

Statutory Forms

- **Inspection List – By Council**
- **Building Consent Form (Form 5) – By Council**
- **Code Compliance Application (Form 6) – By Council**
- **Installation & PS3 Forms – By Council**
- **Application Form**
- **LBP Design Certificates**
- **Certificate of Title or Sales & Purchase Agreement**
- **PIM, Resource Consent – By Council**

**AS BUILT TRUSS LAYOUT
REQUIRED - This must be received by the Building Unit AT
LEAST 10 WORKING DAYS PRIOR to the Structure
Pre-Roof Pre-Wrap inspection.**

Truss "As-Build" designs may be sent to
Buildinginfo@wmk.govt.nz

PLEASE NOTE

- Although your Consent documentation states 24 hours notice is required, it is not always possible to carry out an inspection within the 24 hour period.
- It is important that you book your inspection at least 2-3 days in advance.
- Delays in your building project may occur if we are unable to carry out an inspection at short notice, particularly for concrete pours.
- If an inspection of the building works is not carried out in accordance with the Inspection Schedule it could affect the issue of the Code Compliance Certificate.

To book inspections ring WDC on
03 311 8240

All inspections are subject to a separate charge.

All reinspections will be charged and recorded separately even if other inspections are carried out on the same day.

Using engineers & other professionals

If an engineer has been engaged to carry out various site inspections you will need to provide copies of his/her site notices to us and a producer statement, call a PS4 from the engineer confirming the building elements designed and inspected by the engineer were completed in accordance with the approved design.

Confirmation of installation of products

We require producer statements, warranties & installation certificates from various installers as a way of confirming products have been installed in accordance with the manufacturers recommendations. These are commonly required for exterior claddings, wet area tanking, membrane roofing/decking and effluent fields. Energy certificates such as electrical and gas certificates need to be provided too. You will need to provide these to us prior to the issue of the Code Compliance Certificate.

Applying for a Code Compliance Certificate (CCC)

When you are satisfied your project is complete please book a final inspection and complete and sign *form 6*, application for Code Compliance Certificate which is enclosed with your building consent. You should have this form ready for when the building Inspector arrives on site to carry out the final inspection. Please note all outstanding monies must be paid prior to the issue of the CCC.

Grant or refuse a CCC

We are required to make a decision to grant or refuse a CCC if you do not formally apply for a CCC within two years of the granting of the building consent. The date your consent was granted is the date at the bottom of the building consent form. If you do not apply for a CCC or arrange an extension with us within the two year period we will carry out an inspection of the building work. An additional fee applies for this work.

Lapsing of your consent

Your building consent will lapse if building work has not commenced within 12 months after the date of issue of the building consent. The issue date is deemed to be the day you paid for the consent. In saying this we understand things don't always run smoothly so you can apply for a time extension which we may agree to. A fee applies for this.

Site Inspection Sheet

Application

Cameron Finlayson	No.	131056
C/- Versatile Homes & Buildings	Issue date	3/07/13
3 Springs Road		
Sockburn	Overseer	Chris Keegan
Christchurch 8042		

Project

Description	New (& prebuilt) House, Unit, Bach, Crib, Town House etc. Being Stage 1 of an intended 1 Stages Dwelling with attached garage
Intended Life	Indefinite, but not less than 50 years
Intended Use	Residential
Estimated Value	\$172,128
Location	1 Butchers Road, Kaiapoi
Legal Description	Lot 130 Stage 2A RC125220
Valuation No.	2173041500

This inspection list and all the approved plans relating to this building consent are to be kept on site and available to the building and/or plumbing and drainage inspector, or approved building certifier, on request.

Please give at least 24 hours notice for the next required inspection.

Work cannot proceed past each step until that step has been inspected and approved, and this form signed by the relevant inspector or certifier.

Name

Address

Signature

Plumber

Drainlayer

This sheet is to be returned to Waimakariri District Council when applying for your Code Compliance Certificate.

Note: If this form is not completed, the Code Compliance Certificate will not be issued until Council is satisfied that the building complies with the New Zealand Building Code.

When this project is completed this inspection sheet will be attached to the relevant property file held at the Council office.

Please note! The approved plans and this inspection sheet are to be available on site, on request, at all times.

Compacted Hardfill - pre DPM

Foundation / Floor Slab

Structure Pre Roof Pre Wrap

Fire Rating - Boundary Walls

Building Wrap & Sill Tape

Mid Height Veneer

Preline & Plumbing

4

Site Inspection Sheet

Prestopping

Drains

Final

Form 5

Building consent 131056

Section 51, Building Act 2004

The building

Street address of building: 1 Butchers Road, Kaiapoi

Legal description of land where building is located: Lot 130 Stage 2A RC125220

Valuation number: 2173041500

Building name:

Location of building within site/block number:

Level/unit number:

The owner

Name of owner: Cameron Finlayson

Contact person:

Mailing address: 46 Colman Avenue, Sockburn, Christchurch 8042

Street address/registered office:

Phone number: Landline:

Mobile: 0277426595

Daytime:

After hours:

Facsimile number:

Email address: cam.finlayson@portabuild.co.nz

Website:

First point of contact for communications with the council/building consent authority:

Full Name: Cameron Finlayson

Mailing Address: C/- Versatile Homes & Buildings, 3 Springs Road, Sockburn, Christchurch 8042

Phones:: 033489093

Email: georgie.fraser@versatile.co.nz

Building work

The following building work is authorised by this building consent:

Dwelling with attached garage

Residential

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.

This building consent is subject to the following condition:

The Building Act 2004, s90, states that agents authorised by the building consent authority (the Council) for the purposes of this section 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 the building site; and
- (c) any building.

This building consent is issued with the following advice notes:

1. This consent is issued subject to the attached Building Inspection Works Schedule:
2. Please note that the consent fees allow for a single inspection of construction stages of the project as specified in the inspection schedule. Any extra inspections required will be invoiced before a code compliance certificate is issued.
3. All boundary survey pegs must be located by discovery or redefinition before work is commenced.
4. Any special conditions of consent endorsed on the Building Consent and/or documents MUST be drawn to the attention of the subcontractors.
5. The duplicate copy of the approved consent documents and inspection schedule must remain on site during construction.
6. Engineers site reports are to be kept on site for the building Inspector. A PS4 Construction Review will be required from the engineer prior to the issue of a Code Compliance certificate.
7. All inspections listed must be requested. It is advisable to give at least 48 Hours Notice.
8. Comply with the endorsements on the plan.
9. Please note that any material deviation from the approved documents will require a formal application for amendment. Amendments that are not of a material nature can be approved by a Building Officer or Building Inspector by way of the endorsement of the approved consent documentation and/or narrative on an inspection notice. For the sake of completeness examples of variations that are minor include: - Substituting one product for a similar product such as an internal lining, insulation, etc - Substituting the type of timber treatment - Minor wall bracing changes - A change to a component (e.g, fixing bracket) - Changing a room layout (fixtures and fitting in a bathroom/kitchen) - A construction change e.g, the framing method around a window
10. All relevant energy certificates will need to be supplied prior to the issue of the Code Compliance Certificate.
11. Your consent is issued subject to manufactures technical information about their products, installation and maintenance is to be as this technical information requires.
12. Please note the consent has been granted prior to confirmation of who the Licensed Building Practitioners are for the job.
13. The Building Consent Authority will not book nor carry out an inspection until the names and licence number(s) of the Licensed Building Practitioner(s) have been provided in writing.

Compliance schedule

A compliance schedule is not required for the building.

Attachments

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

Signature



Administration

On behalf of: Waimakariri District Council

Date: 3/07/13

Form 6

Application for code compliance certificate

Section 92, Building Act 2004

The building consent

Building consent number: 131056

Issued by: Waimakariri District Council

Valuation number: 2173041500

*The owner

Name of owner: Cameron Finlayson

†Contact person:

Mailing address: 46 Colman Avenue, Sockburn, Christchurch 8042

Street address/registered office:

Phone number: Landline:

Mobile: 0277426595

Daytime:

After hours:

Facsimile number:

Email address: cam.finlayson@portabuild.co.nz

Website:

The following evidence of ownership is attached to this application: [copy of certificate of title, lease, agreement for sale and purchase, or other document showing full name of legal owner(s) of the building]

‡Agent

‡Name of agent: Cameron Finlayson

§Contact person: Georgie Fraser

Mailing address: C/- Versatile Homes & Buildings, 3 Springs Road, Sockburn, Christchurch 8042

Street address/registered office:

Phone number: Landline: 033489093

Mobile:

Daytime:

After hours:

Facsimile number:

Email address: georgie.fraser@versatile.co.nz

Website:

Relationship to owner:

First point of contact for communications with the council/building consent authority:

Full Name: Cameron Finlayson

Mailing Address: C/- Versatile Homes & Buildings, 3 Springs Road, Sockburn, Christchurch 8042

Phones:: 033489093

Email: georgie.fraser@versatile.co.nz^{||}

Application

All building work to be carried out under the above building consent was completed.

The personnel who carried out the building work are as follows:

Designer: Richard Mowbray 112 Waterloo Road Hornby : 033491280

I request that you issue a code compliance certificate for this work under section 95 of the Building Act 2004.

The code compliance certificate should be sent to: C/- Versatile Homes & Buildings, 3 Springs Road, Sockburn, Christchurch 8042 (Agent)

Signature of agent on behalf of and with the authority of the owner

Name of person signing

Date:

Attachments

The following documents are attached to this application:

[¶]Certificates from the personnel who carried out the work

[¶]Certificates that relate to the energy work

[¶]Evidence that specified systems are capable of performing to the performance standards set out in the building consent

*Delete this section if details have not changed from the building consent.

[†]Delete if owner is an individual.

[‡]Delete this section if the application is not being made on behalf of the owner.

[§]Delete if the agent is an individual.

^{||}Contact details must be in New Zealand.

[¶]Delete items not applicable.



WAIMAKARIRI
DISTRICT COUNCIL

ISSUED CONSENT BC131056

PRODUCER STATEMENT PIPEWORK TESTING

Private Bag 1005, Rangiora 7440
Ph 03 311 8900, 03 327 6834 Fax 03 313 4432
www.waimakariri.govt.nz

BC No.

Issued by (Plumber):

At (address):

For (Owner):

In respect of the testing of water pipe work prior
to concealment.

I hereby state that I have personally tested the water pipe work installed in the building authorised under this Building Consent by the method indicated hereunder.

☐ By pressurising the pipe work to 1500 kPa for a period of not less than 15 minutes for the hot and cold water supply and checking to see there are no leaks. (NZBC G12/AS1 7.5.1 (a), (b).)

☐ By pressurising the uPVC pipe work to 1.5 times the maximum working pressure for a period of not less than 15 minutes and checking that there are no leaks. (NZBC G12/AS1 7.5.2, NZS 7643).

Max working pressure was:

☐ By pressurising the pipe work to 1500 kPa for a period of not less than 5 minutes and checking to see there are no leaks. (NZBC G12 VM1, AS3500:Part 1.2 1998)

And believe on reasonable grounds that the pipe work has passed that test.

☐ All work complies with the NZBC

I also understand that Waimakariri District Council in accepting this producer statement will be relying on it to issue the Code Compliance Certificate at the completion of the building work.

SIGNATURE OF LICENSED CERTIFYING PLUMBER:

Signature:

Registration Number:

Company Name:

Date:



THE BUILDING

1. Site address (street/road/township):

2. Legal Description of the land where the building is located:

Lot:

DP:

Valuation Roll Number:

Note: Only complete items here that are applicable to your project.

3. Building Name: (eg: where buildings have Official Names)

4. Location of Building within Site:

(only applicable to multi-development sites)

5. Number of Levels:

6. Level/Unit No:

7. Floor Area - Existing:

New:

Total:

8. Current Lawfully Established Use

(eg: Use on any previous consent for the existing building):

9. Year Building First Constructed:

(only applicable to existing buildings, approximate date is acceptable, eg 1920's or 1960-1970)

THE APPLICANT / OWNER

10. Owner's Name: (Company or Organisation name)

11. Contact Person: (If Owner is not an Individual)

12. Mailing Address:

Postcode:

13. Street Address / Registered Office:

14. Contact Numbers: Landline

Mobile:

Daytime:

After hours:

15. Fax:

16. Email:

17. The following evidence of ownership is attached to this application, eg:

Copy of Certificate of Title (current within 1 month)

If Certificate of Title is not issued:

Signed copy of Sale and Purchase Agreement

AGENT / CONTACT

18. Name of Agent:

19. Contact Person:

20. Mailing / Billing Address:

21. Street Address / Registered Office:

22. Contact Numbers: Landline

Mobile:

Daytime:

After hours:

23. Fax:

24. Email:

25. Authorisation from owner, see page 2

(required when application not signed by owner)

26. *Note: The "Agent / Contact" will be the first point of contact for communications with the Council / Building Consent Authority regarding this Application / Building Work and will receive all correspondence including all invoices.*

APPLICATION

27. I request that the following (please select one) be issued for the Building Work described in this Application:

Project Information Memorandum Only: (PIM)

Building Consent for PIM No:

Building Consent: (including Project Information Memorandum)

Building Consent without PIM: Planning Check applies

Exemption from the need for B/C: (Refer Schedule 1, Section 'K' BA04)

For Office Use Only

Fee Paid on Application

Deposit \$

Fixed Fee \$

Date:

Receipt:

Officer:

THE PROJECT

28. Type of Building Work (ie:shop, office...):

31. Intended life of the building:

Indefinite but not less than 50 years

Or specified as _____ years

29. Specify the intended use of the building

32. List Building Consents previously issued for this

building (if any) (ie: is this project being constructed in stages? Is this consent for a relocated or transportable building?):

30. Will the building work result in a change of use of this building?

Yes No

Will Hazardous Substances be stored in the building?

Yes No

33. Estimated Value (incl GST) \$

(ie the estimated aggregate of the values of all goods and services to be supplied for the building work and includes GST).

AGENT AUTHORISATION

I authorise

to act as agent on my behalf for the Building Consent process.

Name:

Date:

Signed:

by owner

PROJECT INFORMATION MEMORANDUM

This section must be completed if you are applying for a PIM

DO NOT complete this section if a PIM has already been issued

The following documents are attached to this application:

Site plan, Floor plans, Elevations for proposed building, Certificate of Title, and/or Sales and Purchase Agreement.

One copy of all information required (all plans to be dimensioned, scaled and accurate). **Plans must be A3 or A4 size.**

Application Fee (as per Council Fees and Charges Schedule)

BUILDING CONSENT

(DO NOT complete this section if the Application is for a Project Information Memorandum only)

34. The following documents are attached to this application:

1 copy -building plans (site plans, floor plans, elevation plans) (one set of plans only, must be A3 or A4 size)

1 copy of each - specifications, producer statements, truss details (refer below)

1 copy -Certificate of Title and/or Sale and Purchase Agreement. Current C/T required (issued within one month of application) All plans to be dimensioned, scaled and accurate

Project Information Memorandum

Development Contribution Notice (if applicable)

Certificate attached to Project Information Memorandum (Resource Management Act)

Certificate of design work from Licenced Building Practitioner

Restricted Building Work - see page 8

Key personnel - see page 9

35. See page 10 for a Schedule confirming the Building Work will comply with the Building Code.

NB: Where a buildable truss design certificate is used for the granting of a Building Consent, **an 'as built' truss design must be provided to us for assessment ten days prior to the structure and pre-roof inspection.** A set fee will be charged at the time of granting of the consent to cover the assessment of the as built truss design information.

Where a Building Consent has been granted using an 'as built' truss design certificate, no further information will be required unless the design/layout of the roof has changed from consented design and layout.

NOTES BY APPLICANT

Other notes or comments which you as the applicant may wish to add, eg: Resource Consents

APPLICATION INFORMATION

(a) Project Information Memorandum (PIM)

A PIM will be issued within 20 working days provided all the required information is supplied with the application. Processing time is stopped whenever further information is required and starts again when the correct information is received. It is not mandatory to apply for a PIM. Applicants can choose not to apply for a PIM when they consider that the information would not be relevant for their building project.

A fee is required to accompany your PIM application (as per Council's fees and Charges Schedule).

b) Planning Check

Where a PIM is not sought, a Planning Check will be undertaken to ensure your proposal complies with the District Plan.

c) Building Consent (BC)

A Building Consent will be processed within a maximum allowable time of 20 working days provided all the information required has been supplied. Processing time is stopped whenever further information is required and starts again when the correct information is received.

Once the building consent has been processed, you will receive notification, which will include an invoice for the fees payable.

Once the fees are paid in full, your Building Consent will be issued.

d) Combined Project Information Memorandum & Building Consent Applications.

Applications for a combined PIM/BC will only be accepted when sufficient information is provided to permit the Building Consent to be processed.

If insufficient information is provided, then further information will be requested, or your application may be returned to you.

INSPECTIONS

During the process of construction, inspections will be necessary to confirm all work complies with your approved Building Consent documentation. Please ring the Council on 03 311 8240 well in advance of requiring an inspection to ensure that this can be arranged.

The inspections required will be set out in the Building Consent documentation issued by the Council. Failure to have a prescribed inspection carried out may put the issue of the Code Compliance Certificate at risk.

Failed inspections will incur a re-inspection charge.

RESOURCE CONSENT

Your application will be assessed by the Planning Unit of the Council to determine whether your project complies with the relevant District Plan requirements.

If your application does not comply with District Plan requirements you will need to either amend your proposal to comply or apply for a Resource Consent. A Certificate will be attached to your Project Information Memorandum to notify that a Resource Consent is required prior to building work commencing. It is recommended that you contact the Planning Unit to determine the process from there. Ring 03 311 8900.

CODE COMPLIANCE CERTIFICATE

A Building Consent is not completed until it has been issued with a Code Compliance Certificate. The owner is required to complete a separate application for a Code Compliance Certificate as soon as practicable after the building work is completed. In any event no later than two (2) years after the granting of the Building Consent. Council is required to decide whether or not a Code Compliance Certificate can be issued. If your project will not be completed within two years you will need to apply for a time extension*.

**fees apply*

DOCUMENTATION CHECKLIST

Applicants must mark all items provided with ✓ or leave blank if not applicable

**FOR OFFICE
USE ONLY:**
*these have been
provided*

APPLICATION FORM (one copy required)

- Fully complete all sections
- Means of Compliance with NZBC - Designer to complete
- Provide the correct legal description (Council can help with this)
- Provide one copy of the current Certificate of Title, or Sales and Purchase Agreement - not more than one month old
- Give name and contact numbers of contact person (if not the owner)
- State the project location (street address or location details as near as possible if no address)
- Sign and date the form
- Agent Authorisation (section completed where applicable)
- Certificate/s of design work (LBP)

DESIGN BASIS (to be completed by the Designer)

Please list the following basis for the building design:

- Wind Zone
- Earthquake Zone
- Snow Zone/Altitude
- Corrosion Zone (if applicable)
- Building is specifically Engineer-designed
- Complies with NZS 3604: 2011
- Both Specific Design and NZS 3604

DESIGN DOCUMENTS (one copy required)

- Weather Tightness Risk Matrix
- Truss Design Layout and Producer Statement
- Bracing Calculations / Plan
- H1 Energy Efficiency Calculations

SITE PLAN (one copy)

- Overview of site showing legal boundaries as per current Title
- Showing proposed and existing structures (including swimming pools)
- Distances to boundaries
- Proposed and existing site levels
- North Point
- Utility infrastructure (sewer, water pipelines, septic tanks etc) where applicable
- Water races, drains, topographic features

**FOR OFFICE
USE ONLY:**
*these have been
provided*

DRAINAGE LAYOUT

One copy to scale usually 1:100 or 1:50

Foul Water - Showing waste pipes, sizes, grades, venting

Foul Water to discharge point

Storm Water - Pipe sizes, grades, downpipe locations

Storm Water drain to discharge point

FOUNDATION LAYOUT

One copy to scale usually 1:100 or 1:50

Full foundation layout plan

For timber floors, show all pile layout, pile types and bracing location

Slab thickenings, shrinkage control joints and reinforcing rebates

FLOOR PLANS

One copy to scale usually 1:100 or 1:50

Layout of all floors fully dimensioned. For alterations and/or additions provide both new and existing floor plans

Doors and window positions and sizes

Layout of amenity areas (laundry etc)

Main structural beams that are not shown elsewhere

Lintel sizes

HWC Location

Roof Space Access

Gas Cylinder Location

Room names

Location of Smoke Alarms

Location of Heating Unit (if applicable)

EXTERIOR ELEVATIONS

One copy to scale usually 1:200 or 1:50

Elevations of all external walls showing claddings

Doors and windows showing opening sections

Show location of Solar Panels

Accurate ground levels existing and proposed

Subfloor ventilation for timber floors

Show roof bracing on elevations if not shown elsewhere

CROSS SECTION AND CONSTRUCTION DETAILS

One copy to scale usually 1:50 or 1:20 for sections and 1:10 for details (minimum scale)

Roof lines, overhangs, floor levels, ground levels

Major vertical dimensions

Foundation, wall and roof structure and materials

Upper level decks or balconies over lower level room must be fully detailed including the storm water disposal and overflow precautions

Stairs, handrails and balustrade showing pitch and head clearances

Structural connections, posts to footings, beams to posts, trusses or beams to walls

Component fixing information is to be provided for all structural and framing components

Foundation and footing details and reinforcing. Show height from finished floor to ground level

Pile details for timber floors

Floor bracing details

Timber grade and treatment

Damp proof membranes and building papers

Insulation systems and materials

Flashing details and documents

Roof penetrations

Shower floor details and wall to shower base junction detail

Sealing to wet area fixtures

Water splash prevention

All other building components that are not otherwise detailed or are unusual in any way

SPECIFICATION - One copy

The specification must be for the project. We will not accept standard specifications unless they relate directly to the building and they cover the project accurately and fully. Multi-choice specifications will not be accepted. A brief accurate specification is usually best.

FOR OFFICE
USE ONLY:
*these have been
provided*

Provide a written specification to cover all of the trades involved in the project. All materials used in the project are fully specified including fixings of all materials and components.

The specification can be written on the drawings as long as all materials are fully covered.

SPECIFIC DESIGNS - One copy

For all components that require specific design, provide the following:

The Chartered Professional Engineer's Producer Statement

The Engineer's monitoring schedule if the Engineer chooses to do site monitoring

All structural calculations

Structural details showing connections and details of the components

Solar technical details and plumbing schematic

Log Fire and Flue Installation Instructions

Current Potable Water Test

Effluent Disposal Design & ECan's copy of the submitted application form or approval

Wastewater system designs when required to be done by a Chartered Professional Engineer such as in a hazard zone

OFFICE USE ONLY

Further information required? Yes No

Application accepted? Yes No Date of acceptance

Further information provided? Yes No Officer

RESTRICTED BUILDING WORK

Will the building include any restricted building work? Yes No

If Yes, provide the following details of all Licensed Building Practitioners who will be involved in carrying out or supervising the restricted building work: [if these details are unknown at the time of the application, they must be supplied before the work begins].

NB: Site inspections will not be undertaken until the name, licensing class, and practitioner/registration number of the LBPs has been provided.

Licence Class	Name	Licensed Building Practitioner Number (or registration number if treated as being licensed under section 291 of the Building Act 2004)
Foundations		
Carpentry		
Exterior Plasterer		
Bricklayer		
Blocklayer		
Roofer		

KEY PERSONNEL**BUILDER**

Name:

Reg. No:

Address:

Phone No:

Fax No:

Email:

DESIGNER(S)

Name:

Reg. No:

Address:

Phone No:

Fax No:

Email:

CERTIFYING DRAINLAYER

Name:

Reg. No:

Address:

Phone No:

Fax No:

Email:

CERTIFYING PLUMBER

Name:

Type:

Reg. No:

Address:

Phone No:

Fax No:

Email:

CERTIFYING GASFITTER

Name:

Reg. No:

Address:

Phone No:

Fax No:

Email:

REGISTERED ELECTRICIAN

Name:

Reg. No:

Address:

Phone No:

Fax No:

Email:

STRUCTURAL ENGINEER

Name:

Reg. No:

Address:

Phone No:

Fax No:

Email:

BUILDING CODE COMPLIANCE

Application for project information memorandum and/or building consent

The building work will comply with the building code as follows:

[if you are not sure which clauses are applicable, consult with your builder, designer, or architect]

Clause [tick relevant clause numbers of Building Code]	Means of compliance [refer to the relevant compliance document(s) or detail of alternative solution in the plans and specifications; if not applicable, put n/a]	Waiver / modification required [state nature of waiver or modification of building code required; if not applicable, put n/a]
B1 Structure		
B2 Durability		
C1 Outbreak of fire		
C2 Means of escape		
C3 Spread of fire		
C4 Structural stability during fire		
D1 Access routes		
D2 Mechanical installations for access		
E1 Surface water		
E2 External moisture		
E3 Internal moisture		
F1 Hazardous agents on site		
F2 Hazardous building materials		
F3 Hazardous substances and processes		
F4 Safety from falling		
F5 Construction and demolition hazards		
F6 Lighting for emergency		
F7 Warning systems		
F8 Signs		
G1 Personal hygiene		
G2 Laundering		
G3 Food preparation and prevention of contamination		
G4 Ventilation		
G5 Interior environment		
G6 Airborne and impact sound		
G7 Natural light		
G8 Artificial light		
G9 Electricity		
G10 Piped services		
G11 Gas as an energy source		
G12 Water supplies		
G13 Foul water		
G14 Industrial liquid waste		
G15 Solid waste		
H1 Energy efficiency		

All the relevant information on this form is required to be provided under the Building Act and Resource Management Act for the Waimakariri District Council to assess your application. Under these Acts this information has to be made available to members of the public. The information contained in this application may be made available to other units of the Council. You have the right to access the personal information held about you by the Council which can be readily retrieved. You can also request that the Council correct any personal information it holds about you.

APPLICANT'S SIGNATURE

Signed by or for and on behalf of the Applicant

Owner or Agent Date:

Note: if acting "for and on behalf", please read the following declaration before signing - "I hereby declare that I am authorised to act as Agent of the Applicant". NB: Ensure agent authorisation section is completed - see page 2.

I wish to receive my building consent and approved documentation in the following format:

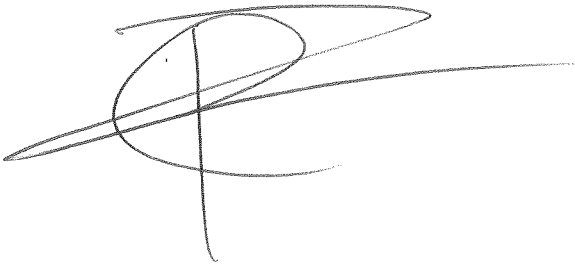
Electronically via File Transfer Portal on CD Hard copy

The CD or hard copy documents are to be collected from Rangiora Service Centre unless arrangements have been made to have these delivered to you.

I, CAM FINLAYSON, AUTHORISE GEORGIE ~~B~~ FRASER
OF VERSATILE HOMES AND BUILDINGS TO ACT
AS MY AGENT.

CAM FINLAYSON

21/5/2013

A handwritten signature in black ink, consisting of a large, stylized 'C' with a vertical line through it and a horizontal line extending to the right.

Memorandum from licensed building practitioner: Certificate of design work

Section 45 and section 30c, Building Act 2004

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

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

THE BUILDING

Street address: **Lot 130 Silverstream**

Suburb:

Town/City: **Kaiapoi**

Postcode:

THE OWNER(S)

Name(s): **Cameron Finlayson**

Mailing address: **Lot 130 Silverstream**

Suburb:

PO Box/Private Bag:

Town/City: **Kaiapoi**

Postcode:

Phone number:

Email address:

IDENTIFICATION OF DESIGN WORK THAT IS RESTRICTED BUILDING WORK

I **Richard Mowbray** carried out/supervised the following design work that is restricted building work

PRIMARY STRUCTURE

Design work that is restricted building work	Description of restricted building work	Carried out or supervised	Reference to plans and specifications
Tick <input checked="" type="checkbox"/>	If appropriate, provide details of the restricted building work	Tick <input checked="" type="checkbox"/> whether you carried out this design work or supervised someone else carrying out this design work	If appropriate, specify references
Foundations and subfloor framing <input type="checkbox"/>	Engineers Foundation Design	<input type="checkbox"/> Carried out <input type="checkbox"/> Supervised	
Walls <input checked="" type="checkbox"/>	Stud size, grade, centres & treatment	<input type="checkbox"/> Carried out <input checked="" type="checkbox"/> Supervised	Sheet 1,6,7,8,9 Specification
Roof <input checked="" type="checkbox"/>	Trusses as per Mitek	<input type="checkbox"/> Carried out <input checked="" type="checkbox"/> Supervised	Sheet 7 Specification
Columns and beams <input checked="" type="checkbox"/>	Lintels	<input type="checkbox"/> Carried out <input checked="" type="checkbox"/> Supervised	Sheet 6 Specification
Bracing <input checked="" type="checkbox"/>	Wall bracing	<input type="checkbox"/> Carried out <input checked="" type="checkbox"/> Supervised	Sheet 3 Specification
Other <input type="checkbox"/>		<input type="checkbox"/> Carried out <input type="checkbox"/> Supervised	

EXTERNAL MOISTURE MANAGEMENT SYSTEMS			
Design work that is restricted building work	Description of restricted building work	Carried out or supervised	Reference to plans and specifications
Tick <input checked="" type="checkbox"/>	If appropriate, provide details of the restricted building work	Tick <input checked="" type="checkbox"/> whether you carried out this design work or supervised someone else carrying out this design work	If appropriate, specify references
Damp proofing <input type="checkbox"/>	Engineers Foundation Design	<input type="checkbox"/> Carried out <input type="checkbox"/> Supervised	
Roof cladding or roof cladding system <input checked="" type="checkbox"/>	Corrugate roofing & flashing	<input type="checkbox"/> Carried out <input checked="" type="checkbox"/> Supervised	Sheet 7,8,9 Specification
Ventilation system (for example, subfloor or cavity) <input type="checkbox"/>		<input type="checkbox"/> Carried out <input type="checkbox"/> Supervised	
Wall cladding or wall cladding system <input checked="" type="checkbox"/>	Brick Veneer As per manufactures recommendations	<input type="checkbox"/> Carried out <input checked="" type="checkbox"/> Supervised	Sheet 7,9, 10- 12 Specification
Waterproofing <input checked="" type="checkbox"/>	Colorsteel Flashings as per min E2 requirements	<input type="checkbox"/> Carried out <input checked="" type="checkbox"/> Supervised	Sheet 7, 9-12 Specification
Other <input type="checkbox"/>		<input type="checkbox"/> Carried out <input type="checkbox"/> Supervised	

FIRE SAFETY SYSTEMS			
Design work that is restricted building work	Description of restricted building work	Carried out or supervised	Reference to plans and specifications
Tick <input checked="" type="checkbox"/> if appropriate	If appropriate, provide details of the restricted building work	Tick <input checked="" type="checkbox"/> whether you carried out this design work or supervised someone else carrying out this design work	If appropriate, specify references
Emergency warning systems <input type="radio"/> Evacuation and fire-service operation systems Suppression or control systems Other		<input type="radio"/> Carried out <input type="radio"/> Supervised	
Note: The design of fire safety systems is only restricted building work when it involves small-to-medium apartment buildings as defined by the Building (Definition of Restricted Building Work) Order 2011.			

WAIVERS AND MODIFICATIONS

Waivers or modifications of the Building Code are required. ☐ Yes ☒ No

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

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

ISSUED BY

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

Name: **Richard Mowbray**

LBP or Registration number: **BP108599**

The practitioner is a: ☒ Design LBP ☐ Registered architect ☐ Chartered professional engineer

Mailing address (if different from below):

Street address/Registered office: **112 Waterloo Road**

Suburb: **Sockburn**

Town/City: **Christchurch**

PO Box/Private Bag: **PO Box 11013**

Postcode: **8013**

Phone number: **03 3491280**

Mobile:

After hours:

Fax: **03 3491283**

Email address: **richard.mowbray@spanbild.co.nz**

Website: **www.spanbild.co.nz**

DECLARATION

I **Richard Mowbray** certify that the design work that is restricted building work identified on this form:

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

Signature:



Date:

20/05/2013

Form 2A

Memorandum from licensed building practitioner: Certificate of design work
Section 45 and Section 30C, Building Act 2004

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

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

THE BUILDING

Street address: **Lot 130, Silverstream**

Suburb:

Town/City **Kaiapoi**

Postcode:

THE OWNER

Name(s): **Cameron Finlayson**

Mailing address:

Suburb:

PO Box/Private Bag:

Town/City:

Postcode:

Phone number:

Email address:

BASIS FOR PROVIDING THIS MEMORANDUM

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

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

I Robert Foster carried out / supervised the following design work that is restricted building work

PRIMARY STRUCTURE: B1

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

			out this design work]	
Primary structure				
All RBW Design work relating to B1	()	<div>N/A</div>	() Carried out () Supervised	
Foundations and subfloor framing	(√)	As per the PS1 and specific calculations	() Carried out (√) Supervised	Refer HFC drawings or markups job number: 13075
Walls	()		() Carried out () Supervised	
Roof	()	<div>N/A</div>	() Carried out () Supervised	
Columns and beams	()		() Carried out () Supervised	
Bracing	()		() Carried out () Supervised	
Other	()		() Carried out () Supervised	

EXTERNAL MOISTURE MANAGEMENT SYSTEMS: E2

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

FIRE SAFETY SYSTEMS: C1 – C6

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

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

Note: continue on another page if necessary.

WAIVERS AND MODIFICATIONS

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

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

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

Note: continue on another page if necessary.

ISSUED BY

Name: Robert Foster	LBP or Registration number: 173329
The practitioner is a: () Design LBP () Registered architect (✓) Chartered professional engineer	
Design Entity or Company (optional):	
Mailing address (if different from below):	
Street address / Registered office:	
Suburb: Newmarket	Town/City: Auckland
PO Box/Private Bag: P.O. Box 109 106	Postcode: 1149
Phone number: 09 367 1070	Mobile:
After Hours: 09 367 1070	Fax:
Email address: Robert@hfc.co.nz	Website: www.hfc.co.nz

DECLARATION

I **Robert Foster** [name of practitioner], LBP,

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

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

Signature:



Date: 28 March 2013

Eighth Edition 2006 (4)

AGREEMENT FOR SALE AND PURCHASE OF REAL ESTATE

This form is approved by the Real Estate Institute of New Zealand Incorporated and by Auckland District Law Society Incorporated.

DATE:

VENDOR: Silverstream Estates Limited

PURCHASER: Cameron Finlayson and/or nominee Baek Hyun Myeong

PROPERTY

Address:

Estate: FEE SIMPLE LEASEHOLD CROSSLASE (FEE SIMPLE) CROSSLASE (LEASEHOLD)
 STRATUM IN FREEHOLD STRATUM IN LEASEHOLD (if none is deleted fee simple)

Legal Description:

Area (more or less):

Lot/Flat/Unit:

DP:

Unique Identifier or CT:

Lot 130 comprising approximately 300 square metres (subject to final adjustment and/or survey) shown for the purposes of identification only as number 130 on the attached plan being part of stage 1 of a subdivision known as Silverstream Estates Kaiapoi of the land comprised in Certificates of Title 27957, 27958, 27959, CB19F/1019, CB20B/783, CB293/231, CB36D/230, CB36D/778 and CB39C/347 (together "the Land")

PAYMENT OF PURCHASE PRICE

Purchase price: \$ 145,000.00

Plus GST (if any) OR Inclusive of GST (if any).

If neither is deleted the purchase price includes GST (if any).

GST date (refer clause 13.0):

Deposit (clause 2.0): \$ 14,500.00 payable to the Vendor's solicitor's trust account pursuant to clause 23 of the Further Terms of Sale

Balance of purchase price to be paid or satisfied as follows:

(1) By payment in cleared funds on the settlement date which is on the Possession Date

OR

(2) in the manner described in the Further Terms of Sale.

Interest rate for late settlement: 16 % p.a.

POSSESSION

Possession date (clause 3.0): five (5) working days following the issue of title for the Property or otherwise by mutual agreement

CONDITIONS (clause 9.0)

Finance condition

LIM required: Yes/No

Lender:

Amount required:

OIA Consent required: Yes/No

Finance date:

Land Act/OIA date: N/A

TENANCIES (if any)

Name of tenant:

Bond: _____ Rent: _____ Term: _____ Right of renewal: _____

SALE BY:

Licensed Real Estate Agent

It is agreed that the vendor sells and the purchaser purchases the property, and the chattels listed in Schedule 1, on the terms set out above and in the General Terms of Sale and any Further Terms of Sale.

GENERAL TERMS OF SALE**1.0 Definitions, notices and interpretation****1.1 Definitions**

- (1) Unless the context requires a different interpretation, words and phrases not otherwise defined have the same meanings ascribed to those words and phrases in the Property Law Act 2007, the Resource Management Act 1991 or the Unit Titles Act 2010.
- (2) "Agreement" means this document including the front page, these General Terms of Sale, any Further Terms of Sale and any schedules and attachments.
- (3) "Building Act" means the Building Act 1991 and/or the Building Act 2004.
- (4) "Building warrant of fitness" means a building warrant of fitness supplied to a territorial authority under the Building Act.
- (5) "Cleared funds" means:
 - (a) cash; or
 - (b) a bank cheque; or
 - (c) an electronic transfer of funds that has been made pursuant to a protocol agreed between the parties.
- (6) "Default GST" means any interest, or late payment penalty, or shortfall penalty, or other sum imposed on the vendor under the Tax Administration Act 1994 by reason of non-payment of any GST payable in respect of the supply made under this agreement but does not include any such sum levied against the vendor by reason of a default by the vendor after payment of the GST to the vendor by the purchaser.
- (7) "Electronic instrument" has the same meaning as ascribed to that term in the Land Transfer (Computer Registers and Electronic Lodgement) Amendment Act 2002.
- (8) "GST" means Goods and Services Tax arising pursuant to the Goods and Services Tax Act 1985 and "GST Act" means the Goods and Services Tax Act 1985.
- (9) "Landonline Workspace" means an electronic workspace facility approved by the Registrar-General of Land pursuant to the provisions of the Land Transfer (Computer Registers and Electronic Lodgement) Amendment Act 2002.
- (10) "LIM" means a land information memorandum issued pursuant to the Local Government Official Information and Meetings Act 1987.
- (11) "LINZ" means Land Information New Zealand.
- (12) "Local authority" means a territorial authority or a regional council.
- (13) "OIA Consent" means consent to purchase the property under the Overseas Investment Act 2006.
- (14) "Property" means the property described in this agreement.
- (15) "Purchase price" means the total purchase price stated in this agreement which the purchaser has agreed to pay the vendor for the property and the chattels included in the sale.
- (16) "Regional council" means a regional council within the meaning of the Local Government Act 2002.
- (17) "Remote settlement" means settlement of the sale and purchase of the property by way of the purchaser paying the moneys due and payable on the settlement date directly into a bank account nominated by the vendor, in consideration of the vendor agreeing to meet the vendor's obligations under clause 3.7(2), pursuant to a protocol agreed by the parties.
- (18) "Settlement date" means the date specified as such in this agreement or, if no such date is specified, the possession date. Where the day nominated for settlement is not a working day the settlement date shall be the last working day before the day so nominated.
- (19) "Settlement statement" means a statement showing the purchase price, plus any GST payable by the purchaser in addition to the purchase price, less any deposit or other payments or allowances to be credited to the purchaser, together with apportionments of all incomings and outgoings apportioned at the possession date.
- (20) "Territorial authority" means a territorial authority within the meaning of the Local Government Act 2002.
- (21) "Unit title" means a unit title under the Unit Titles Act 2010.
- (22) The terms "principal unit", "accessory unit", "unit plan" and "unit" have the meanings ascribed to those terms in the Unit Titles Act 2010.
- (23) The term "rules" includes both body corporate rules under the Unit Titles Act 1972 and body corporate operational rules under the Unit Titles Act 2010.
- (24) The terms "building", "building consent", "code compliance certificate", "compliance schedule", "household unit" and "residential property developer" have the meanings ascribed to those terms in the Building Act.
- (25) The term "title" includes where appropriate a computer register within the meaning of the Land Transfer (Computer Registers and Electronic Lodgement) Amendment Act 2002.
- (26) The terms "going concern", "registered person", "supply" and "taxable activity" have the meanings ascribed to those terms in the GST Act.
- (27) "Working day" means any day of the week other than:
 - (a) Saturday, Sunday, Waitangi Day, Good Friday, Easter Monday, Anzac Day, the Sovereign's Birthday, and Labour Day, and
 - (b) a day in the period commencing on the 24th day of December in any year and ending on the 6th day of January in the following year, both days inclusive; and
 - (c) the day observed as the anniversary of any province in which the property is situated.
 A working day shall be deemed to commence at 9.00 am and to terminate at 5.00 pm.
- (28) Any act done pursuant to this agreement by a party after 5.00 pm on a working day, or on a day which is not a working day, shall be deemed to have been done at 9.00 am on the next succeeding working day.
- (29) Where two or more acts (including service of notices) done pursuant to this agreement are deemed to have been done at the same time, they shall take effect in the order in which they would have taken effect but for subclause 1.1(28).
- (30) Unless a contrary intention appears on the front page or elsewhere in this agreement:
 - (a) the interest rate for late settlement is equivalent to the interest rate charged by the Inland Revenue Department on unpaid tax under the Tax Administration Act 1994 during the period for which the interest rate for late settlement is payable;
 - (b) a party is in default if it did not do what it has contracted to do to enable settlement to occur, regardless of the cause of such failure.

1.2 Notices

The following apply to all notices between the parties relevant to this agreement, whether authorised by this agreement or by the general law:

- (1) All notices must be served in writing.
- (2) Any notice under section 28 of the Property Law Act 2007, where the purchaser is in possession of the property, must be served in accordance with section 353 of that Act.
- (3) All other notices, unless otherwise required by the Property Law Act 2007, must be served by one of the following means:
 - (a) on the party as authorised by sections 354 to 361 of the Property Law Act 2007, or
 - (b) on the party or on the party's lawyer:
 - (i) by personal delivery; or
 - (ii) by posting by ordinary mail; or
 - (iii) by facsimile, or by email; or
 - (iv) in the case of the party's lawyer only, by sending by document exchange.
- (4) In respect of the means of service specified in subclause 1.2(3)(b), a notice is deemed to have been served:
 - (a) in the case of personal delivery, when received by the party or at the lawyer's office;
 - (b) in the case of posting by ordinary mail, on the second working day following the date of posting to the address for service notified in writing by the party or to the postal address of the lawyer's office;
 - (c) in the case of facsimile transmission, when sent to the facsimile number notified in writing by the party or to the facsimile number of the lawyer's office;
 - (d) in the case of email, when acknowledged by the party or by the lawyer orally or by return email or otherwise in writing;
 - (e) in the case of sending by document exchange, on the second working day following the date of sending to the document exchange number of the lawyer's office.
- (5) Notice served by a party after 5.00 pm on a working day, or on a day which is not a working day, shall be deemed to have been served by that party at 9.00 am on the next succeeding working day.
- (6) Where two or more notices are deemed to have been served at the same time, they shall take effect in the order in which they would have been served but for subclause 1.2(5).
- (7) Any period of notice required to be given under this agreement shall be computed by excluding the day of service.

1.3 Interpretation

- (1) If there is more than one vendor or purchaser, the liability of the vendors or of the purchasers, as the case may be, is joint and several.
- (2) Where the purchaser executes this agreement with provision for a nominee, or as agent for an undisclosed principal, or on behalf of a company to be formed, the purchaser shall at all times remain liable for all obligations on the part of the purchaser.
- (3) If any inserted term (including any Further Terms of Sale) conflicts with the General Terms of Sale the inserted term shall prevail.

(4) Headings are for information only and do not form part of this agreement.

2.0 Deposit

- 2.1 The purchaser shall pay the deposit to the vendor or the vendor's agent immediately upon execution of this agreement by both parties and/or at such other time as is specified in this agreement.
- 2.2 If the deposit is not paid on the due date for payment, the vendor may at any time thereafter serve on the purchaser notice requiring payment. If the purchaser fails to pay the deposit on or before the third working day after service of the notice, time being of the essence, the vendor may cancel this agreement by serving notice of cancellation on the purchaser. No notice of cancellation shall be effective if the deposit has been paid before the notice of cancellation is served.
- 2.3 The deposit shall be in part payment of the purchase price.
- 2.4 The person to whom the deposit is paid shall hold it as a stakeholder until:
 - (1) the requisition procedure under clause 5.0 is completed without either party cancelling this agreement; and
 - (2) where this agreement is entered into subject to any condition(s) expressed in this agreement, each such condition has been fulfilled or waived; or
 - (3) this agreement is cancelled pursuant to subclause 5.2(3)(c) or avoided pursuant to subclause 9.7(5).

