



# SPECIFICATION

of

# PROPOSED NEW DWELLING

for

**RPS Quality Homes**

at

**Lot 358 Maia Place,  
Hamilton**



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## **SPECIFICATION OF WORKS**

### **1. PRIME COSTS SUMS**

Prime Costs Sums (PC Sums) may be provided for materials to be supplied by the Contractor or by a Nominated Subcontractor for the incorporation into the Contract Works, and for which freedom of selection by the Owner is reserved. Such sums shall be expended only on the instruction of the owner.

### **2. CONTINGENCY SUMS**

Contingency sums may be provided for any work which may be executed by the Contractor, but the expenditure on which is unknown at the time of calling tenders. Such sums shall be expended only on the written permission of the owner.

All work carried out under a contingency sum shall be a Variation. The contingency sum shall be deducted from the Contract Price.

### **3. GOODS AND SERVICES TAX**

This will apply only where both the Principal (owner) and the Contractors are registered under the Goods and Services Tax Act 1985.

Any progress or final claim prepared by the Contractor shall not be a tax invoice for the purposes of Goods and Services Tax Act 1985. When the owner has signed a progress payment certificate under clause 12.2.1 NZS 3910:2003, or a Final Payment Certificate under clause 12.5.1 NZS 3910:2003, he or she shall ensure that the certificate is in the form required to constitute a tax invoice under the Goods and Services Tax Act 1985.

### **4. NET COST**

Means the actual or assessed expense or direct cost to the Contractor of the Variation, plus return on investment in Plant, after deduction of trade discounts and exclusive of the Contractor's On-site Overheads, Off-site Overheads and Profit.

## PRELIMINARY AND GENERAL

### 1. SCOPE

This specification and attached plans for **BJS Developments Ltd Trading as RPS Quality Homes, Lot 358 Maia Place, Hamilton**. This describes the work to be done and the materials to be used in the construction of the house. The contract is to be run in accordance with NZS3910:2003 Conditions of Contract for Building and Civil Engineering Construction. The Contractor is expected to be familiar with the site, the local building regulations, the plans and specifications conditions of the contract, NZS3604:2011 Timber Framed Buildings and the NZ Building Code and Approved Documents.

Any abnormalities or irregularities within the specification and/or plans are to be indicated by the owner before work commences.

### 2. BUILDING CONSENTS

Contractor is to apply, obtain and pay for the building consent from the local Territorial Authority as listed as a PC Sum from the contract. The Owner is to obtain any other permits required for compliance with any building bylaws of the district i.e. Resource Consents.

### 3. CONTRACT TYPE

This contract is to be a lump sum contract. The Contractor is to provide a cost breakdown for each trade as per the supplied schedule.

### 4. INSURANCES

The contractor is to hold a current Public Liability insurance policy, ACC policy, or similar for employees and to have a Contract Works insurance policy. Policy to cover the loss and/or damage to the contract works, including materials (as per standard policy terms and conditions) for the full contract sum, plus an allowance for any additional incurred costs and fees.

All policies are to remain valid for the construction period. This period will be until an agreed hand over date with the owner at which time insurance on the house will be the responsibility of the Owner.

Copy of validity of insurances and their values is to be made available to the Owner after acceptance of tender and before commencement of works if requested by the Owner or their lending institution

### 5. PROGRAMME

Contractor to provide a proposed overall construction timeframe with tender price. Upon acceptance of the tender the Contractor is to then provide within 5 days a detailed programme of works and the dates for commencement and completion of various stages of the Contract Works. The programme is to fit inside the timeframe submitted with the tender unless agreed otherwise with the Owner.

## **6. INTERPRETATION**

DIMENSIONS ON PLANS ARE TO TAKE PRECEDENCE TO SCALING OF DRAWINGS. The Contractor shall be responsible for the setting out of works based on the Contract Documents and shall make good at his own expense any errors that occur through lack of checking and/of faulty workmanship.

## **7. STABILITY**

The Contractor shall carefully brace and support all parts of the work against damage by wind and protect against the elements and necessary during construction.

## **8. PROTECTION OF PROPERTY**

The Contractor shall protect adjoining properties during the contract and shall make good all damage at his/her own expense.

The Contractor shall make good at his own expense to the satisfaction of controlling authorities, any damage done to footpaths, kerbs, drainage, roading and the like or other property under the control of such authorities.

Each trade is to take adequate care to prevent damage to works of other trades and will be responsible for costs to rectify to the original quality.

## **9. MAINTENANCE**

A Defects Liability period for the Contract Works regarding defective workmanship or materials shall be for 45 days, commencing on the date of Practical Completion of the Contract Works.

The Owner shall give notice in writing to the Contractor during the period of Defects Liability or within five Working Days thereafter of defects to be remedied.

The Contractor shall not be liable for fair wear and tear during the Period of Defects Liability.

If the Contractor fails to complete the remedial works within a reasonable time, the Owner shall be entitled, after giving the Contractor notice, to employ others to carry out such remedial work. The owner shall be entitled to recover the cost of such from the Contractor.

