

Approved Building Consent Documents

Please Note: A copy of the stamped approved documents must be available on site for all inspections.

Inspection booking timeframes

Call received	before 3pm inspection will be done	after 3pm inspection will be done
Monday	Wednesday	Thursday
Tuesday	Thursday	Friday
Wednesday	Friday	Monday
Thursday	Monday	Tuesday
Friday	Tuesday	Wednesday

Building inspections and enquiries phone: 03 347 2839

Please ensure all work for inspection is ready the day before. Incomplete work requiring re-inspection will incur an additional inspection fee.



**SPECIFICATION
OF MATERIALS TO BE SUPPLIED AND
WORK TO BE DONE
FOR NEW HOUSE AT
LOT 8, 13 HART PLACE
LAKE COLERIDGE
7572**

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MATERIAL SCHEDULE

ITEM	BRAND	COMPLIANCE
DPM	Thermakraft Thermathene Black 250 Micron	
Flashing Tape	Thermakraft AluBand	Branz Appraisal 878 (2014)
Wall Wrap	Masons Barricade FR Building Wrap	CodeMark Certificate CM40134-I02-R00
Roof Underlay	Thermakraft 215 Self Supporting Underlay	Complies with E2/AS1 Table 23. Meets performance requirements of B2 for 50 and 15 years.
Aluminium Joinery	All windows/doors to be Double Glazed. Grade A safety glass to glazing in bathroom.	
Wall Cladding	JSC Vertical Shiplap Weatherboard System	CodeMark Certificate - GM-CM30084-RevC
	Board & Batten (Plywood sheet)	As per E2/AS1
	Classic Stone Riverstone on 9mm BGC Stone Sheet	Beal appraisal C716
Roof Cladding	Profile Metal Roof Cladding.	As per E2/AS1
Insulation	Pink Batts OR EarthWool Insulation - R2.6 Min Walls - R3.6 Min Ceiling	Branz Appraisal 238 (2018) (Pink Batts) Branz Appraisal 648 (2016) (EarthWool)
Bracing Systems	Gib Ezybrace System 2016	Branz Appraisal 928 (2016)
Internal Wall Linings	Gib Aqualine wet area systems. (To all bathrooms/Ensuites only)	Branz Appraisal 427 (2007)
Wet Area Membrane	Davco K10 Plus	Branz Appraisal 609 (2008)
Interior Joinery	Kitchen: Formica top with 180 degree rolled front. - Wall tiles to be laid over Gib Aqualine - Tiled showers substrate James Hardie Villaboard - Impervious glass splash back to wall adjacent to cooktop	

PRELIMINARY & GENERAL

Owner: Lindsay Louis Munro & Hugh Garth Munro

Address: 13 Hart Place, Lake Coleridge

Local Authority: Selwyn District Council

Site Description: Lot 8, DP 348241

Scope: The erection and completion in the most workmanlike manner all the works described herein and as shown on the drawings.

Documentation:

Drawings
Specification
Truss Design Certificate
Ground Conditions Report
Certificate of Title

Conditions of Contract:

The whole of the work shall be carried out in accordance with this specification, the accompanying drawings and the New Zealand Standards Specification. Conditions of Contract for Building and Civil Engineering Construction N.Z.S. 3910 and the New Zealand Building Code 2004 & its Amendments.

Standards:

All work shall be carried out in accordance with the New Zealand Building Act 2004 and amendments. Acceptable solutions and verification methods as defined in the Code Handbook and approved documents and relevant N.Z.S. shall form part of this specification, along with Local Body Regulations and requirements

Dimensions:

Figured dimensions are to be used in preference to scaled. If any discrepancies in the plans and specification are found by the Contractor, the Designer or Owner shall be notified before the work is commenced.

Consents & Fees:

The Building Consent and associated fees shall be paid for by the Builder. The Main Contractors shall ensure that all necessary Consents and/or approvals have been applied for and uplifted before commencing work. The Contractor shall keep on site the approved Consent documents and shall bring to the Designer's and/or Owner's notification, any amendments endorsed on the plans and/or specification.

Insurance:

The Main Contractor shall insure the works in an approved Fire Office and such insurance shall cover the full value of the premises when completed. The Contractor shall be held responsible for any damage or loss by fire to the works and such things as are covered by the 'Policy', until the completion of the contract. Receipts for such policies shall be lodged with the Owner before the first progress payment is made.

Sub-contractors:

Sub-contractors will be responsible to the Main Contractor for the carrying out of their respective work to a satisfactory standard and any work not accepted will be replaced at the Sub-contractor's expense.

Materials:

Materials shall be the best of their respective kinds as specified. All materials for which there is a New Zealand and/or Australian Standard Specification shall conform hereto. All workmanship shall be consistent with good trade practice.

Alternatives:

Alternatives to Trade Lines/items as specified throughout this Specification shall be allowed where technical information and performance shows that the same requirements for that product are met.

Attendance upon all trades:

The Sub-contractor concerned shall inspect all preparatory work against which their work is to be placed and report immediately to the Main Contractor, any defects which would affect the satisfactory execution or permanence of their work and shall not proceed until such preparatory work is satisfactory. The Main Contractor shall co-operate with, attend upon, and provide all reasonable assistance for all other Sub-contractors.

Plant & temporary works:

Each Sub-contractor shall allow to provide all necessary plant and temporary work, including temporary framing, fabrication and setting out equipment, together with all labour and tools, implements, ladders and everything necessary for the due performance of the works. They will be entirely responsible for the safety and performance and efficiency of all methods used in the carrying out of his section of the contract. The Main Contractor shall provide scaffolding during the course of the contract.

Existing Services:

The Contractor Shall:

- (a) Locate all underground services affected by the excavation work. Any details that are provided to the Contractor of existing private underground services are done so in good faith. The contractor is responsible for locating all existing underground services before working in any area. The Contractor is required to carry out a detection survey of the site to ensure there are no buried operative electric cables.
- (b) Give all required notices to the Water, Sewage, Gas & Electricity Authorities or Companies, the territorial Authority and Telecom and other telecommunications companies and pay all relevant fees and charges.
- (c) Protect existing services rectify any damage or interference to them and provide temporary services whilst repairs are being carried out.

Protection of Property:

The Contractor shall protect the Owners', Council and adjoining properties and shall make good all damage caused thereto by the building operation by vehicles, or by workmen under his control. The Contractor shall be entirely responsible for all apparatus, equipment and appurtenances furnished by him or his sub-contractors.

Site Security:

The Contractor shall provide temporary fencing to the site to prevent unauthorised access. No person shall be allowed on site without the permission of the Contractors representative.

Cleaning:

Upon completion of each Sub-contractor's work comprised in this contract, he shall take down and clear away all plant and temporary work involved in his section of the work and leave the building and site ready for the next Trade. All trade debris is to be removed from the site and the Works left clean with all services and mechanical parts in working order.

Maintenance:

The Contractor & Sub-contractors shall maintain the Works for 90 days after Practical Completion, and any damage done through faulty workmanship or materials shall be made good at the Contractors expense.

Completion:

At the completion of the contract the Main Contractor shall provide written guarantees specified. The Main Contractor shall be responsible for applying for and receiving from the Territorial Authority a Code of Compliance Certificate. The building shall not be occupied until a Code of Compliance Certificate has been issued. The Final Payment Certificate shall not be issued unless the Contractor is in receipt of the Code Compliance Certificate, as-built drawings and Guarantees.

Health & Safety Management Plan:

The Contractor shall provide evidence that he has a Health & Safety Plan in operation. If not then the Contractor is required to comply with Mike Greer Homes Limited Health & Safety document which can be viewed at 7 Deans Ave or request a Mike Greer Homes Limited Health & Safety booklet be supplied.

