CODE COMPLIANCE CERTIFICATE

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

Kāpiti Coast DISTRICT COUNCIL

Consent No: 160124

The Building			
Street address of building:	3 Bressay Way, Waikanae	**Building name:**	N/A
Current, Lawfully established, use:	Foundations	**Location of building within site/block number:**	-
		Intended life of the building if 50 years or less:	-
Level/unit number:	-	**Year first constructed:**	2016
Legal description of land where building is located:	LOT 2 DP 473745 CT 648387		

The Owner			
Name of owner:	Christison Ian Robert & Christison Diane	**Street address /registered office:**	N/A
Contact person:	As above	**Phone numbers:**	
Mailing address:	3 Bressay Way Waikanae 5036	**Landline:**	04 2938092
		Mobile:	021734254
		Daytime:	-
Email address:	christison@regalman.co.nz	**After hours:**	-
Website:	-	**Facsimile number:**	-

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

Full Name: Energy Architecture NZ Ltd
Mailing Address: 1/202 Oriental Parade, Wellington 6011
Phones:: 0223526795
Email: guy@energyarchitecture.co.nz

Building Work			
Building Consent No:	160124	**Issued by:**	Kapiti Coast District Council
Project Description:	Foundations for future dwelling.		

Code Compliance

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

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

Michelle Salmon –
Building Inspections Team Leader
On behalf of **Kapiti Coast District Council** Date: 21 December 2017

Department	✓ For Referral	Comments	Approving Officer / Date
Site Inspection	✓	Refer to Form 241 for completion of Site Inspection & sign off this form when completed.	
Resource Consents (refer PIM Sheet)	✓		
Plumbing and Drainage	✓	Plumbing - inlet/outlets only	21/3/2016
Building	✓		6-4-2016
Fire Design			
Compliance Schedule			
Environmental Health			
Other.....			

Attachments:

- ☐ PIM
- ☐ DIF
- ☐ CS
- ☐ Sec 37/

Building work related to this consent may not yet commence because you need to obtain resource consent/s under the Resource Management Act 1991 or the proposal must be amended to comply with the requirements of the District Plan.

Other:

- ☐ .....
- ☐ .....

NOTES:

APPLICATION WORKFLOW COVERSHEET (Blue Folder)

Kāpiti Coast DISTRICT COUNCIL
Me Ituri Whakamarō, Ka Titiro Whakamua

Building Consent No.	160124
Building Project	foundations for future dwelling
Location (Site Address)	3 Bessey Way, Waikanae
Building Category	*Circle appropriate category* 0 (R1) R2 R3 C1 C2 C3

Received:
07 MAR 2016

RBW

Note: A signature confirms that the application contains sufficient information to enable compliance with the building code to be assessed.

	Name and signature	Date
# Note: Checked, date stamped and initialled by TO/BCO. Select and circle appropriate category above & identify allocation to appropriate technical groups and if required to go to "site inspection" **BC1**		07/03/16
Payment taken and receipted (details entered inside this cover sheet) by CSO **BC1**		
Data entered and invoiced by CSO **BC1**		
Pages numbered by CSO **BC1**		07/03/16
BC Application and documentation scanned, checked & status update by CSO **BC1**		
BC Application signed over to BC **BC1**		
Application reviewed by Technical Officers who sign off at back of this form **BC2 & BC5**		6-4-2016 21/3/2016
Once Technical review complete, passed to CS for Plan Production and Invoicing **BC3**		6-4-2016
CSO checks data entry input, including required inspections **BC3**		
BC, plans and other appropriate paperwork produced by CSO **BC3**		
BC, Approved plans and appropriate paperwork sent to applicant or agent with receipt by CSO **BC3**		
Inspection envelope prepared by CSO with endorsed plans and other appropriate paperwork and filed to cabinet. **BC3**		

CONSENT DATA INPUT REQUIREMENTS

✓	Required Inspections	✓	Required Inspections	✓	Required Inspections	✓	Required Inspections
✓	Foundation/Piles		Drainage		Pre-lining (Plumbing)	✓	Final (Dwelling)
	Block		Pre-Wrap		Wet Areas – Membrane		Final (Commercial)
	Pre-Slab (Plumbing)		Pre-Clad		Post Lining		Chimney (Inbuilt Fire)
✓	Pre-Slab (Building)		Weathertightness		Brick Veneer		
	Sub-Floor		Pre-lining (Building)		Retaining Wall		

Office use	✓		Office use	✓	
32	✓	Lapse and cancellation after 12mths of consent	23A		Second hand wood burner certified
2	✓	Engineer design specific components	25	✓	Contractor to leave site clean and clear
3	✓	Foundations to solid bearing of 200mm	30		To comply with Food Hygiene Regulations 1974
4		NZS3604 as acceptable solution in terms of NZ Building Code	31		As in CCZ, all fixings need to be stainless steel
6		Not approved as Habitable Room	33		Approval only given for relocation purposes
9		Note and comply with all endorsements on approved plans	34		If cladding to have pre-finished colour coating, to be appropriate for coastal conditions
10		Names and Registration of plumber and drain-layer required	38		Window sashes on upper levels less than 760mm above floor to have stays fixed
11		Concealed soil and TV pipes and gas flues only allowed in ducts or minimum framed	39		Construction of playground to comply with NZS5828
12		Hot & Cold water pipes tested to 1500kPa	40		Fencing, gates, doors directly leading to swimming pool to comply with the Fencing of Swimming Pools Act 1987
13		Roof stormwater to be connected to existing	43		Textured systems should be applied by licensed, trained applicators – supply warranty
15		Owner/builder to ensure prop foundation height will allow satisfactory connection	44		Exterior cladding system to be completed and inspected prior to internal lining
21		Minimum FFL to comply with NZS3604			
23		Installation of solid fuel appliance (wood burner) comply and secured			

Act Ref	✓	Standard Consent Conditions	Comment
37		Resource Consent has not yet been obtained	
72 - 73		Land subject to natural hazard	
75-80		Construction on two or more allotments	

Non-Standard Addenda

Yes/No		Compliance Schedule
Yes/No		Office - please see additional consent data comments on next page

✓		Attach Receipt
✓	This project contains elements specifically designed by an engineer. The Owner/Builder is required to ensure the Engineer inspects the work and provides KCDC with written evidence of the inspections.	Attach receipt
	The attached fire report constitutes an essential part of this Building Consent and must be read and fully implemented on site - refer to the fire report for full details that are not necessarily indicated on the architectural drawings. It is the responsibility of the owner and contractor to ensure the full fire precautions, systems and construction are incorporated in the building.	
	Ground bearing must be reconfirmed on site following excavation but prior to placing of concrete and reinforcing. Soft ground may be encountered requiring engineer specific design.	
	Other:	

Office Use Only: Fees			
Building Consent Fee	$965-00		
Inspection Fee	$464-00		
Sewer Connection	$	Application Fee	$ 2408-50
Water Connection	$	Invoice No: 11208	Date: 3/3/16
Building Research Levy	$50-00	Receipt No:	Date:
Vehicle Crossing Damage Deposit	$ 544-00	Fees Paid By:	
Certificate of Title Charge	$	Building Consent Number:	BC 160124
MBIE Building Levy	$ 100-50	Date Issued:	
Compliance Schedule	$	AUTHORISATION FOR REFUND OF DEPOSITS	
Code Compliance Certificate	$ 72-00	Deposit Held	$
Accreditation Levy	$ 50-00	Cost to Repair Damage Caused During Construction	$
~~Photocopying~~ DIPEN	$ 143-00	Total Balance to be Refunded	$
SUBTOTAL	$	Authority Number:	
Less Fee Paid	$	Authorised:	Date:
Total	$ 2408-50	Deposit Held	$

Kāpiti Coast
DISTRICT COUNCIL

Energy Architecture NZ Ltd
1/202 Oriental Parade
Wellington 6011

8 April 2016

Dear Building Consent Applicant / Building Owner

Approval of Building Consent: 160124

Location: 3 Bressay Way, Waikanae
Legal Description: LOT 2 DP 473745 CT 648387
Description: Foundations for future dwelling.

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

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

As the owner you are also responsible for the following:

- ensuring that building work starts within 12 months of the approval of the building consent and that work progresses at a reasonable pace.
- ensuring that all required inspections are completed and that a Code Compliance Certificate is obtained once the work has been completed – please be aware that before a Code Compliance Certificate is issued, the building work must comply with the Building Act 2004 and the Building Code as at the date of Consent.
- that no work with noisy equipment is to be carried out before 7.30 a.m. or after 6 p.m. Monday to Saturday. During the week there may be workers on site from 6.30 a.m. quietly preparing for work. Work with noisy equipment is not permitted on Sundays and public holidays.
- ensuring that no damage occurs to public property, for example footpaths or retaining structures. Should damage occur you will be required to pay for any repairs.
- ensuring that if you wish to make any changes to the approved building consent, then an amendment to the building consent will need to be lodged with us.

If you have any questions regarding your building consent or your responsibilities, please contact Kapiti Coast District Council on (04) 296 4700.

175 Rimu Road, Paraparaumu 5032 | Private Bag 60 601, Paraparaumu 5254 | T: 04 296 4700 F: 04 296 4830 | www.kapiticoast.govt.nz

Building Consent
160124
Section 51, Building Act 2004

The building

Street address of building:	3 Bressay Way, Waikanae
Legal description of land where building is located:	LOT 2 DP 473745 CT 648387
Valuation number:	1493130500
Building name:	
Location of building within site/ block number:	
Level/unit number:	

The owner

Name of owner:	Ian Christison and Diane Christison
Contact person:	
Mailing address:	125 Tutere Street, Waikanae 5036
Street address/registered office:	
Email address:	christison@regalman.co.nz
Website:	
Phone numbers:	

Landline: 04 2938092 *Mobile:* 021734254

After hours: *Fax number:*

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

Full Name: Energy Architecture NZ Ltd

Mailing Address: 1/202 Oriental Parade, Wellington 6011

Phones:: 0223526795

Email: guy@energyarchitecture.co.nz

Building work

The following building work is authorised by this building consent:

Foundations for future dwelling.

Residential Dwelling

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

Build conditions

Compliance schedule

A compliance schedule is not required for the building.

Attachments

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

- Building Consent Addendum
- List of required inspections
- Plans and specifications

Signature

Building Control Offi

Position

On behalf of: KAPITI COAST DISTRICT COUNCIL

Date: 6/04/16

Addenda to Application

Application

Energy Architecture NZ Ltd 1/202 Oriental Parade Wellington 6011	No.	160124

Project

Description	New (& prebuilt) House, Unit, Bach, Crib, Town House etc. Being Stage 1 of an intended 1 Stage Foundations for future dwelling.
Intended Life	Indefinite, but not less than 50 years
Intended Use	Residential Dwelling
Estimated Value	$50,000
Location	3 Bressay Way, Waikanae
Legal Description	LOT 2 DP 473745 CT 648387
Valuation No.	1493130500

Designer: 0223526795	Energy Architecture NZ Ltd 1/202 Oriental Parade, Wellington :
Contractor: 4723198	Meyers & Associates Ltd 47 Cuba St, Te Aro, Wellington : 04
Contractor:	Mike Craig Builders Ltd PO Box 316, Waikanae : 0274434796

General Requirements

a) The Building Inspector is to be given 24 hours' notice before carrying out the following inspections:

1. Site
2. Foundations
3. Pre-slab - Building
4. Final Inspection

b) To arrange for any of the above required inspections by Building Control Team, please contact the Call Centre on (04) 296 4700 between the hours of 8am and 5pm.

2	Addenda to Application 160124

1. LAPSE AND CANCELLATION OF BUILDING CONSENT. A building consent shall lapse and be of no effect if the building work concerned has not been commenced within 12 calendar months after the date of issue. Or within such further period as the territorial authority allows.
2. The inspection of all specific design components of the building is the responsibility of the Design Engineer who is also required to supply a written report to Council.
3. All foundations are to be to solid bearing minimum of 300mm
4. Contractor to leave site clear of all demolition materials and in a tidy state.
5. This project contains elements specifically designed by an engineer. The Owner/Builder is required to ensure the Engineer inspects the work and provides KCDC with written evidence of the inspections.
6. All work to be in accordance with RM130142 & Sec 221 Consent Notice.

I have read the foregoing addenda to application, and the Owner/Builder/Authorised Person hereby agrees to comply with them.

OWNER/BUILDER/
AUTHORISED PERSON **Date:**

Building Code Clause(s) B1 Structural

PRODUCER STATEMENT – PS4 – CONSTRUCTION REVIEW

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

ISSUED BY: Meyers & Associated Ltd
(Construction Review Firm)

TO: Diane and Ian Christison
(Owner/Developer)

TO BE SUPPLIED TO: Kapiti Coast District Council
(Building Consent Authority)

IN RESPECT OF: New House
(Description of Building Work)

AT: 3 Bressay Way
(Address)

Town/City: Waikanae (Address) **LOT**..... **DP**..... **SO**.....

We Meyers & Associated Ltd (Construction Review Firm) have been engaged by .....

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

owner/developer Diane and Ian Christison

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

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

documents relating to Building Consent No. 160332 and those relating to

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

Authorised instructions/variations(s) No. SR1 to SR7 (copies attached) or by the attached Schedule ☐ have been issued during the course of the works.

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

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

I, Martin Meyers (Name of Construction Review Professional) am: ☒ CPEng 71054 # ☐ Reg Arch ..... #

I am a Member of: ☒ IPENZ ☐ NZIA and hold the following qualifications: BE, MIPENZ (Structural), CPEng, IntPE

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

The Construction Review Firm is a member of ACENZ: ☐

SIGNED BY Martin Meyers (Name of Construction Review Professional) (Signature) .....

ON BEHALF OF Meyers & Associated Ltd (Construction Review Firm) Date 22/11/2017

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

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

Meyers & Associates LTD
CONSULTING STRUCTURAL ENGINEERS

PROJECT: 3 Bressay Way, Waikanae
New House

SITE REPORT No: 1

29 July 2016

Control Joints

The two control joints have been positioned to provide good control of cracking during the normal schrinkage process associated with curing of concrete. The detailing required that the concrete slab be placed in two concrete pours. We feel this is the best method of crack control.

The builder has requested to use a crack forming folded metal profile along the control joint so that he can pour the slab in a single concrete pour.

The crack inducers as proposed by the builder are ideal for the control of cracking in simple concrete slabs. In our case the control joint passes through several ground beams meaning that the crack inducer will not be effective and should not be used.

If the control joint is not placed there will be more uncontrolled cracking in the slab, however, this will not be detrimental to the structural integrity of the floor system.

We recommend:

- The existing control joint layout be followed if cracking is likely to cause secondary effects that may affect the architectural detailing
- The 2 control joints be replaced with a sawcut provided that cracking does not affect the architectural detailing.

Martin Meyers

Copy to: Energy Architecture Ltd email: guy@energyarchitecture.co.nz

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 suitable 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 competence 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 designers standing within the profession. If the design firm is a member of the Association of Consulting Engineers New Zealand (ACENZ), this provides addition assurance about the standing of the firm.

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

*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 Service 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

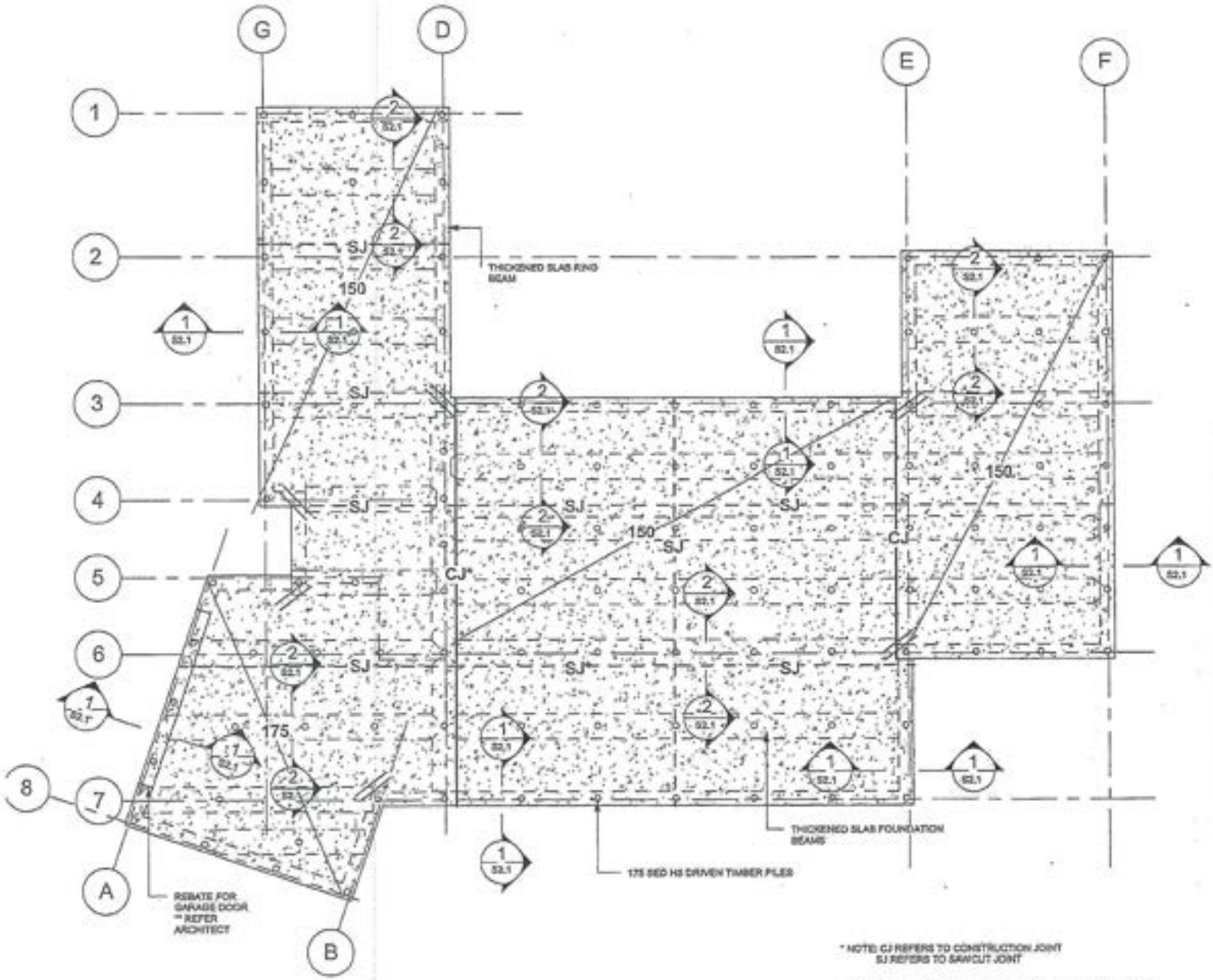
Building Consent Authorities should ensure that the applicant is aware of any requirement for the producer statements for the construction phase of building work at the time building consent is issued as no Design professional should be expected to provide a producer statement unless such a requirement forms part of the Designs Firms 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 of 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)*



* NOTE: CJ REFERS TO CONSTRUCTION JOINT
SJ REFERS TO SAWCUT JOINT

** NOTE: REFER TO ARCHITECT FOR CONCRETE REBATE SETOUT

Project:
New House

Address:
3 Bressay Way
Waikanae 5036

Client:
Diane and Ian Christison

Description:
Stage 1 Foundations

Project Structural Engineer:
Meyers & Associates Ltd
47 CUBA STREET, WELLINGTON
PH 04 473-3198, FAX 04 473-0456

Verification of dimensions:
THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON SITE. ANY DISCREPENCY TO THIS DRAWING MUST BE REFERED TO THE ARCHITECT FOR CLARIFICATION PRIOR TO HAPPENSTANCE OF CONSTRUCTION

Copyright:

Drawing:
FOUNDATION PLAN

Drawn Scale:	Original Sheet Size:
1 : 100	A3

Drawn By:	Checked By:	Date:
B.B	M.M	4/03/16

Job Number:	Drawing No:	Revision:
2478	S1.1	A

Meyers & Associates LTD
CONSULTING STRUCTURAL ENGINEERS

PROJECT: 3 Bressay Way, Waikanae
New House

SITE REPORT No: 2

29 July 2016

Control Joints

The two control joints have been positioned to provide good control of cracking during the normal schrinkage process associated with curing of concrete. The detailing required that the concrete slab be placed in two concrete pours. We feel this is the best method of crack control.

The builder has requested to use a crack forming folded metal profile along the control joint so that he can pour the slab in a single concrete pour.

The crack inducers as proposed by the builder are ideal for the control of cracking in simple concrete slabs. In our case the control joint passes through several ground beams meaning that the crack inducer will not be effective and should not be used.

If the control joint is not placed there will be more uncontrolled cracking in the slab, however, this will not be detrimental to the structural integrity of the floor system.

We recommend:

- The existing control joint layout be followed if cracking is likely to cause secondary effects that may affect the architectural detailing
- The 2 control joints be replaced with a sawcut provided that cracking does not affect the architectural detailing.

Per Martin Meyers

Copy to: Energy Architecture Ltd email: guy@energyarchitecture.co.nz

Meyers & Associates LTD
CONSULTING STRUCTURAL ENGINEERS

PROJECT: 3 Bressay Way, Waikanae
New House

SITE REPORT No: 3

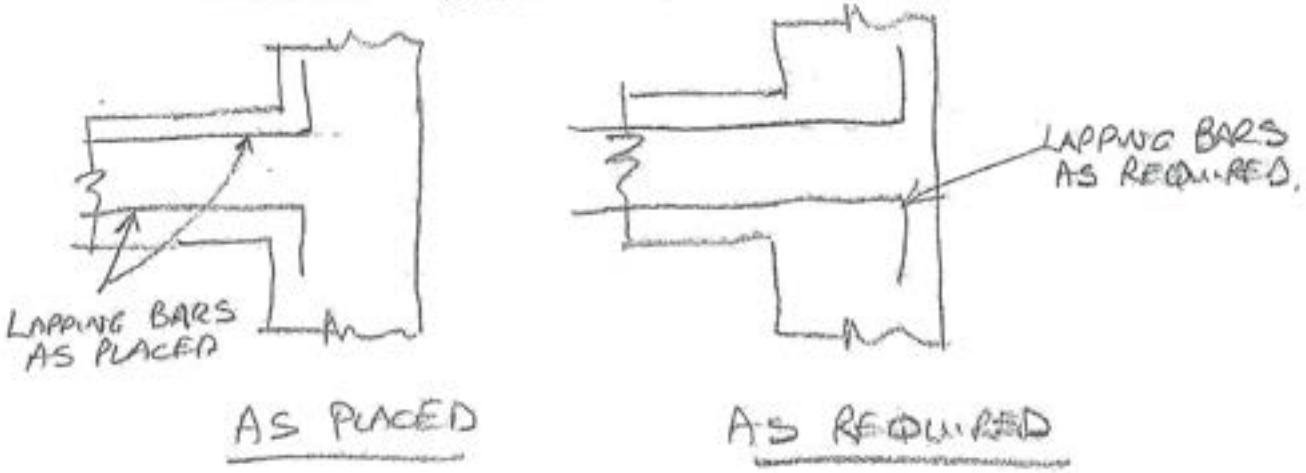
15 August 2016

Pre Slab Pour Inspection 15 August 2016

An inspection was carried out today at 12:00 midday

Inspection showed that slab preparation was substantially complete. Preparation was approved subject to:

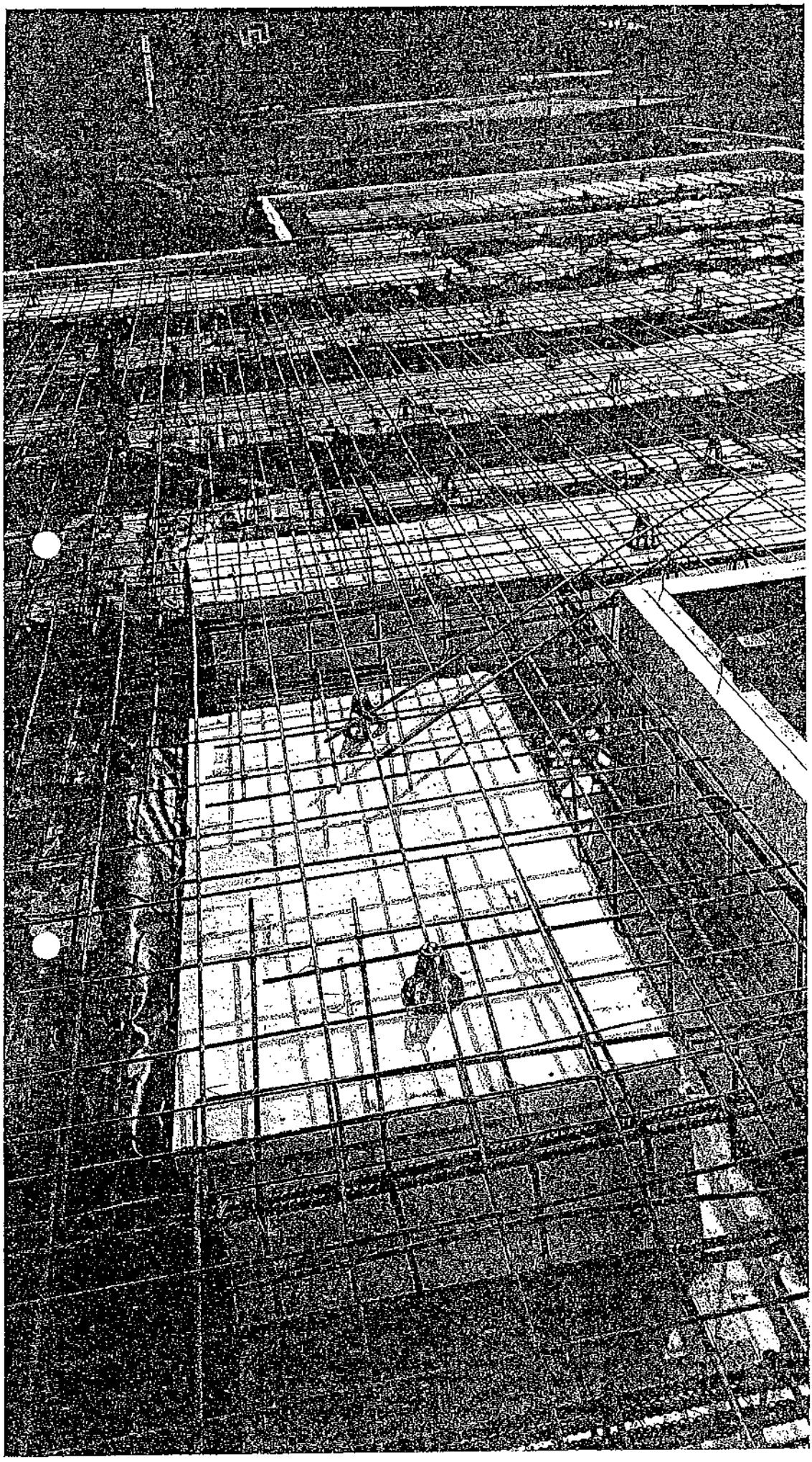
- Supply of pile driving records before slab pour
- Correction of beam lapping bars as shown below



- Final clean out to remove all water and dirt
- Architect to confirm setout of floor insulation is satisfactory – refer to attached photo

Martin Meyers

Copy to: guy@energyarchitecture.co.nz



Meyers & Associates LTD
CONSULTING STRUCTURAL ENGINEERS

PROJECT: 3 Bressay Way, Waikanae
New House

SITE REPORT No: 4

23 August 2016

Support of Beam LR-5

The Architect has advised that the total depth of the supporting column must be reduced to 45mm.

