



SPECIFICATION

of work to be done and materials to be used in carrying
out the works shown on the accompanying drawings

New Dwelling

for

CLARKE
2 ELM TREE LANE
LAKE HOOD,
ASHBURTON.

Project No. 21053

Date: SEPTEMBER 2021

ISSUE: Building Consent

INDEX

2	Index
3	Project
4	Establishment
5	Temporary Works & Services
7	Preliminaries and General
15	Excavator
17	Concrete General
18	Reinforcement of Concrete
22	Carpentry
29	Profiled Metal Roofing
31	Aluminium Joinery
34	Gib Plasterboard Linings
38	Gib Plasterer
39	Brick Veneer Cladding
42	Joinery
44	Plumbing
47	Drainage
49	Electrical
54	Painting & Decorating
59	Appendix

PROJECT

- 1. SCOPE OF THE WORK**
Construct new Dwelling with 4 bedrooms, attached garage & log burner.
- 1.1 SITE**
The site is residential as shown in the drawings.
- 1.2 LEGAL DESCRIPTION**
2 Elm Tree Lane, Lot 41 Elm Tree Lane, Lake Hood, Ashburton
- 1.3 EXISTING SERVICES**
Power, Sewer and water are on site are provided onsite as part of the subdivision,

ESTABLISHMENT

1. GENERAL

This general section relates to site establishment including: -

- Notices and approvals
- Inspections
- Site preparation
- Signage
- Temporary construction

Notices and approvals

1.1 STATUTORY OBLIGATIONS

Comply with all statutory obligations and regulations of regulatory bodies controlling the execution of the works.

1.2 BUILDING CONSENT AUTHORITY AND NETWORK UTILITY APPROVALS

Attend on Building Consent Authority officers, statutory and network utility inspectors, as necessary to obtain approvals (*in addition to building consent approval*) for and the satisfactory completion of, the works.

1.3 NOTIFY NETWORK UTILITY OPERATORS

Notify all network utility operators of proposed works before commencing site operations. Ascertain location of services or confirm that none exist in the vicinity of the works. Take all necessary precautions to avoid damage to existing services.

1.4 SITE AND SOIL SURVEYS

Carry out all investigations necessary and peruse all information available to determine ground conditions and likely ground performance both on the site and adjacent to it. Also refer to the territorial authority project information memorandum (*PIM*).

TEMPORARY WORKS & SERVICES

1. GENERAL

This general section relates to temporary works and services required for the construction of the contract works. It includes:

- Temporary works and services including temporary fencing and hoardings
- Scaffolding and shoring
- General care and protection

Temporary works

1.1 COMPLY WITH NEW ZEALAND BUILDING CODE

Refer to New Zealand Building Code clauses and approved document paragraphs for the criteria and/or methods that must be used in this section to establish compliance with the code.

1.2 COSTS RELATING TO TEMPORARY WORKS

Pay all rates/fees in respect of temporary works.

1.3 MAINTENANCE OF TEMPORARY WORKS

Maintain, alter, adapt and move temporary works and services as necessary. Clear away when no longer required and make good.

1.4 SAFEGUARD THE SITE, THE WORKS AND MATERIALS

Take all precautions to prevent unauthorised access, including access outside working hours, to the site, the works and adjoining property. Safeguard the site, the works, materials and plant from damage and theft.

1.5 SITE FENCING

Provide and maintain a site fence, 2 metres high from ground level on the side accessible to the public. Construct to comply with NZBC clause F5 Construction and demolition hazards. Construct as required for public areas and as shown on the drawings.

Construct the fence with:

- galvanized chain link netting with a 50 mm x 50 mm maximum grid size
- posts at 2.5 metre centres maximum
- gap at the bottom of the fence no greater than 100 mm

1.6 SITE FENCING – NON PUBLIC AREAS

Provide and maintain a 1 metre high site fence to non public areas. Construct using:

- warratah stakes at 1.5 metre centres fitted with safety caps
- plastic safety mesh

1.7 PROVIDE SEDIMENT AND SILT RUN OFF PROTECTION

Provide appropriate measures to prevent or minimise sediment generation and silt run off. Comply with territorial and other authority requirements relating to carrying out earthworks.

Prevent silt run off by:

- exposing only as much ground as required at any time
- providing run off channels, contour drains or earth bunds to divert clean water away from the site on to stable sealed or grassed ground

Pump water from trenches and other areas of the site using methods to prevent sediment entering any drain or watercourse. Filter dirty water before discharging into drainage system.

Temporary services

1.8 WATER

Provide clean, fresh water for the works and make arrangements for distributing about the site.

Scaffolding and shoring

1.9 GENERAL SCAFFOLDING

Provide as necessary general scaffolding for the efficient execution of the works. Placement, erection and structure to be by certified suppliers/erectors and approved by the Labour Department OSH inspectors before being used. Comply with the OSH publication: "Approved code of practice for the safe erection and use of scaffolding."

Care and protection

1.10 PROTECT EXISTING BUILDINGS

Protect the existing building during the execution of the works.

1.11 PROTECT EXISTING TREES

Protect existing trees, fences, gates, walls, during the execution of the works.

1.12 EXISTING SITE SERVICES

Make good any damage to existing driveway, footpaths, grounds, sewers or other services, caused in carrying out the contract works.

1.13 TEMPORARY STORAGE

Provide temporary storage areas and protective covers and screens. Fillet stack and protect all framing and structural members from moisture and contamination. Completely protect finishing materials from the weather and damage and store in accordance with the manufacturer's requirements. Protect fabricated elements from the weather and damage, and store in accordance with suppliers' requirements.

1.14 PERIODIC SITE CLEANING

Carry out periodic site cleaning during the contract period.

1.15 PERIODIC RUBBISH REMOVAL

Maintain on site appropriate means for the storage and removal of construction waste material. Where required or appropriate provide for the separate storage of recyclable waste and other materials requiring special disposal. Keep food waste separate from construction waste.

PRELIMINARIES AND GENERAL

1. SITE

The site of works is located at 2 Elm Tree Lane, Lake Hood, Ashburton.

1.1 CONTRACT DOCUMENTS

The Contract Documents shall be comprised of the following:

1. NZS 3902:2004, or otherwise agreed between the Owner and Contractor.
2. The Architectural Designers Drawings.
3. The Architectural Designers Specifications and attached documents.
4. The Quotation.
5. Any Addendum's or Notices to Tender's issued prior to the full contract figure being agreed.

All the foregoing documents are complimentary and what is called for in one shall be binding as if called for by all.

1.2 RETURN ALL DOCUMENTS

The Contract Documents supplied to the Contractor for the execution of the Contract are instruments of service only and shall be returned to the Owner before Final Payment is made.

1.3 SCOPE OF WORKS

The general scope of the work comprised in this contract shall cover the supply of all labour, materials, plant and direction required in the erection and completion the works, as described in the Contract Documents, and the clearing away and making good all damage, thus leaving the works ready in all respects for the Owner's occupation.

1.4 PUBLIC LIABILITY INSURANCE AND EXTENSIONS

Contractor to Insure:

The Contractor shall arrange Insurance in the joint names of the Owner, Main Contractor and Subcontractors for the respective rights and interests.

Amount of Indemnity:

The indemnity under the said Policy in respect of any one accident or series of accidents arising out of the same occurrence shall not be less than the sum of \$2,000,000.00 (*TWO MILLION DOLLARS*)

Period of Indemnity:

The said policy shall be effected at the commencement of the works and shall be maintained until the Contractor has been issued the Practical Certificate of Completion.

Special Risks:

The said Policy arranged by the Contractor shall be extended to include liability arising from the following Special Risks

- Goods / Products installed.
- Vibration, removal or weakening of support of land or buildings which shall be subject to a deductible / excess at the Contractor's risk of \$2,000,000.00 each and every accident arising from the event.
- Cranes, lifts, hoisting equipment and other plant including trailers and vehicles whilst being uses as Contract machinery.
- Damage to Owner's property caused by Contractors.
- Damage to Owner's employee's personal effects and property.
- Liability for personal injury not covered by the Accident Rehabilitation and Compensation Insurance Act 1992, or any other Act passed in its place.
- Penalties and defence costs the Owner and the Contractor incur as a result of any unexpected and unintended event leading to a prosecution under the Health and Safety in Employment Act 1992.

The Policy shall also extend to include the following special Clauses:

- Gross Liability, Breach of Warranty.

1.5 PUBLIC LIABILITY INSURANCE AND EXTENSIONS

Contract Works Policy:

The Contractor shall arrange in the joint names of the Owner, Contractor and all Subcontractors for their respective rights and interests a Policy of Contract Works Insurance on all general All Risk Conditions.

Earthquake Damage:

The Contractor shall effect indemnity against Earthquake Damage as defined by the Earthquake and War Damage Act 1944.

Amount Insured:

The amount of the insurance shall be the full value of the works as established from the original Contract's sum plus the costs of the demolition and clearing of the site after occurrence of the loss or damage plus the amount of Professional Fees.

Period of Indemnity:

The said policy shall be effected at the commencement of the works or at some earlier date at the discretion of the Contractor and shall be maintained until completion of all maintenance.

Special Risks:

The said policy arranged by the Contractor shall be extended to include the following risks and / or property:

- Temporary Works.
- Non cessation of Insurance following partial occupation by the owner.
- Off-site storage of materials to be used or incorporated in the works.
- Transit to the site of the works of material to be used or incorporated in the works.
- Damage or costs resulting from earthquake for which indemnification is not provided within the terms of the Earthquake and War Damage Commission Act 1944.
- Increased cost of working following operation of an Insured Peril including express air freight and overtime charges.
- Damage arising during running up and testing of any plant incorporated or to be incorporated in the Contract.
- Temporary removal.
- Automatic reinstatement of sum insured following a loss.
- Excess / Deductible each loss occurrence \$500.00 (*excluding loss by fire, lightening, or explosion*) which shall be the responsibility of the Contractor.
- Loss of damage arising due to cessation of work.

1.6 CONTRACTORS ALL RISK INSURANCE

The Owner shall be responsible for the insuring of the works during the contract period. Such insurance shall be for the full tendered price, inclusive of all owner supplied materials and sub-trades, plus 10% to allow for demolition and price fluctuations during the contract period.

1.7 BYLAWS

It is the responsibility of all trades to be conversant with the relevant approved documents of the New Zealand Building Code as they apply to their portion of the works. All work carried out and materials supplied shall meet the requirements of the Building Act 2004 and amendments thereto, and shall also be in compliance with Local Authority By - Laws. Refer also to "Schedule of Approved Documents Per Trade" as attached appendices.

1.8 BUILDING CONSENT

The Building Consent shall be applied and paid for by the Owner.

Should additional fees be levied for extra inspections as a result of works not approved by the territorial authority when a requested inspection was carried out, these inspection costs shall be met by the contractor or sub-contractor responsible.

Any additional work required by the territorial authority that is not shown or specified shall be treated as a variation to the contract.

1.9 AMENDED BUILDING CONSENT

The **Contractor** is reminded that Variations, other than for minor changes, and particularly where changes involve structural components, weathering envelope, waterproofing systems, plumbing, sanitary drainage, accessibility, egress and the like, will require an application for amendment to the building consent to be lodged with the Building Consent Authority, and an Amendment to the Building Consent must be approved before the work is carried out.

Similarly where it is proposed to substitute product or methods from those detailed in the documents, these will, particularly in those situations described above, also require an application for Amendment to the Building Consent.

Where variations or changes are required, either at the request of the client, or where prevailing building conditions or site conditions necessitate a change to the work from that documented, the Contractor shall seek a ruling from the Building Consent Authority, in writing, to clarify if a Variation to the Consent is required.

If required it shall be the Contractor's responsibility to prepare all necessary documentation, including revised drawings if necessary, and pay associated fees to obtain the required Amendment to the Building Consent. Such costs will be reimbursable by the client as a part of the approved variation cost.

1.10 SETTING OUT

Set Out and Datum:

Set out the work to conform with the drawings. Establish a permanent site datum to confirm the proposed building ground floor level and its relationship to all other existing and new building levels.

Confirm Height in Relation to Boundary:

Provide a certificate prepared by a licensed cadastral surveyor that the building has been constructed within the allowed height in relation to boundary. Provide the certificate to the local authority. Provide a copy of the certificate to the contract administrator

Check Dimensions:

Check all dimensions both on drawings and site, particularly the correlation between components and work in place. Take all dimensions on drawings to be between structural elements before linings or finishes, unless clearly stated otherwise.

1.11 CONTRACTOR'S RESPONSIBILITY

The Contractor shall keep all persons (*including those employed by the Subcontractors*) under his control and within the boundaries of the site and he will be held responsible for the care of the works generally until their completion.

1.12 ACCESS TO SITE

Access to the site shall be from 2 Elm Tree Lane, Lake Hood, Ashburton.

1.13 SHEDS AND TOILET

Provide, erect and maintain proper site sheds, etc for the storage and complete protection of materials, etc for the execution of work which may be fabricated and/or stored on site.

1.14 COVER UP AND PROTECT

The Contractor shall cover up and protect the whole of the works from any weather which could be in any way detrimental to the work.

1.15 PAYMENT FOR MATERIALS STORED OFF SITE

To maintain progress on jobs, the client is prepared to make payment of up to 90% of the value, for material pre-purchased for the contract. Such claims are to be supported by an assignment of ownership, a copy of the invoice and insurance cover note for the full value made out in the client's name.

1.16 SUBSTITUTION

No materials, products, or methods are to be substituted from those asked for in the documents without direct instruction by the owner or his representative. Any alternative

material, product or method proposed shall be required to meet the standard of operation, material, and workmanship called for in the documents.