## **10. CONTINGENCIES**

An allowance is to be made by the Contractor and Owner to meet any contingencies that may arise regarding physical conditions and artificial obstructions but shall not include weather conditions or conditions due to weather unless those conditions occur as a result of weather away from the site. The sum of \$10,000 (ten thousand dollars) is to be allowed in the Contract Price.

If during the Contract the Contractor encounters on the site physical conditions which it considers could not reasonably have been foreseen by an experienced contractor when tendering, and which will in its opinion substantially increase its Costs, the Contractor shall as soon as practicable and where possible before the conditions are disturbed, notify the Owner in writing and confirm such notification in writing.

If, as a result of such conditions, the Contractor proposes to make a claim for an additional payment, the Contractor shall follow such notice as soon as is practicable with details of the additional materials, plant and labour and programme of works proposed to be used, the anticipated delay to or interference with the Contract Works and an estimate of the claim for additional payment.

The Owner is to then investigate the conditions and discuss with the Contractor as to the validity of the work being unforeseen. If agreed then the Owner is to issue a Variation Order for the additional works.

## **11. SITE**

All Contractors are expected to visit the site and ascertain the nature and extent of their work. The levels shown on the plans are approximate only. Contractors shall allow and quantify works based on these levels for the subfloor works.

## **12. WORKMANSHIP**

All work shall be carried out in accordance with the best trade practice, in conformity with the Contract Documents and to the satisfaction of the Owners.

All product required to be stored on site is to be kept clear of the ground and protected from the elements or as required by the manufacturers specification.

## **13. TEMPORARY SERVICES**

Contractor is to allow supplying site with temporary power, water, telephone of cell phone and sufficient facilities for ablutions.

## **14. CLEAN UP**

Contractor is to ensure the site is to be kept clear of waste products, unusable offcuts and the like to ensure a safe work site. The Contractor is also to be responsible for the procurement of a mini skip to be provided on site for building waste.

Upon Practicable Completion the Contractor is to remove the mini skip and pay any related costs and fees for dumping.

The Contractor is to be responsible for the final clean up at Practical Completion of the interior, exterior and yard of the Site. Ensure all windows are clean and smear free, carpets vacuumed, concrete surfaces swept and free from any plaster and cement splashes and the like.

## **15. DISPUTES**

No decision, valuation or certificate of the Owners shall be questioned or challenged more than three months after it has been given unless notice has been given to the Owner within that time. Every dispute or difference that cannot be resolved between both parties by mutual agreement within 10 days is to be referred to mediation. The process for selection of a mediator and the ensuing process are to be done in accordance with NZS 3910:2003.

## **16. ACCESS, HEALTH & SAFETY**

The Building Inspectors are to have complete access to the site at all times. The owner will be required to sign a key out from the RPS Quality Homes office to visit from time to time.

The Contractor is to have a Health and Safety Policy which needs to be made available upon request by the Owner or a DOL Inspector. This may be kept at the Contractors office provided that all sub-contractors are aware of the content and site hazards are regularly monitored and made aware to those on site.

It is the Contractor's responsibility to advise all visitors to the site of any site hazards that may exist at the time for the duration of the Contract.

## **17. CODE COMPLIANCE CERTIFICATE**

The Contractor is to be responsible for obtaining the Code of Compliance Certificate at the time of Practical Completion and to be given to the Owner. The Owner will only be responsible for this Certificate if it is discussed and agreed this way between the Owner and the Contractor.

## **EXCAVATION**

### **1. PRELIMINARY AND GENERAL**

Refer to P&G section of this specification as applicable to the trade.

### **2. ALLOWANCES**

Allow for foundation depths as shown on the Contract Drawings.

### **3. SETTING OUT**

Set out the work as shown or implied in the Contract Drawings. Check for accuracy for platform position, levels and the like.

### **4. SITE CLEARANCE**

Remove all vegetation and top soil within building platform and driveway. Stock piles on site as directed and avoid covering with subsoil subsequently excavated.

### **5. LEVELLING AND BULK EXCAVATION**

Excavate for all site levels, foundation walls, underground services and the like to correct levels, to firm bearing or to obtain sufficient frictional resistance for satisfy local Territorial Authority.

### **6. FOUNDATIONS**

All foundation trenches are to be taken straight out, level and to the proper width and be kept free of water and loose material. Concrete is not to be placed until excavations approved as required by the Building Consent or Engineer. If trenches are over excavated then the excess depth shall be filled with concrete, as specified for foundations, at the Contractors expense.

### **7. BACKFILL OF TOPSOIL**

Allow to backfill and well consolidate in maximum 100mm layers to foundation walls and service trenches. Spread previously excavated topsoil as directed. Do not damage any waterproof coatings of polythene protecting foundations of Insuclad wall cladding.

FINISHED FLOOR LEVELS TO THE HOUSE ARE NOT TO EXCEED NZS 3604:2011. LAWNS AND GARDENS ARE TO BE 225mm BELOW FINISHED FLOOR LEVEL AND CONCRETE/PAVING IS TO BE 150mm BELOW FINISHED FLOOR LEVEL.

# CONCRETE AND REINFORCING

## 1. PRELIMINARY AND GENERAL

Refer to P&G of this specification as applicable to this trade.