3.0 Possession and Settlement

Possession

- 3.1 Unless particulars of a tenancy are included in this agreement the property is sold with vacant possession and the vendor shall so yield the property on the possession date.
- 3.2 If the property is sold with vacant possession the vendor shall permit the purchaser or any person authorised by the purchaser in writing, upon reasonable notice:
 - (1) to enter the property on one occasion prior to the possession date for the purposes of examining the property, chattels and fixtures which are included in the sale; and
 - (2) to re-enter the property on or before the possession date to confirm compliance by the vendor with any agreement made by the vendor to carry out any work on the property and the chattels and fixtures.
- 3.3 Possession shall be given and taken on the possession date. Outgoings and incomings in respect of the possession date are the responsibility of and belong to the vendor.
- 3.4 On the possession date the vendor shall make available to the purchaser keys to all exterior doors, electronic door openers relating to the property and the keys and/or security codes to any alarms which may be situated on the property. The vendor does not have to make available keys, electronic door openers and security codes where the property is tenanted and these are held by the tenant.

Settlement

- 3.5 The purchaser shall prepare, at the purchaser's own expense, a transfer instrument in respect of the property, executed by the purchaser if necessary. The purchaser shall tender the transfer instrument to the vendor or the vendor's lawyer a reasonable time prior to the settlement date.
- 3.6 The vendor shall prepare, at the vendor's own expense, a settlement statement. The vendor shall tender the settlement statement to the purchaser or the purchaser's lawyer a reasonable time prior to the settlement date.
- 3.7 On the settlement date:
 - (1) The balance of the purchase price, interest and other moneys, if any, shall be paid by the purchaser in cleared funds or otherwise satisfied as provided in this agreement (credit being given for any amount payable by the vendor under subclause 3.12 or 3.13);
 - (2) The vendor shall concurrently hand to the purchaser:
 - (a) the transfer instrument in respect of the property provided by the purchaser under subclause 3.5, in registrable form;
 - (b) all other instruments in registrable form required for the purpose of registering the transfer instrument and conferring title on the purchaser in terms of the vendor's obligations under this agreement; and
 - (c) LINZ registration fees on each of the instruments referred to in subclause 3.7(2)(b) and the purchaser's lawyer's reasonable agency registration fees.
- 3.8 All obligations under subclause 3.7 are interdependent.

Electronic Instruments

- 3.9 Where the instruments conferring title on the purchaser in terms of the vendor's obligations under this agreement must be registered as electronic instruments then:
 - (1) the purchaser's obligations under subclause 3.5 shall be satisfied by the purchaser's lawyer preparing, certifying and signing within a reasonable time prior to the settlement date the transfer instrument in the Landonline Workspace created for the transaction by the purchaser's lawyer; and
 - (2) the vendor's obligation under subclause 3.7(2) shall be satisfied:
 - (a) by the vendor's lawyer preparing in such Landonline Workspace all other instruments required to confer title on the purchaser in terms of the vendor's obligations under this agreement and having those instruments and the transfer instrument certified, signed and pre-validated on or before the settlement date and having them released upon settlement so that the purchaser's lawyer can then submit them as soon as possible after settlement for registration; and
 - (b) by the vendor's lawyer paying the LINZ registration fees on all of the instruments mentioned in subclause 3.9(2)(a), except for the transfer instrument.
- 3.10 The vendor and the purchaser may agree to complete settlement by way of remote settlement.

Last Minute Settlement

- 3.11 If due to the delay of the purchaser, settlement takes place between 4.00 pm and 5.00 pm on the settlement date ("last minute settlement"), the purchaser shall pay the vendor:
 - (1) one day's interest at the interest rate for late settlement on the portion of the purchase price paid in the last minute settlement; and
 - (2) if the day following the last minute settlement is not a working day, an additional day's interest (calculated in the same manner) for each day until, but excluding, the next working day.

Purchaser Default: Late Settlement

- 3.12 If the vendor is not in default and if any portion of the purchase price is not paid upon the due date for payment:
 - (1) The purchaser shall pay to the vendor interest at the interest rate for late settlement on the portion of the purchase price so unpaid for the period from the due date for payment until payment ("the default period"); but nevertheless this stipulation is without prejudice to any of the vendor's rights or remedies including any right to claim for additional expenses and damages. For the purposes of this subclause, a payment made on a day other than a working day or after the termination of a working day shall be deemed to be made on the next following working day and interest shall be computed accordingly.
 - (2) The vendor is not obliged to give the purchaser possession of the property or to pay the purchaser any amount for remaining in possession, unless this agreement relates to a tenanted property, in which case the vendor must elect either to:
 - (a) account to the purchaser on settlement for incomings in respect of the property which are payable and received during the default period, in which event the purchaser shall be responsible for the outgoings relating to the property during the default period; or
 - (b) retain such incomings in lieu of receiving interest from the purchaser pursuant to subclause 3.12(1).

Vendor Default: Late Settlement or Failure to Give Possession

- 3.13 (1) For the purposes of this subclause 3.13:
 - (a) the default period means:
 - (i) in subclause 3.13(2), the period from the possession date until the date when the vendor is able and willing to provide vacant possession and the purchaser takes possession; and
 - (ii) in subclause 3.13(3), the period from the date the purchaser takes possession until the date when settlement occurs; and
 - (iii) in subclause 3.13(5), the period from the possession date until the date when settlement occurs; and
 - (b) the vendor shall be deemed to be unwilling to give possession if the vendor does not offer to give possession.
- (2) If this agreement provides for vacant possession but the vendor is unable or unwilling to give vacant possession on the possession date, then, provided that the purchaser provides reasonable evidence of the purchaser's ability to perform the purchaser's obligations under this agreement:
 - (a) the vendor shall pay the purchaser, at the purchaser's election, either:
 - (i) compensation for any reasonable costs incurred for temporary accommodation for persons and storage of chattels during the default period; or
 - (ii) an amount equivalent to interest at the interest rate for late settlement on the entire purchase price during the default period; and
 - (b) the purchaser shall pay the vendor an amount equivalent to the interest earned or which would be earned on overnight deposits lodged in the purchaser's lawyer's trust bank account on such portion of the purchase price (including any deposit) as is payable under this agreement on or by the possession date but remains unpaid during the default period less:
 - (i) any withholding tax; and
 - (ii) any bank or legal administration fees and commission charges; and
 - (iii) any interest payable by the purchaser to the purchaser's lender during the default period in respect of any mortgage or loan taken out by the purchaser in relation to the purchase of the property.

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- (3) If this agreement provides for vacant possession and the vendor is able and willing to give vacant possession on the possession date, then, provided the purchaser provides reasonable evidence of the purchaser's ability to perform the purchaser's obligations under this agreement, the purchaser may elect to take possession in which case the vendor shall not be liable to pay any interest or other moneys to the purchaser but the purchaser shall pay the vendor the same amount as that specified in subclause 3.13(2)(b) during the default period. A purchaser in possession under this subclause 3.13(3) is a licensee only.
- (4) Notwithstanding the provisions of subclause 3.13(3), the purchaser may elect not to take possession when the purchaser is entitled to take it. If the purchaser elects not to take possession, the provisions of subclause 3.13(2) shall apply as though the vendor were unable or unwilling to give vacant possession on the possession date.
- (5) If this agreement provides for the property to be sold tenanted then, provided that the purchaser provides reasonable evidence of the purchaser's ability to perform the purchaser's obligations under this agreement, the vendor shall on settlement account to the purchaser for incomings which are payable and received in respect of the property during the default period less the outgoings paid by the vendor during that period. Apart from accounting for such incomings, the vendor shall not be liable to pay any other moneys to the purchaser but the purchaser shall pay the vendor the same amount as that specified in subclause 3.13(2)(b) during the default period.
- (6) The provisions of this subclause 3.13 shall be without prejudice to any of the purchaser's rights or remedies including any right to claim for any additional expenses and damages suffered by the purchaser.
- (7) Where the parties are unable to agree upon any amount payable under this subclause 3.13:
- An interim amount shall on settlement be paid to a stakeholder by the party against whom it is claimed until the amount payable is determined.
 - The interim amount shall be the lower of:
 - the amount claimed; or
 - an amount equivalent to interest at the interest rate for late settlement for the relevant default period on such portion of the purchase price (including any deposit) as is payable under this agreement on or by the possession date.
 - Any interest earned on the interim amount net of any withholding tax and any bank or legal administration fees and commission charges shall follow the destination of the interim amount.
 - The amount determined to be payable shall not be limited by the interim amount.
 - If the parties cannot agree on a stakeholder the interim amount shall be paid to a stakeholder nominated on the application of either party by the president for the time being of the New Zealand Law Society.

Deferment of Settlement and Possession**3.14 If—**

- this is an agreement for the sale by a residential property developer of a household unit; and
 - a code compliance certificate has not been issued by the possession date or the settlement date in relation to the household unit—
- then, unless the parties agree otherwise (in which case the parties shall enter into a written agreement in the form prescribed by the Building (Forms) Regulations 2004) the possession date and/or the settlement date, as the case may be, shall be deferred to the fifth working day following the date upon which the vendor has given the purchaser notice that the code compliance certificate has been issued (which notice must be accompanied by a copy of the certificate).
- 3.15 In every case, if neither party is ready, willing and able to settle on the settlement date, the settlement date (and the possession date if the possession date is the same date) shall be deferred to the second working day following the date upon which one of the parties gives notice it has become ready, willing and able to settle.

New Title Provision**3.16 (1) Where—**

- the transfer of the property is to be registered against a new title yet to be issued; and
 - a search copy, as defined in section 172A of the Land Transfer Act 1952, of that title is not obtainable by the fifth working day prior to the settlement date—
- then, unless the purchaser elects that settlement shall still take place on the agreed settlement date, the settlement date shall be deferred to the fifth working day following the later of the date on which:
- the vendor has given the purchaser notice that a search copy is obtainable; or
 - the requisitions procedure under clause 5.0 is complete.
- (2) This subclause shall not apply where it is necessary to register the transfer of the property to enable a plan to deposit and title to the property to issue.
- (3) Deferment of the settlement date under this subclause shall not constitute deferment of the possession date unless the parties so agree.

4.0 Risk and insurance

- 4.1 The property and chattels shall remain at the risk of the vendor until possession is given and taken.
- 4.2 If, prior to the giving and taking of possession, the property is destroyed or damaged, and such destruction or damage has not been made good by the possession date, then the following provisions shall apply:
- If the destruction or damage has been sufficient to render the property untenable and it is untenable on the possession date the purchaser may:
 - complete the purchase at the purchase price, less a sum equal to any insurance moneys received or receivable by or on behalf of the vendor in respect of such destruction or damage, provided that no reduction shall be made to the purchase price if the vendor's insurance company has agreed to reinstate for the benefit of the purchaser to the extent of the vendor's insurance cover; or
 - cancel this agreement by serving notice on the vendor, in which case the vendor shall return to the purchaser immediately the deposit and any other moneys paid by the purchaser, and neither party shall have any right of claim against the other arising from this agreement or its cancellation.
 - If the property is not untenable on the possession date the purchaser shall complete the purchase at the purchase price less a sum equal to the amount of the diminution in value of the property.
 - In the case of a property zoned for rural purposes under an operative District Plan, damage to the property shall be deemed to have rendered the property untenable where the diminution in value of the property exceeds an amount equal to 20% of the purchase price.
- 4.3 The purchaser shall not be required to take over any insurance policies held by the vendor.

5.0 Title, boundaries and requisitions

- 5.1 The vendor shall not be bound to point out the boundaries of the property except that on the sale of a vacant residential lot which is not limited as to parcels the vendor shall ensure that all boundary markers required by the Cadastral Survey Act 2002 and any related rules and regulations to identify the boundaries of the property are present in their correct positions at the possession date.
- 5.2 (1) The purchaser is deemed to have accepted the vendor's title except as to objections or requisitions which the purchaser is entitled to make and notice of which the purchaser serves on the vendor on or before the earlier of:
- the tenth working day after the date of this agreement; or
 - the possession date; or
 - the settlement date.
- (2) If a plan has been or is to be submitted to LINZ for deposit in respect of the property, then in respect of objections or requisitions arising out of the plan, the purchaser is deemed to have accepted the title except as to such objections or requisitions which the purchaser is entitled to make and notice of which the purchaser serves on the vendor on or before the fifth working day following the date the vendor has given the purchaser:
- notice that the plan has been deposited; or
 - notice that (where a new title is to issue for the property) the title has issued and a search copy of it as defined in section 172A of the Land Transfer Act 1952 is obtainable.
- (3) If the vendor is unable or unwilling to remove or comply with any objection or requisition as to title, notice of which has been served on the vendor by the purchaser, then the following provisions will apply:
- The vendor shall notify the purchaser ("a vendor's notice") of such inability or unwillingness on or before the fifth working day after the date of service of the purchaser's notice.
 - If the vendor does not give a vendor's notice the vendor shall be deemed to have accepted the objection or requisition and it shall be a requirement of settlement that such objection or requisition shall be complied with before settlement.
 - If the purchaser does not on or before the fifth working day after service of a vendor's notice notify the vendor that the purchaser waives the objection or requisition, either the vendor or the purchaser may (notwithstanding any intermediate negotiations) by notice to the other, cancel this agreement.
 - In the event of cancellation under subclause 5.2(3), the purchaser shall be entitled to the immediate return of the deposit and any other moneys paid under this agreement by the purchaser and neither party shall have any right or claim against the other arising from this agreement or its cancellation. In particular, the purchaser shall not be entitled to any interest or to the expense of investigating the title or to any compensation whatever.

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- 5.3 (1) If the title to the property being sold is a cross lease title or a unit title and there are:
- in the case of a cross lease title:
 - alterations to the external dimensions of any leased structure; or
 - buildings or structures not intended for common use which are situated on any part of the land that is not subject to a restricted user covenant;
 - in the case of a unit title, encroachments out of the principal unit or accessory unit title space (as the case may be):
 - the purchaser may requisition the title under subclause 6.2 requiring the vendor:
 - In the case of a cross lease title, to deposit a new plan depicting the buildings or structures and register a new cross lease or cross leases (as the case may be) and any other ancillary dealings in order to convey good title; or
 - In the case of a unit title, to deposit an amendment to the unit plan, a redevelopment plan or new unit plan (as the case may be) depicting the principal and/or accessory units and register such transfers and any other ancillary dealings in order to convey good title.
- (2) The words "alterations to the external dimensions of any leased structure" shall only mean alterations which are attached to the leased structure and enclosed.
- 5.4 Except as provided by section 7 of the Contractual Remedies Act 1979, no error, omission or misdescription of the property or the title shall enable the purchaser to cancel the agreement but compensation, if claimed by notice before settlement in accordance with subclause 7.1 but not otherwise, shall be made or given as the case may require.
- 5.5 The vendor shall not be liable to pay for or contribute towards the expense of erection or maintenance of any fence between the property and any contiguous land of the vendor but this proviso shall not enure for the benefit of any subsequent purchaser of the contiguous land; and the vendor shall be entitled to require the inclusion of a fencing covenant to this effect in any transfer of the property.

6.0 Vendor's warranties and undertakings

- 6.1 The vendor warrants and undertakes that at the date of this agreement the vendor has not:
- received any notice or demand and has no knowledge of any requisition or outstanding requirement:
 - from any local or government authority or other statutory body; or
 - under the Resource Management Act 1991; or
 - from any tenant of the property; or
 - from any other party; or
 - given any consent or waiver - which directly or indirectly affects the property and which has not been disclosed in writing to the purchaser.
- 6.2 The vendor warrants and undertakes that at the giving and taking of possession:
- The chattels are delivered to the purchaser in their state of repair as at the date of this agreement (fair wear and tear excepted) but failure so to deliver the chattels shall only create a right of compensation.
 - All electrical and other installations on the property are free of any charge whatsoever.
 - There are no arrears of rates, water rates or charges outstanding on the property.
 - Where an allowance has been made by the vendor in the settlement statement for incomes receivable, the settlement statement correctly records those allowances including, in particular, the dates up to which the allowances have been made.
 - Where the vendor has done or caused or permitted to be done on the property any works:
 - any permit, resource consent or building consent required by law was obtained; and
 - the works were completed in compliance with those permits or consents; and
 - where appropriate, a code compliance certificate was issued for those works.
 - Where under the Building Act, any building on the property sold requires a compliance schedule:
 - the vendor has fully complied with any requirements specified in any compliance schedule issued by a territorial authority under the Building Act in respect of the building;
 - the building has a current building warrant of fitness; and
 - the vendor is not aware of any reason, that the vendor has not disclosed in writing to the purchaser, which would prevent a building warrant of fitness from being supplied to the territorial authority when the building warrant of fitness is next due.
- 6.3 The vendor warrants and undertakes that at settlement:
- Since the date of this agreement, the vendor has not given any consent or waiver which directly or indirectly affects the property.
 - Any notice or demand received by the vendor, which directly or indirectly affects the property, after the date of this agreement:
 - from any local or government authority or other statutory body;
 - under the Resource Management Act 1991; or
 - from any tenant of the property; or
 - from any other party -
- has been delivered forthwith by the vendor to either the purchaser or the purchaser's lawyer, unless the vendor has paid or complied with such notice or demand. If the vendor fails to so deliver or pay the notice or demand, the vendor shall be liable for any penalty incurred.
- (3) Any chattels included in the sale are the unencumbered property of the vendor.
- 6.4 The vendor warrants and undertakes that on or immediately after possession:
- If the water and wastewater charges are determined by meter, the vendor will have the water meter read and will pay the amount of the charge payable pursuant to that reading; but if the water supplier will not make special readings the water and wastewater charges shall be apportioned.
 - Any outgoings included in the settlement statement are paid in accordance with the settlement statement and, where applicable, to the dates shown in the settlement statement, or will be so paid immediately after the possession date.
 - The vendor will give notice of sale in accordance with the Local Government (Rating) Act 2002 to the territorial authority and regional council in whose district the land is situated and will also give notice of the sale to every other authority that makes and levies rates or charges on the land and to the supplier of water.
 - Where the property comprises a stratum estate, the vendor will notify the secretary of the body corporate in writing of the transfer of the property and the name and address of the purchaser.
- 6.5 If the purchaser has not validly cancelled the agreement, the breach of any warranty or undertaking contained in this agreement does not defer the obligation to settle but that obligation shall be subject to the rights of the purchaser at law or in equity, including any rights under subclause 5.4 and any right of equitable set-off.

7.0 Claims for compensation

- 7.1 If the purchaser claims a right to compensation either under subclause 5.4 or for an equitable set-off:
- The purchaser must serve notice of the claim on the vendor before settlement; and
 - The notice must:
 - in the case of a claim for compensation under clause 5.4, state the particular error, omission or misdescription of the property or title in respect of which compensation is claimed;
 - in the case of a claim to an equitable set-off, state the particular matters in respect of which compensation is claimed;
 - comprise a genuine pre-estimate of the loss suffered by the purchaser; and
 - be particularised and quantified to the extent reasonably possible as at the date of the notice.
- 7.2 For the purposes of subclause 7.1(1), "settlement" means the date for settlement fixed by the agreement unless, by reason of the conduct or omission of the vendor, the purchaser is unable to give notice by that date, in which case notice may be given by the date for settlement fixed by a valid settlement notice served by either party pursuant to subclause 10.1.
- 7.3 If the amount of compensation is agreed, it shall be deducted on settlement.
- 7.4 If the amount of compensation is disputed:
- An interim amount shall be deducted on settlement and paid by the purchaser to a stakeholder until the amount of the compensation is determined.
 - The interim amount must be a reasonable sum having regard to all of the circumstances.
 - If the parties cannot agree on the interim amount, it shall be determined by an experienced property lawyer appointed by the parties. The appointee's costs shall be met equally by the parties. If the parties cannot agree on the appointee, the appointment shall be made on the application of either party by the president for the time being of the New Zealand Law Society.
 - The stakeholder shall lodge the interim amount on interest-bearing call deposit with a bank registered under the Reserve Bank of New Zealand Act 1969 in the joint names of the vendor and the purchaser.
 - The interest earned on the interim amount, net of any withholding tax and any bank or legal administration fees and commission charges shall follow the destination of the interim amount.

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- (6) The amount of compensation determined to be payable shall not be limited by the interim amount.
- (7) If the parties cannot agree on a stakeholder, the interim amount shall be paid to a stakeholder nominated on the application of either party by the president for the time being of the New Zealand Law Society.
- 7.5 The procedures prescribed in subclauses 7.1 to 7.4 shall not prevent either party taking proceedings for the specific performance of the contract.

8.0 Unit title and cross lease provisions

Unit Titles

- 8.1 If the property is a unit title, sections 144 to 163 of the Unit Titles Act 2010 ("the Act") require the vendor to provide to the purchaser a pre-contract disclosure statement, a pre-settlement disclosure statement and, if so requested by the purchaser, an additional disclosure statement.
- 8.2 If the property is a unit title, the vendor warrants and undertakes as follows:
- (1) Apart from regular periodic contributions, no contributions have been levied or proposed by the body corporate that have not been disclosed in writing to the purchaser.
 - (2) Not less than five working days before the settlement date the vendor will provide:
 - (a) a copy of all insurance policies or certificates effected by the body corporate under the provisions of section 135 of the Act; and
 - (b) a pre-settlement disclosure statement from the body corporate under section 147 of the Act. Any periodic contributions shown in that pre-settlement disclosure statement shall be apportioned.
 - (3) There are no other amounts owing by the owner under any provision of the Act or the Unit Titles Act 1972.
 - (4) There are no unsatisfied judgments against the body corporate and no proceedings have been instituted against or by the body corporate.
 - (5) No order or declaration has been made by any Court against the body corporate or the owner under any provision of the Act or the Unit Titles Act 1972.
 - (6) The vendor has no knowledge or notice of any fact which might give rise to or indicate the possibility of:
 - (a) the owner or the purchaser incurring any other liability under any provision of the Act or the Unit Titles Act 1972; or
 - (b) any proceedings being instituted by or against the body corporate; or
 - (c) any order or declaration being sought against the body corporate or the owner under any provision of the Act or the Unit Titles Act 1972.
 - (7) The vendor is not aware of proposals to pass any body corporate resolution relating to its rules nor are there any unregistered changes to the body corporate rules which have not been disclosed in writing to the purchaser.
 - (8) No lease, licence, easement or special privilege has been granted by the body corporate in respect of any part of the common property which has not been disclosed in writing to the purchaser.
 - (9) No resolution has been passed and no application has been made and the vendor has no knowledge of any proposal for:
 - (a) the transfer of the whole or any part of the common property;
 - (b) the addition of any land to the common property;
 - (c) the cancellation of the unit plan; or
 - (d) the deposit of an amendment to the unit plan, a redevelopment plan or a new unit plan in substitution for the existing unit plan which has not been disclosed in writing to the purchaser.
 - (10) As at the giving and taking of possession, all contributions and other moneys payable by the vendor to the body corporate have been paid in full.
- 8.3 If the property is a unit title, in addition to the purchaser's rights under sections 149 and 150 of the Act, if the vendor does not provide a copy of all insurance policies or certificates and the pre-settlement disclosure statement under section 147 in accordance with the requirements of subclause 8.2(2):
- (1) The purchaser may postpone the settlement date until the fifth working day following the date on which that information is provided to the purchaser.
 - (2) The purchaser may elect that settlement shall still take place on the settlement date, such election not being a waiver of any rights under subclause 8.2(2)(b) to a proper apportionment of outgoings.
 - (3) Postponement of the settlement date under this subclause of sections 149 or 150 of the Act shall not constitute postponement of the possession date unless the purchaser so elects.

Unauthorised structures - Cross leases and unit titles

- 8.4 (1) Where structures (not stated in clause 5 to be requisitionable) have been erected on the property without:
- (a) in the case of a cross lease title any required lessors' consent; or
 - (b) in the case of a unit title any required body corporate consent;
- the purchaser may demand within the period expiring on the earlier of:
- (i) the tenth working day after the date of this agreement;
 - (ii) the possession date; or
 - (iii) the settlement date -
- that the vendor obtain the written consent of the current lessors or the body corporate (as the case may be) to such improvements ("a current consent") and provide the purchaser with a copy of such consent on or before the settlement date.
- (2) Should the vendor be unwilling or unable to obtain a current consent then the procedure set out in subclauses 5.2(3) and 5.2(4) shall apply with the purchaser's demand under subclause 8.4(1) being deemed to be an objection and requisition.

9.0 Conditions and mortgage terms

Particular conditions

- 9.1 If particulars of any finance condition(s) are inserted on the front page of this agreement, this agreement is conditional upon the purchaser arranging finance in terms of those particulars on or before the finance date.
- 9.2 (1) If the purchaser has indicated on the front page of this agreement that a LIM is required:
- (a) that LIM is to be obtained by the purchaser at the purchaser's cost; and
 - (b) the purchaser is to request the LIM on or before the fifth working day after the date of this agreement; and
 - (c) this agreement is conditional, upon the purchaser approving that LIM provided that such approval must not be unreasonably or arbitrarily withheld.
- (2) If, on reasonable grounds, the purchaser does not approve the LIM, the purchaser shall give notice to the vendor ("the purchaser's notice") on or before the fifteenth working day after the date of this agreement stating the particular matters in respect of which approval is withheld and, if those matters are capable of remedy, what the purchaser reasonably requires to be done to remedy those matters. If the purchaser does not give a purchaser's notice the purchaser shall be deemed to have approved the LIM. If through no fault of the purchaser the LIM is not available on or before the fifteenth working day after the date of this agreement and the vendor does not give an extension when requested, this condition shall not have been fulfilled and the provisions of subclause 9.7(5) shall apply.
- (3) The vendor shall give notice to the purchaser ("the vendor's notice") on or before the fifth working day after receipt of the purchaser's notice advising whether or not the vendor is able and willing to comply with the purchaser's notice by the settlement date.
- (4) If the vendor does not give a vendor's notice, or if the vendor's notice advises that the vendor is unable or unwilling to comply with the purchaser's notice, and if the purchaser does not, on or before the tenth working day after the date on which the purchaser's notice is given, give notice to the vendor that the purchaser waives the objection to the LIM, this condition shall not have been fulfilled and the provisions of subclause 9.7(5) shall apply.
- (5) If the vendor gives a vendor's notice advising that the vendor is able and willing to comply with the purchaser's notice, this condition is deemed to have been fulfilled and it shall be a requirement of settlement that the purchaser's notice shall be complied with, and also, if the vendor must carry out work on the property, that the vendor shall obtain the approval of the territorial authority to the work done, both before settlement.
- 9.3 (1) If the purchaser has indicated on the front page of this agreement that OIA Consent is not required then the purchaser warrants that the purchaser does not require OIA Consent.
- (2) If the purchaser has indicated on the front page of this agreement that OIA Consent is required, this agreement is conditional upon OIA Consent being obtained on or before the Land Act/OIA date shown on the front page of this agreement, the purchaser being responsible for payment of the application fee.
- 9.4 If this agreement relates to a transaction to which the Land Act 1948 applies, this agreement is subject to the vendor obtaining the necessary consent by the Land Act/OIA date shown on the front page of this agreement.
- 9.5 If the Land Act/OIA date is not shown on the front page of this agreement that date shall be the possession date or a date two months from the date of this agreement whichever is the sooner.
- 9.6 If this agreement relates to a transaction to which section 225 of the Resource Management Act 1991 applies then this agreement is subject to the appropriate condition(s) imposed by that section.

Operation of conditions

- 9.7 If this agreement is expressed to be subject either to the above or to any other condition(s), then in relation to each such condition the following shall apply unless otherwise expressly provided:
- (1) The condition shall be a condition subsequent.
 - (2) The party or parties for whose benefit the condition has been included shall do all things which may reasonably be necessary to enable the condition to be fulfilled by the date for fulfilment.

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- (3) Time for fulfilment of any condition and any extended time for fulfilment to a fixed date shall be of the essence.
- (4) The condition shall be deemed to be not fulfilled until notice of fulfilment has been served by one party on the other party.
- (5) If the condition is not fulfilled by the date for fulfilment, either party may at any time before the condition is fulfilled or waived avoid this agreement by giving notice to the other. Upon avoidance of this agreement the purchaser shall be entitled to the immediate return of the deposit and any other moneys paid by the purchaser under this agreement and neither party shall have any right or claim against the other arising from this agreement or its termination.
- (6) At any time before this agreement is avoided the purchaser may waive any finance condition and either party may waive any other condition which is for the sole benefit of that party. Any waiver shall be by notice.

Mortgage terms

- 9.8 Any mortgage to be arranged pursuant to a finance condition shall be upon and subject to the terms and conditions currently being required by the lender in respect of loans of a similar nature.
- 9.9 If the vendor is to advance mortgage moneys to the purchaser then, unless otherwise stated, the mortgage shall be in the appropriate "fixed sum" form currently being published by the Auckland District Law Society Incorporated.

10.0 Notice to complete and remedies on default

- 10.1 (1) If the sale is not settled on the settlement date either party may at any time thereafter serve on the other party a settlement notice; but
 - (2) The settlement notice shall be effective only if the party serving it is at the time of service either in all material respects ready able and willing to proceed to settle in accordance with the agreement or is not so ready able and willing to settle only by reason of the default or omission of the other party.
 - (3) If the purchaser is in possession the vendor's right to cancel this agreement will be subject to sections 28 to 36 of the Property Law Act 2007 and the settlement notice may incorporate or be given with a notice under section 28 of that Act complying with section 29 of that Act.
- 10.2 Subject to clause 10.1(3), upon service of the settlement notice the party on whom the notice is served shall settle:
 - (1) on or before the twelfth working day after the date of service of the notice; or
 - (2) on the first working day after the 13th day of January if the period of twelve working days expires during the period commencing on the 6th day of January and ending on the 13th day of January, both days inclusive –
 time being of the essence, but without prejudice to any intermediate right of cancellation by either party.
- 10.3 (1) If this agreement provides for the payment of the purchase price by instalments and the purchaser fails duly and punctually to pay any instalment on or within one month from the date on which it fell due for payment then, whether or not the purchaser is in possession, the vendor may immediately give notice to the purchaser calling up the unpaid balance of the purchase price, which shall upon service of the notice fall immediately due and payable,
 - (2) The date of service of the notice under this subclause shall be deemed the settlement date for the purposes of subclause 10.1.
 - (3) The vendor may give a settlement notice with a notice under this subclause.
 - (4) For the purpose of this subclause a deposit is not an instalment.
- 10.4 If the purchaser does not comply with the terms of the settlement notice served by the vendor then, subject to clause 10.1(3):
 - (1) Without prejudice to any other rights or remedies available to the vendor at law or in equity the vendor may:
 - (a) sue the purchaser for specific performance; or
 - (b) cancel this agreement by notice and pursue either or both of the following remedies namely:
 - (i) forfeit and retain for the vendor's own benefit the deposit paid by the purchaser, but not exceeding in all 10% of the purchase price; and/or
 - (ii) sue the purchaser for damages.
 - (2) Where the vendor is entitled to cancel this agreement the entry by the vendor into a conditional or unconditional agreement for the resale of the property or any part thereof shall take effect as a cancellation of this agreement by the vendor if this agreement has not previously been cancelled and such resale shall be deemed to have occurred after cancellation.
 - (3) The damages claimable by the vendor under subclause (1)(b)(ii) shall include all damages claimable at common law or in equity and shall also include (but shall not be limited to) any loss incurred by the vendor on any bona fide resale contracted within one year from the date by which the purchaser should have settled in compliance with the settlement notice. The amount of that loss may include:
 - (a) interest on the unpaid portion of the purchase price at the interest rate for late settlement from the settlement date to the settlement of such resale; and
 - (b) all costs and expenses reasonably incurred in any resale or attempted resale; and
 - (c) all outgoings (other than interest) on or maintenance expenses in respect of the property from the settlement date to the settlement of such resale.
 - (4) Any surplus money arising from a resale as aforesaid shall be retained by the vendor.
- 10.5 If the vendor does not comply with the terms of a settlement notice served by the purchaser then, without prejudice to any other rights or remedies available to the purchaser at law or in equity the purchaser may:
 - (1) sue the vendor for specific performance; or
 - (2) cancel this agreement by notice and require the vendor forthwith to repay to the purchaser any deposit and any other money paid on account of the purchase price and interest on such sum(s) at the interest rate for late settlement from the date or dates of payment by the purchaser until repayment.
- 10.6 The party serving a settlement notice may extend the term of the notice for one or more specifically stated periods of time and thereupon the term of the settlement notice shall be deemed to expire on the last day of the extended period or periods and it shall operate as though this clause stipulated the extended period(s) of notice in lieu of the period otherwise applicable, and time shall be of the essence accordingly. An extension may be given either before or after the expiry of the period of the notice.
- 10.7 Nothing in this clause shall preclude a party from suing for specific performance without giving a settlement notice.
- 10.8 A party who serves a settlement notice under this clause shall not be in breach of an essential term by reason only of that party's failure to be ready and able to settle upon the expiry of that notice.

11.0 Non-merger

- 11.1 The obligations and warranties of the parties in this agreement shall not merge with:
 - (1) the giving and taking of possession;
 - (2) settlement;
 - (3) the transfer of title to the property;
 - (4) delivery of the chattels (if any); or
 - (5) registration of the transfer of title to the property.

12.0 Agent

- 12.1 If the name of a licensed real estate agent is recorded on this agreement it is acknowledged that the sale evidenced by this agreement has been made through that agent whom the vendor appoints as the vendor's agent to effect the sale. The vendor shall pay the agent's charges including GST for effecting such sale.

13.0 Goods and Services Tax

- 13.1 If this agreement provides for the purchaser to pay (in addition to the purchase price stated without GST) any GST which is payable in respect of the supply made under this agreement then:
 - (1) The purchaser shall pay to the vendor the GST which is so payable in one sum on the GST date.
 - (2) Where the GST date has not been inserted on the front page of this agreement the GST date shall be the possession date.
 - (3) Where any GST is not so paid to the vendor the purchaser shall pay to the vendor:
 - (a) interest at the interest rate for late settlement on the amount of GST unpaid from the GST date until payment; and
 - (b) any default GST.
 - (4) It shall not be a defence to a claim against the purchaser for payment to the vendor of any default GST that the vendor has failed to mitigate the vendor's damages by paying an amount of GST when it fell due under the GST Act.
 - (5) Any sum referred to in this clause is included in the purchase price, interest and other moneys, if any, referred to in subclause 3.7.
- 13.2 If the supply under this agreement is a taxable supply the vendor will deliver a tax invoice to the purchaser on or before the GST date or such earlier date as the purchaser is entitled to delivery of an invoice under the GST Act.
- 13.3 The vendor warrants that any dwelling and curtilage or part thereof supplied on sale of the property are not a supply to which section 5(1d) of the GST Act applies.
- 13.4 (1) Without prejudice to the vendor's rights and remedies under clause 13.1, where any GST is not paid to the vendor on or within one month of the GST date, then whether or not the purchaser is in possession, the vendor may immediately give notice to the purchaser calling up any unpaid balance of the purchase price, which shall upon service of the notice fall immediately due and payable.
 - (2) The date of service of the notice under this subclause shall be deemed the settlement date for the purposes of subclause 10.1.
 - (3) The vendor may give a settlement notice under subclause 10.1 with a notice under this subclause.

14.0 Zero-rating

- 14.1 The parties warrant that the particulars stated in Schedule 2 are correct at the date of this agreement.
- 14.2 Where the particulars stated in Schedule 2 indicate that at settlement:
- (1) The vendor is a registered person or will be a registered person;
 - (2) The recipient is a registered person or will be a registered person;
 - (3) The recipient intends to use the goods supplied under this agreement for making taxable supplies; and
 - (4) The recipient does not intend to use the property as a principal place of residence by the recipient or a person associated with the recipient under section 2A(1)(c) of the GST Act -
- GST will be chargeable on the supply under this agreement at zero per cent pursuant to section 11(1)(mb) of the GST Act.
- 14.3 If GST is chargeable on the supply under this agreement at zero per cent pursuant to section 11(1)(mb) of the GST Act, then on or before settlement the purchaser will provide the vendor with the recipient's registration number if it is not included in Schedule 2.
- 14.4 If any of the particulars stated by the purchaser in Schedule 2 should alter between the date of this agreement and settlement, the purchaser shall notify the vendor of the altered particulars as soon as practicable and in any event no later than two working days before settlement. The purchaser warrants that any altered particulars will be correct as at the date of the purchaser's notification. If the GST treatment of the supply under this agreement should be altered as a result of the altered particulars, the vendor shall prepare and deliver to the purchaser or the purchaser's lawyer an amended settlement statement if the vendor has already tendered a settlement statement; and a credit note or a debit note, as the case may be, if the vendor has already issued a tax invoice.
- 14.5 Unless the context otherwise requires, words and phrases used in subclauses 14.1 to 14.4 and in Schedule 2 shall have the same meaning as those words and phrases have in the GST Act.

15.0 Supply of a Going Concern

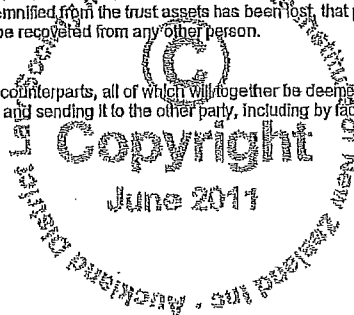
- 15.1 If there is a supply under this agreement to which section 11(1)(mb) of the GST Act does not apply but which comprises the supply of a taxable activity that is a going concern at the time of the supply, then, unless otherwise expressly stated herein:
- (1) Each party warrants that it is a registered person or will be so by the date of the supply;
 - (2) Each party agrees to provide the other party by the date of the supply with proof of its registration for GST purposes;
 - (3) The parties agree that they intend that the supply is of a taxable activity that is capable of being carried on as a going concern by the purchaser; and
 - (4) The parties agree that the supply made pursuant to this agreement is the supply of a going concern on which GST is chargeable at zero per cent.
- 15.2 If it subsequently transpires that GST is payable in respect of the supply and if this agreement provides for the purchaser to pay (in addition to the purchase price without GST) any GST which is payable in respect of the supply made under this agreement, then the provisions of clause 13.0 of this agreement shall apply.

16.0 Limitation of Liability

- 16.1 If any person enters into this agreement as trustee of a trust, then:
- (1) That person warrants that:
 - (a) that person has power to enter into this agreement under the terms of the trust;
 - (b) that person has properly signed this agreement in accordance with the terms of the trust;
 - (c) that person has the right to be indemnified from the assets of the trust and that right has not been lost or impaired by any action of that person including entry into this agreement; and
 - (d) all of the persons who are trustees of the trust have approved entry into this agreement.
 - (2) If that person has no right to or interest in any assets of the trust except in that person's capacity as a trustee of the trust, that person's liability under this agreement will not be personal and unlimited but will be limited to the actual amount recoverable from the assets of the trust from time to time ("the limited amount"). If the right of that person to be indemnified from the trust assets has been lost, that person's liability will become personal but limited to the extent of that part of the limited amount which cannot be recovered from any other person.

17.0 Counterparts

- 17.1 This agreement may be executed in two or more counterparts, all of which will together be deemed to constitute one and the same agreement. A party may enter into this agreement by signing a counterpart copy and sending it to the other party, including by facsimile or e-mail.



FURTHER TERMS OF SALE

See Attached Further Terms of Sale

**SCHEDULE 1**List all chattels included in the sale
(strike out or add as applicable)

~~Stove~~ ~~Fixed floor coverings~~ ~~Blinds~~ ~~Curtains~~ ~~Drapes~~ ~~Light fittings~~

FURTHER TERMS OF SALE

18. Subdivision and Deposit of Plan

- 18.1 The Property is part of the Vendor's subdivision located west of Kaiapoi in Canterbury and known as Silverstream Estates Kaiapoi (the "Development"). The Waimakiriri District Plan is in the course of/has been (as the case may be) amended to rezone the Development land to Residential 7 and Business 4 to allow the Development to proceed. The Vendor has applied to the Waimakiriri District Council ("WDC") for subdivision consent for a multi staged mixed use development (the "Consent").
- 18.2 In this Agreement reference to the Consent includes the principal subdivision consent for the Development and any variation to that consent or any new consent or subsequent variation required by the Vendor to complete the Development.
- 18.3 Following grant of the Consent on terms and conditions satisfactory to the Vendor, the Vendor will use its reasonable endeavours to complete all physical work and to do all things necessary to deposit the proposed subdivision plan with Land Information New Zealand ("LINZ") and obtain the issue of a new computer freehold register title for the Property.
- 18.4 The Vendor will, at the Vendor's expense in a good and workmanlike manner and prior to the Settlement date, complete the connection of water, sewage, electricity and telephone supply services (suitable for residential purposes and for direct connection to a residential dwelling) to the Property in accordance with the requirements of the Consent.
- 18.5 The Property is sold by the Vendor to the Purchaser subject to all existing encumbrances, consent notices, restrictions, covenants and easements shown on the certificates of title to the Land.
- 18.6 The Vendor may grant, receive the benefit of, or take the burden of or vary any encumbrances, consent notices, restrictions, covenants, and easements which may be required by the WDC or any other relevant authority or which may otherwise be required by the Vendor as part of the Development.
- 18.7 The Vendor reserves the right to alter or vary at any time or times the proposed subdivision plan and any subsequent plan or plans and the terms of the Consent relating to the Development (and including the right to alter or vary or cancel any proposed easements shown on the plans) both prior to and following deposit of the proposed subdivision plan with LINZ in such manner as the Vendor in its sole discretion thinks fit.
- 18.8 The Purchaser expressly waives any right of objection or requisition or claim for compensation in respect of any such grant or variation and no compensation will be payable in respect of any such grant, alteration or variation and the Purchaser will take title to the Property subject to or with the benefit of any such easements and other interests or instruments.
- 18.9 The Purchaser will not be entitled to claim any compensation in respect of any minor variation or alteration to the dimensions, measurements and areas of the Property shown on the attached plan. For the purposes of this clause minor variation shall be deemed to be a change less than or equal to a 5% fluctuation in the size of the Property shown on the attached plan.
- 18.10 If any variation or alteration results in a variation greater than 5% of the size of the Property shown on the attached plan the purchase price shall be adjusted (at a rate

equivalent to the purchase price per square metre plus GST (if any)) for each whole square metre by which the final area of the Property exceeds or is less than the area shown on the attached plan. A certificate provided by the Vendor to the Purchaser as to any adjustment in the purchase price shall be final and binding on the Purchaser.

- 18.11 In no circumstances will the Vendor be obliged to deposit the proposed subdivision plan by a particular date, nor will the Purchaser make any claim against the Vendor for any delays which may occur in the depositing of the plan.
- 18.12 The Purchaser will not be entitled to a transfer of the Property or to call for title to the Property until the computer freehold register title has been issued. The Vendor gives no warranty as to the date when the computer freehold register title will be issued.
- 18.13 The Vendor reserves the right to change the address of the Property if in the Vendor's discretion this is required prior to settlement.
- 18.14 If the WDC and/or any other relevant authority impose any condition, restriction or requirement in relation to the Development which, in the Vendor's sole and absolute discretion is unacceptable, then the Vendor will be entitled to cancel this Agreement by giving written notice to the Purchaser. In any such case, no compensation or other amounts will be claimed by the Purchaser and the Vendor will refund to the Purchaser the deposit paid together with accrued interest less Resident Withholding Tax and commission (if any) and neither party will have any rights or remedies against the other.

19. Staging

- 19.1 The Purchaser acknowledges that as the Vendor is undertaking the Development in stages the Vendor will not be obliged to complete the Development (in total) as a pre-requisite to settlement of the Property being tendered on the Settlement date and that as the Vendor is staging the Development the Purchaser will not object to any approvals (or variations) sought to facilitate the staging of the Development.

20. Covenants

- 20.1 The Property is sold subject to and with the benefit of the Vendor's land covenants set out in draft form in Schedule A (the "Covenants"). The Covenants in final form will be registered against the title to the Property.
- 20.2 The Vendor reserves the right at any time by notice in writing to the Purchaser to vary and add to the Covenants in such manner as the Vendor considers appropriate.
- 20.3 The Purchaser accepts and approves the Covenants and notwithstanding any other clause in this Agreement the Purchaser will not requisition or object to the title to the Property on the basis of the Covenants and if required by the Vendor, will execute and register any documentation necessary for the registration of the Covenants.
- 20.4 The Vendor (together with the Vendor's transferees, successors and assigns) may deal with other lots in the Development either subject to or free from any or all of the Covenants and nothing in this Agreement shall oblige the Vendor to enforce any of the Covenants against any other owner of land in the Development.

