Jambs	1 coat undercoat, 2 coats enamel finish.
Walls	1 coat Gib sealer and 2 coats selected acrylic.
Wardrobes	1 coat Gib sealer and 2 coats selected acrylic.

Note : Contract provides for single selected colour throughout to finishing timbers, doors, scotias, ceilings, walls etc.

17. INSULATION

Pink Batts R2.2 to walls R3.2 to ceilings. (Garage not insulated)
Pink Batts Silencer between bedroom 2-5 internal walls.

18. FLOOR COVERINGS

AREA	As per plan
CARPET	To supply and install Jennian Knightsbridge range heavy duty 100% wool carpet on 9.50mm 95kg density Sovereign Plus Foam Underlay with smoothedge installation and naplock bars where required.
AREA	As per plan
VINYL	To supply and install three metres wide vinyl to $50 per m2, no coving allowed for.
AREA	Accessible Bathroom
VINYL	To supply & install Jacobsen Eminent Safe T, 2 Metre wide vinyl with coving up to 100mm high.

19. DRAINAGE

PC Sum allowed for works related to sewage and stormwater disposal from new dwelling only.
Confirmation of total costs should be obtained prior to authorisation of commencement of work.
1x 10,000L Tank fully buried provided for the disposal of stormwater and reticulation of toilets and outdoor taps.
Davey water pump to be located beside tank.

20. DOUBLE GARAGE

Dimensioned as per plan and constructed using material and finishes as previously outlined in this schedule.

Internal Linings	9mm Customwood - selected paint finish
Scotia	No 24 DF, fixed and stopped - selected paint finish.
Skirting	No. 2 60mm M.D.F - selected paint finish.

Garage Door	Standard Woodgrain Garador Steeline Colorsteel 1x 5400 and 1x 2600 Sectional garage door with automatic opener and 2 remotes. - selected standard colour. **No glazing allowed**.

22. 12 MONTH MAINTENANCE PERIOD

23. MASTER BUILD 7 YEAR GUARANTEE

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- 2 DEC 2005
KAPITI COAST
DISTRICT COUNCIL
00021

JENNIAN HOMES MANAWATU

GENERAL SPECIFICATIONS

Specification of the work to be done and the materials to be used for completion of the contract annexed here to

Mr B Prince

Lot number 3 DP 386409

This specification is to be read in conjunction with the accompanying drawings and any other drawing which may be issued during the Contract. The Contractor shall provide the Contract which is to be completed by all parties before the commencement of any work on the site. Any additions, omissions or variations to the Contract shall be notified in writing and signed by both parties. The owners are to ensure that all boundary marker pegs are in place and exposed for inspection.

Contract Documents
Plan drawings, specification, contract, quotation and schedule of material and works.

PRELIMINARY AND GENERAL (ALL TRADES)

1. Consent The main Contractor shall arrange to obtain all building, plumbing, sewerage consents and electrical permits and arrange all appropriate inspections excluding Code of Compliance inspection.

2. Protection of work All parts of the work liable to injury and all adjoining property, existing work, footways, trees etc. , are to be protected to the best of the Contractor's ability until completion of the Contract.

3. P.C. Sums (Net sums) The P.C. Sums quoted in this specification are net and the Contractor or sub-contractor concerned must add any fixing charges and profit he requires to all such items.

4. By-Laws The whole of the work in the Contract is to be carried out in strict accordance with the Local Authorities' regulations.

5. Insurance The Contractor shall at all times keep the whole of the works fully covered by insurance; manly contracts all risk and public liability.

6. Temporary Services The Contractor shall arrange for all temporary services of which the cost will be of the contractors care and remove same on completion of the Contract. If temporary services are not practical or available to connect to and permanent connections have to be made, then this connection fee is at the employer's expense, if not covered in the Contract.

7. Maintenance The Contractors shall maintain the property for a period of 31 days after completion, and any damage done, arising during that time through faulty workmanship, shall be made good at the Contractor's expense.

8. Completions On completion all trade debris is to be removed from the site, and the building left clean and ready for occupancy, with all services and mechanical parts in good working order.

EXCAVATOR

All to comply with NZ Building Codes B1/AS4, E1/AS1, E2/AS1.

1. Generally Excavate the site to the levels shown on the drawings where applicable.

2. Excavate As required for all wall footings, pile footings, steps etc, as shown on the drawings. Footing excavations are to be stepped to suit the slope of the ground, and kept level at the bottom, maintained free from fallen material before placing reinforcing or concrete foundations after . Deposit the surplus soil on the site, practical to the contractor, or as directed by the employer. Any excavations for power or water resources, or sewage and drainage to be refilled, but not reinstated to its original condition. Replanting or resealing of owners care.

CONCRETER

All work to be carried out strictly in accordance with NZ Building Codes B1/AS1/AS3/AS4, B2/VM1, E1/AS1, G15/AS1.

1. Materials Concrete to be mixed with a test of 17.5 mpa after 28 days. Reinforcement to be round mild steel rods or reinforcing mesh, as detailed, free from scale, paint, grease, etc. Formwork shall be erected and braced in such a manner that the concrete shall finish to the dimensions shown or specified. The formwork is to be hosed out and kept wet before and while the concrete is being placed.

   Concrete Work Construct the various footings as detailed on the drawings and reinforce as shown. Hard filling to be compacted Riverrun in layers of 150mm depth maximum with a topping of 50mm sand blinding. Thickness and reinforcing as detailed on the drawings. Allow to build in all, pipes, wires, etc, as required, prior to the pouring of the concrete.

3. Concrete Mix- Ready mix to be supplied onto site. Concretor to place, screed and float off to an acceptable finish.

Floor Slabs	17.5Mpa
Foundations	17.5 Mpa
Site Concrete	10.5 Mpa

CARPENTER

All Carpentry is to be carried out in accordance with NZS3604 1999 and the NZ building codes B1/AS1/AS2AS3/AS4/AS5, B2/VM1, E2/AS1, E3/AS1.

1. Construction All materials are to be as specified laid true to their various lines and levels and constructed in a proper tradesman like manner, to make the whole of the works a sound construction in accordance with the Building Code. All timber work abutting or resting on masonry units, concrete or brickwork is to be protected with a bitumen - fabric damp proof course. Foundation and floor dimensioned as per plan using 17.5mpa concrete over compacted hardfill. Roof framing is to be constructed with Engineer designed "Gangnail" Chem Free roof trusses fixed plumb, fastened to the plates with 2 x 100mm nails & Z nails and braced at each end of the building.

2. Exterior finish Behind all exterior wall linings and as detailed on the drawings, fit a breather type building paper, lapped 100mm. Wall areas are to be covered with exterior linings shown on drawings.
   Soffits and porch ceilings to be lined with flat hardies sheets. Build in the various exterior joinery frames. Fit head flashing.

4. Interior Finish
   Interior wall linings generally to be 10mm standard gibboard, with 10mm Gib Aqualine to wet areas, 10mm Gib Ultraline to ceilings, 10mm Gib Braceline as per bracing schedule fixed as per manufacturer's specifications. Wall linings of which the contractor is to take the utmost care of quality control but the responsibility of manufacturer's defects will not be rectified at the contractor's expense.

5. Plates to be in long straight lengths. MSG8 H3.1+ Bottom plates and MSG8 Chem Free wall plates to be butt jointed over continuous support, MSG8 H3.1+ top plates to be butt jointed and fastened with 4 NH nail plates. MSG8 H3.1 to exterior walls.

6. Studs are to be set out to accommodate 2.4m high wall lining sheets, and are to be held to the plates with two 100mm nails at each end, bowed studs are to be straightened with saw cuts, wedges and 100 x 25mm or 75 x 25mm strapping.

7. Nogging (dwangs) Shall be wall thickness 40mm spaced in rows at 800mm centres maximum, set out to accommodate the wall lining sheets and be nailed with two 75mm nails at each end.

8. Ceiling nogging (dwangs) to be set out to accommodate the ceiling lining sheets and cornices around the perimeter of each room.

9. Wall Bracing As per bracing schedule.

10. The wall frames are to be assembled, squared, braced and erected. The bottom plates are to be straightened and fastened down with 120x12mm Thru bolts 350mm from all corners and at 900 centres, the corners are to be plumbed both ways using a plumb bob and line and the top plates are to be held straight with temporary bracing until the ceiling and roof framing and bracing has been completed.

11. All joints nail holes and other imperfections are to be stopped flush and left ready for the paperhanger.

12. Shower Linings as per itemized in Schedule of Material and Works and fitted to manufacturer's specifications.

13. Ceiling Linings - see drawing. Nog for and building the various fittings as supplied under "Plumber" and trim around with splash boards where needed.

14. Interior doors are to be fitted with one and a half pairs of loose pin butts.

15. Skirtings to be fitted to the floor, scribed to internal corners and mitred at external angles.

16. Coat cupboard and wardrobes as per itemized in Schedule of Material and Works.

17. Linen, hot water cupboards as per itemized in Schedule of Material and Works.

19. Generally Form a ceiling access in a convenient and inconspicuous place. Co-operate with the Electrician in the building in of a meter box and the building of a switchboard recess and trimmed around as required. Supply and fix the sundry internal finishing mouldings and trim as required. All internal finishing timbers shall be free from all hammermarks, splits, etc. All nails in exposed work (interior and exterior) are to be punched.

PLUMBER AND DRAINLAYER

This work to be carried out strictly in accordance with the NZ Building Codes B1/AS1, E1/AS1, G1/AS1, G10/AS1, G12/AS1, G13/AS1/AS2, together with any relevant Local Authority Bylaws relating to such work.

1. Generally The whole of the plumbing and drain laying shall be done in strict accordance with The Building Code and drains shall be laid by registered workmen only.

2. Exterior Work Supply and fix all necessary flashings, lead caps, in conjunction with the builder to make a thoroughly watertight job. Supply and fix spouting to all eaves, laid with even falls to downpipes.

3. Water Service Lay on cold water from the main to a hot water cylinder, set up as shown on the drawings. Provide and set up, to comply with NZ4617 and maximum delivered hot water temperature not to exceed 55° 500L Greenglo HWC with Solar panels. Lay on hot and cold water services to the various fittings as shown on the drawings and to two hose taps positioned as on accompanying drawing.

4. AQUATHERM HOT AND COLD WATER SYSTEM

a. **GENERAL**

1.1 DOCUMENTS REFERRED TO
Documents referred to in this section are:

DIN 8077	Polypropylene (PP) Pipe dimensions
DIN 8078	Polypropylene (PP) pipes types 1, 2 & 3, General quality Requirements and testing.

1.2 MANUFACTURER'S DOCUMENTS
Manufacturer's and supplier's documents relating to work in this section are:

Fusiotherm® Pipe systems technical manual – For the application in sanitary and heating
Copies of the above literature are available by phoning 0-9-570 7204.

Requirements

1.3 QUALIFICATIONS
Plumbers to be certified Aquatherm Fusiotherm® installers, familiar with the materials and the techniques specified. Carry out all work under the direct supervision of a plumber registered under the Plumbers, Gasfitters and Drain layers Act 1976.

Warranties

1.5 MANUFACTURERS MATERIAL WARRANTY
Provide an Aquatherm GmbH materials and installation warranty in the suppliers standard form including NZ$ 5,000,000 cover for third party legal liability.

Warranty period:	10 years
From:	Date of completion of system testing

Performance

1.6 TESTING
Confirm the timing before carrying out any tests. Supply potable water and the apparatus needed. Ensure that any connected tapware is isolated before commencing testing. Test to Aquatherm Fusiotherm testing

procedures as applicable. Provide completed test records in the Aquatherm New Zealand Products Catalogue standard form

b. **PRODUCTS**

Materials

2.1 NO SUBSTITUTIONS
Substitutions are not permitted to any specified Aquatherm Fusiotherm® or associated products, components or accessories.

2.3 FUSIOTHERM POLYPROPYLENE PP-R 80 WATER PIPE
Fusiotherm® pipes to DIN 8077 and DIN 8078 complete with fusion welded fittings and accessories brand-matched.

Components

2.15 PIPE CLAMPS
Fusiotherm® proprietary pipe clamps and clips.

2.16 VALVES
Fusiotherm® proprietary valves and ball cocks as selected and required.

c. EXECUTION

Conditions

3.1 HANDLE AND STORE
Handle and store pipes, fittings and accessories to avoid damage. Store on site, under cover, out of direct sunlight, on a clean level area, stacked to eliminate movement and away from work in progress to Fusiotherm® Pipe systems technical manual, section 4 Installation principles.

3.3 FASTENING TECHNIQUE
Fix pipework using Fusiotherm® proprietary pipe brackets, spacing to Fusiotherm® Pipe systems technical manual, section 4 Installation principles. Ensure brackets are set out as fixed or sliding points Fusiotherm® Pipe systems technical manual, section 4 Installation principles.

3.5 IN CONCRETE INSTALLATION
Install directly in concrete to Fusiotherm® pipe installation procedures.

3.6 THERMAL MOVEMENT
Accommodate movement in pipes resulting from temperature change by the layout of the pipe runs, by expansion joints and by sleeving through penetrations. Install pipework to Fusiotherm® Pipe systems technical manual, section 4 Installation principles.

3.7 PIPE SIZE
Flow rates to each outlet to be no less than those given in NZBC G12/AS1: Water supplies, table 3, Acceptable flow rates to sanitary fixtures, with pipe size as determined in table 4, Tempering valve and nominal pipe diameters and the Fusiotherm® Pipe systems technical manual.

Application - jointing

3.8 FUSIOTHERM POLYPROPYLENE PP-R 80 WATER SUPPLY
Size the piping layout to eliminate loss of pressure at any point by simultaneous draw-off. Run pipes complete with all fittings, support and fixing, fusion weld joins and install to manufacturers specifications, all to NZBC G12/AS1: Water supplies. Conceal pipework and pressure test before the wall linings are fixed.

Application - distribution systems

3.9 COLD WATER INSTALLATION
From connection point, size the runs and branches to deliver the acceptable flow rate to NZBC G12/AS1: Water supplies, table 3, Acceptable flow rates to sanitary fixtures at each outlet. Allow for the expected concurrent use of adjoining fixtures. Lay out pipes in straight runs with support spacing to NZBC G12/AS1: Water supplies, table 7, Water supply pipework support spacing firmly fixed and buffered to eliminate noise and hammer, with preformed tee-connection take-offs and branches, with bends to Fusiotherm® requirements, complete with necessary valves and fittings.

5. Fittings Provide and set up the fittings as shown on the drawings and provide traps and wastes to bath, vanity units, sink top, shower tray stainless steel or similar. W.C's, tub, taps as selected. Exterior hose taps - brass.

6. Drains

Stormwater to be piped to 1x 10,000 litre concrete watertank.

Drains:. Sewer drains to be first quality pipes, 100mm laid with even falls and easy bends to a main connection as directed. Provide and fix all necessary gully traps, terminal and back vents, cleaning eyes, inspection junctions and bends etc, as may be necessary to comply with the local authorities' regulations.

7. **NOTE** All underground pipes and gullies will be located in relation to the natural ground level and no responsibility will be taken by the contractor for subsequent ground work, which alters that level.

JOINER

All work to be carried out strictly in accordance with NZ Building Codes B1/VM1, C2/AS1, E2/AS1 and F2/AS1.

1. Windows to be Aluminium
   Aluminium windows as per details supplied – see brick veneer details.
   Windows shall be delivered to the site, stored on edge and protected from breakages, damage, plaster splashes etc. Timber windows to be of the sizes and types as indicated on the drawings, of standard construction and high class workmanship. The windows are to be glazed with a standard quality Clear double float glass, with obscured glass to bathrooms and W.C. windows. Safety glass as per plans.

2. Doors Exterior door frames and doors are to be of standard sizes and of the types as shown on the drawing. Interior doors are to be flush type.

3. Fittings Construct the various units/tops as shown on the drawings.

ROOFER

All work carried out strictly in accordance with NZ Building Codes C3/AS1 and E2/AS1.

1. Generally Refer to the drawings for the type of roofing to be used.

2. Colour Tiles Tile battens are to be nailed firmly to the rafters, spaced to suit the gauge of the tile. Tiles to be laid with standard laps and nailed down in accordance with standard practices. Hips and ridges to be covered in like material.

BRICKLAYER

All work shall be in accordance with the requirements of NZS 3604:1999 or the current equivalent and NZS 4210:1989 "Code of Practice for Masonry Construction", as appropriate.

1. Materials Bricks to be delivered to the site in packets and 75% of them to be free from cracks and chipped edges. Mortar to consist of sand, cement and a liquid lime based plasticiser, mixed according to the manufacturer's directions.

   1.1 Bricks
   Allow for Austral Clay bricks – 230mmx70mmx76mm to be delivered on to site free from damage or defect.
   1.2 Mortar
   All Mortar used in the brickwork is to be composed of three parts sand to one part cement with one-tenth part hydrated lime mixed with a sufficiency of water. Allow for natural colour mortar.
   1.3 Weathering
   Allow to flush point all joints.
   1.4 Work
   Refer to elevations for areas of brickwork. All corners are to be plumbed both ways and the courses are to be level and straight. Mortar joints to be to manufacturer's specifications. Build in vermin proofing at

bottom plate level and galvanised ties spaces at not more than 450mm horizontally and 400mm vertically. Maintain a 40mm minimum cavity to be kept clear of all mortar droppings and to be drained and ventilated. Bricklayer to co-operate with carpenter to form weather tight seal between window and door frames using approved sealants Co-operate with the carpenter in the fixing in of all exterior joinery. Allow for, supply and fix bricks on edge for sills. Use sealant as required to form weather-proof sill.

1.5 Clean Down
Bricklayer must remove all mortar splashes and stains from face of completed work

INSULATION

1. Where applicable the building shall be insulated in accordance with NZ Building Code H1.

   Walls - Pink Batts R2.2
   Ceilings - Pink Batts R3.2
   Silencer batts to interior walls of bedrooms 2-5

ELECTRICIAN

1. Generally This contract includes the supply and installation of the electric wiring system complete. The whole of the work shall be carried out strictly in accordance with the NZ Electrical Wiring Regulations 1993 and NZECP 51 Domestic Premises – NZECP 2 Damp Situations. Electrical contractor is to obtain all permits from the supply authority and arrange for all inspections required.

2. Supply Arrange for a mains supply to the building.

3. Boards Provide and set up as required one meter board flashed as per drawing supplied with all necessary equipment neatly labelled. Provide and set up where directed by builder, a switchboard panel with all necessary fuses, switches and main switches properly mounted and labelled, and hinged on one side. This panel can be combined with the meter board if convenient.

4. Fittings Provide and fix the lights, switches and power outlets as listed on drawings, allow to install stove. Wire up the thermostatically controlled hot water cylinder element, earth all metal wastepipes and metal fittings as required by the regulations.

5. Completion On completion of all work to fill out and present the Certificate of Compliance to the principal contractor.

PAINTER AND PAPERHANGER

All in Accordance with NZ 7703:1985.

1. Generally All paint and polyurethane is to be delivered to the job, exactly to the manufacturer's direction and currently usable.

2. Exterior Woodwork - prime, stop and paint in one undercoat and one finish coat with a good finish. Stained work - one coat of stain, the nail holes etc. are to be stopped. Metal work, including spouting downpipes, wrought iron, one coat metal primer and one finish coat. Hardies sheets - two coats. Galvanised iron roof to be left unpainted.

3. Interior All ceilings to be given two coats of flat ceiling paint, or textured. All wall area to be painted. All other interior finishing woodwork to be primed, stopped, undercoated and finished.

CARPENTER

Material Schedule or to NZS 3604 - or as shown on accompanying drawing

MATERIAL	SIZE	GRADE
Note: Timber sizes noted are generally Ex Gauged Sizes		
Trimmer studs	90 x 45 mm, 75 x 35 mm	CHEM FREE INT H3.1 EXT MSG8
Wallplates	90 x 45mm	CHEM FREE INT H3.1 EXT MSG8
Top and bottom plates	90 x 45 mm,	CHEM FREE INT H3.1 EXT MSG8
Studs	90 x 45 mm,	CHEM FREE INT H3.1 EXT MSG8
Lintels	90 x 45 mm,	CHEM FREE INT H3.1 EXT MSG8
Nogging (dwangs)	90 x 45 mm,	CHEM FREE INT H3.1 EXT MSG8
Bracing	metal cut in	
Ceiling battens	70 x 35 mm	MSG8
Rafters	100 x 50 mm	H1.2+
Ridges and Hip rafters	100 x 50 mm	H1.2+
Roof trusses	Gangnail or similar	CHEM FREE
Tile Batten (tile roof)	50 x 40 mm	H1.2+
Eaves framing	75 x 40 mm	H1.2+
Fascia Boards	200x25mm Preprimed	H3
Interior door jambs	25mm	Custom wood
Architraves (if any)	No2	Custom wood
Skirtings	No 2	Custom wood
Scotia	Gibcove 55mm/No 24 to garage	Gib, Custom wood
Splashboards		Tiles
Shelving	25mm/300mm Customplanks	Customwood
Exterior trim	Mouldings as required	H3
Interior trim	Mouldings as required	MDF.

Building Consent Application — use this Checksheet for:

Single Residential Dwelling and Accessory Buildings

— including single stand-alone dwellings, dwelling additions and/or alterations, repiling, garages, decks, gazebos, sheds, retaining walls etc.

— An Application Form is attached to this checksheet —

(Please include this checksheet with your application)

Address of project: 40 Titoki Rd - Waikanae.

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

Please tick relevant box in the Customer Use column as you attach the information. If the box is not relevant to your application, write NA across the box. Please check each section carefully and complete those sections that are relevant to your project.

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

RECEIVED
- 2 DEC 2009
KAPITI COAST DISTRICT COUNCIL
00030

CUSTOMER USE ⇩ | *KCDC USE* ⇩

1. GENERAL

Complete this section for all applications

☑ a. **Building Consent Application Form** (1 copy) ☑

Completed and signed by the owner or by an agent on behalf of the owner.

☑ b. **Proof of ownership** (1 copy) KCDC to obtain ☑

One recent copy of **current** certificates/s of title (i.e. not older than 3 months) or where applicable one copy of purchase agreement (if recently purchased) or one copy of relevant portions of current lease

☑ c. **Locality Plan (1:500) showing:** ☑

Physical location of the subject building in relation to streets or landmarks, north point, name of building and lot and DP number.

☑ d. **Site Plan (1:100) showing:** ☑

Dimensions of all boundaries, north point, finished floor levels, ground contours (extended to boundaries) and/or levels, site area, street name and number, lot and DP number, outline of building, distance to boundaries and the position of swimming or spa pools. Include on the site plan the designated wind zone of the site (e.g. specific design, very high, high, medium or low).

☐ e. **Application Fee** ☐

Applications will not be accepted without payment of the appropriate fees. Fees payable are set out in the published fee schedule of the council that has jurisdiction over the project site.

For office use only Receiving Officer: Palmer

2. CHANGE OF USE

Complete for all existing buildings where the proposal involves forming a household unit where one did not exist before

Example: the conversion of a garage or shed into a residential unit

☐

a. Assessment of the building for compliance with the building code ☐

Section 115(a) of the Building Act 2004 requires that the building, in its new use, complies fully with all clauses of the building code.

☐

b. Reasonably practicable ☐

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

3. FOUNDATIONS / FLOOR

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

☑

a. Foundation Plan (1:100 / 1:50) showing: ☑

- Dimensions of all new foundations
- Sub-floor, including bracing
- Footing details
- If a concrete slab, show basic details including reinforcing and contractions joints
- Piles and footing
- If the addition is an upper storey show details on upgrading existing foundations, joints, piles etc
- Indicate ventilation to sub floor spaces

☐

b. Subfloor bracing ☐

Provide subfloor bracing plan and calculations for all piled structures. Where the structure is specifically engineered, this should be included with the structural calculations.
Subfloor bracing plan and calculations are required where an additional storey is to be added.

4. CONSTRUCTION

Complete for all new structures or alterations to existing structures.

☐

a. Existing floor plan (1:100 / 1:50) showing: ☐

(For additions and alterations only)

- All levels
- All designated spaces
- All removals
- Sanitary fixtures
- Smoke detectors

b. Proposed floor plans (1:100 / 1:50) showing:

- Room dimensions
- Location of partitions
- All designated spaces
- All floors (new or altered)
- Location of sanitary fixtures
- Stairs, barriers, handrails, floor joists and beams
- Floor joist layout for each level with timber floors
- Smoke detectors
- Note where wall will form part of the swimming pool fence

c. Pre-nail Truss and Frames:

- Specific design wall framing requires clarification
- Truss layout must be supported by design certification and design of fixing details, including consideration of load paths to ground
- Lintels carrying point loads, such as from girder trusses, require specific engineering design

d. Wall bracing plan (1:100 / 1:50) showing:

- Bracing details and calculations for wall bracing (also required for existing lower storeys where an additional storey is being added)
- Sub-floor bracing for decks projecting more than 2m from the house
- Location, type and number of bracing elements to indicate compliance with NZS 3604:1999 (include calculations)
- If the bracing was specifically designed by a structural engineer, provide calculations (required for specific design wind zones and lateral distribution of upper floor loads where lower storey bracing is provided in walls beyond the upper storey footprint)

e. Sections and details (1:50 / 1:20 / 1:10) showing:

- Foundation details involving reinforcing and connections
- Stairs, handrails, decks and decking
- Insulation systems and materials to floors, walls and roof
- Barriers providing safety from falling. Specific engineering design required where detail does not comply with NZBC B1/AS2
- Framing sizes, beams, lintels
- Roof cladding, eaves, fascias, gutters
- Flashings to openings
- Fire rated systems on all walls – closer than 1 metre to boundary
- Stud heights of rooms and total height from lowest ground floor level to top of ridge
- Window and door installation details
- Retaining wall details e.g. type, height of retained ground, relationship to boundary, waterproof membrane and proposed drainage

☐ **f. Fire Report:** ☐

For domestic dwellings of 4 storeys or more, or buildings providing more than one household unit

5. EXTERNAL

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

☑ **a. Elevations (1:100 / 1:50) showing:** ☑

Accurate lines form boundary to boundary on each elevation, relevant District Plan daylight control lines, the maximum height on each elevation, location of door and window openings, fixed and opening sashes, sill heights, floor levels in relation to ground levels, exterior cladding nominated to all elevations, down pipes and spouting, ventilators to sub-floor area (suspended floors only)

☑ **b. Risk assessment** ☑

(Risk matrix in E2/AS1 may be used for buildings within scope)
Consider exposure, design and detailing to support appropriate selection of cladding

☑ **c. Cladding details (1:50 / 1:20 / 1:10)** ☑

Provide details around all penetrations, joinery and other junctions at a level appropriate to the level of risk e.g. roof/wall, balcony/wall, junction of different types of cladding, back flashing details for cavity systems

☐ **d. Production certification** ☐

Supply copies of product certificates relied on as compliance documents

☐ **e. Alternative solutions** ☐

If the proposal uses products or systems that are not covered in the Acceptable Solutions of clause E2 of the building code provide supporting current information including test results (fully signed reports), case studies, expert opinion (including evidence of experience/qualification, basis for forming opinion and statement of independence) etc to demonstrate compliance.

6. SERVICES

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

☑ **a. Plumbing and Drainage plan 1:100 / 1:50) showing:** ☑

Note: if you have supplied drainage details for surface water disposal on the site plan, no drainage plan is required.

- Sizes of pipe work and drains
- Fixtures and fittings, hot water system(s)
- If the building is more than one storey with sanitary fittings on upper floors, provide an isometric layout showing wastes, pipes and falls
- Drainage layout with inspection bends and junctions indicated for both sewer and storm water
- Any other drainage on site including council mains and retaining wall field drains
- Ventilation of sanitary rooms
- Calculations for sizing of down pipes
- Gully traps including overflow relief gullies

7. STRUCTRAL

Complete for all projects incorporating specific structural design

a. Structural calculations

If any design work required the services of a structural engineer, attach 2 copies of the calculations with this. The calculations must be prefaced with information explaining the design philosophy and justification of assumptions and methodologies used in analysis

b. Expert Opinion (Producer Statements):

If this application for consent relies on any expert opinion including producer statements certifying compliance with the New Zealand Building Code, a copy must be attached with this application. (Note all structural producer statements are required to have accompanying calculations)

8. SPECIFICATIONS

Complete for all applications

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

a. Specification: General

- Elements of structure (size, spacing, timber treatment)
- Finish or fixings to meet durability requirements
- Plumbing and drainage materials and design that installation is to comply with
- Wet area surfaces
- Ventilation systems
- Flooring slip resistance for access routes
- Glazing
- Type of smoke detectors (including existing smoke detectors where they will remain)

b. External claddings

For each of the following claddings provide details of the product name, manufacturer, maintenance requirements and warranties offered

- Building wraps
- Wall claddings
- Roof claddings
- Membranes (roof and decks)
- Tanking
- Joinery

9. DEMOLITION / REMOVAL

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

a. Means of barricading the site

Provide details of temporary barriers, gates which swing inwards or other means of restricting public access to the area

b. Proposed tipping location for demolition materials (address/landfill)

☐ **c. Hazardous building material** ☐
Provide safety plan detailing the safe handling and disposal of hazardous materials

☐ **d. Site management plan covering** ☐
Management to control silt runoff, noise and dust

☐ **e. Proposed destination for relocate building** ☐

☐ **f. Access to and from the site including (use of kerb crossings)** ☐

☐ **g. Specify termination of existing services** ☐

- Water
- Sewer
- Storm water

☐ **h. Details about the building such as:** ☐
Number of storeys, type of materials the building is constructed (Photographs of the building would be useful)

Note
You will need to contact the relevant service authorities specified below to advise them of the extent of your work:
Electricity, gas, drainage, water, transport, telecommunications, cable television or any other services that may be affected.
Transportation of relocated building
You will be required to contact and provide details to Councils Transportation and Traffic Department.

10. OTHER APPROVALS

Please check territorial authority regarding the requirement for other approvals required and fees payable. These may include:

- Consents under the Resource Management Act
- Approvals under bylaws including earthworks, vehicle crossings, road openings and water connections.

Show the location of swimming or spa pools on the property and describe how compliance with the fencing of Swimming Pools Act will be achieved.

The issue of a building consent does not relieve the owner of any duty or responsibility under any other act.

The following Councils developed this checksheet in partnership: Kapiti Coast District, Porirua City, Wellington City, Hutt City, and Upper Hutt City.

Checklist for Water Demand Management Declaration of Compliance

The Kapiti Coast District Council now requires any new or relocated homes in residentially zoned areas that have access to full reticulated water supplies to install water saving devices.

As part of these requirements, the applicant needs to complete and submit the Water Demand Management Declaration of Compliance document with their Project Information Memorandum (PIM)/Building consent.

Please note that the applicant's manifold or toby may need replacing with a new manifold restrictor unit. This will be at the applicant's expense and the Council will invoice the applicant.

CUSTOMER USE		KCDC USE
	Please complete the following	
☑	a. **Water Demand Management Declaration of Compliance form** (1 copy) completed and signed by the owner or by the agent on behalf of the owner	☑
☑	b. If your section has an existing water connection, this may need to be modified to accommodate the rainwater tank top-up connection. The cost will be invoiced to the home owner.	☑

KCDC Building Consent Authority
Building Consent Documentation Filed

RECEIVED
- 2 DEC 2009
KAPITI COAST
DISTRICT COUNCIL
00033

BC No.	BC090914
Street Address	**New Dwelling** **40 Titoki Road** **WAIKANAE**

Tick indicates document(s) included in this Building Consent

Building Consent Application,	✓
Application checksheet,	✓
Costing schedule,	✓
Plans and specifications,	✓
Invoice and receipt,	
Processing records/checksheets,	
Inspection page printouts	
1, 3-6, 8+17, 19-26, 36-58, 66, 67	
Building consent and memorandum,	✓
Inspection reports,	✓
Application for CCC,	✓
Code of Compliance Certificate.	✓
Producer statements and supporting documentation,	✓
Peer review documents,	NIL
Fire design documents,	NIL
Requests for further information and other correspondence,	NIL
Amendments,	NIL
Supplementary information,	NIL
Energy work certificates,	✓
Notices to Fix.	NIL

This form comprises part of the Building Consent documentation and indicates the contents of the Building Consent File. Refer KCDC Policy 029.

Form 43 **New Dwelling**
40 Titoki Road
WAIKANAE

BC.....

ECKLIST

RECEIVED 00031 - 2 DEC 2009 KAPITI COAST DISTRICT COUNCIL

No = Plan
Building Code &/or Bld. Act (The reason specified alongside each prompt) *
Yes = Plans , specifications & documentation complying with the
Building Code &/or Bld. Act (The reason specified alongside each prompt)
N/A = Not Applicable to this application. (The deletion of whole sections as N/A is permitted)
For alternatives comment below each section.
Note – The further information requests are identified by hand written numbers and corresponding on FIR letters / e-mails sent

Category 2

Site Plan (*NZS 3604 Sec 3.4, 4,5 Code clB1, B2,E1, E2 F1&F2* Sect. 72, 75 BA04)

N/A NO YES — *Comments*

- ☐ ☐ ☑ Wind.zone High V/ High Specific.....GIS
- ☐ ☐ ☑ Flooding / ponding hazards .....GIS
- ☐ ☐ ☐ Slippage/ fault line hazards ..... GIS
- ☐ ☐ ☐ Erosion, river & coastal hazards .....GIS
- ☐ ☐ ☑ Subsidence/ soft soil hazards ..... *Site inspection notes* ....apears satisfacting at 300
- ☐ ☐ ☑ Corrosion zone *Sea spray* or Zone *1* .....GIS
- ☐ ☐ ☐ Soil contamination ..... GIS
- ☐ ☐ ☑ Distances to boundaries / siting..... *District plan*
- ☐ ☐ ☐ Floor levels/ contours.....E2/AS1 & *NZS 3604 E1*...Ponding Zone + on building site please indicate floor levels.
- ☐ ☐ ☐ Two or More Allotments.....Sec 75 – 83 Bld Act
- ☐ ☐ ☐ Noise / sound insulation (airport & highway)

Specific Design (*Verified Online PS2 B1 B2 VM1*)

Comments

- ☐ ☐ ☑ *PS1* Design Certificate *B1 B2 VM1*
- ☐ ☐ ☐ *PS2* Peer Review..... *B1 B2 VM1*
- ☐ ☐ ☑ Calculations *VM1*
- ☐ ☐ ☑ CPeng ..... *Verified Online*

Garage lintel and supports
PA Johnstone Cpeng 200k Profesional indemnity

Concrete / Foundation Plan (*NZS 3604 NZS 4210 & 4229 E2/AS1*)

Comments

Layout

- ☐ ☐ ☑ Layout dimensions..... *NZS 3604*
- ☐ ☐ ☑ Control joints..... *NZS 3604*
- ☐ ☐ ☑ Slab thickening..... *NZS 3604*, cl 7.5
- ☐ ☐ ☐ Alternative.....*specify reason*

Section

- ☐ ☐ ☑ Depth & width..... *NZS 3604*
- ☐ ☐ ☑ Reinforcement..... *NZS 3604;B2*
- ☐ ☐ ☑ Plate fixings..... *NZS 3604:B2 cl 7.5*
- ☐ ☐ ☐ DPM ..... *NZS 3604;B2*...Mortered slope recommend
- ☐ ☐ ☑ Engineer design and Calcs.....*B1;B2*
- ☐ ☒ ☐ Concrete strength.....*B1;B2 cl 4.8.2*...17.5 Mpa should be 25 in SS zone
- ☐ ☐ ☐ Alternative.....specify reason

Timber / Subfloor Plan *(NZS3604 NZS 3602 & 3640 , B1,B2)*

Comments

Layout

N/A NO YES

- ☐ ☐ ☐ Layout dimensions.....
- ☐ ☐ ☐ Bearers details.....*B1 ; B2*.....
- ☐ ☐ ☐ Joist details.....*B1:B2*.....
- ☐ ☐ ☐ Alternative.....specify reason.....

Section

- ☐ ☐ ☐ Foundation type/size..... *NZS 3604;B2*.....
- ☐ ☐ ☐ Piles post sizes & treatment ..... *NZS 36043602;3640;B2*.....
- ☐ ☐ ☐ Pile c/c..... *NZS 3604*.....
- ☐ ☐ ☐ Fixing..... *NZS 3604:B2*.....
- ☐ ☐ ☐ Coatings(durability)..... *NZS3604 ;B2*.....
- ☐ ☐ ☐ Ventilation& Access to sub floor spaces ..... *NZS 3604*.....
- ☐ ☐ ☐ Alternative.....specify reason .....

*

If the addition is an upper storey show details on upgrading existing foundations, joints, piles, etc (may require Engineer design)

Floor plans / layout *(B1, B2, C1-4, D1, E3, F7, G1, G2, G12 G3, G9, G11, G13)*

Comments

General

N/A NO YES

- ☐ ☐ ☑ Room dimensions.....
- ☐ ☐ ☑ Sectional lines.....
- ☐ ☐ ☑ Location of partitions.....
- ☐ ☐ ☑ All designated spaces.....
- ☐ ☐ ☑ Lintels..... *NZS 3604:B2*..... Hy Calculation sheets. By Prenailer
- ☐ ☐ ☑ Beams..... *NZS 3604, B2 by engineer*.....
- ☐ ☐ ☑ Point loads by engineer or prenailer....*B1 B2*.....
- ☐ ☐ ☐ Smoke detectors.....*F7* ..... Fire report for
- ☐ ☑ ☐ Wet areas / WCs ..... *D1, Table 2;* B2..... Tech spec for membrane.
- ☐ ☐ ☑ Kitchen.....*G3, G9,G11.* .....
- ☐ ☐ ☐ Alternative.....specify reason .....

Changes to existing work requires both an existing floor plan & a proposed floor plans
Facility provided for washing utensils / food G3, Section 1.1 & Figure 1:
Preparation Area and Access to Facility Paragraphs 1.1.2 and 1.5

VSD

Wall / Framing B1, B2, E3

Comment

General

- ☐ ☑ ☑ Identify engineering / Structural items/ portals. .....*B1 B2*..... Trusses over 12m support.
- ☐ ☐ ☑ By prenailer or to NZS 3604..... .....*B1 B2*.....
- ☐ ☐ ☑ Fixing types ..... *NZS 3604*.....*B1 B2*.....
- ☐ ☐ ☑ Stud c/c as per wind zone.... *NZS 3604*.....*B1 B2*.....
- ☐ ☐ ☑ Building wrap..... *NZS 3604* ..... Carcrup
- ☐ ☐ ☑ Stud heights of rooms..... *NZS 3604*.....*B1 B2*..... Tech specs & selection tables for
- ☐ ☑ ☐ Alternative.....specify reason ..... Proprietary lintels - prenailer ✓

Roof..... *NZS 3604,3602 &3640 B1B2E2 E2/AS1*

Comments

Trussed / by prenaller or Framed roof *NZS 3604*

N/A	NO	YES	
☐	☐	☑	Fixing layout & details.....*B1 B2*
☐	☐	☑	Correct layout.....*B1*
☐	☐	☑	Max span (12m or Engineer).....*B1* Ridge 15m by Prenailer
☐	☐	☑	Purlin or batten c/c....*B1 B2*
☐	☐	☑	Rafters / Beams.....*B1 B2*
☐	☐	☐	Alternative.....specify reason

Roof cladding - Metal ; Profiled Metal; Masonry, Membranes *Code E2, E2/AS1 B2*

☐	☐	☑	Pitch / profile.....*E2* 15°
☐	☐	☑	Underlay.....*E2*
☐	☐	☑	Flashings.....*E3;E2.....B1 B2*
☐	☐	☐	Parapets.....*B1 E2 B2*
☐	☐	☐	Membrane Roofs and substrate *Code E2/AS1 B2*
☐	☐	☑	Gutters, Barges & Fascias detail *Refer E2, section 8.3, cl 8.3.9*
☐	☐	☐	Alternative.....specify reason

Installation of profiled metal roof cladding shall be by trained installers, approved by the tile manufacturer or NZ agent. In some cases experienced builders undertake installation, refer E2, section 8.4, cl 8.4.2 'General'.

Claddings *CodeB1 & B2 E2/AS1,Branz good practice Guides &,Weather tightness Vol 12&3*

Comments

☐	☐	☑	Risk matrix Cavity or direct.....*E2* Low risk
☐	☐	☑	Brick Veneer.....*E2 "The brick book" Branz Masonry Guide ; B2*
☐	☐	☐	Timber Weatherboard ....*E2 Branz Timber Guide Vol 1&2; B2*
☐	☐	☐	Stucco .....*B1 NZS 3604 Branz good practice guide; B2*
☐	☐	☐	Profiled Metal.....*E2 Metal Roofing Practice; B2*
☐	☐	☐	Plywood .....*E2 ; B2*
☐	☐	☑	Fiber Cement W/b.....*E2; B2* .....
☐	☐	☐	Board & Batten..... *Branz good practice guide; B2*
☐	☐	☐	Fiber Cement Sheet.....*E2; B2*
☐	☐	☑	Weathertightness details.....*E2` ; B2*
☐	☐	☐	Alternative.....specify reason

Bracing *NZS 3604* B1, B2, E3

Comments

N/A	NO	YES	
☐	☐	☐	Subfloor bracing.....B1& *NZS 3604*
☐	☐	☑	Wall bracing..... B1 & *NZS 3604*
☐	☐	☑	Roof bracing..... B1& *NZS 3604*
☐	☐	☑	Bracing calculations..... B1 & *NZS 3604*
☐	☐	☑	Provide bracing plan layout..... B1 & *NZS 3604*
☐	☐	☐	Double top plate (if > 5m)..... B1 & *NZS 3604*
☐	☐	☐	Indicate dragon tie (if > 6.m)..... B1.& *NZS 3604*
☐	☐	☑	Diaphragm ceilings (if > 7.5m)..... B1 & *NZS 3604*
☐	☐	☐	Check for distribution ..... B1 & *NZS 3604*
☐	☐	☐	Alternative.....specify reason

Light & Ventilation *B1 G4, Clause 1.2 ; G4, clause 1.3* G7,G9 F2

General

Comments

N/A NO YES

- ☐ ☐ ☑ Vent 5%.....*G4*
- ☐ ☐ ☑ Light 10%.....*G7*
- ☐ ☐ ☑ Electrical.....*G9*
- ☐ ☐ ☑ Mechanical ventilation.....*G4*
- ☐ ☐ ☑ Exterior space for awareness.....*G7*

Glazing

- ☐ ☐ ☑ Safety glass.....*F2*
- ☐ ☐ ☑ Wind zone..... *B1. NZS 3604*
- ☐ ☐ ☐ Alternative.....specify reason

Insulation *BRANZ Home Insulation Guide, NZS 4218, AS/NZS 2918*

Comments

- ☐ ☐ ☑ Floor *H1*
- ☐ ☐ ☑ Wall..... *H1*
- ☐ ☐ ☑ Roof..... *H1*
- ☐ ☐ ☑ Windows / glazing..... *H1*
- ☐ ☐ ☐ Alternative.....specify reason

Stairs / Landings / Handrails *D1,sec 4*

Comments

- ☐ ☐ ☐ Stair tread & risers.....*D1*
- ☐ ☐ ☐ Landing size.....*D1*
- ☐ ☐ ☐ Handrail.....*D1*
- ☐ ☐ ☐ Riser opening (min) where children.....*D1*
- ☐ ☐ ☐ Residential Accessibility.....*D1*
- ☐ ☐ ☐ Alternative.....specify reason

Stair type
Minor Private: Max rise 220mm/Min tread 220mm,
Secondary Private: Max rise 200mm/Min tread 250mm,
Main Private: Max rise 190mm/Min tread 280mm. (Main private includes exterior stairs)

Decks / Balconies / Barriers *D1, F4 & NZS 3604, Section6 & 7,*

Comments

- ☐ ☐ ☐ Barrier & deck fixing durability.....*D1 B1 B2*
- ☐ ☐ ☐ Top rails, balusters, bottom rails, palings.....*D1 B1*
- ☐ ☐ ☐ If Engineer then calculations required.....*B1 B2*
- ☐ ☐ ☐ Max 3m height or Engineer.....*B1 B2*
- ☐ ☐ ☐ Deck joist sizes, grade, treatment, span & spacing.....*D1 B1 B2*
- ☐ ☐ ☐ Piles & bearers the correct grade, treatment, size, spacing & span.....*D1 B1 B2*
- ☐ ☐ ☐ Slip resistance *D1*
- ☐ ☐ ☐ Appropriate waterproofing membrane..... *B1 B2*
- ☐ ☐ ☐ Stringer size & connections *D1 B1 B2*
- ☐ ☐ ☐ Thresholds.....*D1 E2*
- ☐ ☐ ☐ Alternative.....specify reason

Fire *(Residential) NZBC F7;Cdoc*

Comments

N/A NO YES

- ☐ ☐ ☑ Travel distances max 24m.....C3.15..... also refer to Fire report.....
- ☐ ☐ ☐ Smoke detectors.....F7..... refer to fire report.....
- ☐ ☐ ☐ Wood burners .....F7.....
- ☐ ☐ ☐ Garage fire wall details .....C7 (C7.10 C7.8) .....
- ☐ ☐ ☐ Alternative.....specify reason .....

Swimming Pool & Fencing *Fencing of Swimming Pools Act 1987'*

Comments

- ☐ ☐ ☐ Refer to Compliance for sign off.....
- ☐ ☐ ☐ Specific Engineering Design .....
- ☐ ☐ ☐ Proprietary system/design.....
- ☐ ☐ ☐ Section/construction .....
- ☐ ☐ ☐ Pool backwash discharging the sewer.....
- ☐ ☐ ☐ Fence height .....
- ☐ ☐ ☐ Gate(s) / door(s) open outward.....