Site Safety:

To meet compliance with F5/AS1 – Construction and Demolition Hazards.
Toe boards will be used on the storage or access platforms to prevent materials falling off.
Temporary chain-link fences 2m high will be used to prevent access to site. Gates in the fencing will open into the site. The temporary fencing will be contained onsite and will pose no hazard or obstruction to the public.
As per above site fencing will keep public out of site. The scale of the construction means that there is no risk to the public outside the site.

Trade section:

The specification is divided into trade sections for convenience and reference only, and it shall not be construed that each trade is a separate and complete contract. While reasonable care is taken to classify each trade, no claims will be admitted from Sub-contractors for work not specifically mentioned in a trade section, but which is provided for, (express or implied), elsewhere in the specification or shown on the drawings.

This Specification is to be read in conjunction with Architectural & Engineering Drawings. The Specification takes precedence over the drawings.

If any discrepancies in the plans and specification are found the Designer or Owner shall be notified before the work is commenced.

SITE PREPARATION

Preliminary:

Refer to the Preliminary Section of the Specification for clauses equally binding on all sections of this contract

Standards:

NZBC: B1/VM1, NZS 4431:1989

Scope:

Contractor is advised to visit the site before signing a Contract Agreement to satisfy himself as to the site conditions, ground levels & all other matters affecting the execution of the works.

Clear site of vegetation & stockpile The Contractor shall assume that all trees and plants outside the building areas shall be retained. The Contractor shall be responsible for leaving the site clear and ready for final planting.

EXCAVATION

Preliminary:

Refer to the Preliminary Section of the Specification for clauses equally binding on all sections of this contract

Standards:

NZBC: B1 Appendix A, NZS 4431:1989

Scope:

Site strip as required.

The Contractor shall employ a Registered Surveyor to set out the positions of the foundations. Reference points, datum's, profiles or similar shall be established clear of the excavation to ensure they are not damaged or dislodged, and to allow easy and accurate checking at all times.

Excavate for foundation walls to the widths and depths as shown on the drawings and to an approved solid bearing. The Contractor shall clear and strip the areas on which fill material is to be placed. Saturated, weak or organic soils exposed by clearing and stripping shall be excavated and removed from site. At the discretion of the Engineer on site excavated material may be acceptable.

Excavations shall be kept free of water. Any ground water in the excavations shall be kept away by means of a sump dug clear of the excavation or by other dewatering systems as appropriate.

All footings to be approved by the Local Council Building Inspector before pouring of concrete commence.

In the event of excavations for foundations being too deep in error, the Contractor shall, at his expense, fill the excavation to the true level with mass concrete as required by an Engineer.

Materials:

Backfill foundation walls and service trenches with 150mm compacted layers of AP40 to a minimum density of 2,150kg/m³, in layers 75mm min. and 150mm max. Compacted fill shall be well-graded rock free from organic matter and top soil. All hardfill shall be compacted with a vibrating roller or plate compacter in order to achieve not less than 90% density (NZS 4402 Pt 2).

Compacted hardfill shall be placed under slabs as shown on the drawings. No compacted hardfill shall be placed under footings or foundations unless approved by the Engineer.

All compacted hardfill under slabs shall be inspected by the Engineer.

Take care to not cause damage to any waterproof coatings or polythene protecting foundation walls from ground water entry.

CONCRETE WORK

Preliminary:

Refer to the Preliminary Section of the Specification for clauses equally binding on all sections of this contract

Standards:

NZBC:B1/VM1 & VM4, B2, NZS 3101:1:2006, NZS 3109:1997, NZS 3112:1986, NZS 3114:1987, AS/NZS 4671:2001, AS/NZS 4680: 2006, NZS3604:2011

Scope:

Driveway & Service Court

Materials:

All concrete shall have a minimum 28 days crushing strength of 20MPa in exposure zone B, slump 100mm and shall be mixed and placed in conformity with N.Z.S. 3109. Aggregate size shall be 20mm unless otherwise specified. Calcium Chloride shall not be used.

Surface finishes:

Slabs to take plaster or tiles	U2
Other slabs	U3
Top surfaces of foundation beams & pads	U2
Concrete below ground	F1
Concrete to take plaster or tiles	F2
Concrete surfaces not exposed in the completed building	F3
Concrete surfaces exposed in or outside the completed building	F5

Exposed Aggregate:

A trial run is recommended before general application to determine timing and the depth of etching required. Agitate Retarder thoroughly before use. Place concrete in formwork (3 parts cement, 4 parts sand, 6 parts aggregate by volume is a typical mix) and wood float surface covering all stones. Brush, spray or roller on Retarder liberally, to the fresh concrete surface just as the surface water disappears.

Protect the coated surface from wind, rain or hot sun. Within 12 - 24 hours after application remove retarded top layer of mortar with a stiff broom and hosed water, leaving a clean exposed aggregate surface. If extremely small aggregate is used, it is important not to start the wash off too early, as bare spots may be created. Slurry runoff from cleaned aggregate is to be ponded and vacuumed by the contractor

Formwork:

Provide and fit all formwork to profiles shown, properly strutted and braced in accordance with N.Z.S. 3109 to remain rigid, true to line, level and watertight during placing of concrete. Allow for setdowns for doors in slabs as required.

Rubbish:

Allow to remove all rubbish from the site associated with the execution and completion of this section of the works.

Formed Driveway:

The Contractor is to maintain and protect Public Property and that of drainage, electricity, gas, highway, water, and telephone authorities and is to make good or pay for the reinstatement of all damage thereto. Basecourse shall not be laid until the work under Drainlayer is completed and power mains have been laid and all kerb & channel and walls have been laid.

Excavation and Grading:

Excavate to 250mm below finished driveway levels and grade to required falls. Provide and lay 150mm finished thickness of sub-base material, laid and compacted in 2 layers. Sub-base material shall be approved well-graded alluvial gravel (pit run) of 65mm max size. It shall be laid at optimum moisture content and mechanically compacted to a level surface in accordance with NRB Specification F/1: Aug 1986.

Basecourse:

Provide and lay a 75mm finished layer of stabilised basecourse over the sub-base to driveway, finishing 25mm below the finished levels. Basecourse shall be crushed basecourse complying with NRB Specification M/4: June 1985. Place basecourse in such a manner as to minimise segregation. Consolidate basecourse by rolling with approved steel wheel rollers at optimum moisture content. In general the laying and compaction of the basecourse shall comply with NRB Specification B/2: July 1987. The finished surface shall be dense, tight, evenly graded to falls and free of dust and loose material, and to the approval of the Designer.

Finishing:

All concrete that is to remain visible when the building is complete shall comply with finish F6 as specified in NZS 3114:1987. The surface shall be finished to smooth even grades with no local depressions or bumps exceeding 6mm in 3m, and shall be such as to direct water into channels and sumps. Finish neatly against concrete kerbs, channels, slabs and foundations at other boundaries and at the correct surface level. Full precautions shall be taken to prevent disfigurement of any concrete work. Any disfigurement or damage shall be made good at the Contractors expense.

STEELWORK

Preliminary:

Refer to the Preliminary Section of the Specification for clauses equally binding on all sections of this contract

Standards:

NZBC: B1, NZS3404:1997, NZS3604:2011

Scope:

Posts & Portals where shown on drawings by specific engineer design.

Design:

All steelwork to be designed and certified by a Registered Engineer, who shall supply details and a Producer Statement.

Materials:

All exterior steelwork and steelwork exposed to moisture shall be galvanised.

All interior steelwork shall receive two coats of QD primer.

All exposed bolts, nuts and washers shall be hot dipped galvanised.

All welding shall comply with modern trade practice and comply with AS/NZS 1554.1: 1995.

Fixing:

To be in accordance with Engineers Instructions.

