

# CODE COMPLIANCE CERTIFICATE

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



Consent No(s): 230628

The Building			
<b>Street address of building:</b>	48 Anderson Park Drive, Waikanae	<b>Building name:</b>	N/A
<b>Current, Lawfully established, use:</b>	Detached dwelling	<b>Location of building within site/block number:</b>	Central to site
<b>Level/unit number:</b>	-	<b>Intended life of the building if 50 years or less:</b>	-
<b>Legal description of land where building is located:</b>	Lot 43 DP 592074	<b>Year first constructed:</b>	2023
The Owner			
<b>Name of owner:</b>	T Atkinson	<b>Street address /registered office:</b>	48 Anderson Park Drive, Waikanae
<b>Contact person:</b>	T Atkinson	<b>Phone numbers:</b>	
<b>Mailing address:</b>	8 Hurley Road, Paraparaumu Beach, Paraparaumu 5032	<b>Landline:</b>	-
<b>Email address:</b>	timothyatkinson@gmail.com	<b>Mobile:</b>	021 401 480
<b>Website:</b>	-	<b>Daytime:</b>	-
		<b>After hours:</b>	-
		<b>Facsimile number:</b>	-
First point of contact for communications with the Kapiti Coast District Council:			
As above			
Building Work			
<b>Building Consent No(s):</b>	230628	<b>Issued by:</b>	Kapiti Coast District Council

## Code Compliance

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

(a) the building work complies with the building consent.

A handwritten signature in blue ink, appearing to read 'Michelle Salmon', is written over a light blue circular stamp.

Michelle Salmon  
Building Inspections Team Leader  
On behalf of **Kapiti Coast District Council**

Date: 25/09/2024

Grant Baxter  
PO Box 74  
Paraparaumu 5254

27 October 2023

Dear Building Consent Applicant / Building Owner

**Approval of Building Consent – Detached Residential / Outbuilding: 230628**

**Location:** 110 Ngarara Road, Waikanae  
**Legal Description:** LOT 2 DP 544253  
**Description:** To construct a new two storey dwelling with four bedrooms and double garage

I am pleased to inform you that the above building consent application has been approved. The building consent documents have been issued and are enclosed.

The building consent attached to this letter is consent under the Building Act 2004 to undertake building work in accordance with the plans and specifications that accompanied your application. Under section 49 of that Act, Council is satisfied that the provisions of the building code would be met if the proposed building work were completed in accordance with those plans and specifications. This consent does not affect any duty or responsibility under any other Act or permit any breach of any other Act.

This building consent does not give or imply any rights to transgress beyond your legal boundaries. Any work that is required beyond your legal boundaries can only be undertaken with the permission of the affected owner/s.

**Before starting any work please read ALL the building consent documents carefully and in full so that you, as the owner, understand the conditions under which the consent has been issued.**

**Please note that this building consent includes restricted building work, the details of this are included in this letter.**

**Owner responsibilities**

The owner is responsible for ensuring:

- building work starts within 12 months of the approval of the building consent and that work progresses at a reasonable pace.

- written notice of every licensed building practitioner undertaking restricted building work is provided to Council before that work commences, and any changes are advised in writing
- the approved building consent documents are kept on site during construction and available for the District inspector at inspections
- all required inspections are completed and that a Code Compliance Certificate is obtained once the work has been completed. The list of supporting documentation required before issue of the Code Compliance Certificate and information on filling out the application form for code compliance certificate is attached. Failure to obtain a final inspection and a code compliance certificate may affect your insurance cover and could affect future re-sale of your property.
- a Corridor Access Request is made and a Works Access permit is obtained before undertaking work in the legal road/road reserve, including installing a vehicle access crossing from the public road into your property. The process to be followed and the forms can be found on the Council website under Council Services/Roads or Council Services/Frequently asked questions/Access & Transport.
- before any excavations are undertaken a "Before U Dig" inquiry is made to check for locations of any underground services.
- no work with noisy equipment is to be carried out before 7.30 a.m. or after 6 p.m. Monday to Saturday. During the week there may be workers on site from 6.30 a.m. quietly preparing for work. Work with noisy equipment is not permitted on Sundays and public holidays.
- all loose materials that are capable of being carried by the wind are either secured or removed from the site. All activities must be carried out in a manner that keeps to a minimum the dust nuisance to adjacent properties.
- no damage occurs to public property, for example footpaths, water meters or retaining structures. Should damage occur you will be required to pay for any repairs.
- obtaining an amendment to the building consent for any changes to the approved building consent, prior to that work being undertaken.
- meeting the requirements of any easements, consent notices, covenants, and like listings registered on the title.
- the development contributions invoiced, if any, must be paid before a code compliance certificate can be issued.
- all maintenance recommended by the manufacturers is carried out at the required intervals.

#### General requirements

**Note:** Your attention is drawn to the notes contained in the 'Addendum to the Consent' and guidance documents referred to.

The following information is relevant to this building consent:

1. The Building Inspector is to be given 24 hours' notice before carrying out the inspections on the attached list. To arrange for inspections by the District Inspector, please contact the building inspectorate on 04 296 4700 between the hours of 8.00am and 4.30pm.
2. You are responsible for the safety of visitors to the work site including those undertaking building inspections. You must provide safe access to parts of the construction necessary for inspection. Ladder access must be securely founded and tied. Scaffold access and roof edge protection is generally required.
3. If required inspections, including those by designers of specifically designed elements, are not undertaken you may experience difficulty in obtaining a Code Compliance Certificate for the project. We suggest that at the time of the first inspection you discuss the inspection requirements with the inspecting officer.
4. This building consent will lapse and be of no effect if the building work concerned has not been commenced within 12 calendar months after the date of issue, or within such further period as the territorial authority allows.
5. The contractor is to leave the site clear of all demolition materials and in a tidy state.
6. Easements, consent notices, covenants, and like listings registered on the title are the responsibility of the applicant.
7. Note and comply with endorsements on approved plans.

#### Restricted Building Work

The following building work associated with this building consent is restricted building work [Section 7 and 402(1)(n) of the Building Act 2004 and Building (Definition of Restricted Building Work) Order 2011]:

Description of restricted building work including design work that is restricted building work
<b><i>Primary structure</i></b>
Foundations and subfloor framing
Walls
Roof
Columns and beams
Bracing
Other
<b><i>External moisture management systems</i></b>
Damp proofing
Roof cladding or roof cladding system
Ventilation system (for example subfloor or cavity)
Wall cladding or wall cladding system
Waterproofing
Other

Please note that the design work and restricted building work must be supervised or carried out by a licensed building practitioner who is licensed to carry out or supervise that kind of building work.

You or your agent will need to provide their details to the Council in writing prior to commencement of the building work. If after the restricted building work commences the named licensed building practitioner(s) ceases to be engaged to carry out or supervise the restricted building work under the building consent, this must also be advised in writing as must also the details of any other licensed building practitioner(s) subsequently engaged to carry out or supervise the restricted building work (Section 87 of the Building Act 2004). A form "Advice of licensed building practitioner(s)" is enclosed for you to use to advise the Council of licensed building practitioner details.

Please also note that it is an offence to engage another person to carry out or supervise restricted building work who is not a licensed building practitioner (Section 86 of the Building Act 2004).

#### **Other reference material**

- Guide for completing an application for code compliance,  
<https://www.kapiticoast.govt.nz/your-council/planning/building/code-compliance-certificate/>
- A guide to the inspection process  
<https://www.kapiticoast.govt.nz/your-council/planning/building/building-services-inspections/>

If you have any questions regarding your building consent or your responsibilities, please contact Kapiti Coast District Council on 04 296 4700 or toll free on 0800 486 486.

**Building Consent**  
 [Form 5, Building (Forms) Regulations 2004]  
**230628**  
**Section 51, Building Act 2004**

**The building**

*Street address of building:* 110 Ngarara Road, Waikanae  
*Legal description of land where building is located:* LOT 2 DP 544253  
*Valuation number:* 1494126602  
*Building name:* N/A  
*Location of building within site/ block number:* -  
*Level/unit number:*

**The owner**

*Name of owner:* T Atkinson  
*Contact person:* As above  
*Mailing address:* 8 Hurley Road, Paraparaumu Beach, Paraparaumu 5032  
*Street address/registered office:* As above  
*Phone numbers:*  
*Landline:* - *Mobile:* 021401480  
*After hours:* - *Fax number:* -  
*Email address:* timothyatkinson@gmail.com  
*Website:* -  
*First point of contact for communications with the council/building consent authority:*  
 Full Name: Grant Baxter  
 Mailing Address: PO Box 74, Paraparaumu 5254  
 Phones: 04 9021210  
 Email: grant@onboard.co.nz

**Building work**

The following building work is authorised by this building consent:  
 To construct a new two storey dwelling with four bedrooms and double garage  
  
 Detached dwelling

This building consent is issued under section 51 of the Building Act 2004. This building consent does not relieve the owner of the building (or proposed building) of any duty or responsibility under any other Act relating to or affecting the building (or proposed building). This building consent also does not permit the construction, alteration, demolition, or removal of the building (or proposed building) if that construction, alteration, demolition, or removal would be in breach of any other Act.

### Conditions of building consent

This building consent is subject to the following conditions:

1. Refer to the list of inspections required. Under section 90 of the Building Act 2004 agents authorised by the Council (acting as a Building Consent Authority) are entitled, at all times during normal working hours or while building work is being done, to inspect—
  - a. land on which building work is being or is proposed to be carried out; and
  - b. building work that has been or is being carried out on or off that building site; and
  - c. any building.

### Compliance schedule

A compliance schedule is not required for the building.

### Attachments

Copies of the following documents are attached to this building consent:

- List of required inspections and supporting documentation required
- Building Consent Addendum
- Plans and specifications
- Advice of licensed building practitioners

**Note:** The cover letter and all attachments to this building consent should be read fully to ensure you understand all conditions of this consent.

Signature 

  
Position

On behalf of: KAPITI COAST DISTRICT COUNCIL

Date: 27/10/23

## Relevant Information

Issued in accordance with Building Consent No. 230628

1. Development contributions must be paid within 6 months from the date of the Council invoice or prior to the issue of a Code Compliance Certificate (whichever is the earlier).
2. All work is to be undertaken in accordance with resource consents issued for this property. Resource Consents relevant to this property are listed.
3. Council's manifold/meter box, base, and lid, are to be protected/re-instated to original specification. The cost to reinstate any damage to Council's assets will be paid for by the owner/contractor.
4. Both hot and cold water pipes are to be tested to 1500kPa pressure.
5. Any external cladding system must be completed before a pre-lining inspection for the affected wall can take place.
6. Plan notes take precedence over general specifications.
7. RM200227

## Building Consent Addendum to 230628

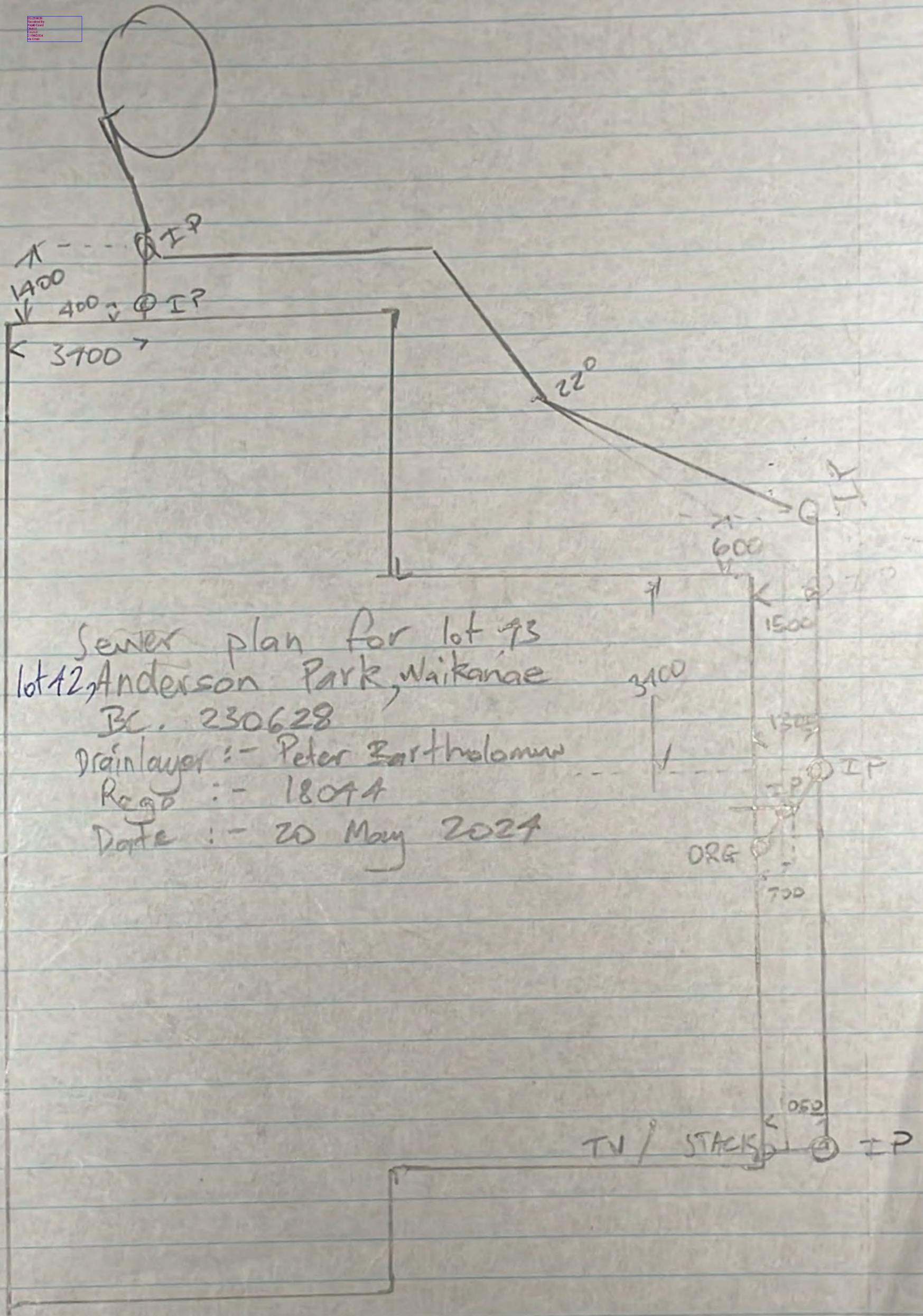
Application	Building Consent No. 230628
Grant Baxter	
PO Box 74	
Paraparaumu 5254	

Project	
Description:	New (& prebuilt) House, Unit, Bach, Crib, Town House etc. Being Stage 1 of an intended 1 Stages To construct a new two storey dwelling with four bedrooms and double garage
Intended Life:	Indefinite, but not less than 50 years
Intended Use:	Detached dwelling
Estimated Value:	\$900,000
Location:	110 Ngarara Road, Waikanae
Legal Description:	LOT 2 DP 544253
Valuation No:	1494126602

### Specific requirements

- Names and registration numbers of the plumber and drainlayer are required before work commences.
- The inspection of all specific design components covered by a producer statement design (PS1), where the designer has recommended construction monitoring, is the responsibility of the Design Engineer who is also required to supply a written report (PS4) to the Council. It is the Design engineer's responsibility to confirm design assumptions.
- Confirmation of the minimum floor levels must be determined on site by a registered land surveyor and certified accordingly.
- A certifying plumber/drainlayer is to complete the attached producer statement forms and return to Council. Also provide a neat `as built` drainage plan showing sewer, stormwater and water.

# Sewer pump Station



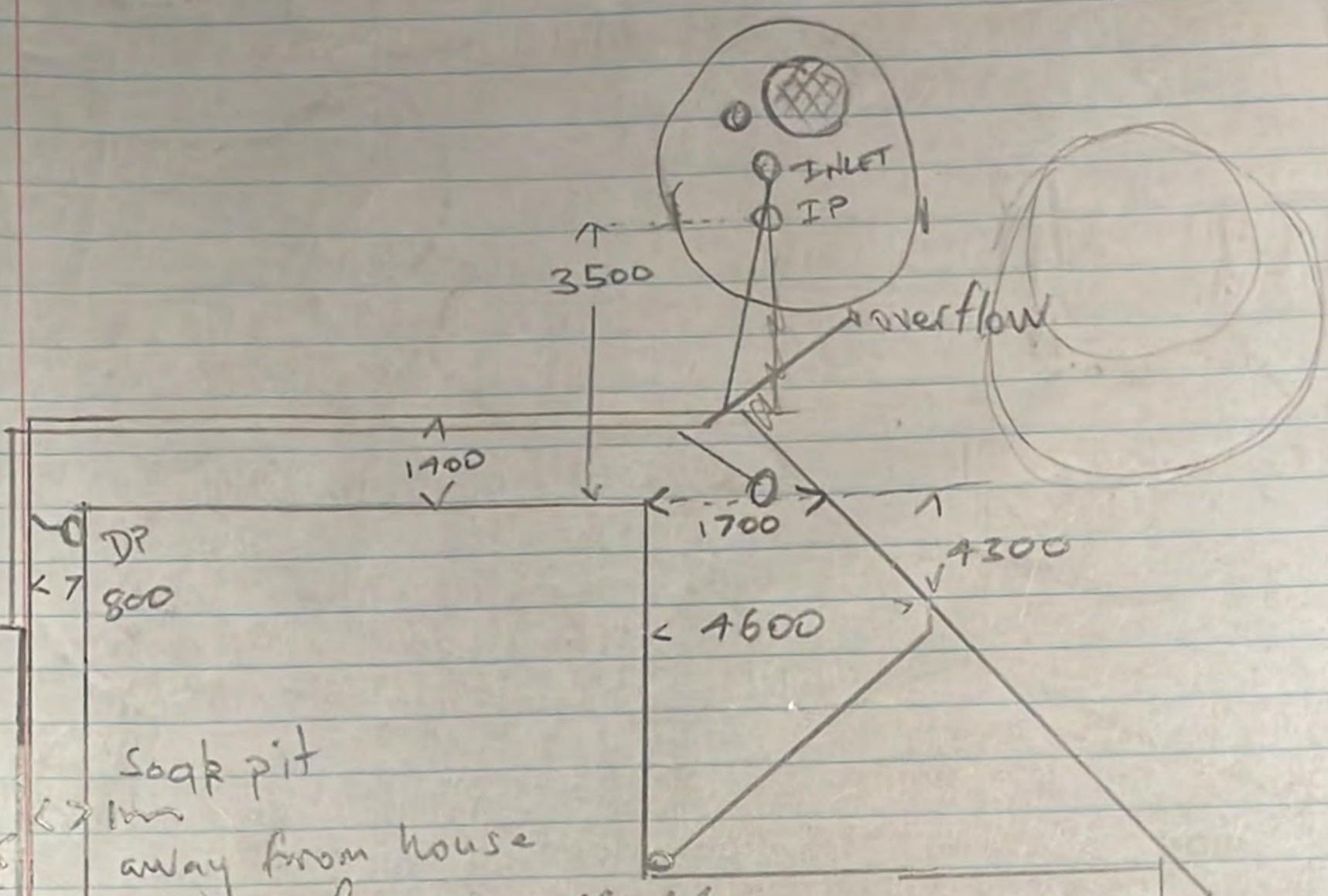
Sewer plan for lot 93  
lot 12, Anderson Park, Waikanae

BC. 230628

Drainlayer :- Peter Bartholomew

Regd :- 18044

Date :- 20 May 2024



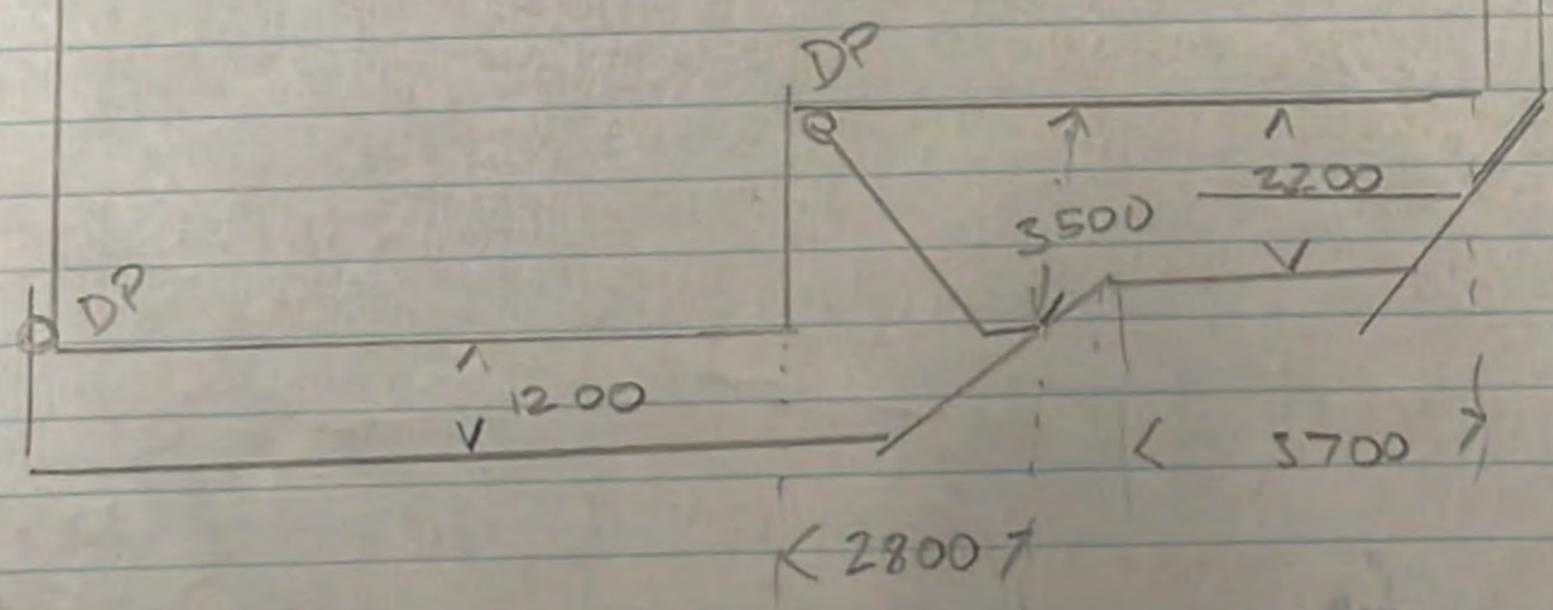
Rego :- 18044  
 Drain layer :- Peter Bartholomew DP  
 Storm water drains

BC230628  
 Received by  
 Kapiti Coast District Council  
 21/06/2024  
 via Email

for  
 B.C. 230628  
 Date :- 20 May 2024  
 lot 42, Anderson Park

DP  
 800  
 DP

DP





1 Other (specify)

PS3 for the MaxStone Cladding System

**Building Practitioners**

1 Designer 1

Grant Baxter

1 Designer 2

Fabio Parodi

1 Carpentry 1

1 Foundations 1

1 Roofing 1

1 Plumber

1 Drainlayer

1 Electrician

APPROVED  
BY  
BUILDING  
Marcus  
Lundon  
20/10/2023

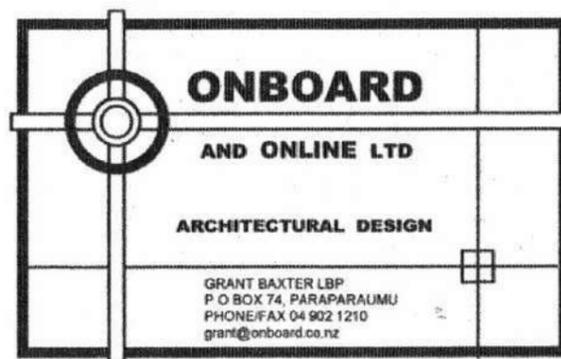
CAUTION  
Plans have  
been  
digitally  
reproduced  
and may  
not  
be to  
scale.

BC230628  
Received  
by  
Kapiti  
Coast  
District  
Council  
13/09/2023

# PROPOSED NEW HOUSE

## AT LOT 43 ANDERSON PARK

### WAIKANAE, KAPITI COAST

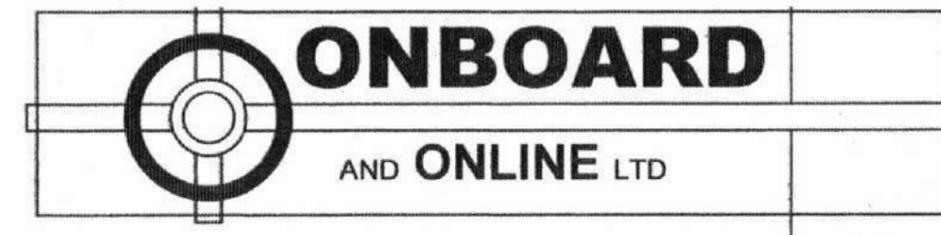


JOB # 2023-04-3230

REVISED 23/8/2023  
REVISED 27/6/2023  
26 APRIL 2023

# GENERAL NOTES RELEVANT TO THIS PROJECT

PROPOSED NEW HOUSE AT LOT 43 ANDERSON PARK, WAIKANAĒ, KAPITI COAST



CAUTION – plans have been digitally reproduced and may not be to scale

STANDARDS – all references to Standards and Codes etc shall be taken as reference to latest version including amendments

BUILDING CODE – all work must be carried out to conform to relevant sections of NZ Building Code and NZ Standards, particularly NZS 3604:2011 for light timber frame construction

SETTING OUT – all setting out/building configuration and building heights must be checked and confirmed on site

BOUNDARY LINES – the owner/builder is responsible for clearly defining the site boundary lines and pegs (not necessarily fence lines) – this may require a survey

ENGINEER'S DESIGN – this project contains elements specifically designed by an Engineer. Owner/builder must ensure Engineer inspects work and provides written evidence

SUPERVISION – all work carried out under jurisdiction of producer statement to meet the Engineer requirements fully - Engineer to sign off work supervision after construction

FLOOR LEVELS – confirmation of Q50 or Q100 minimum floor levels wherever applicable to be determined and certified by a Registered Land Surveyor

TILED FLOORS – NZS 3604:2011 recommends a control joint around the perimeter of any areas of solid tiles on floor to avoid cracking

SHRINKAGE CONTROL – joints to be formed in floor slabs as per NZS 3604:2011 Section 7.5.8.6

EXPOSED FIXINGS – all proprietary or bolted fixings to be stainless steel including cladding fixings and fixing less than 600 mm above ground exposed to air

VENTILATION – all habitable/service rooms to have 5% of the area as opening windows, or approved alternative, to achieve ventilation requirements

WINDOWS – restrictor stays limiting sash opening to 100 mm to be fitted wherever sill height is less than 760 mm and the difference in levels is 1 metre or greater to NZBC F4

OPENING WINDOWS – opening windows projecting over access routes and decks to be protected in accordance with NZBC D1 Paragraph 1.5.4

GARAGES – garages not approved for habitable use shall be insulated from the rest of the building to NZS4218 1996

BOTTOM PLATE FIXING – 12 mm Ø cast in at 1200 crs max

TOP PLATE FIXING – Where walls are supporting trusses the top plate must be fixed to the supporting members as per NZS 3604:2011 Table 8.18

TIMBER GRADING – all timber shall be treated for use as per NZS3602 2003 and shall be Grade SG8 unless otherwise specified

GLAZING – to conform to NZS4223.3:2016 Part 3 – fit suitable flashings to all joinery – high wind = 1100 pa DWP; very high wind = 1550 pa DWP

SAFETY GLASS – to be provided to glazed doors, side panels, full height and low sill windows as per NZS4223.3:2016 Part 3

BALUSTRADES – internal balustrades to be capable of withstanding the following horizontal imposed loads: UDL- 0.36 kN/metres, UDL to infill - 0.5 kN/m<sup>2</sup>, point load to infill - 0.25 kN

FIXING – top fixing of balustrade, especially over habitable area, is not permitted – recommend side fixing with maintenance regime to ensure continued protection from damp ingress

STAIRWAYS – stairs and handrails to conform to the requirements of NZBC B1, D1, F4 – main private stairways to have 280 mm min tread and 190 mm max riser

CLADDING – to be installed to manufacturer's requirements in particular fixing and ground clearance

FLASHINGS – fit head, jamb and sill flashings to all joinery – fit flexible flashing tape to corners, jamb and sill – fit air seals to inner edge of joinery reveals

JUNCTIONS – all junctions to claddings and other external moisture areas to have capillary gaps/breaks and inseals where relevant, stopping wind driven or surface tension water

DOOR SUPPORTS – window sill support brackets are required to all window or door units extending to floor level wherever external walls incorporate drained cavity systems

INSULATION – thermal insulation must be provided to floors, walls and roofs sufficient to satisfy NZBC Clause H1

WALL WRAP – heavy duty type wind barrier to be installed behind bevel backed weatherboards if very high wind zone

GABLE ENDS – where walls are not lined eg attic spaces at gable ends, a rigid sheathing (ply) or an air barrier shall be fixed to framing prior to cavity battens or cladding

ROOFING – roofing material to be installed to manufacturer's requirements – in particular for fixing and minimum pitch refer to NZBC E2 Section 8

WARRANTY – supply copy of relevant warranties for roofing, membrane systems, or fascia/gutter systems as appropriate to Council

EAVE FLASHINGS – required for all profiled metal roofing in very high wind zones and in any wind zone where roof pitch is less than 10°

ROOF COATINGS – steel profile coatings to be suitable for corrosion zone - check manufacturer's warranty requirements

SOFFIT FLASHINGS – upwards sloping soffits require continuous flashings to direct water over outside of the wall cladding

ROOF VENTILATION – cross flow of ventilation to be provided to roofs above the thermal insulation layer sufficient to prevent interstitial condensation

ELECTRICAL – provide electrical certification after completion and prior to Code Compliance Certificate being issued

DOWNLIGHTS – where recessed downlights are used they shall be installed to prevent transfer of moisture into ceiling spaces and maintain clearance from insulation to AS/NZS 3000

SMOKE ALARMS – to be installed for the detection and warning of fire to NZBC F7

HOT WATER - hot water temperature at any new or relocated sanitary fixture used for personal hygiene shall not exceed 55°C and hot water pipes to be insulated to NZS 4305:1996

TILED SHOWERS – must be fully waterproofed by registered applicator using approved system to manufacturer's recommendations with installation warranty supplied to Council

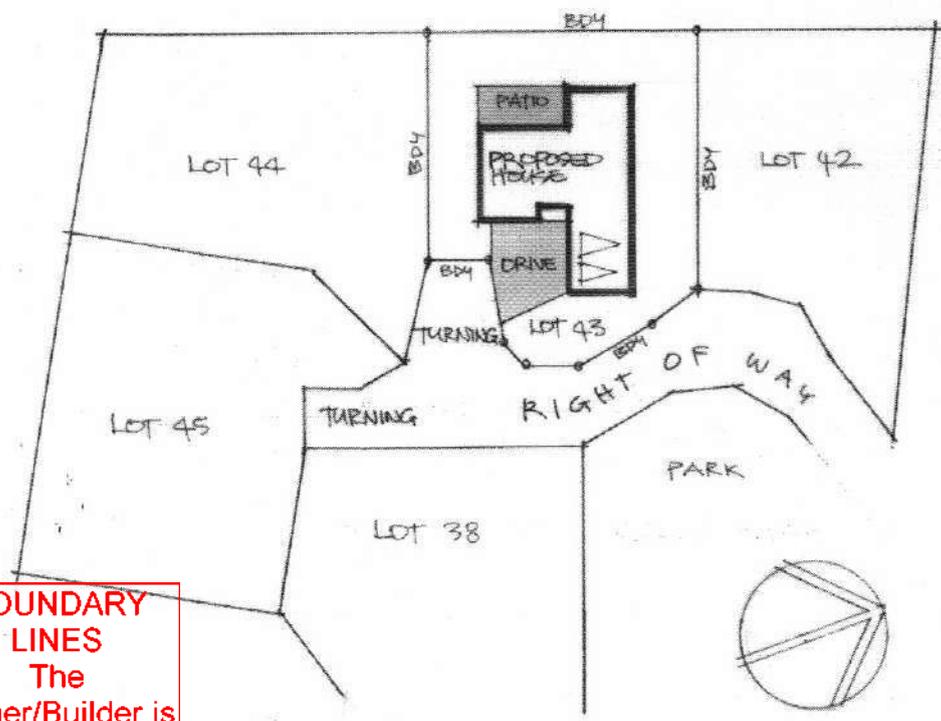
BC230628  
Received  
by  
Kapiti  
Coast  
District  
Council  
13/09/2023

APPROVED BY  
PLANNING  
kirsties  
22/09/2023

All works to be  
in accordance  
with BC230628  
& RM200227

BC230628  
Further Information Received  
12/10/23

### RESERVE LAND



**LOCATION PLAN**  
SCALE 1:500

**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

NON-POTABLE WATER TO BE RUN IN LILAC COLOURED PIPE & NOTED @ EACH OUTLET CONNECT TO WC & OUTDOOR TRAPS. INSTALL DOWNPIPE RAINHEAD SCREEN MESH & FIRST FLUSH DIVERTER

SITE SAFETY FENCING & HAZARD BOARD TO COMPLY WITH FS/AP1

RESIDENTIAL ZONE  
HIGH WIND ZONE  
SALTWIND  
EXPOSURE ZONE C

LOWER AREA: 213m<sup>2</sup>  
UPPER AREA: 57m<sup>2</sup>  
TOTAL AREA: 270m<sup>2</sup>  
SITE COVERAGE: 36.7%

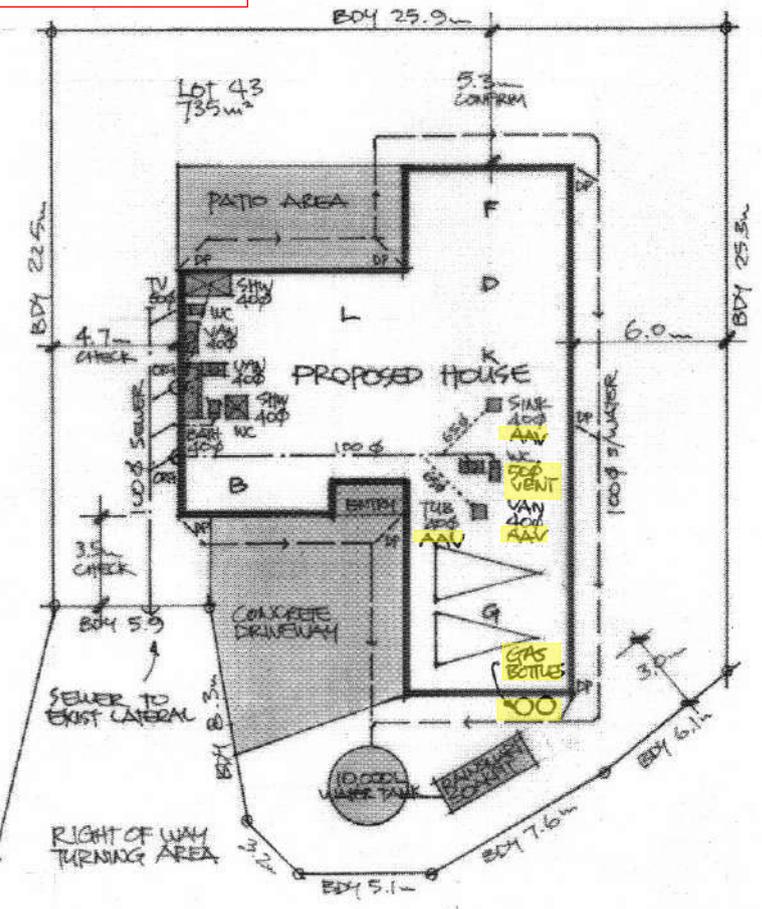
ALL PLUMBING & DRAINS TO COMPLY TO AS/NZS:3500 CONFIRM LATRANS

ALL PIPES TO FALL  
100 Ø LAID @ 1:60  
65 Ø LAID @ 1:40  
40 Ø LAID @ 1:40

NEW RAINSMART CURTAIN SOAKPIT  
17m<sup>3</sup> SYSTEM -  
9.6x2.1m AREA

NEW 10000 LITRE PROMAX INGROUND WATER TANK TO PROMAX SPOCS

FLAT SITE-CHECK ALL LEVELS ON SITE OR EXCAVATION OF RETAINING WEDD

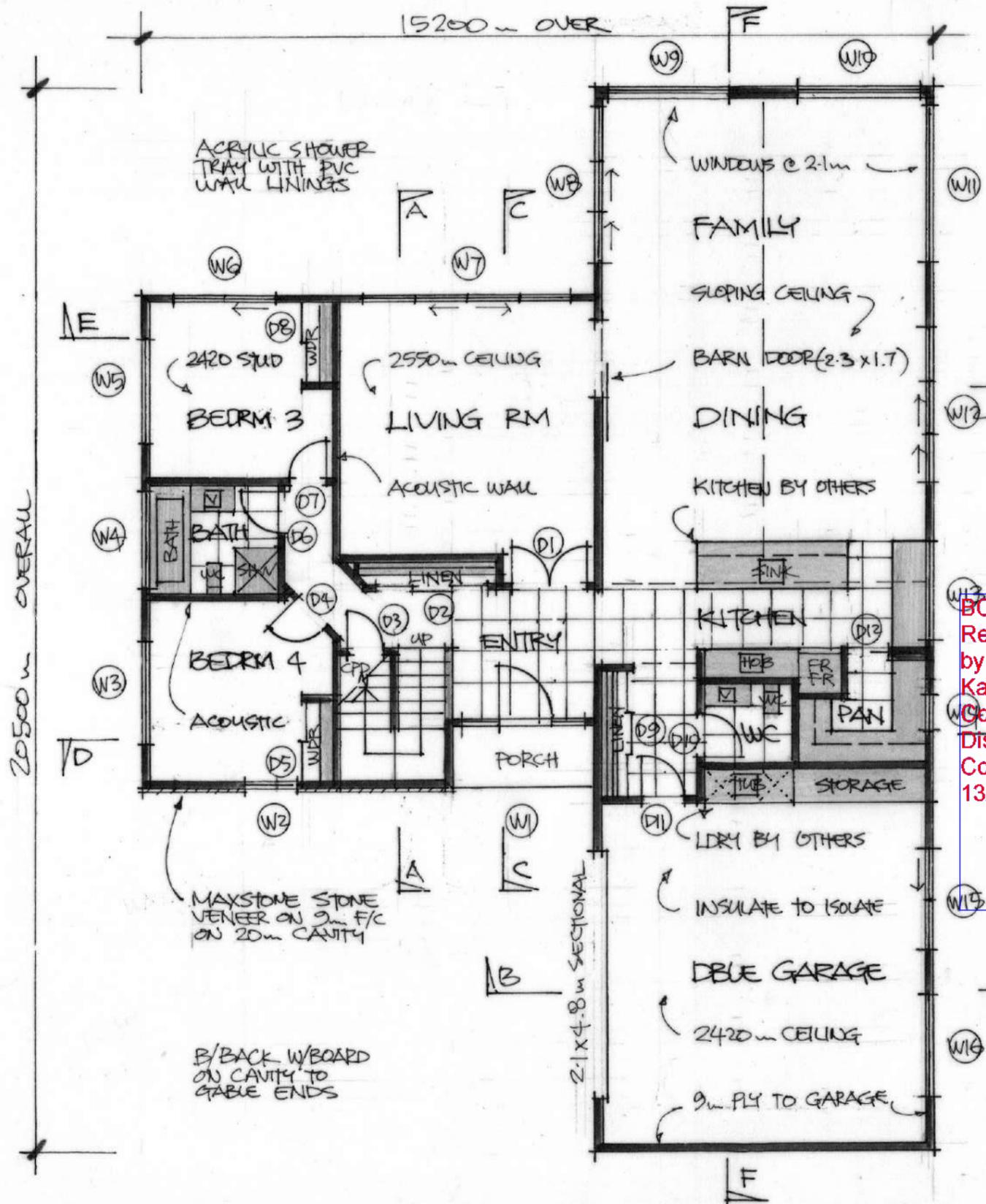


**SITE PLAN**  
SCALE 1:200

REVISED 9/10/2023  
REVISED 27/6/2023

**ONBOARD**  
AND ONLINE LTD  
ARCHITECTURAL DESIGN PHONE (04) 902 1210

**LOT 43 ANDERSON PARK, WAIKANAЕ 1**  
JOB # 2023-04-3230 PROPOSED NEW HOUSE AT LOT 43 ANDERSON PARK, WAIKANAЕ, KAPITI COAST 28/04/2023



