ALTERNATIVE TO NZS 3604:1999 TABLE 8.14 & FIGURE 8.12)

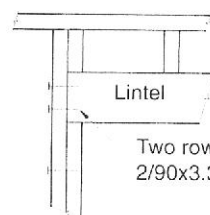
DEFINITIONS



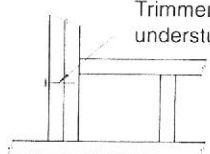
LINTEL FIXING TYPES

TYPE A

1.4kN



Two rows of 2/90x3.3 nails.

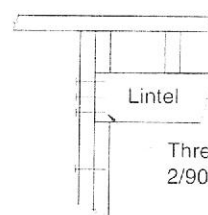


Three sets of 2/90x3.33 nails.
Trimmer stud to understud.

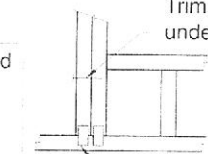
Fixing of jack stud to lintel & top plate, as per top plate schedule, see reverse side.

TYPE B

4.0kN



Three rows of 2/90x3.3 nails.



Three sets of 2/90x3.33 nails.
Trimmer stud to understud.

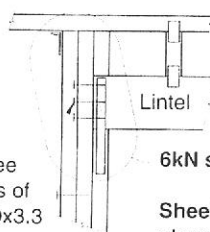
Two TYLOK 2T4s one side of stud.

"All other nailing as Table 8.19"

"All other nailing as Table 8.19"

TYPE C

7.5kN



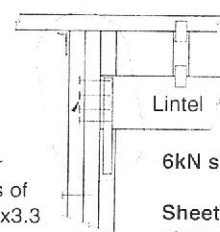
Three rows of 2/90x3.3 nails.

6kN stud anchor
OR
Sheet brace strap 400 one face of stud & lintel, 6/30x3.15 nails each end
OR
TYLOK Stud tie.

"All other nailing as Table 8.19"

TYPE D

13.5kN

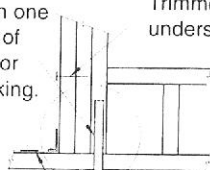


Four rows of 2/90x3.3 nails.

6kN stud anchor
OR
Sheet brace strap 400 one face of stud & lintel, 6/30x3.15 nails each end
OR
TYLOK Stud tie.

"All other nailing as Table 8.19"

For timber floors run the strap down one face of joist or blocking.

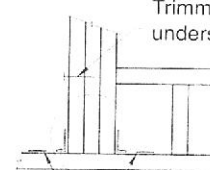


Min. M12 bolt with 50x50x3 washer to concrete floor.

Three sets of 2/90x3.33 nails.
Trimmer stud to understud.

6kN stud anchor
OR
Sheet brace strap 400 wrap around bottom plate. 6/30x3.15 nails each end
OR
TYLOK Stud tie.

Three sets of 2/90x3.33 nails.
Trimmer stud to understud.



Min. M12 bolt with 50x50x3 washer to concrete floor.
Pair 6kN stud anchors.

Lintel Span	Loaded Dimension *See reverse side	Light Roof Wind Zone				Heavy Roof Wind Zone			
		L	M	H	VH	L	M	H	VH
1.5	2.0	A	A	B	B	A	A	B	B
	3.0	A	B	B	C	A	A	B	B
	4.0	A	B	C	C	A	A	B	C
	5.0	B	B	C	C	A	A	C	C
	6.0	B	B	C	D	A	A	C	C
2.0	2.0	A	B	B	C	A	A	B	B
	3.0	A	B	C	C	A	A	B	C
	4.0	B	B	C	C	A	A	C	C
	5.0	B	C	C	D	A	A	C	C
	6.0	B	C	C	D	A	B	C	D
2.4	2.0	A	B	B	C	A	A	B	B
	3.0	B	B	C	C	A	A	C	C
	4.0	B	C	C	D	A	A	C	C
	5.0	B	C	C	D	A	B	C	D
	6.0	B	C	C	D	A	B	C	D
3.0	2.0	A	B	C	C	A	A	B	C
	3.0	B	B	C	D	A	A	C	C
	4.0	B	C	C	D	A	B	C	D
	5.0	B	C	D	D	A	B	C	D
	6.0	C	C	D	-	A	B	D	D
3.6	2.0	B	B	C	C	A	A	B	C
	3.0	B	C	C	D	A	B	C	C
	4.0	B	C	D	D	A	B	C	D
	5.0	C	C	D	-	A	B	D	D
	6.0	C	D	D	-	A	B	D	-
4.2	2.0	B	B	C	C	A	A	C	C
	3.0	B	C	D	D	A	B	C	D
	4.0	C	C	D	-	A	B	D	D
	5.0	C	D	D	-	A	B	D	-
	6.0	C	D	-	-	A	C	D	-
4.8	2.0	B	C	C	D	A	A	C	C
	3.0	B	C	D	D	A	B	C	D
	4.0	C	C	D	-	A	B	D	D
	5.0	C	D	-	-	A	B	D	-
	6.0	C	D	-	-	A	C	D	-

NOTES:

- Lintels accepting Girder trusses for ALL load cases use:
- Fixing type C where contributory area = 10m²
- Fixing type D where contributory area = 20m²
- All cases outside this require specific design



HOME OF GANG-NAIL® BUILDING SYSTEMS

MiTek New Zealand Ltd.

AUCKLAND
PO Box 58-014, Greenmount
Phone: (09) 274 7109
Fax: (09) 274 7100

www.mitek.nz.co.nz

CHRISTCHURCH
PO Box 8387, Riccarton
Phone: (03) 348 8691
Fax: (03) 348 0314

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MiTek New Zealand Ltd.



Applicants

Name:

Scott

Consent no.

060012

~~060153~~

Job Address:

10 Daffodil grove

Inspecting Officer:

Jim Taphin

Date of Inspection:

7-07-06

Internal Preline

Exterior Cladding Finished

☐

Bracing Element Fixings

☐

Post Fixings

☐

Moisture Content

%

Air Seals

☐

Timber Treatments

☐

Ceiling Insulation

☐

Wall Insulation

☐

Ceiling Battens

☐

COMMENTS:

Internal Preline Plumbing

Plumber:

Carterton Plumbers

Pressure Test

☒

Visual Leak Check

☒

Stacks

☐

Pipe Size

☒

Pipe Material

☒

Joint Strain

☒

Pipe Support/ Clips

☒

Holes Notching

☒

Wastes

☐

Supply Tank

☐

gas

COMMENTS:



Applicants Name: Scott Consent no. 060012

Job Address: 10 Daffodil grove.

Inspecting Officer: Jim Taphin Date of Inspection: 13-06-06

Internal Preline

Exterior Cladding Finished	☐	Timber Treatments	☒
Bracing Element Fixings	☒	Ceiling Insulation	☒
Post Fixings	☐	Wall Insulation	☐
Moisture Content	<u>14 %</u>	Ceiling Battens	☒
Air Seals	☐		

COMMENTS: closed in with Paper, windows
to be fitted

Internal Preline Plumbing

Plumber: _____

Pressure Test	☐	Joint Strain	☐
Visual Leak Check	☐	Pipe Support/ Clips	☐
Stacks	☐	Holes Notching	☐
Pipe Size	☐	Wastes	☐
Pipe Material	☐	Supply Tank	☐

COMMENTS: _____

Final Inspection

Applicants Name: Scott Consent no. 060012

Job Address: 10 Dofadell grove

Inspecting Officer: Jim Taffin Date of Inspection: 21-05-07
Bruce Livingston

Has the Form 6 (Application for CCC) been received Yes / No

Building Exterior

Subfloor Ventilation	☐	Flashings - Roof	☒
Decks - Structure	☐	Cladding	☐
Balustrades - Design	☐	Roofing and Fixings	☒
- Height	☐	Gully Dishes	☒
Steps/Stairs - Design	☐	Wastes to Gullies	☒
- Handrail	☐	Terminals Vents	☒
Flashings - Windows	☒	Spouting - Downpipes	☒
Landscaping and Ground levels	☒	Texture Coating Warranty	☐
Roof Warranty	☐	Electrical Certificate	☒
Gas Certificate	☒	Drainage Backfilling	☒
Septic Tank	☒		

Building Interior

Service Area - Floors, Walls & Ceilings

• Kitchen	☒	Nat. Ventilation	☒	Hot Water Cylinder:	
• Bathroom	☒	Mech. Ventilation	☐	• Venting	☐
• WC	☒	Lighting	☒	• Valves	☐
• Laundry	☒	Ceiling Insulation	☒	• Seismic Restraint	☐
Cooking Facilities	☒	Safety Glass	☐	Supply Tank	☐
Food Storage	☒	Stairs:		Traps & AAV's	☐
Laundering	☐	• Design	☐	WC Pan:	
Smoke Alarm	☒	• Handrails	☐	• Fixings	☒
				• Flushing	☒
				• Silicone	☒
				Water Temperature	☒

COMMENTS: Ridge Caps, Tub screwed to Wall.
Drain in Garage to be fixed to floor
Electrical Certificate, gas Certificate
Te Cap to Kitchen Unit



Applicants Name: Scott Consent no. 060012

Job Address: 10 Daffodil grove

Inspecting Officer: Jim Taffin Date of Inspection: 15-05-06

External Framing Fixings

Timber Treatment	☒	Rafter/Truss to Top Plate	☒
Stud to Floor	☒	Rafter/Trusses to Purlins	☒
Lintel to Stud/Jackstud	☒	Straps for bracing Panels	☒
Lintel to Top Plate	☒	Studs - Size/Spacing	☒
Stud to Top Plate	☒	Lintels/Beams - Size/Spacing	☒
Bottom Plate Fixings	☒	Rafter/Truss - Size/Spacing	☒
Post Fixings	☐	Purlin - Size/Spacing	☒

COMMENTS: _____

External Preline / Post Wrap Window Flashings

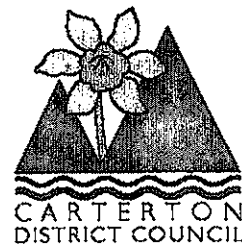
Building Wrap Tape	☐	Corner Backflashings	☐
Window Flashing Tape	☐	Cavity Battens	☐
Window Flashing - Sill	☐	Penetrations	☐
Window Flashing - Head	☐	Window Flashing - Jambes	☐

COMMENTS: _____

Brick and ½ high

40 mm Cavity Gap	☐	Cavity Cleaning	☐
Brick Ties	☐	Weep Holes	☐

COMMENTS: _____



Foundation Checklist

Applicants Name: Scott Consent no. 060012

Job Address: 10 Daffodil

Inspecting Officer: Mike Sims Date of inspection: 6/04/06

Are The Approved Building Consent Documents On Site? YES / NO

Check Boundary Dimensions:

Front Yard	☐	Left Hand Side Yard	☐
Rear Yard	☐	Right Hand Side Yard	☐

File Foundations

File Hole Size	☐	Anchor Pile Size / Spaces	☐
File Hole Spacing	☐	Ground Bearing	☐

Concrete Or Block Foundation Wall

Ground Bearing	☐	Reinforcing	☐
Footing Depth	☐	Reinforcing Chairs & Cover	☐
Footing Width	☐	Subfloor Vents	☐

Concrete Slab

Ground Bearing	☐	Slab Reinforcing	☒
Footing Depth	☐	Reinforcing Chairs & Cover	☒
Footing Width	☐	Min. Height Above FGL	☒
Footing Reinforcing	☐	DPC	☒
Slab Thickening	☐	Joints Taped	☒
Thickening	☐	Penetrations Taped	☒
Reinforcing	☐		

Underslab Plumbing

Pipe sizes	☐
Falls	☐
Pipe protection	☐

Underslab Drainage

Pipe sizes	☐
Falls	☐
Pipe protection	☐

COMMENTS: _____



Foundation Checklist

Applicants

Name: scott Consent no. 060012

Job Address: 10 Daffodil grove

Inspecting

Officer: L Daphin Date of inspection: 4-4-06

Are The Approved Building Consent Documents On Site? YES / NO

Check Boundary Dimensions:

Front Yard	☐	Left Hand Side Yard	☐
Rear Yard	☐	Right Hand Side Yard	☐

File Foundations

File Hole Size	☐	Anchor Pile Size / Spaces	☐
File Hole Spacing	☐	Ground Bearing	☐

Concrete Or Block Foundation Wall

Ground Bearing	☐	Reinforcing	☐
Footing Depth	☐	Reinforcing Chairs & Cover	☐
Footing Width	☐	Subfloor Vents	☐

Concrete Slab

Ground Bearing	☐	Slab Reinforcing	☐
Footing Depth	☐	Reinforcing Chairs & Cover	☐
Footing Width	☐	Min. Height Above FGL	☐
Footing Reinforcing	☐	DPC	☐
Slab Thickening	☐	Joints Taped	☐
Thickening Reinforcing	☐	Penetrations Taped	☐

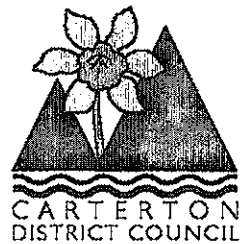
Underslab Plumbing

Pipe sizes	☒
Falls	☒
Pipe protection	☒

Underslab Drainage

Pipe sizes	☒
Falls	☒
Pipe protection	☒

COMMENTS:



Foundation Checklist

Applicants

Name: Scott Consent no. 060012

Job Address: 10 Daffodil

Inspecting Officer: Nike Sun Date of inspection: 15/3/06

Are The Approved Building Consent Documents On Site? YES/NO

Check Boundary Dimensions:

Front Yard	☒	Left Hand Side Yard	☒
Rear Yard	☐	Right Hand Side Yard	☒

File Foundations

Pile Hole Size	☐	Anchor Pile Size / Spaces	☐
Pile Hole Spacing	☐	Ground Bearing	☐

Concrete Or Block Foundation Wall

Ground Bearing	☒	Reinforcing	☒
Footing Depth	☒	Reinforcing Chairs & Cover	☒
Footing Width	☒	Subfloor Vents	☐

Concrete Slab

Ground Bearing	☐	Slab Reinforcing	☐
Footing Depth	☐	Reinforcing Chairs & Cover	☐
Footing Width	☐	Min. Height Above FGL	☐
Footing Reinforcing	☐	DPC	☐
Slab Thickening	☐	Joints Taped	☐
Thickening	☐	Penetrations Taped	☐
Reinforcing	☐		

Underslab Plumbing

Pipe sizes	☐
Falls	☐
Pipe protection	☐

Underslab Drainage

Pipe sizes	☐
Falls	☐
Pipe protection	☐

COMMENTS: _____



Applicants Name: Rhys Scott Consent no. 060012
Job Address: 10 Daffodil grove.
Inspecting Officer: Jim Taffin Date of Inspection: 10-3-06

Postline

Sheets nailed as per your schedule ☐

COMMENTS: _____

Drains

Drainlayer: Carterton Plumbers

Drain Depth	☒	Gully Traps	☐
Pipe Material	☒	Granular bedding	☒
Disposal Field	☐	Terminal Vents	☐
Drains Under Building	☒	Even Gradient / Line	☒
Connection to Main	☒	Inspection Bends	☒
Drain Test	☒	Septic Tank	☐

COMMENTS: Drain from street to Back
of garage only.

CARTERTON DISTRICT COUNCIL

Building Consent Enquiry

Change, Inspection Load, Create Invoice, Print Forms, Print Letters, Search, Resource Consent
Search (Change Log)

PIM/Consent No. 060012

The Building

Valuation No 1822045517
General Property Enquiry
Street Address 10 DAFFODIL GROVE
Legal Description LOT 5 DP 311131
Building Name New Dwelling
Floor (m2) 293
Current use Residential Dwelling
Current Status Further information requested 13/01/06
Process Days To Date 2
Overseer Milan Hautler
Zone URBAN RESIDENTIAL

The Owner

Name R Scott
Contact Rhys Scott
Mailing Address R D 2
Parkvale
Carterton
Mobile Phone 027 273 2400

The Agent

Name Ocean Building Nuhaka
Contact Mike Quirke
Mailing Address 6 Dorset Road
R D 2
Carterton
Mobile Phone 027 242 4841

Relationship to Owner Applicant/Agent

Debtor BC060012

Edit Debtor

Balance \$ 2,562.80

Invoice 08292

First Point of Contact

Name Mike Quirke
Mailing Address 6 Dorset Road
R D 2
Carterton

Mobile Phone 027 242 4841

Building Work

Type of Work Construct New Dwelling
Intended use Residential Dwelling
Intended life INDEFINITE
Stats code 1100 New (& prebuilt) House, Unit, Bach, Crib, Town House e
Estimated value \$240,000
Resource
Consent?
Dev Contrib
Notice?

Deposit \$2,562.80
Building
Consent/PIM \$1,850.00
Processing Fee
DBH Levy \$472.80
BRANZ Levy \$240.00
Total Charges \$2,562.80

Status history

Formally received 6/01/06 RECEIPTED BY CASHIER
Invoiced 6/01/06 08292
Letter sent 6/01/06
Further
information 13/01/06
requested

Builder Mike Quirke
Phone 027 242 4841
6 Dorset Road, R D 2, Carterton

Forms that should have been saved

Forms and
Letters Actually 06/060012LAPPBC.doc
Saved

Notes

Date 13/01/06
Officer Mike Sims

- 1. The flitch beam requires calculations to verify.
- 2. The truss design needs to identify the point loads & verify any extra lintels required.
- 3. The names of the tradesmen are required.

- 4. The plans need to be numbered and show the scale.
- 5. Show the slab height above FGL.
- 6. The foundation detail is illegible & needs to show where the flashing is, flashing tape & air seals, 2/012 rods at the bottom.
- 7. Are 100x50 or 75x50 purlins proposed?
- 8. We need a schedule of the proposed fixings for - B.P/floor, lintel stud, TP/stud & purlin/truss.
- 9. Show the proposed roof bracing.
- 10. Provide a copy of the fire specifications.
- 11. What is the proposed waterproofing under the tiling.
- 12. The specification is not specific to the job.

**Standard and
Non-Standard
Conditions**

No conditions applied to this consent

**Standard and
Non-Standard
PIM Notes**

**Type
Officer**

PP Planning PIM

Milan Hautler

Urban Low density zone, property result of land subdivision refer conditions resource consent 000040. Council holds no record of hazardous substances on the property.

Inspections

None found

**Standard and
Non-Standard CCC Conditions**

None found

**Work to be
Stopped and
Notice to Fix
Conditions**

None found

RM Certificate

None found

**Letter 1 and
Letter 2
Paragraphs**

None found

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Designed by: NCSWebTeam



DISTINCTIVE SPECIFICATION

Mr R Scott
Lot 5 Daffodil Grove
CARTERTON

PRELIMINARY & GENERAL

SCOPE OF WORK

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

CONTRACT DOCUMENTS

- The following documents form this contract:-
 1. Builders Tender and Building Agreement (if applicable)
 2. This Specification and addenda pages.
 3. Working Drawings.

SITE

- The contract is based upon the site confirming with :
 1. Levels and or contours shown on the drawings together with specific foundation details drawn or specified. Refer also to last paragraph under DRAWINGS & SPECIFICATIONS below.

OR

2. Level site
- The sub soil supporting the foundations have a safe bearing pressure of not less than 100kPa as required by NZS 3604 CL 3.12 OR TO Local Authority requirements.
 - Where the sub soil is not of sufficient strength to meet the requirements of minimum foundations, all additional work, labour and materials to provide adequate foundations or bearing capacity shall become a variation of the Contract (this includes previously cultivated ground and filled sites)

DRAWINGS & SPECIFICATION

- This Specification is to be read in conjunction with the plans, working drawings and any other detailed drawings which may be issued.
- All figured dimensions shall be taken in preference to those scaled.
- All detailed drawings shall supersede those to smaller scale.
- If any error is found or inconsistency between the plan and specification, the drawing shall take precedence and such differences are

to be referred to the Designer for interpretation.

- The Designer is not liable for any differences between the levels shown on the plans and actual site levels (unless levels are supplied by a registered surveyor.)

BY-LAWS, TOWN PLANNING & BUILDING CONSENTS

- The whole of the works shall be carried out in accordance with NZS 3604 and amendments, and all relevant N.Z., Standards and shall conform to the current National Building Code.
- The Owner shall obtain Town Planning Consent and the Building Consent prior to the commencement of the work and pay all fees necessary for the carrying out of the Contract.
- The Owner may nominate, in writing, the Contractor as his/her Agent for applying for and picking up all consents.

NOTE: For housing, the owner is liable for up to four inspections from the Territorial Authority. Further inspections will be paid for by the Contractor.

INSURANCES

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

1. NEW WORK

Contractors "All Risk Insurance" or "Fire Insurance" insuring against loss or damage by fire, in the joint names of the Contractor and the Owner to the full insurable value.

2. PUBLIC LIABILITY INSURANCE

The Contractor shall carry Public Liability cover for \$1,000,000 for any one claim. This cover shall include excavation where applicable.

MAINTENANCE

- Where required by the agreement between the Owner and the Contractor, The Contractor shall undertake to remedy defects in material and workmanship which appear in the building within 31 days after completion.
- The Owner will notify the Contractor in writing of any items which require rectifying within 31 days.

VARIATIONS

- No variations shall be considered unless the Contractor prepares a separate estimate for such work.
- The Contractor shall be obliged to undertake any variation that the Owner has given approval by signing and returning the variation to the Contractor.

MONETARY ALLOWANCES

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

APPROVED

- Where the term 'or similar approved' is used, this shall be to the Owner or Designers approval.

TEMPORARY SERVICES

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

SETTING OUT

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

COMPLETION

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

- Refer to the addenda for any existing items or materials to be retained in alteration work.

CLAIMS AS TO OWNERSHIP OF MATERIALS

- The Contractor shall ensure that all materials delivered to the site to be fixed in place, are not subject to any reservation of title or to any claims by the providers of those materials, and that no conditions exist that could give rise to future claims.

MATERIALS SUBSTITUTION

- Where the use of Brand names are used in this Specification or on the drawings, substitution may be made, provided the substitute materials are of equal or better equality than the item being replaced.

SITE WORKS

PRELIMINARY

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

SETTING OUT

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

CLEARING THE SITE

- Clear of all vegetation over the area of the proposed building/s.

UNSTABLE GROUND

- Where loose, soft or otherwise unstable ground is encountered, the excavation depth is to be increased until solid bearing is reached. The Contractor shall notify the Designer or Owner before any such work is carried out.
- An extra to the Contract will be made for such work, and materials and labour shall be charged at an agreed day rate.

FOUNDATION EXCAVATIONS

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

CONCRETE FLOOR

1. Excavations:-
 - Remove vegetation and top soil over the whole of the building area as shown on the drawings, to a minimum depth as required by the local Body or Lending Authority.
 - Excavate for all foundations, ground beams or footings shown on plan to a solid bearing at a minimum depth below adjacent ground level as follows:
Firm Rock : 150 mm
Expansive Clay : 450 mm
Other materials : 300 mm
 - All excavations are to be level and shall be stepped for sloping ground.
2. Backfilling:
 - Backfill against exterior of foundations as required with clean excavated material well compacted.
3. Filling under slab
 - Fill under all concrete floor slabs shall be well graded approved hard material.

- This layer shall be well compacted and its surface shall be blinded with clean fines well rolled and consolidated.

INSPECTION

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

EXCAVATING

- Excavate site as shown on drawings.
- Care shall be taken in interpreting drawings and to maintain grade to Garage Doors as shown on the drawings but of 1 in 55 maximum or as required by the local authority.
- Spoil to be remove from site unless shown otherwise on drawings or addenda or as directed by Owner.

CONCRETE WORK

PRELIMINARY

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

ENGINEERING DRAWINGS

- Where Engineering Drawings are included in Contract Documents these shall take precedence over 'standard' specifications and details.

FORMWORK

- All formwork shall be set out and constructed to form concrete profiles as shown on the drawings or specified.
- Form all openings in formwork for vents, conduits or ducts as required.

REINFORCING

- All reinforcing shall be free from loose flaking rust, mud, oil and other coatings.
- Fabricate from mild steel to NZS 3402P for plain bars or NZS 1693 for deformed bars.
- Reinforcing shall be as shown on drawings.
- Generally reinforcing in foundation walls shall be placed in the centre of the walls, unless otherwise noted on drawings.
- Laps in deformed bars shall be a minimum of 40 x diameter, and shall be staggered at random.
- Openings in foundation walls shall be trimmed with a minimum of 1-D12 bar

extending not less than 600 mm beyond the edges of the opening.

CONCRETE

- Concrete manufacture shall comply with NZS 2086:1967 for ready Mix Concrete Production.
- Concrete shall be either Special Grade or High Grade as described in NZS 1900 Chapter 9.3.1981 have generally, for foundations, a minimum 28 day crushing strength of 17.5 Mpa.

Concrete Floor Construction

1. Foundations
 - Foundations are required around the perimeter of the floor slab
2. Level Site.
 - Foundations are to be of the size and details as required by the local authority.
 - Minimum requirements : shall have a depth of 300 mm below and a height to give a floor level of 225mm above the surrounding ground level. For a single storey 130 mm wide with 45 degree angle and 2-D12 rods.
3. Sloping sites
 - Foundation walls and footings shall be of a size and reinforced as shown on the drawings.
4. Vapour Barrier
 - Vapour barrier (under concrete floor slabs) where shown on the drawings and as required shall consist of approved sheeting material.
 - Also to include sub-floor insulation 40mm 'S' grade.
 - Sheeting shall be "AHI" Moistop 737, Fletcher Duroid Dampguard, Permathene of minimum 200 microns, Dampstop or similar.
 - All joints shall be lapped by not less than 150 mm and sealed with pressure sensitive tape.
 - The vapour barrier shall be laid continuous, over prepared hardcore fill with sand blinding to the entire building area with not less than 100 mm projecting beyond the outer limit of the foundations unless detailed otherwise. It shall be sealed around all services or other projections with self adhesive plastic tape.

- Any defects in the barrier shall be repaired before any concrete is placed.