CARPENTRY

Preliminary:

Refer to the Preliminary Section of the Specification for clauses equally binding on all sections of this contract

Standards:

NZBC: B1, B2, D1, E2, E3, F4, G1, G3, G5, G6, G7, F4, H1, NZS 3602: 2003, NZS 3604:2011, NZS 3617: 1979

Scope:

Framing
 Posts (Steel & Timber)
 Steel portals
 Trusses
 Internal gutter to chimney
 Ceiling plane braces
 Bracing
 Soffits
 Fascia
 Exterior Cladding
 Door, window & air seal installation
 Insulation
 Linings
 Skirting's
 Ceiling Hatch
 Miscellaneous Trims
 Hardware & Miscellaneous Hardware
 Installation of fittings
 Assist other trades

Materials:

As required on plans and in specification

Timbers:

All timbers shall be of their respective kinds and grades as specified and thoroughly seasoned. Timbers shall comply in all respects with N.Z.S. 3631 National Grading Rules and Kiln dry timber framing in accordance with NZS 3602.
 In general, the following grades apply-
 All structural timber to be treated in accordance with NZBC Clause B2/AS1. Refer to the schedule on the working drawings.

Moisture Content:

Framing timbers shall be left to dry to a moisture content of **18%** before internal linings may commence.

Preservative Treatment:

All treated framing timbers shall be Tanalith N.C.A. preservative treatment or other approved means to the N.Z.T.P.A. & comply with NZBC B2/AS amendments dated from May 2011

Gauging & Thicknessing:

Purlins, plates, studs, dwangs and all other framing timbers shall be gauged and/or thicknessed to produce regular plane faces to walls, ceiling and all other surface finishes.

Fixing Of Timbers:

All fixing of timbers shall be carried out in accordance with NZS3604:2011. Framing tolerances must comply with the requirements of NZS 3604:2011. All framing must be made flush. All exposed wooden trim, and both faces and edges of all other dressed exterior finishing timbers shall be primed on all faces with approved exterior primer before being fixed in position.

Damp Proofing:

Provide between all faces of framing timbers in contact with concrete, place a full length and width damp proof course 3 ply bituminous fabric.

Building Wrap:

Masons Barricade FR Building Wrap (CodeMark Certificate CM40134-I02-R00), fixed in accordance with NZBC: E2/AS1 and manufacturers technical literature.

Air barrier:

Masons Barricade FR Building Wrap (CodeMark Certificate CM40134-I02-R00), as a non-rigid air barrier. Building wrap to be installed to walls which are not lined on the internal face e.g. Garage walls or gable ends.

Building wrap must be installed horizontally and be continuous around corners. The wrap must be lapped 75mm minimum at horizontal joints and 150mm minimum over studs at vertical joints. Where studs are at greater than 450mm centres, polypropylene strap or additional vertical cavity battens must be installed at maximum 300mm centres to prevent bulk insulation bulging into the cavity.

Flexible sill and jamb flashing tapes complying with NZBC E2/AS1, Paragraph 4.3.11 must be used around all penetration openings. All penetrations must have internal air seals applied.

Priming:

Priming shall be Taubmans Exterior Wood-primer or equal approved. Prime all faces, edges, back joints and abutting surfaces of all exterior finishing timbers. All exterior joinery shall not be exposed for more than 6 weeks. Any surface so exposed, shall be reprimed.

Wall Framing:

Frame up walls to sizes and at centres as per drawings, plumb and true to line in accordance with section 8 of NZS3604:2011.
Chimney wall framing as per Engineers design

Concrete Slabs**Non-Braced External Walls:**

Secure bottom plate with Pryda bottom plate anchors at maximum 900mm crs with 1x 75x4mm concrete nail adjacent to anchor minimum 70mm from edge and slab.

Non- Braced Internal Walls:

Secure bottom plate with 75x3.8mm shot fired fastenings with 16mm washers, spaced at 600mm centres, within 150mm from each end of plate.

Braced External Walls:

GS1-N - Secure bottom plate with Pryda bottom plate anchors as above, if a Pryda bottom plate anchor is not within 150mm from each end of the bracing element provide M12 bolt fixing with 50x50x3mm washer within 150mm from each end of bracing element.

BL1-H - Secure bottom plate as per non-braced walls fixings as above.
With additional GIB Handibrac fixings at both ends of bracing element to stud/plate junction to give a minimum uplift strength of 15kN (Bowmac or similar)

Braced Internal Walls:

GS1-N - Secure bottom plate with 75x3.8mm shot fired fasteners with 16mm washers, spaced at 150mm and 300mm from each end of bracing element and 600mm centres thereafter.

Posts:

Sized as per plans. Posts shall be Radiata and treated to a minimum of H3.2. If posts are exposed to the weather and in contact with the ground or concrete ensure post is treated to H5.

Roof Framing:

Frame up roof with gang nail trusses and framing timbers as indicated on the drawings. All trusses shall be secured with "Z" nails or framing anchors as per truss design/pre-nailers.

NOTE: Fabricator of trusses shall provide a Registered Certificate for truss design.

Lintels & Beams:

Sized as per truss design by truss designer, if not sized on truss design then to be sized to meet tables in Section 8 NZS3604:2011 or as per Engineers design.

Build in timber beams as shown. All beams to have minimum 50mm landing onto wall plates and shall be double studded under and blocked to provide support.

Lintels to be fixed to prevent uplift as per plans and Figure 8.12 NZS3604:2011.

Steel Beams:

Build in steel beams as detailed. Allow to provide 12mm dia. bolt holes to flanges and webs of all steel members for fixing of timbers.

Ceilings:

10mm Gib board linings to be fixed on metal ceiling battens at 400crs

Insulation:

R3.6 Fibreglass batts to ceilings

R2.6 Fibreglass batts to external walls and walls between dwelling and attached garage.

Bracing:**Roof Bracing:**

Designed and covered by the truss designer as part of there truss design to meet B1.

Ceiling Plane Bracing:

Designed and covered by Engineer.

Wall Bracing:

Selected bracing elements as per bracing plan. To be installed and fixed in strict accordance with manufacturer's technical literature.

Ensure studs are also fixed in accordance with bracing manufacturer's technical literature.

Refer to bracing plan, bracing schedule and calculation sheets.

Exterior Linings:

Provide and fix 4.5mm HardieFlex eaves/soffits lining, V butt jointed.

JSC VERTICLAD CEDAR WEATHERBOARD CAVITY SYSTEM

Framing:

H1.2 treated and set-out must comply with NZS 3604 with studs as required by 3604 and dwangs @ 480 centres max.

Building Wrap

Masons *Barricade* FR building wrap (CodeMark Certificate CM40134-I02-R00), fixed in accordance with NZBC: E2/AS1 and manufacturers technical literature.

Air barrier:

Masons *Barricade* FR building wrap has been CodeMark Certified as a non rigid air barrier. Building wrap to be installed to walls which are not lined on the internal face e.g. Garage walls or gable ends.

Flashings:

Materials: Coloursteel or UPVC (uncoated steel, galv, zinc, zinc/aluminium/magnesium not to be used in contact with Cedar)

All wall openings, penetrations, intersections, connections, windows sills, heads and jambs must be flashed prior to weatherboard installation. The building wrap must be appropriately incorporated with penetration and junction flashings. Materials must be lapped in such a way that water tracks down to the exterior on the face of the building wrap.

Flexible Flashing Tape:

Aluband/Aluminium Window Sealing System (BRANZ Appraised 878) to all openings/penetrations as per drawings.

Cavity Vent Strip:

As per E2/AS1

Cavity Battens:

CCA treated JSC-H20x45 H3.2 timber cavity battens horizontal at 480mm max centres

Fixing:

Materials: 75mm annular grooved rose head, silicon bronze or Stainless Steel

Adjust horizontal set-out to ensure there is a 2mm expansion gap between successive boards. Use full length boards only (nogs – dwangs at 400 - 480 mm centres). Nail other side of board just clear of lap 35mm – 40mm from edge. Nails to be driven in with an upward slope. Line nails horizontally across the boards. Refer to JSC Timber VertiClad fixing details.