21. Purchaser Conditions

- 21.1 This Agreement is subject to and conditional on:

- 21.1.1 the approval of the Purchaser's solicitor to all information disclosed by a Land Information Memorandum obtained in respect of the Property or the Land;
- 21.2 The date for satisfaction of clause 21.1 is fifteen (15) working days of the date of this Agreement. Clause 21.1 is inserted for the sole benefit of the Purchaser.
- 22. Vendor Conditions**
- 22.1 This Agreement is subject to and conditional on the Vendor obtaining the Consent and any other consents, approvals and resource consents as the Vendor may require from the WDC or any other relevant authority to complete the Development on terms which are entirely acceptable to the Vendor in all respects and the Vendor arranging the depositing of the approved subdivision plan and the issue of the new certificates of title for the Property within 24 months from the date of this Agreement. This condition is inserted for the sole benefit of the Vendor and may be waived by it at any time.
- 23. Deposit**
- 23.1 The Purchaser will pay the Deposit to the Vendor's Solicitor as stakeholder for the parties ("Stakeholder") on the date of satisfaction of the conditions contained in clause 21 to be held on interest bearing deposit in a designated Stakeholder's account. The Deposit will be released by the Stakeholder to the Vendor on the first of the following to occur:
- 23.1.1 the issue of a computer freehold register title for the Property; or
- 23.1.2 this Agreement is avoided for non-fulfilment of a condition pursuant to clause 9.7(5); or
- 23.1.3 this Agreement is otherwise validly cancelled.
- 23.2 The interest (net of Resident Withholding Tax, applicable bank charges and commission) earned on the Deposit will be credited to the party entitled to the Deposit under this Agreement on the applicable date under clause 23.1.
- 23.3 The Stakeholder will not be liable to any party for reason of any delay in investing the Deposit or any failure on behalf of the Stakeholder's bank, or any costs deducted by the bank for handling the Deposit or any interest, provided however that the Stakeholder will use reasonable endeavours to place the Deposit on interest bearing deposit with the Stakeholder's bank as soon as reasonably possible.
- 23.4 The Vendor will not be required to issue a tax invoice until the Settlement date.
- 24. Cancellation by Vendor**
- 24.1 If any one or more of the following events occur prior to the Settlement date (irrespective of whether the Purchaser will be deemed to be in default and whether any such events pertains only to one of several persons or companies purchasing jointly) then the Vendor may (at its election) cancel this Agreement by written notice to the Purchaser:
- 24.1.1 the Purchaser, being a natural person is declared bankrupt; or
- 24.1.2 the Purchaser, being a company:
- 24.1.2.1 enters into voluntary administration; or

24.1.2.2 is placed in receivership; or

24.1.2.3 is placed in liquidation; or

24.1.2.4 enters into a scheme of arrangement for the benefit of its creditors.

24.2 Without prejudice to any other right set out under this Agreement, if the Vendor cancels this Agreement pursuant to clause 24, then it may forfeit and retain the Deposit and interest and/or sue the Purchaser for damages.

24.3 The Vendor may (at its election) cancel this Agreement by written notice to the Purchaser if the Vendor decides not to proceed with the Development. In any such case, no compensation or other amounts will be claimed by the Purchaser and the Vendor will refund to the Purchaser the Deposit together with accrued interest less Resident Withholding Tax and commission (if any) and neither party will have any rights or remedies against the other.

25. Force Majeure

25.1 The Vendor is entitled to cancel this Agreement if circumstances arise outside the reasonable control of the Vendor, including without limitation, acts of God, earthquake, strikes, lockouts, riots, acts of war, epidemics, compliance with a law or governmental order, or monetary or economic developments prevent the Vendor from commencing, continuing, or completing the Development. The Vendor may (without any obligation to do so) exercise its right of cancellation under this clause by notice in writing to the Purchaser and the Vendor will refund to the Purchaser the Deposit (if any) together with accrued interest less Resident Withholding Tax and commission (if any) and neither party will have any rights or remedies against the other.

26. No Caveats

26.1 The Purchaser cannot register a caveat against the Land prior to the issue of a separate title for the Property. If the Purchaser breaches this clause, the Purchaser will pay all costs incurred by the Vendor to remove the caveat incurred and losses suffered by the Vendor directly or indirectly as a consequence of any delay in deposit of the subdivision plan(s) for the Development or completion of any work the Vendor requires for the Development caused by the registration of the caveat.

26.2 All costs incurred by the Vendor under clause 26 will be an amount due in addition to the purchase price by the Purchaser to the Vendor on the Settlement date.

26.3 The Purchaser irrevocably appoints the Vendor the Purchaser's attorney to prepare, sign and register a withdrawal of any caveat registered against the Land in contravention of this clause.

27. Fencing

27.1 If the Vendor has erected a fence on the Property or reimbursed the registered proprietor of an adjacent property in respect of a fence erected by that registered proprietor then the Purchaser will reimburse the Vendor for the Vendor's share of that fencing.

27.2 This amount will be an amount due in addition to the purchase price by the Purchaser to the Vendor on the Settlement date.

28. Restriction on Dealing

- 28.1 Until the Purchaser has completed settlement of the purchase of the Property the Purchaser will not, without first obtaining the written consent of the Vendor, advertise or market for sale, transfer, assign, or encumber the Purchaser's interest under this Agreement or the Property.

29. Assignment

- 29.1 The Vendor reserves the right to assign or transfer its interest in the Property, the Land and/or this Agreement without the Purchaser's consent.

30. Agreed Lowest Price

- 30.1 The purchase price does not include any capitalised interest and the parties agree that the "lowest price" for the purposes of the definition of "consideration" in section EW 32 of the Income Tax Act 2007 is equal to the purchase price of the Property.

31. No Representation and Entire Agreement

- 31.1 This Agreement constitutes the entire agreement, understanding and arrangement (express and implied) between the parties in respect of the matters contained in this Agreement.
- 31.2 The Purchaser acknowledges that it has entered into this Agreement and not in reliance on any representation, statement, advertisement or warranty made by the Vendor or any officer or agent of the Vendor as to any matter of fact relating in any way to the Development.
- 31.3 All information obtained by the Purchaser whether provided by the Vendor or the Vendor's agents and consultants directly or accessible electronically through the Vendor's website has been prepared prior to commencement of the Development. While every reasonable effort has been made by the Vendor to ensure that the information correctly illustrates the Development this material may only be used by the Purchaser for guidance and no responsibility will be taken for any non-material differences, errors or omissions which may become apparent during or on completion of the Development.

32. Severability

- 32.1 If any provision of this Agreement is, or becomes, unenforceable, illegal or invalid for any reason, this Agreement will remain in full force apart from such provision which will be deemed deleted.

33. Conflict

- 33.1 If there is a conflict between these Further Terms of Sale and the terms of the Agreement these Further Terms of Sale will prevail.

SCHEDULE A
LAND COVENANTS

SILVERSTREAM ESTATES LIMITED
BUILDING AND DESIGN COVENANTS
("LAND COVENANTS")

1. Creation of Land Covenants

- 1.1** The Grantor for itself and its successors in title covenants and agrees with the Grantee and its successors in title that the Grantor will at all times observe and perform the covenants contained in this Easement Instrument to the intent that each of the covenants will forever enure for the benefit of and be appurtenant to each and all of the Servient Tenements and Dominant Tenements (together "the Land") and each and all of the registered proprietors of the Land provided that the Grantor will be liable only for breaches of the covenants contained in this Easement Instrument which occur whilst the Grantor is the registered proprietor of the Land or any part of the Land and provided further that Silverstream Estates Limited will not be liable for breaches of the covenants contained in this instrument whilst it is the registered proprietor of the Land or any part of the Land.
- 1.2** The Grantor will at all times indemnify and keep the Grantee indemnified from all losses, costs, claims and demands in respect of any breach or non-observance by the Grantor of these covenants.
- 1.3** The Grantee will not call on Silverstream Estates Limited to pay for or contribute towards the cost of erection or maintenance of any boundary fence between any property and adjoining property of the Grantee provided that this covenant will not enure for the benefit of any subsequent registered proprietor of any adjoining land.

2. Interpretation

- 2.1** Unless the context specified or requires otherwise, the following words and phrases in these covenants shall have the meanings specified below:

"Approved Builder" means a builder who has been approved by the Developer and who has entered into an Approved Builder Deed.

"Approved Builder Deed" means a deed to be entered into between the Developer and a builder of any Building or structure on a Developed Property in a form prescribed by the Developer.

"Authority" means the Waimakariri District Council or any other relevant authority.

"Building" means any building or structure higher than 1.2 metres above Ground Level, including chimneys and satellite dishes, but excluding arials.

"Developed Properties" means all of the residential Developed Properties within the Development

"Developed Property" means any one property comprised on a separate certificate of title in the Development.

"Developer" means Silverstream Estates Limited or its nominee or any developer who acquires the Development from Silverstream Estates Limited for the purposes of completing the Development.

"Development" means the Silverstream Estates development in Kaiapoi.

"Dwelling" means a Building or a group of Buildings designed and occupied as a single self contained household unit, by one or more persons, and includes normal accessory structures including but not limited to garages, garden sheds and glasshouses.

"Ground Level" means the finished ground level of a Developed Property as at the date of deposit of the plan of subdivision which creates that Developed Property.

"Home Office" means no more than two rooms in a Dwelling set aside for home office/business but excludes any bed and breakfast or other form of commercial visitor accommodation activity.

"Land Covenants" means these covenants.

“RMA” means the Resource Management Act 1991 and any regulations (as amended from time to time).

“Subdivision Plan” means a subdivision plan showing Developed Property boundaries.

“WDP” means the Waimakariri District Plan as amended from time to time.

“Working Days” means a day which is not a Saturday, Sunday or public holiday in Canterbury.

3. Construction Covenants

- 3.1 The Grantor for itself and its successors in title hereby covenants and agrees with the Grantee and its successors in title for the benefit of the Dominant Tenement that the Grantor shall not:

3.1.1 Erect (or permit or suffer to be erected) on the Servient Tenement:

- 3.1.1.1 any Building unless the plans (including the site plan, concept plan, landscaping plan and fencing plan) and specifications (including the materials used in construction) and the final working drawings and specifications have first been approved in writing by Developer in accordance with its prescribed approval processes. The Developer’s decision in relation to all aspects of the approval will be final;
- 3.1.1.2 any Building where construction has not commenced within six (6) months of the date of approval. Approval will be deemed to have lapsed on that date in which case the plans and specifications will need to be resubmitted for approval by the Developer;
- 3.1.1.3 any Building unless the builder has first been approved by the Developer and the builder has signed an Approved Builder Deed;
- 3.1.1.4 any Building other than a Building that has been approved by the Developer;
- 3.1.1.5 any Building other than a single Dwelling, garage, storage sheds, and usual accessory buildings for the occupation of one family unit;
- 3.1.1.6 any re-locatable, pre-built or kit-set Building or any Building containing second-hand materials (other than second-hand recycled bricks) unless approved in writing by the Developer;
- 3.1.1.7 any Building with external cladding (except cladding of soffits or gable ends) of unrelieved flat steel, corrugated iron, fibrolite, hardiflex, galvanised steel, fibre cement weatherboards, uncoated fibre material, PVC sidings or claddings, unpainted concrete masonry, metal or asphalt based aggregate covered tiles or shingles or any similar materials;
- 3.1.1.8 any Building with unfinished exterior walls or doors (except where cedar cladding or decorative brick/stone are used);
- 3.1.1.9 any Building with a roof constructed from anything other than slate, tile or a pre-coloured steel product unless the Developer agrees to a different roofing material as part of the approval of the plans and specifications and no Building shall have a roof constructed from copper, corrugated iron or any unpainted metal surface or have copper spouting or down pipes other than in accordance with this clause;
- 3.1.1.10 any fence or boundary wall containing cement board sheets or panels, corrugated iron or metal sheeting;
- 3.1.1.11 any sign visible from outside the Developed Property except:

- 3.1.1.11.1 one standard real estate sign which shall be no larger than 600cm x 1m and no higher than 1.2m above Ground Level;
- 3.1.1.11.2 signage erected by the Developer;
- 3.1.1.11.3 signage approved by the Developer on such conditions as the Developer thinks fit;
- 3.1.1.11.4 a sign erected by an Approved Builder in accordance with the terms of an Approved Builders Deed;

and all signs erected in accordance with this clause are subject to the requirements and the rules applicable to the Residential 7 zone of the WDP. All signs shall be located appropriately and maintained to the satisfaction of the Developer in all respects. The Developer may give 24 hours written notice to any registered proprietor of a Developed Property to remove any sign that does not comply with these Land Covenants.

3.1.1.12 any carport other than a fully enclosed garage;

3.1.1.13 any aboveground electrical, telephone, or other wires or any fencing other than provided for in the approved plans and specifications;

3.1.1.14 any satellite dish with a diameter greater than 0.7 metres or any satellite dish or TV aerial that is visible from the street frontage of the Developed Property; or

3.1.1.15 any Building beyond the approved Authority set backs or over legal easements.

- 3.1.2 Delay commencement of construction of the Building to a date more than six (6) months after the settlement date of the purchase of the Developed Property or take any more than twelve (12) months from the date of approval of the plans and specifications to complete construction of the Building, fencing and landscaping of the Developed Property in accordance with the approved plans except in the case of the Grantor owning two adjoining lots with the intention of constructing one Dwelling on those lots in which case the expected completion date will be advised to the Grantor as part of the plans approval process.
- 3.1.3 Erect (or permit or suffer to be erected) on Lots [9, 12, 90] of Deposited Plan [] any Building greater than one storey in height.
- 3.1.4 Permit during the course of construction the loading, unloading, delivery, or storage of building materials other than within the boundaries of the Developed Property.
- 3.1.5 Carry out any construction unless an adequate rubbish skip is available and regularly emptied or replaced or permit any rubbish to blow outside the boundaries of the Developed Property or permit any vehicles to be washed down other than within the boundaries of the Developed Property during the course of construction.
- 3.1.6 Permit the Grantor's construction workers and contractors to use the Developed Property or any other area in the Development for toileting purposes and prior to construction commencing the Grantor shall provide a suitable portable toilet facility for use by the Grantor's construction workers and contractors.
- 3.1.7 Provide car parking for less than one vehicle that can be parked on the Developed Property and less than one vehicle that can be garaged on the Developed Property.
- 3.1.8 Use colours on the exterior roof or wall other than those approved by the Developer.

- 3.1.9 Permit any soil, earth, clay, sand or shingle to remain on a Developed Property after completion of construction and to remove the same as soon as possible.
- 3.1.10 Bring onto or use (either during the course of construction or following completion of construction) any temporary structure, tent (other than a children's play tent), caravan or campervan or similar facility for overnight sleeping or accommodation on any Developed Property.
- 3.1.11 Permit any internal plumbing pipes (other than stormwater pipes) to be visible from the outside of the Building and to conceal the pipes into walls or ducts and pipes which are required to break the roof line must be painted the same colour as the roof.
- 3.1.12 Erect fences on the boundaries of the Developed Property other than in accordance with the approved plans and specifications and the provisions of the Fencing Act 1978 will apply to all fencing, including without limitation, section 9. The Grantor acknowledges that the Developer will not be required to contribute to the cost of erection and maintenance of a fence on a boundary of a Developed Property. Where the Developer has erected a fence then the Grantor will reimburse the Developer for the cost of the fencing and if the Grantor being liable to pay the Developer for the fencing cost or maintenance cost fails to reimburse the Developer within ten (10) Working Days of receiving an invoice for the amount to be reimbursed then the Grantor will pay the Developer interest at the rate of twelve percent per annum (12%) on a daily basis until payment is made.
- 3.1.13 Erect fences otherwise in accordance with the provisions of the WDP in particular the rules relating to all fencing between residential properties and reserve land to ensure that all residential properties fronting neighbourhood roads shall have a minimum visual permeability/openness of 45% and subject to that plan all street facing fences will be set back from the front boundary of the Developed Property in accordance with specifications that will be described in the approved plans and specifications. Subject to the WDP all side and rear fences will not exceed 1.8m in height and will be stained or finished before the Dwelling is occupied. Where fences from adjoining Developed Properties meet they will be flush at that juncture and if required the fence will be tapered over a minimum length of 2 x 2.4m.

4. Land Use Covenants

- 4.1 The Grantor for itself and its successors in title hereby covenants and agrees with the Grantee and its successors in title for the benefit of the Dominant Tenement that the Grantor shall not:
 - 4.1.1 Use or allow the Developed Property to be used or developed other than in accordance with the requirements of the WDP in all respects and in particular the rules applicable to the Residential 7 zone of the WDP.
 - 4.1.2 Use or allow the Developed Property to be used for any illegal, offensive or noisy activities.
 - 4.1.3 Use the Developed Property as a residence until the later of:
 - 4.1.3.1 the date of issue of a Code Compliance Certificate by the Waimakariri District Council; or
 - 4.1.3.2 the date that the Building, landscaping and fencing have in the Developer's opinion been completed strictly in accordance with the approved plans and specifications.
 - 4.1.4 Use any part of the Developed Property for any purpose other than a residential Dwelling or Home Office without the prior written consent of the Developer.
 - 4.1.5 Except during the period of construction of the Building, use (or permit or suffer to be used) any chainsaw, motor mower, mechanical weed-eater or other noisy mechanical device on the Developed Property before 8.00am or after 7.00pm on any day.

- 4.1.6 Play or use (or permit or suffer to be played or used) or used any live music or any radio, television set, audio device or electrical musical appliance on the Developed Property that can be heard beyond the boundaries of the Developed Property.
- 4.1.7 Subdivide (which term includes any unit title or cross-lease subdivision) any Developed Property. This clause shall not apply to any boundary adjustment which does not result in the creation of a greater number of separate titles than existed prior to the boundary adjustment.
- 4.1.8 Permit any clothesline or clothes drying apparatus to be visible from the street frontage of a Developed Property.
- 4.1.9 Permit the Developed Property to become untidy and overgrown and will keep the Developed Property in a neat and tidy condition and not allow rubbish to accumulate on the Developed Property.
- 4.1.10 Permit any part of the Developed Property to form a private or legal road to an adjoining property.
- 4.1.11 Erect a Dwelling without erecting a new letterbox at the front of the Developed Property of a design and colour approved by the Developer and where the letterbox shall not be more than 1.5 metres high or 500mm wide.
- 4.1.12 Permit any damage to be caused to any Servient or Dominant Tenement and any adjoining property (including, without limitation, berms, footpaths, stormwater swales, tree planting and fences) as a consequence of construction work on the Developed Property. The Grantor shall promptly make good any damage.
- 4.1.13 Keep any livestock or animals on the Developed Property (other than household domestic pets for household domestic purposes) which may cause a nuisance or annoyance to registered proprietors of neighbouring Developed Properties or detract from the Development including but not limited to pigs, deer, goats, horses, sheep fowl, pigeons, or any dog which in whole or in part, resembles any of the Pit Bull Terrier, Japanese Tosa, Dogo Argentine, Fila Brasileiro, Rottweilers or Doberman Pinschers breeds or any other potentially aggressive or noisy breed of animal or allow the Developed Property to be used for any commercial kennel or cattery.
- 4.1.14 Park or (permit or suffer to be parked) on the Developed Property any caravan, storage container, campervan, boat, trailer or recreational vehicle where it is visible from a road.
- 4.1.15 Park any vehicle or leave any item of plant or equipment on the road reserve in front of the Developed Property which is in a poor state of repair, unsightly or damaged and which might cause a hazard to any person or devalue or decrease the enjoyment of any registered proprietor of a Developed Property.
- 4.1.16 Bring or allow to be brought onto any Developed Property motor vehicles of a gross laden weight of more than 4500kg or agricultural or other contracting plant, or any similar machinery likely by its presence to devalue of any Developed Property or decrease the enjoyment of any registered proprietor of a Developed Property.
- 4.1.17 Permit the state or repair and condition of the Building on the Developed Property to deteriorate and to regularly maintain the Building and in particular the exterior surface materials.
- 4.1.18 Oppose or object to any application for a resource consent or building consent or any other approval made by the Developer to the Authority and will on request being made by the Developer sign any documentation required to give effect to the consent or approval.
- 4.1.19 Make or lodge, be a party to or finance or contribute to the cost of any complaint, application, or other proceeding (either directly or indirectly) under the RMA or otherwise designed or intended to limit, prohibit, or restrict:

4.1.19.1 the permitted use of the piggery adjoining part of the western boundary of the Development as more particularly described in certificates of title CB12K/708 and CB560/71 permitted by a resource consent or any existing use of the land or any part of the land; or

4.1.19.2 in the case of any expansion, after the date of this Land Covenant, of any such activity which was carried out by the piggery adjoining part of the western boundary of the Development as more particularly described in certificates of title CB12K/708 and CB560/71 prior to the date of this Land Covenant, or in the case of any alteration to the accommodation of animals housed on the land described in certificates of title CB12K/708 and CB560/71 that is required to bring about changes introduced by the Animal Welfare code,

provided that the effects of such activities including any proposed expansion will be no greater than the effects of activities which were lawfully established at the date of this Land Covenant unless the Grantor believes (acting reasonably) that an activity carried out on the land described in certificates of title CB12K/708 and CB560/71 is in breach of the requirements of the WDP or the requirements of a consent issued by an Authority.

The terms "permitted activity" and "resource consent" shall have the meanings as defined in section 2 of the RMA, and "existing use" shall have the meaning as defined in terms of section 10 of the RMA.

4.1.20 The Grantor acknowledges that the Development land was rural land prior to rezoning and that properties surrounding the Development continue to be used for rural, quasi-rural, life-style and ancillary related purposes and this must be taken into account by the Grantor in determining if any complaint should be made.

4.1.21 Pursuant to the provision of the Contracts (Privity) Act 1982, the parties acknowledge that the terms and provisions of clauses 4.1.19 and 4.1.20 of these Land Covenants confer a benefit on and shall be enforceable by, the registered proprietors (from time to time) of the land described in certificates of title CB12K/708 and CB560/71 as if such persons or entities were a party to these Land Covenants.

4.1.22 Make any complaint (either directly or indirectly) in respect of the location of the Developed Property within the 50 dBA air noise contour for Christchurch International Airport ("CIA"). The Grantor acknowledges that part of the Development is within the 50 dBA air noise contour for CIA and that depending on prevailing weather conditions the Developed Property will be over-flown by aircraft landing and taking off from CIA 24 hours a day, 365 days a year. The Grantor will not lay any complaint with or against the Developer, any Authority, Christchurch International Airport Limited or its successor in respect of any noise or other nuisance that may be caused to the Grantor as a consequence of the Developed Property's proximity to CIA.

5. Default

5.1 If there shall be any breach or non-observance on the Grantor's part of the Land Covenants contained in this Easement Instrument (and without prejudice to any other liability which the Grantor may have to the Grantee or any other person having the benefit of these Land Covenants) the Grantor will upon written demand being made by the Developer or any of the registered proprietors of the Dominant Tenement(s):

5.1.1 pay to each Grantee (or other person having the benefit of these Land Covenants) making such demand as liquidated damages the sum of \$150.00 per day for every day or part day that such breach or non-observance of the Land Covenants contained in this Easement Instrument continues after the date upon which written demand has been made;

- 5.1.2 remove or cause to be removed any Building, fence or other structure erected or placed on the Servient Tenement in breach or non-observance of the foregoing Land Covenants; and
 - 5.1.3 replace any building materials so as to comply with these Land Covenants;
 - 5.1.4 reimburse the Developer whilst the Developer is the registered proprietor of any Dominant Tenement on demand all legal and other costs incurred by it in dealing with the Grantor's breach.
- 5.2 The Grantor and their successors in title and assigns will only be liable for breaches of the Land Covenants which occur while they are registered proprietors of the Servient Tenement.
- 5.3 The Grantor will not have any claim in damages against the Developer on account of any refusal to grant or the grant of any approval under these Land Covenants or for the transferring or assigning of its interest and right to grant or withhold approvals as provided herein if such transferee or assignee fails to observe those obligations.
- 5.4 Whilst the Developer is the registered proprietor of any Dominant Tenement all breaches or non-observance on the Grantor's part of the Land Covenants whether actual or alleged must first be referred to the Developer so that no Grantee other than the Developer can take any action against a Grantor in respect of a breach or non-observance of the Land Covenants. In addition to the remedies set out in clause 5.1 the Developer will have a complete discretion to deal with the default in such way as it thinks fit and the Grantor will not have any claim in damages against the Developer or right to compensation in respect of any action by the Developer in dealing with the default.
- 6. Disputes
 - 6.1 If a dispute arises in relation to this Easement Instrument:
 - 6.1.1 the party initiating the dispute must provide full written particulars of the dispute to the other party;
 - 6.1.2 the parties must promptly meet and in good faith try to resolve the dispute;
 - 6.1.3 subject to clause 6.2 if the dispute is not resolved within ten (10) days of the written particulars being given (or any longer period agreed by the parties) the dispute must be referred to arbitration in accordance with the Arbitration Act 1996 to be conducted by a single arbitrator to be agreed on by the parties or, failing agreement, to be appointed by the President of the Canterbury and Westland Branch of the New Zealand Law Society.
 - 6.2 Notwithstanding clause 6.1.3 if any dispute arises in relation to this Easement Instrument including as to what may constitute a breach or as to matters of interpretation of this Easement Instrument whilst the Developer is the registered proprietor of any Dominant Tenement then the same shall be referred to the Developer for resolution whose decision shall be final.
- 7. No Termination
 - 7.1 The Grantor may not determine this Easement Instrument for breach of any provision in this instrument (whether express or implied) or for any other cause, it being the intention of the parties that the Land Covenants created herein shall subsist for all time unless they become obsolete or are surrendered.
- 8. Expiry of Land Covenants
 - 8.1 These Land Covenants shall expire and cease to have any effect on the date 50 years following the date of registration of this Easement Instrument such expiry of these Land Covenants being without prejudice to any claim under these Land Covenants made prior to the expiry date.

SILVERSTREAM ESTATES KAIAPOI
GENERAL DESIGN CONTROL PHILOSOPHY and
PLANS APPROVAL PROCESS
(to be attached to the Design Control Form)

This document should be read in conjunction with the Land Covenants which are or will be registered against the title to each property in the Development. A set of the Land Covenants is available on request.

The Land Covenants are intended to be broad, to allow flexibility, to allow adaptability as architectural styles change and develop and to allow the possibility of the Silverstream Estates Development ("the Development") developing a design theme but are also required to ensure the integrity of design and style and to reflect the Developer's vision for the Development.

Design controls in respect of design and building and other matters are set out in the Land Covenants.

The intention of the Land Covenants is to ensure continuity and harmony of building style within the Development.

The indicative plans and specifications approval process is described as follows but Silverstream Estates Limited ("the Developer") reserves the right to vary and adapt the process as it thinks fit.

1. Approval Process

- 1.1 All plans submitted to the Developer must be submitted in duplicate and in sufficient detail to enable the Developer to assess the proposed design.
- 1.2 The Developer may request such further information it requires in its sole discretion to assist it in giving approval.
- 1.3 The Developer will aim to advise the applicant or the applicant's builder of its decision within ten (10) working days of receipt of the final plans and specifications, any other information requested by the Developer and the name of the builder who will undertake the building work (if relevant).
- 1.4 All builders once approved by the Developer must enter into an approved builders deed in the form and on the terms then in use by the Developer.
- 1.5 The approval by the Developer of any plans and specifications is granted in respect of the specific plans for the specific property to which they relate and shall not constitute or be deemed to be approval of similar plans for any other property.
- 1.6 The Developer may, in its sole discretion, waive compliance with any aspect of the design controls if in the Developer's sole opinion the granting of such a waiver will not be contrary to the intent and spirit of those controls.
- 1.7 In assessing whether to approve any plans and specifications the Developer will amongst other things consider:
 - 1.7.1 whether the proposed building(s) and/or landscaping is of a quality design and/or compatible with other buildings (either existing or already approved but not yet built) or landscaping in the vicinity and/or the local environment;

- 1.7.2 the extent to which the proposed buildings are in harmony with the surrounding area and any existing or approved dwellings;
 - 1.7.3 the influence or effect the proposed buildings may have upon the outlook of adjacent and/or neighbouring dwellings;
 - 1.7.4 the effect of any proposed landscaping;
 - 1.7.5 individual elements of the design as well as the overall design; and
 - 1.7.6 the requirements of the Waimakariri District Plan; and
 - 1.7.7 any other factor which the Developer considers relevant
- 1.8 The Developer's approval of any plans and specifications may be made subject to such conditions as the Developer considers necessary.
- 1.9 The Developer reserves the right to charge the applicant an administration fee in consideration of the approval of the plans and specification which will be payable as a condition of giving approval.

SCHEDULE 2 (GST Information)

1. The vendor is registered under the GST Act or will be so registered at settlement.	Yes/No
2. The vendor's registration number (if already registered):	94-613-973
3. The purchaser is registered under the GST Act or will be so registered at settlement.	
4. The purchaser's registration number (if already registered):	Yes/No
5. The purchaser's full name:	
6. The purchaser's address:	
7. The purchaser intends at settlement to use the goods supplied under this agreement for making taxable supplies.	Yes/No
8. The purchaser intends at settlement to use the property as a principal place of residence by the purchaser or a person associated with the purchaser under section 2A(1)(c) of the GST Act.	Yes/No
9. The purchaser intends to direct the vendor to transfer title to the property to another party ("nominee")	Yes/No
10. If the answer to question 9 is "Yes":	Yes/No
(a) The nominee is registered under the GST Act or is expected by the purchaser to be so registered at settlement.	
(b) The nominee's registration number (if already registered):	
(c) The nominee's full name:	
(d) The nominee's address:	
(e) The purchaser expects the nominee to intend at settlement to use the goods supplied under this agreement for making taxable supplies.	Yes/No
(f) The purchaser expects the nominee to intend at settlement to use the property as a principal place of residence by the nominee or a person associated with the nominee under section 2A(1)(c) of the GST Act.	Yes/No

WARNING *(This warning does not form part of this agreement)*

This is a binding contract. Read the information set out on the back page before signing.

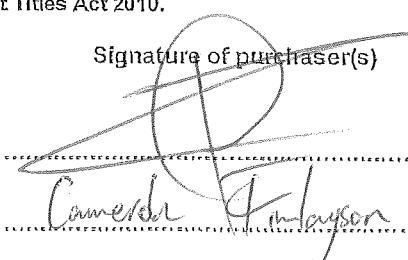
Acknowledgements

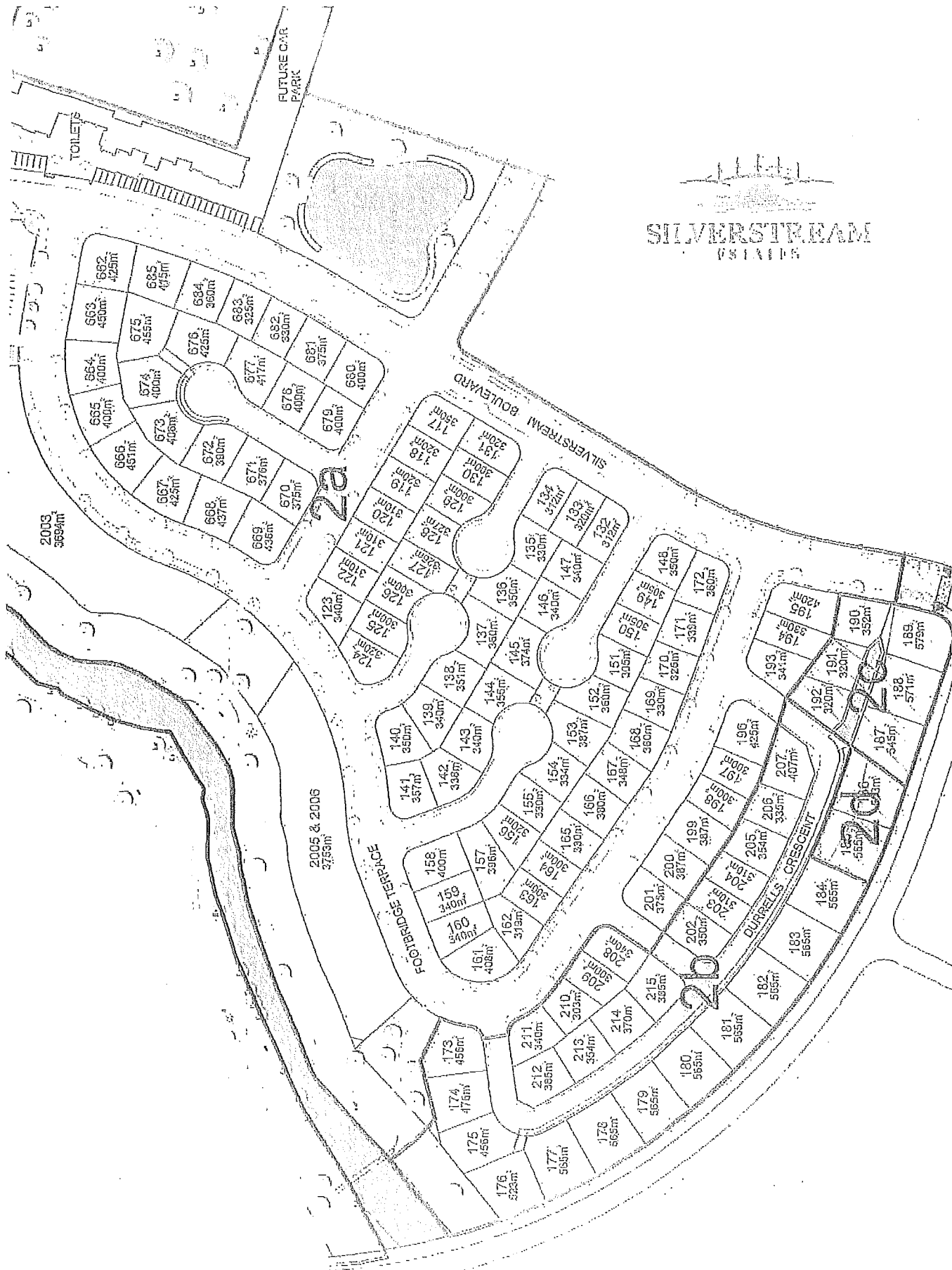
Where this agreement relates to the sale of a residential property and this agreement was provided to the parties by a real estate agent, or by a licensee on behalf of the agent, the parties acknowledge that they have been given the guide about the sale of residential property approved by the Real Estate Agents Authority.

Where this agreement relates to the sale of a unit title property, the parties acknowledge that the purchaser has been given a pre-contract disclosure statement under section 146 of the Unit Titles Act 2010.

Signature of vendor(s)

Signature of purchaser(s)


 Cameron F. Layson



SILVERSTREAM
ESTATES

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- DATE:

VENDOR:
Silverstream Estates Limited

Contact Details:
263 Giles Road
Kaiapoi

Fax: (03) 323 6992
Phone: (03) 323 6991

VENDOR'S LAWYERS:

Firm: Duncan Cotterill

Individual Acting: Hugh Lindo/Helen Scott

Contact Details:
PO Box 5
Christchurch
Fax: (03) 379 7097
Phone: (03) 379 2430
Email: h.lindo@duncancotterill.com

PURCHASER:

Cameron Finlayson

Contact Details:

PURCHASER'S LAWYERS:

Firm: AWS Legal

Individual Acting: Fraser McKenzie

Contact Details:

151 Spay Street

Invercargill

vaser.mckenzie@awslegal.com

REAL ESTATE AGENT:

Agent's Name:

Manager:

Salesperson:

Contact Details:

THE ABOVE NOTES ARE NOT PART OF THIS AGREEMENT
AND ARE NOT A COMPLETE LIST OF MATTERS WHICH ARE
IMPORTANT IN CONSIDERING THE LEGAL CONSEQUENCES
OF THIS AGREEMENT.

PROFESSIONAL ADVICE SHOULD BE SOUGHT REGARDING
THE EFFECT AND CONSEQUENCES OF ANY AGREEMENT
ENTERED INTO BETWEEN THE PARTIES.

THE PURCHASER IS ENTITLED TO A COPY OF ANY SIGNED
OFFER AT THE TIME IT IS MADE.

19 June 2013

Our Reference: "PIM Number: 131056P"

Cameron Finlayson
C/- Versatile Homes & Buildings
3 Springs Road
Sockburn
Christchurch 8042

Dear Sir/Madam

PROJECT INFORMATION MEMORANDUM

Please find enclosed your Project Information Memorandum in respect of the proposed work at 4 Robb Place Kaiapoi Silverstream Stage 2A.

Prior to **commencing building work**, the applicant must ensure that a Building Consent has been applied for and issued and that any "authorisations" have been obtained and any conditions of the PIM have been verified.

These include:

Consent Notice

The applicant is made aware of the Consent Notices issued under Resource Consent 125220 Stage 2A in respect of Lot 130.

- Any dwelling erected on Lot 130 shall have a minimum floor level of 4.30m A.M.S.L.
- A 1 metre wide landscaping strip shall be provided with the road frontage setback.

Specific Requirement

This lot is subject to specific requirements relating to site coverage, setbacks and structure height – a copy of these are attached.

Environment Canterbury Canterbury Regional Council Liaison Statement

The applicant is made aware that the proposed project falls within an area of shading on the attached ECAN liquefaction study map, and the following will apply.

The shading on the enclosed ECAN map identifies areas where liquefaction assessment is needed and where a site specific geotechnical investigation and report is required as part of a Building Consent application.

Davis Ogilvie has carried out a Shallow Geotechnical Investigation on this lot a copy of which has been provided with the application – This will be reviewed as part of the Building Consent Process.

Vehicle Crossing

This property has been identified as requiring a new vehicle crossing. **A formal Vehicle Crossing Application will need to be submitted along with a \$61.30 fee in fee or a road and established prior to the erection of a dwelling or other significant building.** (Rule 3.2, Waimakariri District Council Vehicle Crossing Bylaw 2007).



Note that a legal and compliant vehicle crossing will need to be established (in accordance with WDC Engineering Code of Practice **DWG 600 211** (Urban) (attached) Resource Consent approval will need to be sought if the location of the proposed vehicle crossing cannot be located **it in 1m or greater than 7m** to the adjacent vehicle crossing (Waimakariri District Plan Rule 30.6.1.13). **An error on the ground or on a vehicle crossing is not its responsibility to receive a vehicle crossing permit from the Council commitment once a main title is established.** (Rule 4.4 Waimakariri District Council Vehicle Crossing Bylaw 2007)

The approval plan along with any Development Contribution notification or Resource Consent Certificate (where applicable) attached to this Project Information Memorandum must be included with the Building Consent for the project (when issued). Any significant departure from the original plans may require that a new Project Information Memorandum be issued.

Yours faithfully



Gillian Beilby
PIMs Officer



Project Information Memorandum**Section 31 38, Building Act 2004****Allocation**

Cameron Finlayson	No.	131056P
C/- Versatile Homes & Buildings	Issue date	19/06/13
3 Springs Road	Application date	4/06/13
Sockburn	Overseer	Gillian Beilby
Christchurch 8042		

Project

Description	New (& prebuilt) House, Unit, Bach, Crib, Town House etc. Being Stage 1 of an intended 1 Stages Dwelling with attached garage
Intended Life	Indefinite, but not less than 50 years
Intended Use	Residential
Estimated Value	\$172,128
Location	4 Robb Place, Kaiapoi
Legal Description	Lot 130 Stage 2A RC125220
Valuation No.	2173041500

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

This project information memorandum includes:

- ___ Information identifying special features of the land concerned
- ___ Information about the land or building concerned notified to the Council by any statutory organisation having the power to classify land or buildings
- ___ Details of relevant utility systems
- ___ Details of authorisations which have been granted
- ___ Notification of any other authorisations which must be obtained before the proposed building work may be undertaken
- ___ Important information

All boundary survey pegs are to be located by discovery or redefinition and flagged before work is commenced.

No part of the structure is to exceed the Council's recession plane.

The certificate of title may make reference to land covenants - a copy of which should be submitted with the Building Consent application.

A current copy of the certificate of title is to be submitted with the building consent application.



4 Project Information Memorandum continued

This project Information Memorandum does not purport to be a full report on every aspect of the property which is likely to be relevant to the building works proposed. It is information that is known to the Council at the date of the issue of this memorandum. It is issued pursuant to Sections 30-39 of the Building Act 2004.

INFORMATION IDENTIFYING RELEVANT SPECIAL FEATURES OF THE LAND

Wind Zone High

Snow Zone 4

Earthquake Zone 2

This building project is located approximately 3.5m above mean sea level.

Comment :

Any dwelling erected on Lot 130 shall have a minimum floor level of 4.30m A.M.S.L.

Davis Ogilvie Statement of suitability of earth fill for residential developments report – Lot 130 has had fill done as per plan attached.

Attachment :

Davis Ogilvie Statement

INFORMATION ABOUT THE LAND OR BUILDINGS NOTIFIED TO THE COUNCIL BY ANY STATUTORY ORGANISATION HAVING THE POWER TO CLASSIFY LAND OR BUILDINGS

Environment Canterbury (Canterbury Regional Council)

Comment :

In tallin a Woodb rner /solid Fuel Burner, or other forms of heating in your home.

The applicant is advised to check with Environment Canterbury (Canterbury Regional Council) as to what type of fire if any may be installed into your proposed dwelling, this is determined by the Clean Air Zones. Tel: 0800324636

This property is within the clean air zone 2

Attachment :

Nil

DETAILS OF RELEVANT UTILITY SYSTEMS administered by the Waima ariri District Council**Sewer**

Is a connection to a public sewer scheme available?

Yes

If yes, which public sewer scheme?

Eastern District

Is the property already connected?

No

Comments:

Connect to the service lateral provided in compliance with conditions of the Resource Consent for this development.

The reticulation shall gravitate to the existing main located in Robb Place. The reticulation design shall incorporate the following minimum requirements:

- The shared lateral between the road boundary and the sewer main (into which the shared lateral discharges) shall be verified for grade related capacity and condition.
- If lateral grade related capacity in (a) above is not satisfactory, then the subdivider shall install a new lateral within the road reserve to connect to the public main.
- The minimum grade for this shared lateral within the road reserve shall be a minimum of 1 in 80.

Notes:

Sewer connections must be installed by registered drainlayers. It is the property owner's responsibility to arrange connections. New connections to sewer mains must be inspected and approved by the Council prior to backfilling.

A trench opening permit is required to open a footpath or street.

A Capital charge is payable where the property has not previously paid sewer rates.

Water

Is a connection to a public water supply available?

Yes

If yes, which public water supply?

Kaiapoi

Is the property already connected?

No



5**Project Information Memorandum continued****Comments:**

Connect to the service lateral provided in compliance with conditions of the Resource Consent for this development.

Notes:

Water connections to property boundaries are installed by the Council after the receipt of charges payable.

A capital charge is payable where the property has not previously paid water rates.

Stormwater

Is a connection to a public drainage system available?

Yes

Is the property already connected?

No

Discharge point: Kerb & channel

Comments:

Connect to the service lateral provided in compliance with conditions of the Resource Consent for this development.

Notes:

Stormwater connections must be installed by registered drainlayers. It is the property owner's responsibility to arrange connection. New connections to drainage systems must be inspected and approved by the Council prior to backfilling.

A trench opening permit is required if crossing a footpath.

A Capital charge is payable where the property has not previously paid urban drainage rates.

Attachment

"As Built" service plans

DETAILS OF AUTHORISATIONS THAT HAVE BEEN GRANTED

Resource consent

Comment :

Resource Consent 125220 – Stage 2a Residential 7 subdivision.

Attachment :

Resource Consent 125220 224c and consent notices

A copy of the above noted resource consent can be viewed at or emailed from Waimakariri District Council if required.

DETAILS OF AUTHORISATIONS THAT MUST BE OBTAINED BEFORE BUILDING CAN COMMENCE:

Consent Notices

Environment Canterbury (Canterbury Regional Council

Vehicle Crossing

Comment :**Consent Notice**

The applicant is made aware of the Consent Notices issued under Resource Consent 125220 Stage 2A in respect of Lot 130.

Any dwelling erected on Lot 130 shall have a minimum floor level of 4.30m A.M.S.L.

A 1 metre wide landscaping strip shall be provided with the road frontage setback.

Specific Requirement

This lot is subject to specific requirements relating to site coverage, setbacks and structure height – a copy of these are attached.

Environment Canterbury Canterbury Regional Council Liquefaction Hazard

The applicant is made aware that the proposed project falls within an area of shading on the attached ECAN liquefaction study map, and the following will apply.



6 Project Information Memorandum continued

The shading on the enclosed ECAN map identifies areas where liquefaction assessment is needed and where a site specific geotechnical investigation and report is required as part of a Building Consent application.

Davis Ogilvie has carried out a Shallow Geotechnical Investigation on this lot a copy of which has been provided with the application – This will be reviewed as part of the Building Consent Process.

Vehicle Crossing

This property has been identified as requiring a new vehicle crossing. **Normal**

Vehicle Crossing application will need to be submitted along with a 61.30

process in accordance with a resource consent and established prior to the erection of a dwelling

or other significant building. (Rule 3.2, Waimakariri District Council Vehicle Crossing Bylaw 2007).

Note that a legal and compliant vehicle crossing will need to be established (in accordance with WDC Engineering Code of Practice **DWG 600 211** (Urban) (attached) Resource Consent approval will need

to be sought if the location of the proposed vehicle crossing cannot be **located at least 1m or greater**

than 7m to the adjacent vehicle crossing (Waimakariri District Plan Rule 30.6.1.13). **An error on the**

be in or on a vehicle crossing that is receiving a vehicle crossing permit from the

Council commit an offence against the bylaw. (Rule 4.4 Waimakariri District Council Vehicle

Crossing Bylaw 2007)

Attachment :

Vehicle Crossing application form.