5. Floors
 - Floors shall have a minimum thickness of 100 (refer NZS 3604 :CI E11.1) and shall be reinforced with 665 HRC welded mesh fabric lapped 225 mm at all joints.
 - Floor slabs to be cast integrally with foundation walls.
 - The surface shall be finished evenly and true to level with no abrupt changes.
 - Finishing shall be carried out by floating to a smooth and even finish.
 - Permissible floor slab tolerance shall be 6mm in a 3 metre length, plus or minus 5 mm from specified finished level.
6. Holding down Fittings.
 - Lumberloc bottom plate fixing anchor installed to manufactures specifications.
 - Locate first fixing not more than 300 mm from end of timber ..

CARPENTER

PRELIMINARY

- The whole of the works shall be carried out in accordance with and conforming to the By-Laws and Regulations of the Local Authority, and to NZS 3604.

ENGINEERING DRAWINGS

- Where Engineering Drawings are included in the Contract Documents these shall take precedence over 'standard' specifications and details.

EXTENT OF WORK

- Comprises the supply and fixing of all timber work, linings, sheathings, fittings, finishings and hardware as shown to the best trade practice.
- Cut away for, attend on and make good after all other trades, including paperhanging.
- Provide and fix all necessary beads, stoops, fillets etc. as may be required.
- Leave all working parts in good working order.

MATERIALS

- All materials shall be new unless otherwise specified and shall be the best of their respective kinds.
- All timbers shall be as specified and graded according to NZS 3631 and shall be in straight and in lengths as long as procurable.
- Wood based products to comply with NZS 3602, NZS 3604 C1 2.1 and any/all related documents.
- All treated timbers shall be in accordance with the Timber Preservation authorities Regulations.
- Framing timbers to which linings are to be fixed should be gauged to eliminate variation in size.
- Exposed exterior and interior finishing timbers, unless otherwise detailed, are to be machine dressed to a constant thickness and width.

WORKMANSHIP

- Workmanship of the best shall be employed in thoroughly securing and framing together spiking or bolting as may be required.
- All nails in exposed work are to be punched below the surface.

TREATED TIMBERS

- Treat all cut surfaces and bolt holes with full coating of concentrated preservative, e.g. copper-naphthenate or pentachlorophenol (in a light petroleum solution)

PAINT PRIMING

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

DAMP PROOF COURSE

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

TIMBER GRADES

- The Contractor shall allow for all timbers as specified below:
- Machine dressed timbers shall be thoroughly kiln dried or air seasoned to a moisture content of 12-18%.

General Framing Timbers.

- No.1 Framing Radiata (min H1.2 treated)

Exposed Beams and Rafters

- Clean Douglas Fir or Oregon

Trusses

- No.1 Framing Radiata (min H1 treated)

Exterior Finishing Timber

- Finger Jointed Radiata (H3 treated and preprimed)

Interior Finishing Timber

- finger jointed Radiata

Roof Framing

- Radiata (min H1 treated)

BUILDING PAPER

- Provide as specified in addenda, standard or fire retardant breather type building paper complying with NZS 2295 and secure to the exterior face of stud framing or sheet bracing material.
- Run building paper horizontally with upper sheets lapping over lower not less than 75 mm.
- Adequately secure to plates, bearers and studs, extending from upper side of top plate to the underside of the bearers or wall plates supporting the ground floor joists.
- Replace or adequately repair if punctured or torn, immediately before fixing exterior coverings.

WALL FRAMING

- Frame up for walls and partitions as shown on drawings.
- Studs shall be cut square at ends or true to angles of gable or sloped frames. Exterior studs shall be at 600 crs.
- All studs shall be continuous for full length from top to bottom plates including plates at roof level on gable frames.
- Fix ribbon plate to studs for fixing ceiling joists at gable end frames.
- Framing shall be generally cut of 100 x 50 No.1 Framing grade treated Radiata Pine.
- Top and bottom plates shall be of sizes complying with NZS 3602
- Studs shall be at 600crs with two rows of dwangs
- Where studs are not laterally supported by exterior cladding or interior linings complying with NZS 3604:sections 8&9, provide rows of dwangs or metal wallings at not more than 1350 mm crs.

LINTELS

- Lintels shall be of sizes shown on the drawings and complying with NZS 3604: Table 6.7.
- Lintels shall be supported at ends by checking trimmer studs not less than 15mm nor more than 20mm for 150mm deep lintels.
- Lintels not exceeding 250mm deep shall be supported by a 40 mm thick doubling stud.
- Lintels not exceeding 300mm deep shall be supported by 50mm thick doubling stud.
- Lintels shall be fixed to trimmer studs and trimmer studs to floor joists at the bottom with 25 mm wide galv straps or other similar fixings as required by NZS 3604.
- Refer also to the drawings and/or NZS 3604 : Fig 6.8
- All nailing of framing shall be as shown on the nailing schedule (NZS 3604: Table A1.)

CANTILEVERED LINTELS

- Cantilevered lintels shall be designed to Gang-Nail Design Charts or to Engineers requirements.

BRACING

(Refer NZS 3604: C1 6.3 including Fig. K1 and Table K1 for bracing requirements.)

- All bracing elements shall be located strictly in the positions shown on the drawings.
- Metal bracing shall be 22 x 22 x 1.2 mm galvanized steel angles
- Where angle braces are used, they shall be set in straight lines and saw cuts in framing shall only be of sufficient width and depth to neatly accommodate the bracing.
- Excessive depths of cuts will not be permitted and studs cut to excess depths will be removed and replaced.
- Braces shown on the drawings are those required to comply with NZS 3604.
- The Contractor may provide additional bracing to hold frames square and true during erection.
- The plan lengths of the bracing shall not be less than shown on the drawings.
- Linings fixed over the bracing and forming part of the bracing element, shall be fixed to framing ALL ROUND with fixings at centres as set out in the

Nailing Schedule. (NZS 3604 : Table A1)

- Generally a Type 1 element requires the lining to be fully fixed on one face of the framing only, whilst types 2 & 3 require complete fixing of the lining on both sides of the framing over the area of the wall covered by the brace.
- Sheet bracing shall be of the materials shown and shall be fixed in the locations shown on the drawings, and according to the manufacturers instructions.
- In addition to the nail fixing required in the nailing schedules, sheet bracing elements shall be connected to bottom plates and joists or trimmer joists as shown in NZS 3604 : Fig.K1.
- Bottom plates shall be held down to slab floors with 12 mm dia. Bolts or proprietary fixings not more than 150 mm from the ends of the bracing element and at not more than 900 mm centres between the nail plates or similar fixings between bottom plates and end studs, all as shown on NZS 3604
- Internal walls acting as bracing elements shall be connected to exterior walls at the top plate level in accordance with NZS 3604 :C1 6. 9. 7.
- Top plates in walls containing bracing elements shall be butted together and jointed with metal connections in accordance with NZS 3604 : 6.. 7. 3.3.

TRUSSES

- Trusses shall be constructed to the standard designs of approved manufacturers.
- All trusses shall be certified by the fabricator as being constructed to the standards required by NZS 3604 C1. 10.2.
- Trusses shall be carefully handled and stacked on the site to prevent damage.
- Trusses shall be fixed to top plates with not less than 2 skewed 100 x 3.75 nails plus additional fixings to top plate and wall studs consisting of either two 4.9 mm wire dogs or an alternative fixing having 5kN capacity in tension against uplift at not more than 900 mm crs.
- Connect jack trusses to common trusses with connectors and blocking as detailed by the manufacturers.
- Provide 75 x 50 blocking between bottom chords, or fix ceiling battens as shown on the drawings.
- The Contractor shall be responsible to ensure correct lintel sizes are provided in

accordance with truss layout. Beam sizes shall also be checked.

PURLINS AND TILING BATTENS

- Securely fix purlins and/or tiling battens as required in the Nailing Schedule NZS 3604 : Table A1, plus any additional fixings as required or shown.
- Purlins shall be fixed with lumberloc rolled spiral nails.
- Tiling battens shall be supplied and fixed by the Roofing Sub-Contractor and shall be of the sizes as required, and at centres to suit tiling materials.
- The General Contractor shall provide temporary members required to hold roof framing in position until tiling battens are fixed.

ROOF BRACING

- Provide and fix roof bracing as required by NZS 3604

DWANGS AND BATTENS

- Provide dwangs around the perimeter of all ceiling areas and between ceiling joists or trusses as required by the ceiling lining manufacturer.

CEILING ACCESS

- Provide 600 x 600 minimum access hole sited in Garage immediately above main house internal access trimmed with framing of the same size as the ceiling joists, in the ceiling where directed by the designer or in a location providing not less than 600 mm height between the top of the ceiling joists and any other roof members.

EAVES

- Frame up eaves as shown on drawings with 75 x 40 or similar sized ribbon plate fixed to wall framings and bearers at centres to suit soffit lining.

WARDROBES AND CUPBOARDS

- Frame up for wardrobes and other cupboards where shown on the drawings.
- Walk-in wardrobe; Allow for full length shelf with 300 mm square "Cubbie Holes" above to one wall. Provide a shelf in each wardrobe, 300 mm wide out of ex 25 mm timber, 18mm Customwood or similar.
- Shelves shall be supported by an ex 50 x 25 rail fixed under the shelf to the wall behind and a purpose made white powder coated aluminium coat rail along the front edge.

- The shelf shall be fixed 1600mm from the floor or at other height as directed or detailed.
- Provide vertical divisions for shelves over 2000mm long.
- Fix additional shelves as detailed or noted in drawings.
- Provide shelf and rail in coat cupboards as for wardrobes.
- Pantry cupboards shall be fitted with shelves out of white melteca or similar. Shelves shall be returned at sides of pantry if shown on the drawings, supported at corners. Provide 6 rows of shelving.

EXTERIOR CLADDING

- Where shown on drawings or included in the addenda, exterior sheathing shall be fixed as set out below.
- All materials shall be fixed according to the manufacturer's recommendations and details and according to the best accepted trade practices.
- All claddings shall be fixed over breather type building paper.
- All fixing nails shall be galvanized or other non-corrodible metal and as per the Nailing Schedule NZS 3604 : Table A1.

BRICK VENEER EXTERIOR WALL CLADDINGS

- Will be Monier 70 series Brick Veneer
- Cladding shall be fixed and finished in accordance with the manufacturers specifications and installation instructions by applicators approved by the manufacturers.
- A 40mm cavity is required between inside of bricks and wall framing.

SOFFITS

- Where shown on the drawings, line soffits with 4.5 mm Hardiflex, or as indicated in the Addenda.
- Lining shall fit close to wall framing and shall fit into grooved fascia at outer edge.
- Joints in sheets shall be set into extruded P.V.C. mouldings.
- Fix with galvanized shear point nails.

EXTERIOR FINISHING TIMBERS

- Supply and fix all exterior finishing timbers – fascias, barges, corner stops, scribes etc. as required to complete the works.
- Scribes shall be out of 12 mm timber.
- All other finishing timbers shall be generally out of 25 mm timber.

- Fascias to eaves shall be grooved to take soffit linings.
- Fascias and barges to roofs shall be out of suitable width timber.
- All joints in exterior finishing timbers shall be mitred and shall be primed before fixing.
- Mitres shall be neatly and accurately cut and fitted.

TILING

- Fix tiles to areas shown on drawings and/or specified in addenda.
- Fix tiles with purpose made gap filler adhesive.
- Allow 2 rows tiles around kitchen benches
- Both bathrooms to be tiled in entirety to a height of 2000mm and trimmed with metal tile edging.

INTERIOR LININGS

- All interior linings shall be fixed strictly according to the manufacturer's recommendations.
- Where shown in addenda the interior shall be lined with linings as set out below.

Gibraltar Board

- To wall areas unless otherwise shown, line with 9.5 mm Gibraltar Board fixed and finished in strict accordance with the manufacturers recommendations.
- All Gibraltar board fixings shall comply with 'Winstones' GIBALTAR BOARD SYSTEMS Fixing and jointing Instructions publication.
- Where Gibraltar Board forms part of a wall bracing element or a ceiling diaphragm, they shall be fixed to framing all round and at intermediate framing as set out in the Nailing Schedule NZS 3604 : Table A.1.
- Except at bracing elements or ceiling diaphragms, linings may be fixed to framing using Gib Fixing adhesive with supplementary nailing.
- Fix expanded metal strips at external corners of linings.
- (WR) Gib Board shall not be fixed on ceilings or where a vapour barrier is required behind interior lining.

INTERIOR FINISHING TIMBERS

- Provide and fix all skirtings, architraves, scotias, reveals and other mouldings and beadings required to complete the works.
- Where finishing timbers are specified to be clear finished, they shall be Rimu or as specified.

- Else where they may be Rimu or finger-jointed treated Radiata Pine or other available.
- Joints in lengths of runs of skirtings or scotias shall be neatly and accurately mitred.
- At corner intersections, joints shall be neatly and accurately scribed to fit.
- Reveals shall be finished 19 mm timber unless otherwise specified.
- Skirtings shall be generally out of 75 x 12, beveled with grooved back.
- Windows shall have rebated jambs unless otherwise specified.
- Mitre corners and glue joints when fixing.
- Drill holes for fixing at ends of all finishing timbers and fix with 40 mm long panel pins.
- Scotias shall generally be 40 mm beveled scotia unless shown otherwise.

SHOWERS

- To Bathrooms allow "wet area" shower with single glass wall including hinged door, tiled walls and floor and "easy clean" trap set into sloping floor.
- Will use MARPEI MAPEGUM water proofing system with mapelastic wet are membrane BRANZ appraisal certificate no 484(2005)
- All work to be done by approved applicator to NZBC E3/AS1.