Finishing:

CedarShield ~ Factory Applied Weatherboard Coating System. JSC specifically developed the CedarShield System to responsibly manage and increase the performance of Western Red Cedar against the harsh New Zealand

environment. The CedarShield System offers factory applied coating within a controlled environment delivering a full envelope seal to Weatherboards, Fascia, Panelling and Dressed profiles and decking prior to delivery.

CedarShield ensures a consistent application for improved appearance and increased finish life and durability without unsightly lap marks or acclimatisation lines. Coating options include both oil and water based coating systems with many new and innovative colours available.

Ensure all Weatherboards are envelope sealed prior to fixing. JSC Timber cladding solutions require all cut and exposed edges to be sealed prior or during the Weatherboard installation. JSC timber recommends the Weatherboards are annually cleaned and maintained to meet the coating manufacturer's specification and recoating schedule.

PLYWOOD SHEET AND BATTEN CLADDING (E2/AS1)

Framing

Is to be H1.2 treated and set-out must comply with NZS 3604 with studs @ 400 c/c and dwangs @ 800 c/c. Double studs are required at internal corners. An extra stud is required at the internal corners. Extra packers may be required at external corners.

Building Wrap:

Is to be Masons *Barricade FR*, fixed in accordance with NZBC E2 /AS1. Walls which are not lined on the internal face eg. garage walls or gable ends must include a rigid sheathing or an air barrier behind the cladding.

Plywood Sheet:

To be a minimum of 12mm thick and manufactured to AS/NZS 2269 grade CD and treated as required by NZS3602. Plywood sheet cladding to be fixed over a drained cavity. H3 LOSP treated with 3x coat paint finish (not CCA)
Allow 2mm gap between sheet.

Battens:

Minimum ex 75x25mm H3.2 treated timber battens, with 6x6mm weather grooves. To be fixed over sheet joints and over supports.

Cavity Battens:

Are to be minimum H3.1 treated, be minimum 20mm thick, the same width as the studs and be fixed by the cladding fixings to the main framing through the building wrap. Where studs are at 600mm centres, the battens must be provided at 300mm centres vertically and fixed to top and bottom plates, and dwangs.

Cavity Base Closure:

Shall be aluminium or PVC, and must be installed at the bottom of all walls constructed using the drained and ventilated cavity construction method. The vent strip is to be kept clear and unobstructed to allow free drainage and ventilation of cavities.

Flashings:

All wall openings, penetrations, intersections, connections, windows sills heads and jambs must be flashed prior to cladding installation. The building wrap must be appropriately incorporated with penetration and junction flashings. Materials must be lapped in such a way that water tracks down to the exterior on the face of the building wrap.

Fixing:

Sheets must be kept dry and under cover whilst in storage prior to and during fixing. Cut ends which are exposed or where sealant is applied to the boards must be primed prior to installation.

As per Table 24 – E2/AS1: Plywood sheet is to be fixed with 60x2.8 FH nails with minimum framing penetration of 30mm. Fix at 150mm centres to sides and 300mm centres in middle.

Cover battens to be fixed with 60x2.8 JH nail to cavity battens only, at 300mm centres in the centre of the batten.

Finish

Plywood sheet cladding and battens are to be Paint finished, painted on all edges and the outer face with a latex exterior paint system.

Warranty:

Provide 15 year warranty covering manufacturing defects in the panels and Accessories

CLASSIC STONE VENEER SYSTEM – BEAL APPRAISAL C716 V11

Preliminary:

Refer to the Preliminary Section of the Specification for clauses equally binding on all sections of this contract

Standards:

NZBC: B1, B2, E2/AS1, E3/AS1, NZS 3604, NZS 4210, AS/NZS 2699.1

Scope:

Schist stone veneer to areas shown on the drawings. Timber framing behind must be at 450mm stud centres.

Materials:

Classic Stone wall cladding system

Fixing:

The Classic Stone wall cladding system must only be installed by Classic Stone Ltd approved and trained applicators who have experience in the application of stone veneer products.

The quarried schist stone is supplied pre-dressed to a maximum depth of 40mm front to back, colour selected by owners. The stone varies in thickness and length and is to be laid with the mortar visibly raked.

Fibre Cement Backing Sheet:

Supply and install 9mm BGC Stonesheet to be used in High wind zones.

Fix using stainless steel fixings and per manufacturers fixings requirements. Fixings must not be closer than 12mm from the edge of the sheets and not over tightened.

Waterproofing Substrates:

In order to meet the NZ Building Code requirements, particularly regarding section E2 – External Moisture. Apply a waterproofing membrane over fibre cement sheet.

BGC recommend application of a waterproofing membrane to the entire surface of the BGC Stonesheet prior to tiling.

Waterproofing Substrates:

In order to meet the NZ Building Code requirements, particularly regarding section E2 – External Moisture, waterproofing is best achieved by first waterproofing at the substrate level. Apply a waterproofing membrane over fibre cement sheet.

Equus Chevaline Coverall, (an approved Classic Stone water proofer), is a thixotropic waterborne acrylic system with in-built flexibility and durability and has specific early-water resistance and high adhesion.

Concrete, brick and fibre cement surfaces: Surface of substrate to be cleaned of any contaminants and then an application of One (1) coat of Equus **Coverall**/water 50/50 brushed on at 5-7 sqm/litre.

The substrates will then need a bonding agent to be applied to ensure good adhesion with the plaster coat that follows.

Bond Coat:

The bond coat is one of the most important parts to the whole system. It is essential to ensure that this coat is applied **at least 24 hrs** in advance of the stone being laid. Ensure that the coat is extremely hard and seemingly impossible to remove without mechanical assistance. The Bond Coat application should be consistent in its coverage and cover most of the visible substrate with a coarse texture. Please refer for more detail to the install DVD.

Adhesive Bond Coat Mix:

- 1 part Mortar sand
- 2 parts Cement
- Mix with 60% Binder/water or 60% Primal/water
- Oxide as required

Mix to a smooth creamy consistency. Apply with brush or hopper gun. Ensure that all work is thoroughly masked off as splatter is near impossible to remove. We would recommend all BGC sheets be pre sealed with Coverall and Bond coated prior to sheet installation. (Saves lots of time and mess, contact Classic Stone for further information)

Classic Stone Adhesive Mortar:

1. 2 Litres Cement
2. 6 Litres Selected Mortar sand
3. Classic Stone adhesive –
 - A. 50% Primal MC 76lo to 50% water premixed. Mix to desired consistency.
4. Oxide as required. (Keep mixes consistent)

Preparatory Work:

Spread out Classic Stone products at the jobsite so there is a good variety of sizes, shapes, and colours to choose from. Plan some variety and contrast in the overall design. Use small stones next to large ones, heavy-textured pieces next to smooth and thick stones next to thinner ones. Mixing Classic Stone products from different pallets during application will allow a desirable balance of individual stones on the finished project. Tinting mortar complements the colour of the stone being installed. This will greatly enhance the appearance of the finished installation. Regular mortars can be tinted to complement Classic Stone products using iron oxide pigments.

Apply Stone:

Press the stone firmly into place with a gentle wiggling motion, to promote bonding. Never tap the stone into place, as it could break the bond of previously laid stone. Adequate mortar should be applied to the stone & substrate to provide a complete coverage so as to ensure a strong adhesion and to prevent water intrusion and thus also help prevent freeze/thaw issues. Always install corner stones first. Apply remaining stones by working from the bottom up or top down. Mortar joints between stones should be as tight and uniform as possible. Be extra careful to keep your lines straight and level.