DETAILS OF VEHICLE CROSSING ENTRANCEWAY , TYPE OF FRONTAGE AND TRENCH OPENING PERMIT**Vehicle Crossing Entrance**

Is formation of a vehicle crossing from road edge to property boundary required? **Yes**

Type of access required: **DWG 600 211** (Urban)

Advice Note

None applicable to this project

This project information memorandum is confirmation that the proposed building work may be undertaken subject to the provisions of the Building Act 2004 and any requirements of the building consent **not yet approved.**

Signed for and on behalf of the Council:

Name: Gillian Beilb

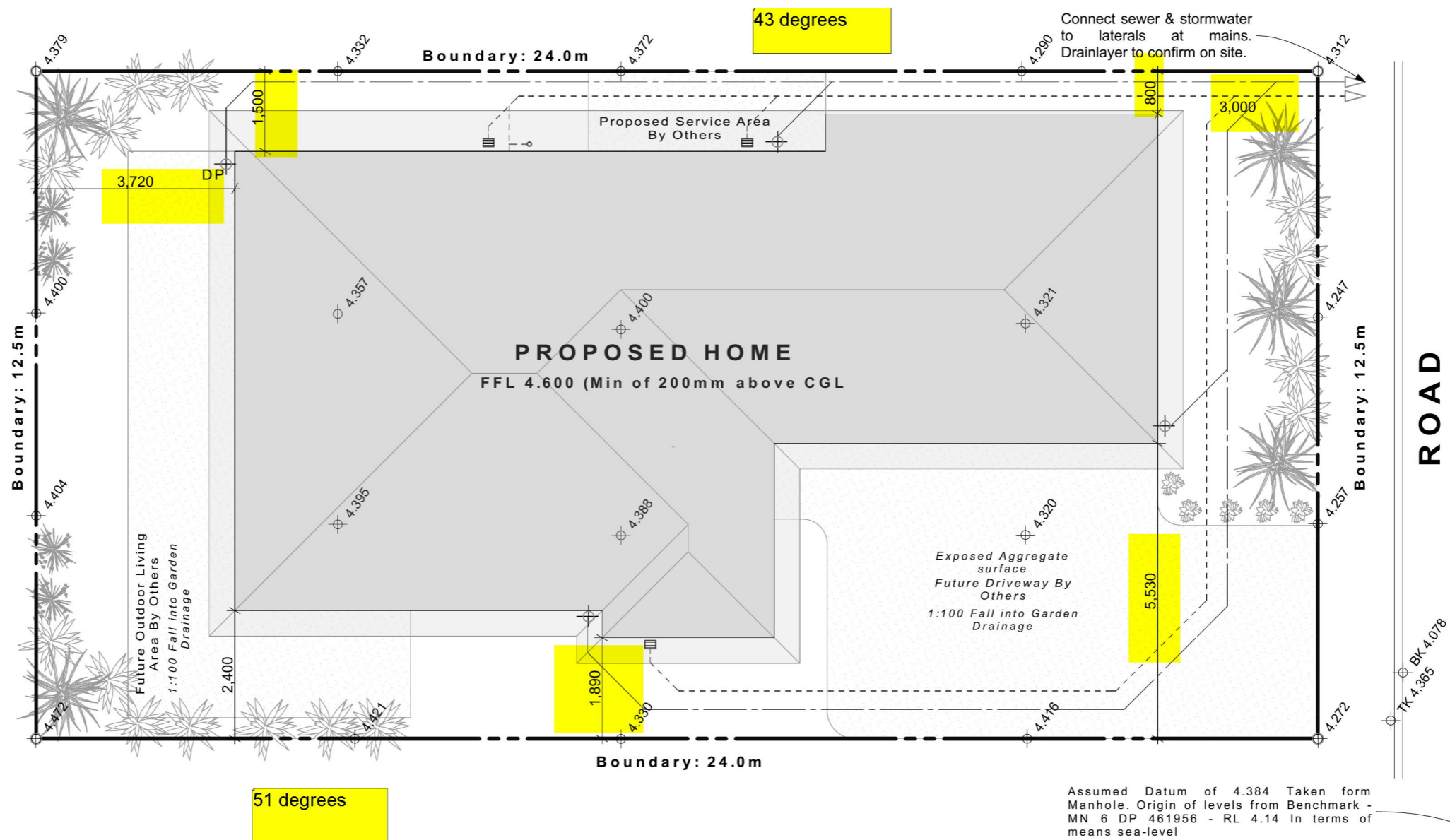
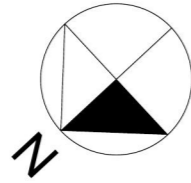
Date: 19/06/13



APPROVED PIM APPLICATION
Refer to PIM report for conditions of this
application
BC131056
19/06/2013
gillianb

LOT: 130

Site Area: 300.0m²
Building Area: 132.2m²
Site Coverage: 44.06%



PROPOSED HOME FOR:
CAMERON FINLAYSON,
LOT 130 SILVERSTREAM

DRAWING TITLE

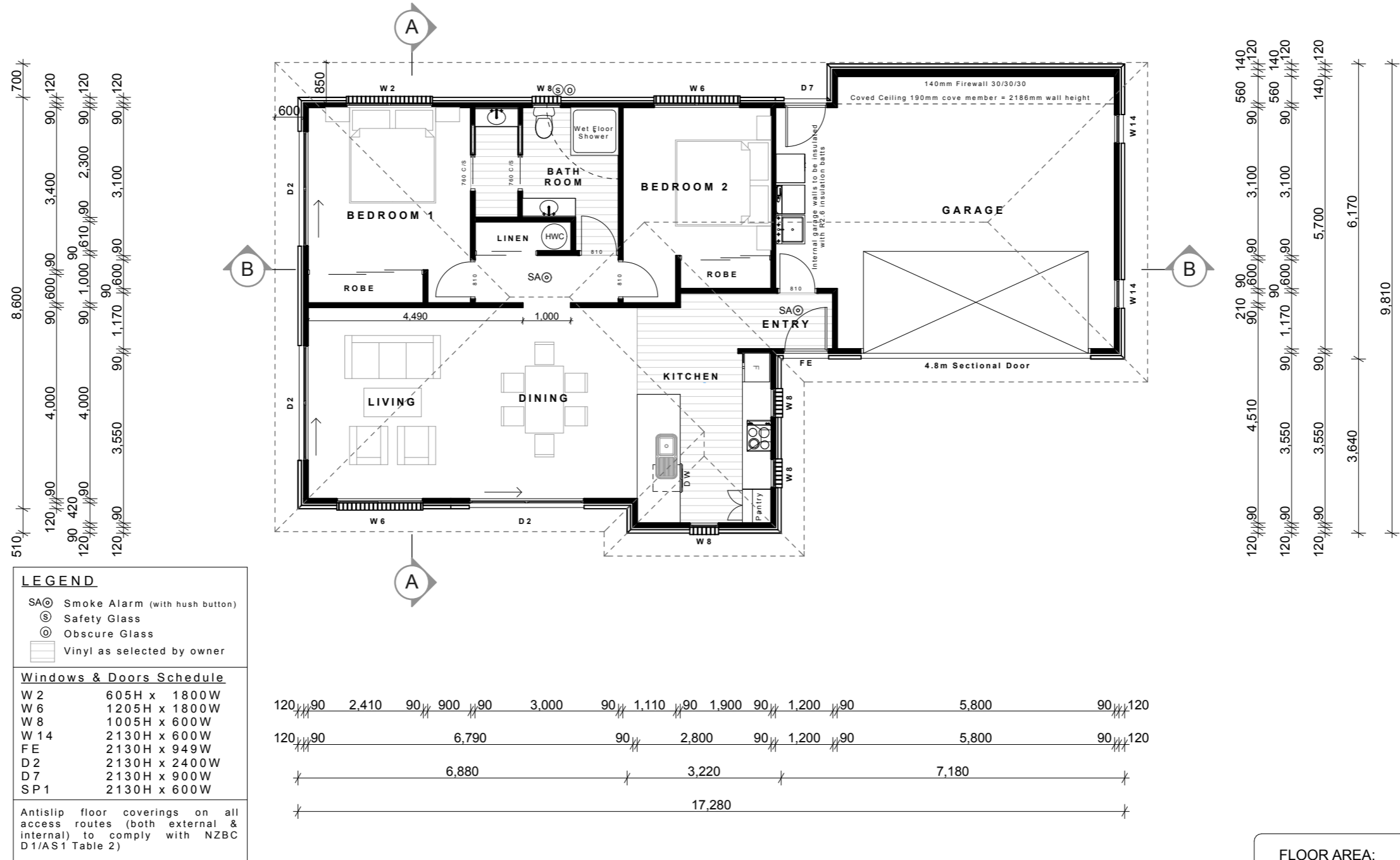
SITE PLAN

Note: Construction to comply with NZS 3604 (2011)
and the New Zealand Building Code 2004

SCALE: 1:100
DATE: 21/05/2013
DRAWN: RM
FILE: 130237

SHEET:
0
OF:

APPROVED PIM APPLICATION
Refer to PIM report for conditions of this application
BC131056
19/06/2013
gillianb



PROPOSED HOME FOR:
CAMERON FINLAYSON,
LOT 130 SILVERSTREAM

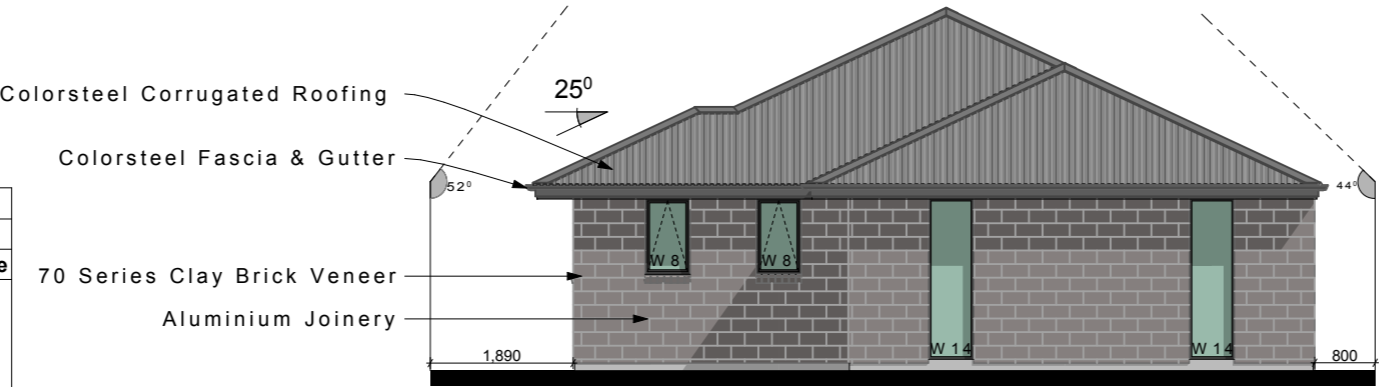
DRAWING TITLE
FLOOR PLAN

BUILDING ENVELOPE RISK MATRIX		
Front Elevation		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Low risk	0
Eaves width	Low risk	0
Envelope complexity	Low risk	0
Deck design	Low risk	0
Total Risk Score:		1

BUILDING ENVELOPE RISK MATRIX		
Left Elevation		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Low risk	0
Eaves width	Low risk	0
Envelope complexity	Low risk	0
Deck design	Low risk	0
Total Risk Score:		1

BUILDING ENVELOPE RISK MATRIX		
Rear Elevation		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Low risk	0
Eaves width	Low risk	0
Envelope complexity	Low risk	0
Deck design	Low risk	0
Total Risk Score:		1

BUILDING ENVELOPE RISK MATRIX		
Right Elevation		
Risk Factor	Risk Severity	Risk Score
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Low risk	0
Eaves width	Very High risk	5
Envelope complexity	Low risk	0
Deck design	Low risk	0
Total Risk Score:		6



FRONT ELEVATION



LEFT ELEVATION



REAR ELEVATION



RIGHT ELEVATION

APPROVED PIM APPLICATION
Refer to PIM report for conditions of this
application
BC131056
19/06/2013
gillianb



PROPOSED HOME FOR:
CAMERON FINLAYSON,
LOT 130 SILVERSTREAM

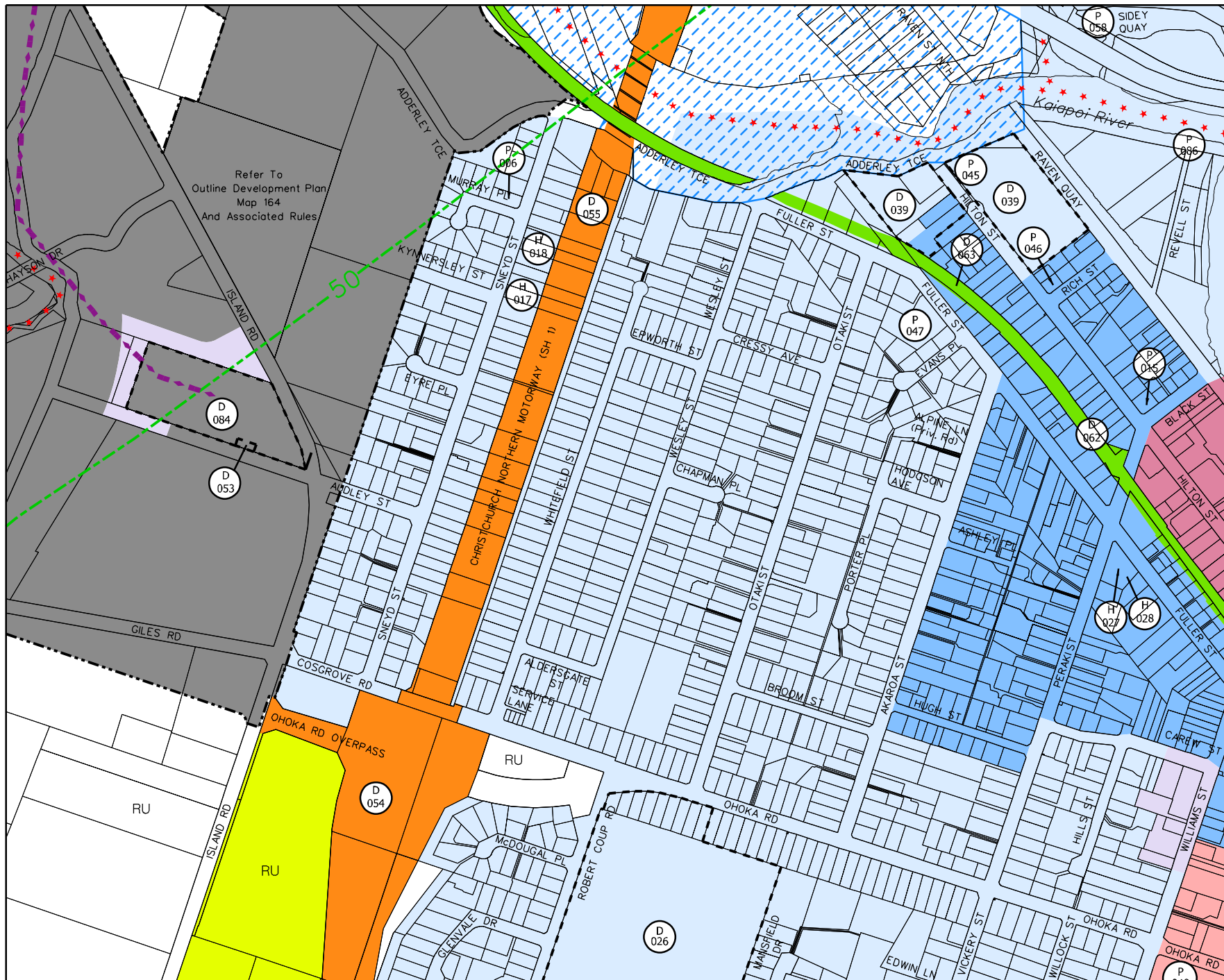
DRAWING TITLE

ELEVATIONS

Note: Construction to comply with NZS 3604 (2011)
and the New Zealand Building Code 2004

SCALE: 1:100
DATE: 21/05/2013
DRAWN: RM
FILE: 130237

SHEET:
2
OF:



Metres

0 60 120 180

Scale 1:7,500 (A4)

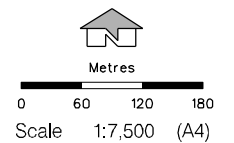
	102	103
58	104	105
68	106	107

104



- - - OUTLINE DEVELOPMENT PLAN AREA
- LOCAL / NEIGHBOURHOOD RESERVE
- RECREATION AND ECOLOGICAL LINKAGES
- STORMWATER MANAGEMENT AREA
- AREA A
- AREA B
- AREA C
- BUSINESS 4
- BUSINESS 4 (PARKING & ACCESS)
- 30m RESIDENTIAL BUILDING LINE
- POSSIBLE FUTURE ROAD
- CHRISTCHURCH AIRPORT 50dBA NOISE CONTOUR

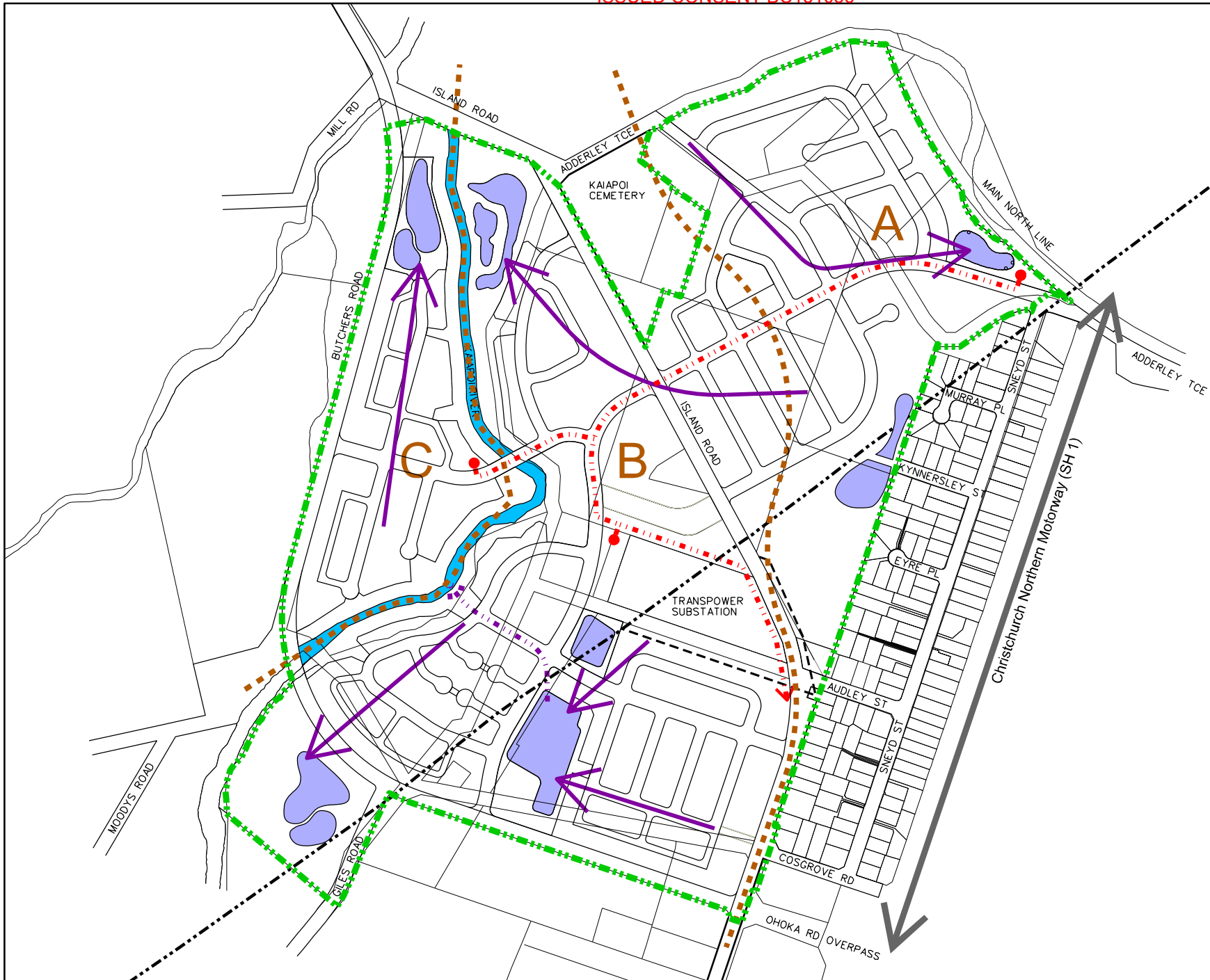
NOTE:
Disclaimer - refer to map legend sheet



West Kaiapoi
Outline Development Plan

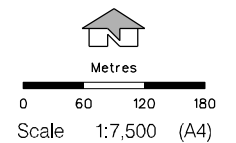
164A





- - - OUTLINE DEVELOPMENT PLAN AREA
- STORMWATER MANAGEMENT AREA
- PROPOSED PUMP STATION
- - - A
B SEWER CATCHMENT AREA
- - - RISING MAIN TO THE EXISTING SEWER NETWORK
- ← GENERAL CATCHMENT FLOW
- - - POUND OUTLET
- - - CHRISTCHURCH AIRPORT 50dBA NOISE CONTOUR










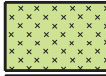


























NOTE:
Disclaimer - refer to map legend sheet



West Kaiapoi
Outline Development Plan
Infrastructure Network Plan

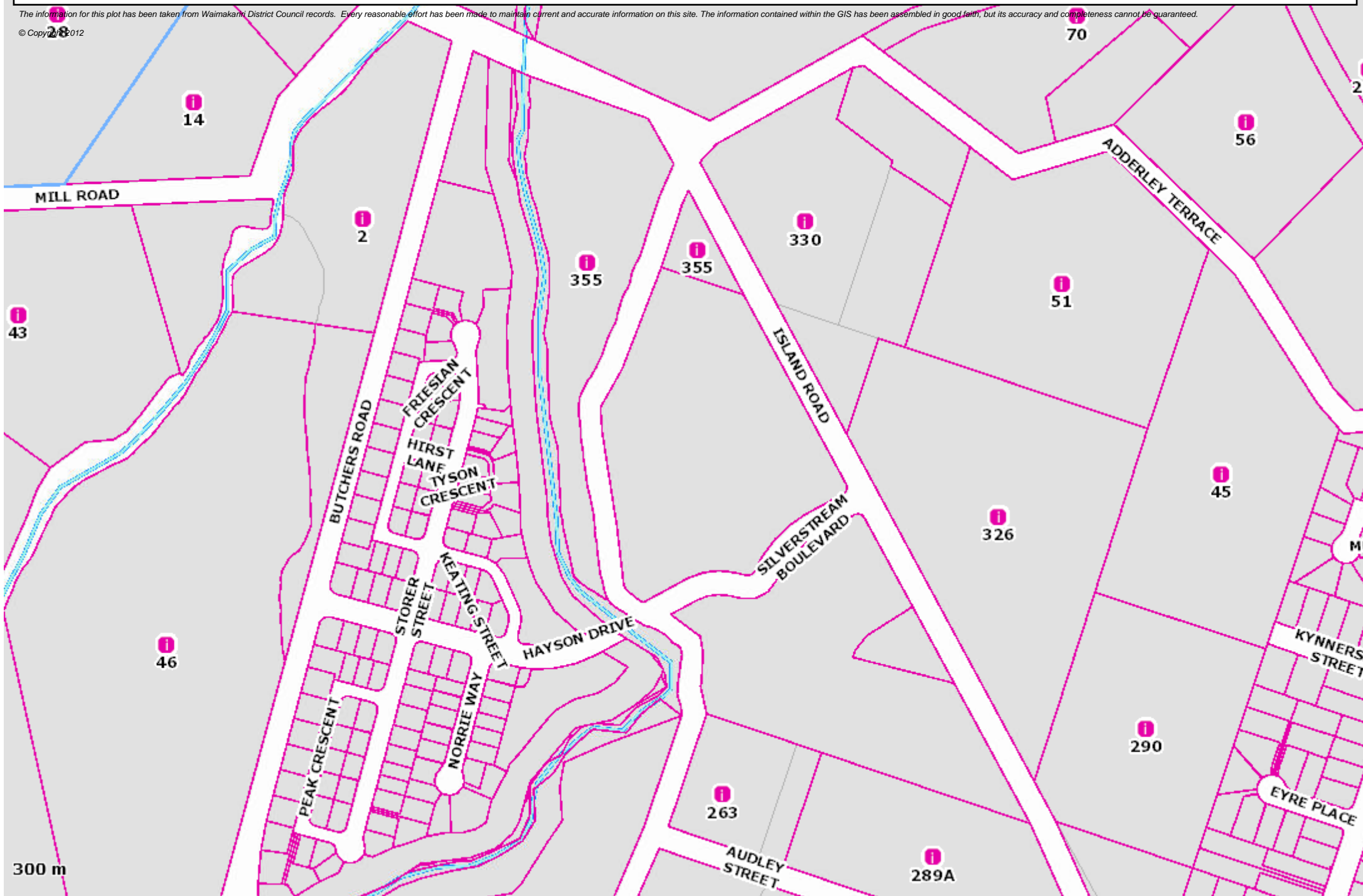
164C

URBAN LEGEND (Sheets 77 to 133)

	Zone Business 1		Zone Residential 7		Designations		River Reaches subject to esplanade provisions
	Zone Business 2		Zone Rural		Heritage Sites		Limited Access Road
	Zone Business 3		Zone Mapleham Rural 4B		Vegetation and Habitat Sites		Road to be Closed
	Zone Business 4		Subdivision Constraint (Rural)		Notable Plant Sites		Outline Development Plan Required Boundary
	Zone Residential 1		Subdivision Constraint Area (Policy 18.1.1.8)		Archaeological Sites		Coastal Marine Area boundary
	Zone Residential 2		Pegasus Rural Zone See Map 142		Waahi Tapu / Waahi Taonga		Waimakariri District boundary
	Zone Residential 3		Localised Flooding Area		Transpower High Voltage Lines	NOTE: The planning maps are produced in colour and are intended to provide accurate and adequate information as at the date of publication and at the scale at which they are published. The Waimakariri District Council will not accept liability to any person or entity arising out of any reliance in part or full, by such person or entity upon any of the contents of the planning maps for any purpose in circumstances where they are reproduced in a way that alters the scale, and / or colour or any other detail of the maps, and the information contained therein.	
	Zone Residential 4A		Goat control area	NOTE: These notations do not necessarily indicate the precise position of the Site, nor relate to the size of any Site.			
	Zone Residential 4B	Note: See Rule 23.1.1.17 for goat control (includes Outstanding Landscape areas)				Average Noise Exposure Contours; Christchurch International Airport	
	Zone Residential 5		Transit New Zealand Designation				
	Zone Residential 6	Tranz Rail Designation		50		Noise Level in dBA Ldn	
	Zone Residential 6A						

The information for this plot has been taken from Waimakariri District Council records. Every reasonable effort has been made to maintain current and accurate information on this site. The information contained within the GIS has been assembled in good faith, but its accuracy and completeness cannot be guaranteed.

© Copyright 2012





TA Approvals

Territorial Authority	Waimakariri District Council TA Certification Division	TA Reference	RC125220/130418028502
Survey Number	LT 461956	Survey Purpose	LT Subdivision
Surveyor Reference	29529 - Silverstream Stage 2A	Land District	Canterbury
Surveyor	Russell Thomas Bengie		
Surveyor Firm	Davis Ogilvie & Partners Ltd (Christchurch)		

TA Certificates

Pursuant to Section 224(c) Resource Management Act 1991 I hereby certify that some of the conditions of the subdivision consent have been complied with to the satisfaction of the Waimakariri District Council and that (10) ten consent notices have been issued and an uncompleted works bond has been entered into in respect of those conditions that have not been complied with. Dated this 19th day of April 2013. ✓

Signature

Signed by Yvonne Sally Fear, Authorised Officer, on 19/04/2013 12:14 PM

Receipt Information

Transaction Receipt Number	7035710
Signing Certificate (Distinguished Name)	Fear, Yvonne Sally
Signing Certificate (Serial Number)	1292396701
Signature Date	19/04/2013

*** End of Report ***

IN THE MATTER of the Resource
Management Act 1991

AND

IN THE MATTER of an application by
**Silverstream Estates Ltd - H
Investments (NZ) Ltd** to subdivide land
into residential lots (Zone 7)

**CONSENT NOTICE PURSUANT TO SECTION 221 OF THE
RESOURCE MANAGEMENT ACT 1991**

TO: The District Land Registrar
Canterbury Land Registry

TAKE NOTICE that the land described in the Schedule below is subject to a condition in relation to a subdivision consent as follows:

1. A development contribution in respect of Lot 7000 shall be imposed as part of any future land use, building or subdivision consent approval that will result in a building development being undertaken on Lot 7000. The quantum amount of any such contribution will be in accordance with the provisions of the Council's development contribution policy that is applicable at that time.

The above condition, as it applies to Lot 7000, shall be subject to a Consent Notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the computer freehold register for Lot 7000.

AND YOU are requested to register this Consent Notice as prescribed by Section 221 of the Resource Management Act 1991.

SCHEDULE

Estate in fee simple and being Lot 7000 Deposit Plan 461956 and being a subdivision of Part RS 14549, Section 1 SO 453503, Lot 7002 DP 453541, Lot 1 DP 67357, Lot 2 DP 67357, Pt RS 366A and Pt RS 381, Certificate of Titles CB19F/1019, CB20B/783, CB39C/347, 585024 & 614010.

Dated this 18th day of April 2013

SIGNED for and on behalf of
the **WAIMAKARIRI DISTRICT COUNCIL**
pursuant to Section 252 of the
Local Government Act 1974



AUTHORISED OFFICER

IN THE MATTER of the Resource
Management Act 1991

AND

IN THE MATTER of an application by
**Silverstream Estates Ltd - H
Investments (NZ) Ltd** to subdivide land
into residential lots (Zone 7)

**CONSENT NOTICE PURSUANT TO SECTION 221 OF THE
RESOURCE MANAGEMENT ACT 1991**

TO: The District Land Registrar
Canterbury Land Registry

TAKE NOTICE that the land described in the Schedule below is subject to a condition in relation to a subdivision consent as follows:

1. The owner of Lot 7000 shall retain and maintain the stormwater reticulation facilities installed along the common boundary shared with Lot 1 DP 58168 (TransPower NZ Ltd substation site) to ensure that no stormwater from Lot 7000 enters onto Lot 1 DP 58168.

The above condition, as it applies to Lot 7000, shall be subject to a Consent Notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the computer freehold register for Lot 7000.

AND YOU are requested to register this Consent Notice as prescribed by Section 221 of the Resource Management Act 1991.

SCHEDULE

Estate in fee simple and being Lot 7000 Deposit Plan 461956 and being a subdivision of Part RS 14549, Section 1 SO 453503, Lot 7002 DP 453541, Lot 1 DP 67357, Lot 2 DP 67357, Pt RS 366A and Pt RS 381, Certificate of Titles CB19F/1019, CB20B/783, CB39C/347, 585024 & 614010.

Dated this 18th day of April 2013

SIGNED for and on behalf of
the **WAIMAKARIRI DISTRICT COUNCIL**
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AUTHORISED OFFICER

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of an application by Silverstream Estates Ltd - H Investments (NZ) Ltd to subdivide land into residential lots (Zone 7)

**CONSENT NOTICE PURSUANT TO SECTION 221 OF THE
RESOURCE MANAGEMENT ACT 1991**

TO: The District Land Registrar
Canterbury Land Registry

TAKE NOTICE that the land described in the Schedule below is subject to a condition in relation to a subdivision consent as follows:

1. A 1 metre wide landscaping strip shall be provided within the road frontage setback (excluding any vehicle entranceway and entry footpath) along the cul de sac road frontages on Lots 124 - 132, 134 - 158, 670 - 674, 676 - 679 (all inclusive) for the purposes of providing on-site landscaping (may include paved areas) that shall include as a minimum a tree, shrub or bush; with the type being agreed by Council, such that upon maturity it will attain a minimum height of 2.5 metres. This tree, shrub or bush shall be established within 6 months of the dwelling being occupied and shall be maintained on an on-going basis.

The above condition, as it applies to Lots 124 - 132, 134 - 158, 670 - 674, 676 - 679 (inclusive) shall be subject to a Consent Notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the computer freehold register Lots 124 - 132, 134 - 158, 670 - 674, 676 - 679 (inclusive).

AND YOU are requested to register this Consent Notice as prescribed by Section 221 of the Resource Management Act 1991.

SCHEDULE

Estate in fee simple and being Lots 124 - 132, 134 - 158, 670 - 674, 676 - 679 (inclusive) Deposit Plan 461956 and being a subdivision of Part RS 14549, Section 1 SO 453503, Lot 7002 DP 453541, Lot 1 DP 67357, Lot 2 DP 67357, Pt RS 366A and Pt RS 381, Certificate of Titles CB19F/1019, CB20B/783, CB39C/347, 585024 & 614010.

Dated this 18th day of April 2013

SIGNED for and on behalf of
the **WAIMAKARIRI DISTRICT COUNCIL**
pursuant to Section 252 of the
Local Government Act 1974



AUTHORISED OFFICER

IN THE MATTER of the Resource
Management Act 1991

AND

IN THE MATTER of an application by
**Silverstream Estates Ltd - H
Investments (NZ) Ltd** to subdivide land
into residential lots (Zone 7)

**CONSENT NOTICE PURSUANT TO SECTION 221 OF THE
RESOURCE MANAGEMENT ACT 1991**

TO: The District Land Registrar
Canterbury Land Registry

TAKE NOTICE that the land described in the Schedule below is subject to a condition in relation to a subdivision consent as follows:

1. The owners of Lots 127, 128, 136, 137, 144, 145, 152, 153, 2003 and 2004 shall pay the full costs of erecting and maintaining fencing along the common boundary with the Council Reserves.
2. All fencing on Lots 127, 128, 136, 137, 144, 145, 152, 153, 2003 and 2004 that shares a common boundary with a Council Reserve shall have a minimum visual permeability / openness of 45%.

The above condition, as it applies to Lots 127, 128, 136, 137, 144, 145, 152, 153, 2003 and 2004 shall be subject to a Consent Notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the computer freehold register Lots 127, 128, 136, 137, 144, 145, 152, 153, 2003 and 2004.

AND YOU are requested to register this Consent Notice as prescribed by Section 221 of the Resource Management Act 1991.

SCHEDULE

Estate in fee simple and being Lots 127, 128, 136, 137, 144, 145, 152, 153, 2003 and 2004 Deposit Plan 461956 and being a subdivision of Part RS 14549, Section 1 SO 453503, Lot 7002 DP 453541, Lot 1 DP 67357, Lot 2 DP 67357, Pt RS 366A and Pt RS 381, Certificate of Titles CB19F/1019, CB20B/783, CB39C/347, 585024 & 614010.

Dated this 18th day of April 2013

SIGNED for and on behalf of
the **WAIMAKARIRI DISTRICT COUNCIL**
pursuant to Section 252 of the
Local Government Act 1974



AUTHORISED OFFICER

IN THE MATTER of the Resource
Management Act 1991

AND

IN THE MATTER of an application by
Silverstream Estates Ltd - H
Investments (NZ) Ltd to subdivide land
into residential lots (Zone 7)

**CONSENT NOTICE PURSUANT TO SECTION 221 OF THE
RESOURCE MANAGEMENT ACT 1991**

TO: The District Land Registrar
Canterbury Land Registry

TAKE NOTICE that the land described in the Schedule below is subject to a condition in relation to a subdivision consent as follows:

1. The owner of Lot 7000 shall maintain on an ongoing basis the 2 metre high solid timber acoustic fence established along the common boundary of Lot 7000 and the Transpower NZ Ltd substation site (being Lot 1 DP 58168) as detailed on the Davis Ogilvie Drawing 338 (Issue A) for a minimum length of 37 metres with the bottom of the fence being no lower than 4.30 metres above mean sea level. Should any upgrading work or the replacement of this acoustic fence be necessary, then those works shall be undertaken in accordance with the Marshall Day Acoustics plan "Acoustic Timber Fence" Drawing No. MDA-ENV-FEN-004 Rev 'A'. If an alternate fence design is sought, then it shall be designed by an appropriately experienced and qualified Acoustics Engineer and be approved by Council.

The above condition, as it applies to Lot 7000, shall be subject to a Consent Notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the computer freehold register for Lot 7000.

AND YOU are requested to register this Consent Notice as prescribed by Section 221 of the Resource Management Act 1991.

SCHEDULE

Estate in fee simple and being Lot 7000 Deposit Plan 461956 and being a subdivision of Part RS 14549, Section 1 SO 453503, Lot 7002 DP 453541, Lot 1 DP 67357, Lot 2 DP 67357, Pt RS 366A and Pt RS 381, Certificate of Titles CB19F/1019, CB20B/783, CB39C/347, 585024 & 614010.

Dated this 18th day of April 2013

SIGNED for and on behalf of
the **WAIMAKARIRI DISTRICT COUNCIL**
pursuant to Section 252 of the
Local Government Act 1974



AUTHORISED OFFICER

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of an application by **Silverstream Estates Ltd - H Investments (NZ) Ltd** to subdivide land into residential lots (Zone 7)

**CONSENT NOTICE PURSUANT TO SECTION 221 OF THE
RESOURCE MANAGEMENT ACT 1991**

TO: The District Land Registrar
Canterbury Land Registry

TAKE NOTICE that the land described in the Schedule below is subject to a condition in relation to a subdivision consent as follows:

1. Dwellings and any other buildings/structures to be established on Lots 117 – 172, 193 – 201 (inclusive) shall have:
 - A maximum structure coverage of 55% of the net site area.
 - A maximum structure height of 9 metres.
 - A minimum dwelling eave setback of 2 metres from any road boundary.
 - A minimum dwelling wall setback of 2 metres from any right of way or accessway.
 - A minimum dwelling eave setback of 1.4 metres from any right of way or accessway.
 - A minimum dwelling wall setback of 1.5 metres from rear and side boundaries.
 - A minimum dwelling eave setback of 0.9 metres from rear and side boundaries.
 - A minimum garage eave setback of 0m from internal boundaries.
 - A minimum direct entry garage wall setback of 5.5 metres from any road, right of way or accessway.
 - A minimum side entry garage eave setback of 2 metres from any road, right of way or accessway.

The above condition, as it applies to Lots 117 – 172, 193 – 201 (inclusive) shall be subject to a Consent Notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the computer freehold register Lots 117 – 172, 193 – 201 (inclusive).

AND YOU are requested to register this Consent Notice as prescribed by Section 221 of the Resource Management Act 1991.

SCHEDULE

Estate in fee simple and being Lots 117 – 172, 193 – 201 (inclusive) Deposit Plan 461956 and being a subdivision of Part RS 14549, Section 1 SO 453503, Lot 7002 DP 453541, Lot 1 DP 67357, Lot 2 DP 67357, Pt RS 366A and Pt RS 381, Certificate of Titles CB19F/1019, CB20B/783, CB39C/347, 585024 & 614010.

Dated this 18th day of April 2013

SIGNED for and on behalf of
the **WAIMAKARIRI DISTRICT COUNCIL**
pursuant to Section 252 of the
Local Government Act 1974



AUTHORISED OFFICER

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of an application by **Silverstream Estates Ltd - H Investments (NZ) Ltd** to subdivide land into residential lots (Zone 7)

**CONSENT NOTICE PURSUANT TO SECTION 221 OF THE
RESOURCE MANAGEMENT ACT 1991**

TO: The District Land Registrar
Canterbury Land Registry

TAKE NOTICE that the land described in the Schedule below is subject to a condition in relation to a subdivision consent as follows:

1. Any dwelling erected on Lots 117 – 172, 193 – 201, 662 - 685 (inclusive), 2003 and 2004 shall have a minimum floor level as per the table below:

Allotment Number	Minimum Floor Level (metres above mean sea level)
Lots 128, 130 - 136 inclusive, 145 – 148 inclusive, 195, 681 – 684 inclusive,	4.30
Lots 117 – 127 inclusive, 129, 134, 137 - 144 inclusive, 149 – 172 inclusive, 193, 194, 196 – 201 inclusive, 662 – 680 inclusive, 685, 2003, 2004.	4.40

The above condition, as it applies to Lots 117 – 172, 193 – 201, 662 - 685 (inclusive), 2003 and 2004 shall be subject to a Consent Notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the computer freehold register Lots 117 – 172, 193 – 201, 662 - 685 (inclusive), 2003 and 2004.

AND YOU are requested to register this Consent Notice as prescribed by Section 221 of the Resource Management Act 1991.

SCHEDULE

Estate in fee simple and being Lots 117 – 172, 193 – 201, 662 - 685 (inclusive), 2003 and 2004 Deposit Plan 461956 and being a subdivision of Part RS 14549, Section 1 SO 453503, Lot 7002 DP 453541, Lot 1 DP 67357, Lot 2 DP 67357, Pt RS 366A and Pt RS 381, Certificate of Titles CB19F/1019, CB20B/783, CB39C/347, 585024 & 614010.

Dated this 18th day of April 2013

SIGNED for and on behalf of
the **WAIMAKARIRI DISTRICT COUNCIL**
pursuant to Section 252 of the
Local Government Act 1974

A handwritten signature in black ink, appearing to read 'MJP Hewson', is written over a horizontal line.

AUTHORISED OFFICER

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of an application by **Silverstream Estates Ltd - H Investments (NZ) Ltd** to subdivide land into residential lots (Zone 7)

**CONSENT NOTICE PURSUANT TO SECTION 221 OF THE
RESOURCE MANAGEMENT ACT 1991**

TO: The District Land Registrar
Canterbury Land Registry

TAKE NOTICE that the land described in the Schedule below is subject to a condition in relation to a subdivision consent as follows:

1. No further subdivision or development shall take place, or any building established on Lots 7003 – 7006 (inclusive) until the required connections to the reticulated services have been provided, and the minimum land levels attained so to be in accordance with the requirements of the Waimakariri District Plan.

The above condition, as it applies to Lots 7003 – 7006 inclusive, shall be subject to a Consent Notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the computer freehold register for Lots 7003 – 7006.

AND YOU are requested to register this Consent Notice as prescribed by Section 221 of the Resource Management Act 1991.

SCHEDULE

Estate in fee simple and being Lots 7003 – 7006 Deposit Plan 461956 and being a subdivision of Part RS 14549, Section 1 SO 453503, Lot 7002 DP 453541, Lot 1 DP 67357, Lot 2 DP 67357, Pt RS 366A and Pt RS 381, Certificate of Titles CB19F/1019, CB20B/783, CB39C/347, 585024 & 614010.

Dated this 18th day of April 2013

SIGNED for and on behalf of
the **WAIMAKARIRI DISTRICT COUNCIL**
pursuant to Section 252 of the
Local Government Act 1974



AUTHORISED OFFICER

IN THE MATTER of the Resource
Management Act 1991

AND

IN THE MATTER of an application by
**Silverstream Estates Ltd - H
Investments (NZ) Ltd** to subdivide land
into residential lots (Zone 7)

**CONSENT NOTICE PURSUANT TO SECTION 221 OF THE
RESOURCE MANAGEMENT ACT 1991**

TO: The District Land Registrar
Canterbury Land Registry

TAKE NOTICE that the land described in the Schedule below is subject to a condition in relation to a subdivision consent as follows:

1. A 100 mm wide strip of land setback from the road boundaries of property frontage fronting the cul de sac roads shall be kept at the same cross fall gradient as the adjacent road berm and shall be maintained free of any fencing or landscaping (other than grass) for the placement of the rubbish wheelie bins on collection day for Lots 134, 138, 139, 140, 148, 149, 150, 155, 156, 157, 159, 670, 671 and 672.

The above condition, as it applies to Lots 134, 138, 139, 140, 148, 149, 150, 155, 156, 157, 159, 670, 671, 672 shall be subject to a Consent Notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the computer freehold register for Lots 134, 138, 139, 140, 148, 149, 150, 155, 156, 157, 159, 670, 671 and 672.

AND YOU are requested to register this Consent Notice as prescribed by Section 221 of the Resource Management Act 1991.

SCHEDULE

Estate in fee simple and being Lots 134, 138, 139, 140, 148, 149, 150, 155, 156, 157, 159, 670, 671 and 672 Deposit Plan 461956 and being a subdivision of Part RS 14549, Section 1 SO 453503, Lot 7002 DP 453541, Lot 1 DP 67357, Lot 2 DP 67357, Pt RS 366A and Pt RS 381, Certificate of Titles CB19F/1019, CB20B/783, CB39C/347, 585024 & 614010.

Dated this 18th day of April 2013

SIGNED for and on behalf of
the **WAIMAKARIRI DISTRICT COUNCIL**
pursuant to Section 252 of the
Local Government Act 1974



AUTHORISED OFFICER

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of an application by **Silverstream Estates Ltd - H Investments (NZ) Ltd** to subdivide land into residential lots (Zone 7)

**CONSENT NOTICE PURSUANT TO SECTION 221 OF THE
RESOURCE MANAGEMENT ACT 1991**

TO: The District Land Registrar
Canterbury Land Registry

TAKE NOTICE that the land described in the Schedule below is subject to a condition in relation to a subdivision consent as follows:

1. No building is to be established on that part of Lot 7000 being within 32 metres of either side of the centerline of the overhead high voltage Transpower power lines until such time that they have been undergrounded.