HARDWARE

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

BUILT IN OVEN

Refer Kitchen Joinery.

HEATING APPLIANCES

- A separate contract for supply and installation of a "Kent Metro" to be included. All work to be in conjunction with main plumbing contractor.
- Provide hearth slabs as required.

- All heaters are to be installed strictly according to the Manufacturer's recommendation and the Local Authority requirements.
- Provide heat resistant linings and clearances from walls and fittings as detailed on the installation instructions provided with each unit.
- Hearth slabs shall be precast of sizes shown and with the surface finish as shown on the drawings or in the addenda.

GARAGE DOORS

- Supply and install Garage Door of size and type shown on the drawings.
- Door shall be provided with locks and all fittings and operating gear and shall be installed according to the manufacturer's details.
- Fit with automatic opening device.

LAUNDRY FITTINGS

- Install cupboard unit to accommodate stainless steel tub specified under 'Plumbing' and fit timber splashboard.

VANITY UNIT

- Install 2 off vanity units where shown on the drawings and arrange for the plumber to connect wastes, traps and taps.
- Vanity should be to the P.C. Sum shown on the addenda.

NAILING

- All nailing to comply with NZS 3604 Table A1.

FLASHINGS

- Arrange for the Window Manufacturer to provide machine folded flashings for exterior timber doors and windows out of 0.6mm galvanized steel.
- Provide flashings for heads and sills of windows and doors, and for jambs where no fascias are specified.
- Flashings shall be neatly fitted.
- Provide aluminium flashings over aluminium window and door frames.

JOINER

GENERAL

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

DOORS & FRAMES

- Doors shall be 1980mm high by 760mm wide shown on the drawings.

EXTERNAL DOORS.

(refer addenda)

- Supply and fit external doors as shown on the drawings.
- Hinged doors shall be of sizes shown on the drawings supplied to Aluminium Joiner by Owner.

INTERNAL DOORS

- Internal doors shall be 1980mm high x 38mm thick Pressed Panel Hollow core to be decided by owner.
- Surfaces shall be suitable for finish as required by Schedule or Addenda.
- Hang on three B.M.A. finish, 90mm loose pin butt hinges.
- Frames shall be out of 50 mm timber, rebated at jambs.
- Unless otherwise noted, jambs shall be suitable for paint finish and shall be rebated to receive linings.

ALUMINIUM DOORS

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

ALUMINIUM WINDOWS

- Supply and install powder coated glazed aluminium windows
- Windows shall be of approved manufacture, and shall conform to NZS 4211 & NZS 3503.
- Sashes shall be awning type, hung on Interlock friction stays or top hung unless shown otherwise .
- Contractor to confer with manufacturer with regards to framing opening sizes.
- Unless otherwise specified or shown in the addenda, frames shall be supplied complete with factory fitted, ex 25mm timber reveal linings suitable for clear polyurethane finish, grooved to receive wall lings.

KITCHEN FITTINGS

- All cupboards and fittings shall be fabricated by competent tradesmen in a fully equipped factory, according to best joinery practices.
- The dimensions of all units are to be ascertained on site.
- Fabricate all joinery units as detailed on the drawings, with 90mm toe space
- Units shall be constructed with carcass work out of 18mm Melteca or approved alternative, cut and fitted to provide a rigid frame.
- Unless preformed drawers are used, all drawers shall have fronts and sides dovetailed. To be on drawer runners.
- Supply sink bench as shown on the plan. (refer to addenda and plans)
- The General Contractor shall take delivery of, and install all units, taking care not to damage any surface or fittings.
- He shall arrange to repair or replace any damaged fittings or surfaces.

ROOFER

PRELIMINARY

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

EXTENT OF WORK

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

METAL LONGRUN ROOF

To roof areas where shown on drawings.

- Materials
 - Long run 0.4mm corrugated color steel
- Underlay
 - Standard weight Building paper on 75mm roof netting
- Purlins
 - Cut purlins to manufacturer's recommendations from 75 x 50mm
 - Purlins to be fixed at maximum 900mm centres with first at 100mm from face of fascia.
- Ridges, Barges, Hips.
 - Soft edge ridge 50mm min cover
 - Standard square barge flashing
- Valleys

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

f) Flashings

- Flash and overflash all projections through roofing.
- All flashings to be coated to match roofing Materials.

SOLID PLASTER

PRELIMINARY AND GENERAL

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

MATERIALS

- Cement
 - Shall be approved brand N.Z. Portland cement.
- Sand
 - Shall be river sand, sharp and coarse grained and free from any foreign matter.
- Hydrated Lime
 - Shall be mill hydrated of an approved brand.
- Adhesion Agents
 - If used, shall be in accordance with the maker's instructions.
 - Plasticising agents shall be used strictly in accordance with the manufacturer's specification, may be used in lieu of hydrated lime.

WORKMANSHIP

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

FOUNDATIONS

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

PORCH, STEPS AND TERRACE

(if shown)

- Plaster up in one operation.
- One coat 12 mm thick to terrace, 12mm thick to verticals and sides only.
- Wood float up then give light sweeps with a steel float to remove blemishes.

DRAINLAYER

PRELIMINARY

- Read and note all clauses under Preliminary and General of this specification where they apply to this trade.
- The whole of the works shall be carried out in accordance with and shall conform to N.Z. Building Code 1992 and approved documents.
- The sub-contractor shall pay all inspection and other fees necessary for the carrying out of the Contract.

EXTENT OF WORK

- a) Sewage Drains
 - Excavate for, provide, lay and backfill sewage drains from connection at boundary to fittings in accordance with reticulation as required or as detailed.
- b) Stormwater drains
 - Where required by the local Authority excavate for, provide, lay and backfill stormwater drains outfall to downpipes in accordance with reticulation as required or as detailed.

BY-LAWS AND PERMITS

- Obtain permits and pay all fees for the above work.
- All drainage work shall be carried out in accordance with the Drainage Regulations under the Health Act and the Local Body by-Laws.
- The work shall be in strict conformity with the specific clauses in this Specification and all work shall be passed by the Inspector.
- All drains shall be tested and the excavations can only be filled in after the work has been passed.

MATERIALS

- Pipes shall be of sizes shown on drawings.
- UPVC plastic pipes unless otherwise shown
- Pipes shall comply with NZS 7649 and NZS 7650.
- They shall be true to shape and free from cracks and other defects.
- Pipes shall be laid and jointed in accordance with manufacturer's instructions.

LAYING DRAINS

- The drains shall be commenced at the point of outfall, and worked back to the highest point with at least 300mm cover.
- The whole of the drains shall be laid in a true and even grade at not less than 1:60 for 100mm dia. Pipes.

BACKFILLING

- When filling in trenches, care must be taken to ram carefully the first portion around the drains, the whole trench is then to be well filled, rammed and consolidated with water.
- The surface of the ground must be made to its original condition.

GULLY TRAPS

- Where shown on the drawings, install gully traps with grating and set in concrete.

PLUMBER & SHEET METAL WORKER

PRELIMINARY

- The General Conditions and Preliminary clauses of this specification shall apply to this section of the works.
- The whole of the works shall be carried out in accordance with and shall conform to the N.Z. Building Code 1992 and approved documents.
- The sub-contractor shall obtain all permits and pay all inspection and other fees necessary for the carrying out of this contract.

EXTENT OF WORK

- This trade comprises the supply and fixing of flashings, spoutings, downpipes, sanitary fittings, and wastes, hot and cold water reticulation and drainage.

MATERIALS AND WORKMANSHIP

- All work shall be carried out in accordance with the Drawings, Specifications, Local Authority and Public Health Regulations.
- Water pipes and tubes shall be set out in straight runs of even gradients, avoiding all places where air locks are likely to occur.
- Use easy bends and unless unavoidable, elbow fittings are not to be used.
- Copper tubing is to be secured in position by copper straps.
- All piping, including water, waste and vents shall be concealed or as shown.

NOTICES

- The Plumber shall give all necessary notices to the Local Authority for the inspection of work and testing of same.

FLASHINGS

- Flash in 0.45 BMT galvanized sheet steel necessary to render building water tight.
- All flashings shall accurately fit the work and shall be machine bent and cut in as long lengths as possible with all joints well lapped and soldered, beaded edges and fixed with 19.0mm flat head galv. nails at 75mm centres.
- Fit full length 0.45 aluminium flashings to all heads
- Flash and over flash all vents, chimneys and other projections through roofing and leave in a water tight condition.

DOWNPIPES

- At positions shown or required, fix downpipes, sealed into droppers from spouting and into stormwater drain.
- Fix to walls with purpose made fixing brackets supplied by manufacturer.

PIPING.

- Piping for water supplies shall be polybutylene piping.
- Allowance for 3/8 diameter Polybutylene pipe to ensuite shower and basin from Hot water cylinder.
- Piping laid in concrete shall be spirally wound with two layers of 'Densotape' or similar, wrapped in opposing direction
- No joints shall be made in polybutylene piping in concrete.
- Polybutylene piping laid underground shall be protected from damage from sharp objects.
- All joints in copper pipes shall be sacketted and brazed with 'Silfos'.
- Polybutylene piping shall be jointed only with special copper joint fittings manufactured by the makers of the brand of piping being used.
- Piping shall be installed in long lengths.
- Polybutylene should be continuous as far as possible, for the whole length of the system. Thread pipes through holes drilled through the centre lines of the framing.
- Where possible, pipes shall be curved to change direction, but where curving is not possible, standard elbows and tees shall be used.
- Support all piping at recommended centres with ready made clips.
- Standard fittings and couplings for copper and polybutylene piping shall be used, including couplings linking the two materials.

- Polybutylene piping may be used for both hot and cold water reticulation except for circulating pipes between wetback and boiler units and hot water cylinders.
- All piping shall be terminated at outlets with brass 'wingbacks' securely screw fixed to timber framing or solid backing.

COLD WATER SUPPLY.

- From the toby connection of the Local Authority water supply, lay 20mm or 15 mm i.d. pipe buried 450mm underground to an isolation Stop Cock located in a suitable toby box located against the building foundations.
- From Stop Cock run 20mm dia. Pipe to bath, with 12mm i.d. branches to sink/s, basins, tubs, washing machine, shower, W.C. flushing cisterns and dishwasher if required.
- From wall, use Qest Qickee supply set for connection to cistern and for exposed pipes to basins.
- Take 12mm i.d. branch to provide supply for exterior hose taps.
- Allowance for pumped fed rainwater and switch valve for mains supply when no rainwater is available.
- Allowance for grey-water removal and pump driven tap feed to gardens.

HOT WATER SUPPLY

- Gas water heater shall be Rennai manufacture and shall be installed in accordance with the maker's recommendations and the Local Plumbing Authority and Gas Supply Authority requirements.
- Provide and install flue for gas water heater in accordance with By-Laws and recommendations.
- Provide expansion pipe from storage heater, 20mm dia. Extended above the roof level with pressure relief valve as required, or with low pressure system, turn exhaust to discharge over storage tank if in suitable location.
- All piping conveying hot water shall be double lagged with plumber's felt, spirally wound and bound to prevent unraveling.
- Each layer of felt shall be wound in opposing directions.
- From expansion pipe, take branches to taps.
- Branch to sink shall be 12mm dia. Take 20mm dia. lead from expansion pipe to bath with 12mm branches off lead to shower first then to basins, tub, washing machine and dishwasher if required.
- The tub and washing machine branches may be taken from the sink lead if more suitable.

- Use Quest-Dux supply sets for exposed leads to basins.

VENTS.

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

WASTES AND TRAPS

- Provide trapped wastes to all fittings of the sizes required by the Plumbing and Drainage regulations.
- Vent wastes where and as required by the regulations.
- Provide separate waste for washing machine, unless otherwise specified.
- Wastes may be polypropylene waste pipe system.
- Polypropylene wastes shall be complete with all couplings, seals, clips and other fittings.
- Where possible, waste pipes shall be concealed within the structure.
- Special care shall be taken to fix the wastes in unobtrusive positions.
- Provide cleaning eyes to all copper wastes.
- Where wastes pass through the foundation walls, pack and seal to allow expansion and prevent access of vermin.
- Wastes through concrete slabs shall be wrapped in 'Densotape or similar

FITTINGS.

- Supply and fix all fittings as shown on the drawings and in the addenda.
- Provide and fit all stopcocks, gate valves, etc. required for the water reticulation system..

W.C. pans

- Shall be vitreous china, washdown type, and shall be supplied and fitted complete with connector to waste, vent and double flap plastic seat.
- Supply and fit low-line dual-flush cistern, complete with sparge pipe, ball valve, ballcock and overflow.

Basins.

- Provide and install vitreous china, enameled steel or plastic basins as shown on the drawing or on the addenda.

Vanities.

- Arrange with the Carpenter to install two Vanity units as required. Provide taps and wastes. See addenda for PC sum.

Toilet Basin

- Allow proprietary wall mount vitreous China basins with chrome bottle traps to both toilets.

Tub.

- Provide and install a pressed or fabricated stainless steel tub on white Melteca cabinet.

Wet Area Shower.

- Allow an easy clean trap into tiled sloping concrete floor of bathrooms.

