

**COUNCIL
COPY**

SPECIFICATION

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



PROPOSED ROOF OVER EXISTING DECK

to

DWELLING FOR TUAKIRI CHARITABLE TRUST

at

618 TE WETA ROAD, WAIKITE VALLEY



MURRAY L DESIGN

RESIDENTIAL & COMMERCIAL ARCHITECTURE

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1012	TABLE OF CONTENTS	3
1210	PROJECT	4
1211	DOCUMENTATION	5
1212	COMPLIANCE	6
1213	SELECTIONS	7
1220	GENERAL REQUIREMENTS	8
2310	PILE FOUNDATIONS	12
3110	CONCRETE WORK	13
3800	TIMBER FRAMING	14
4310	ROOFING	15
6700	PAINTING	16
7410	RAINWATER SPOUTING SYSTEM	18
7700	ELECTRICAL	19

1210 PROJECT.

1. GENERAL

1.1 PROJECT

Street address:	618 Te Weta Road, Waikite Valley
Legal description:	Lot 5 DPS 84898
Site area:	25180 m2
Project type:	Roof structure over existing deck
Intended use:	Single residential building
Intended life:	Indefinite but not less than 50 years

1.2 PROJECT DESCRIPTION

Proposed translucent roofinfining and framing over existing deck.

1.3 OWNER

Name:	Tuakiri Charitable Trust
Mailing address:	15 Tamaki Street, ROTORUA
Telephone:	021 0264408
Email:	Chantelle.walker@tetoamatataki.com

1.4 DESIGNER

Name:	Murray Stephens
Mailing address:	13 Pegasus Drive, Rotorua
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1.5 CONTRACTOR

Name:	Mike Harnett Builders
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Telephone:	021 08209336
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1211 DOCUMENTATION

1. GENERAL

1.1 DRAWINGS

Number	Title
01	SITE PLAN
02	ENLARGED SITE & DRAINAGE PLAN
03	FLOOR PLAN
04	CROSS SECTION & DETAILS

1212 COMPLIANCE

1. GENERAL

1.1 SITE DATA

Soil type:	Type D/E
Exposure zone:	Zone B
Wind zone:	High
Earthquake zone:	Zone2

1.2 BUILDING DATA

Building classification:	Cat 2
Floor live load:	2 KPa
Overall height:	4.5 metres
Risk assessment:	N/A

1213 SELECTIONS

1. GENERAL

The following selections are to be read in conjunction with the related work sections, where they are available, and the general sections.

2. SITE

<< 2310 PILE FOUNDATIONS >>

2.1 POST FOUNDATIONS

Type/treatment: Radiata pine, SG6, H5 CCA (preservative code 01 or 02)
Size: 90x90 laminated

3. STRUCTURE

<< 3110 CONCRETE WORK >>

3.3 CONCRETE REINFORCEMENT

3.4 CONCRETE

Location: Post foundations
Strength: 17.5 MPa

<< 3800 TIMBER FRAMING >>

3.5 ROOF TIMBER FRAMING

Type/treatment: Radiata pine, Grade SG8, Treated H3.2

3.7 EXTERIOR EXPOSED TIMBER

Cladding & trim: Radiata pine, Dressing, Treated H3.1
Structure: Radiata pine, Grade SG8, Treated H3.2 CCA (preservative code 01 or 02)

6. FINISH

<< 6700 PAINTING >>

6.1 EXTERIOR PAINTING

Pergola: Selected by owner

7. SERVICES

<< 7410 RAINWATER SPOUTING SYSTEM >>

7.1 SPOUTING

Brand/type/size: PVC

7.2 DOWNPIPES

Brand/type/size: 80mm Ø PVC

<< 7700 ELECTRICAL >>

7.3 LIGHT FITTINGS

Brand/type/reference: Selected by owner

1220 GENERAL REQUIREMENTS

1. GENERAL

1.1 THE WORKS

The works are as described in this specification and shown on the drawings.