Where a substituted material, product, or method is proposed, and particularly where that substitution is for an alternative method or lesser product, the contractor shall provide evidence including shop drawings, installation details, and/or manufacturers' instructions to show how the substituted product will comply or differ from that shown in the documents. Such information is to be provided before the owner's approval can be sought, and before the substitution is incorporated into the works.

Note! Substitution of materials, products or methods from those asked for in the documents as approved for building consent, may require an amendment to the consent to be sought before the substitution is carried out. See clause *(1.10 Amended Building Consent)*

1.17 FINISHING WORK

Should any trade consider that any surface or work executed by the previous trade in any way prevents the execution of a satisfactory finish the General Foreman, or Contractor's representative, shall be immediately notified and no work shall proceed until the necessary improvement has been made.

Failure to give such notice shall not relieve the finishing trade concerned of responsibility for a poor result. Any work executed by a finishing trade on any surface shall be deemed to be an acceptance by that trade that the surface is satisfactory.

1.18 SUBCONTRACTORS

The Contractor shall be required to attend on all Sub-contractors including those nominated and/or supplied by the Owner. The Contractor may sub-let portions of the works to such an extent and to such persons and firms as the Owner or his agent has approved. The Owner shall be notified of all intended Sub-contractors prior to their being engaged and reserves the right to reject any he may object to. Any Cost differentials, either additions or deductions, incurred as a result of this action shall be treated as a variation to the contract.

All Sub-contractors are bound by the preliminary and general section of the specification and to the full extent of their responsibility and instructions as contained in the full Contract Documents. This specification is divided into trade sections for convenience only and is to be read in its entirety by all trades. It shall not be construed that each trade section is a complete and separate contract.

1.19 APPROVED SUBCONTRACTORS AND FIRMS

If a tenderer proposes to sub-let any of the trades or work specified hereinafter he shall supply with his tender, the names of companies, firms, or individuals to whom it is proceed to sub-let the work, and the nature of the work concerned. Any tender unaccompanied by this list of subcontractors may be treated as informal.

1.20 FOREMAN

The Contractors shall allow for a properly qualified general foreman to be constantly on the works throughout the period of this execution. Any directions or explanations given to the general foreman, in writing, shall be held to have given to the Contractor.

1.21 SPECIFICATION

The items shown in any section cover most of the work in that section but do not limit it. The work that shall be provided by the Contractor shall be all that is necessary in accordance with best trade practice to complete the works as correctively and / or individually implied by the drawings and this specification for all trades.

1.22 SECURITY

The contractor shall take all reasonable precautions to maintain security of the works and adjacent premises. This shall be provided by means of locked doors, temporary framed closures or ply sheets screwed to framing in order that access to site cannot easily be gained by persons who unlawfully access the building site.

1.23 CLEAR AWAY

On completion take down and clear away all plant and temporary work including office and sheds, etc and make good. Remove all rubbish, debris, and surplus materials as they accumulate and on completion clean all floors, paving, external surfaces and glass both sides. Touch up all paintwork, clean off any surfaces inside and out in any way marked and leave the completed works in a thoroughly clean condition for the owner's occupation.

1.24 CLEANING BY THE CONTRACTOR

Clear the contract works of all construction materials, waste, dirt and debris. Clean the contract works including:

- Wipe all surfaces to remove construction dust
- Clean out service ducts and accessible concealed spaces
- Clean out all gutters and rainwater heads
- Wipe dust from both sides of glass. Take particular care when removing paint or cementitious materials to not damage the glass.
- Remove adhesive residue left by labels and other temporary protection/markings
- Clean out the interior of all cabinetry
- Wash down external concrete including driveways and concrete masonry. Take care when waterblasting to not cause damage to the surface or allow water to enter the building.
- Remove rubbish and building material from the area immediately adjacent to the contract works

1.25 VARIATIONS

In addition to the general conditions of contract, no variations shall be recognised for action unless authorised in writing by the client or his appointed agent. The cost adjustment of any variation shall be agreed prior to the works being carried out, or where this is not possible (due to unknown extent of work etc) the rates for charge-up work, including margins to be added to the net cost of materials, sub-trades and labour shall be those established at time of quotation. The contractor shall nominate his hourly rate and margins for variations to be carried out on a cost-plus basis. See clause (1.10 Amended Building Consent)

1.26 HEALTH AND SAFETY MANAGEMENT PLAN

Tenders are required to submit with their tenders details of their companies Health and Safety Management Plan in accordance with the "Health and Safety in Employment Act"

The contractor shall take all necessary precautions in accordance with the *New Zealand Building Code - Clause F5 Construction and Demolition Hazards* and the *Health and safety Employment Act 1992 – Approved Code of Practise for Demolition* to safeguard people from injury, and other property from damage, caused by construction or demolition site hazards.

Where public access adjoins to the site, the Contractor shall provide fencing or suitable barriers to exclude the public from the site. Furthermore the Contractor shall undertake the work in a manner that avoids objects falling onto people or property both on and off the site and mitigates any further hazards that can affect people or property on or adjacent to the works.

1.27 DOCUMENTATION

The main contractor shall insure that all sub-trades receive a full set of construction documents, i.e. Plans, Specification and Notices issued, prior to the commencement of work. Additional copies of the documentation are available from the Designer and will be charged at \$1.25 for A3 black & white, \$2.50 for A3 colour, \$2.50 for A2 black & white, \$5.00 for A2 colour and \$0.15 for A4 black & white sheets.

1.28 TIME FOR COMPLETION

The site is available for immediate start and it is the Owner's desire to have the house completed and ready for their occupation in a short but achievable time period.

With the tender the Contractor shall nominate their:

1. Earliest possible start date
2. Earliest possible completion date.

The Contractor shall stay on site from the beginning for the project until it is complete.

1.29 POSSESSION

Before the taking of possession of the building, by the Owner or his agent, the Certificate of Completion contained in the contract agreement must be signed.

1.30 MAINTENANCE

The period of maintenance shall be 90 days from the date of the signing of the Certificate of Completion by the Owner. Any retention monies shall be paid out on the satisfactory completion of maintenance, but providing that the "Certificate of Compliance" has been provided to the owner by the Territorial Authority.

Should the Territorial Authority withhold the provision of the Certificate of Compliance, due to the contractor or his sub-contractors not complying with the requirements of the building code, these requirements shall be met by the contractor responsible before the retention's are released.

1.31 CERTIFICATE OF COMPLIANCE

The Owner shall, on completion of the works, supply all the necessary Producer Statements, Certificates, and Guarantees to the owner, showing that all works have been carried out in accordance with the documents, and in compliance with the Building Code. In addition the Contractor shall notify the Territorial Authority of the buildings readiness for final inspection as required under the Building Act.

1.32 FIXED PRICE CONTRACT

This is a Fixed Price Contract. No consideration will be given to increased costs, claims on labour or materials, apart from net sum adjustments or approved variations to the contract.

Any unavoidable cost increases are to be communicated to the Designer as soon as possible.

The owner reserves the right to purchase materials prior to increase.

1.33 G.S.T

Unless stated otherwise, the Contractor shall allow in his price for Goods and Services Tax. All net or provisional sums or other monetary figures included in the documents shall be deemed to be inclusive of G.S.T. at the rate applicable on the closing date of the tender. All quotations for variations or extra works submitted to the Owner by the Contractor shall likewise include for G.S.T.

1.34 ITEMS SUPPLIED BY THE OWNER

The Contractor shall allow for the installation of owner supplied materials as directed and likewise shall allow to co-operate with owner supplied sub-contractors for inclusion of their work within the total building package. The contractor shall allow for any costs associated with co-operation and direction of owner supplied sub-trades.

Items of material or nominated sub-contractors supplied by the Owner shall be the responsibility of the Owner and should those items fail in usage it shall be the Owners responsibility to replace them along with any consequential works.

The Contractor is responsible for the contract programme, and co-ordination of works and materials used on the site, including supervision of overall standards of workmanship. Sub-standard workmanship and/or materials, shall be made good by the supplier or sub-contractor responsible.

1.35 NET SUM ALLOWANCES

A Prime Cost or P.C. Sum is the net sum allowance to be included for the supply only of a fixture, item of material, or appliance. The contractor shall allow separately to take delivery of, and to fix in place, and for any profit margin.

The Owner may elect to supply any P.C. Sum item himself with the whole or any part of

the sum allowance not expended by the Contractor being deducted from the final account.

NET SUM ALLOWANCES N/A

1.36 **PROVISIONAL SUMS**

A Provisional Sum is the sum allowance to be included for any portion of the works to be carried out on a labour plus material charge up basis. This sum shall be deemed to allow for any directly related establishment or overhead costs, and items or works provided under a provisional sum shall be accounted for at their net cost plus a margin for profit as agreed.

PROVISIONAL SUMS: N/A

1.37 **CONTINGENCY SUM**

Unless specifically included, no contingency sum is to be allowed. A contingency sum shall only be expended at the direct instruction of the owner. Should unforeseen works be encountered, these shall be discussed with the owner, or his agent, prior to the works being carried out, for his approval both as to the extent of these works and the methods proposed.

CONTINGENCY SUM: N/A

1.38 **OWNER SUPPLIED SUB-TRADES**

The following sub-trades shall be employed by the owner, and shall be engaged to complete contract works in co-operation with, and at the direction of, the Contractor. The contractor shall make allowance for the cost of administration or management of owner supplied sub-trades within his tender offer. The owner shall be responsible for the payment of the trades separately from the building contract.

1. Kitchen, Pantry & Laundry Joinery design and installation.
2. Laundry joinery design and installation.
3. All Wardrobe, Storage and Office Joinery supply & Installation.
4. Heat Pump Supply and Install.

1.39 **WORKS TO BE CARRIED OUT BY THE OWNER**

The following works are to be completed by the owner either in conjunction with the contractors works or after completion of the contract whichever is both applicable and needful for the satisfactory completion of the works. Allow to cooperate with the owner or his sub-contractor in the execution of these works.

1. Landscaping work, including formation of garden, lawns and paved areas.
2. Floor coverings, (*with the inclusion of tiled floor areas*) and window furnishings.

1.40 **ITEMS PROVIDED BY THE OWNER**

The following items are to be supplied by the owner for installation by the appropriate trade. All items shall be delivered to the site in good order and condition. The owner shall advise the value of any item supplied by him for inclusion within the contractors contract all risk insurance package.

1. Floor coverings (*including tiles*).
2. Window furnishings.
3. Electrical fittings as described as O.S.F. in the electrical section.
4. All electrical white ware including:
 - Fridge/freezer
 - Oven
 - Range hood
 - Electric hob
 - Microwave
 - Dishwasher
 - Washing machine
 - Dryer
5. 3 No. WC's
6. 3 No. Vanities
7. 1 No. Acrylic Shower complete
8. 1 No. Acrylic Bath

9. Mirrors to Bathroom, WC & Ensuite.
10. Taps.
11. Heated Towel Rails to Bathroom & Ensuite.
12. Door hardware.

EXCAVATOR

1. GENERAL

All Sub-contractors are bound by the preliminary and general section of the specification and to the full extent of their responsibility and instructions as contained in the full Contract Documents. This specification is divided into trade sections for convenience only and is to be read in its entirety by all trades. It shall not be construed that each trade section is a complete and separate contract.

1.1 PRODUCER STATEMENT – CONSTRUCTION

At the completion of the Contract, the Contractor shall provide to the Engineer a Producer Statement – Construction, covering the work described in this section.

- Be issued by the Contractor to the owner (named)
- Describe the building work.
- Be signed by a named duly authorised representative of the Contractor.
- Contain the statement:

“I (*named representative*) a duly authorised representative of (*the Contractor*) believe on reasonable grounds that (*the Contractor*) has carried out and completed (*all/part only as specified*) of the building works in accordance with all the Contract Documents, Contractors Instructions and Site Reports.”

1.2 SCOPE

This section of the Contract includes excavation, backfilling and hardfill in connection with foundation, and ground floor slabs.

1.3 STRIPPING OF SITE

Over the whole building platform, break up and remove any existing concrete, asphalt and other paving or site-works.

Strip all grass, vegetation and topsoil. Leave sufficient topsoil for landscaping. Excavate any fill material to expose natural silts over the whole building platform.

Remove all tree roots associated with any old stumps on the site.

1.4 EXCAVATE FOR FOUNDATIONS

Excavate for footing pads, foundation beams, and slab thickenings as detailed. Allow for formwork for depth of concrete.

Before pouring concrete the excavations should be clean and the bottom firm. Ram bottom if necessary.

1.5 DEPTH OF FOUNDATIONS

Any soft spots found in excavations shall be reported to the Engineer. Should it be found necessary to excavate to a greater depth than shown on the drawings, the Contractor shall be paid for such greater excavation at a rate approved in writing before such work is carried out.

Allow for site concrete beneath foundations where shown on the drawings.

1.6 EXCAVATIONS TOO DEEP

Should the Contractor excavate to a greater depth than called for by the drawings or by the Engineer's written instructions, he shall at his own cost fill to the proper level. Filling shall be to the Engineer's written instructions and may include filling with site concrete.

1.7 MAINTAIN EXCAVATIONS

Secure and maintain excavations free from slips, erosion, water and other fluids or fallen materials. Provide and maintain all shoring, sheet piling, planking, pumps and other materials or plant necessary for caring out and maintaining excavations and remove them when on longer necessary. If water enters excavations before concrete is cast, it shall be removed and any soft areas replaced in accordance with clause (1.6 *Excavations too deep*)

1.8 BACKFILLING

Backfill around the foundations with thoroughly compacted hardfill. Remove all timber, rubbish and other loose material before backfilling.

Backfill and compact in 150mm thick layers using a vibrating roller or similar vibrating equipment. Ramming shall only be used where access is not available for vibrating equipment.

Backfill shall be compacted to a minimum dry density of 2200kg/m³, and its moisture content shall not exceed 5%.