The above condition, as it applies to Lot 7000, shall be subject to a Consent Notice pursuant to Section 221 of the Resource Management Act 1991 to be registered on the computer freehold register for Lot 7000.

AND YOU are requested to register this Consent Notice as prescribed by Section 221 of the Resource Management Act 1991.

SCHEDULE

Estate in fee simple and being Lot 7000 Deposit Plan 461956 and being a subdivision of Part RS 14549, Section 1 SO 453503, Lot 7002 DP 453541, Lot 1 DP 67357, Lot 2 DP 67357, Pt RS 366A and Pt RS 381, Certificate of Titles CB19F/1019, CB20B/783, CB39C/347, 585024 & 614010.

Dated this 18th day of April 2013

SIGNED for and on behalf of
the **WAIMAKARIRI DISTRICT COUNCIL**
pursuant to Section 252 of the
Local Government Act 1974



AUTHORISED OFFICER

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contractor to locate all existing services & verify all dimensions before commencing work

Denotes location T.B.C.

KEY	
KERB LEVELS	KRM,44
SECTION FORMATION LEVELS	
UNVENTED SEWER MANHOLE	○
VENTED SEWER MANHOLE	●
STORMWATER MANHOLE	○
SUMP	⊗
LANDSCAPING TREES (BY OTHERS)	⊗
STREET SIGNS (BY OTHERS)	⊗
CHARCOAL PAVING	⊗

issue	date	reason	approved
A	06/03/13	Council Issue	
B	11/04/13	Extra Information added	



PRELIMINARY

CAD ref: 29529.CM1



Davis Ogilvie Ph. 03 368-1653
Engineers - Surveyors - Planners
188 Hazledene Road, Addington
Christchurch, New Zealand
P.O. Box 589 Christchurch 8140
OFFICES ALSO IN:
Nelson - Timaru - Greymouth

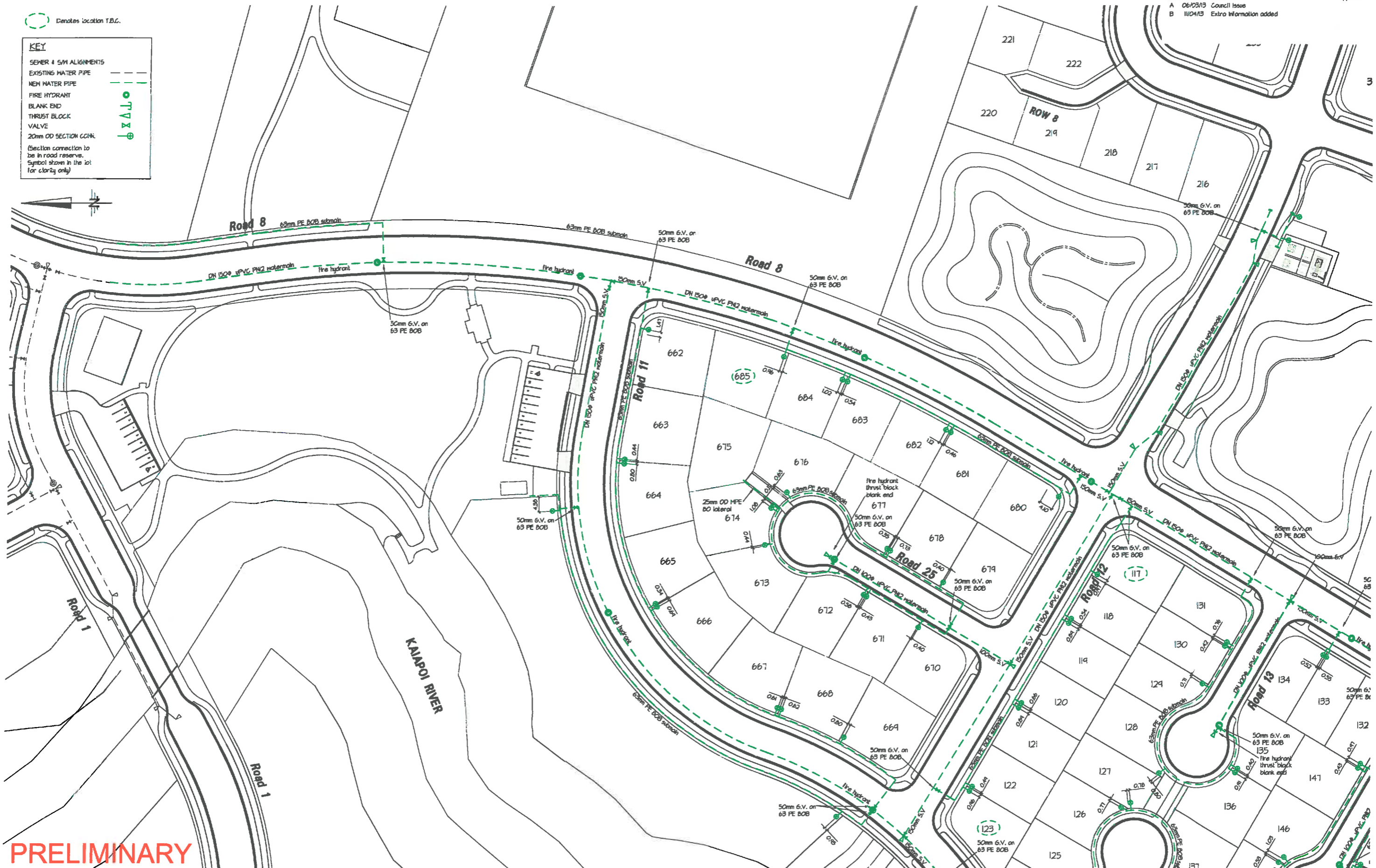
AREA E: WEST KAIAPOI DEVELOPMENT
FOR H INVESTMENTS LIMITED

ASBUILTS
SEWER - STAGE 2A

design	drawn	QA check	dwg	issue
DB	DB	ED	AB12	B
scale @ A1	date	file		
1:500	11/11	29529		

Denotes location T.B.C.

KEY	
SEWER & SWM ALIGNMENTS	---
EXISTING WATER PIPE	---
NEW WATER PIPE	---
FIRE HYDRANT	●
BLANK END	○
THRUST BLOCK	⊕
VALVE	⊕
20mm OD SECTION CORR.	⊕
(Section connection to be in road reserve. Symbol shown in the lot for clarity only)	



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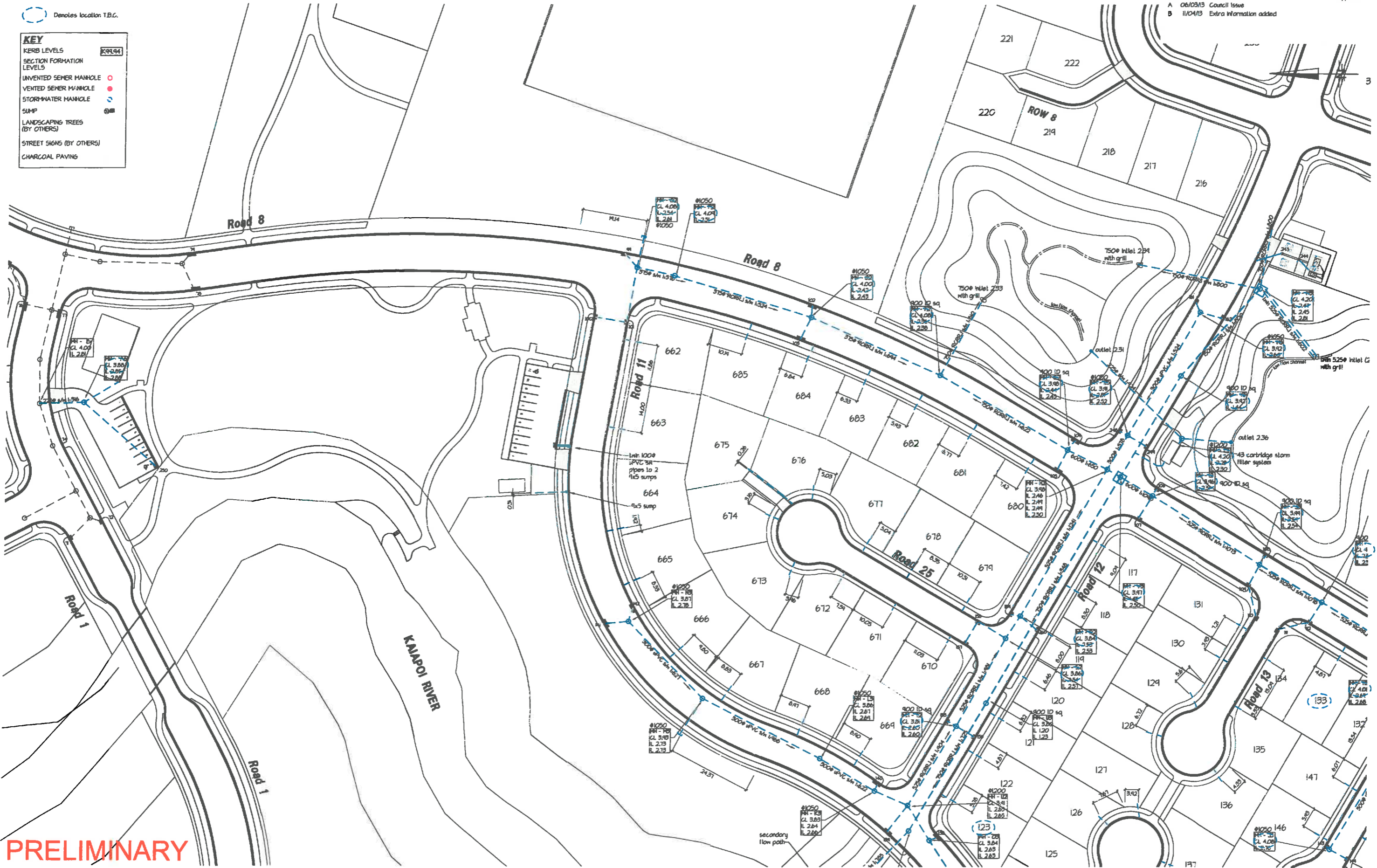
contractor to locate all existing services & verify all dimensions before commencing work

Issue	date	reason	approved
A	06/03/13	Council Issue	
B	11/04/13	Extra Information added	

Denotes location T.B.C.

KEY

- KERB LEVELS
- SECTION FORMATION LEVELS
- UNVENTED SEWER MANHOLE
- VENTED SEWER MANHOLE
- STORMWATER MANHOLE
- SUMP
- LANDSCAPING TREES (BY OTHERS)
- STREET SIGNS (BY OTHERS)
- CHARCOAL PAVING



CAD ref: 28529.CM1

do
Davis Ogilvie
Davis Ogilvie Ph. 03 366-1653
Engineers - Surveyors - Planners
181 Hazledene Road, Addington
Christchurch, New Zealand
P.O. Box 588 Christchurch 8140
OFFICES ALSO IN:
Nelson - Timaru - Greytown

AREA E: WEST KAIAPOI DEVELOPMENT
FOR H INVESTMENTS LIMITED

ASBUILTS
STORMWATER - STAGE 2A

design	drawn	QA check	dwg	Issue
DB	DB	ED		
scale A1	date	file		
1:500	11/11	29529	AB15 B	

STATEMENT OF SUITABILITY OF EARTH FILL FOR RESIDENTIAL DEVELOPMENT

Subdivision Silverstream Estates, Stage 2, lots 117 - 131 - TC2 Sites
 Owner/Developer Silverstream Estates Ltd.
 Location Island Road, Kaiapoi

The earth fills shown on the attached plans No 29529.502.A dated 21/02/13 have been placed in compliance with the terms of NZS 4431:1989: Earthfill For Residential Development

I am a Chartered Professional Engineer (Member ID 1003344) acting on behalf of Davis Ogilvie and Partners Ltd.

During the work, I and/or staff under my supervision made periodic visits to inspect the site and soil testing was carried out to check the quality of the fill.

The attached Plan No. 29529.502.A shows Lots 117 - 131

which are affected by filling and the extent of fill covered by this certificate. The maximum fill depth was 0.93metres.

The land is zoned TC2 therefore NZS 3604:2011 (Timber Framed Building Standard) definition of good ground has not been met onsite, as there is a minor to moderate risk of liquefaction induced land damage in future seismic events.

This certification does not remove the necessity for the geotechnical investigation and inspections that is necessary in TC2 areas. Each TC2 site shall have a geotechnical investigation undertaken in accordance with 'Repairing and Rebuilding houses affected by Canterbury Earthquakes' (2012)



Elliot Duke - BE Nat Res (Hons) MIPENZ, CPEng

Chartered Professional Engineer
(Position)

21st February 2013
(Date)

On Behalf Of Silverstream Estates Ltd.
(Name of Owner/Developer)



CUT/FILL	Lot No.	Max Side Fill
	171	0.36
	165	0.35
	164	0.35
	158	0.36
	151	0.36
	142	0.38
	135	0.42
	125	0.45
	124	0.54
	125	0.62
	126	0.63
	127	0.62
	129	0.63
	128	0.62
	130	0.62
	131	0.71

variables contained in
equation 1.

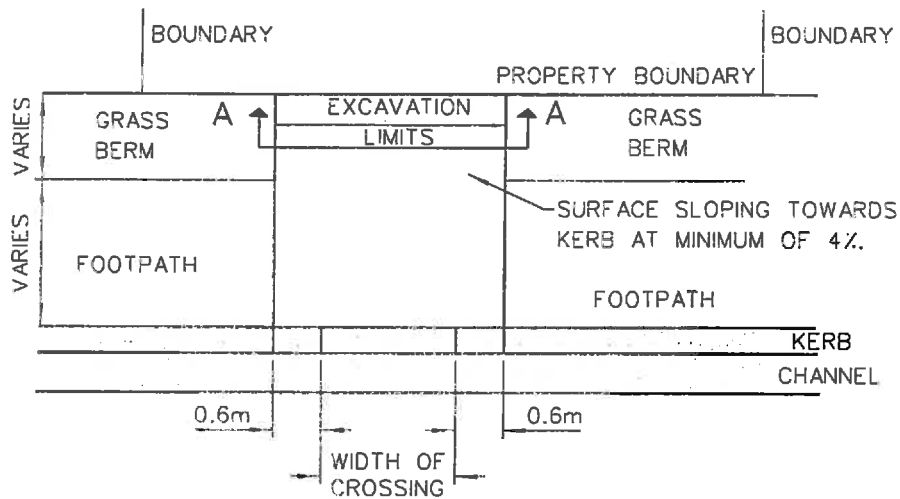
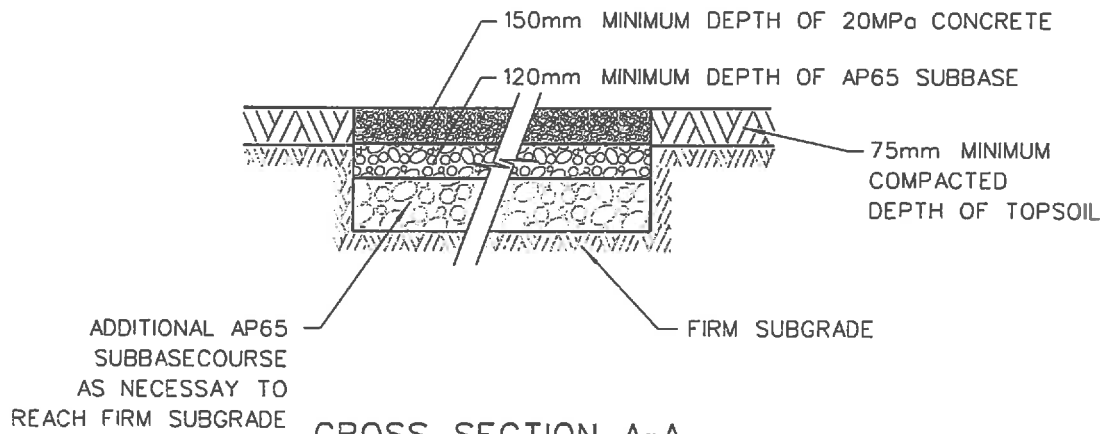
AD ref. 200201-0000-0001-01 Stage 1

2-411 Ogden Ph 303-542-1663
 Engineers & Surveyors - 1800
 1st National Plaza 400-1000
 Cheyenne, Wyo 82002
 P.O. Box 349 Cheyenne WY 82001
 OFFICES ALSO:
 Helena • Tulsa • Chicago

do
Davis Ogilvie

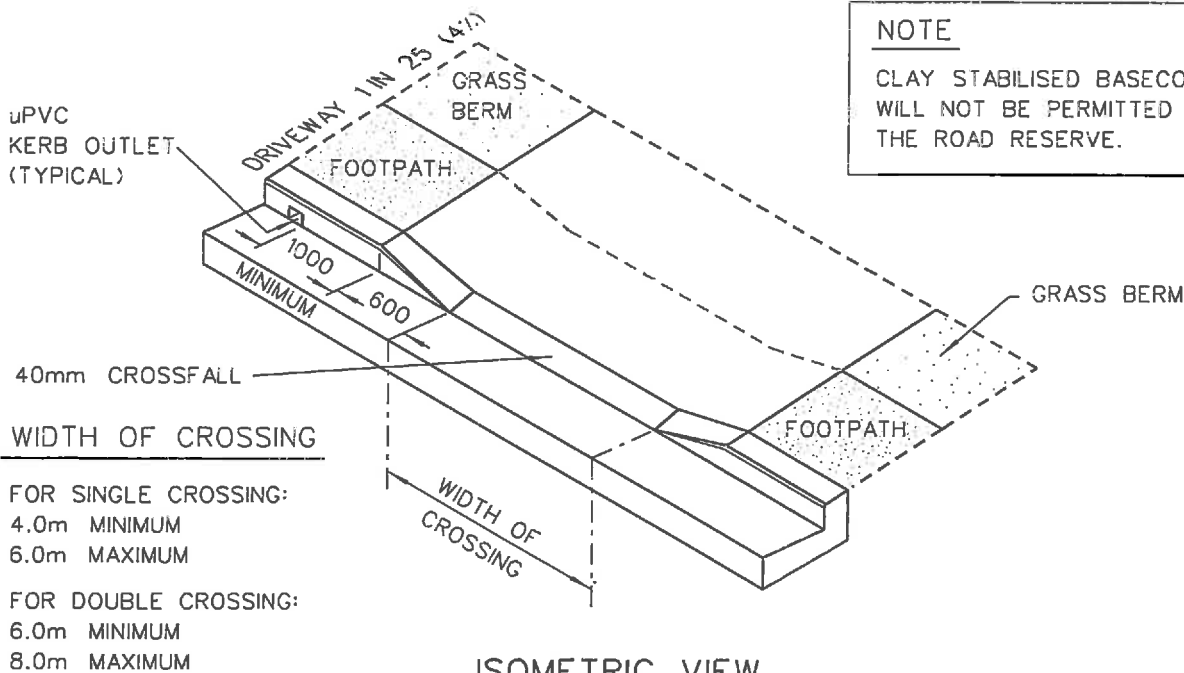
**ENGINEERING DESIGN
ENGINEERED FILL - STAGE 2**

**AREA E: WEST KAIAPOI DEVELOPMENT
FOR H INVESTMENTS LIMITED**



NOTE

CLAY STABILISED BASECOURSE WILL NOT BE PERMITTED WITHIN THE ROAD RESERVE.



WAIMAKARIRI
DISTRICT COUNCIL
technical services

NOT TO SCALE

SHEET TITLE

Typical Residential
Concrete
Vehicle Crossing
(Flat Channel)

PROJECT TITLE

Standard Drawings

SHEET

211A

ISSUE
EPLAN No.
600

ENVIRONMENT CANTERBURY (ECAN) LIQUEFACTION HAZARD STUDY

What does it mean for the Waimakariri District?

You may have seen the recently released Environment Canterbury (ECan) liquefaction assessment report, which is based on liquefaction studies and reports from the last 20 years, as well as information collected from the September 2010 and February 2011 earthquakes.

A link to the full report is available on the New Foundations website at newfoundations.org.nz

The report addresses flat land throughout Christchurch City Council, and Hurunui, Selwyn and Waimakariri Districts - land outside of areas already zoned by the Canterbury Earthquake Recovery Authority (CERA) and the Department of Building and Housing (DBH).

The map included in this update highlights the reported findings – the red boundary line indicates what areas have been assessed as damaging liquefaction unlikely and liquefaction assessment needed.

The Ministry of Business, Innovation and Employment (MBIE) has revised its guidelines for repairs and rebuilds in Canterbury to take this information into consideration. MBIE guidelines for repairs and rebuilds in Canterbury can be found at dbh.govt.nz/canterbury-earthquake-residential-building

The following information outlines both land assessment areas and what these classifications mean for current homeowners and future builds and developments.

For further information about the study contact ECan directly or go to ecan.govt.nz. Associated building enquiries can be directed to the Waimakariri District Council Building Unit on 03 311 8900.

Damaging liquefaction unlikely

1. Before consent to develop or build can be granted by Council, a geotechnical assessment is required to be undertaken by an engineer.
2. This assessment evaluates the suitability of the land for building on. Standard foundation investigations will normally be adequate for residential dwelling construction.

Liquefaction assessment needed

1. Before consent to develop or build can be granted by Council, a geotechnical assessment is required to be undertaken by a geotechnical engineer.
2. This assessment evaluates the suitability of the land for building on and is likely to include physically drilling down to 15m.
3. Waimakariri District Council has recorded liquefaction susceptibility information on its Land Information Memorandums (LIM) since 2001. This process will remain the same with the addition of this information on new Property Information Memorandums (PIM).

A PIM is a document you can request when planning a building project. It is prepared by Council and contains any information or requirements Council is aware of that could affect a building project.

A LIM is a document containing information that Council holds about a property.

PIM wording:

The shading on the map identifies areas where liquefaction assessment is needed and where a site specific geotechnical investigation and report is required as part of a Building Consent application.

LIM wording:

This property is in an area categorised as "liquefaction assessment needed". See Environment Canterbury Report number R12/83 for more information.
<http://files.ecan.govt.nz/public/r12-83-liquefaction-hazard-canterbury-report.pdf>



Geotech, Engineer Reports & Conditions PS1 & 2

- Calculations**
- A4 Details**

File No: 30844

5 March 2013

Silverstream Estates Ltd
160A Hussey Road
Northwood
CHRISTCHURCH 8051

Attention: Fred Rame

WAIMAKARIRI DISTRICT
COUNCIL
Plans and specifications
APPROVED in accordance
with the Building Act 2004,
clause 49 and the Building
Regulations 1992, Clause 3
131056 2/07/2013 Keegan

Dear Sir

SHALLOW GEOTECHNICAL INVESTIGATION LOT 130 SILVERSTREAM, KAIAPOI

1. INTRODUCTION

Davis Ogilvie & Partners Ltd has been commissioned by Silverstream Estates Ltd to determine the ground bearing capacity at the aforementioned address.

Davis Ogilvie did not perform a complete assessment of all possible conditions or circumstances that may exist at the site. Conditions may exist which were undetectable given the limited investigation of the site. Variations in conditions may occur between investigatory locations, and there may be conditions onsite which have not been revealed by the investigation, which have not been taken into account in the report. Assessments made in this report are based on the conditions found onsite. No warranty is included; either expressed or implied that the actual conditions will conform to the assessments contained in this report.

This report has been prepared solely for the purposes of Silverstream Estates Ltd. The information contained herein is confidential, and shall not be passed on to any third party, other than the Local Building Consent Authority, without prior written permission of Davis Ogilvie & Partners Ltd. No responsibility is accepted for any use outside the scope of this report. This report does not cover slope stability, suitability of the site (e.g. flooding), or potential future liquefaction of the site.

2. DESK STUDY

The site is situated in Kaiapoi. Following the Christchurch earthquake series limited disruption to services and infrastructure was observed in the area. Onsite there was no evidence of surface liquefaction, faults, scarps or fissures, and surface liquefaction was not evident in the neighbourhood following the February 2011 event according to LINZ satellite imagery (24 February 2011).

The published site geology is identified as being dominantly alluvial sand and silt overbank deposits (Springston formation of the Yaldhurst Member)¹. Test pit logs from the site investigation show fill overlying alluvial sand, and silt which confirm the published geology.

Geotechnical classification and reporting for the Silverstream Estates Development (stage two) carried out by Golder Associates (2012)² recommends a land technical category of TC2, which identifies that minor to moderate land damage from liquefaction is possible in future large earthquakes.

¹ Brown L.J. et al. (1992), Geological Map 1, Geology of the Christchurch Urban Area, Scale 1:25 000. Institute of Geological and Nuclear Sciences, Lower Hutt New Zealand.

² Golder Associates (2012), Geotechnical Assessment Report –Silverstream Estates, Kaiapoi Stage two, Golder Associates, Christchurch, New Zealand.



Engineered filling of parts of Stage 2 has been carried out as part of the development of the subdivision. The fill has been certified in accordance with NZS 4431:1989. A site plan indicating fill depths and locations is attached to this letter.

3. SOIL TESTING AND RESULTS

Site visits including in-situ soil testing were conducted on 13 February 2013. The site investigation comprised of four dynamic cone penetrometer (dcp) tests conducted to a maximum depth of 3.0 m below existing ground level (bgl).

Test pits carried out on 14 February 2013 were excavated on the boundary adjoining lots 117,118,130,131 and 118, 119, 129, 130. The test pits were excavated to a maximum depth of 2.9 m, where saturated soils caused collapse. Locations of the tests, soil logs and penetrometer tests results are attached to this letter.

Piezometer measurements taken by Golder Associates (2012)³ to determine the ground water level (gwl) at borehole 1003 located to the south west side of stage 2, indicates a potential maximum gwl of 1.16 m bgl, this was measured on the 20/12/2011. The gwl was encountered at a depth of 2.6 m during the test pit excavation.

In-situ soil testing by means of an excavated test pit revealed engineered fill underlain by alluvial deposits of sand and silt. An indicative soil profile is presented in Table 1.

Table 1: Indicative Soil Profile

De t m	De cri tion	DCP blo /100	E t imated Ultimate Bearin ² Ca acit Pa
0 - 0.4	Topsoil	N/A	N/A
0.4 – 1.3	Sandy gravelly SILT (engineered fill)	5 - 19	300+
1.3 – 1.8	Clayey SILT	2 - 5	200+
1.8 – 2.6	SAND	7 - 10	300+
2.6 – 2.9	SAND some silt	8 - 9	300+

1. Test pit logged to a total depth of 2.9 m where saturated soils caused collapse.

2. Estimated Ultimate Bearing Capacity (kPa) determined by correlations from Stockwell (1977).

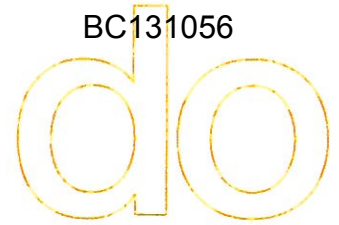
4. DISCUSSION

Ground bearing pressure is discussed in terms of 'Good Ground', as defined by NZS 3604:2011 *Timber Framed Buildings* (this is an ultimate bearing strength of at least 300 kPa). 'Good Ground' excludes land where liquefaction and/or lateral spreading could occur and excludes soils that have a significant organic content or uncontrolled fill. As the site has been deemed to the TC2 the 'Good Ground' criteria does not apply.

Engineered fill was encountered on site from a depth of 0.4 m to 1.3 m. The fill has been certified in accordance with NZS 4431:1989. Soil testing completed on site confirmed that the ground exceeded 300 kPa ultimate bearing capacity.

Based on in-situ testing and the proposed TC2 classification by Golder Associates (2012)³ it is determined that the ground for the aforementioned lot has adequate ultimate bearing capacity in excess of 200kPa, 0.4 m bgl (below the organic topsoil layer) for buildings designed in accordance

³ Golder Associates (2012), Geotechnical Assessment Report –Silverstream Estates, Kaiapoi Stage two, Golder Associates, Christchurch, New Zealand.



with the MBIE (2012)⁴ guidelines, therefore foundation of any dwelling constructed onsite will not require specific engineering design provided these guidelines are followed.

The foundation types suitable for the TC2 land are dependent on the house construction type and the bearing capacity of the underlying soils. Figure 1 details the different house construction types suitable for TC2 sites.

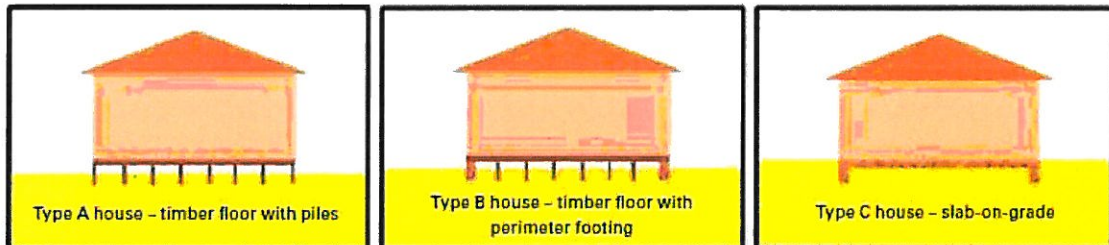


Figure 1: House construction types MBIE (2012)

TC2 sites with an ultimate bearing capacity over 300 kPa can have Type A and B foundations utilising shallow timber piles or timber piles and a perimeter wall system, designed and constructed in accordance with NZS 3604:2011. Onsite 300 kPa was not consistently achieved until a depth of 1.8 m (bgl). Therefore Type A and B foundations will require specific engineering design.

For concrete slab foundations (Type C) a stiffened raft slab will be required in the TC2 areas with a minimum bearing of 200 kPa (ultimate). There are a number of foundation options available as detailed in Section 5.3.1 of the Guidance document MBIE (2012). Onsite 200 kPa was achieved at a depth of 0.4 m (bgl)

If alternative solutions are proposed outside the scope of these documents then specific engineering design of the foundations will be required.

5. CONCLUSION

Based on an ultimate bearing capacity of 200 kPa achieved 0.4 m bgl (below the organic topsoil layer) specific engineering designed foundations are not required for the site. Residential dwelling foundations shall be constructed in accordance with MBIE (2012) TC2 guidelines.

Should soft or suspect ground conditions be encountered onsite, the builder must contact Davis Ogilvie or an appropriately qualified and experienced engineer to confirm foundation requirements.

If you have any queries or wish to discuss the report further please feel free to contact either of the undersigned.

Yours faithfully

DAVIS OGILVIE and PARTNERS LTD

Prepared By:
BEN VAN BUSSEL

Geotechnical Technician
Dip civil, GIPENZ
Email: benv@do.co.nz

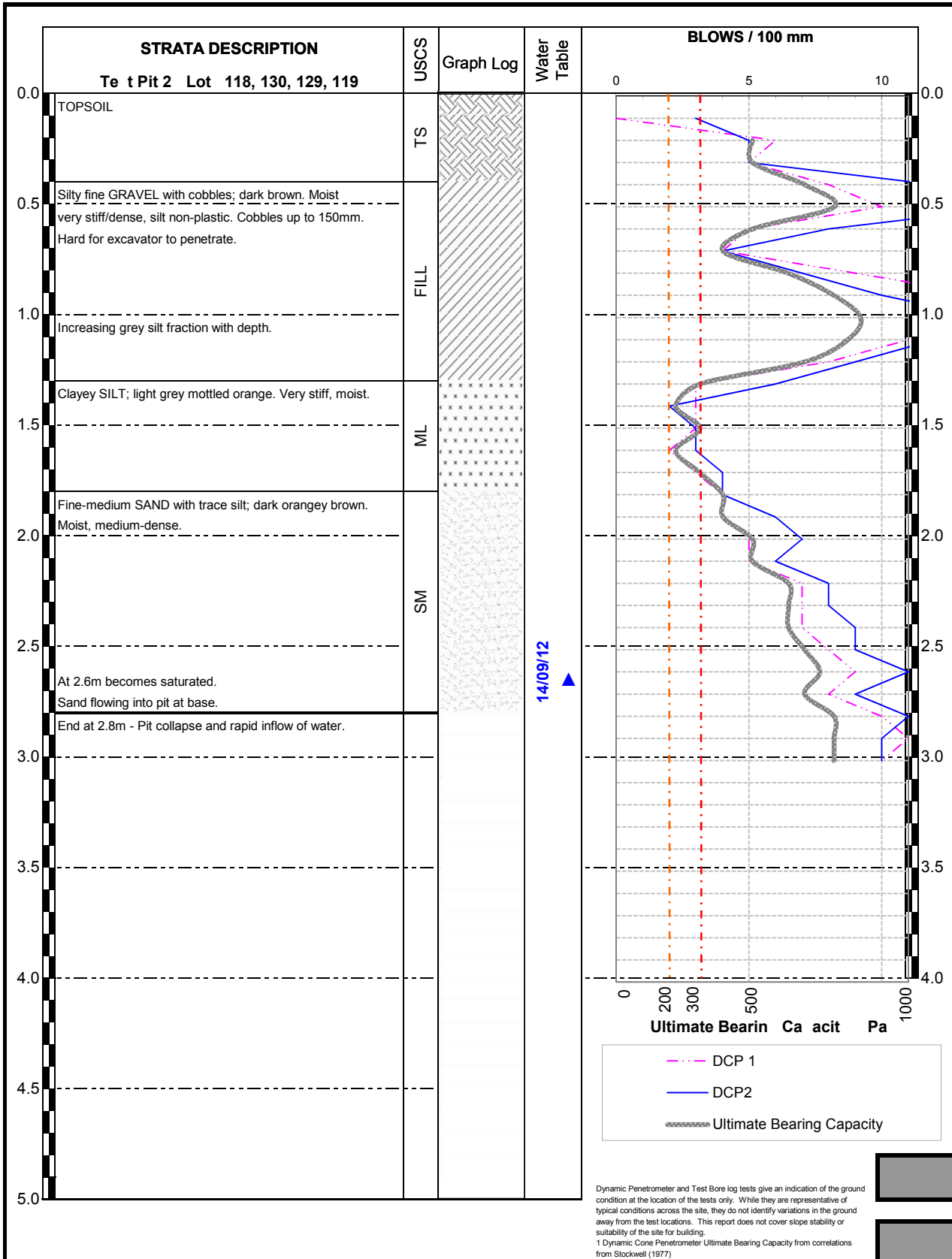
Reviewed By:
ELLIOT DUKE
DIRECTOR
Senior Civil and Geotechnical Engineer
BE (Hons), MIPENZ, CPEng
Email: elliot@dop.co.nz

Enclosed: 2 x Site Bearing Strength and Bore Logs, 1 x Site Test Location Plan, 1 x fill plan

⁴ Ministry of Business, Innovation and Employment (2012), Repairing and rebuilding houses affected by the Canterbury earthquakes, Ministry of Business, Innovation and Employment, Wellington, New Zealand.

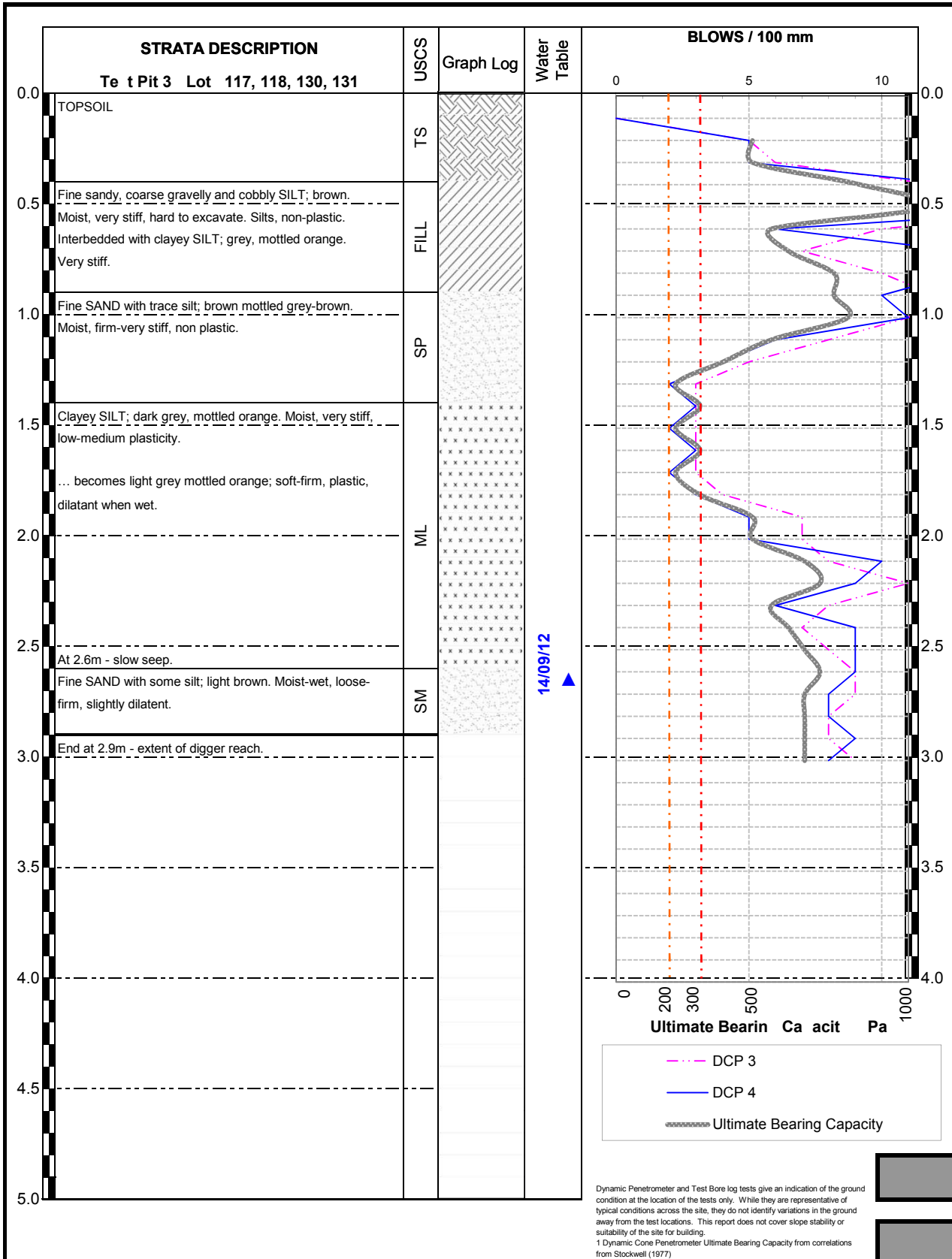
Project: Silverstream Stage II Lot 130
Client: Silverstream Estates Ltd
Test Location: Refer to attached Geotechnical Site Plan
Note: Shallow Investigation

Date: 5/02/2013
Time: 11am
Field Staff: CH
Equipment: DCP

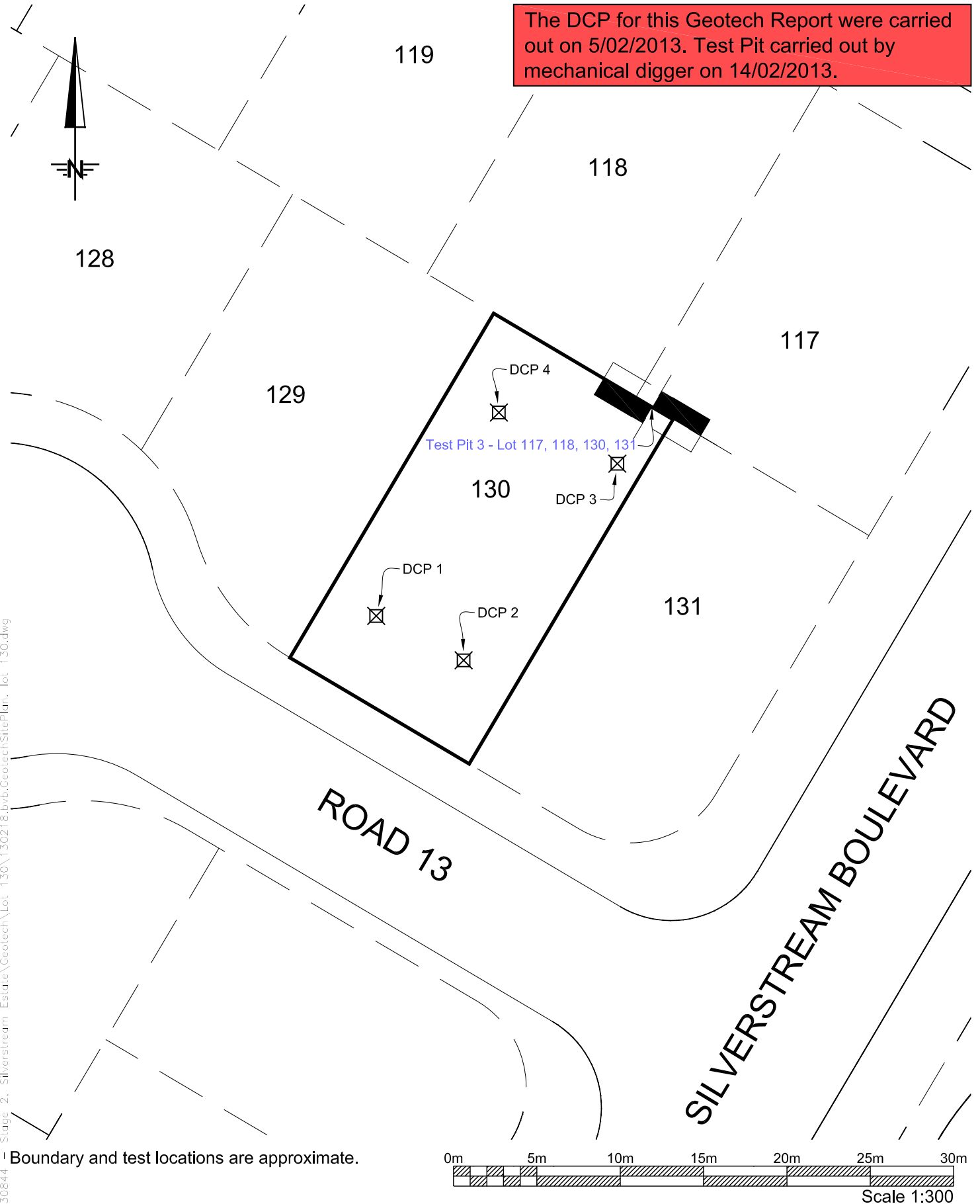


Project: Silverstream Stage II Lot 130
Client: Silverstream Estates Ltd
Test Location: Refer to attached Geotechnical Site Plan
Note: Shallow Investigation

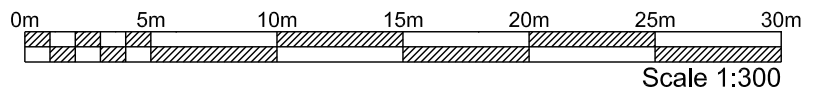
Date: 5/02/2013
Time: 11am
Field Staff: CH
Equipment: DCP



The DCP for this Geotech Report were carried out on 5/02/2013. Test Pit carried out by mechanical digger on 14/02/2013.



Boundary and test locations are approximate.



A	02/13	Geotechnical Report Diagram	ED
issue	date	reason	approved

CAD ref: 130218.bvb.GeotechSitePlan.Lot 130



Building Code Clause(s) B1, B2.....

PRODUCER STATEMENT – PS1 – DESIGN*(Guidance notes on the use of this form are printed on the reverse side*)*

ISSUED BY: HFC: FOUNDATIONS LTD.....

(Design Firm)

TO: VERSATILE HOMES.....

(Owner/Developer)

TO BE SUPPLIED TO: WAIMAKARIRI DISTRICT COUNCIL.....

(Building Consent Authority)

IN RESPECT OF: WAFFLE SLAB DESIGN.....

(Description of Building Work)

AT: SILVERSTREAM, KAIAPOI.....

*(Address)*WAIMAKARIRI DISTRICT
COUNCILPlans and specifications
APPROVED in accordance
with the Building Act 2004,
clause 49 and the Building
Regulations 1992, Clause 3
131056 2/07/2013 Keegan

..... LOT 130 DP SO

We have been engaged by the owner/developer referred to above to provide WAFFLE SLAB DESIGN.....

..... services in respect of the requirements of

Clause(s) B1/VM1 & AS1, VM4, B2/VM1 (Structural Durability Only).....

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

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

☒ Compliance Documents issued by Department of Building & Housing

& soil report by DAVIS OGILVIE & PARTNERS LTD, REF: 30844, DATED: MARCH 2013..... or

☐ Alternative solution as per the attached schedule

The proposed building work covered by this producer statement is described on the drawings titled WAFFLE SLAB.....

..... and numbered 13075.S100 -> S101.....;

together with the specification, and other documents set out in the schedule attached to this statement.