1.2 PERSONNEL

Owner: The person defined as "owner" in the New Zealand Building Code.

Contractor: The person contracted by the owner to carry out the contract.

1.3 THE SITE

The site of the works, the site address and the legal description are listed under the sections 1210 PROJECT. Confine access and work to the area of site indicated on the drawings.

1.4 SPECIFICATION SECTIONS

Sections are for reference and convenience only and do not constitute individual trade sections or work elements. Read all sections together and read this section with all other sections.

1.5 INTERPRETATIONS

Required: Required by the documents, or by a statutory authority.

Proprietary: Identifiable by naming the manufacturer, supplier, installer, trade name, brand name, catalogue or reference number.

Approval: Approval in writing.

Direction: Direction in writing.

Notified: Notified in writing.

1.6 ABBREVIATIONS

The following abbreviations are commonly used throughout the specification:

AS	Australian Standard
AS/NZS	Joint Australian/New Zealand Standard
BCA	Building Consent Authority
BRANZ	Building Research Association of New Zealand
LBP	Licensed Building Practitioner
NZBC	New Zealand Building Code
NZS	New Zealand Standard
NZS/AS	Joint New Zealand/Australian Standard
NUO	Network Utility Operator
OSH	Occupational Safety and Health
RBW	Restricted Building Work
TA	Territorial Authority

1.7 INCONSISTENCIES

If there are any inconsistencies, errors or omissions in or between documents, the contractor must seek direction in resolving it. Figured dimensions take precedence over scaled dimensions; drawings to a larger scale take precedence over drawings to a smaller scale and drawings take precedence over specification.

1.8 SUBSTITUTIONS

A substitution may be proposed where specified products are not available, or if substitute products are brought to the attention of and are considered by the owner as equivalent or superior to those specified. Except where a specified product is not available, the owner is not bound to accept any substitutions.

Notify proposed substitution of specified products. Include sufficient information to allow the owner to confirm that the substitution is equivalent or superior to that specified.

Advise the owner whether an amendment will or may be required to the Building Consent and the expected costs of such amendment.

- 1.9 THE WORDS "PROVIDE" OR "FIX"
The words "provide" (or "supply") or "fix" if used separately mean "provide and fix" unless explicitly stated otherwise.
- 1.10 MANUFACTURERS AND SUPPLIERS
Manufacturers and suppliers requirements, instructions, specifications or details are those issued by them for their particular material, product or component and are the latest edition.
- 1.11 REFERENCED DOCUMENTS
Reference is made to various New Zealand Building Code (NZBC) acceptable solutions (AS) and verification methods (VM) for criteria and/or methods used to establish compliance with the Building Act 2004. Reference is also made to various Standards produced by Standards New Zealand (NZS, AS/NZS) and to listed Acts, Regulations and various industry codes of practice and practice guides. The latest edition (including amendments and provisional editions) at the date of this specification applies unless stated otherwise. Documents cited both directly and within other cited publications are part of this specification.
- 1.12 PRECEDENCE OF REFERENCED DOCUMENTS
This specification takes precedence in the event of it being at variance with and requiring a higher standard than, the cited documents. Resolution of any variance must be confirmed in writing and where Building Consent is affected, the change notified to the BCA for advice as to whether an amendment is required to the Building Consent Authority.
- 1.13 BUILDING CONSENT COMPLIANCE
It is an offence under the Building Act 2004 to carry out any work not in accordance with the Building Consent. Refer the resolution of matters concerning compliance to the owner for a direction. Where Building Consent is affected refer any change to the BCA for advice as to whether an amendment is required to the Building Consent.
- 1.14 STATUTORY OBLIGATIONS
Comply with all statutory obligations and regulations of regulatory bodies controlling execution of the works.
- 1.15 BUILDING CONSENT
Obtain the original or copies of the Building Consent form and documents from the owner and keep on site. Liaise with the BCA and/or the building certifier for all required notices and all inspections required during construction to ensure compliance. Return the consent form and documents to the owner on completion.
- 1.16 INSPECTIONS
Do not proceed with work noted on the Building Consent for inspection until it has been inspected and passed by the BCA inspector.
- 1.17 KEY PERSONNEL
Provide names and contact detail of LBP's/ key personnel. Prior to Restricted Building Work being carried out, provide names, registrations numbers (where appropriate) and contact detail of LBP's that are required for RBW by the Building Consent Authority as part of the Building Consent.
- Include the following as applicable:
- Person with the appropriate site license
 - Carpenter
 - Registered electrician
- 1.18 PRODUCER STATEMENTS AND LBP DOCUMENTATION
When Records of Work or producer statements verifying construction are required, for the application for the Code Compliance Certificate, provide copies to both the BCA and the owner. Provide LBP documents and producer statements in the form required by the BCA.