1.9 HARDFILL

Supply, lay and compacted hard fill in accordance with NZS3604:2011.

1.10 EXCAVATED MATERIAL

Excavated topsoil may be stock-piled on site where directed by the owner.

Silt and other material shall be removed from the site and disposed of.

1.11 SURPLUS MATERIAL

Remove from site and dispose of all the surplus material from the excavations.

1.12 CO-OPERATION

Co-operate with CONCRETOR, DRAINLAYER and PLUMBER subcontractors, and programme excavation work to fit with other trades.

1.13 DESCRIPTION OF WORKS

This section is a guide only and should be read in conjunction with the working drawings to obtain the full extent of work required.

1. The Excavator shall excavate the site to levels shown on the drawings.
2. Excavate to depths shown on the drawings, or to solid bearing. (*Should extra depth be required to reach solid bearing this shall be noted before concrete is poured, and shall be treated as a variation to the contract*)
3. Excavated soil necessary for landscaping to remain on site, stockpiled in location as instructed by the owner – surplus excavated material to be removed from the site.
4. Removal of any concrete spills etc and backfill around foundation to be by Contractor. The Owner shall be responsible for all landscaping and site grading work.

CONCRETE GENERAL

1. GENERAL

All Sub-contractors are bound by the preliminary and general section of the specification and to the full extent of their responsibility and instructions as contained in the full Contract Documents. This specification is divided into trade sections for convenience only and is to be read in its entirety by all trades. It shall not be construed that each trade section is a complete and separate contract.

No change or variation is to be made to any structural element without the specific instruction or consent being given, in writing, by the Design Engineer.

1.1 GENERAL SPECIFICATION

All concrete work shall comply with the provisions of NZS 3109:1997 "Specification for Concrete Construction", unless specifically instructed otherwise, in writing, by the Engineer. All other materials shall comply with the relevant New Zealand standard.

1.2 CONCRETE GRADES AND STRENGTHS

The following 28 day compressive strengths shall be used:

Over excavation backfill to level	10MPa
Foundations	20MPa
Floor Slabs	20MPa

Concrete production shall be in accordance with the requirements of NZS 3104:1991 "Concrete Production - High Grade and Special Grade", unless otherwise approved in writing by the Engineer. All concrete must be supplied by a high or special graded plant as defined in NZS 3104:1991.

No additives are to be included in the mix design without the written approval of the Engineer.

1.3 BUILDING IN

Build in all penetrations, openings, cast in duct sleeves, conduits and the like, as required by other services and trades.

1.4 SURFACE FINISHES:

Schedule of Finishes

The following finishes are required for the different parts of the building:

Floor Slab	U2
Unexposed Foundations	F1
Exposed Foundations	F3

The specified finishes are to be in accordance with the standards defined in NZS 3114: 1987 "Concrete Surface Finishes".

It is the responsibility of the Sub-Contractor applying any surface finish, to ensure that the concrete surface is suitable for his application, always providing that the surface is structurally sound.

1.5 VIBRATORS

Vibrators shall be used for the placing of concrete. Vibrators and their use shall comply with the requirements of NZS 3109, Section 7.6.

Vibrators shall be moved to new positions as frequently as necessary to ensure uniform vibration of the whole mass and fully compacted concrete. On no account shall vibrators Come within 12mm of the face of the formwork. Vibrators shall not be used to transfer concrete from one position to another.

1.6 FORMWORK AND CONCRETING

Formwork and concreting shall conform to NZS 3109, Sections 5 and 7. Formwork shall be so designed and constructed that concrete can be placed and thoroughly compacted without loss of grout and without visible offsets, bulges or misalignment. All joints shall be tight and close fitting to prevent leakage. Where concrete will be exposed in the job, form clean, neat arises except where chamfers are shown on the drawings, in which case the fillets shall form part of the mould side and not be loosely added. To avoid stepping or ridges at construction joints, formwork shall be tightly secured against previously cast or hardened concrete. Concrete finishes are specified above.

Construction joints shall comply with NZS 3109, Clause 5.6.3. Where keyed construction joints are drawn or specified in the ground floor slabs, these shall be Type C. Elsewhere, joints shall be Type B, unless agreed otherwise with the Engineer. Unless their positions are shown on the drawings, the locations of all construction joints shall be agreed in advance with the engineer.

Care shall be taken that oil is kept out of contact with the reinforcement. All formwork shall be checked for dimensional accuracy and alignment immediately before concreting and adjusted as necessary. Pouring shall be between properly positioned stops.

Before pouring commences, the engineer or his representative shall be notified and a reasonable opportunity given him to inspect formwork, reinforcement and construction joints.

Stripping times shall not be less than those NZS 3109, Clause 5.4 unless otherwise agreed by the engineer.

1.7

DESCRIPTION OF WORKS

Refer to the Architectural drawings to see the full extent of work required. All work undertaken shall be completed in best trade practice.

1. This section of the Contract consists of the supply, positioning, placing and finishing of all concrete and reinforcing for foundations, floor slabs as shown on the drawings.
2. Foundations shall be constructed as shown on the drawings.
3. Provide steel mesh to the floor slab with 30mm top cover.
4. Lay 250 micron polythene below the house and garage floor slabs.
6. Co-Operate with the Electrician for installation of Duct holes for other sub trades, i.e. Plumber.

REINFORCEMENT FOR CONCRETE

1. GENERAL

All Sub-contractors are bound by the preliminary and general section of the specification and to the full extent of their responsibility and instructions as contained in the full Contract Documents. This specification is divided into trade sections for convenience only and is to be read in its entirety by all trades. It shall not be construed that each trade section is a complete and separate contract.

This section deals with the supply, cutting, bending and fixing of steel bar and steel welded reinforcement for concrete.

1.1 GRADE 300E STEEL

To AS/NZS 4671. Round bars are shown by symbol "R" and deformed bars by symbol "D", followed by the diameter in millimetres.

1.2 WELDED WIRE FABRIC

Hard drawn steel wire spot welded to AS/NZS 4671, smooth or deformed and to the spacings and dimensions either specified or shown on the drawings.

1.3 TYING WIRE

Mild drawn steel wire not less than 1.2 mm diameter.

Components

1.4 SPACERS AND CHAIRS

Precast concrete or purpose made moulded PVC to approval. Where concrete spacer blocks are used in exposed concrete work use blocks matching surrounding concrete.

1.5 HANDLE AND STORE

Handle and store all reinforcing steel and accessories without damage or contamination. Store on timber fillets on hard ground in a secure area clear of any building operation. Lay steel fabric flat.

1.6 DELIVER ALL BUNDLES

Deliver all bundles of steel to the site clearly marked or tagged with numbers relating them to the bending schedule and drawings.

1.7 CLEANLINESS

Keep reinforcement clean so that at the time of placing concrete it is free of all loose mill scale, loose rust and any other contamination that may reduce bonding capacity.

1.8 PROJECTING REINFORCEMENT

Protect projecting reinforcement from the weather where rust staining of exposed concrete surfaces may occur.

Protect and/or mark any projecting reinforcement where it provides a potential hazard to site personnel.

Assembly

1.9 CUT AND BEND

Cut and bend bars using proper bending tools to avoid notching and to the requirements of NZS 3109: 3.3 Hooks and Bends. Minimum radii of reinforcement bends to NZS 3109: table 3.1, Minimum radii of reinforcement bends. Do not rebend bars. Where rebending is necessary, use a purpose built tool, proper preparation and preheating.

1.10 ADJUSTMENTS

Use a purpose built tool for on site bending and to deal with minor adjustments to steel reinforcement.

1.11 TOLERANCES, BENDING

To NZS 3109: clause, 3.9 Tolerances for reinforcement.

Application

1.12 SECURE REINFORCEMENT

Secure reinforcement adequately with tying wire and place accurately, supported adequately and secured against displacement when concreting. Bend tying wire back well clear of the formwork.

1.13 SPACING

Spacing as dimensioned on the drawings but if not shown then the clear distance between parallel bars in a layer, or the distance between layers, or the spacing of other steel to the minimums laid down in NZS 3109: clause 3.6, Spacing of reinforcement.

1.14 TOLERANCES, SPACING

To NZS 3109: clause 3.9, Tolerances for reinforcement.

1.15 LAPPED SPLICES

Length of laps where not dimensioned on the drawings in accordance with the SELECTIONS. Increase laps for plain round steel by 100%. Provide laps only where indicated on the drawings. Tie all lapping bars to each other.

1.16 WELDED SPLICES

Carry out only if either specified on the drawings or after written approval from the Construction reviewer and then to the requirements of AS/NZS1554 and NZS 3109: clause 3.7.2, Welded splices, in respect of developed strength and location.

1.17 MECHANICAL SPLICES

Use only where shown on drawings. Use the appropriate sleeve size and length, swaged onto the bars using correct die and hydraulic press all to the manufacturer's requirements. Notify when ready for inspection and carry out tests if required.

1.18 STEEL SPACERS

Fix spacers between layers of wall reinforcement at 1.0 metre centres minimum.

1.19 MINIMUM COVER

Unless noted otherwise on the drawings, minimum cover to all reinforcing bars, stirrups, ties and spirals to NZS 3109: clause 3.8, Cover.

1.20 TOLERANCES, COVER

Tolerances on cover relative to the values in NZS 3109: clause 3.9 Tolerances for reinforcement.

1.21 FIX CHAIRS

Fix chairs for top reinforcement in slabs at 1.0 metre centres or to ensure adequate support.

1.22 CONCRETE SPACER BLOCKS

Where required in exposed concrete work, make from same materials and mix as the surrounding concrete.

Completion

1.23 REMOVE

Remove all debris, unused materials and elements from the site.

1.24

REINFORCEMENT LAPS

Where reinforcement laps are not shown on the drawings, lap as follows:

<u>Bar Diameter</u>	<u>Grade 300E deformed</u>	<u>Grade 500E deformed</u>
10 mm	400 mm	650 mm
12 mm	500 mm	750 mm
16 mm	650 mm	1000 mm
20 mm	800 mm	1250 mm
25 mm	1000 mm	1600 mm
32 mm	1200 mm	2000 mm

CARPENTRY

1. GENERAL

All Sub-contractors are bound by the preliminary and general section of the specification and to the full extent of their responsibility and instructions as contained in the full Contract Documents. This specification is divided into trade sections for convenience only and is to be read in its entirety by all trades. It shall not be construed that each trade section is a complete and separate contract.

This section deals with the erection on site, of timber trusses and frame, laminated veneer lumber and laminated timber members and engineered wood products.

1.1 STANDARDS

In this section of the Construction Specification, reference is made to the latest version of the following documents:

<i>New Zealand Building Code</i>		<i>(DBH)</i>
<i>NZS 3601:1973</i>	<i>Metric dimensions for timber</i>	<i>(SNZ)</i>
<i>NZS 3602:2003</i>	<i>Timber and wood base products for use the in building</i>	<i>(SNZ)</i>
<i>NZS 3604:2011</i>	<i>Timber frame buildings</i>	<i>(SNZ)</i>
<i>NZS 3631:1988</i>	<i>New Zealand timber grading rules</i>	<i>(SNZ)</i>
<i>AS/NZS 2098:2012</i>	<i>Method of test for veneer and plywood</i>	<i>(SNZ)</i>
<i>AS/NZS 2269:22012</i>	<i>Plywood structural</i>	<i>(SNZ)</i>

1.2 WORKMANSHIP

Work generally shall be in accordance with the best trade practices, and this shall be deemed to include those methods, practices and processes contained in the current syllabuses for the New Zealand Trade Certificates in carpentry, joinery and timber machining.

1.3 TIMBER CLASSES AND GRADES

All timbers shall comply with NZS 3631. All framing timber shall be no. 1 framing. Sizes shall comply with NZS 3601, unless otherwise specified. All framing timber shall be MSG8 unless otherwise noted.

1.4 WOOD BASED PRODUCTS

Plywood for interior situations where there is full protection from the weather, and from high humidity, shall comply with the following standard:
AS/NZS 2098 and AS/NZS2269

1.5 FINISHING TIMBER

All finishing timber shall be gauged to both width and thickness. Finishing timbers shall be machined to a standard that removes all rough and uneven areas and produces a surface free of noticeable machining defects. All interior joinery and finishing timbers shall be supplied free of saw, machine and other marks that would impair the production of a smooth even finish

1.6 TIMBER MOISTURE CONTENT

Due to the inherent nature of timber to expand and shrink according to its moisture content, all trades shall ensure that the seasoning, handling, storage, and protection of the timbers is carried out to maintain the lowest practical moisture content for the erected structure.

In general the Equilibrium Moisture Content of Pinus and Rimu timbers used in the works shall be as follows;

<i>Exterior Finishing Timbers</i>	<i>16%</i>
<i>Interior Finishing Timbers</i>	<i>12%</i>
<i>Interior Joinery and Finishing Timbers</i>	<i>12%</i>
<i>All Framing Timbers</i>	<i>16%</i>
<i>All seasoning shall take place before machining</i>	

1.7 TIMBER TREATMENT

Timber treatment shall be in compliance with NZS 3640 and NZS 3602.

<u>area</u>	<u>treatment</u>
exterior & interior wall framing	H1.2
roof trusses	H1.2
purlins	H1.2
timber fascia / barge board	H3.1
cavity battens	H3.2

1.8 PROTECTION

All materials shall be adequately transported and stored to ensure the materials are protected against physical and water damage.

1.9 D.P.C.

Lay malthoid damp proof course between all adjoining concrete and timber surfaces. D.P.C. shall be the full width of the timber to be protected.

1.10 STRAPS, BOLTS, FIXINGS ETC

Provide all necessary bolts, straps, nail plates, joist hangers, multi grips etc required.