**LOWER LEVEL FLOOR PLAN**

SCALE 1:100 LOWER AREA: 213 m<sup>2</sup>

190x45 FRAMING TO GABBLE END WALL OF FAMILY

13m GIB CEILINGS 10m GIB TO ALL WALL LININGS

AQUALINE GIB TO ALL WET AREA WALLS & CEILINGS

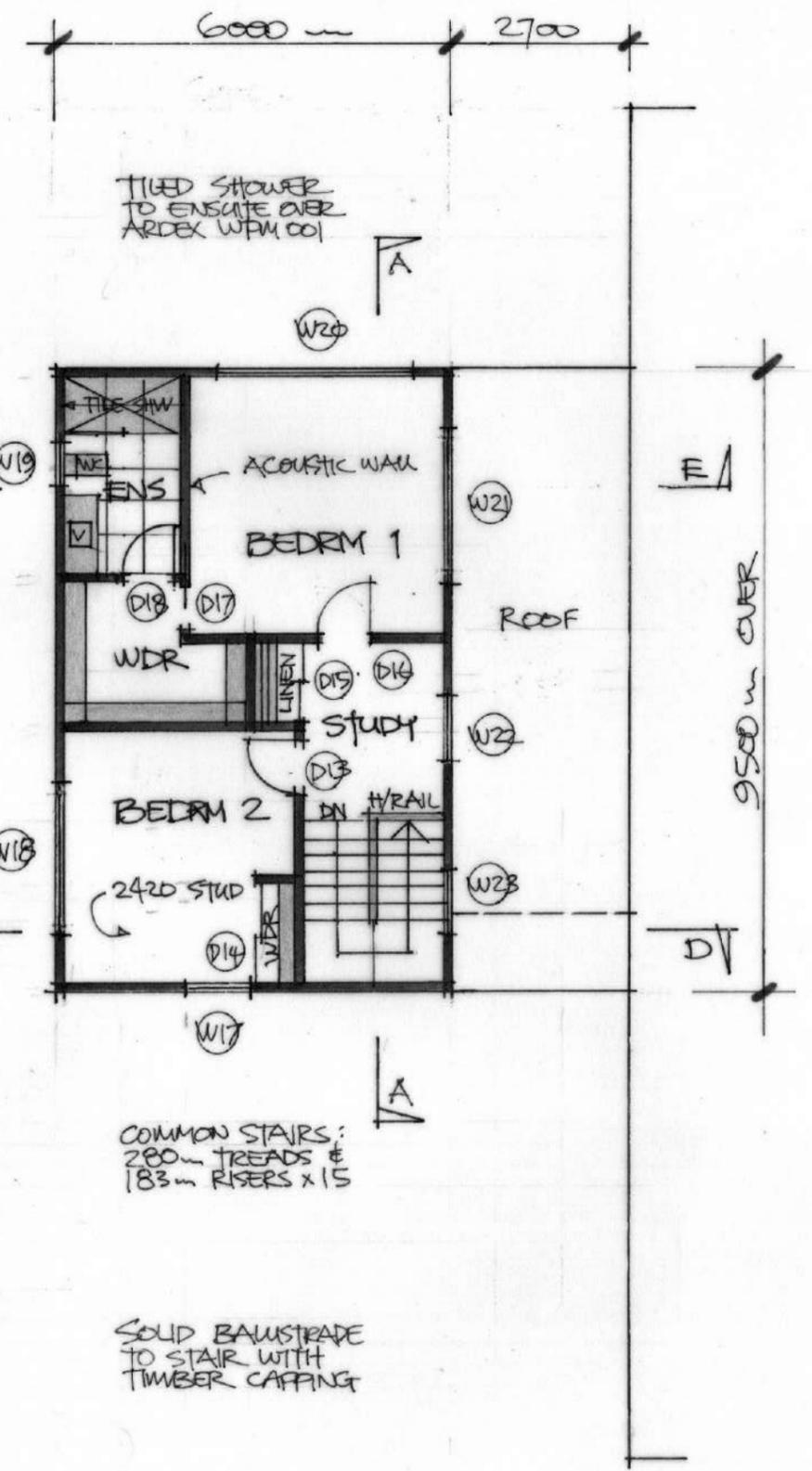
ACOUSTIC WALLS: 2/10m NOISELINE EACH SIDE OF WALL

TILED FLOORS TO ALL WET AREAS INCLUDING ENTRY

ATTIC STORAGE OVER GARAGE WITH PULL-DOWN LADDER

R.T.O ROOF BATS R.2.6 WALL BATS EXCLUDES GARAGE

BC230628 Received by Kapiti Coast District Council 13/09/2023



**UPPER LEVEL**

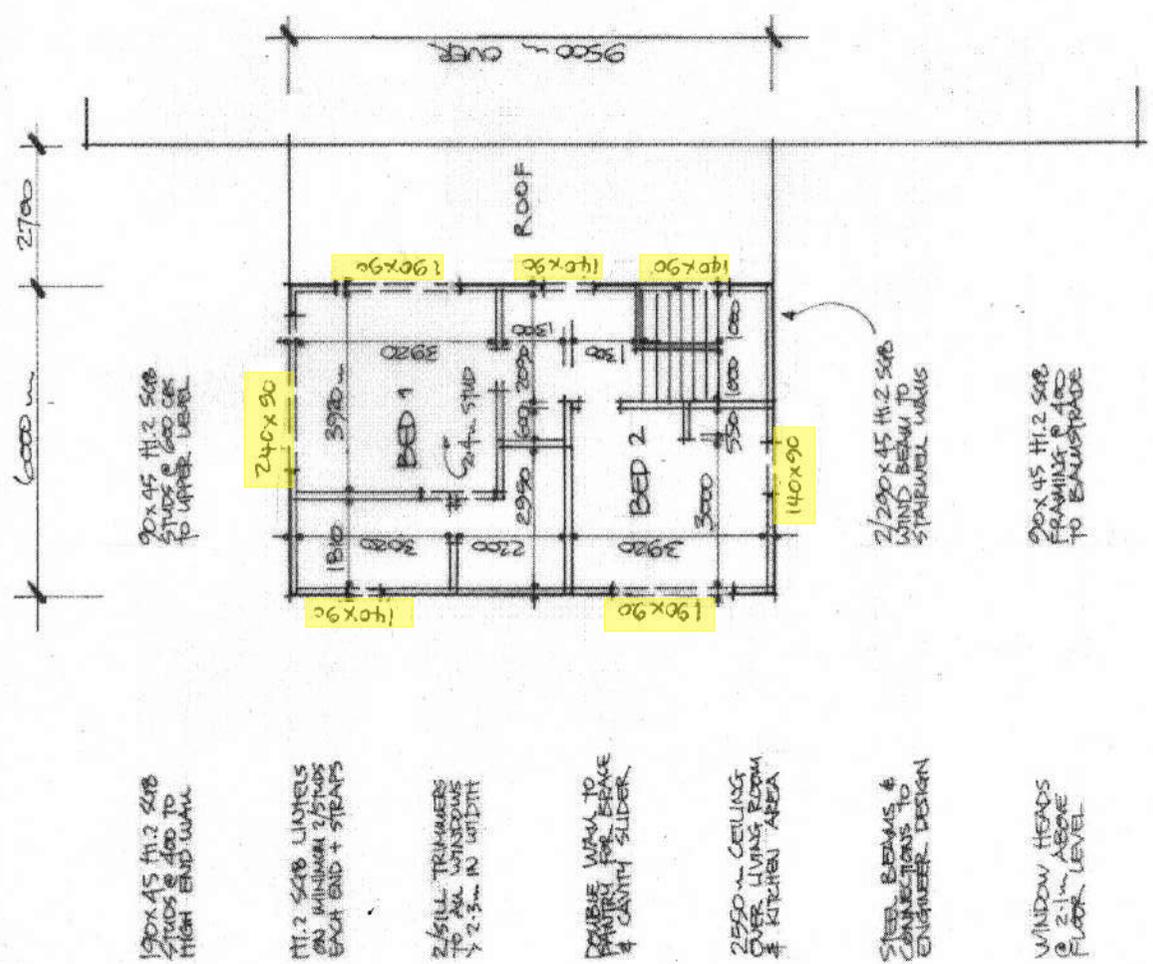
SCALE 1:100 AREA: 57m<sup>2</sup> REV 23/8/2023 REVISED 27/6/2023



ARCHITECTURAL DESIGN PHONE (04) 902 1210

**LOT 43 ANDERSON PARK, WAIKANAЕ 2**

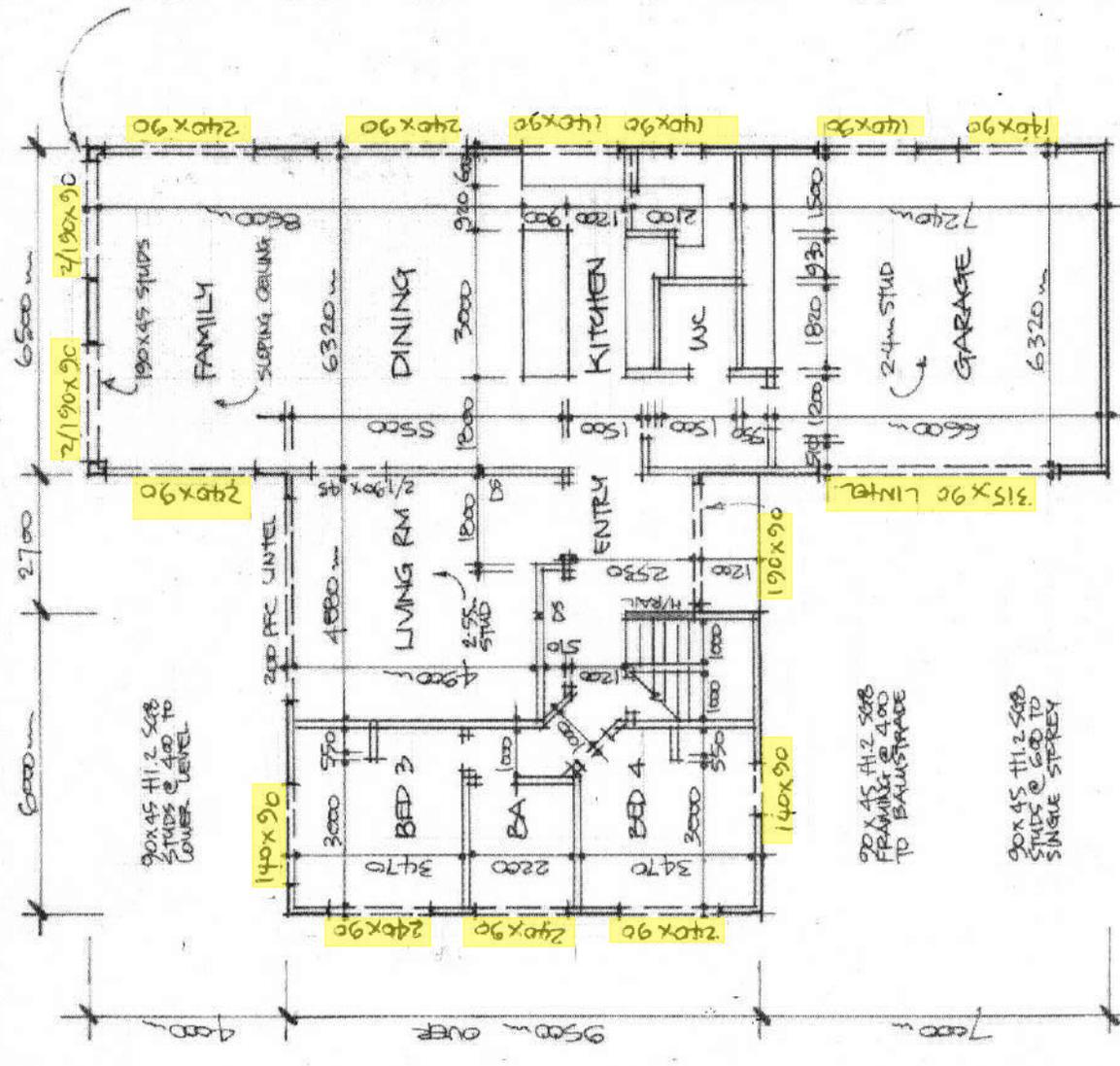
JOB # 2023-04-3230 PROPOSED NEW HOUSE AT LOT 43 ANDERSON PARK, WAIKANAЕ, KAPITI COAST 26/04/2023



**UPPER FRAMING**  
 SCALE 1:100  
 REVISED 16/10/2023  
 REVISED 27/6/2023

**LOT 43 ANDERSON PARK, WAIKANAÉ 3**

PROPOSED NEW HOUSE AT LOT 43 ANDERSON PARK, WAIKANAÉ, KAPITI COAST 26/04/2023



**LOWER LEVEL FRAMING**  
 SCALE 1:100

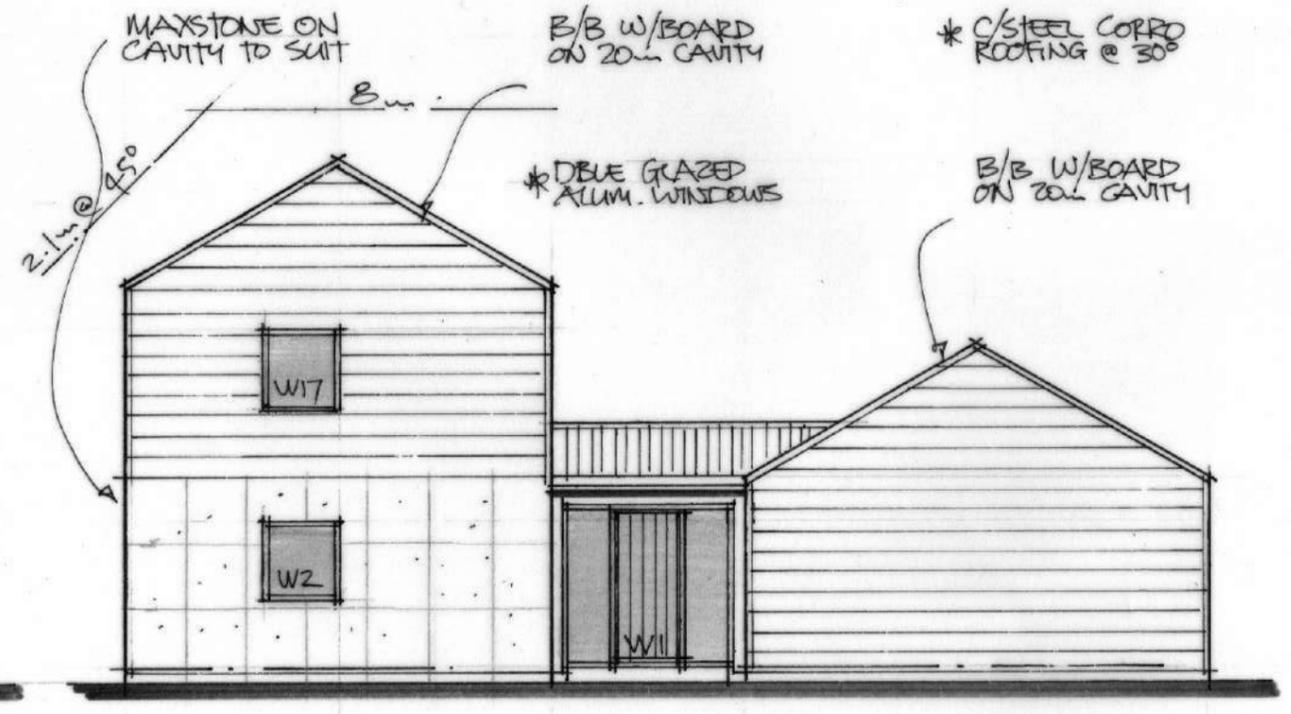
BC230628  
 Further Information Received 16/10/2023

**ONBOARD**  
 AND ONLINE LTD

ARCHITECTURAL DESIGN PHONE (04) 902 1210



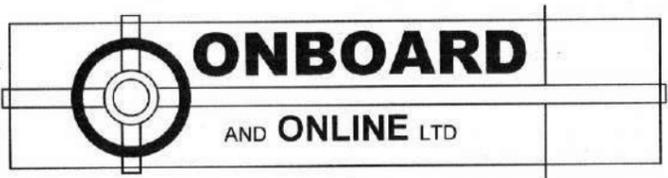
**SOUTH - WEST ELEVATION**  
SCALE 1:100



**SOUTH - EAST ELEVATION**  
SCALE 1:100

BC230628  
Received  
by  
Kapiti  
Coast  
District  
Council  
13/09/2023

REVISED 27/6/2023



ARCHITECTURAL DESIGN      PHONE (04) 902 1210

<b>LOT 43 ANDERSON PARK, WAIKANAЕ</b>		<b>4</b>
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JOB # 2023-04-3230      PROPOSED NEW HOUSE AT LOT 43 ANDERSON PARK, WAIKANAЕ, KAPITI COAST      26/04/2023



**NORTH - EAST ELEVATION**  
SCALE 1:100



**NORTH - WEST ELEVATION**  
SCALE 1:100

BC230628  
Received  
by  
Kapiti  
Coast  
District  
Council  
13/09/2023

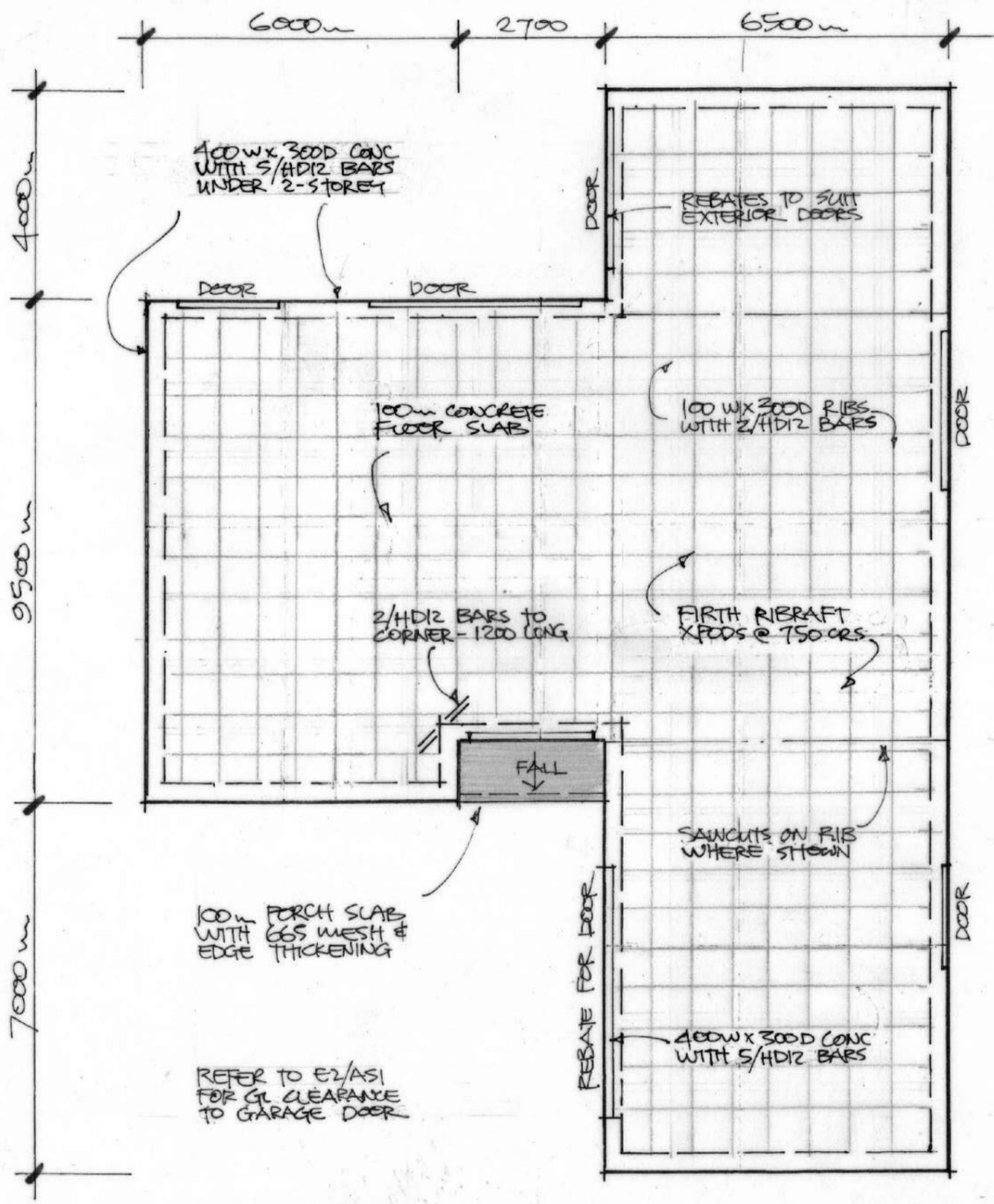
REVISED 27/6/2023



ARCHITECTURAL DESIGN      PHONE (04) 902 1210

**LOT 43 ANDERSON PARK, WAIKANAЕ 5**

JOB # 2023-04-3230      PROPOSED NEW HOUSE AT LOT 43 ANDERSON PARK, WAIKANAЕ, KAPITI COAST      26/04/2023



**FOUNDATION PLAN**  
SCALE 1:100

20m PLYWOOD FLOORING (H3.2 IN ALL WET AREAS)

310x 90 PLYDASPAN FLOOR JOISTS @ 400 BY PRENAUER

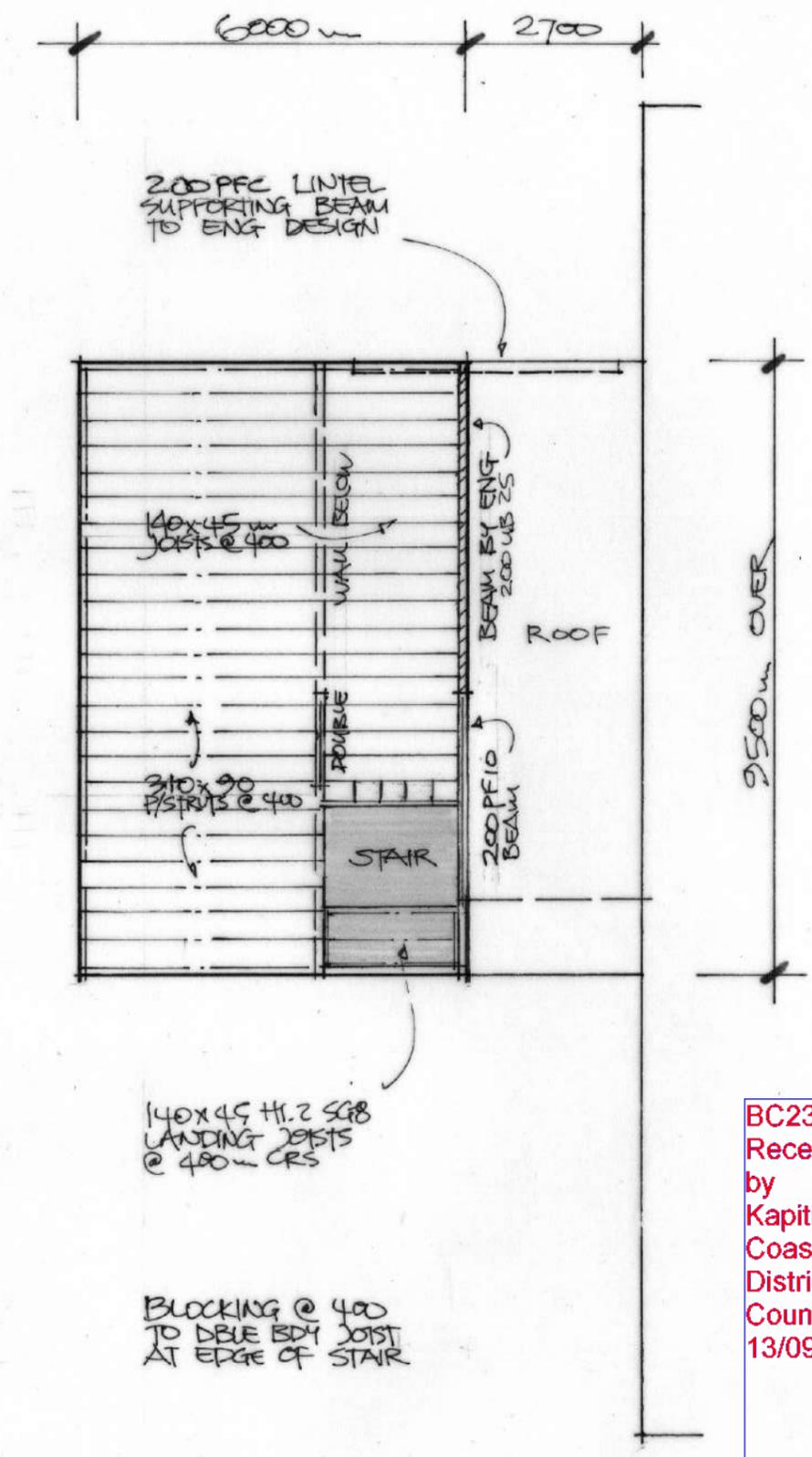
STEEL BEAMS & CONNECTIONS TO ENGINEER DESIGN

100m CONC SLAB SEG2 MESH ON DPM, SAND & COMPACT H/FILL

225 W X 300 D CONC PERIMETER WITH 4/HD12 BARS

FIRTH RIBRAFT XPOD SYSTEM TO FIRTH DETAILS

ENSURE FFL IS 225m ABOVE GL OR 150m ABOVE PAVING

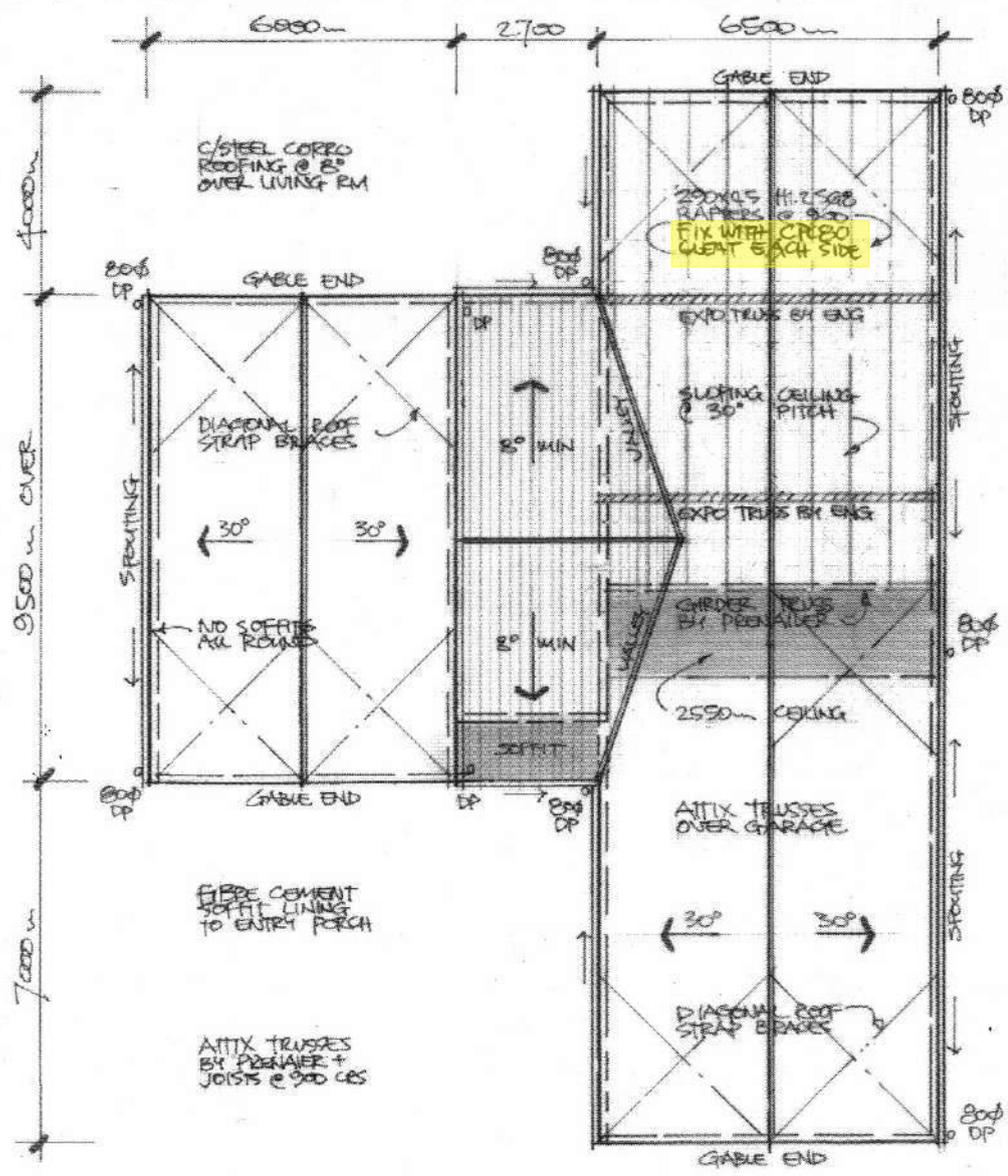


**UPPER FLOOR JOISTS**  
SCALE 1:100  
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REVISED 27/6/2023

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**LOT 43 ANDERSON PARK, WAIKANA E 6**



**OVERALL ROOF PLAN**  
SCALE 1:100

C/STEEL CORRO ROOFING Laid @ FLASHED @ 30°

COVERER 215 ROOF UNDERLAY WITH R7.0 BEATS

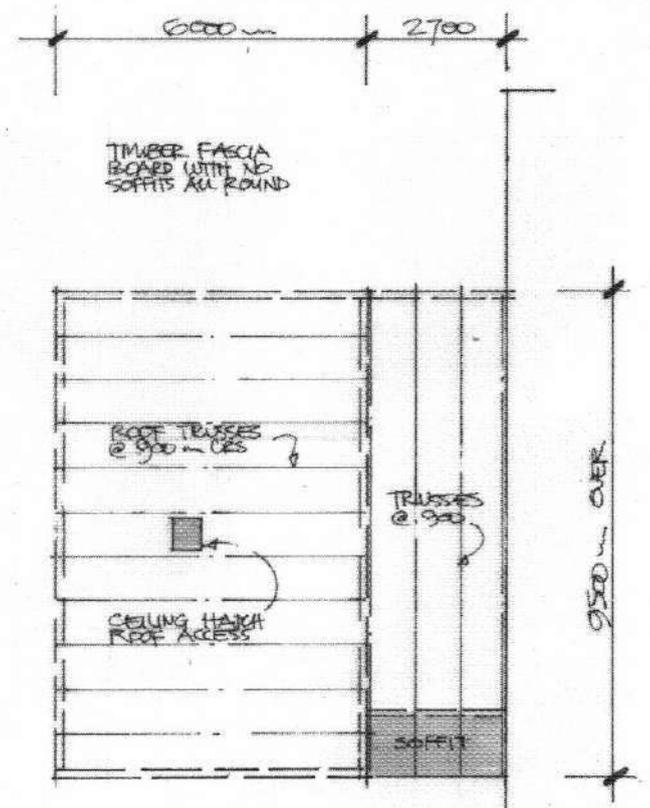
70x45 H.2 SCB PURLINS @ 900 C/S (60 C/S TOP & BOTTOM ROW)