- 1.19 **CODE COMPLIANCE CERTIFICATE**
Provide documentation that the Owner requires in order to obtain a Code Compliance Certificate for the consented work.
- 1.20 **TRADE GUARANTEES AND WARRANTIES**
Where specific trade guarantees/warranties are offered covering materials and/or execution of proprietary products or complete installations, or are required as a condition of Building Consent, provide guarantees/warranties to the owner.
- 1.21 **SITE ACCOMMODATION**
Provide, erect and maintain scaffolding, sheds, toilets, water, power and hoardings. Allow for cartage, craneage, plant hire and storage. Arrange for temporary works and services necessary for the completion of the works.
- 1.22 **HEALTH AND SAFETY**
Make the works safe and provide and maintain a safe working environment, to the requirements of the Health and Safety at Work Act 2015. Ensure that all those working on or visiting the site are aware of the rules governing site safety, are properly supervised and are not unnecessarily exposed to hazards and risks.
- 1.23 **PROTECT THE WORKS**
Protect parts of the work liable to damage until completion of the works. Take all precautions necessary to protect the works from damage by unauthorised entry or inclement weather. Brace and support all parts of the works against damage during construction.
- 1.24 **STORAGE AND PROTECTION**
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.
- 1.25 **ANTIQUITIES AND ITEMS OF VALUE AND INTEREST**
Report immediately the finding of any fossils, antiquities, pre-1900 items, or objects of value. Ensure they remain undisturbed until approval is given for their removal.
- 1.26 **MEANS OF COMMUNICATION**
All directions and approvals in writing.
- 1.27 **WORKING HOURS**
Work on site is restricted to between 0800 to 1800, Monday to Friday, excluding statutory holidays. Work outside these hours may be permitted, with prior approval in writing by the owner.
- 1.28 **RESTRICTIONS**
Do not:
- smoke on site
- light rubbish fires on the site
- bring dogs on to or near the site
- bring radios/audio players on to the site.
- 1.29 **QUALITY ASSURANCE**
Carry out and record regular checks of material quality and accuracy. Provide all necessary materials, equipment, plant, attendances, supervision, inspections and programming to ensure required standards are met.
- 1.30 **DAMAGE AND NUISANCE**
Prevent damage and nuisance from water, fire, smoke, vehicles, dust, rubbish, noise and other causes resulting from the contract works. Comply with the requirements of the TA and relevant Acts and Standards.

- 1.31 SET-OUT AND DATUM
Set out the works to conform with the drawings. Establish a permanent site datum to confirm the existing ground floor level and its relationship to other existing and new building levels.
- 1.32 EXECUTION OF THE WORK
Conform to the requirements of this specification. Ensure work is level, plumb, and true to line and face. Employ only experienced workers familiar with the materials and techniques specified.
- 1.33 MATERIALS AND PRODUCTS
Use only new materials and products, unless stated otherwise, of the specified quality and complying with cited documents.
- 1.34 COMPATIBILITY
Ensure all parts of a construction or finish are compatible and their individual use approved by the manufacturers and suppliers of other parts of the system. Source all parts of a system from a single manufacturer or supplier.
- 1.35 CLEAR AWAY
Regularly clear away trade debris, unused materials and elements from the site. On completion of the work leave the building clean and ready for occupancy, with all services operating and mechanical parts in good working order. Remove temporary markings, coverings and protective wrappings.
- 1.36 CLEAN
Clean and wash down external surfaces to remove dirt, debris and marking. Clean interior surfaces including floors, glass, cabinetwork, joinery, sanitary and hardware items.