1.11 WALL FRAMING

General:

All timber shall be SG8 timber unless shown otherwise. Allow to build in all necessary pipe work, wiring, and ducting as required to all timber framing.

External Framing:

Allow to frame up external timber framed walls with 90 x 45mm studs @ 600mm crs max. and dwang to suit wall linings as shown on the Construction Drawings.

Internal Framing:

Allow to frame up internal timber framed walls with 90 x 45mm studs @ 600mm crs max. and dwang to suit wall linings as shown on the Construction Drawings.

Plate Fixing

Bottom Plate to floor slab:

All timber bottom plates shall be fixed to the concrete slab with Bowmac m10 proprietary bottom plate fixings. fixings shall be located within 150mm of each end of the bottom plate and at maximum of 900crs in accordance with clause 7.5.12.2 of NZS 3604.

Top plate to Stud:

All top plates shall be fixed to supporting studs or lintels with 2 no. 90 x Ø3.15mm skewed nails plus 2 no. wire dogs, or an alternative fixing with a capacity of 4.7kN as noted below all in accordance with NZS 3604, clause 8.7.6 and table 8.18.

- 2/90x3.15mm nails vertically into stud plus 2/lumberlock CPC40
- 2/90x3.15mm nails vertically into stud plus 1/lumberlock CPC80

Stud to Bottom Plate Fixing:

Allow to fix all studs to bottom plates in accordance with NZS 3604, table 8.19 as follows:-

<u>hand driven nails</u>	<u>power driven nails</u>
4/75x3.15mm skew nails	4/75x3.06mm skew nails
2/100x3.75mm end nailed	3/90x3.15mm end nailed

Double Studs

Unless shown otherwise allow to install double studs under all beam/lintel ends shown on the Construction Drawings. Fix all beams/lintels to double studs with 25 x 1mm strap with 6 no. 30 x Ø2.5mm nails into both beam/lintel and stud, on one side only in accordance with NZS 3604 figure 8.12.

Beams/Lintels

Refer to the Construction Drawings for size and location of the various beams/lintels. If no lintels are shown on the Construction Drawings then these shall be as required by NZS 3604.

Additional Solid Blocking

Allow for additional dwangs/jackstuds in wall frames for the fixing of various fittings. This shall include, but not be limited to the following: -

- *sockets and switches*
- *sanitary fittings – toilet, basin, rails*

Refer to the Construction Drawings for the location of these fittings and cooperate with the appropriate installer of the scheduled items.

1.12 STEELWORK n/a

1.13 ROOF FRAMING General:

Allow to frame roof as shown on the Construction Drawings with roof trusses by manufacture and purlins as detailed.

Roof Truss Fixings:

Roof trusses shall be fixed in accordance with the manufacture written instructions, refer to appendix of this specification for details. The truss supplier is to structurally design and fabricate the roof trusses, and provide a Producer Statement PS1.

Purlin Fixings

All purlins shall be fixed with 1/14g self-drilling type 17 screw, 100mm long, or alternatively an approved 5.5kN capacity fixing as per table 10.10 from NZS:3604.

Roof Bracing

Allow to supply and install roof bracing where shown on the Construction Drawings. Roof plane bracing shall consist of a pair of tensioned and crossed Lumberlok strip braces running continuously from ridge to top plate. Refer to appendix of this specification for details

All roof bracing shall be installed in strict accordance with the manufacturers written instructions. Refer to appendix of this specification for details

Rafters:

N/A

1.14 FASCIAS By Roofing contractor.

1.15 BARGE BOARDS By Roofing contractor.

1.16 BUILDING PAPER Fit Tekton Building Wrap to outside face of all external wall framing. Around all opening sills and heads install Protecto Super Stick flashing tape.

1.17 EXTERNAL WALL CLADDINGS In general the exterior wall claddings shall be as shown on the drawings. The carpenter shall supply and install all timber and sheet claddings. All exterior linings shall be installed to manufacturer's written specifications.

Exterior claddings shall be as follows:

AAC PANEL:

Refer to the SPECIALIZED section of the specification for details.

WeatherTex Weathergroove panels

Refer to the WEATHERTERTEX section of specification for details.

1.18 SOFFITS

House:

As per plans 4.5mm Hardies soffit lining with jointers

1.17 INTERNAL WALL LININGS

Gibraltar Board:

All Gibraltar board wall linings shall be 10mm standard Gibraltar board, fixed in accordance with the manufacturer's written instructions (no nail fixings will be accepted) and with joints and screw heads all stopped as specified in clause 6.20.

Aqualine Wall Linings:

Allow to line the following area with 10mm aqualine gibraltar board:-

- Bathroom
- Ensuite

All Fixed in accordance with the manufacturer's written instructions (no nail fixings will be accepted) and with joints and screw heads all stopped as specified in clause 6.20.

Wall Bracing Elements:

Allow to supply and install all wall bracing elements as shown on the Construction Drawings. All bracing elements shall be fixed in accordance with Gib EzyBrace Systems August 2016 manual.

1.18 CEILING LININGS

Timber ceiling battens:

Allow to supply and install rondo ceiling battens as shown on the Construction Drawings for all Gibraltar board ceiling linings. Installation of the battens shall be in accordance with the manufacturer's written instructions, and be complete in all respects ready to take the linings.

Gibraltar Board:

In general all internal ceiling linings shall be 13mm standard Gibraltar board, fixed in accordance with the manufacturer's written instructions (no nail fixings will be accepted) and with joints and screw heads all stopped as specified in clause 6.20.

Aqualine Ceiling Linings:

Allow to line the following area with 13mm aqualine gibraltar board:-

- Bathroom
- Ensuite

All Fixed in accordance with the manufacturer's written instructions (no nail fixings will be accepted) and with joints and screw heads all stopped as specified in clause 6.20.

The shower in the Bathroom will be proprietary unit incorporating shower base, walls and door installed by the Plumber. Co-operate with the Plumber to ensure access into the room.

The shower Ensuite will be a tiled floor shower with flooring that falls to a waste. Allow to co-operate with the Plumber to install a floor wastes. Walls to be lined with 9mm Villaboard ready for waterproofing membrane and tiled finish. Refer to details.

Ceiling Diaphragms

N/A

1.19 **FIX HARDWARE**

Take delivery of the hardware as selected by the owner. Hardware shall include all door furniture including locks, door stops, socket bolts etc., but excluding door hinges, kitchen self closing hinges and cupboard handles provided and fitted by the joiner.

All Hardware to be satin chrome finish unless otherwise stated.

1.20 **JOINERY AND FITTINGS**

Doors and Windows

Aluminium Windows & Doors:

The aluminium joinery shall supply the carpenter the following to be fitted by the carpenter: -

- *All external aluminium framed windows and doors*

The Carpenter, upon delivery of the aluminium joinery units, shall protect them against damage whether physical or chemical (e.g.cementitious substances).

The Carpenter shall provide all necessary fixings (e.g. nails, screws, brackets). Excess of sealants on adjoining surfaces shall be cleaned off.

Separate aluminium from: -

- *dissimilar metals*

- *concrete*

- *corrosive timbers*

Air Seals:

The carpenter shall allow to supply and install PEF backing rods and flexible sealant in accordance with E2/AS1, as air seals to all windows and external doors as shown on the Construction Drawings.

1.21 **TIMBER JOINERY**

The Carpenter shall allow to take delivery of, and fitting of all joinery fittings to the following areas:-

- Kitchen & Pantry

- Storage & Wardrobe Areas

- Laundry

All joinery fittings shall be screw fixed on site to assist with future removal if required.

1.22 **FLASHINGS**

General Construction:

The carpenter shall arrange for the manufacture, supply and fitting of the various construction flashings as detailed on the Construction Drawings.

Windows/Doors:

The aluminium joiner shall provide free on site for installation by the carpenter propriety aluminium flashings to all aluminium windows and doors as shown the Construction Drawings. The carpenter shall allow to install all flashings.

Service Penetrations:

The carpenter shall ensure that each trade responsible for services penetrating the building envelope shall manufacture, supply and fit flashings as required to ensure a completely watertight seal.

1.23 **INSULATION**

General:

The batts shall be cut to neatly fit between studs, dwangs, ceiling joists, rafters etc. Installation shall be installed in accordance with the manufacturer's written instructions. All insulation shall be installed and supported in such a way that it will remain stable and maintain a continuous insulation barrier.

Ceilings:

The Carpenter shall allow to supply and install R3.6 fiberglass Pink Batts insulation to all the new ceilings where shown on the Construction Drawings. These shall be neatly and tightly fitted between framing and carried over all exposed water pipework at ceiling level.

Walls:

The Carpenter shall allow to supply and fit R 2.6 fibreglass batts to all exterior timber framed walls of the house. Including the internal walls between the garage and the house where shown on the Construction Drawings.

Underfloor:

N/A

Sound Batts:

N/A

- 1.24 SKIRTINGS**
To be 60x10mm Single Bevel Pinus skirting's. Skirting's to be ready for finishing coats by the PAINTER.
- 1.25 ARCHITRAVES**
To be 40x10mm Single Bevel Pinus Architraves. Architraves to be ready for finishing coats by the PAINTER.
- 1.26 SKYLIGHT PANELS**
N/A
- 1.27 ATTIC STORAGE**
N/A
- 1.28 TRIMMING FOR EXTRACT FANS**
Allow to trim for extract fans in Bathroom and Ensuite in locations shown on the drawings.
- 1.29 GARAGE DOOR**
Provide 1No garage doors in sizes shown. The door facing the street shall be fitted with Dominator automatic operating gear supplied complete with push button and 2 remote operating controls. The wiring for auto door shall be carried out by the ELECTRICIAN.
- 1.30 ATTIC STAIR**
N/A
- 1.31 HOT WATER CYLINDERS**
N/A
- 1.32 INSTALLATIONS**
Co-operate with all other trades in the installation of plumbing fittings, electrical appliances etc. It is essential that all services be concealed and where they are to be incorporated into joinery fittings and the like that the shortest route from the wall, floor or ducting is taken. The carpenter shall alert all trade to this requirement.

PROFILED METAL ROOFING

1. GENERAL

All Sub-contractors are bound by the preliminary and general section of the specification and to the full extent of their responsibility and instructions as contained in the full Contract Documents. This specification is divided into trade sections for convenience only and is to be read in its entirety by all trades. It shall not be construed that each trade section is a complete and separate contract.

This section relates to the supply and installation of profiled sheet roofing, complete with all roof underlays and accessories to create a watertight roof.

1.1 ROOFING WORK

All roofing work shall be carried out by approved Roofing Contractors and materials shall be fixed strictly in accordance with the manufacturer's recommendations.

All downpipes, spouting and roof flashings to be undertaken by a Certified Plumber under the roofing contract.

1.2 DESCRIPTION OF WORKS

This section is a guide only and should be read in conjunction with the working drawings to obtain the full extent of work required.

1. longrun 5-Rib coloursteel roofing in selected colour and underlay to house, complete with all accessories required to complete a weathertight installation.
2. 80mm Coloursteel downpipes in selected colour.
3. Spouting to be continuous type Coloursteel spouting in selected profile and colour with snow straps @ 450mm crs.
4. Other miscellaneous roof flashings and cappings including plumbing penetrations.

1.3 METAL ROOFING

Underlay:

Supply and install Thermakraft 407 Bituminous Self Supporting Roof Underlay. Underlay shall be laid vertically over purlins with 150 mm minimum laps. Fix securely to purlins with 8mm staples or 20mm clouts. The underlay shall be firmly laid to avoid excessive dishing between purlins. Underlay shall be carefully lapped and detailed to discharge over the eaves of the building in to the spouting. All building paper shall meet the requirements of NZS 2295.

Roofing:

Supply and install longrun 5-Rib coloursteel 0.4 BMT Roofing in selected colour. Roofing complete with all accessories required to complete a weathertight installation.

Fixing:

The fixing shall be in accordance with the manufacturer's recommendations for a very high wind zone.

Flashings, cappings:

Supply and install 0.55 Coloursteel flashings, lapped, riveted and sealed to ensure a watertight roof. Fix soft-edged ridge and hip flashings neatly fitted over the corrugations in the roofing material. All ridge, hip, apron, and barge flashings shall be supplied in long single lengths wherever practicable.

Flashings for roof penetrations (*e.g. vents, and the like*) shall be by the plumber, prefinished to match the roof colour wherever possible, or otherwise touched up to match roof colour.

All flashings and cappings shall be undertaken by a tradesman plumber within the Roofing Contract.