Dress Stone:

When mortar joints are firm use a wooden or metal striking tool and remove excess mortar. At the same time, firmly press mortar into the joints so edges are thoroughly sealed. Using a whisk broom, brush mortar joints until smooth and all loose mortar has been brushed away. Brush off any loose mortar on face of stones. **Never** let mortar set overnight before brushing joints.

Control Joints:

Where control joints are present, the joint itself **must be** waterproofed with a suitable waterproof membrane (in accordance with NZ Building Code) so as to adequately protect the substrate. The stone should be overlapped over the joints from either side, with not more than 20% of the stone crossing the control joint. An air cavity is thus left in behind to form the slip joint, to allow any moisture to drain and allow for any movement from substrates.

Weather Conditions:

If stone is being applied in hot or dry weather, the back of each piece should be moistened with a fine spray of water or a wet brush so as to adequately prevent excessive absorption of moisture from the mortar. If being installed over concrete, masonry or scratch coat substrate, the substrate surface area should also be dampened before applying mortar. Applications should be protected from freezing as mortar will not set up properly under

such conditions. Do not use antifreeze compounds to lower the freezing point of mortar. For further reference see BRANZ's Stucco Good Practice Guide 2004.

Completion:

Clean any remaining grout off stone with a dry brush. Use compressed air to blow away any dust left from cutting with a diamond blade. This dust can stain in some circumstances.

Sealing:

Classic Stone veneers must always be sealed with Equus WB2 water proofing sealant for all Cladding situations as per the BEAL Appraisal. Apply the Equus WB2 sealer to the entire stone and pointing. Follow the directions provided by Equus. (refer to the Classic Stone Technical Manual) Typically those areas of the building prone to greater weathering should be resealed more often (refer to manufacturers specifications).

To ensure complete coverage, two coats are required, applied wet on wet, approximately 10 minutes apart, depending upon prevailing conditions. With the exception of coastal properties and high rain fall areas, resealing should be done every ten years. Coastal properties and high rain fall areas should be done (in conjunction with annual inspections) every six to ten years.

For further information refer to the Equus Data Sheet - WB2.

Warranty:

Obtain 15 year Limited Warranty from the purchase date.

INTERIOR LININGS

Plaster Board:

10mm GIB board shall be used as lining material throughout the construction, taped and stopped and left ready for respective finishes.
 All GIB board shall be fixed in accordance with the Manufacturer's instructions and specification, to *no. 4 finish* for painting. All Gibraltor board shall be sealed before finishes are applied. All linings are to be screw fixed.
 10mm GIB Aqualine to Bathroom
 9mm Villaboard linings behind tiled showers
 GIB Square Stop external corners
 Other linings as required for bracing requirements
 Bathrooms and ensuites will be lined with GIB Aqualine
 Wet areas not specified as GIB Aqualine will be paint sealed with gloss or semi-gloss paint as per E3/AS1

Skirtings & Trim:

Provide and fix 60x12 bevelled MDF skirtings, all mitred and scribed to jambs.

Sealants:

All sealants used on this job shall be Expandite or equal approved, as recommended by the manufacturer.

- Silaflex MS - where a paintable sealant required
- Silaflex RTV - use for glass and cement
- Silaflex N - use for metal work
- Silaflex B - use for concrete, brick and timber

Air seals:

Install between reveal or frame and the wrapped opening of windows, doors and other penetrations.
 To be self-expanding polyurethane foam (or sealant) installed over PEF backing rod in accordance with manufacturer's technical literature to comply with E2/AS1 9.1.6 Air Seals.

Fascia:

As per plans – Generally Coloursteel fascia fixed on brackets at 900mm crs.

Hardware & Miscellaneous Hardware:

As selected and required as per drawings.

Access hatch:

Proprietary access hatch to ceiling as shown on plans, generally 600x600mm minimum size, to be installed in between 900mm truss centres.

Hardware & Miscellaneous Hardware:

As selected and required per drawings.

Workmanship:

Co-operate with all other trades in setting out their work. Cut for, attend on and make good all other trades. Provide all fastenings, fixings, blocks and backings, unless otherwise specified for securing the work of other trades.
 Work shall finish true to line and face and erected, plumb and level. Framing shall be accurately cut and fitted together, finely spiked, bolted, or connected as shown or specified. Punch all nails in exposed work. Where proprietary timber connectors are used, they shall be used strictly in accordance with the Manufacturer's instructions. All workmanship shall comply with N.Z.S.3604:2011 and The New Zealand Building Code Handbook and approved documents.

ROOFING

Preliminary:

Refer to the Preliminary Section of the Specification for clauses equally binding on all sections of this contract

Standards:

NZBC: E2/AS1, NZ Metal Roof and Wall Cladding Code of Practice.

Scope:

Roof cladding to dwelling as indicated on drawings.

Materials:

Selected Profile Metal Roofing
Trimline or equal long-run colorsteel roofing and accessories
BMT 0.4mm
Grade G300
Product Colorsteel G2z
Colour To be advised
Profile Trapezoidal profile
Flashings Coated to match Colorsteel roofing

Materials:

Selected Internal Gutters as per plans.
Ardex Butynol Membrane and accessories
Thickness 1mm for roofing and internal gutters, 1.5mm for decks
Product Ardex Butynol
Colour To be advised
Falls Internal Gutters min 1:100
Roofing Purlins To be H3.2 treated where Butynol laps onto purlins

Appraisal:

Branz Appraised 436

Plywood Substrate:

Plywood substrate to be minimum 17mm thick, CD Grade structural plywood and H3.2 CCA treated. NOTE: Do use LOSP Treated plywood.
Panels shall be laid with staggered Joints
Panels shall be laid with the face grain at rights angles to the main supports
Supports shall be at 400mm max centres
Edges of sheets shall be supported with dwangs or framing
External edges shall be chamfered with, min radius 5mm
Ensure 20mm H3.2 treated triangular fillet install at base of any 90deg up stand.
Plywood joints must be taped with 25mm wide PVC pressure sensitive tape

Fixings:

-3mm gaps between all sheets
-10gx50mm stainless steel countersunk head screws or as specified by manufacturer of plywood
-Fixings at 150mm centres on edge
-200mm centres in the body of sheets

Adhesives, Primers, Seam Tapes, Flashing Tapes, Sealants:

Install as per manufacturer's technical installation literature. Ensure specified products are used (no substitutions).
Seam tapes shall be Uncured Butyl cold gum tape.
Penetrations through membrane shall be flashed as per manufacturer's technical details.

Internal Gutters:

- No cross seams in the gutters

Underlay:

Thermakraft 215 Self-Supporting Roof Underlay to full roof area

Installation:

Underlay shall be:

Layed with minimum numbers of laps

Lapped at all side and end laps by minimum 150mm.

Self supporting underlays, laid to maximum 1.2m span between adjacent supports.

11 degree roof pitch or higher = Run underlay horizontally or vertically

10 degree roof pitch or lower = Run underlay horizontally only

If spread of fire is possible, roofing underlay is to be Thermkarft Covertex 405 - Fire Retardant Self Supporting Synthetic Roofing Underlay.

Fixing:

In strict accordance with manufacturer's installation instructions.

The roofer shall supply & fix all roofing, including purlins, hips, ridges, valleys etc. all in accordance with manufacturer's instructions.

Butynol membrane laying shall be in strict accordance with manufacturer's installation instructions, carried out by skilled Tradesmen from a firm specialising in butyl fixing.

Sheets shall be laid out on the roof for at least 20 minutes to "relax" before fixing. All sheeting to the roofs shall be laid out across the slope at an even patten and shall be "lap bonded" at all joints.

Obtain guarantee provide 10-year guarantee against water penetration due to faulty material or workmanship.