Ambiguity / Contradictions

Comments

- ☐ ☐ ☐ Manufacturers Specs .....
- ☐ ☐ ☐ Engineer compared with Designer/Architect .....
- ☐ ☐ ☐ Any Other contradictions .....

Alternative Solutions

Record assessment, decision and reasons for decisions below. Has the designer substantiated why they believe the proposal complies with the building code? Is there a determination on a similar proposal? Has corroborative evidence been provided (peer review, appraisal or determination)? Include reference to comparison with acceptable solutions, other documents / standards / best practice guides / publications, expert opinion, determinations, in-service history, product certification, professional judgment, building code objectives. Refer BRANZ Bulletin # 456 (Dec 2004). List any conditions / communications / actions:

This sheet relevant to plumbing & drainage only

General

Comments

N/A NO YES

- ☐ ☐ ☑ Kitchen area.....G3/AS1
- ☐ ☐ ☑ Laundry.....
- ☐ ☐ ☑ Bathrooms.....
- ☐ ☐ ☑ Location of sanitary fixtures.....
- ☐ ☐ ☑ Plumbing layout.....

Plumber's Reg no.....?..... Drainlayers Reg no.....?.....

Effluent Disposal Systems

Comments

- ☐ ☐ ☐ Engineering Site Investigation
- ☐ ☐ ☐ Design Specification & Producer Statement

(The design criteria should include; Capacity based on bedroom numbers, Loading calculation, site evaluation, soil profile, site characteristics.)

Water Supplies

Comments

- ☐ ☐ ☑ G 12 .....
- ☐ ☐ ☑ Town supply,.....
- ☐ ☐ ☐ Private scheme.....Metered supply required + plan change 15 as well.....
- ☐ ☐ ☑ Type & location.....
- ☐ ☐ ☐ Alternative.....specify reason.....

Sanitary Drainage

Comments

- ☐ ☐ ☑ G13.....
- ☐ ☐ ☑ Layout .....
- ☐ ☐ ☑ Council availability or .....
- ☐ ☐ ☐ Septic tank design & calcs.....
- ☐ ☐ ☐ Alternative.....specify reason

Stormwater Drainage

Comments

- ☐ ☐ ☑ E1 .....
- ☐ ☐ ☐ Layout .....
- ☐ ☐ ☐ Council availability .....
- ☐ ☐ ☐ Alternative.....specify reason

* 100mm SW drain 7 300m²

Sanitary Plumbing

Comments

- ☐ ☐ ☑ G13 .....
- ☐ ☐ ☑ Layout .....
- ☐ ☐ ☐ Alternative.....specify reason .....

Accessibility D1 ; NZS 4121

Comments

N/A NO YES

- ☐ ☑ ☐ Car parks
- ☐ ☐ ☐ Projections
- ☐ ☐ ☐ Kerb Ramps
- ☐ ☒ ☐ Footpaths/Ramps / Landings
- ☐ ☒ ☐ Entrances
- ☐ ☐ ☐ Public Facilities
- ☐ ☐ ☐ Lifts
- ☐ ☐ ☐ Stairs
- ☐ ☐ ☐ Stair / handrails
- ☐ ☐ ☑ Doorways/Doors/Corridors/ Lobbies
- ☐ ☐ ☐ Controls
- ☐ ☐ ☐ Places of assembly/entertainment/Recreation
- ☐ ☐ ☑ Warning Systems
- ☐ ☒ ☐ Toilet Facilities / ~~Laundering~~ Is the house laundry being used by the guests
- ☐ ☒ ☐ Food preparation / accommodation
- ☐ ☒ ☑ Signs

Fire report C1,C2, C3, C4

Comments

- ☐ ☐ ☑ Purpose group FHC — SR + SA
- ☐ ☐ ☑ Fire cell separation /use of building — 30/30/30
- ☐ ☐ ☑ f- rating — FO
- ☐ ☐ ☑ s- rating — S30
- ☐ ☐ ☑ Occupancy numbers — 8 / 2 By Beds
- ☐ ☐ ☑ Means of escape — ✓ / ✓
- ☐ ☐ ☑ Travel distances — 11.4 Closest boundary
- ☐ ☐ ☑ External walls/unprotected areas — 45/45/45 provided
- ☐ ☐ ☑ Fire resistance to supporting elements/floors/ walls. — NA
- ☐ ☐ ☐ Risks to/below escape routes — Fire Hydrant required.
- ☐ ☒ ☑ Fire safety precautions — Calculated and options provided SFI 2 + SDI 5
- ☐ ☐ ☑ SFI's / SDI's — Fire Service Access and fire hydrants SNZ PAS 4509 2008
- ☐ ☐ ☐ Alternatives
- ☐ ☐ ☐ Referal to DRU
- ☐ ☐ ☐ Alternative.....specify reason

→ Interlenancy STC = 55 through wall
→ Please provide STC for fire door
Access for fire Appliances or → DRU Alternative.

Solid waste G15

Comments

- ☐ ☐ ☐ Waste bin area
- ☐ ☐ ☐ Environmental health referral
- ☐ ☐ ☐ Alternative.....specify reason

Fire hydrant at begining of drive
Aprox 70 m - 75 m to middle of site
consent is given for 18 C as an acceptable

Hazardous Agents, Materials & substances F1 - F3

Comments

- ☐ ☐ ☐ Waste bin
- ☐ ☐ ☐ Environmental health referral

solution not the alternative SNZ PAS 4509: 2008

Work Sheet

(1) Recommend mortered slope to brick cavity base detail
(2) Finished floor levels above mean sea level / Q100 ponding.
(3) Concrete strength exposed concrete 25mpa minimum
(4) Technical specification for wet area membrane.
(5) Accessible route carpark → paths → entrances

→ (7) Savona Central heating system details.

		FHC1	FHC1
(1)	Purpose Groups	SR	+ SA
(2)	Numbers	8	2 → by bed numbers
(3)	Means of escape ok less than (24) ~~and 60~~		
(4)	SR FHC 1 single floor		= 1 + 16
	Domestic smoke alarm system		
	Visability in escape routes		
	SA FHC 1 single floor		= 5 of 16 18c
	Automatic fire alarm system of not required.		
	Visibility in escape routes not required		
	Fire Hydrant system or access Provide details		
(5)	F Ratings = 0 for each wall		
	Av = 4 + 3.4 + .48		= 7.88 Glass doors
	Af = 34.4 + 4.8		= 39.2
	AH = 0		= 0
	AV/Af = .20		
	AH/Af = 0		S = Kte
	K = 1.0		
	te = 30		
	Kte = 1 × 30 = S30		

6 SR/SA Says seperation by F rating or 30/30/30 whichever is greater

7 Door
STC Fire door only 33 not 55 but as the occupants of the homestay room are under the control of the dwelling I see no issues with the lesser rating is fine fire resistance

General stamp prompts

Wind Zone
Corrosion
Cladding
Electrical
Bracing Highlighted
Boundary setting out
Engineers design

Set Status
Complete checklist
Addenda
Section 72 / ponding
Set inspections

Dialogue Record

List further information requested , info received , records / reference of communication etc. via Phone / Email / letter / counter / fax

Date /time	State the content of discussion !!!	Initials
15/02	Spoke with Jemma said I would do in morning.	SM

Change Of Use – Sec 114: *(record decisions and basis for decisions – confirm whether sec 115 applies)*		.....
Date	NA	
Alteration to Existing Building – Sec 112: *(record decisions and basis for decisions – confirm whether sec 118 applies and if so, has it been complied with?). List conditions / communications / actions:*		.....
Date	NA	
Hazards – Sec 71-74 : *(record decisions and basis for decisions – see under "site plan above already done")*		.....
Date:	NA	
Compliance Schedule – Sec 100 - 107: *(record if new / amended compliance schedule required, and attach copy of replica compliance schedule. Ensure that note is recorded on building consent that new / amended compliance schedule will be issued).*		
Date	NA	

Note :- Refer to the associate code clause along side each prompt above for compliance or reason of decision **Plan checked yet Unsatisfactory** (request for further information- see attached copy)	I am satisfied on reasonable grounds that the provisions of the Building Code are met and the **Building consent may be granted (refer Bld Act Sec 49(1))** All previous Further Information Requests now satisfactory.
Signature, name & date Bldg..... 11-02-10	**Signature, name & date** Bldg..... 29.02.10 (for all pages except those listed below)
Plumbing..... —	Plumbing..... Simon Cox 9/12/09 (For pages 6 of 11 unless otherwise listed)
Fire.....	Fire..... 29-02-10 (As listed on page 7 of 11)

Processing Check Sheet
for
Project Information Memorandum (PIM)

Property Address: 40 Titoki Road Waikanae.					
Legal Description: Lot: 3 **DP:** 386409					
Building Project: New Dwelling.					
Building Consent/PIM Number: BC 090914					
Zone: Residential.					
Items to check	**Yes**	**No**	**Action reqd**	**Actioned**	**Date & Signature**
Certificate of Title	✓				
Easements	✓		see attached CT.		
Section 221	✓		Include copy of S221		
Section 72			Advise Approvals Team of S72 reqd		
Existing Resource Consent	✓		Include copy RM090169 Land Use - Homestay. 100037		
District Plan features			abuts Coastal Zone Bores & Wells.		
Designations	✓		Airport Conical Surface.		
Heritage register		✓			
Flood hazards	✓		Flood Control Area & Ponding.		
Min floor level reqd			Advise F.F.level		
Other hazards		✓			
EQ faults		✓			
Services	✓				
ECO sites		✓			
Yards		✓	Neighbours approval for one yard encroachment		
HIRB		✓			
Maximum height		✓			
Site coverage		✓			
Earthworks					
Permeable surface area		✓			
Onsite parking		✓			
DIF fees		✓	Calculate fees		
Recourse Consent reqd	✓		Apply Section 37		

Decision: *(delete items that don't apply)*
~~Application complies and PIM can be issued.~~
PIM can be issued subject to section 37 Certificate
~~PIM is refused~~

J. Burke 8/4/10.
RM 100037.
Granted 7-4-10.

RECEIVED
- 2 DEC 2009
KAPITI COAST
DISTRICT COUNCIL

KAPITI COAST
DISTRICT COUNCIL

Project Information Memorandum No. 090914P.

Building Project.

New Dwelling
40 Titoki Road
WAIKANAE

This application is cross referenced with RM090169

FOR OFFICE USE ONLY

FEES		PIM Fee	$.....
	$.....		
	$.....	RECEIPT NO.	DATE .....
	$.....		
	$.....	INVOICE NO	DATE .....
	$.....		
	$.....	RECEIPT NO	DATE .....
SUBTOTAL	$.....		
Less Deposit Paid	$.....		
TOTAL	$.....		
GST INCLUDED	$.....		

PROJECT INFORMATION MEMORANDUM

Section 34, Building Act 2004

Building Consent Number:	**BC090914P**
Applicant Name:	**Jennian Homes Manawatu Ltd**
Applicant Address:	**74 Kimbolton Road**
	Feilding
Application Date:	**2009-12-02**
Pim Decision Issued:	**2010-04-08**
Project:	**New Dwelling**
Intended Use:	**99**
Estimated Value:	**685000**
Legal:	**LOT 3 DP 386409 C/T 345892**
Location:	**32 Titoki Road, Waikanae**
Valuation No:	**1491017001**

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

This project information memorandum includes:

___ Information identifying special features of the land concerned
___ Details of relevant utility systems
___ Details of authorisations which have been granted

Signed for and on behalf of the Council:

Name: _____ **Date:** _____

General

Use permitted:	Non-complying
Resource Consent granted:	Yes - RM100037
Designations on property:	Airport Conical Surface
Easements:	Drainage, Sewage
Site subject to inundation:	Ponding & Flood Control
Coastal building line restriction:	N/A
Relocatable zone:	N/A
Minimum floor level: (50 year event)	N/A
Floor level: (100 year event)	N/A
Yard and height requirements:	Comply
Tree/building preservation:	None listed
Other comments:	All work to be carried out in accordance with Resource Consent RM100037. Consent notices, covenants, and like listings registered on the title are the responsibility of the applicant. Search this property title for any impediments to this proposal. Should a waahi tapu or other cultural site be unearthed during earthworks, the operator and/or owner shall: 1) Cease operations; 2) Inform local Iwi; 3) Inform the New Zealand Historic Places Trust (NZHPT) and apply for an appropriate authority is required; and 4) Take appropriate action, after discussion with NZHPT, Council and Tangata Whenua, to remedy damage and/or restore the site. NB: In accordance with the Historic Places Act 1983, where an archaeological site is present (or uncovered), authority from the NZHPT is required if the site is to be modified in anyway.

Planning

Potential erosion:	Not known to be

Potential avulsion:	Not known to be
Potential subsidence:	Not known to be
Potential slippage:	Not known to be
Potential alluvion:	Not known to be
Potential inundation:	Flood control and ponding
Presence of hazardous contaminants:	Not known to be
Other features:	This property is located within the Conical Surface 1:20, Airport Operations Area of the Operative District Plan 1999. The property is shown to be subject to Ponding / Flood Control . If you require further details please contact Blair Murray, Stormwater Engineer, Kapiti Coast District Council on 04 2964 751.

Plumbing & Drainage

Sewer available / connected:	Available
Water available / connected:	Available
Site plan of existing services: (if any)	Not supplied
Location of sewer lateral:	shown
Location and size of water toby:	20mm
Location of easements: (if any)	
Location of public drains: (if any)	
Stormwater disposal to:	Water tank
Plumbing and drainage notes:	The Council water toby is to be modified to allow a restricted top up to the water storage tank.(600lt per day) The cost of this modification is to be paid for by the owner when invoiced. A water meter will also be required
Rain Water System:	Yes
Rain Water Size:	10000
Grey Water System:	No

COMPUTER FREEHOLD REGISTER UNDER LAND TRANSFER ACT 1952

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**345892**
Land Registration District	**Wellington**
Date Issued	09 May 2008

Prior References
WN24C/839

Estate	Fee Simple
Area	3603 square metres more or less
Legal Description	Lot 3 Deposited Plan 386409

Proprietors
Barrington John Prince

Interests

Subject to a right (in gross) to drain sewage over part marked I and K on DP 386409 in favour of The Kapiti Coast District Council created by Transfer 575944.2 - 16.8.1983

The easements created by Transfer 575944.2 are subject to Section 309 (1) (a) Local Government Act 1974

7810059.5 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 9.5.2008 at 9:00 am

SUBJECT TO SECTION 243(C) RESOURCE MANAGEMENT ACT 1991 (AFFECTS ROW D DP 386409)

Subject to a right (in gross) to drain sewage over part marked H, and a right to drain stormwater over part marked M,K and L, all on DP 386409 in favour of Kapiti Coast District Council created by Easement Instrument 7810059.9 - 9.5.2008 at 9:00 am

The easements created by Easement Instrument 7810059.9 are subject to Section 243 (a) Resource Management Act 1991

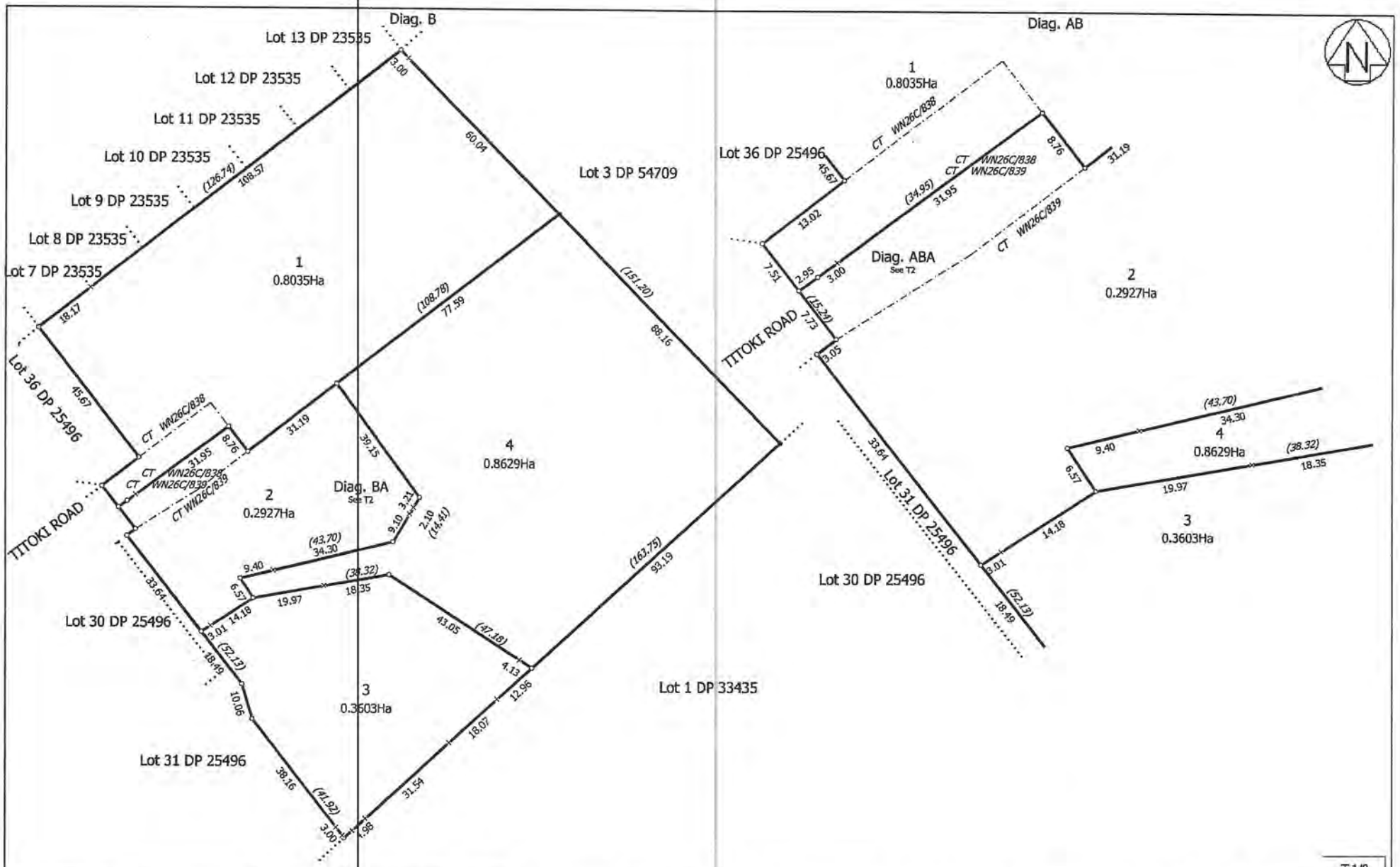
Land Covenant in Easement Instrument 7810059.11 - 9.5.2008 at 9:00 am

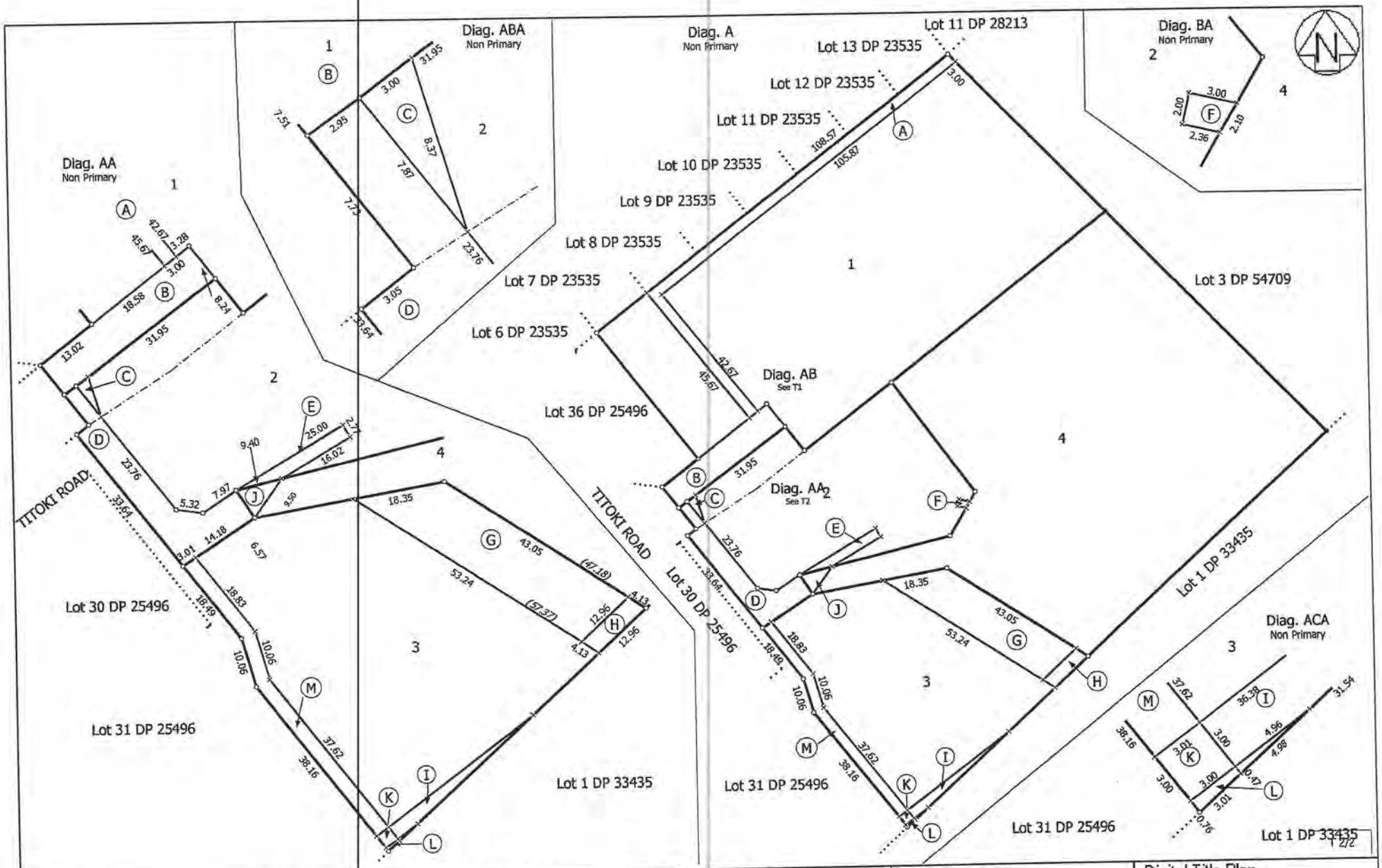
Land Covenant in Easement Instrument 7810059.12 - 9.5.2008 at 9:00 am

Subject to a right to drain sewage over part marked H on DP 386409 created by Easement Instrument 7810059.13 - 9.5.2008 at 9:00 am

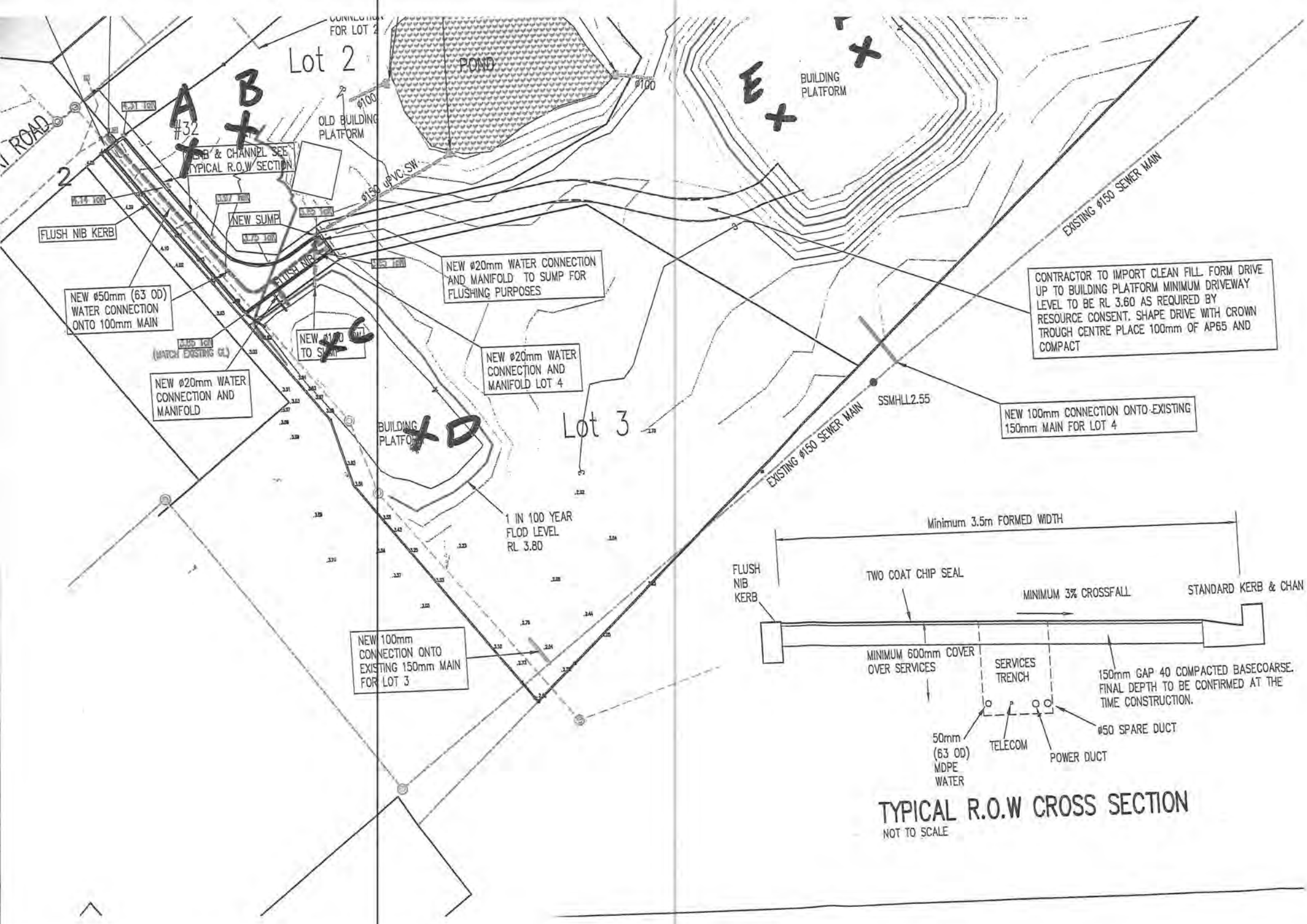
Appurtenant hereto is a right to convey water, electricity and telecommunications and a right to drain stormwater created by Easement Instrument 7810059.13 - 9.5.2008 at 9:00 am

The easements created by Easement Instrument 7810059.13 are subject to Section 243 (a) Resource Management Act 1991


Diag. B
Diag. AB
Lot 13 DP 23535
Lot 12 DP 23535
Lot 11 DP 23535
Lot 10 DP 23535
Lot 9 DP 23535
Lot 8 DP 23535
Lot 7 DP 23535
Lot 36 DP 25496
Lot 3 DP 54709
Lot 30 DP 25496
Lot 31 DP 25496
Lot 1 DP 33435
TITOKI ROAD
1
0.8035Ha
2
0.2927Ha
3
0.3603Ha
4
0.8629Ha
Diag. BA
See T2
Diag. ABA
See T2
CT WN26C/838
CT WN26C/839
3.00
60.04
(126.74)
108.57
18.17
45.67
31.19
8.76
31.95
(108.78)
77.59
(151.20)
88.16
39.15
3.21
9.10
2.10
(14.41)
(43.70)
34.30
9.40
6.57
(38.32)
18.35
19.97
33.64
14.18
8.01
(52.13)
18.49
43.05
(47.18)
4.13
12.96
18.07
10.06
38.16
(41.92)
3.00
1.98
31.54
(163.75)
93.19
13.02
(34.95)
31.95
7.51
2.95
3.00
(15.24)
7.73
8.05
T1/2
Land District: Wellington
Digitally Generated Plan
Generated on: 26/05/2008 09:54am Page 4 of 5
Lots 1-4 Being a Subdivision of Lots 4-6 DP 54709
Surveyor: Nicola Kate Todd
Firm: Cuttriss Consultants Ltd (Kapiti)
Digital Title Plan
DP 386409
Deposited on: 9/05/2008



Land District: Wellington Digitally Generated Plan Generated on: 26/05/2008 09:54am Page 5 of 5	Lots 1-4 Being a Subdivision of Lots 4-6 DP 54709	Surveyor: Nicole Kate Todd Firm: Cuttriss Consultants Ltd (Kapiti)	Digital Title Plan DP 386409 Deposited on: 9/05/2008



TYPICAL R.O.W CROSS SECTION

NOT TO SCALE

CODE COMPLIANCE CERTIFICATE

Section 95 Building Act 2004 [Form 7 – Building (forms) Regulations 2004]

Consent No: 170827

Kāpiti Coast DISTRICT COUNCIL
Me Huri Whakamuri, Ka Titiro Whakamua

The Building			
Street address of building:	40 Titoki Road, Waikanae	**Building name:**	N/A
Current, Lawfully established, use:	Residential Dwelling	**Location of building within site/block number:**	Central position in large site
		Intended life of the building if 50 years or less:	-
Level/unit number:	Single Level	**Year first constructed:**	2009
Legal description of land where building is located:	LOT 3 DP 386409 C/T 345892		

The Owner			
Name of owner:	Dowle Carl Stewart & Dowle Sonja Margaret	**Street address /registered office:**	N/A
Contact person:	As above	**Phone numbers:**	
Mailing address:	40 Titoki Road Waikanae Beach Waikanae 5036	**Landline:**	-
		Mobile:	027 458 9979
		Daytime:	-
Email address:	carlsdowle@gmail.com	**After hours:**	-
Website:	-	**Facsimile number:**	-

First point of contact for communications with the Kapiti Coast District Council:

As above

Building Work			
Building Consent No:	170827	**Issued by:**	Kapiti Coast District Council
Project Description:	New entrance & canopy roof, new en-suite & walk-in robe, new covered deck & doors to living area.		

Code Compliance

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

(a) the building work complies with the building consent

Michelle Salmon –
Building Inspections Team Leader
On behalf of **Kapiti Coast District Council** Date: 27 March 2019

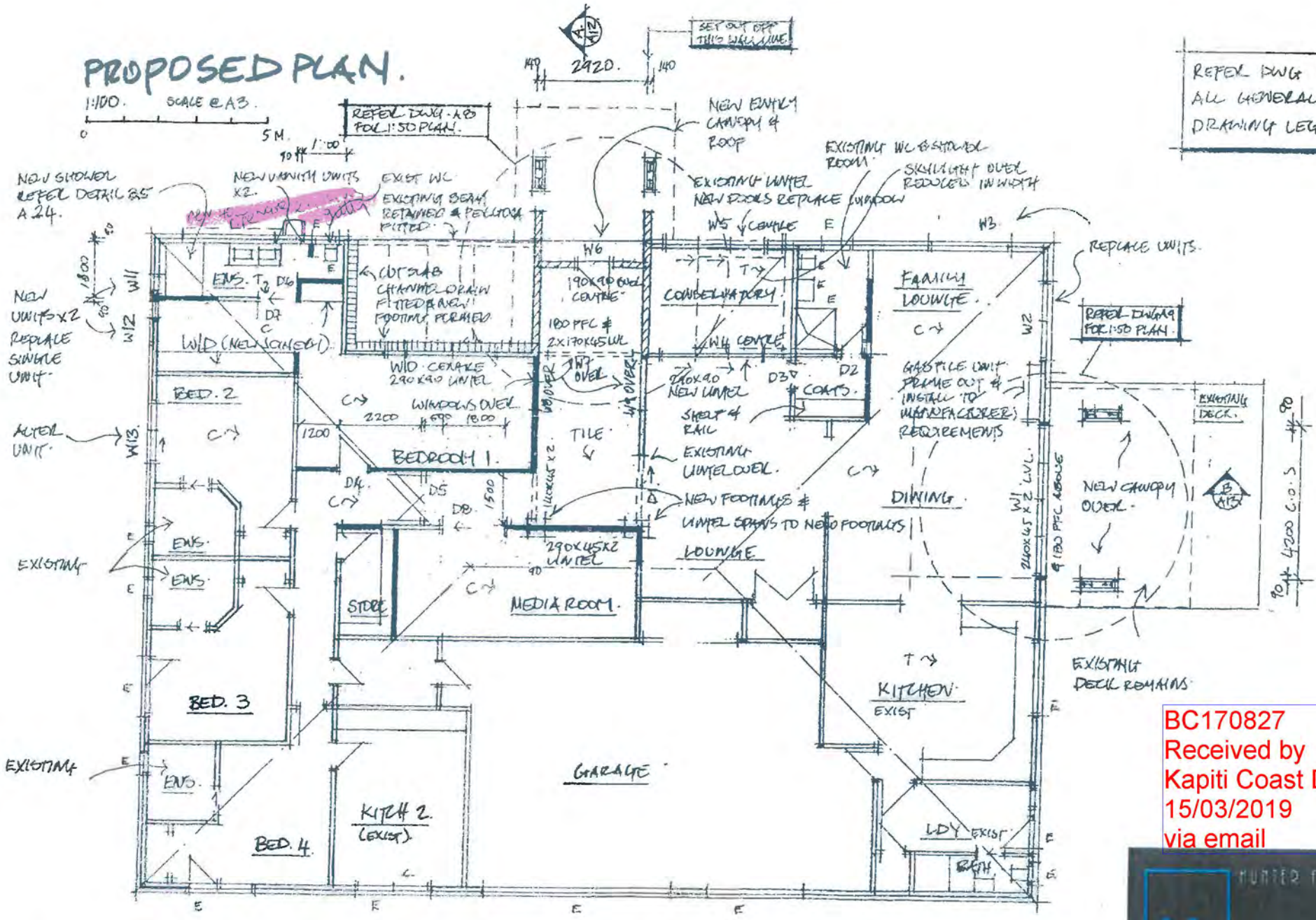
PROPOSED PLAN.

1:100. SCALE @ A3.

0 5M.

REFER DWG A8 FOR 1:50 PLAN.

REFER DWG A1 FOR ALL GENERAL NOTES & DRAWING LEGEND.



BC170827
Received by
Kapiti Coast District Council
15/03/2019
via email

HUNTER ARCHITECTURE
P. 04 9049288
M 021 415 999

40 TITOKI ST

DOUBLE HOUSE WAIKANAE BEACH
•PROPOSED ADDITIONS & ALTERATIONS.

25 AUG 17.

A3.

BC170827
Received by
Kapiti Coast District Council
15/03/2019
via email

STATEMENT
PIPED SERVICES AND PLUMBING STACKS

Kāpiti Coast DISTRICT COUNCIL
Me Huri Whakamuri, Ka Titiro Whakamua

Construction Review

Send or deliver this form to: Kapiti Coast District Council,
175 Rimu Road, Paraparaumu 5032
Private Bag 60601, Paraparaumu 5254
For enquiries, phone 04 296 4700 (Toll Free: 0800 486 486)

TO BE COMPLETED BY THE INSTALLER	
Issued by: Craig Thomson	
Registration number: 22088	
In respect of Piped Services installed in accordance with G12/AS1 as shown on the approved plans or as per the attached amended plan and Sanitary Plumbing Stacks installed in accordance with G13/AS1 or AS/NZS 3500.2.2	
Installed at: 40 Titoki street Waikanae	
Building Consent No:	
As a certified plumber, currently holding an annual practicing license, certify that I, or personnel under my control, have carried out the installation of the above system and I believe on reasonable grounds that the installation complies with the New Zealand Building Code. Both hot and cold systems have been pressure tested for a period of 15 minutes at a pressure of 1500 kPa.	
Name: Craig Thomson	Signature: [signature]
Address: 81 Eatwell ave	Date: 7/3/19
Phone:	Fax:
Mobile: 0273056995	Email: craig@ccplumbinggas.co.nz

Kāpiti Coast District Council Office Use Only	
Statement author authenticated and current registration verified. Verification and Registration checked through public register on www.pgdb.co.nz.	
Date:	
Name:	
Signature:	

Memorandum from licensed building practitioner:
Record of Building Work
Section 88, Building Act 2004

THE BUILDING	
Street address: 40 TITOKI ROAD	
Suburb: WAIKANAE	
Town/City: KAPITI COAST	Postcode:

THE PROJECT
Building consent number: 170827

THE OWNER(S)		
Name(s): CARL & SONJA DOWLE		
Mailing address: 40 TITOKI ROAD		
Suburb: WAIKANAE	PO Box/Private Bag:	
Town/City: KAPITI COAST	Postcode:	
Phone number: 027 458 9979	Email address: sonjadowle@gmail.com	

RECORD OF WORK THAT IS RESTRICTED BUILDING WORK

PRIMARY STRUCTURE

Work that is restricted building work	Description of restricted building work	Carried out or supervised
Tick ✓	If necessary, describe the restricted building work	Tick ✓ whether you carried out the work or supervised someone else.
Foundations and subfloor framing ✓	Extending front entrance slab plus four concrete basis formed for anchoring steel posts to canopies	✓ Carried out ○ Supervised
Walls ✓	Internal & external walls constructed as per plans External walls to front entrance	✓ Carried out ○ Supervised

PRIMARY STRUCTURE			
Roof	✓	Roofs formed to front entrance and rear of house to form canopies as per plans.	✓ Carried out ○ Supervised
Columns and beams	✓	Lintels formed as necessary to internal & external walls. Steel columns & beams supplied by Fusion Engineering. We helped install into position.	✓ Carried out ○ Supervised
Bracing	✓	Bracing elements installed as per plans, including using super brace ply as building wrap and nailed off to manufacturers specifications.	✓ Carried out ○ Supervised
Other	○	/	○ Carried out ○ Supervised

EXTERNAL MOISTURE MANAGEMENT SYSTEMS			
Damp proofing	○	/	○ Carried out ○ Supervised
Roof cladding or roof cladding system	○	/	○ Carried out ○ Supervised
Ventilation system (for example, subfloor or cavity)	✓	Cavity battens / system fitted as required for vertical cedar cladding.	✓ Carried out ○ Supervised

EXTERNAL MOISTURE MANAGEMENT SYSTEMS CONTINUED

Wall cladding or wall cladding system	○	Cedar vertical cladding installed as per plans.	✓ Carried out ○ Supervised
Waterproofing	○		○ Carried out ○ Supervised
Other	○		○ Carried out ○ Supervised

ISSUED BY

Name and contact details of the licensed building practitioner who is licensed to carry out or supervise restricted building work.

Name: PETER NEILSON JAMES CULLEN	LBP number: 106341 121210
Class(es) licensed in: CARPENTRY.	
Plumbers, Gasfitters and Drainlayers registration number (if applicable):	
Mailing address (if different from below):	
Street address/Registered office: 35C KOTARE ST,	
Suburb: WAIKANAE	Town/City: KAPITI COAST
PO Box/Private Bag:	Postcode: 5036
Phone number: 021 781240	Mobile: 021 781240
After hours:	Fax:
Email address: petemelneilson@xtra.co.nz	Website:

DECLARATION

I James and Pete carried out or supervised the restricted building work recorded on this form.

Signature: P. Nelson Date: 12/11/2018

ELECTRICAL WORKERS REGISTRATION BOARD

ELECTRICAL CERTIFICATE OF COMPLIANCE AND ELECTRICAL SAFETY CERTIFICATE

Reference/Certificate ID No: SCEL 305

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under Part 1 or Part 2 of AS/NZS 3000 are safe to be connected to the specified system of electrical supply.

Location Details: 40 Titoki St, Waikanae

Contact Details: (Name and address) Carl & Sonya As Above 0274589979

Name of Electrical worker: Scott Carroll **Registration/Practising licence number:** E7000

Organisation/company: SCEL

Phone and email: 021 793855 scott.carroll@xtra.co.nz

Name of person(s) supervised:

CoC

Type of work: Additions (Alterations) New work

The prescribed electrical work is: Low risk (General) High risk (Specify):

Reference Standards: (Part 1 of AS/NZS 3000) Part 2 of AS/NZS 3000

Additional Standards:

Description of Work: (including date/s of work and type of supply system)

- Electrical work to alterations/Addition on house including power outlets and lighting to, Masks bedroom, ensuite, dressing room Media room, Store room, hallway, entranceway living areas x 2, dining area + deck outside

I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct in that the installation, or part of the installation:

Select those that apply:

- ✓ Has been installed in accordance with the specified certified design[1]
- Existing ✓ Has an earthing system that is correctly rated (where applicable)
- ✓ Contains fittings that are safe to connect to a power supply
- ✓ Relies on a supplier Declaration of Conformity[1]
- ✓ Relies on a manufacturer's instructions[1]
- ✓ Has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010
- ✓ Is safe to connect

Test Results	
Polarity (Independent earth):	✓
Insulation resistance:	✓
Earth Continuity:	✓
Bonding:	✓
Fault Loop impedance	✓
Other (specify): RCD	✓

Electronic/Other reference: www.voltex.co.nz

Certifier's signature: [signature]

Date: 19/12/2018

1 Attach or reference. If it is impractical to attach a copy of a particular manufacturer's instructions, or of any certified design or supplier declaration of conformity, provide a reference to where the documents can be found, in a readily accessible format, by electronic means.

ESC

I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name: Scott Carroll **Registration/Practising licence number:** E7000

Certifier's signature: [signature] **Certificate Issue Date:** 19/12/2018 **Connection Date:** 19/12/2018.

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(e) of the Building Act 2004.

GASFITTING CERTIFICATE OF COMPLIANCE

Client Name: Dowel

Reference or Job #: | **ICP (if known):**

Address of work: 40 Titoki Road

Suburb: Waikanae | **Town / City:**

Description of gasfitting work: (If different gasfitting work was done by different people, state who did what gasfitting.)

installed gas bottle station
installed gas fire and BBQ

Gas supply pressure 3.5 kPa **Risk classification** (tick one) ☐ Low-Risk ☐ General ☐ High-risk

Gas type (tick one) ☐ Natural gas ☑ LPG ☐ Biogas ☐ Other (specify)

The work has been done in accordance with a certified design: ☐ Yes ☑ No

If yes – identify the certified design including name, date and version. Also attach a copy of the certified design to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.))

Identify:
Link:

The work relies on manufacturer's instructions: ☑ Yes ☐ No

If yes – identify the instruction manual including name, date and version. Also attach a copy of manufacturer's instructions to this certificate.
(Or provide reference to readily accessible electronic format, eg Internet link.)

Identify:
Link: left with owner

The work has been done in accordance with means of compliance (specify):

☑ Yes – AS/NZS 5601.1 sections 3 to 6 ☐ Yes – AS/NZS 5601.2 sections 3 to 9 ☐ No

Were any other standards or gas code of practice required for compliance?

☐ Yes (specify) | ☑ No

Parts of the gas installation that are safe to connect to a gas supply?

☑ All ☐ Parts (specify)

Date(s) on which the work was done (if different from date of certifying gasfitting): 19/11/18

Name and registration number of anyone who carried out work under supervision:

By signing this document i confirm that I am satisfied that the work described in this certificate of compliance has been done lawfully and safely, and that the information on this certificate is correct.

Certifier name: Craig Thomson

Registration number: 22088 **Certificate Issue Date:** 19/11/18

Signature: Craig Thomson

Outline any additional information attached:

PRODUCER STATEMENT/WARRANTY

Part No. 9990226

Our windows and doors comply with the New Zealand building code

All products supplied by Vantage Windows & Doors meet or exceed the requirements of the New Zealand Building Code and New Zealand Standards; NZS4211, Performance of Windows, and NZS4223, Glazing in Buildings - Parts 1-4 incl.

This means our windows and doors have been designed and successfully tested to perform in New Zealand's most diverse conditions, and will:

- satisfy the strength and deflection requirements of the standards
- deliver the desired levels of weathertightness appropriate to the prescribed wind zones
- meet the air leakage requirements necessary to provide comfort and efficiency
- include glazing of appropriate weight, strength and safety to satisfy not only the expected wind load but also accidental human impact.

In accordance with the TERMS AND CONDITIONS OF WARRANTY (vantage.co.nz/terms), a warranty for all Vantage Windows And Doors products is provided, under normal conditions of use, against failure of materials and/or workmanship for a period of 5 years.

The surface finishing of the aluminium extrusion is covered by a separate Performance Warranty which is dependent on the actual finish selected.

A window and door hardware/component warranty protects against defects in manufacturing, functionality and surface finish for a period of 5 years, provided care and maintenance guidelines have been followed. Plated (soft) finishes are excluded from the warranty.

PLEASE NOTE

- This warranty is subject to correct installation as outlined in the Building Code Acceptable Solution Clause E2/AS1 External Moisture or an approved alternative solution.

40 Titoki Road

VANTAGE WINDOWS & DOORS

To validate this warranty please register online at vantage.co.nz/warranty within 30 days of receiving this document.

Please input the below warranty number and follow the online steps

Warranty Number: 18-10-5059

Manufacturer: HPW NZ Ltd

Warranty queries should be directed to the above manufacturer

PRODUCER STATEMENT/WARRANTY

Part No. 9990226

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- deliver the desired levels of weathertightness appropriate to the prescribed wind zones
- meet the air leakage requirements necessary to provide comfort and efficiency
- include glazing of appropriate weight, strength and safety to satisfy not only the expected wind load but also accidental human impact.

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A window and door hardware/component warranty protects against defects in manufacturing, functionality and surface finish for a period of 5 years, provided care and maintenance guidelines have been followed. Plated (soft) finishes are excluded from the warranty.

PLEASE NOTE

- This warranty is subject to correct installation as outlined in the Building Code Acceptable Solution Clause E2/AS1 External Moisture or an approved alternative solution.

40 Titoki Road 2

VANTAGE WINDOWS & DOORS

To validate this warranty please register online at vantage.co.nz/warranty within 30 days of receiving this document.