Please find attached revised column details. The column is to be fabricated from two 125*5 mm and two 35*3mm shs sections. Welds to be 4mm fillet wesld at locations shown.

Attached documentation

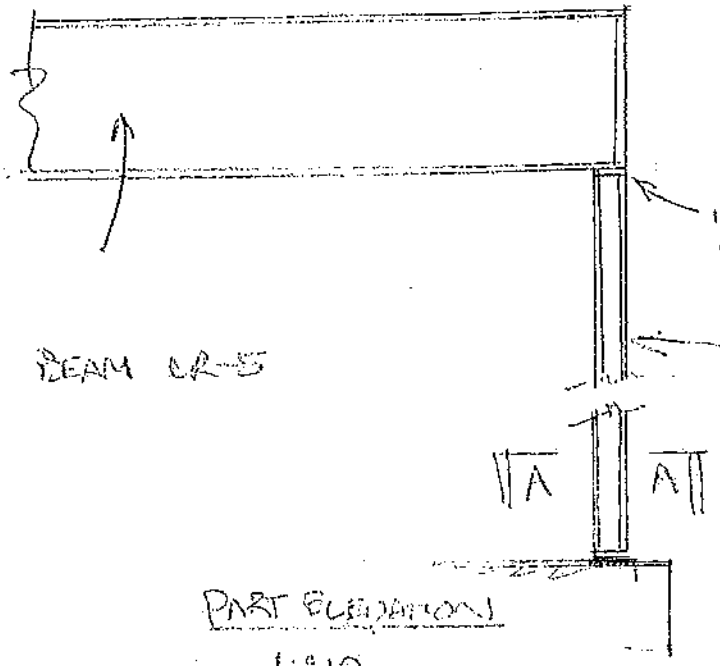
- Sketch1 dated today
- Microstran printout
- Calculations

Martin Meyers

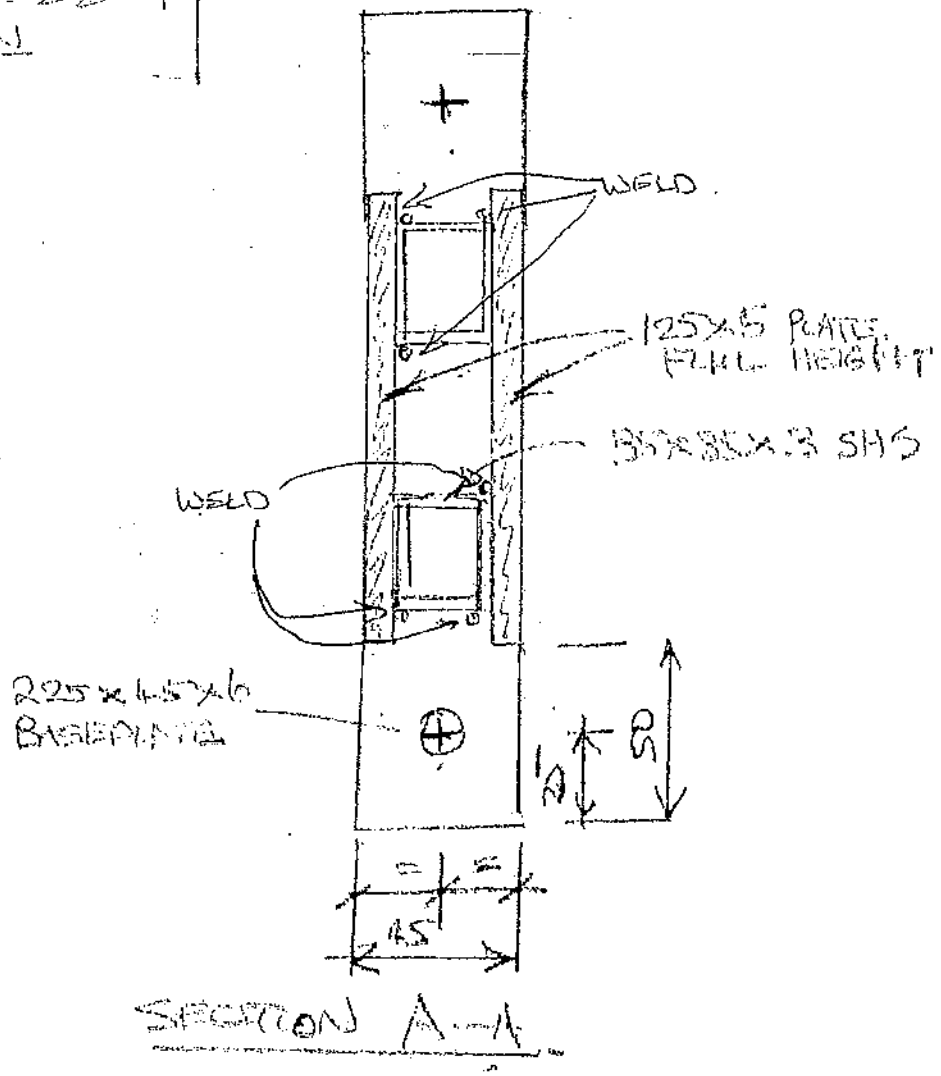
Copy to: guy@energyarchitecture.co.nz

3 BRESSAY WAY

Meyers & Associates LTD
CONSULTING STRUCTURAL ENGINEERS



PART ELEVATION
1:10



SECTION A-A

47 Cuba Street, PO Box 24-120, Wellington
Phone: 04 472-3198, Fax: 04 473 0456
email: martin@meyers.co.nz / www.meyers.co.nz

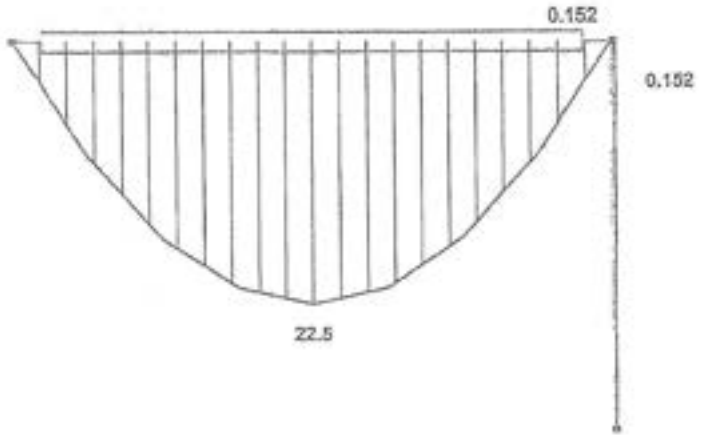
SKETCH 1
23 AUG 2016.

Microstran V9

Martin
Job: Mswin1

23/08/2016
08:35:37 a.

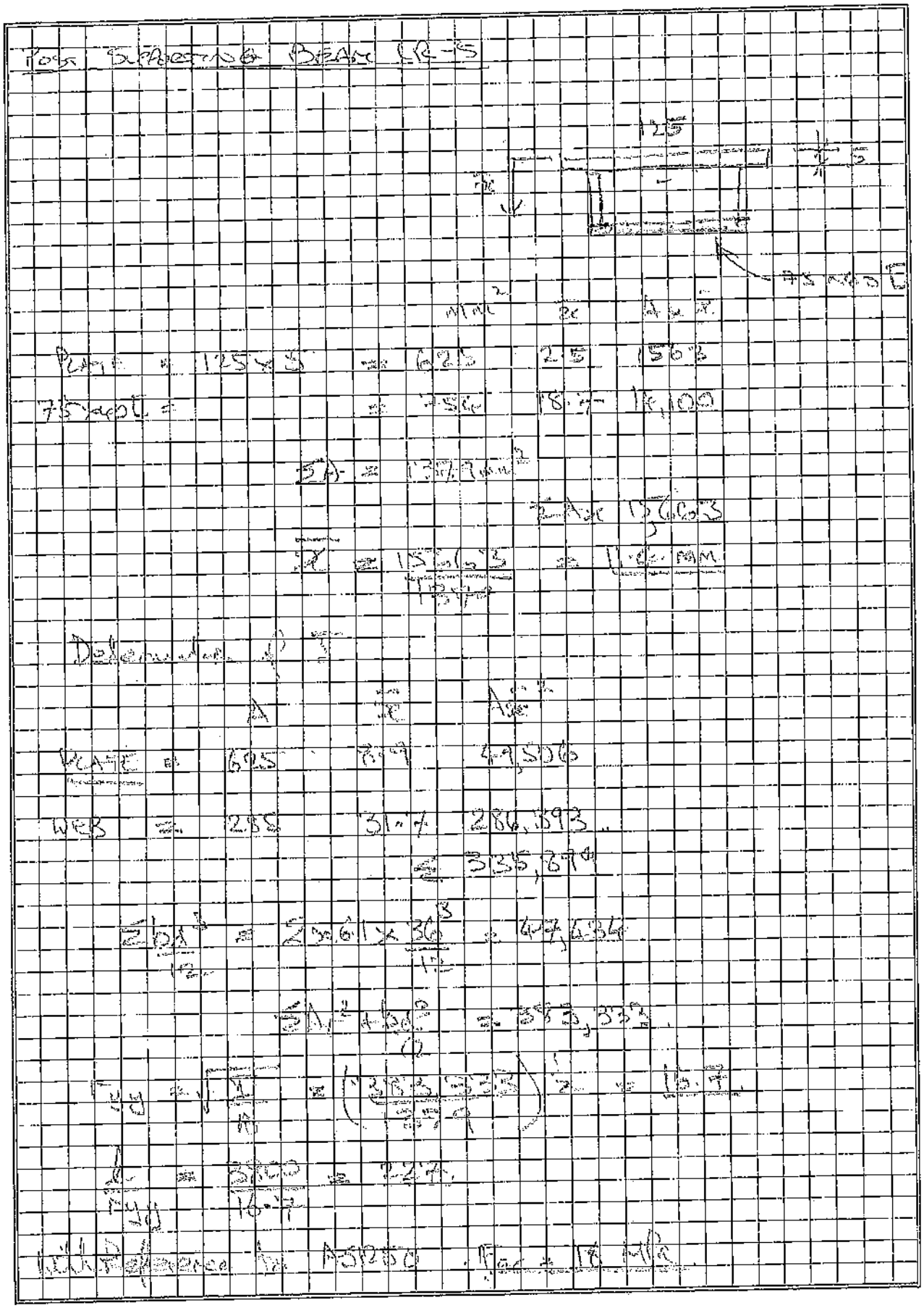
Load Cases:
—— 4 C 1.2 dead+wind In



Y
Z X
theta: 270 phi: 0

beam lr-5

Bending Moment, Mz



BENDING + Direct

$\frac{My}{I} = \frac{0.152 \times 10^6}{383333} \times 29 = 11.5\ MPa$

$F_{bx} = 38$

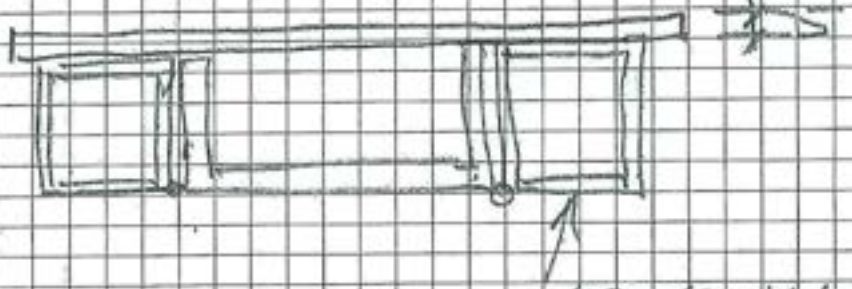
$f_{ac} = \frac{15.5 \times 10^3}{1379} = 11.24\ MPa$

$\frac{f_{ac}}{F_{ac}} + \frac{C_{my} \times f_{bx}}{\left(1 - \frac{f_{ac}}{0.60 F_{ex}}\right) f_{bx}} = \frac{11.24}{18.0} + \frac{1 \times 11.5}{\left(1 - \frac{11.24}{0.6 \times 38}\right) 18.0}$

$= 0.62 + 0.13$

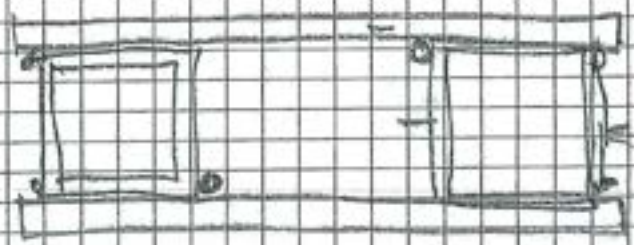
$= 0.75 < 1.0 \Rightarrow$ OK

⇒ STILL NOT HAPPY SO DO FOLLOWING



40 x 40 x 6.4 SHS

OR



125 x 5

300 x 300 x 3

$I = \Sigma Ad^2 + I = 2 \times (625 \times 200^2 + 0.06 \times 10^6)$

$= 620 \times 10^3\ mm^4$

$r_{yy} = \sqrt{\frac{I}{A}} = \left(\frac{620 \times 10^3}{1972}\right)^{\frac{1}{2}} = 17.7$ ⇒ BOTH VALUES BETTER THAN IN ASSUMED CASE

Meyers & Associates LTD
CONSULTING STRUCTURAL ENGINEERS

PROJECT: 3 Bressay Way, Waikanae
New House

SITE REPORT No: 5

09 November 2016

Site Inspection 08 November 2016

An inspection was carried out yesterday at 3:00pm.

During inspection we have checked Structural Steel and Timber beam connections.

Preparation was approved subject to:

1. Detail 1 on S3.5
   use CPC80 @ 600 centres each side for connection

2. Garage Rafters-
   Rafters spans up to 4500mm-240*45 @ 600 max crs, SG8
   spans between 4500 & 6500mm-240*45 @ 300 Hyspan

3. Beam LR-7
   Beam is placed in roof, not visible for checking- Contractor to send photos taken during installation of the beam

4. Beam LR-6
   Beam is not yet placed under roof, Contractor to advice when placed

5. Beams LR-8, LR-9
   Beams are placed in roof, not visible for checking- Contractor to send photos taken during installation of the beams

6. Portal Frames- along Grid2 and Garage were inspected and approved

7. Garage Ridge Steel Beams inspected and approved

8. Beams LR-22 not yet placed- Contractor to advice when placed

Boaz Navarro

pp Martin Meyers

Copy to: guy@energyarchitecture.co.nz

Job Ref 2478

DESIGN OF SIMPLY SUPPORTED TIMBER BEAM GRADE HYSPAN

GARAGE RAFTERS

Clear Span = L = 6.50 m
Trib Width = 0.60 m
Trib Area for Point Loads= 0 m2

Uniformly Distributed Loadings

Dead=	0.50	kPa	UDL=	0.30 kN/m
Live=	0.25	kPa	UDL=	0.15 kN/m
Wind Down=	0.85	kPa	UDL=	0.51 kN/m
Wind Up=	1.44	kPa	UDL=	0.86 kN/m

Point Loading a= 0.00 m (Where "a" is distance from left hand)

Dead=	0.00	kN	a/l=	0.00
Live=	0.00	kN	b=(l-a)=	6.5 m
Wind Down=	0.00	kN	d=	6.5 m
Wind Up=	0.00	kN	fs =	4.5 MPa

Member Selected Width = b = 90 mm; Height = d = 240 mm

Ixx = 104 *10^6mm4
Zxx = 864 *10^3mm3

Member Properties

		E MPa	f'b MPa	f'c MPa	f't MPa	fs MPa
Grade	HYSPAN	13200	42	34	27	4.5

Moments M = wL^2/8 + Pab/L

		MZ		k1	k8		
Dead=	1.8 kNm						
Live=	0.8 kNm						
Wind Down=	2.7 kNm						
Wind Up=	4.6 kNm						
D+L =	2.38 kNm	2.75	MPa	0.60	1.00	20.16	OK
1.4D =	2.22 kNm	2.57	MPa	0.60	1.00	20.16	OK
1.2D+1.5L =	3.09 kNm	3.58	MPa	0.80	1.00	26.88	OK
0.9D+W =	5.99 kNm	6.93	MPa	1.00	1.00	33.60	OK
1.2D+W =	4.59 kNm	5.32	MPa	1.00	1.00	33.60	OK

Shear V = wL/2 + Pd/L

		3*V/2*b*d		k1	F*k1*fs	
Dead=	1.0 kN					
Live=	0.5 kN					
Wind Down=	1.7 kN					
Wind Up=	2.8 kN					
D+L =	1.46 kN	0.10	MPa	0.60	2.16	OK
1.4D =	1.37 kN	0.09	MPa	0.60	2.16	OK
1.2D+1.5L =	1.90 kN	0.13	MPa	0.80	2.88	OK
0.9D+W =	3.69 kN	0.26	MPa	1.00	3.60	OK
1.2D+W =	2.83 kN	0.20	MPa	1.00	3.60	OK

Deflections (d= 5wl^4/384EI+Pl^3q/48EI) q=(3a/l-4(a/l)^3 = 0.00

						Max Allow.	
Dead =	5.1	mm	=	0.0008	L	< 0.0030	OK
Live =	2.5	mm	=	0.0004	L	< 0.0030	OK
Wind Down =	8.7	mm	=	0.0013	L	< 0.0075	OK
Wind Up =	14.7	mm	=	0.0023	L	< 0.0075	OK
D+0.7*L =	6.9	mm	=	0.0011	L	< 0.0033	OK
2*Dead =	10.2	mm	=	0.0016	L	< 0.0033	OK
Wind SLS =	9.8	mm	=	0.0015	L	< 0.0050	OK
1 kN =	4.2	mm					OK

USE 240 * 90 GRADE HYSPAN

Meyers & Associates LTD
CONSULTING STRUCTURAL ENGINEERS

PROJECT: 3 Bressay Way, Waikanae
New House

SITE REPORT No: 6

13 March 2017

Bracing Elements E5 & D6

We have received email, enclosed, from the Architect asking for confirmation about bracing elements E3 & D6.

We can advice following:

Bracing Element E3, on corner of Grids E7 and it is as per our drawing Formance panel

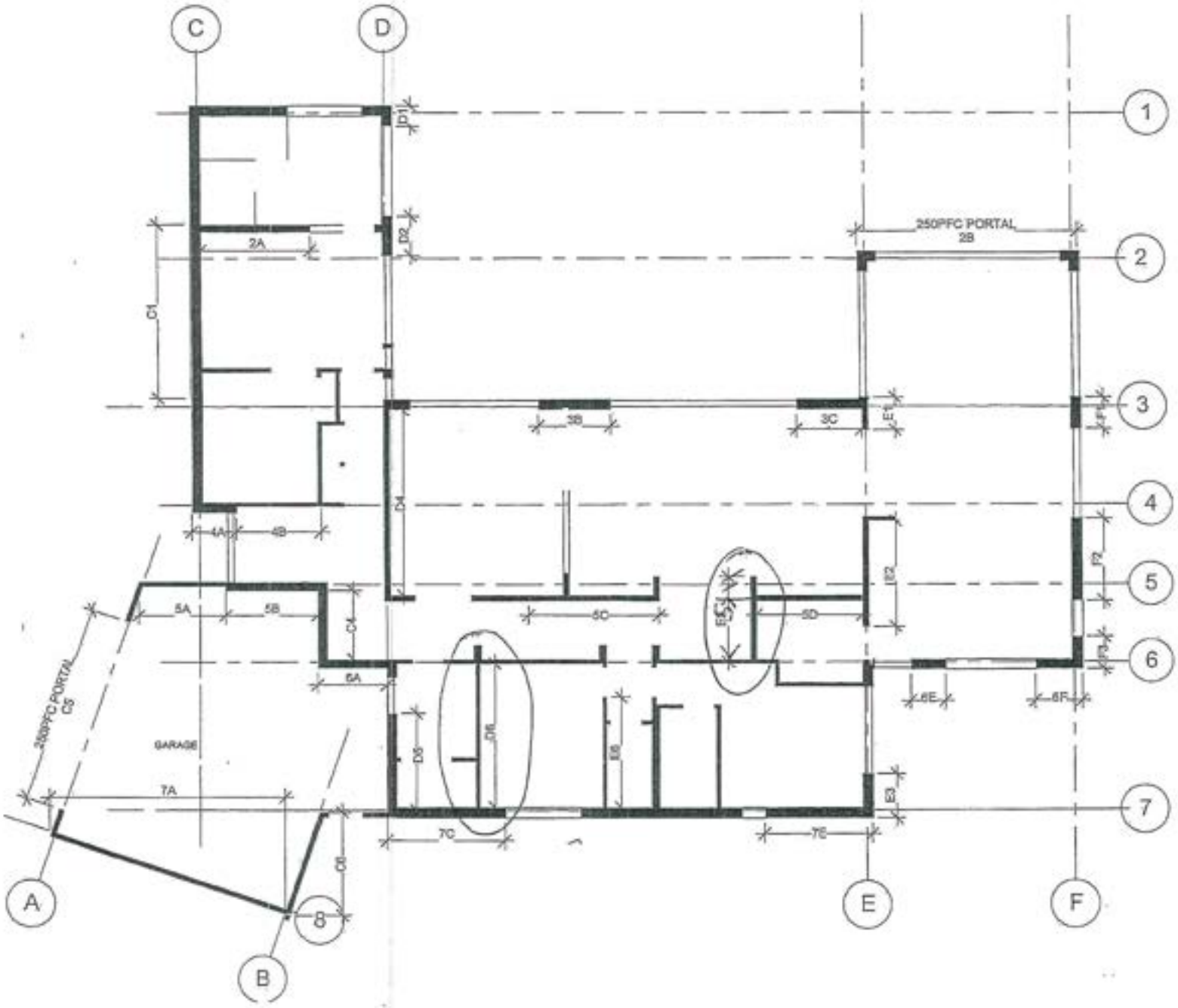
Bracing Element E5, pantry wall, can be braced with GS2-N as per drawing S1.1, RevB included

Bracing Element D6, wall between laundry and study, can be braced with GS2-N as per drawing S1.1, RevB included

Bosa Novakov

Copy to: guy@energyarchitecture.co.nz

Job Ref 2478



SCHEDULE OF BRACED WALLS

NAME	MIN LENGTH	WALL TYPE
2A	2600	BLS-H
2B	1500	PORTAL
3A	1700	FBW-12a
3B	1700	FBW-12a
3C	1700	FBW-12a
4A	1700	FBW-12a
4B	2300	GS2-N
5A	2400	GS1-N
5B	3500	FBW-12a
5C	3500	GS2-N
5D	3500	GS2-N
6A	1800	FBW-12a
6E	900	FBW-12a
6F	1200	FBW-12a
7A	600	GS1-N
7B	1100	GS1-N
7C	3200	FBW-12a
7E	3200	FBW-12a
C1	4800	FBW-12a
C4	1900	FBW-12a
C5	1500	PORTAL
D6	3500	GS2-N
E1	900	FBW-12a
E2	1200	FBW-12a
E4	5100	GS2-N
E5	2600	FBW-12a
E6	3000	GS2-N
F1	900	BLS-H
F2	2900	GS2-N
F3	1200	FBW-12a
F4	600	FBW-12a
F5	3200	FBW-12a
F6	600	FBW-12a

DG GS2-N
E5 GS2-N

Project:
Diane and Ian Christison

Address:
3 Bressay Way
Waikanae 5036

Client:
Diane and Ian Christison

Description:
Stage 2 - New House

Project Structural Engineer:
Meyers & Associates Ltd
47 CUBA STREET, WELLINGTON
PH 04 473-3198, FAX 04 473-0456

Verification of dimensions:
THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON SITE. ANY DISCREPANCY TO THIS DRAWING MUST BE REFERRED TO THE ARCHITECT FOR CLARIFICATION PRIOR TO MANUFACTURE OF CONSTRUCTION

Copyright:

Drawing:
WALL BRACING PLAN

Drawn Scale:	Original Sheet Size:
1 : 100	A3

Drawn By:	Checked By:	Date:
B.B	M.M	28/04/16

Job Number:	Drawing No:	Revision:
2478	S1.1	B

WALL BRACING requirements

LEVEL Ground Floor

DIRECTION Alphabetical

BU REQD WIND = 1715 BU "=100%NBS

BU REQD EQ = 2010 BU "=100%NBS

WALL HEIGHT	MIN BU REQD Wind	MIN BU REQD EQ	BRACING ELEMENT NUMBER	BRACING TYPE	LENGTH m	WIND RATING BU/m	WIND BU PROVIDED BU	EARTHQUAKE RATING BU/m	EARTHQUAKE BU PROVIDED BU
Zone A - 35%									
3.0			C1	FBW-12a	4.8	100	384	100	384
3.0			C2		1.4	0	0	0	0
3.0	600	704	C3		2.2	0	0	0	0
3.0			G4	FBW-12a	1.9	100	152	100	152
2.4			C5	PORTAL	1	200	200	200	200
3.0			C6	GS1-N	2.8	70	157	60	134
							Sum Provided for EQ Zone A =		**870**
						Sum BU Provided for Wind Zone A =	**893**		
						% Required =	**149%**		**124%**
Zone B - 50%									
3.0			D1	FBW-12b	0.6	100	48	100	48
3.0			D2	FBW-12a	1	100	80	100	80
3.0			D3		0	0	0	0	0
3.0			D4	BLG-H	4.8	150	576	145	557
3.0			D5	FBW-12a	2.6	100	208	100	208
3.0			D6	**GS2-N**	**3.9**	**95**	**296**	**85**	**265**
3.0	858	1005	E6	GS2-N	3	95	228	85	204
3.0			E5	**GS2-N**	1.7	**95**	129	**85**	116
3.0			E4		2.7	0	0	0	0
3.0									
							Sum Provided for EQ Zone B =		**1478**
						Sum BU Provided for Wind Zone B =	**1566**		
						% Required =	**183%**		**147%**
Zone C -15%									
3.0			E1	BL1-H	0.9	90	65	100	72
3.0			E2	GS2-N	2.9	95	220	85	197
3.0			E3	FBW-12a	0.9	100	72	100	72
3.0	257	302	F1	FBW-12a	0.8	100	64	100	64
3.0			F2	FBW-12a	2.2	100	176	100	176
3.0			F3	FBW-12a	0.8	100	64	100	64
3.0									
							Sum Provided for EQ Zone C =		**645**
						Sum BU Provided for Wind Zone C =	**661**		
						% Required =	**257%**		**214%**

TOTALS

TOTAL BU PROVIDED FOR WIND = 3120

% of Required WIND= 182%

TOTAL BU PROVIDED FOR E.Q. = 2993

% of Required EQ = 149%

Subject: Re: Bressay way, bracing elements to feature walls
From: Guy Shaw <guy@energyarchitecture.co.nz>
Date: 13/03/2017 9:17 a.m.
To: Martin Meyers <martin@meyers.co.nz>, bosa@meyers.co.nz
CC: Mike Craig <mjcraigbuilder@paradise.net.nz>

Martin, Bosa,
I can confirm that feature walls only require plasterboard as a substrate no no change is required to these bracing elements.

Mike did raise a subsequent request for clarification.

1. Bracing element E3 is indicated as Formance panel on the attached bracing plan, In fact it's a timber framed wall so should be a plasterboard bracing element. Can you confirm?