On behalf of the Design Firm, and subject to:

(i) Site verification of the following design assumptions confirmation of design founding conditions.....

(ii) All proprietary products meeting their performance specification requirements;

I believe on reasonable grounds the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached schedule, will comply with the relevant provisions of the Building Code.

I, ROBERT FOSTER..... am: ☒ CPEng 173329..... #*(Name of Design Professional)*☐ Reg Arch #I am a Member of: ☒ IPENZ ☐ NZIA and hold the following qualifications: B.E.....

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

The Design Firm is a member of ACENZ ☐ YES ☐ NO

SIGNED BY ROBERT FOSTER..... ON BEHALF OF HFC: FOUNDATIONS LTD.....

(Design Firm)

Date 28.MAR.2013...

(signature).....

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

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

GUIDANCE ON USE OF PRODUCER STATEMENTS

Producer statements were first introduced with the Building Act 1992. The producer statements were developed by a combined task committee consisting of members of the New Zealand Institute of Architects, Institution of Professional Engineers New Zealand, Association of Consulting Engineers New Zealand in consultation with the Building Officials Institute of New Zealand. The original suite of producer statements has been revised at the date of this form as a result of enactment of the Building Act (2004) by these organisations to ensure standard use within the industry.

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

PS1 Design	Intended for use by a suitably qualified independent design professional in circumstances where the BCA accepts a producer statement for establishing reasonable grounds to issue a Building Consent;
PS2 Design Review	Intended for use by a suitably qualified independent design professional where the BCA accepts an independent design professional's review as the basis for establishing reasonable grounds to issue a Building Consent;
PS3 Construction	Forms commonly used as a certificate of completion of building work are Schedule 6 of NZS 3910:2003 ¹ or Schedules E1/E2 of NZIA's SCC 2007 ²
PS4 Construction Review	Intended for use by a suitably qualified independent design professional who undertakes construction monitoring of the building works where the BCA requests a producer statement prior to issuing a Code Compliance Certificate.
This must be accompanied by a statement of completion of building work (Schedule 6).	

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

Competence of Design Professional

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

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

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

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

* Professional Indemnity Insurance

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

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

Professional Services during Construction Phase

There are several levels of service which a Design Firm may provide during the construction phase of a project (CM1-CM5)³ (OL1-OL4)². The Building Consent Authority is encouraged to require that the service to be provided by the Design Firm is appropriate for the project concerned.

Requirement to provide Producer Statement PS4

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

Attached Particulars

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

Refer Also:

- ¹ Conditions of Contract for Building & Civil Engineering Construction NZS 3910: 2003
- ² NZIA Standard Conditions of Contract SCC 2007 (1st edition)
- ³ Guideline on the Briefing & Engagement for Consulting Engineering Services (ACENZ/IPENZ 2004)

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



28 March 2013

The Building Consent Department
Waimakariri District Council
Private Bag 1005
Rangiora 7440

AUCK@HFC.CO.NZ
CHCH@HFC.CO.NZ

Dear Sir/Madam,

RE: Specific Structural Engineering Inspection Schedule for proposed foundations at Lot 130, Silverstream, Kaiapoi

HFC recommend the following minimum structural inspections be carried out by a Chartered Professional Engineer (or nominated representative) to enable the issue of a PS4 – Producer Statement - Construction Review.

T: 09 367 1070
T: 03 339 7000

Structural Inspection Schedule

Element	Inspection of:	# of inspections
Sub Grade	Inspection of cut / fill building platform to be completed by HFC: Civil & Structural (south) Ltd or geotechnical engineer	1
Foundation	Pre-pour Inspection of reinforcing and pod layout to be completed by HFC: Civil & Structural (south) Ltd	1
Total number of inspections required:		2

P.O. BOX 109 106, NEWMARKET, AUCKLAND
P.O. BOX 28 006, BECKENHAM, CHRISTCHURCH

Notes:

1. It is the responsibility of the owner's agent or contractor to notify the Engineer when inspections are to be required. Please provide at least 48hrs notice.
2. Inspections may be combined or added to at the discretion of the CPEng engineer.
3. Issue of a PS4 Producer Statement – Construction Review is dependent on the satisfactory completion of the specified works, and only issued for the work which has been inspected, and found to be in compliance with the structural documentation. We may ask contractor for PS3 Producer Statement – Construction prior to the issue of a PS4.
4. For engineering enquiries relating to this project please contact the office direct on 03 339 7000 quoting reference #: **13075**.

Yours faithfully
per: HFC Civil and Structural (South) Ltd

渡邊 智明

Tom Watanabe

BE, ME, MIPENZ, CPEng, IntPE(NZ), RPEQ(Aust.), 1st Class Kenchikushi(JPN)

HFC I GROUP
CIVIL & STRUCTURAL ENGINEERS

13075

WAFFLE SLAB DESIGN

FOR:

VERSATILE HOMES

WAIMAKARIRI DISTRICT
COUNCIL
Plans and specifications
APPROVED in accordance
with the Building Act 2004,
clause 49 and the Building
Regulations 1992, Clause 3
131056 2/07/2013 Keegan

AT

SILVERSTREAM

130

KAIAPOI

WAIMAKARIRI DISTRICT

March 28, 2013

HFC FOUNDATIONS LTD Civil and Structural Consulting Engineers	SPECIFICATION SHEET WAFFLE SLAB DESIGN	Proj. No. 13075 Date Mar-13 Page: A1															
CLIENT NAME: VERSATILE HOMES ADDRESS: SILVERSTREAM KAIAPOI LOT: 130 DP: (-) COUNCIL: WAIMAKARIRI DISTRICT DWG TITLE: HFC FOUNDATIONS LTD WAFFLE SLAB DRAWING NO.S: S100 -> S101																	
<u>DESIGN PRINCIPAL CHARACTERISTICS:</u> <table><tr><td>ROOF TYPE:</td><td>LIGHT</td><td>0.25 kPa</td><td>Max roof span:</td><td>8.3 m</td></tr><tr><td>STOREYS:</td><td colspan="4">SINGLE</td></tr><tr><td>EXTERIOR WALLS:</td><td>BRICK</td><td>1.8 kPa</td><td>Max stud height:</td><td>2.4 m</td></tr></table>			ROOF TYPE:	LIGHT	0.25 kPa	Max roof span:	8.3 m	STOREYS:	SINGLE				EXTERIOR WALLS:	BRICK	1.8 kPa	Max stud height:	2.4 m
ROOF TYPE:	LIGHT	0.25 kPa	Max roof span:	8.3 m													
STOREYS:	SINGLE																
EXTERIOR WALLS:	BRICK	1.8 kPa	Max stud height:	2.4 m													
<u>GEOTECHNICAL REQUIREMENTS:</u> <table><tr><td>Dep. Bearing capacity:</td><td>100 kPa</td></tr><tr><td>Exp. Soil clasification:</td><td>MODERATELY (Ys<25) EXPANSIVE</td></tr><tr><td colspan="2">20<Ys<25 therefore differential mound movement $Y_m = 0.7Y_s =$ <table border="1"><tr><td>17.5</td></tr></table> mm</td></tr></table>			Dep. Bearing capacity:	100 kPa	Exp. Soil clasification:	MODERATELY (Ys<25) EXPANSIVE	20<Ys<25 therefore differential mound movement $Y_m = 0.7Y_s =$ <table border="1"><tr><td>17.5</td></tr></table> mm		17.5								
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20<Ys<25 therefore differential mound movement $Y_m = 0.7Y_s =$ <table border="1"><tr><td>17.5</td></tr></table> mm		17.5															
17.5																	

HFC FOUNDATIONS LTD Civil and Structural Consulting Engineers		WAFFLE SLAB DESIGN FOR: VERSATILE HOMES SILVERSTREAM		Proj. No. 13075 Date Mar-13 Page: A2
<div>SLAB DESIGN</div>				
1. GENERAL LIVING AREAS				
DEAD (G)	Slab = 24 x 0.085 =	2.04	kN/m ²	
	SDL =	0.50	kN/m ²	
	Total =	2.54	kN/m ²	
LIVE (Q)	Domestic:	1.50	kN/m ²	
	=> 1.2G + 1.6Q =	5.45	kN/m ²	
Two way spanning slab: L _x = L _y =		1.10	m	
	Mult = 5.45 x 1.1 ² / 16 =	0.41	kNm/m	
Eurosteel SE615-500STD Mesh:				
	A _s =	158	mm ² /m	
	F _y =	500	Mpa	
	d =	40	mm	
	a = (158 x 500) / (0.85 x 1000 x 25) =	3.72	mm	
	ΦM = 0.85 x 158 x 500 x (40 - 3.72 / 2) =	2.56	kNm	OK
Min. shrinkage reinforcement: 0.7 / 500 x 85 x 1000 =		119	mm ²	
	Eurosteel SE615-500STD	158	mm ²	OK
no sawcuts				
2. GARAGE AREAS				
DEAD (G)	Total =	2.54	kN/m ²	
LIVE (Q)	Garage:	2.5	kN/m ²	
	P (applied to external panels) =	6.5	kN	
	P (applied to internal panels) =	13	kN	
	=> 1.2G + 1.6Q =	7.05	kN/m ²	
Two way spanning slab: L _x = L _y =		1.10	m	
Mult = 7.05 x 1.1 ² / 16 =		0.53	or <	2.56 kNm OK
Mult = 1.2 x 2.54 x 1.1 ² / 16 + 1.6 x 6.5 x 1.1 / 8 =		1.66	external <	2.56 kNm OK
Mult = 1.2 x 2.54 x 1.1 ² / 16 + 1.6 x 13 x 1.1 / 16 =		1.66	internal <	2.56 kNm OK

HFC FOUNDATIONS LTD Civil and Structural Consulting Engineers	WAFFLE SLAB DESIGN FOR: VERSATILE HOMES SILVERSTREAM	Proj. No. 13075 Date Mar-13 Page: A3
<u>BEARING UNDER SLAB</u>		
Allowable bearing pressure:	66.66667 kPa	
Ultimate bearing pressure:	100 kPa	
Assume loads can be transferred to subgrade in 2 Ways:		
1. Direct Bearing:		
Slab load transmitted through polystyrene blocks	5.04 kN/m ²	
Ok by inspection		
2. Rib Bearing:		
Typical rib 100 mm wide		
Check ultimate bearing under a typical 1200 x 1200 panel		
Ultimate		
Bearing load from Slab: $5.45 \times 1.2^2 / 0.22 =$	35.66 kN/m ²	
(living areas) S/W ribs $7.2 \times 0.1 / 0.1 =$	7.20 kN/m ²	
	<u>42.86</u> kN/m ²	OK
Ultimate		
Bearing load from Slab: $7.05 \times 1.2^2 / 0.22 =$	46.13 kN/m ²	
(garage areas) S/W ribs $7.2 \times 7.2 \times 0.1 / 0.1 =$	7.20 kN/m ²	
	<u>53.33</u> kN/m ²	OK
SETTLEMENT SOIL PRESSURES		
USE LONG TERM LIVE LOAD REDUCTION FACTOR =	0.4	
Living areas : Load = $(2.54 + 0.4 \times 1.5) \times 1.2^2 / 0.22 =$	20.55 kPa	
Garage areas: Load = $(2.54 + 0.4 \times 2.5) \times 1.2^2 / 0.22 =$	23.17 kPa	
S/W ribs:	7.20 kPa	
=> Max bearing load for settlement =	30.37 kPa	

HFC FOUNDATIONS LTD Civil and Structural Consulting Engineers	WAFFLE SLAB DESIGN FOR: VERSATILE HOMES SILVERSTREAM	Proj. No. 13075 Date Mar-13 Page: A4
--	---	---

EXTERNAL FOOTINGS

HOUSE DATA	DEAD (G)	LIVE (Q)	
LIGHT ROOF: 8.3 m maximum roof span x 0.25 kPa	1.19	1.19	[kN/m]
WALL: 2.4 m high brick wall x 1.8 kPa	4.32		[kN/m]
300 wide footing	2.77		[kN/m]
Ground floor G = 2.54 x 0.6	1.52		[kN/m]
Ground floor Q = 1.5 x 0.6		0.90	[kN/m]
TOTAL	9.80	2.09	[kN/m]

Wult = 1.2G + 1.6Q = **15.10** kN/m

Exterior footing width: **300** mm

Ultimate Bearing load on external footing = **50** kPa < **100 kPa** **OK**

SLIDING

SEISMIC ZONE FACTOR Z=0.3, IN ACCORDANCE WITH SESOC GUIDENCES FOR THE CHRISTCHURCH REGION. SHEAR KEYS NOT SUITABLE FOR AREAS SUBJECT TO LIQUEFACTION IN ACCORDANCE WITH DBH GUIDELINES. RELY ON FRICTION LEVEL TO RESIST SLIDING.

SETTLEMENT: SOIL PRESSURES

USE LONG TERM LIVE LOAD REDUCTION FACTOR = 0 FOR ROOFS

Exterior footing width = 300 mm

Max bearing load for settlement = 33.88 kPa

HFC FOUNDATIONS LTD Civil and Structural Consulting Engineers	WAFFLE SLAB DESIGN FOR: VERSATILE HOMES SILVERSTREAM	Proj. No. 13075 Date Mar-13 Page: A5
<p style="text-align: center;"><u>METHODOLGY AND CONSTRUCTION SEQUENCE</u></p> <p>1/ Clear topsoil and form a level building platform (hardfill as required).</p> <p>2/ Ensure/confirm 66.666666666667kPa allowable bearing capacity unless a specific design has been carried out for lower bearing capacities.</p> <p>3/ In accordance with NZS3604:2011 expansive clay shall be assumed to be present in the soil supporting the foundation unless:</p> <ul style="list-style-type: none"> (a) Reasonable enquiry does not reveal any incidence of major cracks in dry weather on the building site itself or in the surrounding locality (b) The locality has not been identified as an area where expansive clay is likely to be found (c) Excavation for foundation does not reveal plastic clay <p>or</p> <p>Geotechnical investigations have been carried out and do not reveal expansive clays Where expansive clays have been identified additional reinforcing and other details may be required and a specific design by HFC Foundations Ltd is required.</p> <p>5/ Cover building plantform with 20mm sand blinding.</p> <p>6/ Cover blinding with DPC.</p> <p>7/ Place 1100 x 1100 x 300 thick polystyrene panels in a pattern as shown on the foundation plan (i.e 1200 x 1200 grid).</p> <p>8/ Cut out additional internal load bearing foundation thickenings where shown and reinforce slab and thickenings (refer to additional details for expansive clays).</p> <p>9/ Refer to special details required for expansive soils (if any) and provide additional reinforcing to suit</p> <p>10/ Refer to architectural drawings for all dimensions, recesses and under slab service locations.</p> <p>11/ Waste pipes to be installed in accordance with the New Zealand Building Code.</p> <p>12/ Place reinforcing, pour topping slab, internal and exterior thickenings in one operation.</p> <p>13/ Eurosteel Seismic 500E Grade Mesh SE615-500STD should be used. Saw cut slab in accordance with the drawings.</p> <p>14/ 25 Mpa concrete to be used unless noted otherwise. Cure slab in accordance with the good building practices.</p> <p>15/ All HD12 Grade 500 laps shall be 600mm min.</p>		

Exterior Footing top steel			500E	Exterior Footing bottom steel		
No.			Mesh	No.		
Bars	Dia	(mm2)	Area/m	Bars	Dia	(mm2)
1	16	201	158	2	12	226

Seismic case:

Enter G+0.4Q exterior wall line load: 5.9 kN/m

Ext footing self weight

24 x 0.3 x 0.385 2.77 kN/m

Trib slab load

G= 24 x 0.085 x 0.6 1.22 kN/m

0.4Q 0.4 x 1.5 x 0.6 0.36 kN/m

Total UDL (w1) = 10.26 kN/m

Load on tip (p1) = 5.94 kN

2m cantilever (exterior footing)

$M^* = w \times 2m^2/2 + P1 \times 2m$ 32.39 kNm

$V^* = w^*(2-0.335) + P1$ 23.01 kN

Top steel area = tops steel + 0.6m x mesh 295.89 mm2

f'c = 25 Mpa a = 23.21 mm

$\phi M = 40.67$ kNm > 32.39 OK

Shear capacity

Acv = 300 x 335 - 50x100 part brick rebate 95500 mm2

vc 0.46 Mpa

$\phi V = 32.61$ kN > 23.01 OK

> 22.20 OK

4m span (exterior footing)**Hogging**

$w \times 4^2/8$

M^* 20.51 kNm

$0.625wl - w^*0.335$

V^* 22.20 kN

Sagging

$w \times 4^2/13$

12.62 kNm

Bottom steel area 226.22 mm2

f'c = 25 Mpa a = 17.74 mm

$\phi M = 31.36$ kNm > 12.62 OK

Shear capacity (sagging)

Acv = 300 x 335 - 100x100 brick rebate 90500 mm2

vc 0.47 Mpa

$\phi V = 32.24$ kN

Interior ribs**Interior slab self weight**

Topping = $24 \times 0.085 \times 1.2\text{m}$	2.448 kN/m
Rib = $24 \times 0.3 \times 0.1$	0.72 kN/m
$Q = 0.4 \times 1.5 \text{ kPa} \times 1.2$	0.72 kN/m
Cross rib = $24 \times 0.3 \times 0.1 \times 1.1/2\text{m}$	0.396 kN/m
Total UDL on rib (w_2) =	4.284 kN/m

2m Cantilever edge rib

Load on tip (p_2)	10.41 kN
-----------------------	----------

M^* on rib = $w_2 \times 1.7^2/2 + P_2 \times 1.9\text{m}$	25.96 kNm
V^* on rib = $w_2 \times (1.7 - 0.335) + P_2$	16.25 kN

Moment capacity of rib

Top steel = area of mesh $\times 1.2$ width	189.6 mm ²		
$a =$	44.61 mm		
$\phi M =$	26.00 kNm	>	25.96 OK

Shear capacity of rib

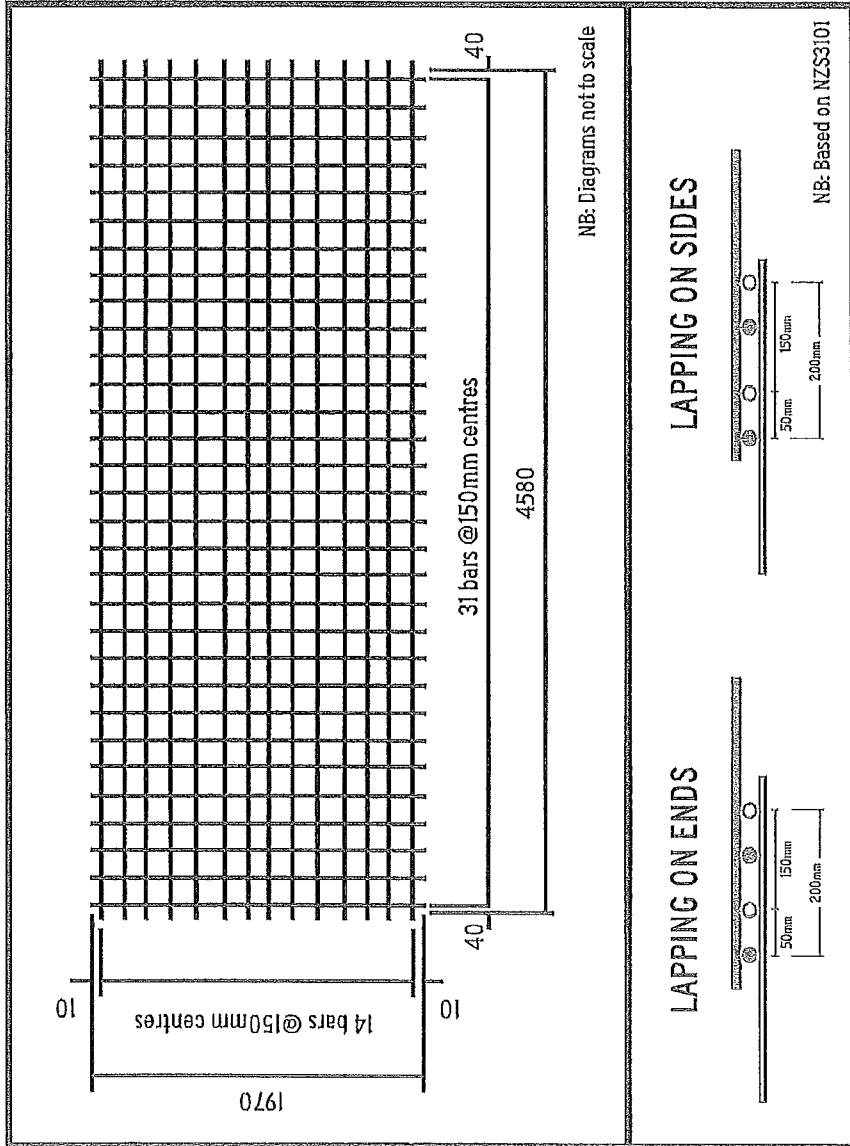
Rely on 85 slab only

$A_{cv} = 1200 \times 50$	60000 mm ²		
$v_b =$	0.53 Mpa		
$k_a =$	0.99		
$\phi V_c =$	23.93 kN	>	16.25 OK

SUMMARY:

G+0.4 Q LINE LOAD			5.9 kN/m	
300 pod , 85 topping, $f'_c =$			25 Mpa	
Mesh area/m		158 mm ² /m	Grade 500E	
Top perimeter bars	1	16	($A_s =$)	201 mm ² , 500 E
Bottom per bars	2	12	($A_s =$)	226 mm ² , 500 E

MESH SPECIFICATIONS



Xtra-Ductile

Specify and use with confidence.

Stock Code: SE 615-500STD

Product Description: SE 615-500 XTRA-DUCTILE MESH (4.58M X 1.97M)

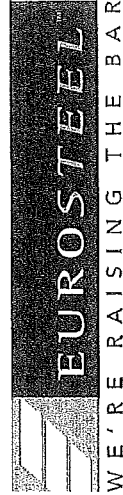
Yield Stress: ≥ 500 MPA

Uniform Elongation: $\geq 10\%$

Weight per 50M: 2.490 kg/m²

Nett Cover: 7.525m²

	LONG WIRE	CROSS WIRE
WIRE DIA. (mm)	R5.5	R5.5
CENTRES (mm)	150	150
LENGTH (mm)	4580	1970
NO. OF WIRES	14	31
0/HANG (mm)	40	10
GROSS WEIGHT PER SHEET	23.38 kg	
WIRE kg/M	0.187	
WEIGHT (kg)	1197	11.40
GROSS SECTION	158.31 mm ² /m	
GROSS SHEET AREA	902 m ²	
CUBIC PER SHEET	0.1 m ³	
NO. OF SHEETS PER PACK	25	
PACK WEIGHT	584.41 kg	
PACK CUBIC	2.48 m ³	



www.eurocorp.co.nz

Each batch of product is independently tested for compliance with AS4671:2001 by an independent third party engineering consultancy Holmes Solutions (www.holmessolutions.com)

Each sheet of EuroSteel SE615 500 Xtra-Ductile mesh has a Pink identification tag attached which details the Euro Corporation product code and the unique batch number relevant to the sheet

This tag should be left on the sheet when it is placed in position to allow easy identification at any time prior to covering with concrete

Batch test certificates are available from Euro Corporation if required



SUPER DUCTILE 500E™ Seismic Grade Reinforcing Mesh

R500SE51.5

MESH SPECIFICATION

Date: October 2011

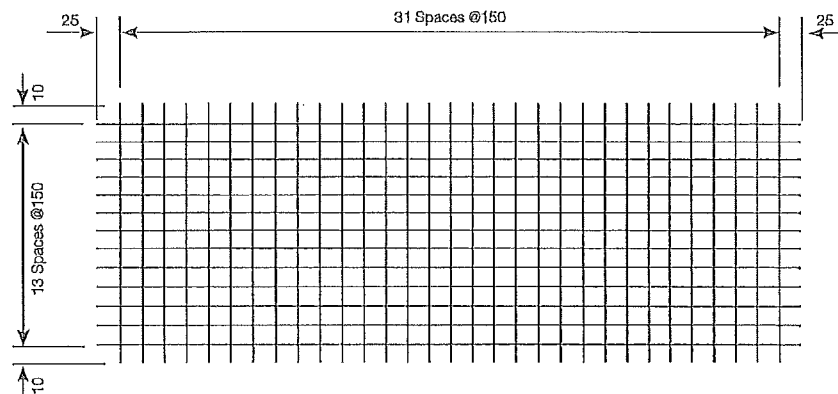
Product Description: 4.7m x 1.97m x - 150 x 150 Grid: R5.5 Line Wire, R5.5 Cross Wire

	Wire Dia.(mm)	Spacing (mm)	Length (mm)	No. of Wires	Overhangs (mm)	mm ² /m	Wire kg/m	Weight (kg)
Longitudinal Wire	5.5 R	150	4700	14	25 25	158.4	0.1865	12.27
Cross Wire	5.5 R	150	1970	32	10 10	158.4	0.1865	11.76

GROSS SHEET WEIGHT (Kg) 24.03

WEIGHT PER SQM (Kg/m²): 2.487

MESH SKETCH (not to scale)

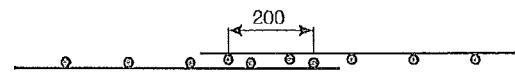


GROSS SHEET AREA (m ²):	9.259
NETT COVER (m ²):	7.787
Ratio STACK & TURNED (Y / N):	Y
No. OF SHEETS / BUNDLE:	25
ESTIMATED CUBIC (m ³):	1.3240
BUNDLE WEIGHT (Tonnes):	0.6007

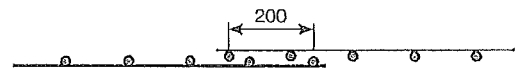
MECHANICAL PROPERTIES

Uniform Elongation%	Yield Strength		Tensile Ratio		Weld Shear Strength
	Min	Max	Min	Max	
≥10%	500MPa	600MPa	1.15	1.4	>5.9

LAPPING ON ENDS



LAPPING ON SIDES



Product testing by SGS NZ Ltd for Grade 500E compliance as per AS/NZS 4671:2001. All SuperDuctile 500E product is individually tagged with distinctive gold lettering. The tag contains the product code and the unique batch number relevant to the sheet. It is important that this tag is kept in position to allow easy identification until covered with concrete. *All measurements/weights approximate



Auckland P: (09) 270 4247
E: auckland.quotes@freo.co.nz

Palmerston North P: (06) 359 1776
E: palmerstonnorth.quotes@freo.co.nz

Christchurch P: (03) 377 1180
E: christchurch.quotes@freo.co.nz

Hamilton P: (07) 843 0890
E: hamilton.quotes@freo.co.nz

Wellington P: (04) 670 8480
E: wellington.quotes@freo.co.nz

Dunedin P: (03) 479 2730
E: dunedin.quotes@freo.co.nz

Tauranga P: (07) 542 9400
E: tauranga.quotes@freo.co.nz

Nelson P: (03) 544 0751
E: nelson.quotes@freo.co.nz

Invercargill P: (03) 214 9090
E: invercargill.quotes@freo.co.nz

Truss Details & Bracing Details

(Include Fixings of Gib & Ecoply)

- Design IT Calcs
- Hyspan etc.

AS BUILT TRUSS LAYOUT
REQUIRED - This must be received by the Building Unit AT
LEAST 10 WORKING DAYS PRIOR to the Structure
Pre-Roof Pre-Wrap inspection.

Truss "As-Build" designs may be sent to
Buildinginfo@wmk.govt.nz



ISSUED CONSENT 20131059

MiTek New Zealand LimitedBuilding Consent 13/01/13
Received 27/13

Correspondence from : **AUCKLAND**
40 Neales Road, East Tamaki 2013
PO Box 58-014, Botany 2163
Phone: 09 274 7109
Fax: 09 274 7100

CHRISTCHURCH
14 Pilkington Way, Wigram 8042
PO Box 8387, Riccarton 8440
Phone: 03 348 8691
Fax: 03 348 0314

www.mitek.nz.co.nz

MiTek 20/20 Engineering 4.6.6.132

Printed: 12:30:56 17 May 2013

PRODUCER STATEMENT for MiTek 20/20® TRUSS DESIGN - Version 4.6**ISSUED BY:** **MiTek New Zealand Limited****TO:** **Spanbild****IN RESPECT OF:** **MiTek® Truss Designs**

This producer statement covers the MiTek 20/20® truss design and the structural performance of the GANG-NAIL® connector plate for the job reference **130237** and may be used by a Building Consent Authority to assist in determining compliance with the New Zealand Building Code.

The MiTek 20/20® truss design program has been developed by MiTek New Zealand Limited for the design of MiTek® timber roof, floor and attic trusses in New Zealand. The truss designs computed by MiTek 20/20® are prepared using sound and widely accepted engineering principles, and in accordance with compliance documents of the New Zealand Building Code and Verification Method B1/VM1; and internationally accepted standard ANSI/TPI 1 - 2002 as an alternative solution to satisfy the requirements of Clause B1 of the New Zealand Building Code.

On behalf of MiTek New Zealand Limited, and subject to:

- i) All proprietary products meeting their performance specification requirements
- ii) The provision of adequate roof bracing and overall building stability
- iii) Correct selection and placement of GANG-NAIL connector plates
- iv) Correct input of Truss Design Data as shown in the Fabricator Design Statement for this job
- v) The design being undertaken by the accredited fabricator under the terms of the software licence

I believe on reasonable grounds that the trusses, if constructed in accordance with the MiTek 20/20® truss design and shop drawings, will comply with the relevant provisions of the New Zealand Building Code.

MiTek New Zealand Limited holds a current policy of Professional Indemnity Insurance no less than \$500,000.

On behalf of MiTek New Zealand Limited,

Date: Friday, 17 May 2013

In Ling Ng, BE (Hons), CPEng, IntPE, MIPENZ (ID: 146585)
TECHNICAL SERVICES MANAGER, MiTek New Zealand Limited

Job: 13023-7

Client: Finlayson
Phone:Spanbild
ISSUED CONSENT BC131056

Fabricator Design Statement : Page 1

Description:
Building Consent No.:
Mitek 20/20 Engineering 131056

Lot 130 Saverstream

Building Consent 131056
Received 27/13
Phone:

Printed: 12:30:57 17 May 2013

MITEK FABRICATOR DESIGN STATEMENT

This statement is issued by MiTek accredited fabricator Spanbild, being licensed to use the MiTek 20/20® software, to the client listed above and may be used by the Building Consent Authority to assist in determining compliance with the New Zealand Building Code.

MiTek 20/20® TRUSS DESIGN DATA

The MiTek 20/20® computer design for this job is based on the following design parameters entered into the program. The Fabricator shall ensure that these job details are current and relevant to the project for the design of the MiTek® trusses.

Job Details

Importance Level : 2

Design Working Life : 50 years

Roof Truss

Timber Group: ~MSGx45 H1.2

Pitch: 25.000 deg

Nominal Overhang: 600 mm

Roof**Ceiling****Wind**

Material: Galv Iron .5mm

Material: Glb Board 12mm

Area: High (44.0 m/s)

Dead Load: 0.210 kPa

Dead Load: 0.200 kPa

Pressure Coeff: Cpe = varies; Cpl = -0.30, 0.20

Restraints: 900 mm centres

Restraints: 600 mm centres

SnowLive Load: Q_{cr} = 0.250 kPaLive Load: Q_c = 1.400 kN

Location: Christchurch (N4) at 100 m

Open Ground Load: 0.900 kPa

Basic Roof Load: 0.441 kPa

The timber for these MiTek® trusses shall be treated to the requirements of NZS 3602:2003 and shall be graded to the requirements of NZS 3603:1993. Unless otherwise noted, this design assumes that the steel fixings and timber connectors proposed are located in a "closed environment", as defined by NZS3604:2011 Section 4.

MiTek® Truss List

Legend: * = detail only, ? = input only, Txx = failed design, Ø = non certified, Unmarked trusses = designed successfully, LB = lateral bracing required
WB = windbeam required

Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)
CT01	1	5930	25.000	900	J03D	1	2467	25.000	900	*HB03	1	3982	18.249	900
HJ01	1	3444	18.249	900	J03E	1	2467	25.000	900	*HB04	1	2258	18.249	900
J07A	1	2980	25.000	900	J04	1	1580	25.000	900	*HB05	1	2924	18.249	900
T01	1	8580	25.000	900	J04A	1	1580	25.000	900	*HB06	1	2924	18.249	900
T06	1	8580	25.000	834	J05	1	680	25.000	900	*HJ02	1	6839	18.249	900
TG01	1	8580	25.000	900	J05A	1	680	25.000	900	*R01	1	1515	25.000	900
TG02	1	8580	25.000	900	J06	1	1567	25.000	900	*R01A	1	1515	25.000	900
TR01	1	8580	25.000	900	J07	1	2980	25.000	900	*R02	1	913	25.000	900
TR02	1	8580	25.000	900	J08	1	1078	25.000	900	*R03	4	913	25.000	900
CJ01	1	2282	25.000	900	J09	1	1467	25.000	900	*R03A	1	913	25.000	900
CJ01A	1	2282	25.000	900	J09A	1	1467	25.000	900	*R03B	4	913	25.000	900
CT02	3	5930	25.000	900	J09B	1	1467	25.000	900	*R03C	1	913	25.000	900
J01	1	2702	25.000	900	T02	1	2980	25.000	900	*R03D	1	913	25.000	900
J01A	1	2702	25.000	900	T03	1	2080	25.000	900	*R04	1	913	25.000	900
J01B	1	2702	25.000	900	T04	1	5450	25.000	900	*R04A	1	913	25.000	900
J02	1	1802	25.000	900	T04A	1	5450	25.000	900	*R05	1	1280	25.000	900
J02A	1	1802	25.000	900	T05	3	5555	25.000	900	*R05A	1	1280	25.000	900
J03	1	2467	25.000	900	V01	1	2185	25.000	900	*R06	1	580	25.001	900
J03A	1	2467	25.000	900	V03	1	1410	25.000	900	*R07	1	1180	25.000	900
J03B	1	2467	25.000	900	*HB01	1	4670	18.249	900	*V02	1	542	25.000	900
J03C	1	2467	25.000	900	*HB02	1	4670	18.249	900					

Total quantity : 72

WAIMAKARIRI DISTRICT
COUNCIL
Plans and specifications
APPROVED in accordance
with the Building Act 2004,
clause 49 and the Building
Regulations 1992, Clause 3
131056 2/07/2013 Keegan

The computer design input has been carried out by:

Signed:

Name of Detailer:

On behalf of:


Dean Murphy

Spanbild

Date: Friday, 17 May 2013

Qualifications and Title: Product Engineer - Timber

GIB EzyBrace® 2011 Software



Demand Calculation Sheet

single storey

V06/11

Job Details

Name: Cameron Finlayson
 Street and Number: Silverstream
 Lot and DP Number: Lot 130
 City/Town/District: Kaiapoi
 Designer: RM
 Company Name: Versatile Homes & Buildings
 Date: 15/05/2013



Select Lining Option

10 or 13 mm GIB® Plasterboard

Building Specification

Number of storeys	single	
Floor Loading	2kPa	
Foundation Type	slab	
<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px;"> Single Floor Cladding Weight: heavy Roof Weight: light Room in Roof Space: no Roof Pitch (degrees): 25 Roof height above eaves (m): 2.3 Building height to apex (m): 4.9 Ground to lower floor level (m): 0.2 </div> <div style="border: 1px solid black; padding: 5px;"> Complete Single Floor Column only Stud Height (m): 2.4 Building Length (m): 17.2 Building Width (m): 9.8 Building Plan Area (m2): 132 </div> </div>		

WAIMAKARIRI DISTRICT COUNCIL
 Plans and specifications APPROVED in accordance with the Building Act 2004, clause 49 and the Building Regulations 1992, Clause 3 131056 2/07/2013 Keegan

Building Location

Wind Zone Select by Building Consent Authority Map or Preference: High Wind Region: Preference selected Lee Zone: Preference selected Ground Roughness: Preference selected Site Exposure: Preference selected Topographic Class: Preference selected	Earthquake Zone 2 Annual exceedance probability 1/500 (NZS3604:2011 default)	Soil Type D&E (deep to very soft)
--	---	---

Bracing Units required for Wind

Demand W (BU)		Walls single
along	slab	514
across	slab	867

Bracing Units required for Earthquake

Demand along / across E (BU)	
Walls	
single	
slab	834

RM



V06/11

	WAIMAKARIRI DISTRICT	
	COUNCIL	
	Plans and specifications	
	APPROVED in accordance	
	with the Building Act 2004,	
	clause 49 and the Building	
	Regulations 1982, Clause 3	
	131056 2/07/2013 Keegan	

					Wind	Earthq.
Totals Achieved	W	346%	EQ	203%	1776	1695
<i>Concrete Slab</i>					<i>OK</i>	<i>OK</i>
Totals Required (from Demand)					514	834

RM



V06/11

	WAIMAKARIRI DISTRICT	
	COUNCIL	
	Plans and specifications	
	APPROVED in accordance	
	with the Building Act 2004,	
	clause 49 and the Building	
	Regulations 1992, Clause 3	
	131056 2/07/2013 Keegan	

					Wind	Earthq.
Totals Achieved	W	190%	EQ	188%	1647	1564
<i>Concrete Slab</i>					<i>OK</i>	<i>OK</i>
Totals Required (from Demand)					867	834

GIB EzyBrace® Systems



GIB EzyBrace® System Specification – GS1-N

JUNE 2011

Specification Code	Minimum Length (m)	Lining requirement
GS1-N	0.4	Any 10mm or 13mm GIB® Standard Plasterboard to one side only

WALL FRAMING

Wall framing to comply with;

- NZBC B1 - Structure; AS1 Clause 3 Timber (NZS 3604:2011)
 - NZBC B2 - Durability AS1 Clause 3.2 Timber (NZS 3602)
- Framing dimensions and height as determined by NZS 3604 stud and top plate tables for load bearing and non-bearing walls. The use of kiln dried stress graded timber is recommended.

BOTTOM PLATE FIXING**Timber Floor**

Pairs of hand driven 100 x 3.75mm nails at 600mm centres; or

Three power driven 90 x 3.15 nails at 600mm centres.

Concrete floor**INTERNAL WALL BRACING LINES**

In accordance with the requirements of NZS 3604:2011 for internal wall plate fixing or 75 x 3.8mm shot fired fasteners with 16mm discs spaced at 150mm and 300mm from end studs and 600mm centres thereafter.

EXTERNAL WALL BRACING LINES

In accordance with the requirements of NZS 3604 for external plate fixing.

WALL LINING

Any 10mm or 13mm GIB® Plasterboard lining.

Sheets can be fixed vertically or horizontally.

Sheet joints shall be touch fitted.

Use full length sheets where possible.

PERMITTED SUBSTITUTION

For permitted GIB® Plasterboard substitutions refer to Page 21 in GIB Ezybrace® Systems 2011.

FASTENING THE LINING**Fasteners**

32mm x 6g GIB® Grabber® high thread screws; or 30mm GIB® Nails.

Fastener centres

50,100,150, 225, 300mm from each corner and 150mm thereafter around the perimeter of the bracing element.

For vertically fixed sheets place fasteners at 300mm centres to intermediate sheet joints.

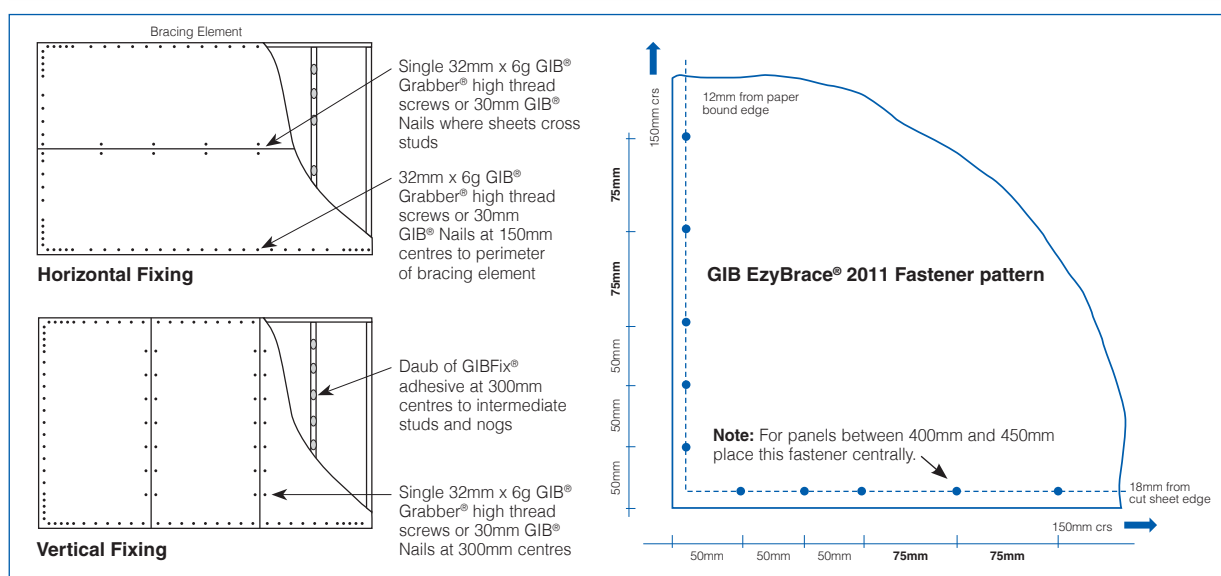
For horizontally fixed sheets place single fasteners to the sheet edge where it crosses the stud.

Use daubs of GIBFix® adhesive at 300mm centres to intermediate studs.

Place fasteners no closer than 12mm from paper bound sheet edges and 18mm from any sheet end or cut edge.

JOINTING

All fastener heads stopped and all sheet joints paper tape reinforced and stopped in accordance with the GIB® Site Guide.



In order for GIB® systems to perform as tested, all components must be installed exactly as prescribed. Substituting components produces an entirely different system and may seriously compromise performance. Follow the specifications. This Specification sheet is issued in conjunction with the publication GIB EzyBrace® Systems 2011 and has been appraised in accordance with the BRANZ Appraisal No. 294 (2011).



GIB EzyBrace® Systems



GIB EzyBrace® System Specification – GS2-N

JUNE 2011

Specification Code	Minimum Length (m)	Lining requirement
GS2-N	0.4	Any 10mm or 13mm GIB® Standard Plasterboard fixed to each side of the wall framing.

WALL FRAMING

Wall framing to comply with;

- NZBC B1 - Structure; AS1 Clause 3 Timber (NZS 3604:2011)
 - NZBC B2 - Durability AS1 Clause 3.2 Timber (NZS 3602)
- Framing dimensions and height as determined by NZS 3604 stud and top plate tables for load bearing and non-bearing walls. The use of kiln dried stress graded timber is recommended.

BOTTOM PLATE FIXING**Timber Floor**

Pairs of hand driven 100 x 3.75mm nails at 600mm centres; or
Three power driven 90 x 3.15 nails at 600mm centres.

Concrete floor**INTERNAL WALL BRACING LINES**

In accordance with the requirements of NZS 3604:2011 for internal wall plate fixing or 75 x 3.8mm shot fired fasteners with 16mm discs spaced at 150mm and 300mm from end studs and then 600mm centres thereafter.

WALL LINING

One layer 10mm or 13mm GIB® Plasterboard to each side of the wall.

Sheets can be fixed vertically or horizontally.

Sheet joints shall be touch fitted.

Use full length sheets where possible.

PERMITTED SUBSTITUTION

For permitted GIB® Plasterboard substitutions refer to Page 21 in GIB® Ezybrace Systems 2011.

FASTENING THE LINING**Fasteners**

32mm x 6g GIB® Grabber® high thread screws; or
30mm GIB® Nails.

Fastener centres

50,100,150, 225, 300mm from each corner and 150mm thereafter around the perimeter of the bracing element.

For vertically fixed sheets place fasteners at 300mm centres to intermediate sheet joints.