- 1.4 SPOUTING**
Supply and install Metalcraft Quarter round to house and garage. Lay to a fall of 25mm per 12metres and supported on Coloursteel heavy duty concealed gutter brackets at 900mm crs.
- Allow to install heavy duty Coloursteel snow straps @ 450mm crs securely riveted back to edge of roofing to cope with snow loads.
- 1.5 FASCIA & BARGES**
Supply and install Metalcraft 185 Coloursteel Fascia and barges to house as shown in colour to match roofing.
- 1.6 DOWNPIPES**
Provide and fit 80mm 0.55 gauge Coloursteel downpipes to the house, with Coloursteel stand off brackets. Colour to match roofing.
- 1.7 LEAF GUARD**
N/A
- 1.8 INSPECTION OF STRUCTURE**
The Contractor shall inspect the structure before commencing and ensure that all members are fixed satisfactorily and that all surfaces are true and properly graded with no projections which may damage the materials. If any aspect of the sub-structure is not to the satisfaction of the Contractor, the Contractor shall co-ordinate with the Carpenter to remedy the structure ready for installation of the cladding system. Failure to comment on the structure shall indicate acceptance of the surfaces and a satisfactory job shall then be the responsibility of the Contractor.
- 1.9 SCAFFOLDING**
The Contractor shall provide all scaffolding and temporary working platforms required for the work. All scaffolding shall be erected to comply with all regulations.
- 1.10 HANDLING**
Handling of the sheets shall be managed to ensure that they are delivered onto the site and fixed in place in an undamaged condition. Where Damage occurs the disfigured sheets will be replaced.
- 1.11 SITE STORAGE**
Sheets shall be stacked clear of the ground in such a manner as to prevent distortion and be protected against staining and damage from other site operations.
- 1.12 GUARANTEES**
The completed steel roof shall be guaranteed by the specialist firm carrying out the work for a period of on less than 15 years on the materials and 5 years on workmanship (*from date of Code of Compliance*)
- Such Guarantees shall cover watertightness, workmanship and materials. The General Contractor shall be responsible for obtaining a written guarantee and forwarding it to the Owner.
- 1.13 COMPLETION**
The one specialist subcontractor shall be entirely responsible for the complete watertightness of all the roofing, shall leave all roofs watertight in perfect order, remove all debris and leave the site clean

ALUMINIUM JOINERY

1. GENERAL

All Sub-contractors are bound by the preliminary and general section of the specification and to the full extent of their responsibility and instructions as contained in the full Contract Documents. This specification is divided into trade sections for convenience only and is to be read in its entirety by all trades. It shall not be construed that each trade section is a complete and separate contract.

This section deals with the manufacture, supply, and installation of aluminium windows, doors and frames, complete with door and window hardware and furniture.

1.0 RESPONSIBILITIES

This contract is for the supply and installation of aluminium joinery as detailed on the accompanying architectural drawings. The window manufacturer shall provide trim opening sizes where windows are to be fitted within timber framed walls. **All opening sizes are to be confirmed by way of site measure before manufacture.**

Unless otherwise agreed the aluminium windows shall be manufactured, delivered to the site, and installed by the window manufacturer, all in good order and condition. It shall be the responsibility of the Head Contractor to provide adequate protection against damage caused when stored on site or by other trades during the course of the contract.

The Head contractor is to arrange with the painter to provide a sealer coat to all timber reveals at the earliest opportunity in accordance with the painting schedule.

1.1 PRODUCTS

All windows and doors shall be constructed in accordance with NZS 4223:3: 2016

The Joinery is to be manufactured by a specialist Aluminium Joinery manufacturer using an approved brand of aluminium window extrusions.

All windows shall be provided glazed, apart from where for practical reasons it shall be more convenient to glaze on site. In this event the manufacturer shall include for any on site glazing.

1.2 FINISH

The finish shall be a matt powercoated finish from a standard powdercoat colour range. A colour sample shall be provided for the Owners approval before the windows are manufactured.

1.3 ALUMINIUM SECTIONS

STACKER DOORS

Unless otherwise stated all stacker doors shall be constructed using the using a **'Fairview 35mm Flat Face suite'**

SLIDING DOORS

Unless otherwise stated all stacker doors shall be constructed using the using a **'Fairview 35mm Flat Face suite'**

HINGED DOORS

Unless otherwise stated doors shall be constructed using the using a **'Fairview 35mm Flat Face suite'**

WINDOWS

Unless otherwise stated all windows shall be constructed using the using a **'Fairview 35mm Flat Face suite'**

1.4 GLAZING

All windows shall be **Double-Glazed** except for the garage which will be single-glazed. Windows shall be constructed with condensation channels designed to remove any accumulated condensation to the exterior of the frame.

All top hung sashes over 500mm wide shall be fitted with 2 handles per sash, mounted in an opposing opposite position. Sash handles shall have a double snib to allow windows to be snibbed closed and maintain limited airflow.

1.6 REVEALS

19mm pinus H3.1 treated window and door reveals grooved to accept wall linings.

1.7 TINT

Grey Tint, provide a sample prior to fabrication for approval by the client.

1.8 OBSCURE GLASS

Provide obscure glass to the Ensuite and Bathroom. Obscure glass shall have a fine plain stipple. Provide sample to the Owner prior to ordering.

1.9 HARDWARE

Provide and install the following hardware from the Stella Range:

All opening window sashes:

Provide and fit powercoated (*to match window frame*) Stella wedgeless window fasteners and casement / awning friction stays to windows.

All sliding doors:

Large Pull Handles both sides (*powercoated to match door frames*) with narrow mortice key locks with internal snibs.

All Hinged Doors:

Provide and fit powercoated (*to match window frame*) Stella Hinged door Hardware with narrow mortice key locks with internal snibs.

1.10 ENTRANCE DOOR

Supply and install Parkwood Flush Panel CFL aluminium insulated door in selected colour in 'Fairview 35mm Flat Face suite'. Frame shall be ready to accept aluminium insert.

Hardware shall be Stainless Steel Regal 600mm Square Pull Handle and Lock Kit.

1.11 FLASHINGS & MISCELLANEOUS TRIM

Provide head-flashings in a matching colour to all windows or doors requiring weathering protection above head.

1.12 CONFIRMATION

Colour and hardware shall be confirmed at the earliest possible date to ensure materials are ordered and available when final check measure is carried out, in order to remove material supply delays from the construction programme.

1.13 FINISH SAMPLES

Submit for assessment before fabrication, 3 samples of the specified finish to all exposed window and door sections, in the selected colour, including statements of the film thickness actually achieved on the samples. On acceptance these will be used as quality control samples.

1.14 COMPLETE AIR SEAL

Form an air-tight seal by means of proprietary expanding foam, compressible foam strips, or sealants used with backing rods, applied deep within the reveal to completely fill the gap between joinery and structural framing. Ensure that in combination with the internal linings a complete air seal is created.

Completion - cleaning

1.15 REMOVE TRADE DEBRIS

Remove trade debris by appropriate means on a floor by floor basis as each floor is completed and again before any work is covered up by others. Arrange for general removal.

1.16 CLEANING GENERALLY

Clean with soft, clean cloths and clean water. Finish with a clean squeegee. Do not use abrasive or alkaline materials.

1.17 TRADE CLEAN

Trade clean window frames, operable windows and doors, glass and other related surfaces inside and out at the time of installation to remove marks, dust and dirt, to enable a visual inspection of all surfaces.

1.18 PROTECTIVE COVERINGS

Retain protective coverings and coatings and keep in place during the fixing process. Provide protective coverings and coatings where required to prevent marking of surfaces visible in the completed work and to protect aluminium joinery from following trades. Remove protection on completion.

1.19 SAFETY

Indicate the presence of transparent glasses for the remainder of the contract period, with whiting, tape or signs compatible with the glass type. Indicators other than whiting must not be applied to the glass surface. Masking tape must not be used for this purpose.

Completion

1.20 PROTECTION

Protect finishes against damage from adjacent and following work.

1.21 REPLACE

Replace damaged, cracked or marked elements.

1.22 LEAVE

Leave work to the standard required for following procedures.

1.23 REMOVE

Remove safety indicators and protective coverings, and wipe down all joinery thoroughly to leave it perfectly clean. Remove debris, unused materials and elements from the site.

1.24 COMPLETION

It is the responsibility of this contractor to ensure on completion that all glass types, glass sizes are correct, and in accordance with the Building Act and NZS 4223 Part 3:1999, Glazing in Buildings., and that all frames and glazing is completely watertight.

GIB® PLASTERBOARD LININGS

1. GENERAL

All Sub-contractors are bound by the preliminary and general section of the specification and to the full extent of their responsibility and instructions as contained in the full Contract Documents. This specification is divided into trade sections for convenience only and is to be read in its entirety by all trades. It shall not be construed that each trade section is a complete and separate contract.

This section relates to the supply, fixing and jointing of GIB® plasterboard linings and accessories to timber and steel framed walls and ceilings to form:

- standard systems
- bracing systems

1.1 DOCUMENTS REFERRED TO

Documents referred to in this section are:

[NZBC E2](#)/AS1 External moisture

AS 1397 Steel sheet and strip - hot-dipped, zinc-coated, or aluminium/zinc-coated

AS/NZS 2588 Gypsum plasterboard

AS/NZS 2589 Gypsum linings - Application and finishing

[NZS 3604](#) Timber-framed buildings

AS/NZS 4600 Cold-formed steel structures

BRANZ technical paper P21: A wall bracing test and evaluation procedure

NASH Residential and Low-Rise Steel Framing Part 1 2010 Design Criteria

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

1.2 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents which refer to work in this section are:

MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents which refer to work in this section are:

GIB® Site Guide (Jan 2018)

GIB Ultraliner® Plus lining system (2018)

GIB® Noise Control Systems (September 2017)

GIB Aqualiner® Wet Area Systems (Feb 2021)

GIB® Ezybrace® Systems (August 2016)

GIB® Ezybrace® Software (2016)

GIB® Ezybrace® for Steel Frame Housing (NASH) Software (2016)

GIB® Rondo® Metal Ceiling Batten Systems

GIB-Cove®

GIB® Goldline® Platinum Tape-on Trims

GIB® UltraFlex high impact corner mould

BRANZ Appraisal 294 - GIB® Ezybrace® Systems

BRANZ Appraisal 427 - GIB Aqualiner® Wet Area Systems

Copies of the above literature are available at

Web: www.gib.co.nz

Telephone: 0800 100 442

1.3 NO SUBSTITUTIONS

Substitutions are not permitted to any specified GIB® systems, GIB® system components, GIB® plasterboard, associated GIB® products or GIB® accessories.

1.4 INSTALLER WORK SKILLS AND QUALIFICATIONS

GIB® plasterboard fixers and plasterers to be experienced competent workers, familiar with GIB® plasterboard lining systems installation and finishing techniques. Submit evidence of experience on request. For example:

- National Certificate of Interior Systems; or
- Certified Business member of AWCINZ.

1.5 INSPECTIONS AND ACCEPTANCE

Allow for inspection of the finished plasterboard surface:

- before applying sealer and
 - before applying finish coatings or decorative papers,
- so that after assessment of the type and/or angle of illumination and its effect on the completed decorative treatment, group approval and acceptance of the surface can be given.

1.6 BRACING REQUIREMENTS

Provide braced wall systems using GIB® Ezybrace® Systems (June 2011) or GIB® Ezybrace® Software (2011) to meet the requirements of [NZS 3604](#) when tested to BRANZ Technical paper P21. Alternatively use GIB® Ezybrace® for Steel Frame Housing (NASH) Software 2011 to meet the requirements of NASH Residential and Low-Rise Steel Framing Part 1 2010 Design Criteria. Refer to drawings for location and type.

1.7 GIB® PLASTERBOARD

Gypsum plaster core encased in a face and backing paper formed for standard and water resistance use to AS/NZS 2588. Refer to SELECTIONS for location, type, thickness and finish.

GIB® Standard plasterboard

GIB Wideline® plasterboard

GIB Ultraline® and/or GIB® Ultraline PLUS high quality surface plasterboard

GIB Aqualine® wet area plasterboard

1.8 CORNICE

Install cornice in profile and size to match existing.

1.9 SCREWS

GIB® Grabber® drywall screws.

1.10 NAILS

GIB® Nails (gold passivated).

Size: 30mm, 40mm

1.11 TAPE ON TRIMS AND EDGES

GIB® Goldline® tape-on trims

GIB® UltraFlex high impact corner mould

1.12 METAL ANGLE TRIMS

GIB® galvanized steel slim angle trims.

1.13 CONTROL JOINTS

GIB® Rondo® P35 control joints.

GIB® Goldline® tape-on trims

1.14 ADHESIVE

Timber frame and/or steel frame:

GIBFix® One ultra low VOC water based wallboard adhesive

GIBFix® All-Bond solvent based wallboard adhesive

1.15 JOINTING COMPOUND

Bedding compound: GIB Tradeset®, GIB Lite Blue®, GIB MaxSet®, GIB ProMix® All Purpose, GIB Plus 4®

Finishing compound: GIB ProMix® All Purpose, GIB® Trade Finish®, GIB® Trade Finish® Lite, GIB ProMix® Lite, GIB® U-Mix, GIB Plus 4®

Cove: GIB-Cove® Bond

1.16 JOINTING TAPE

GIB® paper jointing tape.

1.17 GAP FILLER

- 1.18 GIB® Gap Filler ultra low VOC multi-purpose acrylic flexible filler**
STORAGE
Store GIB® plasterboard sheets and accessories in dry conditions stored indoors out of direct sunlight in neat flat stacks on either an impervious plastic sheet or clear of the floor with no sagging and avoiding damage to ends, edges and surfaces. Reject damaged material. Refer to GIB® Site Guide (Jan 2010).
- 1.19 LEVELS OF PLASTERBOARD FINISH**
Provide the selected plasterboard surfaces to the pre decorative levels of finish specified in AS/NZS 2589.
- 1.20 CONFIRM LEVELS OF PLASTERBOARD FINISH ACCEPTANCE**
Before commencing work, agree in writing upon the surface finish assessment procedure towards ensuring that the quality of finish expectations are reasonable and are subsequently obtained and acceptable.
"Levels of plasterboard finish" is a tool for specifying the required quality of finish when installing and flush stopping GIB® plasterboard **prior** to the application of a range of decorative finishes under various lighting conditions. Refer to **AS/NZS** 2589.
- 1.21 SUBSTRATE**
Do not commence work until the substrate is plumb, level and to the standard required by the sheet manufacturer's requirements. Refer to GIB® Site Guide (Jan 2010).
- 1.22 TIMBER FRAME MOISTURE CONTENT**
Maximum allowable moisture content to AS/NZS 2589 for timber framing at lining: 18% or less for plasterboard linings. Refer to [NZBC E2/AS1](#) and GIB® Site Guide (Jan 2010).
- 1.23 METAL FRAMING**
Metal framing, to which gypsum lining is fixed, shall comply with AS 1397, AS/NZS 4600, or NASH Residential and Low-Rise Steel Framing Part 1 2010 Design Criteria, as applicable. Where adhesion of gypsum linings is required, surfaces shall be free of oil, grease, dust and other foreign materials. Refer to the metal framing manufacturers specifications where high density gypsum linings (>800 kg/m³) such as GIB Braceline® and GIB Noiseline® are specified for fixing to light gauge steel framing.
- 1.24 PROTECTION**
Protect surfaces; cabinetwork, fittings, equipment and finishes already in place from the possibility of water staining and stopping damage. Refer to GIB® Site Guide.
- 1.25 LINING WALLS AND CEILINGS GENERALLY**
Form to GIB® Site Guide (Jan 2010). Ensure bulk insulation thickness shall not exceed that of the wall framing.
- 1.26 BOARD ORIENTATION**
Minimise joints by careful sheet layout using the largest sheet sizes possible, and generally fixing horizontally. Where part sheets are required for various stud heights they should be positioned so the cut sheet is as low as possible to keep joints below eye level.
- 1.27 FORM BRACING SYSTEMS**
Form to GIB® Ezybrace® Systems (June 2011).
- 1.28 FORM CONTROL JOINTS**
Form control joints to GIB® Site Guide.
- 1.29 INSTALL COVES**
Install to GIB-Cove® literature using GIB-Cove® Bond.
- 1.30 INSTALL TAPE-ON TRIMS**
Install to GIB® Goldline® Tape-on trims literature and/or GIB® Ultraflex high impact corner mould literature.
- 1.31 FINISHING GENERALLY**
To GIB® Site Guide (Jan 2010) and AS/NZS 2589.