2. Bracing element D6 doesn't appear on the schedule. Can you please confirm it's specification.

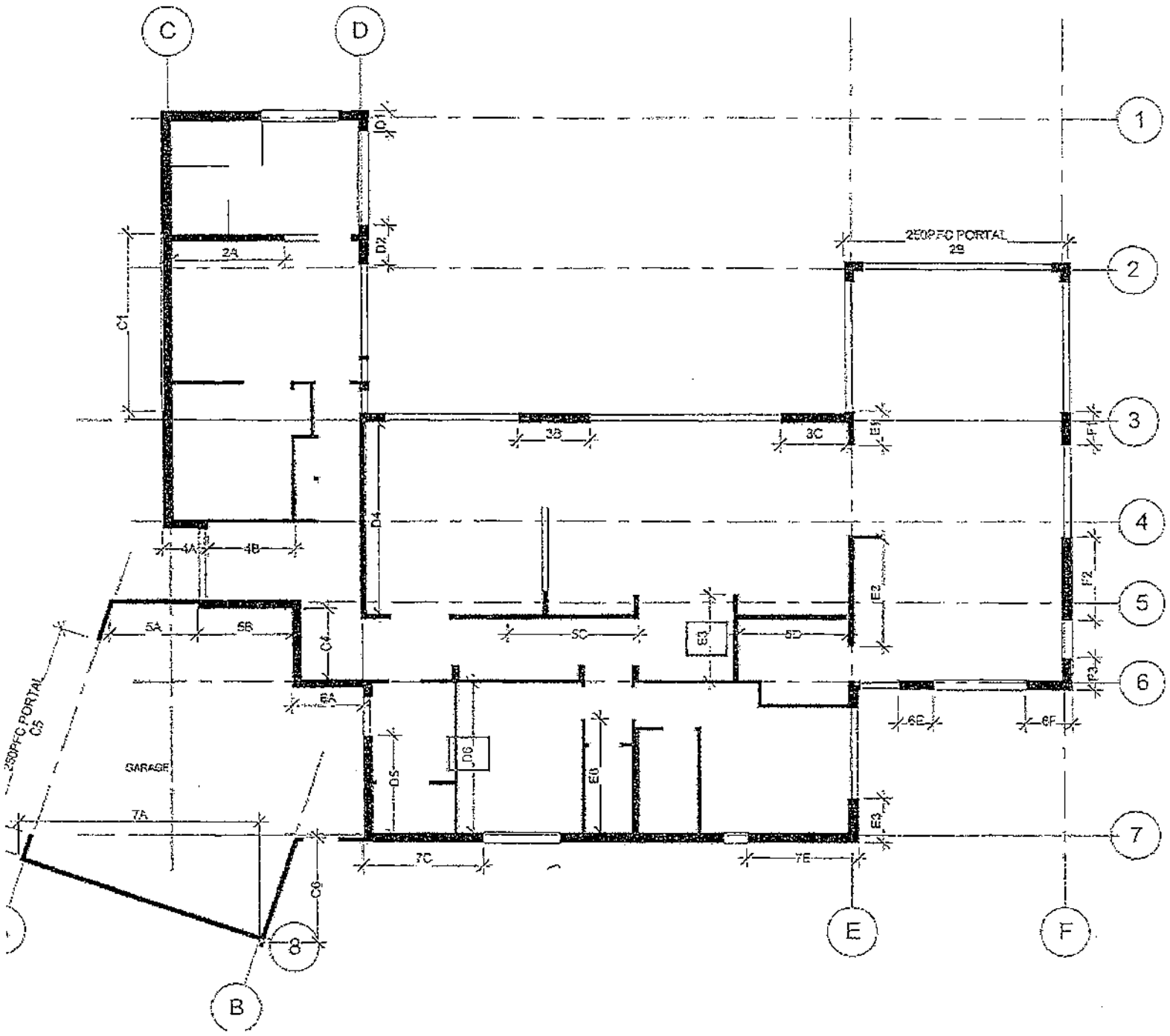
Regards

GUY **SHAW**
BArch(Hons) LBP Design 2
Certified PassivHaus Designer

DIRECTOR

ENERGY **ARCHITECTURE NZ** LTD
M: 022 352 6795
E: guy@energyarchitecture.co.nz
W: www.energyarchitecture.co.nz

"there is no justification for building homes with a permanent legacy of high energy bills"
Julie Hirigoyen, chief executive of the UK Green Building Council



SCHEDULE OF BRACED WALLS

NAME	MIN LENGTH	WALL TYPE
2A	2500	BLT-H
2B	250*300PFC	PORTAL
3B	1500	FBW-12a
3C	1700	FBW-12a
4A	1100	FBW-12a
4B	2300	GS2-N
5A	2200	GS1-N
5B	2500	FBW-12a
5C	3600	GS2-N
5D	2900	GS2-N
6A	1600	FBW-12a
6E	900	FBW-12a
6F	1200	FBW-12a
7A	600	GS1-N
7B	1300	GS1-N
7C	3200	FBW-12a
7E	2900	FBW-12a
C3	4900	FBW-12a
C4	1900	FBW-12a
C5	250*300PFC	PORTAL
C6	2600	GS1-N
D1	500	FBW-12a
D2	1000	FBW-12a
D4	5100	GS2-N
D5	2600	FBW-12a
D6	3000	GS2-N
E1	900	BLT-H
E2	2600	GS2-N
E3	1200	FBW-12a
F1	300	FBW-12a
F2	2200	FBW-12a
F3	200	FBW-12a

Project:
Diane and Ian Christison

Address:
3 Bressay Way
Waikanae 5036

Client:
Diane and Ian Christison

Description:
Stage 2 - New House

Project Structural Engineer:
Meyers & Associates Ltd
47 CUBA STREET, WELLINGTON
PH 04 473-3198, FAX 04 473-0455

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THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON SITE. ANY DISCREPANCY TO THIS DRAWING MUST BE REFERRED TO THE ARCHITECT FOR CLARIFICATION PRIOR TO MANUFACTURE OR CONSTRUCTION

Drawing:
WALL BRACING PLAN

Drawn Scale:	Original Sheet Size:
1 : 100	A3

Drawn by:	Checked By:	Date:
B.B	M.M	28/04/15

Job Number:	Drawing No:	Revision:
2478	S1.1	A

Meyers & Associates LTD
CONSULTING STRUCTURAL ENGINEERS

PROJECT: **3 Bressay Way, Waikanae**
New House

SITE REPORT No: 7

22 November 2017

Please refer to SR5. We were never advised that beams LR-6 & LR22 were placed, these were never sighted onsite by Meyers and Associates. Contractor has sent photos through as well as photos of the other requested items. Photos and PS3 from contractor is attached.

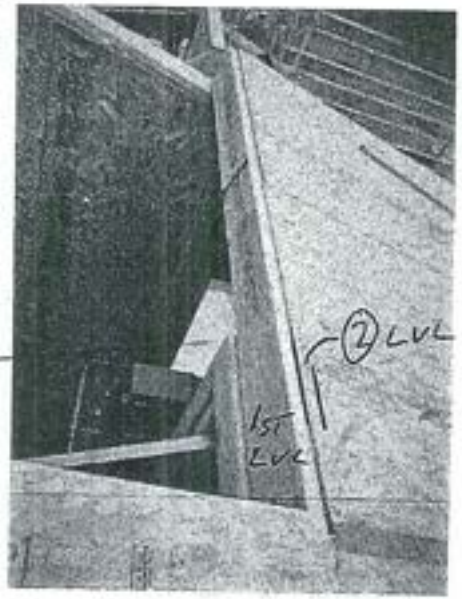
Bosa Novakov

Bosa Novakov

Copy to: guy@energyarchitecture.co.nz

Job Ref 2478

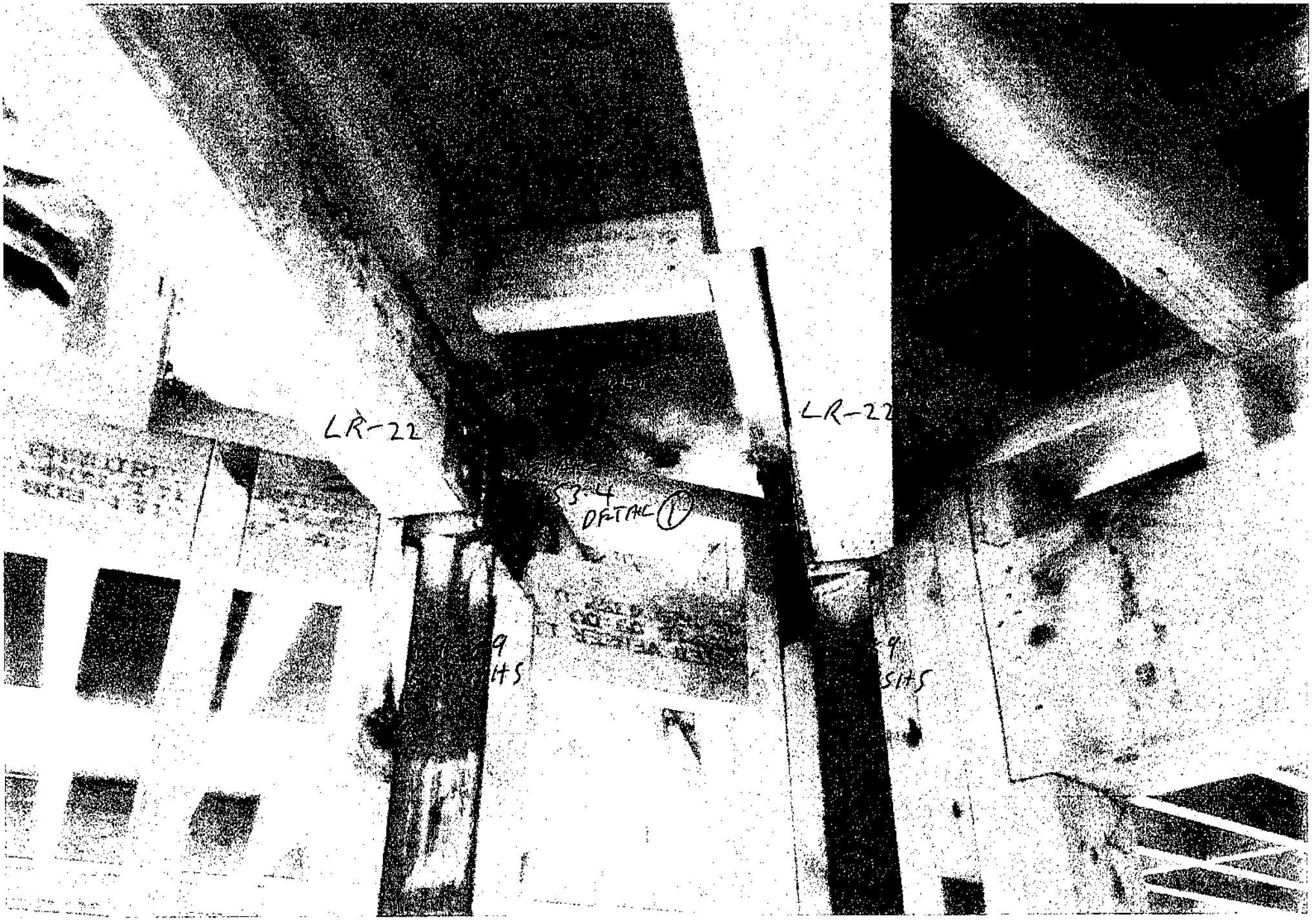
190x45
LVL

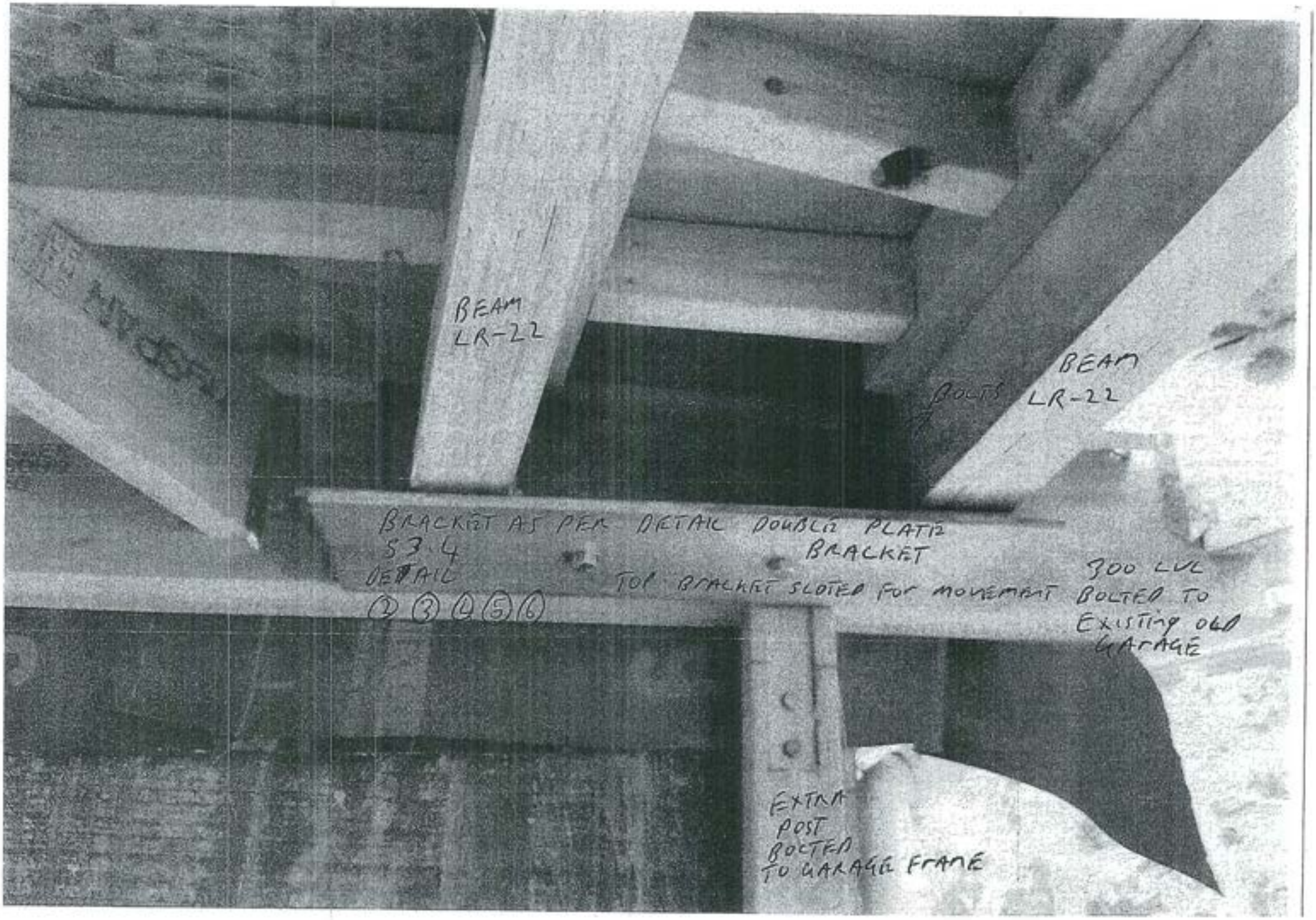


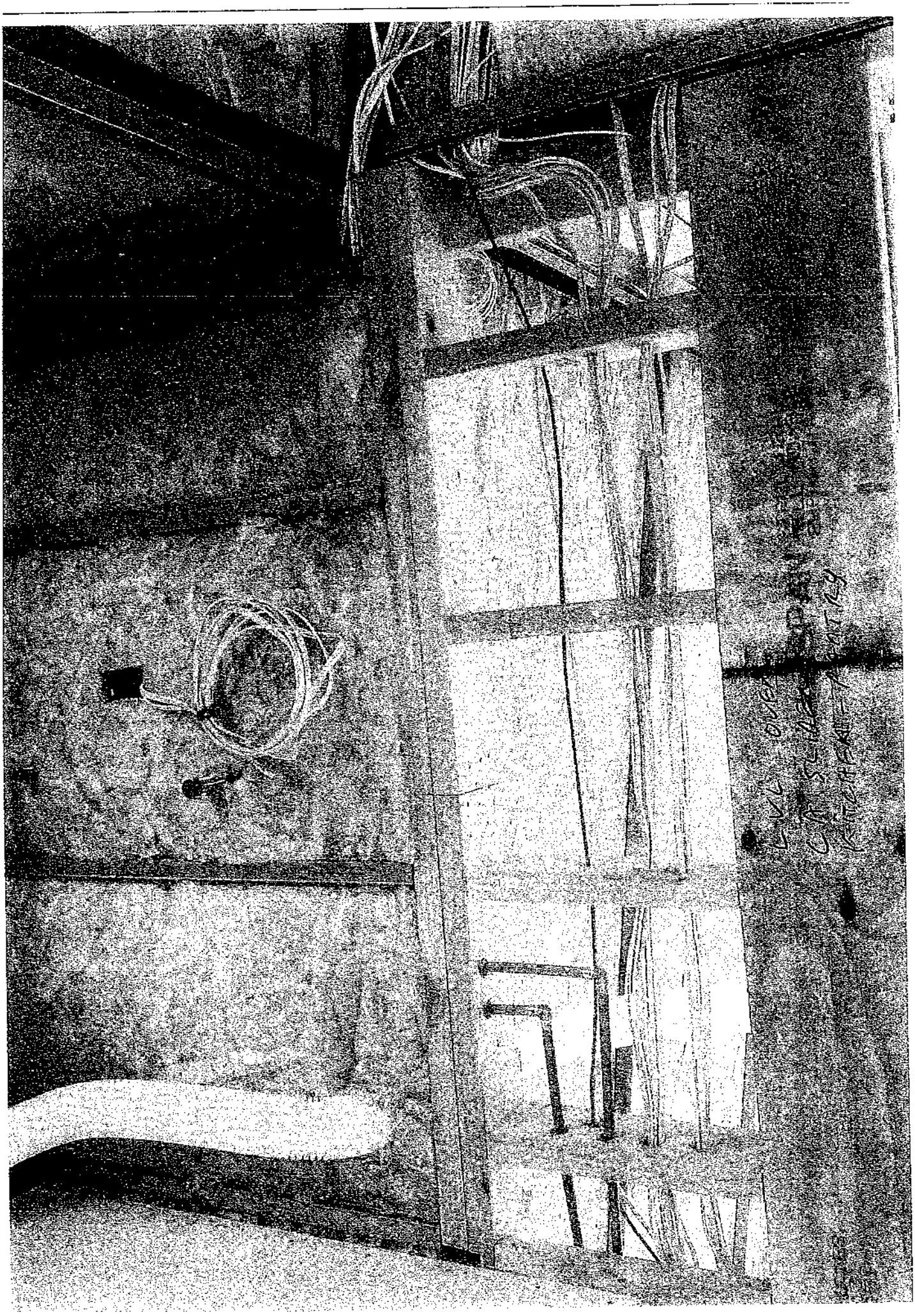
THIS IS FRONT DOOR END. WE USED A LVL X2 FULL RUN FROM FRONT DOOR TO END OF PANTRY WITH JOINS OVER WALLS

RUNS OVER LR-6 - LR7

ALSO LR8 - LR9 ARE LVL 190x45x2


LR-22
LR-22
53-4
DFTTAC
9
HTS
9
SHTS


BEAM
LR-22
BOLTS
BEAM
LR-22
BRACKET AS PER DETAIL
S3.4
DETAIL
1 2 3 4 5 6
DOUBLE PLATE
BRACKET
TOP BRACKET SLOTED FOR MOVEMENT
300 LVL
BOLTED TO
EXISTING OLD
GARAGE
EXTRA
POST
BOLTED
TO GARAGE FRAME



Kāpiti Coast
DISTRICT COUNCIL
Te Hunt Whakamua, Te Tiriti Whakaruru

Christison Ian Robert
Christison Diane
3 Bressay Way
Waikanae 5036

13 December 2017

Dear Building Consent Applicant / Building Owner

Progress of work on Building Consent 160124

Site Address:	3 Bressay Way, Waikanae
Legal Description:	LOT 2 DP 473745 CT 648387
Project Description:	Foundations for future dwelling.

The Council, under Section 93 of the Building Act 2004, must decide whether to issue a Code Compliance Certificate (CCC) within 20 working days of the 2-year anniversary of the date the building consent was granted. You have received a CCC sign off for BC160332 (New Single Level Dwelling), but have not received CCC for BC 160124 (Foundations for future dwelling).

If your building work is complete, please ring and book a final inspection. The completed CCC Application Form will be collected by the building inspector when he/she visits.

If the building consent is substantially incomplete at the time of inspection, or the work does not comply, the Council will refuse to issue a CCC.

However this does not preclude you from reapplying for a CCC at a later date as the Act does not set a time limit for applicants to complete their building project.

If you have any questions please contact me on (04) 296 4700 or 0800 486 486 or via email: michelle.salmon@kapiticoast.govt.nz referencing Building Consent: 160124.

Yours sincerely

Michelle Salmon
Building Inspections Team Leader

Encl: CCC application form

175 Rimu Road, Paraparaumu 5032 | Private Bag 60601, Paraparaumu 5254 | T: 04 296 4700 F: 04 296 4830 | www.kapiticoast.govt.nz

BUILDING CONSENT DOCUMENTATION FILED

Kāpiti Coast DISTRICT COUNCIL

Building Consent Number:	160124
Street Address:	3 Bressay Way, Waikanae

Tick indicates documents (s) included in this Building Consent	✓
Building Consent Documentation	✓
Application Workflow Coversheet	✓
Application for a Building Consent Form	✓
Application for a Building Consent Checksheet	✓
Proof of ownership	✓
Costing Schedule	✓
Building plans and specifications	✓
Production Checklist	✓
GoGet Processing Summary	✓
Scope of Inspection Sheet and Inspection Checksheets	✓
1-56	
Building consent and memorandum	
Inspection reports	
Application for CCC	
Site Plan	
PIM	
Certificate of Design Work	
Copy of electrical certificate	
Copy of gas certificate	
An "as-built" drainage plan	
Plumbing (Form 125) for pressure test and installation piped services	
Drainage (Form 126) for stormwater installation	
Drainage (Form 127) for private sewer installation	
A Construction Review (PS4) statement for structural engineering	
A Construction Review (PS4) statement for fire engineering	
A Construction Review (PS4) statement for geo-technical engineering	
Roof cladding warranty	
Solar water heating technical specifications	
Wall cladding/texture coating installation applicator warranty	
A copy of the lift certificate	
A certificate from the fire alarm installer	
A certificate from the sprinkler certifier	
A copy of wet-area membrane installers warranty	
A copy of deck membrane manufacturer's installers warranty/guarantee	

FPIS (verifier) Fire Systems Certification	
Specified Systems – Make - Model - Location	
A copy of windows	
A copy of water tank warranty	
A copy of septic tank warranty	
Record of work	
Owner Builder Statutory Declaration	
Extension of Completion Time for Building Consent letter	
Lapsed Building Consent letter	
Compliance Schedule	
Compliance Schedule Statement	
Building Consent Amendment Documentation Filed	
Peer review documents	
Fire design documents	
Installers Checksheet – Freestanding or Inbuilt Fire (Form 129)	
Requests for further information and other correspondence	
Amendments	
Supplementary information	
Notices to Fix	
Code of Compliance Certificate	
Refuse to Issue Code Compliance Certificate letter	
Photos:	

This form comprises part of the Building Consent documentation and indicates the contents of the Building Consent File.

BUILDING CONSENT PRODUCTION CHECKLIST

Kāpiti Coast DISTRICT COUNCIL
Te Hurī Whakamuri, Ka Titiro Whakamua

Proposal: Foundations for future dwelling	BC: 160124
Address: 3 Bressay Way Waikanae	Category: 1
	Residential: ☑ Commercial: ☐
Officer:	Date:

Key	
N/A ☐	Not Applicable to this application. (The deletion of whole sections as N/A is permitted. For alternatives comment below each section).
No ☐	Plans, specifications & documentation not complying with the Building Code &/or Bld Act (The reason specified alongside each prompt)
Yes ☐	Plans, specifications & documentation complying with Category Bld Code &/or Bld Act (The reason specified alongside each prompt)

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

N/A	No	Yes	Comments
☐	☐	☐	Wind zone High V/ High Specific (GIS) Site specific (3604)
☐	☐	☐	Flooding / ponding hazards (GIS) Residual ponding only
☐	☐	☐	Slippage / fault line hazards (GIS)
☐	☐	☐	Erosion, river & coastal hazards (GIS)
☐	☐	☐	Subsidence / soft soil hazards (Site inspection notes)
☐	☐	☐	Corrosion zone Zone D or Zone C
☐	☐	☐	Soil contamination (F1 GIS)
☐	☐	☐	Distances to boundaries / siting (District plan)
☐	☐	☐	Floor levels / contours (E2/AS1 & NZS 3604 E1)
☐	☐	☐	Two or More Allotments (Sec 75 – 83 Bld Act)
☐	☐	☐	Noise / sound insulation (airport & highway)
☐	☐	☐	CT/221 notice reviewed
☐	☐	☐	Outstanding Building Consents, No CCC
			BC:
			BC:
			BC:
Additional comments:			

Ambiguity / Contradictions

N/A	No	Yes	Comments
☐	☐	☐	Manufacturers Specs
☐	☐	☐	Engineer compared with Designer/Arch
☐	☐	☐	Any Other contradictions
Additional comments:			

Commercial Fire report *(C/VM1, C/As1, C/AS2, C/A34, C/AS4, C/AS5, C/AS6, C/AS7, F6, F7, F8)*

N/A	No	Yes	Comments
☐	☐	☐	Referral to NZFS Fire Engineering unit
Additional Comments:			

Notes
GIS checked no Council sewers shown within the lot.
Pipes under the slab Run to GI3
Plumbers + Drainage Pack will be provided on the house Building Consent.

General stamp prompts:

Wind Zone	Set Status
Corrosion	Complete checklist
Cladding and Roofing	Addendum and note re fire report
Electrical	Section 72 / ponding
Compliance Schedule	Set inspections
Boundary setting out	Glazing
Engineers design and addendum	Sec 72
Slip resistance	Hazard Assessment

Dialogue Record

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

Date / time	State content of discussion!!!	Initials

Change of Use – Sec 114: *(Record decisions and basis for decisions – confirm whether sec 115 applies)*		
Date:		

Alteration to Existing Building - Sec 112 *(Record decisions and basis for decisions – confirm whether sec 118 applies and if so, has it been complied with?). List conditions / communications / actions:*		
Date:		

Hazards – Sec 71-74: *(Record decisions and basis for decisions – see under "site plan above already done")*	Letter Sent Yes ☐	Letter Sent No ☐
Date:		

Compliance Schedule – Sec 100 - 107: *(Record if new / amended compliance schedule required, and attach copy of replica compliance schedule. Ensure that note is recorded on building consent that new / amended compliance schedule will be issued).*		
Date:		

Declaration of Owner-builder

N/A	Yes	Comments
☐	☐	**Declaration of Owner-builder**
☐	☐	Design
☐	☐	Building

Owner-builder register – Edocs: 406692

Inspections

No of inspections estimated on application	No of inspections estimated at processing	Additional fees actioned if required

CODE COMPLIANCE CERTIFICATE REVIEW CHECKSHEET

Criteria: All building work except for minor works or major projects.
Refer QAS: B14, B15, B16

Kāpiti Coast DISTRICT COUNCIL
He Kuri Whakamuri, Ka Titiro Whakamua

Address of Project:	
Date:	BC No: 160124

	N/A	Yes	No
Application for Code Compliance Certificate (Form 278) completed?		☐	☐
Confirm all required inspections and been completed and passed		☐	☐
If inspections have been missed, what supporting information and method of verification has been provided to compensate for missed inspections?			

For consents issued after change to inspection fees on 1 July 2015	
Inspections estimated at time consent issued (number)	
Inspections undertaken (number)	
Number of extra inspections to be invoiced and paid before CCC issued	

☐ Invoice actioned Date:

	N/A	Yes	No
Work in accordance with approved consent and approved amendments		☐	☐
If no, has NTF been issued?	☐	☐	☐
Have items of non-compliance been resolved and NTF uplifted?	☐	☐	☐

Note: If work is not in accordance with consent, (and approved amendments) or NTF matters have not been resolved, suspend application for Code Compliance Certificate.