2310 POST FOUNDATIONS

1. GENERAL

Refer to 1213 SELECTIONS/drawings for specific product, material, accessories and finish selections.

1.1 QUALIFICATIONS

Carry out work using persons competent and experienced in the trade. Work to be carried out by or supervised by the appropriate LBP.

2. PRODUCTS

2.1 TIMBER PILES

Radiata pine H5 CCA (preservative code 01 or 02) treated , to NZS 3602, table 1
Requirements for wood-based building components.

2.2 ACCESSORIES

Nails:	Steel, stainless steel and galvanized steel of pattern to NZS 3604, table 6.6 Nailing schedule for hand-driven and power driven-nails , and NZS 3604, 4, Durability .
Bolts and screws:	Steel, stainless steel and galvanized steel to NZS 3604, 6 Foundation and subfloor framing , and NZS 3604, 4 Durability .
Nail plates:	Stainless steel and galvanized steel toothed or nailed steel plates to the plate manufacturer's design for the particular locations shown on the drawings and to NZS 3604, 4 Durability .
Concrete:	For piles, prescribed grade 17.5 MPa to NZS 3104, table 3.1 Prescribed mixes (P) .

3. EXECUTION

3.1 EXECUTION GENERALLY

Comply with NZS 3602, NZBC B2/AS1 and NZS 3604 except as varied by this specification. Execution to include those methods, practices and processes contained in the unit standards for the National Certificate in Carpentry and the National Certificate in Joinery (cabinetry, exterior joinery, stairs).

3.2 INSTALL SQUARE LAMINATED TIMBER POSTS

Prepare for, place and secure as detailed on the drawings.

3110 CONCRETE WORK

1. GENERAL

Refer to 1213 SELECTIONS/drawings for specific product, material, accessories and finish selections.

1.1 QUALIFICATIONS

Carry out work using persons competent and experienced in the trade. Structural and foundation work to be carried out by or supervised by the appropriate LBP.

2. PRODUCTS

2.3 CONCRETE

Strength as selected. Ready-mix normal grade, maximum aggregate size 19mm to NZS 3104. Site mixed prescribed grade, using either separate batching of sand and coarse aggregate, or builder's mix, to NZS 3104.

3. EXECUTION

3.6 CONCRETE PLACEMENT

To comply with NZS 3109.

3.10 CURING OF CONCRETE

Keep damp for not less than seven days. Ensure curing of slabs commences as soon as possible after final finishing, by the use of continuous water sprays, or ponding. Alternately, apply a curing membrane. Ensure any membrane used will not affect subsequent applied finishes.

3800 TIMBER FRAMING

1. GENERAL

Refer to 1213 SELECTIONS/drawings for specific product, material, accessories and finish selections.

Use experienced competent carpenter familiar with the materials and techniques specified. Work to be carried out by or supervised by the appropriate LBP.

2. PRODUCTS

2.1 TIMBER FRAMING GENERALLY

Species, grade and level of treatment to NZBC B2/AS1, NZS 3602, tables 1 to 3

Requirements for wood-based building components..., and moisture content to NZS 3602, table 4 **Allowable moisture content**..... Structural Grade (SG) to NZS 3604, NZS 3622 with properties to NZS 3603.