PURLINS FIXED WITH 80 TYPE 17 PURLIN SCREWS

PREWAL ROOF TRUSSES @ 900 C/S BY PREWAL

TRUSSES FIXED WITH 75N STRAPS EACH END

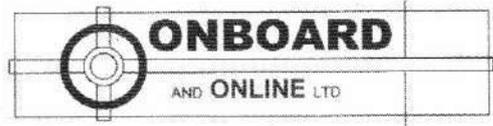
C/STEEL SPOULTING OR FACIA BOARD + C/STEEL FLASHINGS



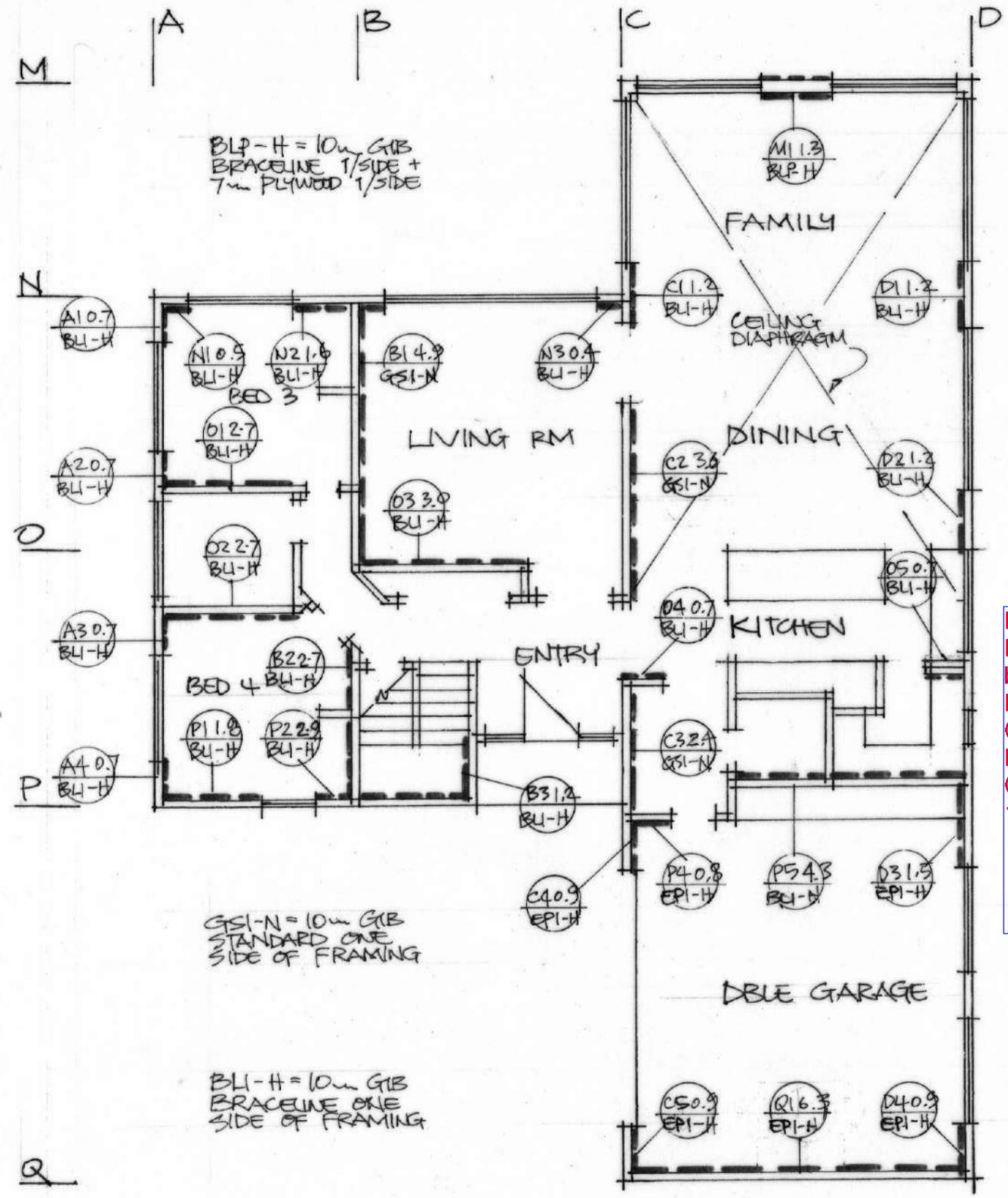
**ROOF FRAMING**  
SCALE 1:100

REVISED 9/10/2023  
REVISED 21/10/2023

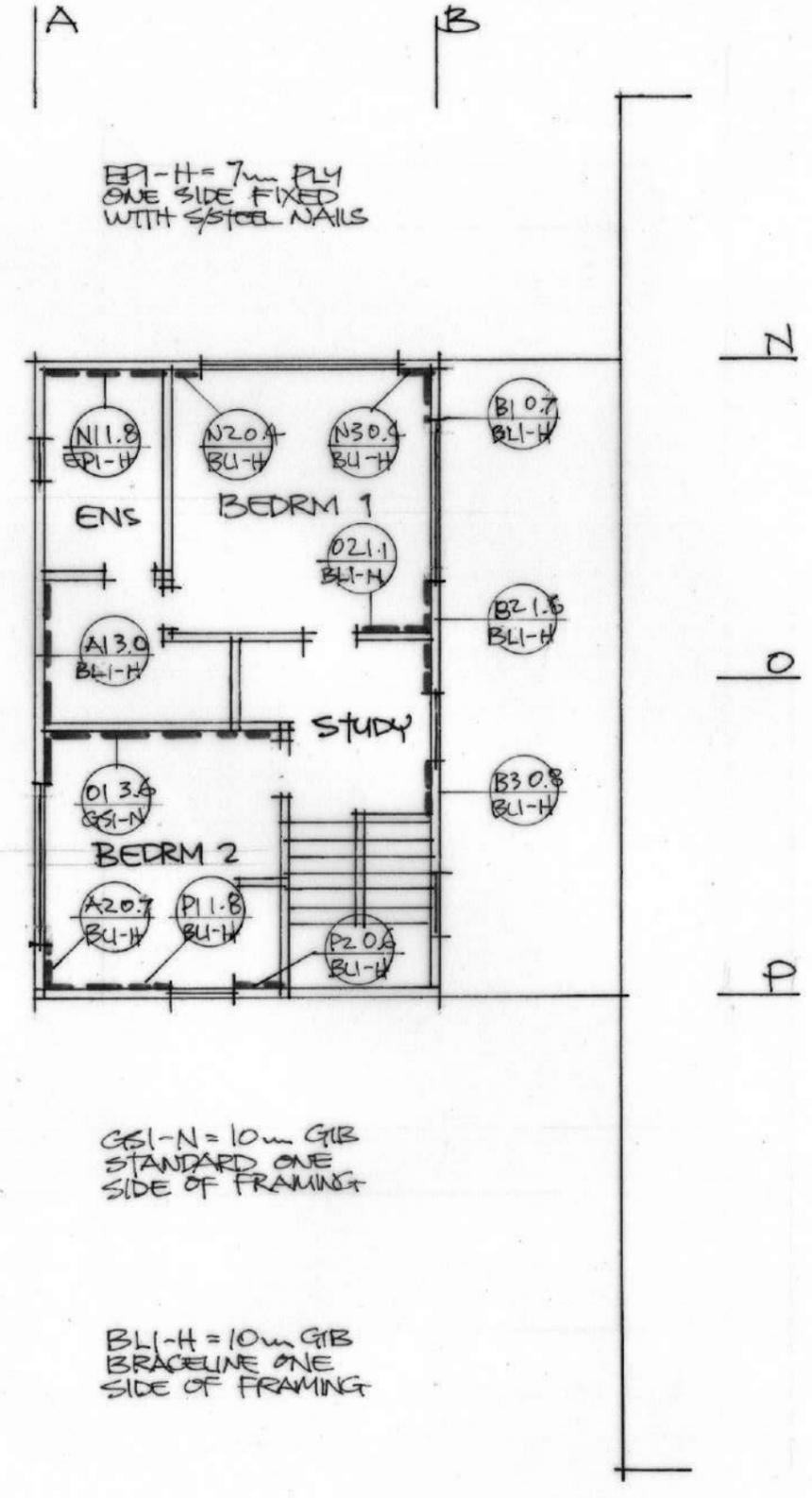
BC230628  
Further Information Received  
12/10/23



**LOT 43 ANDERSON PARK, WAIKANAЕ** **7**



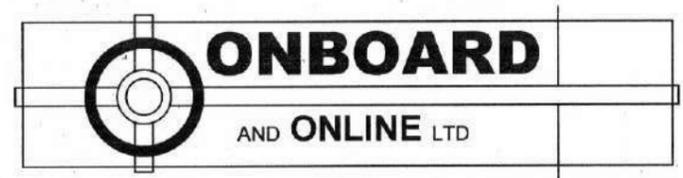
### LOWER LEVEL BRACING



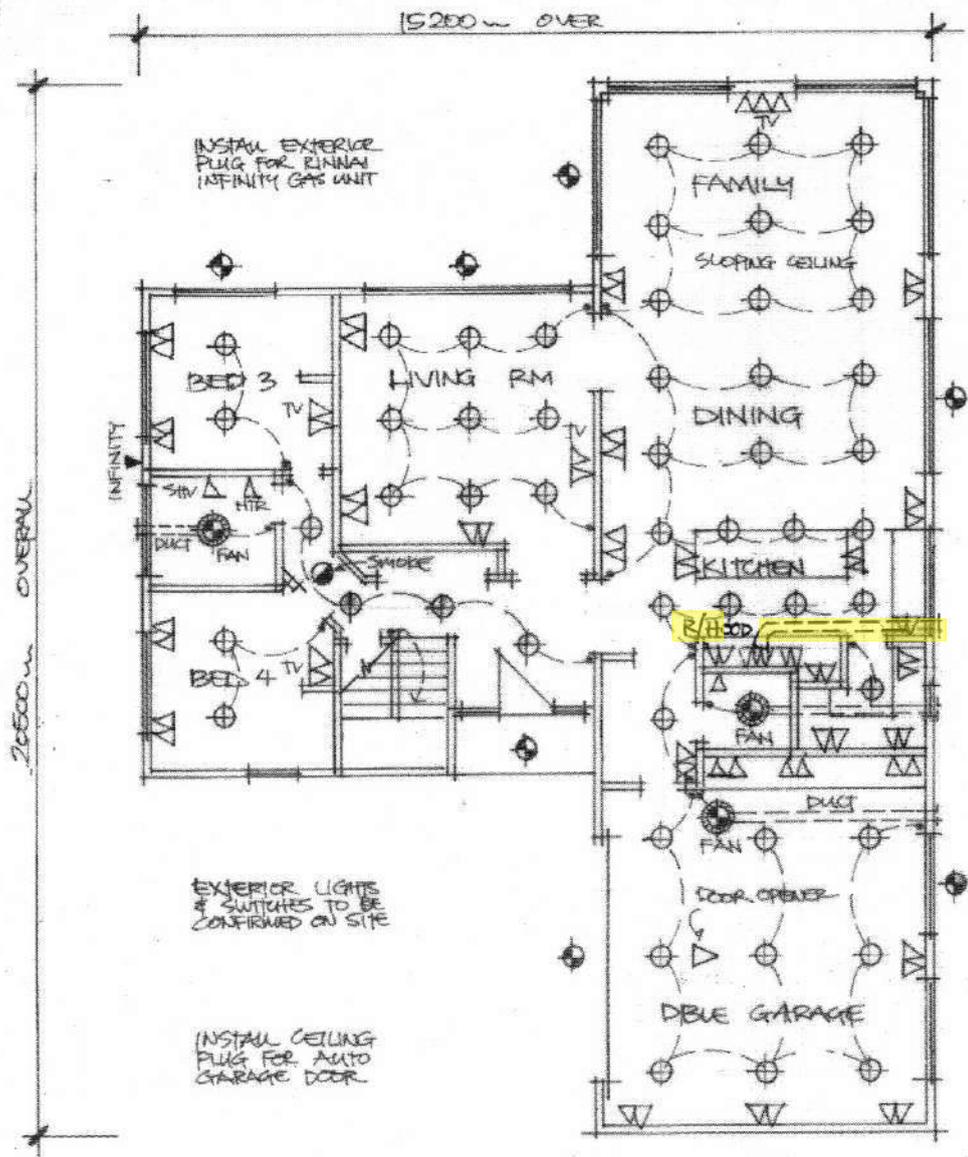
### UPPER BRACING

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**LOT 43 ANDERSON PARK, WAIKANAЕ 8**



**LOWER LEVEL ELECTRICAL**  
SCALE 1:100

INDICATIVE LAYOUT SHOWN ONLY - CHECK ON SITE WITH OWNER

CONNECT ALL WORK TO SWITCHBOARD & SMART METER

CONFIRM BATHROOM LAYOUTS FOR ALL HOT POINTS REQ'D

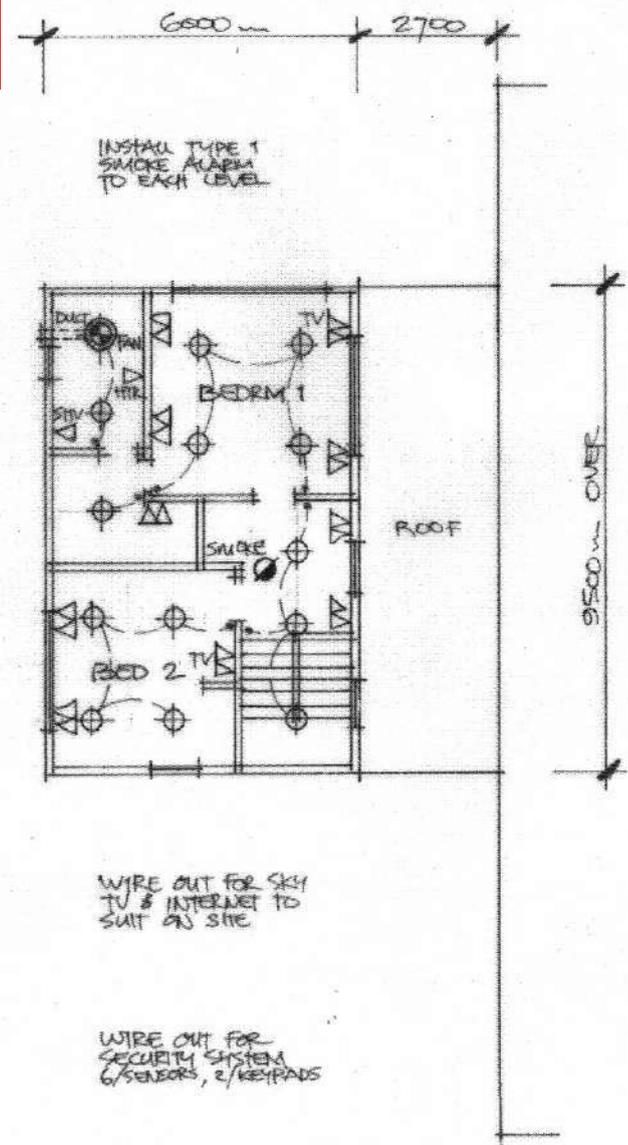
CONFIRM KITCHEN & PANTRY LAYOUTS FOR ALL HOTPOINTS

INSTALL EXTRACT FANS AS SHOWN & DUCT TO EXTERIOR

INSTALL UNDERFLOOR HEATING WATS TO ALL TILED AREAS

INSTALL LIGHTS & PLUG TO ATTIC SPACE TO SUIT

INSTALL RANGEHOOD WITH SOL/S MIN. AIR FLOW



**UPPER ELECTRICAL**  
SCALE 1:100

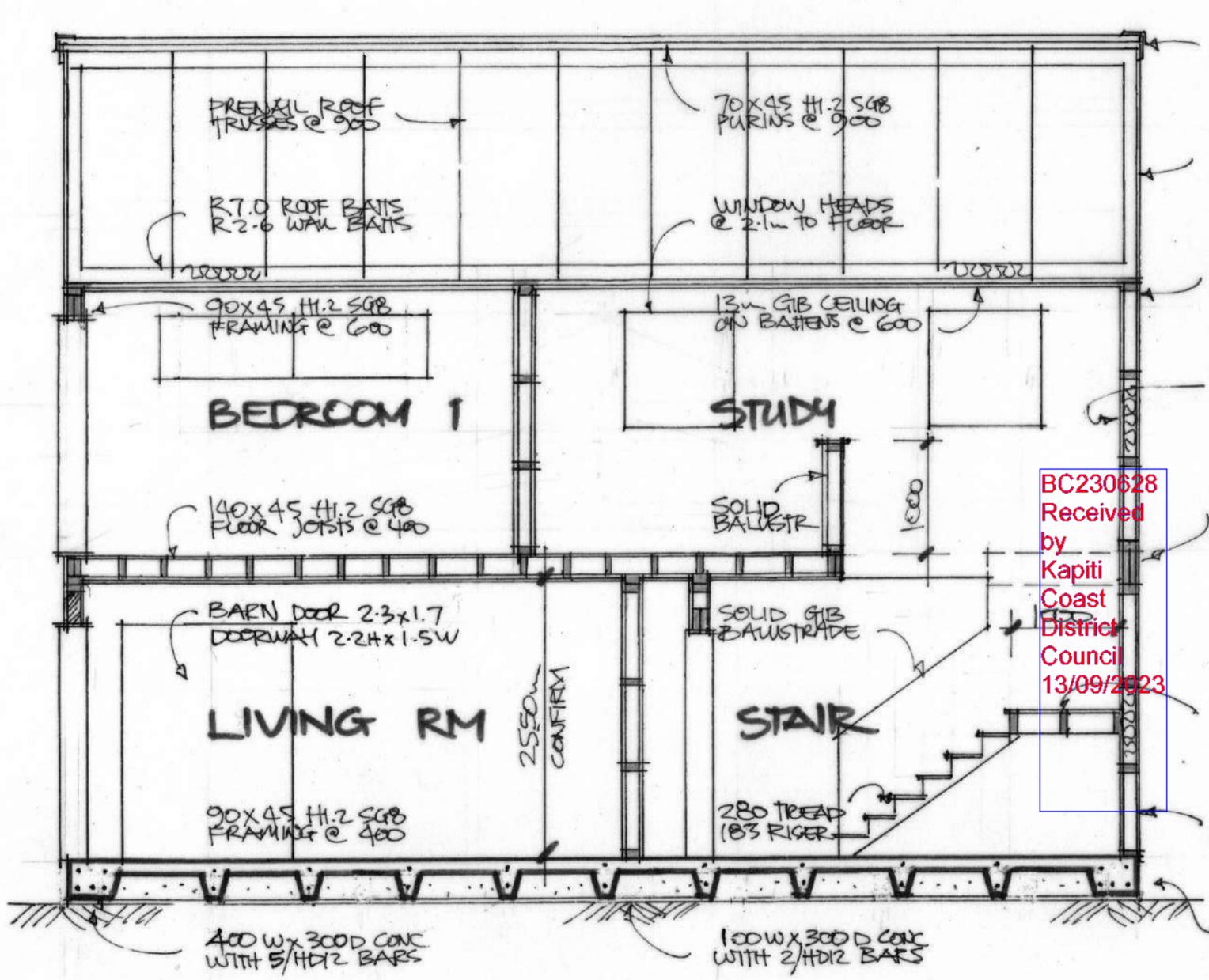
REVISED 9/10/2023  
REVISED 2/16/2023

**ONBOARD**  
AND ONLINE LTD

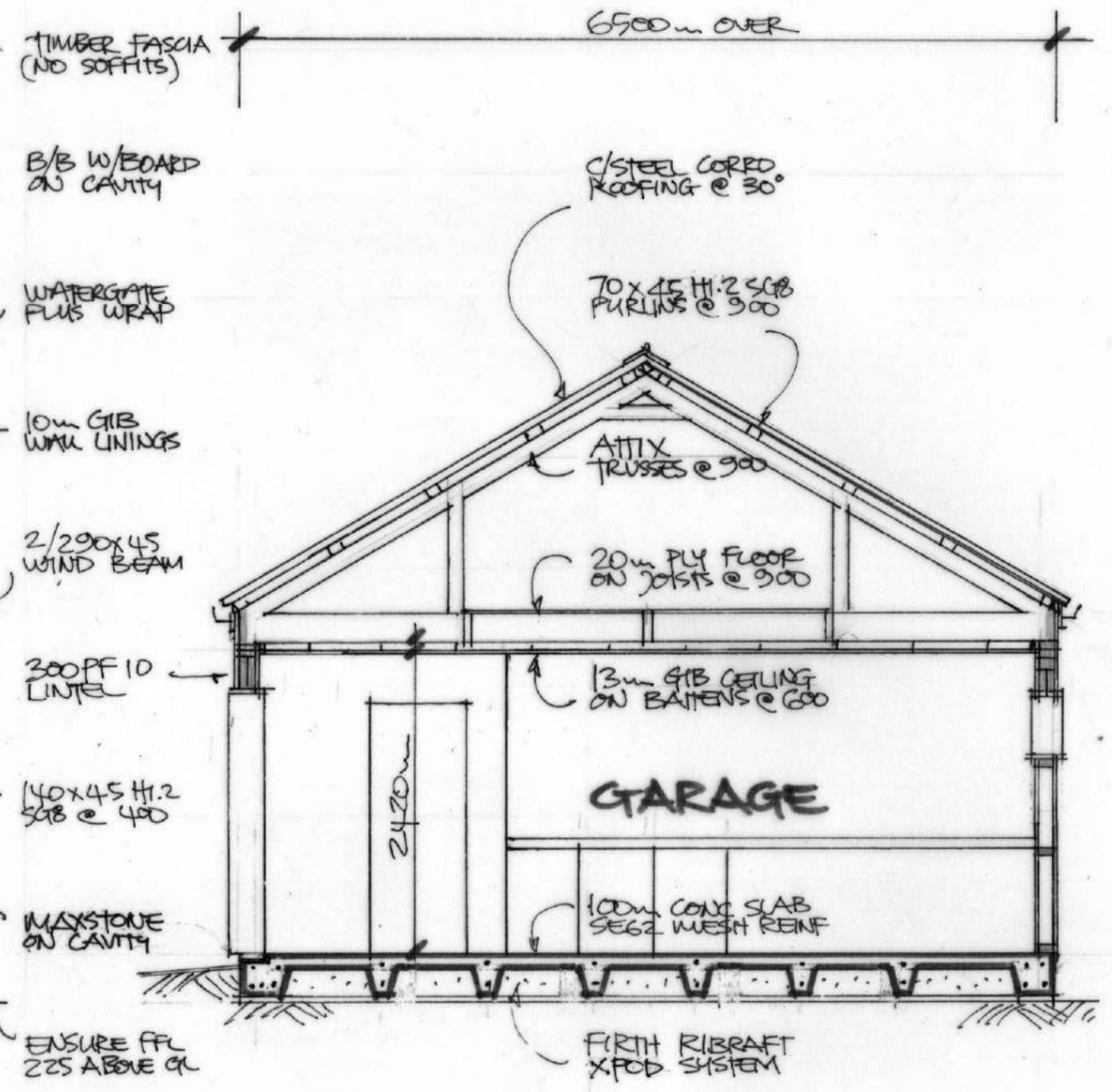
ARCHITECTURAL DESIGN      PHONE (04) 902 1210

**LOT 43 ANDERSON PARK, WAIKANAЕ**      **9**

JOB # 2023-04-3230      PROPOSED NEW HOUSE AT LOT 43 ANDERSON PARK, WAIKANAЕ, KAPITI COAST      26/04/2023



**SECTION A - A**  
SCALE 1:50



**SECTION B - B**  
SCALE 1:50

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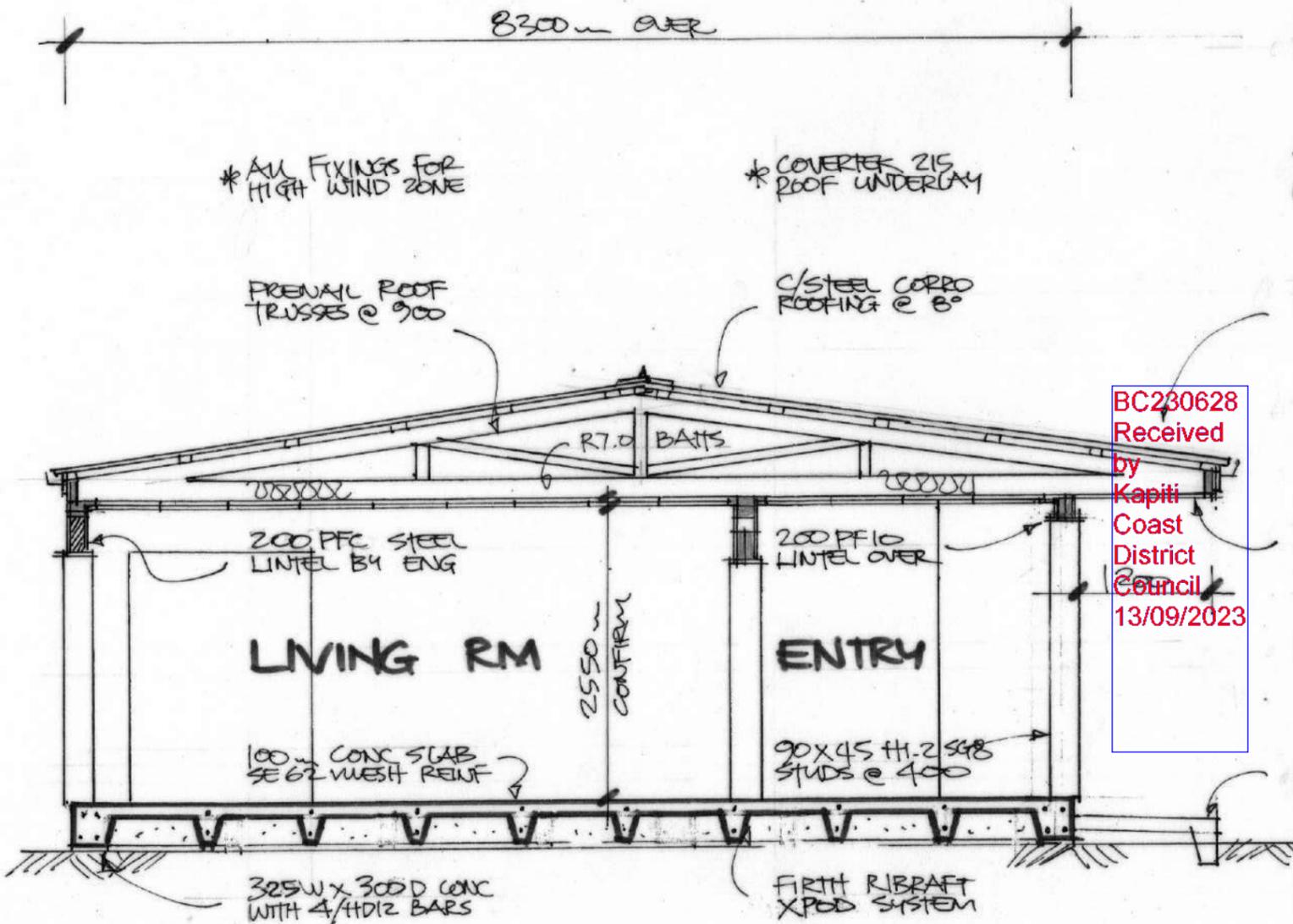
REVISED 23/8/2023  
REVISED 27/6/2023



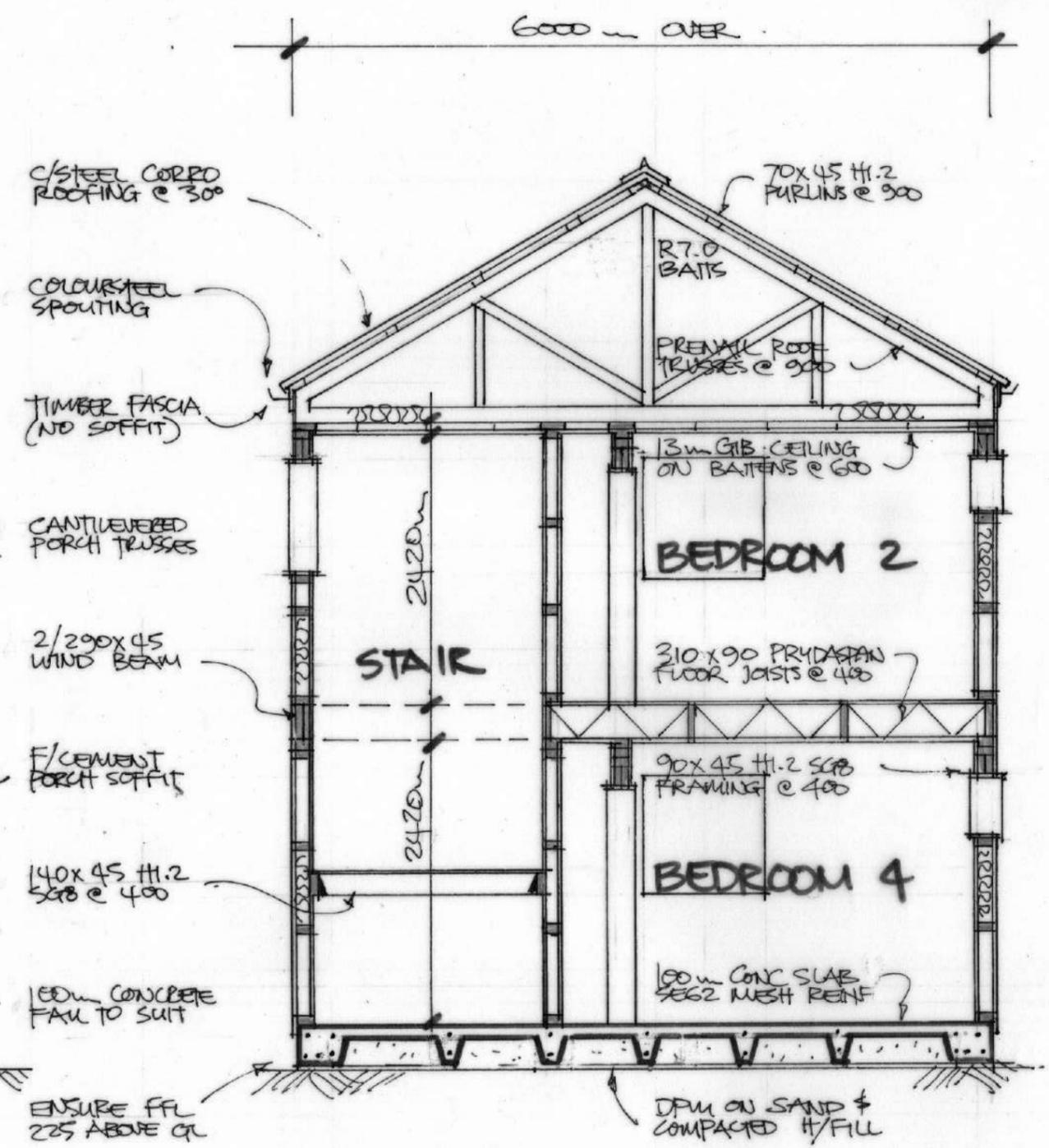
ARCHITECTURAL DESIGN PHONE (04) 902 1210

**LOT 43 ANDERSON PARK, WAIKANAЕ 10**

JOB # 2023-04-3230 PROPOSED NEW HOUSE AT LOT 43 ANDERSON PARK, WAIKANAЕ, KAPITI COAST 26/04/2023



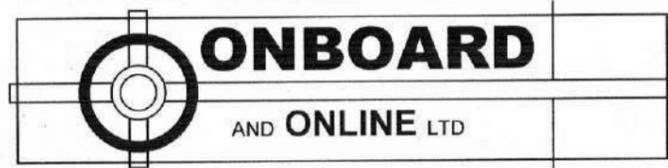
SECTION C-C  
SCALE 1:50



SECTION D-D  
SCALE 1:50

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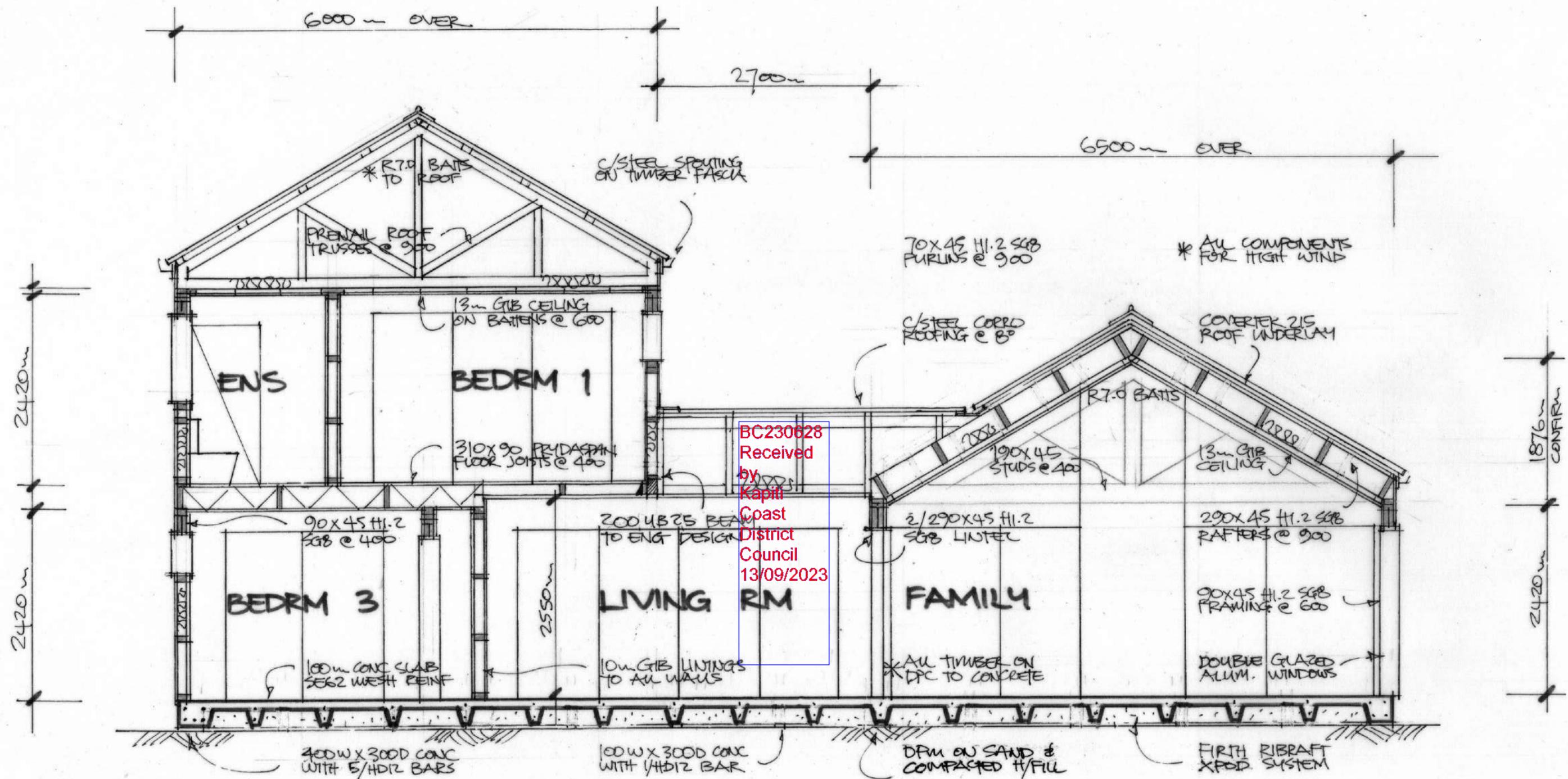
REVISED 23/8/2023  
REVISED 27/6/2023



ARCHITECTURAL DESIGN PHONE (04) 902 1210

**LOT 43 ANDERSON PARK, WAIKANA E 11**

JOB # 2023-04-3230 PROPOSED NEW HOUSE AT LOT 43 ANDERSON PARK, WAIKANA E, KAPITI COAST 26/04/2023



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**SECTION E - E**  
 SCALE 1:50

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 REVISED 27/6/2023

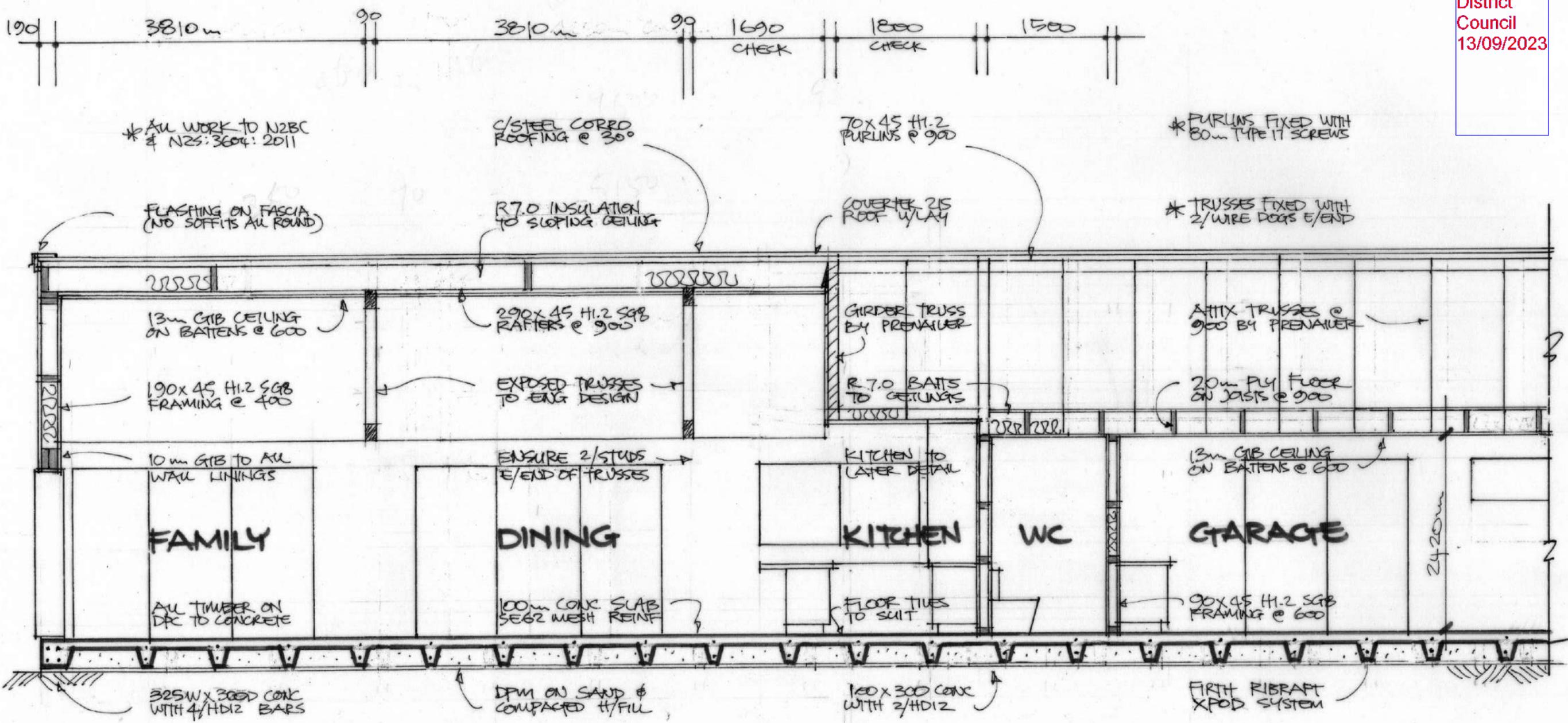


ARCHITECTURAL DESIGN PHONE (04) 902 1210

**LOT 43 ANDERSON PARK, WAIKANAЕ 12**

JOB # 2023-04-3230 PROPOSED NEW HOUSE AT LOT 43 ANDERSON PARK, WAIKANAЕ, KAPITI COAST 26/04/2023

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**SECTION F - F**  
SCALE 1:50