Supporting documentation required in Building Consent addenda. Form completed during BC Approval process			
Tick indicates yes, N/A indicates considered – but not applicable	**Req'd**	**Supplied**	**Accept**
Copy of electrical certificate			
Copy of gas certificate			
An "as-built" drainage plan			
Plumbing (Form 125) for pressure test and installation piped services			
Drainage (Form 126) for stormwater installation			
Drainage (Form 127) for private sewer installation			
A Construction Review (PS4) statement for structural engineering	✓		
A Construction Review (PS4) statement for fire engineering			
A Construction Review (PS4) statement for geo-technical engineering			
Roof cladding warranty			
Solar water heating technical specifications			
Wall cladding/texture coating installation applicator warranty			
A copy of the lift certificate			
A certificate from the fire alarm installer			
A certificate from the sprinkler certifier			
A copy of wet-area membrane installers warranty			
A copy of deck membrane manufacturer's installers warranty/guarantee			
FPIS (verifier) Fire Systems Certification			
Specified Systems – Make - Model - Location			
A copy of windows			
A copy of water tank warranty			
A copy of septic tank warranty			
Record of work			
Owner Builder Statutory Declaration			
Building Consent Amendment Documentation Filed			

If specified supporting documentation has not been provided, what alternative information or verification method has been provided to compensate? *(Describe)*

Compliance Schedule	Yes	No
Is a new or amended compliance schedule required?	☐	☐
If "Yes" Has it been issued? *(Refer note below)*	☐	☐
If the new/revised compliance schedule has not been issued, what action has been taken to ensure it will be issued? *(Outline)*		

Note: If the draft/ revised compliance schedule has not been issued, the Code Compliance Certificate cannot be issued. Suspend issuing CCC until this matter is addressed.

Building Consent Requirements	Yes	No
Are there any items specified in the Building Consent or PIM that have not been completed?	☐	☐
(If yes, outline below)		
Are there any development impact fees to be paid outstanding? (if Yes, CCC cannot be issued)	☐	☐
Are there any other outstanding fees? (if Yes, CCC cannot be issued)	☐	☐

Decision

Issue Code Compliance Certificate? ☐ or Refuse Code Compliance Certificate? ☐

Give reasons for decision:

☐ On review of the inspection notes and supporting documentation it can be considered on reasonable grounds that all work has been completed in compliance with the Building Consent.

OR

☐ Other

Building officer:	*Co- reviewer:*
Signature:	Signature:
Date:	Date:
Name:	Name:

Copies	Yes	No
File: Compliance Schedule, Compliance Schedule Statement, and CCC placed on file.	☐	☐
Applicant: Copies of Compliance Schedule, Compliance Schedule Statement sent out with the CCC	☐	☐
Inspection Pack: Add copies of Compliance Schedule, Compliance Schedule Statement and CCC	☐	☐

Statement of Compliance with the NZ Building Code

Consent No: 160124

ISSUED BY: **Kapiti Coast District Council**

PROJECT

Site Address: 3 Bressay Way, Waikanae
Legal Description: LOT 2 DP 473745 CT 648387
Work Description: Foundations for future dwelling.
Building Category: R1

OWNER

Name(s): Ian Christison and Diane Christison
Address: 125 Tutere Street,Waikanae

[P] Application for CCC received and accepted
[P] Confirm all required inspections completed and documented in GoGet
[P] Work in accordance with approved consent and approved amendments
[P] Supporting documentation required in building consent addenda received
[P] Quality assurance documentation
[P] Restricted building work
[P] Approve to issue Code Compliance Certificate if all fees paid

NOTES:
Inspections Prepaid:
Inspections Done:

LICENSED BUILDING PRACTITIONERS:

Designer 1	BP126522
Foundations 1	CPENG71054
Carpentry 1	BP100504

On review of the documentation and inspection notes it can be considered on reasonable grounds that all work has been completed in compliance with the building consent.

Signed:
Name: Tyler Smith
Position: Building Officer

Date: 18 December 2017

GoGet Inspection Audit Report

Consent No: **160124**
Applicant: **Energy Architecture NZ Ltd**
Site Address: **3 Bressay Way, Waikanae**
Work Type: **Foundations for future dwelling.**

Inspection Type: **Final Inspection**
Inspection Outcome: **Pass**
Inspected By: **Tyler Smith**
Inspection Date: **18 December 2017 10:21 a.m.**
Duration: **15 minutes**

Inspection Element	Status
Exterior	N/A
Interior	N/A
Intertenancy/commercial	N/A
Other	Pass

Final inspection carried out with main build: BC160332

GoGet Inspection Audit Report

Consent No: **160124**
Applicant: **Energy Architecture NZ Ltd**
Site Address: **3 Bressay Way, Waikanae**
Work Type: **Foundations for future dwelling.**

Inspection Type: **Foundations**
Inspection Outcome: **Pass**
Inspected By: **Alan Tinney**
Inspection Date: **15 August 2016 12:20 p.m.**
Duration: **15 minutes**

Inspection Element	Status
General	Pass
Footing depth **400mmx450mm**	Pass
Engineers details required **Meyers**	Pass
Good bearing **Driven Piles**	Pass
Reinforcing **as per engineer**	Pass
Siting	Pass
Sub-floor vents	N/A
Other	N/A

Kapiti Coast District Council
175 Rimu Road
Private Bag 60601
Paraparaumu 5254
Phone (04) 296 4700

SITE NOTICE

Consent No: **160124**
Applicant: **Energy Architecture NZ Ltd**
Site Address: **3 Bressay Way, Waikanae**
Work Type: **Foundations for future dwelling.**
Building Category: **R1**

Inspection Type: **Foundations**
Inspection Outcome: **Pass**
Inspected By: **Alan Tinney**
Inspection Date: **15 August 2016**

Passed Items

General

Footing depth	**400mmx450mm**
Engineers details required	**Meyers**
Good bearing	**Driven Piles**
Reinforcing	**as per engineer**
Siting	

Inspection Type: **Pre-Slab Building**
Inspection Outcome: **Pass**
Inspected By: **Alan Tinney**
Inspection Date: **15 August 2016**

Passed Items

General

Engineers details required	**Meyers & Associates**
Ground clearance	
Concrete cover	
Sand blinding	
Slab thickenings	**150mm/15mm**
Vapour barrier	
Steel reinforcing	**500e ductile 82 de**
Bar chairs	
DPC penetrations taped	
Minimum floor level	
Other	**ok to pour after engineer has passed sie notes and ps4**

GoGet Inspection Audit Report

Consent No: **160124**
Applicant: **Energy Architecture NZ Ltd**
Site Address: **3 Bressay Way, Waikanae**
Work Type: **Foundations for future dwelling.**

Inspection Type: **Postline / Wet area Pre Application**
Inspection Outcome: **Pass**
Inspected By: **Alan Tinney**
Inspection Date: **26 May 2017 9:38 a.m.**
Duration: **15 minutes**

Inspection Element	Status
General	Pass
Sighted previous inspection notes	Pass
Conforms with approved drawings	Pass
Confirm additional information/amended plan	Pass
Sheet bracing **BL1/GS1/2**	Pass
Sheet fixings	Pass
Fire/acoustic separation	N/A
Other	N/A
Wet area substrate system **aqualine fixed @ 100mm**	Pass

Kapiti Coast District Council
175 Rimu Road
Private Bag 60601
Paraparaumu 5254
Phone (04) 296 4700

SITE NOTICE

Consent No: **160124**
Applicant: **Energy Architecture NZ Ltd**
Site Address: **3 Bressay Way, Waikanae**
Work Type: **Foundations for future dwelling.**
Building Category: **R1**

Inspection Type: **Postline / Wet area Pre Application**
Inspection Outcome: **Pass**
Inspected By: **Alan Tinney**
Inspection Date: **26 May 2017**

Passed Items

General

- Sighted previous inspection notes
- Conforms with approved drawings
- Confirm additional information/amended plan
- Sheet bracing — **BL1/GS1/2**
- Sheet fixings
- Wet area substrate system — **aqualine fixed @ 100mm**

GoGet Inspection Audit Report

Consent No: **160124**
Applicant: **Energy Architecture NZ Ltd**
Site Address: **3 Bressay Way, Waikanae**
Work Type: **Foundations for future dwelling.**

Inspection Type: **Pre-site Inspection**
Inspection Outcome: **Fail**
Inspected By: **Craig Watson**
Inspection Date: **9 March 2016 12:06 p.m.**
Duration: **30 minutes**

Inspection Element	Status
General	Fail
Contours match application **Flat**	Pass
Datum point identified	Fail
Boundaries identified	N/A
Ground conditions checked **Engineered**	Pass
Footpath checked	Pass
Kerb and channel checked	Pass
Grass berm checked	Pass
Existence damage **no damage**	Pass
Vehicle crossing installed	N/A
Dogs	N/A
Further investigation	N/A
Conforms with approved drawings	Pass
Resource consent	N/A
Producer statement	Pass
Driveway checked	N/A
Position of boundaries and datum height checked	N/A
Surveyor ***Cuttris***	Pass
Engineer supervision required	Pass

Kapiti Coast District Council
175 Rimu Road
Private Bag 60601
Paraparaumu 5254
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SITE NOTICE

Consent No: **160124**
Applicant: **Energy Architecture NZ Ltd**
Site Address: **3 Bressay Way, Waikanae**
Work Type: **Foundations for future dwelling.**
Building Category: **R1**

Inspection Type: **Pre-site Inspection**
Inspection Outcome: **Fail**
Inspected By: **Craig Watson**
Inspection Date: **9 March 2016**

Passed Items

General

Contours match application	**Flat**
Ground conditions checked	**Engineered**
Footpath checked	
Kerb and channel checked	
Grass berm checked	
Existence damage	**no damage**
Conforms with approved drawings	
Producer statement	
Surveyor	**Cuttris**
Engineer supervision required	

Failed Items

General

- Datum point identified

GoGet Inspection Audit Report

Consent No: **160124**
Applicant: **Energy Architecture NZ Ltd**
Site Address: **3 Bressay Way, Waikanae**
Work Type: **Foundations for future dwelling.**

Inspection Type: **Pre-site Inspection**
Inspection Outcome: **Pass**
Inspected By: **Tyler Smith**
Inspection Date: **18 December 2017 10:20 a.m.**
Duration: **15 minutes**

Inspection Element	Status
General	Pass
Datum point identified	N/A

Kapiti Coast District Council
175 Rimu Road
Private Bag 60601
Paraparaumu 5254
Phone (04) 296 4700

SITE NOTICE

Consent No: **160124**
Applicant: **Energy Architecture NZ Ltd**
Site Address: **3 Bressay Way, Waikanae**
Work Type: **Foundations for future dwelling.**
Building Category: **R1**

Inspection Type: **Pre-site Inspection**
Inspection Outcome: **Pass**
Inspected By: **Tyler Smith**
Inspection Date: **18 December 2017**

Passed Items

General

Inspection Type: **Final Inspection**
Inspection Outcome: **Pass**
Inspected By: **Tyler Smith**
Inspection Date: **18 December 2017**

Passed Items

Other	**Final inspection carried out with main build: BC160332**

Support Documentation	Status
Application for CCC	Accepted
Construction review PS4 statement for structural engineering	Accepted

Licensed Building Practitioners	Status
Foundations 1	Accepted
Designer 1	Accepted

GoGet Inspection Audit Report

Consent No: **160124**
Applicant: **Energy Architecture NZ Ltd**
Site Address: **3 Bressay Way, Waikanae**
Work Type: **Foundations for future dwelling.**

Inspection Type: **Pre-Slab Building**
Inspection Outcome: **Pass**
Inspected By: **Alan Tinney**
Inspection Date: **15 August 2016 12:04 p.m.**
Duration: **30 minutes**

Inspection Element	Status
General	Pass
Engineers details required **Meyers & Associates**	Pass
Rebate for brick veneer	N/A
Ground clearance	Pass
Concrete cover	Pass
Driveway S/W control	N/A
Sand blinding	Pass
Slab thickenings **150mm/15mm**	Pass
Vapour barrier	Pass
Bottom plate fixings	N/A
Steel reinforcing **500e ductile 82 de**	Pass
Bar chairs	Pass
DPC penetrations taped	Pass
Minimum floor level	Pass
Other **ok to pour after engineer has passed sie notes and ps4**	Pass

Taken at 12:04 PM on Monday 15/08/2016

Taken at 12:04 PM on Monday 15/08/2016

Taken at 12:04 PM on Monday 15/08/2016

GoGet Inspection Audit Report

Consent No: **160124**
Applicant: **Energy Architecture NZ Ltd**
Site Address: **3 Bressay Way, Waikanae**
Work Type: **Foundations for future dwelling.**

Inspection Type: **Pre-Slab Plumbing**
Inspection Outcome: **Pass**
Inspected By: **Gareth McCullagh**
Inspection Date: **23 June 2016 2:22 p.m.**
Duration: **30 minutes**

Inspection Element	Status
General	Pass
Secondary flow path	N/A
Pipe material **all pvc and primed and glued**	Pass
Pipe protection **plastic poly wrap**	Pass
TRP line	N/A
Plumbing layout **in for all fixtures with minor change to main bathroom**	Pass
Pipes supported	Pass
Wastes and drains **all loo mm with good fallout of slab**	Pass
Water/air **water tested**	Pass
Leak check	Pass
Other	N/A

Kapiti Coast District Council
175 Rimu Road
Private Bag 60601
Paraparaumu 5254
Phone (04) 296 4700

SITE NOTICE

Consent No:	**160124**
Applicant:	**Energy Architecture NZ Ltd**
Site Address:	**3 Bressay Way, Waikanae**
Work Type:	**Foundations for future dwelling.**
Building Category:	**R1**

Inspection Type:	**Pre-Slab Plumbing**
Inspection Outcome:	**Pass**
Inspected By:	**Gareth McCullagh**
Inspection Date:	**23 June 2016**

Passed Items

General

Pipe material	**all pvc and primed and glued**
Pipe protection	**plastic poly wrap**
Plumbing layout	**in for all fixtures with minor change to main bathroom**
Pipes supported	
Wastes and drains	**all loo mm with good fallout of slab**
Water/air	**water tested**
Leak check	

BC 160124

RECEIVED 07 MAR 2016 BY INFORMATION J0066

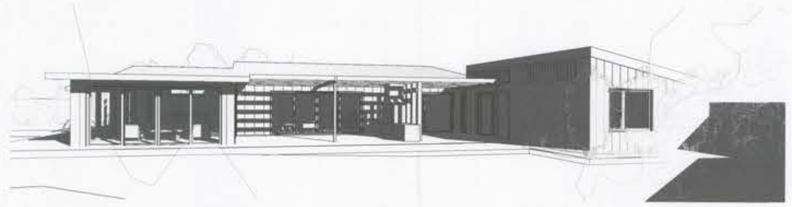
Site Address:	3 bressay way, Waikanae
Legal Description:	Lot 2 DP 476745
Site Area:	0.1773 Ha
Site Coverage:	28% (excluding vehicle ROW)

Building Footprint (Gross Building)
Area
401.8 m²

Property Schedule	
Name	Area
Site - Yards	358.0 m²
Right of Way - Vehicle	354.8 m²
Right of Way - Pedestrian : Drainage Easement	35.9 m²
Right of Way - Pedestrian	44.0 m²
Site - Developable area	980.7 m²
Grand total	1773.4 m²

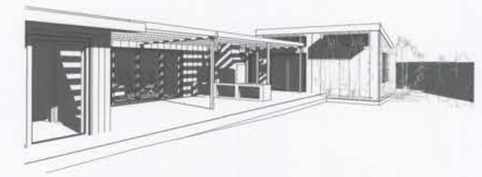
Sheet List

Sheet Number	Sheet Name	Current Revision	Current Revision Date	Current Revision Issued To	Current Revision Description
A000	Drawing Index	A	03/03/2016	COUNCIL	INFORMATION
A100	Site Plan	A	03/03/2016	COUNCIL	INFORMATION
A110	Floor Plan	A	03/03/2016	COUNCIL	INFORMATION
A130	Sections	A	03/03/2016	COUNCIL	INFORMATION
A131	Sections	A	03/03/2016	COUNCIL	INFORMATION
A140	Elevations	A	03/03/2016	COUNCIL	INFORMATION



1 View from North

2 View from East



3 View from North East

4 View from South West

The scope of this Consent is for Slab Only

APPROVED
BY BUILDING
Stuart Nepia
06/04/2016

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

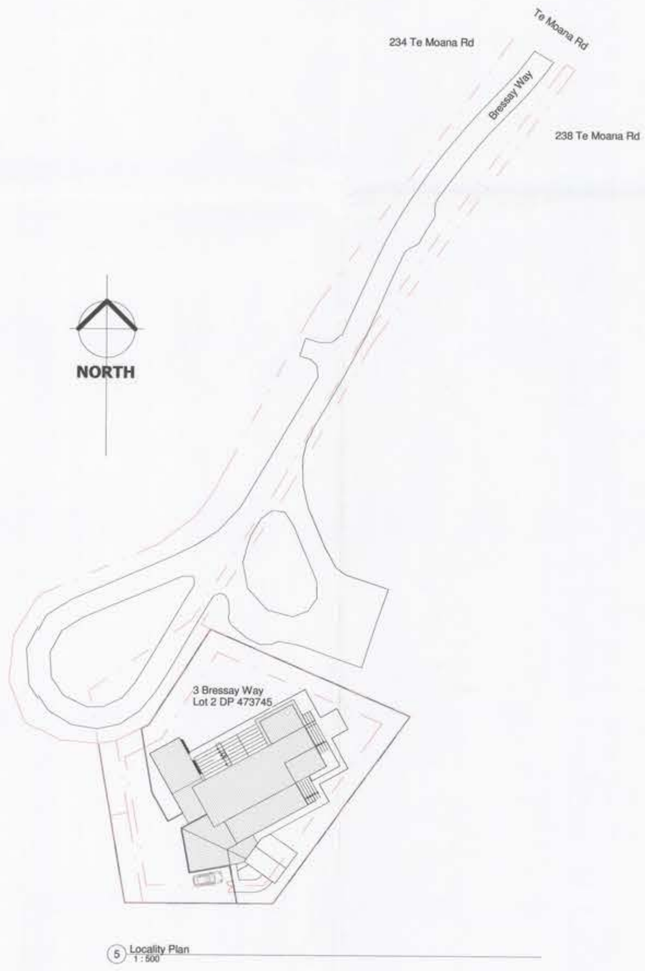
Room Schedule - All rooms	
Name	Area
Conservatory	21.7 m²
Entrance	16.1 m²
Garage	54.4 m²
Guest Bed	15.7 m²
Guest Ensuite	4.2 m²
Hall	17.9 m²
Kitchen/Informal Dining	38.4 m²
Laundry	5.7 m²
Lounge/Formal Dining	40.7 m²
Master Bedroom	18.5 m²
Master Dressing	11.1 m²
Master Ensuite	14.6 m²
Media	24.0 m²
Pantry	6.2 m²
Plant	2.8 m²
Shed	32.1 m²
Storage	1.1 m²
Storage	0.5 m²
Study	13.1 m²
WC	1.9 m²
Grand total	343.4 m²

Room Schedule - Conditioned	
Name	Area
Conservatory	21.7 m²
Entrance	16.1 m²
Guest Bed	15.7 m²
Guest Ensuite	4.2 m²
Hall	17.9 m²
Kitchen/Informal Dining	38.4 m²
Laundry	5.7 m²
Lounge/Formal Dining	40.7 m²
Master Bedroom	18.5 m²
Master Dressing	11.1 m²
Master Ensuite	14.6 m²
Media	24.0 m²
Pantry	6.2 m²
Plant	2.8 m²
Storage	1.1 m²
Storage	0.5 m²
Study	13.1 m²
WC	2.8 m²
Grand total	255.0 m²

ENGINEERS DESIGN
This project contains elements specifically designed by an engineer. The owner/builder is required to ensure the engineer inspects the work and provides KCDC with written evidence of the inspection.

Noisy Equipment
It is the responsibility of the owner to ensure that no work with noisy equipment shall be carried out before 7:30 a.m. or after 6 p.m. Monday to Saturday. During the week there may be workers on site from 6:30 a.m. quietly preparing for work. Work with noisy equipment is not permitted on Sundays or public Holidays.

Endorsements made on any single page apply equally to the entire project.



5 Locality Plan
1 : 500

All work to be in accordance with current NZ Standards unless otherwise noted. Drawings to be read in conjunction with specifications, engineers and other consultant drawings. Engineer's drawings take priority on all structural matters. Contractors shall verify all conditions and dimensions on site and notify Energy Architecture NZ Limited (EANZ) of any dimensional errors, omissions or discrepancies before beginning or fabricating any work. Any changes without the approval of EANZ and/or the local building authority in writing shall void EANZ of all contractual obligations.

APPROVED
BY
PLUMBING
AND
DRAINAGE
Simon C
21/3/2016

Revision Schedule

Ref.	Description	Date
A	INFORMATION	03/03/2016
4	DETAILED DESIGN	09/12/2015
3	DETAILED DESIGN	27/11/2015
2	DETAILED DESIGN	24/11/2015
1	DEVELOPED DESIGN	09/07/2015

ENERGY
ARCHITECTURE NZ LTD
Email: guy@energyarchitecture.co.nz
Web: www.energyarchitecture.co.nz
Mobile: 022 352 6795

Project: No: 1403
3 Bressay Way

Address:
3 Bressay Way
Waikanae 5036

Client: Diane and Ian Christison

Issue Date: 03/03/2016

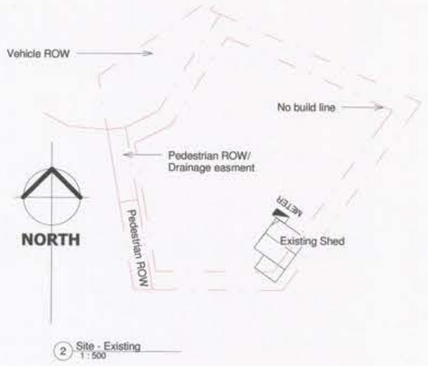
Drawn By: GS

Reduced Scales: 1:100 - x 1.00, 1:50 - x 0.50 Scale: 1 : 500

Drawing Index

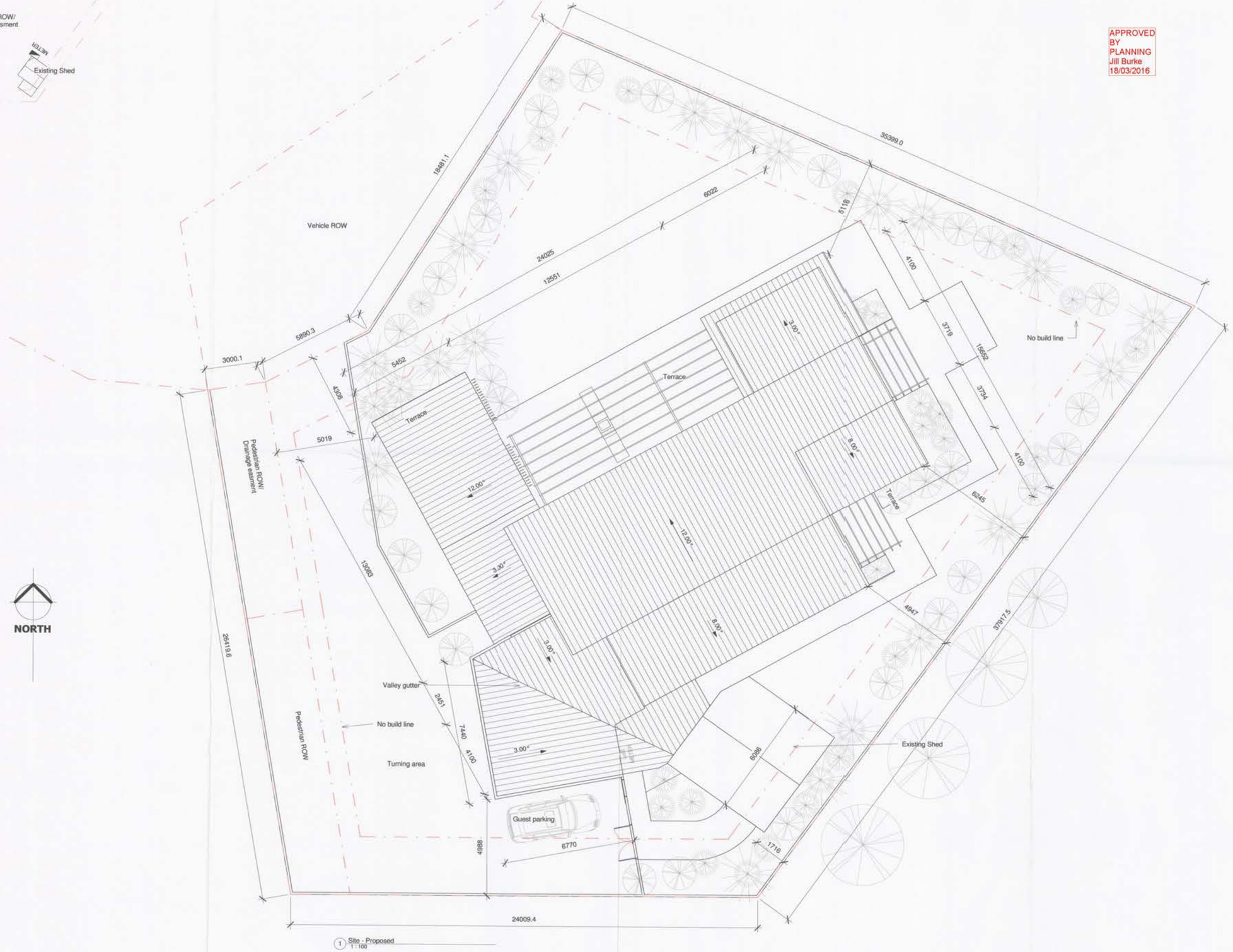
Sheet: A000 A

BC 160124



2 Site - Existing
1 : 500

APPROVED
BY
PLANNING
Jill Burke
18/03/2016



NORTH

1 Site - Proposed
1 : 100

RECEIVED
07 MAR 2016
BY:

INFORMATION

J0005

All work to be in accordance with current NZ Standards unless otherwise noted. Drawings to be read in conjunction with specifications, engineers and other consultant drawings. Engineer's drawings take priority on all structural matters. Contractors shall verify all conditions and dimensions on site and notify Energy Architecture NZ Limited (EANZ) of any dimensional errors, omissions or discrepancies before beginning or fabricating any work. Any changes without the approval of EANZ and/or the local building authority in writing shall void EANZ of all contractual obligations.

Revision Schedule

Ref.	Description	Date
A	INFORMATION	03/03/2016
5	DETAILED DESIGN	09/12/2015
4	DETAILED DESIGN	27/11/2015
3	DETAILED DESIGN	24/11/2015
2	DEVELOPED DESIGN	09/07/2015
1	DEVELOPED DESIGN	24/04/2015

ENERGY
ARCHITECTURE NZ LTD
Email: guy@energyarchitecture.co.nz
Web: www.energyarchitecture.co.nz
Mobile: 022 352 6795

Project: No: 1403
3 Bressay Way

Address:
3 Bressay Way
Waikanae 5036

Client: Diane and Ian Christison

Issue Date: 03/03/2016

Drawn By: GS

Reduced Scales: 1:100 - x 1.00 1:50 - x 0.50

Scale: As indicated

Site Plan

Sheet: A100 A

BC 160124

RECEIVED
07 MAR 2016
BY:

INFORMATION

30004

All work to be in accordance with current NZ Standards unless otherwise noted. Drawings to be read in conjunction with specifications, engineers and other consultant drawings. Engineer's drawings take priority on all structural matters. Contractors shall verify all conditions and dimensions on site and notify Energy Architecture NZ Limited (EANZ) of any dimensional errors, omissions or discrepancies before beginning or fabricating any work. Any changes without the approval of EANZ and/or the local building authority in writing shall void EANZ of all contractual obligations.