## 2. MATERIALS

Concrete shall be ordinary grade of 17.5 MPa strength at 28 days cure. Reinforcing to have compliance with current New Zealand Standards. Contractor to provide certificate showing compliance if requested by the Owner.

## 3. FORMWORK

Formwork shall be so constructed that the concrete thickness and shapes required are obtained as detailed without removal causing damage. Foundations shall be vibrated by a submersible vibrator every 600mm crs.

## 4. REINFORCING LAPS

Reinforcing steel shall be lapped at least 40 rod diameters for plain rods and not less than 32rod diameters for deformed bars in concrete.

## 5. CONCRETE SLAB ON GROUND

Concrete slab on ground floors and porches shall not be any less than 100mm thick on well compacted granular fill and reinforced with 1 x layer of 500E mesh. Mesh sheets to over lap by minimum 225mm at sheet joints or as per manufacturers recommendations. Floor slab to have underlay of 0.25mm polythene sheet with joints lapped 150mm and taped to manufacturer's specification.

Any damage done to the vapour barrier during provision of under slab or under slab services shall be repaired and made good before placing any concrete. Seal around any wastes or pipes that project through the DPC.

Curing- protect the concrete from rapid drying with water during summer conditions. Refer to NZS3109:1997 for further details.

## 6. HOLD DOWNS

Provide for and ensure all hold down bolts (or alternative approved fixings) are positioned before placing of concrete and are as per NZS3604. Ref bracing plan for position of braced elements are fixing strengths required.

## 7. EXTENT

Work to cover the setting out, formwork and placing of concrete in the foundations and floor slabs.

# CARPENTRY AND JOINERY

## 1. PRELIMINARY AND GENERAL

Refer to P & G section of the specifications applicable to this trade.

## 2. EXTENT

The work of the section shall include all labour, materials, equipment necessary to carry out and complete the carpentry as shown, or as further required by this specification.

## 3. ATTENDANCE

Allow to attend upon other trades providing all blockings, fixings, trims, noggings and the like as required for the completion of their respective works and make good after all trades.

## 4. MATERIALS AND WORKMANSHIP

All materials used shall be the best of their respective class and type specified. Any materials which in the opinion of the Owner and the local Territorial Authority are not up to standard are to be removed immediately from site. All work shall be carried out in a workman like manner in accordance with the best trade practice and as or where especially specified. Any work that is intended or implied but not specifically shown, mentioned or specified as necessary for the proper building shall be included. All work shall comply with NZS 3604:2011.

## 5. TIMBER

All timbers used shall be the best of its kind conforming to NZS requirements (Building Timbers). All framing to be 100x45 or 75x50mm stud. Top and bottom plates to be the same size as the studs in long length, halved or nail plated at wall junctions and jointed over studs. All studs at 600mm centres generally provide nogs at 800mm centres and to sheet edges and fittings. All in accordance with respective manufacturers current recommendations.

## 6. SCHEDULE OF TIMBERS

Refer to the plans and NZS 3604 for all sizes and grades of all timbers used in the construction.

Roof trusses shall be constructed by licensed manufacturers. Roof purlins to be as per the roofing supplies specification, if not covered by NZS 3604 2011 Chapter 10. Interior finishing lines shall be confirmed with the Owner if not already detailed on the plans. If cornices are not required allow to box finish using proprietary tape.

## 7. EXTERIOR TIMBER

All exterior timber shall be treated to the requirements of the Timber Preservations Authority

## **8. DAMP PROOFING**

All timber is protected from dampness with 3 ply bituminous felt or other approved damp proof course (DPC) when in contact with concrete or block work.

## **9. PRIMING**

All exterior finishing timber, all timbers in contact with concrete block work and all external, faces, rebates and the like shall be primed before fixing unless otherwise specified in Painting Trade.

## **10. NAILS AND SCREWS**

All nails used in framing to be of sufficient length to penetrate the holding or second timber to at least half length. All bolts, screws etc to be adequate for their respective purpose as scheduled in NZS 3604, 2011.

## **11. INSULATION**

To be detailed on plans, installed in accordance with the manufacturers' specifications and to comply with NZ Building Code and NZS 4218.

## **12. WALL LININGS**

See NZS 3604, Chapter 6.9 for fixing of bracing elements. Generally wall linings shall be 10mm Gibraltar board unless stated otherwise. All linings to be screwed with appropriate screws as specified by Winstone on joints at approximately 150mm centre to centre. All stopping to be done with the best quality plaster, filled to an even surface and with all spots and rises removed. Refer to the plans for alternative wall linings.

**Use Gib 'Aqualine' water resistant board in bathroom and wet areas.**

**Fix 'Braceline' and 'Fyreline' panels as per Winstone manual.**

Where walls and ceilings are to be painted allow to finish to level 4/level 5.

Where walls are to be wallpapered allow to finish to level 3/level 4.

## **13. CEILING LININGS**

All ceilings to be lined with 10mm Gib Ultraline and fixed to 75x35 timber ceiling battens at 450mm c/c. Shall be as detailed in the plans. See NZS 3604 for structural ceiling diaphragms. Refer to the wall bracing plan on the drawings if applicable.

## **14. HARDIE LINEA WEATHERBOARDS ( if applicable )**

Fix as per manufactures specification.