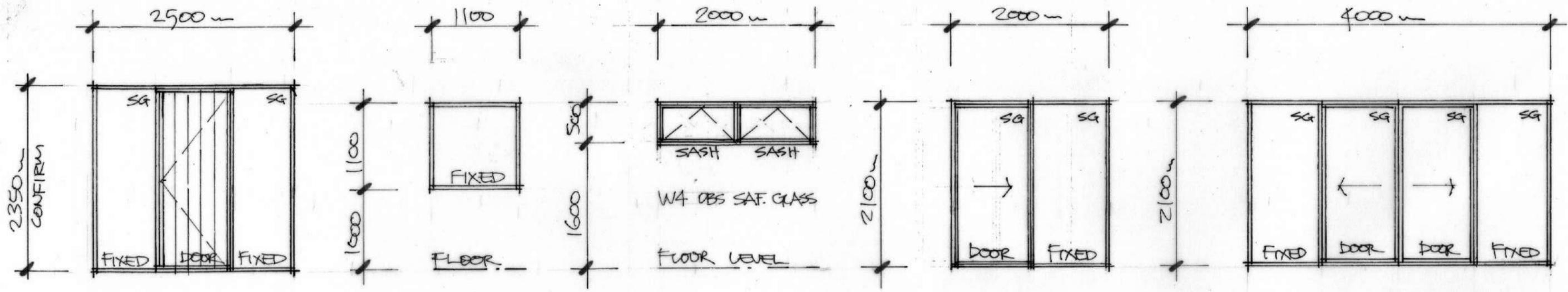
REVISED 23/8/2023  
REVISED 27/6/2023



ARCHITECTURAL DESIGN      PHONE (04) 902 1210

**LOT 43 ANDERSON PARK, WAIKANAЕ 13**

JOB # 2023-04-3230      PROPOSED NEW HOUSE AT LOT 43 ANDERSON PARK, WAIKANAЕ, KAPITI COAST      26/04/2023



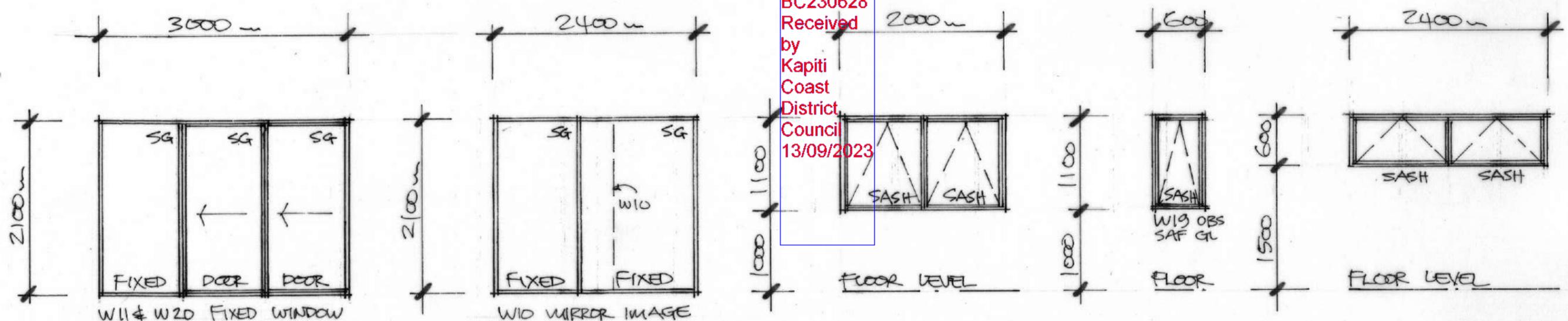
W1

W2,17,22,23

W3,4,5,16

W6,15

W7



W8,11,12,20

W9,10

W13

W14,19

W18,21

**WINDOW SCHEDULE**  
SCALE 1:50

SITE MEASURE ALL  
ALL UNITS DEGLAZED  
SAFETY GLASS < 800H

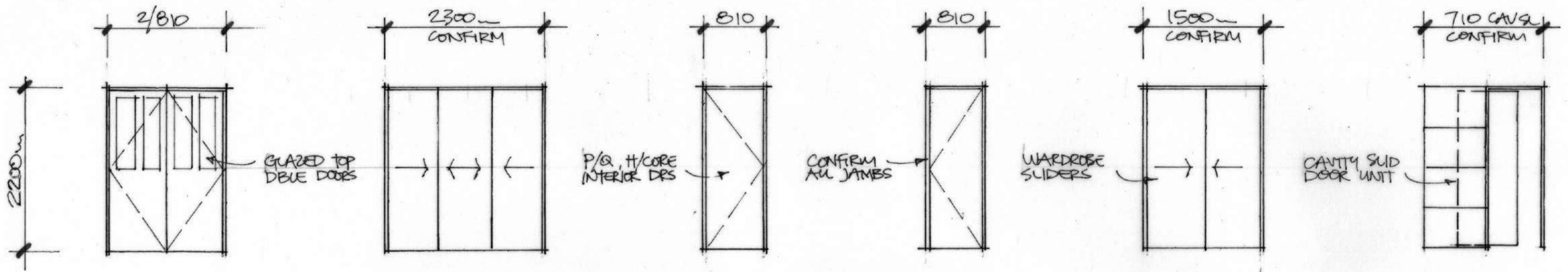
FIT ALL FLASHINGS,  
TAPE & AIR SEALS  
CONFIRM ARCHITRAVES

CONFIRM HARDWARE  
CLADDING ON GAVITY  
HIGH WIND ZONE

REVISED 27/6/2023



**LOT 43 ANDERSON PARK, WAIKANAЕ 14**



D1

BARN DOOR  
2.3mH x 1.7mW  
SITE MEASURE  
CONFIRM TRACK

D2,9

D3,11

D4,6,7,10,13,16,18

D5,8,14,15

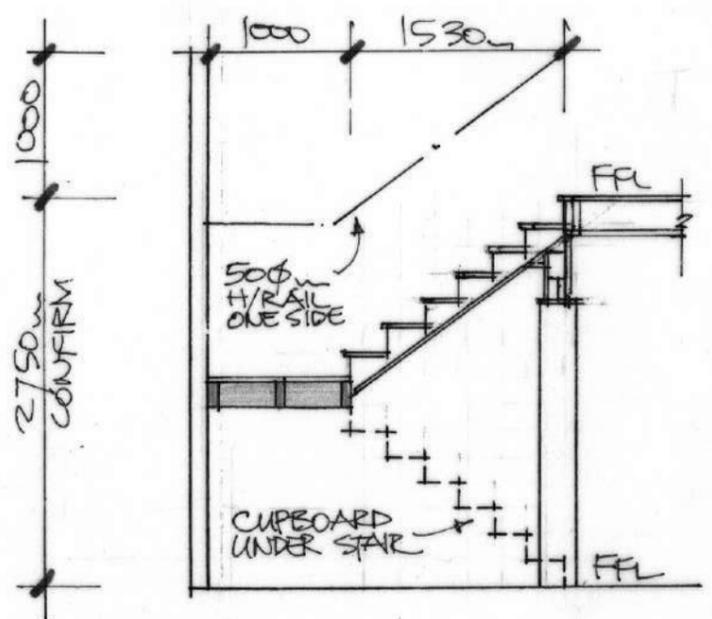
D12,17

**DOORS**

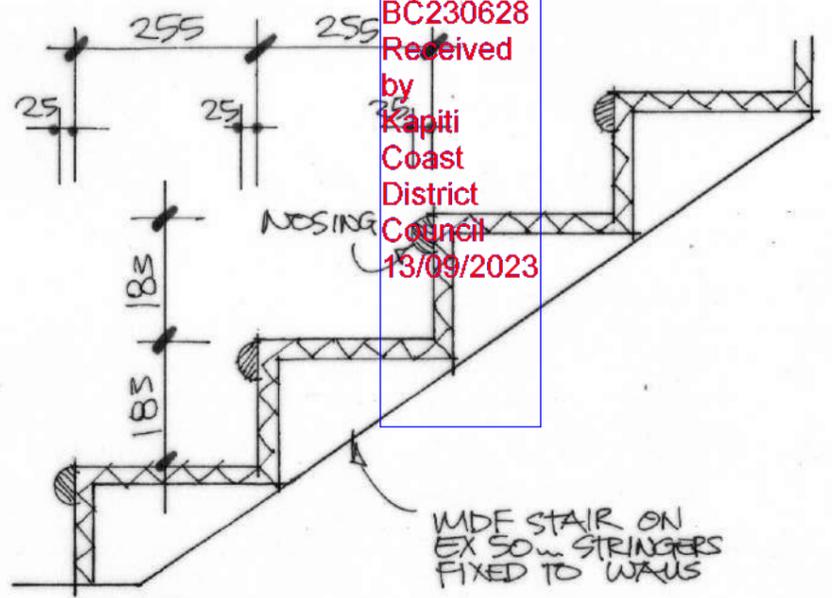
ALL DOORS 'PLYCO' OR  
SIMILAR HOLLOW CORE

CONFIRM ALL JAMBS  
& DOOR ARCHITRAVES

CONFIRM ALL HARDWARE  
PRIVACY LOCK TO D6,10,18

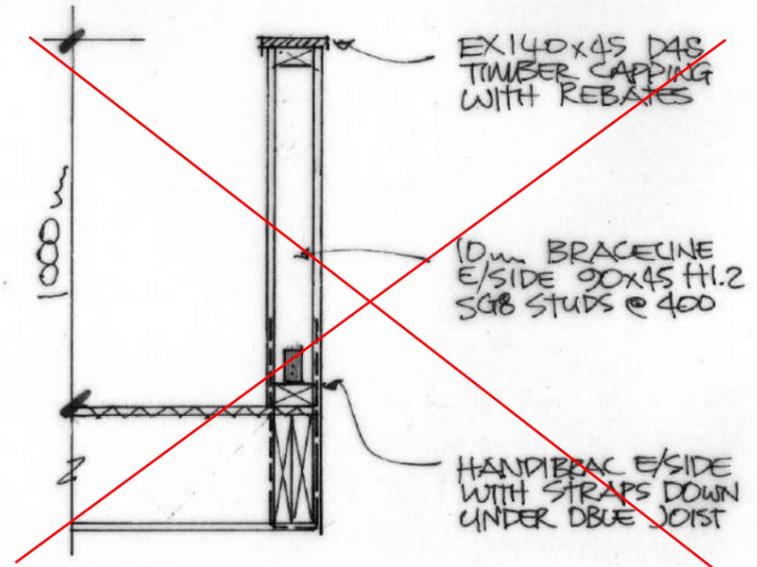


**STAIR SECTION**  
SCALE 1:50



**STAIR DETAIL**  
SCALE 1:10

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**BALUSTRADE**  
SCALE 1:20

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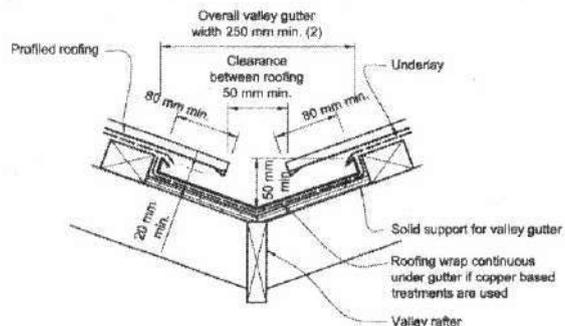
**LOT 43 ANDERSON PARK, WAIKANAЕ 15**

Acceptable Solution E2/AS1

EXTERNAL MOISTURE

Figure 51: Valley gutters for profiled metal  
Paragraphs 4.3, 4.5, 8.1, 8.2 and 8.4.16

NOTE: (1) Refer to Table 8 for maximum roof catchment areas for valley gutters.  
(2) Minimum width of valley gutter may reduce to 180 mm, providing roof catchment area is in accordance with Table 8. In this case, cover of roof cladding over gutter shall be reduced to 60 mm to provide a clearance gap of 40 mm.

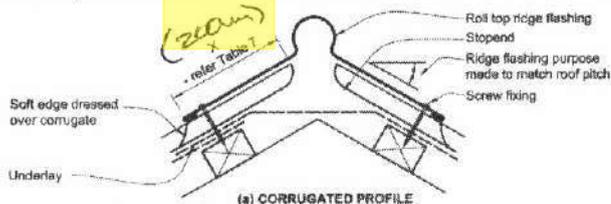


Amend 2  
Jul 2005

Amend 2  
Jul 2005

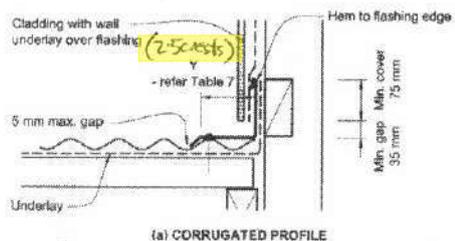
Amend 1  
Aug 2011

Figure 46: Ridge and hip flashings for profiled metal  
Paragraphs 4.4, 4.5, 8.4.11, 8.4.12, Table 7



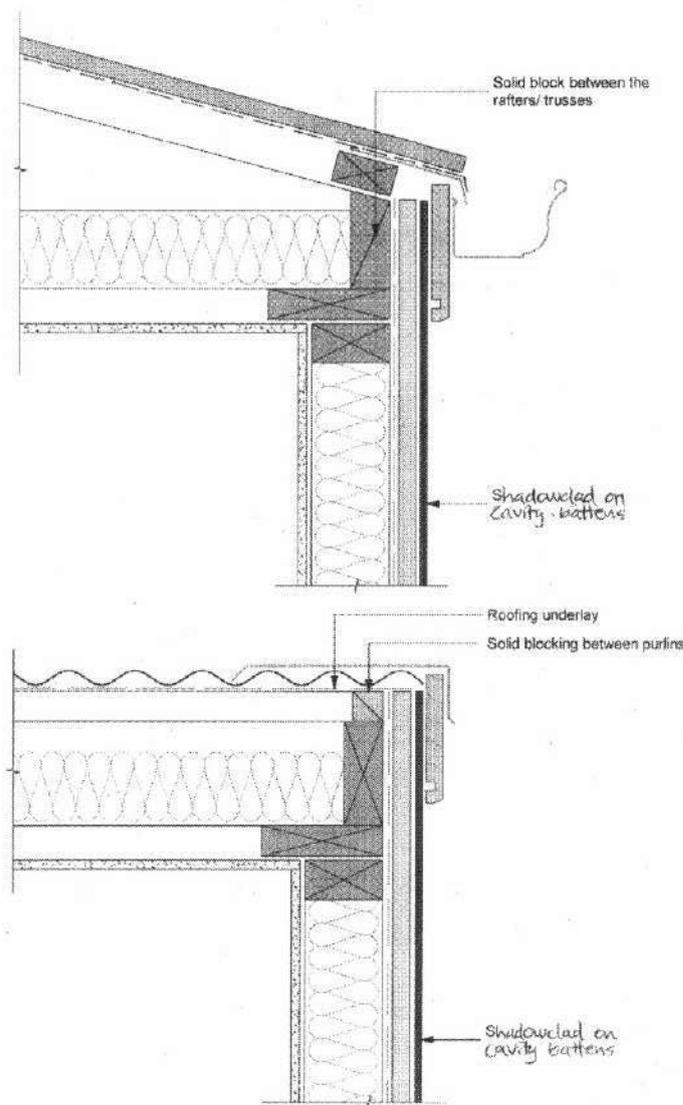
Amend 2  
Jul 2005

Figure 48: Parallel apron flashings for profiled metal  
Paragraphs 2.4.11, 3.4.12, Table 7



Amend 2  
Jul 2005

NIL soffit detail



REVISED 9/10/2023



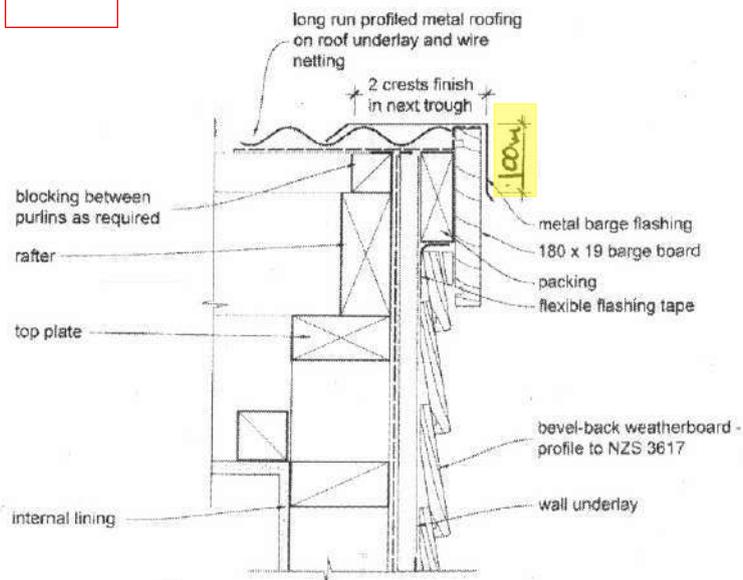
24 December 2011

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branz@branz.co.nz  
0800 80 80 85

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Issue: 2.01  
Cladding  
Horizontal Weatherboard  
Top of Wall

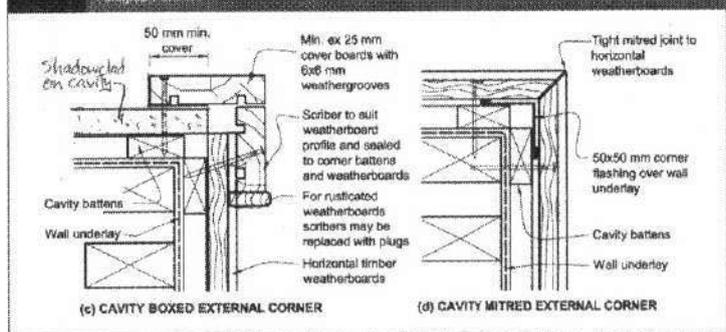
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Acceptable Solution E2/AS1

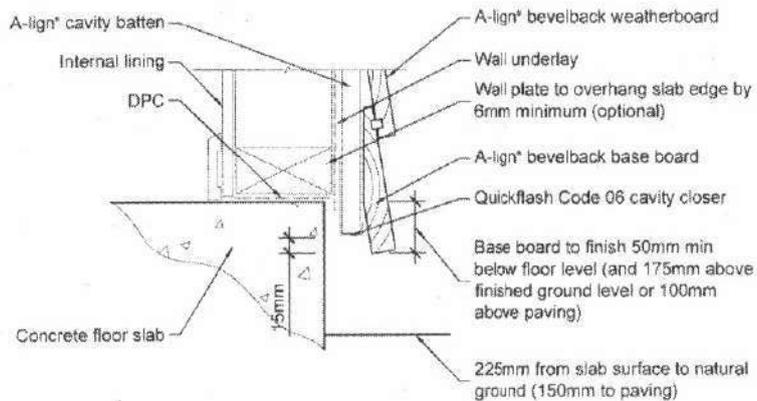
EXTERNAL MOISTURE

Figure 78. External corners for horizontal weatherboards  
Paragraph 9.4.4.4



Amend 5  
Aug 2011

Bevelback weatherboard - cavity - base of wall - concrete floor



REVISED 9/10/2023

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Figure 1.02.07.03

120703\_clad\_dfx\_bevel\_walltop.dwg

This A4 View Scale is 1:5



Horizontal Weatherboard - Bevelback  
Wall/Barge/Roof

top of wall/barge with no overhang

July 2014  
CAD Scale 1:5

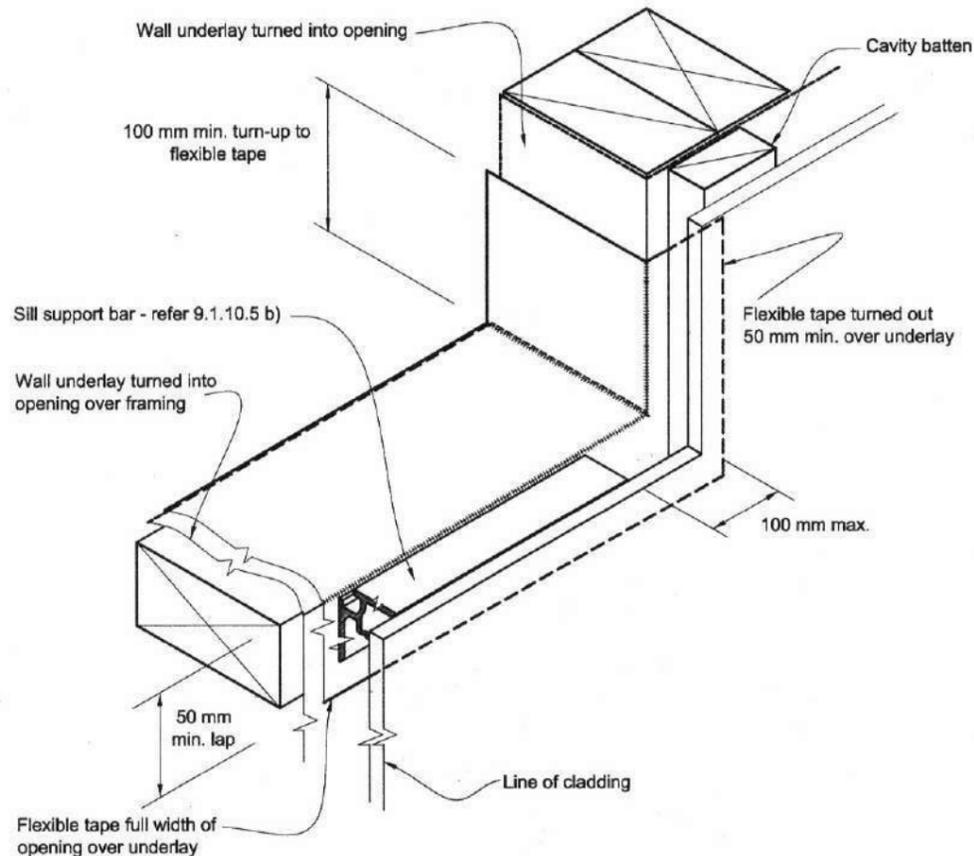
LOT 43 ANDERSON PARK, WAIKANAЕ 17

JOB # 2023-04-3230 | PROPOSED NEW HOUSE AT LOT 43 ANDERSON PARK, WAIKANAЕ, KAPITI COAST | 26/04/2023

Figure 72B: General window and door opening with drainage cavity  
Paragraphs 9.1.5, 9.1.9.3, 9.1.10.2, Figures 73C, 76, 85, 86, 91, 99, 116 and 128

NOTE:

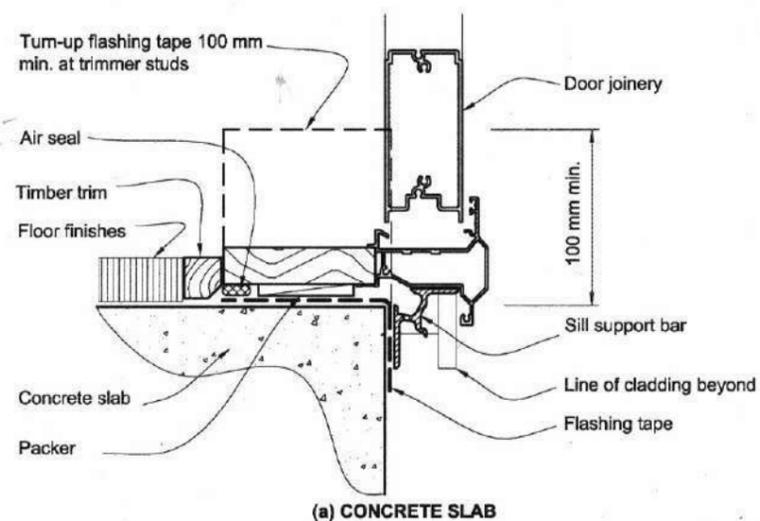
- (1) Detailed cladding omitted for clarity, refer to specific claddings.
- (2) Head to be treated similarly with continuous wall underlay and flexible tape at corners.
- (3) Refer individual cladding details for jamb flashings.



Errata 2  
Dec 2011

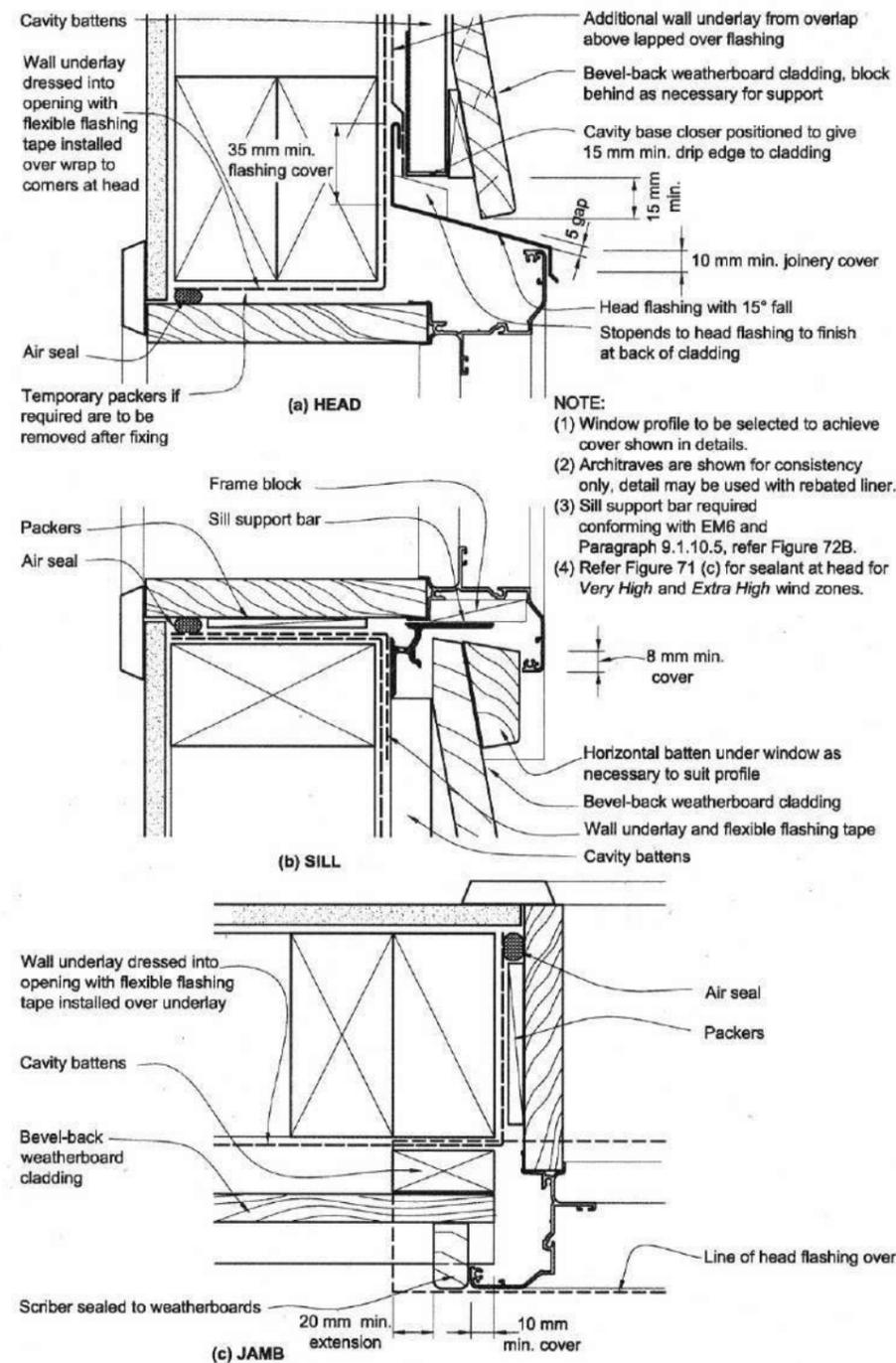
Amend 5  
Aug 2011

Figure 17C: Door sills for cavity construction  
Paragraph 9.1.10.5, Figures 73C, 85, 86, 91, 99, 116 and 128



(a) CONCRETE SLAB

Figure 85: Windows and doors for bevel-back weatherboards on cavity  
Paragraph 9.4.7



NOTE:

- (1) Window profile to be selected to achieve cover shown in details.
- (2) Architraves are shown for consistency only, detail may be used with rebated liner.
- (3) Sill support bar required conforming with EM6 and Paragraph 9.1.10.5, refer Figure 72B.
- (4) Refer Figure 71 (c) for sealant at head for Very High and Extra High wind zones.

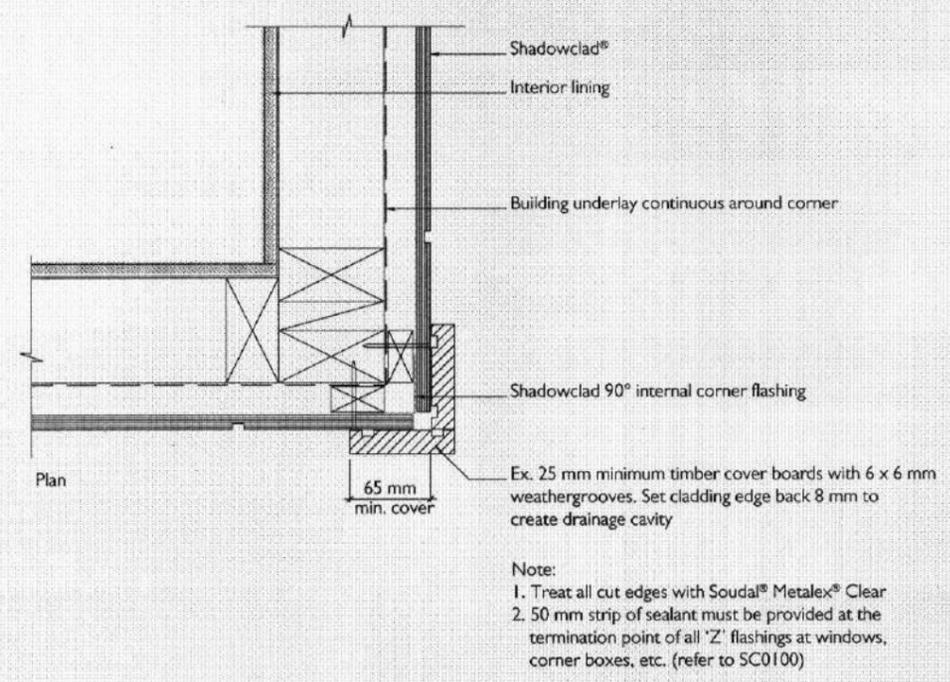
Amend 5  
Aug 2011

Amend 2  
Jul 2005

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**LOT 43 ANDERSON PARK, WAIKANAЕ 18**

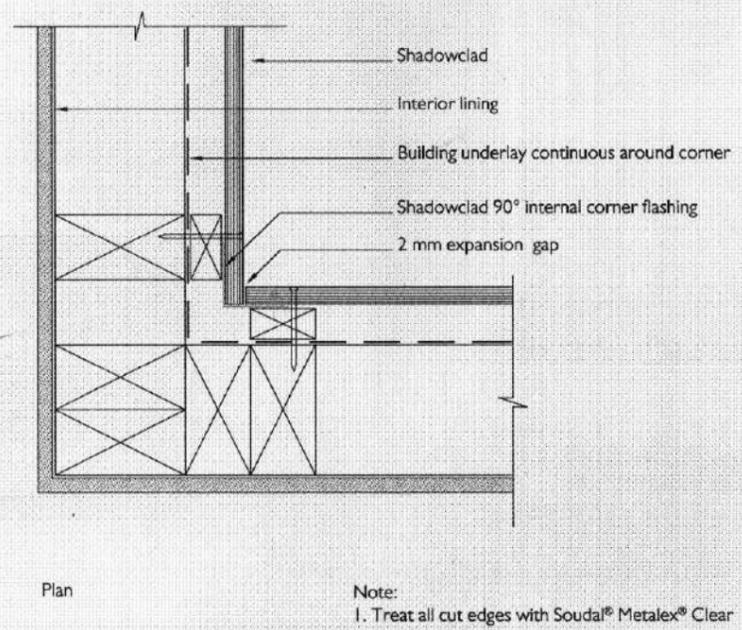
SC022: Shadowclad External Corner with Cover Boards (Cavity)



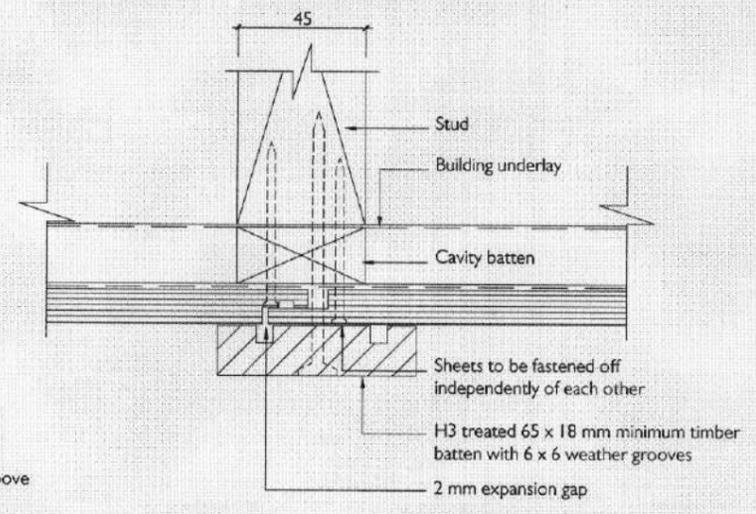
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13/09/2023

4.13 INTERNAL CORNERS

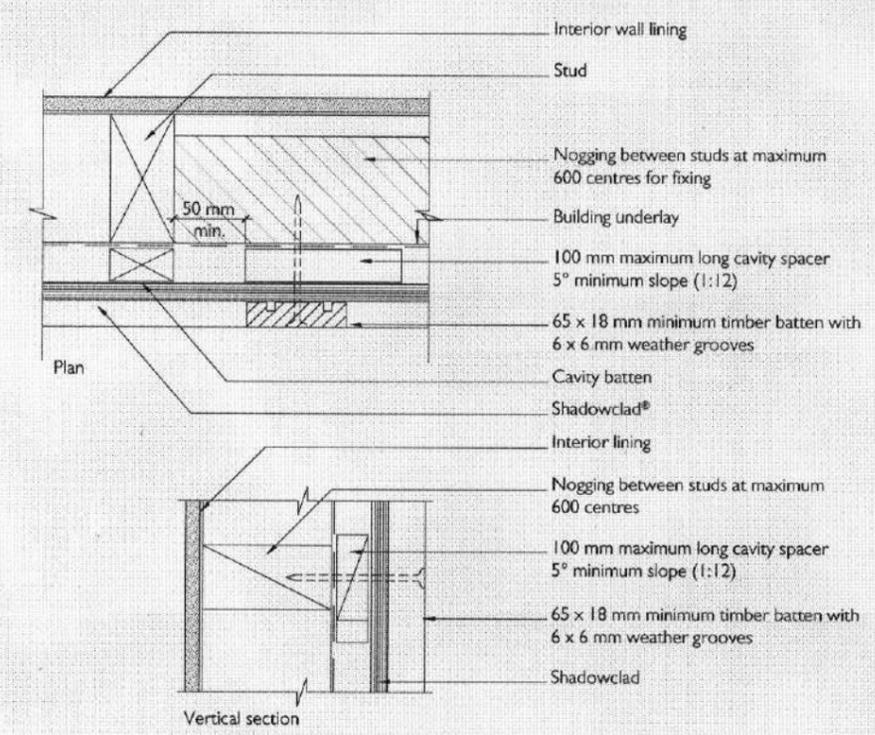
SC024: Shadowclad Internal Corner with 90° Flashing (Cavity)



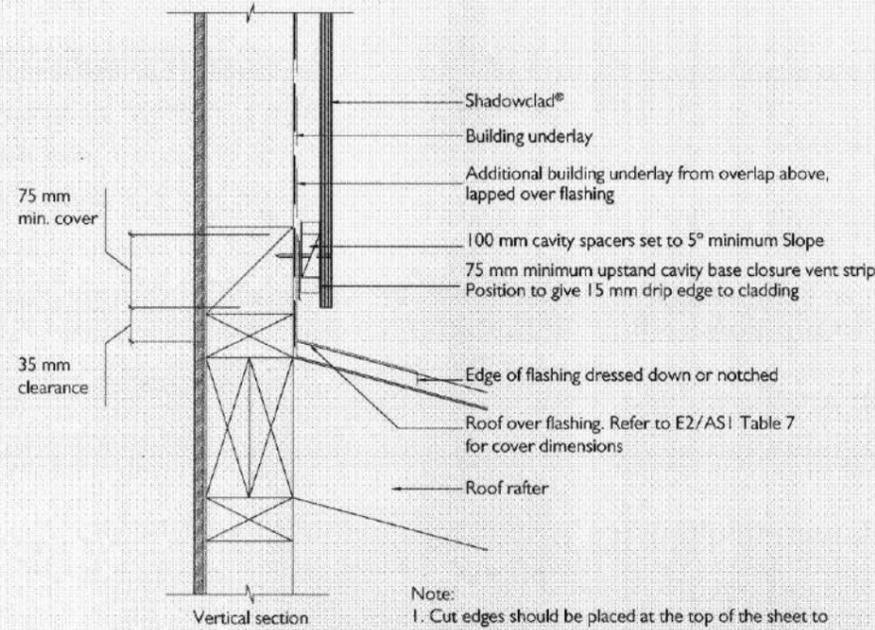
SC010: Shadowclad Vertical Joint with Optional Cover Batten (Cavity)



SC012: Shadowclad Nogging for Vertical Cover Batten Between Studs (Cavity)

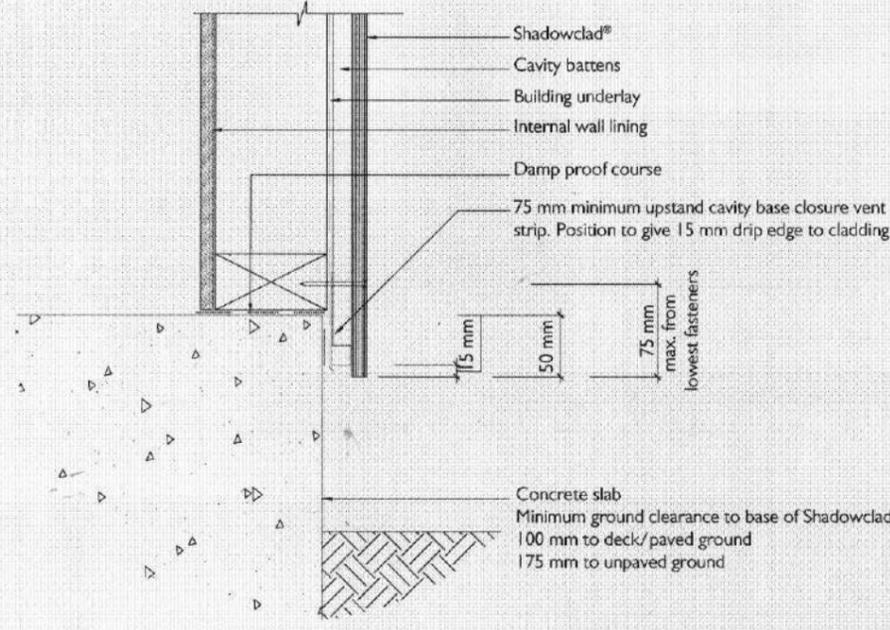


**SC050: Shadowclad Basic Apron Flashing (Cavity)**

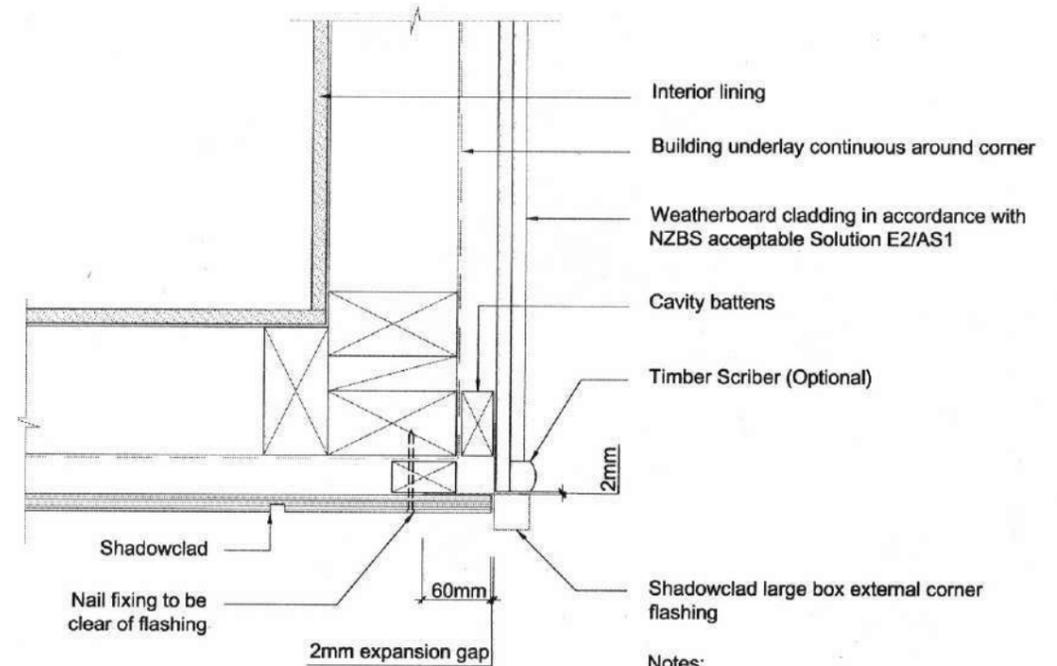


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**SC042: Shadowclad Overhangs and Ground Clearances (Cavity)**