Revision Schedule

Ref.	Description	Date
A	INFORMATION	03/03/2016
9	DETAILED DESIGN	09/12/2015
8	DETAILED DESIGN	27/11/2015
7	DETAILED DESIGN	24/11/2015
6	DEVELOPED DESIGN	09/07/2015
5	DEVELOPED DESIGN	01/07/2015
4	DEVELOPED DESIGN	28/05/2015
3	DEVELOPED DESIGN	25/05/2015
2	DEVELOPED DESIGN	09/05/2015
1	DEVELOPED DESIGN	24/04/2015

ENERGY
ARCHITECTURE NZ LTD
Email: guy@energyarchitecture.co.nz
Web: www.energyarchitecture.co.nz
Mobile: 022 352 6795

Project: No: 1403

3 Bressay Way

Address:
3 Bressay Way
Waikanae 5036

Client: Diane and Ian Christison

Issue Date: 03/03/2016

Drawn By: GS

Reduced Scales: 1:100 - x 1.00, 1:50 - x 0.50

Scale: 1 : 50

Floor Plan

Sheet: A110 A

BC 160124

INFORMATION

J0003

All work to be in accordance with current NZ Standards unless otherwise noted. Drawings to be read in conjunction with specifications, engineers and other consultant drawings. Engineer's drawings take priority on all structural matters. Contractors shall verify all conditions and dimensions on site and notify Energy Architecture NZ Limited (EANZ) of any dimensional errors, omissions or discrepancies before beginning or fabricating any work. Any changes without the approval of EANZ and/or the local building authority in writing shall void EANZ of all contractual obligations.

1 Section - Conservatory/Kitchen
1 : 50

2 Section - Lounge/Hall/Guest Ensuite
1 : 50

3 Section - Entrance/Hallway
1 : 50

Revision Schedule

Ref.	Description	Date
A	INFORMATION	03/03/2016
4	DETAILED DESIGN	09/12/2015
3	DETAILED DESIGN	27/11/2015
2	DETAILED DESIGN	24/11/2015
1	DEVELOPED DESIGN	09/07/2015

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Email: guy@energyarchitecture.co.nz
Web: www.energyarchitecture.co.nz
Mobile: 022 352 6795

Project: No: 1403

3 Bressay Way

Address:
3 Bressay Way
Waikanae 5036

Client: Diane and Ian Christison

Issue Date: 03/03/2016

Drawn By: GS

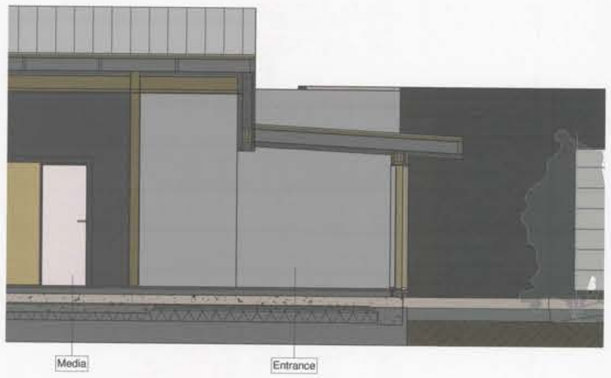
Reduced Scales: 1:100 - x 1.00, 1:50 - x 0.50

Scale: 1 : 50

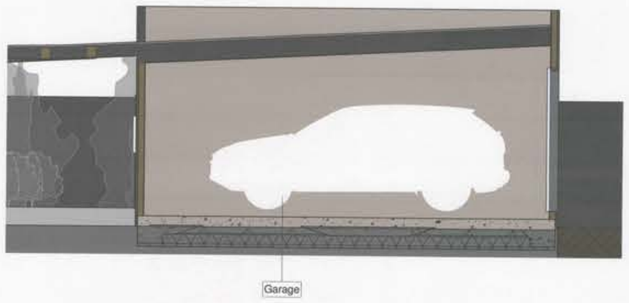
Sections

Sheet: A130 A

BC 160124



1 Section - Entrance
1 : 50



2 Section - Garage
1 : 50

3 Section - Hallway/Pantry/Kitchen
1 : 50

4 Section - Master bedroom
1 : 50

INFORMATION

J0062

All work to be in accordance with current NZ Standards unless otherwise noted. Drawings to be read in conjunction with specifications, engineers and other consultant drawings. Engineer's drawings take priority on all structural matters. Contractors shall verify all conditions and dimensions on site and notify Energy Architecture NZ Limited (EANZ) of any dimensional errors, omissions or discrepancies before beginning or fabricating any work. Any changes without the approval of EANZ and/or the local building authority in writing shall void EANZ of all contractual obligations.

Revision Schedule

Ref.	Description	Date
A	INFORMATION	03/03/2016
4	DETAILED DESIGN	09/12/2015
3	DETAILED DESIGN	27/11/2015
2	DETAILED DESIGN	24/11/2015
1	DEVELOPED DESIGN	09/07/2015

ENERGY
ARCHITECTURE NZ LTD
Email: guy@energyarchitecture.co.nz
Web: www.energyarchitecture.co.nz
Mobile: 022 352 6795

Project: No: 1403
3 Bressay Way

Address:
3 Bressay Way
Waikanae 5036

Client: Diane and Ian Christison

Issue Date: 03/03/2016

Drawn By: GS

Reduced Scales: 1:100 - x 1.00 1:50 - x 0.50 Scale: 1 : 50

Sections

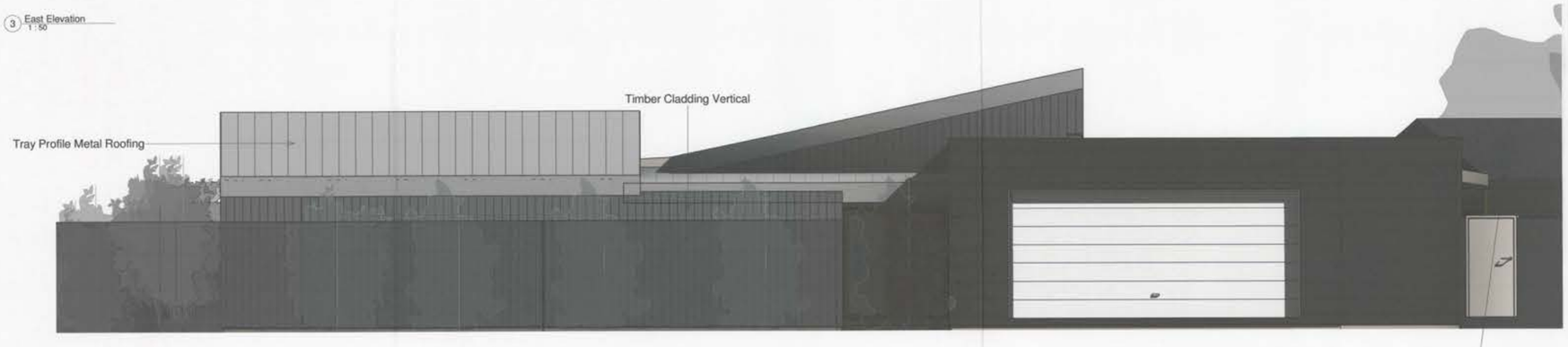
Sheet: A131 A

BC 160124

1 North Elevation
1 : 50

2 South Elevation
1 : 50

3 East Elevation
1 : 50



4 West Elevation
1 : 50

RECEIVED
07 MAR 2016
BY SM1-6

INFORMATION

J0001

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RBW

Revision Schedule

Ref.	Description	Date
A	INFORMATION	03/03/2016
4	DETAILED DESIGN	09/12/2015
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3 Bressay Way

Address:
3 Bressay Way
Waikanae 5036

Client: Diane and Ian Christison

Issue Date: 03/03/2016

Drawn By: GS

Reduced Scales: 1:100 - x 1.00 1:50 - x 0.50

Scale: 1 : 50

Elevations

Sheet: A140 A

BC 160124

J0067

3 Bressay Way
Waikanae 5036

Stage 1 Foundations

for

New House

Drawings	No.	Date & Revision 4.3.16
SPECIFICATION SUMMARY	S0.1	A
FOUNDATION PLAN	S1.1	A
FOUNDATION DETAILS 01	S2.1	A

Issue Date: 4 March 2016

Structural Engineer: Meyers & Associates Ltd

47 Cuba Street, PO Box 24-120, Wellington, Phone 04 472-3198, e-mail: martin@meyers.co.nz

BC 160124

J0068

CONCRETE

** REQUIRED CONCRETE PROPERTIES
THE MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS ARE AS FOLLOWS:

FOUNDATION	25 MPa HIGH GRADE
SLAB ON GRAD	25 MPa HIGH GRADE
SUSPENDED SLAB GRADE	25 MPa HIGH GRADE

** THE MAXIMUM SLUMP VALUES SHALL BE AS FOLLOWS:

WALLS LESS THAN 200 MM THICK	200 MM
WALLS THICKER THAN 200 MM	150 MM
FLOOR SLAB	80 MM

** MAXIMUM SIZE OF POUR
THE MAXIMUM SIZE OF THE POUR OF SLABS SHALL BE LIMITED TO 20.0 METRES ON THE DIAGONAL. TO ALLOW FOR SHRINKAGE TO TAKE PLACE, THREE DAYS SHALL ELAPSE BEFORE THE ADJACENT SECTION OF THE SLAB IS POURED.
THE MAXIMUM LIFT BETWEEN HORIZONTAL CONSTRUCTION JOINTS IS 1.4 METERS.

** CONSTRUCTION JOINTS
MAKE AS FEW CONSTRUCTION JOINTS AS POSSIBLE BEFORE PLACING FRESH CONCRETE THOROUGHLY ROUGHEN CONCRETE SURFACE AND CLEAN FREE FROM LAITANCE AND DIRT. KEEP THE EXISTING CONCRETE SURFACE CONTINUOUSLY WET FOR 24 HOURS PRIOR TO PLACING FRESH CONCRETE.

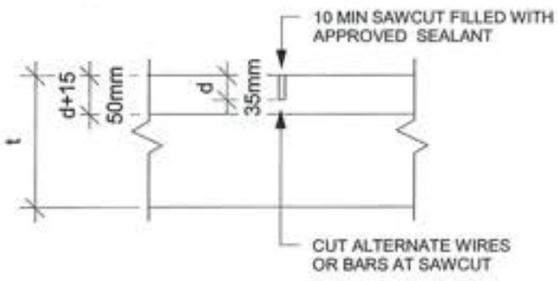
THE CUTTING OF SAWN JOINTS IN THE FLOOR SLAB SHALL BE DONE NO LATER THAN 36 HOURS AFTER THE SLAB HAS BEEN POURED.

** WEATHER PROTECTION
SHOULD RAIN OCCUR DURING A POUR PROTECT THE WORK UNTIL THE CONCRETE HAS SET TO A STAGE WHERE IT DOES NOT LEACH.
PROTECT NEW WORK FROM HOT OR COLD WEATHER, FROM DIRECT SUNSHINE AND FROM DRYING WINDS.

** CURING
IMMEDIATELY AFTER PLACEMENT CONCRETE SHALL BE PROTECTED FROM PREMATURE DRYING. ONE OF THE FOLLOWING METHODS MAY BE USED ON THE CONCRETE FINISHING OPERATIONS:
- PONDING OR CONTINUOUS SPRINKLING
- APPLICATION OF ABSORPTIVE MATS OR A LAYER OF SAND WHICH ARE MAINTAINED CONTINUOUSLY WET.
- COVERING WITH AN IMPERMEABLE SHEET SUCH AS POLYTHENE TO PREVENT UNDUE LOSS OF MOISTURE

** REMOVAL OF FORMWORK
THE MINIMUM TIME TO BE ALLOWED BEFORE FORMWORK IS STRIPPED SHALL BE AS FOLLOWS:
SIDES OF BEAMS, WALLS, COLUMNS 12 HOURS

** SAWCUTTING OF SLAB ON GRADE
SAWCUT TO BE COMMENCED AS SOON AS POSSIBLE AFTER CONCRETE HAS HARDENED SUFFICIENTLY TO PREVENT RAGGED EDGES WITH A MINIMUM OF 24 HOURS AND A MAXIMUM OF 3 DAYS



SAWCUT JOINT (SJ)

STEEL REINFORCEMENT

**SCOPE
CONCRETE SHALL BE REINFORCED WITH THE DRAWINGS AND AS SPECIFIED

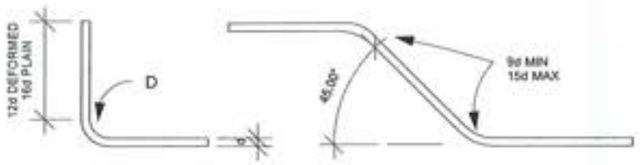
** STEEL
PLAIN OR DEFORMED GRADE 300 OR 500 MPa REINFOREMENT SHALL COMPLY WITH AS/ NZS 4671:2001. HRC MESH SHALL COMPLY WITH AS/NZS 4671:2001

** DESIGNATION
BAR DIAMETERS ARE GIVEN IN MM
R INDICATES ROUND BARS OF GRADE 300 MPa
D INDICATES DEFORMED BARS OF GRADE 300 MPa
HD INDICATES DEFORMED BARS OF GRADE 500 MPa (SEISMIC 500E/ MA) - MICRO ALLOYED

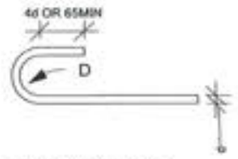
** LAP LENGTHS
WHERE THE LAP LENGTHS ARE NOT SHOWN ON THE DRAWINGS THE FOLLOWING LAP LENGTHS SHALL BE USED:

GRADE 300 DEFORMED BARS	LAP LENGTH = 45*BAR DIAMETER
GRADE 500E	LAP LENGTH = 65*BAR DIAMETER
GRADE 300 ROUND BARS	LAP LENGTH = 90*BAR DIAMETER
GRADE 500E ROUND BARS	LAP LENGTH = 130*BAR DIAMETER

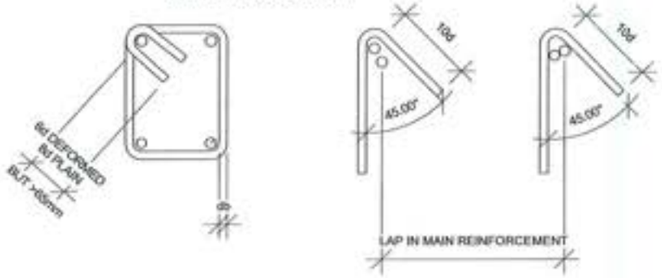
** BENDS ANCHORAGE AND TIE DIMENSIONAL REQUIREMENTS



BENDS & ANCHORAGE



STANDARD HOOK



TIES FOR BEAMS AND COLUMNS

MINIMUM D OF BENDS (INSIDE FACE)			
BAR SIZE	D&DH BARS	BEAM & COLUMN TIES	
		PLAIN	DEFORMED
6-20	5d	2d	4d
20-40	6d	3d	6d

** CONCRETE COVER REQUIREMENTS TO REINFORCEMENT
* INCREASE BY 10MM WHERE BARS ARE 20MM OR LARGER

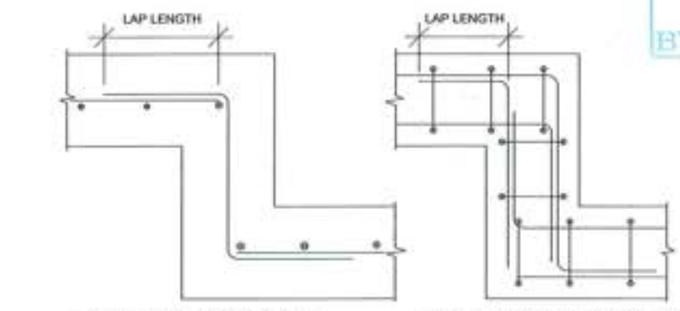
MEMBER	IN CONTACT WITH GROUND		ABOVE GROUND LEVEL		
	CAST AGAINST GROUND	AGAINST APP'D BOXING, SITE CONCRETE	EXPOSED TO WEATHER & UNPLASTERED	EXPOSED TO WEATHER & PLASTERED	NOT EXPOSED TO WEATHER
FOOTINGS	75	50			
BEAM & COLUMN:					
PRINCIPAL REINF.	75	50	50	40	40
SECONDARY REINF.	75	40	40	25	25
SLABS *	75	40	40	30	25
WALLS *	75	40	40	30	25

INSPECTIONS

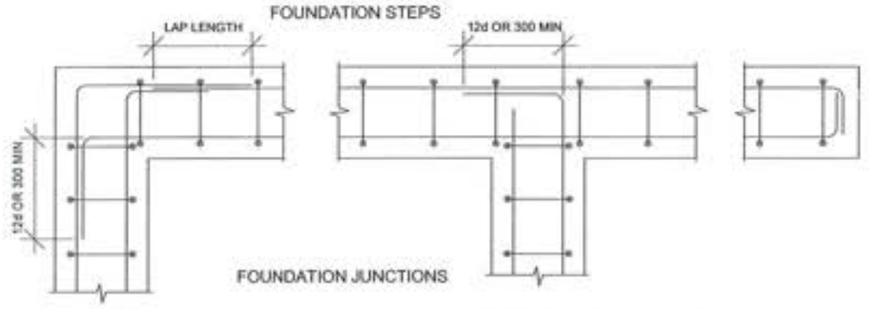
THE ENGINEER IS TO BE ADVISED 48 HOURS BEFORE INSPECTION NEEDED. ENGINER TO INSPECT ALL STRUCTURAL CONCRETE WORK BEFORE POURING.

INSPECTIONS INCLUDE:

AT COMPLETION OF EXCAVATION
AT COMPLETION OF BACKFILLING
AT PREPARATION OF FOUNDATIONS & FLOOR SLAB
AT START OF DRIVING OF PILES



SINGLE LAYER REINFORCING DOUBLE LAYER REINFORCING



PILING

** PILES

ALL PILES SHALL DE DRIVEN TIMBER PILES WITH A SMALL END DIAMETER (S.E.D) OF 175mm MINIMUM.

ALL PILES SHALL HAVE A MINIMUM PRESERVATION TREATMENT OF H5.

ALL PILES SHALL HAVE A MINIMUM DENSITY OF 350KG/M3.

** PILES CAPACITIES

ALL PILES SHALL BE DRIVEN TO ACHIEVE THE FOLLOWING AXIAL LOAD CAPACITIES:
WORKING LOAD CAPACITY = 5 TONNES
ULTIMATE LOAD CAPACITY = 10 TONNES
FAILURE LOAD CAPACITY = 15 TONNES

** PILE DRIVING RECORDS

THE PILE DRIVING CONTRACTOR SHALL KEEP PILE DRIVING RECORDS FOR ALL THE DRIVEN PILES. INFORMATION TO BE RECORDED SHALL INCLUDE:
LENGTH OF PILE USED AT EACH LOCATION
WEIGHT OF HAMMER
LENGTH OF DROP OF HAMMER
FINAL SET OF OF PILE
FINAL DEPTH OF PILE BELOW GROUND

Project:
New House
Address:
3 Bressay Way
Waikanae 5036

Client:
Diane and Ian Christison

Description:
Stage 1 Foundations

Project Structural Engineer:
Meyers & Associates Ltd
47 CUBA STREET, WELLINGTON
PH 04 473-3198, FAX 04 473-0456

Verification of dimensions:
THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON SITE. ANY DISCREPENCY TO THIS DRAWING MUST BE REFERED TO THE ARCHITECT FOR CLARIFICATION PRIOR TO MANUFACTURE OF CONSTRUCTION

Drawing:
SPECIFICATION SUMMARY

Drawn Scale:	Original Sheet Size:
NOT TO SCALE	A3

Drawn By:	Checked By:	Date:
B.B	M.M	4/03/16

Job Number:	Drawing No.	Revision:
2478	S0.1	A

BC 160124

J0009

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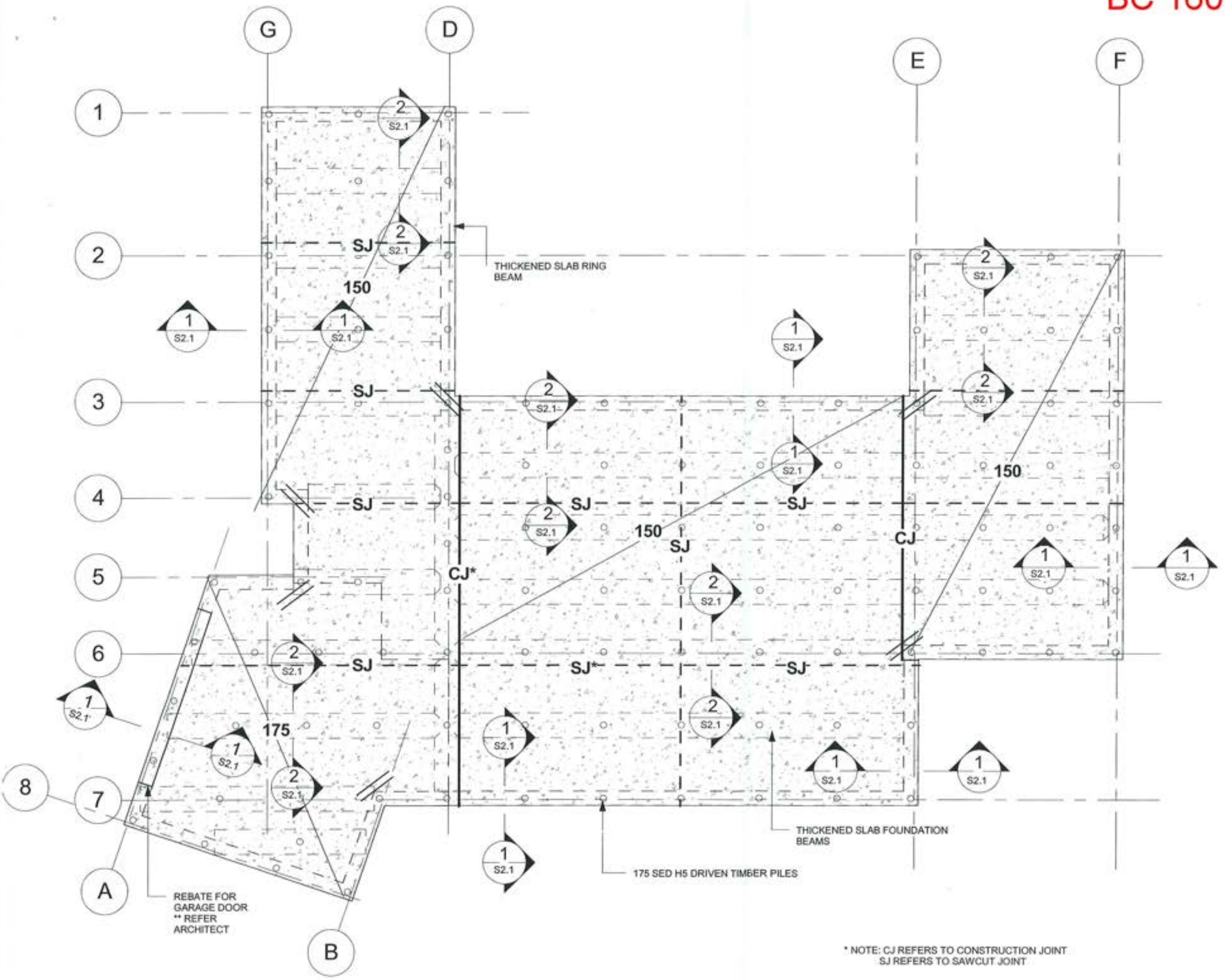

* NOTE: CJ REFERS TO CONSTRUCTION JOINT
SJ REFERS TO SAWCUT JOINT

** NOTE: REFER TO ARCHITECT FOR CONCRETE REBATE SETOUT

Project:
New House
Address:
3 Bressay Way
Waikanae 5036

Client:
Diane and Ian Christison

Description:
Stage 1 Foundations

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47 CUBA STREET, WELLINGTON
PH 04 473-3198, FAX 04 473-0456

Verification of dimensions:
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Copyright:

Drawing:
FOUNDATION PLAN

Drawn Scale:	Original Sheet Size:
1 : 100	A3

Drawn By:	Checked By:	Date:
B.B	M.M	4/03/16

Job Number:	Drawing No:	Revision:
2478	S1.1	A

BC 160124

J0010

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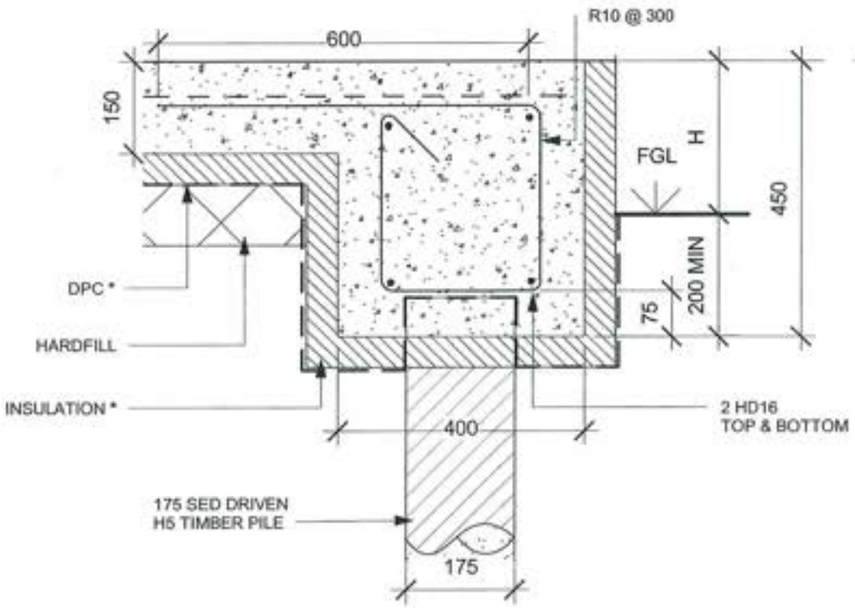
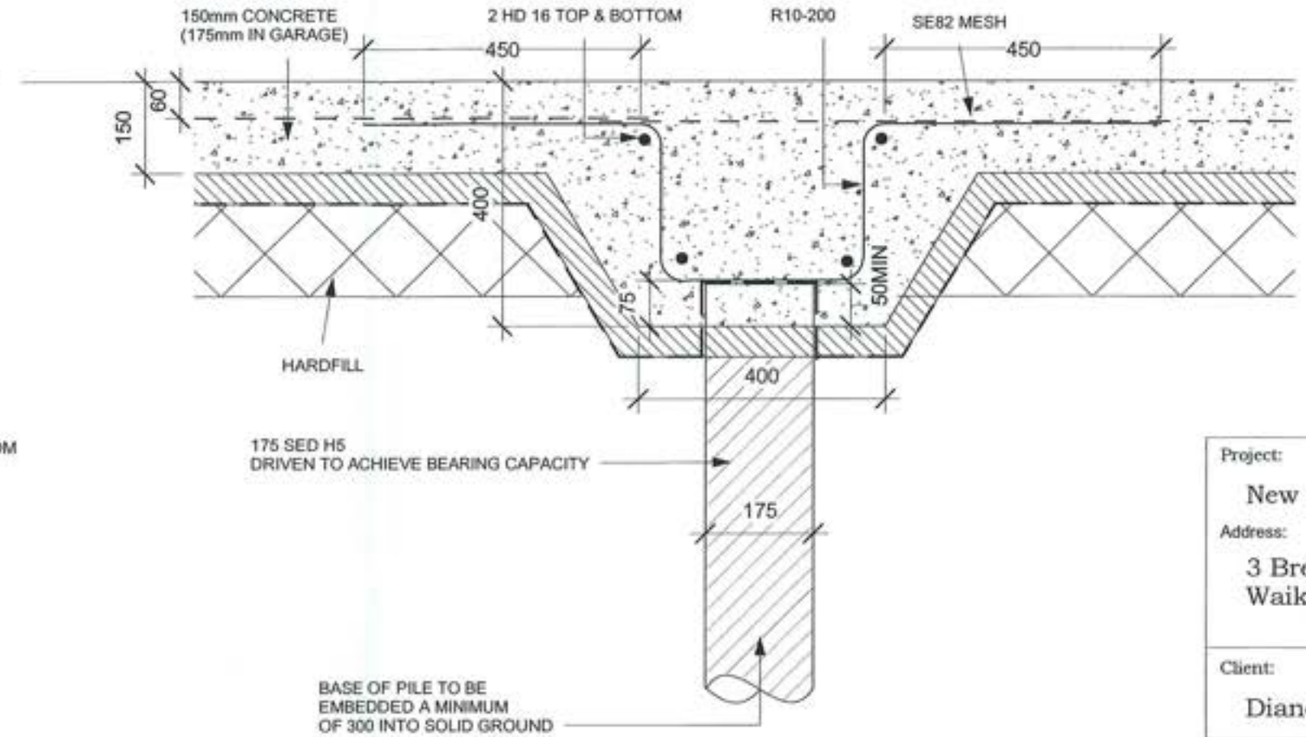
07 MAR 2016