## **15. DOORS AND DOOR JAMBS**

Interior doors are to be paint quality flush panel with clashings strip on one edge. Hang doors on 1.5 pair FB loose pin butt hinges. Interior door frames to be rebated out of 18mm customwood jambs with planted stops. Exterior doors to be as shown on drawings.

## **16. DOORS AND DOOR JAMBS**

Allow for the fixing only of all locksets and other door furniture, catches, handles, hooks, towel rails, sliding door gear etc. to be provided by owner. Confirm with owner or Designer if to be fix only.

Allow for the fixing to complete the work and leave in perfect working order. All hardware must be confirmed with the Owner by the Builder before finalising.

## **17. HARDWARE**

Allow for the fixing only of all locksets and other door furniture, catches, handles, hooks, towel rails, sliding door gear etc. to be provided by owner. Confirm with owner or Designer if to be fix only.

Allow for the fixing to complete the work and leave in perfect working order. All hardware must be confirmed with the Owner by the Builder before finalising.

## **18. WARDROBES, LINEN CUPBOARDS AND STORES (HOT WATER CUPBOARD IF APPLICABLE)**

To be lined full height and fitted out as per notes on the floor plan. Proprietary systems if specified are to be fitted as per manufacturers recommendations.

## **19. KITCHEN**

Kitchen is to be as per the plan provided by the kitchen manufacturer, unless stated otherwise. All constructed to current recommended joinery practices and using materials suitable for the end use. Installation by the kitchen manufacturer.

## **20. MANHOLE AND ACCESS DOOR /SUBFLOOR ACCESS**

Provide manhole in ceiling of a suitable wardrobe or cupboard, unless good access is available via the garage.

Provide access door to subfloor area in a suitable inconspicuous place, with Galvanised hinges and latch. Check with Designer or owner.

## **21. DECK MEMBRANES**

If applicable see relevant specifications at end of this spec and drawings for details. If not detailed otherwise, use Ardex Superflex waterproofing membrane as per manufacturers specification.

## **22. DECK & INTERNAL HANDRAILS (if applicable)**

To be constructed out of powdercoated 50 or 30mm top rails, midrails, bottom rails, 10mm rod. Verticals, 6mm plate for fixings. See drawings for details. Alternatively take delivery of proprietary handrail system and fix as per manufacturers design and recommendations.

All glazed panels to be toughened glass.

## **23. SKYLIGHTS**

Provide skylights in positions shown on plans, completed with flashing kits, to be installed as per Manufacturer's recommendations. To be Clearlite, Velux, Skydome or similar.

# ROOFER

## 1. PRELIMINARY AND GENERAL

Refer to P & G section of the specifications applicable to this trade.

## 2. ROOF FRAMING AND WALLS

Roof framing shall provide adequate support and fixings for purlins or tile battens. No member shall be overloaded by landing heavy, localised, stacking of cladding on them prior to fixing. Allow for temporary braces as required for framings as might be necessary to cope with loads until roof cladding is complete and wall linings subsequently fixed.

## 3. ROOF UNDERLAY

Underlay shall be breather type building paper to NZS 2295:2006. Run horizontally with upper sheets lapped 75mm over lower sheets and with bottom edges turned over fascia into gutters. Such underlay shall be provided under all metal roofs and be adequately supported unless self supporting type.

## 4. PREPARATORY WORK

Provide all gutters, valleys and under flashings before cladding commences. Valleys to be Colorsteel to match roofing colour, be at least 400 wide with folded edges and with lower end finishing well into spouting. Ensure all edges of roof cladding are adequately supported around projections such as pipes, chimney and the like.

## 5. ROOF CLADDING

Roofing to be as shown on the plans.

### **Colorsteel Roofs**

Provide and fix 0.55mm longrun Colorsteel roofing , securely fixed with colorsteel nails or screws. Cover ridges and hips with 0.55mm Colorsteel ridging. Finish verges with Colorsteel verge cappings. Coloursteel roofing shall be installed to the manufactures specifications as required to provide a watertight job.

### **Zincalume Roofing and Cladding**

Provide and fix 0.55mm longrun Zincalume roofing or cladding, securely fixed with compatible fasteners. All flashings to be 0.55mm Zincalume to provide a watertight job.

### **Colortile Roofing**

Provide and fix Colortile roof as per manufacturers recommendations, complete with California Barge and Ridge flashings.

### **Tile Roofs**

Concrete tiles, clay tiles and pressed metal tiles are to be fixed in accordance with manufacturers specifications.

Provide all flashings as per detailed on drawings or Manufacturers literature, and as required to complete a water tight job.

#### **Internal Gutters**

Provide Zinalume or Colorsteel internal gutters if applicable as detailed on drawings complete with coloursteel or Zinalume rainwater heads, overflow and downpipes. Rainwater heads to be shaped as per elevations.

#### **6. CAPPINGS**

Adequately and neatly secure all ridging and over flashings wherever needed to make and keep roof watertight. Use only materials compatible with roof cladding. Sealant shall not be used except where approved. Do not leave swarf, broken rivets, screws, nails, or waste metal on roof, nor on guttering.

#### **7. BIRD PROOFING**

Where required bird proof any cavities with purpose made foam plastic impregnated with bitumen.