Please input the below warranty number and follow the online steps

Warranty Number: # 18-05-4238

Manufacturer: MPW NZ Ltd

Warranty queries should be directed to the above manufacturer

D&S Doyle
40 Titoki Street
Waikanae - New Zealand

CONTACT: Gregor WINKLER
EMAIL: gregor.winkler@prefa.com
TOWN: Marktl/Lilienfeld (Austria)
DATE: 12/12/2018

SUPPLEMENTARY GUARANTEE

BUILDING:
D&S Doyle
40 Titoki Street
Waikanae - New Zealand
Installation date: Aug.-Sept.2018

CONTRACTOR:
Architectural Roof & Façade Innovations

MATERIAL:
Prefalz
Black grey
75 m²
Certificate No.: NZ 18-010

Dear Sir or Madam,

For the above-mentioned property, in accordance with the PREFA guarantee conditions, PREFA guarantees that, during a guarantee period of **20 years**,

- the basic material of the PREFA Product will not exhibit any changes as a result of cracks, corrosion (rust) or frost which could impede the PREFA Product's mechanical functionality

Differently to that which is stated on the guarantee certificate, the guarantee period shall be 20 **years** as, according to the property details, the Product will be used in a corrosive atmosphere (proximity to the sea). Please find the guarantee conditions on the back of the attached guarantee certificate no. NZ 18-010.

Kind regards
PREFA Aluminiumprodukte GmbH

Gregor Winkler, MA
Marketing & Sales International

Leopold Pasquali
Managing Director

GUARANTEE CERTIFICATE

40-YEAR MATERIAL GUARANTEE

PREFA Aluminiumprodukte GmbH provides a 40-year guarantee on the basic material of

- **PREFA ROOF ELEMENTS**
  ROOF TILE | R.16 ROOF TILE | SHINGLE | RHOMBOID ROOF TILES | FX.12 ROOF PANEL
- **PREFA DOUBLE-LOCK STANDING SEAM (PREFALZ)**
- **PREFA ROOF DRAINAGE (GUTTER AND PIPE)**
- **PREFA FAÇADE ELEMENTS**
  SIDING | RHOMBOID FAÇADE TILES | FAÇADE SHINGLE | FX.12 FAÇADE PANEL | RIBBED PROFILE | SERRATED PROFILE | RIPPLE PROFILE

against breakage, corrosion (rust) and frost damage under the conditions specified below

40 YEAR MATERIAL GUARANTEE

CUSTOMER / BUILDING DETAILS

Name of customer and address of building: D&S Doyle

40 Titoki Street, Waikanae, New Zealand

Roofing/installation company: Architectural Roof & Facade Innovations Ltd

Product: PREFALZ - black grey, 75m²

Certificate no.: NZ 18-010

Date of installation: Aug.-Sept. 2018

Dr. Cornelius Grupp
Managing director

GUARANTEE CONDITIONS

This PREFA Aluminiumprodukte Gesellschaft m.b.H. ("PREFA") guarantee policy (the "Guarantee")

- pertains exclusively to the characteristics (described in more detail in point 3 of the Guarantee) of the basic material used for the following products manufactured and distributed by PREFA: roof tile, R.16 roof tile, rhomboid roof tile, FX.12 roof and façade panel, rhomboid façade tiles, siding and Prefalz, roof drainage system, ribbed profile, serrated profile and ripple profile (collectively referred to as the "PREFA Product");
- exclusively covers the basic material of the PREFA Product installed on the building (the "Building") described in more detail in this Guarantee;
- and exclusively entitles
  - the customers listed here who have acquired the PREFA Product directly from PREFA or from a specialist company authorised to install the PREFA Product (the "PREFA Roofer") as the end consumer,
  - and the customer's legal successor of ownership of the building.

Protection of the customer covered by the Guarantee is subject to the following requirements, conditions and limitations:

1. The PREFA Product covered by the Guarantee is manufactured from coated aluminium, which, at the time of manufacture, complies with the following standards:
   - aluminium: EN 1396:2015
   - coating: EN 13523 (all parts).

2. The duration of the Guarantee ("Guarantee Period") shall be 40 years, starting from the date of the first delivery of the PREFA Product by PREFA directly to the customer or to the PREFA Roofer. The applicable date of this first delivery shall be considered the date on the delivery note sent by PREFA to the customer or to the PREFA Roofer.

3. PREFA guarantees that, during the Guarantee Period:
   - the basic material of the PREFA Product will not exhibit any changes as a result of cracks, corrosion (rust) or frost which could impede the PREFA Product's mechanical functionality.

4. Requirements to be fulfilled for the Guarantee to apply:
   - professional installation of the PREFA Product within Europe — free of planning and building physics errors — by a specialist company authorised by PREFA, in accordance with PREFA's mounting instructions, installation guidelines and design, and with the recognised codes of practice, legal regulations and relevant existing standards, applicable at the time of installation and mounting;
   - the exclusive use of original PREFA accessories during mounting or installation;
   - installation of the PREFA Product in environments such as those defined in EN 1396:2015, table C.1, categories 1 to 3 (not including category 4: severe industrial and coastal regions).

5. Excluded from the Guarantee shall be any damage caused to the PREFA Product's basic material:
   - as a result of mounting or installing the PREFA Product contrary to the aforementioned conditions;
   - as a result of natural disasters, floods or other cases of force majeure or intermittent or continuous immersion of the PREFA Product in water or other liquid or solid media;
   - as a result of the pressure of snow or ice, or as a result of hail or lightning (particularly deformations);
   - as a result of usual wear and tear (in particular, changes in the shade or gloss level);
   - as a result of installing the PREFA Product in areas with a corrosive atmosphere (e.g. caused by chemical fumes or salt spray) or as a result of other (electro-) chemical reactions with environmental elements or other building parts;
   - as a result of incorrect further processing of the PREFA Product;
   - as a result of the use of unsuitable cleaning products or cleaning methods;
   - as a result of factors damaging the PREFA Product's basic material prior to it being sent to the building site, or during storage at the building site or otherwise prior to installing the PREFA Product;
   - as a result of mechanical or other physical damage to the PREFA Product caused by persons or items of any kind;
   - damage covered by an insurance policy;
   - damage to material replaced under this Guarantee.

6. NOTE: the Guarantee only covers damages to the PREFA Product's basic material which arise during the Guarantee Period and are reported to PREFA in writing by the customer within 30 days after the point at which the customer first noticed, or could have noticed, the case for the guarantee claim (upon presentation of the Guarantee).

7. If the guarantee claim proves to be justified, PREFA shall, at its own discretion:
   - repair the basic material by restoring or renovating it;
   - or supply, free of charge, a replacement PREFA Product if the basic material is damaged, delivering this to the Roofer commissioned with the mounting/installation (or, alternatively, to the Roofer nearest to the customer).

   PREFA shall reserve the right to alter or modify the way in which PREFA Products and/or the colour coating of PREFA Products are produced at any time. If, for this reason, the PREFA Product to be replaced or the colour required for the new coating is no longer available, PREFA shall, at its own discretion, use a Product or colour coating of a similar quality. If a PREFA Product has been improved or replaced, the remaining part of the Guarantee Period applying to the originally-installed product shall apply to this product.
   Differences in colour between the originally-installed PREFA Product and the replacement product or new coating do not represent a defect covered by the Guarantee. Consequential damage and other damage resulting from the damaged basic material or damaged colour coating shall not be replaced by PREFA.

8. The Guarantee shall not limit the customer's rights with regard to the specialist company commissioned with the mounting/installation of, or the distributor from whom it acquired, the PREFA Product.

9. The Guarantee shall be exclusively governed by Austrian law. The place of jurisdiction for claims under the Guarantee shall be PREFA's registered office in Austria.

Form 6A

Memorandum from licensed building practitioner: Record of building work

Section 88, Building Act 2004

Please fill in the form as fully and correctly as possible.
If there is insufficient room on the form for requested details, please continue on another sheet and attach the additional sheet(s) to this form.

THE BUILDING	
Street address: 40 Titoki Street	
Suburb: Waikanae	
Town/City: Waikanae	Postcode:

THE PROJECT
Building consent number:

THE OWNER(S)	
Name(s): D & S Dowle	
Mailing address: 40 Titoki Street	
Suburb: Waikanae	PO Box/Private Bag:
Town/City: Waikanae	Postcode:
Phone number:	Email address:

RECORD OF WORK THAT IS RESTRICTED BUILDING WORK

PRIMARY STRUCTURE

Work that is restricted building work	**Description of restricted building work**	**Carried out or supervised**
Tick ✓	If necessary, describe the restricted building work.	Tick ✓ whether you carried out the restricted building work or supervised someone else carrying out the restricted building work.
Foundations and subfloor framing ☐		Carried out Supervised
Walls ☐		Carried out Supervised
Roof ☐		Carried out Supervised
Columns and beams ☐		Carried out Supervised
Bracing ☐		Carried out Supervised
Other ☐		Carried out Supervised

EXTERNAL MOISTURE MANAGEMENT SYSTEMS		
Work that is restricted building work	**Description of restricted building work**	**Carried out or supervised**
Tick ✓	If necessary, describe the restricted building work	Tick ✓ whether you carried out the restricted building work or supervised someone else carrying out the restricted building work.
Damp proofing ☐		Carried out Supervised
Roof cladding or roof cladding system ☑	QBT450 Roof, material Prefa aluminium	✔ Carried out Supervised
Ventilation system (for example, subfloor or cavity) ☐		Carried out Supervised
Wall cladding or wall cladding system ☐		Carried out Supervised
Waterproofing ☐		Carried out Supervised
Other ☐		Carried out Supervised

ISSUED BY

Name and contact details of the licensed building practitioner who is licensed to carry out or supervise restricted building work.

Name: Hartmut Reichelt	LBP number: BP125102
Class(es) licensed in:	
Roofing	
Plumbers, Gasfitters and Drainlayers registration number (if applicable):	
Mailing address (if different from below):	
Street address/Registered office: 5/13 Omahi Street	
Suburb: Waikanae	Town/City: Waikanae
PO Box/Private Bag 161	Postcode: 5036
Phone number: 04 293 2230	Mobile: 027 293 6466
After hours:	Fax:
Email address: info@arfi.nz	Website: www.arfi.co.nz

DECLARATION

I Hartmut Reichelt carried out or supervised the restricted building work recorded on this form.

Signature: 

Date: 4/12/18

CONSTRUCTION MONITORING REPORT

PROJECT: **Dowle Dwelling** **17116**

CONTRACTOR :

DATE: **24.04:18** TIME: **2:00pm** INSPECTION No: **#1**

WEATHER CONDITIONS **Fine**

LOCATION: **40 Titoki Road** **Waikanae**

NOTES & PHOTOGRAPHS:

1.1 General Project Overview:

Site visit as requested to check ground conditions for steel construction
Builders on site

1.2 Specific Elements Inspected:

Reo for internal pad inspected and approved as per sketch provided. 2H12 each way
Checked ground conditions for post foundations to FD1.
Requested extra 200 and 300mm excavation of soft ground.
Discussed and agreed on reo to FD3.
Ok to pour with reo placed and excavation completed

1.3 Miscellaneous:



Peter Bolton
CMEngNZ CPEng
Base Consulting Engineers Ltd
peter@basecon.co.nz
06-367 0088

CONSTRUCTION MONITORING REPORT



PROJECT: **Dowle Dwelling** **17116**

CONTRACTOR :

DATE: **05.07:18** TIME: **3:00pm** INSPECTION No: **#2**

WEATHER CONDITIONS **Fine**

LOCATION: **40 Titoki Road** **Waikanae**

NOTES & PHOTOGRAPHS:

1.1 General Project Overview:

Site visit as requested to check for steel construction canopy frames
2 Builders on site

1.2 Specific Elements Inspected:

For lounge deck canopy, checked ground conditions for post foundations to FD1.
Ok to pour with reo placed
Structural steel to SD4 and SD6, SD4 welded connection changed to 4/M16 bolts as discussed. All ok for both this and entry canopy
Checked steel for internal beam to SD1 and SD2 ,all ok

OK to issue PS4

1.3 Miscellaneous:











Entry canopy







Peter Bolton
CMEngNZ CPEng
Base Consulting Engineers Ltd
peter@basecon.co.nz
0274 444 080

ARCHITECTS

Building Code Clause(s). B1 VM1

PRODUCER STATEMENT – PS4 – CONSTRUCTION REVIEW

(Guidance on use of Producer Statements (formerly page 2) is available at www.ipenz.nz)

ISSUED BY: BASE CONSULTING ENGINEERS LTD
(Construction Review Firm)

TO: MR. C. DOWLE
(Owner/Developer)

TO BE SUPPLIED TO: KAPITI COAST DISTRICT COUNCIL
(Building Consent Authority)

IN RESPECT OF: DOWLE DWELLING - Steel construction
(Description of Building Work)

AT: 40 TITOKI ROAD
(Address)

Town/City: WAIKANAE (Address) LOT ..... DP ..... SO .....

We BASE CONSULTING ENGINEERS LTD (Construction Review Firm) have been engaged by MR. C. DOWLE

To provide ☐ CM1 ▪ CM2 ☐ CM3 ☐ CM4 ☐ CM5 (Engineering Categories) or ☐ observation as per agreement with

owner/developer MR. C. DOWLE

or ☐ other ..... (Extent of Engagement) .....services

in respect of clause(s) B1 VM1 ..... of the Building Code for the building work described in

documents relating to Building Consent No. ..... and those relating to

Building Consent Amendment(s) Nos. ..... issued during the course of the works. We have sighted these Building Consents and the conditions of attached to them.

Authorised instructions/variations(s) No. Construction Monitoring Reports:Job No: 17116 ..... (copies attached) or by the attached Schedule ☐ have been issued during the course of the works.

On the basis of ☐ this review ▪ these review(s) and information supplied by the contractor during the course of the works and **on behalf of the firm** undertaking this Construction Review, **I believe on reasonable grounds** that ☐ All or ▪ Part only of the building works have been completed in accordance with the relevant requirements of the

Building Consent and Building Consent Amendments identified above. with respect to Clause(s). B1 VM1 ..... of the Building Code. I also believe on reasonable grounds that the persons who have undertaken this construction review have the necessary competency to do so.

I, Peter Bolton (Name of Construction Review Professional) am: ▪ CPEng 56179 # ☐ Reg Arch ..... #

I am a Member of: ▪ IPENZ ☐ NZIA and hold the following qualifications: BE Civil .....

The Construction Review Firm issuing this statement holds a current policy of Professional Indemnity Insurance no less than $200,000*.

The Construction Review Firm is a member of ACENZ:

SIGNED BY Peter Bolton (Name of Construction Review Professional) ..(Signature).....

ON BEHALF OF BASE CONSULTING ENGINEERS LTD (Construction Review Firm) .....Date 09/07/2018

*Note: This statement shall only be relied upon by the Building Consent Authority named above. Liability under this statement accrues to the Design Firm only. The total maximum amount of damages payable arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in contract, tort or otherwise (including negligence), is limited to the sum of $200,000**

This form is to accompany **Forms 6 or 8 of the Building (Form) Regulations 2004** for the issue of a Code Compliance Certificate.

THIS FORM AND ITS CONDITIONS ARE COPYRIGHT TO ACENZ, IPENZ AND NZIA

GUIDANCE ON USE OF PRODUCER STATEMENTS

Producer statements were first introduced with the Building Act 1991. The producer statements were developed by a combined task committee consisting of members of the New Zealand Institute of Architects, Institution of Professional engineers New Zealand, Association of Consulting Engineers New Zealand in consultation with the Building Officials Institute of New Zealand. The original suit of producer statements has been revised at the date of this form as a result of enactment of the Building Act (2004) by these organisations to ensure standard use within the industry.

The producer statement system is intended to provide Building Consent Authorities (BCAs) with reasonable grounds for the issue of a Building Consent or a Code Compliance Certificate, without having to duplicate design or construction checking undertaken by others.

PS1 Design Intended for use by a suitably qualified independent design professional in circumstances where the BCA accepts a producer statement for establishing reasonable grounds to issue a Building Consent;

PS2 Design Review Intended for use by a suitably qualified independent design professional where the BCA accepts an independent design professional's review as the basis for establishing reasonable grounds to issue a Building Consent;

PS3 Construction Forms commonly used as a certificate of completion of building work are Schedule 8 of NZS 3910:2013 or Schedules E1/E2 of NZIA's SCC 2011[2]

PS4 Construction Review Intended for use by a suitably qualified independent design professional who undertakes construction monitoring of the building works where the BCA requests a producer statement prior to issuing a Code Compliance Certificate.

This must be accompanied by a statement of completion of building work (Schedule 6).

The following guidelines are provided by ACENZ, IPENZ and NZIA to interpret the Producer Statement.

Competence of Design Professional

This statement is made by a Design Firm that has undertaken a contract of services for the services named, and is signed by a person authorised by that firm to verify the processes within the firm and competence of its designers.

A competent design professional will have a professional qualification and proven current competence through registration on a national competence based register, either as a Chartered Professional Engineer (CPEng) or a Registered Architect.

Membership of a professional body, such as the Institution of Professional Engineers New Zealand (IPENZ) or the New Zealand Institute of Architects (NZIA), provides additional assurance of the designer's standing within the profession. If the design firm is a member of the Association of Consulting Engineers New Zealand (ACENZ), this provides additional assurance about the standing of the firm.

Persons or firms meeting these criteria satisfy the term "suitably qualified independent design professional"

*Professional Indemnity Insurance

As part of membership requirements, ACENZ requires all member firms to hold Professional Indemnity Insurance to a minimum level.

The PI Insurance minimum stated on the front of this form reflects standard, small projects. If the parties deem this inappropriate for large projects the minimum may be up to $500,000.

Professional Services during Construction Phase

There are several levels of service which a Design Firm may provide during the construction phase of a project (CM1-CM5 for Engineers[3]). The Building Consent Authority is encouraged to require that the service to be provided by the Design Firm is appropriate for the project concerned.

Requirement to provide Producer Statement PS4

Building Consent Authorities should ensure that the applicant is aware of any requirement for producer statements for the construction phase of building work at the time the building consent is issued as no design professional should be expected to provide a producer statement unless such a requirement forms part of the Design firm's engagement.

Attached Particulars

Attached particulars referred to in this producer statement refer to supplementary information appended to the producer statement.

Refer Also:

1 Conditions of Contract for Building & Civil Engineering Construction NZS 3910 : 2013

2 NZIA Standard Conditions of Contract SCC 2011

3 Guideline on the Briefing & Engagement for Consulting Engineering Services (ACENZ/IPENZ 2004)

4 PN Guidelines on Producer Statements

www.acenz.org.nz
www.ipenz.org.nz
www.nzia.co.nz

Applicator Workmanship Warranty

WARRANTY No. 180316 DATE OF INSTALLATION 11-5-18

BUILDING OWNER & ADDRESS Dr C Dowle

40 Titoki St

WATERPROOFING CONTRACTOR (Name, Address, Phone No.)

RJ Williams 43 Riverbank road Otaki

AREA LAID m² 14.79m² + 16.43m² PRODUCT, TYPE AND USE Dampflex 3 Bostik

wet area shower in ensuite + exterior terrace off master bed

Subject to the conditions appearing below, the Applicator warrants its workmanship as follows:

a) All membrane products (the "Materials") are laid and installed in compliance with the manufacturer's instructions; and

b) For a period [5] years, the Workmanship on the Materials by the Applicator shall maintain a waterproof barrier to the area treated.

This Warranty shall be subject to the conditions which follow:

1. This Warranty shall extend only to the workmanship undertaken by the applicator and shall in no way bind the manufacturer of the Materials laid and installed by the Applicator.

2. The Applicator's obligations under this Warranty shall be limited to the Applicator making good at their expense any defect in the workmanship which permits the entry/escape of water. The Applicator shall have no further liability or responsibility for any direct, indirect or consequential injury, loss or damage whatsoever and howsoever arising.

3. This Warranty shall not apply to any alleged defective workmanship that is:

   a) Due directly or indirectly to any alleged cause such as (without limiting the generality of this exclusion) governmental or environmental interference or any other cause beyond the reasonable control of the Applicator; or

   b) Caused by the act, omission, default or representation of any party other than the Applicator, its servants or agents and in particular the work of any other tradesman and damage from persons not authorised by the Applicator to have access to or be employed in the repair, maintenance or alteration of the application during the warranty period; or

   c) Caused by the Materials or any of them being disturbed by any party other than the Applicator after fixing.

4. This Warranty shall be invalid unless the Applicator receives the Customer's written claim within the warranty period and within fourteen (14) days after the date of discovery of any alleged defect.

5. Where it is necessary for the Applicator to repair any defective workmanship, the Customer shall remove and/or replace plant, equipment or any other objects that hinder the access by the Applicator to the materials. The cost of any site visit requested under a warranty claim which does not reveal any problem relating to the warranted scope of work shall be paid for by the party requesting the inspection at the then current trade consultancy rates.

6. The Customer shall have made payment in full to the Applicator for the nominated works within the terms of the Applicator's contract with the Customer prior to the Customer making claim under this Warranty.

7. In the event that any Materials subject to this Warranty are ordinarily acquired for personal, domestic or household use or consumption, then this Warranty shall be read subject to the guarantees contained in the Consumer Guarantees Act 1993.

Applicator Name (Print) Richard Williams Telephone No. 021 350 440

Address 43 Riverbank road

Signature of Applicator [signature] Date 26-11-18

Memorandum from licensed building practitioner: Record of Building Work

Section 88, Building Act 2004

THE BUILDING	
Street address: 40 TITOKI ROAD	
Suburb: WAIKANAE	
Town/City: KAPITI COAST	Postcode:

THE PROJECT
Building consent number: 170827

THE OWNER(S)	
Name(s): CARL & SONJA DOWLE	
Mailing address: 40 TITOKI ROAD	
Suburb: WAIKANAE	PO Box/Private Bag:
Town/City: KAPITI COAST	Postcode:
Phone number: 027 458 9979	Email address: sonjadowle@gmail.com

RECORD OF WORK THAT IS RESTRICTED BUILDING WORK

PRIMARY STRUCTURE

Work that is restricted building work	Description of restricted building work	Carried out or supervised
Tick ✓	If necessary, describe the restricted building work	Tick ✓ whether you carried out the work or supervised someone else.
Foundations and subfloor framing ✓	Extending front entrance slab plus four concrete basis formed for anchoring steel posts to canopies	✓ Carried out ○ Supervised
Walls ✓	Internal & external walls constructed as per plans External walls to front entrance	✓ Carried out ○ Supervised

Council Copy

PRIMARY STRUCTURE

Roof	✓	Roofs formed to front entrance and rear of house to form canopies as per plans.	✓ Carried out ○ Supervised
Columns and beams	✓	Lintels formed as necessary to internal & external walls. Steel columns & beams supplied by Fusion Engineering. We helped install into position.	✓ Carried out ○ Supervised
Bracing	✓	Bracing elements installed as per plans, including using super brace ply as building wrap and nailed off to manufacturers specifications.	✓ Carried out ○ Supervised
Other	○	/	○ Carried out ○ Supervised

EXTERNAL MOISTURE MANAGEMENT SYSTEMS

Damp proofing	○	/	○ Carried out ○ Supervised
Roof cladding or roof cladding system	○	/	○ Carried out ○ Supervised
Ventilation system (for example, subfloor or cavity)	✓	Cavity battens / system fitted as required for vertical cedar cladding.	✓ Carried out ○ Supervised

EXTERNAL MOISTURE MANAGEMENT SYSTEMS CONTINUED

Wall cladding or wall cladding system	○	Cedar vertical cladeling installed as per plans.	☑ Carried out ○ Supervised
Waterproofing	○	/	○ Carried out ○ Supervised
Other	○	/	○ Carried out ○ Supervised

ISSUED BY

Name and contact details of the licensed building practitioner who is licensed to carry out or supervise restricted building work.

Name: PETER NELSON JAMES CULLEN	LBP number: 106341 121210
Class(es) licensed in: CARPENTRY.	
Plumbers, Gasfitters and Drainlayers registration number (if applicable):	
Mailing address (if different from below):	
Street address/Registered office: 35C KOTARE ST,	
Suburb: WAIKANAE	Town/City: KAPITI COAST
PO Box/Private Bag:	Postcode: 5036
Phone number: 021 781240	Mobile: 021 781240
After hours:	Fax:
Email address: petemelneilson@xtra.co.nz	Website:

DECLARATION

I James and Pete carried out or supervised the restricted building work recorded on this form.

Signature: P. Nelson Date: 12/11/2018

Council Copy

ELECTRICAL CERTIFICATE OF COMPLIANCE AND ELECTRICAL SAFETY CERTIFICATE

ELECTRICAL WORKERS REGISTRATION BOARD

Reference/Certificate ID No: SCEL 305

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under Part 1 or Part 2 of AS/NZS 3000 are safe to be connected to the specified system of electrical supply.

Location Details: 40 Tifoki St, Waikanae

Contact Details: (Name and address) Carl & Sonya As Above 0274589979

Name of Electrical worker: Scott Carroll **Registration/Practising licence number:** E7000

Organisation/company: SCEL

Phone and email: 021 793855 scott.carroll@xtra.co.nz

Name of person(s) supervised:

CoC

Type of work: Additions (Alterations) New work

The prescribed electrical work is: Low risk (General) High risk (Specify):

Reference Standards: (Part 1 of AS/NZS 3000) Part 2 of AS/NZS 3000

Additional Standards:

Description of Work: (including date/s of work and type of supply system)

- Electrical work to alterations/Addition on house including power outlets and lighting to, Master bedroom, ensuite, dressing room Media room, store room, hallway, entranceway living areas x 2, dining area + deck outside

I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct in that the installation, or part of the installation:

Select those that apply:

- ✓ Has been installed in accordance with the specified certified design[1]
- Existing ✓ Has an earthing system that is correctly rated (where applicable)
- ✓ Contains fittings that are safe to connect to a power supply
- ✓ Relies on a supplier Declaration of Conformity[1]
- ✓ Relies on a manufacturer's instructions[1]
- ✓ Has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010
- ✓ Is safe to connect

Test Results	
Polarity (Independent earth):	✓
Insulation resistance:	✓
Earth Continuity:	✓
Bonding:	✓
Fault Loop impedance	✓
Other (specify): RCD	✓

Electronic/Other reference: www.voltex.co.nz

Certifier's signature: [signature]

Date: 19/12/2018

1 Attach or reference. If it is impractical to attach a copy of a particular manufacturer's instructions, or of any certified design or supplier declaration of conformity, provide a reference to where the documents can be found, in a readily accessible format, by electronic means.

ESC

I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's name: Scott Carroll **Registration/Practising licence number:** E7000

Certifier's signature: [signature] **Certificate Issue Date:** 19/12/2018 **Connection Date:** 19/12/2018.

CUSTOMER COPY – THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(e) of the Building Act 2004.

Applicator Workmanship Warranty

WARRANTY No. 80316 DATE OF INSTALLATION 11-5-18

BUILDING OWNER & ADDRESS Dr C Dawle

40 Titoki St

WATERPROOFING CONTRACTOR (Name, Address, Phone No.)

RJ Williams 43 Riverbank road Otaki

AREA LAID m² 14.79m² + 16.43m² PRODUCT, TYPE AND USE Dampfx3 Bostik wet area shower in ensuite + exterior terrace off master bed

Subject to the conditions appearing below, the Applicator warrants its workmanship as follows:

a) All membrane products (the "Materials") are laid and installed in compliance with the manufacturer's instructions, and

b) For a period [1, 5] years, the Workmanship on the Materials by the Applicator shall maintain a waterproof barrier to the area treated.

This Warranty shall be subject to the conditions which follow:

1. This Warranty shall extend only to the workmanship undertaken by the applicator and shall in no way bind the manufacturer of the Materials laid and installed by the Applicator.

2. The Applicator's obligations under this Warranty shall be limited to the Applicator making good at their expense any defect in the workmanship which permits the entry/escape of water. The Applicator shall have no further liability or responsibility for any direct, indirect or consequential injury, loss or damage whatsoever and howsoever arising.

3. This Warranty shall not apply to any alleged defective workmanship that is:

   a) Due directly or indirectly to any alleged cause such as (without limiting the generality of this exclusion) governmental or environmental interference or any other cause beyond the reasonable control of the Applicator; or

   b) Caused by the act, omission, default or representation of any party other than the Applicator, its servants or agents and in particular the work of any other tradesman and damage from persons not authorised by the Applicator to have access to or be employed in the repair, maintenance or alteration of the application during the warranty period; or

   c) Caused by the Materials or any of them being disturbed by any party other than the Applicator after fixing.

4. This Warranty shall be invalid unless the Applicator receives the Customer's written claim within the warranty period and within fourteen (14) days after the date of discovery of any alleged defect.

5. Where it is necessary for the Applicator to repair any defective workmanship, the Customer shall remove and/or replace plant, equipment or any other objects that hinder the access by the Applicator to the materials. The cost of any site visit requested under a warranty claim which does not reveal any problem relating to the warranted scope of work shall be paid for by the party requesting the inspection at the then current trade consultancy rates.

6. The Customer shall have made payment in full to the Applicator for the nominated works within the terms of the Applicator's contract with the Customer prior to the Customer making claim under this Warranty.

7. In the event that any Materials subject to this Warranty are ordinarily acquired for personal, domestic or household use or consumption, then this Warranty shall be read subject to the guarantees contained in the Consumer Guarantees Act 1993.

Applicator Name (Print) Richard Williams Telephone No. 021 350 440

Address 43 Riverbank road

Signature of Applicator [signature] Date 26-11-18

PRODUCER STATEMENT/WARRANTY

Part No 9990226

Our windows and doors comply with the New Zealand building code

All products supplied by Vantage Windows & Doors meet or exceed the requirements of the New Zealand Building Code and New Zealand Standards; NZS4211, Performance of Windows, and NZS4223, Glazing in Buildings - Parts 1-4 incl.

This means our windows and doors have been designed and successfully tested to perform in New Zealand's most diverse conditions, and will:

- satisfy the strength and deflection requirements of the standards
- deliver the desired levels of weathertightness appropriate to the prescribed wind zones
- meet the air leakage requirements necessary to provide comfort and efficiency
- include glazing of appropriate weight, strength and safety to satisfy not only the expected wind load but also accidental human impact.

In accordance with the TERMS AND CONDITIONS OF WARRANTY (vantage.co.nz/terms), a warranty for all Vantage Windows And Doors products is provided, under normal conditions of use, against failure of materials and/or workmanship for a period of 5 years.

The surface finishing of the aluminium extrusion is covered by a separate Performance Warranty which is dependent on the actual finish selected.

A window and door hardware/component warranty protects against defects in manufacturing, functionality and surface finish for a period of 5 years, provided care and maintenance guidelines have been followed. Plated (soft) finishes are excluded from the warranty

PLEASE NOTE

- This warranty is subject to correct installation as outlined in the Building Code Acceptable Solution Clause E2/AS1 External Moisture or an approved alternative solution.

40 Tiaki Road

VANTAGE WINDOWS & DOORS

To validate this warranty please register online at vantage.co.nz/warranty within 30 days of receiving this document.

Please input the below warranty number and follow the online steps

Warranty Number: 18-10-5059

Manufacturer: HPW NZ Ltd

Warranty queries should be directed to the above manufacturer

PRODUCER STATEMENT/WARRANTY

Part No. 9990226

Our windows and doors comply with the New Zealand building code

All products supplied by Vantage Windows & Doors meet or exceed the requirements of the New Zealand Building Code and New Zealand Standards; NZS4211, Performance of Windows, and NZS4223, Glazing in Buildings - Parts 1-4 incl.

This means our windows and doors have been designed and successfully tested to perform in New Zealand's most diverse conditions, and will:

- satisfy the strength and deflection requirements of the standards
- deliver the desired levels of weathertightness appropriate to the prescribed wind zones
- meet the air leakage requirements necessary to provide comfort and efficiency
- include glazing of appropriate weight, strength and safety to satisfy not only the expected wind load but also accidental human impact.

In accordance with the TERMS AND CONDITIONS OF WARRANTY (vantage.co.nz/terms), a warranty for all Vantage Windows And Doors products is provided, under normal conditions of use, against failure of materials and/or workmanship for a period of 5 years.

The surface finishing of the aluminium extrusion is covered by a separate Performance Warranty which is dependent on the actual finish selected.

A window and door hardware/component warranty protects against defects in manufacturing, functionality and surface finish for a period of 5 years, provided care and maintenance guidelines have been followed. Plated (soft) finishes are excluded from the warranty.

PLEASE NOTE

- This warranty is subject to correct installation as outlined in the Building Code Acceptable Solution Clause E2/AS1 External Moisture or an approved alternative solution.

40 Titoki Road 2

To validate this warranty please register online at vantage.co.nz/warranty within 30 days of receiving this document.

Please input the below warranty number and follow the online steps

Warranty Number: # 18-05-4038

Manufacturer: MPW NZ Ltd

Warranty queries should be directed to the above manufacturer

D&S Doyle
40 Titoki Street
Waikanae - New Zealand

CONTACT: Gregor WINKLER
EMAIL: gregor.winkler@prefa.com
TOWN: Marktl/Lilienfeld (Austria)
DATE: 12/12/2018

SUPPLEMENTARY GUARANTEE

BUILDING:
D&S Doyle
40 Titoki Street
Waikanae - New Zealand
Installation date: Aug.-Sept.2018

CONTRACTOR:
Architectural Roof & Façade Innovations

MATERIAL:
Prefalz
Black grey
75 m²
Certificate No.: NZ 18-010

Dear Sir or Madam,

For the above-mentioned property, in accordance with the PREFA guarantee conditions, PREFA guarantees that, during a guarantee period of 20 years,

- the basic material of the PREFA Product will not exhibit any changes as a result of cracks, corrosion (rust) or frost which could impede the PREFA Product's mechanical functionality

Differently to that which is stated on the guarantee certificate, the guarantee period shall be 20 years as, according to the property details, the Product will be used in a corrosive atmosphere (proximity to the sea). Please find the guarantee conditions on the back of the attached guarantee certificate no. NZ 18-010.

Kind regards
PREFA Aluminiumprodukte GmbH

Gregor Winkler, MA
Marketing & Sales International

Leopold Pasquali
Managing Director

GUARANTEE CERTIFICATE

40-YEAR MATERIAL GUARANTEE

PREFA Aluminiumprodukte GmbH provides a 40-year guarantee on the basic material of

- **PREFA ROOF ELEMENTS**
  ROOF TILE | R.16 ROOF TILE | SHINGLE | RHOMBOID ROOF TILES | FX.12 ROOF PANEL
- **PREFA DOUBLE-LOCK STANDING SEAM (PREFALZ)**
- **PREFA ROOF DRAINAGE (GUTTER AND PIPE)**
- **PREFA FAÇADE ELEMENTS**
  SIDING | RHOMBOID FAÇADE TILES | FAÇADE SHINGLE | FX.12 FAÇADE PANEL | RIBBED PROFILE | SERRATED PROFILE | RIPPLE PROFILE

against breakage, corrosion (rust) and frost damage under the conditions specified below

40 YEAR MATERIAL GUARANTEE

CUSTOMER / BUILDING DETAILS

Name of customer and address of building: D&S Doyle

40 Titoki Street, Waikanae, New Zealand

Roofing/installation company: Architectural Roof & Facade Innovations Ltd

Product: PREFALZ - black grey, 75m²

Certificate no.: NZ 18-010

Date of installation: Aug.-Sept. 2018

Dr. Cornelius Grupp
Managing director

GUARANTEE CONDITIONS

This PREFA Aluminiumprodukte Gesellschaft m.b.H. ("PREFA") guarantee policy (the "Guarantee")

- pertains exclusively to the characteristics (described in more detail in point 3 of the Guarantee) of the basic material used for the following products manufactured and distributed by PREFA: roof tile, R.16 roof tile, rhomboid roof tile, FX.12 roof and façade panel, rhomboid façade tiles, siding and Prefalz, roof drainage system, ribbed profile, serrated profile and ripple profile (collectively referred to as the "PREFA Product");
- exclusively covers the basic material of the PREFA Product installed on the building (the "Building") described in more detail in this Guarantee;
- and exclusively entitles
  - the customers listed here who have acquired the PREFA Product directly from PREFA or from a specialist company authorised to install the PREFA Product (the "PREFA Roofer") as the end consumer,
  - and the customer's legal successor of ownership of the building.

Protection of the customer covered by the Guarantee is subject to the following requirements, conditions and limitations:

1. The PREFA Product covered by the Guarantee is manufactured from coated aluminium, which, at the time of manufacture, complies with the following standards:
   - aluminium: EN 1396:2015
   - coating: EN 13523 (all parts).

2. The duration of the Guarantee ("Guarantee Period") shall be 40 years, starting from the date of the first delivery of the PREFA Product by PREFA directly to the customer or to the PREFA Roofer. The applicable date of this first delivery shall be considered the date on the delivery note sent by PREFA to the customer or to the PREFA Roofer.

3. PREFA guarantees that, during the Guarantee Period:
   - the basic material of the PREFA Product will not exhibit any changes as a result of cracks, corrosion (rust) or frost which could impede the PREFA Product's mechanical functionality.

4. Requirements to be fulfilled for the Guarantee to apply:
   - professional installation of the PREFA Product within Europe — free of planning and building physics errors — by a specialist company authorised by PREFA, in accordance with PREFA's mounting instructions, installation guidelines and design, and with the recognised codes of practice, legal regulations and relevant existing standards, applicable at the time of installation and mounting;
   - the exclusive use of original PREFA accessories during mounting or installation;
   - installation of the PREFA Product in environments such as those defined in EN 1396:2015, table C.1, categories 1 to 3 (not including category 4: severe industrial and coastal regions).

5. Excluded from the Guarantee shall be any damage caused to the PREFA Product's basic material:
   - as a result of mounting or installing the PREFA Product contrary to the aforementioned conditions;
   - as a result of natural disasters, floods or other cases of force majeure or intermittent or continuous immersion of the PREFA Product in water or other liquid or solid media;
   - as a result of the pressure of snow or ice, or as a result of hail or lightning (particularly deformations);
   - as a result of usual wear and tear (in particular, changes in the shade or gloss level);
   - as a result of installing the PREFA Product in areas with a corrosive atmosphere (e.g. caused by chemical fumes or salt spray) or as a result of other (electro-) chemical reactions with environmental elements or other building parts;
   - as a result of incorrect further processing of the PREFA Product;
   - as a result of the use of unsuitable cleaning products or cleaning methods;
   - as a result of factors damaging the PREFA Product's basic material prior to it being sent to the building site, or during storage at the building site or otherwise prior to installing the PREFA Product;
   - as a result of mechanical or other physical damage to the PREFA Product caused by persons or items of any kind;
   - damage covered by an insurance policy;
   - damage to material replaced under this Guarantee.

6. NOTE: the Guarantee only covers damages to the PREFA Product's basic material which arise during the Guarantee Period and are reported to PREFA in writing by the customer within 30 days after the point at which the customer first noticed, or could have noticed, the case for the guarantee claim (upon presentation of the Guarantee).

7. If the guarantee claim proves to be justified, PREFA shall, at its own discretion:
   - repair the basic material by restoring or renovating it;
   - or supply, free of charge, a replacement PREFA Product if the basic material is damaged, delivering this to the Roofer commissioned with the mounting/installation (or, alternatively, to the Roofer nearest to the customer).

   PREFA shall reserve the right to alter or modify the way in which PREFA Products and/or the colour coating of PREFA Products are produced at any time. If, for this reason, the PREFA Product to be replaced or the colour required for the new coating is no longer available, PREFA shall, at its own discretion, use a Product or colour coating of a similar quality. If a PREFA Product has been improved or replaced, the remaining part of the Guarantee Period applying to the originally-installed product shall apply to this product.
   Differences in colour between the originally-installed PREFA Product and the replacement product or new coating do not represent a defect covered by the Guarantee. Consequential damage and other damage resulting from the damaged basic material or damaged colour coating shall not be replaced by PREFA.

8. The Guarantee shall not limit the customer's rights with regard to the specialist company commissioned with the mounting/installation of, or the distributor from whom it acquired, the PREFA Product.

9. The Guarantee shall be exclusively governed by Austrian law. The place of jurisdiction for claims under the Guarantee shall be PREFA's registered office in Austria.

PREFA ALUMINIUMPRODUKTE GMBH, REGIONAL COURT OF ST. PÖLTEN FN 93019 V
A-3182 MARKTL/LILIENFELD, WERKSTRASSE 1, AUSTRIA
T +43 2762-502, F +43 2762-874, E OFFICE@PREFA.COM, WWW.PREFA.COM
01/2017 | MFG

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Kapiti Coast District Council
25/05/2018

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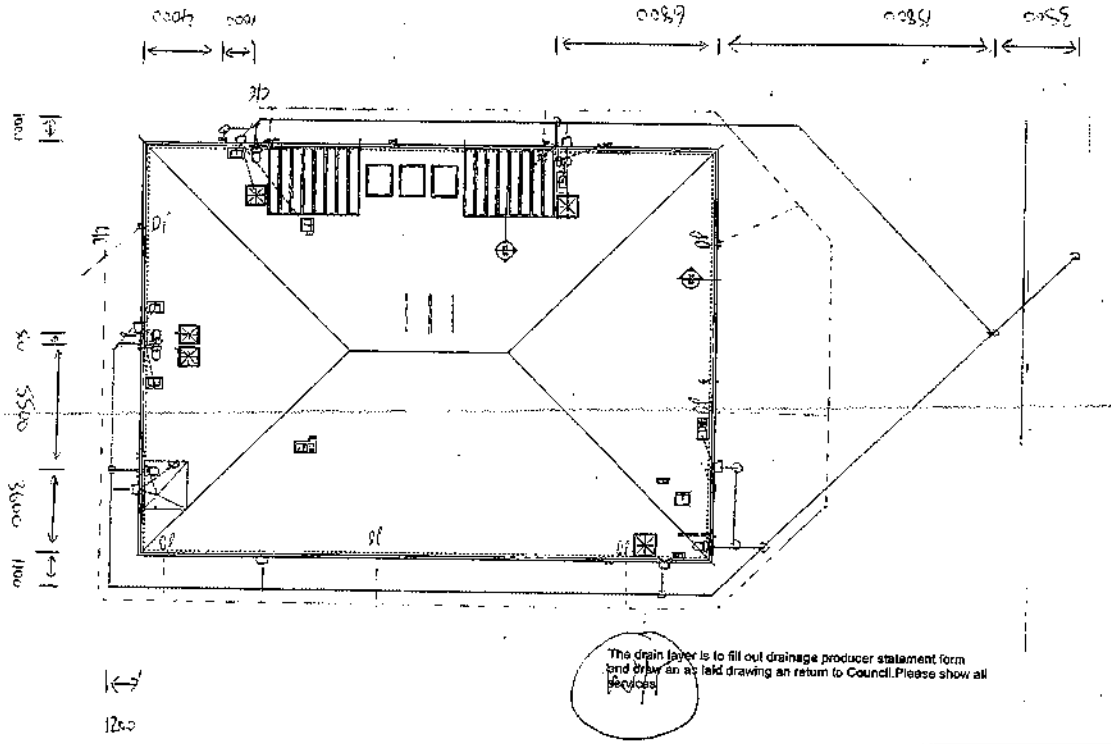

Validity authenticated in accordance with NZBC Policy 002

12 NOV 2010

Signature: _____



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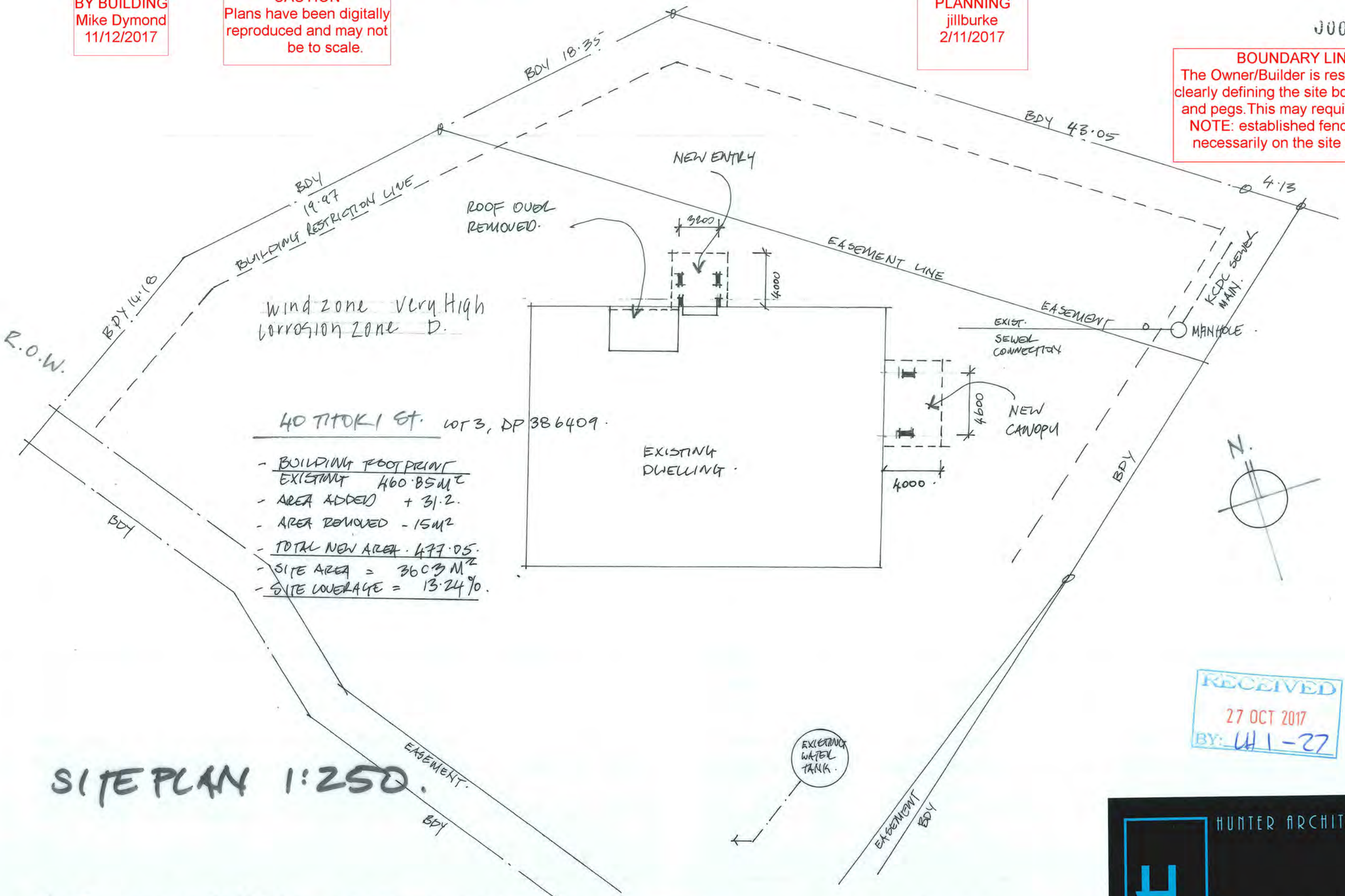
APPROVED BY BUILDING
Mike Dymond
11/12/2017

CAUTION
Plans have been digitally reproduced and may not be to scale.