1 SECTION 1-1
1 : 10



* NOTE: REFER TO ARCHITECT FOR
DPC & INSULATION

** NOTE: MESH TO BE DRAPED TO GIVE 60mm COVER
OFF BOTTOM AT MIDSPAN

2 SECTION 2-2
1 : 10

Project:
New House
Address:
3 Bressay Way
Waikanae 5036

Client:
Diane and Ian Christison

Description:
Stage 1 Foundations

Project Structural Engineer:

Meyers & Associates Ltd
47 CUBA STREET, WELLINGTON
PH 04 473-3198, FAX 04 473-0456

Verification of dimensions:
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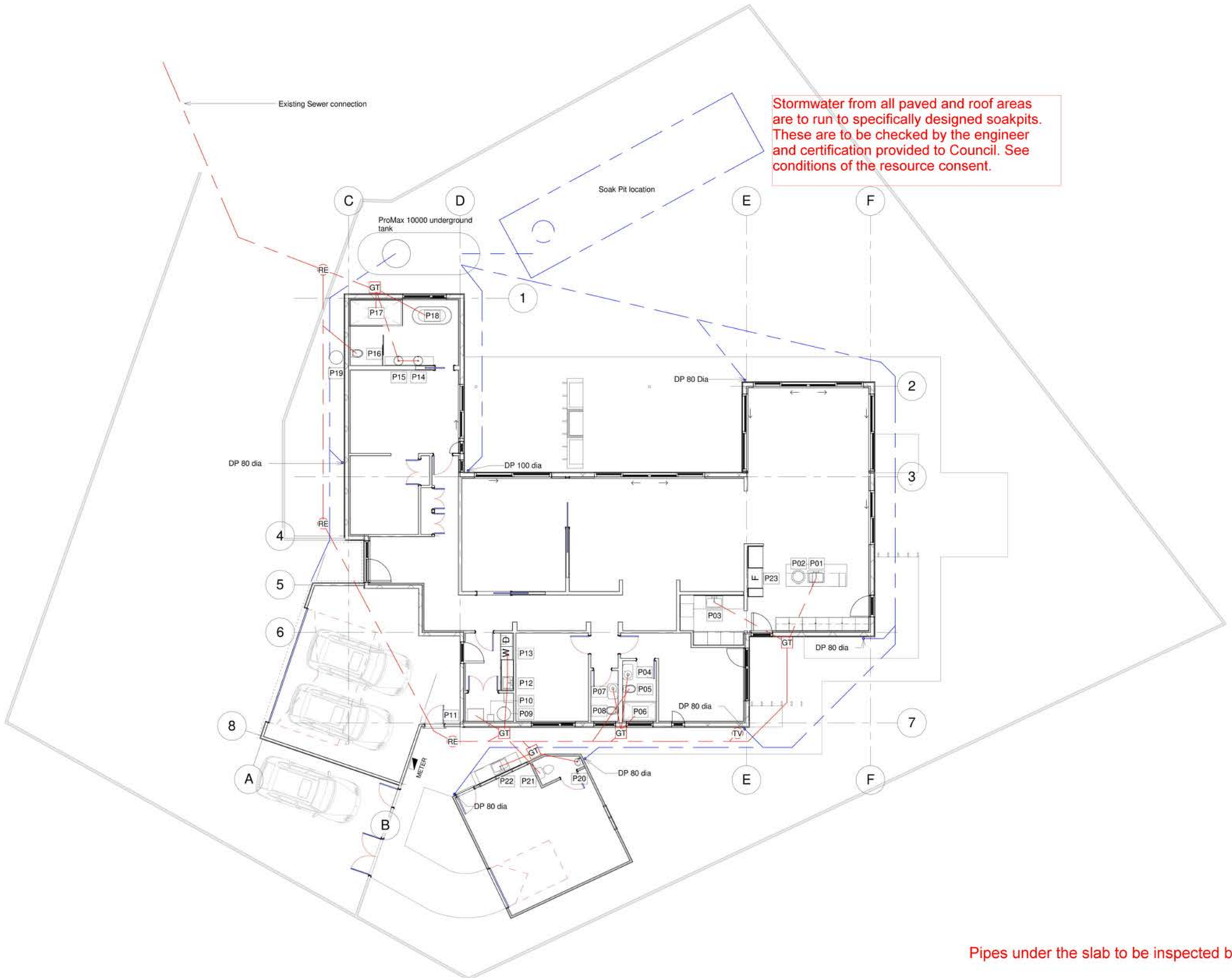
Drawing:
FOUNDATION DETAILS 01

Drawn Scale:	Original Sheet Size:
1 : 10	A3

Drawn By:	Checked By:	Date:
B.B	M.M	4/03/16

Job Number:	Drawing No:	Revision:
2478	S2.1	A



Pipes under the slab to be inspected before covering.

Plumbing Legend

- Sewer Pipe
- Storm water pipe
- Threshold drain
- GT Gully Trap
- RE Rodding Eye
- TV Terminal vent

Plumbing Fixture Schedule

Mark	Family	Comments
P01	Sink Kitchen-Single (NZ)	Connection to GT. AAV
P02	Water Heater (NZ)	
P03	Sink Kitchen-Single (NZ)	Connection to GT. AAV
P04	Wall Basin RH Shelf	Connection to GT
P05	Wall hung toilet	S-Trap to Main Drain
P06	Shower	Connection to GT
P07	Wall Basin RH Shelf	Connection to GT
P08	Wall hung toilet	S-Trap to Main Drain
P09	Water Heater (NZ)	
P10	Generic Plumbing item	Water Filter
P12	M_Sink Kitchen-Island	Connection to GT
P13	Washing Machine	Connect to laundry tub
P14	Above Counter Wash Hand Basin	Connection to GT. AAV
P15	Above Counter Wash Hand Basin	Connection to GT. AAV
P16	Wall hung toilet	S-Trap to Main Drain
P17	Shower	Connection to GT
P18	AURA 1800 FREESTANDING BATH	Connection to GT
P19	Water Heater (NZ)	
P20	Basin-Small (UK)	Connection to GT
P21	Toilet-Domestic (M)	S-Trap to Main Drain
P22	Sink Kitchen-Single (NZ)	Connection to GT. AAV
P23	Refrigerator	Cold water connection
P24	ProMax 10000 underground tank	

COSTING

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APPROVED BY PLUMBING AND DRAINAGE Simon C 21/3/2016

Revision Schedule

Ref.	Description	Date
A	COSTING	17/03/2016

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

ENERGY ARCHITECTURE NZ LTD
Email: guy@energyarchitecture.co.nz
Web: www.energyarchitecture.co.nz
Mobile: 022 352 6795

Project: No: 1403
3 Bressay Way

Address:
3 Bressay Way
Waikanae 5036

Client: Diane and Ian Christison

Issue Date: 17/03/2016

Drawn By: Author

Reduced Scales: 1:100 - x 1.00, 1:50 - x 0.50

Scale: As indicated

Plumbing and Drainage

Sheet: A121 A

Cuttriss
Land Surveyors, Engineers & Resource Managers

J0011

RECEIVED
07 MAR 2016
BY:

SOIL TEST REPORT

LOTS 1-6 BEING
A SUBDIVISION OF
LOT 24 DP 18250
236 TE MOANA ROAD
WAIKANAE

Client: The Shetland Trust

Job Number: 21105

MARCH 2014

Cuttriss Consultants Ltd

PO Box 30 429 3rd Crest House 94 Queens Drive LOWER HUTT
Telephone 0-4-939 9245 Fax 0-4-939 9245 Email hutt@cuttriss.co.nz

PO Box 386 33 Kapiti Road PARAPARAUMU
Telephone 0-4-904 5420 Fax 0-4-904 5423 Email kapiti@cuttriss.co.nz

Cuttriss
Land Surveyors, Engineers & Planners

Cuttriss Consultants Limited
Hutt Valley, Wellington, Kapiti Coast
PO Box 386
33 Kapiti Road
Paraparaumu
Tel: 04-904 5420
Fax: 04-904 5423
Email: kapiti@cuttriss.co.nz

ref: Mitchell/21105

13 March 2014

Subdivision Engineer
Kapiti Coast District Council
Private Bag 60 601
PARAPARAUMU

Attention: Joey Narvasa

Dear Joey

SOIL TEST REPORT – LOTS 1-6 BEING A SUBDIVISION OF LOT 24 DP 18250
236 TE MOANA ROAD, WAIKANAE

Following the engagement of our services for subdividing the above site, we have carried out soils tests in accordance with Condition 9 of RM130142 and we detail our findings and report below.

PREAMBLE

This report has been prepared to provide indicative findings on the ground conditions likely to be encountered during the construction of new dwellings on Lots 2 to 6 at the above address, and to comply with consent conditions 9 of RM 130142. It is noted that an existing dwelling lies with proposed Lot 1.

At the time of testing house locations were not known. 2 Scala Penetrometer tests and 1 Hand Auger test were carried out on lots 2 to 6.

DOCUMENTS

Refer to the enclosed plan, general photos of the site and test record sheets. The plan shows the positions of the tests undertaken and the test sheets record the results of the scala penetrometer tests to the depths shown.

LOCATION

The site is a residential property located on Te Moana Road between Nimmo Avenue West and Greenaway Road. The site abuts residential properties on most boundaries, with the southern boundary adjacent to land administered by the Regional Council.

TOPOGRAPHY

The site has an area of 1.4342 hectares and contains a substantial residential dwelling situated on the eastern portion of the site.

Apart from the dwelling the balance of the site consists of open lawns containing a number of substantial trees including trees along all the property boundaries. There is a garden shed in the south-east corner of the site, within proposed Lot 2. The site is generally flat with slight undulations and a slight fall from east to west.

TESTING

Two Scala Penetrometer tests have been taken on each site which locations are shown on the enclosed plan. These tests have been carried out to give an indicative result of the depths to firm material for the construction of a new dwelling.

1 Hand Auger test was undertaken at each site down to 1m below ground level. The water table was not encountered at any of the test locations

Depths to firm material between the test locations, shown on the plan within this report, may vary to those depths tabled in this report.

From NZS3604:2011 and our experience in silt conditions, penetrometer test results of five blows per 100mm are considered indicative of soils of adequate bearing strength for light timber framed buildings not requiring specific design foundations. NZS3604:2011 states that "the soil below the underside of the foundations shall be assumed to have an ultimate bearing capacity of not less than 300kPa when the number of blows per 100mm depth of penetration below the underside of the proposed footing at each test site exceeds:-

(i) five down to a depth equal to twice the width of the widest footing below the underside of the proposed footing or;
(ii) three at greater depths."

RESULTS

The test results are tabulated and summarised below under:-

1. Test — The test number on our test sheets
2. Predominant Soils — The main ground condition at each test.
3. Location — The location as shown on our plan
4. Depths — The depth in millimetres at which 5 blows per 100mm was recorded and is considered likely to comply with NZS3604:2011 (five blows per 100mm down to a depth equal to twice the width of the widest footing below the underside of the proposed footing or three blows per 100mm at greater depth)

TEST NO.	PREDOMINANT SOIL	LOCATION	DEPTHS TO FIRM MATERIAL (mm) (from existing ground level)*
A	silt	as shown on attached plan	0
B	sand		Not encountered
C	silt		1200
D	silt		1200
E	silt		1200
F	silt		1700
G	silt		1700
H	silt		1400
I	silt		Not encountered
J	silt		Not encountered

Note – when testing at increased depths interpolation of scala penetrometer results is required due to the increased frictional resistance on the sides of the penetrometer rods, although this is generally more prevalent in clay conditions.

* Firm material has been assessed at these depths based on interpolation of the test results and reference has also been made to clause 3.3.7 1(b)(iii) of NZS 3604:2011.

CONCLUSION

This report has been prepared for an indication of the likely ground conditions that will be encountered during the construction of a new dwellings located at 236 Te Moana Road, Waikanae and does not remove the necessity for further tests to be carried out if required.

As underlying silt material is indicated at the scala tests down to the depths shown in the column above, and is likely in all possible house positions within the immediate testing area, the site in the vicinity of the tests taken is suitable for the erection of light timber framed building in accordance with NZS3604:2011, provided the foundations are specifically designed, and subject to the following recommendations.

RECOMMENDATIONS

Our following recommendations are:

1. The test locations in this report give an indicative result of the depths to firm material. Additional scala penetrometer tests may be required, as results may vary between tests taken and vary outside the area tested to determine depth to firm material for any proposed dwelling.

2. Piles, poles, rails and foundations be taken down into firm material to such depths as may be calculated depending upon the design of the proposed dwelling by a suitably competent and qualified Engineer.

3. All topsoil and surface vegetation shall be removed from the proposed development site prior to a concrete slab construction and/or after piling.

4. That all foundations be subject to the normal inspections.

5. Due to the size of the proposed lots and variance in the test results a consent notice should be issued for lots 1 to 6 requiring further site investigation (to confirm foundation design) once the location of any new dwelling is known.

Prepared by:

Nick Mitchell
Civil Designer

Reviewed and Approved by:

Neil Johnstone
Chartered Professional Engineer

Soil Test Results & Test Location Plan

Cuttriss
Land Surveyors, Engineers & Resource Managers

Cuttriss Consultants Limited
Hutt Valley, Wellington, Kapiti Coast

PARAPARAUMU OFFICE

CLIENT The Shetland Trust
JOB NO. 21105
DATE
SHEET 1 of 12 SHEETS

SITE ADD 236 Te Moana Rd
LOCALITY
FIELDWORK NM

Existing GL	A	Diff	B	Diff	C	Diff	D	Diff	E	Diff	F	Diff	G	Diff	H	Diff
100	7	7	2	2	4	4	2	2	1.5	2	4	4	2	2	3	3
200	16	9	5	3	12	8	4	2	3	2	8	4	6	4	7	4
300	32	16	8	3	15	3	6	2	5	2	12	4	10	4	10	3
400	50	18	10	2	19	4	9	3	7	2	16	4	15	5	12.5	3
500	70	20	12	2	22	3	13	4	16	9	20	4	21	6	15	3
600	98	28	15	3	24	2	17	4	26	10	24	4	25	4	23	8
700			17	2	26	2	19	2	35	9	28	4	27	2	28	5
800			19	2	29	3	21	2	37.5	3	32	4	29	2	33	5
900			20	1	31	2	22	1	39	2	34	2	31	2	37	4
1000			22	2	35	4	24	2	41	2	37	3	35	4	41	4
1100			24	2	39	4	26	2	43	2	39	2	39	4	45	4
1200			27	3	47	8	31	5	48	5	42	3	44	5	49	4
1300			30	3	53	6	37	6	60	12	45	3	49	5	53	4
1400			32	2	59	6	45	8	70	10	48	3	53	4	58	5
1500			36	4	64	5	60	15	90	20	50	2	57	4	61	3
1600			39	3	75	11	71	11			52	2	60	3	65	4
1700			43	4	88	13	79	8			63	11	66	6	68	3
1800			47	4	101	13	82	3			77	14	76	10	72	4
1900			51	4	115	14	87	5			96	19	89	13	76	4
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2100																
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3500																

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Hutt Valley, Wellington, Kapiti Coast

PARAPARAUMU OFFICE

CLIENT The Shetland Trust
JOB NO. 21105
DATE
SHEET 2 of 12 SHEETS

SITE ADD 236 Te Moana Rd
LOCALITY
FIELDWORK NM

Existing GL	I	Diff	J	Diff		Diff		Diff		Diff		Diff		Diff		Diff
100	2	2	7	7												
200	6	4	14	7												
300	12	6	20	6												
400	18	6	25	5												
500	23	5	30	5												
600	27	4	33	3												
700	30	3	36	3												
800	32	2	38	2												
900	34	2	40	2												
1000	36	2	42	2												
1100	38	2	44	2												
1200	41	3	46	2												
1300	43	2	48	2												
1400	45	2	51	3												
1500	49	4	54	3												
1600	53	4	56	2												
1700	57	4	58	2												
1800	60	3	61	3												
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3400																
3500																

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CLIENT The Shetland Trust
JOB NO. 21105
DATE 9/12/2013
SHEET 3 of 12 SHEETS

Scala ID A
SITE ADD 236 Te Moana Rd
LOCALITY See plan
FIELDWORK NM

Depth (mm)	Blows (no.)	Depth (mm)	Blows (no.)
100	7		
200	9		
300	16		
400	18		
500	20		
600	28		
700			
800			
900			
1000			
1100			
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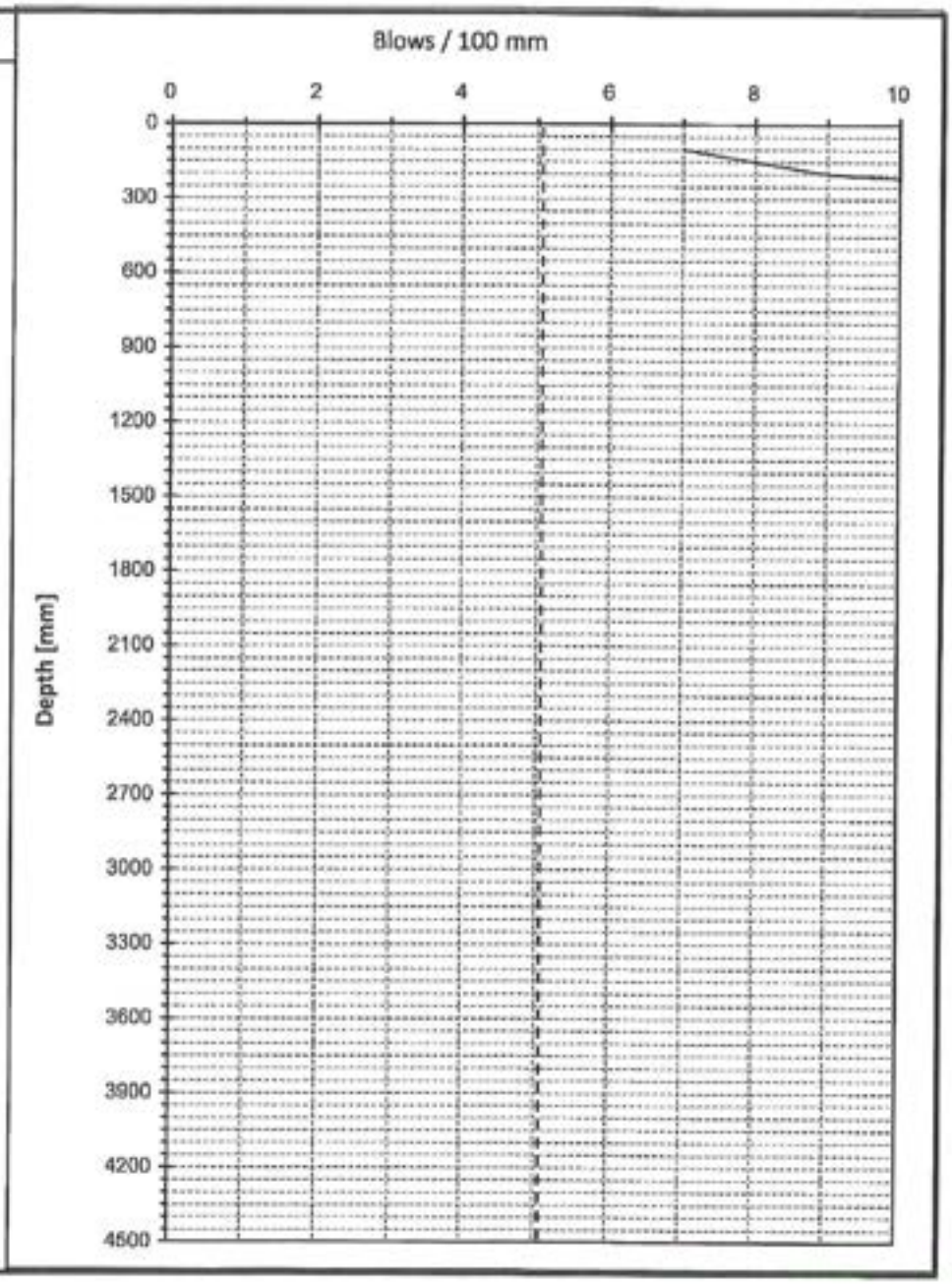

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CLIENT The Shetland Trust
JOB NO. 21105
DATE 9/12/2013
SHEET 4 of 12 SHEETS

Scala ID B
SITE ADD 236 Te Moana Rd
LOCALITY See plan
FIELDWORK NM

Depth (mm)	Blows (no.)	Depth (mm)	Blows (no.)
100	2		
200	3		
300	3		
400	2		
500	2		
600	3		
700	2		
800	2		
900	1		
1000	2		
1100	2		
1200	3		
1300	3		
1400	2		
1500	4		
1600	3		
1700	4		
1800	4		
1900	4		
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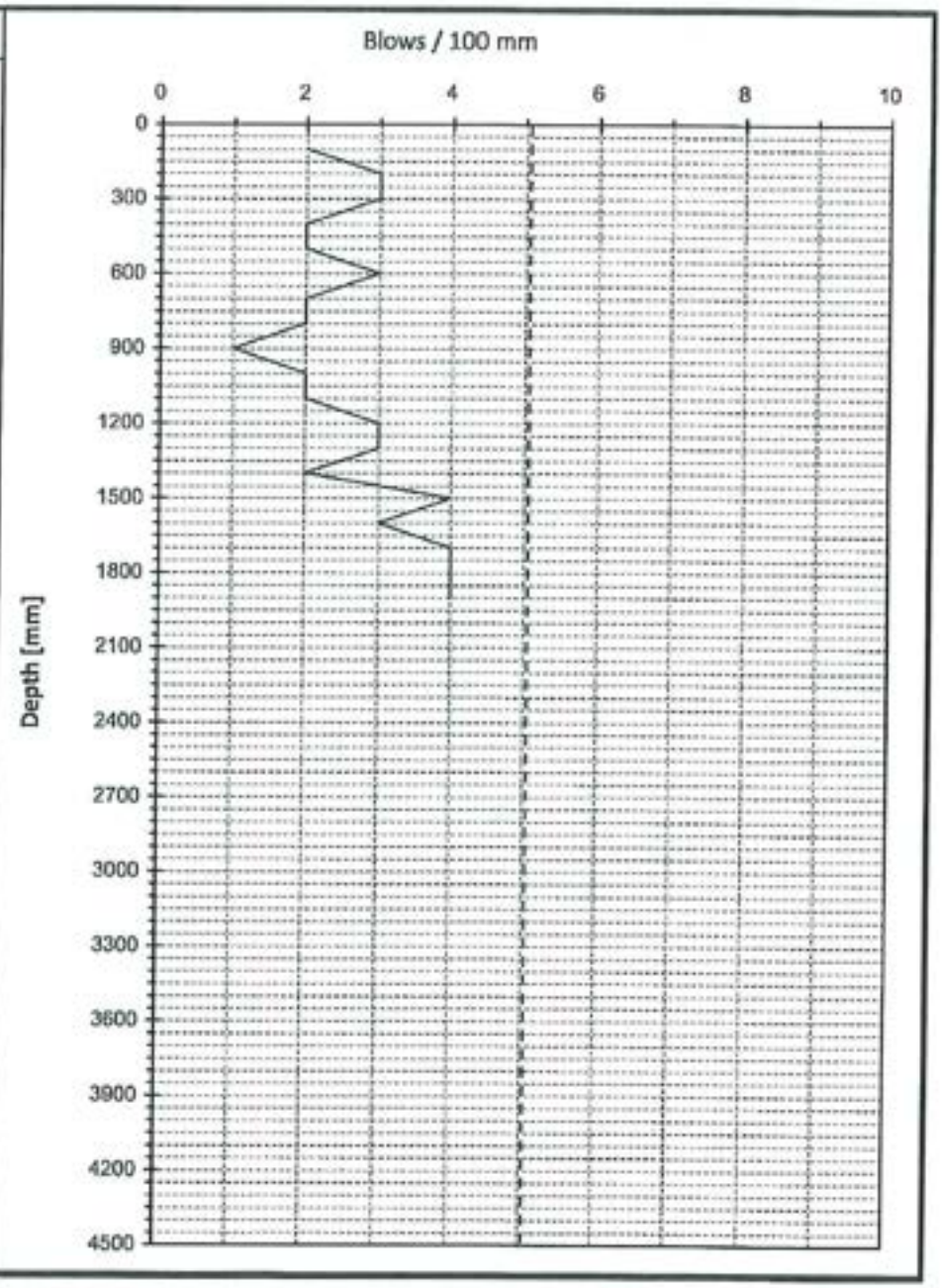

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CLIENT The Shetland Trust
JOB NO. 21105
DATE 9/12/2013
SHEET 5 of 12 SHEETS