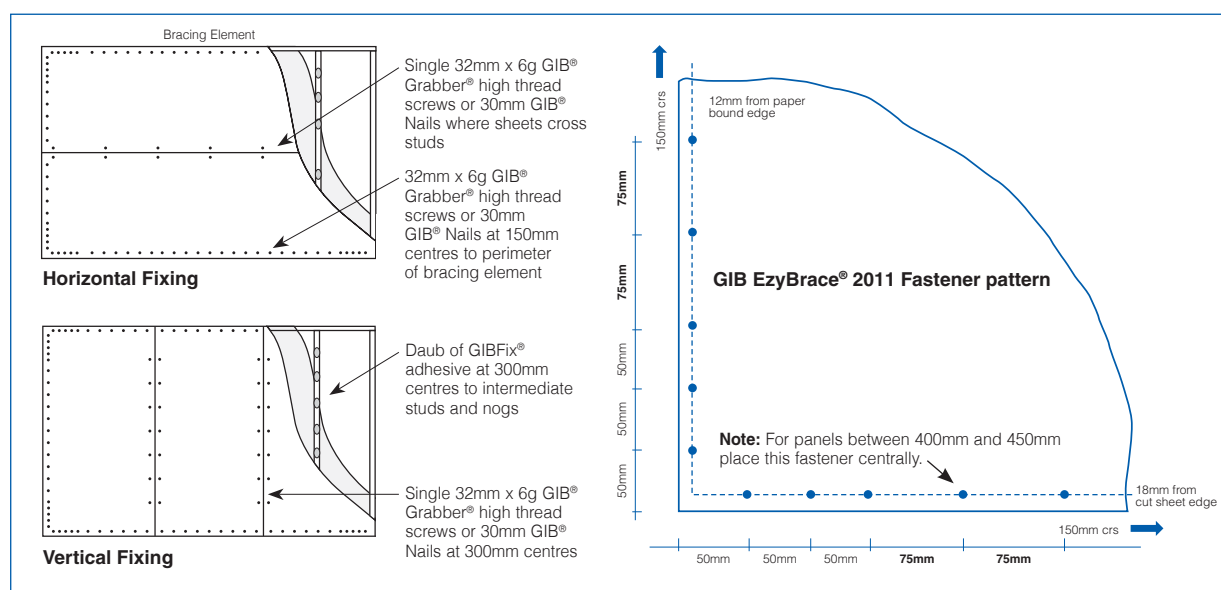
For horizontally fixed sheets place single fasteners to the sheet edge where it crosses the stud.

Use daubs of GIB Fix® adhesive at 300mm centres to intermediate studs.

Place fasteners no closer than 12mm from paper bound sheet edges and 18mm from any sheet end or cut edge.

JOINTING

All fastener heads stopped and all sheet joints paper tape reinforced and stopped in accordance with the GIB® Site Guide.



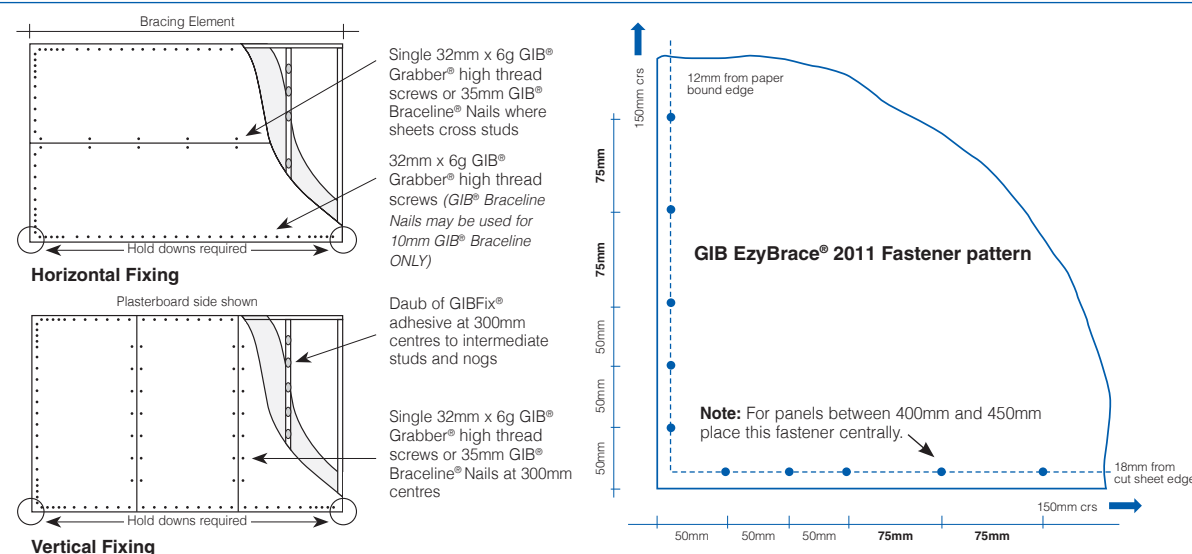
In order for GIB® systems to perform as tested, all components must be installed exactly as prescribed. Substituting components produces an entirely different system and may seriously compromise performance. Follow the specifications. This Specification sheet is issued in conjunction with the publication GIB EzyBrace® Systems 2011 and has been appraised in accordance with the BRANZ Appraisal No. 294 (2011).





JUNE 2011

Specification Code	Minimum Length (m)	Lining requirement	Other requirements
BLP-H	0.4	10mm or 13mm GIB Braceline® to one side of the frame plus minimum 7mm Ecoply to the other side	Hold downs



BRANZ Appraise
Appraisal No 294 (2011)

Ecoply® Bracing Specification – EP1

June 2012

Single sided structural plywood brace

Specification No.	Minimum Wall Length	Lining Requirements	BUs/m Wind	BUs/m Earthquake
EP1	0.6 m	7mm Ecoply®, or Ecoply Barrier one side	125	130

Framing

Wall framing must comply with:

- NZBC B1 - Structure: AS1 Clause 3 Timber (NZS3604:2011)
- NZBC B2 - Durability: AS1 Clause 3.2 Timber (NZS3602)

Framing dimensions and height are as determined by the NZS3604:2011 stud and top plate tables for load bearing and non load bearing walls. Kiln dried verified structural grade timber must be used. Machine stress graded timber, such as Laserframe®, is recommended.

Bottom Plate Fixing

Use GIB HandiBrac® hold-down connections at each end of the bracing element. Refer to installation instructions supplied with the connectors for correct installation instructions and bolt types to be used for either concrete or timber floors. Within the length of the bracing element, bottom plates are fixed in accordance with the requirements of NZS 3604:2011.

Lining

One layer 7mm Ecoply structural plywood fixed directly to framing or over cavity battens. If part sheets are used, ensure nailing at required centres is carried out around the perimeter of each sheet or part sheet. A 2-3mm expansion gap should be left between sheets.

Fastening the Ecoply

Fasteners

Fasten with 50 x 2.8 mm galvanised or stainless steel flat head nails. Place fasteners no less than 7 mm from sheet edges.

Fasteners for H3.2 CCA treated Ecoply

Where fasteners are in contact with CCA treated timber or plywood, fasteners shall be a minimum of hot dip galvanised

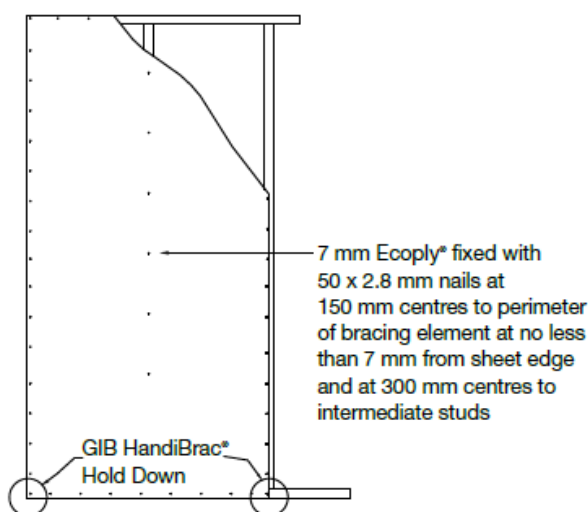
In certain circumstances stainless steel fasteners may be required. Refer to section 4 of NZS 3604:2011 for these circumstances.

Refer to Table 8 in the Ecoply Specification and Installation Guide for further fastener selection advice.

Stainless steel fasteners must be annular grooved

Fastening Centres

Fasteners are placed at 150 mm centres around the perimeter of each sheet and 300 mm centres to intermediate studs.



Ecoply® Bracing Systems are designed to meet the requirements of the NZBC and have been tested and analysed using the P21 method referenced in NZS3604:2011 listed as an acceptable solution B1/AS1 Structure. Testing was carried out using Ecoply and Laserframe SG8 timber framing manufactured by Carter Holt Harvey Limited trading as Carter Holt Harvey Woodproducts New Zealand, and GIB® products manufactured by Winstone Wallboards Ltd. **Substituting materials may compromise performance of the system.** GIB® and GIB HandiBrac® are registered trade marks of Fletcher Building Holdings Ltd.

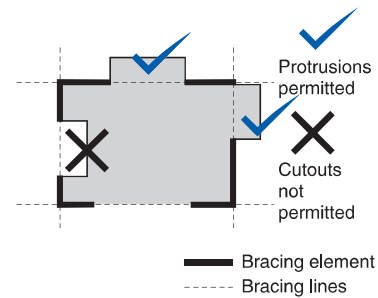
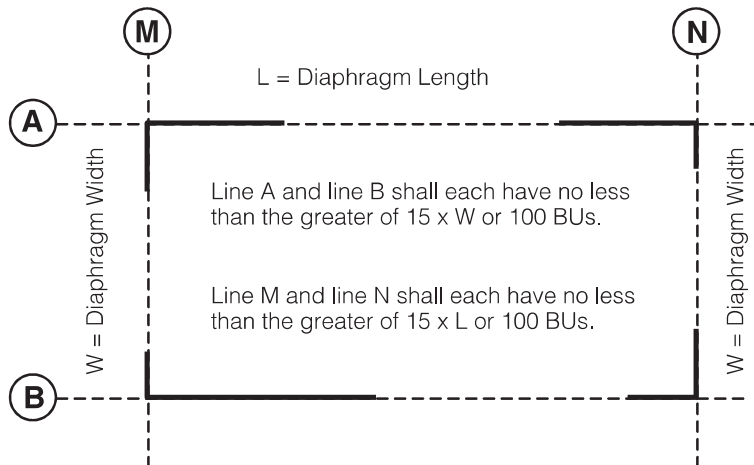
GIB EzyBrace® Systems



Ceiling Diaphragms

JUNE 2011

GIB® Ceiling Diaphragms are stiff and strong horizontal bracing elements which effectively transfer loads to bracing walls. They themselves do not have a bracing unit rating but are used when bracing lines exceed 6m separation. The basic shape of a ceiling diaphragm is square or rectangular. Protrusions are permitted but cut-outs are not. The length of a ceiling diaphragm shall not exceed twice its width. Dimensions are measured between supporting bracing lines. Supporting bracing lines shall have a bracing capacity no less than the greater of 100 bracing units or 15 bracing units per metre of diaphragm dimension, measured at right angles to the line being considered, as illustrated.

**Limitations for GIB® plasterboard ceiling diaphragms**

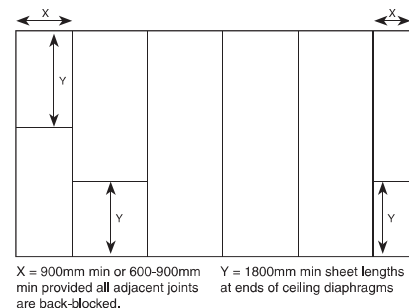
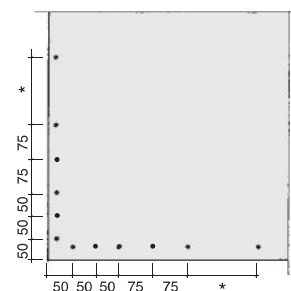
GIB® plasterboard ceiling diaphragms may be constructed as follows:

- For diaphragms not steeper than 15° and not exceeding 7.5m in length, any GIB® plasterboard may be used provided perimeter fixing is at 150mm centres
- For diaphragms not steeper than 45° and not exceeding 7.5m in length and for diaphragms not steeper than 25° and not exceeding 12m in length, any GIB® plasterboard may be used provided perimeter fixing is at 100mm centres

Otherwise construction is in accordance with the general fixing requirements for GIB® ceiling diaphragms outlined below.

General Fixing Requirements for GIB® Ceiling Diaphragms

- Linings shall be installed over the entire area of the diaphragm.
- Fastening shall be no less than 12mm from sheet edges and not less than 18mm from sheet end.
- Sheets shall be supported by framing members (e.g., ceiling battens) spaced at no more than 500mm centres for 10mm GIB® Plasterboard and at no more than 600mm centres for 13mm GIB® Plasterboard.
- Sheets within the diaphragm area may be fastened and finished conventionally in accordance with the publication entitled, "GIB® Site Guide". All joints shall be paper tape reinforced and stopped. It is recommended that sheet butt joints are formed off framing and back-blocked (see "GIB® Site Guide").
- Use full width sheets where possible. At least 900mm wide sheets with a length not less than 1800mm shall be used. Sheets less than 900mm wide but no less than 600mm may be used provided all joints with adjacent sheets are back-blocked (see "GIB® Site Guide").
- Openings are allowed within the middle third of the diaphragm's length and width. Fixing of sheet material to opening trimmers shall be at 150mm centres. Neither opening dimension shall exceed a third of the diaphragm width. Larger openings, or openings in other locations, require specific engineering design. Refer "Openings in Bracing Elements" page 17.
- Fasteners are placed at 150mm or 100mm centres around the ceiling diaphragm with the corners fastened using the GIB EzyBrace® 2011 fastener pattern.

**Sheet Widths and Lengths in Ceiling Diaphragms****Fastening pattern for ceiling diaphragms**

* Perimeter centres at 150mm or 100mm depending on diaphragm limitations above

GIB EzyBrace® Systems



Ceiling Diaphragms

JUNE 2011

Battens

Ceiling diaphragms may be constructed using steel or timber ceiling battens.

Battens shall be spaced at a maximum of:

- 500mm for 10mm GIB® Plasterboard
- 600mm for 13mm GIB® Plasterboard

Timber battens shall be fixed in accordance with the requirements of NZS 3604:2011.

Steel battens shall be GIB® Rondo® battens or similar with a minimum base metal thickness (BMT) of 0.55mm with two external flanges of 8mm to allow direct screw fixing to roof framing.

Steel battens shall be fixed with 2/32mm x 8g GIB® Grabber® wafer head self tapping screws to supporting framing.

Steel battens must be fixed directly to the roof framing. If a clip system has been used, a timber block (min 300mm) or a continuous timber member can be fixed alongside the bottom chord to permit a direct connection to the batten.

For steel battens a steel channel or metal angle is required at the perimeter of the diaphragm. The perimeter channel shall be fastened to the top plate with 32mm x 8g GIB® Grabber® wafer head self tapping screws at 300mm centres maximum.

The linings are fastened to the perimeter channel in case (a) with 25mm x 6g self tapping screws at 150mm centres and in case (b) to the 140mm x 35mm top plate with 32mm x 6g GIB® Grabber® high thread screws at 150mm centres. Within the diaphragm area sheets may be fastened as described in 'General Fixing Requirements for GIB® Ceiling Diaphragms'.

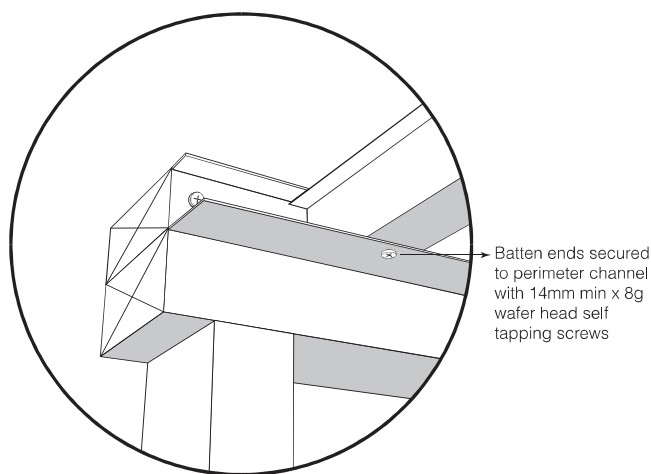
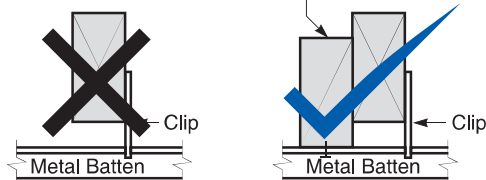
Perimeter fastenings shall be spaced at:

- 150mm for ceiling diaphragms up to 7.5m and not steeper than 15 degrees
- 100mm for ceiling diaphragms 7.5m–12m or steeper than 15 degrees

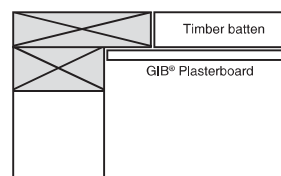
Coved ceiling diaphragms can be achieved by attaching a folded metal angle to the junction. The metal angle shall be;

- min 0.55mm BMT
- fastened at 300mm centres on each edge using 30mm GIB® Nails or 32mm x 8g GIB® Grabber® wafer head self tapping screws or similar to the roof framing.
- linings are fastened to the folded angle as specified for the perimeter at 150mm centres with 25mm x 6g self tapping screws.

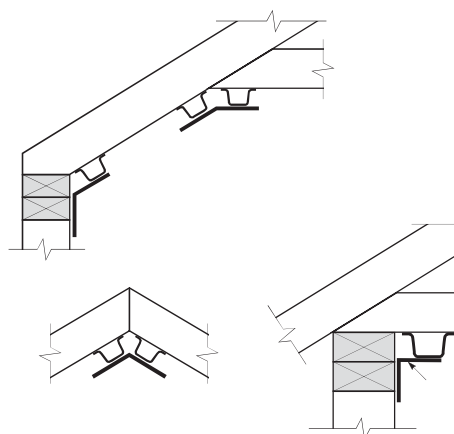
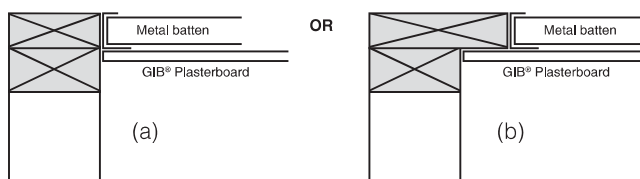
Block or continuous Timber member min 300mm fixed with min 4 x 100mm x 3.75mm Nails



Timber battens example



Steel battens with perimeter channel example



Producer Statement PS1- Design

ISSUED BY: MiTek New Zealand Ltd

TO BE SUPPLIED TO: Building Consent Authorities in New Zealand

IN RESPECT OF: GANGLAM Design Manual, 04/2008

AT: Various Locations in New Zealand

MiTek New Zealand Ltd has provided engineering design services in respect of the requirements of Clause B1 of the NZ Building Code for

☐ All ☒ Part only as specified – GANGLAM Members

of the proposed building work.

The selection charts within this design manual have been prepared in accordance with **Compliance Documents and Verification Method B1/VM1** of the NZ Building Code and in accordance with sound and widely accepted engineering principles.

On behalf of MiTek New Zealand Ltd, and subject to:

1. The verification of the design assumptions within this manual
2. All proprietary products meeting their performance specification requirements;

I believe on reasonable grounds that the use of GANGLAM Members in the proposed building, if constructed in accordance with the drawings, specifications and other documents provided, will comply with the relevant provisions of the Building Code.

MiTek New Zealand Ltd holds a current policy of Professional Indemnity Insurance of not less than \$500,000.

On behalf of MiTek New Zealand Ltd

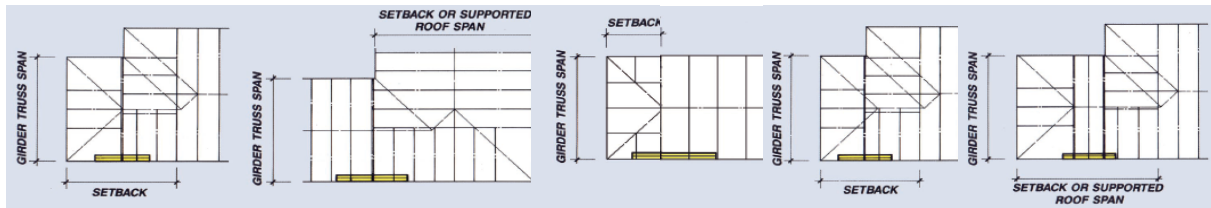
Date: December 2008



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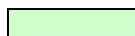
MiTek New Zealand Ltd.

AUCKLAND: 40 Neales Road, East Tamaki 2013 PO Box 58-014, Greenmount 2141 Ph: 09-274 7109 Fax: 09-274 7100
CHRISTCHURCH: 14 Pilkington Way, Wigram 8042 PO Box 8387, Riccarton 8440 Ph: 03-348 8691 Fax: 03-348 0314

**TABLE 7A:****LINTEL SUPPORTING GIRDER / SETBACK TRUSSES WITH LIGHT ROOF**

	LINTEL SIZE	SETBACK (m)	MAXIMUM LINTEL SPAN (m)										
			GIRDER TRUSS SPAN (m)										
			5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0
SOLID TIMBER	2/140 x 45	1.2	2.14	2.03	1.95	1.81	1.70	1.60	1.51	1.43	1.36	1.30	1.24
		2.4	1.83	1.64	1.49	1.36	1.25	1.15	1.07	1.00	0.94	0.89	0.84
		3.6	1.50	1.32	1.17	1.05	0.96	0.88	0.81	0.75	0.70	0.66	0.62
		4.8	1.25	1.08	0.95	0.85	0.77	0.70	0.64	0.59	0.55	0.51	0.48
	2/190 x 45	1.2	2.83	2.73	2.65	2.58	2.51	2.38	2.26	2.16	2.06	1.98	1.90
		2.4	2.64	2.53	2.31	2.13	1.98	1.85	1.73	1.63	1.54	1.46	1.39
		3.6	2.38	2.12	1.91	1.74	1.60	1.47	1.37	1.28	1.20	1.13	1.06
		4.8	2.05	1.80	1.61	1.45	1.32	1.21	1.11	1.03	0.97	0.90	0.85
	2/240 x 45	1.2	3.41	3.30	3.20	3.12	3.04	2.97	2.91	2.85	2.78	2.67	2.57
		2.4	3.21	3.09	2.99	2.90	2.76	2.59	2.44	2.31	2.19	2.08	1.98
		3.6	3.05	2.92	2.72	2.49	2.30	2.14	1.99	1.87	1.76	1.66	1.58
		4.8	2.91	2.61	2.34	2.13	1.95	1.80	1.67	1.55	1.45	1.37	1.29
	2/290 x 45	1.2	3.97	3.84	3.73	3.63	3.54	3.46	3.39	3.33	3.27	3.21	3.16
		2.4	3.76	3.62	3.50	3.40	3.31	3.23	3.15	3.01	2.86	2.73	2.61
		3.6	3.59	3.44	3.32	3.21	3.05	2.84	2.67	2.51	2.37	2.25	2.14
		4.8	3.44	3.29	3.13	2.86	2.64	2.44	2.27	2.13	2.00	1.89	1.79
		6.0	3.31	3.09	2.78	2.52	2.30	2.12	1.97	1.83	1.72	1.61	1.52
		7.5	3.09	2.71	2.42	2.17	1.98	1.81	1.67	1.55	1.45	1.35	1.27
GANGLAM	2/330 x 45	10.0	2.58	2.23	1.97	1.75	1.58	1.44	1.32	1.22	1.14	1.06	1.00
		1.2	4.70	4.56	4.43	4.31	4.21	4.12	4.04	3.96	3.89	3.83	3.77
		2.4	4.49	4.33	4.19	4.07	3.97	3.87	3.79	3.71	3.64	3.57	3.43
		3.6	4.30	4.14	4.00	3.87	3.76	3.67	3.55	3.35	3.18	3.02	2.88
		4.8	4.14	3.97	3.83	3.70	3.54	3.30	3.09	2.90	2.74	2.59	2.46
		6.0	4.00	3.83	3.68	3.42	3.15	2.92	2.72	2.54	2.39	2.25	2.13
	2/380 x 45	7.5	3.84	3.67	3.32	3.01	2.75	2.53	2.34	2.18	2.04	1.92	1.81
		10.0	3.56	3.11	2.75	2.47	2.24	2.05	1.89	1.75	1.63	1.52	1.43
		1.2	5.26	5.09	4.95	4.83	4.71	4.61	4.52	4.44	4.36	4.29	4.22
		2.4	5.04	4.86	4.71	4.58	4.46	4.36	4.26	4.17	4.09	4.02	3.95
		3.6	4.84	4.66	4.50	4.37	4.25	4.14	4.04	3.96	3.88	3.71	3.55
		4.8	4.67	4.49	4.33	4.19	4.07	3.96	3.82	3.60	3.41	3.23	3.07
	2/430 x 45	6.0	4.52	4.33	4.17	4.03	3.91	3.64	3.40	3.19	3.00	2.84	2.69
		7.5	4.36	4.16	4.00	3.77	3.46	3.19	2.97	2.77	2.60	2.45	2.31
		10.0	4.12	3.91	3.49	3.15	2.86	2.63	2.42	2.25	2.10	1.97	1.85
		1.2	5.79	5.61	5.46	5.32	5.20	5.09	4.99	4.90	4.81	4.74	4.66
		2.4	5.57	5.38	5.21	5.07	4.94	4.83	4.72	4.63	4.54	4.46	4.39
		3.6	5.37	5.17	5.00	4.85	4.72	4.60	4.50	4.40	4.31	4.23	4.16
	2/480 x 45	4.8	5.19	4.99	4.81	4.66	4.53	4.41	4.30	4.21	4.10	3.90	3.71
		6.0	5.03	4.83	4.65	4.50	4.36	4.24	4.11	3.87	3.65	3.46	3.28
		7.5	4.86	4.65	4.47	4.32	4.18	3.90	3.63	3.40	3.19	3.01	2.85
		10.0	4.61	4.39	4.22	3.86	3.53	3.24	3.00	2.80	2.61	2.45	2.31
		1.2	6.31	6.12	5.95	5.80	5.67	5.55	5.44	5.34	5.25	5.17	5.09
		2.4	6.08	5.88	5.70	5.54	5.41	5.28	5.17	5.07	4.97	4.89	4.81
	2/530 x 45	3.6	5.88	5.66	5.48	5.32	5.18	5.05	4.94	4.83	4.74	4.65	4.57
		4.8	5.70	5.48	5.29	5.12	4.98	4.85	4.74	4.63	4.54	4.45	4.34
		6.0	5.53	5.31	5.12	4.95	4.81	4.68	4.56	4.46	4.29	4.07	3.87
		7.5	5.35	5.12	4.93	4.76	4.62	4.49	4.29	4.02	3.79	3.58	3.39
		10.0	5.09	4.85	4.66	4.49	4.19	3.87	3.59	3.35	3.13	2.95	2.78
		1.2	6.81	6.61	6.43	6.27	6.13	6.00	5.89	5.78	5.68	5.59	5.51
	2/580 x 45	2.4	6.58	6.37	6.18	6.01	5.86	5.73	5.61	5.50	5.40	5.30	5.22
		3.6	6.38	6.15	5.95	5.78	5.63	5.49	5.37	5.26	5.15	5.06	4.97
		4.8	6.19	5.95	5.75	5.58	5.42	5.28	5.16	5.05	4.94	4.85	4.76
		6.0	6.02	5.78	5.58	5.40	5.24	5.10	4.98	4.87	4.76	4.67	4.47
		7.5	5.83	5.59	5.38	5.20	5.04	4.90	4.78	4.66	4.40	4.16	3.95
		10.0	5.55	5.31	5.10	4.92	4.76	4.51	4.19	3.92	3.68	3.46	3.27
		1.2	7.31	7.09	6.90	6.73	6.58	6.44	6.32	6.21	6.10	6.00	5.91
		2.4	7.07	6.84	6.64	6.46	6.31	6.17	6.04	5.92	5.81	5.71	5.62
		3.6	6.86	6.62	6.41	6.23	6.07	5.92	5.79	5.67	5.56	5.46	5.37
		4.8	6.67	6.42	6.21	6.02	5.86	5.71	5.58	5.46	5.35	5.25	5.15
		6.0	6.50	6.24	6.03	5.84	5.67	5.52	5.39	5.27	5.16	5.06	4.96
		7.5	6.30	6.04	5.82	5.63	5.46	5.31	5.18	5.06	4.95	4.76	4.52
		10.0	6.02	5.75	5.53	5.33	5.17	5.02	4.81	4.50	4.23	3.99	3.78

 = regular duty plating

 = heavy duty plating

 = super heavy duty plating

Producer Statement

Producer Statement - PS1 - Design

ISSUED BY: MiTek New Zealand Limited

TO BE SUPPLIED TO: Building Consent Authorities in New Zealand

IN RESPECT OF: GANG-NAIL FLITCH BEAM Design Manual, 12/2007

AT: Various Locations in New Zealand

MiTek New Zealand Limited has provided engineering design services in respect of the requirements of Clause B1 of the NZ Building Code for

☐ All ☒ Part only as specified – GANG-NAIL FLITCH BEAM

of the proposed building work.

The selection charts within this design manual have been prepared in accordance with **Compliance Documents and Verification Method B1/VM1** of the NZ Building Code and in accordance with sound and widely accepted engineering principles.

On behalf of MiTek New Zealand Limited, and subject to:

1. The verification of the design assumptions within this manual
2. All proprietary products meeting their performance specification requirements;

I believe on reasonable grounds that the use of GANG-NAIL FLITCH BEAM in the proposed building, if constructed in accordance with the drawings, specifications and other documents provided, will comply with the relevant provisions of the Building Code.

MiTek New Zealand Limited holds a current policy of Professional Indemnity Insurance of not less than \$500,000.

On behalf of MiTek New Zealand Limited

Date: January 2010



In Ling Ng
Technical Services Manager
BE (Hons), CPEng, IntPE
MIPENZ (ID: 146585)

MiTek New Zealand Limited

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FLITCH BEAM



Selection Charts

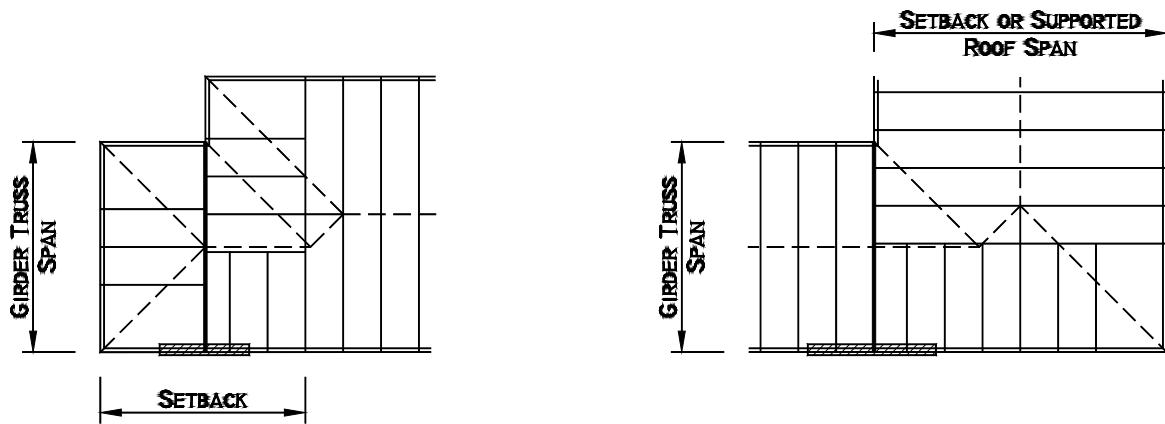


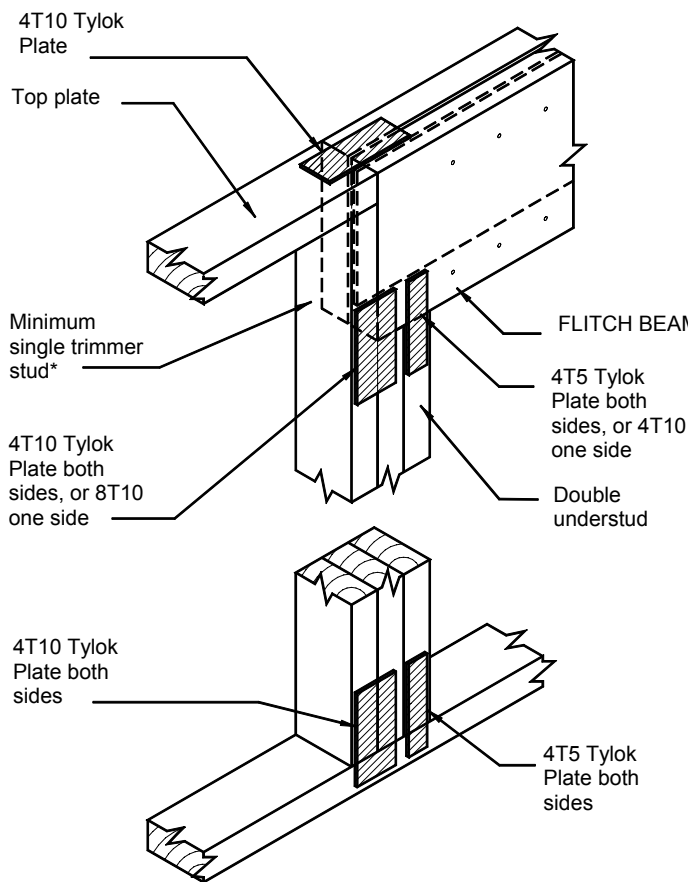
TABLE 7A: MSG8, VSG8, MSG6 or Unverified No. 1 Framing
LINTEL SUPPORTING GIRDER/SETBACK TRUSSES WITH LIGHT ROOF

LINTEL SIZE	SETBACK (m)	MAXIMUM LINTEL SPAN (m)										
		GIRDER TRUSS SPAN (m)										
		5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0
FB15L	1.2	3.21	3.02	2.80	2.61	2.44	2.30	2.18	2.07	1.97	1.88	1.80
	2.4	2.73	2.45	2.22	2.04	1.88	1.74	1.63	1.53	1.44	1.36	1.29
	3.6	2.29	2.02	1.80	1.63	1.49	1.37	1.27	1.18	1.10	1.03	0.98
	4.8	1.94	1.69	1.50	1.34	1.21	1.11	1.02	0.95	0.88	0.82	0.77
	6.0	1.68	1.45	1.27	1.13	1.02	0.93	0.85	0.79	0.73	0.68	0.64
	7.5	1.42	1.21	1.06	0.94	0.84	0.76	0.70	0.64	0.60	0.56	0.52
	10.0	1.12	0.95	0.83	0.73	0.65	0.59	0.54	0.49	0.46	0.43	0.40
FB20M	1.2	4.80	4.63	4.48	4.36	4.23	4.06	3.87	3.69	3.54	3.39	3.27
	2.4	4.56	4.38	4.16	3.85	3.60	3.37	3.18	3.01	2.86	2.72	2.59
	3.6	4.35	3.95	3.60	3.30	3.05	2.83	2.65	2.49	2.35	2.22	2.10
	4.8	3.92	3.49	3.14	2.85	2.62	2.41	2.24	2.09	1.96	1.85	1.75
	6.0	3.52	3.10	2.76	2.49	2.27	2.09	1.93	1.79	1.68	1.57	1.48
	7.5	3.10	2.70	2.39	2.14	1.94	1.77	1.63	1.51	1.41	1.32	1.24
	10.0	2.56	2.20	1.93	1.71	1.54	1.40	1.29	1.19	1.10	1.03	0.96
FB25L	1.2	5.04	4.87	4.71	4.42	4.18	3.96	3.77	3.60	3.44	3.31	3.18
	2.4	4.80	4.39	4.04	3.74	3.49	3.28	3.09	2.92	2.77	2.64	2.51
	3.6	4.27	3.84	3.49	3.20	2.95	2.74	2.56	2.41	2.27	2.14	2.03
	4.8	3.80	3.38	3.03	2.76	2.53	2.33	2.16	2.02	1.89	1.78	1.68
	6.0	3.40	2.99	2.67	2.41	2.19	2.01	1.86	1.73	1.61	1.51	1.43
	7.5	2.99	2.60	2.30	2.06	1.87	1.70	1.57	1.45	1.35	1.27	1.19
	10.0	2.46	2.12	1.85	1.65	1.48	1.35	1.23	1.14	1.06	0.99	0.92
FB25M	1.2	5.79	5.59	5.41	5.26	5.13	5.01	4.91	4.81	4.71	4.53	4.37
	2.4	5.53	5.32	5.14	4.99	4.85	4.64	4.39	4.17	3.97	3.79	3.63
	3.6	5.31	5.10	4.91	4.63	4.30	4.02	3.78	3.56	3.37	3.20	3.05
	4.8	5.12	4.90	4.48	4.10	3.79	3.52	3.28	3.08	2.90	2.74	2.60
	6.0	4.95	4.47	4.02	3.66	3.36	3.10	2.88	2.69	2.53	2.38	2.25
	7.5	4.51	3.97	3.55	3.20	2.92	2.68	2.48	2.31	2.16	2.03	1.91
	10.0	3.82	3.32	2.93	2.63	2.38	2.17	2.00	1.85	1.72	1.61	1.51
FB30M	1.2	6.73	6.50	6.30	6.13	5.98	5.84	5.72	5.61	5.50	5.41	5.32
	2.4	6.47	6.23	6.02	5.84	5.69	5.55	5.42	5.31	5.11	4.89	4.70
	3.6	6.24	5.99	5.78	5.60	5.44	5.26	4.96	4.69	4.45	4.24	4.05
	4.8	6.03	5.78	5.57	5.38	5.02	4.69	4.39	4.14	3.91	3.71	3.53
	6.0	5.85	5.59	5.36	4.91	4.53	4.20	3.92	3.68	3.46	3.27	3.10
	7.5	5.64	5.34	4.81	4.37	4.00	3.70	3.43	3.20	3.00	2.83	2.67
	10.0	5.21	4.56	4.06	3.66	3.32	3.05	2.81	2.61	2.44	2.28	2.15

FLITCH BEAM



Fixing and Support Details



Simply Supported Beam

* Refer NZS3604:2011 Section 8.5.2 for trimming stud requirements.

H1 Calculations

~~Risk Matrix~~

ON ELEVATIONS



H1 Energy Efficiency - Fourth Edition - Compliance Schedule Method

Client: Finlayson

Address: Lot 130 Silverstream, Kaiapoi

Cladding: Brick

Floor: Concrete

Zone: 3

WAIMAKARIRI DISTRICT
COUNCIL
Plans and specifications
APPROVED in accordance
with the Building Act 2004,
clause 49 and the Building
Regulations 1992, Clause 3
131056 2/07/2013 Keegan

Floor Area (m ²)	132.20
Perimeter Total (lm)	40.04
Perimeter South, East, West (lm)	31.17
Wall Height (m)	2.42
Total Wall Area (m ²)	96.90
Wall Area South, East, West (m ²)	75.43
Total Joinery Area (m ²)	27.19
Joinery Area South, East, West	16.97
Glazing Area Percentage	28.1%
Glazing Area Percentage S, E, W	22.5%

(Percentage must be below 30%)

(Percentage must be below 30%)

NOTE: Garage is non-habitable space, Insulation is to be applied between garage and habitable spaces

Component	Insulation Value	Construction Value	Minimum Required
Roof	R3.6 Batts	R3.5	R3.3
Wall (Brick)	R2.6 Batts	R2.0	R2.0
Floor	N/A	R1.3	R1.3
Glazing	Double Glazing	R0.26	R0.26

*This Building complies with clause H1 Energy Efficiency of the New Zealand Building Code.
Construction R-values and Concrete floor ratio's are as per Branz House Insulation Guide Fourth Edition.*

Specifications



VERSATILE[®]

HOMES & BUILDINGS

WAIMAKARIRI DISTRICT
COUNCIL

Plans and specifications
APPROVED in accordance
with the Building Act 2004,
clause 49 and the Building
Regulations 1992, Clause 3
131056 2/07/2013 Keegan

FINLAYSON, LOT 130 SILVERSTREAM

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EXCAVATION

SECTION 1

1. PRELIMINARY

The extent of excavation & associated work shall be as shown on the drawings, including all excavation work for the building.

2. SITE SAFETY

All excavation work shall meet all safety requirements. Provide proper support for excavations. Cover holes and fence off open trenches and banks. All precautions shall be taken to avoid damage to all public & private property.

3. SURFACE PREPERATION

Conforming with NZS 3604, 3.5 Site preparation, remove all turf, vegetation, trees, topsoil, stumps and rubbish from the area being built on.

4. STOCKPILE TOPSOIL

Stockpile excavated topsoil on site where directed. Keep separate from other excavated materials. Spread and level where directed before completion of the works.

5. EXCAVATION

Take foundation excavations to depths shown on drawings. Keep trenches plumb and straight, bottoms level and solid, stepped as detailed and clean and free of water.

6. FILLING MATERIALS

Volcanic tuff:	Scoriaceous tuff of variable grading excluding silt or clay material, capable of being placed and compacted as specified.
Rock fill:	Hard material comprising rock, broken stone, hard brick, concrete, run of pit scoria, or other comparable inert material capable of being placed and compacted as specified.
Sand fill:	Clean sand of such grading in particle size as to allow for mechanical compaction to 90% maximum density.
Hardcore:	Scoria or crushed rock to GAP (General All Passing) 40 grading.
Granular base:	Screened crushed gravel or scoria graded in size from 20 mm to 7 mm, clean. When tested with a standard sieve of 4.75 opening no material is to pass.
Dressing course:	Scoria to GAP 20 grading, or "dirty footpath scoria", or equivalent "all in" graded crushed metal aggregate.
Free-draining	

aggregate: Scoria or crushed gravel graded 50 to 14 clean.

7. GRANULAR BASE FOR SLABS

To NZS 3604, 7.5.3 Granular base. Consolidate with a vibrating roller. Blind the surface with coarse sand or sand/cement and roll ready to receive a damp proof membrane.

8. BACKFILLING

Compact backfilling in 150 mm layers, with the last 200 mm in clean topsoil, lightly compacted and neatly finished off.

CONCRETE & REINFORCING

SECTION 2

1. PRELIMINARY

1.1 Standards

All Workmanship and materials shall comply with NZS 3109, NZS 3104, NZS 3114, NZS 3124 & NZS 3112.

1.2 Inspection

At least 24 hours notice shall be given to the Territorial Authority before pouring, to allow for inspection of the excavation, formwork and reinforcing. No concrete shall be poured before approval.

2. MATERIALS

2.1 Concrete

All concrete shall be 20MPa minimum (refer to Foundation Plan in drawings for concrete strength relevant to zone), maximum aggregate size 19mm complying to NZS 3104.

2.2 Reinforcing

Refer to Engineers Foundation Design

2.3 Bar Chairs

Shall be purpose made moulded PVC and fitted for top reinforcement in slabs at 1.0 metre centres.

3. FORMWORK

Formwork shall be constructed that the concrete thickness & profiles required are obtained as detailed without removal causing any damage. Select formwork finish to produce the specified finish quality.

4. FOUNDATION WALLS

Refer to Engineers Foundation Design

5. CONCRETE FLOORS

Shall be constructed as per engineers foundation design

6. CASTING IN

Build in grounds, bolts and fixings for wall plates and bracing elements, holding down bolts, pipes, sleeves and fixings as required. Form pockets,

chases and flashing grooves as required. No grounds exceeding 100 mm in length. Minimum cover on conduits 40 mm. Do not encase aluminium items in concrete. Do not paint steel embedded items more than 25 mm into the concrete encasement. Cut back form ties to specified cover and fill the cavities with mortar. Wrap all pipes embedded in concrete with tape to break the bond and to allow for expansion.

7. SAW CUTS

Pour floor slabs cast on the ground in areas no greater than 25 square metres, with a maximum ratio of length to breadth of 1:1.5. Cut slabs where indicated on the drawings and as required to control shrinkage cracking. Carry out cutting as soon as possible, without causing tear-out of aggregate and before shrinkage cracking has occurred, generally within 24 hours of pouring. Where saw cuts are made, cut out 100 mm of every second wire of the mesh for a length of 50 mm each side of the saw cut position. Saw cuts: $\frac{1}{3}$ rd slab depth, or 30 mm minimum. Clean out saw cuts. Fill with cement grout where the floor will be covered with carpet or vinyl.

8. CURING OF CONCRETE

All concrete shall be cured and protected as specified in NZS 3109 Section 7.7. Casting of slabs in very hot weather should be avoided, but if necessary water curing should be applied as soon as possible after finishing the work. Keep damp for no less than seven days, by the use of continuous water sprays, or ponding. Any curing agents to be used shall have the prior approval of an engineer. Slabs are to be kept free of any construction loads for 7 days, and 28 days before the application of heavy loads.

BRICKLAYER

SECTION 3

1. QUALIFICATIONS

- 1.1 Carry out Masonry Work with People competent and experienced, under supervision of a Licensed Building Practitioner.

2. PRELIMINARY

- 1.2 Scope

Supply and lay brickwork to areas shown on plans and elevations.

- 1.3 Standard

All work shall be in accordance with NZS 3604 and NZS 4229.

3. MATERIALS

- 2.1 Bricks

Bricks for external veneers shall be 70 series Austrial Bricks, colour & type of be selected by owner. All fair face brickwork shall be laid with the best face outward.

- 2.2 Cement

Shall be ordinary Portland cement and at the time of use shall comply with NZS 3122 Portland Cement.

- 2.3 Water

Water shall be potable

- 2.4 Sand for Mortar

Sand used shall be No.1 grade and/or shall comply with the relevant clauses of NZS 3103.

- 2.5 Ties

Shall be galvanized or stainless steel if in a sea spray zone as per NZS3604, section 4.5. Design to conform to with AS/NZS 2699.1, as modified by NZBC B1/AS1, 3.1 (NZS 3604).