APPROVED BY PLANNING
jillburke
2/11/2017

J0001

BOUNDARY LINES
The Owner/Builder is responsible for clearly defining the site boundary lines and pegs. This may require a survey.
NOTE: established fences are not necessarily on the site boundary.



SITE PLAN 1:250.

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HUNTER ARCHITECTURE
P: 04 9049288
M: 021 413 999

40 TITOKI ST. WAIKANAE BCH. DOWLE HOUSE ADDITIONS & ALERATIONS 25 AUG 17. A0

BC170827

General Notes

J0002

1 All work to comply with NZS 3604 and all current amendments 2011 and NZ Building Code 2011

2 Contractor is to confirm all dimensions and conditions on site prior to any construction commencing

Contractor is to notify the Designer of any discrepancies prior to any construction commencing.
All drawings to be read in conjunction with all Contract Documents including but not limited to Specification, engineers structural details, and product manufacturer's specifications.

3 Timber treatment for all framing to be in accordance with NZBC 2011 B2 AS1

All framing timbers are to be SG8

All bottom plates to be H3.2

All Gutter and low pitch roof framing to be H3.2 Treated.

External and load bearing wall framing H1.2 as follows.

90 x 45s at 400mm cts up to 2.7m high

140x45 Framing at 400 centres

Internal non load bearing walls 90x45 @600 ctrs.to 2.4 high and 400 centres to 2.7 high

All Other framing refer dwgs.

4 **Wind Zone is Very High. Exposure Zone D**

5 Interior Trim,painted pine to match existing

6 **Cladding 1.** Generally unless detailed otherwise stained cedar variable width vertical shiplap weatherboard over ex 25mm castilated H3.1 horizontally fitted ventclad cavity battens over thermakraft Watergate plus 295 underlay. Refer spec for underlay requirements.

Cladding 2. Eurometals Zinc vertical joint cladding on ex 25mm H3.1 ventclad castilated H3.1 cavity battens Over James Hardies RAb board. Refer dwgs and Manufacturer for details and specific installation requirementss.

Roofing. Eurometals Zinc standing seam roofing system on Vaporzinc underlay on 17.5mm H 3.1 LOSP rated Ply substrate Refer dwgs and Manufacturer for details and specific installation requirements.

Note ensure a separation layer is provided between treated timber cavity battens and all zinc sheet and flashings, such a protective flashing tape applied to battens.

7 **Wall Linings** 10mm gib. Wet areas aqualine and 9mm villa board to wet areas to be tiled. Note shower and wet areas tiles to be over waterproof membrane, refer spec for product specification.

8 Wall Pink batts ultra R2.8, Ceiling Pink Batts R3.2

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40 TITOKI ST. WAIKANAE BEACH. DOWLE HOUSE. PROPOSED ADDITIONS & ALTERATIONS. A1. 25 AUG 2017.

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JUOG3

DEMOLITION PLAN. 1:100

0 5M
SCALE @ A3.

KEY.

WALLS/ITEMS TO BE REMOVED ENSURE ALL STRUCTURE REMAINS FULLY SUPPORTED THRU'OUT ALL STAGES OF WORK.

FIT NEW WASTE ALLOW TO CUT SLAB TO SUIT CHANNEL.

REMOVE WINDOW SHOWER TO BE REMOVED

REMOVE DOOR & SIDE LITE UNIT & REPLACE WITH SLIDER

REMOVE VENTAM

REMOVE WALL & WINDOW, ROOF - BEAM REMAINS

REMOVE

CUT SLAB & FIT CHANNEL

REMOVE ROOF OVER

SCRIBBLE SLATE

SKYLIGHT RETAINED HERE

REMOVE WINDOWS & REPLACE WITH DOORS

CHANGE TO FIXED SINGLE HORIZ. PANE SLOT WINDOW.

REMOVE DOOR & OPENING RETAIN CAVITY SLIDER FOR REUSE AS D3.

CHANGE TO SLIDING WINDOW

RETAIN AS REUSE AS D4.

NEW OPENING HEAD TO BE 2200.

BAR TO BE REMOVED

REMOVE DOORS

RETAIN AS REUSE AS D4.

CEILING REMOVED

RETAIN EXIST LINTEL

NEW OPENING HEAD 2200

REMOVE DOORS RETAIN ONE PANEL & REUSE AS DOOR D1 & D8.

CUT SLAB FOR NEW FOOTINGS FOR LINTEL/FT LOAD OF NEW ROOF

REMOVE WINDOWS & FORM NEW OPENING HEAD @ 2400

REMOVE ROOFING OVER. ROOF TRUSSES REMAIN

EXISTING DECK.

STORE

REMOVE PERGOLA ALLOW THIS FACE

GARAGE.

EXISTING WC.

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40 TITOKI ST

DOWLE RESIDENCE · WAIKANAE BEACH ·
PROPOSED ALTERATIONS & ADDITIONS

25 AUG 17 · A2

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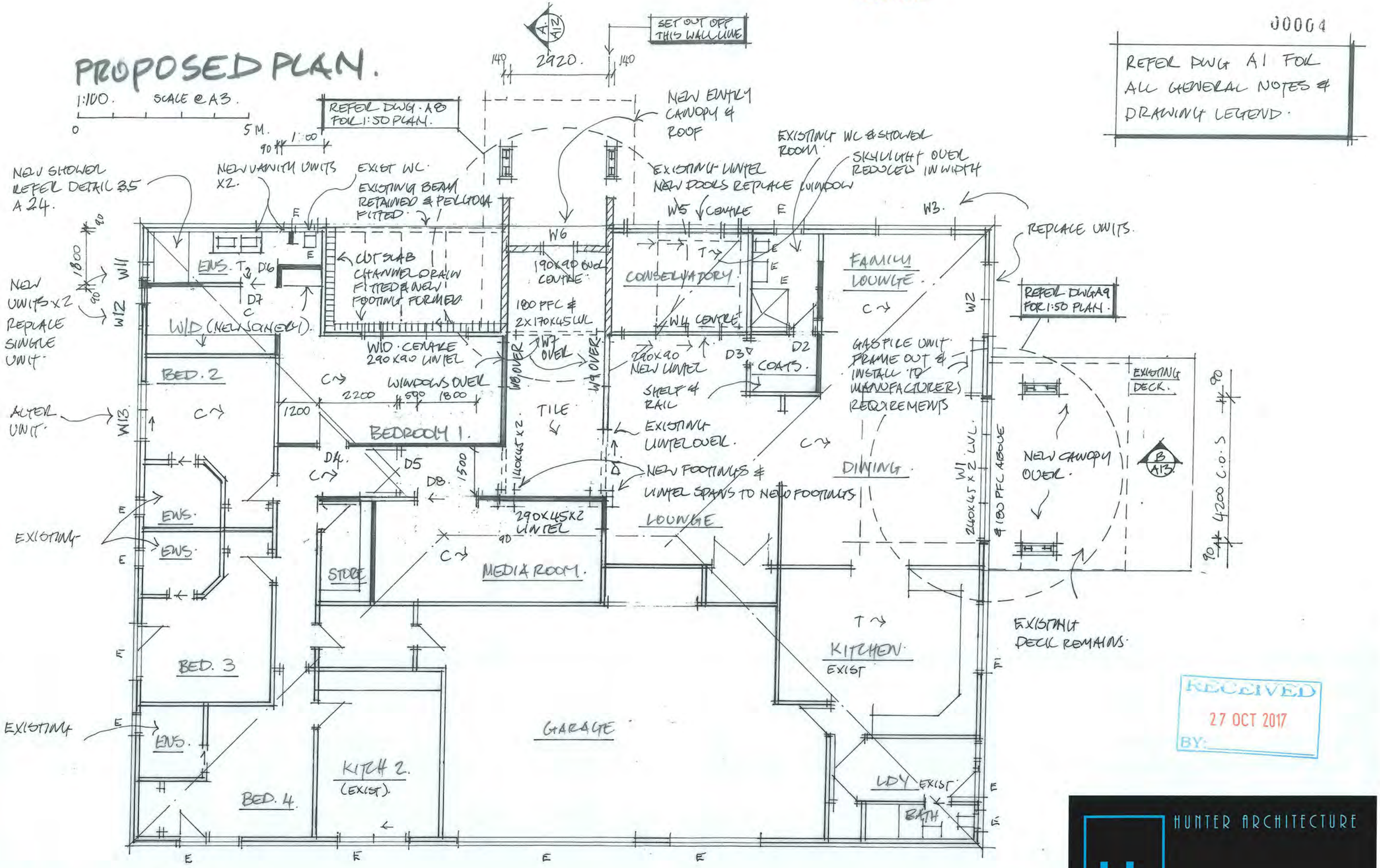
00004

PROPOSED PLAN.

1:100. SCALE @ A3.

0 5 M.

REFER DWG A1 FOR ALL GENERAL NOTES & DRAWING LEGEND.



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DOWLE HOUSE WAIKANAE BEACH
PROPOSED ADDITIONS & ALTERATIONS.

25 AUG 17.

A3.

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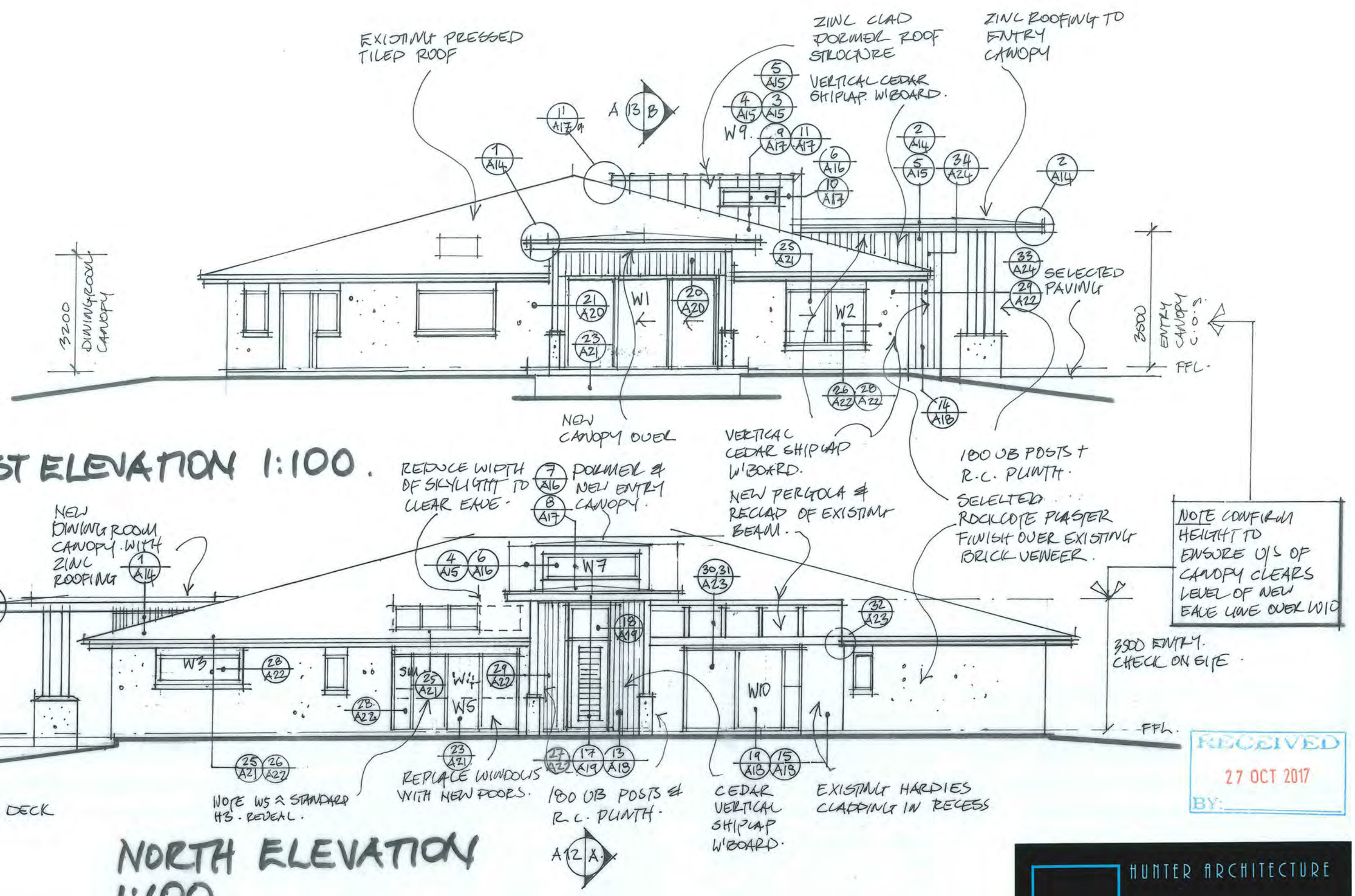

EAST ELEVATION 1:100.

NORTH ELEVATION 1:100

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DOWLE HOUSE
WAIHANAE BEACH

PROPOSED ADDS & ALTS.
25 AUG 17.

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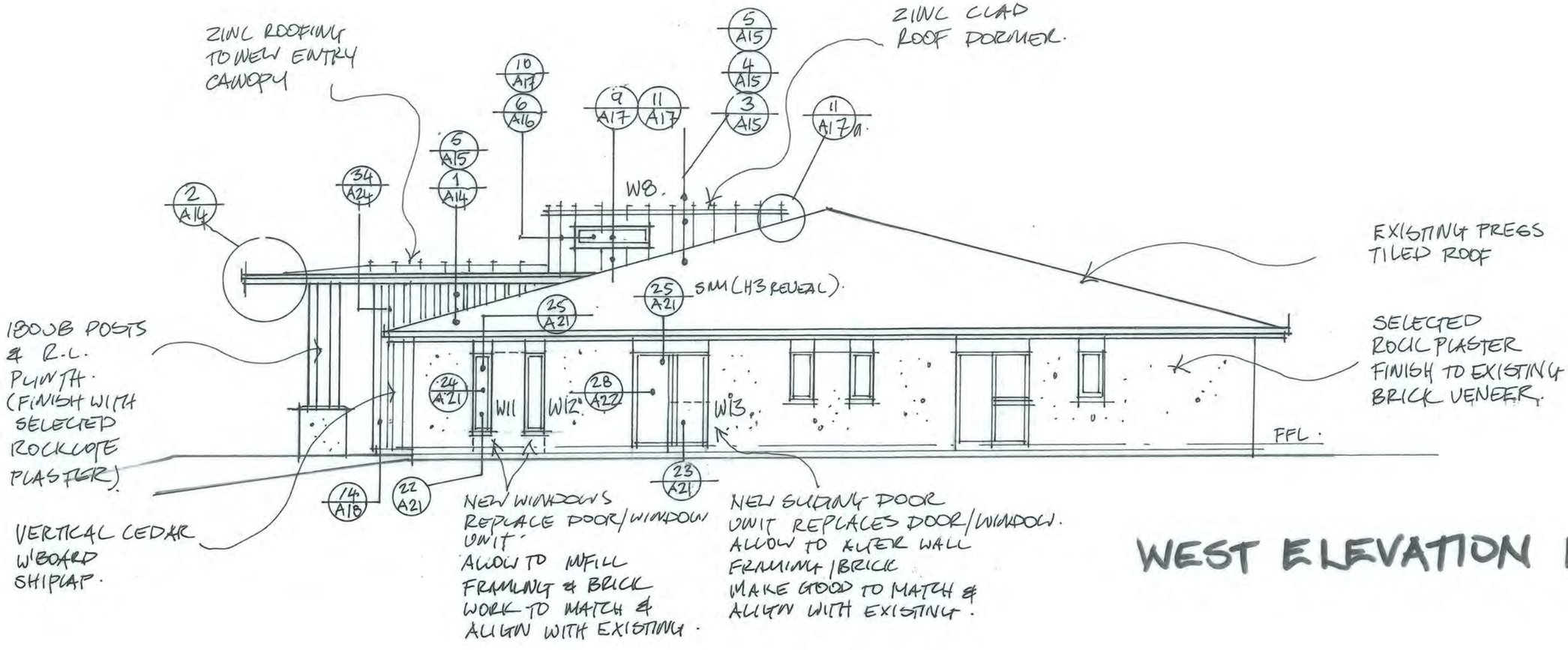

WEST ELEVATION 1:100.

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40 TITOKI ST. WAIKANAE BEACH POWLE HOUSE

PROP. XDDS & ALTS. 25 AUG 2017.

A 5

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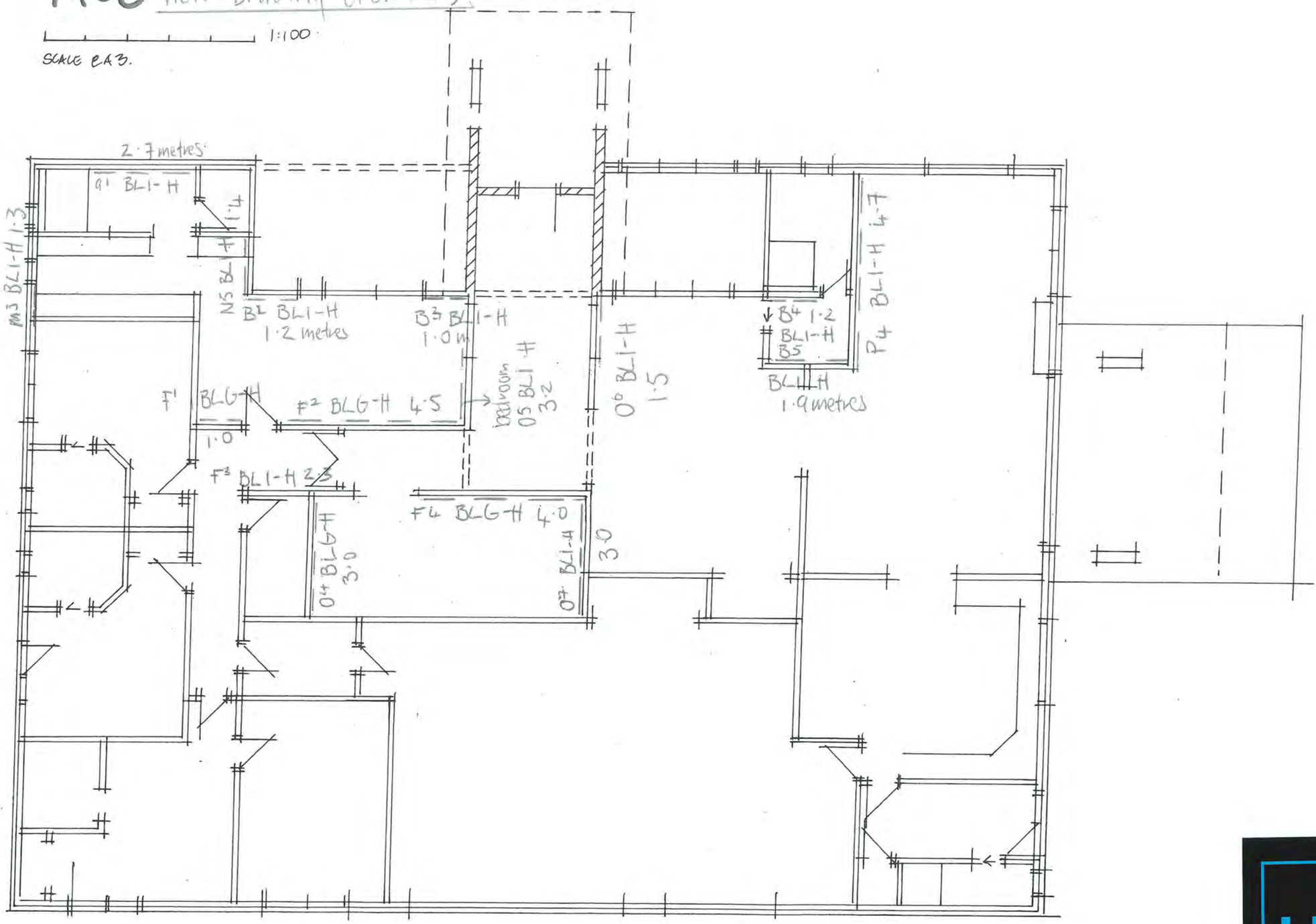
BRACING PLAN.

1:100 new bracing elements:

1:100

SCALE @ A3.



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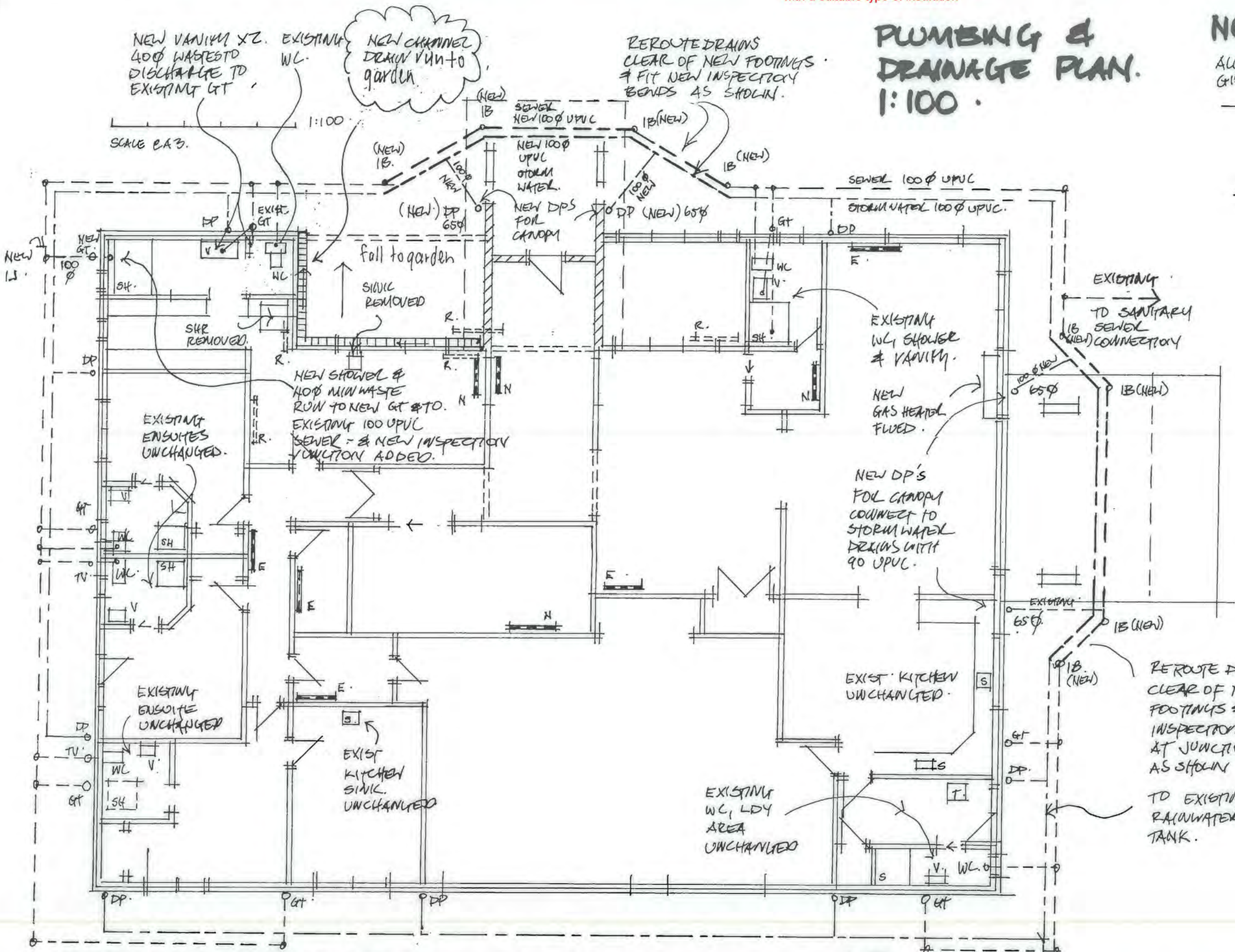
40 TITOKI ST WAIKANAE BCH PROPOSED ADDS & ALTS. A6 25 AUG 2017.
DOWLE HOUSE

All frost prone pipes are to be lagged with a suitable type of insulation

PLUMBING & DRAINAGE PLAN. 1:100.



NOTES/LEGEND.

ALL WORK TO NZBC G13/AS1.

- EXISTING 100Ø UPVC SEWER, OR NEW AS NOTED.
- EXISTING
- EXISTING 100Ø UPVC STORM WATER DRAIN. OR NEW AS NOTED.
- IJ (NEW) NEW INSPECTION JUNCTION.
- IB (NEW) NEW INSPECTION BEND.
- 65Ø (NEW) NEW DP. OR AS EXISTING ≈ DP.
- E (N). NEW OR EXISTING RADIATOR.
- R. RADIATOR TO BE REMOVED.

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Further Information Received
04/12/2017

BUILDER TO ENSURE THAT PROPOSED FOUNDATION HEIGHT WILL ALLOW A SATISFACTORY DRAINAGE CONNECTION TO THE COUNCILS SEWER.

HO TITOKI ST

WAIKANAE BCH DOWLE HOUSE

PROPOSED ADDS & ALTS. amended 4/12/17

A7 25 AUG 2017.

A CERTIFYING PLUMBER/DRAINLAYER TO FILL OUT ATTACHED PRODUCER STATEMENT FORMS AND RETURN TO COUNCIL .ALSO PROVIDE NEAT ASBUILT DRAINAGE PLAN SHOWING SEWER,STORMWATER AND WATER.

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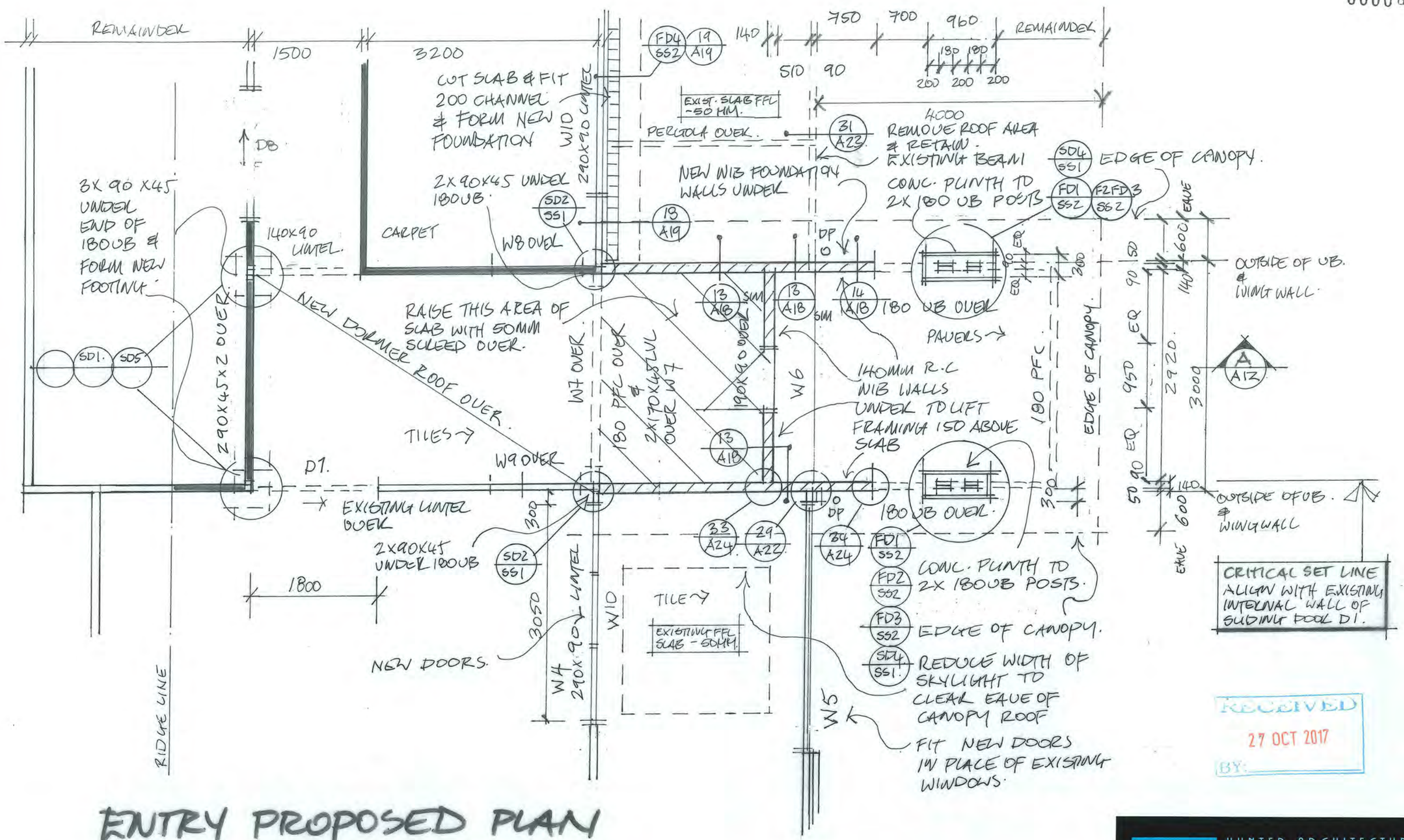
J0008



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ENTRY PROPOSED PLAN

1:50 SCALE @A3

0 1 2 3.

40 TITOKI ST. WAIKANAE BEACH DOWLE HOUSE

ADDS & ALT · 25 AUG · 2017 · A8

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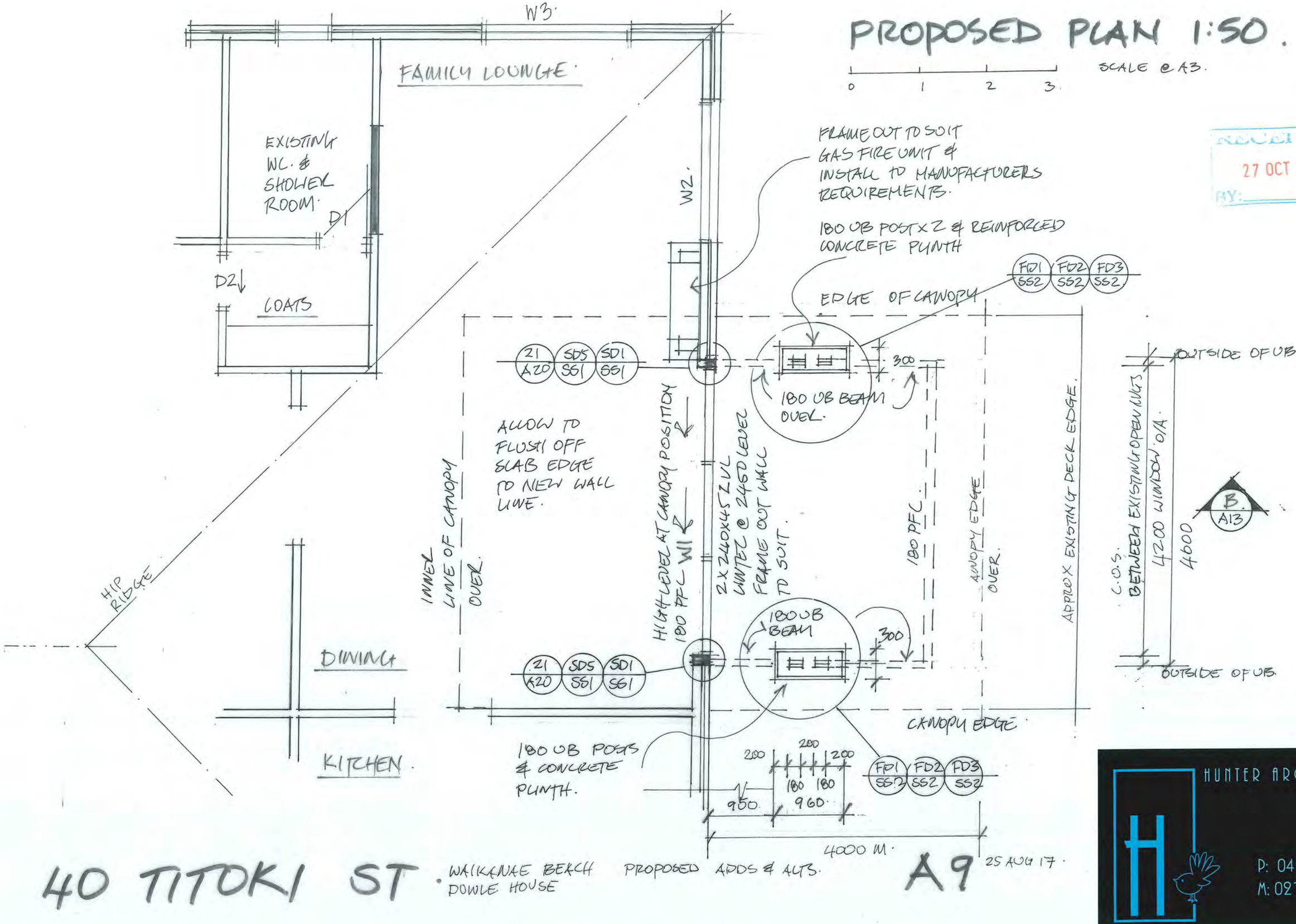
PROPOSED PLAN 1:50.

SCALE @ A3.

0 1 2 3



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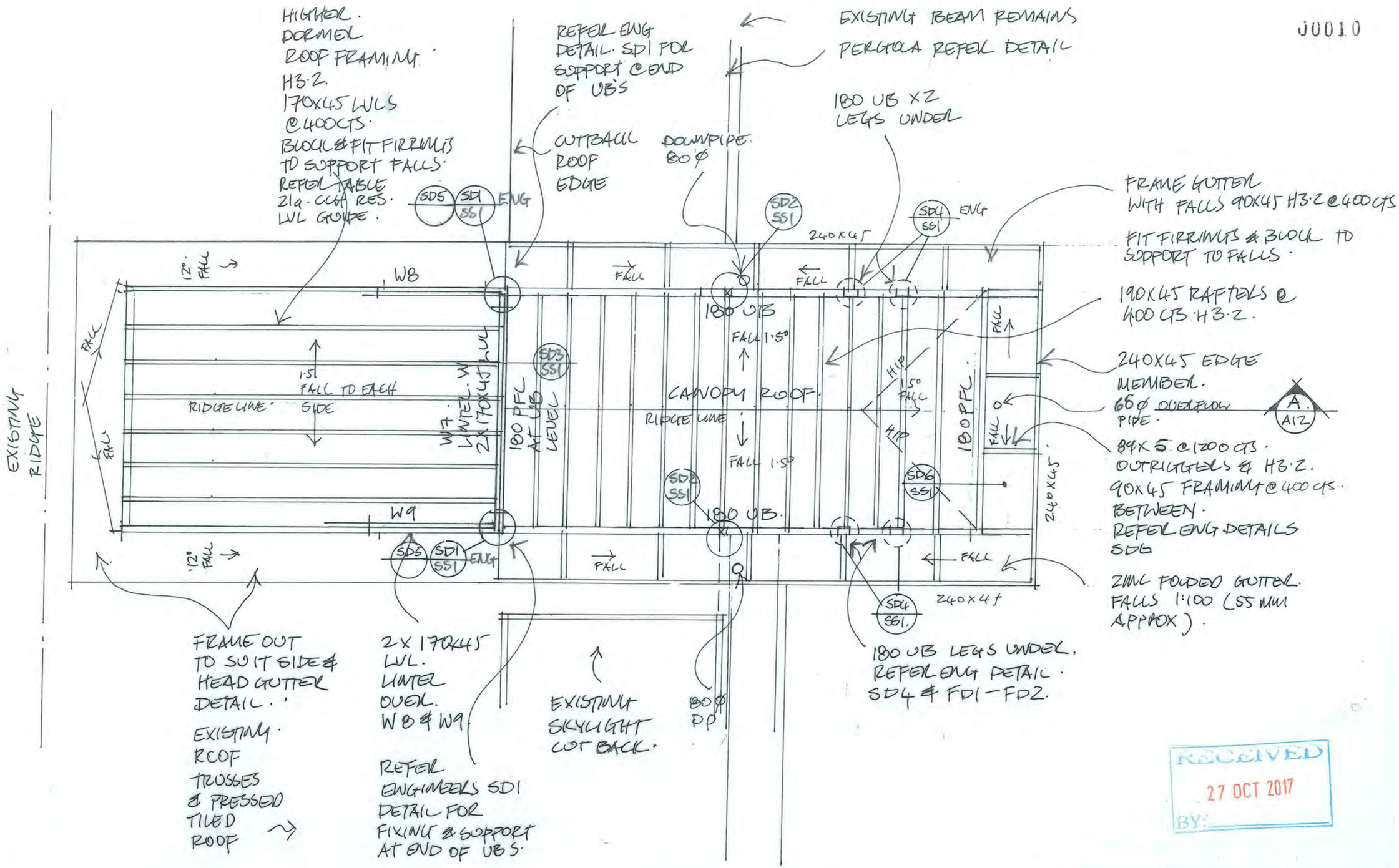
J0010



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ROOF FRAMING PLAN. 1:50
ENTRY CANOPY & POP UP DORMER.

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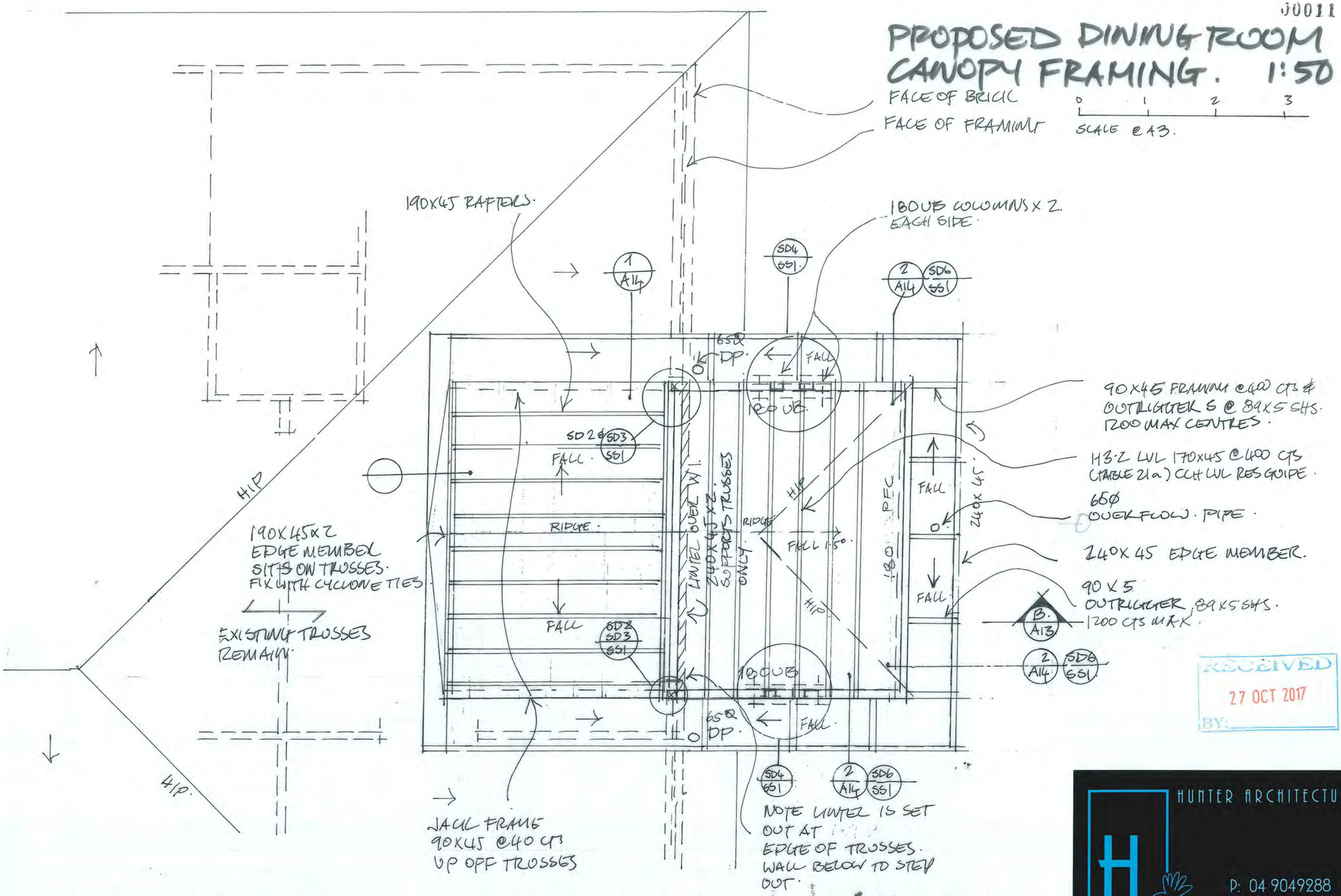
00011

PROPOSED DINING ROOM CANOPY FRAMING. 1:50



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A11 25 AUG 17.

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SECTION A. 1:50.