1.32 REPLACE
Replace damaged sheets or elements.

1.33 CLEAN DOWN
Clean down completed surfaces to remove irregularities and finally sand down with fine paper to the sheet manufacturer's requirements, to leave completely smooth and clean.

1.34 REMOVE
Remove debris, unused materials and elements from the site.

1.35 LEAVE
Leave work to the standard required by following procedures.

Plasterboard

1.36 STANDARD SYSTEMS WALLS

<u>Location</u>	<u>Plasterboard type / Lining requirements</u>	<u>Thickness</u>	<u>Finish level</u>
Gib throughout House	GIB® Standard plasterboard	10 mm	4
Gib to Bathroom & Ensuite	GIB Aqualine® plasterboard	10 mm	4

1.37 STANDARD SYSTEMS CEILINGS

<u>Location</u>	<u>Plasterboard type / Lining requirements</u>	<u>Thickness</u>	<u>Finish level</u>
Gib throughout House	GIB® Standard plasterboard	13 mm	4
Gib to Bathroom & Ensuite	GIB Aqualine® plasterboard	13 mm	4

1.38 BRACING SYSTEMS

Refer to GIB Bracing Systems. For bracing element location refer to drawn documentation. (See *bracing plan*).

GIB® PLASTERER

1. GENERAL

All Sub-contractors are bound by the preliminary and general section of the specification and to the full extent of their responsibility and instructions as contained in the full Contract Documents. This specification is divided into trade sections for convenience only and is to be read in its entirety by all trades. It shall not be construed that each trade section is a complete and separate contract.

All work is to be carried out by experienced tradesmen and finished surfaces are to be brought to a high standard of finish either as the finished surface or suitable for the finished coating system that is to be applied.

1.0 GIBRALTAR BOARD FINISHES

The plasterer shall stop flush the nail holes using an approved Gibraltar board stopping compound. Junctions of sheets are to be stopped and reinforced with tape and trowelled flush.

All fixing and finishing work SHALL STRICTLY COMPLY with Winstones Gib-fixing and stopping instructions.

Only such fixings, glues, and plaster products as recommended and approved by the wallboard manufacturer shall be used, and there shall be no substitution from these for any reason.

On completion all work shall be left sanded and free from blemishes ready for the application of decorative finishes as detailed under the painter.

1.1 LININGS SCHEDULE

Walls:

Bathroom & Ensuite	-10mm "Aqualine" Gib board stopped to a level 4 finish.
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All other affected areas	-10mm Gib board stopped to a level 4 finish.
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Ceilings:

Bathroom & Ensuite	-13mm "Aqualine" Gib board stopped to a level 4 finish.
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All other affected areas	-13mm Gib Board on timber battens stopped to a level 4 finish.
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JOINERY

1. GENERAL

All Sub-contractors are bound by the preliminary and general section of the specification and to the full extent of their responsibility and instructions as contained in the full Contract Documents. This specification is divided into trade sections for convenience only and is to be read in its entirety by all trades. It shall not be construed that each trade section is a complete and separate contract.

1.1 RESPONSIBILITIES:

It shall be the responsibility of the Joinery manufacturer to provide framed opening sizes to the Contractor for the enabling of the installation of interior doors. All joinery fixtures and fittings are to have their measurements confirmed on site by the Joiner prior to manufacture.

It shall be the responsibility of the Contractor to provide adequate protection against damage for all joinery stored on site or from other trades during the course of the contract.

Note! The Contractor shall arrange an appointment between the Owner, Himself, and the Joiner to finalise the details of the joinery fittings and stair balustrades before manufacture.

Unless specified otherwise all joinery, cupboards, doors, windows, etc shall be supplied to the site glazed or with glazing ready to install. It is the responsibility of the Joiner's glazier to price for and install the correct glass type in accordance with NZS 4223: Part 3:1999, Glazing in Buildings.

The contractor shall arrange for the painter to apply a sealer-coat to all joinery as applicable and in accordance with the painting schedule at the earliest opportunity.

1.2 GENERAL

All works shall be carried out by experienced tradesmen and shall be glued, screwed, and otherwise fixed and jointed in accordance with the best trade practice.

Timber shall be graded, dried, and treated as required and generally for exterior shall be D.A. treated Rimu or treated Pinus clears and for interior shall be D.A. Rimu or treated Pinus clears. (*refer to scope*)

Unless noted otherwise all fixtures shall be provided fully fabricated with all doors supplied pre-hung, in frames or jambs as described, using 90mm loose-pin hinges.

1.3 ENTRANCE DOOR

By Aluminium Joiner.

1.4 INTERIOR DOORS:

All interior doors will be Hollow Core Hallmark Merivale V Grooved Panel MDF paint grade doors of sizes shown x 1980h. Doors to be supplied pre-hung in 20mm pinus reveals grooved to accept wall linings, sanded paint quality. Check with Carpenter for wall framing and lining thickness.

All hinged doors to be fitted on three satin chrome butt hinges to suit unless otherwise stated.

1.5 FRAMED CAVITY SLIDERS

Internal C/S Sliding doors shall be Hollow Core Hallmark Merivale V Grooved Panel MDF paint grade doors of sizes shown x 1980h door leaf with 20mm timber door frames. Reveals to be grooved to accept wall linings. Door gear to be standard 90mm track and frame by "CS Cavity Sliders" (*or equivalent*)

1.6 KITCHEN

By The owner

- 1.7 PANTRY**
By The owner
- 1.8 LAUNDRY JOINERY**
By The owner
- 1.9 MASTER BEDROOM W.I.R JOINERY**
By The owner
- 1.10 WARDROBE JOINERY**
By The owner.
- 1.11 SHELVING & CUPBOARD JOINERY**
By The owner

PLUMBING

1. GENERAL

All Sub-contractors are bound by the preliminary and general section of the specification and to the full extent of their responsibility and instructions as contained in the full Contract Documents. This specification is divided into trade sections for convenience only and is to be read in its entirety by all trades. It shall not be construed that each trade section is a complete and separate contract.

All work shall be carried out by a registered plumbing sub-contractor and shall be in compliance with the G13 AS1 & 2.

Plumber to arrange for inspections as required under the building consent.

1.1 WATER SUPPLY

Allow to connect to the pressurised water supply provided by the subdivision using a 25mm Alkathene pipe. Supply an on/off tap at the water entry point, to enable the house water to be isolated from the supply.

1.2 PIPEWORK

All pipework shall be carried out with good trade practice using proprietary fittings relevant to the material types for bends, tees, and joints.

1.3 WATER DISTRIBUTION

Pipe-work within the house shall be carried out using the "Fusiotherm" piping system available ex Aquatherm NZ Ltd. The piping system will be carried out using proprietary fittings and having fully fused joints to all junctions, tees etc in accordance with the Fusiotherm Manual.

Generally pipe sizes are described as outside diameter and shall be 25mm to main runs, with 20mm branches of maximum length of 2.5m to all other fittings. Pipework shall be installed for mains pressure reticulation throughout the dwelling, and shall be piped in such a manner to allow the draining of the plumbing system should owners be away from the home for extended periods.

Where pipework is not contained within the building insulation 'envelope', pipes shall be lagged. Pipes shall be fixed in accordance with the manufacturer's specification using proprietary saddle clips and fixing brackets.

Pipes shall be fitted within walls and over ceilings wherever possible. Where pipes are required to be laid in concrete floor slabs they shall be laid in boxed chases in the concrete floor and capped with a grout mix to enable location of pipes at some future stage. Lag all pipes in slabs as for above.

1.4 HOT WATER HEATING

Supply and install 1No Rheem Mains Pressure 300L Hot Water Cylinder to the cupboard space where shown. The hot water cylinder shall be manufactured to comply with all the necessary standards. The hot water cylinders shall be factory assembled and tested. Models shall be manufactured with immersion electric heating units fitted with a surface mounted thermostat incorporating a safety over temperature energy cut out. The hot water cylinders shall be installed using CFC free material.

1.5 TEMPERATURE LIMITING:

The Hot Water heater is to have a Methven tempering valve adjusted to deliver water to Showers, Baths, Vanities and Basins at 55deg C. Install in strict accordance with manufacturers recommendations.

- 1.6 WASTES**
Shall be of P.V.C. pipe generally of 40mm diameter for bath, shower, sinks, tub and washing machine wastes. Hand Basins may have 30mm waste. All wastes shall be fitted with removable 'S' bend traps directly below the waste in order to prevent sewer smells returning up pipework (*where wastes are exposed chrome bottle trap wastes shall be used*). All joints shall be glued.
- 1.7 VENTS**
Provide vents to fittings, and drains, as required, flashed at roof penetrations using flashing to match roofing type and colour, and finishing at least 300mm above the roof or 900mm above the soffit level. Where practicable, vents shall be joined together within the attic space to reduce the number of vents penetrating the roof envelope. Terminate vents with a bird proof cowl.
- 1.8 DOWNPIPES ETC**
All roof flashings, gutters and downpipes shall be carried out by the Roofing Contractor as previously specified under ROOFER.
- 1.9 KITCHEN**
Kitchen Sink:
Joiner to supply sink. Pipe for waste and faucet to sinks. Install taps as supplied by the owner.

Dishwasher:
Pipe up for dishwasher unit where shown on drawings. Unit supplied by the owner. Provide a separate waste to the gully trap for dishwasher water. Dishwasher to have hot & cold water feed.

Range Hood:
Supplied by Owner. Allow to take delivery and install. Allow to supply and install additional extract fan ensuring venting to exterior via the roof cavity and soffit.
- 1.10 LAUNDRY**
Laundry Tub
Supplied by the main contractor. Provide hot and cold water feed and waste.

Washing Machine
Supplied by the owner, provide hot and cold water supply.

Dryer
Supplied by the owner. Supply and install a vent to vent the dryer to the exterior.
- 1.11 BATHROOM**
Shower
Supplied by the owner. Install safety glass doors and screens including all hinges, handles, etc as selected by the owner. Install shower mixer and rose as supplied by the owner.

Vanity
Supplied by the main contractor. Vanity installed by the carpenter. Allow to pipe for hot and cold water feed and waste. Install taps supplied by the main contractor.

W.C. Pan & Cistern
Supplied by the owner. Allow to install and connect to water supply and waste.

Bath
Supplied by the owner. Allow to install and connect to water supply and waste.
- 1.12 ENSUITE**
Shower
The shower in the Bathroom will be a sloped floor tiled shower. Install an "Allproof" stainless steel floor waste. Install shower mixer and rose. Install taps and shower slide

supplied by the owner.

Vanity

Supplied by the main contractor. Vanity installed by the carpenter. Allow to pipe for hot and cold water feed and waste. Install taps supplied by the main contractor.

W.C. Pan & Cistern

Supplied by the owner. Allow to install and connect to water supply and waste.

1.13

WC

W.C. Pan & Cistern

Supplied by the owner. Allow to install and connect to water supply and waste.

Vanity

Supplied by the main contractor. Vanity installed by the carpenter. Allow to pipe for hot and cold water feed and waste. Install taps supplied by the main contractor.

1.14

TAPS

Allow to install all tapware as supplied by the owner. In addition supply and install brass threaded hose-taps around house perimeter where shown on the foundation plan. Allow to confirm with owner on site final positions prior to installation.

1.15

WASTES

Supply all wastes and plugs. All waste fittings shall be allowed as chrome. Allow to provide traps and waste pipes as required. All visible traps to be chrome colour.

1.16

FLASHINGS

Provide all Coloursteel flashings for vents and the like. All other flashings required i.e. parapets etc shall be by the roofing contractor.

1.17

LOG BURNER

Supply and install Masport Rakaia Log burner complete

DRAINAGE

1. GENERAL

All Sub-contractors are bound by the preliminary and general section of the specification and to the full extent of their responsibility and instructions as contained in the full Contract Documents. This specification is divided into trade sections for convenience only and is to be read in its entirety by all trades. It shall not be construed that each trade section is a complete and separate contract.

This section relates to the supply and laying of gravity foul water, stormwater and field drains.

1.2 AS-BUILT DRAWINGS

Supply a 1:100 scale as-built drawing of drains and fittings to the territorial authority and to the owner on completion.