Sink Bench

- Sink supplied by joiner. Supply and connect plug and CP chain.
- Provide waste outlet for waste disposal unit if required. Connect up to waste.

Taps.

- All taps shall be marked Hot and Cold and unless otherwise shown on the addenda shall be Methven manufacture or other selected.
- Allow for the following from range:
 - Bath -Faucet
 - Sink - Faucet
 - Basins Basin tap
 - Shower Feltonmix mixer
(or similar – refer addenda)
 - Tub Tub tap
 - Washing Machine - Washing machine tap
 - Outside taps -4 brass bib-cocks with hose ruffs.

FREESTANDING FIREPLACES.

- All units shall be installed strictly in accordance with the manufacturer's details and to the Local Authority requirements.
- Arrange with the Carpenter to provide all protective sheeting required around units.
- Installed as per attached drawings
- Sizes shall be as recommended by the manufacturer, with vents as recommended
- Provide and install flues, flue liners, spacers flashings, caps and stays required to complete the installation.

ELECTRICAL

PRELIMINARY

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

FEES

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

SCOPE OF WORK

- Carry out the whole of the electrical installations in strict accordance with the latest Electrical Wiring Regulations and Local Authority By-Laws.
- Provide all lighting and power points as shown on the drawings or as otherwise directed by the Owners.
- Install HPM battery operated smoke alarm to manufactures specifications as indicated on plan.

MATERIALS AND WORKMANSHIP

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

CO-OPERATION

- Co-operate with the Building Contractor and other sub-contractors at all phases of the work.
- Give ample notice to enable the Contractor to arrange the necessary voids, chases etc..

COMPLETION & CONNECTION OF POWER

- Leave the work complete, pay all charges and arrange for all inspections and tests and for the connection of power to the works.
- It is the responsibility of the Electrical Contractor to ensure that no delay is caused to the job once the Contract is complete.

POWER BOARD SUPPLY

- Arrange with the Power Board, allow for and pay all fees for the connection of an

underground or overhead supply to the building.

- Arrange for any power poles required to carry overhead power lines.

METER BOX

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

MAIN SWITCHBOARD

- Provide and install a recessed main switchboard, complete with all fuses, circuit breakers, switches, bell transformer and auxiliary equipment.

ELECTRIC STOVE

- Provide wiring and switches for electric cooker where shown on drawings.
- If separate oven and cooking top unit are to be installed, allow for wiring and switches for each unit.
- The Electrician is to allow for taking delivery of and installing cooking appliances as shown on the drawings and addenda.
- Allow in Contract the P.C. sum for the supply of cooking appliances as noted on the addenda.

HOOD OR AIR EXTRACT FAN

- Provide and install a range hood or air extract fan where shown on the drawings or referred to in the addenda, with switches and power for the operation of the same.
- The fan shall be of the size and type shown on the drawing or in the addenda.
- Allow the P.C. sum shown in the addenda for the supply of the range hood, installation to be included in the electrical contract.

HEATERS

- Scope heated towel rail.

POWER POINTS

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

LIGHTS

- Provide light points where shown on the drawings.

- The Contractor is to allow in his tender to provide recess down-light type fittings to all lights, with angled fittings to wall lights.
- All lights are to have flush wall mounted switches.
- All exterior lights shall be watertight fittings.
- Fittings under soffits shall be ball type.
- Allow for recessed lights.
- Auto Pantry light – provide automatic Pantry light.

LIGHT SWITCHES

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

AUTOMATIC GARAGE DOOR OPENERS

- Allow for automatic door openers if noted in the addenda.
- Electrical contractor to specify type and sum allowed when tendering.

SPECIAL FITTINGS

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

PAINTING

PRELIMINARY

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

INSPECTION

- The Painting Contractor shall examine all surfaces and if not in proper condition for painting he shall notify the Building Contractor who will rectify to the Painters satisfaction.

STANDARDS

- Material and Workmanship shall comply with –
NZS 7703:1985 Painting of buildings
AS 1580:1980 Methods of Tests for

NZS 5807:1980

BS 4800: 1981

BS 5252: 1976

Paints, Related
Materials
Identification by
Colour Wording
Paint Colours
Building purposes
Colour Co-ordination
Building Purposes

SUPERVISION

- The Building Contractor and any representative of the Paint Manufacturers designated by the Building Contractor shall have access to the job and to materials being used during the progress of the work.

UNSUITABLE CONDITIONS

- No paint shall be applied to wet or uncured cement or plaster or to surfaces that are not clean, smooth, dry or free from all oil or grease.
- No painting shall be carried out in frost, fog, rain or dusty conditions.
- Preceding coats are to be thoroughly dry before applying next coat.

PUTTYING

- Surface cracks, nail holes etc. in woodwork shall be leveled up to surface of the work with linseed oil putty or other suitable filler after priming coat has been applied.

SANDPAPERING

- Each coat of paint when dry, is to be properly smoothed with sandpaper and dusted clean before application of succeeding coat.

PROTECTION

- The Contractor or Painter shall provide and lay adequate dust sheets to protect the floors and other surfaces.
- Varnish and enamel shall not be applied in the presence of dust.

WORKMANSHIP

- All work is to be executed in accordance with approved trade practice.
- Materials shall be evenly applied and primers well brushed into pores of the wood and into all crevices and quirks.
- No coat of paint shall be applied unless preceding coats are dry.

EXTERNAL WORK

- Paint all external woodwork usually painted with three coats in accordance with the following.

- Priming coat applied by Carpenter before erection.
- - a) Stopping and rubbing down
 - After priming has set, stop all nail holes as detailed in General clauses, and rub down as required to obtain a satisfactory surface for undercoating
 - b) Undercoat
 - Apply undercoat as soon as possible after priming.
 - Tint undercoat if required.
 - Paint all glazing putties with, and tint undercoat to approximate colour of finished coat, but it shall be readily distinguished from same.
 - Paint to impinge slightly onto glass surface where applicable.
 - c) Finishing Coat
 - Apply one coat of Exterior Hi-Gloss in the colour selected, taking care to ensure that all undercoated areas receive a coat of paint.
 - If 'Bright Red' is selected, then two coats must be applied. Selection of dark colours for wood is not recommended.
 - d) Hardiflex Eaves, and Porch Linings
 - Shall be painted with two coats of Flat Acrylic paint in accordance with the manufacturer's instructions for first class work.
 - e) Metalwork
 - All exterior metal-work should be thoroughly cleaned and free from dirt, grease or other surface imperfections.
 - After thorough surface preparation has been completed, apply coats as specified in External Work (a) and (b) above.
 - f) Iron and Steel
 - As recommended by paint manufacturer.
 - g) Galvanised Corrugated Steel Roofing (NOT COLORSTEEL)
 - As specified under Roofer.

N.B. Apart from laps priming as specified under Roofer however, painting of any roofing material does not form part of the Contract.

INTERNAL WORK

In all painted rooms, the Contract allows for not more than three colours.

Additional charge will be made for colours in excess of this number.

NOTE: Painting interior of any kitchen, laundry or other cupboards is not included in the contract.

- a) Painted Wood Surface.
 - After surface preparation has been completed, apply one coat of appropriate Intermediate Primer Undercoat, second coat of Intermediate Primer Undercoat and final coat of super Enamel or Super Satin, tinted as directed.
- b) Polyurethane Wood Surfaces.
 - After thorough surface preparation has been completed, all interior woodwork, excepting that which is scheduled to be painted, shall be stopped with tinted putty.
 - Apply Sanding sealer or Satin clear as the first coat.
 - Follow with two coats of Gloss Polyurethane or Satin Clear Polyurethane.
- c) Gibraltar Board Walls to Wardrobes and Coat Cupboard.
 - After necessary stopping and sanding has been completed, apply two coats of P.V.A. Flat Plastic Paint, tinted as specified.
- c) Ceilings to all Service Rooms – (Kitchen, Bathroom and Laundry.)
 - After necessary stopping and sanding has been completed, apply two coats of semi-gloss enamel.
- d) Ceilings to other rooms (other than service rooms)
 - After necessary stopping and sanding has been completed, apply two coats of Alkyd flat or Dulux Spring Plastic Paint.

COMPLETION

- On completion, the Contractor shall remove all empty cans or other debris arising out of this work, clean off all glass, free from paint spots and smears, in addition to the other areas so affected.

GLASS GENERAL

- Glass and glazing must comply with NZS 4223.

- Glass must be free from blemishes and to the thickness required by the standard details.

NEW GLAZING WORK

- Supply and fix clear sheet glass to all new exterior joinery and porch screens, with exception of bathroom and toilet sashes and entry doors which will be glazed with white obscure glass of equal pattern

TIMBER WINDOWS AND DOORS

- All glazing must be carried out on site in dry conditions.
- Glass to be cut to fit inside rebates to give adequate cover, with due allowance for expansion, properly bedded in silicone and foreputtied with linseed oil putty, secured with metal sprigs prior to foreputtying.
- Foreputtying to be neatly finished off and must not encroach on glazing daylight.

ALUMINIUM WINDOWS AND DOORS

- To be fully glazed by Aluminium fabricator.

DOUBLE GLAZING

- Refer addenda for windows requiring double glazing.

TINTED GLASS.

- Refer addenda for windows requiring tinted glass.

Technical Details

All Metro woodfires comply with AS/NZS2918:2001. Specifications may alter and those detailed within should be used only as a guide. Refer to the installation and operation manual supplied with every Metro, or if in doubt, consult your Metro retailer.

METRO.
XTREME PED.



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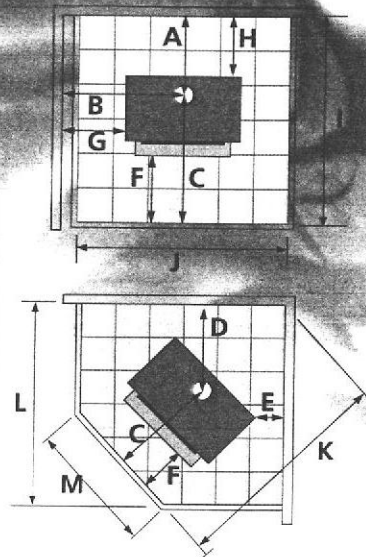


METRO SPECIFICATIONS mm

MODEL	WIDTH	DEPTH	HEIGHT	FIREBOX	kW	Inlet	Outlet
ECO TINY TRAD	490	530	665	36 litres	9.5 (2)	295	485
ECO/LTD PIONEER PED/TRAD	590	530	665	50 litres	14.4 (2)	295	485
LTD PIONEER REAR OUTLET	590	530	660	50 litres	14.0 (3)	295	485
LTD XTREME PED/TRAD	670	575	715	68 litres	17.7 (1)	340	530
LTD ASPIRE PED/TRAD	670	575	715	68 litres	19.8* (1)	340	530
LTD MEGA PED	670	675	715	103 litres	23.5 (2)	340	530
ECO/LTD WEE RAD	607	530	665	50 litres	14.4 (2)	295	485
LTD RAD	750	575	745	68 litres	17.7 (1)	353	543
LTD MEGA RAD	750	675	745	103 litres	23.5* (2)	353	543
ECO COMPACT INSERT FIREBOX	560	410	550	50 litres	13.0 (3)	170	360
ECO INSERT FIREBOX	560	500	550	56 litres	14.5 (3)	170	360
LTD PIONEER INSERT FIREBOX	560	500	550	63 litres	16.0 (3)	170	360
ECO/LTD TRAD FASH-A	805/900	195	655/685				
ECO/LTD TREND FASH-A	810	170	650				

* denotes tested with optional fan, (1) denotes tested to SFH-11:1994, (2) denotes tested to NZHHA maximum output test method, (3) denotes estimated.

WETBACK HEIGHTS



METRO INSTALLATION CLEARANCES mm

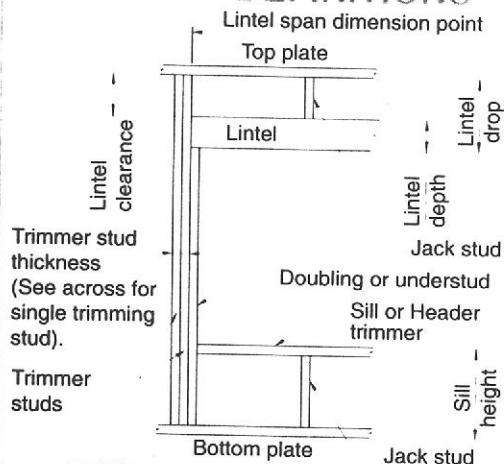
MODEL	FLUESHIELD	A	B	C	D	E	F	G	H*	I*	J	K	L	M
ECO TINY TRAD	With Flueshield	250	445	580	305	25	200	185	100	830	650	1020	875	250
	Without Flueshield	605	545		595	315		350	455	1185		1420	1165	
LTD PIONEER PED	With Flueshield	250	595	580	400	85	200	300	100*	830*	825	1145	950	425
LTD PIONEER TRAD														
ECO PIONEER PED	With Flueshield	260	595	580	400	85	200	300	110	840	825	1145	950	425
ECO PIONEER TRAD														
LTD PIONEER REAR OUTLET		N/A	565	N/A	N/A	100	200	270	100	840	825	1170	965	425
LTD XTREME PED	With Flueshield	250	575	625	455	110	200	240	100	875	905	1265	1065	505
LTD XTREME TRAD														
LTD ASPIRE PED	With Flueshield	250	575	625	455	110	200	240	100	875	905	1265	1065	505
LTD ASPIRE TRAD														
LTD MEGA PED	With Flueshield	270	610	725	465	130	200	275	120	995	905	1400	1140	505
	Without Flueshield	540	610		560	220		275	390	1265		1545	1235	
LTD WEE RAD	With Flueshield	250	555	580	400	80	200	250	100*	830*	825	1145	950	425
	Without Flueshield	580	555		600	280		250	430	1160		1420	1145	
ECO WEE RAD	With Flueshield	260	525	580	400	80	200	220	110	840	825	1145	950	425
	Without Flueshield	580	525		600	280		220	430	1060		1420	1145	
LTD RAD	With Flueshield	250	575	625	455	80	200	200	100	875	905	1265	1065	505
	Without Flueshield	800	575		625	250		200	650	1425		1465	1205	
LTD MEGA RAD	With Flueshield	270	675	725	500	125	200	300	120	995	905	1425	1175	505
	Without Flueshield	540	675		595	220		300	390	1265		1570	1270	

* The rear clearance (H) and overall floor protector depth (I) can reduce by 50mm for the LTD Wee Rad, LTD Pioneer Ped and LTD Pioneer Trad, providing a wetback is not fitted and therefore maintenance access is not required.