0 1 2 3 SCALE @A3

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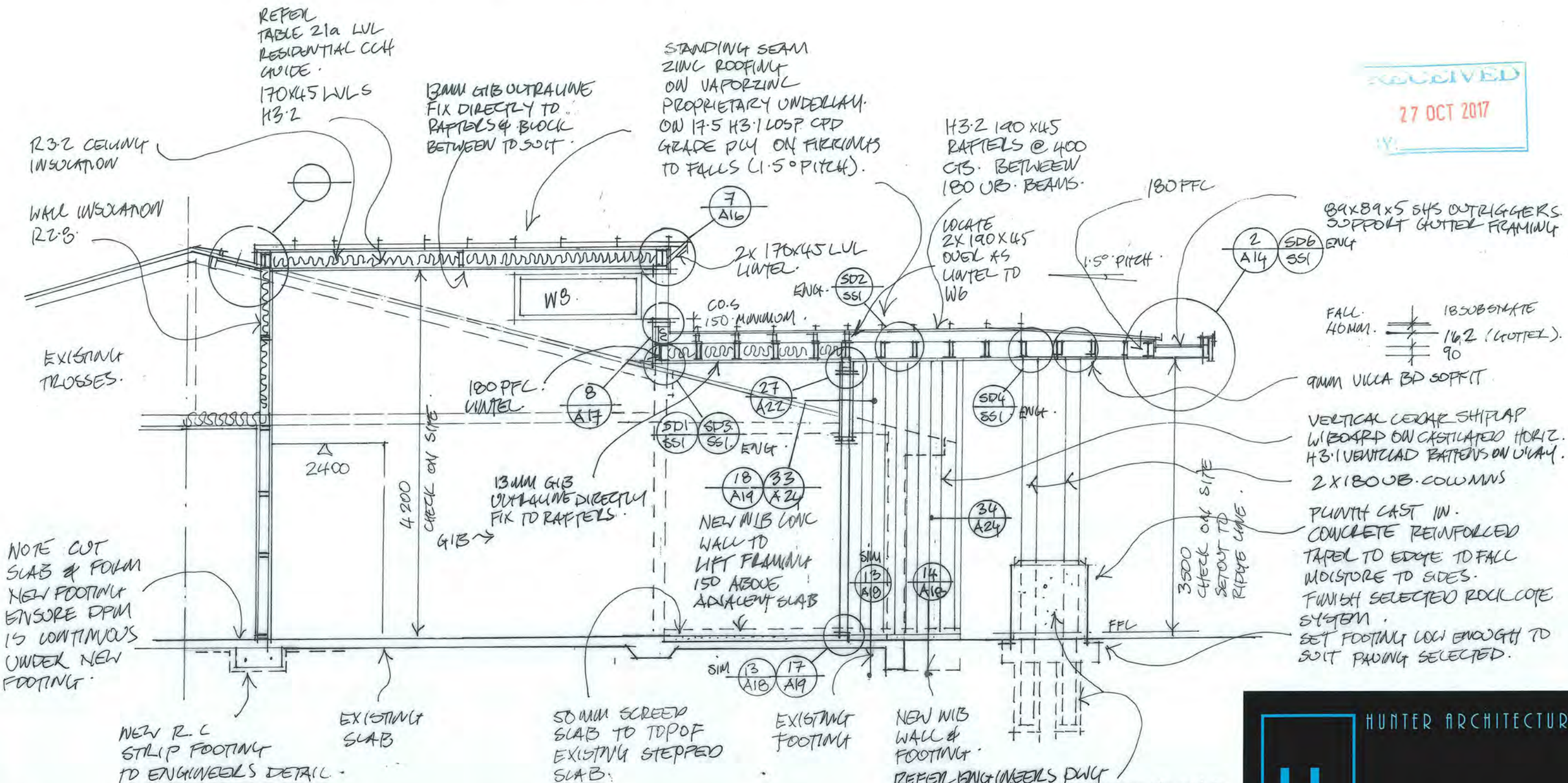

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WAIKANAE BCH.
DOWLE HOUSE

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A12

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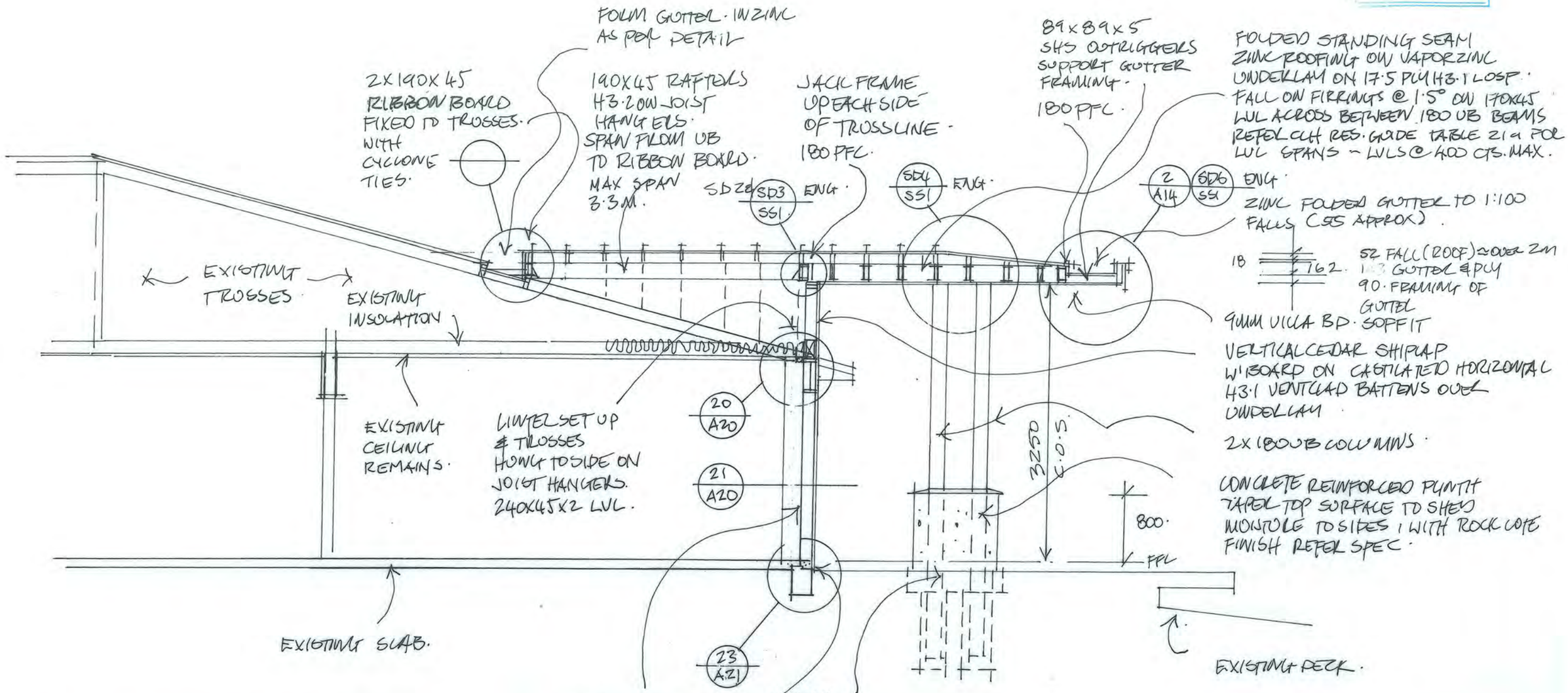

SECTION B 1:50

SCALE @ A3

0 1 2 3

40 TITOKI ST · DOWLE HOUSE PROP · ADDS & ALTS ·

A13 25 AUG 2017 ·

HUNTER ARCHITECTURE
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J0014

SEPERATION LAYER TO ALL H3.1 / ZINC JUNCTIONS.

50

ZINC STANDING SEAM.

VAPORZINC UNDERLAY,

S/S STIFFENER & DRIP EDGE

REBATE PLY TO SUIT STIFFENER THICKNESS

1.5° FALL

ZINC GUTTER FOLDED TO SUIT ON VAPORZINC U'LAY & H3.1 LOSP 17.5 MM SUBSTRATE PLYWOOD ON FIRRINGS TO FALLS.

5° MIN.

10

50MM X 10MM PACER H3.2.

240X45 H3.2 TRIMMER.

35 MIN

16 C.O.S

70 MIN.

1:100 FALL ≈ 55MM.

115

70

FIRRINGS TO SUIT.

190 RAFTERS @ 400 CTS.

S/S HANGERS

H3.2 90X45 H3.2 FRAMING ON S/S HANGERS @ 400 CTS.

EX25 CEDAR BEAD.

TAPE OVER HIDDEN FLASHING

50

UPVC GUTTER

15

35

JACK FRAME UP OFF EXISTING TROSSES. FRAMING @ 400 CTS

EXISTING PRESSED METAL COATED TILE ON BATTENS ROOFING ON U'LAY

600 MM.

VERTICAL CEDAR SHIPLAP W'BOARD ON H3.1 EX 25MM BATTENS OVER BUILDING UNDERLAY.

HIDDEN FLASHING TO LAP OVER TILE UPSTAND.

9MM FLUSH STOPPED VILLA BOARD.

FOLDED ZINC CAP FLASHINGS.

EX 25MM FASCIA TO SUIT. PAINTED.

SKETCH VIEW OF FIXING PLATE.

89 X 5HS OUTRIGGERS.

M12

200

89

65Ø OVERFLOW PIPE.

STANDING SEAM ZINC ROOFING ON VAPORZINC UNDERLAY ON H3.2 17.5 CCA CPD RATED PLYWOOD.

ZINC GUTTER FOLDED TO SUIT ON VAPORZINC U'LAY ON H3.1 LOSP 17.5 CPD PLYWOOD ON FRRINGS TO FALLS

55

162

C.O.S

70MM

FALL 1:100 ≈ 55MM

M12

89X5 SHS. OUTRIGGERS & FIXING PLATE @ 1200 CTS & EACH END. REFER ENG DETAIL SP3. & INTERMEDIATE H3 90X45 FRAMING @ 400 CTS.

BOLT RIBBON BOARD TO 180UB, M12 @ 900 CTS. & HANG JOISTS ON JOIST HANGERS @ 400 CTS

DRIPEDGE DETAIL SEE ADJACENT DETAIL. 1.5°

FIRRINGS.

PACER TO SUIT RAFTER SIZE AT S EDGE.

180 UB (OR PFC REFER PLAN REFER ENG DETAILS. SD1-SD5.

65Ø DP. DROPPER.

DETAIL.

1 DINING ROOM CANOPY ROOF DETAIL TO SIDES OVER EXISTING ROOF

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DETAIL.

2 ENTRY ROOF & DINING ROOM ROOF CANOPY EDGES.

600

EAVE GUTTER.

40 TITOKI ST

WAIKANAE BCH DOWLE HOUSE

PROP. ADDS & ALTS.

A 14

25 AUG. 2017.

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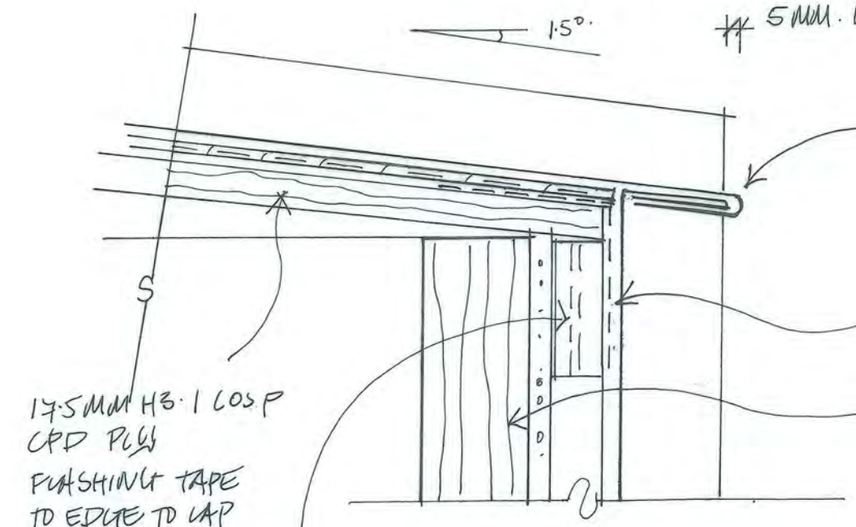
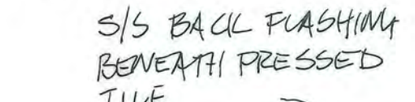
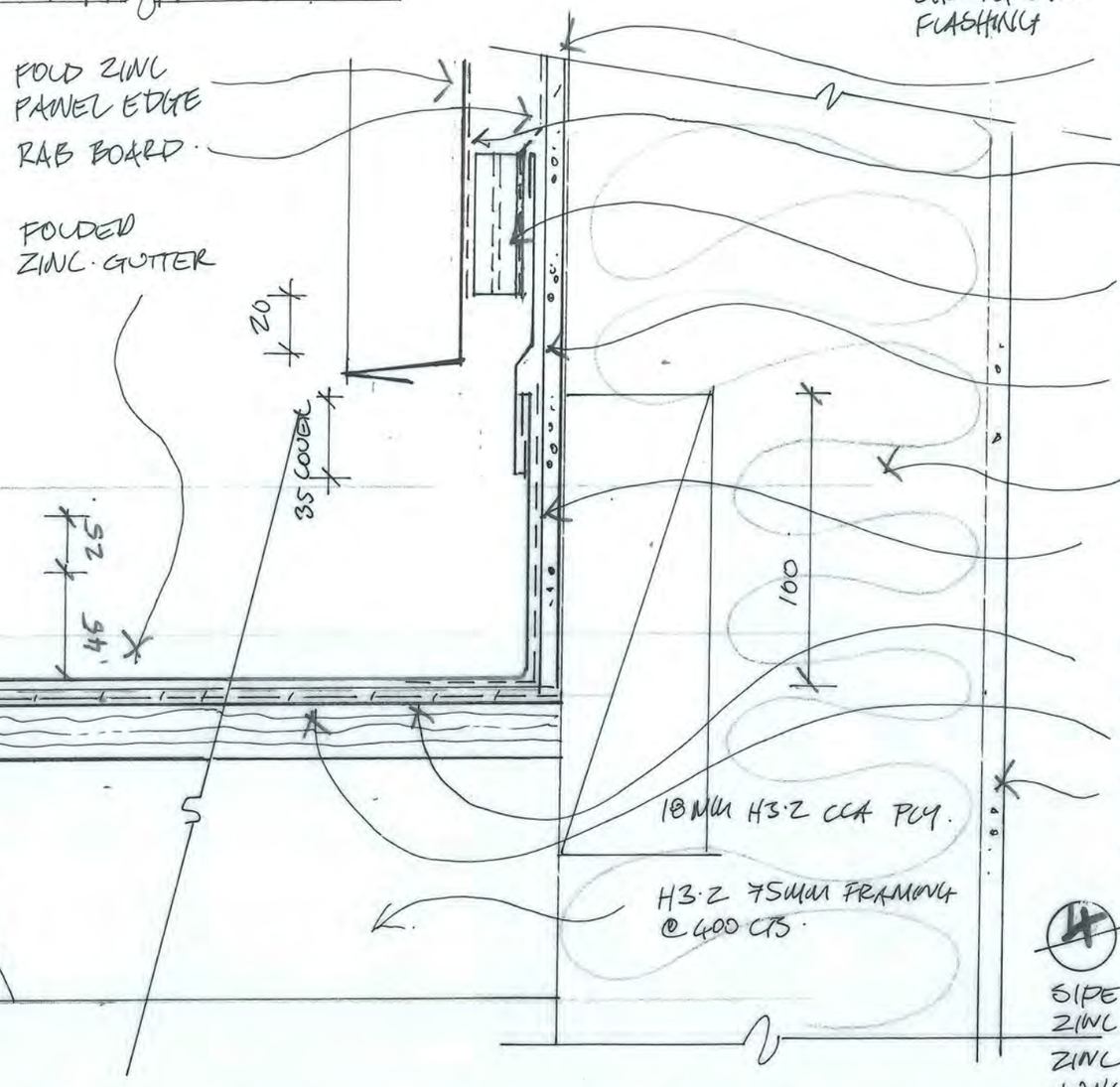
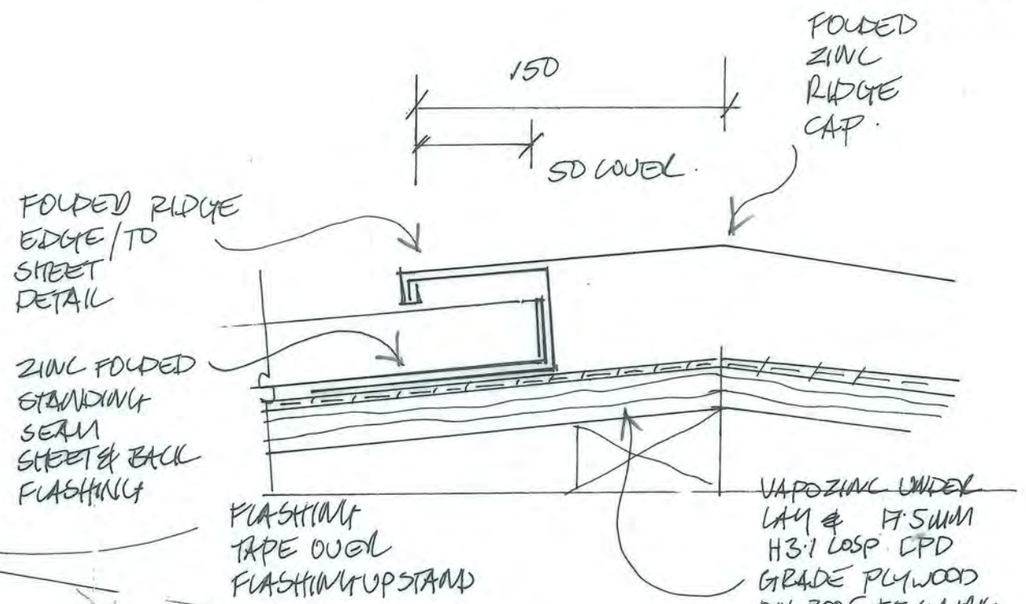


3 **DETAIL.** 1:2
ROOF EDGE / ZINC.







4 **DETAIL.** 1:2.
SIDE GUTTER ZINC / TILE & ZINC WALL JUNCTION.

5 **DETAIL.** 1:2.
RIDGE CAP TO ZINC SHEET ROOFING.

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DOWLE HOUSE.

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LVL.
170x45 x2
LINTEL

170x45 LVL
RAFTERS ON
JOIST HANGERS.

STANDING SEAM
ZINC SHEET PROFILE
ON VAPOZINC
UNDERLAY ON H3.1 LOSP
17.5 CPD GRADE PLY.

TAPERED (H3.2).
BLOCKING @
400 CTS. FIX
TO LINTEL

SET EQUAL
TO HEAD.

SEPERATE FACING
FLASHING WITH FOLDS
AT JOINS TO ROOFING TRAY
& HEAD FLASHING.

15

WALL INSERATION.

10mm GIB

RAB.

TAPE TO
BATTENS.

ZINC SHEET
STANDING
SEAM
CLADDING
ON VENTCLAD
CAVITY
BATTENS
(CASTIGATED)

13mm GIB
ULTRALINE
FIXED DIRECTLY
TO LVL
RAFTERS

MULTIGRID
EACH SIDE

PEF/AIRSEAL.

AQUALINE
REVEAL.

PACKER

FLASHING
TAPE
UNDER.

DRESS TAPE INTO REVEAL

10mm.

15

30

30

INSEAL
FOAM TO
WINDOW
JUNCTION.

ZINC JAMB
FLASHING &

ZINC FACING FLASHING
WITH FOLDED SEAM JOINTS.

10

30

BLOCKING
TO SUIT @
400 CTS
MAX.

SET TO BE
EQUAL TO JAMB

AIRSEAL/PEFROD.

GIB. REVEALS
(AQUALINE).

DOUBLE GLAZED
ALUM. JOINERY.
P/COATED

25

INSEAL
FOAM STRIP.
TO WINDOW
JOIN.

ZINC HEAD FLASHING.
WITH WEEP HOLES.

7 DETAIL.

ZINC/WINDOW/ROOF
EDGE. @ W7.

1:2.

8 DETAIL. 1:2.

ZINC/WINDOW JAMB.
@ W7.

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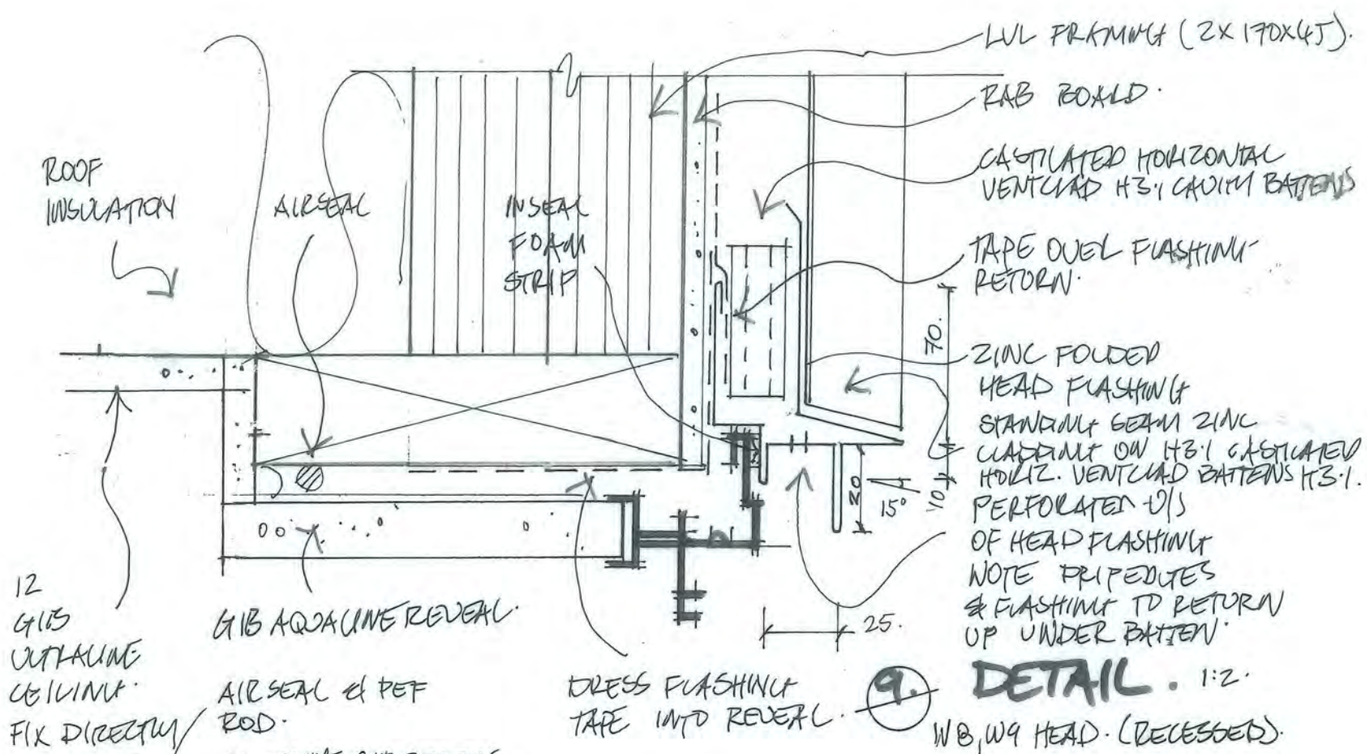
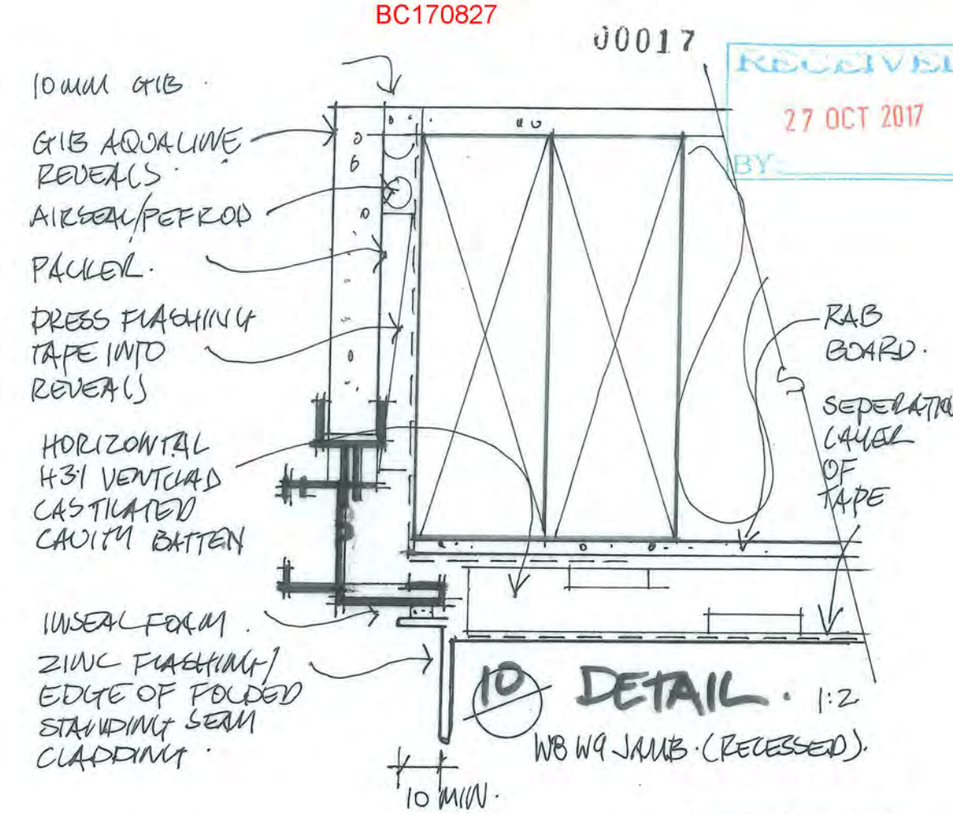
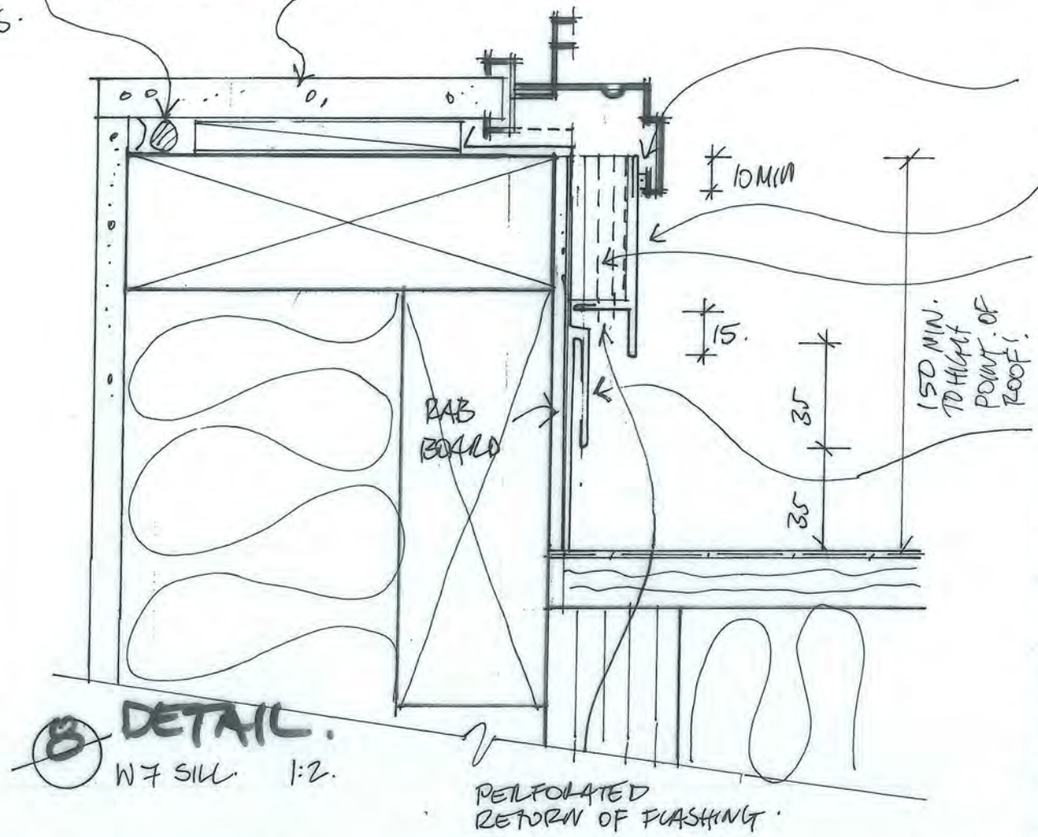


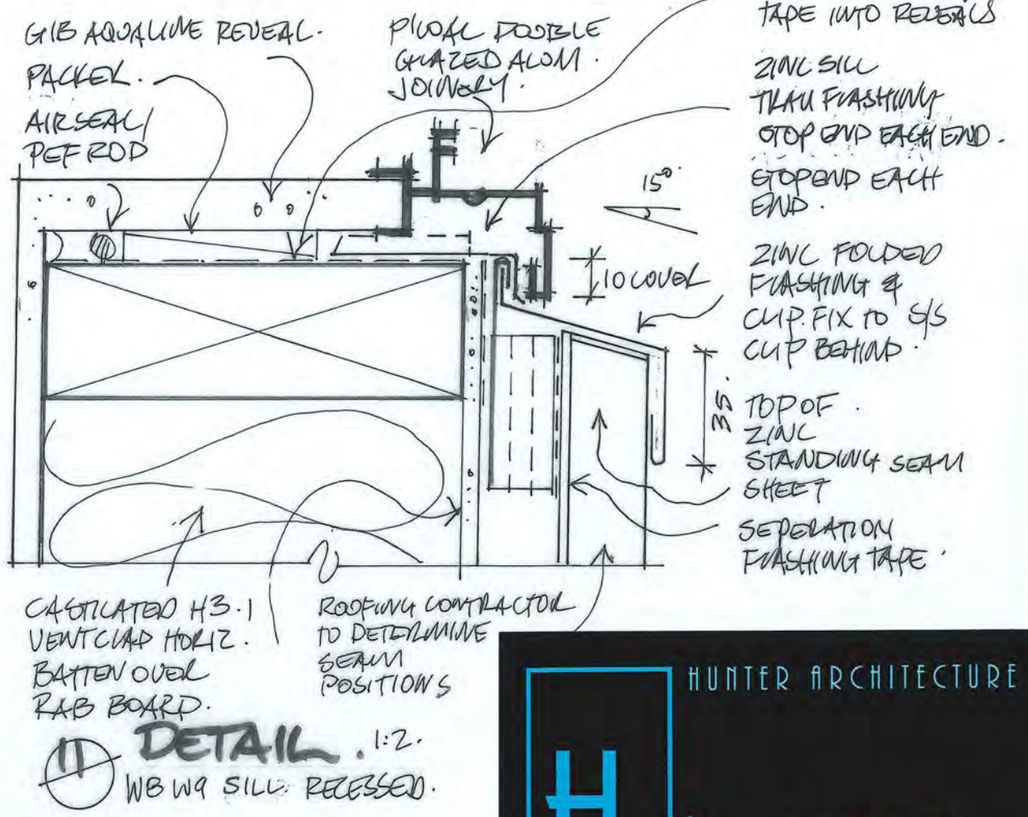




INSEAL FOAM SEAL STRIP.

SILL ZINC FLASHING. 10MM COVER MIN, PERFORATED CASTILA VENTILAD (H3.1). BATTEN. (SEPERATION LAYER BETWEEN ZINC & TREATED BATTENS

ZINC STANDING SEAM ROOFING SHEET ON VAPOZINC UNDERLAY ON H3.1 OSB 17.5 CPD GRADE PLY ON H3.2 LVL. FOLDED UP WITH ZINC OVER FLASHING NOTE OVER FLASHING FITTED AS A SILL TRAY FLASHING. TO EXTEND UNDER WINDOW FRAME. FOLD UP & STOP END EACH END OF TRAY.



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DOWLE HOUSE PROPOSED ADDS & ALTS. 25 AUG 2017

A 17

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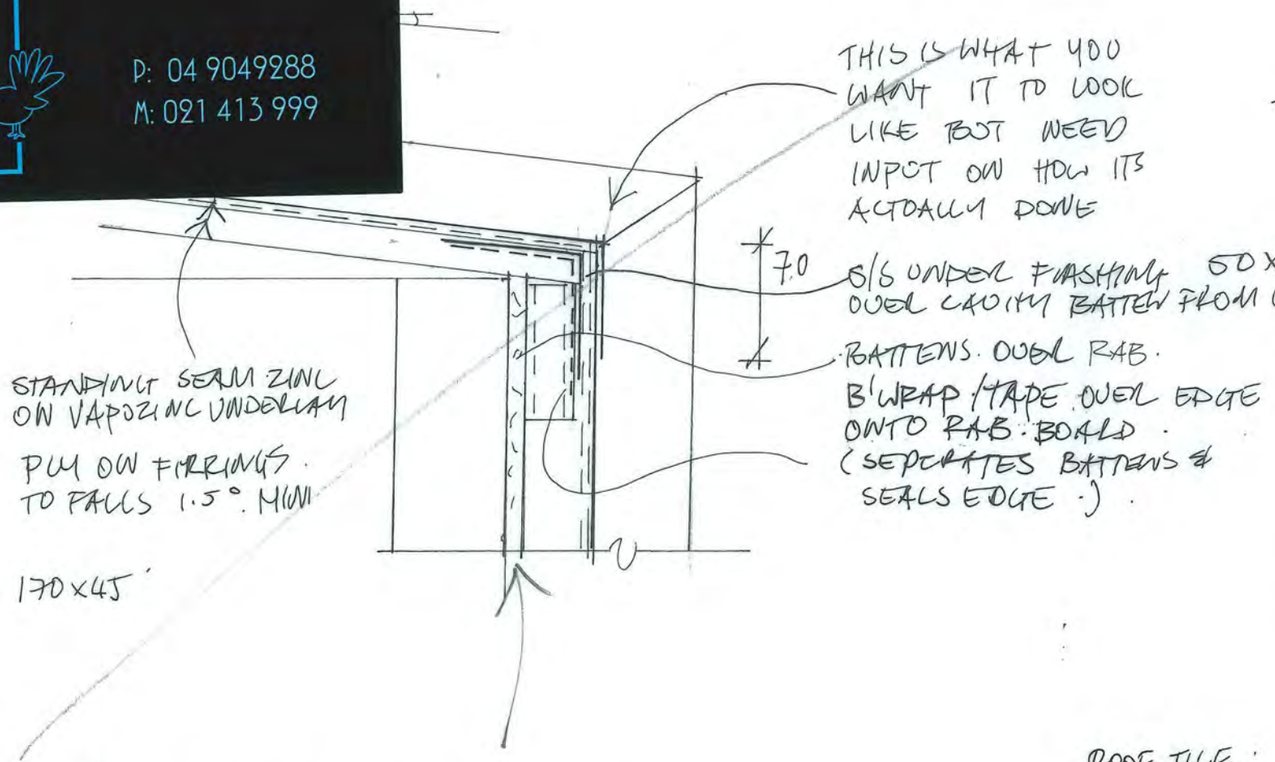
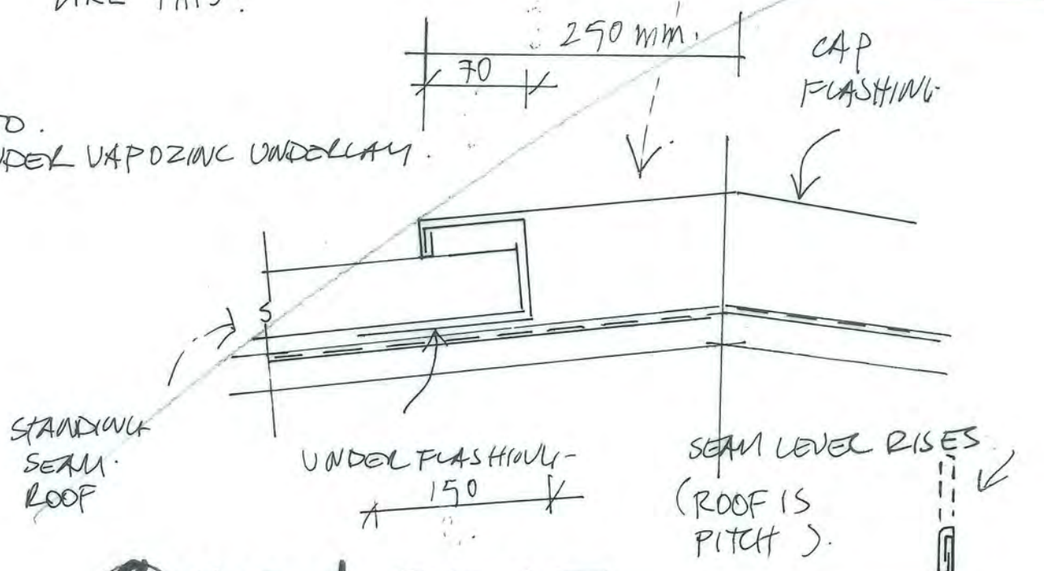
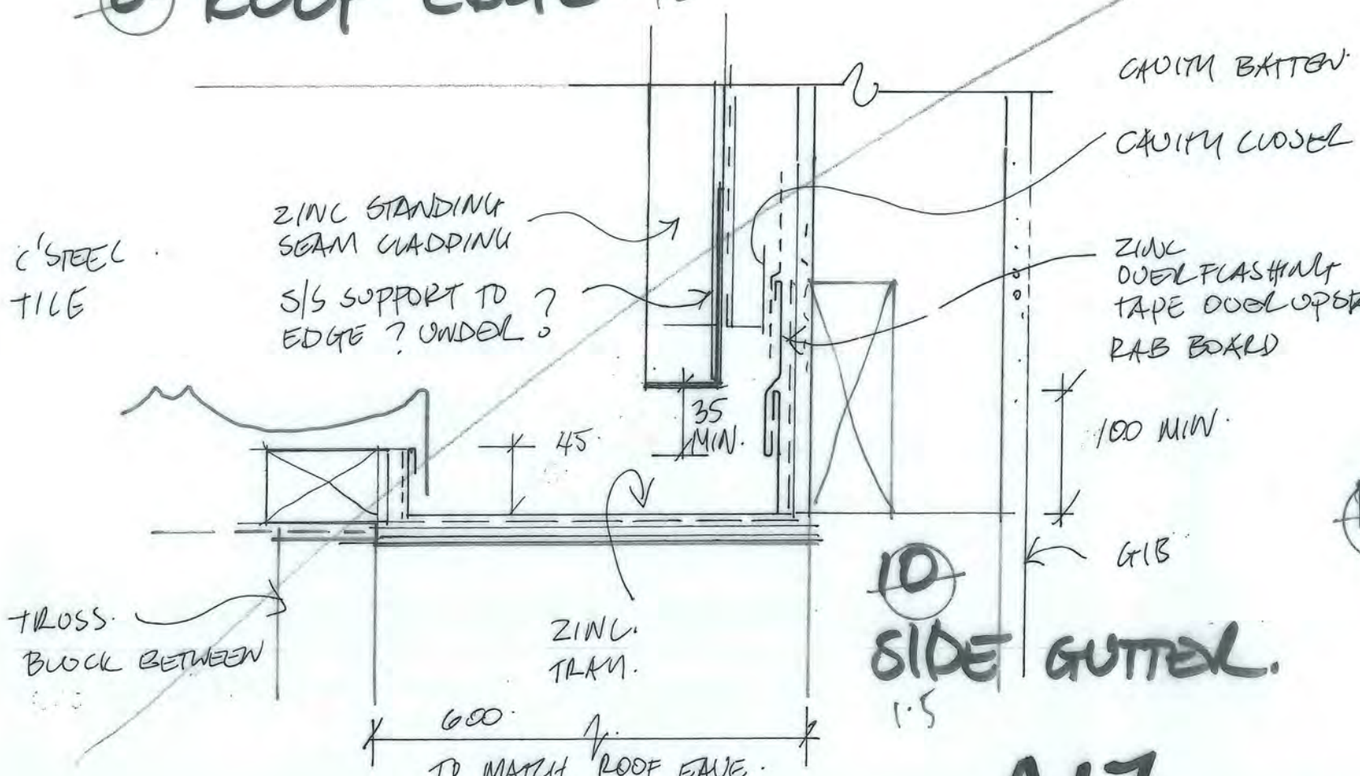


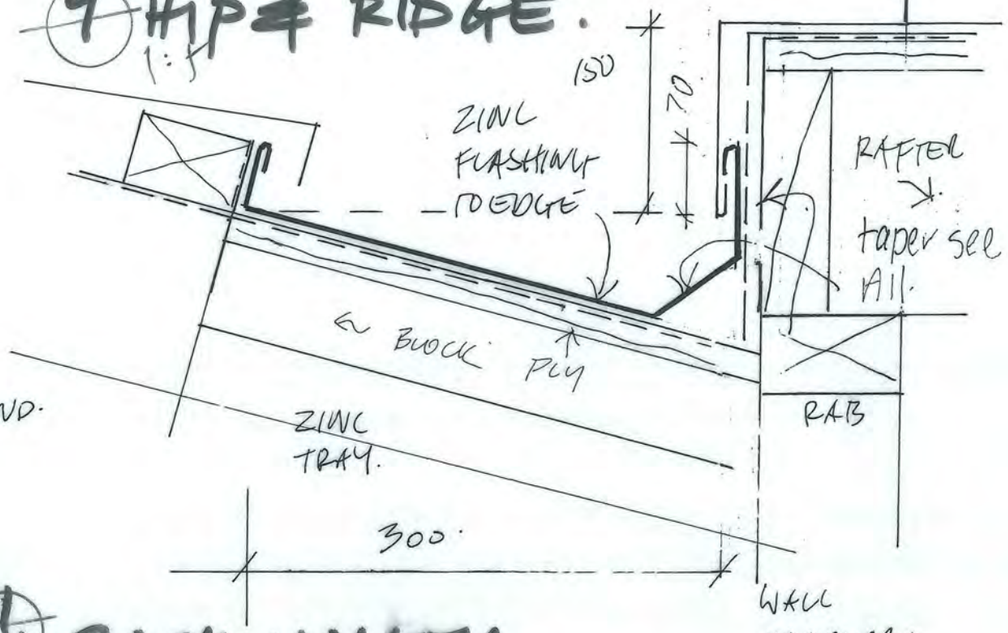
+ RIDGE DETAIL NEEDED! LIKE THIS?



8 ROOF EDGE. 1:2



9 HIP & RIDGE. 1:5



10 SIDE GUTTER. 1:5

11. BACK VALLEY. DETAIL. (RIDGE OF HOUSE END OF BOX. 1:5

A17

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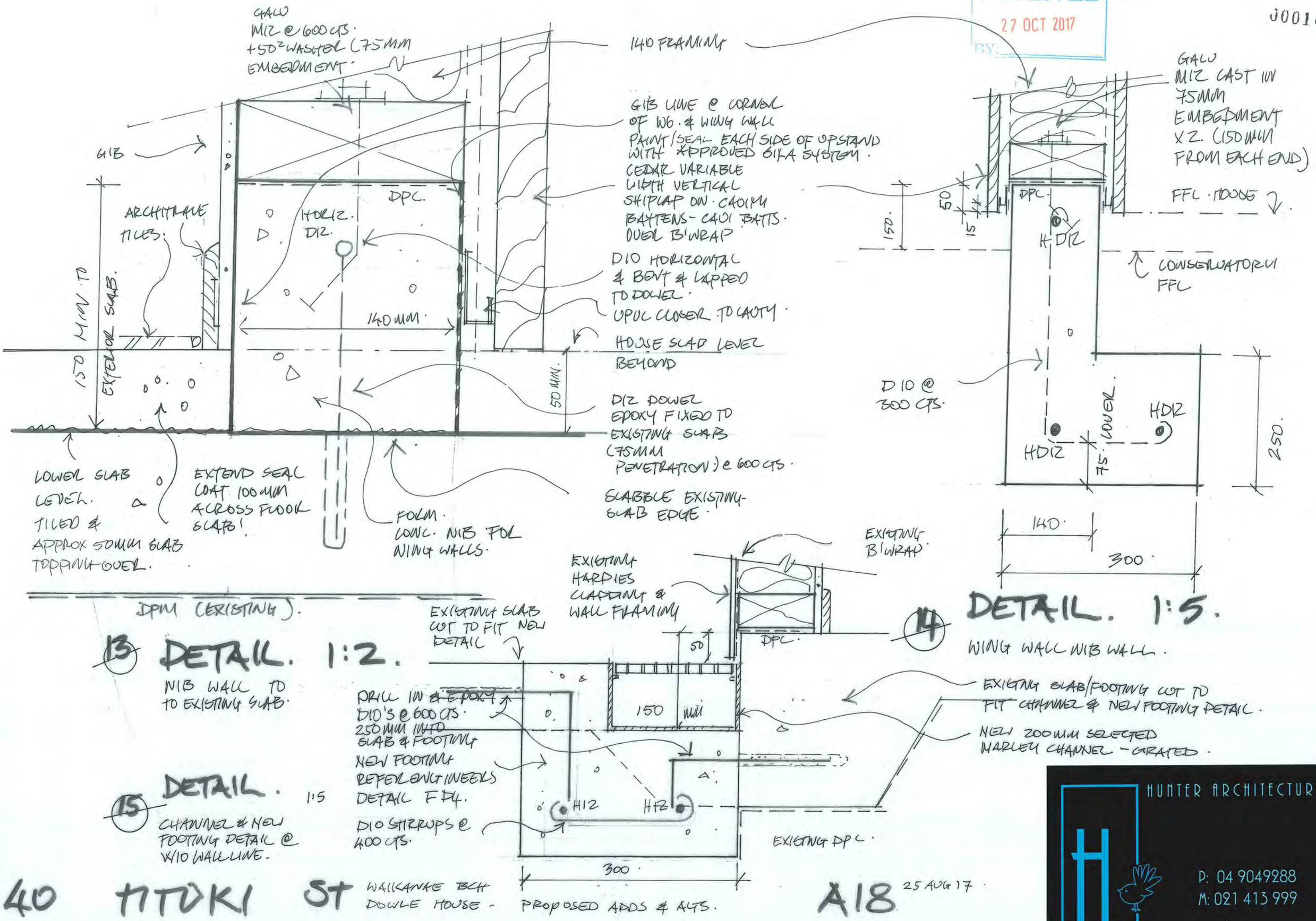

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150MM WIDE FLASHING TAPE OF HEAD UPSTAND

GIB.

ARCHITRAVE TO MATCH EXISTING.

AIR SEAL. PEF ROD

HERMPAC CEDAR VERTICAL SHIPLAP VARIABLE WIDTH W'BOARDS ON CAVIBAT BATTENS OVER B'WRAP

75MM UPSTAND.

15°

10 COVER

UPVC CAVITY CLOSER.

0.7MM PLOATALUM HEAD FLASHING. STOPEND EACH END & HEAD SEAL TO WINDOW.

PLOATALUM. DOUBLE GLAZED JOINERY H3. REVEALS

PROP. SUPPORT BAR & LOCATOR BAR - REBATED TO SLAB AS SHOWN.

DRESS WRAP & FLASHING TAPE INTO REVEALS.

DELETED DETAIL

(16) DETAIL.

CEDAR VERTICAL W'BOARD HEAD TO WINDOW.

FLASHING TAPE & H3.2 PACKERS TO SUIT. TAPE TO CORNERS TO EZ ASI REQUIREMENTS.

INWARD OPENING DOOR SHOWN. WITH CONC. WIB. EACH SIDE.

50MM TOPING SLAB. SET TO MATCH EXISTING HOUSE LEVEL.

AIR SEAL

150 ABOVE FINISHED GROUND OR. 225. TO SOIL.

SCABBLE SLAB SURFACE TO KEY TOPPING SLAB TO EXISTING. C&W

100MM R.C. EXISTING SLAB.

(17) DETAIL. 1:2.

GIB.

WALL INSULATION.

B'WRAP

INSEAL FOAM STRIP & SEAL.

HERMPAC CEDAR VERTICAL W'BOARD ON CAVIBATTS.

10 COVER.

PROP. ALUM. J FLASHING.

SLIDING DOOR UNITS.

PEF ROD & AIR SEAL.

PACKER.

SILL PAN STOPENDED

RECESSED CHANNEL. SEE DETAIL. (W10 ONLY).

(18) DETAIL.

VERTICAL CEDAR / WINDOW JAMB.

LEVEL STEP SILL

SEALANT (FOR TILES.)

REBATED DOOR BEAD DETAIL.