ALUMINIUM WINDOWS & DOORS

Preliminary:

Refer to the Preliminary Section of the Specification for clauses equally binding on all sections of this contract

Standards:

NZBC: B1, B2, E2, E3, F2, G4, G7, NZS 4211:2008 – Specification for performance of windows, AS/NZS 4403:1996, NZS 4223-Glazing Standards
Powder Coating shall be in accordance with BRANZ Building Information Bulletin 218, and British Standard 6496 of Powder Coating.

Scope:

Site measure openings to be fitted with joinery units
Doors
Windows
Flashings
Garage doors

Materials:

Aluminium:

All sections are to be extruded from 6063 alloy, T5 temper. Windows shall use 35mm sections with condensation channels and 3 ply bituminous fabric flashings. Manufacturer of windows and performance of windows shall comply with N.Z.S 4211.

Hardware:

Colour Matched Hardware, Double Tongue Latches.

Reveals:

To be 20mm solid timber, H3.1 treated, mitred and grooved to take linings

Glass:

As specified in glazing section. Double Glazed (excluding Garage), (obscure glass to wet areas).

Colour:

Powder coated selected colour with a consistent minimum thickness of 50 microns to all surfaces.

Garage doors:

As per F and F schedule.

Flashings:

Colorsteel, colour to match.

Fixing:

Co-operate with the contractor for supply of Colorsteel flashing to window head, where required.

The window sub-contractor shall provide a warranty covering all sections of the work in the supply, fixing and glazing of all windows and doors, for a period of Five (5) years.

EXTERIOR JOINERY

Preliminary:

Refer to the Preliminary Section of the Specification for clauses equally binding on all sections of this contract

Standards:

NZBC: E2, G4

Scope:

Site measure openings to be fitted with joinery units
Front Entry door & sidelights

Materials:

Standard profiles run from solid, complete with 2 weather grooves, in powder coated aluminium frame.

Fixing:

In accordance with best trade practice.
Mortice and tenon housing and dowelling shall be used wherever practical.
Screws shall be used in preference to nails or brads and glue blocks shall be fitted wherever required.
All joints shall be accurately cut and fitted and well glued.
Nails and brads shall be neatly punched and holes suitably stopped.

INTERIOR JOINERY

Preliminary:

Refer to the Preliminary Section of the Specification for clauses equally binding on all sections of this contract

Standards:

NZBC: B2, G1, G2, G3. NZS 3610:1979

Scope:

Allow to take delivery from the Joiner of all joinery specified in doors and fittings and build in to complete the installation as shown on the drawings.

- Doors
- Skirting /trims
- Kitchen Joinery
- Rails & Shelves to wardrobes & cupboards
- Laundry Bench

Materials:

Doors: hollow core, paint finish, Pressed Panel MDF, or Grooved MDF, or Flush Panel MDF doors with 30mm grooved jambs to take wall linings. Hung on 1 ½ pairs butt hinges.

Aluminium Sliders with Plasterboard Panels to Bedroom wardrobes

Any cavity sliders to be CA sliders complete with all hardware.

Stack sliders complete with all hardware

Single Door to have Glass Tops

Hardware as shown in schedule of Fixtures & Fittings

Kitchen Joinery:

Allow to fabricate and install kitchen units in Prefinished MDF with laminate finish such as Melamine or equal.

Formica top with (180 degree) rolled front (impervious and easily cleaned for hygiene as required by G3/AS1)

Impervious glass splash back to wall adjacent to cooktop for hygiene reasons as required by G13/AS1.

- 2mm PVC to all edges
- White laminated internal carcass and shelves.
- Drawers on metal drawer slides, with cutlery inserts.
- Overlay doors on spring load hinges.
- Overlay drawer fronts.
- Shelves on adjustable shelf studs.
- Pantry cupboards with 5 no adj. shaped shelves.
- Satin Chrome Handles
- SS sink and drainer.
- Selected sink mixer
- Make allowances for appliances. Ensure neat tight fit.

Shelves & Cupboards:

Cupboards and robes shall be to a trim height of 2m with sliding doors in a grooved frame. Provide 18mm prefinished MDF board shelves, all edges banded, to robes and 3 shelves to other cupboards.

Laundry Bench:

As per Kitchen.

Workmanship:

All joinery shall be constructed in accordance with the best trade practice.

Accurately set out, neatly executed and finish all joinery work, both in the shop and on the job. Exposed timber shall be brought to a first class finish, properly dressed and glass papered with arrises off.

Site Measure: Before manufacture of joinery, measure on the job and verify that

All dimensions shown are correct or are adjusted so that all joinery will correctly fit the space provided. No extra will be paid in respect of work arising through failure to measure and verify. The Joiner shall ensure that all exterior joinery is correctly made in respect of any dimensional variation occurring in the building.

Timber:

All timbers shall be of their respective kinds and grades, specified in accordance with NZS 3631 National Grading Rules. All timber must be dried to a moisture content from 10% - 14%, based on dry oven kiln weight. Timber showing signs of faulty or excessive kiln drying will be rejected.

Any preservative treated timber used for exterior joinery shall have been treated by the Tanalith C.A. non-leaching process. Dipped treatment is NOT acceptable for exterior use. Joinery and finishing timber must be stacked and protected under cover until required for use.

Timber Grades:

Interior Carcase Work & Frames 18mm MDF. Exterior doors Exterior approved only.

Hardware:

Supply and fix all hinges, cupboard catches, friction stays and any other hardware specified herein or on the drawings, for particular fittings.

All hardware forms part of this sub trade and shall be fixed in the shop before fabrication.

All exterior joinery for a paint finish shall be primed before leaving the joinery shop.

Finishing:

All exposed timber shall be brought to a first class finish, properly dressed and glass papered with arrises off for respective finishes.

Timber Joinery:

The assembly of all joinery shall be appropriate to the nature of the job and consistent with good trade practice. Mortising, tenoning, grooving, matching, tonguing, housing and rebating shall all be employed as necessary and where detailed, to provide a first class job. All joinery timbers shall be machine dressed on all four faces. All joints shall be accurately cut and fitted and well glued to develop the full strength of the joint. Screws shall be used in preference to nails or brads and glue blocks shall be fitted wherever required.

Nails and brads shall be neatly punched and holes suitably stopped.

Allowances shall be made during assembly for shrinkage and measures shall be taken to prevent undue warping or twisting. All exposed timber shall be brought to a first class finish by machine glass papering or hand finishing to a fine finish.

PLUMBING

Preliminary:

Refer to the Preliminary Section of the Specification for clauses equally binding on all sections of this contract

Standards:

NZBC: B2, C/VM1, E1, E3, G1, G2, G3, G4, G10, G12, G13, AS/NZS3500
AS/NZS 2918 log burners, NZS 7601:1988, 7602:1977, 7643:1979, NZS 4305, AS/NZS 4936:2002, AS/NZS 5065:2005.

Scope:

New water connection from boundary.
Plumbing to WC's, tub, shower, bath, vanities, sink, dishwasher, waste disposal unit
Waste pipes to GT's, and vent pipes.
WC installations & connections
Instant gas
Water supply as required to fridge
Flashings to vents, flue etc.
Fascia/Spouting & downpipes,
Log Burner installation. AS/NZS 2918:2001
External hose taps x 3
Heat pump condensate drain to discharge to foul water drainage system

Materials:

Piping:

All hot and cold water polybutylene pipes with copper fittings installed in accordance with G12/AS1 Table 1 and AS/NZS 4020.
All piping shall be run in the ceiling cavity or wall framing and shall be lagged in all positions, both hot and cold. All pipework shall be adequately supported and the full installation shall comply with the N.Z.B.C. water supply conditions.

Cold Water Supply:

Allow to supply and install new 20mm diameter P.V.C. metered street supply to dwelling.
All supplies to wet areas shall be in 20mm dia. with 15mm dia. branches as required.