LINTEL FIXING SCHEDULE

(ALTERNATIVE TO NZS 3604:1999 TABLE 8.14 & FIGURE 8.12)

DEFINITIONS



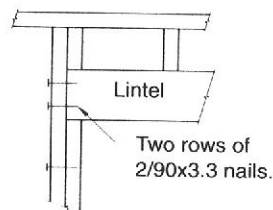
SELECTION CHART FOR LINTEL FIXING

Lintel Span	Loaded Dimension *See reverse side	Light Roof Wind Zone				Heavy Roof Wind Zone			
		L	M	H	VH	L	M	H	VH
1.5	2.0	A	A	B	B	A	A	B	B
	3.0	A	B	B	C	A	A	B	B
	4.0	A	B	C	C	A	A	C	C
	5.0	B	B	C	C	A	A	C	C
	6.0	B	B	C	D	A	A	C	C
2.0	2.0	A	B	B	C	A	A	B	B
	3.0	A	B	C	C	A	A	B	C
	4.0	B	B	C	C	A	A	C	C
	5.0	B	C	C	D	A	A	C	C
	6.0	B	C	C	D	A	A	C	D
2.4	2.0	A	B	B	C	A	A	B	B
	3.0	B	B	C	C	A	A	C	C
	4.0	B	C	C	D	A	A	C	C
	5.0	B	C	C	D	A	B	C	D
	6.0	B	C	D	D	A	B	C	D
3.0	2.0	A	B	C	C	A	A	B	C
	3.0	B	B	C	D	A	A	C	C
	4.0	B	C	C	D	A	B	C	D
	5.0	B	C	D	D	A	B	C	D
	6.0	C	C	D	-	A	B	D	D
3.6	2.0	B	B	C	C	A	A	B	C
	3.0	B	C	C	D	A	B	C	C
	4.0	B	C	D	D	A	B	C	D
	5.0	C	C	D	-	A	B	D	D
	6.0	C	D	D	-	A	B	D	-
4.2	2.0	B	B	C	C	A	A	C	C
	3.0	B	C	D	D	A	B	C	D
	4.0	C	C	D	-	A	B	D	D
	5.0	C	D	D	-	A	B	D	-
	6.0	C	D	-	-	A	C	D	-
4.8	2.0	B	C	C	D	A	A	C	C
	3.0	B	C	D	D	A	B	C	D
	4.0	C	C	D	-	A	B	D	D
	5.0	C	D	-	-	A	B	D	-
	6.0	C	D	-	-	A	C	D	-

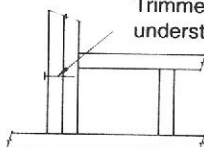
NOTES:

- * Lintels accepting Girder trusses for ALL load cases use:
Fixing type C where contributory area = 10m²
Fixing type D where contributory area = 20m²
- * All cases outside this require specific design

TYPE A 1.4kN

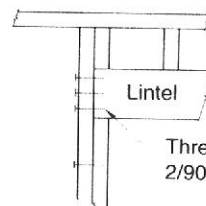


Two rows of 2/90x3.3 nails.
Three sets of 2/90x3.33 nails.
Trimmer stud to understud.



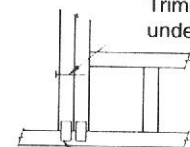
"All other nailing as Table 8.19"

TYPE B 4.0kN



Three rows of 2/90x3.3 nails.

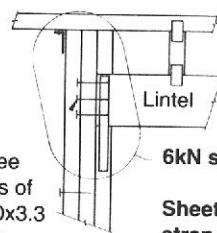
Three sets of 2/90x3.33 nails.
Trimmer stud to understud.



Two TYLOK 2T4s one side of stud.

"All other nailing as Table 8.19"

TYPE C 7.5kN

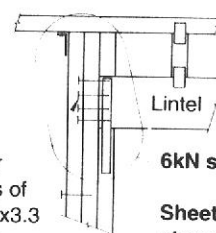


Three rows of 2/90x3.3 nails.

6kN stud anchor OR
Sheet brace strap 400 one face of stud & lintel, 6/30x3.15 nails each end
OR
TYLOK Stud tie.

"All other nailing as Table 8.19"

TYPE D 13.5kN

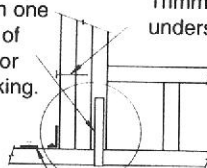


Four rows of 2/90x3.3 nails.

6kN stud anchor OR
Sheet brace strap 400 one face of stud & lintel, 6/30x3.15 nails each end
OR
TYLOK Stud tie.

"All other nailing as Table 8.19"

For timber floors run the strap down one face of joist or blocking.

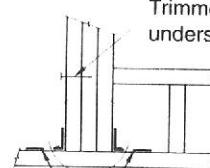


Min. M12 bolt with 50x50x3 washer to concrete floor.

Three sets of 2/90x3.33 nails.
Trimmer stud to understud.

6kN stud anchor OR
Sheet brace strap 400 wrap around bottom plate. 6/30x3.15 nails each end
OR
TYLOK Stud tie.

Three sets of 2/90x3.33 nails.
Trimmer stud to understud.



Min. M12 bolt with 50x50x3 washer to concrete floor.

Pair 6kN stud anchors.



HOME OF GANG-NAIL® BUILDING SYSTEMS

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Fax: (03) 348 0314

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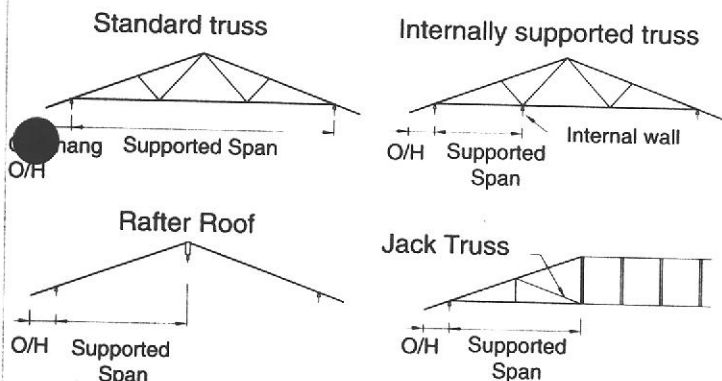
STUD TO TOP PLATE FIXING SCHEDULE

(ALTERNATIVE TO NZS 3604:1999 TABLE 8.18)

NOTE:

- ★ All fixings are designed for vertical loads only. Dead loads include the roof weight and standard ceiling weight of 0.20kPa. Refer to table 8.19, NZS3604:1999 for nailing schedule to resist horizontal loads.
- ★ These fixings assume the correct choice of rafter/truss to top plate connections have been made. Refer to the **LUMBERLOK®** Truss Fixing Chart.
- ★ Gable end wall top plate/stud connections require only 2x90x3.33 nails driven vertically into stud through top plate.
- ★ All Fixings assume top plate thickness of 45mm maximum.
- ★ Wall framing arrangements under girder trusses are not covered in this schedule.

LOADED DIMENSION DEFINITION



$$\text{LOADED DIMENSION} = \frac{\text{SUPPORTED SPAN}}{2} + \text{OVERHANG}$$

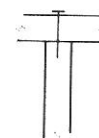
SELECTION CHART FOR FIXING LOADS - TOP PLATE TO STUD

Loaded Dimension	Light Roof Wind Zone				Heavy Roof Wind Zone			
	L	M	H	VH	L	M	H	VH
1.5	A	A	B	B	A	A	B	B
2.0	A	B	B	C	A	A	B	B
2.5	A	B	C	C	A	A	B	C
3.0	B	B	C	D	A	A	B	C
3.5	B	B	C	D	A	A	B	D
4.0	B	C	D	D	A	A	C	D
4.5	B	C	D	D	A	B	C	D
5.0	B	C	D	D	A	B	C	D
5.5	B	C	D	D	A	B	C	D
6.0	B	C	D	-	A	B	D	D

- All studs at 600 crs.
- For studs at 400 crs decrease loaded dimension by 33%.
- All trusses at 900 crs.
- For trusses at 1200 crs increase loaded dimension by 33%.

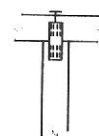
FIXING OPTION

FIXING TYPE A
0.7kN



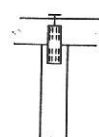
2/90x3.33 plain steel wire nails driven vertically into stud.

FIXING TYPE B
1.7kN



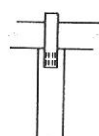
2/90x3.33 plain steel wire nails driven vertically into stud, plus single **TYLOK 2T4** plate.

FIXING TYPE C
2.7kN



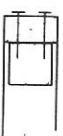
2/90x3.33 plain steel wire nails driven vertically into stud, plus pair **TYLOK 2T4** plates.

FIXING TYPE D
6.0kN

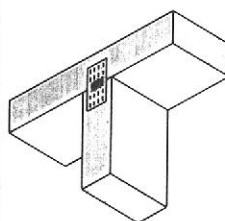


2/90x3.33 plain steel wire nails driven vertically into stud, plus **TYLOK Stud tie**.
OR
Sheet brace strap 400 with 6/30x3.15 nails each stud face.

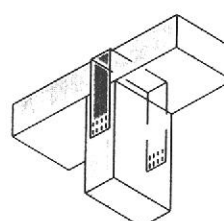
OR



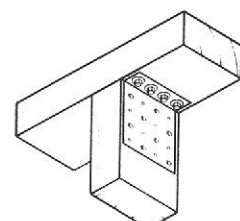
2/90x3.33 plain steel wire nails driven vertically into stud, plus **6kN Stud Anchor**.



TYLOK 2T4



TYLOK STUD TIE
OR



6kN STUD ANCHOR

SHEET BRACE STRAP 400



HOME OF **GANG-NAIL®** BUILDING SYSTEMS

MiTek New Zealand Ltd.

AUCKLAND
PO Box 58-014, Greenmount
Phone: (09) 274 7109
Fax: (09) 274 7100

CHRISTCHURCH
PO Box 8387, Riccarton
Phone: (03) 348 8691
Fax: (03) 348 0314

www.mitek.nz.co.nz

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MiTek Beam

Intel supporting roof and ceiling only

DESIGN LOADS

Roof Live Load 0.25kPa, 1.0kN Point Load
Roof Dead Load 0.25kPa, Light
Ceiling Dead Load 0.20kPa, Standard
Seismic Zone A, B or C
Overhang of 750mm has been included
Spans are horizontal dimensions

JOB NAME: Rhys Scott
ADDRESS: Lot 5 daffodill Gr
Carterton

DATE: 18/01/2008

BEAM NAME: Flitch

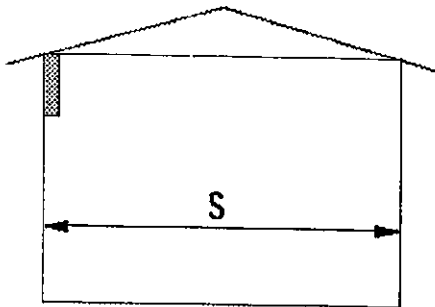
JOB DATA

Roof Weight Light
Ceiling Weight Standard
Wind Load High
Snow load NIL
Is The Roof Pitch Greater than 30 deg. No

Flitch Beam ▼

LOAD CONDITIONS

Roof Span (S) 6460 mm



Certification of MiTek Beam Design Program

The MiTek Beam design program has been developed by MiTek New Zealand Ltd for the design of GANG-NAIL Beams and Lintels in New Zealand. The beam designs computed by this program are prepared using sound and widely accepted engineering principles, and in accordance with NZS 4203, NZS 3603 and NZS 3604 as verification methods and acceptable solutions of the approved documents issued by the Building Industry Authority to satisfy the requirements of Clause B1:Structure of the Building Regulations 1992. This computer design for the proposed building complies with the relevant provisions of the NZ Building Code. This is subject to all proprietary products meeting their performance specification requirements, the provision of adequate bracing, fixings and the correct input of design data carried out by suitably trained personnel.