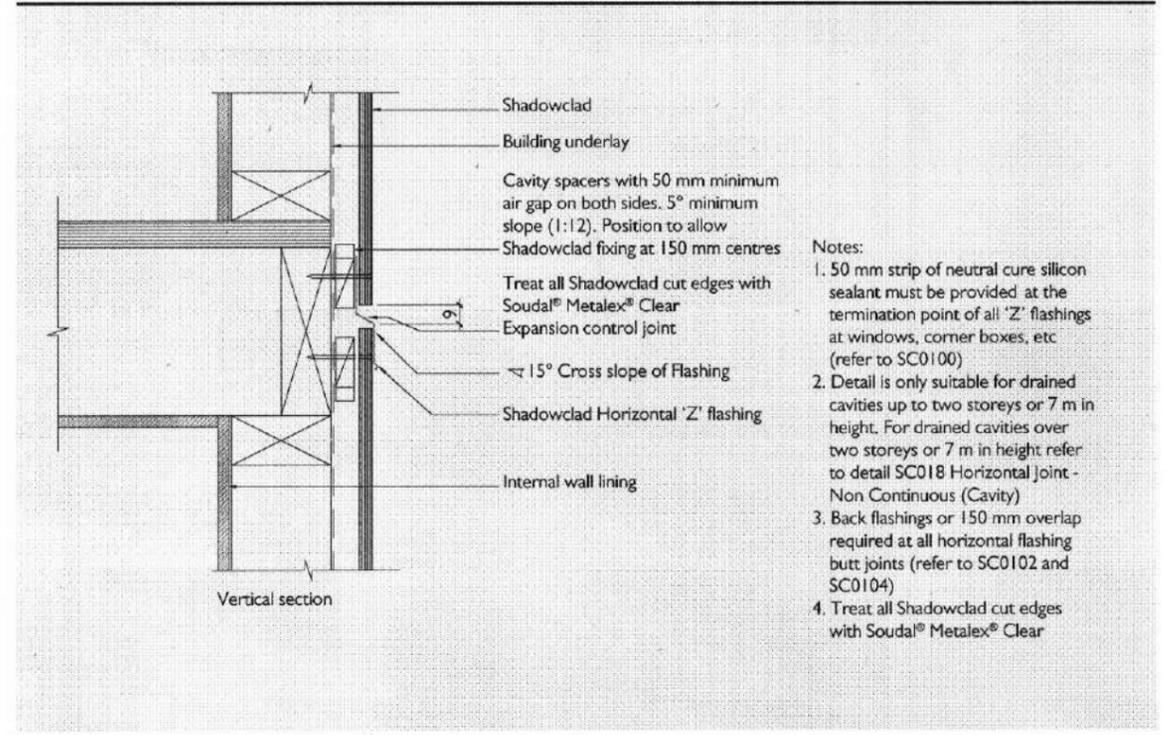


**SC061 Shadowclad to weatherboard external junctions**

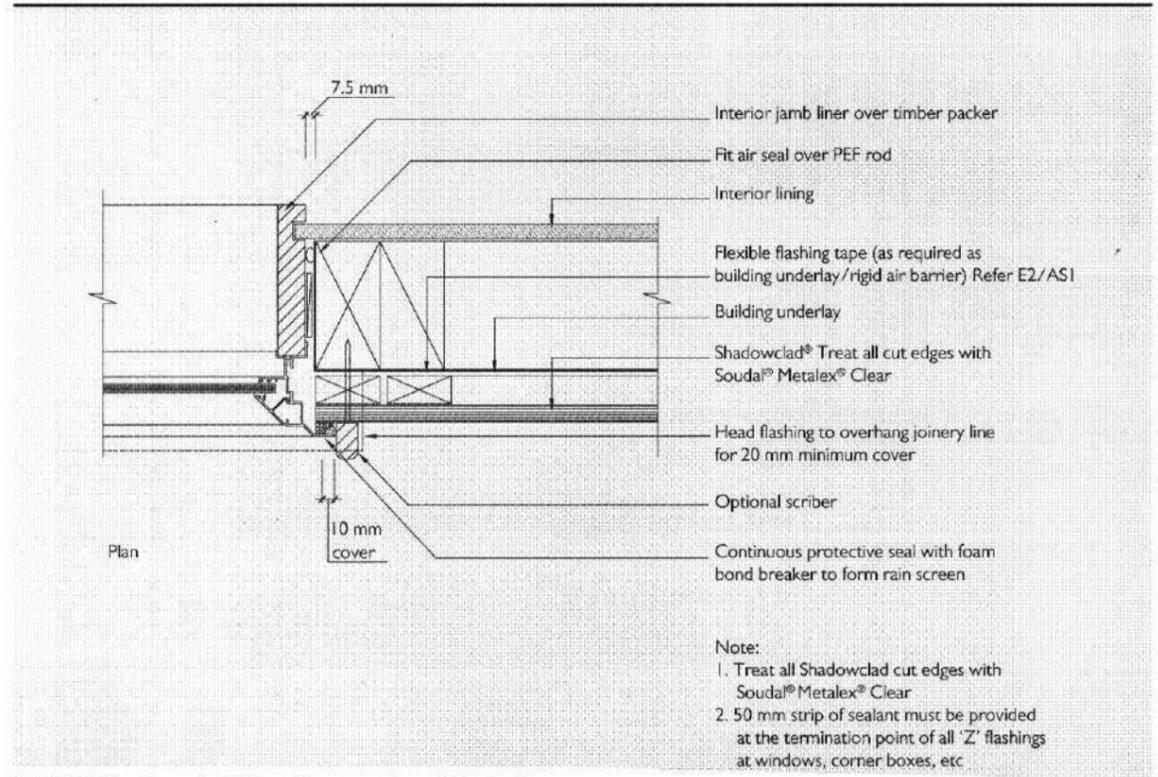


Plan

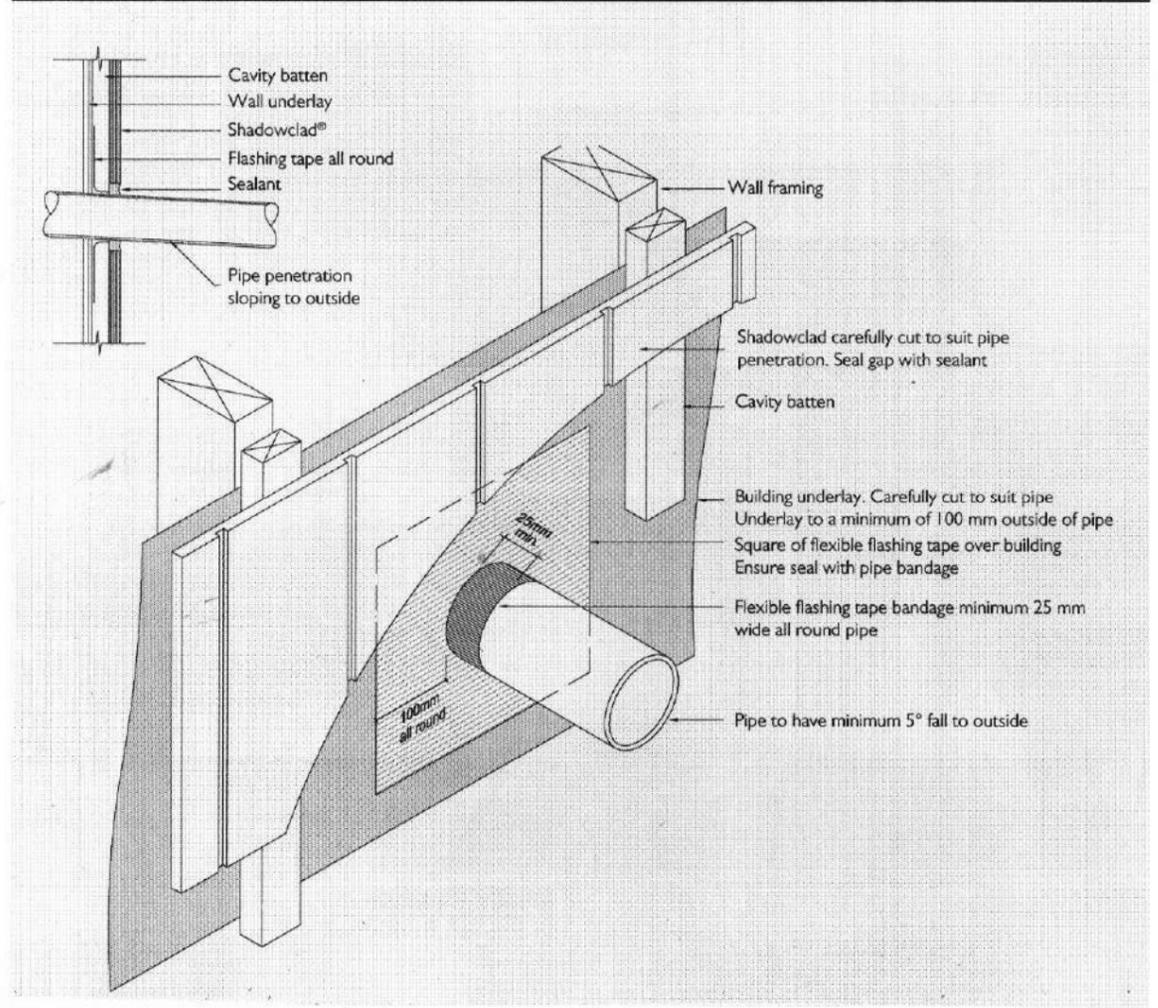
**SC016: Shadowclad Mid Floor Horizontal Joint (Cavity)**



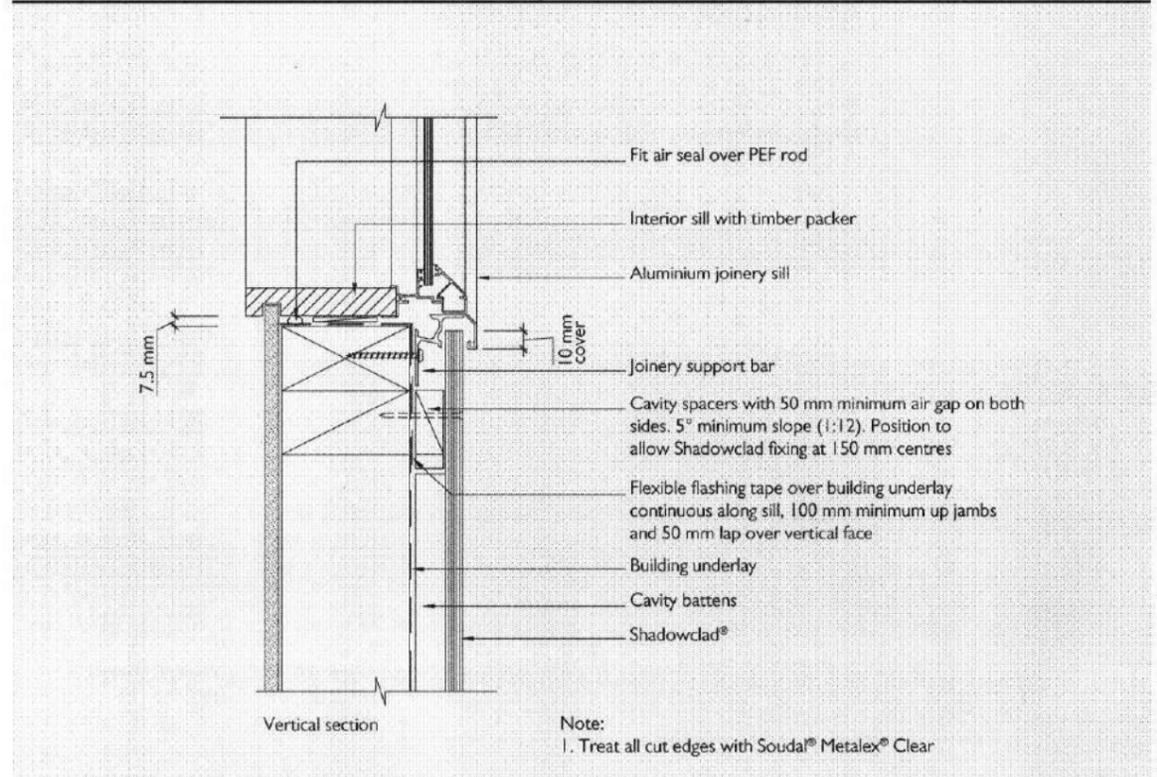
### SC030: Shadowclad Jamb Detail (Cavity)



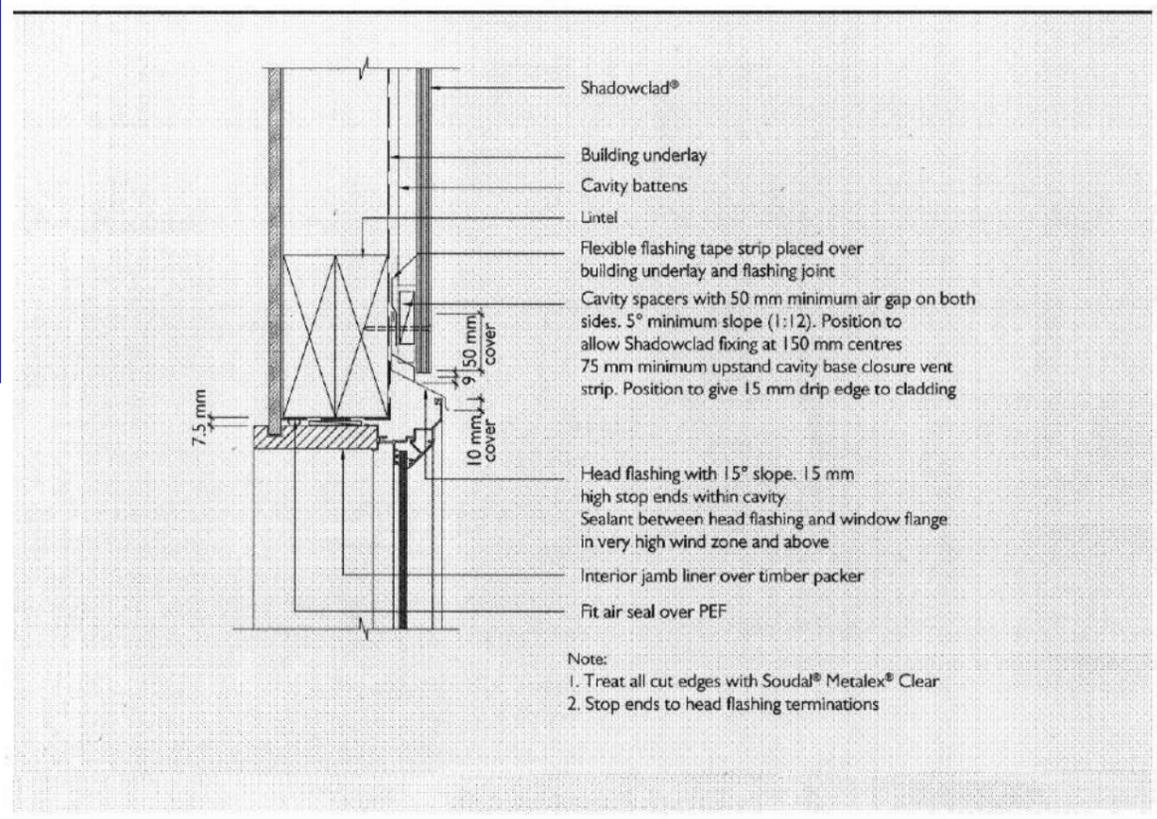
### SC040: Shadowclad Pipe Penetration (Cavity)



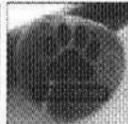
### SC032: Shadowclad Window Sill Detail (Cavity)



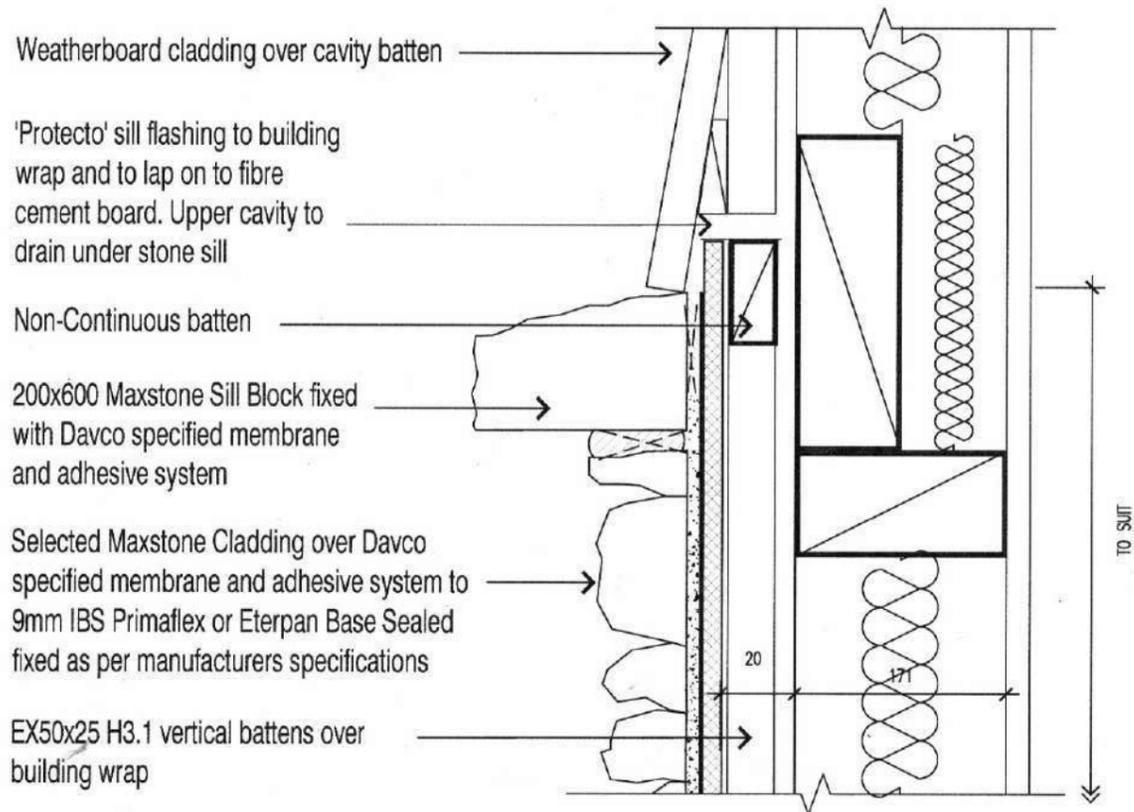
### SC028: Shadowclad Window Head Detail (Cavity)



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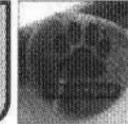


<h3>HORIZ. JOINT WITH W/B's DETAIL II</h3>	Scale	Date
	NTS	26/08/2019
	TILEMAX	MAXSTONE

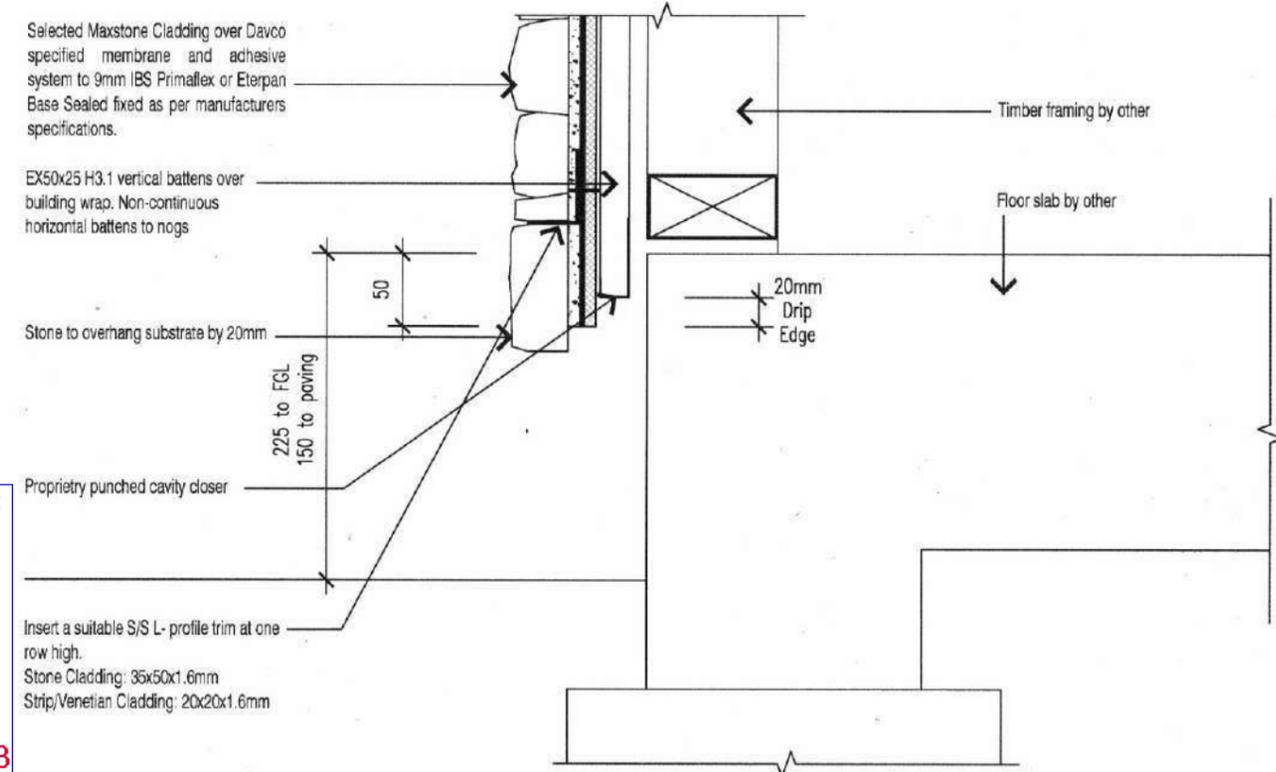


**NOTE:** EX50x25 BATTENS CAN BE SUBSTITUTED WITH EX50x50 WHERE APPROPRIATE

**NOTE:** SUBSTRATE TO BE FIXED IN STRICT ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS AND LITERATURE



<h3>STANDARD SLAB EDGE DETAIL EX50x25 BATTENS</h3>	Scale	Date
	NTS	26/08/2019
	TILEMAX	MAXSTONE



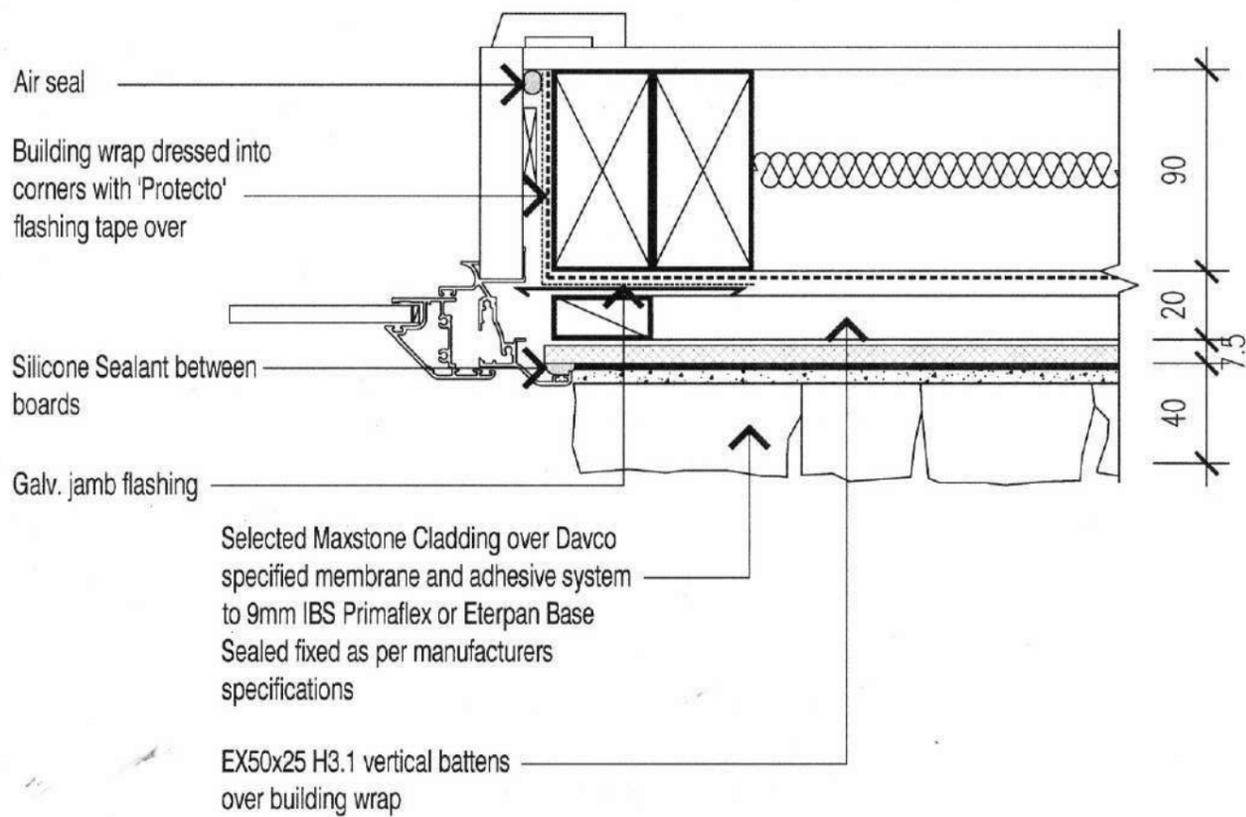
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**NOTE:** EX50x25 BATTENS CAN BE SUBSTITUTED WITH EX50x50 WHERE APPROPRIATE

**NOTE:** SUBSTRATE TO BE FIXED IN STRICT ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS AND LITERATURE



<h2>WINDOW JAMB DETAIL STANDARD APPLICATION</h2>	Scale	Date
	NTS	26/08/2019
	TILEMAX	MAXSTONE



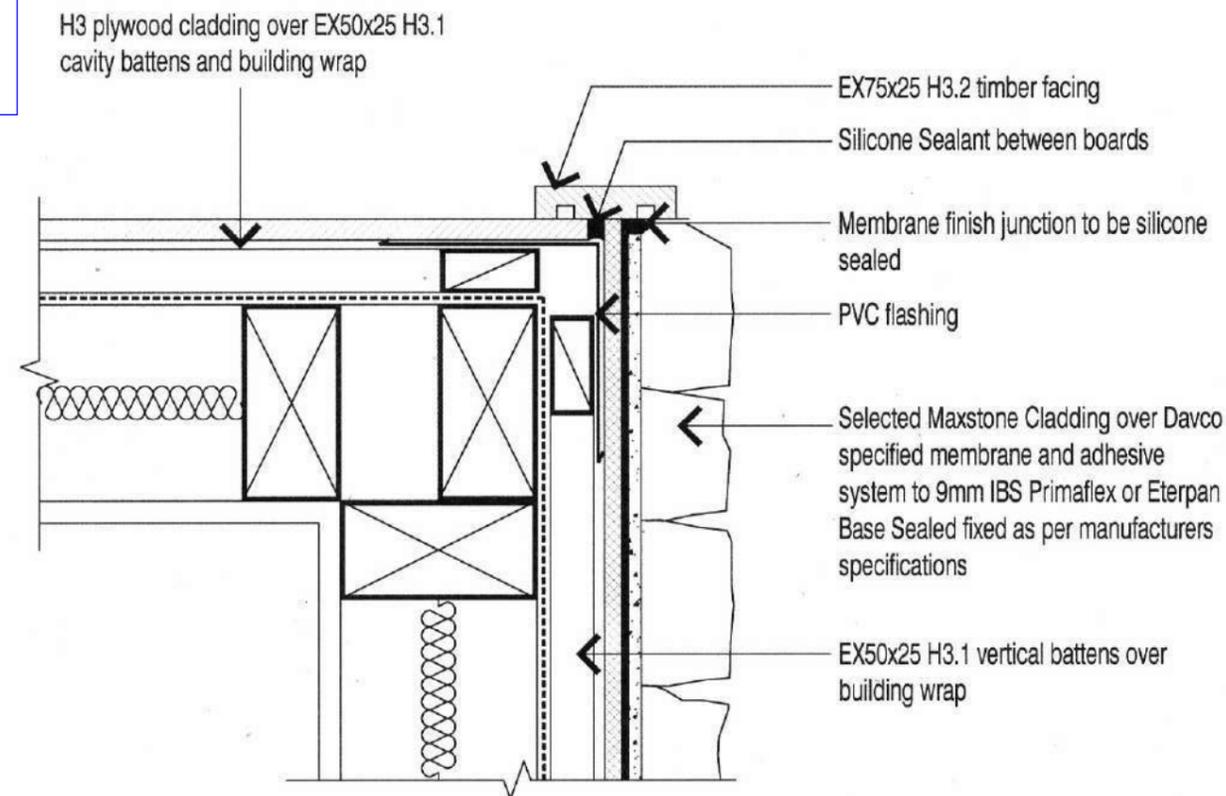
NOTE: EX50x25 BATTENS CAN BE SUBSTITUTED WITH EX50x50 WHERE APPROPRIATE

NOTE: SUBSTRATE TO BE FIXED IN STRICT ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS AND LITERATURE



<h2>EXT. CORNER WITH PLY CLADDING I</h2>	Scale	Date
	NTS	26/08/2019
	TILEMAX	MAXSTONE

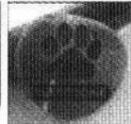
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NOTE: MEMBRANE FINISH JUNCTION TO BE SILICONE SEALED

NOTE: EX50x25 BATTENS CAN BE SUBSTITUTED WITH EX50x50 WHERE APPROPRIATE

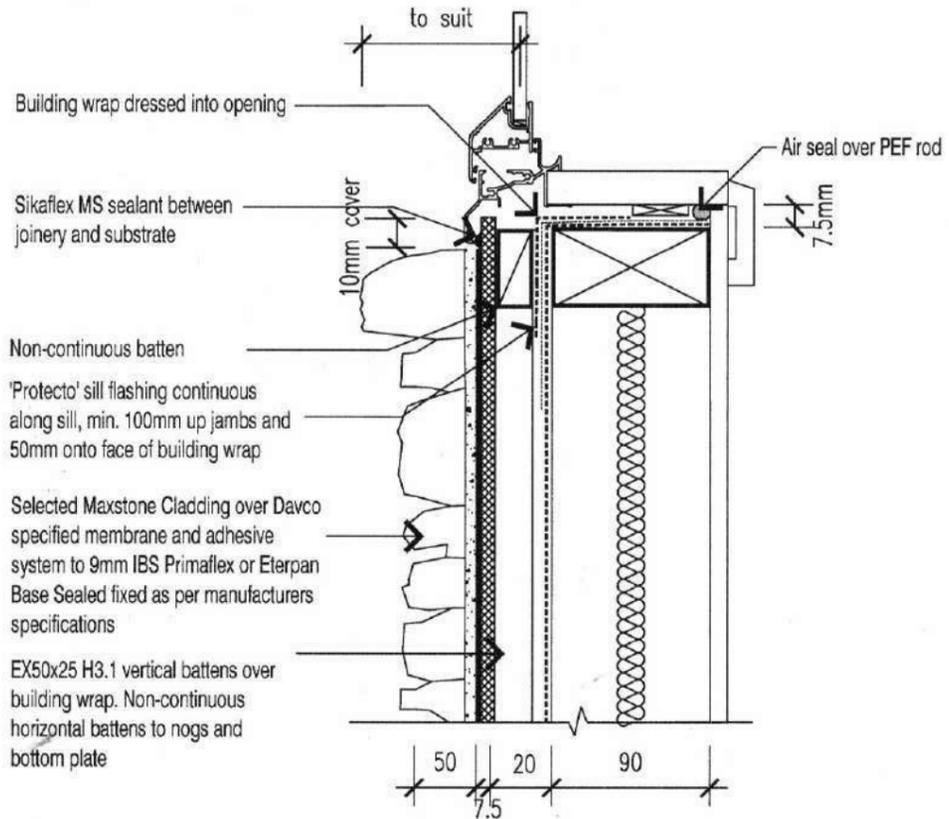
NOTE: SUBSTRATE TO BE FIXED IN STRICT ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS AND LITERATURE



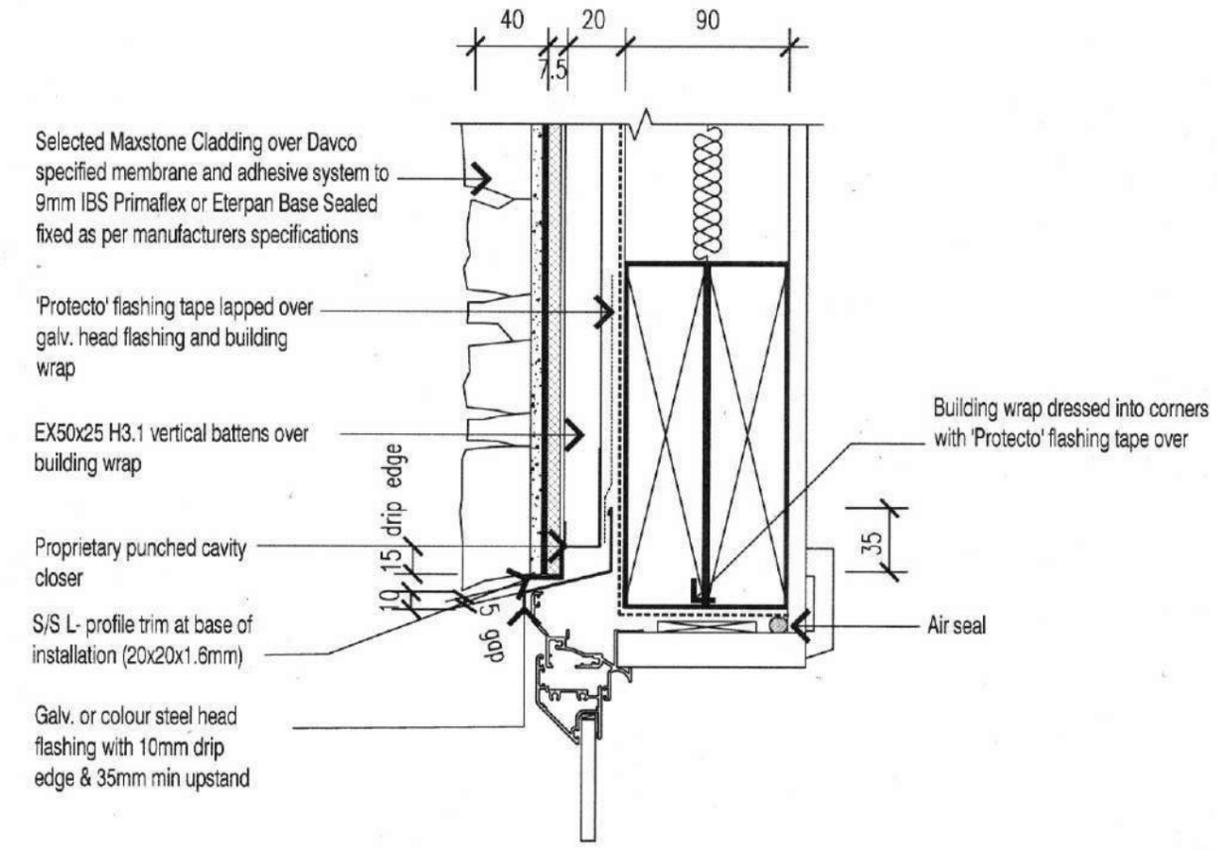
WINDOW SILL 80MM SILL STANDARD APPLICATION	Scale NTS	Date 26/08/2019
	TILEMAX	MAXSTONE



WINDOW HEAD DETAIL EX50x25 BATTENS	Scale NTS	Date 26/08/2019
	TILEMAX	MAXSTONE



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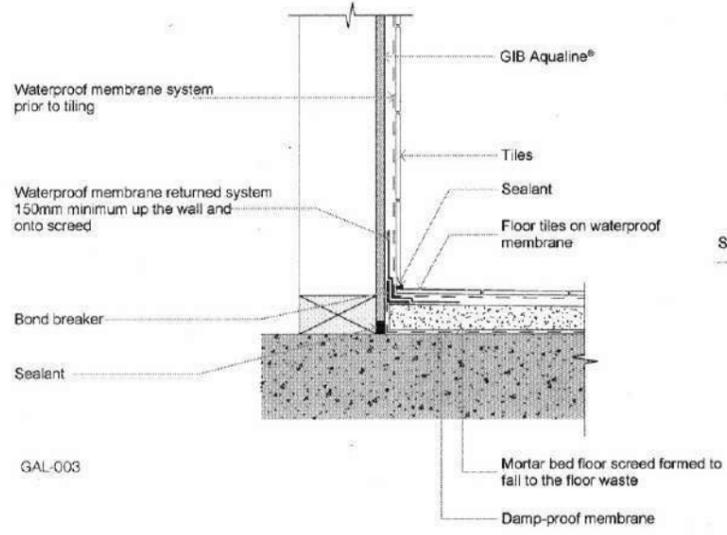
NOTE: EX50x25 BATTENS CAN BE SUBSTITUTED WITH EX50x50 WHERE APPROPRIATE

NOTE: SUBSTRATE TO BE FIXED IN STRICT ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS AND LITERATURE

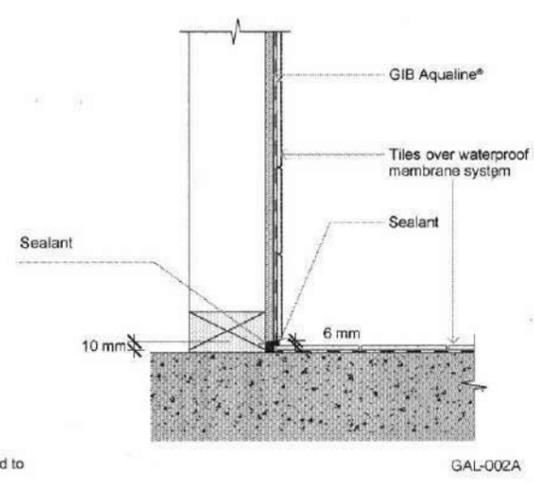
NOTE: EX50x25 BATTENS CAN BE SUBSTITUTED WITH EX50x50 WHERE APPROPRIATE

NOTE: SUBSTRATE TO BE FIXED IN STRICT ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS AND LITERATURE

A: MORTAR UNDER CERAMIC FLOOR LINING JUNCTION



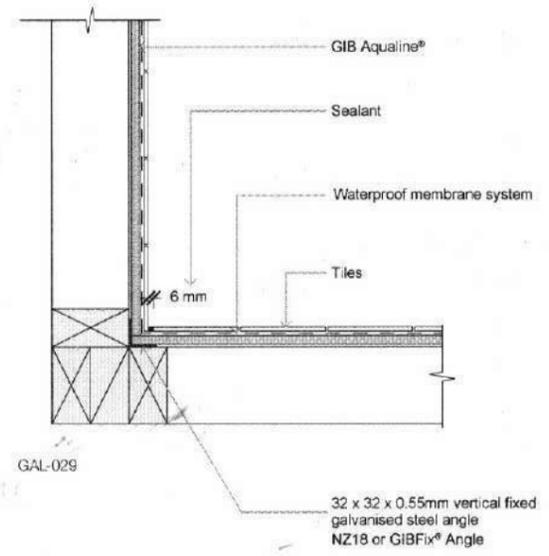
C: CERAMIC FLOOR LINING JUNCTION



PREFORMED SHOWER BASE JUNCTIONS

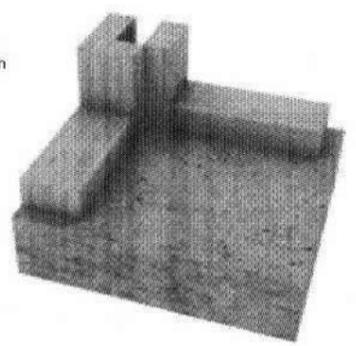
Refer to the shower base manufacturer for proprietary shower tray installation detailing including wet wall lining junction detailing.