Scala ID C
SITE ADD 236 Te Moana Rd
LOCALITY See plan
FIELDWORK NM

Depth (mm)	Blows (no.)	Depth (mm)	Blows (no.)
100	4		
200	8		
300	3		
400	4		
500	3		
600	2		
700	2		
800	3		
900	2		
1000	4		
1100	4		
1200	8		
1300	6		
1400	6		
1500	5		
1600	11		
1700	13		
1800	13		
1900	14		
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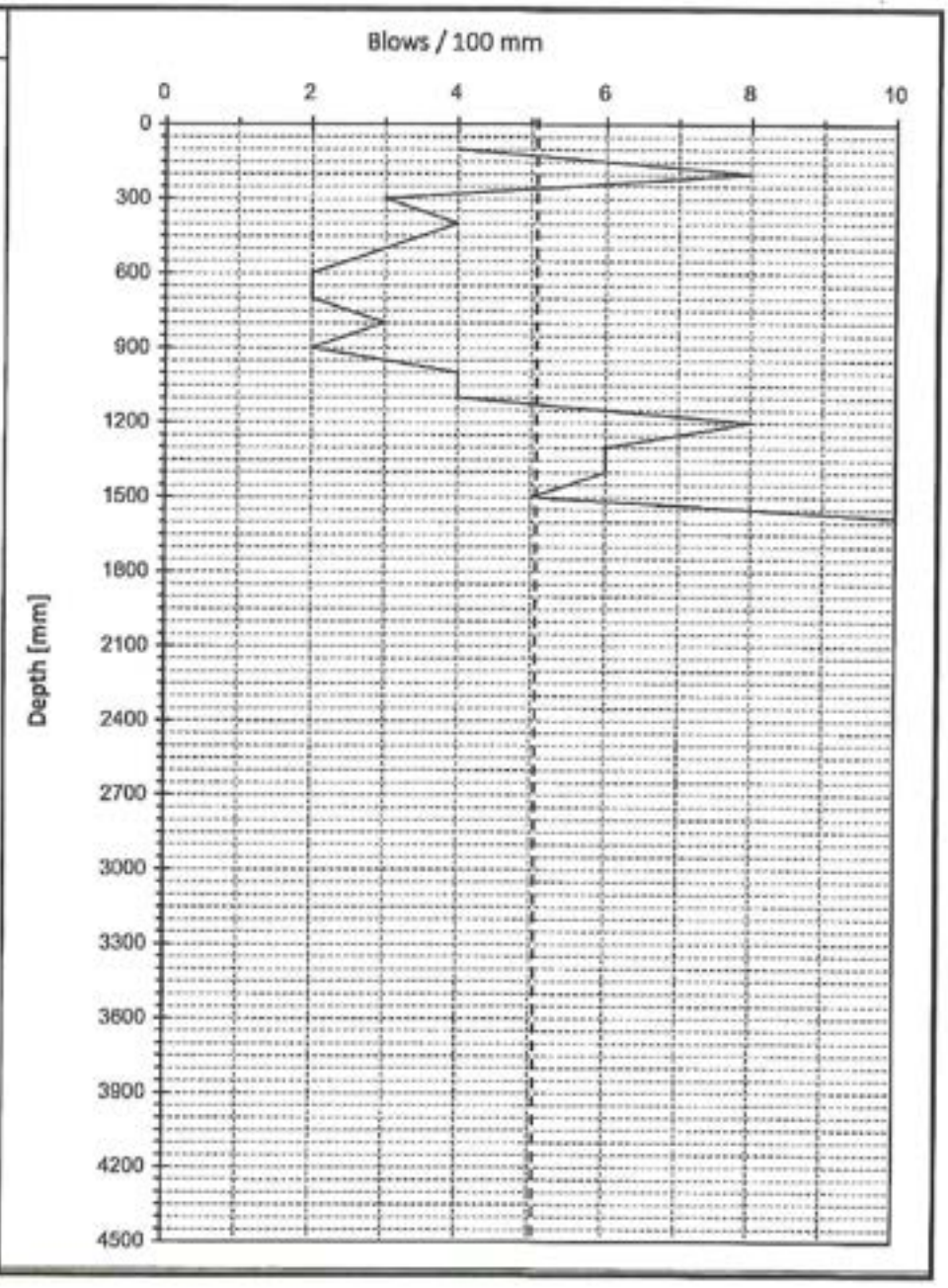

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JOB NO. 21105
DATE 9/12/2013
SHEET 6 of 12 SHEETS

Scala ID D
SITE ADD 236 Te Moana Rd
LOCALITY See plan
FIELDWORK NM

Depth (mm)	Blows (no.)	Depth (mm)	Blows (no.)
100	2		
200	2		
300	2		
400	3		
500	4		
600	4		
700	2		
800	2		
900	1		
1000	2		
1100	2		
1200	5		
1300	6		
1400	8		
1500	15		
1600	11		
1700	8		
1800	3		
1900	5		
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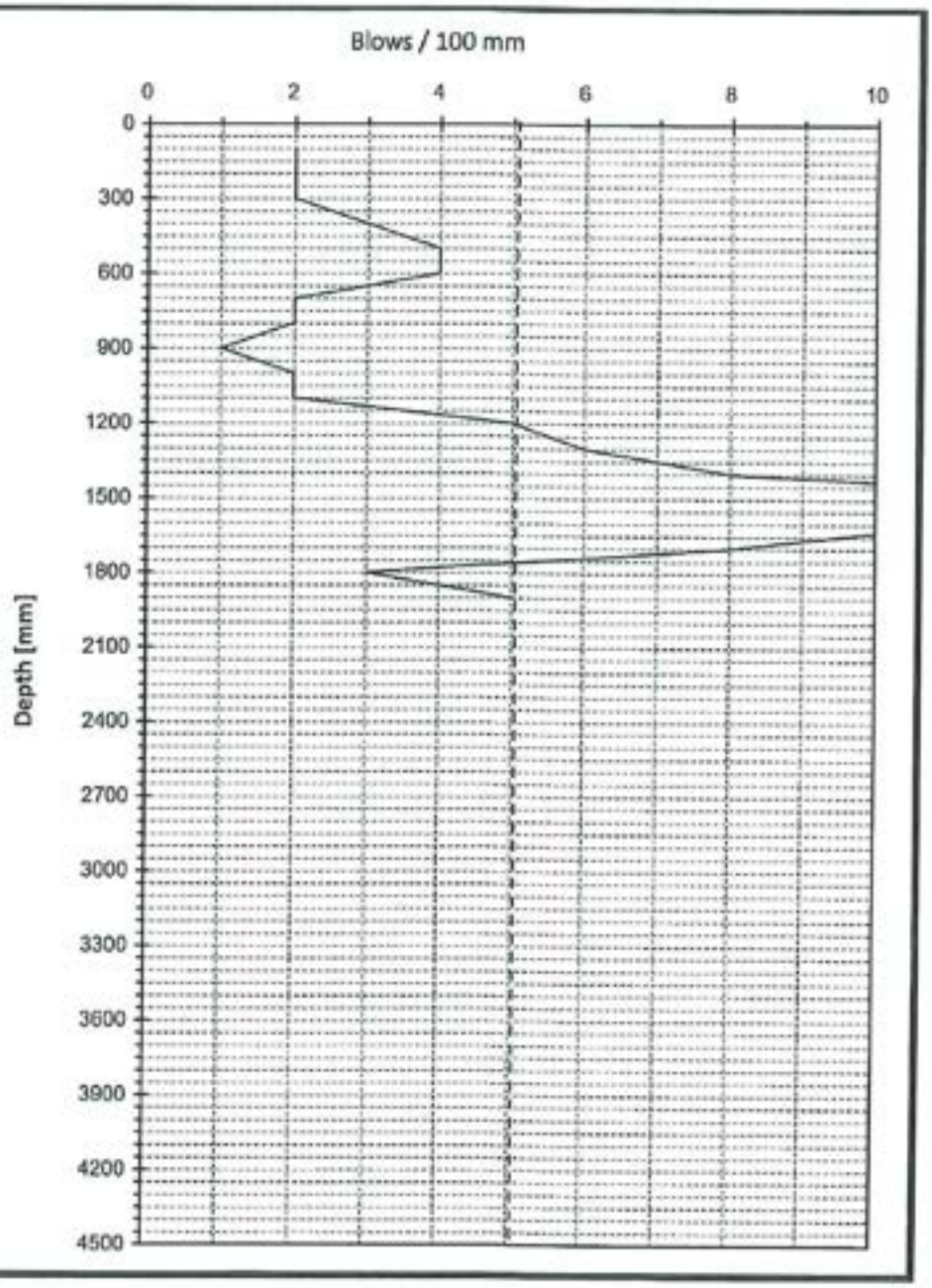

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CLIENT The Shetland Trust
JOB NO. 21105
DATE 9/12/2013
SHEET 7 of 12 SHEETS

Scala ID E
SITE ADD 236 Te Moana Rd
LOCALITY See plan
FIELDWORK NM

Depth (mm)	Blows (no.)	Depth (mm)	Blows (no.)
100	1.5		
200	1.5		
300	2		
400	2		
500	9		
600	10		
700	9		
800	2.5		
900	1.5		
1000	2		
1100	2		
1200	5		
1300	12		
1400	10		
1500	20		
1600			
1700			
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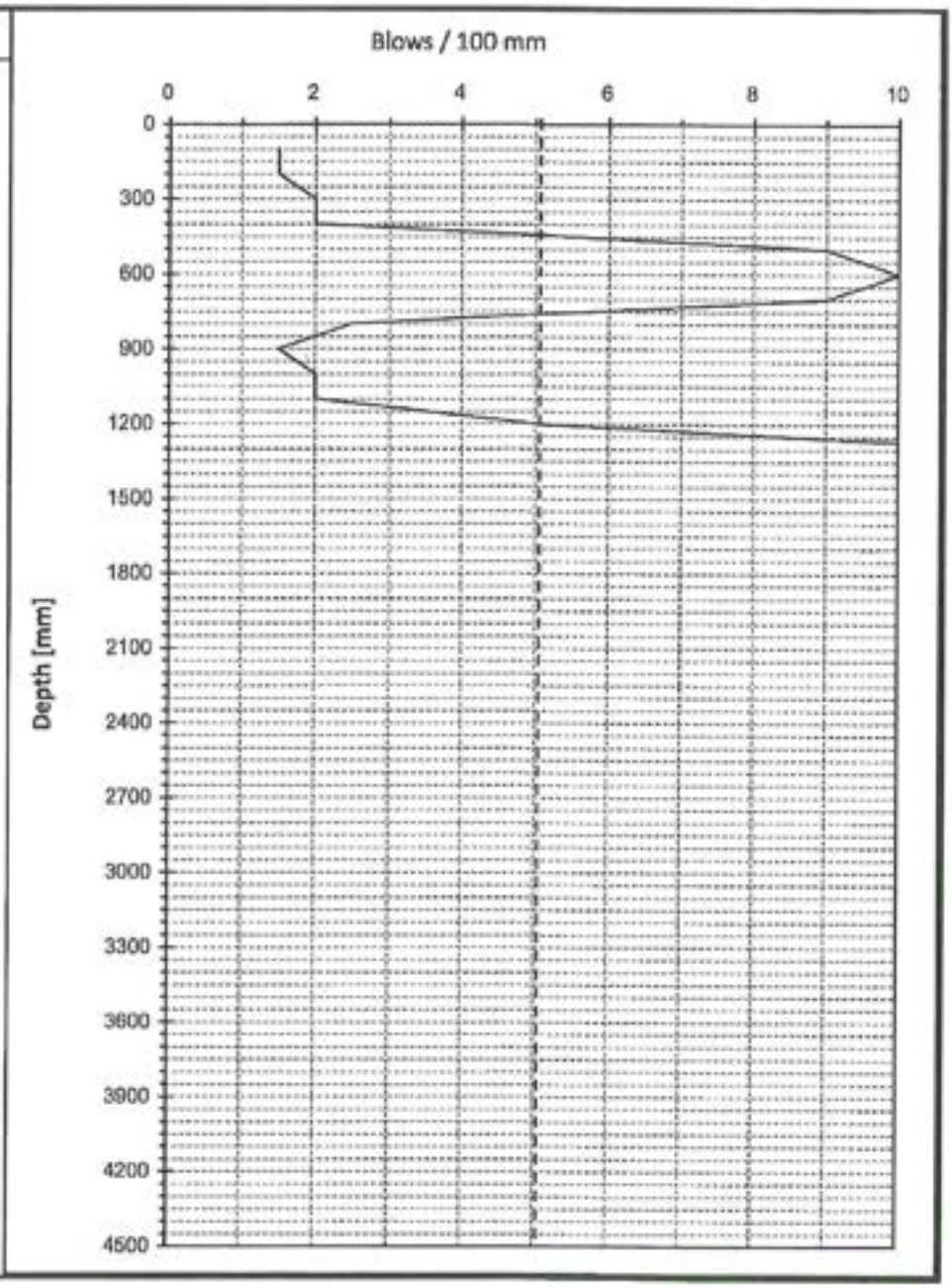

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CLIENT The Shetland Trust
JOB NO. 21105
DATE 9/12/2013
SHEET 8 of 12 SHEETS

Scala ID F
SITE ADD 236 Te Moana Rd
LOCALITY See plan
FIELDWORK NM

Depth (mm)	Blows (no.)	Depth (mm)	Blows (no.)
100	4		
200	4		
300	4		
400	4		
500	4		
600	4		
700	4		
800	4		
900	2		
1000	3		
1100	2		
1200	3		
1300	3		
1400	3		
1500	2		
1600	2		
1700	11		
1800	14		
1900	19		
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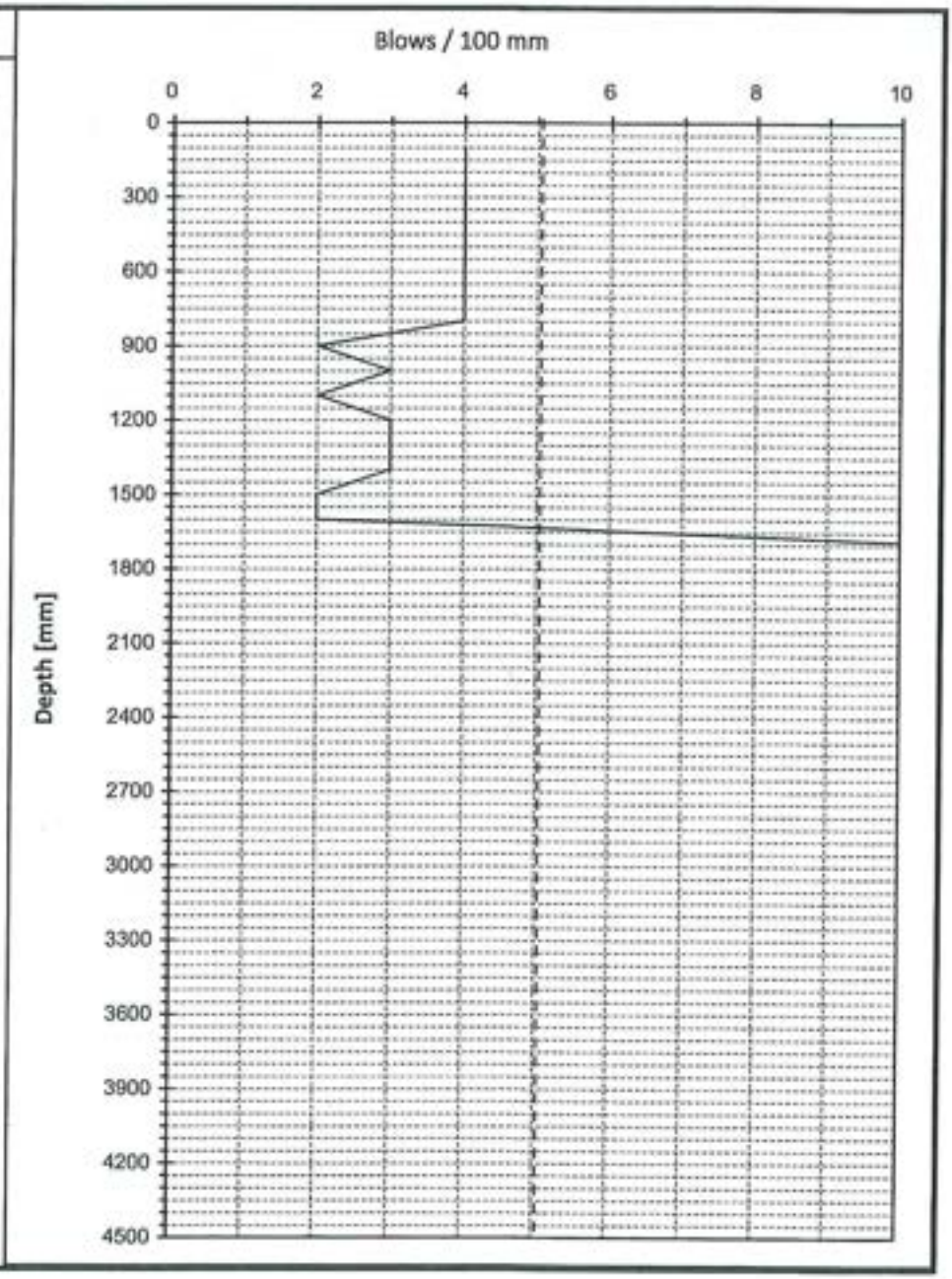

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CLIENT The Shetland Trust
JOB NO. 21105
DATE 9/12/2013
SHEET 9 of 12 SHEETS

Scala ID G
SITE ADD 236 Te Moana Rd
LOCALITY See plan
FIELDWORK NM

Depth (mm)	Blows (no.)	Depth (mm)	Blows (no.)
100	2		
200	4		
300	4		
400	5		
500	6		
600	4		
700	2		
800	2		
900	2		
1000	4		
1100	4		
1200	5		
1300	5		
1400	4		
1500	4		
1600	3		
1700	6		
1800	10		
1900	13		
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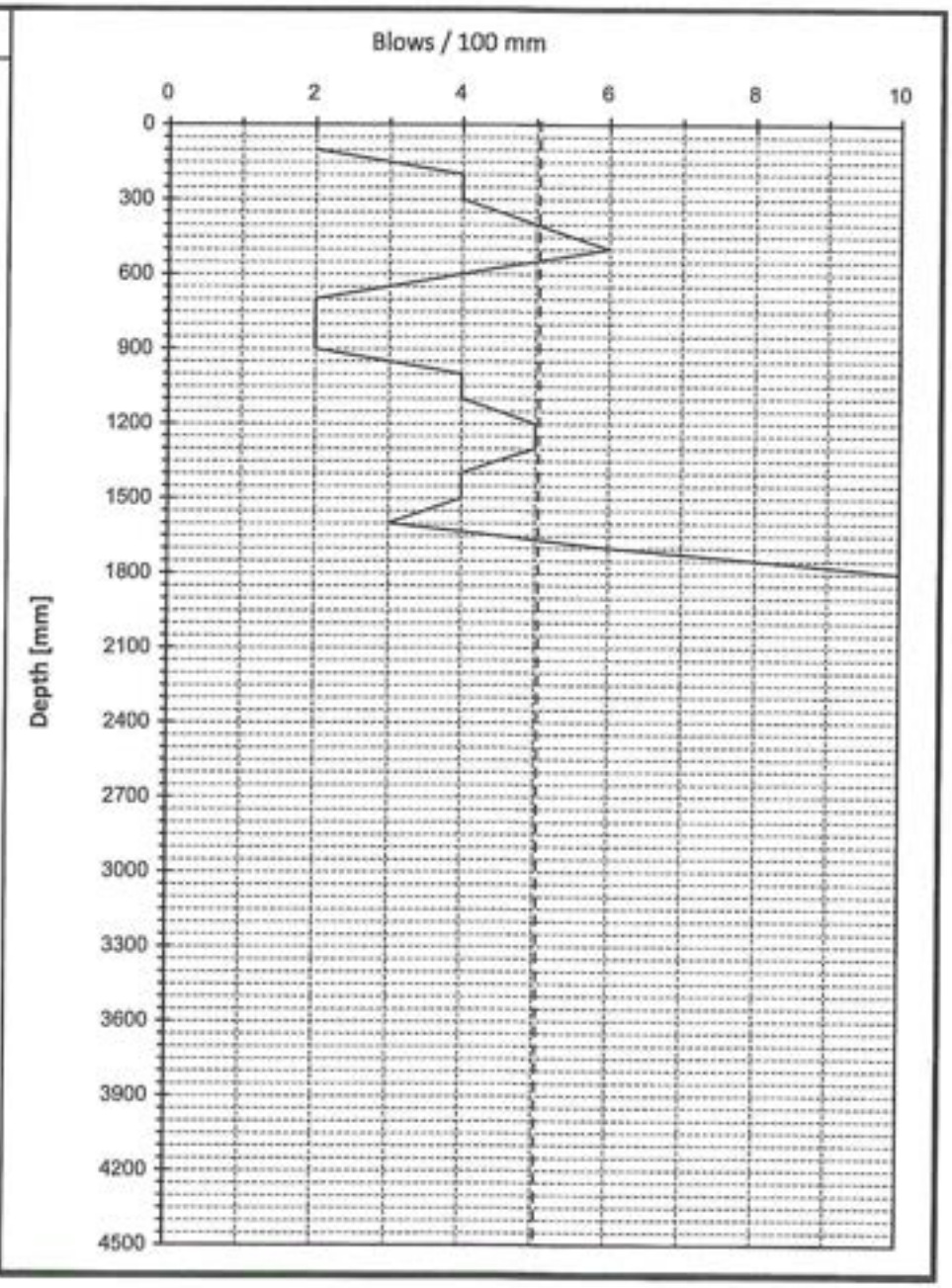

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CLIENT The Shetland Trust
JOB NO. 21105
DATE 9/12/2013
SHEET 10 of 12 SHEETS

Scala ID H
SITE ADD 236 Te Moana Rd
LOCALITY See plan
FIELDWORK NM

Depth (mm)	Blows (no.)	Depth (mm)	Blows (no.)
100	3		
200	4		
300	3		
400	2.5		
500	2.5		
600	8		
700	5		
800	5		
900	4		
1000	4		
1100	4		
1200	4		
1300	4		
1400	5		
1500	3		
1600	4		
1700	3		
1800	4		
1900	4		
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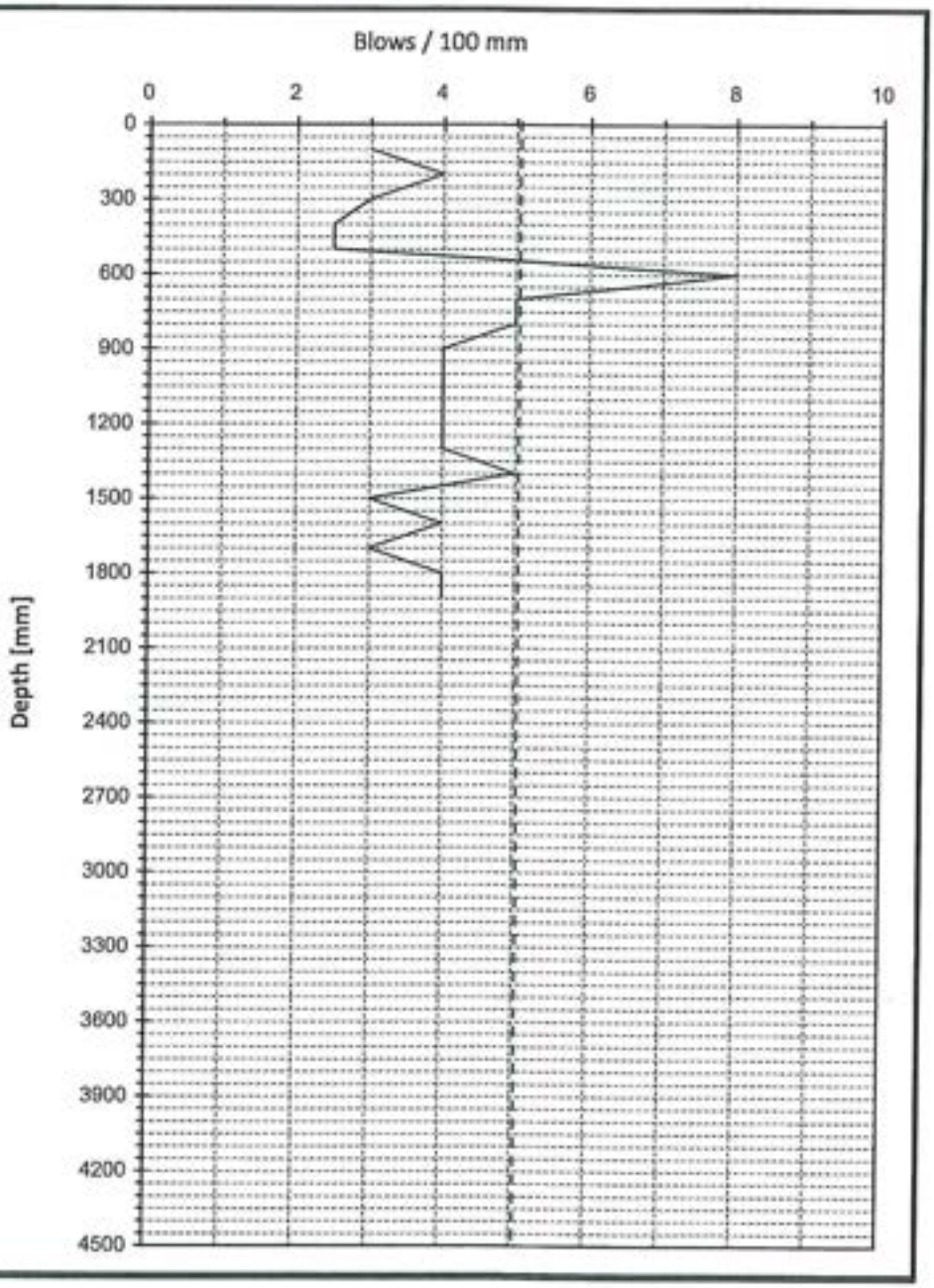

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CLIENT The Shetland Trust
JOB NO. 21105
DATE 13/03/2014
SHEET 11 of 12 SHEETS

Scala ID I
SITE ADD 236 Te Moana Rd
LOCALITY See plan
FIELDWORK NM

Depth (mm)	Blows (no.)	Depth (mm)	Blows (no.)
100	2		
200	4		
300	6		
400	6		
500	5		
600	4		
700	3		
800	2		
900	2		
1000	2		
1100	2		
1200	3		
1300	2		
1400	2		
1500	4		
1600	4		
1700	4		
1800	3		
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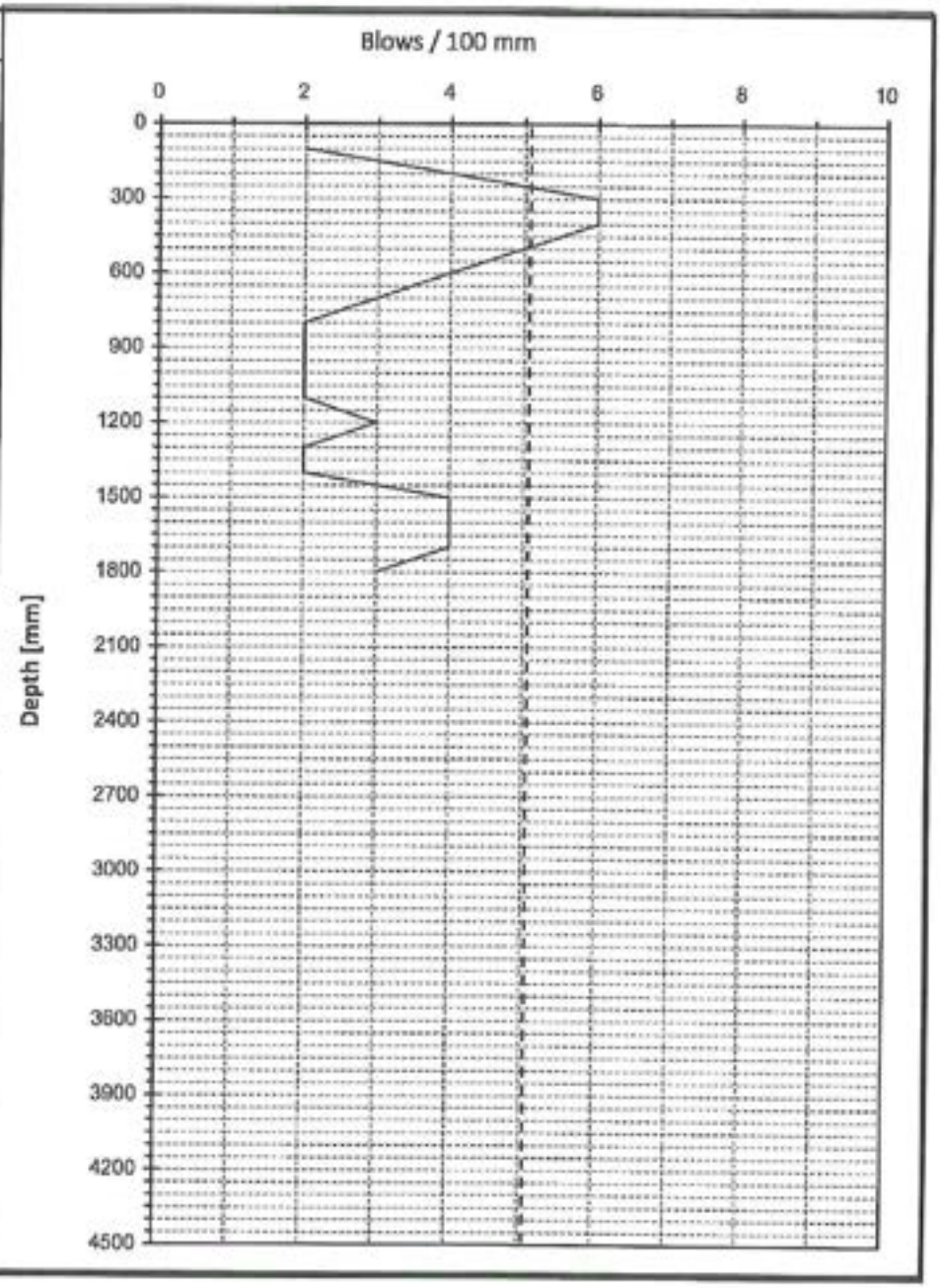