AIR SEAL.

EXISTING SLAB.

SELECTED TILES / CARPET.

10

PACKER

SUPPORT ANGLE SECURELY FIXED.

CHASE TO SUIT (EXISTING SLAB EDGE).

FLASHING TAPE.

(19) DETAIL. W10. WITH CHANNEL 1:2.

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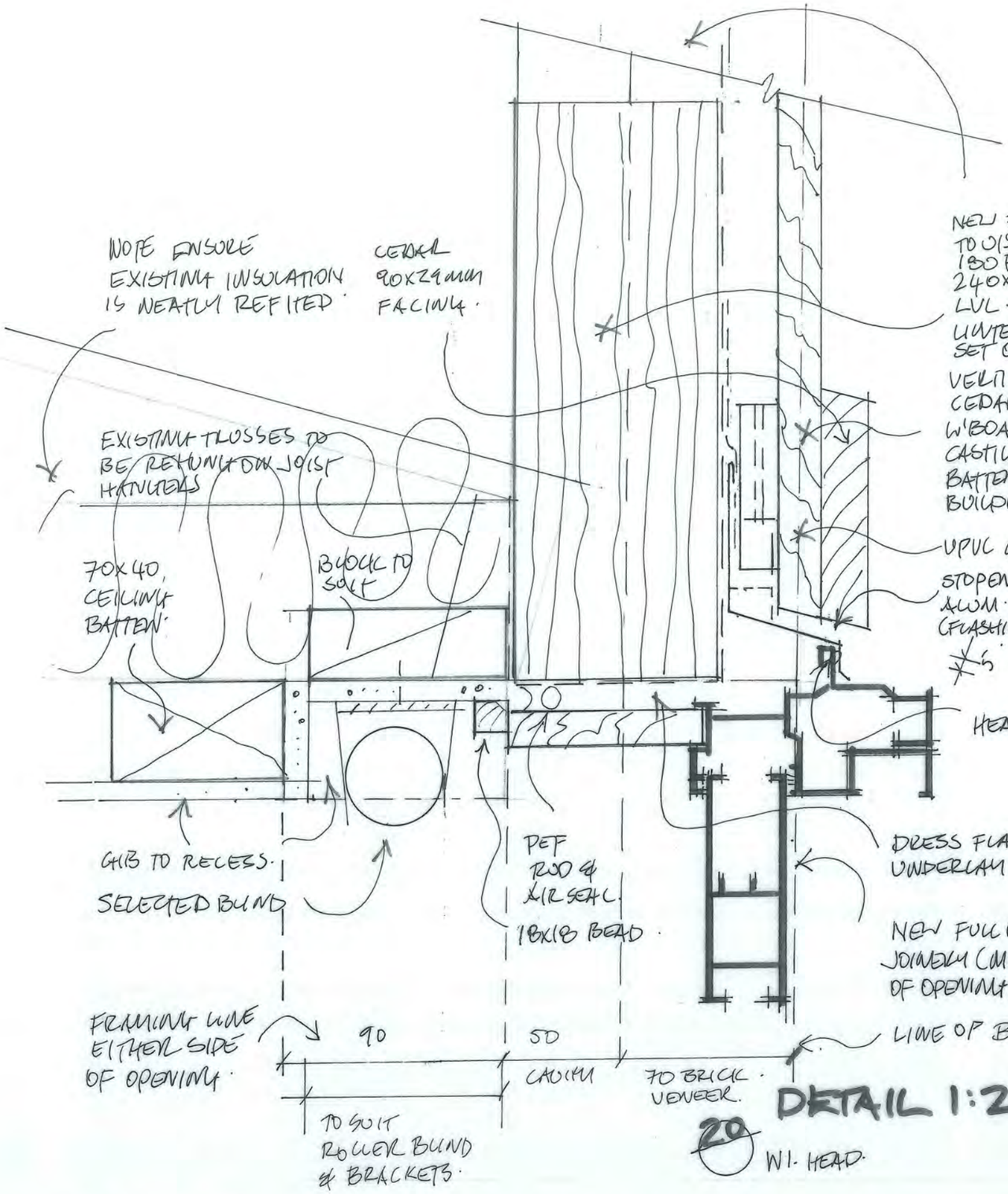

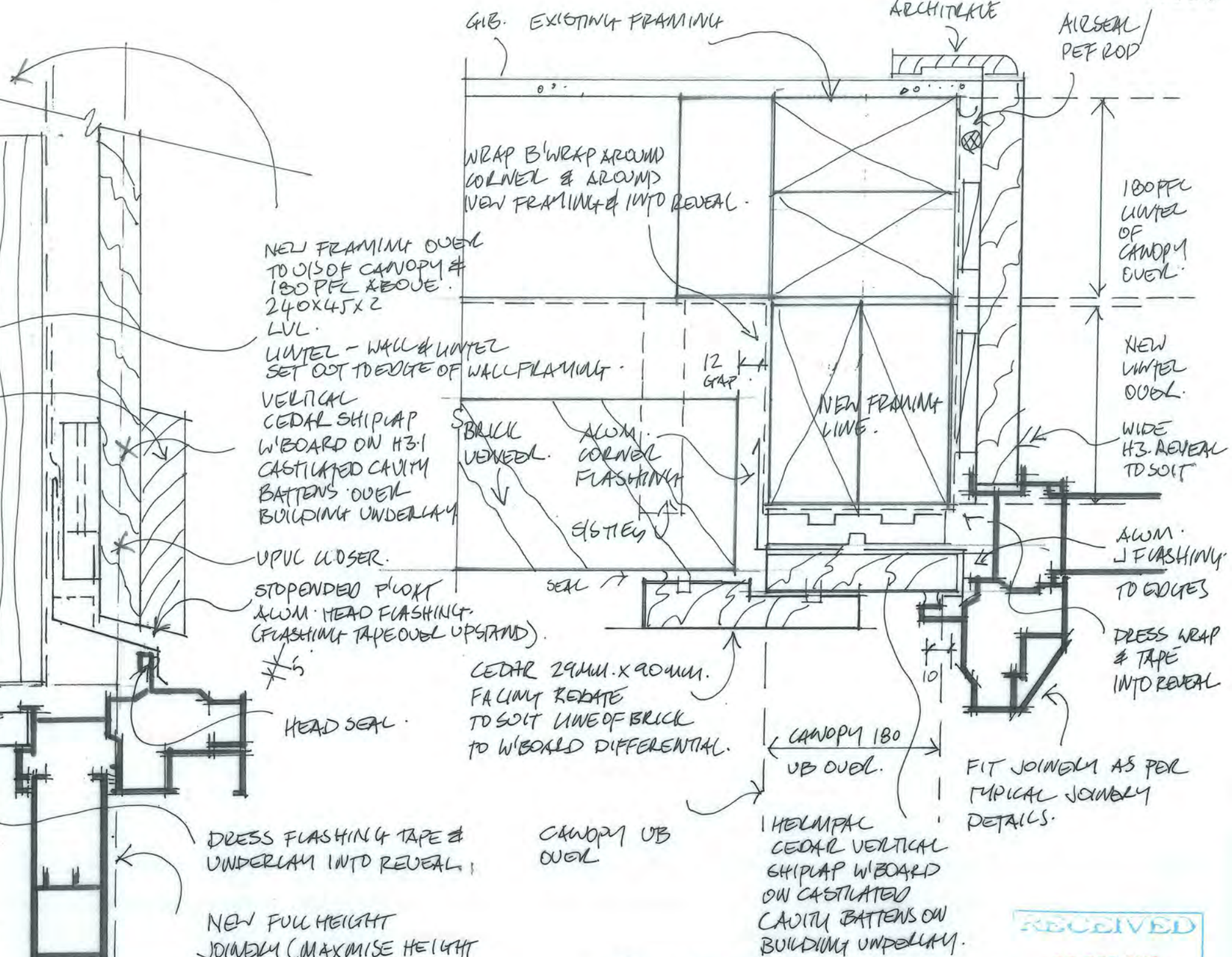

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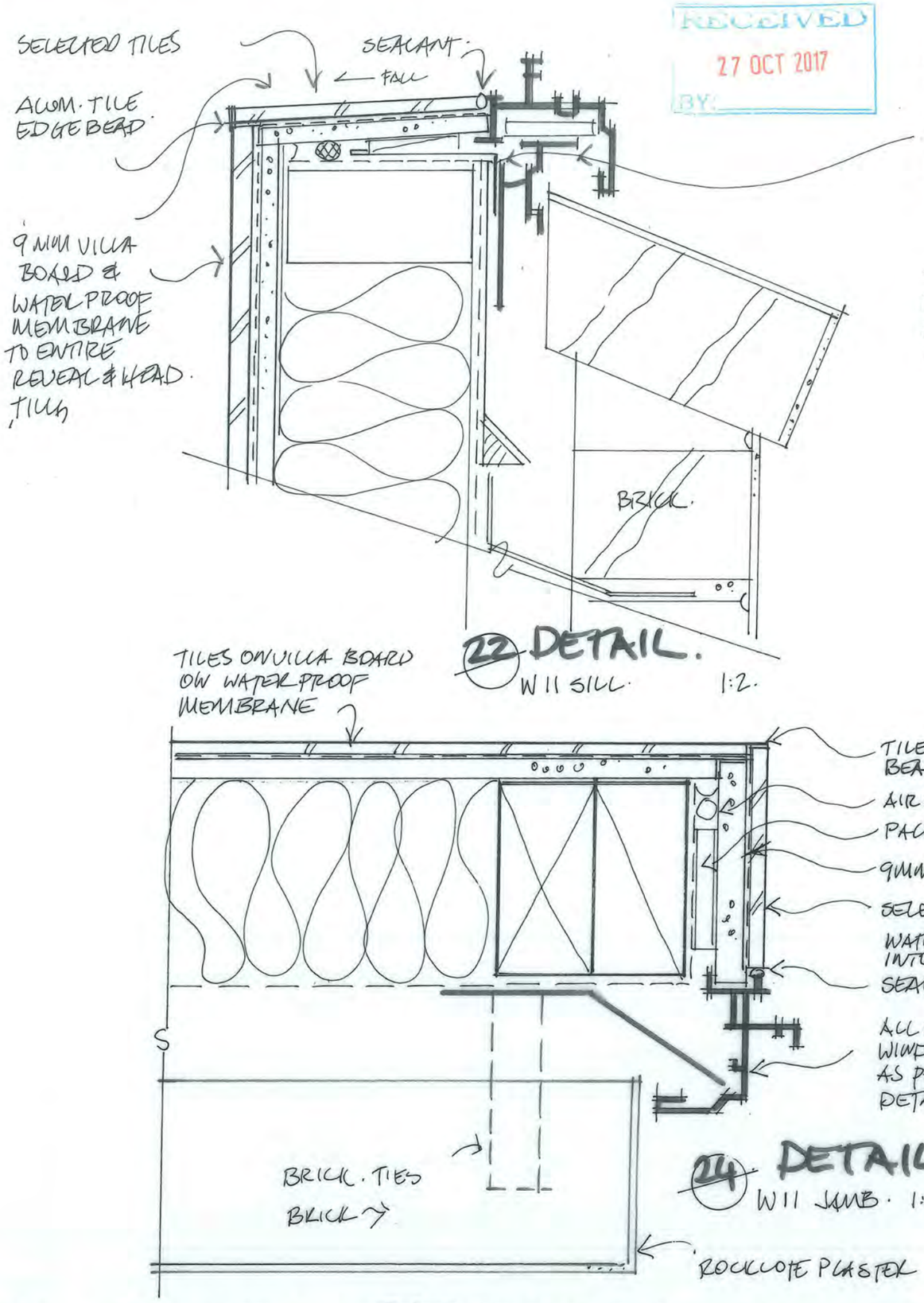
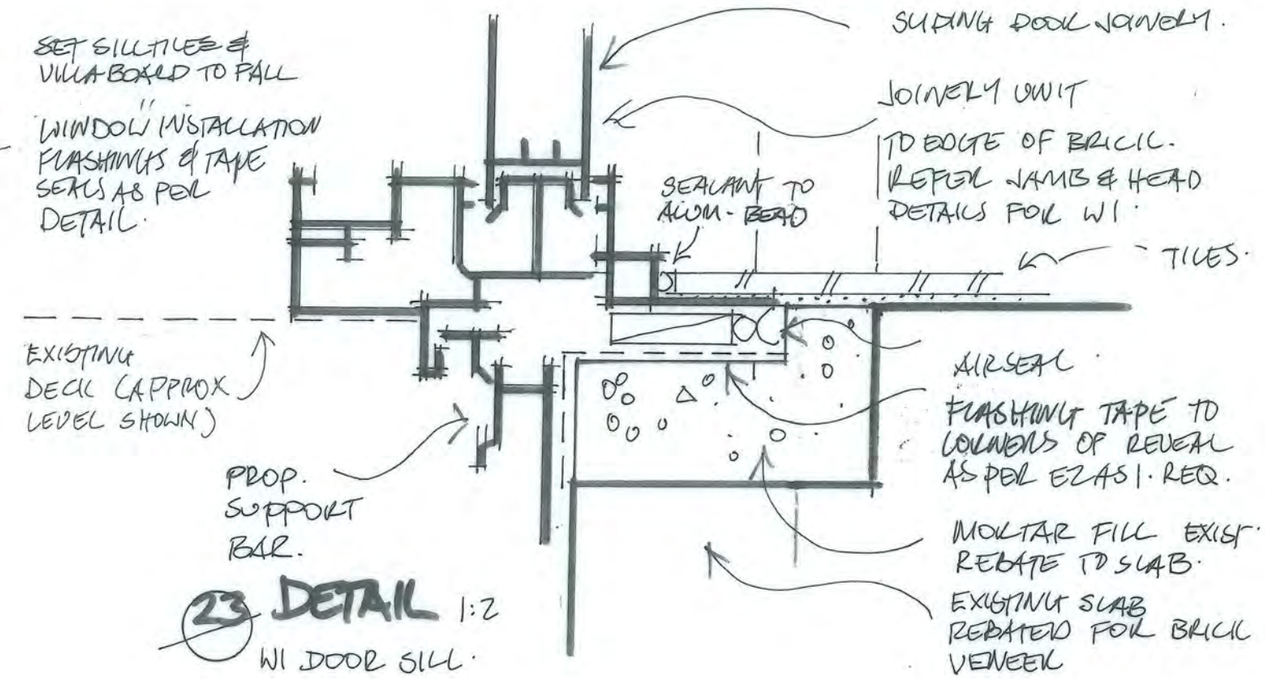
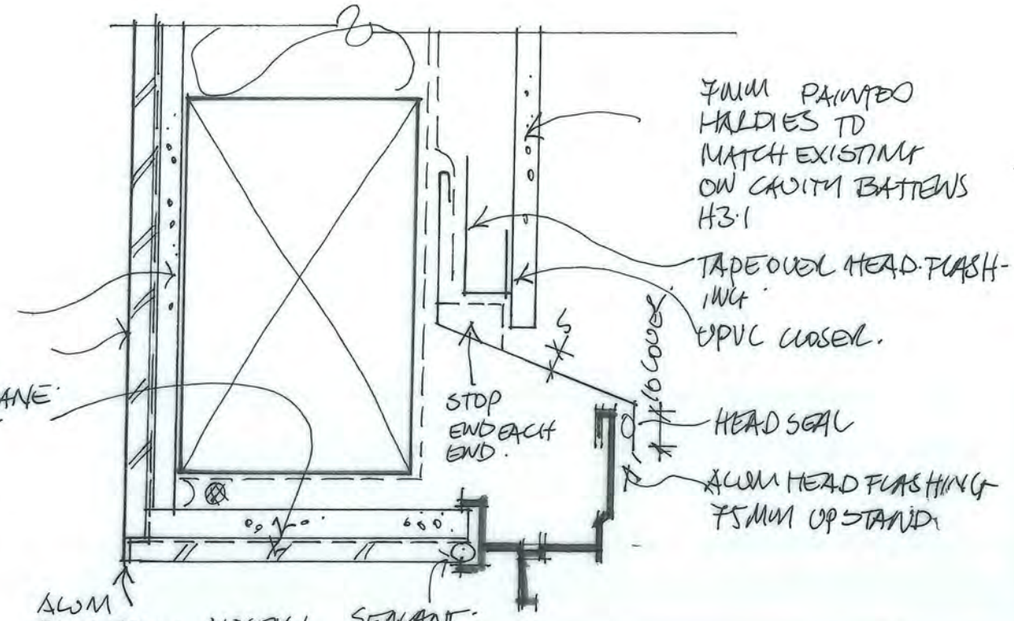


22 DETAIL.
W11 SILL. 1:2.

24 DETAIL.
W11 JAMB. 1:2.



23 DETAIL 1:2
W1 DOOR SILL.



25 DETAIL. 1:2.
W11 JAMB.

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P.Q. H3. REVEALS & ARCHITRAVES TO MATCH EXISTING.
AIRSEAL/ PEF ROD.
ALUM. SILL TRAY & BOTM L SILL FLASHING EXTEND BOTM 200 MM PAST EACH END OF OPENING.
KICK OUT FILLET H3.2.
GIB.
WALL INSULATION.
5 GAP.
15°.

P'COAT DOUBLE GLAZED JOINERY & PROP. SUPPORT BAR.
DRESS FLASHING TAPE & BUILDING UNDERLAY INTO REVEALS TO EZASI RE.
DO NOT SEAL SILL TO MASONARY SILL.
SELECTED PLASTER FINISH OVER MASONARY BRICK VENEER.
SILL MIN 15° SLOPE
S/S MASONARY TIES
BUILDING UNDERLAY.

26 DETAIL. 1:2.
BRICK VENEER WINDOW SILL

DIRECTLY FIX 13MM GIB OUTLAYING TO RAFTERS & BLOCK @ 600 CTS.

27 DETAIL. 1:2.
WINDOW/SOFFIT JUNCTION. @ W6.

2 X 190 X 45 RAFTERS OVER.
140 X 45 WALL FRAMING
ALUM. P'COAT. NEW HEAD FLASHING & H3.2 BEAD TO SUIT.
3500.
3455.
10MM COVER.
HEAD SEAL
DOUBLE GLAZED ALUM JOINERY.
B'WRAP & FRAMING

ARCHITRAVE TO MATCH EXISTING.
AIR SEAL & PEF ROD
PACKERS.
DRESS WRAP & FLASHING TAPE INTO REVEALS

28 DETAIL. 1:2
BRICK VENEER. JAMB TO WINDOW

JAMB FLASHING.
P'COAT ALUM. DOUBLE GLAZED JOINERY & P.Q. H3. JAMB LINERS.
SELECTED PLASTER FINISH TO MASONARY BRICK VENEER.
FRAMING LINE & B'WRAP

EXTEND SILL BOTM FLASHING 200 MM PAST OPENING
200MM.
B'WRAP.
S/S BRICK MASONARY VENEER WALL TIES.

5MM GAP.
VERTICAL CEDAR W'BOARD ON CAVITY BATTS
ALUM. JAMB J. FLASHING WITH HEM.
CEDAR BEAD. EX 25.

29 DETAIL. 1:2.
BRICK/CEDAR CORNER

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60

EXISTING TILES.
NOTE AMEND DETAIL HERE TO LIFT UNDERLAY OVER LAST PURLIN BATTEN.

FIT BARGE FASCIA & BARGE FLASHING TO END & FACE OFF SOFFIT WHERE CUT SHORT!

75 COVER

FIT GUTTER & H3.1 R.Q. FASCIA. OVER EXISTING DIRECT FIX HARDIE SHEET. OVER R1 UNDERLAY.

ZINC. CAP FLASHING ALLOW 70MM COVER. & WRAP EXISTING FRAMING IN PROTECTIVE FLASHING TAPE ACROSS TOP & 100MM DOWN FACE OVER R1 WRAP.

EXISTING CEILING FRAMING & TROSSES.

NEOPRENE WASHER.

EXISTING HARDIE GROOVE CLADDING.

EXISTING GIB, INSOLATION, WALL FRAMING

PROVIDE FRAMING AS NECESSARY TO SUPPORT PERGOLA RIBBON BOARD

70

FRAMING LINE & WRAP.

BRICK VENEER & PLASTER

EXISTING BEAM. C.O.S.

PACK TO SUIT HARDIES.

FACE BEAM WITH H3.1 PAINTED FACINGS.

SKEW NAIL EX 190X45 CEDAR PERGOLA MEMBERS (@ 600 CTS). TO 190X45 CEDAR RIBBON BOARDS OVER H3.1 PAINTED 150X100X50 EX 25MM PACKERS. @ M12 FIXING AT 600 CTS. (S/S + 50² WASHERS).

35 LAP OVER BRICK & SEAL.

FIT

50 LAP OVER HARDIES.

FIT EX 25MM FACING TO CORNER CUT BRICK & PLASTER FINISH.
FIT 0.7MM ALUM. BACK FLASHING.

6.

35

SEAL.

30 DETAIL. 1:2
PERGOLA @ HOUSE.

31 DETAIL. 1:5
PERGOLA & BEAM DETAIL.

32 DETAIL @ WALL
DETAIL. 1:2.

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DOWLE HOUSE

ARDS & ALTS.
25 AUG 2017.

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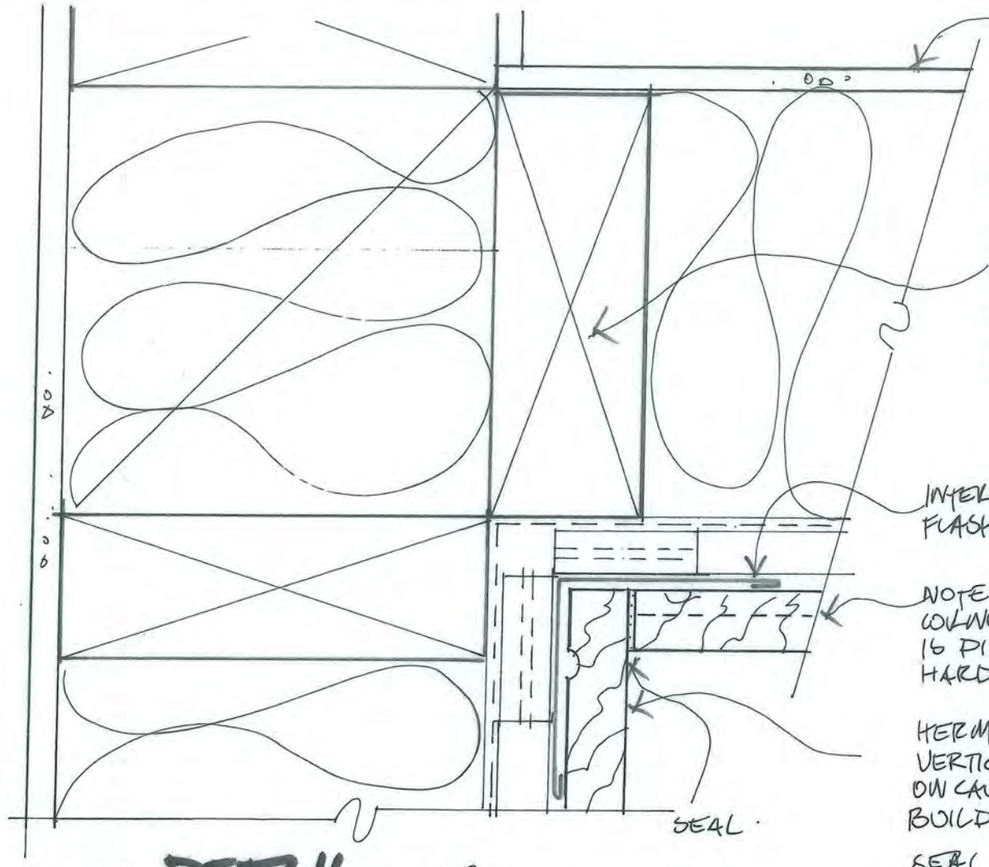
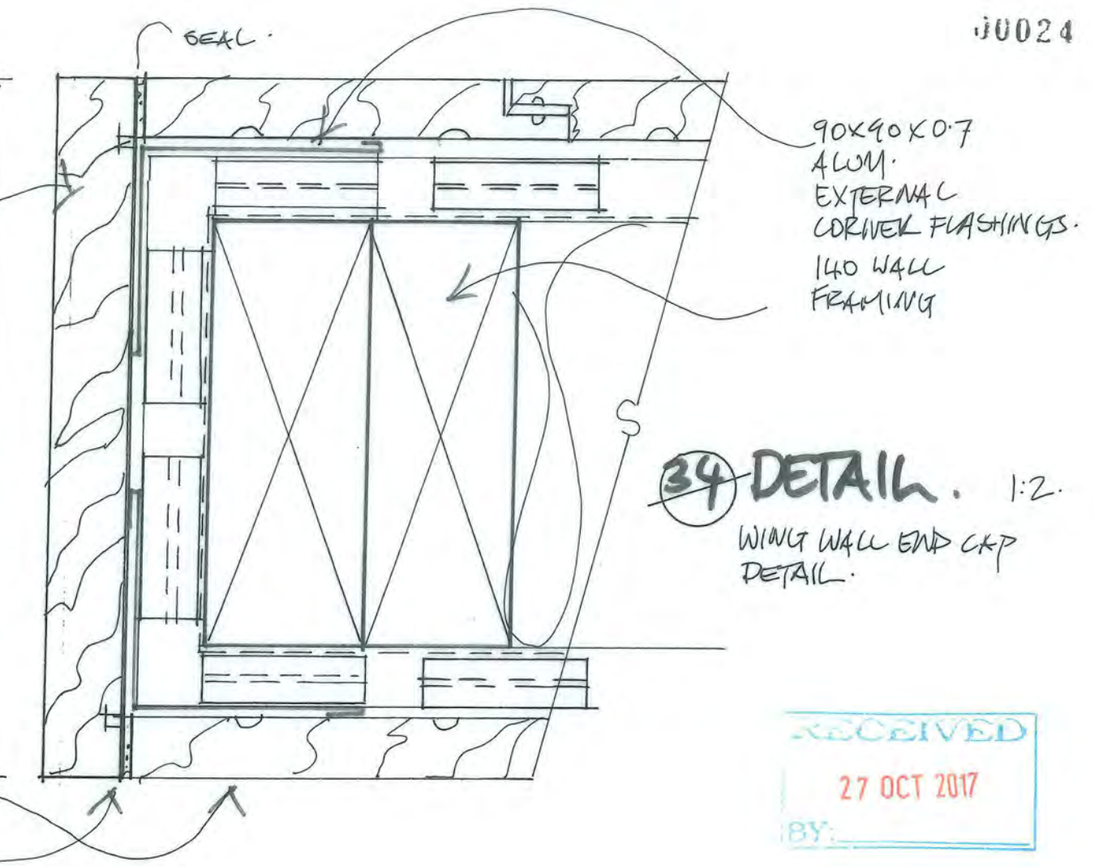
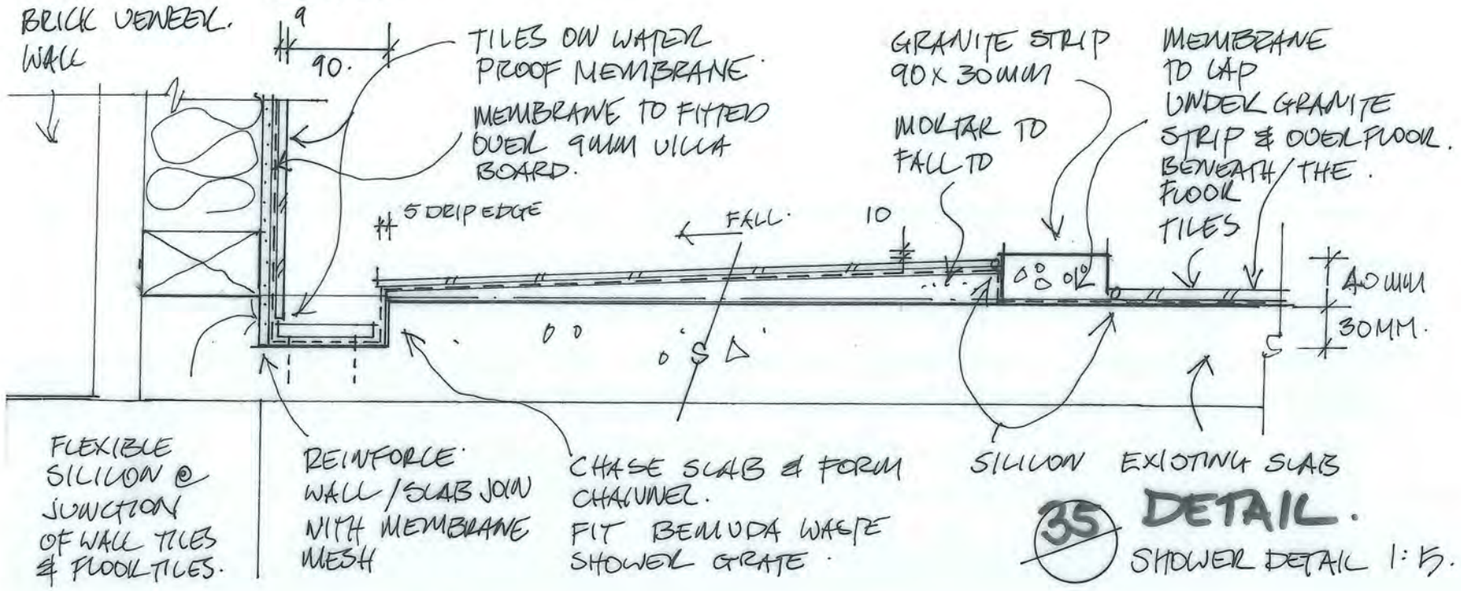
J0024



33 DETAIL. 1:2.
CEDAR INTERNAL CORNER JUNCTION.



34 DETAIL. 1:2.
WING WALL END CAP DETAIL.



35 DETAIL.
SHOWER DETAIL 1:5.

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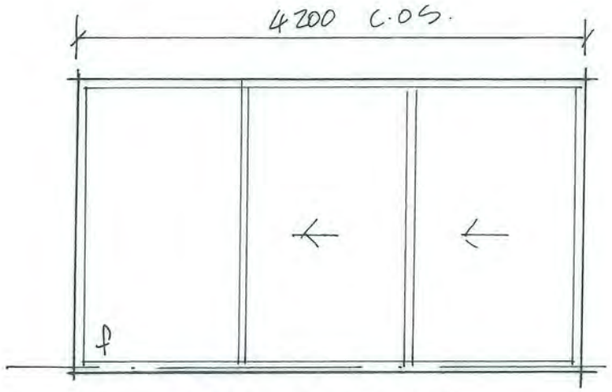
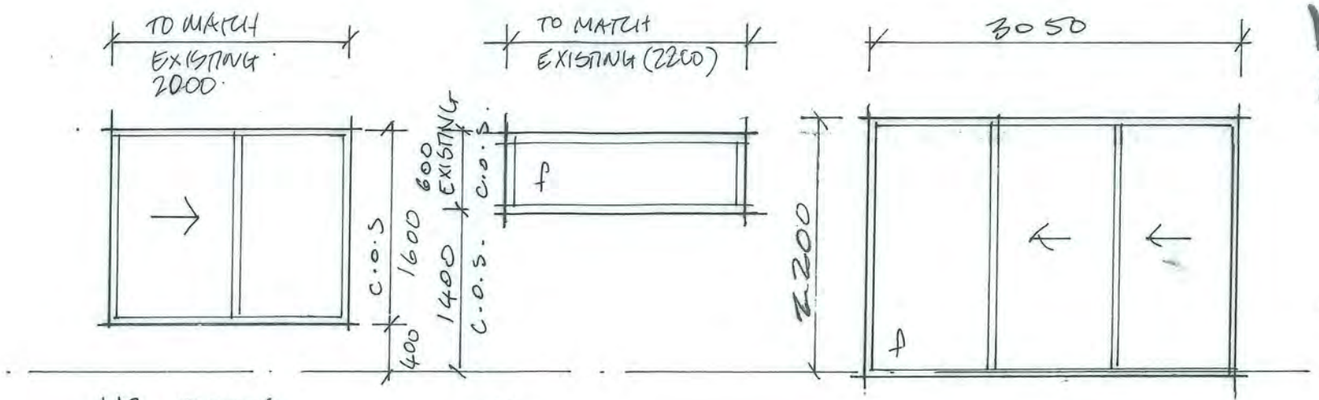


W1 STACKING SLIDING GLAZING TO NZS 4223. GRADE A SAFETY GLASS REQUIREMENTS REBATE SILL.



W2 SUPER. GLAZING TO NZS4223 GRADE A SAFETY REQUIREMENTS.

W3

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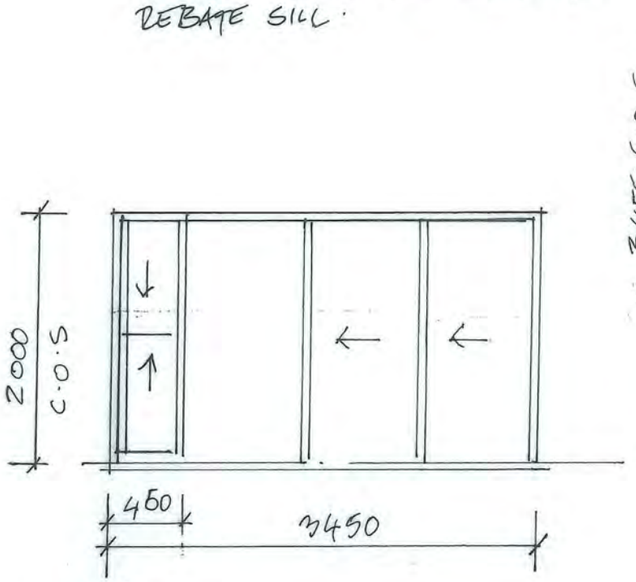
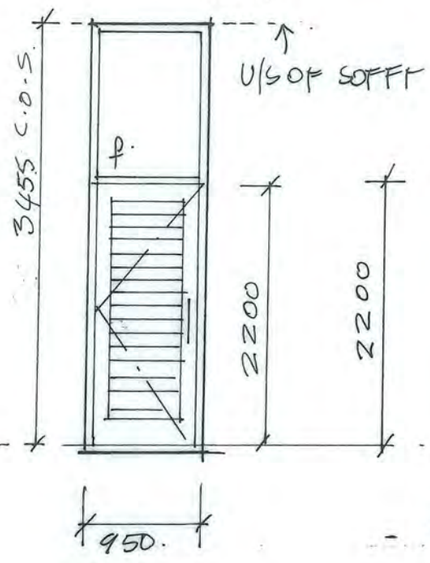
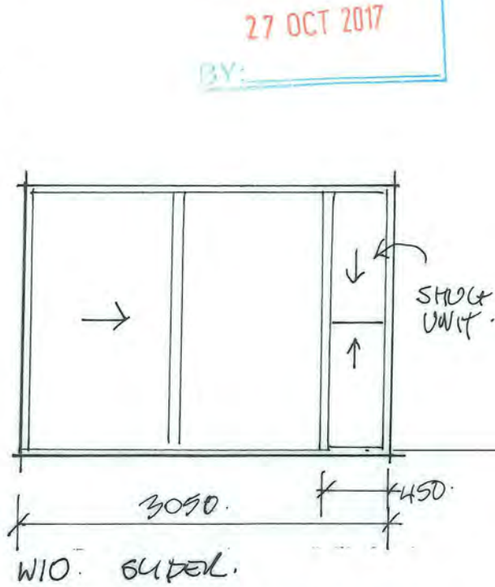
W4. STACKING SLIDER. GRADE A SAFETY GLAZING TO NZS 4223 REQ. REBATED SILL.



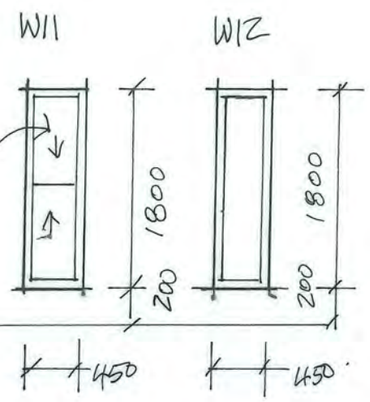
W5
GRADE A SAFETY GLAZING TO NZS 4223 REQUIREMENTS. REBATED SILL. SHUG SIDE LITE



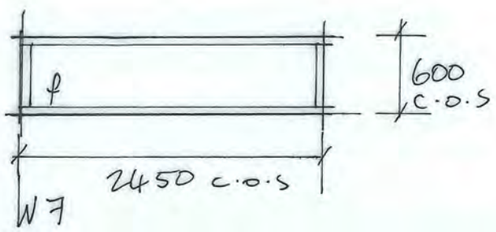
W6
FRONT DOOR TO MATCH EXISTING ALUM STYLE. REBATED SILL.



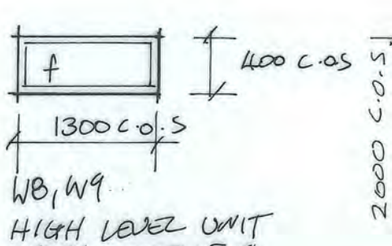
W10. SUPER.
GRADE A SAFETY GLAZING TO NZS 4223 REQUIREMENTS. REBATED SILL. SHUG SIDE LITE



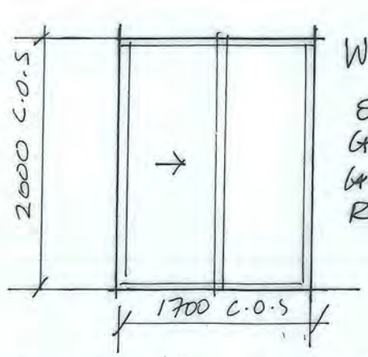
W11. TO HAVE TILED SILLS.
BOTH W11, W12 GRADE A SAFETY GLAZING TO NZS 4223 RQ.
BOTH TO BE 'OBSCURA GLAZED. 'FROSTED' TYPE TO BE CONFIRMED WITH DESIGNER.



W7
W7 HIGH LEVER UNIT CHECK SETOUT & SIZE ON SITE.



W8, W9
HIGH LEVER UNIT CHECK SETOUT & SIZE ON SITE



W13
SUPER
GRADE A SAFETY GLAZING - TO NZS 4223 REQ.
REBATED SILL.

WINDOW & DOOR SCHEDULE.

- CONTRACTOR TO CONFIRM ALL DIMENSIONS & CONDITIONS ON SITE PRIOR TO FABRICATION.
- A NUMBER OF UNITS ARE SUBJECT TO SIZING DUE TO ROOF/WALL/DETAIL SET OUT REQUIREMENTS ON SITE & REQUIRE PARTICULAR CARE IN CONFIRMING DIMENSIONS ON SITE
- ALL UNITS DOUBLE GLAZED P'COAT ALOM UNITS, R0.26 MIN.
  WIND ZONE V. HIGH
  CORROSION ZONE C.
- NOTE W7, W9, W8 HAVE GIBBED REVEALS
  W11 HAS TILED & WATERPROOFED REVEALS
- C.O.S = CHECK ON SITE
- HARDWARE TO MATCH EXISTING
- UNITS ALL KEYED ALIKE
- PROTECTIVE FLASHING TAPE THERMAKRAFT ALU BAND
- ALL GLAZING TO NZS4223 PARTS 1 & 2 REQUIREMENTS FOR SAFETY GLAZING.
- SLIDING UNITS - APL LEVEL STEP SILL BEAD. FITTED
- SEE DWG A... FOR INTERIOR DOORS.

HUNTER ARCHITECTURE
P: 04 9049288
M: 021 413 999

40 TITOKI ST · WAIKANAE TECH · DOWLE HOUSE · ADDS & ALTS · 25 AUG 2017 · A26

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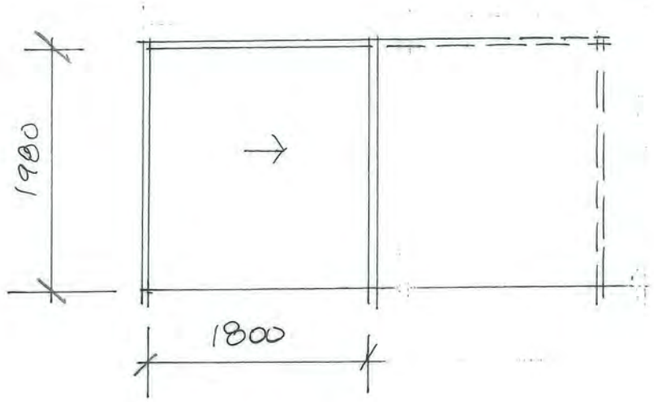
00026

DOORS.

- NOTE ALL DOORS ARE PANEL P.Q. DOORS TO MATCH EXISTING.
- HARDWARE TO MATCH EXISTING
- ARCHITRAVES TO MATCH EXISTING.

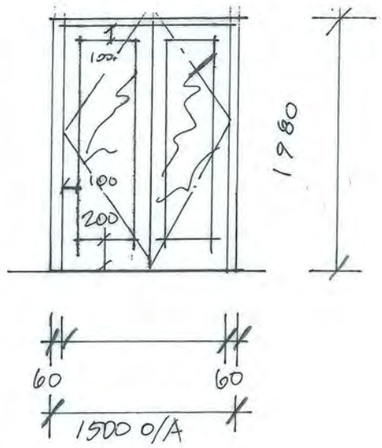


D1
REUSE ONE EXISTING SLIDING DOOR PANEL

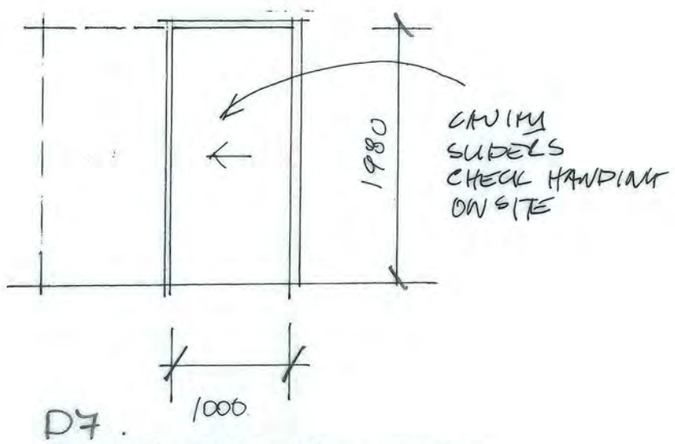
DB. (SLIDES OTHER WAY)
REUSE OTHER OTHER OF EXISTING SLIDER.



D3. 660 X 1980
D4. 810 X 1980. (REUSE EXISTING).
D6. 610 X 1980
HINGED DOORS



D5.
- TIMBER FRAME
- P.Q. TIMBER GLAZING BEADS.
- GRADE A SAFETY GLAZING TO NZS4223 REQUIREMENTS.
- CLEAR GLAZED



D7.
PRIVACY LATCH 1980H X 1000W

D3 REUSE FROM DOOR REMOVED IN DEMO TO EXISTING WC/SHOWER ROOM.

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J0027

ALLOW FOR RCD TO VANITY MIRROR PAD & UNDER FLOOR TILE HEATING PAD, HEATED TOWEL RAIL & FAN HEATER. TO ENSUITE & SENSOR TO BATHROOM LIGHT SWITCH. POSITIONS T.B.A.

MOUNT TO U/S OF BEAM.

CHANGE SWITCHING TO SUIT NEW DOOR LOCATION.

ENS

W/D

ENTRY

CONSERVATORY

FAMILY

BED 1

BED 2

ENS

ENS

ENS

BED 3

BED 4

ENS

DIMMERS

DIMMERS

DINING

DECK

LOUNGE

MEDIA

DOOLON REED SWITCH.

KITCHEN

GARAGE

KITCHENETTE

KEY.

- A. LED RECESSED DOWNLIGHT
- B. LED WALL LIGHT.
- C. PENDANT LIGHT.
- E EXTERIOR LIGHT.
- F. EXTERIOR LED DOWNLIGHT RECESSED.
- (S) SMOKE ALARM
- (◎) DUCTED EXTRACT INLINE FAN TO EXTERIOR VIA SOFFIT GRILL.
- SINGLE / 2WAY SWITCHES (DIMMERS AS INDICATED).
- SOCKETS
- PHONE/DATA/TV. POSITIONS T.B.A.

ALLOW FOR FEED TO OUTSIDE POWER.

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DOWLE HOUSE

PROPOSED ADDS & ALTS.

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11/12/2017

Building Code Clause(s) B1 VM1

PRODUCER STATEMENT – PS1 – DESIGN

(Guidance on use of Producer Statements (formerly page 2) is available at www.ipenz.nz)

ISSUED BY: BASE CONSULTING ENGINEERS LTD
(Design Firm)

TO: MR. C. DOWLE
(Owner/Developer)

TO BE SUPPLIED TO: KAPITI COAST DISTRICT COUNCIL
(Building Consent Authority)

IN RESPECT OF: DOWLE DWELLING
(Description of Building Work)

AT: 40 TITOKI ROAD
(Address)

Town/City: WAIKANAE BEACH (Address) LOT DP SO

We have been engaged by the owner/developer referred to above to provide:

THE STRUCTRUAL DESIGN FOR: PILE FOUNDATIONS FOR LINTEL; CANOPY BEAMS; POSTS & FOOTINGS NZS: 3404: NZS: 3101

(Extent of Engagement)

services in respect of the requirements of Clause(s) B1 VM1 of the Building Code for:

☐ All or ☐ Part only (as specified in the attachment to this statement), of the proposed building work.

The design carried out by us has been prepared in accordance with:

☒ Compliance Documents issued by the Ministry of Business, Innovation & Employment B1 VM1; AS/NZS: 1170 or
(verification method/acceptable solution)

☐ Alternative solution as per the attached schedule

The proposed building work covered by this producer statement is described on the drawings titled:

DOWLE DWELLING and numbered 17116;
together with the specification, and other documents set out in the schedule attached to this statement.