Beam Span: 4800 mm
Beam Size: FB25H Flitch
Beam Camber: 8 mm



MiTek New Zealand Ltd.

HOME OF GANG-NAIL BUILDING SYSTEMS

The computer design input has been carried out by:

Signed: Michael Buckthought Date: 18/01/06
Name of Computer Operator: Michael Buckthought
Qualifications and Title: Detailer
Company: CAPITAL PRE-CUT SOLUTIONS

Job Details

Name	Rhys Scott		
Street and Number	Daffodil Grove		
Lot and DP Number			
City/Town/District	Carterton		
Designer and date	Capital precut solutions	1-Nov-05	

Building Specification

Location of Storey	single	▼	not applicable (single storey building) not applicable (slab)
Floor Loading	2 kPa	▼	
Foundation Type	slab	▼	
Building Height to Apex (m)	6	▼	
Roof Height above Eaves (m)	3	▼	
Stud Height (m)	2.4	▼	
Cladding Weight (top or single)	heavy	▼	
Cladding Weight (lower)	light	▼	
Cladding Weight (subfloor)	light	▼	
Roof Weight	light	▼	
Roof Pitch (degrees)	0-25	▼	
Room in Roof Space	no	▼	
Building Length (m)	29		
Building Width (m)	21		
Gross Building Plan Area (m2)	265		

Building Location

Wind Zone	High		Earthquake Zone	
Region	R1	▼	A	▼
Terrain	Inland	▼		
Exposure	Exposed	▼		
Topography	Moderate	▼		

Bracing Units required for Wind

per m	subfloor	walls
W along	n/a	78 BUs/m
W across	n/a	78 BUs/m
Totals	subfloor	walls
W along	n/a	1638 BUs
W across	n/a	2262 BUs

Bracing Units required for Earthquake

per m2	subfloor	walls
E	n/a	5.2 BUs/m2
Totals	subfloor	walls
E along	n/a	1378 BUs
E across	n/a	1378 BUs

Gib® Wall Bracing Calculation Sheet B

single storey

V1.2A

Along								
Wall or Bracing Line	Bracing Elements provided						Wind	Earthq.
1	2	3	4	5	6	7	8W	9EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Element Length L (m)	Element Height H (m)	BUs Achieved	BUs Achieved
A	enter	1	Gib®	BR5	▼ 1.6	2.4	184	136
		2	Gib®	BR5	▼ 1.6	2.4	184	136
		3		none	▼	2.4		
line totals		4		none	▼	2.4		
W	368	5		none	▼	2.4		
EQ	272	6		none	▼	2.4		
B	enter	1	Gib®	Gib1b	▼ 3.2	2.4	240	160
		2	Gib®	BR5	▼ 1.2	2.4	138	102
		3		none	▼	2.4		
line totals		4		none	▼	2.4		
W	378	5		none	▼	2.4		
EQ	262	6		none	▼	2.4		
C	enter	1	Gib®	Gib1a	▼ 2.4	2.4	132	120
		2	Gib®	Gib3	▼ 3.5	2.4	228	210
		3	Gib®	Gib3	▼ 5.6	2.4	364	336
line totals		4	Gib®	Gib3	▼ 4.6	2.4	299	276
W	1023	5		none	▼	2.4		
EQ	942	6		none	▼	2.4		
D	enter	1	Gib®	BR5	▼ 1.3	2.4	150	111
		2	Gib®	Gib1a	▼ 1.8	2.4	99	90
		3	Gib®	Gib1a	▼ 2.4	2.4	132	120
line totals		4		none	▼	2.4		
W	381	5		none	▼	2.4		
EQ	321	6		none	▼	2.4		
E	enter	1	Gib®	Gib1b	▼ 3.3	2.4	248	165
		2		none	▼	2.4		
		3		none	▼	2.4		
line totals		4		none	▼	2.4		
W	248	5		none	▼	2.4		
EQ	165	6		none	▼	2.4		

Totals Achieved						Wind	Earthq.
						2397	1962
Totals Required (from Sheet A)						OK	OK
						1638	1378

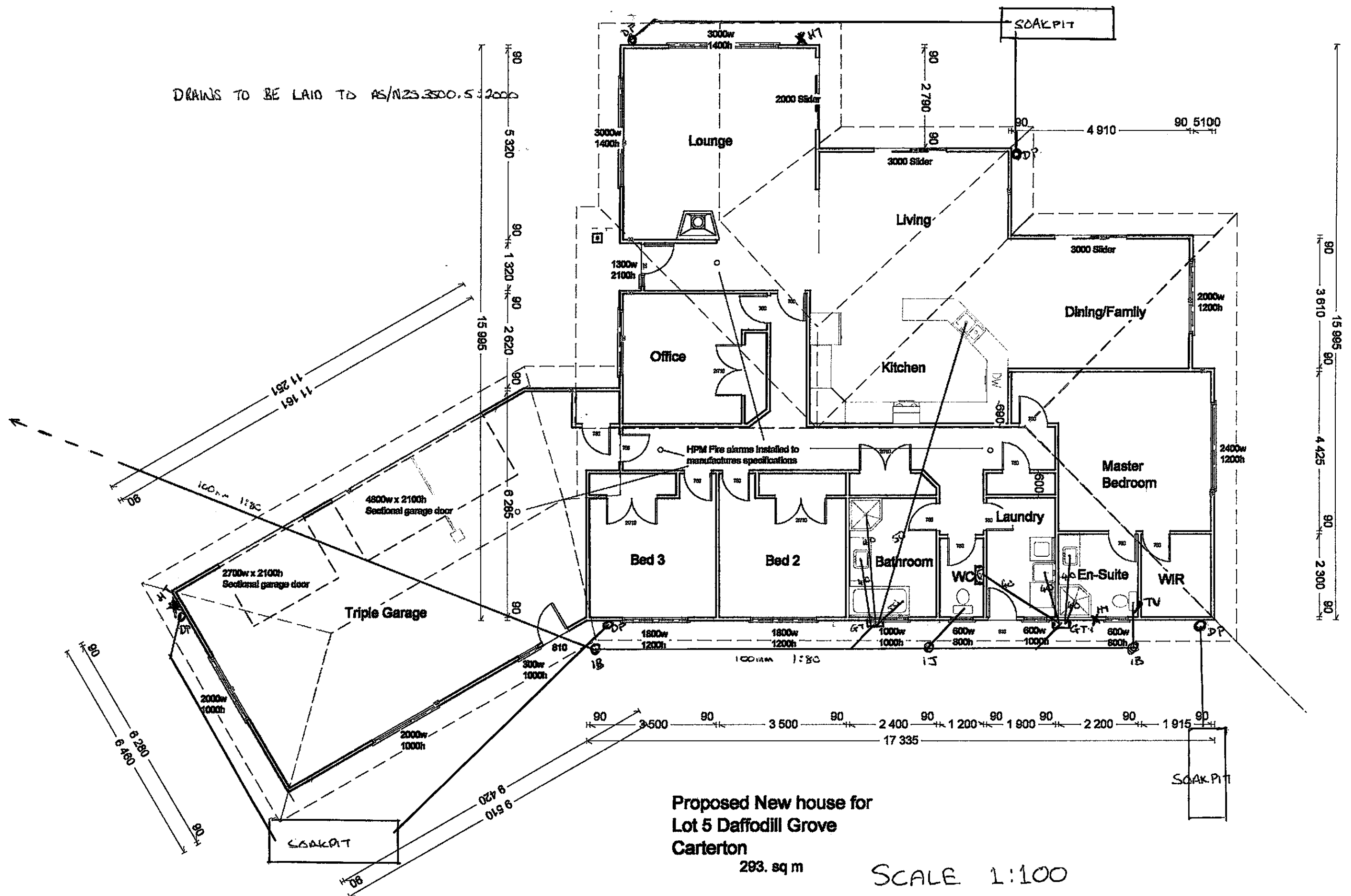
Gib® Wall Bracing Calculation Sheet B
single storey
V1.2A

Across								
Wall or Bracing Line		Bracing Elements provided					Wind	Earthq.
1	2	3	4	5	6	7	8W	9EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Element Length L (m)	Element Height H (m)	BUs Achieved	BUs Achieved
M	enter	1	Gib®	Gib1a	▼ 2	2.4	110	100
		2	Gib®	Gib1a	▼ 2	2.4	110	100
		3		none	▼	2.4		
line totals		4		none	▼	2.4		
W	220	5		none	▼	2.4		
EQ	200	6		none	▼	2.4		
N	enter	1	Gib®	BR5	▼ 1.4	2.4	161	119
		2	Gib®	BR5	▼ 1.4	2.4	161	119
		3	Gib®	Gib3	▼ 4	2.4	260	240
line totals		4		none	▼	2.4		
W	582	5		none	▼	2.4		
EQ	478	6		none	▼	2.4		
O	enter	1	Gib®	BR5	▼ 1.2	2.4	138	102
		2	Gib®	Gib1b	▼ 3	2.4	225	150
		3	Gib®	Gib1b	▼ 3.6	2.4	270	180
line totals		4		none	▼	2.4		
W	633	5		none	▼	2.4		
EQ	432	6		none	▼	2.4		
P	enter	1	Gib®	Gib1b	▼ 2.4	2.4	180	120
		2	Gib®	BR5	▼ 1.5	2.4	173	128
		3	Gib®	Gib1a	▼ 1.8	2.4	99	90
line totals		4		none	▼	2.4		
W	452	5		none	▼	2.4		
EQ	338	6		none	▼	2.4		
Q	enter	1	Gib®	BR9	▼ 0.8	2.4	88	76
		2	Gib®	BR5	▼ 1.2	2.4	138	102
		3	Gib®	Gib1b	▼ 3.3	2.4	248	165
line totals		4		none	▼	2.4		
W	474	5		none	▼	2.4		
EQ	343	6		none	▼	2.4		

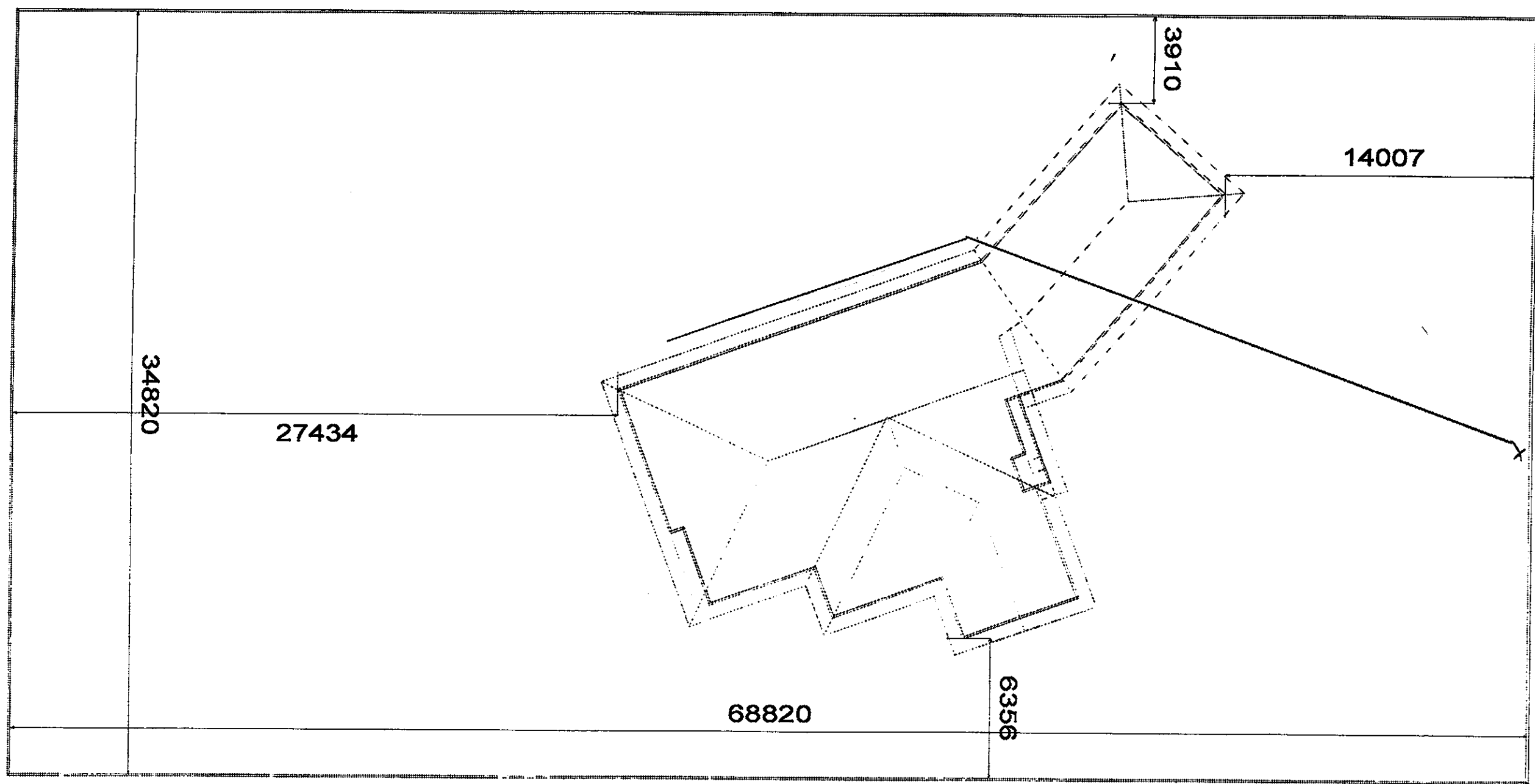
Totals Achieved						Wind	Earthq.
						2360	1791
Totals Required (from Sheet A)						OK	OK
						2262	1378