B: TILED INTERNAL CORNER



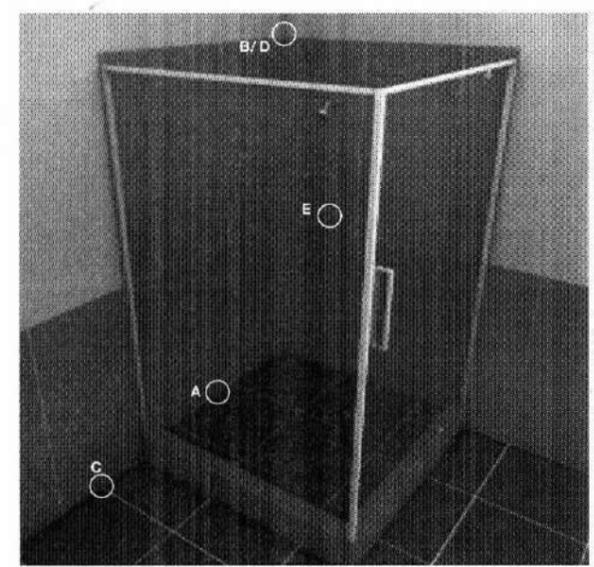
D: TILED INTERNAL CORNER METAL ANGLE POSITION

Refer to page 16 of this publication for specification and installation guidance.

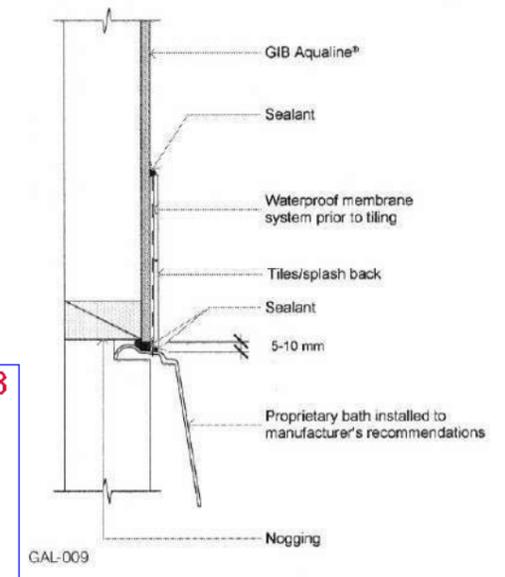


E: SHOWER MIXER PENETRATION IN WET WALL LININGS

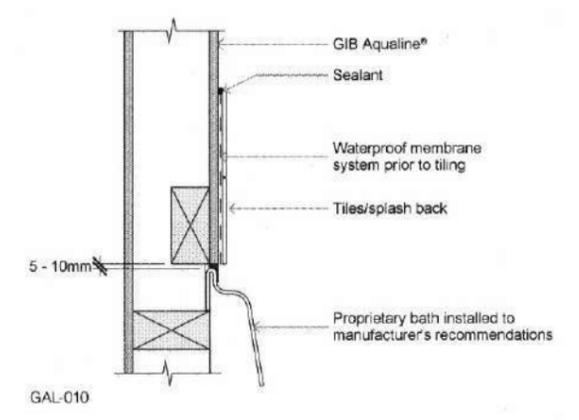
Refer to the shower mixer manufacturer for shower mixer installation detailing including the use of proprietary products to prevent water or moisture ingress behind the wet wall lining.



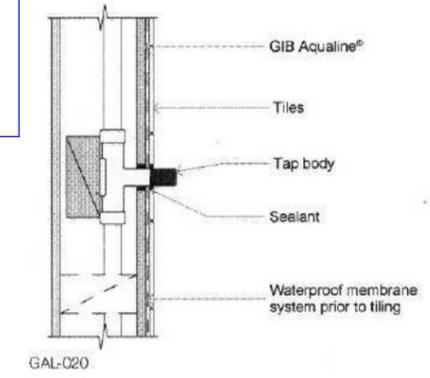
A: BATH LINING JUNCTION



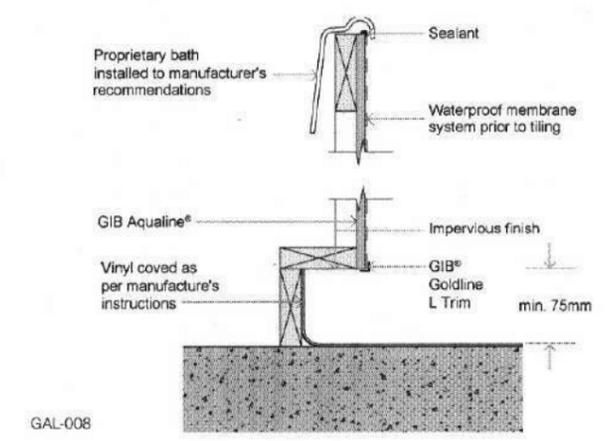
D: BATH LINING JUNCTION



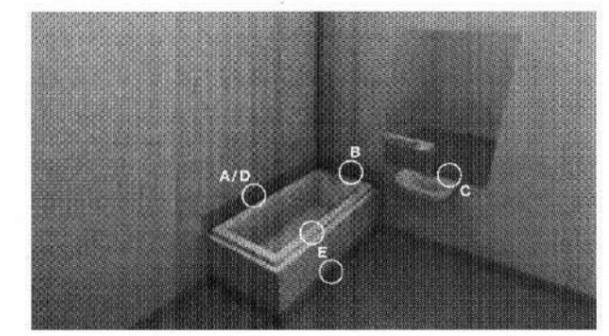
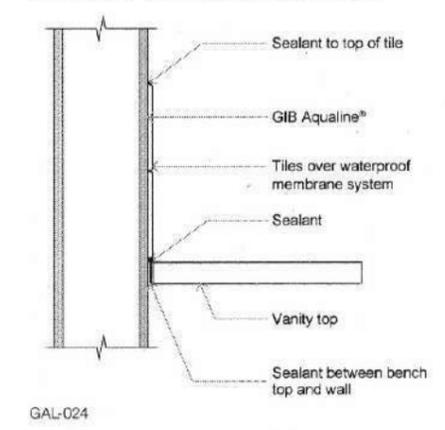
B: SEALING SEMI WET AREA PENETRATION



E: CRADLE VINYL LINING JUNCTION



C: VANITY TOP LINING JUNCTION



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# H1/AS1 ENERGY EFFICIENCY FORM

## JOB DETAILS

Name NEW HOUSE  
 Street and Number LOT 43 ANDERSON PARK  
 Lot and DP Number LOT 43  
 City/Town/District WAIKANAÉ

CLIMATE ZONE 1 2 **3** 4 5 6

### LOWER FLOOR

Floor Area	<u>EXCLUDING GARAGE</u>	<u>166.5 m<sup>2</sup></u>
Wall Area		<u>142.6 m<sup>2</sup></u>
Glazing Area		<u>54.1 m<sup>2</sup></u>
Skylights		<u>✓</u>
Glazing ≤ 30% Wall Area	<u>CALCULATION METHOD (SEE BELOW)</u>	<u>37.9%</u>

### UPPER FLOOR

Floor Area		<u>57 m<sup>2</sup></u>
Wall Area		<u>74.4 m<sup>2</sup></u>
Glazing Area		<u>13.5 m<sup>2</sup></u>
Skylights		<u>✓</u>
Glazing ≤ 30% Wall Area	<u>SCHEDULE METHOD</u>	<u>18.1%</u>

$$H_{ref} = \frac{A_{roof}}{R_{roof}} + \frac{A_{wall}}{R_{wall}} + \frac{A_{floor}}{R_{floor}} + \frac{A_{glazing}}{R_{glazing}} (30\%)$$

$$= \frac{166.5}{6.6} + \frac{88.5}{2.0} + \frac{166.5}{1.5} + \frac{42.8}{0.37} = 296.15$$

$$H_{prop} = \frac{A_{roof}}{R_{roof}} + \frac{A_{wall}}{R_{wall}} + \frac{A_{floor}}{R_{floor}} + \frac{A_{glazing}}{R_{glazing}}$$

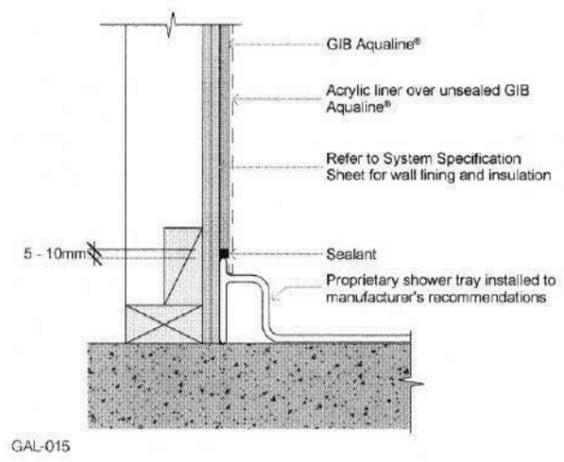
$$= \frac{166.5}{7.0} + \frac{88.5}{2.6} + \frac{166.5}{1.5} + \frac{54.1}{0.46} = 286.4$$

INSULATION FROM TABLE 1, H1/AS1 AS  $H_{prop} < H_{ref}$  it is compliant

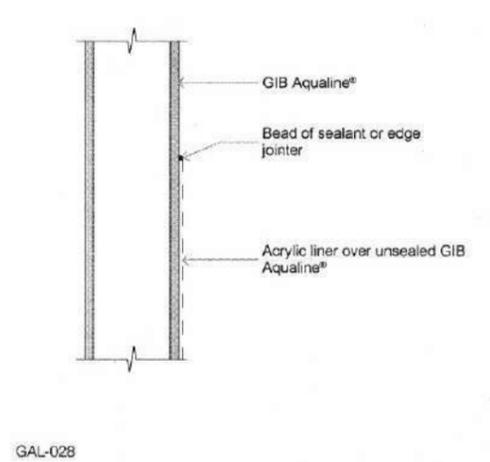
Roof	<u>CORRO ROOF ON TRUSSES</u>	<u>R7.0</u>
Wall	<u>SHADOWCLAD ON FRAMING</u>	<u>R2.6</u>
Floor	<u>FIRTH RIBRAFT SLAB</u>	<u>R1.5</u>
Windows	<u>DOUBLE GLAZED ALUMINIUM</u>	<u>R0.46</u>
Skylights	<u>N/A</u>	<u>✓</u>

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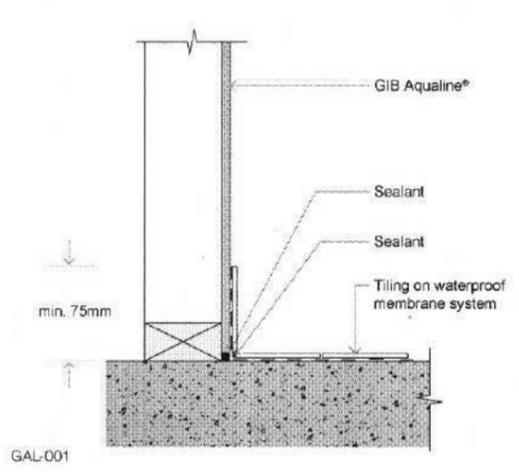
A: MOULDED SHOWER TRAY DOUBLE LINING JUNCTION



C: UNSEALED PLASTERBOARD LINING

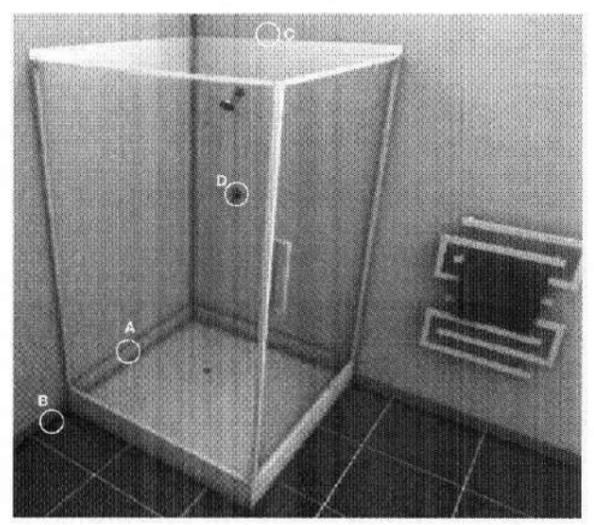


B: CERAMIC FLOOR SKIRTING LINING JUNCTION



D: SHOWER MIXER PENETRATION IN WET WALL LININGS

Refer to the shower mixer manufacturer for shower mixer installation detailing including the use of proprietary products to prevent water or moisture ingress behind the wet wall lining.



# E2/AS1: Building envelope risk matrix

## Job Details

Name NEW HOUSE  
 Street and Number LOT 43 ANDERSON PARK  
 Lot and DP Number LOT 43  
 City/Town/District WAIKANAHE

Table 1 from E2/AS1 Definitions of Risk

Risk factor	Risk	Detail
A: 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
B: Number of storeys	Low	One story
	Medium	Two storey in part
	High	Two storeys
	Very high	More than two storeys
C: 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)
D: 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)
E: 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)
F: 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

Notes: 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

Risk Factor	Risk Severity North Elevation NORTH - EAST								Sub totals for each risk factor
	Low	Score	Medium	Score	High	Score	Very High	Score	
Wind zone (per NZS 3604)	0		0		1	✓	2		1
Number of storeys	0		1		2	✓	4		2
Roof/wall intersection design	0		1	✓	3		5		1
Eaves width	0		1		2		5	✓	5
Envelope complexity	0	✓	1		3		6		0
Deck design	0	✓	2		4		6		0
Total risk score									9

Risk Factor	Risk Severity South Elevation NORTH - WEST								Sub totals for each risk factor
	Low	Score	Medium	Score	High	Score	Very High	Score	
Wind zone (per NZS 3604)	0		0		1	✓	2		1
Number of storeys	0	✓	1		2		4		0
Roof/wall intersection design	0		1		3	✓	5		1
Eaves width	0		1		2		5	✓	5
Envelope complexity	0	✓	1		3		6		0
Deck design	0	✓	2		4		6		0
Total risk score									7

Risk Factor	Risk Severity East Elevation SOUTH - EAST								Sub totals for each risk factor
	Low	Score	Medium	Score	High	Score	Very High	Score	
Wind zone (per NZS 3604)	0		0		1	✓	2		1
Number of storeys	0		1		2	✓	4		2
Roof/wall intersection design	0		1	✓	3		5		1
Eaves width	0		1		2		5	✓	5
Envelope complexity	0		1		3	✓	6		3
Deck design	0	✓	2		4		6		0
Total risk score									12

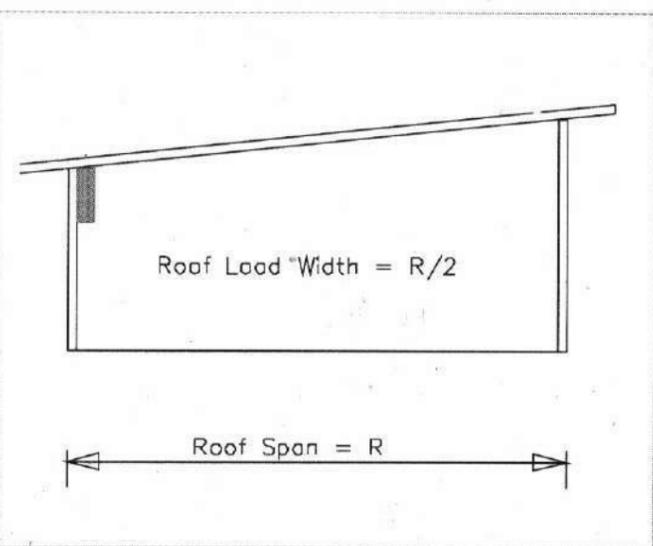
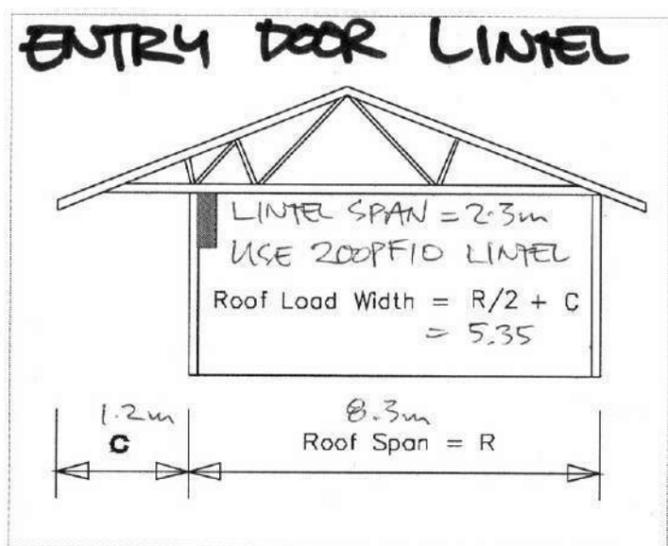
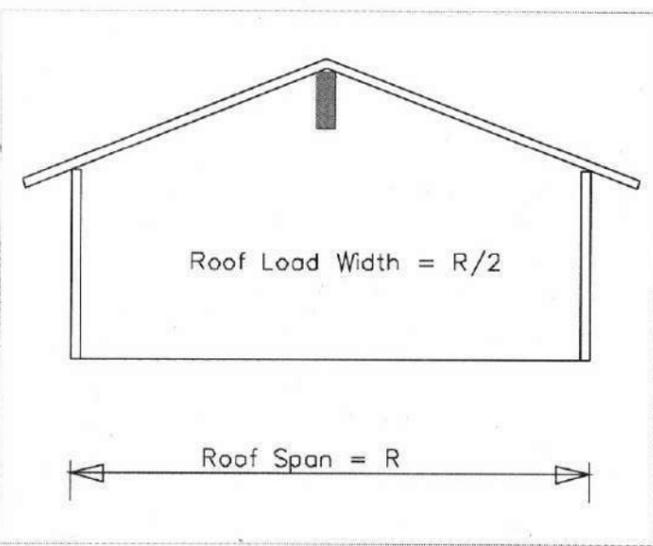
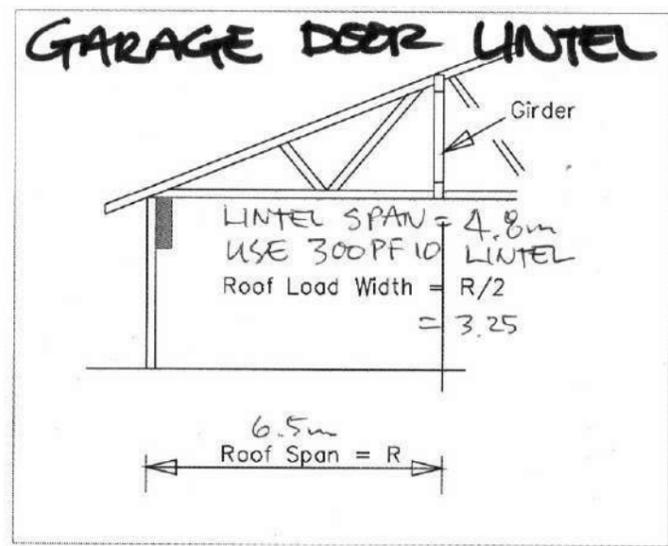
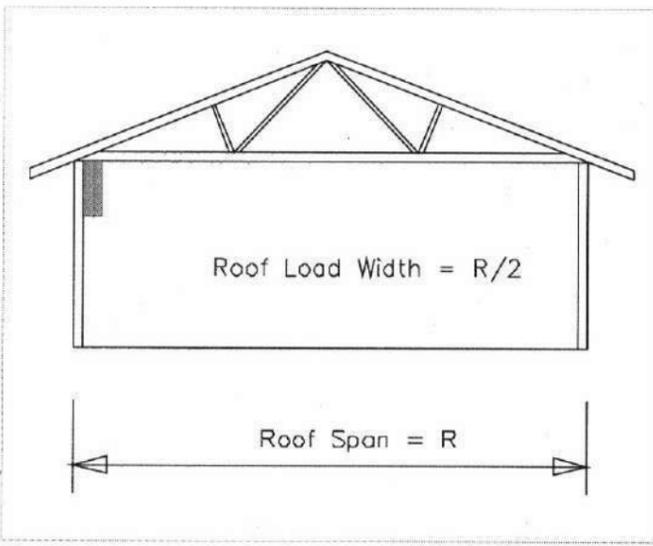
Risk Factor	Risk Severity West Elevation SOUTH - WEST								Sub totals for each risk factor
	Low	Score	Medium	Score	High	Score	Very High	Score	
Wind zone (per NZS 3604)	0		0		1	✓	2		1
Number of storeys	0		1		2	✓	4		2
Roof/wall intersection design	0		1		3	✓	5		1
Eaves width	0		1		2		5	✓	5
Envelope complexity	0	✓	1		3		6		0
Deck design	0	✓	2		4		6		0
Total risk score									9

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### Selected Cladding Resulting from Risk Assessment

	Risk Score from page 3	Cladding Selected from Table 3	Tick selected option	
			Direct Fixed	Drained cavity
N/E Elevation	9	SHADOWCLAD PLY OVER		✓
S/W Elevation	7	WATERGATE PLUS WALL WRAP		✓
S/E Elevation	12	(SOUTH-EAST WALL HAS B/B		✓
S/W Elevation	9	W/BOARD & MAXSTONE CLADDING)		✓

Roof Loads Only



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**GARAGE LINTEL**

Table 1: FLITCH BEAM supporting LIGHT ROOF 1.0kPa SNOW LOAD

PF Size	Maximum Lintel Span (m)											
	Roof Load Width (m)											
	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5
150PF6	3.21	2.98	2.76	2.59	2.44	2.31	2.21	2.11	2.03	1.96	1.89	1.83
200PF6	4.40	4.09	3.78	3.54	3.34	3.17	3.02	2.89	2.78	2.68	2.59	2.51
200PF8	4.62	4.44	4.24	3.97	3.74	3.55	3.38	3.24	3.11	3.00	2.90	2.80
200PF10	4.81	4.62	4.46	4.30	4.10	3.89	3.71	3.55	3.41	3.29	3.18	3.07
250PF6	5.23	5.02	4.81	4.50	4.24	4.03	3.84	3.67	3.53	3.40	3.29	3.18
250PF8	5.49	5.28	5.10	4.95	4.76	4.51	4.30	4.12	3.95	3.81	3.68	3.56
250PF10	5.72	5.50	5.31	5.16	5.02	4.90	4.72	4.52	4.34	4.18	4.04	3.91
300PF6	6.01	5.78	5.58	5.42	5.15	4.89	4.66	4.46	4.28	4.13	3.99	3.86
300PF8	6.31	6.07	5.87	5.69	5.54	5.41	5.22	5.00	4.80	4.62	4.47	4.32
GARAGE 300PF10	6.56	6.32	6.11	5.93	5.78	5.64	5.52	5.41	5.27	5.08	4.90	4.74

**ENTRY LINTEL**

Table 1: FLITCH BEAM supporting LIGHT ROOF 1.0kPa SNOW LOAD

PF Size	Maximum Lintel Span (m)											
	Roof Load Width (m)											
	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5
150PF6	3.21	2.98	2.76	2.59	2.44	2.31	2.21	2.11	2.03	1.96	1.89	1.83
200PF6	4.40	4.09	3.78	3.54	3.34	3.17	3.02	2.89	2.78	2.68	2.59	2.51
200PF8	4.62	4.44	4.24	3.97	3.74	3.55	3.38	3.24	3.11	3.00	2.90	2.80
ENTRY 200PF10	4.81	4.62	4.46	4.30	4.10	3.89	3.71	3.55	3.41	3.29	3.18	3.07
250PF6	5.23	5.02	4.81	4.50	4.24	4.03	3.84	3.67	3.53	3.40	3.29	3.18
250PF8	5.49	5.28	5.10	4.95	4.76	4.51	4.30	4.12	3.95	3.81	3.68	3.56
250PF10	5.72	5.50	5.31	5.16	5.02	4.90	4.72	4.52	4.34	4.18	4.04	3.91
300PF6	6.01	5.78	5.58	5.42	5.15	4.89	4.66	4.46	4.28	4.13	3.99	3.86
300PF8	6.31	6.07	5.87	5.69	5.54	5.41	5.22	5.00	4.80	4.62	4.47	4.32
300PF10	6.56	6.32	6.11	5.93	5.78	5.64	5.52	5.41	5.27	5.08	4.90	4.74

Pryda Flitch Beam Fixings

Typical Lintel Support

**FLITCH BEAM STANDARD SUPPORT** Consent Doc. Ref. L5

MP4R10 Knuckle Plate

MP4R5 & MP4R10 Knuckle Plates each side

MP4R5 & MP4R10 Knuckle Plates each side

For trimming studs see NZS3604:2011 clause 8.5.2. The above to be read in conjunction with "Timber Lintel - Fixing Schedule" in the Pryda Building Guide

pryda

Right Angle Beam Pocket (All Beam sizes)

**FLITCH BEAM - BEAM POCKET** Consent Doc. Ref. L6

MP6R10 Knuckle Plate

MP6R15 Knuckle Plate

2 x MP4R10 Knuckle Plate

pryda

Right Angle Cantilever Lintel

**FLITCH BEAM - RIGHT ANGLE CANTILEVER** Consent Doc. Ref. L7

MP4R10 Knuckle Plate on each side

2 x NPA100/190 if PF200 or greater  
Single NPA100/190 if PF150

2 x Multigrip (MG) if PF200 or greater.  
Single MG if PF150

pryda

Oblique Angle Cantilever Beam

**FLITCH BEAM - OBLIQUE ANGLE CANTILEVER** Consent Doc. Ref. L8

MP4R10 Knuckle Plate

2 x NPA 100/190 on each side of PF200 or greater. Single NPA 100/190 on each side if PF150

pryda

- Notes**
- Trimming and under studs in accordance with NZS3604:2011 Clause 8.5.2
  - All cantilever lintel supports to be double studs
  - The above assumes 90 x 45 wall framing

- Wall framing timber grade to be SG6 or better
- The L5 fixing to be read in conjunction with "Timber Lintel - Fixing Schedule" in the Pryda Building Guide
- For more information on Consent Documentation Reference see Pryda Building Guide

Roof/ Wall/ Floor Loads

**BDY JOIST OVER STAIR**

Roof Span =  $R = 6.0m$

Roof Load Width =  $R/2 = 3.0m$

LINTEL SPAN =  $3.15m$   
USE 200PF10 LINTEL

Floor Span =  $F = 2.1m$

Floor Load Width =  $F/2 = 1.05m$

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**STAIRS**

Table 7: LINTEL supporting FLOOR & 2.4 WALL, LIGHT & HEAVY ROOF, 1.0kPa SNOW LOAD

Lintel Type	Roof load width	LIGHT ROOF LINTEL SIZE supporting FLOOR, 2.4 WALL Maximum Lintel Span (m)					HEAVY ROOF LINTEL SIZE supporting FLOOR, 2.4 WALL Maximum Lintel Span (m)				
		Floor Load Width					Floor Load Width				
		2	2.5	3	3.5	4	2	2.5	3	3.5	4
	2	4.00	3.77	3.47	3.24	3.04	3.61	3.45	3.22	3.00	2.82
	2.5	3.90	3.65	3.38	3.16	2.98	3.52	3.31	3.10	2.92	2.75
	<b>3</b>	<b>3.79</b>	3.54	3.29	3.09	2.92	3.40	3.18	3.00	2.84	2.69
	3.5	3.69	0.00	0.00	0.00	0.00	3.27	3.07	2.90	2.76	2.63
	4	3.60	0.00	0.00	0.00	0.00	3.15	2.97	2.82	2.69	2.57
	4.5	3.52	0.00	0.00	0.00	0.00	3.04	2.88	2.74	2.62	2.51
	5	3.42	0.00	0.00	0.00	0.00	2.95	2.80	2.67	2.55	2.45
	5.5	3.33	0.00	0.00	0.00	0.00	2.86	2.72	2.60	2.49	2.40
	6	3.25	0.00	0.00	0.00	0.00	2.78	2.65	2.54	2.44	2.35
	6.5	3.17	0.00	0.00	0.00	0.00	2.70	2.58	2.48	2.39	2.30
	7	3.10	0.00	0.00	0.00	0.00	2.63	2.52	2.42	2.34	2.26
	7.5	3.03	0.00	0.00	0.00	0.00	2.56	2.46	2.37	2.29	2.22
	8	2.97	0.00	0.00	0.00	0.00	2.50	2.41	2.32	2.25	2.18

STAIRS

200PF10

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No.	AMENDMENT	NAME	DATE
A	DRAFT	PB	15/06
B	CONSENT SS4	PB	11/10

**NOTES**

REFER TO THE ONBOARD ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND DETAILS.  
DO NOT SCALE OFF THIS DRAWING

CHECK ALL DIMENSIONS ON SITE PRIOR TO FABRICATION

ALL WORKMANSHIP AND MATERIALS SHALL COMPLY WITH NZS3602 AND NZS3603. LIGHT TIMBER FRAME CONSTRUCTION SHALL BE IN ACCORDANCE WITH NZS3604.  
CHEMICAL PRESERVATION OF ROUND AND SAWN TIMBER SHALL BE IN ACCORDANCE WITH 3640

ALL SAWN AND GLUE LAMINATED TIMBER TO BE GRADE SG8 UNLESS NOTED OTHERWISE

ALL BOLTED CONNECTIONS TO HAVE 50x50x3 WASHERS WHERE IN CONTACT WITH TIMBER

PROVIDE MINIMUM 24 HOURS NOTICE FOR INSPECTIONS BY ENGINEER AT WHICH TIME ALL WORK TO BE INSPECTED SHALL BE COMPLETED

PROPRIETARY FIXINGS AND TIMBER CONNECTORS SHALL BE SELECTED IN ACCORDANCE WITH NZS3604:20211 SECTION 4-DURABILITY

**Base Consulting Engineers Limited**



279 Oxford Street  
P O Box 434  
Levin 5540

Telephone Levin 06-367 0088  
Paraparaumu 04-297 0088  
Mobile 027 44 44 080

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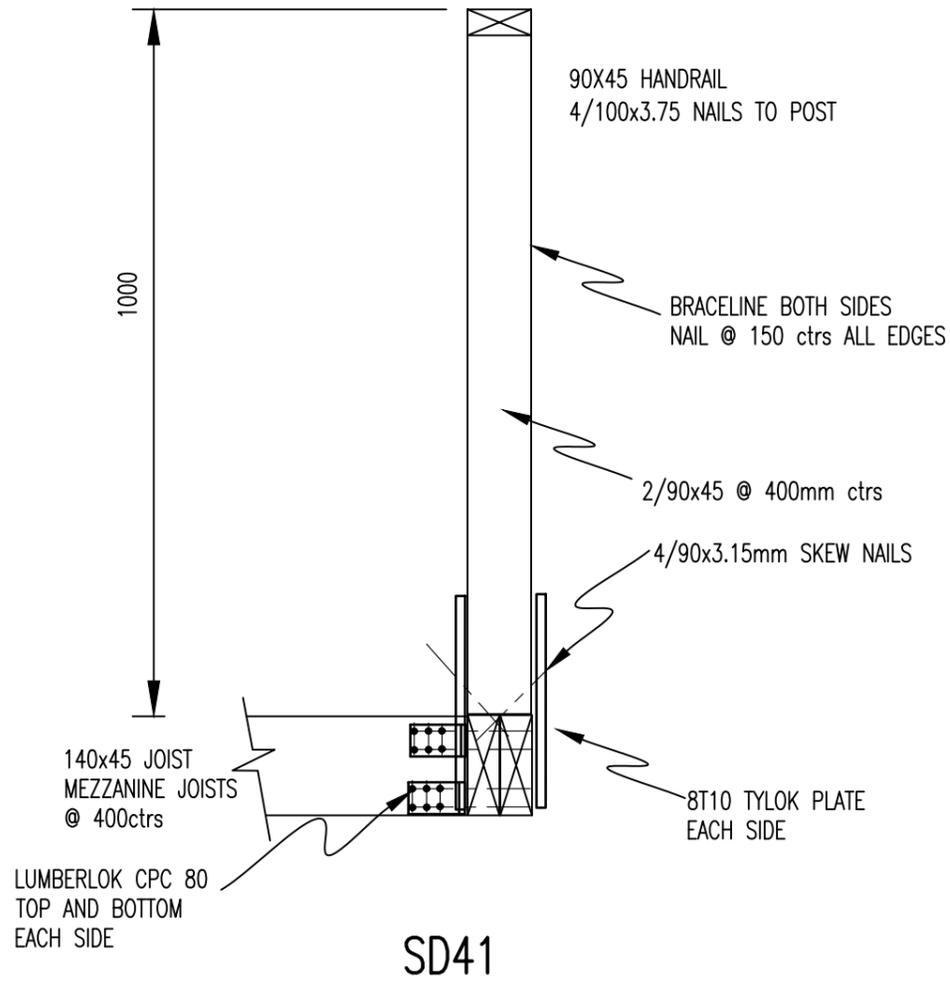
**STRUCTURAL DETAILS**

ATKINSON DWELLING  
Lot 43  
ANDERSON PARK  
WAIKANAE

SCALE  
AS SHOWN

	NAME	DATE	DRAWING NUMBER
FIELDWORK			23055 SS4
DESIGNED	PB	7/6/23	
DRAWN	PB	8/6/23	
CHECKED	PB	15/6/23	

SHEET 4 OF 4 SHEETS



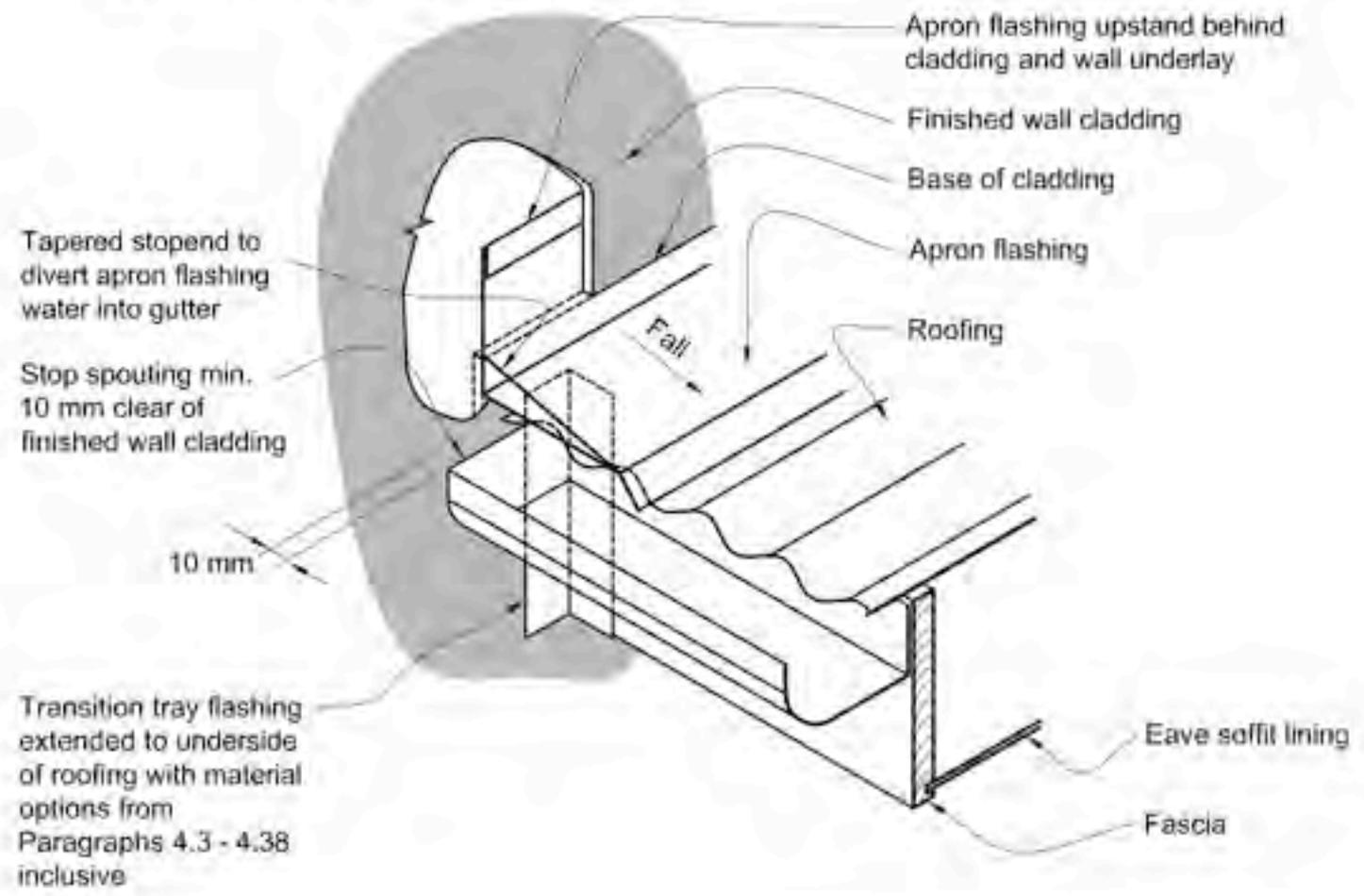
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EXTERNAL MOISTURE

Acceptable Solution E2/AS1

**Figure 8B: Gutter/wall junction**  
Paragraphs 5.1 and 5.2

- NOTE: (1) The upstand at the lower edge of the *apron flashing* may be preformed to a larger size and then trimmed on site to suit.
- (2) The *transition flashing* bridges gap at the end of the *fascia* to protect the *soffit framing*.
- (3) *Wall underlay* omitted for clarity.