2.2 ACCESSORIES

Damp-proof course:	High impact embossed polyethylene
Nails, bolts and screws:	Steel, stainless steel, galvanized steel of pattern to suit the location and to BRANZ BU 519: Fasteners selection. To NZS 3604, 4 Durability and NZBC E2/AS1.
Nail plates connectors:	Stainless steel and/or galvanized steel toothed or nailed plates to the plate manufacturer's design for the particular locations as shown on the drawings and to NZS 3604, 4 Durability . Galvanized steel and stainless steel connectors and brackets to the connector manufacturer's design for locations shown on drawings and to NZS 3604, 4 Durability and NZBC E2/AS1
Corrosion risk	For exterior timber, timber in damp areas and timber subject to occasional wetting, use only stainless steel (or equivalent) fixings and connectors, when the timber is treated with; Copper Azole (CuAz, Preservative code 58), Alkaline Copper Quaternary (ACQ, Preservative code 90), Micronise Copper Azole (code 88) or Micronised Copper Quaternary (code 89). For interior timber, treated with copper-based timber preservatives (H3.2 or higher), use a minimum of hot-dipped galvanized steel fixings and fasteners.

3. EXECUTION

3.1 ATTENDANCE

Provide and fix blocks, nogs, openings and other items as required by others.

3.2 MOISTURE CONTENT

Maximum allowable moisture content to NZS 3602, table 4 **Allowable moisture content**..., for framing supporting interior linings:

Framing at erection	24%
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3.3 EXECUTION GENERALLY

To NZS 3604 except as varied in this specification. To include those methods, practices and processes contained in the unit standards for the National Certificate in Carpentry and the National Certificate in Joinery (cabinetry, exterior joinery, stairs). Set out framing in accordance with the requirements of NZS 3604 and as required to support sheet linings and claddings.

3.4 INSTALL FLOOR, WALL AND ROOF FRAMING

Frame roof to required loading and bracing complete with valley boards, ridge boards and purlins to NZS 3604, 10 **Roof framing**. Design and fit roof trusses complete with anchorage. All fabricated and fastened to NZS 3604, 9 **Posts**, and NZS 3604, 10 **Roof framing**.

4310 ROOFING

1. GENERAL

Refer to 1213 SELECTIONS/drawings for specific product, material, accessories and finish selections.

1.1 QUALIFICATIONS

Use experienced competent roofers familiar with the materials and techniques specified. Work to be carried out by or supervised by the appropriate LBP.

1.2 WIND AND EARTHQUAKE LOADINGS

Use fixings and methods capable of sustaining the loads appropriate to the area as set out in NZS 3604, section 5 **Bracing design**, and confirmed under 1212 COMPLIANCE.

2. PRODUCTS

2.1 PROFILED TRANSLUSCENT

Profile, material and finish as selected. Accessories, cappings, flashings and fixings to match and to the roofing manufacturer's requirements.

2.2 ACCESSORIES

Nails, screws, fastenings:	Metal, size and pattern, to roofing manufacturer's requirements and complying with the relevant aspects of NZS 3604, section 4 Durability and NZBC E2/AS1.
Flashings:	As required.

3. EXECUTION

3.1 STORAGE

Stack roofing and accessories on clean, level areas of the site. Cover and protect from damage and from weather until ready to fix in place.

3.2 SET-OUT

Set out the planned layout before fixing commences, to ensure true lines and the correct relationship to module, grid and roof features. Overlaps to face away from prevailing wind direction.

3.4 TAKE CARE

Take care to avoid damaging roofing both during and after fixing. Mark only with chalk or spirit-based pen. Wear only soft-soled shoes on the finished surface.

3.5 INSTALL PROFILED ROOFING

Use cutting tools recommended by the roofing manufacturer. Fix complete with matching accessories, flashed to roof features and penetrations.

3.6 FIXINGS AND SEALANTS

Refer to the roofing manufacturer's literature for fixing details and to NZS 3604 for fixings durability requirements. Select and use sealants only as recommended by the roofing manufacturer.

3.7 INSTALL COVERS AND FLASHINGS

Provide flashings. Install and fix as detailed and to the roofing manufacturer's details and to comply with NZBC E2/AS1, 4.0 **Flashings**.

3.9 COMPLETE

Ensure the work is complete with flashings, undercloaks, valleys, ridges and hips properly installed so the finished roof is completely weathertight.