#### **8. SPOUTING AND DOWNPIPES**

Downpipes to be 80mm dia PVC clipped to wall cladding with min 2 x clips per down pipe. Spouting to be Klass External Colorsteel.

#### **9. GUARANTEES**

On completion of all roofing thoroughly clean down and furnish Owners with written guarantees to watertightness and security of the roof cladding. Guarantees to be signed by the approved Fixer/s and run for a period of three (3) years from the date of Practical Completion.

# BRICK WALL CLADDING

## 1. PRELIMINARY AND GENERAL

Refer to P&G section of the specifications applicable to this trade.

## 2. PRODUCT BRICK VENEER

Exterior wall cladding is to include clay brick veneer

The materials and workmanship of masonry veneer shall be in accordance with NZS3604:2011 and E2/AS1. **Colour to be confirmed from the Owner.**

### Trade Practice

1. Ensure all the bricks used on the job are from the same batch number.
2. Bricks are to be thoroughly blended from at least 3 pallets where possible to ensure an even spread of colour to the finished wall. Check the colour and the general size of all bricks before commencing work. If two different types of bricks are being used on the job, check the average length of each type as they may vary and have an impact on the way the job needs to be set out. The brick width, especially on rumbled bricks may affect the cavity size. **CHECK PRIOR TO LAYING.**
3. If there is insufficient quantities of brick to complete the work, **ADVISE THE OFFICE IMMEDIATELY.** The laying may need to **STOP** until the additional bricks are supplied to site to allow for sufficient bricks on site to be available to blend with the additional bricks. Where possible, plan the job so that the work is not finishing into the front door area.
4. Bricks must be laid level and plumb. Protect brickwork from staining and damage by other trades, especially around taps.
5. All bricks are to be laid in 'stretcher bond' or 'half bond' unless noted differently on the plans.
6. Try to avoid laying any bricks shorter than 50mm long.
7. Bricks **MUST** be kept dry (not saturated) at all times during construction. Keep plastic on top of pellets. Cover stacked bricks around the site. Cover the top of unfinished walls or work. Divert downpipes away from brickwork. This action will eliminate most problems relating to efflorescence (salts) on bricks. **DO NOT WET** bricks prior to laying.
8. Mix mortar by volume to ensure an even mortar colour on the job. Mix thoroughly. Do not allow newly laid bricks and mortar to get wet.
9. All mortar joints must be tooled to provide a smooth sealed joint. Joints may be raked to a maximum of 6mm; then tool the joint smooth.
10. Window sills should overhang 30-50mm. Minimum slope 1:50. All sills to be sloped at the same angle. All sizes of bricks on the sill and size of mortar joints to be uniform in width and thickness.
11. Thoroughly clean the brickwork as the job progresses. Do not use spirits of salt (hydrochloric acid) to clean bricks without checking with the manufacturer, as this could result in problems with vanadium salts.
12. Provide wash outs approximately every 10th brick and at corners within the bottom row of bricks to enable the cavity to be thoroughly cleaned.

# PLUMBING

## 1. PRELIMINARY AND GENERAL

Refer to P&G section of the specifications applicable to this trade.

## 2. EXTENT

Plumber required to pipe out and fit all items as specified on the drawings and contained in the client Priced Specification- Contract Set.

All fixtures and fitting shall generally be supplied by the builder unless otherwise stated.

## 3. WORKMANSHIP

All work to be performed and carried out using best acceptable trade practices and installation and storage of products to be as per manufacturer's specifications. Upon acceptance of a tender the successful Plumber is to provide their registration number to the Contractor and the Owner.

In general this means all work shall comply with G10/AS1, G11/AS1, G12/AS1 and G13/AS1 and any other relevant Acceptable solutions as marked in the Building consent Application Form.

## 4. GUARANTEES

On completion of all Plumbing thoroughly clean down works and provide to head contractor the plumbing pressure test producer statement and gas compliance of certificate.

# DRAINLAYER

## 1. PRELIMINARY AND GENERAL

Refer to P&G section of the specifications applicable to this trade.

## 2. EXTENT

Work in this section of the Contract Works comprises of all surface and foul water drainage up to above ground level to connect Plumbers' work. Included all pipes and special, fittings, gully traps and connections of terminal vents, soil and waste pipes. The Drain Layer shall confer with the Plumber and shall arrange with the Contractor before the foundations are to be laid to fix the exact positions of all connections for wastes and drains.

## 3. WORKMANSHIP

The whole of this work shall be carried out by experienced licensed tradesmen to the satisfaction of the Builder and Territorial Authority Inspectors. It shall conform to requirements of the Drainage and Plumbing Regulations and Territorial Authority Specifications. The Drain Layer is to observe all consents, service all notices and pay all fees required and arrange for all tests and inspections required for their works and to submit an as-laid drainage plan to the Territorial Authority. Upon acceptance of a tender the successful Drain layer is to provide their registration number to the Contractor and the Owner.

In general this means all work shall comply with G10/AS1, G11/AS1, G13/AS1 and any other relevant Acceptable Solutions as marked in the Building consent Application Form

## 4. MATERIALS

As required to meet the regulations for the project and the site.