- 2.6 Lintels

In Accordance with NZBC E2/AS1 section 9.2.9. table 4.5 and Section 4.5 in NZS 3604:2011 Durability.

- 2.7 Damp Proofing

Heavy Kraft Strip Laminates Saturated and coated with Bitumen.

4. STORAGE

Store Masonry clear of the ground, undercover and well ventilated until placed in the work. Ensure Masonry veneer is dry prior to laying.

5. MORTAR

Composed of Portland Cement, sand and mortar with an admixture to the provisions of NZS 4210. Mortar shall be discarded if not used within 90 minutes of mixing.

For Mortar colour add mineral oxide pigment to the requirements of NZS 4210. Colour to be suitable with brick veneer.

6. BRICK VENEER

All work to comply with NZBC E2/AS1 - section 9.2. Lay bricks in stretcher bond to a true level line and plumb face, with consistent joints not more than 9.5mm wide. A cavity not less than 40mm or more than 55mm shall be maintained between frame and veneer. Keep cavity clean and free of mortar droppings and protrusions and free of all pipe work or electrical wirings.

Wall ties to be screw fixed to face of studs (with out damaging the building wrap) approved galvanized ties at 600mm horizontally and 400mm max vertically. Form weep holes in bottom course and vent holes in top course by raking out every 3rd perpend in each of those courses.

Veneer Lintels to support masonry veneer above window & door openings. Angle lintel dimensions shall be shown on drawings. Refer NZBC Table 18E: E2/AS1 for lintel sizes.

7. CLEAN UP

Clean down brickwork to remove stains. Remove efflorescence with a stiff bristle broom, blot with a damp sponge and wash walls with a plentiful supply of clean water during fine weather.

ALUMINIUM JOINERY

SECTION 4

1. STANDARDS

All work & materials to comply with NZBC B1/AS1, NZBC 4211, NZBC 223

2. WINDOW AND DOOR REVEALS

Reveals to be graded materials suitable for paint finish, treated to H3.1.

3. FLASHINGS

Fit flashings as per drawings.

4. ORGANIC POWDER COATING FINISH

To the Window Association of New Zealand's Specification for powder coatings on architectural aluminium products+. All finished surfaces to show uniformity of gloss and colour (to match sample) free of all coating defects.

5. SEALANT, GLAZING TAPE AND GASKETS

To be selected as per the window manufacturer's requirements.

6. FIXINGS

Ensure fixings and bracketing are compatible with aluminium. Do not use electroplated zinc fasteners or brass fastenings.

7. OPENING PREPARATION

Confirm framing openings on site for dimension, plumb and straightness prior to fabrication or ordering of aluminium joinery. Prepare and trim to WNZ WISi Pre Cladding Trim Preparation requirements.

8. EXECUTION GENERALLY

To NZBC E2/VM1, WNZ Aluminium Window Handbook+ and Installation code for aluminium joinery products+. Install to WNZ WISi Window installation System requirements.

9. HANDLING

Avoid distortion of elements during transit, handling and storage. Prevent pre-finished surfaces from rubbing together. Prevent contact with mud, plaster and cement. Do not deliver to site any elements which cannot be immediately unloaded into suitable conditions of storage.

10. CORROSION PROTECTION

Seal or suitably coat cut ends and holes drilled in aluminium before the frames are installed. Before fixing, apply bituminous coatings, slips or

underlays between dissimilar metals in contact, or aluminium in contact with concrete.

11. FIX FRAMES

Fix frames rigidly in place without distortion, to the window manufacturer's and the Window Association of New Zealand's ~~%~~Aluminium Window Handbook+ requirements, plumb, true to line and face, weathertight and with all openings operating freely.

12. DRAINAGE

Anti-condensation channels to sills. All sills to sashes and fixed lights to incorporate positive drainage to the exterior.

13. GLAZING INSTALLATION

All glass held in aluminium beads and black PVC gaskets.

14. SAFETY GLASS INSTALLATION

Ensure use of grade A safety glass to doors, sidelight panels, low level windows and all other locations to comply with NZS 4223, part 3, as modified by NZBC F2/AS1, 1.0 Glazing.

15. INSTALL FLASHINGS

Install flashings to heads, jambs and sills of frames as supplied and required by the window manufacturer and as detailed on the drawings. Finish on head flashings to match window finish.

16. SEAL FRAMES ON SITE

Seal frames to each other and to adjoining structure and finishes, all as required by the window manufacturer and to make the installation weathertight.

17. SAFETY

Indicate the presence of transparent glasses for the remainder of the contract period, with whiting, tape or signs compatible with the glass type. Indicators other than whiting must not be applied to the glass surface. Permanent manifestations to comply with NZS 4223, part 3, 303.1.

18. CLEAN GLASS AND FRAMES

Clean off or remove glass indicators at completion of the building. Clean glass inside and out to a shining finish. Clean down both sides of window and door frames using the methods required by the window and door manufacturer.

CARPENTRY

SECTION 5

1. PRELIMINARY

1.1 Standards

Workmanship and materials shall comply with NZS 3604:2011, the NZBC and all relevant N.Z. Standards.

1.2 Protection

All finished or partly finished work shall be protected from surface injury or damage from exposure to the weather or any other cause.

2. MATERIALS

2.1 Timber

All timber shall comply with NZS 3602, tables 1 to 3. Moisture content to be between 12% and 18% before fixings linings.

2.2 Fasteners

Nails, screws and other fixings shall be galvanised for exterior work or stainless steel where required by NZS 3604:2011.

3. DAMP PROOF COURSE

Where timber is in contact with concrete the timber shall be separated from the concrete with Gromford supercourse 500+hi-impact polyethylene DPC.

4. SCHEDULE OF TIMBERS

<u>Location</u>	<u>Timber</u>	<u>Grade</u>	<u>Treatment</u>
Wall framing	Pinus Radiata	SG8	H 1.2
Trusses	Pinus Radiata	SG8	H 1.2
Purlins	Pinus Radiata	SG8	H 1.2

5. WALL FRAMING

5.1 Exterior Framing

All External framing shall be 90x45 SG8 studs at 600crs. Dwangs shall be at 800crs. Double top plate shall be 140x35 SG8 and top and bottom plates shall be 90x45 SG8.

Fix bottom plates to concrete floors with bolts or bottom plate anchors @ 900mm centres maximum.

5.2 Internal Framing

Shall be 90x45 SG8 studs at 600crs with dwangs at 800crs.

Bottom plates may be fixed to concrete floors with powder actuated fixings as Ramset+ or similar. Bracing elements walls shall be fixed with bolts or bottom plate anchors @ 900mm centres maximum.

5.3 Bracing

Shall be Winstones Gib Board fixed in accordance with the Bracing Plan and to satisfy all requirements in the NZ3604. Fix bracing to manufacturers recommendations at the wall position.

6. ROOF FRAMING

6.1 Trusses

All trusses to be H1.2 SG8 90x45 timber unless specified otherwise by manufacturer. Trusses shall be spaced at 900mm crs and fabricated as shown on the drawing by registered truss manufacturer.

6.2 Purlins

All purlins to be H1.2 SG8 70x45 timber unless specified otherwise by manufacturer. Purlins shall be 70x45 SG8 @ 800crs fixed over trusses as per purlin fixing details.

6.3 Soffit

Fix 70x45 sprockets to side of truss overhang to form soffits. Fix 4.5mm hardiflex soffit.

6.4 Bracing

Shall be Lumberlok galv steel strap brace (27 x 0.6mm) fixed as per Truss layout.

6.5 Fascia

Shall be Colorsteel Steel & Tube Fascia system. Fix fascia brackets with galv. clouts to end of truss overhang.

7. ROOFING

7.1 Roof Underlay

Lay Thermakraft 215 self supporting roof underlay in accordance with NZBC AS/ 8.1.5. & to NZS 3604. Underlay shall be breather type to NZS 2295 & run parallel to ridge and lapped 150mm over lower sheet. Provide adequate lap of roof underlay into gutters.

Underlay shall be provided under all metal roofs & be adequately supported unless self-supporting type.

7.2 Gutter

Shall be Colorsteel Dqshape Fascia & Gutter system.

Fix end brackets 300mm from corners intermediate bracket at 900mm c/s maximum spacing. Fit pre-fabricated ends to gutters, seal joints with RTV sealant and rivet fix. Cut hole for down pipe dropper. Rivet dropper and seal with R.T.V. Lap lengths of gutter to form joints with overlap running down the fall of the gutter. Seal between laps and rivet fix. Fix gutter roll to bracket ends then fold gutter up into position. Secure gutter by clipping bottom into bracket and front rolled edge over gutter bracket.

7.3 Flashings

Provide all flashings as required, Fix all flashings & cappings in accordance with NZBC Table 11 E2/AS1.

7.4 Roof penetrations

Flash and over flash penetrations through the roof with Dektiteq flashings to manufactures recommendations and as per NZBC E2/AS1 8.1.7.

7.5 Roofing Iron

a) Material: Shall be Versatile Longrun: 0.4 B.M.T., G.550, ZM275 NZ Colorsteel Endura or Colorsteel Maxx if with 100m of the high tide mark, fixed with 50mm tek screws with colour matched heads with neoprene seals.

b) Installation: Lay sheets with laps away from the prevailing wind. Lap bottom edge of sheet 50mm over fascia.

Fix roofing through every rib to gutter purlin. Nail through sheet laps to every purlin. Fix each rib to each alternative purlin, except no two adjacent ribs (except laps) shall be nailed to the same purlin. All cutting of roofing shall be by shears or nibblers. Cutting discs will not be permitted.

Installers should wear clean soft soled shoes when walking on roof and should take all reasonable care to ensure the surface film of the roofing is not scratched. After completion of the roof wash down the entire surface with hose and soft bristled broom to remove all fixing debris and swarf. Ensure all fixing debris and swarf is washed out of gutters.

- c) Limitations and Maintenance: Versatile colorsteel roofing will perform to the requirements of New Zealand Building Code, Clause B.2 Durability if installed and maintained as herein specified and in accordance with the recommendations of NZ Steels Environmental Categories Guide.

7.6 Ridging

Shall be coloured steel alu-edged ridging with 100mm laps between sections. Lap lengths away from prevailing wind and fix with 50mm tek screws through every second roof rib into top purlin. Dress alu-edge down into tray of roofing. Colour to match roofing iron.

8. EXTERIOR WALL COVERINGS

8.1 Building wrap

(BRICK) Cover all exterior wall framing with Fast Wrap (Branz Appraisal No. 615) building wrap complying with NZBC E2/AS1 clause 9.1.7. Securely fix to top and bottom plates and studs.

8.2 Brick Veneer

See Section 3.

9. INSULATION

9.1 General

Refer to drawings for extent of insulation & building envelope. Install insulation in accordance with NZBC acceptable solution H1/AS1 & to the manufacturers recommendations.

9.2 Ceiling Insulation

Insulate all interior roof cavity framing with R3.6 Pink batts, minimum to form a complete insulated diaphragm.

9.3 Wall Insulation

Insulate all exterior framing with friction fit R2.6 Pink batts to form a complete envelope.

10. INTERIOR LININGS

11.1 General

All linings shall be carried to floor level and behind all fittings. The moisture content of the framing shall be as specified by the manufacturer before fixing any lining & to NZS 3602, Table 4 Allowable Moisture Content.

Note: See specific stud heights to noted on drawings.

11.2 Gibraltar Board

Line all walls with 10mm (except wet areas) and ceilings with 13mm Gibraltar board stopped to a level 4 paint grade finish.

Line all walls with 10mm & ceilings with 13mm in wet areas with Gibraltar Aqualine board stopped to a level 4 paint grade finish. To be constructed to the requirements of Gib board Aqualine Wet Area Systems

Fix sheets to manufacturers recommendations with Gib screws just below the surface of the board (without rupturing the face paper or core). Fix ceiling sheets across ceiling battens in a staggered pattern. Fix wall sheets horizontally. Fix wall sheets to stud in internal corners and at junctions with other walls.

Gib must be stored dry under cover, staked flat and clear off the floor with sufficient support to avoid sagging and damage to board edges and ends. Gib must be handled as finishing material.

Protect joinery, fittings and finishes already in place from water straining or damage from lining insulation. Ensure building is weather proof before lining work commences.

Plasterboard Accessories:

External angles:	Slim type 0.5mm galvanized steel.
Casing bead:	Slim type 0.5mm galvanized steel or PVC.
Cornice:	Plasterboard scotia type.
Nails:	Galvanized clouts 40mm x 2.5mm.
Screws:	40 mm x 6 gauge zinc electro-plated bugle head gypsum drywall screws
Jointing compound & paper tape:	To the board manufacturer's requirements.
Adhesive:	Multi-purpose water based wallboard adhesive.

11.3 Jointing

Only use clean mixing containers & potable water. Discard compound that has started to harden, do not over mix. Refer to GIB Board Stopping & Finishing Systems for details.

- Joints: Fill Joint recesses with Gib jointing compound, center the reinforcing tape, apply second coat of GIB jointing compound &

follow with coat of Gib finishing compound. Allow to dry/set before applying finishing coat & lightly sand off.

- Stopping nails/screws: Apply two successive coats of Gib jointing compound and a coat of finishing compound.
- Boxed corners: Fill Gib jointing compound, centre reinforcing tape into internal angle & apply a coat of Gib finishing compound to complete.
- External Corners: Apply 2 coats of Gib Jointing compound followed by a coat of finishing compound.
- End Butt Joints: Fill tape and coat as for tapered edge joints, with each strip double width.

11.3 Levels of Finish

Provide levels of finish to standards AS/NZS 2589 to:

Level 4: Surfaces receiving light texture or wall covering finishes, suitable for paint finish.

Level 5: Surfaces receiving thick coating finishes, suitable for critical lighting, semi-gloss or gloss type paint finishes.

11.4 Skirtings

Shall be customwood 60 x 12mm skirting to all wall and floor junctions including the inside of all built-in cupboards and wardrobes.

11. CUPBOARDS AND WARDROBES

12.1 Wardrobes

Shall be fully lined and stopped. Fit 20mm full length customwood or particle board shelf at 1.7m above floor, with 20mm galv-pipe hanging rail 75mm below shelf.

12.2 Cylinder Cupboard

Fit four shelves beside cylinder as required. Each shelf to be ex 75 x 25 slats spaced 15mm apart.

12. INTERIOR DOORS

Shall be hollow core, paint grade flush panel doors hung. Frames shall be grooved or flat (suitable for architraves). Wedge and rigidly fix in place without distortion, plumb, and true to line and face. Fit hardware selected and provided, all in accordance with the hardware manufacturers requirements.

13. KITCHEN JOINERY

14.1 Execution Generally

To include those methods, practices and processes contained in the current syllabus for the National Certificate in Carpentry and the National Certificate in Joinery (cabinetry, exterior joinery, stairs).

14.2 Fabrication Quality

Check site dimensions. Carry out machining within the practices required for the particular timber or wood product being used. Machine drill and cut holes and recesses and form joints to the componentry manufacturer's requirements. Work accurate, square and true to line and face.

14.3 Materials/Components

Door & drawer front style	Melteca 16mm MDF with 2mm colour PVC edge
End Panels	Melteca 16mm MDF with 2mm colour PVC edge
Handles	A choice of 10 handle types in brushed nickel or matt chrome finish
Toe kick, cornice	Melteca 16mm MDF with 2mm colour PVC edge
Carcass Interior Finish	Satin White 16mmPB with 2mm white PVC edge
Hinges	Hafele or equivalent
Runners	Hafele draw set white metal sided or equivalent
Bench Top	Formica 38mm FR10 rounded bull-nose edges (top mounted sink). Allocation of joints on benchtop to be at the discretion of benchtop supplier
Sink	1 x stainless steel sink with 1 bowl
Trays	1 x standard cutlery tray
Appliances	Dishwasher Underbench oven Ceramic hob or gas hob
Cooker splashbacks	Option 1: 5mm Ceramic Tiles over 10mm gib Option 2: 5mm Toughened Glass over 10mm gib Option 3: 0.4mm Sheet metal over 6mm fibre cement & 10mm gib

14.4 Factory Joinery Fittings

Carry out jointing, dowelling and other operations necessary for the proper assembly of the fittings as detailed, with fixings concealed unless otherwise detailed. Use glue joints where provision for shrinkage is not required, with contact surfaces, gluing and pressure all applied to the glue manufacturer's requirements. Locate and drive connectors and fasteners

to the bolt manufacturer's requirements. Scribe fit adjustable shelves with 4 shelf pins and locate force fit pin holes at 50 mm maximum centres in solid cheeks. Hang doors on concealed hinges.

14.5 Transit & Delivery

Load, transport and unload fittings without distortion or damage and keep covered to protect from the weather. Do not deliver fittings until floor, wall and ceiling surfaces are in place and the fittings can be placed in their final location.

14.6 Installation

Scribe fit on site and install level, square, plumb and true to line and face.

WATER SYSTEM

SECTION 6

1. QUALIFICATIONS

All work shall be carried out in accordance with Drainage & plumbing regulations, Local Authority requirements & good trade practice. Work carried out shall comply with NZBC G10/AS1, G12/AS1 & G13/AS1

Work to be carried out by or under the direct supervision of a person registered under the Plumbers, Gasfitters and Drainlayers Act 2006.

2. POLYETHYLENE SUPPLY WATER PIPE

From water metre box to house use 20mm high-density cross-linked polyethylene composite pipe and fittings to AS/NZS 4130. Run pipes in straight runs, firmly fixed to falls, with long radius bends and jointed by brazing or with crox fittings, all to NZBC G12/AS1, 5.0 Water supply.

3. POLYBUTYLENE WATER PIPE

Polybutylene tubing complete with fittings and accessories brand-matched to AS/NZS 2642.

4. INSULATION FOR HOT WATER PIPES

Preformed closed cell foam.

5. EXPOSED PIPES

- white polyethylene composite pipe with white nuts and accessories
- pipework finish to include escutcheon plates and bends and elbows protruding from walls or fittings.

6. EXECUTION GENERALLY

Generally carry out the whole of this work and tests to NZBC G12/AS1.

7. INSTALL POLYBUTYLENE WATER SUPPLY

Run 20mm pipe from entry point direct to hot water cylinder via stop cock, filter, pressure reducing valve, non return valve and final stop cock. Tee of supply pipe before H.W.C. and run 20mm dia pipe with 15mm dia, branches and risers to sink, vanity, bath, shower, toilet, tub and hose taps. Run pipes complete with all fittings, support and fixing, and jointed to the pipe manufacturer's specifications, all to NZBC G12/AS1, 5.0 Water supply. Conceal piping, insulate hot water pipework and pressure test before the wall linings are fixed.

8. OUTLET LOCATIONS

Ensure wall outlets for exposed pipes are level and centred on the fixture to ensure the neat installation of exposed pipework.

9. INSTALL HOT WATER PIPE INSULATION

Insulate hot water pipes in accordance with the insulation manufacturer's instructions. Cut insulation sections tight between timber framing and tight between the webs of steel studs. Where hair felt is used, wrap around pipes in two layers in opposite directions and secure with galvanized steel wire ties.

10. INSTALL HOT WATER HEATER

Install & restrain Rheem 250L mains pressure cylinder (model 312 250 15) where shown on drawings, complete with all the necessary fittings to the heater manufacturer's requirements and NZBC G12/AS1, 6.10 Water heater installation or NZS 5261.

For cylinder(s) supply & fit TACO 52-600-25 30-70 tempering valve, inline set at max 55 degrees and take 18mm hot supply with appropriate ties to fittings. Supply & install necessary relief valves isolating taps, drains, pipes etc. All cisterns, hot water cylinders etc with overflow pipes must be piped away to the outside.

(Note: With the use of plastic type piping, plumber to discuss & provide means of electrical earthing with the electrician.)

11. BACKFLOW PREVENTION

Fit back flow prevention devices to all outlets where it is possible for water or contaminants to backflow in the potable water supply.

12. PENETRATIONS

Provide and fit collars and escutcheon plates to match pipework at penetrations through constructions.

13. COMPLETION

Pressure test to ensure no leakage and leave in proper working order. Clean tapware and fittings.

SANITARY PLUMBING

SECTION 7

1. QUALIFICATIONS

Carry out work by or under the direct supervision of a person registered under the Plumbers, Gasfitters and Drainlayers Act 2006.

2. UPVC WASTE, SOIL AND VENT PIPES

uPVC pipe, complete with fittings brand-matched to the pipe manufacturer's requirements.

3. EXPOSED PIPES AND TRAPS

As selected and to the following details:

- chrome plate on copper pipes and associated copper and brass fittings
- white polybutylene or PVC, including all associated fittings.

4. EXECUTION GENERALLY

Carry out this work and complete all tests to AS/NZS 3500.2.

5. ELECTROLYTIC ACTION

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

6. INSTALL TRAPS, WASTE AND VENT PIPES

Connect waste outlets to traps and run waste pipes and back vents concealed, sized and fixed to AS/NZS 3500.2. Discharge wastes into the drainage system stack, soil pipe, or gully trap as shown. Bird proof mesh to roof vents and vermin proof mesh to untrapped waste pipes.

7. PENETRATIONS

At penetrations through constructions provide and fit collars and escutcheon plates to match pipework.

8. TEST

Test soil and waste disposal systems to ensure no leakage exists and leave in working order.

9. ENSURE

Ensure all sanitary plumbing fittings and pipework are complete and operational.

SANITARYWARE, TAPWARE

SECTION 8

1. QUALIFICATIONS

Carry out work by or under the direct supervision of a person registered under the Plumbers, Gasfitters and Drainlayers Act 2006.

2. EXECUTION GENERALLY

Carry out this work and complete all tests to AS/NZS 3500.2.

3. INSTALL SANITARYWARE

Fit and install sanitaryware and associated screens, elements and hardware, plumb, true to line and rigid, to the fixture manufacturer's requirements. Supply standard chrome plated brass wastes and plastic plugs on chrome plated chains with all basins, tubs and baths.

4. INSTALL TAPWARE

Install tapware in accordance with the tap manufacturer's requirements. Flush out on completion. Check that washers or ceramic discs are operating correctly.

5. TEST

Test soil and waste disposal systems to ensure no leakage exists and leave in working order.

6. ENSURE

Ensure all sanitary plumbing fittings and pipework are complete and operational.

DRAINAGE

SECTION 9

7. QUALIFICATIONS

All drainage work to be carried out in accordance with Local Authority requirements and bylaws & to the requirements of NZBC. All work to be carried out by or under the direct supervision of a person registered under the Plumbers, Gasfitters and Drainlayers Act 2006.

8. MATERIALS

Concrete:	17.5 MPa prescribed grade.
Reinforcement:	Grade 300 deformed bars.
uPVC pipes:	uPVC pipes bends, junctions, fittings and joints.
Field drains:	Plastic pipes for field drains perforated and coiled with filter fabric over.
Drainage/filling materials	
Granular fill:	Clean gravel or crushed stone or a blend of these. Particle size from minimum 7 mm to maximum 20 mm.
Selected fill:	Fine grain soil or granular material suitable for bedding, excluding topsoil.
Ordinary fill:	Top soil or other excavated materials.

9. FITTINGS

Gully traps:	To NZBC G13/AS2, 3.3 Gully traps, complete with grating.
Strip drain channel:	Proprietary, modular, variable invert, uPVC or precast concrete drainage channel sections and drainage sump, embedded in site concrete and fitted with selected metal gratings.

10. EXCAVATE

The excavation of trenches for drains shall be accurately made with base clean & true grade so that no unnecessary filling is required. Adequate width shall be allowed in accordance with depth of drain to enable laying & jointing to be properly carried out, trenches to be kept firm & dry & shall be opened up only in lengths that they can be protected, utilised & filled within a reasonable timeframe. Excavate for drains to a firm even base with correct gradients set in straight runs.

11. MANUFACTURER'S REQUIREMENTS

All drainage installations to the pipe and fitting manufacturer's requirements.

12. EXCAVATION GENERALLY

Carry out drainage work to AS/NZS 3500.2 (sanitary plumbing and drainage) and AS/NZS 3500.3 (stormwater drainage) as modified by NZBC B1/AS1, 6.0 Drains.

13. LAY WASTEWATER DRAINS

Lay drains in straight runs to correct gradients, to discharge into the network utility operators sewer. Set inspection fittings on a concrete base.

14. INSTALL GULLY TRAPS

Set on concrete 50 mm above surrounding ground or paving and brought up to protect the top of the fitting. Trowel off.

15. LAY STORMWATER DRAINS

Confirm the required location of downpipes and finished ground levels before commencing pipework. Set downpipe bends in concrete brought up to protect the top of the bend from damage. Lay drains in straight runs to correct gradients to discharge into the network utility operator's stormwater system.

16. LAY GROUNDWATER DRAINS

Lay perforated coil piping firmly in a granular bed in straight runs to correct gradients, discharging into a sump. Carry the granular bed up over the pipes without disturbing them, to a total depth of 300 mm and cover with geotextile fabric; all to the pipe manufacturer's requirements.

17. INSTALL STRIP DRAIN CHANNEL

Excavate trench and form site concrete base to fall. Set interlocking channel sections, sumps and accessories in place, all in accordance with the channel manufacturer's requirements. Check falls and install gratings and covers.

18. INSTALL SURFACE WATER SUMP

To NZBC E1/AS1, 3.6 Surface water inlets to drains. Ceramic half-siphon pipe. Cast iron frame with a lift out grating.

19. CONCRETE ENCASEMENT

Concrete encase shallow drains and drains under driveways, on a 100 mm deep 17.5 MPa concrete bed reinforced with three 10 mm mild steel bars. Surround pipes with a polythene membrane to allow movement and encase in 100 mm 17.5 MPa concrete.

20. FIELD TEST

Field test drains for watertightness to the satisfaction of the Building Consent Authority inspector.

21. BACKFILL

Backfill drain lines in 150 mm layers, well tamped but without disturbing the drains. Finish off with 150 mm of topsoil, slightly mounded above the finished ground line.

ELECTRICAL

SECTION 11

1. COMPLY

All electrical work carried out to comply with the Electricity (Safety) Regulations 2010, AS/NZS 3000, NZBC G8/AS1&G9/AS1 and the New Zealand Electrical Codes of practice for listed & prescribed work & with the Network Utility operations requirements. Apply for the service connection. Arrange for the required inspections of listed work. The owner is responsible to pay all fees & charges.

2. QUALIFICATIONS

Carry out work by or under the direct supervision of a holder of a practising certificate under the Electricity (Safety) Regulations 2010.

3. CERTIFICATE OF COMPLIANCE

Supply a certificate of compliance to the owner, as required by the Electricity(Safety) Regulations 2010. Allow the network utility operator to view before the meter installation, listed work inspection, polarity check and livening of supply.

4. METER BOARD / DISTRIBUTION BOARD / SUB BOARD

Proprietary manufactured meter board complete with flashing kit. Proprietary manufactured distribution board, zinc plated powder coated, or heavy duty plastic, fire resistant enclosed construction, complete with neutral and earth busbars, MCB's, RCD's and main switch. All protective devices: 6kA MCB's of the appropriate rating. Fit to board manufacturer's requirements where detailed. Recess into wall and ensure fire containment properties of the enclosure is maintained.

5. CABLES

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

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

Power circuits: 1.5 mm² on 16 amp MCBs for domestic construction

6. ELECTRICAL ACCESSORIES

As selected and to the following details:

Switch units:	Minimum 16 amp, 230 volt flush polycarbonate units. For number of switches per unit, dimmer units, neon (indicator or toggle) units, locator units and 2-way units refer to the electrical drawings.
---------------	--

Switched socket10 amp, 230 volt flush polycarbonate 3 pin combined units: switch units.
 Hot water systemOne way 20 amp switch complete with clamp for switch: flexible PVC conduit.
 Stove/range socket32 amp, 230 volt flush polycarbonate 3 pin combined outlet and switch: switch unit, with remote isolating switch.

7. CABLING

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

8. INSTALL SWITCH AND SOCKET UNITS

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

Switch Units: 1000 mm.

Socket Units: 150 mm above work benches.
 400 mm elsewhere.

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

9. INSTALL LIGHT FITTINGS

Install selected light fittings in the locations and heights shown on the drawings and in accordance with the fitting manufacturer's requirements.

10. ELECTRIC HOT WATER SYSTEM

Wire as a separate circuit through a wall-mounted isolating switch, with the cable from switch to element encased in flexible PVC conduit, clamp fixed at each end.

11. WIRE FOR PLUMBING FITTINGS

Wire for fittings to the Electricity (Safety) Regulations 2010 to the fitting manufacturer's requirements.

12. INSTALL SMOKE ALARMS

Smoke alarms with hush buttons to be installed to NZBC F7/AS1, 3.3 Location of smoke alarms, and to manufacturer's requirements, fitted neatly and without damage to the surrounding finish.

13. ELECTRIC POWERED FITTINGS AND EQUIPMENT

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

14. HEATPUMP

Make provisions for heat pump to areas as specified on drawings. Install to manufacturers specification.

15. COMPLETION

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

PAINTING**SECTION 12****1. QUALIFICATIONS**

Carry out work using competent and experienced painters.

2. HEALTH AND SAFETY

Refer to the requirements of the Health and Safety in Employment Act 1992 and if elimination or isolation is not possible, then minimise the hazards in this work.

3. PAINT

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

4. GAP FILLERS

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

5. INSPECT SURFACES

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

6. PROTECT

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

7. REMOVE HARDWARE

Remove hardware and door/window furniture and replace on completion. Do not paint over permanently attached hinges, or any hardware items which cannot be removed.

8. PRIMING AND SEALING

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

9. ENVIRONMENTAL CONDITIONS

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

10. SELECTIONS

Confirm all selections, colours and finishes for both paint and wallpaper with the owner.

11. SHARP EDGES, CRACKS AND HOLES

Repair as required by the paint manufacturer.

12. PREPARE SURFACES

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

13. PAINT APPLICATION

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

14. MANUFACTURER'S MANUALS

Refer to the paint manufacturer's manuals and follow their preparation, sequence and application requirements applying to each system. Ensure all paint coats in any system are supplied by the same manufacturer.

15. SCUFF BETWEEN COATS

Scuff between all coats to remove any dust pick-up, protruding fibres and coarse particles.

16. FINISHED PAINT SURFACES

Finished paint surfaces to show uniformity of gloss and colour, with the correct thickness for each coat, and freedom from painting defects. Ensure finished work is clean and free of any disfigurement.

17. CLEAN

Clean adjoining surfaces, glass and fittings of any paint contamination.

18. REPLACE

Replace hardware without damage to the hardware or the adjoining surfaces.

FLOOR COVERINGS

SECTION 13

1. SELECTIONS

Confirm all selections, colours and finishes for carpet, vinyl or tiles with the owner.

2. QUALIFICATIONS

Carry out work using competent and experienced installers.

APPENDICES (TO FOLLOW)

SECTION 14

1. Certificate of Title / Sales & Purchase Agreement
 2. Ground Report
 3. Engineers Calculations
 4. Engineers PSD(s)
 5. Truss Design
 6. Truss Manufacturer PSD(s)
 7. H1 Calculations
 8. Bracing Calculations
 9. Bracing Details
 10. Gib Wet Area system Specs
 11. Ceiling batten Specs
 12. Roof Cladding Specs
 13. Down Pipe Calculations
 14. Down Pipe/Gutter Specs
 15. Building wrap Specs
 16. Roof underlay Specs
 17. Insulation Specs
 18. Brick veneer Specs
 19. HWC Specs
 20. Heat pump Specs
 21. Bedding & Backfill
 22. Smoke Alarm Specs
 23. Air Extraction Fan Specs
 24. Equipotential Bonding
 25. Overflow Relief Gully Trap Diagram
 26. Sealant Specs
-



EROSION & SEDIMENT CONTROL

- Preconstruction Planning: Project Manager to oversee commissioning of Sediment Control on site.
- All Weather Access: Stabilize access and parking areas with gravel.
- Control Water at top of site.
- Manage within sediment control zone – surplus soil/gravel or stockpile to be contained behind sediment fences.
- Sediment Control: Sediment fences (Straw Bails) to be laid to street and/or areas where runoff could occur. Wash down areas for trucks to be graveled.
- Vegetation Buffer: Protect Vegetation/Grass area by management fences (Straw Bails).
- Manage Litter and Waste: Provide contained area for waste management.
- Connect all Downpipes: as soon as roof is fitted.
- Service Trenching: Minimize trenching and amount of time that the trench is open.
- Maintain and Decommission: Foreman to ensure that sediment control fences are maintained and decommissioned.

WASTE MANAGEMENT GUIDELINES

- Put up a clear sign informing the workers about waste reduction practices.
- Allocate one area on the site for all bins. A bin for each recycle, reuse and disposal destination. Clearly label each bin by what it is intended to store.
- Different waste types occur at different times of the project, such a foundation, framing, cladding and fitout times. So plan your waste separation system around this.
- Arrange for materials to arrive as needed and protect them to avoid damage.
- Reuse off-cuts and other 'waste' as much as you can on the job, or make them available for others to use.
- Let the site manager know if you expect a large amount of a particular waste, so that a reuse or recycling option can be found.
- Handle and dispose of all hazardous materials in accordance with national and local regulations.
- The waste skip is only for materials that cannot be reused or recycled, and should be used as a last resort.

Technical Information

(Manufacturer's Information)

- ~~- Septic Tank & Effluent Design incl. fencing~~
- ~~- ECAN Approval Documents~~
- ~~- Gas Fire~~
- ~~- Heating Unit~~
- ~~- Solar Panels~~
- ~~- Central Heating Systems~~
- A4 Details/Acceptable Solution Extract
- ~~- Well/Water Test~~

9 External walls

GENERAL

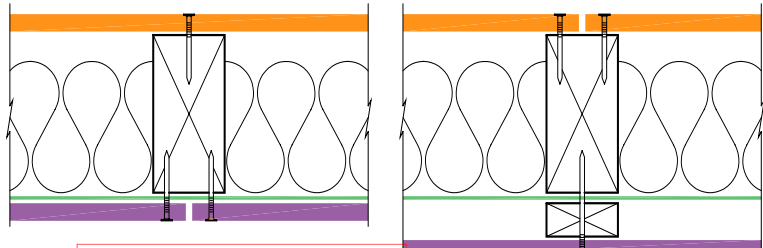
The external walls are required to be fire rated depending upon the situation when the wall is close to a boundary or a neighbouring property in order to comply with NZBC clause C3. The walls included in this section are load bearing walls as per NZS 3604. Special attention must be paid to junctions and penetrations in external walls. The external claddings may be required to be fixed over a cavity for certain designs and the cavity must not open into the roof space or sub floor space.

The systems presented in the following sections are primarily based on the correct selection of materials.

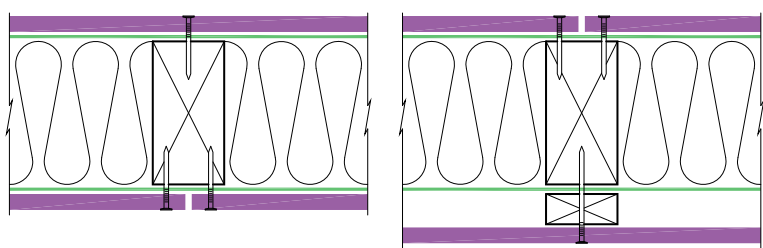
When using Scyon Linea Weatherboards in a fire rated situation the weatherboard must always be face fixed.

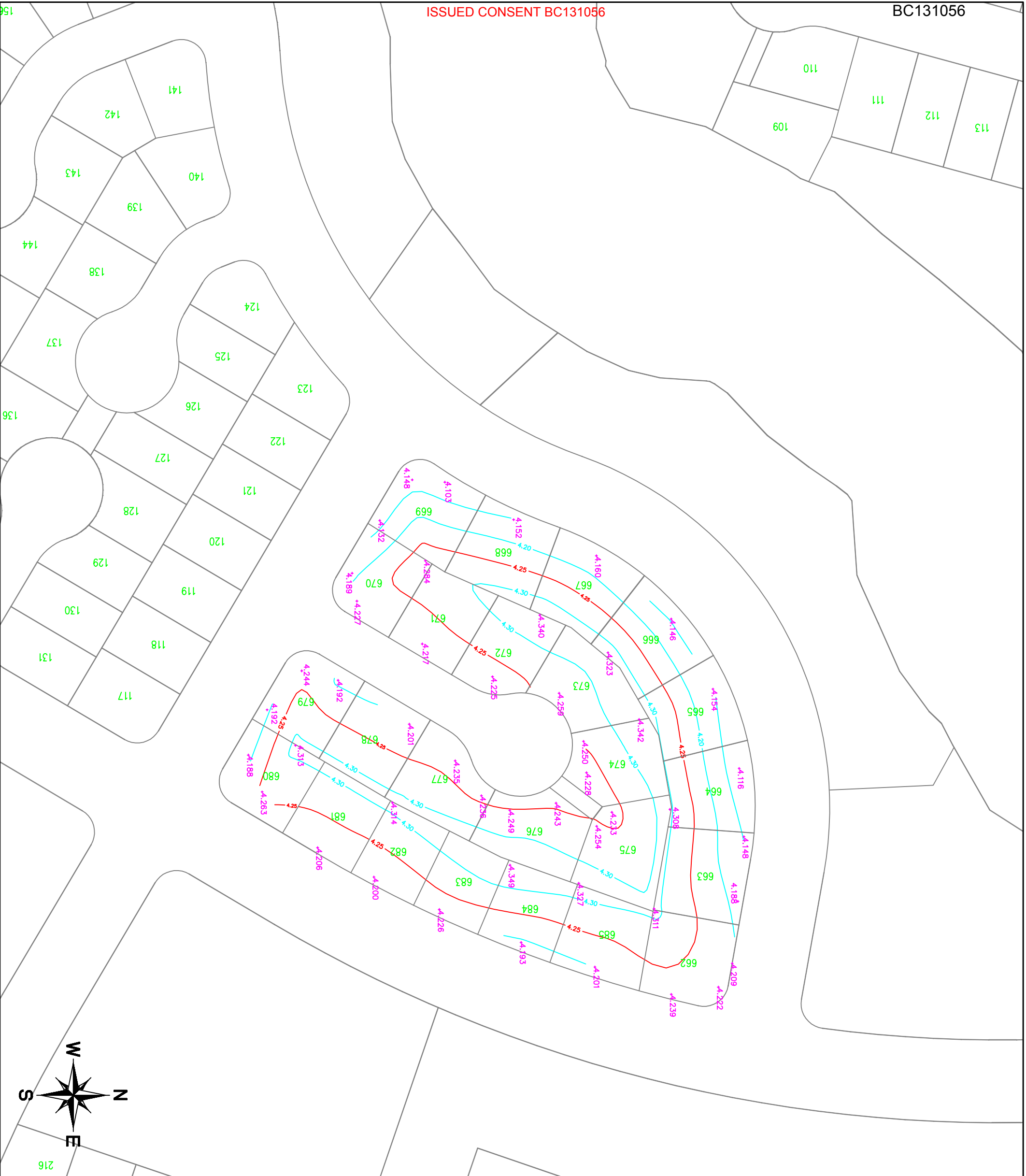
All dimensions shown in tables are in millimetres.

EXTERNAL 30 MINUTE TWO WAY FIRE RATED AND ACOUSTIC SYSTEMS

FRR 30/30/30	JHETGJ30		
<ul style="list-style-type: none"> 6mm or thicker cladding one side Refer to product technical specification for information regarding fixing. Fire retardant building underlay 10mm GIB Fyrelite® one side fixed to GBTL 30 R2.2, Fibreglass Insulation Timber framing as per section 6.3 			
OPTIONS	<p>WAIMAKARIRI DISTRICT COUNCIL Plans and specifications APPROVED in accordance with the Building Act 2004 clause 49 and the Building Regulations 1992, Clause 3.5 131056 2/07/2013 Keegan</p>		
Stud depth (mm)	90		
James Hardie cladding thickness (mm)			9
STC / R _w	41/40	41/41	42/41
R Value	1.91+		

NOTE: 13mm GIB plasterboard can also be used in lieu of 10mm GIB Fyrelite. Fix as per GBTL 30b

FRR 30/30/30	JHETJJ30		
<ul style="list-style-type: none"> 6mm or thicker cladding both sides or James Hardie cladding one side and 6mm or thicker James Hardie lining on other side Refer to product technical specification for information regarding fixing. Fire retardant building underlay James Hardie Mineral Insulation 90mm Timber framing as per section 6.3 			
OPTIONS			
Stud depth (mm)	90		
James Hardie cladding thickness (mm)	6	7.5	9
6mm Villaboard Lining	39/40	41/42	44/43
9mm Villaboard Lining	43/42	43/42	43/43
R Value	2.04+		
	R _w / STC Rating		



Client:

HEB Construction

Project:

Silverstream

Title:

Stage 2 Sections 662 - 685
Finished Levels

Date:

12 Feb 13

By:

W. Newall

Scale at A3:

NTS

Checked:

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Drawing No:

Revisions:

A:

B:

WEISS™

Technical Data Sheet

FV102

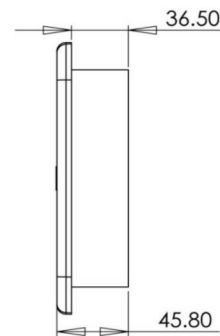
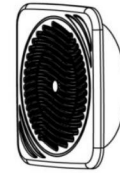
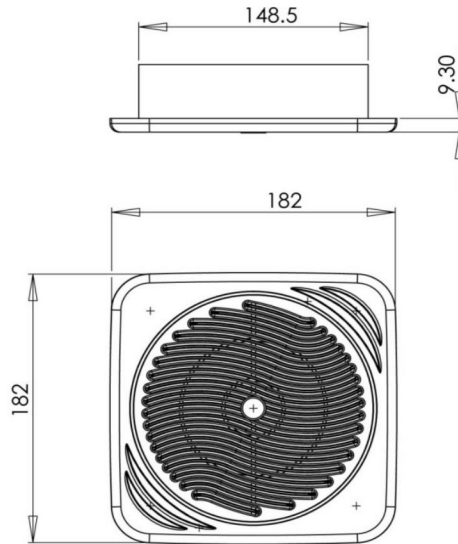
ClearFlow Inline

150mm ducting

Dimensions

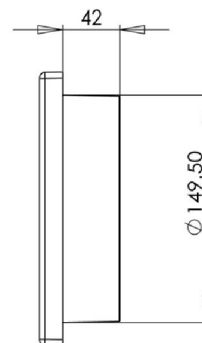
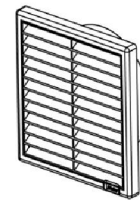
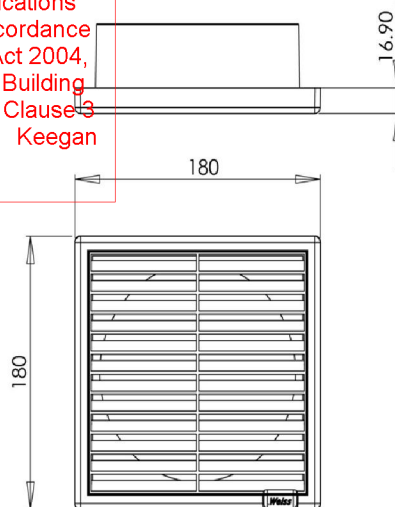
Cut-out size for inlet fascia 155mm

Cut out size for outlet vent 155mm



WAIMAKARIRI DISTRICT
COUNCIL

Plans and specifications
APPROVED in accordance
with the Building Act 2004,
clause 49 and the Building
Regulations 1992, Clause 3
131056 2/07/2013 Keegan



Specifications

Weight	2kg
Colour of front fascia	White
Housing material	ABS

Approval

AS/NZS 3350.2.80:1998 Amdts 1-3 "Electrical Fan"

Features

- Easy to install
- 3 metres of 150mm ducting supplied
- Unique 'no fuss' all in one unit
- Allows moisture to be removed to the outside of your home
- All parts are included
- 3 year extended warranty

Technical Data Sheet

Product Use

The FV102 is used for the extraction of mist and steam

Typical applications:

- Bathrooms
- Toilets
- Laundries

Environmental Conditions

Operation	to IEC 721-3-3
Climatic conditions	class 3K5
Temperature	0...+50°C
Humidity	<95% r.h.

Standards

Test standards	AS/NZS 3350.2.80: 1998 Amdts 1-3 "Electrical Fan"
Test Report no	SD3190
EMC Compliance	This is a Level One product with an C frame motor that has a very low risk of causing EMC Interference

General

Free Air Fan Performance	362m³/ hr 100.6L/sec
Installed decibel rating	45DB

Ordering

When ordering please give name and type,	
Reference	FV102
Barcode	942000490001-3

Technical Data

Power Supply	230 VAC
Power consumption	max. 0.4 Amps
Supply Line fusing	max. 10A
For solid wires	2 x 1.5mm²
Motor	230-240VAC 50Hz 0.4 Amp
Motor insulation class	B1
Total motor wattage	40 Watts
Motor protection	Thermally protected
Total product wattage	40 watts