3.10 CLEAR

Clear trade debris and unused materials from the roof and surrounds regularly during the work and at completion. Sweep down the completed roof and flush out spoutings, gutters and rainwater pipes.

6700 PAINTING

1. GENERAL

Refer to 1213 SELECTIONS/drawings for specific product, material, accessories and finish selections.

1.1 QUALIFICATIONS

Carry out work using competent and experienced painters.

1.2 HEALTH AND SAFETY

Refer to the requirements of the Health and Safety at Work Act 2015 and if elimination or isolation is not possible, then minimise the hazards in this work. Refer to WorkSafe NZ publication, Repainting lead based paints, for the required procedures and precautions when treating or removing lead based paint, burning or sanding off paint, or using solvent based paint removers.

1.3 SELECTIONS

Confirm all selections, colours and finishes with the owner.

2. PRODUCTS

2.1 PAINT

As selected and to the paint manufacturer's standards for exterior and/or interior primers, undercoats, sealers, stains, clear coatings, solvent-borne and water-borne paints.

2.2 GAP FILLERS

Linseed oil, putty, plastic wood, wood filler or plastic filler, to suit and to match the surface being prepared.

3. EXECUTION

3.1 INSPECT SURFACES

Inspect surfaces being painted and report to the owner any that will not, after the preparatory work laid down by the paint manufacturer, allow work of the required standard. Confirm that all areas have adequate lighting and are sufficiently free of other construction activities to enable painting work to proceed.

3.2 PROTECT

Cover up adjoining surfaces and areas liable to damage or over-painting.

3.4 PRIMING AND SEALING

Ensure that priming and sealing work needed before or during construction is carried out when required.

3.5 ENVIRONMENTAL CONDITIONS

Carry out work within acceptable temperature and humidity limits, with timber dry, all to the requirements of the paint manufacturer.

3.6 SHARP EDGES, CRACKS AND HOLES

Repair as required by the paint manufacturer.

3.7 PREPARE SURFACES

Prepare surfaces as required by the paint manufacturer. Make good all damage and defects.

3.8 PAINT APPLICATION

Apply paint by brush and/or roller to suit the location of the coating and to the paint manufacturer's requirements. Do not spray on site without express permission.

- 3.9 **MANUFACTURER'S MANUALS**
Refer to the paint manufacturers' manuals and follow their preparation, sequence and application requirements applying to each system. Ensure all paint coats in any system are supplied by the same manufacturer.
- 3.10 **SCUFF BETWEEN COATS**
Scuff between all coats to remove any dust pick-up, protruding fibres and coarse particles.
- 3.11 **FINISHED PAINT SURFACES**
Finished paint surfaces to show uniformity of gloss and colour, with the correct thickness for each coat, and freedom from painting defects. Ensure finished work is clean and free of any disfigurement.
- 3.12 **CLEAN**
Clean adjoining surfaces, glass and fittings of any paint contamination.

7410 RAINWATER SPOUTING SYSTEM

1. GENERAL

Refer to 1213 SELECTIONS/drawings for specific product, material, accessories and finish selections.

1.1 LIAISON

Ensure liaison with associated installations to ensure material selections are compatible and required flashing work is completed.

1.2 ELECTROLYTIC ACTION

Avoid electrolytic action by eliminating contact or continuity of water between dissimilar metals.

2. PRODUCTS

2.1 PVC-U SPOUTING

Profile, jointing, brackets and fittings brand matched and complete to the spouting manufacturer's specifications.

2.2 PVC-U DOWNPIPES

Tubes, stand-off brackets and fittings brand matched and complete to the manufacturers specifications.

3. EXECUTION

3.1 INSTALL PVC-U SPOUTING AND DOWNPIPES

Fit and screw fix brackets, set to falls to outlets. Ensure solvent welded or rubber ring jointed spouting sections are complete with all fittings to the spouting manufacturer's requirements. Screw fix stand-off brackets, set pipes plumb and clear of the wall, solvent welded. Discharge into stormwater bends.