1.3 QUALIFICATIONS

Drainlayers to hold a current licence within the terms of the Plumbers Gasfitters & Drainlayers Act 2016 and be experienced, competent and familiar with the materials and techniques specified.

1.4 EXCAVATE

Excavate for drains to a firm even base with correct gradients set in straight runs.

1.5 MANUFACTURER'S REQUIREMENTS

All drainage installations to the pipe and fitting manufacturer's requirements.

1.6 DRAINAGE GENERALLY

Carry out drainage work and tests to AS/NZS 3500.2 (sanitary drainage) AS/NZS 3500.3 (stormwater drainage) as modified by NZBC B1/AS1: 6.0. Lay uPVC pipe systems to relevant sections of AS/NZS 2032, NZS 2566.1 and AS/NZS 2566.2. Lay polyethylene pipes and fittings to relevant sections of AS/NZS 2033 and NZS 2566.1.

1.7 LAY FOUL WATER DRAINS

Lay drains in straight runs to correct gradients, to discharge into roadside council septic system.

Supply and lay 100mm sewer drain from the house and connect into septic tank where shown. Drainlayer shall confirm final position of this on site prior to work commencing.

Soil drains shall be in approved PVC pipe complete with proprietary jointing rings, bends, traps, and inspections. Lay drains with a minimum fall of 1 in 60. Pipes shall be fully bedded in chip in base of trench.

Allow for any inspection chambers / points as required by the bylaws. Set inspection fittings on a concrete base.

1.8 INSTALL GULLY TRAPS

Set on concrete 50 mm above the surrounding ground or paving and brought up to protect the top of the fitting. Trowel off.

1.9 LAY STORMWATER DRAINS

Confirm the required location of downpipes and finished ground levels before commencing pipework. Set downpipe bends in concrete with the concrete brought up to protect the top of the bend from damage. Lay drains in straight runs to correct gradients to discharge into the network utility operator's stormwater system.

Supply and lay 100mm PVC stormwater drains from all downpipes and connect into the soak pits as shown with a minimum fall of 1 in 120. Provide a collar with leaf grating at the junction of the down-pipes and stormwater pipe.

Allow for any inspection chambers / points as required by the bylaws.

1.10 SOAKHOLES OR TRENCHES

Dispose of stormwater on site as shown on the drawings, by soakage, to suit local geology and soil structure; all as directed by the territorial authority.

1.11 FIELD TEST

Field test drains for watertightness (*UPVC to AS/NZS 2032 or AS/NZS 2566. 2 Appendix N*) to the satisfaction of the territorial authority inspector.

1.12 BACKFILL

Backfill drain lines in 150 mm layers, well tamped but without disturbing the drains. Finish off with 150 mm of topsoil, slightly mounded above the finished ground line.

ELECTRICAL

1. GENERAL

All Sub-contractors are bound by the preliminary and general section of the specification and to the full extent of their responsibility and instructions as contained in the full Contract Documents. This specification is divided into trade sections for convenience only and is to be read in its entirety by all trades. It shall not be construed that each trade section is a complete and separate contract.

The complete Electrical subcontract is to be carried out by a licensed electrician. Obtain all permits and pay fees as required and supply electrical producer statement on completion of the works. All

Switches are to be HPM or PDL switches with satin chrome face plates. All wiring shall be carried out to the requirements of the New Zealand Wiring Regulations and local power authority bylaws. All wiring for light circuitry shall be in three strand to provide earth for fittings.

The Contractor shall arrange a meeting with himself, the electrician, and the owner on the site to confirm the final positions and numbers of all electrical fittings and circuitry before wiring commences.

1.0 DESCRIPTION OF WORKS

Refer to the Architectural drawings to see the full extent of work required. All work undertaken shall be completed in best trade practice.

Where light fittings require use of transformers, or heat protection cones, etc, including bulbs, these shall likewise be supplied by the electrical contractor. Switches, wiring, and installation shall be by the electrical contractor.

Where light fittings are described as "O.S.F.", these fittings will be supplied by the Owner ready for installation by the Electrician. These fittings will be supplied to the Electrician with all transformers, or heat protection cones, bulbs, etc.

1.1 RELEVANT STANDARDS.

- | | | |
|----|-----------------|--|
| 2 | NZBC E2/AS1 | External moisture |
| 3 | NZBC F6/AS1 | Visibility in escape routes |
| 4 | NZBC F7/AS1 | Warning systems |
| 5 | NZBC G4/AS1 | Ventilation |
| 6 | AS/NZS 1125 | Conductors in insulated electric cables and flexible cord |
| 7 | AS/NZS 1768 | Lightning protection |
| 8 | AS/NZS 2201.1 | Intruder alarm systems - Client's premises - Design, installation, commissioning and maintenance |
| 9 | AS 2293.1:2005 | Emergency escape lighting and exit signs for buildings - System design, installation and operation |
| 10 | AS 2293.3:2005 | Emergency escape lighting and exit signs for buildings - Emergency escape luminaires and exit signs |
| 11 | AS/NZS 3000 | Electrical installations (known as the Australian/New Zealand Wiring Rules) |
| 12 | AS/NZS 3008.1.2 | Electrical installations - Selection of cables - Cables for alternating voltages up to and including 0.6/1 kV - Typical New Zealand installation conditions |
| 13 | AS/NZS 3100 | Approval and test specification-general requirements for electrical equipment |
| 14 | AS/NZS 3112 | Approval and test specification - Plugs and socket-outlets |
| 15 | AS/NZS 3113 | Approval and test specification - Ceiling roses |
| 16 | AS/NZS 3190 | Approval and test specification - Residual current devices (current-operated earth-leakage devices) |
| 17 | AS/NZS 3439.3 | Low-voltage switchgear and controlgear assemblies - Particular requirements for low-voltage switchgear and controlgear assemblies intended to be installed in places where unskilled persons have access for their use - Distribution boards |

- 18 AS 3786 Smoke alarms
- 19 [NZS 4514](#) Interconnected smoke alarms for houses
- 20 [AS/NZS 5000.2](#) Electric cables - Polymeric insulated - for working voltages up to and including 450/750v
- 21 [AS/NZS 60335.1](#) Household and similar electrical appliances - Safety - General requirements
- 22 [AS/NZS 60598.2.2:2001](#) Luminaires - Particular requirements - Recessed luminaires
- 23 AS/NZS 61439.3 Low-voltage switchgear and controlgear assemblies - Part 3: Distribution boards intended to be operated by ordinary persons (DBO).
- 24 IEC 61643 Components for low voltage surge protection devices
- 25 [Electricity \(Safety\) Regulations 2010](#) (Reprint as at 4 April 2016)
[TCF Premises Wiring Code of Practice 2011](#)

1.2 COMPLY

Comply with the Electricity (Safety) Regulations 2010, [AS/NZS 3000](#), [AS/NZS 3008.1.2](#) and [TCF Premises Wiring Code of Practice](#) for listed and prescribed work and with the utility network operator's requirements. Apply for the service connection. Arrange for the required inspections of listed work. Pay all fees.

1.3 POWER SUPPLY

Allow to provide temporary power supply to the building site, branch off from onsite power supply as provided by the subdivision.

1.4 METER BOARD

Provide an exterior meter board with a viewing window in position shown. Meter board shall allow for metering at normal rate, water rate, and night boost rate.

1.5 SWITCHBOARD:

Provide and fit 1 no. [PDL Superboard](#) flush mounted (or equal approved) located where shown on the Drawings. All wiring including mains shall be concealed. Provide all RCD/MCB's for circuits. Label all circuits clearly at the completion of the installation.

1.6 CONFIRM MOUNTING POSITIONS

Confirm locations and heights of all light switches, socket outlets and fittings on the job with the owner before proceeding.

1.7 SYSTEM DESIGN, GENERAL

Design elements for the complete electrical installation in accordance with current practice and allowing for stated and necessary conditions of use for safe, robust, low maintenance and energy efficient use. Work to be aligned and positioned to suit surrounding finishes and symmetry.

1.8 SETTING OUT

At the earliest opportunity set-out the position and sizes of holes, recesses and chases as necessary for the accommodation of the electrical services for the complete electrical installation. Arrange for those trades affected to carry out this work during construction or afterwards by cutting out and making good.

1.9 OUTLET AND EQUIPMENT LOCATIONS

Outlet and equipment locations shown on the drawings for the complete electrical installation are their actual location, but subject to verification for final height and position. Confirm final positioning on site. Allow for up to 2 metres of movement prior to installation.

1.10 LIGHT SWITCHES

15 amp 240 volt mechanism of rocker operation, mounted under a moulded polycarbonate flush plate ganged under a common plate for multiple switches on the same circuit and by separate plates for multiple switches on separate circuits. To [AS/NZS 3000](#) for damp or exterior situations.

1.11 SWITCH PANELS

To accommodate switches to separate circuits and phases and flush mounted within a metal wall box with selected colour powder coated flush plate 2.5 mm thick. Switches individually secured within a mounting plate behind the flush plate. Engrave the flush plate to indicate the use of each switch. Permanently label circuit numbers on back of plate.

1.12 POWER OUTLETS

Single phase 10A, 15A or 20A, 240V mechanisms as required, rocker operation with 3-pin (flat earth pin) plug base mounted under a moulded polycarbonate flush plate and with 2 switches and plug bases in a standard flush plate for double socket outlets. Install protected type in plant areas. To AS/NZS 3000 for outlets in damp or exterior situations.

Three phase outlets press or rotary switch operated with 5-pin screw-neck plug socket, spring loaded flap and flush mounted in a polycarbonate enclosure. Provide ratings as shown, to suit equipment or 20 amps, whichever is the greater. Damp area and exterior outlets to be RCD protected (30 mA, 20 ms).

1.13 WIRING

Fix and support cables for the complete electrical installation with purpose made clips, cleats and saddles, with adequate air circulation around each cable and without any joints between equipment. Install on the loop-in, loop-out principle without the use of connectors for sub-circuit wiring.

Space one cable diameter (minimum) apart between adjacent circuit or sub-main groups including parallel sets of cables. Do not bend more than the minimum radius required by the cable manufacturer. Fix cables of essential services to the permanent structure above ducts, pipes and other elements that can be dislodged.

Enclose PVC conduit wire within conduits, on the loop-in system without using connectors and jointed only at outlet or switch positions. Enclose TPS cables in conduit in slabs, walls and columns and in steel conduit where liable to damage.

Install only where cable can be easily withdrawn for re-wiring or relocation, through correctly located and sized access holes in timber framing. Do not secure or clip in inaccessible locations. Install multiple runs over common routes in groups on trays or ladders and in ducts. Install in trefoil formation for single core TPS conductors 120 mm² and larger, using purpose made clamps so that proximity effects in adjacent ferrous metals are minimised and equal reactance values between phases are achieved. Fit cable glands on all circular cables penetrating equipment enclosures.

1.14 CIRCUITING

Provide separate circuits for lighting and power in accordance with the drawings and this specification. Individual lighting circuit load not to exceed 8 amps single phase unless otherwise specified.

1.15 SOCKET OUTLETS

Provide socket outlets in positions scheduled 30mm clear of skirtings or fittings and a min

of 500mm from floor level. Face plates shall be: - **PDL 600 series**

All socket outlets shall be of horizontal configuration unless shown otherwise.

1.16 LIGHT OUTLETS

Provide light outlets in positions scheduled, switched as indicated with switches located at approx. 1,000mm from floor level to centre of face plate, and 30mm clear of architraves or fittings. Face plates shall be: - **PDL 600 series**

All light switches shall be of horizontal configuration unless shown otherwise.

1.17 LIGHT FITTINGS – OWNER SUPPLIED

Install Light fittings as supplied by the Owner
Exterior lights. Refer to lighting plan.

Interior lights. Refer to lighting plan.

- 1.18 HEAT POINTS**
Refer to electrical plan.
- 1.19 TELEPHONE, DATA AND TELEVISION CABLING**
Allow to supply and install multi-channel TV Aerial including RG6 coax cable to provide service capable of receiving digital television with outlets as instructed by the owner.
- 1.20 TV AERIAL**
Supply and install a UHF TV aerial to roof (*position to be discussed with owner*). Owner is to arrange for sky digital dish to be installed.
- 1.21 EXTRACT VENTS**
Supply and install 2No 'FANTECH RESPF150 flush mounted ceiling extract vents to Ensuite & Bathroom. Vents will extract to the exterior via ceiling and discharge below soffit (*powercoated to match the soffit colour*)
- 1.22 UNDERTILE HEATING CABLES**
Supply and install Undertile heating elements to the Bathroom and Ensuite. They shall have individual thermostatically controlled wall mounted controllers located beside entry light switch for the room.
- 1.23 HEATING ELEMENTS**
Supply and install heating elements for behind mirrors in the Bathroom. The mirrors are supplied by the owner. Co-operate with owner for sizes and final positions.
- 1.24 HARDWIRED APPLIANCES**
Wire for all hardwired appliances as shown. Appliances include: dishwasher, oven & range hood.
- 1.25 SMOKE DETECTORS**
Supply and install 2 No **PDL SD Series** ceiling mounted battery powered smoke detectors with hush buttons to location shown on the floor plans.
- 1.26 HEATED TOWEL RAILS**
Install 2No heated towel rails as supplied by the owner to the Bathroom and Ensuite. Confirm position with owner prior to installation.
- 1.27 DOOR BELL**
Supply and install adjacent to the front door in a location confirmed by the owner onsite.
- 1.28 GARAGE DOOR OPENER:**
Supply and install Garage door opener with 2-remote controls as detailed
- 1.29 HOW WATER CYLINDER:**
n/a
- 1.30 HOME THEATRE/AUDIO SYSTEM**
Allow to co-operate with owner supplied sub-contractor to install home theatre/audio system.
- 1.31 OUTDOOR LIGHTING**
Wire for power supply to future outdoor garden lighting with switching where shown in the Electrical plan.
- 1.32 LABELLING**
Provide and install a printed label under each controller, switch and circuit breaker on distribution boards. List the rating of each circuit. Clearly define functions on labels.