• PROPOSED NEW
DWELLING

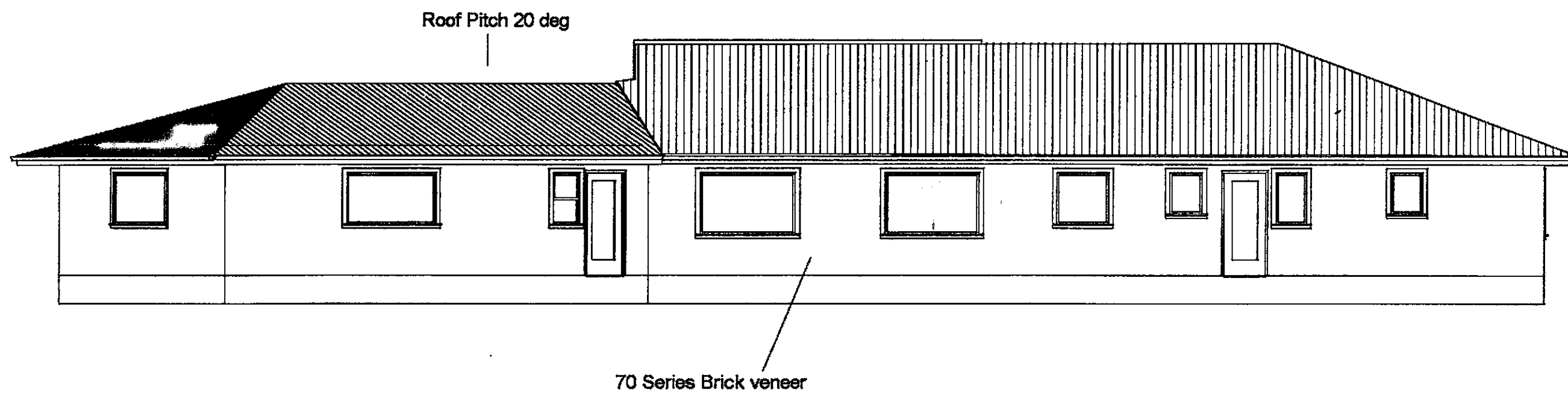
• For Mr R Scott
Lot 5 Daffodill Grove
CARTERTON



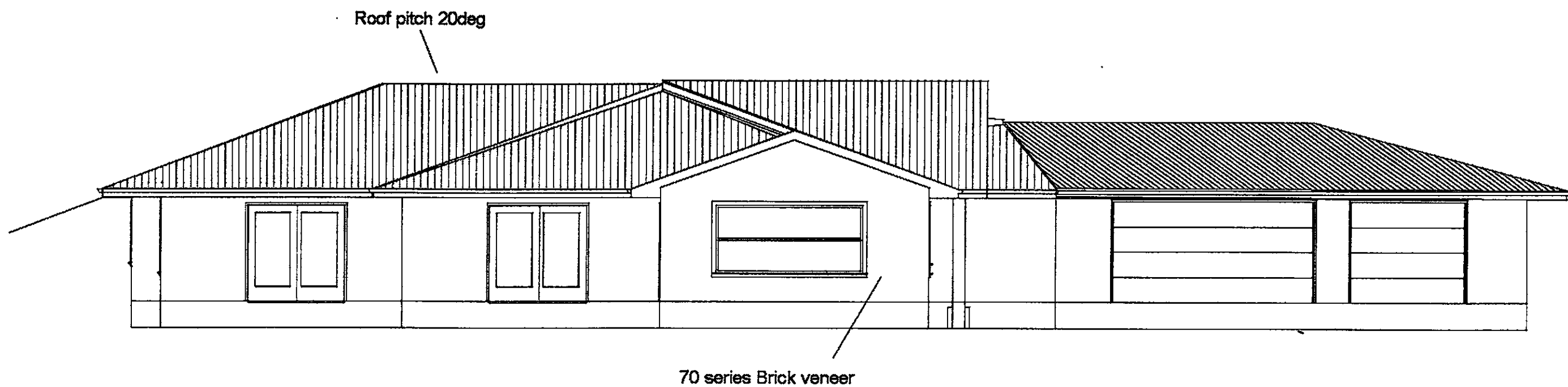
Dafodill Grove



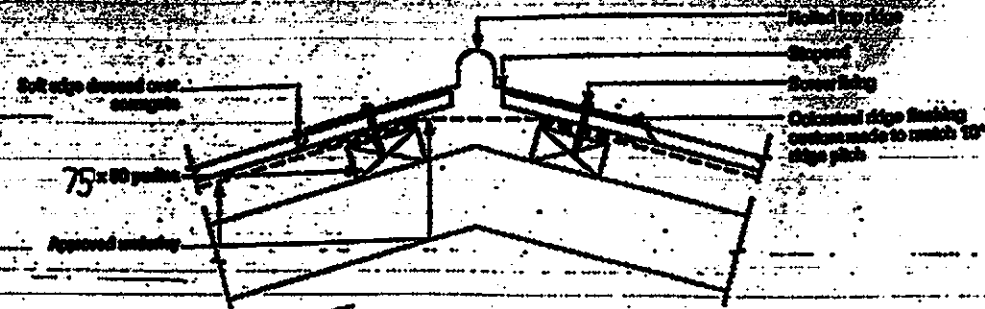
NTS



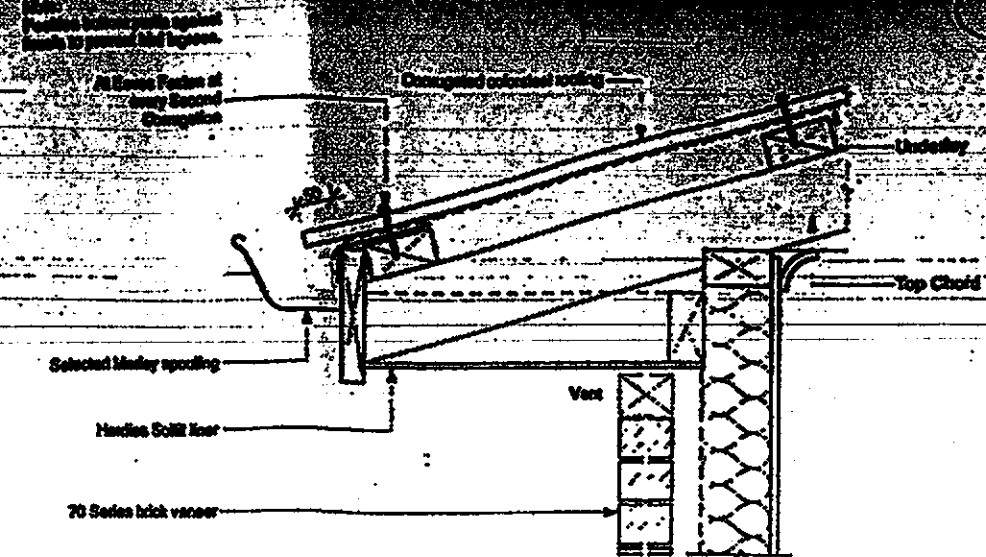
ELEVATIONS



not to scale



Ridge and hip Flashings
Scale 1:10



Eave detail for 70 Series brick
Scale 1:10

0.4mm Corrugated colour steel over
building paper and 75mm roof
netting on 75x50 purlins @900crs
Max

Gangnail trusses @900crs by
approved fabricator

R1.8 batts to walls with R2.6
batts to ceiling

2420 stud

90x45 H1.2 studs
@ 600crs

10mm Gib on 75x40 ceiling
batten at 400crs

600 hardies
soffit

100mm Concrete Slab with
665 mesh on 250 micron
vapour barrier over 50mm of
sand on compacted hard fill

200

R10 at 600 crs.

2 / D12

Good ground

Second layer of approved
Building Wrap over flashing.

Head flashing with 15° slope

10mm min cover to joinery

Aluminium joinery

BRANZ approved flexible tape
over approved building paper.

Timber framing

Approved Building Wrap

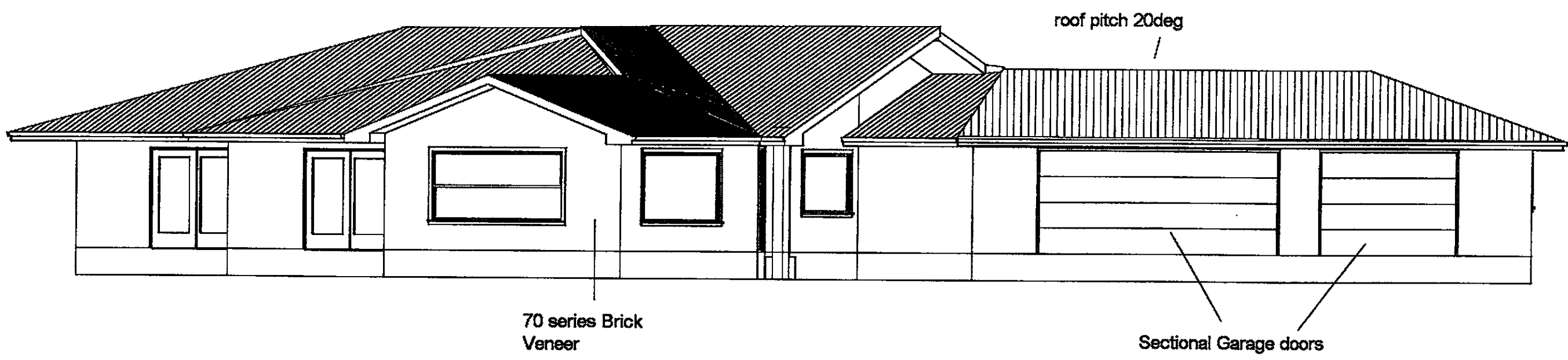
BRANZ approved air seal

Packer

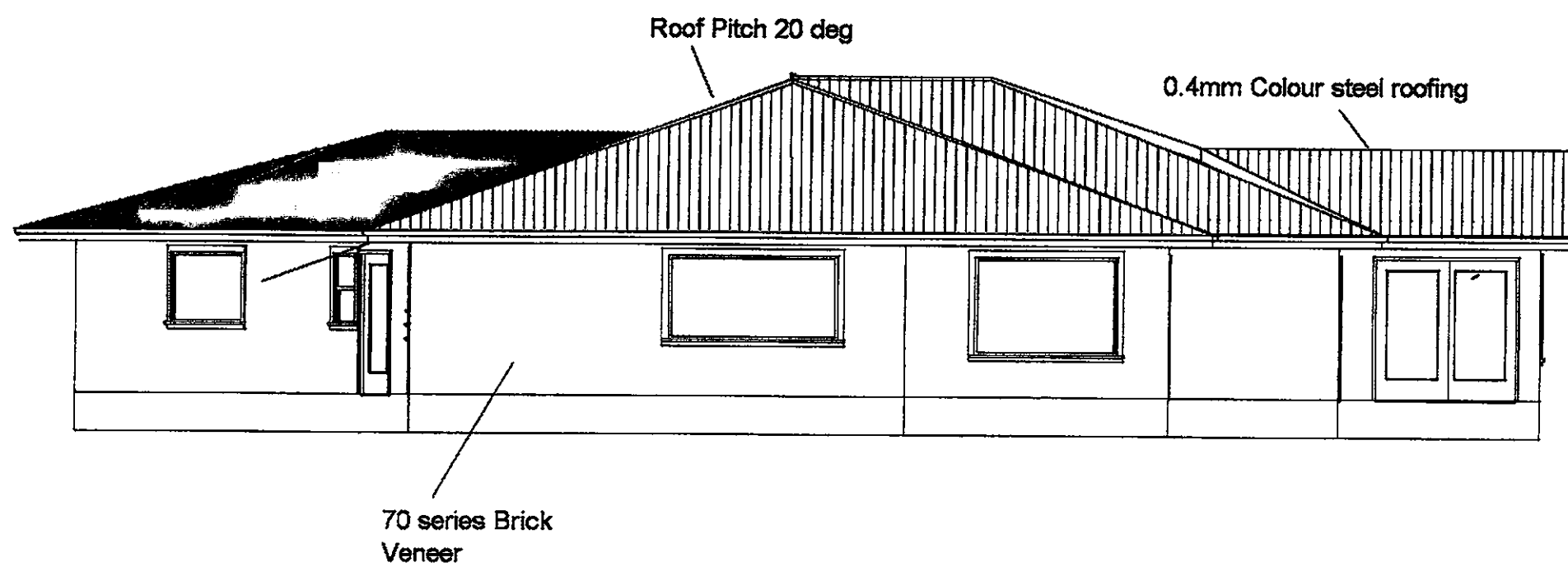
Head Flashing
Scale 1:5

not to scale

REVISED 17.02.06



not to scale



not to scale

9

Daffodill Grove