Plumbing fittings:

As shown in schedule of Fixtures & Fittings

Laundry Tub:

Allow to supply and install Laundry Tub, complete with taps and valves.

Wastes:

Supply and install UPVC, diameters as shown on drawings laid down to the sizes supplied by the N.Z.B.C. and approved documents. Wastes shall run in the wall framing and not be exposed on exterior. All wastes to be laid so as to enter gully traps below grating.

Flashings:

Provide and fix proprietary EPDM flexible boot flashing to all roof penetrations.
Dektite type – as per manufacturer's technical literature suitable for roof penetrations 0 - 510mm.
Provide 0.45mm Endura Colorsteel flashings to window heads to Builder for building in.
Sealant used in conjunction with metal shall be Selleys Dow Corning 780 Silicone Sealant.
Under no circumstances shall lead flashings be used.

Gas Hot Water:

Install Rinnai AT26 instant gas hot water system as per manufacturer's technical literature in supporting documents with hot water pipes to be fitted to each fixture.

Energy cut-off devices shall be designed to:

- a) Be reset manually, and
- b) Disconnect the energy supply before the water temperature exceeds 95°C.

Relief valve drains shall:

- a) Be of copper pipe,
- b) Have no restrictions or valves,
- c) Have a continuous fall from the relief valve to the outlet,
- d) Discharge in a visible position which does not present a hazard or damage to other building elements (except when used in association with free outlet storage water heaters),
- e) Have a minimum diameter of the same size as the valve outlet,
- f) Have the number of changes in direction plus the length of the relief drain (in metres) not exceeding 12
For example: 7 metres of pipe allows the total number of bends to be 5.
- g) Be connected to a relief valve in accordance with the valve manufacturer's specification,
- h) Comply with NZBC G12 Paragraph 6.7.3 when relief valve drains are combined, and
- i) Comply with Paragraphs 6.7.4 and 6.7.5 when freezing is likely.

Safe Water temperatures:

Hot water delivery to any sanitary fixture used for personal hygiene shall not exceed 55 degrees.

This shall be achieved by installing a tempering valve between the outlet of the water heater and the sanitary fixture. Tempering values shall comply with NZS4617 or AS1357.2. Storage water heater control thermostat shall be set at a temperature of not less than 60 degrees to prevent growth of legionella bacteria.

Fascia/Spouting:

Colorsteel, selected colour, complete with downpipe droppers for rectangular downpipes

Downpipes:

Shall be Colorsteel or similar rectangular 75mm x 50mm (55msq per DP) fixed to buildings with 2x brackets, all straight and plumb, and finishing 75mm above grating.

Heat pump condensate drain:

To discharge over nearest planting area.

Log Burner:

Selected by Owners as per F and F schedule and as noted on plans – Clean Air Approved.

Fixing:

Workmanship: All workmanship shall be of the best trade practice and executed by a Licensed Plumber and Drainlayer in accordance with the Building Act 1991 and The New Zealand Building Code Handbook and approved documents and to the Local Authority's satisfaction. Obtain all permits and pay all Fees.

Materials:

All materials shall be of their best respective kinds and shall conform to the N.Z.S. applicable. All materials, pipes and fittings shall be copper and/or U.P.V.C. complying with the relevant NZS for sewer and storm water drainage, as required by the N.Z.B.C. Cement, sand, etc, used shall be as specified under 'Concrete'. Supply and install all fittings and materials required to complete the job.

All waste or water pipes in or under concrete floors and all other hot water piping shall be fully lagged. All pipework shall be concealed. Subject all water installations to a full water test. Take separate supplies to serve showers. Ensure shower supplies are not affected by the draw off from any other fixture.

DRAINAGE

Preliminary:

Refer to the Preliminary Section of the Specification for clauses equally binding on all sections of this contract

Standards:

NZBC: B1, E1, G10, G13, NZS3500, AS/NZS 5065:2005, AS/NZS1260, AS/NZS1547

Scope:

Pipe to existing foul water lateral on site
Pipe to existing stormwater lateral on site
Installation of Gully Traps
Backfill

Materials:

100mm diameter UPVC pipes. All pipework shall be concealed.
Backfill with excavated material.

Workmanship:

Excavate for storm water and foul water drains, to the required depths and gradients to provide a disposal system in compliance with the N.Z.B.C. and to the satisfaction of the Local Drainage Inspector. After drains have been inspected, tested and approved, the trenches and other excavations shall be backfilled in accordance with The New Zealand Building Code Handbook and approved documents. If drains are installed in different positions to those indicated on the drawings, the Drainlayer shall supply an as-built drawing with accurate dimensions.

Completion:

At completion, leave the whole of the plumbing and fitting system, water supply and flashing in good working order, free from leaks, defects and with all waste materials removed.

GASFITTING

Preliminary:

Refer to the Preliminary Section of the Specification for clauses equally binding on all sections of this contract

Standards:

NZBC: G2, G3, G4, G5, G10, G11, AS/NZS 5601:2013, NZS 7646:1978

Scope:

Installation of Gas cylinders and piped connections to fittings.
Installation of Gas cooking appliances.
Instant gas hot water

Materials:

To nominated approved appliances.

Installation:

To be by craftsman Gasfitter, who shall supply Owner with a Certificate of Compliance, to be carried out in strict accordance with manufacturer's installation instructions.

Gas bottles over 25L capacity should be securely held in place by brackets fastened to wall.
Cylinders should not be supported by other cylinders.
Cylinders should be installed on supporting firm bases such as concrete, 50mm above surrounding surface which falls away from building envelope.

Gas bottles over 25L (9KG) are NOT to be located inside.

Completion:

Provide Gasfitting Certificate of Compliance – Gas Safety Certificate on completion of works as part of Code Compliance requirements for council.

ELECTRICAL

Preliminary:

Refer to the Preliminary Section of the Specification for clauses equally binding on all sections of this contract

Standards:

NZBC: B2, F7, G4, G8, G9, NZ Electrical Codes of Practice ECP50 & ECP051, NZS 6703: 1984

Scope:

The work comprises the provision of -
Underground mains supply from junction box at boundary and supply to meter box.
Installation of flush type switchboard with M.C.B.'s where shown on the plan.
Wiring of circuits to serve all lights, power points and fittings.
Electrical Fixtures and fittings: All electrical installations to be in accordance with NZECP 51:2001 & NZBC G9.
Temporary power as required
Earthing system
Power outlets.
Lights: Interior & exterior. All lighting to be in accordance with NZBC D1 & G8
Cooktop & wall oven installations.
Rangehood installation.
Waste Disposal
Heater installations
Extract Fans: Ventilation of Sanitary & Laundry rooms: Refer to floor plan
Heated towel rail installations
Telephone Jacks
TV Jacks
TV Aerial (digital)
Door Bell
Gas Hob ignition
Gas hot water
Heat pump
Smoke Alarms: F7/AS1 3.2.2 and 3.2.3: for positions refer to floor plan. Installation is to be carried out in conjunction with manufacturers' instructions, AS/NZS4514 and the Building Code requirements.
Coiled cable for landscaping by others
Security system wiring

Fittings:

Co-ordinate with the Local Authority in the establishment of loadings and requirements for the site.
The supply to the house shall be single phase and neutral. Meter board box shall be fabricated from galvanised sheet metal and installed within selected exterior wall cladding as per plans and elevations. Box shall have sufficient space for supply metering night rate metering and any other controls required by the Power Authority.
All wiring shall be heavy T.P.S. of required size. All plug and switch plates shall be P.D.L. flush type. Each power outlet to be switched. Arrange with the General Contractor for layout of work and for provision of nogging, blocking or cutting, etc. All wiring to be concealed.
Light switches and power outlets shall be P.D.L. 600 Series, white finish.
Switchboard shall be P.D.L. Distribution Board flush fittings or equal approved with circuit breakers.
Exterior lighting if it is noted on the plans or in F & F Schedule.
Fittings as per fittings and fixtures schedule. Lighting and electrical by others, all positions and types to be selected and confirmed by client with contractor.