1.33 CERTIFICATE OF COMPLIANCE

Carry out the prescribed electrical work for the complete electrical installation, test and complete a certificate of compliance, as required by the Electricity Regulations. Allow the network utility operator to view before the meter installation, listed work inspection, polarity check and livening of supply. On completion supply the certificate of compliance.

1.34 SAFETY CHECKS

Arrange for the safety check by a registered electrical inspector, or independently qualified person of the complete electrical installation and continuing safety checks required for this electrical installation and appliances under the Electricity Regulations.

1.35 LEAVE CLEAN

Leave systems and equipment for the complete electrical installation operating correctly and to the Electricity Regulations and the network utility operator. Leave work including light fittings, switch and socket plates, switchboards and distribution boards clean, undamaged, in full working order and to the standard required by following procedures.

1.36 GUARANTEE

On completion of the work supply to the Main Contractor a guarantee on workmanship and materials under this contract for a period of 1 year.

PAINTING & DECORATING

1. GENERAL

All Sub-contractors are bound by the preliminary and general section of the specification and to the full extent of their responsibility and instructions as contained in the full Contract Documents. This specification is divided into trade sections for convenience only and is to be read in its entirety by all trades. It shall not be construed that each trade section is a complete and separate contract.

1.1 PAINT MANUFACTURE

Only paint from a recognised principal manufacturer will be acceptable. Bulk non-proprietary line will not be acceptable.

The paint system is to be consistent as to primer, undercoat, and finishing coat, that is shall be sourced from the one manufacturer, designed for use with each other in the situation used, and compatible with the manufacturer's recommendations.

1.2 MATERIALS

All paints shall be the manufacturers premium top quality shelf line conforming with applicable New Zealand Standard Specifications. Tradeline or Homemaker type paints are unacceptable and shall not be used.

No paint or other materials shall be stored in direct contact with floors, fittings, or furniture, and likewise no mixing shall be carried out in these locations.

1.3 COLOUR SCHEME

A colour scheme will be supplied by the Owner giving details of brand, type and colours of finishing coats and this shall be strictly adhered to. Allow for all work required in respect of applying different colours and finishes to individual walls, ceilings, trim, and fittings, including cutting in and protection of adjacent surfaces etc.

1.4 WORKMANSHIP

All work shall be carried out under the control of an experienced foreman by competent tradesmen in accordance with NZS 7703: The Painting of Buildings, and sound trade practice using equipment suitable to ensure a first class job.

No oil paint shall be applied to damp surfaces, and exterior paint work shall not be carried out during frosty, wet, or inclement weather. Any surfaces damaged due to weather conditions or by dust shall be repainted without extra cost.

Painting where there is a likelihood of frost shall cease at no later than 3.00pm and earlier if the surface is in a frost prone area or side of the building.

Note; acrylics must not be applied where temperatures are less than 10deg. since this inhibits the proper drying of the paint.

Clean and rub down with glasspaper the surfaces to be painted and also rub down before applying each succeeding coat.

1.5 APPLICATION OF COATS:

The following methods of application shall be used.

Prime Coats;

Brush application only

Under and Topcoats;

Generally shall be brush applied, although roller application is acceptable on large areas of hardiflex and the like.

Spray application;

The use of pressure spray application shall only be allowed with the written consent of the contract supervisor.

Only airless spray equipment operated by a skilled operator experienced in the use of that equipment will be considered, and will depend on the material and area to be painted, and the standard of workmanship achieved by the operator on previous work.

1.6 TIME BETWEEN COATS

Generally allow 24 hrs between coats, but at no time less than that recommended by the manufacturer, and as may be necessitated by the drying conditions.

1.7 ANCILLARY SURFACES

The descriptions of areas in schedules and elsewhere are of necessity simplified. Coat ancillary exposed surfaces to match similar or adjacent materials or areas, except where a fair-faced natural finish is required or items are completely prefinished. In cases of doubt obtain written instructions before proceeding.

1.8 HARDWARE

Do not paint hinges or hardware that cannot be removed. Before commencing work carefully remove hardware, fixtures and fittings, set aside where they cannot be damaged or misplaced and replace on completion.

1.9 PROTECTION

Supply, lay and fix dropsheets, coverings and masking necessary to protect adjoining, fixtures, fittings and spaces from paint drops, spots, spray and damage.

Application - preparatory work**1.10 SURFACE PREPARATION**

Refer to the **Resene** One-Line Specifications and Product Data Manual for surface preparation sheets (or obtain them by phoning 0800 **RESENE**, or at www.resene.co.nz) listed in the materials systems schedule clauses. Carry out the preparatory work required by them for each of the substrates.

1.11 LEAD-BASED PAINT, ASBESTOS

Handle cautiously lead-based paint and asbestos, if present, as outlined in the preamble of the **Resene** One-Line Specifications and Product Data Manual and the Putting Your Safety First brochure.

1.12 SHARP EDGES, CRACKS AND HOLES

Remove and/or repair sharp edges, cracks and holes if present, as outlined in the preamble of the **Resene** One-Line Specifications and Product Data Manual.

Elastomeric sealants, if used, should not be painted. The paint film will not match the flexibility of the sealant and may severely limit its effectiveness.

1.13 REMEDIAL WORK

If any substrate or surface, that even with the preparation work called for in this section, cannot be brought up to a standard that will allow painting or clear finishing of the required standard then do not proceed until remedial work is carried out.

1.14 GAP FILLING

Make good cracks, holes, indented and damaged surfaces. Use suitable gap fillers to match the surface being prepared. Any special priming requirements of the fillers must be satisfied. Allow to dry or set before sanding back level with the surface. Prime or seal timber before using putty.

Exterior and wet areas: Use only Portland cement base or water-insoluble organic base gap fillers.

1.15 OFF-SITE WORK

Carry out this work under cover in a suitable environment with suitable lighting. Store items, both before and after coating, in a clean, dry area protected from the weather and mechanical damage, properly stacked and spaced to allow air circulation and to prevent sticking.

Application - generally

1.16 PAINTING GENERALLY

Comply with the **Resene** One-Line Specifications and Product Data Manual data sheets and the additional requirements of this work section.

1.17 MIXING

Although generally supplied ready-mixed, thoroughly mix paints. Lift any settled pigment and ensure the paint is homogenous.

1.18 ENVIRONMENT

Defer painting of exterior surfaces until weather conditions are favourable - warm dry days without frost or heavy dews. Avoid painting in direct sunlight any surfaces that absorb heat excessively. As far as possible apply paint in the temperature range 15°C to 25°C. If temperatures fall outside the range of 10°C and 35°C do not paint unless paints with the necessary temperature tolerance have been specified. Do not apply solvent borne paint if moisture is present on the surface.

1.19 SEQUENCE OF OPERATIONS

Painting work to generally follow the following sequences:

- Complete surface preparation before commencing painting.
- Apply primers, sealers, stains, undercoats, paints and clear coatings in the sequences laid down by **Resene**.
- Allow the full drying time between coats laid down by **Resene**.
- Do not expose primers, undercoats and intermediate coats beyond a few days before applying the next coat.
- Finish broad areas before painting trim.
- Ensure batch numbers of tins are matched for whole areas.
- Internally, paint ceilings before walls and walls before joinery, trim and other items.

1.20 APPLICATION

Select brush, roller, or pad and apply coatings to the requirements of **Resene** to obtain a smooth, even coating of the specified thickness, uniform gloss and colour.

1.21 LIGHTLY SAND

Lightly sand primers, sealers, undercoats and intermediate coats to remove dust pick-up, protruding fibres and coarse particles. Complete by removing dust immediately before applying the next coat.

1.22 DEFECTIVE WORK

Correct defective work immediately and recoat as required, following precisely the **Resene** system being applied.

1.23 EACH COAT

Each coat of paint and the completed paint system to have the following qualities and properties:

- Uniform finish, colour, texture, sheen and hiding power and the proper number of coats applied.
- No blemishes such as runs, sags, crinkling, fat edges, entrained paint skins, hairs, dust, bare or starved patches, cracks, brush marks, ladder marks and blistering.
- Proper covering of corners, crannies, thin edges, cracks, end grain and other difficult places of application.

Completion

- 1.24 CLEAN**
Clean adjoining surfaces, glass and fittings of any paint contamination. Clean off glass indicators at the completion of the building works. Clean glass inside and out to a shining finish.
- 1.25 LEAVE**
Leave the whole of this work uniform in gloss and colour, of correct thickness, free from painting defects, clean and unmarked and to the standard required by following procedures.
- 1.26 REMOVE**
Remove dropsheets, coverings and masking to leave surrounding surfaces and areas clean, tidy and undamaged. Remove debris, unused materials and elements from the site.
- 1.27 REPLACE**
Replace hardware without damage to it or the adjoining surface and leave hardware properly fitted and in working order.
- 1.28 GUARANTEE**
Provide a written guarantee against defective workmanship and materials for a period of five years from the date of final payment certificate. The guarantee is to be provided before the final payment is made.
- 1.29 DESCRIPTION OF WORKS**
Refer to the Architectural drawings to see the full extent of work required. All work undertaken shall be completed in best trade practice.

The painting sub contractor shall allow to provide colour sample of A4 size for all surfaces and shall confirm standard of finish i.e. satin, semi gloss, full gloss etc before paint is ordered.

NOTE: The designer accepts a level 5 finish may not be obtainable where a high gloss finish to the ceiling or walls is chosen, However particularly in the areas adjacent to large windows and doors the contractor shall allow to plaster all surfaces to as high finish as possible. Painting of the walls and ceilings signifies the painter's acceptance of those surfaces.

- 1.30 EXTERIOR**
- | | |
|---------------------------|---|
| 1. Roof | Coloursteel. |
| 2. Spouting | Coloursteel. |
| 3. Downpipes | Coloursteel. |
| 4. Fascias & Barge boards | Coloursteel. |
| 5. Soffits | Surface Prep
Refer to SIPDS No.3 Concrete & Cementitious and Spe
c Sheet 3:4/1
- 1-Coat of Resene Concrete Primer
- 2-Coats of Resene Lumbersider |
| 6. Entry door | N/A |
| 7. Garage Door | N/A |
| 8. Garage Door Reveals | Surface Prep.
Refer to "Resene Surface preparation D83"
Paint System - 3 Coat paint system.
1 st coat – Resene Sureseal Pigmented Sealer |

2nd coat – Resene Acrylic Undercoat – General Purpose
3rd coat – Resene Acrylic Sonix 101 – Semi Gloss Acrylic

c

- | | |
|--------------------|---|
| 9. Bricks | N/A |
| 10. Cedar Cladding | Surface Prep
Refer to SIPDS No. 2 Timber and Spec Sheet 2:4/1
- 2-Coats of Resene Woodsman Wood Oil Stain |
- 1.31 INTERIOR**
- | | |
|---|---|
| 1 Gibraltar board walls
(General) | Surface Prep.
Refer to SIPDS No.1 Interior Wallboard and Spec Sheet 1:1/1
- 1-Coat of Resene Broadwall Waterbourne Wallboard Sealer
- 2-Coats of Resene SpaceCote Low Sheen |
| 2 Gibraltar board walls
(Wet Areas) | Surface Prep.
Refer to SIPDS No.1 Interior Wallboard and Spec Sheet 1:1A/1
- 1-Coat of Resene Sureseal - Pigmented Sealer
- 2-Coats of Resene SpaceCote Low Sheen Kitchen & Bathroom |
| 3 Gibraltar board ceilings
(General) | Surface Prep.
Refer to SIPDS No.1 Interior Wallboard and Spec Sheet 1:1/1
- 1-Coat of Resene Broadwall Waterbourne Wallboard Sealer
- 2-Coats of Resene Ceiling Paint |
| 4 Gibraltar board ceilings
(Wet Areas) | Surface Prep.
Refer to SIPDS No.1 Interior Wallboard and Spec Sheet 1:1A/1
- 1-Coat of Resene Sureseal - Pigmented Sealer
- 2-Coats of Resene SpaceCote Low Sheen Kitchen & Bathroom |
| 5 Skirtings & Architraves | Surface Prep.
Refer to SIPDS No.2 Interior Wallboard and Spec Sheet 2:9/1
- 1-Coat of Resene Quick Dry – Primer Undercoat
- 2-Coats of Resene Lustacryl – Semigloss waterborne enamel. |
| 6 Window & Door Reveals | Surface Prep.
Refer to SIPDS No.2 Interior Wallboard and Spec Sheet 2:9/1
- 1-Coat of Resene Quick Dry – Primer Undercoat
- 2-Coats of Resene Lustacryl – Semigloss waterborne enamel. |
| 7 Internal Doors. | Surface Prep.
Refer to SIPDS No.2 Interior Wallboard and Spec Sheet 2:9/1
- 1-Coat of Resene Quick Dry – Primer Undercoat
- 2-Coats of Resene Lustacryl – Semigloss waterborne enamel. |

APPENDIX

Refer to attached sheets which shall include the following items:

1. Building Code Schedule of Approved Documents per Trade.
2. Roof Truss Design and Producer Statements.
3. Bracing Calculations
4. Lumberlok Stud to Top Plate Fixing Schedule.
Lumberlok Lintel Fixing Schedule.
Lumberlok Purlin & Batten Fixing Chart.
Lumberlok Roof Bracing Specification.
5. Timber Treatments Guide
6. Internal Waterproofing
7. Wall wrap & Roof underlay
8. HWC Restraints
9. Ezpanel
10. Weathertex panels
11. Masport Fire specification