## 5. TRENCHES

The excavation of trenches for drains shall be accurately made with base clean and true to grade so that no unnecessary filling is required. Adequate width shall be allowed in accordance with depth of drain to enable laying and jointing to be properly carried out. Trenches shall be kept firm and dry and shall be opened up only in lengths that can properly be protected, utilised and backfilled within a reasonable time. No allowances will be given in the event of damage or subsidence due to inadequate protection or extended length of time trenches are open.

## 6. FITTINGS

The plan shows the layout of the system. Additional fittings that are normally required such as inspection point and inspection bends and the like that are not specifically shown must be allowed for by the Drain layer to comply with normal trade practice and under the requirements of the Drainage and Plumbing Regulations and Territorial Authority Specifications.

## 7. COMPLETION

Property backfill all trenches, consolidate as filling proceeds and leave area in a tidy state removing excess clay and spoil from site. Contractor to provide an 'As laid' drainage plan to the Territorial Authority Inspector at the time of the drainage inspection.

# ELECTRICIAN

## 1. PRELIMINARY AND GENERAL

Refer to P&G section of the specifications applicable to this trade.

## 2. FEES

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

## 3. EXTENT

Electrician to prewire and fit off all electrical and light fittings as per the project Electrical Plan.

Carry out the whole of the electrical installations in strict accordance with the latest Electrical Wiring Regulations and Territorial Authority Bylaws and meter wiring diagrams.

## 4. MATERIALS AND WORKMANSHIP

All materials used under this contract shall be of approved British or New Zealand Standard Specification. Allow for all materials necessary to complete the contract as not listed on the client supplied items from Mastertrade. All work shall be carried out by a Registered Electrician in accordance with regulations and best trade practice and in a manner which will cause minimum inconvenience to other workmen and the work as a whole. Do all cutting, drilling and the like with timber cut the minimum only away for entry of cables.

Ensure that the ceiling insulation is returned to a completed state after light fittings are installed to continue compliance with the NZ Building Code.

## 5. CO-OPERATION

Allow to co-operate with the Contractor and other sub-contractors in all phases of work. Give adequate notice to enable the Contractor to arrange the necessary void, chase and the like which may be required.

## 6. COMPLETION AND CONNECTION OF POWER

Leave the work complete, and test and for the connection of power to the works.

## 7. POWER SUPPLY

Allow to connect from the supply to the point of entry.

## 8. MAIN SWITCHBOARD

Provide and install recessed main switchboard completed with all necessary control and auxiliary equipment in position shown.

## 9. WATER HEATERS

Allow for the permanent connection of the hot water heaters to the electrical system as provided

complete by the Plumber.

## **10. POWER POINTS**

All wall plugs shall be 230V 10amp 3 pin flush type with PDL plates. Generally install plugs 300mm above floor or 225mm above bench top. Points to washer/dryer space and refrigerator are to be installed 1200mm from the floor. Install light and heater points as per plan and as detailed in the schedule of specifications.

Check with owner for positions of heated towel rails if required.

Allow for dedicated power outlets to oven, hobs, extract fans, hwc's etc. Confirm with client exact location of all electrical fittings.

## **11. LIGHT SWITCHES**

Light switches generally shall be 5amp, all insulated PDL microgap type or equivalent. Fix switches generally 1200mm above floor level.

## **12. TV OUTLET**

Allow for TV outlets to each unit in positions as shown on drawings. Run co-axial cable through wall framing and in the ceiling space to enable the installation of an aerial, to be supplied by subcontractor.

## **13. EXTRACT FANS**

Provide and install 'Mistral' or similar extract fans in ceiling in positions shown on electrical plan. To be connected to light switch and duct taken through to closest outside wall or roof where possible.

## **14. PHONE OUTLETS**

Allow for Telecom phone jacks in position shown on drawings.

# ALUMINIUM JOINERY

## 1. PRELIMINARY AND GENERAL

Refer to P&G section of the specifications applicable to this trade.

This document describes the installation of aluminium windows and doors into light timber framed residential buildings. Windows and Doors shall be a “WANZ” member product with each unit shall be complying with NZS 4211 1985 and labelled so. On some light commercial sites where domestic windows are used the same general requirements should be met.

Note: Manufacturers details should be used in conjunction with this code at all times.

## 2. FRAMING SIZES

“Trim Sizes” or openings framed out for joinery units in the exterior walls of buildings shall be agreed upon between the joinery Manufacturer and Buyer before manufacture, the Buyers should obtain a “Trim Sheet” from the Manufacturer before the frame is cut. The Onus is on the Buyer to notify the manufacturer of any changes to these sizes, or any windows which may require site measuring. The Buyer is also responsible for advising the joinery Manufacturer of wall thickness and whether or not the joinery Manufacturer is to supply aluminium flashings as part of their supply contract.

Note: All ex 100mm framing is presumed to finish 94mm.

All joinery shall be installed into prepared openings which are large enough to accommodate the units comfortably without forcing. A clearance gap of 5mm to 6mm around the periphery of the unit is usually recommended.

## 3. USE BUILDING PAPER

In all installations the building paper should be allowed to abut as close as possible to the unit reveal, and care must be taken to ensure that the exterior claddings that go behind the cover fin of the unit extend as far as the trimmed opening to maximise the cover available.