All recessed downlights shall be white; CA rated meeting the requirements of NZE.
Downlights are to be positioned 50mm from combustible timber; however insulation can be abutted as the downlights are CA rated.
RCD fittings to Bathroom & Ensuite.
Exterior Grade fittings for external use
Smoke Detectors (Battery): Ionisation type, 10 year lithium powered, hush and test facility, inbuilt sounder (mini. 85dBA), surface mounted, tamper proof, guaranteed for life of battery, and minimum UL listed.
- Make: First Alert

Installation:

All installation to be in accordance with NZECP 51:2001, NZBC G8 & NZBC G9, NZBC D1 (minimum illuminance of 20lux to access route).
Total of 20lux of luminance for the total wattage required per m2 of floor area as shown in NZBC G8/AS1 table.

Workmanship:

All workmanship shall be of the best trade practice and executed by a Registered Electrician and to the satisfaction of the Local Authority's Inspector.
Obtain and pay all necessary permits and charges incidental to this contract. In all cases, work shall comply with the N.Z.B.C. Electrical Wiring Regulations, 1976 and amendments and any New Zealand Electrical Codes of Practice applicable to this work.
On completion, leave the entire electrical installation in perfect working order, passed and approved by the Local Electrical Power Authority.
Clear away all debris.

GLAZING

Preliminary: Refer to the Preliminary Section of the Specification for clauses equally binding on all sections of this contract

Standards: NZBC: F2, NZS 4223 parts 1, 2 & 3:2016, NZS 4211:2008

Scope: Aluminium Joinery glazed off site.
Double Glazing
Glazing to Front door & Sidelight
Skylight glazing
Mirrors
Hob Splashback
Shower screen/door to proprietary showers

Materials:

Glass: All glass shall be free from waves, bubbles, leaching and other imperfections.
Standard Unit: 4mm glass / 12mm air gap / 4mm glass
Slider Unit: 5mm glass / 8mm air gap / 5mm glass
Safety Panel: 4mm toughened glass / 8mm air gap / 6,38mm laminate
Mirrors: width to suit vanities, polished edge
Hob Splashback to be Satinlite glass with holes and domes
Obscure glass to all wet areas

Grade A safety glass:

As per plans – to comply with NZS:4223:2016

Bathrooms:

Grade A safety glass: Glazing within 2000mm of floor level
Framed shower screen and bath enclosures

Restrictor stays to meet F4:

(Are required when possible height of fall from an open window is more than 1m)
Ensure Restrictor stays are provided to opening windows when the lower edge of the opening is less than 760mm above finished floor level.
Ensure restrictors are fitted to limit the maximum opening so that a 100mm diameter sphere cannot pass through it.
Or a 760mm high barrier protecting the opening of solid construction or with vertical members its full height.

PAINTING

Preliminary:

Refer to the Preliminary Section of the Specification for clauses equally binding on all sections of this contract

Standards:

NZBC: B2, E2, G7

Scope:

Soffits
Exterior wall cladding
Front door
Interior walls & ceilings
Interior doors & window reveals
Skirting's & trims
Timber post

Materials:

Dulux Tradeline in unopened containers.

<i>Ceilings:</i>	Flat Finish
<i>Walls:</i>	Low Sheen Finish Doors
<i>Wet Areas & Reveals:</i>	Satin Enamel Finish as per E3/AS1
<i>External Claddings:</i>	Acrylic self-priming paint (2x coats)
<i>Internal:</i>	All GIB board shall have sealer applied over No. 4 stopping finish, all in accordance with the GIB Board Manufacturer's specification. 1 coat GIB sealer or 1 undercoat, 2 top coats acrylic 3 coats polyurethane for clear finish
<i>Wallpaper:</i>	Size walls, hang plumb

Colours:

All colours to be as selected and approved by Owner
(Maximum of 4 colours from white base)

Application:

Thoroughly prepare all surfaces, rub down between coats and leave a first class finish. Stop all cracks and nail holes, etc. No painting shall be done under adverse weather conditions. All paintwork shall be 3 coats in 1 undercoat and 2 top coats. All work shall be of the highest standard, performed by skilled tradesmen in accordance with best trade practice, using tools and equipment suitable for ensuring a first class job. No external work shall be done during frosty or inclement weather. Any work damaged by dust, rain or any other cause shall be rubbed down and recoated. The top and bottom edges of all doors etc. shall be painted to the same number of coats as the exposed faces. No coat of paint, varnish or polish shall be applied until the undercoat is perfectly dry and hard. All finished surfaces shall be left smooth, even and free from brush marks, lap marks, corner dribbles or other trades. All fittings, fixings and hardware shall be removed before preparatory processes are commenced and shall be refixed on completion of the painting. Adequately protect all finished work, including glass from paint splashes.

On completion, clean down all surfaces involved, including glass, rubbish, splashes and blemishes, etc. Remove all rubbish and leave ready for occupation.

TILING

Preliminary:

Refer to the Preliminary Section of the Specification for clauses equally binding on all sections of this contract

Standards:

NZBC: B1, B2, D1, E2, E3, G3, NZS/AS 1884:2013

Scope:

This section of work includes the waterproof membrane, supplying, laying, grouting and sealing of tiles as shown in schedule of Fixtures & Fittings

Laying:

1 row of tiles above vanities, basins & benches.

Tiling shall be carried out following the guidelines and practices described in the BRANZ publication: "Good Tiling Practice", October 1996.

Set out is to be confirmed at the time of selecting tiles and before work is commenced.

Tiles shall be fixed straight and even with no ridges. Cracked or chipped tiles shall NOT be used.

Where required tiles shall be cut using a saw to produce straight edges with no chips or cracks. Cut tiles shall be laid with cut edges concealed from view.

Joints to tiles shall be finished smooth and be sealed against moisture.

Seal bottom edge of tiles at benches with selected colour-matched silicone type sealant. Sealant to be fungus resistant.

Grouting of tiles to be sealed once dry to stop moisture penetration inwards.

Interior tiles shall be laid over GIB Aqualine as shown on drawings.

GIB Aqualine is suitable as a substrate for tiling up to the following weights: 10mm GIB Aqualine up to 20kg/m², 13mm GIB Aqualine up to 32kg/m².

Waterproofing Membranes:

Waterproofing to extend to 1.5m radius from rose on floor, 1.5m along walls and 1.8m above finished floor level.

A waterproof membrane must be applied to all lining materials used as a substrate for ceramic tiles in a shower or shower over bath situation.

The wall surface in a shower or shower over bath situation is not complete and ready for tiling until coated with a waterproofing membrane over the lining and the jointed areas.

Waterproof membranes must be fully cured and dry prior to application of tiling adhesive.

Embed reinforcing mats in the membrane at all internal corners of the shower (including floor/wall junctions)

Guarantees:

The tiles shall provide a Guarantee to cover against defective workmanship and materials supplied by him for a period of not less than 2 years after Certified Practical Completion.

FLOOR COVERINGS

Preliminary:

Refer to the Preliminary Section of the Specification for clauses equally binding on all sections of this contract

Standards:

NZBC: B1, B2, D1, E2, E3, G3, NZS/AS 1884:2013

Scope:

Interior rooms as required as shown in schedule of Fixtures & Fittings

Materials:

Carpet: On underlay with Smoothedge & Naplock bars.

Vinyl: 2m wide, approved adhesive. Ensure moisture content of concrete is below maximum level

LANDSCAPING

Preliminary:

Refer to the Preliminary Section of the Specification for clauses equally binding on all sections of this contract

Scope:

As shown in schedule of Fixtures & Fittings