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## Earth Fill and Site Suitability Report

110 Ngarara Road - Anderson Park Stage 2.

Anderson Park Trust c/o Leith Consulting Ltd

Document Number: 21852-RPT-G-002-A

Date: 24 August 2022

Prepared by

Emma Cody  
 Engineering Geologist  
 BSc, MSc, PhD, MEngNZ

Approved by

Martin Williams  
 Principal Geotechnical Engineer  
 MSc, CMEngNZ, CPEng

Consulting Civil, Structural, Environmental & Geotechnical Engineers

Directors: V.J. Anderson BE C&M • R.A. Puklowski NZCE (Civil) REA MEngNZ • C.F. Short BBS PG Dip Man • A.R. Wilton BE CMEngNZ CPEng IntPE DipMS

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### 1. Introduction

CGW has been engaged by Anderson Park Trust to provide geotechnical certification of earthfill and lot suitability relating to residential development at the Anderson Park (Phase 2) development, at 110 Ngarara Road, Waikanae, in accordance with NZS4431 'Code of Practice for Earth Fill - For Residential Development'.

This report is to be submitted to the Kapiti Coast District Council (KCDC). Our limitations are attached in Appendix A.

### 2. Site Description

The subdivision is located to the west of Ngarara Road, Waikanae as shown on Figure 1.



Figure 1: Proposed development with access from Ngarara Road (right).

Geotechnical investigations were carried out at the site by CGW, reference report 20363-RPTGEO-001-A, dated 24 July 2020.

Earthworks design and plans were prepared by Leith Consulting and subsequently modified by CGW, reference drawings 21852-DWG-C-03-01-D & 02-D attached in Appendix B.

In summary, the earthworks comprised the remodelling and compaction of 'site won' sands to generally reduce slopes to 1V:3H, infill hollows and provide buildable lot areas.

The earthworks contractor for the project is Goodmans Civil Limited.

### 3. Acceptance Criteria

#### 3.1 Fill Material

Earth fill must meet the requirements of NZS4431:1989/2022- Earth Fill for Residential Development. As part of the original CGW geotechnical investigation,

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samples of intended 'site won' sand were tested for particle size distribution, standard compaction (maximum dry density) and California Bearing Ratio (CBR).

The CGW testing indicated a standard maximum dry density (MDD) of 1.49 Mg/m<sup>3</sup> and a CBR of 11% (at Optimum Moisture Content – OMC) for the fine grained dune sands.

As part of the earthworks programme, Goodmans also undertook standard compaction tests (MATS Laboratory) which indicated maximum dry density (MDD) of 1.52 and 1.55 Mg/m<sup>3</sup>

Compaction, as specified by NZS4431:1989 must exceed 95% of MDD as determined by standard compaction laboratory testing. Therefore, a minimum target density of 95% x 1.52 Mg/m<sup>3</sup> was chosen.

Laboratory test results are attached in Appendix C.

### 3.1 Earthworks

Earthworks commenced on 14<sup>th</sup> February 2022, bulk earthworks were substantially completed by the end of May 2022. Third party laboratory and field testing was undertaken by MATS Limited, however Goodmans also undertook their own testing (calibrated to MATS) and supplied results to CGW.

During the earthworks CGW inspected the earthworks on the following occasions, Table 1. Earthworks monitoring was undertaken equivalent to 'Level 2' supervision (refer AS3798-2007, 'Guidelines on earthworks for commercial and residential developments').

**Table 1: Summary of CGW Site Inspections**

Visit Number	Date	Comments
1	19/1/2022	Initial site meeting regards earthworks & engineering
2	9/2/2022	Observed initial site stripping. Inducted onto site
3	16/2/2022	Observed ongoing earthworks
4	17/2/2022	Observed ongoing earthworks & met MATS
5	23/2/2022	Observed ongoing earthworks & observed Goodmans testing
6	7/3/2022	Observed ongoing earthworks
7	11/3/2022	Observed ongoing earthworks
8	25/5/2022	Observed ostensibly completed bulk earthworks

During the earthworks MATS visited the site on the following dates listed in Table 2 below, to undertake compliance testing following placement and compaction of earth fill. Testing comprised a combination of the Nuclear Densometer Method NZS

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4407:2015 and Scala Penetrometer testing in accordance with NZS 4402:1988 Test 6.5.2

**Table 2: Summary of TestLab Inspections**

Date	Comments
17/2/2022	Nuclear Density & Scala tests
22/2/2022	Nuclear Density & Scala tests
28/3/2022	Nuclear Density & Scala tests
6/4/2022	Nuclear Density & Scala tests

MATS and Goodmans field testing results are attached in Appendix D, along with a testing location plan prepared by CGW.

All field results achieved > 95% Standard MDD, consequently the filling was completed in accordance with NZS4431:1989 specification.

## 4. Foundations

### 4.1 Liquefaction

The risk and extent of damage from liquefaction has previously been assessed in our original report, reference report 20363-RPTGEO-001-A, dated 24 July 2020.

The MBIE Canterbury earthquakes guidance document 'Repairing and rebuilding houses affected by the Canterbury earthquakes' December 2012, Version 2, provides a useful benchmark in classifying the liquefaction risk to a property and is now being used across New Zealand following changes to the Building Code in November 2021. CGW used this guidance to assess the liquefaction risk to the site in our original assessment.

Since the original report, changes to the Building Code and geotechnical guidance, has required a reassessment of the original liquefaction (CPT) testing data.

Consequently, the data has been reassessed with peak ground acceleration (PGA) values and earthquake magnitudes determined following the guidelines in the Earthquake Geotechnical Practice Module 1 (November 2021 revision) for the Kapiti Coast as follows:

SLS: 0.13 g & Mw 6.5

ULS: 0.68 g & Mw 7.7

The MBIE Guidelines provide broad classifications of land for future land performance based on index values of expected settlements. Given in Table 3 below is a summary of expected future land performance criteria for the site based on

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MBIE Technical Category and our previous analysis of the deep geotechnical data collected from the site.

Table 3 - Expected Future Land Performance Categories							
Technical Category	Expected SLS Land Settlement (mm)		Expected ULS Land Settlement (mm)		Expected Global Lateral Movement (mm)		Expected ULS Lateral Stretch (mm)
TC1	0 -15	✓	0 – 25		Nil		Nil
TC2	0 – 50		0 – 100	✓	<300 (Minor to moderate)	✓	<50 (Minor) ✓
TC3	>50		>100		300 – 500 (Major)		0 – 200 (Minor to Moderate)

The results, especially considering the earthworks that have taken place and releveling of the site, indicate that a TC2 classification is still appropriate.

CPT locations are indicated on the post earthworks scale testing plans included in Appendix E.

Either TC2 compliant foundations as per the MBIE guidance (subject to other SED criteria such as slopes, retention etc.) or specific engineering design (SED) by a suitably qualified and experienced structural engineer to mitigate against liquefaction risk for a TC2 site are required.

#### 4.2 Specific Engineering Design

Due to the following factors all lots require lot specific engineering design (SED) of foundations, earthworks and retention.

- Liquefaction classification (Section 4.1);
- The sloping nature of many of the lots;
- The fact that a number of lots are a combination of cut & fill, with potential for differential settlements; and
- The potential lot specific earthworks/retention remodelling for construction.

A SED condition should be placed by consent notice on the titles established as part of the proposed subdivision, for all the lots. SED should be carried out by a suitably experienced Chartered Professional Engineer (CPEng).

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## 5. Post Earthworks Scala Testing

Following the completion of the earthworks, lot specific scala (dynamic cone penetrometer - DCP) testing has been carried out on all lots using a machine scala operated by Canterbury Geotest. Our design recommendations based on the post earthworks Scala testing are indicated in Table 4.

<b>Table 4: Summary of Recommendations</b>			
<b>Residential Lot Number</b>	<b>Estimated UBC (kPa) at shallow depth (@ 0.3m)</b>	<b>Cut/Fill</b>	<b>Recommendations and comment.</b>
1	300	Fill	Specific Engineering Design (SED)
2	300	Cut	Specific Engineering Design (SED)
3	200*	Cut/Fill	Specific Engineering Design (SED)
4	300	Cut	Specific Engineering Design (SED)
5	300	Cut	Specific Engineering Design (SED)
6	300	Cut	Specific Engineering Design (SED)
7	300	Cut	Specific Engineering Design (SED)
8	200	Cut	Specific Engineering Design (SED)
9	200	Cut	Specific Engineering Design (SED)
10	300	Cut (Fill on driveway)	Specific Engineering Design (SED)
11	300	Fill	Specific Engineering Design (SED)
12	200*	Cut/Fill	Specific Engineering Design (SED)
13	300	Cut	Specific Engineering Design (SED)
14	300	Cut	Specific Engineering Design (SED)
15	200*	Cut/Fill	Specific Engineering Design (SED)
16	200*	Cut Fill	Specific Engineering Design (SED)
17			Not tested ~ No Build Lot
18	200*	Cut/Fill	Specific Engineering Design (SED)
19	200	Fill	Specific Engineering Design (SED)

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<b>Table 4: Summary of Recommendations</b>			
<b>Residential Lot Number</b>	<b>Estimated UBC (kPa) at shallow depth (@ 0.3m)</b>	<b>Cut/Fill</b>	<b>Recommendations and comment.</b>
20	200	Fill	Specific Engineering Design (SED)
21	300	Fill	Specific Engineering Design (SED)
22	200*	Cut/Fill	Specific Engineering Design (SED)
23	200*	Cut/Fill	Specific Engineering Design (SED)
24	200*	Cut/Fill	Specific Engineering Design (SED)
25	200*	Cut/Fill	Specific Engineering Design (SED)
26	300	Cut	Specific Engineering Design (SED)
27	200	Cut	Specific Engineering Design (SED)
28	300	Fill	Specific Engineering Design (SED)
29	300	Fill	Specific Engineering Design (SED)
30	300	Fill	Specific Engineering Design (SED)
31	300	Fill	Specific Engineering Design (SED)
32	300	Fill	Specific Engineering Design (SED)
33	200*	Cut/Fill	Specific Engineering Design (SED)
34	200*	Cut/Fill	Specific Engineering Design (SED)
35	200*	Cut/Fill	Specific Engineering Design (SED)
36	300	Fill	Specific Engineering Design (SED)
37	200*	Cut/Fill	Specific Engineering Design (SED)
38	200	Fill	Specific Engineering Design (SED)
39	200	Fill	Specific Engineering Design (SED)
40	200*	Cut/Fill	Specific Engineering Design (SED)
41	200*	Cut/Fill	Specific Engineering Design (SED)

Table 4: Summary of Recommendations			
Residential Lot Number	Estimated UBC (kPa) at shallow depth (@ 0.3m)	Cut/Fill	Recommendations and comment.
42	200*	Cut/Fill	Specific Engineering Design (SED)
43	200*	Cut/Fill	Specific Engineering Design (SED)
44	200*	Cut/Fill	Specific Engineering Design (SED)
45	200*	Cut/Fill	Specific Engineering Design (SED)

- For Cut/Fill ... UBC of 200 kPa to allow for potential differentials

## 6. Site Suitability

As a result of our site observations and the testing recorded above we are satisfied (not to be construed as a guarantee), that the earth fill has been constructed in accordance with NZS4431 and is suitable for residential development. A Statement of Suitability of Earth Fill for Residential Development is provided in Appendix F.

We believe on reasonable ground (not be construed as a guarantee) that there is a suitable proposed building platform within the lots which meets the criteria of NZS 4431:1989 Earth Fill for residential development subject to the following:

- All lots require lot specific engineering design (SED) of foundations, earthworks and retention.

## 7. Consent Notice

A consent notice should be applied to all Lots consistent with the following.

"Lot specific foundation, earthworks and retention design should be carried out by a suitably experienced Chartered Professional Engineer (CPEng).

A suitably qualified professional should inspect foundation excavations and earthworks in order to verify the actual ground conditions meet the design requirements and the absence of unsuitable material."

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### **Appendix A: Limitations**

This report has been prepared solely for the benefit of our client, Anderson Park Trust, as per our brief and an agreed consultancy agreement. The reliance by any other parties on the information or opinions contained in this report shall, without our prior agreement in writing, be at such parties' sole risk.

The conclusions and recommendations contained within this report are based on the investigations as described in detail above. The nature and continuity of subsoil conditions are inferred and it must be appreciated that actual conditions could vary considerably. Defects and unforeseen ground conditions may remain undetected which might adversely affect the stability of the site and the recommendation made herein.

This report has been prepared solely to address the issues raised in our brief, and shall not be relied on for any other purpose.

Where we have provided comments on aesthetic issues these need to be confirmed by an architect or other expert in the field.

In the event the third party investigation data has been provided to us, the client acknowledges that we have placed reliance on this information to produce our report and CGW will accept no liability resulting from any errors or defect in the third party data provided to us.

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**Appendix B: Earthworks Plan**

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MAX FILL	6.6m
CUT VOLUME	34,500m <sup>3</sup>
FILL VOLUME	26,500m <sup>3</sup>
BALANCE	8,000m <sup>3</sup> (EXCESS CUT)

VOLUMES EXCLUDE A COMPACTION FACTOR ALLOWANCE (ESTIMATED AT 15%)



LOT 102  
DP 409302  
(Recreational Reserve)

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0	-7,000
1	-6,000
2	-5,000
3	-4,000
4	-3,000
5	-2,000
6	-1,000
7	0,000
8	1,000
9	2,000
10	3,000
11	4,000
12	5,000
13	6,000
14	7,000
15	8,000
16	9,000
17	10,000
18	100,000



LOT 2  
DP 500046  
(NO. 7)

LOT 1  
DP 500046  
(NO. 8)

LOT 3  
DP 426868  
(NO. 124)



**Appendix C: Laboratory Fill Testing Results**

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**CALIFORNIA BEARING RATIO (REMOULDED)  
TEST REPORT**



Project : Testing for CGW Consulting  
 Location : 110 Ngarara Road, Waikanae  
 Client : CGW Consulting Engineers  
 Contractor : Unknown  
 Sampled by : Unknown  
 Date sampled : Rec'd 10/07/2020  
 Sampling method : Test Pit/Bulk Sample  
 Sample description : SAND fine grain (Dune Sand)  
 Sample condition : As rec'd (dry)

Report No : 522900/1387  
 Lab Ref No : 2-20/180  
 Client Ref No : 20363

Test Results		
Sample ID		2-20/180
Location		TP02 (0.6 - 1.0 m) & TP07 (0.7 - 1.1 m) Combined
Sample condition at compaction		Wetted up (OWC)
Sample condition at test		Soaked
Sample description		SAND fine grain (Dune Sand)
Curing time	days	n/a
Soaking time	days	4
Passing 19mm	%	100
Surcharge mass	kg	4
Lime additive	%	n/a
Cement additive	%	
Swell	%	0.0
Penetration	mm	5.0
Water content as received	%	10.3
Water content as compacted	%	23.8
Water content after testing	%	25.5
Dry density	t/m <sup>3</sup>	1.50
<b>CBR value</b>	%	11

Test Methods	Notes
CBR NZS : 4407 : 2015 : 3.15	Material Used Whole Soil
Water Content NZS : 4407 : 2015 : 3.1	Rate of penetration 1mm/min
Compaction NZS : 4402 : 1986 : 4.1.1 (Standard)	Sample tested at just below OWC to limit oversaturation of sample.

Date tested : 17 - 22/07/2020  
 Date reported : 23/07/2020

Sampling is not covered by IANZ Accreditation. Results apply only to sample tested.  
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IANZ Approved Signatory

Designation : Laboratory Technician (Z. Francis)  
 Date : 23/07/2020



All tests reported herein have been performed in accordance with the laboratory's scope of accreditation

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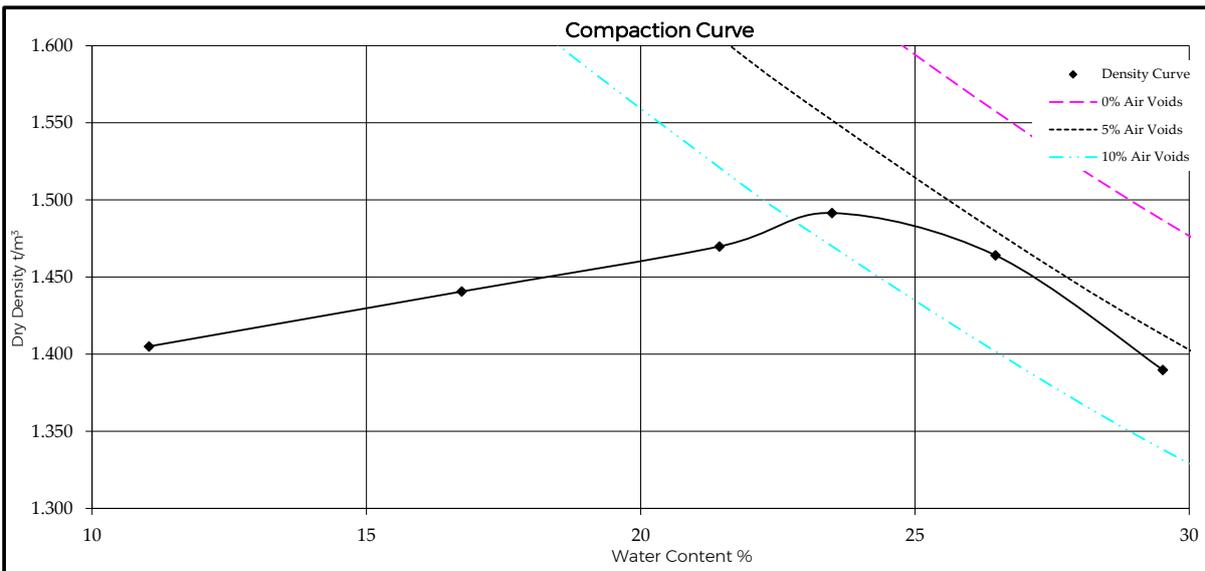
DRY DENSITY / WATER CONTENT RELATIONSHIP  
COMPACTION



Project : Testing for CGW Consulting Engineers  
Location : 110 Ngarara Road, Waikanae  
Client : CGW Consulting Engineers  
Contractor : Unknown  
Sampled by : Unknown  
Date sampled : Rec'd 10/07/2020  
Sampling method : Test Pit/Bulk Sample  
Sample description : SAND fine grain (Dune Sand)  
Sample condition : As rec'd (dry)  
Solid density : 2.65 t/m<sup>3</sup> (Assumed)  
Source : TP02, TP07 (0.6-1.0, 0.7 - 1.1 m)

Project No : 522900/1387  
Lab Ref No : 2-20/180  
Client Ref No : 20363

Test Results							
Maximum dry density	1.49	t/m <sup>3</sup>	Natural water content	11.0	%		
Optimum water content	26	%	Fraction tested	Whole			
Sample ID							
Bulk density	t/m <sup>3</sup>	1.560	1.682	1.785	1.842	1.852	1.800
Water content	%	11.0	16.7	21.4	23.5	26.5	29.5
Dry density	t/m <sup>3</sup>	1.405	1.441	1.470	1.492	1.464	1.390
Sample condition							



Test Methods	Notes
Compaction NZS 4402 : 1986 Test 4.11 / 4.12	All information supplied by Client Sample was flooded to obtain points above MDD

Date tested : 15-20/07/2020  
Date reported : 23/07/2020

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IANZ Approved Signatory

Designation : Senior Civil Engineering Technician (D. Pollard)  
Date : 23/07/2020



All tests reported herein have been performed in accordance with the laboratory's scope of accreditation

**PARTICLE SIZE ANALYSIS (WET SIEVE METHOD)**  
**TEST REPORT**



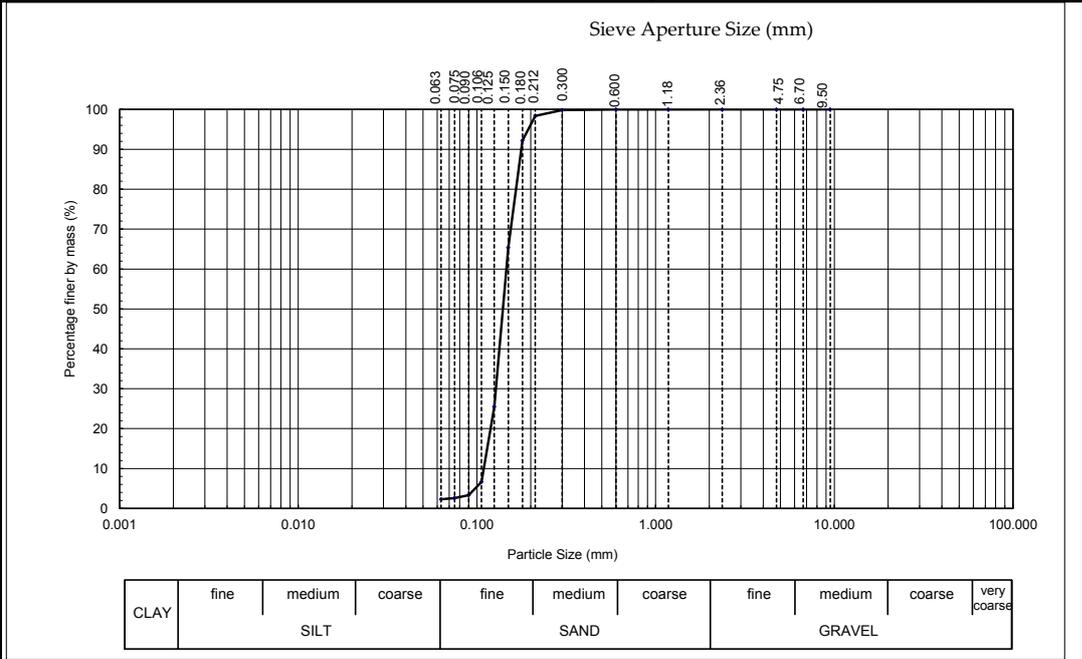
Project : **Testing for CGW Consulting Engineers**  
 Location : **110 Ngarara Road, Waikanae**  
 Client : **CGW Consulting Engineers**  
 Client/Sample Ref : **20363**  
 Contractor : **Unknown**  
 Sampled by : **Unknown**  
 Date received : **10/07/20**  
 Sampling method : **Test Pit/Bulk Sample**  
 Sample condition : **As received (dry)**  
 Sample description : **SAND fine grain (Dune sand)**  
 Solid Particle Density (t/m<sup>3</sup>): **n/a**  
 Water Content (as received): **10.3 %**

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**Kapiti Coast District Council**  
**13/09/2023**

Report No: **522900/1387**  
 Lab Ref No: **2-20/180**  
 Client Ref: **20363**

Sieve Analysis						Hydrometer Analysis			
Sieve Size (mm)	Passing (%)	Sieve Size (mm)	Passing (%)	Sieve Size (mm)	Passing (%)	Particle Size (mm)	Passing (%)	Particle Size (mm)	Passing (%)
9.50	100	0.600	100	0.125	25	--	--	--	--
6.70	100	0.300	100	0.106	7	--	--	--	--
4.75	100	0.212	98	0.090	3	--	--	--	--
2.36	100	0.180	92	0.075	3	--	--	--	--
1.18	100	0.150	65	0.063	2	--	--	--	--

**Note:** "--" denotes sieve not used and/or hydrometer analysis not tested



Test Methods	Notes
Particle Size Analysis: NZS 4402:1986: Test 2.8.1 (Wet Sieve Method)	Uncalibrated sieve sizes(mm): 0.212, 0.180, 0.125, 0.106, 0.090
	<b>All information supplied by Client</b>

Sampling is not covered by IANZ Accreditation. Results apply only to sample tested.

Date Tested: 15-16/07/2020      This report may only be reproduced in full  
 Date Reported: 23/07/2020

**IANZ Approved Signatory**  
 Designation : *Senior Civil Engineering Technician (D. Pollard)*  
 Date : 23/07/2020



All tests reported herein have been performed in accordance with the laboratory's scope of accreditation

**TEST REPORT**  
**DRY DENSITY / WATER CONTENT RELATIONSHIP**  
 NZ Standard compaction

Test method NZS 4402 : 1986 Test 4.1.1

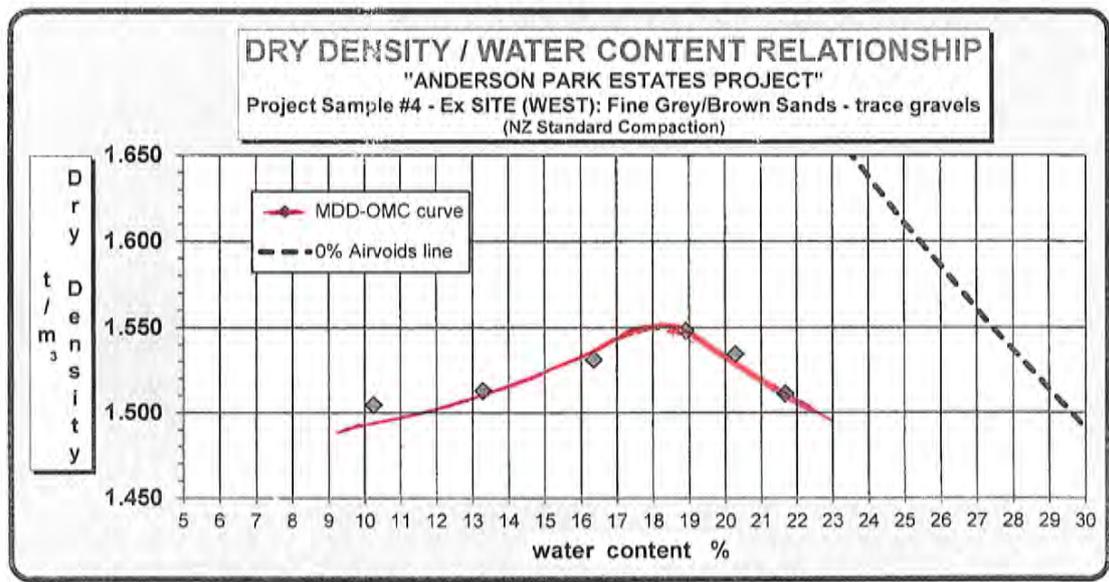
Lab. Ref. No. MA 22/ 055A

<b>JOB: ANDERSON PARK ESTATES PROJECT</b>		<b>ORDER NO:</b> Dave Morgan
<b>Source:</b> SITE: WEST Area		<b>Date Received:</b> 3-Feb-22
<b>Material:</b> Site Sands	<b>Sample:</b> Project Sample #4	<b>Sampled by:</b> unknown
<b>Description:</b> Fine Grey/Brown Sands - trace gravels		<b>Sampling Method:</b> unknown
		<b>Date tested:</b> 03 to 09 February 2022
<b>Client:</b> GOODMANS CONTRACTORS LTD		
4 Anne St		
WAIKANAЕ 5036		
<b>Attn:</b> Mr. Dave Morgan		
		<b>OVERSIZE:</b> 0.0 %

**MAXIMUM DRY DENSITY: 1.55 t/m<sup>3</sup>**  
**at OPTIMUM. WATER CONT.: 18.0 %**  
*Solid Density of soil particles (assumed): 2.70 t/m<sup>3</sup>*

**General Data:**

**Moulds used:** Standard moulds, permitting a 19 mm maximum particle size.  
**Material used:** Fraction passing the 19 mm BS sieve, with the OVERSIZE excluded.  
**History of sample:** Subsamples taken from the bulk material (in natural state) as sampled.  
**Curing:** Moisturized subsamples allowed to cure for 24 hrs in sealed plastic bags.  
 Reduced moisture subsamples air-dried back.



**Comments:** This Report may not be reproduced except in full.

SAMPLING NOT performed by this LABORATORY  
 Moisture Content as supplied: 5.5 %

Data input: Ron Myers  
 Checked: *[Signature]*

Approved: *[Signature]*  
 Harald Harsveldt (DIRECTOR)  
 Date: 9 February 2022

**BC230628**  
**Received by**  
**Kapiti Coast District Council**  
**13/09/2023**

**TEST REPORT**  
**DRY DENSITY / WATER CONTENT RELATIONSHIP**  
 NZ Standard compaction

Test method NZS 4402 : 1986 Test 4.1.1

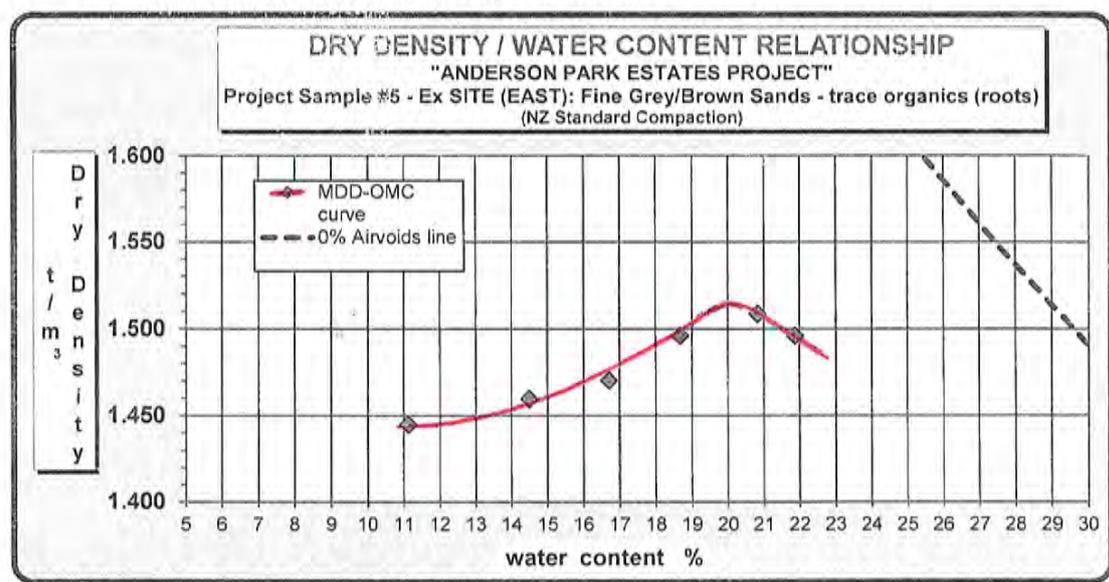
Lab. Ref. No. **MA 22/ 055B**

<b>JOB: ANDERSON PARK ESTATES PROJECT</b>		<b>ORDER NO:</b> Dave Morgan
<b>Source:</b> SITE: EAST Area		<b>Date Received:</b> 3-Feb-22
<b>Material:</b> Site Sands	<b>Sample:</b> Project Sample #5	<b>Sampled by:</b> unknown
<b>Description:</b> Fine Grey/Brown Sands - trace organics (roots)		<b>Sampling Method:</b> unknown
		<b>Date tested:</b> 03 to 09 February 2022
<b>Client: GOODMANS CONTRACTORS LTD</b>		
4 Anne St WAIKANA E 5036		
<b>Attn:</b> Mr. Dave Morgan		<b>OVERSIZE:</b> 0.0 %

**MAXIMUM DRY DENSITY: 1.52 t/m<sup>3</sup>**  
**at OPTIMUM. WATER CONT.: 20.0 %**  
*Solid Density of soil particles (assumed): 2.70 t/m<sup>3</sup>*

**General Data:**

<b>Moulds used:</b>	Standard moulds, permitting a 19 mm maximum particle size.
<b>Material used:</b>	Fraction passing the 19 mm BS sieve, with the OVERSIZE excluded.
<b>History of sample:</b>	Subsamples taken from the bulk material (in natural state) as sampled.
<b>Curing:</b>	Moisturized subsamples allowed to cure for 24 hrs in sealed plastic bags. Reduced moisture subsamples air-dried back.