## 4. PLACING THE UNIT IN THE FRAMING

Units shall be installed level, plumb, square and to a flat plane. They shall not be forced into openings that are too small or so far out of square that the clearance between the unit and the building structure is less than 3mm at the closest point. The sills of the unit should be packed off the bottom trimmer by 4mm to 5mm with varying sized packers if necessary to ensure that the sill is straight and level. If the unit is to be installed onto a floor (as is usually the case with doors) and the floor is not level, the floor should either have the high points ground or planed of, or the low parts packed by use of a packer which will be tapered and fitted in as long a length as practicable so that the sill of the unit has a continuous and solid support. All packers used around the periphery of the units will extend the full depth of the framing (these packers shall generally be placed at fixing points) and in the case of sill packers fitted to floors beneath doors extend to the outside bearing pint of the unit. (In some cases where there is a possibility of building loads of deflecting lintels onto heads of units, thus hindering the proper operation of sliding doors etc head packers may be omitted).

Note: The use of wedges to pack unit is not recommended.

## 5. FLASHINGS

Provide all Zinalume, powdercoated or anodised aluminium flashings to all head, sill and jambs of all windows and doors as detailed on the drawings to provide a watertight structure. If no specific detail is provided then confirm with owner or Designer type of flashing detail to be used. **Flashings must be used in all situations.**

## 6. LINERS

All liners are to be ex25mm timber pre primed, to take 10mm gib board wall linings with architraves.

## 7. LOCKS AND CATCHES

All the French Doors and Exterior Aluminium Doors are to be keyed alike- refer Aluminium Suppliers schedule.

## 8. GLAZIER

Glaze all sashes, glass doors or screens with appropriate weight glass complying with NZS 4223.1 2008 and NZS 4211 2008 Glazing to bathrooms shall be selected obscure glass. All glass below 500m to be toughened safety glass. All glass to be tinted- refer Aluminium Suppliers schedule for final selections.

# TILING

## 1. PRELIMINARY AND GENERAL

Refer to P&G section of the specifications applicable to this trade. This section deals with the supply and setting of ceramic tiles to walls and floors, over concrete, masonry and lined timber substrates.

### Documents

AS2358 - Adhesives - For fixing ceramic tiles

AS3740 - Waterproofing of wet areas within residential buildings

AS3958.1 - Ceramic tiles, 3958 - Guide to the installation of ceramic tiles

BS6431 - Ceramic floor and wall tiles

BRANZ - Good practise guide, Tiling

## 2. EXTENT

Refer to plans and colour schedule for full extent of tiling and tile type. Upon completion of the actual laying a Producer Statement is required to be issued to RPS Quality Homes for the laying of the waterproofing.

## 3. MATERIALS

To be first quality and covered in previous sections for sand, cement, water and lime.

Use proprietary materials only in accordance with manufacturers written instructions and with RPS Quality Homes approval.

Thin bed applications requires the use of epoxy grout tile adhesive.

### TILES

Refer to colour schedule for type and location.

### RIGID SHEET UNDERLAYS

Refer to Tiled Rooms Detail Sheet D1.

### LIQUID WATERPROOFING MEMBRANE

Ardex Superflex™ wet area membrane (BRANZ Appraisal Cert 472(2005)).

### UNDERTILE HEATING

Proprietary electric undertile heating system complete with thermostat/controller.

### CEMENT BASED SCREED

Mix of 3:1 Portland cement, wash-mix sand, gauged with liquid polymer additive to the tile manufacturer's requirements.

### TILE ADHESIVE

AS2358 - Adhesives for fixing ceramic tiles

### GROUT

Cement based, compressible and to suit the particular location and intended use.

### MOVEMENT CONTROL JOINT SEALANT

To BRANZ Good Practise Guide: Tiling, section 5.0, Detailing.

#### 4. MATERIALS AND WORKMANSHIP

All tiling to be carried out and/or directly supervised by a competent tiler experienced with specified materials and techniques.

Ensure RPS Quality Homes client signed tile schedule is available onsite at all times. No work is to begin until the schedule is secured by the tiler and all required tiles are available. Any deviation from this is to be authorised by the Project Coordinator for the job.

##### ADHESIVE COMPATIBILITY

Adhesives selected for use on proprietary substrates or waterproof membranes to have documented compatibility approval from the respective manufacturers.

##### EXECUTION

Ensure surface is clean, dust free and dry. Set out to use whole tiles where practicable, or to give equal margins to cut tile.

Maintain constant joint widths as appropriate to tile type and grout in 1:3 cement: sand, coloured to match with tile schedule.

Clean thoroughly on completion with method appropriate to the tile.

##### HANDLING AND STORAGE

Take delivery of packets of tiles undamaged and dry. Handle tiles with care to avoid chipping, soiling and damage. Store on hard level standings in non-traffic, non-work areas that are enclosed, clean and dry.

##### CHECK TILES

Check tiles to ensure that they are as specified on tile schedule, from the same batch, of a consistent colour and pattern and sufficient to complete the work. Reject tiles that vary widely in colour or pattern. Reject tiles that are damaged.