On behalf of the Design Firm, and subject to:
(i) Site verification of the following design assumptions UBC ASSUMED
(ii) All proprietary products meeting their performance specification requirements;

I believe on reasonable grounds that a) the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached schedule, will comply with the relevant provisions of the Building Code and that b), the persons who have undertaken the design have the necessary competency to do so. I also recommend the following level of construction monitoring/observation:

☐ CM1 ☒ CM2 ☐ CM3 ☐ CM4 ☐ CM5 (Engineering Categories) or ☐ as per agreement with owner/developer (Architectural)

I, PETER BOLTON (Name of Design Professional) am: ☒ CPEng 56179 # ☐ Reg Arch #

I am a Member of: ☒ IPENZ ☐ NZIA and hold the following qualifications: BE CIVIL
The Design Firm issuing this statement holds a current policy of Professional Indemnity Insurance no less than $200,000*.
The Design Firm is a member of ACENZ: ☐

SIGNED BY PETER BOLTON (Name of Design Professional) (Signature)

ON BEHALF OF BASE CONSULTING ENGINEERS LTD (Design Firm) Date 01/12/2017

Note. This statement shall only be relied upon by the Building Consent Authority named above. Liability under this statement accrues to the Design Firm only. The total maximum amount of damages payable arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in contract, tort or otherwise (including negligence), is limited to the sum of $200,000.*

This form is to accompany **Form 2 of the Building (Forms) Regulations 2004** for the application of a Building Consent.

THIS FORM AND ITS CONDITIONS ARE COPYRIGHT TO ACENZ, IPENZ AND NZIA

GUIDANCE ON USE OF PRODUCER STATEMENTS

Producer statements were first introduced with the Building Act 1991. The producer statements were developed by a combined task committee consisting of members of the New Zealand Institute of Architects, Institution of Professional engineers New Zealand, Association of Consulting Engineers New Zealand in consultation with the Building Officials Institute of New Zealand. The original suit of producer statements has been revised at the date of this form as a result of enactment of the Building Act (2004) by these organisations to ensure standard use within the industry.

The producer statement system is intended to provide Building Consent Authorities (BCAs) with reasonable grounds for the issue of a Building Consent or a Code Compliance Certificate, without having to duplicate design or construction checking undertaken by others.

PS1 Design Intended for use by a suitably qualified independent design professional in circumstances where the BCA accepts a producer statement for establishing reasonable grounds to issue a Building Consent;

PS2 Design Review Intended for use by a suitably qualified independent design professional where the BCA accepts an independent design professional's review as the basis for establishing reasonable grounds to issue a Building Consent;

PS3 Construction Forms commonly used as a certificate of completion of building work are Schedule 6 of NZS 3910:2013 or Schedules E1/E2 of NZIA's SCC 2011[2]

PS4 Construction Review Intended for use by a suitably qualified independent design professional who undertakes construction monitoring of the building works where the BCA requests a producer statement prior to issuing a Code Compliance Certificate.

This must be accompanied by a statement of completion of building work (Schedule 6).

The following guidelines are provided by ACENZ, IPENZ and NZIA to interpret the Producer Statement.

Competence of Design Professional

This statement is made by a Design Firm that has undertaken a contract of services for the services named, and is signed by a person authorised by that firm to verify the processes within the firm and competence of its designers.

A competent design professional will have a professional qualification and proven current competence through registration on a national competence based register, either as a Chartered Professional Engineer (CPEng) or a Registered Architect.

Membership of a professional body, such as the Institution of Professional Engineers New Zealand (IPENZ) or the New Zealand Institute of Architects (NZIA), provides additional assurance of the designer's standing within the profession. If the design firm is a member of the Association of Consulting Engineers New Zealand (ACENZ), this provides additional assurance about the standing of the firm.

Persons or firms meeting these criteria satisfy the term "suitably qualified independent design professional".

*Professional Indemnity Insurance

As part of membership requirements, ACENZ requires all member firms to hold Professional Indemnity Insurance to a minimum level.

The PI Insurance minimum stated on the front of this form reflects standard, small projects. If the parties deem this inappropriate for large projects the minimum may be up to $500,000.

Professional Services during Construction Phase

There are several levels of service which a Design Firm may provide during the construction phase of a project (CM1-CM5 for Engineers[3]). The Building Consent Authority is encouraged to require that the service to be provided by the Design Firm is appropriate for the project concerned.

Requirement to provide Producer Statement PS4

Building Consent Authorities should ensure that the applicant is aware of any requirement for producer statements for the construction phase of building work at the time the building consent is issued as no design professional should be expected to provide a producer statement unless such a requirement forms part of the Design firm's engagement.

Attached Particulars

Attached particulars referred to in this producer statement refer to supplementary information appended to the producer statement.

Refer Also:

1 Conditions of Contract for Building & Civil Engineering Construction NZS 3910: 2013

2 NZIA Standard Conditions of Contract SCC 2011

3 Guideline on the Briefing & Engagement for Consulting Engineering Services (ACENZ/IPENZ 2004)

4 PN Guidelines on Producer Statements

www.acenz.org.nz
www.ipenz.org.nz
www.nzia.co.nz

BC170827
Further Information Received
11/12/2017

BC170827
Further Information Received
11/12/2017

Form 2A

Memorandum from licensed building practitioner: Certificate of design work

Section 45 and Section 30C, Building Act 2004

Please fill in the form as fully and correctly as possible.

If there is insufficient room on the form for requested details, please continue on another sheet and attach the additional sheet(s) to this form.

THE BUILDING

Street address: 40 TITOKI ROAD	
Suburb:	
Town/City: WAIKANAE BEACH	Postcode:

THE OWNER

Name: MR. C. DOWLE	
Mailing address:	
Suburb:	PO Box/Private Bag:
Town/City:	Postcode:
Phone number:	Email address:

BASIS FOR PROVIDING THIS MEMORANDUM

I am providing this memorandum in my role as the: Please tick the option that applies (√)	
( )	**sole** designer of all of the RBW design outlined in this memorandum – I carried out all of the RBW design myself – no other person will be providing any additional memoranda for the project
( )	**lead** designer who carried out some of the RBW design myself but also supervised other designers – this memorandum covers their RBW design work as well as mine, and no other person will be providing any additional memoranda for the project
( )	**lead** designer for all but specific elements of RBW – this memorandum only covers the RBW design work that I carried out or supervised and the other designers will provide their own memoranda relating to their specific RBW design
(√)	**specialist** designer who carried out specific elements of RBW design work as outlined in this memorandum – other designers will be providing a memorandum covering the remaining RBW design work

IDENTIFICATION OF DESIGN WORK THAT IS RESTRICTED BUILDING WORK (RBW)

I, Peter Bolton, carried out the following design work that is restricted building work

PRIMARY STRUCTURE: B1

Design work that is restricted building work	**Description**	**Carried out/ supervised**	**Reference to plans and specifications**
Tick(√)if included *Cross (X) if excluded*	*[If appropriate, provide details of the restricted building work]*	*[Specify whether you carried out this design work or supervised someone else carrying*	*[If appropriate, specify references]*

		out this design work]		

Primary structure

All RBW Design work relating to B1	( )		( ) Carried out ( ) Supervised	
Foundations and subfloor framing	()		() Carried out ( ) Supervised	
Walls	()		( ) Carried out ( ) Supervised	
Roof	()		() Carried out ( ) Supervised	
Columns and beams	()		() Carried out ( ) Supervised	
Bracing	()		() Carried out ( ) Supervised	
Other	(√)	Lintel; Canopy Beams; Posts & Footings	(√) Carried out ( ) Supervised	17116

EXTERNAL MOISTURE MANAGEMENT SYSTEMS: E2

All RBW design work relating to E2	( )		( ) Carried out ( ) Supervised	
Damp proofing	( )		( ) Carried out ( ) Supervised	
Roof cladding or roof cladding system	( )		( ) Carried out ( ) Supervised	
Ventilation system (for example, subfloor or cavity)	( )		( ) Carried out ( ) Supervised	
Wall cladding or wall cladding system	( )		( ) Carried out ( ) Supervised	
Waterproofing	( )		( ) Carried out ( ) Supervised	
Other	( )		( ) Carried out ( ) Supervised	

FIRE SAFETY SYSTEMS: C1 – C6

Emergency warning systems, evacuation and fire service operation systems, suppression or	( )		( ) Carried out ( ) Supervised	

BC170827
Further Information Received
11/12/2017

control systems, or other			

Note: The design of fire safety systems is only restricted building work when it involves small-to-medium apartment buildings as defined by the Building (Definition of Restricted Building Work) Order 2011.

Note: continue on another page if necessary.

WAIVERS AND MODIFICATIONS

Waivers or modifications of the building code are required ( ) Yes (√) No

If Yes, provide details of the waivers or modifications below:

Clause	**Waiver/modification required**
[List relevant clause numbers of building code]	*[Specify nature of waiver or modification of building code]*

Note: continue on another page if necessary.

ISSUED BY

Name: Peter Bolton	LBP or Registration number:56179
The practitioner is a: ( ) Design LBP ( ) Registered architect (√) Chartered Professional Engineer	
Design Entity or Company (optional): Base Consulting Engineers Ltd	
Mailing address (if different from below):	
Street address / Registered office: 279 Oxford Street	
Suburb:	Town/City: Levin
PO Box/Private Bag:	Postcode:
Phone number:	Mobile:0274 444 080
After Hours:	Fax:
Email address:peter@basecon.co.nz	Website:

DECLARATION

I Peter Bolton [*name of practitioner*] , CPEng,

state that I have applied the skill and care reasonably required of a competent design professional in carrying out or supervising the Restricted Building Work (RBW) described in this form, and that based on this, I also state that the RBW:

- Complies with the building code; or
- Complies with the building code subject to any waiver or modification of the building code recorded on this form.

Signature:

Date: 03 July 2017

BC170827
Further Information Received
11/12/2017

Base Consulting Engineers Limited

Job No 17116 | Page 1

Job DOWIE DWELLING
40 TITOKI ROAD WAIHEKE

By P BOLTON

Date 29/6/17

PREAMBLE
To provide the structural design for lintel and canopy for proposed extension to dwelling as per drawings provided Hunter Architecture

Design to be in accordance with
AS/NZS 1170 Structural Design Actions
NZS 3101 Concrete Code
NZS 3404 Steel Code

LOADINGS Roof dls dead 0.60kPa
live 0.25 kPa

WIND
$V_s = V_2 M_h M_2$
$= 46.4$ m/s

$M_2 = 0.91$
$M_h = 1.0$
$V_2 = 51$ m/s

$P = 0.5 \rho_{air} V_s^2 C_{fig}$
$= 1.29 C_{fig}$ kPa

CONSIDER LINTEL $l = 4.1$ m

$w^* = 1.2G + 1.5Q$
$= 1.2(0.4) + 1.5(0.25)\ 8.7/2 \times 1.15 + 1.2(0.4)\ 2.6$
$= 5.6$ kN/m

Design Moment M^*
$M^* = w l_{eff}^2 / 8$
$= 5.6 \times 4.1^2 / 8$
$= 11.7$ kNm

$l_{eff} = 1.09 l$
$= 4.4$

Moment Capacity ϕM_b Try 180PFC
$\phi M_b = \alpha_{SR} \phi M_s$
$= 1.13 \times 0.45 \times 49$
$= 25$ kNm

Base Consulting Engineers Limited

Job No 17116 | Page 2

Job | By | Date

Deflection

$\delta = \frac{5 w_D l^4}{384 EI}$ $w_D = 0.4(4.4 \times 1.15 + 2.4)$

$= 3.0$ kN/m

$= \frac{5 \times 3.0 \times 4.1^4}{384 \times 200 \times 14.10}$

$= 4$ mm o/c for 150PFC $= 7$ mm. $\frac{5 \text{ span}}{585}$

For wind $0.9G + W$

$w^* = [0.9(0.35) - 1.2(1.29)] 4.4 \times 1.15$ $C_{fi} = 0.9 + 0.3 = 1.2$

$= 6.2$ kN/m

Deflection

$\delta = \frac{5 \times 6.2 \times 4.1^4}{384 \times 200 \times 14.10}$

$= 8$ mm

LINTEL 4100 span 180PFC

span/512 o/c

150PFC $= 14$ mm

$=$ span/300 margin

Uplift

$R\uparrow = wl/2$

$= 6.2 \times 4.1/2$

$= 12.7$ kN

For 2/M16 bolts in 2/90x45 SY8.

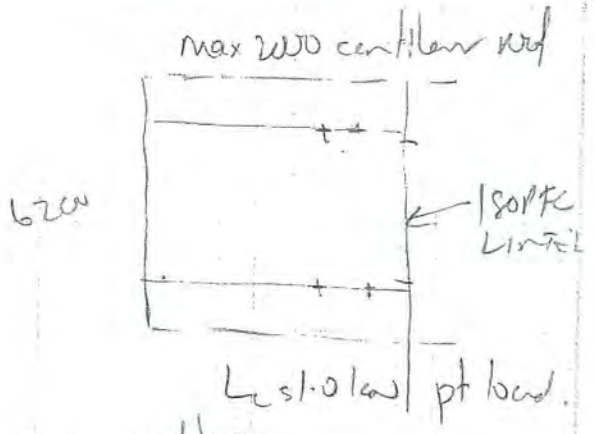
$\phi Q_{skm} = n Q_{sk} k_1 k_4$

$= 2.0 \times 18.5 \times 0.7 \times 0.85$

22 kN ok

2-M16 BOLTS 2/90x45 SY8.

CONSIDER CANOPY



1. Canopy Beam:

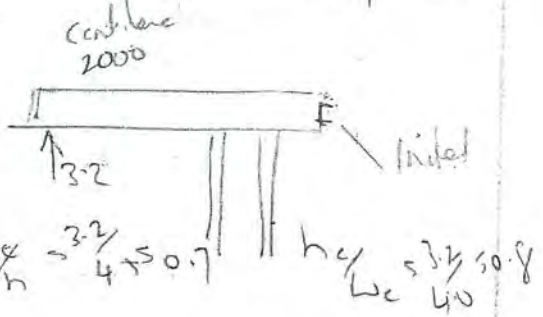
$b = 4.6/2 + 0.8$

$= 3.1$ m

$W^* = 0.96 + L$

$= [0.9(0.3) - 0.46 \times 1.29]\,3.1$

$= 1.0$ kN/m



$C_{pn} = 0.4, \left(-0.3 - 0.2\,\frac{h_g}{L_c}\right)$

$= 0.46$

Design Moment M^*

$M^* = wl^2/2$

$= 1.0 \times 2.0^2/2$

$= 2.0$ kN.m

$1.2G + 1.5Q$

$L^* = 1.2(0.3) + 1.5(0.25)\,3.1$

$= 2.3$ kN/m

$M^* = wl^2/2$

$= 2.3 \times 2.0^2/2$

$= 4.6$ kN.m

$l_e = 2.0\,l$

$= 4.0$

For 180UB18, Moment Capacity ϕM_b

$\phi M_b = \alpha_s \alpha_m M_s$

$= 0.867 \times 1.13 \times 45$

$= 18$ kN.m — ok

$L_D = 0.3 \times 3.1 + 0.3$

$= 1.2$ kN/m

Deflect δ_D

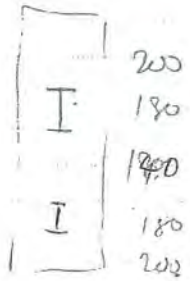
$\delta_D = \frac{wl^4}{8EI}$

CANTILEVER BEAMS 180UB18

$\delta_p = \frac{1.2 \times 2.0^4}{8 \times 200 \times 12.10}$

$= 1$ — ok for 180UB18

Consider Steel Posts



For seismic $V = cd_w$

$W_t = 4 + \psi\phi$ $\psi = 0$ for $\phi \leq 0.25$

$= 0.4 \times 3.1 \times 3.1$

$= 3.8$ kN

$C(T) = C_h(T) Z R N$

$= 1.2$

$C_d(T) = \frac{C(T) S_p}{k}$

$= \frac{1.2 \times 0.94}{1.57}$

$= 0.72$

$C_d(T) = \frac{C(T) S_p}{k}$

$k = (\mu - 1)\frac{T_1}{0.7} + 1$

$= 1.57$

$T_1 = 0.4$

$\mu = 2.0$

$V = 0.72 \times 3.8$

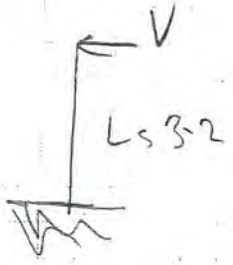
$= 2.7$ kN

Design Moment M^*

$M^* = VL$

$= 2.7 \times 3.2$

$= 8.6$ kN.m



For same 180UB

Moment Capacity ϕM_b

$\phi M_b = \alpha_s \alpha_m M_s$

$= 0.22 \times 45 \times 1.25$

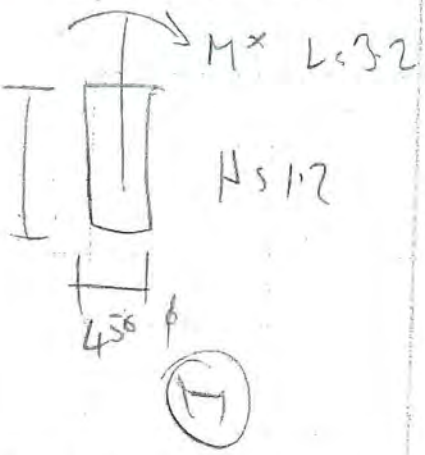
$= 12.4$ kN.m ok

$l = 2.0 + 1$

$= 6.4$

Consider Post Embedment

- Sand loose to Pin



$$H = P\left(1 + \left(1 + \frac{2.18L}{P}\right)^{\frac{1}{2}}\right)$$

$$P = \frac{1.17P}{SB}$$

$$= \frac{1.17 \times 2.7}{0.45 \times 27}$$

$$= 0.26$$

$$H = 0.26\left(1 + \left(1 + \frac{2.18 \times 3.2}{0.26}\right)^{\frac{1}{2}}\right)$$

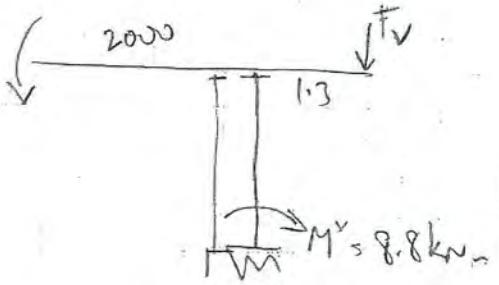
$= 1.6 > 1.2$ no good. try 1500 x 450.

$$P = \frac{1.17 \times 2.7}{0.45 \times 37} \quad = 0.19$$

$$H = 0.19\left(1 + \left(1 + \frac{2.18 \times 3.2}{0.19}\right)^{\frac{1}{2}}\right)$$

$= 1.4$ ok

Embed 1500 x 450 180 UB 18



$F_V = M_{2000}/L$

$= 8.8/1.3$

$= 6.8$ kN - use 2-M16.



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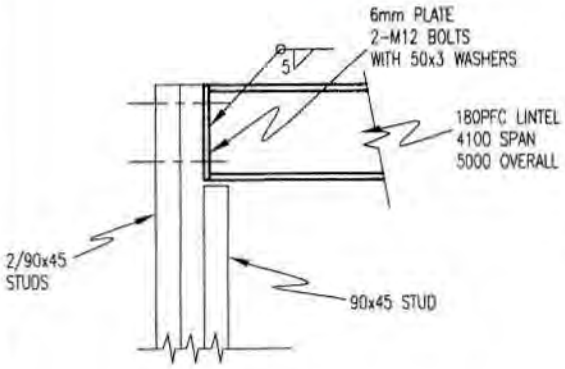
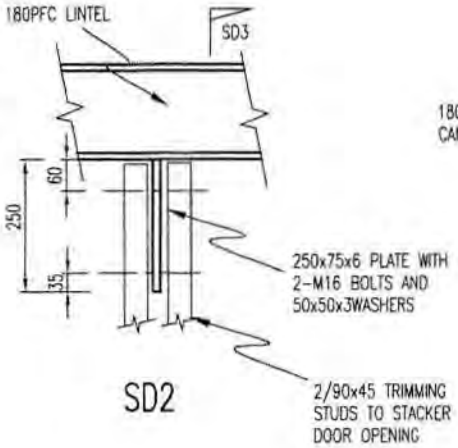
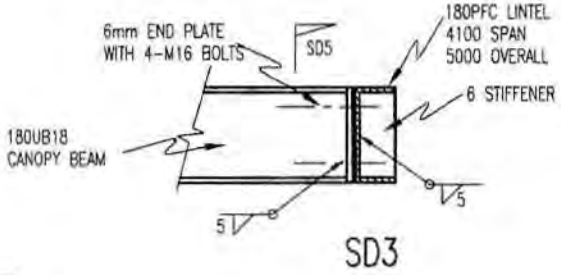
Further Information Received
08/12/2017



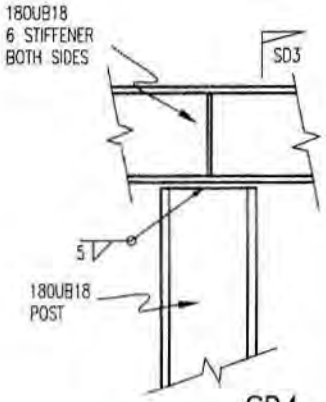
SD1



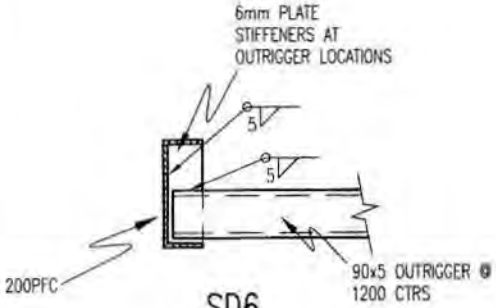
SD2



SD3



SD4



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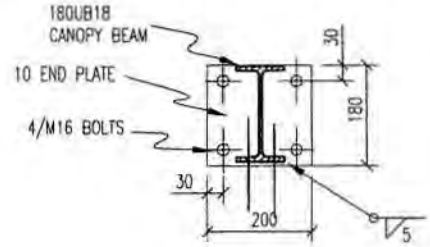

SD5

No.	AMENDMENT	NAME	DATE
A	SD5	PB	5/7
B	DETAILS	PB	21/7
C	DETAILS	PB	1/12

NOTES
REFER TO HUNTER ARCHITECTURE DRAWINGS FOR DIMENSIONS AND DETAILS. DO NOT SCALE OFF THIS DRAWING
ANY DISCREPANCIES OR VARIATIONS SHALL BE REFERRED TO THE ENGINEER
STRUCTURAL STEELWORK TO BE UNDERTAKEN BY SUITABLY QUALIFIED TRADESPERSONS

GROUND CONDITIONS ASSUMED TO BE 300KPa ULTIMATE BEARING CAPACITY
CHECK ALL DIMENSIONS ON SITE PRIOR TO FABRICATION

STEEL GRADES
HOT ROLLED SECTIONS 300MPa
HOLLOW SECTIONS 350MPa

FINISH TO STEEL TO BE WIRE BRUSH TO CLASS 2 WITH SURFACE PREPARATION AND CORROSION PROTECTION TO BE RESENE ARMOURCOTE IN ACCORDANCE WITH THE MANAFACTURERS SPECIFICATION.

IT IS THE CLIENTS RESPONSIBILITY TO DETERMINE WHAT INSPECTIONS ARE REQUIRED BY THE ENGINEER AND TO FORWARD THE PS4 TO THE TERRITORIAL AUTHORITY ON COMPLETION

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Base Consulting Engineers Limited

279 Oxford Street
P O Box 434
Levin 5540

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Paraparaumu 04-297 0088
Mobile 027 44 44 080

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STRUCTURAL DETAILS

DOWLE DWELLING
40 TITOKI ROAD
WAIKANAE

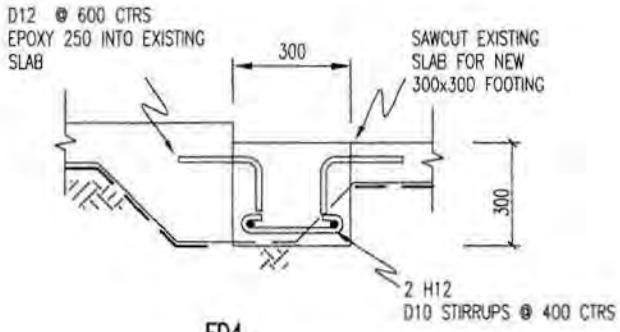
SCALE
AS SHOWN

	NAME	DATE
FIELDWORK	PB	
DESIGNED	PB	29/6/17
DRAWN	PB	3/7/17
CHECKED	PB	3/7/17

DRAWING NUMBER
17116 SS1

SHEET 1 OF 2 SHEETS

BC170827
Further Information Received
08/12/2017



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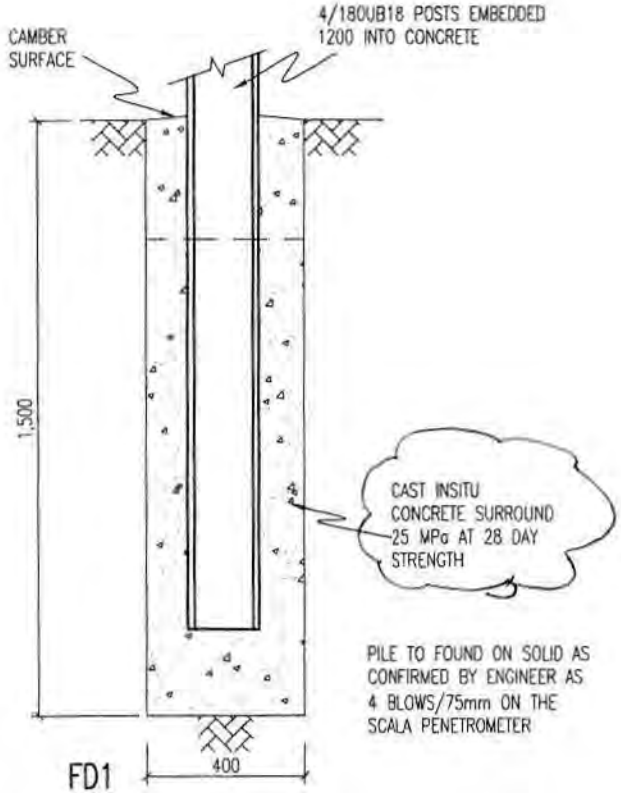

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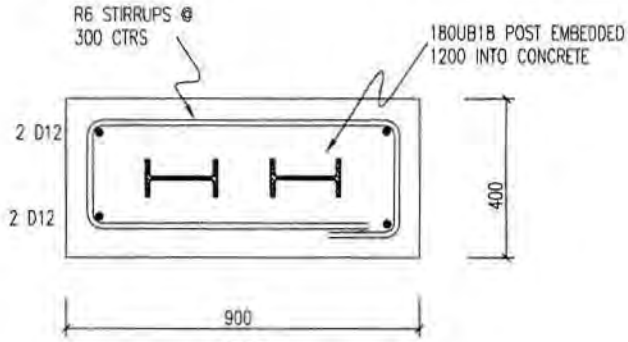

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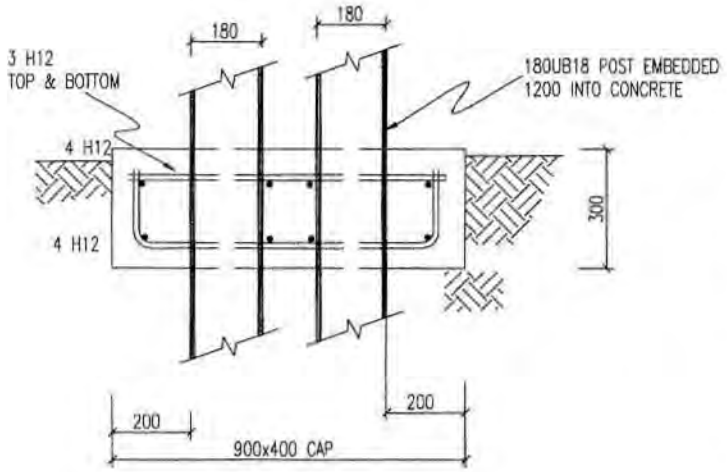

FD2

No.	AMENDMENT	NAME	DATE
A	SD5	PB	5/7
B	DETAILS	PB	21/7
C	DETAILS	PB	1/12

NOTES
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STRUCTURAL DETAILS

DOWLE DWELLING
40 TITOKI ROAD
WAIKANAE

SCALE
AS SHOWN

	NAME	DATE
FIELDWORK	PB	
DESIGNED	PB	29/6/17
DRAWN	PB	3/7/17
CHECKED	PB	3/7/17

DRAWING NUMBER
17116 SS2

SHEET 2 OF 2 SHEETS

00030

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Demand Calculation Sheet

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Job Details

Name:	Dowle house alterations
Street and Number:	40 Titoki Road
Lot and DP Number	lot 3 DP 386409
City/Town/District	Waikanae
Designer	Darren Hunter
Company	Hunter Architecture Ltd
Date	Oct 2017

Building Specification

Number of Storeys	1
Floor Loading	2 kPa
Foundation Type	Slab
	Single
Cladding Weight	Heavy
Roof Weight	Light
Room in Roof Space	No
Roof Pitch (degrees)	15
Roof Height above Eaves (m)	2.7
Building Height to Apex (m)	5.4
Ground to Lower Floor (m)	0.2
Average Stud Height (m)	2.7
Building Length (m)	25
Building Width (m)	18
Building Plan Area (m²)	450

Building Location

Wind Zone = Very High

Earthquake Zone 3

Soil Type:	D & E (Deep to Very Soft)
Annual Prob. of Exceedance:	1 in 500 (Default)

Bracing Units required for Wind

	Along	Across
Single Level	**1303**	**1885**

Bracing Units required for Earthquake

	Along & Across
Single Level	**3904**

GIB EzyBrace® Bracing Software

Single Level Across Resistance Sheet

Job Name: Dowle house alterations

									Wind	EQ
									Demand	
									1885	3904
									Achieved	
Line	Element	Length (m)	Angle (degrees)	Stud Ht. (m)	Type	Supplier	Wind BUs	EQ BUs	4724 251%	4048 104%
m	1	1.80		2.4	GS1-N	GIB®	124	108		
	2	0.60		2.4	GS1-N	GIB®	34	35		
	3	1.30		2.4	BL1-H	GIB®	166	135		
	4	1.20		2.4	VILLA	JH	156	121		
									481 OK	400 OK
n	1	3.10		2.4	GS1-N	GIB®	214	186		
	2	2.90		2.4	GS1-N	GIB®	200	174		
	3	1.90		2.7	GS1-N	GIB®	117	101		
	4	3.40		2.7	GS1-N	GIB®	209	181		
	5	1.40		2.4	BL1-H	GIB®	179	146		
									918 OK	788 OK
o	1	2.40		2.4	GS1-N	GIB®	166	144		
	2	0.50		2.4	BL1-H	GIB®	47	50		
	3	0.50		2.4	BL1-H	GIB®	47	50		
	4	3.00		2.7	BLG-H	GIB®	400	389		
	5	3.20		2.7	BL1-H	GIB®	364	296		
	6	1.50		2.7	BL1-H	GIB®	171	139		
	7	3.00		2.7	BL1-H	GIB®	341	277		
									1536 OK	1346 OK
p	1	3.10		2.4	GS1-N	GIB®	214	186		
	2	2.80		2.4	GS1-N	GIB®	193	168		
	3	1.50		2.7	BL1-H	GIB®	171	139		
	4	4.70		2.4	BL1-H	GIB®	602	489		
	5	1.80		2.4	GS1-N	GIB®	124	108		
									1304 OK	1089 OK
q	1	1.80		2.4	GS1-N	GIB®	124	108		
	2	2.30		2.4	GS1-N	GIB®	159	138		
	3	2.00		2.4	GS1-N	GIB®	138	120		
	4	1.00		2.4	GS1-N	GIB®	65	60		
									486 OK	426 OK

GIB EzyBrace® Bracing Software

Single Level Along Resistance Sheet

Job Name: Dowle house alterations

									Wind	EQ
									Demand	
									1303	3904
									Achieved	
Line	Element	Length (m)	Angle (degrees)	Stud Ht. (m)	Type	Supplier	Wind BUs	EQ BUs	4831 371%	4337 111%
a	1	2.70		2.4	BL1-H	GIB®	346	281		
	2	0.60		2.4	GS1-N	GIB®	34	35		
	3	1.30		2.4	GS1-N	GIB®	90	78		
	4	1.30		2.4	GS1-N	GIB®	90	78		
									559 OK	472 OK
b	1	2.40		2.4	GS1-N	GIB®	166	144		
	2	1.20		2.7	BL1-H	GIB®	137	111		
	3	1.00		2.7	BL1-H	GIB®	105	92		
	4	1.20		2.4	BL1-H	GIB®	154	125		
	5	1.90		2.4	BL1-H	GIB®	243	198		
									804 OK	669 OK
c	1	1.50		2.7	BL1-H	GIB®	171	139		
	2	2.70		2.7	GS1-N	GIB®	166	144		
	3	3.60		2.7	GS1-N	GIB®	221	192		
	4	1.20		2.7	GS1-N	GIB®	74	64		
	5	2.10		2.7	GS1-N	GIB®	129	112		
	6	3.00		2.4	GS1-N	GIB®	207	180		
									966 OK	831 OK
d	1	1.20		2.4	GS1-N	GIB®	83	72		
	2	1.20		2.4	GS1-N	GIB®	83	72		
	3	1.50		2.4	GS1-N	GIB®	104	90		
	4	2.40		2.4	GS1-N	GIB®	166	144		
									435 OK	378 OK
e	2	1.30		2.4	GS1-N	GIB®	90	78		
	3	0.60		2.4	SP2	CHH	54	48		
	4	1.00		2.4	SP1	CHH	100	100		
	5	1.00		2.4	SP1	CHH	100	100		
	6	1.20		2.4	GS1-N	GIB®	83	72		
									427 OK	398 OK
f	1	1.00		2.7	BLG-H	GIB®	133	123		
	2	4.50		2.7	BLG-H	GIB®	600	584		
	3	2.30		2.7	BLG-H	GIB®	307	298		
	4	4.50		2.7	BLG-H	GIB®	600	584		
									1640 OK	1589 OK

Custom Wall Elements

Supplier	System	Min. Length m	Wind BUs/m	EQ BUs/m
CHH	EPBG	.4	100	115
CHH	EPBG	1.2	150	150
CHH	SP1	.6	100	100
CHH	SP2	.6	90	80
JH	VILLA	1.2	130	101

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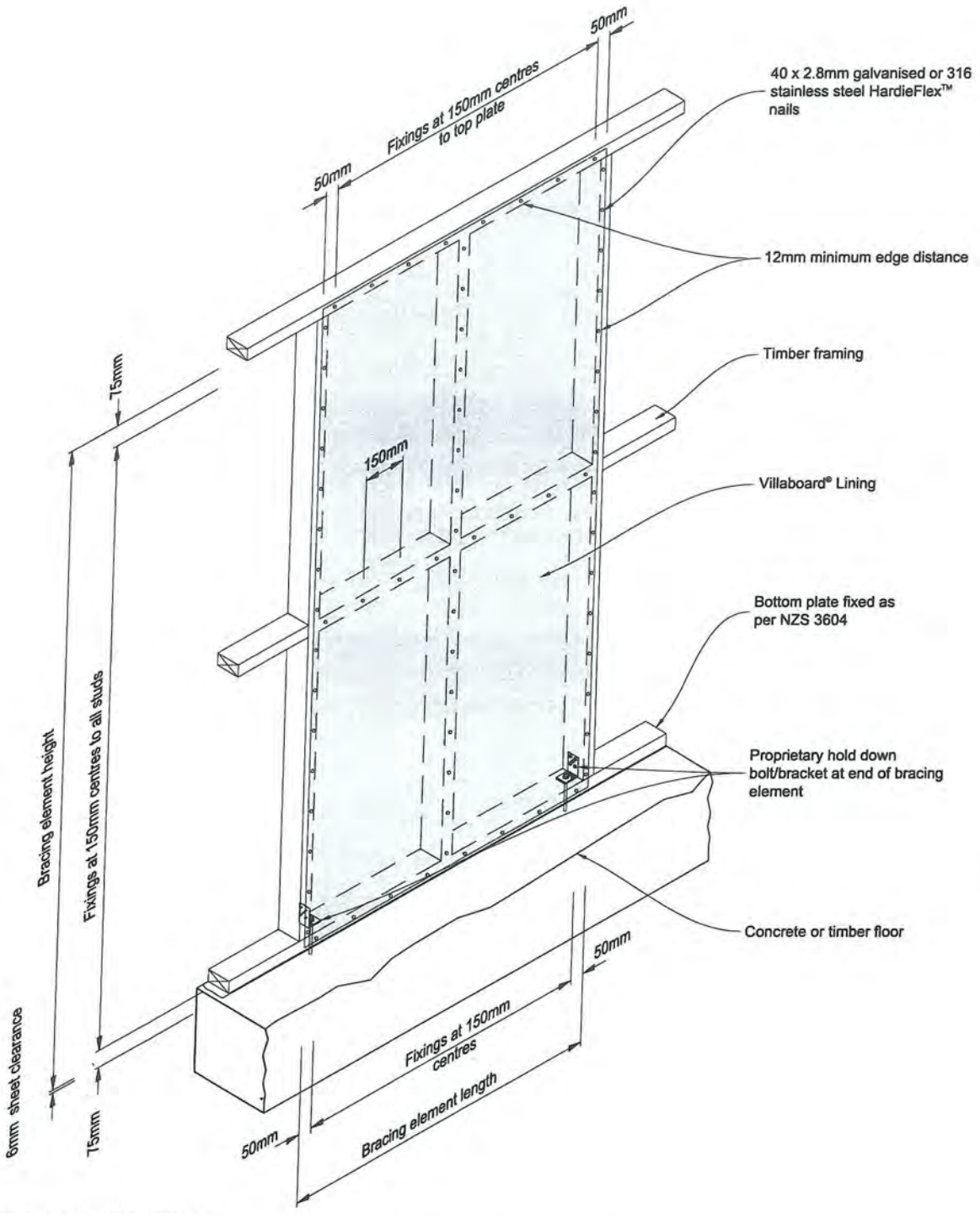
13 Bracing figures — linings



FIBRE CEMENT FIXING DETAILS

Notes for Figure 1:

- **Concrete floor** bottom plate fixing:- Ramset bracing anchor kit Concrete or GIB Handibrac® with 15kN anchor at each end of bracing element
- **Timber floor** bottom plate fixing:- Ramset bracing anchor kit Wood or GIB Handibrac® with a 12x150mm galvanised coach screw at each end of bracing element

Product	System	Minimum length
Villaboard® Lining	Vv	1200mm
HardieGroove™ Lining	HG	1200mm

Figure 1: 1200mm or more Villaboard® Lining/HardieGroove™ Lining to concrete or timber floor

12 Bracing table — Villaboard® Lining

Table 2

Villaboard® Lining Vertically Fixed						
SYSTEM NUMBER	**BRACING ELEMENT LENGTH (mm)**	**REFER FIGURES**	**FLOORING CONSTRUCTION**		**NZS 3604 RATING IN BRACING UNITS PER METRE OF ELEMENT LENGTH**	
			TIMBER	**CONCRETE**	**WIND**	**EARTHQUAKE**
Vv	1200 to 2400	1, 11, 12	√	√	130*	101
	2400 or more	1, 11, 12	√	√	125*	98
	400	2, 11, 12	√	√	81	105
	600	2, 11, 12	√	√	88	85
Villaboard® Lining Horizontally Fixed						
Vh	2400 or more	3, 11, 12	√	√	161*	135*

*A limit of 120BUs/m maximum applies to timber floors and 150BUs/m maximum to concrete floors built as per NZS 3604: 2011 unless a specific engineering design is carried out to ensure the uplift force generated by bracing elements does not exceed the maximum limit for each floor type.

Table 3

HardieGroove™ Lining						
SYSTEM NUMBER	**BRACING ELEMENT LENGTH (mm)**	**REFER FIGURES**	**FLOORING CONSTRUCTION**		**NZS 3604 RATING IN BRACING UNITS PER METRE OF ELEMENT LENGTH**	
			TIMBER	**CONCRETE**	**WIND**	**EARTHQUAKE**
HG	1200	1, 11, 12	√	√	154*	153*

*A limit of 120BUs/m maximum applies to timber floors and 150BUs/m maximum to concrete floors built as per NZS 3604: 2011 unless a specific engineering design is carried out to ensure the uplift force generated by bracing elements does not exceed the maximum limit for each floor type.

5 Sheet fixing

5.1 FASTENER DURABILITY AND SIZE

Coach screws and holding down (HD) bolts, where used, must be M12 hot-dipped galvanised steel fitted with 50 x 50 x 3mm galvanised washers. These must have a protective coating as per Table 4.2 of NZS 3604.

CLADDINGS:

All nails for fixing the bracing panels in external cladding applications must be Grade 316 stainless steel in accordance with NZS 3604.

LININGS:

For dry area internal applications the standard hot dipped galvanised nails can be used.
For wet area internal applications stainless steel nails must be used.

Note: Fastener sizes are given in the respective details section for each product or system.

5.2 SHEET NAILING

Nails must be driven at a minimum edge distance as shown in the bracing details within this specification. This also applies to dimensions from corners, vertically and horizontally. The sheets must be held hard against the framing during nailing to minimise sheet break-out at the back of sheet. Always drive all nails flush with the sheet surface. For sheet/panel systems do not punch the nail below the surface as it reduces the nail's holding power.

Fix all sheets from the centre working towards outer edges to avoid drumminess.

5.3 SHEET ORIENTATION

For the bracing systems specified in this manual, all flat sheets must be fixed vertically with the exception of Villaboard Lining, which can either be fixed vertically or horizontally as per the bracing systems details.

Full-height sheets without joints must be used for walls up to 3000mm in height. When bracing walls exceed 3000mm in height, only one horizontal sheet joint is permitted within the element height. The maximum height of bracing wall is limited to 4800mm.

Always ensure that the sheet joint is on the centre line of the stud or nog to achieve sufficient cover of fixings.

In internal walls the lining sheet used for bracing must stop 6mm up from the bottom of the bottom plate.

5.4 SHEET PENETRATIONS

No window/door penetrations are allowed, but holes/penetrations up to 100 x 100mm positioned no closer than 200mm to the edge of lining or another hole, are allowed for services without significantly affecting the bracing rating of the lining/cladding.

6 Jointing

6.1 GENERAL

Control joints in flush finished or monolithic claddings are required to accommodate movement created by shrinkage and thermal movement of plasters.

Expansion joints are provided in timber walls to allow for long-term frame movement that occurs due to structural loading and timber shrinkage.

Control joints and expansion joints must be determined at the design stage. For further guidance on jointing refer to the BRANZ publication 'Good Stucco Practice'.

When bracing walls contain control joint and expansion joints, the panels must be separated into separate bracing elements on either side of the joint.

7 Finishing

7.1 GENERAL

Protective coating of James Hardie fibre cement sheet cladding and Scyon Linea Weatherboards is required in order to meet the durability requirements of NZBC and to be covered under the James Hardie Product Warranty. Claddings must be painted within 90 days of installation. Use only quality exterior paints complying with AS 3730. Manufacturer's specification for the selected paint must be followed. Note that certain special paints require an undercoat before applying the finish coat. Refer to the relevant paint manufacturer for preparation required before commencing the coating work.

7.2 SEALANTS

All sealants must demonstrate they meet the relevant requirements of NZBC. Application and use of sealants must comply with the manufacturer's instructions. Check with the sealant manufacturer prior to coating over sealants as some sealant manufacturers do not recommend coating over their product.