3.2 ENSURE

Ensure rainwater services are operational, flashings complete and the building weathertight.

1. GENERAL

Refer to 1213 SELECTIONS/drawings for specific product, material, accessories and finish selections.

1.1 COMPLY

Comply with the Electricity (Safety) Regulations 2010, AS/NZS 3000 for listed and prescribed work and with the NUO's requirements. Apply for the service connection. Arrange for the required inspections of listed work. Pay all fees.

1.2 QUALIFICATIONS

Carry out work by or under the direct supervision of an electrical licensed supervisor under the Electricity (safety) Regulations 2010.

1.3 ELECTRICAL CERTIFICATE OF COMPLIANCE

Provide, prior to connection, a Certificate of Compliance (CoC) as required by the Electricity (Safety) Regulations 2010, to the owner and if required to the NUO. Allow the NUO to view before the meter installation, listed work inspection, polarity check and livening of supply.

1.4 ELECTRICAL SAFETY CERTIFICATE

Provide an Electrical Safety Certificate (ESC), as required by the Electricity (Safety) Regulations 2010, to the owner and when required the BCA. To be provided at completion of the work, prior to Practical Completion.

1.5 SAFETY OF INSTALLATION

Before installation work commences, provide a declaration of conformity to Electrical (Safety) Regulations 2010, regulations 57 & 58

2. PRODUCTS**2.1 CABLES**

Tough plastic sheathed copper conductors. Minimum sizes are indicated below. Increase these as necessary due to method of installation, cable length or load.

Lighting circuits: 1.5mm² on 10 amp MCBs for domestic construction

Power circuits: 2.5mm² on 16 amp MCBs for domestic construction

2.2 ELECTRICAL ACCESSORIES

As selected and to the following details:

Switch units	Minimum 16 amp, 230 volt flush polycarbonate units. For number of switches per unit, dimmer units, neon (indicator or toggle) units, locator units and 2-way units refer to the electrical drawings.
Switched socket units:	10 amp, 230 volt flush polycarbonate 3 pin combined switch units.
Hot water system switch:	One way 20 amp switch complete with clamp for flexible PVC conduit.
Stove/range socket outlet and switch:	32 amp, 230 volt flush polycarbonate 3 pin combined switch unit, with remote isolating switch.

3. EXECUTION**3.1 CABLING**

Install with a maximum of 10 light outlet units or 6 switched socket units on any circuit. Separate circuits for all electric heating appliances. All cabling run concealed. No TPS cable laid directly in concrete. Locate holes in timber framing for the passage of cables at the centre line of the timber member. Provide earth bonding and main earth.

3.2 INSTALL SWITCH AND SOCKET UNITS

Fit single and double switch units and socket units level and plumb where shown on the drawings. Install at the following heights (to the centre of the unit) unless shown otherwise on the drawings or to match existing.

Switch Units:	1000mm above floor
Socket Units:	400mm above floor
	150mm above work benches

Mount switches vertically and socket units horizontally. Label switch units which control electrical equipment by engraving on the rocker switch.

3.3 INSTALL LIGHT FITTINGS

Install selected light fittings in the locations and heights shown on the drawings and in accordance with the fitting manufacturer's requirements. Recessed fittings to AS/NZS 3000, types IC-F, IC, CA-80 or CA-135 only (no clearance to insulation required for these types).

3.4 INSTALL DOMESTIC SMOKE ALARMS

Install alarms to NZBC F7/AS1, 3.3 Location of smoke alarms, and to manufacturer's requirements, fitted neatly and without damage to the surrounding finish.

3.5 ELECTRIC POWERED FITTINGS AND EQUIPMENT

Install and wire selected fittings and equipment to the Electricity (Safety) Regulations 2010 and the individual fittings and equipment manufacturer's requirements. Refer to the drawings for required layouts and locations for equipment.

3.6 COMPLETION

Leave all fittings, lamps and tubes operational, with equipment and diffusers clean.