##### CONFIRM LAYOUT

Before commencing work confirm the proposed layout of the tiles and any expansion joints and other visual considerations of the finished work.

##### SETTING OUT

Before commencing the setting out, confirm the number and location of cut tiles. Minimise in number with no cut tiles less than half size and only at the perimeter of the work.

##### SUBSTRATE

Ensure that all services and accessories are in place and located to suit the tile layout, with the substrate required for tiling work. Commencement of the work means the substrate and environment are accepted by the tile payer as satisfactory.

##### TEMPERATURE

Do not carry out tiling where the ambient temperature is below 5o C, or onto a substrate with a temperature higher than 40o C.

##### TILING GENERALLY

Prepare surfaces and carry out the tiling work in accordance with AS3958, Part 1, as modified by BRANZ Good Practise Guide: Tiling.

##### NEW CONCRETE AND MASONRY WALL PREPARATION

Air dry concrete walls for 4 weeks before applying mortar or adhesive. Remove all contaminants affecting bonding or adhesion by steam cleaning. Surface to finish clean and dry, with a texture giving a complete key.

### CONCRETE FLOOR PREPARATION

Remove from the surfaces all contaminants such as paints, oils, release and curing compounds. Remove all projections, unevenness and loose material to leave a clean, dust and dirt free surface. Remove all existing finishes down to the concrete. If the exposed concrete finish is not suitable then scabble the surface to expose the coarse aggregate.

### TIMBER FLOOR PREPARATION

Check floor for deflection is within 1/360th of the span. Remove from the surface all existing finishes, punch nail heads and sand to a smooth, clean, dust and dirt free surface.

### LAYING SHEET WATERPROOFING MEMBRANE

Install to manufacturer's requirements and to BRANZ Good Practise Guide: Tiling, 7.0 Waterproofing interior wet areas.

### APPLYING LIQUID WATERPROOFING MEMBRANE

Apply the Ardex Superflex™ wet area membrane (BRANZ Appraisal Cert 472(2005)) in accordance with the Ardex Superflex™ specifications.

### INSTALL UNDERTILE HEATING

Clean thoroughly and prepare as for tiling. Remove any paint overspray and plaster spills. Ensure that waterproofing is applied over the top of the heating elements in wet areas. Test circuits before and again after waterproofing has been done.

### LAYING CEMENT SCREED

Apply a proprietary cement slurry bond coat over the whole of the floor to the tile manufacturer's requirements. Mix and place a 40mm thick mortar bed over the bond coat and firmly tamp, screed surface by applying a further waterproof coating before laying tiles.

### FALLS

Form screeds in areas where water is used in significant amounts with a deviation from plane of not more than 5mm over 3 metres. Unless otherwise specified form screeds with the following falls:

1:40 minimum                      For tiled decks which also act as a roof

1:40 minimum                      For paving over ground

1:40 minimum                      For shower bases

1:40 minimum                      For accessible shower bases

1:50 minimum                      For commercial kitchens

### TILE FIXING GENERALLY

Apply adhesive, prepare and fix tiles by the method required of the adhesive manufacturer and tap them firmly into place. Use plastic joint spacers to regulate the joints.

### GROUTING

Remove spacers. Prepare joints, mix and apply proprietary grout and finish off to the grout manufacturer's requirements. Grout to finish uniform in colour, smooth and without voids, pinholes or low spots.

### MOVEMENT CONTROL JOINTS (CONSTRUCTION JOINTS)

Minimum width of 6mm, carried through tile bedding. Where substantial movement is anticipated, carry through any rigid backing to the structure. Install joints over expansion joints in structure, at junctions between different backgrounds, where abutting other materials, at storey heights horizontally and 3.0m vertically, at internal corners and at junctions between floors and columns. Ensure joints are clean, formed, filled with polyurethane foam and seal off flush with appropriately coloured approved silicone rubber or polysulphide sealant.

### CONTROL JOINTS (SHRINKAGE)

Control joints in substrate shall be carried right through tile beds. Joints shall be filled with an approved suitable flexible sealant material. Ceramic floor tiles shall be divided by control joints into areas not exceeding 10m<sup>2</sup>.

Terracotta floor tiles shall have control joints as above to areas not exceeding 10m<sup>2</sup>.

### CLEAN

Upon completion of setting and grouting, thoroughly sponge and wash the tiles to leave clean and blemish free. Finally, polish tiles with a clean dry cloth.

Any left over full boxes of tiles are to be returned to the supplier for a credit. All unused tiles are to be stacked into a neat pile in the garage.

## **5. CO-OPERATION**

Allow to co-operate with the Contractor and other sub-contractors in all phases of work. Give adequate notice to enable the Contractor to arrange any additional work or remedies required to complete tiling work.

## **6. WARRANTIES**

Tiler is to provide a written Producer Statement that states all waterproofing work has been carried out in direct accordance with the manufacturer's requirements and the BRANZ Good Practise Guide: Tiling. This statement is to be made available to RPS Quality Homes as soon as possible after the completion of the tiling work. This statement is required for the Territorial Authority to complete the Code of Compliance Certificate process. The issuing of this producer statement does entitle the layer to hold off the issuing until they have been paid for their work. This forms part of their works.