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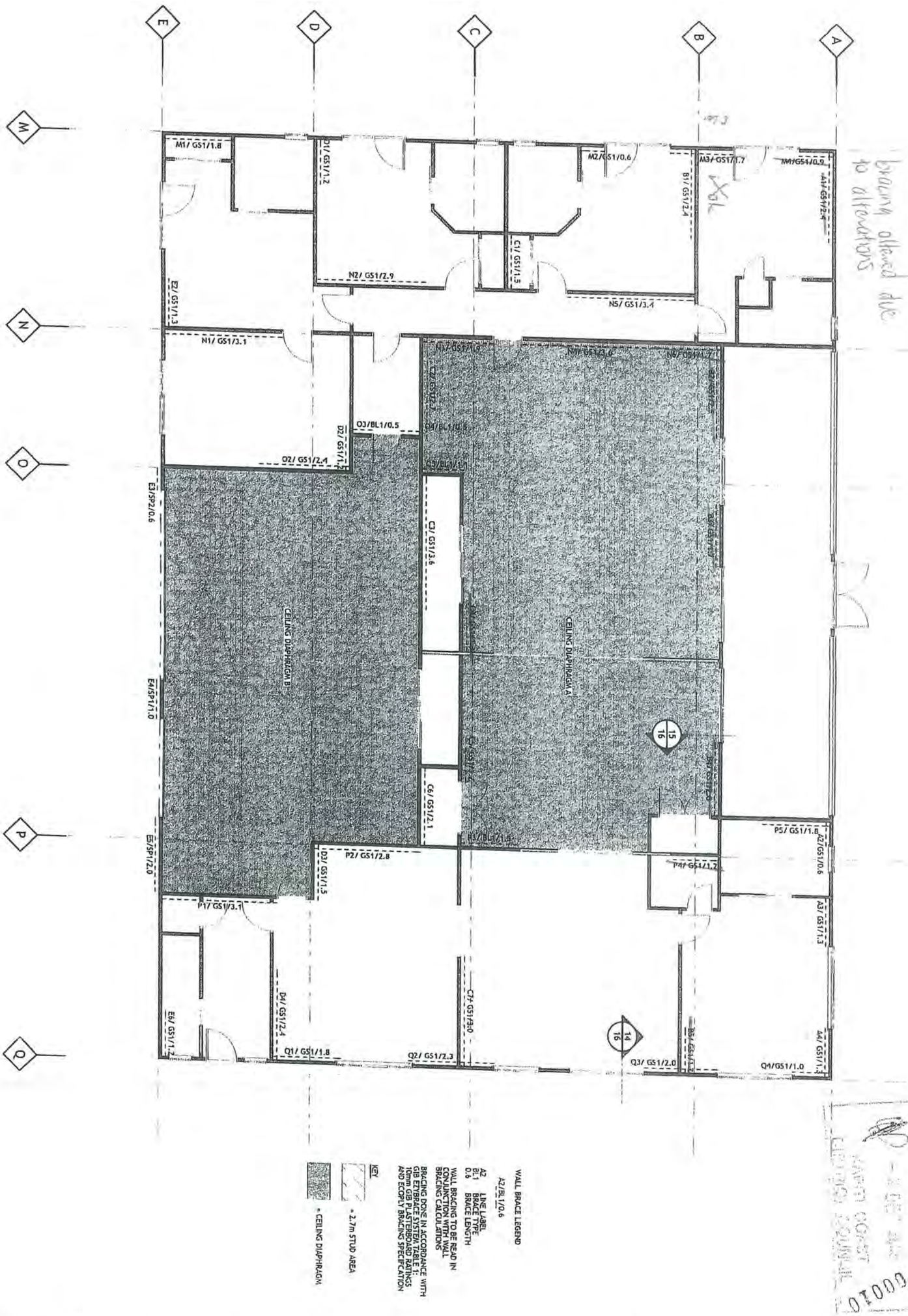

WALL BRACE LEGEND

A2/BL1/0.6

A2 LINE LABEL
BL1 BRACE TYPE
0.6 BRACE LENGTH

WALL BRACING TO BE READ IN CONJUNCTION WITH WALL BRACING CALCULATIONS

BRACING DONE IN ACCORDANCE WITH GIB ETYBRACE SYSTEM TABLE 1: TIMBER FRAME BRACING RATINGS AND E/COPLY BRACING SPECIFICATION

KEY

= CEILING DIAPHRAGM

= 2.7m STUD AREA

brown altered due to alterations

PEER REVIEWED
- AS BUILT
WIND ZONE
EARTHQUAKE ZONE
000010

Sheet: 10/21	Date: 19 NOV 09 Revision: WD-B WORKING DRAWINGS Job #: PN 09018 Drawn: M.B Checked: S.W Amended: S.W	Direction key 3 2 1 4	Drawing: BRACING PLAN SCALE 1:100 @ A3	Client: BARRY PRINCE LOT 3 DP 386409 40 TITOKI ROAD WAIKANAE

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Table 8.2 – Studs in loadbearing walls for all wind zones – SG 8 (see 8.5.1.1)

Wind zone	Loaded dimension* of wall	Stud sizes for maximum length (height) of: (m)								
		2.4			2.7			3.0		
		At maximum stud spacing (mm) of:			At maximum stud spacing (mm) of:			At maximum stud spacing (mm) of:		
		300	400	600	300	400	600	300	400	600
	(m)	(mm x mm)	(mm x mm)	(mm x mm)	(mm x mm)	(mm x mm)	(mm x mm)	(mm x mm)	(mm x mm)	(mm x mm)
		(width x thickness)								
(a) Single or top storey – Light and heavy roof										
Extra high	2.0	–	90 x 45	90 x 70	90 x 45	90 x 70	90 x 90	90 x 70	90 x 70	140 x 45
	4.0	–	90 x 45	90 x 70	90 x 45	90 x 70	90 x 90	90 x 70	90 x 70	140 x 45
	6.0	–	90 x 45	90 x 70	90 x 45	90 x 70	90 x 90	90 x 70	90 x 70	140 x 45
Very high	2.0	–	90 x 45	90 x 70	90 x 35	90 x 70	90 x 70	90 x 45	90 x 70	90 x 90
	4.0	–	90 x 45	90 x 70	90 x 35	90 x 70	90 x 70	90 x 45	90 x 70	90 x 90
	6.0	–	90 x 45	90 x 70	90 x 35	90 x 70	90 x 70	90 x 45	90 x 70	90 x 90
High	2.0	–	90 x 35	90 x 45	90 x 35	90 x 45	90 x 70	90 x 35	90 x 70	90 x 70
	4.0	–	90 x 35	90 x 45	90 x 35	90 x 45	90 x 70	90 x 35	90 x 70	90 x 70
	6.0	–	90 x 35	90 x 45	90 x 35	90 x 45	90 x 70	90 x 35	90 x 70	90 x 70
Medium	2.0	–	90 x 35	90 x 35	90 x 35	90 x 35	90 x 45	90 x 35	90 x 35	90 x 70
	4.0	–	90 x 35	90 x 35	90 x 35	90 x 35	90 x 45	90 x 35	90 x 35	90 x 70
	6.0	–	90 x 35	90 x 35	90 x 35	90 x 35	90 x 45	90 x 35	90 x 35	90 x 70
Low	2.0	–	90 x 35	90 x 35	90 x 35	90 x 35	90 x 35	90 x 35	90 x 35	90 x 45
	4.0	–	90 x 35	90 x 35	90 x 35	90 x 35	90 x 35	90 x 35	90 x 35	90 x 45
	6.0	–	90 x 35	90 x 35	90 x 35	90 x 35	90 x 35	90 x 35	90 x 35	90 x 45
Internal walls for all wind zones	2.0	–	70 x 45	70 x 45	70 x 45	70 x 45	90 x 35	70 x 45	90 x 35	90 x 45
	4.0	–	70 x 45	70 x 45	70 x 45	70 x 45	90 x 35	70 x 45	90 x 35	90 x 45
	6.0	–	70 x 45	70 x 45	70 x 45	70 x 45	90 x 35	70 x 45	90 x 35	90 x 45
		3.6			4.2			4.8		
		At maximum stud spacing (mm) of:			At maximum stud spacing (mm) of:			At maximum stud spacing (mm) of:		
		300	400	600	300	400	600	300	400	600
	(m)	(mm x mm)	(mm x mm)	(mm x mm)	(mm x mm)	(mm x mm)	(mm x mm)	(mm x mm)	(mm x mm)	(mm x mm)
		(width x thickness)								
Extra high	2.0	140 x 45	140 x 45	140 x 90	140 x 90	140 x 90	190 x 45	140 x 90	190 x 90	190 x 90
	4.0	140 x 45	140 x 45	140 x 90	140 x 90	140 x 90	190 x 45	140 x 90	190 x 90	190 x 90
	6.0	140 x 45	140 x 45	140 x 90	140 x 90	140 x 90	190 x 45	140 x 90	190 x 90	190 x 90
Very high	2.0	140 x 45	140 x 45	140 x 90	140 x 90	140 x 90	190 x 45	140 x 90	190 x 45	190 x 90
	4.0	140 x 45	140 x 45	140 x 90	140 x 90	140 x 90	190 x 45	140 x 90	190 x 45	190 x 90
	6.0	140 x 45	140 x 45	140 x 90	140 x 90	140 x 90	190 x 45	140 x 90	190 x 45	190 x 90
High	2.0	90 x 90	140 x 45	140 x 45	140 x 45	140 x 90	140 x 90	140 x 90	140 x 90	190 x 90
	4.0	90 x 90	140 x 45	140 x 45	140 x 45	140 x 90	140 x 90	140 x 90	140 x 90	190 x 90
	6.0	90 x 90	140 x 45	140 x 45	140 x 45	140 x 90	140 x 90	140 x 90	140 x 90	190 x 90
Medium	2.0	90 x 70	90 x 70	140 x 45	90 x 90	140 x 45	140 x 90	140 x 45	140 x 90	140 x 90
	4.0	90 x 70	90 x 70	140 x 45	90 x 90	140 x 45	140 x 90	140 x 45	140 x 90	140 x 90
	6.0	90 x 70	90 x 70	140 x 45	90 x 90	140 x 45	140 x 90	140 x 45	140 x 90	140 x 90
Low	2.0	90 x 35	90 x 70	90 x 70	90 x 70	90 x 90	140 x 45	140 x 45	140 x 45	140 x 90
	4.0	90 x 35	90 x 70	90 x 70	90 x 70	90 x 90	140 x 45	140 x 45	140 x 45	140 x 90
	6.0	90 x 35	90 x 70	90 x 70	90 x 70	90 x 90	140 x 45	140 x 45	140 x 45	140 x 90
Internal walls for all wind zones	2.0	90 x 35	90 x 70	90 x 70	90 x 70	90 x 90	140 x 45	140 x 45	140 x 45	140 x 90
	4.0	90 x 35	90 x 70	90 x 70	90 x 70	90 x 90	140 x 45	140 x 45	140 x 45	140 x 90
	6.0	90 x 35	90 x 70	90 x 70	90 x 70	90 x 90	140 x 45	140 x 45	140 x 45	140 x 90

* For definition of loaded dimension see 1.3.

NOTE –
(1) Determine the loaded dimension of the wall at floor level and the loaded dimension of the wall above at roof level and use the greater value in this table.
(2) 140 x 45 may be substituted for 90 x 90. 90 x 35 may be substituted for 70 x 45.
(3) Studs 70 mm and 90 mm thick may be replaced with studs of 35 mm and 45 mm thickness respectively, provided they are placed at no more than one half the spacing required for the 70 mm and 90 mm stud they are replacing.
(4) Studs 70 mm and 90 mm thick may be substituted with built-up members sized in accordance with 8.5.1.2 and nailed together in accordance with 2.4.4.7.

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7.3 WALLS

Design Deflection Limits:

D.L.	L.L.
SPAN/300	SPAN/360
OR 10 mm	OR 10 mm

TABLE 14: LINTELS – UPPER/SINGLE STOREY

Section D x B (mm)	Product	Light Roof And Ceiling Roof Load Width 'RLW' (m)									
		1.8	2.4	3.0	3.6	4.2	4.8	5.4	6.0	6.6	7.2
		Maximum Span (m)									
90 x 45	hyCHORD•	1.7	1.5	1.3	1.2	1.1	1.1	1.0	1.0	0.9	0.8
2/90 x 45	hyCHORD	2.3	2.0	1.8	1.7	1.5	1.5	1.4	1.3	1.3	1.2
140 x 45	hyCHORD	2.7	2.5	2.4	2.3	2.1	2.0	1.8	1.8	1.7	1.6
150 x 45	hySPAN•	3.0	2.8	2.7	2.5	2.4	2.4	2.3	2.1	2.0	2.0
150 x 63	hySPAN	3.2	3.0	2.9	2.7	2.6	2.5	2.5	2.4	2.4	2.3
2/140 x 45	hyCHORD	3.2	3.0	2.8	2.7	2.6	2.5	2.5	2.4	2.4	2.3
150 x 90	hy90•	3.2	3.0	2.9	2.7	2.6	2.5	2.5	2.4	2.4	2.3
170 x 45	hySPAN	3.3	3.1	2.9	2.8	2.7	2.6	2.5	2.4	2.4	2.4
190 x 45	hyCHORD	3.4	3.2	3.0	2.9	2.8	2.7	2.6	2.5	2.5	2.4
2/150 x 45	hySPAN	3.5	3.3	3.1	3.0	2.9	2.8	2.7	2.6	2.6	2.5
200 x 45	hySPAN	3.7	3.5	3.3	3.1	3.0	2.9	2.8	2.8	2.7	2.6
2/170 x 45	hySPAN	3.8	3.6	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.8
200 x 63	hySPAN	4.0	3.7	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.9
2/190 x 45	hyCHORD	4.0	3.7	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.9
200 x 90	hy90	4.0	3.7	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.9
240 x 45	hySPAN	4.2	4.0	3.8	3.6	3.5	3.3	3.3	3.2	3.1	3.0
2/200 x 45	hySPAN	4.4	4.1	3.9	3.7	3.6	3.5	3.4	3.3	3.2	3.1
240 x 63	hySPAN	4.6	4.3	4.1	3.9	3.7	3.6	3.5	3.4	3.4	3.3
240 x 90	hy90	4.6	4.3	4.0	3.9	3.7	3.6	3.5	3.4	3.4	3.3
2/240 x 45	hySPAN	5.0	4.7	4.5	4.2	4.1	4.0	3.8	3.7	3.7	3.6
300 x 45	hySPAN	5.0	4.8	4.5	4.2	4.1	4.0	3.8	3.7	3.7	3.6 ■
240 x 90	hyONE•	5.2	4.9	4.7	4.5	4.3	4.1	4.0	3.9	3.8	3.7
300 x 90	hy90	5.3	5.0	4.8	4.6	4.5	4.3	4.2	4.1	4.0	3.9
300 x 63	hySPAN	5.4	5.1	4.8	4.6	4.5	4.3	4.2	4.1	4.0	3.9
360 x 45	hySPAN	5.7	5.3	5.1	4.9	4.8	4.6	4.5	4.3	4.2 ■	4.0 ■
2/300 x 45	hySPAN	5.8	5.4	5.2	5.0	4.9	4.8	4.6	4.5	4.4	4.2

■ Indicates minimum bearing at end supports = 90 mm
• Minimum bearing at end supports 45 mm, except where indicated otherwise
• Double sections built-up by vertical lamination – see section 5.4

...ilding envelope risk matrix

Job Details Dowle house

Name

Street and Number 40 Tikok Road

Lot and DP Number lot 3 DP 386409

City/Town/District Waikanae

10033

Table 1 from E2/AS1 Definitions of Risk

Risk factor	Risk	Detail
Wind Zone	Low	Low wind zone as described by NZS 3604
	Medium	Medium wind zone as described by NZS 3604
	High	High wind zone as described by NZS 3604
	Very high	Very high wind zone as described by NZS 3604
Number of storeys	Low	One story
	Medium	Two storey in part
	High	Two storeys
	Very high	More than two storeys
Roof/wall intersection design	Low	Roof-to-wall intersection fully protected (e.g. hip and gable roof with eaves)
	Medium	Roof-to-wall intersection partly exposed (e.g. hip and gable roof with no eaves)
	High	Roof-to-wall intersection fully exposed (e.g. parapets or eaves greater than 90° to vertical with soffit linings)
	Very high	Roof elements finished within the boundaries formed by exterior walls (e.g. lower ends of aprons, chimney etc)
Eaves width (1)	Low	Greater than 600mm at first floor level
	Medium	450-600mm at first floor, or over 600mm at second floor level
	High	100-450mm at first floor, or 450-600mm at second floor level
	Very high	0-100mm at first floor, or 100-450mm at second level, or 450-600mm at third floor level (2)
Envelope complexity	Low	Simple rectangular, L, T, or boomerang shape, with single cladding type
	Medium	Complex, angular or curved shapes (e.g. Y or arrowhead) with single cladding type
	High	More complex, angular or curved shapes (e.g. Y or arrowhead) with multiple cladding types
	Very high	As for high risk, but with junctions not covered in C or F on this Table (e.g. box windows, pergolas, multi-storey re-entrant shapes etc)
Deck design	Low	None or timber slat deck or porch at ground level
	Medium	Fully covered in plan by roof, or timber slat deck attached at first or second floor level
	High	Enclosed deck exposed in plan or cantilevered at first floor level
	Very high	Enclosed deck exposed in plan or cantilevered, at second floor level or above

Note: 1. Eaves width measured from external face of wall cladding to outer edge of overhang including gutters and fascias
2. Balustrades and parapets count as 0 mm eaves

17 OCT 2017

North Elevation — Risk Severity

Risk Factor	Low	Score	Medium	Score	High	Score	Very High	Score	Sub totals for each risk factor
Wind zone (per NZS 3604)	0		0		1		(2)		2
Number of storeys	(0)		1		2		4		0
Roof/wall intersection design	(0)		1		3		5		0
Eaves width	0		(1)		2		5		1
Envelope complexity	(0)		1		3		6		0
Deck design	(0)		2		4		6		0
							Total risk score		3

East Elevation — Risk Severity

Risk Factor	Low	Score	Medium	Score	High	Score	Very High	Score	Sub totals for each risk factor
Wind zone (per NZS 3604)	0		0		1		(2)		2
Number of storeys	(0)		1		2		4		0
Roof/wall intersection design	(0)		1		3		5		0
Eaves width	0		(1)		2		5		1
Envelope complexity	(0)		1		3		6		0
Deck design	(0)		2		4		6		0
							Total risk score		3

South Elevation — Risk Severity

Risk Factor	Low	Score	Medium	Score	High	Score	Very High	Score	Sub totals for each risk factor
Wind zone (per NZS 3604)	0		0		1		(2)		2
Number of storeys	(0)		1		2		4		0
Roof/wall intersection design	(0)		1		3		5		0
Eaves width	0		(1)		2		5		1
Envelope complexity	(0)		1		3		6		0
Deck design	(0)		2		4		6		0
							Total risk score		3

West Elevation — Risk Severity

Risk Factor	Low	Score	Medium	Score	High	Score	Very High	Score	Sub totals for each risk factor
Wind zone (per NZS 3604)	0		0		1		(2)		2
Number of storeys	(0)		1		2		4		0
Roof/wall intersection design	(0)		1		3		5		0
Eaves width	0		(1)		2		5		1
Envelope complexity	(0)		1		3		6		0
Deck design	(0)		2		4		6		6
							Total risk score		3

Selected Cladding Resulting from Risk Assessment

	Risk Score from page 3	Cladding Selected from Table 3	Tick selected option: Direct Fixed	Tick selected option: Drained cavity
North Elevation	3	existing brick veneer		
South Elevation	3	cedar over cavity		✓
East Elevation	3	nil no change - brick		
West Elevation	3	existing brick		✓
		existing brick veneer		✓

cavity to brick veneer remains

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Resene TechSpec

Beach Front Steel Work

Contract:	**Exterior Painting**
Building:	**Residential**
Owner/Agent:	**Hunter Architecture**
Specification No:	**032725-10-17/v1r**
Prepared By:	**Sarah Cummins - Resene Paints Ltd (NZ)**
Date:	**19 October 2017**

Scope

The work involved and intended in this Contract to be carried out at the location detailed above comprises the preparation of surfaces and application of paint in defined areas, in accordance with this specification and as detailed in the attached schedule of paint systems.

Schedule of Paint Systems

Exposed Mild Steel Steel
paint new shop primed exterior mild steel - high performance

Preparation	Refer to SIPDS No. 4 Metal / Steel and Spec Sheet 4:1/3	
Primer / Sealer	Resene Armourcote 221 - brushing epoxy primer applied to achieve a total dry film thickness of 100 microns	RA36
	Resene Armourcote 510 - high solids epoxy applied to achieve a total dry film thickness of 150 microns	RA40
Topcoat System	2 coats of Resene Uracryl 403 - gloss applied to achieve a total dry film thickness of 100 microns	RA56

This specification needs to be used in conjunction with the relevant datasheets (available at http://www.resene.co.nz or hard copies available on request). Proper application of this specification will ensure the Resene paint system will adhere to the substrate it is applied to.
If the substrate has elements or issues not covered in the specification, including the surface information and preparation datasheets (SIPDS), and any additional supplementary information please contact Resene Technical Services for clarification and additional information. SIPDS refers to the Surface Information and Preparation Datasheets.
Substitutions are not permitted to any specified Resene coating system, or associated components and products, without approval from Resene Technical Services . Do not combine paints from different manufacturers in a paint system

Enjoy the Resene Promise of Quality Guarantee



In a world of ever changing values, there are still some things upon which you can rely. One of these is that Resene will continue to strive to produce the best paints that it possibly can, benchmarked against the highest international standards.

Our products are guaranteed to provide film integrity and adhesion for the expected life of the paint system[1].

This is the Resene Promise of Quality Guarantee.

We will deliver top quality paint, advice and colour, developed specifically to meet our customers' needs.

This promise is backed by our commitment to leading edge paint technology, strong and exciting colours, and reducing the impact of paint on the natural environment.

Should Resene fail to deliver on our promise in any way, we will unhesitatingly acknowledge our responsibilities.

Nick Nightingale
Managing Director, Resene Paints Ltd

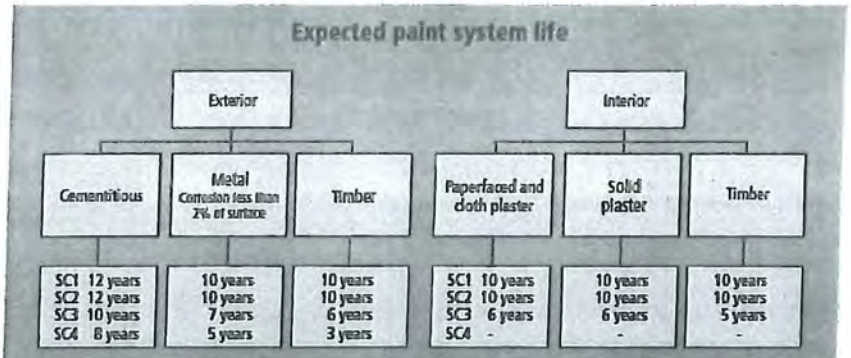
[1] See the 'Resene expected paint system life' chart (over) for the expected life of the paint system. Should the paint fail to provide the film integrity and adhesion detailed, Resene will provide replacement paint to rectify the affected area upon presentation of the original proof of purchase for the Resene paints used on the project. This Promise of Quality Guarantee is transferable to a new owner should the property be sold within the expected life of the paint system provided the new owner holds the original proof of purchase for the Resene paints used.

Resene
the paint the professionals use

Resene expected paint system life

The expected paint system life chart below indicates the expected life of a well maintained pigmented waterborne paint system applied to a properly prepared surface to the specifications of Resene before recoating is required. Well maintained means regular washing of exterior surfaces and repairing any obvious damage. See the Resene Caring for your paint finish brochure for recommended cleaning instructions.

For example:
Painting an EXTERIOR building. The concrete WALLS are to be painted and the surface condition is described as 'IDEAL' (SC1), giving the indication that 12 years could be expected provided regular washing and repairs are carried out during this time. After this the surface will require painting. The box at the bottom of this page gauges the expected surface condition at the end of the stated lifetime. The system for example should have received very little change (0) in surface cracking but it would be expected to have suffered colour change (3).



Exterior expected life figures are for vertical exposure. Surfaces less than 60° to the horizontal will have a 50% reduced life expectancy compared to the stated life expectancies above. Interior expected life figures refer only to durability characteristics of chopping, cracking, flaking, peeling and general film integrity. Colour/staining is excluded. Due to the vast range of staining and the varying effects of this on the substrate and finish it is not possible to include these factors in a general guideline.

Extreme marine environments, adhesion failure of previous coatings, substrate damage or use of solventborne products will result in reduced life expectancies. Refer Resene for assistance.

Surface conditions are defined as follows:

SC1: IDEAL New surface in excellent condition. No defects. Surface has not been exposed to weather

SC2: GOOD Coated surfaces requiring repaint for cosmetic reasons only. Apparently sound coating protecting substrate, no paint breakdown

SC3: FAIR Some substrate exposed for undetermined time due to incidence of paint breakdown - requires preparatory work and spot priming

SC4: POOR Substantial areas exposed to weathering for substantial time or never painted

Test method	Description	Exterior	Interior
AS1580 481.1.11	Chalking	2	0
AS1580 481.1.12	Colour change	3	1
AS1580 481.15	Gloss change	3.5	0
AS1580 481.1.8	Cracking	0	0
AS1580 481.1.10	Flaking	0	0
AS1580 481.1.2	Discolouration	4	1

Key: 0 = No change, 5 = Severe change

If in doubt about any aspect of your specification or project please contact Resene.

Printed on environmentally responsible paper, which complies with the requirements of environmental management systems EMAS and ISO14001, using vegetable-based inks.

3.0 GENERAL DESIGN CONSIDERATIONS

The design methodology used in the preparation of this guide complies with the requirements of the following design standards:

- AS/NZS 1170:2002/3 Structural Design Actions
- NZS 3603:1993 Timber Structures Standard, an Acceptable Solution to NZBC Clause 1 Structure.

Guidance has been taken from AS 1684.1:1999, Residential timber-framed construction, Part 1: Design criteria, and reviewed to ensure agreement with NZS 3604:2011 Timber Framed Buildings. When selected and installed in accordance with the specifications, details and limitations in this guide and the Residential Installation Guide, Futurebuild® LVL will comply with the requirements of the New Zealand Building Code.

The spans given in these tables have been developed by experienced timber design engineers in accordance with NZS3603:1993 and include the most up-to-date loading combinations from AS/NZS 1170.

Floor loading applied includes an allowance for:

- Floor mass not exceeding 40 kg/m^2, unless otherwise notified
- Live load of up to 1.5 kPa/1.8 kN, for use in domestic houses

For other situations, such as decks, balconies, tiled areas and apartment floors, designIT® for houses software should be used for specification where alternate loading conditions may be applied. For commercial, industrial and other heavily loaded floors use designIT for Commercial Floors or contact CHH Woodproducts.

Wind Loading

Unless noted otherwise, the tables given in this guide are suitable for applications in building wind zones up to very high (VH) exposure.

Snow Loading

All tables are suitable for ground snow loads up to 1.0 kPa. For snow loads over 1.0 kPa refer to designIT for houses software.

Member Specification

In selecting an appropriate beam size, specifiers should also consider the applicability of design deflection limits for the beams intended use. Deflection limits applied in this guide may not be suitable for some designs and further advice should be obtained.

Reaction/Support Considerations

For tie down, support and reaction information refer to designIT for houses software.

Deflection Limits

The deflection limits used in these span tables have been determined on the basis of experience with the known serviceability performance of individual member types in typical applications. Where reduced deflections or higher levels of performance are required consult designIT for houses software or select members that have an increased spanning capability as required.

DL – Dead Load, sometimes referred to as permanent load, considers load that is deemed to apply for periods of more than 6 months.

LL – Live Load, sometimes referred to as transient load, is load that is considered to be temporary in its nature.

Dynamic – Dynamic serviceability limits are applied to floor joists and relate to the dynamic response of a floor joist to load. The 1 kN for 2 mm deflection is provided to reflect a dynamic performance level of the floor corresponding 8 Hz.

3.1 CHH SOFTWARE SOLUTIONS

CHH Software Solutions include specification software for both residential and non-residential structural systems. They enable designers and engineers, even those unfamiliar with the specifics of timber engineering to produce high quality, reliable specifications using engineered wood products.

Residential Software

designIT® for houses is a software tool for all building practitioners for designing with the Futurebuild® LVL range of engineered wood products and other selected materials for houses and similar structures.

designIT for houses enables a wide range of applications to be considered, including floor layouts, wind and other loads, which are not included in this publication without the need for engineering knowledge or the exercise of professional engineering judgment.

designIT Site app has been developed as a handy reference tool for the specifier or tradesman on the go. It is a trimmed down version of designIT for houses.

floorIT site is a smartphone app to aid specifiers in the specification, selection and estimation of quantities for a range of flooring applications.

layITout® is an integrated design and layout tool that allows users to enter a house plan, propose and then design a floor joist layout for a fully integrated engineered floor system.

Non Residential Software

designIT for Commercial Floors is a software tool for all building practitioners for designing with the Futurebuild LVL range of engineered wood products and other selected materials in commercial, industrial and other heavily loaded floors.

The computeIT® software suite is designed to aid in the specification of heavy structural members and non residential structural systems. It includes three software packages; computeIT for beams, computeIT toolkit and computeIT for portal frames.

computeIT for beams is an all purpose beam analysis package that enables engineers to develop design solutions for a range of engineered wood products.

computeIT toolkIT is a series of design tools allowing quick and easy design of beams, columns, rigid moment connections, purlins and girts.

computeIT for portal frames is a fully integrated portal frame design, analysis and specification package for the development of optimised timber design solutions.

slabIT site is an app for the design of truFORM and gripFORM members for use as joists and bearers for forming slab soffits.

For more information or to download CHH software free of charge, visit www.chhsoftware.com or contact CHH Woodproducts.

3.2 MANUFACTURE

Futurebuild LVL is manufactured by using phenolic adhesive to laminate radiata pine veneer, in a continuous assembly in which the grain direction of all veneers is orientated in the longitudinal direction. It is pressed as a 1.2 m nominal width continuous billet in various standard thicknesses, docked to any specified length and then ripped into standard widths for use as structural beams etc.

For product range and size information refer to section 2.1 Product Availability.

3.3 STRUCTURAL PROPERTIES

The structural properties for Futurebuild LVL have been determined by testing in accordance with the requirements of AS/NZS 4357 and section 4 of AS/NZS 4063.2:2010 and so comply with the provisions of the NZ Building Code through clause C2.3 in NZS3603.

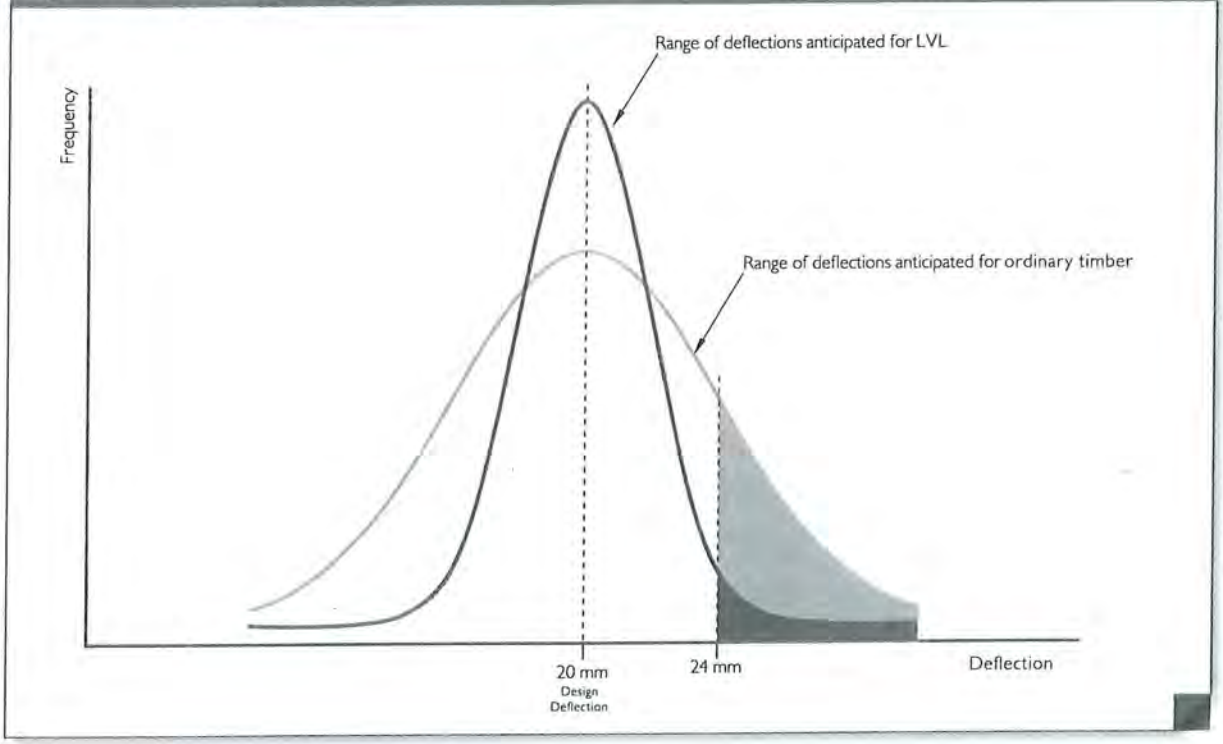
Refer to the Futurebuild LVL Specific Engineering Design Guide for engineering design information.

3.4 STRUCTURAL RELIABILITY

Futurebuild LVL is manufactured by laminating various grades of veneer in a predetermined pattern to impart predictable and reliable structural properties. The uniformity of LVL is the key to its high strength and stiffness properties and its reputation for reliable and predictable performance. It is the reliability of LVL that makes it a genuine engineering material suitable for high load, high risk applications such as large span portal frames.

For ordinary applications the reliability of LVL, illustrated graphically in Figure 1, rewards specifiers and builders with the confidence of meeting customer expectations and reduction in the incidence of expensive and disruptive call backs.

Figure 1: LVL Reliability Curve



3.5 STRUCTURAL CERTIFICATION

The span tables and details in this guide for Futurebuild® LVL have been designed in accordance with sound and widely accepted engineering principles.

The design properties of Futurebuild LVL in this guide were determined in accordance with clauses 2.3 and C2.3 of NZS 3603: "Timber Structures Standard." Futurebuild LVL is Product Certified by the Engineered Wood Products Association of Australasia (EWPAA) as being manufactured in accordance with the joint New Zealand / Australian Standard AS/NZS 4357: "Structural Laminated Veneer Lumber." The EWPAA is accredited for product certification by the Joint Accreditation System of Australia and New Zealand (JAS-ANZ).

Structural design is in accordance with NZS 3603 (verification method B1/VM1, 6.1) with loads and deflection criteria as indicated on the tables. Serviceability and other criteria were selected using guidelines available from joint Australian / New Zealand standards technical committees and correspond to those used in NZS 3604, (Acceptable Solution B1 / AS1, 4.1).

When installed in accordance with the specifications, details and limitations in this guide and the Residential Installation Guide, Futurebuild LVL members will comply with the requirements of the New Zealand Building Code.

3.6 QUALITY ASSURANCE

Futurebuild LVL is manufactured in a fully quality controlled process, independently third party audited by the Engineered Wood Products Association of Australia (EWPAA). The EWPAA certifies Futurebuild LVL manufactured by CHH Woodproducts at its Marsden Point (New Zealand) mill.

Participation and compliance with the requirements of the EWPAA's process based quality control scheme includes product testing and monitoring of properties. It provides the basis for the EWPAA's Product Certification of Futurebuild LVL as conforming to the requirements of AS/NZS 4357 (Structural Laminated Veneer Lumber). Conformance with AS/NZS 4357 ensures that Futurebuild LVL is suitable for structural applications in accordance with NZS 3603 Timber Structures Standard and NZS 3604 Timber Framed Buildings.

The EWPAA's product certification scheme is accredited under the government Joint Accreditation System of Australia and New Zealand (JAS-ANZ).

ewpaa

JAS-ANZ

7.3 WALLS

Design Deflection Limits:

D.L.	L.L.
SPAN/300	SPAN/360
OR 10 mm	OR 10 mm

TABLE 14: LINTELS – UPPER/SINGLE STOREY

Section D x B (mm)	Product	Light Roof And Ceiling Roof Load Width 'RLW' (m)									
		1.8	2.4	3.0	3.6	4.2	4.8	5.4	6.0	6.6	7.2
		Maximum Span (m)									
90 x 45	hyCHORD•	1.7	1.5	1.3	1.2	1.1	1.1	1.0	1.0	0.9	0.8
2/90 x 45	hyCHORD	2.3	2.0	1.8	1.7	1.5	1.5	1.4	1.3	1.3	1.2
140 x 45	hyCHORD	2.7	2.5	2.4	2.3	2.1	2.0	1.8	1.8	1.7	1.6
150 x 45	hySPAN•	3.0	2.8	2.7	2.5	2.4	2.4	2.3	2.1	2.0	2.0
150 x 63	hySPAN	3.2	3.0	2.9	2.7	2.6	2.5	2.5	2.4	2.4	2.3
2/140 x 45	hyCHORD	3.2	3.0	2.8	2.7	2.6	2.5	2.5	2.4	2.4	2.3
150 x 90	hy90•	3.2	3.0	2.9	2.7	2.6	2.5	2.5	2.4	2.4	2.3
170 x 45	hySPAN	3.3	3.1	2.9	2.8	2.7	2.6	2.5	2.4	2.4	2.4
190 x 45	hyCHORD	3.4	3.2	3.0	2.9	2.8	2.7	2.6	2.5	2.5	2.4
2/150 x 45	hySPAN	3.5	3.3	3.1	3.0	2.9	2.8	2.7	2.6	2.6	2.5
200 x 45	hySPAN	3.7	3.5	3.3	3.1	3.0	2.9	2.8	2.8	2.7	2.6
2/170 x 45	hySPAN	3.8	3.6	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.8
200 x 63	hySPAN	4.0	3.7	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.9
2/190 x 45	hyCHORD	4.0	3.7	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.9
200 x 90	hy90	4.0	3.7	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.9
240 x 45	hySPAN	4.2	4.0	3.8	3.6	3.5	3.3	3.3	3.2	3.1	3.0
2/200 x 45	hySPAN	4.4	4.1	3.9	3.7	3.6	3.5	3.4	3.3	3.2	3.1
240 x 63	hySPAN	4.6	4.3	4.1	3.9	3.7	3.6	3.5	3.4	3.4	3.3
240 x 90	hy90	4.6	4.3	4.0	3.9	3.7	3.6	3.5	3.4	3.4	3.3
2/240 x 45	hySPAN	5.0	4.7	4.5	4.2	4.1	4.0	3.8	3.7	3.7	3.6
300 x 45	hySPAN	5.0	4.8	4.5	4.2	4.1	4.0	3.8	3.7	3.7	3.6 ■
240 x 90	hyONE•	5.2	4.9	4.7	4.5	4.3	4.1	4.0	3.9	3.8	3.7
300 x 90	hy90	5.3	5.0	4.8	4.6	4.5	4.3	4.2	4.1	4.0	3.9
300 x 63	hySPAN	5.4	5.1	4.8	4.6	4.5	4.3	4.2	4.1	4.0	3.9
360 x 45	hySPAN	5.7	5.3	5.1	4.9	4.8	4.6	4.5	4.3	4.2 ■	4.0 ■
2/300 x 45	hySPAN	5.8	5.4	5.2	5.0	4.9	4.8	4.6	4.5	4.4	4.2

■ Indicates minimum bearing at end supports = 90 mm
• Minimum bearing at end supports 45 mm, except where indicated otherwise
• Double sections built-up by vertical lamination – see section 5.4

Design Deflection Limits:

D.L.	L.L.
SPAN/300	SPAN/250
OR 20 mm	OR 20 mm

TABLE 21A: RAFTERS – HIGH AND VERY HIGH WIND EXPOSURE

Section D x B (mm)	Product	Cross Section	Single Span								Continuous Span							
			450		600		900		1200		450		600		900		1200	
			Maximum Rafter Span and Overhang 'O/H' (m) for Light Roofs and Ceilings = 40 kg/m²															
			Span	O/H	Span	O/H	Span	O/H	Span	O/H	Span	O/H	Span	O/H	Span	O/H	Span	O/H
90 x 45	hyCHORD®		2.7	0.7	2.4	0.7	2.2	0.6	2.0	0.6	3.1	0.7	3.0	0.6	2.8	0.6	2.6	0.6
140 x 45	hyCHORD		4.0	1.1	3.7	1.0	3.3	1.0	3.0	1.0	-	-	-	-	4.4	0.9	4.1	0.9
150 x 45	hySPAN®		4.6	1.3	4.2	1.2	3.8	1.1	3.4	1.2	6.1	1.1	5.7	1.0	5.0	1.0	4.6	1.0
150 x 63	hySPAN		5.0	1.5	4.6	1.4	4.2	1.3	3.8	1.3	6.5	1.3	6.2	1.2	5.6	1.1	5.1	1.1
170 x 45	hySPAN		5.2	1.5	4.8	1.3	4.2	1.3	3.9	1.2	6.7	1.3	6.3	1.2	5.7	1.1	5.2	1.2
190 x 45	hyCHORD		5.4	1.5	5.0	1.4	4.4	1.4	4.1	1.3	-	-	-	-	-	-	-	-
HJ200 45	hyJOIST®		5.6	1.4	5.1	1.4	4.4	1.3	4.0	1.3	7.0	1.3	6.5	1.2	5.8	1.2	4.8	1.2
200 x 45	hySPAN		6.0	1.7	5.6	1.6	5.0	1.5	4.6	1.4	7.5	1.6	7.1	1.4	6.5	1.3	6.1	1.4
200 x 63	hySPAN		6.4	2.0	6.0	1.8	5.5	1.7	5.0	1.7	7.9	1.8	7.5	1.6	7.0	1.5	6.5	1.6
240 x 45	hySPAN		6.8	2.1	6.4	1.9	5.9	1.8	5.4	1.7	8.5	1.9	8.0	1.8	7.4	1.7	6.9	1.6
HJ240 63	hyJOIST		6.8	1.9	6.3	1.8	5.7	1.7	5.2	1.7	8.3	1.8	7.8	1.7	7.0	1.6	6.2	1.6
240 x 63	hySPAN		7.2	2.4	6.9	2.2	6.3	2.1	6.0	2.0	-	-	8.5	2.0	7.9	1.9	7.5	1.8
HJ240 90	hyJOIST		7.3	2.3	6.9	2.1	6.3	2.0	5.9	1.9	-	-	8.5	1.9	7.7	1.8	7.2	1.8
HJ300 63	hyJOIST		7.7	2.4	7.2	2.2	6.6	2.1	6.1	2.0	-	-	-	-	8.0	1.9	7.4	1.9
300 x 45	hySPAN		7.9	2.8	7.5	2.5	6.9	2.3	6.5	2.0	-	-	-	-	8.6	2.1	8.1	2.0
300 x 63	hySPAN		8.3	3.2	8.0	2.9	7.4	2.7	7.0	2.5	-	-	-	-	-	-	8.7	2.4
HJ300 90	hyJOIST		8.3	2.8	7.8	2.6	7.2	2.4	6.7	2.3	-	-	-	-	-	-	8.2	2.2

TABLE 21B: RAFTERS – HIGH AND VERY HIGH WIND EXPOSURE

Section D x B (mm)	Product	Cross Section	Single Span								Continuous Span							
			450		600		900		1200		450		600		900		1200	
			Maximum Rafter Span and Overhang 'O/H' (m) for Heavy Roofs and Ceilings = 90 kg/m²															
			Span	O/H	Span	O/H	Span	O/H	Span	O/H	Span	O/H	Span	O/H	Span	O/H	Span	O/H
90 x 45	hyCHORD®		2.1	0.8	1.9	0.8	1.7	0.7	1.5	0.7	2.8	0.7	2.5	0.7	2.2	0.6	2.0	0.6
140 x 45	hyCHORD		3.2	1.3	2.9	1.2	2.6	1.1	2.3	1.1	4.3	1.1	3.9	1.0	3.5	1.0	3.1	1.0
150 x 45	hySPAN®		3.6	1.4	3.3	1.3	2.9	1.3	2.7	1.2	4.9	1.3	4.5	1.2	3.9	1.1	3.6	1.1
150 x 63	hySPAN		4.0	1.6	3.7	1.5	3.3	1.4	3.0	1.4	5.4	1.4	4.9	1.3	4.4	1.3	4.0	1.2
170 x 45	hySPAN		4.1	1.6	3.8	1.5	3.3	1.4	3.0	1.4	5.5	1.4	5.0	1.3	4.4	1.3	4.1	1.2
190 x 45	hyCHORD		4.3	1.7	3.9	1.6	3.5	1.5	3.2	1.5	-	-	-	-	4.7	1.3	4.3	1.3
HJ200 45	hyJOIST®		4.3	1.6	3.8	1.5	3.3	1.4	3.0	1.4	5.6	1.4	5.0	1.4	4.2	1.3	3.2	1.4
200 x 45	hySPAN		4.8	1.9	4.4	1.8	3.9	1.7	3.5	1.6	6.3	1.7	5.9	1.6	5.2	1.5	4.8	1.5
200 x 63	hySPAN		5.3	2.2	4.9	2.0	4.3	1.9	3.9	1.8	6.8	1.9	6.4	1.8	5.8	1.7	5.3	1.6
HJ240 63	hyJOIST		5.5	2.1	4.9	2.0	4.3	1.9	3.8	1.8	6.8	1.9	6.3	1.8	5.5	1.7	4.2	1.7
240 x 45	hySPAN		5.7	2.3	5.2	2.1	4.6	2.0	4.2	1.9	7.2	2.1	6.8	1.9	6.2	1.8	5.7	1.7
HJ240 90	hyJOIST		6.1	2.4	5.6	2.3	4.9	2.2	4.4	2.0	7.5	2.2	7.0	2.1	6.3	2.0	5.5	2.0
240 x 63	hySPAN		6.2	2.6	5.8	2.4	5.1	2.3	4.7	2.2	7.7	2.4	7.3	2.2	6.7	2.0	6.2	2.1
HJ300 63	hyJOIST		6.4	2.6	5.9	2.4	5.1	2.3	4.6	2.1	7.8	2.4	7.2	2.2	6.4	2.1	5.6	2.0
300 x 45	hySPAN		6.8	2.9	6.4	2.7	5.8	2.5	5.3	2.3	8.4	2.7	7.9	2.4	7.3	2.3	6.8	2.2
HJ300 90	hyJOIST		7.0	3.0	6.5	2.8	5.9	2.6	5.3	2.3	8.5	2.8	7.9	2.6	7.1	2.4	6.4	2.3
300 x 63	hySPAN		7.2	3.3	6.8	3.1	6.3	2.8	5.8	2.6	-	-	8.5	2.8	7.8	2.6	7.3	2.5

The following notes relate to TABLE 21A and TABLE 21B.

- Maximum overhangs (O/H) have been determined for the support conditions and a minimum backspan of twice O/H
- Bottom edge to be restrained by ceiling or ceiling battens at maximum 600 c/c