**Comments:** This Report may not be reproduced except in full.

SAMPLING NOT performed by this LABORATORY  
 Moisture Content as supplied: 6.4 %

Data input: Rod Myers  
 Checked: *[Signature]*

Approved: *[Signature]*  
 Harald Harsveldt (DIRECTOR)  
 Date: 9-Feb-22

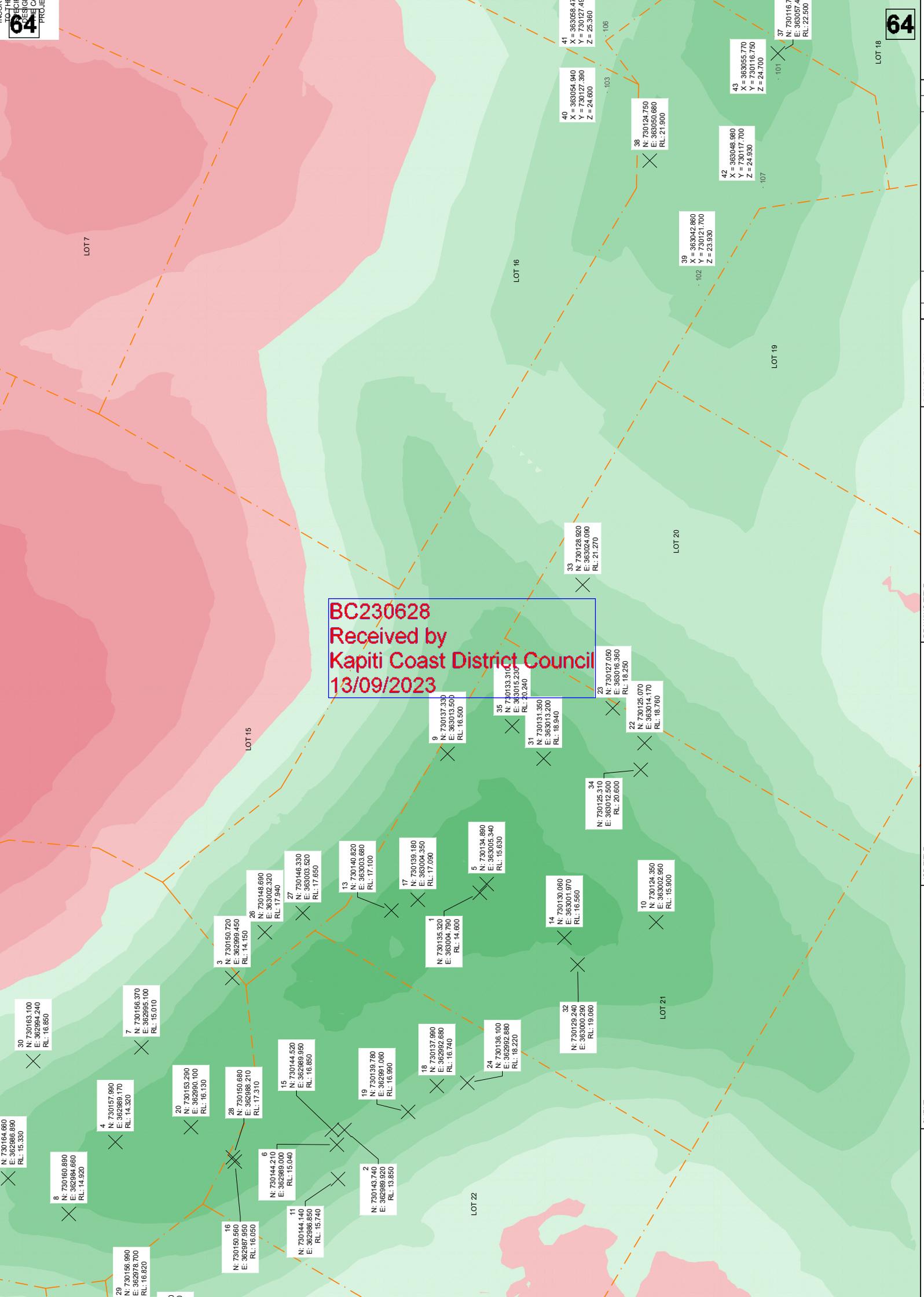
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**Appendix D: Field Testing Results and Location Plan**

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30  
N: 730163.100  
E: 362974.240  
RL: 16.850

7  
N: 730156.370  
E: 362995.100  
RL: 15.010

1  
N: 730157.690  
E: 362989.170  
RL: 14.320

20  
N: 730153.290  
E: 362990.100  
RL: 16.130

28  
N: 730150.680  
E: 362988.210  
RL: 17.310

15  
N: 730144.520  
E: 362989.950  
RL: 16.850

19  
N: 730139.780  
E: 362991.060  
RL: 16.990

18  
N: 730137.990  
E: 362992.680  
RL: 16.740

24  
N: 730136.100  
E: 362992.890  
RL: 18.220

32  
N: 730129.240  
E: 363000.660  
RL: 19.080

8  
N: 730160.890  
E: 362984.660  
RL: 14.920

16  
N: 730150.560  
E: 362978.700  
RL: 16.820

11  
N: 730144.140  
E: 362986.850  
RL: 15.740

2  
N: 730143.740  
E: 362991.920  
RL: 13.850

6  
N: 730144.210  
E: 362989.000  
RL: 15.040

13  
N: 730140.820  
E: 363003.680  
RL: 17.100

17  
N: 730139.180  
E: 363004.350  
RL: 17.090

5  
N: 730134.890  
E: 363005.340  
RL: 15.630

1  
N: 730135.320  
E: 363004.790  
RL: 14.600

14  
N: 730130.060  
E: 363001.970  
RL: 16.560

10  
N: 730124.360  
E: 363002.960  
RL: 15.900

9  
N: 730137.230  
E: 363013.500  
RL: 16.500

35  
N: 730133.310  
E: 363015.230  
RL: 20.240

31  
N: 730131.350  
E: 363013.200  
RL: 18.940

23  
N: 730127.050  
E: 363016.360  
RL: 18.250

22  
N: 730125.070  
E: 363014.170  
RL: 18.160

34  
N: 730125.310  
E: 363012.500  
RL: 20.600

33  
N: 730128.920  
E: 363024.090  
RL: 21.270

21  
N: 730124.750  
E: 363050.880  
RL: 21.900

42  
X: 363048.980  
Y: 730117.700  
Z: 24.930

39  
X: 363042.860  
Y: 730121.700  
Z: 23.930

43  
X: 363055.770  
Y: 730116.750  
Z: 24.700

40  
X: 363054.040  
Y: 730127.390  
Z: 24.800

41  
X: 363059.470  
Y: 730127.450  
Z: 25.960

37  
N: 730116.770  
E: 363057.470  
RL: 22.500

LOT 7

LOT 16

LOT 19

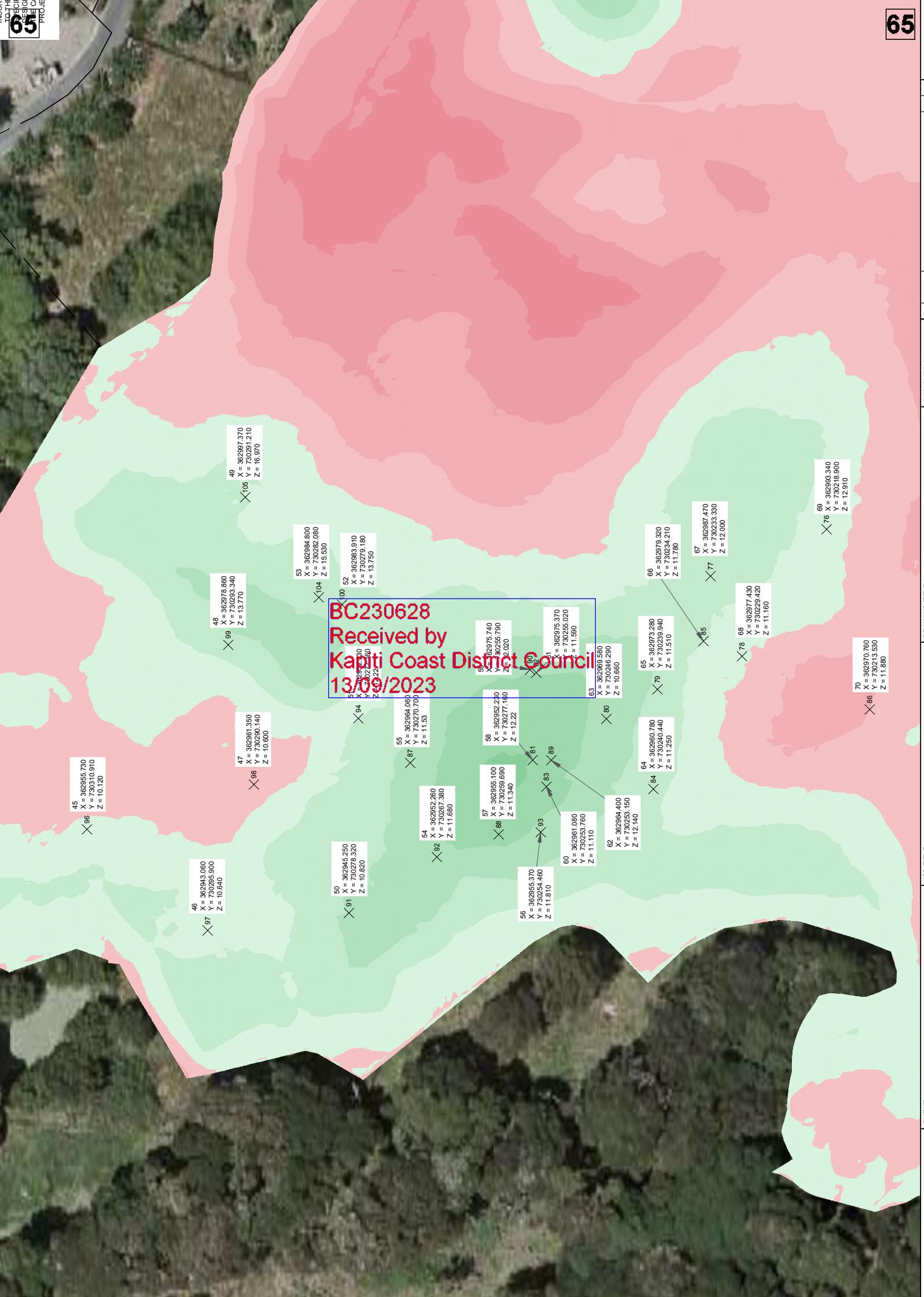
LOT 20

LOT 15

LOT 21

LOT 22

LOT 18



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**Geotechnical / Quality Test Sheet**



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Thursday, 17 February 2022

<b>Time of test</b>	3.00pm
<b>Weather</b>	Fine/Sunny
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.					
	1	2	3	4		
<b>Location - N</b>	730135.32	730143.74	730150.72	730157.99		
<b>Location - E</b>	363004.79	362989.92	362999.45	362989.17		
<b>Elevation (m)</b>	14.6	13.85	14.15	14.32		
<b>Mode and Depth (mm)</b>	300	300	300	300		
<b>DD (Kg/m<sup>3</sup>)</b>	1536	1551	1586	1619		
<b>WD (Kg/m<sup>3</sup>)</b>	1652	1690	1707	1759		
<b>Moisture (Kg/m<sup>3</sup>)</b>		139.2	120.8	140.6		
<b>MC (%)</b>	7.6	9	7.6	8.7		
<b>Opt DD (Kg/m<sup>3</sup>)</b>						
<b>Opt MC (%)</b>						
<b>% Comp</b>	101	102	104.4	106.5		

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### Geotechnical / Quality Test Sheet



Client	Anderson Park Estates Limited
Location	110 Ngarara Road, Waikanae
Project	Anderson Park Stage 2 Subdivision
Job No.	21019
Date	Friday 18 February 2022

Time of test	14.00
Weather	Sunny
NDM No.	
Calibration Expiry Date	
Tested by	

	Test ID No.					
	5	6	7	8		
Location - N	730134.89	730144.21	730156.37	730160.89		
Location - E	363005.34	362989	362995.1	362984.66		
Elevation (m)	15.63	15.04	15.01	14.92		
Mode and Depth (mm)	300mm					
DD (Kg/m <sup>3</sup> )	1605	1549	1575	1598		
WD (Kg/m <sup>3</sup> )	1710	1668	1702	1713		
Moisture (Kg/m <sup>3</sup> )	105.2	119.4	127.9	115.1		
MC (%)	6.6	7.7	8.1	7.2		
Opt DD (Kg/m <sup>3</sup> )						
Opt MC (%)						
% Comp	105.6	101.9	103.6	105.1		

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### Geotechnical / Quality Test Sheet



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Monday 21 February 2022

<b>Time of test</b>	2.00pm
<b>Weather</b>	
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.					
	9	10	11	12		
<b>Location - N</b>	730137.33	730124.35	730144.14	730164.66		
<b>Location - E</b>	363013.5	363002.95	362986.85	362986.89		
<b>Elevation (m)</b>	16.5	15.9	15.74	15.33		
<b>Mode and Depth (mm)</b>	300					
<b>DD (Kg/m<sup>3</sup>)</b>	1583	1584	1557	1586		
<b>WD (Kg/m<sup>3</sup>)</b>	1725	1761	1723	1735		
<b>Moisture (Kg/m<sup>3</sup>)</b>	142.1	177.5	166.2	149.1		
<b>MC (%)</b>	9	11.2	10.7	9.4		
<b>Opt DD (Kg/m<sup>3</sup>)</b>						
<b>Opt MC (%)</b>						
<b>% Comp</b>	104.2	104.2	102.4	104.3		

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### Geotechnical / Quality Test Sheet



Client	Anderson Park Estates Limited
Location	110 Ngarara Road, Waikanae
Project	Anderson Park Stage 2 Subdivision
Job No.	21019
Date	Tuesday 22 February 2022

Time of test	4.00pm
Weather	Sunny
NDM No.	38479
Calibration Expiry Date	28 July 2022
Tested by	Pete Brain

	Test ID No.					
	13	14	15	16		
Location - N	730140.82	730130.06	730144.52	730150.56		
Location - E	363003.68	363001.97	362989.95	362987.95		
Elevation (m)	17.1	16.56	16.85	16.05		
Mode and Depth (mm)	300mm					
DD (Kg/m <sup>3</sup> )	1557	1621	1574	1574		
WD (Kg/m <sup>3</sup> )	1699	1723	1710	1703		
Moisture (Kg/m <sup>3</sup> )						
MC (%)	9.1	6.4	8.6	8.2		
Opt DD (Kg/m <sup>3</sup> )						
Opt MC (%)						
% Comp	102.4	106.6	103.6	103.5		

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**Geotechnical / Quality Test Sheet**



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Wednesday 23 February 2022

<b>Time of test</b>	2.00pm
<b>Weather</b>	sunny
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.					
	17	18	19	20	21	
<b>Location - N</b>	730139.18	730137.99	730139.78	730153.29	730154.26	
<b>Location - E</b>	363004.35	362992.68	362991.06	362990.1	362975.89	
<b>Elevation (m)</b>	17.09	16.74	16.99	16.13	16.32	
<b>Mode and Depth (mm)</b>	300mm					
<b>DD (Kg/m<sup>3</sup>)</b>	1557	1502	1605	1596	1542	
<b>WD (Kg/m<sup>3</sup>)</b>	1687	1661	1733	1728	1666	
<b>Moisture (Kg/m<sup>3</sup>)</b>	130.3	158.3	127.5	131.7	124.7	
<b>MC (%)</b>	8.4	10.5	7.9	8.3	8.1	
<b>Opt DD (Kg/m<sup>3</sup>)</b>						
<b>Opt MC (%)</b>						
<b>% Comp</b>	102.4	98.8	105.6	105	101.4	

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**Geotechnical / Quality Test Sheet**



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Friday 25 February 2022

<b>Time of test</b>	10.00am
<b>Weather</b>	
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.					
	22	23	24	25	26	27
<b>Location - N</b>	730125.07	730127.05	730136.1	730133.58	730148.69	730146.33
<b>Location - E</b>	363014.17	363016.36	362992.88	362995.35	363002.32	3630003.52
<b>Elevation (m)</b>	18.76	18.25	18.22	17.87	17.94	17.65
<b>Mode and Depth (mm)</b>	300mm					
<b>DD (Kg/m<sup>3</sup>)</b>	1549	1576	1568	1543	1544	1535
<b>WD (Kg/m<sup>3</sup>)</b>	1676	1697	1697	1662	1656	1681
<b>Moisture (Kg/m<sup>3</sup>)</b>	127.5	120.5	128.9	119.1	112.1	145.7
<b>MC (%)</b>	8.2	7.6	8.2	7.7	7.3	9.5
<b>Opt DD (Kg/m<sup>3</sup>)</b>						
<b>Opt MC (%)</b>						
<b>% Comp</b>	101.9	103.7	103.2	101.5	101.6	101

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**Geotechnical / Quality Test Sheet**



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Friday 25 February 2022

<b>Time of test</b>	11.15
<b>Weather</b>	
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.				
	28				
<b>Location - N</b>	730150.68				
<b>Location - E</b>	362988.21				
<b>Elevation (m)</b>	17.31				
<b>Mode and Depth (mm)</b>	300mm				
<b>DD (Kg/m<sup>3</sup>)</b>	1600				
<b>WD (Kg/m<sup>3</sup>)</b>	1720				
<b>Moisture (Kg/m<sup>3</sup>)</b>	120.5				
<b>MC (%)</b>	7.5				
<b>Opt DD (Kg/m<sup>3</sup>)</b>					
<b>Opt MC (%)</b>					
<b>% Comp</b>	105.3				

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**Geotechnical / Quality Test Sheet**



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Friday 25 February 2022

<b>Time of test</b>	2.00pm
<b>Weather</b>	
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.				
	29	30	31	32	
<b>Location - N</b>	730156.99	730163.1			
<b>Location - E</b>	362978.7	362994.24			
<b>Elevation (m)</b>	16.82	16.85			
<b>Mode and Depth (mm)</b>	300mm				
<b>DD (Kg/m<sup>3</sup>)</b>	1576	1565			
<b>WD (Kg/m<sup>3</sup>)</b>	1691	1702			
<b>Moisture (Kg/m<sup>3</sup>)</b>	114.9	137.3			
<b>MC (%)</b>	7.3	8.8			
<b>Opt DD (Kg/m<sup>3</sup>)</b>					
<b>Opt MC (%)</b>					
<b>% Comp</b>	103.7	103			

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**Geotechnical / Quality Test Sheet**



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Wednesday 2nd March

<b>Time of test</b>	2.00pm
<b>Weather</b>	Sunny /dry
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.				
	31	32			
<b>Location - N</b>	730131.35	730129.24			
<b>Location - E</b>	363013.2	363000.29			
<b>Elevation (m)</b>	18.94	19.06			
<b>Mode and Depth (mm)</b>	300mm				
<b>DD (Kg/m<sup>3</sup>)</b>	1598	1596			
<b>WD (Kg/m<sup>3</sup>)</b>	1709	1719			
<b>Moisture (Kg/m<sup>3</sup>)</b>	110.7	123.3			
<b>MC (%)</b>	6.9	7.7			
<b>Opt DD (Kg/m<sup>3</sup>)</b>					
<b>Opt MC (%)</b>					
<b>% Comp</b>	105.2	105			

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**Geotechnical / Quality Test Sheet**



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Friday 4 March 2022

<b>Time of test</b>	2.00pm
<b>Weather</b>	Fine/Sunny
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.					
	33	34	35			
<b>Location - N</b>	730128.92	730125.31	730133.31			
<b>Location - E</b>	363024.09	363012.5	363015.23			
<b>Elevation (m)</b>	21.27	20.6	20.24			
<b>Mode and Depth (mm)</b>	300mm					
<b>DD (Kg/m<sup>3</sup>)</b>	1606	1480	1594			
<b>WD (Kg/m<sup>3</sup>)</b>	1739	1627	1687			
<b>Moisture (Kg/m<sup>3</sup>)</b>	133.3	147.4	92.6			
<b>MC (%)</b>	8.3	10	5.8			
<b>Opt DD (Kg/m<sup>3</sup>)</b>						
<b>Opt MC (%)</b>						
<b>% Comp</b>	105.6	97.3	104.9			

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## Geotechnical / Quality Test Sheet



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Monday 7 March 2022

Mike's Logger

<b>Time of test</b>	4.00pm
<b>Weather</b>	Fine/Sunny
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.					
	36	37	38			
<b>Location - N</b>	730118.43	730116.78	730124.75			
<b>Location - E</b>	363063.4	363057.4	363050.68			
<b>Elevation (m)</b>	21.5	22.5	21.9			
<b>Mode and Depth (mm)</b>	300mm					
<b>DD (Kg/m<sup>3</sup>)</b>	1526	1514	1495			
<b>WD (Kg/m<sup>3</sup>)</b>	1650	1621	1614			
<b>Moisture (Kg/m<sup>3</sup>)</b>	123.9	107	119.7			
<b>MC (%)</b>	8.1	7.1	8			
<b>Opt DD (Kg/m<sup>3</sup>)</b>						
<b>Opt MC (%)</b>						
<b>% Comp</b>	100.4	99.6	98.3			

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**Geotechnical / Quality Test Sheet**



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Tuesday 8 March 2022

<b>Time of test</b>	
<b>Weather</b>	Fine/Sunny
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.					
	39	40	41			
<b>Location - N</b>	730116.09	730115.29	730124.56			
<b>Location - E</b>	363066.42	363051.4	363049.61			
<b>Elevation (m)</b>	22.28	22.87	23.1			
<b>Mode and Depth (mm)</b>	300mm					
<b>DD (Kg/m<sup>3</sup>)</b>	1592	1600	1577			
<b>WD (Kg/m<sup>3</sup>)</b>	1732	1731	1706			
<b>Moisture (Kg/m<sup>3</sup>)</b>	140.8	131	129.6			
<b>MC (%)</b>	8.8	8.2	8.2			
<b>Opt DD (Kg/m<sup>3</sup>)</b>						
<b>Opt MC (%)</b>						
<b>% Comp</b>	104.7	105.2	103.7			

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**Geotechnical / Quality Test Sheet**



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Monday 14 March 2022

<b>Time of test</b>	4.00pm
<b>Weather</b>	Fine/Sunny
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.				
	42				
<b>Location - N</b>	730256.9				
<b>Location - E</b>	363065.84				
<b>Elevation (m)</b>	20.5				
<b>Mode and Depth (mm)</b>	300mm				
<b>DD (Kg/m<sup>3</sup>)</b>	1522				
<b>WD (Kg/m<sup>3</sup>)</b>	1619				
<b>Moisture (Kg/m<sup>3</sup>)</b>	96.5				
<b>MC (%)</b>	6.3				
<b>Opt DD (Kg/m<sup>3</sup>)</b>					
<b>Opt MC (%)</b>					
<b>% Comp</b>	100.1				

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**Geotechnical / Quality Test Sheet**



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Tuesday 15 March 2022

<b>Time of test</b>	9.00am
<b>Weather</b>	Fine/Sunny
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.					
	43	44	45			
<b>Location - N</b>	730205.28	730196.91	730185.92			
<b>Location - E</b>	363152.34	363160.47	363157.9			
<b>Elevation (m)</b>	12.3	12.78	13.37			
<b>Mode and Depth (mm)</b>	300mm					
<b>DD (Kg/m<sup>3</sup>)</b>	1540	1509	1556			
<b>WD (Kg/m<sup>3</sup>)</b>	1640	1613	1657			
<b>Moisture (Kg/m<sup>3</sup>)</b>	100.9	103.8	100.9			
<b>MC (%)</b>	6.6	6.9	6.5			
<b>Opt DD (Kg/m<sup>3</sup>)</b>						
<b>Opt MC (%)</b>						
<b>% Comp</b>	101.3	99.3	102.4			

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**Geotechnical / Quality Test Sheet**



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Tuesday 15 March 2022

<b>Time of test</b>	1.00pm
<b>Weather</b>	Fine/Sunny
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.					
	46	47	48			
<b>Location - N</b>	730217.5	730199.03	730185.72			
<b>Location - E</b>	363144.42	363158.43	363159.66			
<b>Elevation (m)</b>	11.93	12.61	13.36			
<b>Mode and Depth (mm)</b>	300mm					
<b>DD (Kg/m<sup>3</sup>)</b>	1569	1501	1544			
<b>WD (Kg/m<sup>3</sup>)</b>	1669	1627	1660			
<b>Moisture (Kg/m<sup>3</sup>)</b>	99.4	125.6	115.4			
<b>MC (%)</b>	6.3	8.4	7.5			
<b>Opt DD (Kg/m<sup>3</sup>)</b>						
<b>Opt MC (%)</b>						
<b>% Comp</b>	103.2	98.8	101.6			

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**Geotechnical / Quality Test Sheet**



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Tuesday 15 March 2022

<b>Time of test</b>	5.15pm
<b>Weather</b>	Fine/Sunny
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.					
	49	50	51			
<b>Location - N</b>	730213.86	730198.38	730184.63			
<b>Location - E</b>	363146.69	363155.11	363159.14			
<b>Elevation (m)</b>	12.54	13.12	13.57			
<b>Mode and Depth (mm)</b>	300mm					
<b>DD (Kg/m<sup>3</sup>)</b>	1593	1630	1533			
<b>WD (Kg/m<sup>3</sup>)</b>	1681	1753	1724			
<b>Moisture (Kg/m<sup>3</sup>)</b>	87.8	105.2	170.5			
<b>MC (%)</b>	5.5	6.5	11			
<b>Opt DD (Kg/m<sup>3</sup>)</b>						
<b>Opt MC (%)</b>						
<b>% Comp</b>	104.8	107.2	102.2			

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### Geotechnical / Quality Test Sheet



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Wednesday 16 March 2022

<b>Time of test</b>	10.00am
<b>Weather</b>	Fine/Sunny
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.				
	52	53			
<b>Location - N</b>	730208.64	730192.42			
<b>Location - E</b>	363150.48	363158.39			
<b>Elevation (m)</b>	13.26	13.82			
<b>Mode and Depth (mm)</b>	300mm				
<b>DD (Kg/m<sup>3</sup>)</b>	1588	1603			
<b>WD (Kg/m<sup>3</sup>)</b>	1706	1712			
<b>Moisture (Kg/m<sup>3</sup>)</b>	118.3	108.1			
<b>MC (%)</b>	7.4	6.7			
<b>Opt DD (Kg/m<sup>3</sup>)</b>					
<b>Opt MC (%)</b>					
<b>% Comp</b>	104.5	105.5			

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## Geotechnical / Quality Test Sheet



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Wednesday 16 March 2022

<b>Time of test</b>	2.00pm
<b>Weather</b>	Fine/Sunny
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.					
	54	55	56			
<b>Location - N</b>	730213.21	730198.23	730179.53			
<b>Location - E</b>	363141.53	363149.48	363155.94			
<b>Elevation (m)</b>	13.89	14.27	14.58			
<b>Mode and Depth (mm)</b>	300mm					
<b>DD (Kg/m<sup>3</sup>)</b>	1555	1573	1566			
<b>WD (Kg/m<sup>3</sup>)</b>	1650	1664	1664			
<b>Moisture (Kg/m<sup>3</sup>)</b>	95.1	98	98			
<b>MC (%)</b>	6.1	6.2	6.3			
<b>Opt DD (Kg/m<sup>3</sup>)</b>						
<b>Opt MC (%)</b>						
<b>% Comp</b>	102.3	103.5	103			

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### Geotechnical / Quality Test Sheet



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Thursday 17 March 2022

<b>Time of test</b>	9.45am
<b>Weather</b>	Fine/Sunny
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.					
	57	58	59	60		
<b>Location - N</b>	730212.06	730199.8	730198.52	730188.86		
<b>Location - E</b>	363152.45	363147.76	363157.41	363165.26		
<b>Elevation (m)</b>	14.17	14.61	15.13	15.09		
<b>Mode and Depth (mm)</b>	300mm					
<b>DD (Kg/m<sup>3</sup>)</b>	1560	1516	1573	1592		
<b>WD (Kg/m<sup>3</sup>)</b>	1668	1629	1684	1682		
<b>Moisture (Kg/m<sup>3</sup>)</b>	108.1	112.5	111	90.7		
<b>MC (%)</b>	6.9	7.4	7.1	5.7		
<b>Opt DD (Kg/m<sup>3</sup>)</b>						
<b>Opt MC (%)</b>						
<b>% Comp</b>	102.6	99.8	103.5	104.7		

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### Geotechnical / Quality Test Sheet



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Friday 18 March 2022

<b>Time of test</b>	10.00am
<b>Weather</b>	Fine
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.					
	61	62	63	64		
<b>Location - N</b>	730221.79	730203.56	730201.59	730187.03		
<b>Location - E</b>	363139.63	363144.39	363159.32	363158.49		
<b>Elevation (m)</b>	14.56	15.45	15.2	15.6		
<b>Mode and Depth (mm)</b>	300mm					
<b>DD (Kg/m<sup>3</sup>)</b>	1577	1565	1586	1574		
<b>WD (Kg/m<sup>3</sup>)</b>	1676	1674	1695	1684		
<b>Moisture (Kg/m<sup>3</sup>)</b>	99.4	109.6	109.6	109.6		
<b>MC (%)</b>	6.3	7	6.9	7		
<b>Opt DD (Kg/m<sup>3</sup>)</b>						
<b>Opt MC (%)</b>						
<b>% Comp</b>	103.7	102.9	104.3	103.6		

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### Geotechnical / Quality Test Sheet



Client	Anderson Park Estates Limited
Location	110 Ngarara Road, Waikanae
Project	Anderson Park Stage 2 Subdivision
Job No.	21019
Date	Friday 18 March 2022

Time of test	2.00pm
Weather	Fine
NDM No.	38479
Calibration Expiry Date	28.07.2022
Tested by	Pete Brain

	Test ID No.					
	65	66	67			
Location - N	730221.66	730210.81	730189.25			
Location - E	363142.53	363153.35	363156.9			
Elevation (m)	15	15.22	15.89			
Mode and Depth (mm)	NDM Spike broke					
DD (Kg/m <sup>3</sup> )						
WD (Kg/m <sup>3</sup> )						
Moisture (Kg/m <sup>3</sup> )						
MC (%)						
Opt DD (Kg/m <sup>3</sup> )						
Opt MC (%)						
% Comp						

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### Geotechnical / Quality Test Sheet



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Tuesday 22 March 2022

<b>Time of test</b>	3.15pm
<b>Weather</b>	Sunny
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.					
	68	69	70	71		
<b>Location - N</b>	730230.12	730213.85	730190.61	730188.08		
<b>Location - E</b>	363131.78	363149.18	363155	363157.4		
<b>Elevation (m)</b>	14.54	15.35	15.9	16.52		
<b>Mode and Depth (mm)</b>	300mm					
<b>DD (Kg/m<sup>3</sup>)</b>	1607	1637	1596	1580		
<b>WD (Kg/m<sup>3</sup>)</b>	1728	1747	1715	1677		
<b>Moisture (Kg/m<sup>3</sup>)</b>	120.3	110.2	118.9	97.2		
<b>MC (%)</b>	7.5	6.7	7.4	6.2		
<b>Opt DD (Kg/m<sup>3</sup>)</b>						
<b>Opt MC (%)</b>						
<b>% Comp</b>	105.7	107.7	105	104		

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**Geotechnical / Quality Test Sheet**



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Friday 25 March 2022

<b>Time of test</b>	2.00pm
<b>Weather</b>	Overcast
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.					
	72	73	74	75		
<b>Location - N</b>	730254.79	730242.96	730231.36	730227.18		
<b>Location - E</b>	362962.18	362964.7	362963.77	362954.6		
<b>Elevation (m)</b>	10.02	10.35	10.87	10.7		
<b>Mode and Depth (mm)</b>	300mm					
<b>DD (Kg/m<sup>3</sup>)</b>	1620	1580	1536	1499		
<b>WD (Kg/m<sup>3</sup>)</b>	1743	1710	1616	1694		
<b>Moisture (Kg/m<sup>3</sup>)</b>	123.2	130.4	79.9	195.3		
<b>MC (%)</b>	7.6	8.3	5.2	13		
<b>Opt DD (Kg/m<sup>3</sup>)</b>						
<b>Opt MC (%)</b>						
<b>% Comp</b>	106.6	103.9	101.1	98.6		

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### Geotechnical / Quality Test Sheet



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Monday 28 March 2022

<b>Time of test</b>	9.00am
<b>Weather</b>	Sunny
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.					
	76	77	78	79		
<b>Location - N</b>	730218.9	730233.33	730229.42	730239.94		
<b>Location - E</b>	362993.34	362987.47	362977.43	362973.28		
<b>Elevation (m)</b>	12.91	12	11.16	11.51		
<b>Mode and Depth (mm)</b>	300mm					
<b>DD (Kg/m<sup>3</sup>)</b>	1570	1617	1520	1508		
<b>WD (Kg/m<sup>3</sup>)</b>	1739	1777	1638	1618		
<b>Moisture (Kg/m<sup>3</sup>)</b>	169.9	158.5	132.3	110.2		
<b>MC (%)</b>	10.2	9.9	8.7	7.3		
<b>Opt DD (Kg/m<sup>3</sup>)</b>						
<b>Opt MC (%)</b>						
<b>% Comp</b>	103.3	106.4	100.5	99.2		

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**Geotechnical / Quality Test Sheet**



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Tuesday 29 March 2022

<b>Time of test</b>	2.30pm
<b>Weather</b>	Sunny
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.				
	80	81			
<b>Location - N</b>	730246.29	730255.46			
<b>Location - E</b>	362969.58	362964.41			
<b>Elevation (m)</b>	10.66	10.29			
<b>Mode and Depth (mm)</b>	300mm				
<b>DD (Kg/m<sup>3</sup>)</b>	1588	1623			
<b>WD (Kg/m<sup>3</sup>)</b>	1813	1758			
<b>Moisture (Kg/m<sup>3</sup>)</b>	225.4	135.7			
<b>MC (%)</b>	14.2	8.4			
<b>Opt DD (Kg/m<sup>3</sup>)</b>					
<b>Opt MC (%)</b>					
<b>% Comp</b>	104.5	106.8			

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**Geotechnical / Quality Test Sheet**



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Wednesday 30 March 2022

<b>Time of test</b>	2.00pm
<b>Weather</b>	Fine
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.					
	82	83	84	85	86	
<b>Location - N</b>	730255.02	730253.76	730240.44	730234.21	730213.53	
<b>Location - E</b>	362975.37	362961.08	362960.78	362979.32	362970.76	
<b>Elevation (m)</b>	11.59	11.11	11.25	11.78	11.88	
<b>Mode and Depth (mm)</b>	300mm					
<b>DD (Kg/m<sup>3</sup>)</b>	1576	1596	1610	1622	1543	
<b>WD (Kg/m<sup>3</sup>)</b>	1676	1679	1728	1716	1638	
<b>Moisture (Kg/m<sup>3</sup>)</b>	100.1	83	118.6	94.4	94.4	
<b>MC (%)</b>	6.3	5.2	7.4	5.8	6.1	
<b>Opt DD (Kg/m<sup>3</sup>)</b>						
<b>Opt MC (%)</b>						
<b>% Comp</b>	103.7	105	105.9	106.7	101.5	

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### Geotechnical / Quality Test Sheet



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Tuesday 5th April 2022

<b>Time of test</b>	2.45pm
<b>Weather</b>	Overcast
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.					
	87	88	89	90		
<b>Location - N</b>	730270.7	730259.69	730253.15	730255.79		
<b>Location - E</b>	362964.06	362955.1	362964.4	362975.74		
<b>Elevation (m)</b>	11.53	11.34	12.14	12.02		
<b>Mode and Depth (mm)</b>	300mm					
<b>DD (Kg/m<sup>3</sup>)</b>	1557	1591	1517	1559		
<b>WD (Kg/m<sup>3</sup>)</b>	1664	1688	1634	1669		
<b>Moisture (Kg/m<sup>3</sup>)</b>	107.5	97.1	116.5	110.1		
<b>MC (%)</b>	6.9	6.1	7.7	7.1		
<b>Opt DD (Kg/m<sup>3</sup>)</b>						
<b>Opt MC (%)</b>						
<b>% Comp</b>	102.4	104.6	99.8	102.6		

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**Geotechnical / Quality Test Sheet**



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Monday 11th April 2022

<b>Time of test</b>	2.30pm
<b>Weather</b>	Overcast
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.					
	91	92	93	94		
<b>Location - N</b>	730278.32	730267.38	730254.46	730277.16		
<b>Location - E</b>	362945.25	362952.26	362955.37	362969.64		
<b>Elevation (m)</b>	10.82	11.68	11.81	12.22		
<b>Mode and Depth (mm)</b>	300					
<b>DD (Kg/m<sup>3</sup>)</b>	1596	1583	1574	1578		
<b>WD (Kg/m<sup>3</sup>)</b>	1694	1686	1736	1714		
<b>Moisture (Kg/m<sup>3</sup>)</b>	98.2	103.8	161.4	136.1		
<b>MC (%)</b>	6.2	6.6	10.3	8.6		
<b>Opt DD (Kg/m<sup>3</sup>)</b>						
<b>Opt MC (%)</b>						
<b>% Comp</b>	105	104.1	103.6	103.8		

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 District  
 Council  
 13/09/2023

**Geotechnical / Quality Test Sheet**



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Monday 2nd May 2022

<b>Time of test</b>	10.30am
<b>Weather</b>	Overcast/drizzle
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.					
	95	96	97	98	99	100
<b>Location - N</b>	730326.12	730310.91	730295.9	730290.14	730293.34	730279.18
<b>Location - E</b>	362952.23	362955.73	362943.06	362961.35	362978.86	362983.91
<b>Elevation (m)</b>	10.03	10.12	10.64	10.6	13.77	13.75
<b>Mode and Depth (mm)</b>	300mm					
<b>DD (Kg/m<sup>3</sup>)</b>	1603	1560	1653	1510	1639	1570
<b>WD (Kg/m<sup>3</sup>)</b>	1692	1682	1748	1578	1786	1716
<b>Moisture (Kg/m<sup>3</sup>)</b>	89	122.4	94.6	68.1	147.5	146.1
<b>MC (%)</b>	5.6	7.8	5.7	4.5	9	9.3
<b>Opt DD (Kg/m<sup>3</sup>)</b>						
<b>Opt MC (%)</b>						
<b>% Comp</b>	105.5	102.6	108.8	99.3	107.8	103.3

BC230628  
 Received  
 by  
 Kapiti  
 Coast  
 District  
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 13/09/2023

**Geotechnical / Quality Test Sheet**



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Tuesday 10th May 2022

<b>Time of test</b>	1.15pm
<b>Weather</b>	
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.					
	101	102	103			
<b>Location - N</b>	730116.75	730121.7	730127.39			
<b>Location - E</b>	363055.77	363042.86	363054.94			
<b>Elevation (m)</b>	24.7	23.93	24.6			
<b>Mode and Depth (mm)</b>	300					
<b>DD (Kg/m<sup>3</sup>)</b>	1606	1637	1549			
<b>WD (Kg/m<sup>3</sup>)</b>	1720	1895	1728			
<b>Moisture (Kg/m<sup>3</sup>)</b>	121.8	257.5	178.3			
<b>MC (%)</b>	7.6	15.7	11.5			
<b>Opt DD (Kg/m<sup>3</sup>)</b>						
<b>Opt MC (%)</b>						
<b>% Comp</b>	105.7	107.7	101.9			

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**Geotechnical / Quality Test Sheet**



<b>Client</b>	Anderson Park Estates Limited
<b>Location</b>	110 Ngarara Road, Waikanae
<b>Project</b>	Anderson Park Stage 2 Subdivision
<b>Job No.</b>	21019
<b>Date</b>	Wednesday 18th May 2022

<b>Time of test</b>	11.00am
<b>Weather</b>	Fine
<b>NDM No.</b>	38479
<b>Calibration Expiry Date</b>	28.07.2022
<b>Tested by</b>	Pete Brain

	Test ID No.					
	104	105	106	107		
<b>Location - N</b>	730282.08	730291.21	730127.49	730117.7		
<b>Location - E</b>	362984.8	362997.37	363058.47	363048.98		
<b>Elevation (m)</b>	15.53	16.97	25.36	24.93		
<b>Mode and Depth (mm)</b>	300mm					
<b>DD (Kg/m<sup>3</sup>)</b>	1529	1553	1532	1592		
<b>WD (Kg/m<sup>3</sup>)</b>	1746	1678	1752	1760		
<b>Moisture (Kg/m<sup>3</sup>)</b>	216.5	125.1	220.7	167.3		
<b>MC (%)</b>	14.2	8.1	14.4	10.5		
<b>Opt DD (Kg/m<sup>3</sup>)</b>						
<b>Opt MC (%)</b>						
<b>% Comp</b>	100.6	102.2	100.8	104.8		