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CLIENT The Shetland Trust
JOB NO. 21105
DATE 13/03/2014
SHEET 12 of 12 SHEETS

Scala ID J
SITE ADD 236 Te Moana Rd
LOCALITY See plan
FIELDWORK NM

Depth (mm)	Blows (no.)	Depth (mm)	Blows (no.)
100	7		
200	7		
300	6		
400	5		
500	5		
600	3		
700	3		
800	2		
900	2		
1000	2		
1100	2		
1200	2		
1300	2		
1400	3		
1500	3		
1600	2		
1700	2		
1800	3		
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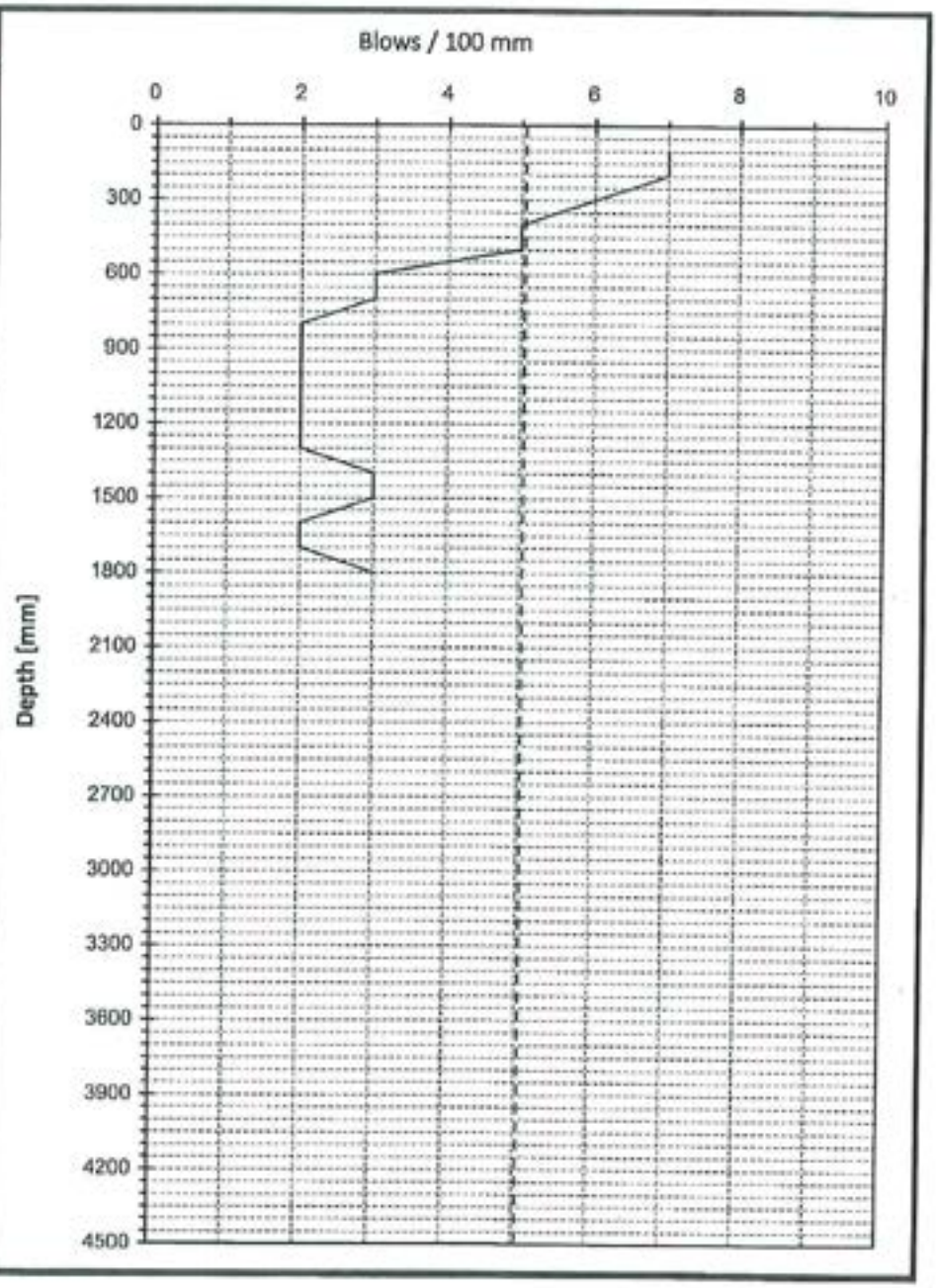
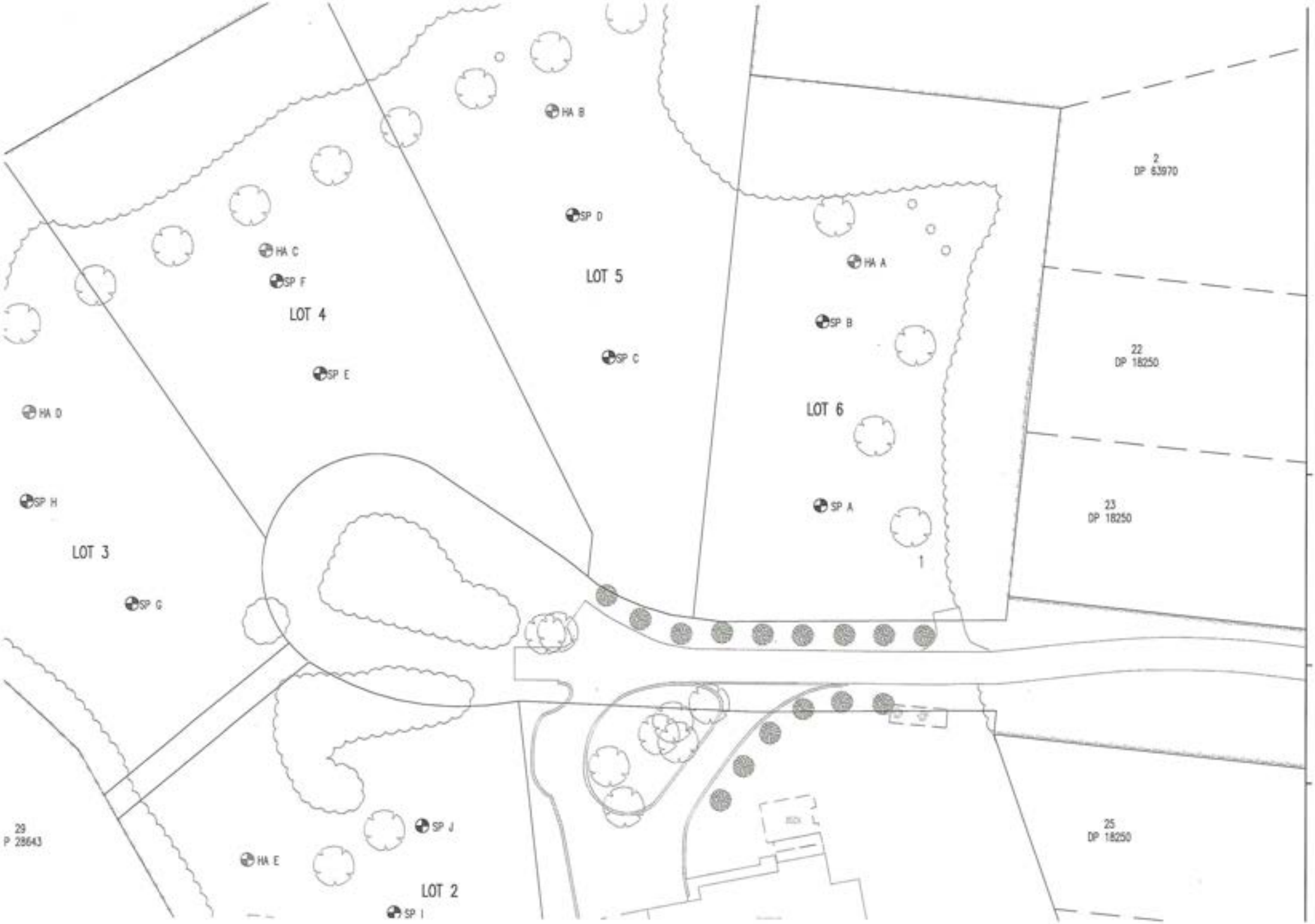
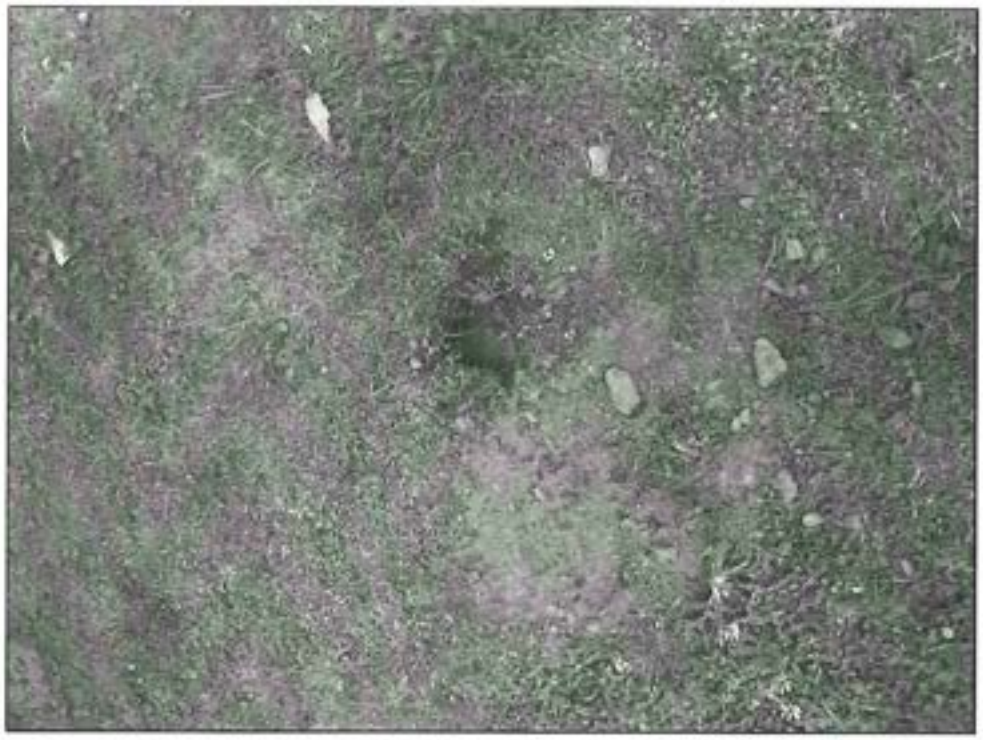



HA B
SP D
HA C
SP F
LOT 4
LOT 5
HA A
SP B
SP C
SP E
HA D
LOT 6
SP H
SP A
LOT 3
SP G
2
DP 63970
22
DP 18250
23
DP 18250
1
29
P 28643
SP J
HA E
LOT 2
SP I
25
DP 18250

Photos of General Site

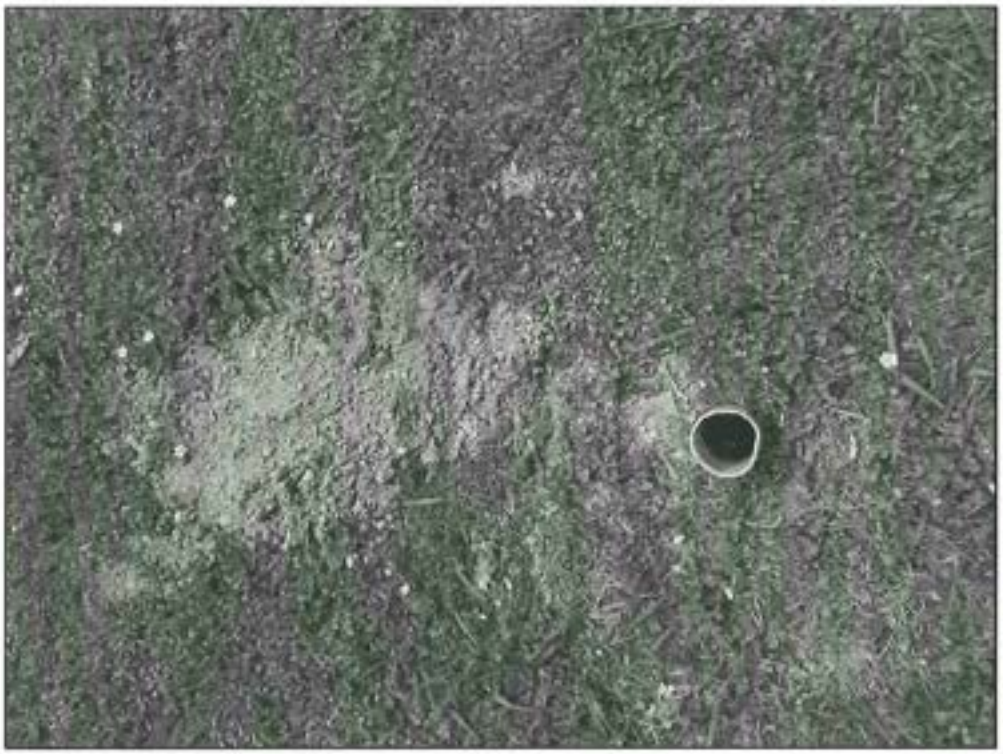


Above: 09 December 2013 - Lot 2 Hand Auger 'E'

Above: 09 December 2013 - Lot 3 Hand Auger 'D'

Above: 09 December 2013 - Lot 4 Hand Auger 'C'

Above: 09 December 2013 - Lot 5 Hand Auger 'B'



Above: 09 December 2013 - Lot 6 Hand Auger 'A'

00012

07 MAR 2016

3 Bressay Way, Waikanae
New House

CALCULATIONS

Meyers & Associates Ltd
P.O.Box 24-120, Wellington, Ph 04 472-3198

3 Bressay Way, Waikanae
Stage 1- House Foundations

DESIGN FEATURES REPORT

Standards

These calculations have been carried out in complete accordance with the relevant NZ Standards including the following

AS/1170	Structural Design Actions
NZS3603:1993	Timber Structures Design
NZS3101:2006	Concrete Structures Design

General Background

A prelimiary site investigation has been carried out by Cuttriss Consultants Ltd who have determined that suitable bearing materials are found at significant depths for this site.
House foundations to be constructed utilising concrete foundations sitting on driven timber piles

Elements Designed by the Engineer

Concrete structural floor slab and ground beams
Driven timber piles

Design Assumptions

Loadings

Floor Loading	=	2.00 kPa
Roof Live Load	=	0.25 kPa

Observation of Construction

Refer to S0.1 for inspection requirements which conform to CM3 Observation requirements

Loadings

Dead

Roof	Roofing						=	0.08 kPa	
	Purlins	75	*	50	@	600	=	0.03 kPa	
	Panels	25	*	1000	@	1000	=	0.14 kPa	
	Beams	300	*	100	@	2000	=	0.08 kPa	
	Ceiling	20	*	1000	@	1000	=	0.11 kPa	
						Total	=	0.44 kPa	
						Roof Slope	=	12 deg =	0.209 radians
						Plan Loading	=	0.45 kPa	
Floor	Concrete	175	*	1000	@	1000	=	4.20 kPa	
	Beams	300	*	400	@	2000	=	1.44 kPa	
	Misc Dead							0.50 kPa	
						Total	=	6.14 kPa	
Walls	Wall Framing	30	*	1000	@	1000	=	0.17 kPa	
	Cladding	100	*	25	@	100	=	0.14 kPa	
	Gib							0.10 kPa	
						Total Timber Framed Wall	=	**0.40 kPa**	
						Stud Height	=	**3.00 m**	
						UDL	=	**1.21 kN/m**	

Live Loadings

Roof	0.25	**kPa**
Floors	2.00	**kPa**
Decks	2.00	**kPa**

Wind Loadings

A site wind Pressure determination has not been carried out at this stage however the following should be allowed for

	V	Md	Mz	Mh	Ms		Vs	q
Site Wind Speed ULS =	45	1	0.83	1	1	=	37.4	0.8
Site Wind Speed SLS =	37	1	0.83	1	1	=	30.7	0.6

TYPICAL PILE DESIGN.

- Piles spaced at 2.0m centres each direction.
- Consider typical internal Pile.
- Typical trib Area = $2.1 \times 2.1 = \underline{4.4 m^2}$

Loadings

Dead = Roof = 4.4×0.45 = 2.0 kN.
Walls = 1.21×2.0 = 2.4.
Floor = 6.14×4.4 = 27.0.
Σ DEAD = 31.4 kN.

Live Floor = 2.0×4.4 = 8.8 kN.

L. Combs
D + L = 40.2 kN. * CRITICAL.
1.4D = 44.0 kN.
1.2D + 1.5L = 50.9 kN.

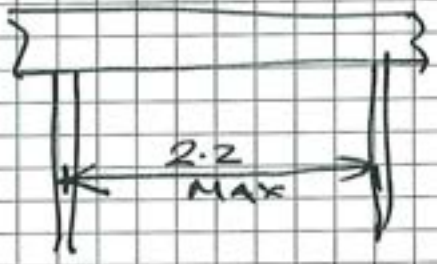
$\Rightarrow$ PILE CAPACITY REQ'D = 50 kN SLS.
75 kN ULS.
150 kN AT FAILURE.

Assume 175 Ø SED PILES

$$\frac{P}{A} = \frac{150 e3}{\pi \times \frac{175^2}{4}} = \underline{6.2 MPa}.$$

$\phi k_1 k_8 f'_c = 0.7 \times 0.6 \times 0.95 \times$ [illegible] = 6.4 MPa.
$\Rightarrow$ OK.

TYPICAL FOUNDATION BEAM DESIGN.



LOADINGS

DEAD
Roof. = 0.45 × 2.2 = 1.0 kN/m
WALLS = = 1.21
Floor. = 6.14 × 2.2 = 13.5 kN/m
ΣDEAD = 15.7 kN/m

LIVE
Floor = 2.0 × 2.2 = 4.4 kN/m

LOAD COMB'S 1.4D = 22 kN/m.
1.2D+1.5L = 25.6.

Design: $M_{max} = \frac{wl^2}{8} = 25.6 \times \frac{2.2^2}{8} = 15.6$ kNm

Assume 400 deep beam

$A_{s\,req'd} = \frac{15.6 \times 10^6}{0.85 \times 500 \times 325} = 112\ mm^2$

Use 2HD16 Top & Bottom = 402 mm²

$P_{min} = \frac{1.4}{500} \times 400 \times 400 = 448$ ⇒ OK enough.

SLAB DESIGN (Assume Supported 1 Way)

Max Span = 2.2m.

Dead Loading = 6.14 kN/m

Live = 2.00 " "

1.2D + 1.5L = 10.4 kNm/m. ⇒ 6.3 kNm/m.

Assume 150 Thick SLAB

$$A_{s\,req'd} = \frac{6.3\,e6}{0.85 \times 500 \times 60} = 246\ mm^2/m.$$

Assuming SE82 Mesh ⇒ 251 mm^2/m

⇒ OK.

00013

3 Bressay Way, Waikanae
New House

SPECIFICATIONS

Meyers & Associates Ltd
P.O.Box 24-120, Wellington, Ph 04 472-3198

Ex. Excavation

Ex.1 Preliminary and General

The Preliminary and General Clauses apply.

Ex.2 Scope

To excavate and remove all topsoil from the building site and prepare house site for placement of hardfill.

Ex.3 Standards

All work and materials shall be in accordance with the following NZ Standards.

NZS 3108	Concrete production ordinary grade
NZS 4402	Methods of Testing soils for civil engineering purposes
Department of Labour Occupational Safety and Health Service	
	Approved Code of Practice for Safety in Excavation and Shafts for Foundations

Ex.4 Antiquities or Items of Value

Report immediately the finding of fossels or other objects of value to society. All such items shall remain undisturbed until approval is given for removal

Ex. 5 Ground Conditions

A foundation investigation has been carried. Results of this investigation are enclosed in the appendix. Contactor shall place their own interpretation as no guarantee is implied that the information is truly representative of complete. Make any such investigations as considered necessary.

Ex.6 Proof Testing

The Contractor shall carry out a series of test piles around the building site to determine length of piles required.

Ex.7 Visit the Site

The Contractor shall visit the site to determine working conditions and access for machinery and take into account factors relating:

- time of year
- nature of ground
- nature of ground to be excavated
- ground water table
- all matters relating to the carrying out of the work

Ex.8 Safe Working Conditions

Provide safe working conditions. Support all excavations and trenches, cover holes, and fence off trenches and banks

Ex.9 Suitable Founding Materials

Request written instruction from the Engineer if suitable founding materials are found at depths less than indicated on the Geotechnical documentation.

Ex.10 Inspections

Arrange for inspections and obtain approvals before placing any new work

Ex.11 Site Measurement

If for any reason the site excavations have to vary from the drawings they shall be recorded, measured and agreed in writing as the excavation proceeds

Ex.12 Material Definitions

Topsoil	Weathered soil containing organic matter capable of growth of vegetation
Retained Features	Refer to architectural documentation for features to be retained
Other Formations	Sands, gravels, sedimentary materials, clays, scoria and similar deposits
Solid Material	Rock encountered in excavations which because of its size or position can be removed only by breaking up by mechanical plant such as jackhammers or similar
Made Up Ground	Fill material with no compaction control
Excavated Fill	Material which may be approved as suitable for filling and complying with NZS4402 by having grading and moisture contnt that allow compaction to 95% of maximum density

Ex 13. Report

Any survey pegs, bench marks and the like leaving them undisturbed until approval for removal is given

Ex 14 Mark Features

Clearly mark out those features to be retained to eliminate possibility of accidental damage

Ex. 15 Comply

Comply with all OSH requirements

Ex. 16 Work By Others

Before taking over work on site by others check all levels and conditions and report and discrepencies that may affect further work

Ex. 17 Existing Services

Locate underground services before work is started. Any information the location of services provides no guarantee of accuracy of alignment or depth. Information provided may not accurately record all services. Make good at no extra cost damage to existing services to the satisfaction of the affected network provider

Ex 18. Excavation Near Trees

Do not excavate or remove topsoil within the dripline of retained trees unless specifically directed and instructed.

Ex 19 Keep Free of Water

Keep excavations free of water and keep water from excavations clear of other construction work

Ex 20 Discharging Water

Obtain approval from the Local Authority for the method of discharging water from the site.

Ex 21 Sumps

Form sumps outside of the line of foundations deep enough to drain excavations.

Ex. 22 Silt Traps

Form Silt traps to the approval of the network utility provider to discharge into their drainage system

Ex. 23 Silt Traps

Form Silt traps to the approval of the network utility provider

Ex 24 Strip Topsoil

Topsoil to be carefully removed and stockpiled where directed on site

Ex. 25 Strip to Subgrade

Strip the soil over the whole building site to form a general subgrade level being a minimum of 200mm below the original ground level.. Leave the subgrade level clear and clear of any loose material.

Ex. 26 Divert Waterways

Temporarily divert as necessary all ditches, field drains and other waterways encountered during the excavations. Reinstate on to approval on completion

Ex. 27 Divert Drains

Divert services, drains and field drains to new routes clear of the building and reconnect to the approval of the nework operator

Ex. 28 Break Out

Break out and remove old foundations, floor slabs, drains, manholes, septic tanks. Seal up connections and remove contaminated soil. Grub out roots in excess of 75mm in diameter to a minimum depth of 500mm below ground level. Backfill with suitable materials placed in accordance with the Backfill specification.

Ex. 29 Excavation

Excavate for pads, strip foundations and tie beams to the levels shown on the drawings. Allow clearance for working space and formwork as necessary.

Ex. 30 Over Excavation

Make good with site concrete

Ex.31 Excavated Backfill

Stockpile excavated backfill on site where directed until required

Ex.32 On Completion

Leave work to the standard required by the following procedures

Ex 33. Surplus Topsoil

Remove unwanted topsoil from the site

Ex. 34 Surplus Material

Remove surplus material from the site continually as excavation proceeds.

Ex. 35 Clean Up

Continally clean up any materials deposited on public footpaths or roads

Bf. Backfilling

Bf.1 Preliminary and General

The Preliminary and General Clauses apply.

Bf.2 Scope

To backfill site to required levels and prepare for placement of house foundations.

Bf.3 Standards

All work and materials shall be in accordance with the following NZ Standards.

NZS 3108	Concrete production ordinary grade
NZS 4402	Methods of Testing soils for civil engineering purposes
Transit NZ	M/4- Basecourse Aggregates
Department of Labour	Occupational Safety and Health Service Approved Code of Practice for Safety in Excavation and Shafts for Foundations

Bf.4 Visit the Site

The Contractor shall visit the site to determine working conditions and access for machinery and take into account factors relating:

- time of year
- nature of ground
- nature of ground to be excavated
- ground water table
- all matters relating to the carrying out of the work

Bf.5 Safe Working Conditions

Provide safe working conditions. Support all excavations and trenches, cover holes, and fence off trenches and banks

Bf.6 Inspections

Arrange for inspections and obtain approvals before placing any new work

Bf.11 Site Measurement

If for any reason the site profiles to vary from the drawings they shall be recorded, measured and agreed in writing as the backfilling proceed

Bf.12 Material Definitions

Compacted ROP Rock Strippings
Rotten rock or quarry strippings free of organic material, maximum density to NZS4402 test 4.1.1 or equivalent

Volcanic Tuff Fill	Scoriacceous tuff or variable grading excluding silt or clay material capable of being paced and compacted as specified
Rock Fill	Material comprising rock, broken stone, hard brick, concrete, pit scoria with a maximum particle size of 75mm capable of being placed and compacted as specified
Sand Fill	Clean sand fill of such grading to allow for mechanical compaction to 90% maximum density in accordance with NZS4402
Hardfill	Scoria or crushed rock to GAP (general all passing) 65 grading
Granular Base	Approved screened clean crushed gravel or scoria graded in size from 20 to 70mm. No material to pass through a standard 4.75mm sieve
Excavated Fill	Material which may be approved as suitable for filling and complying with NZS4402 by having grading and moisture content that allow compaction to 95% of maximum density
TNZ Basecourse	Metal Aggregate to TNZ M/4 specification
Basecourse	Metal aggregate to TNZ GAP 40 rating
Sub-Basecourse	Metal aggregate for road construction to GAP 80 grading
Dressing Course	Scoria to GAP 20 grading.

Free Draing Aggregate
Scoria or cushed clean gravel graded 50 to 14

Site Concrete	Ordinary grade 10 MPa concrete to NZS3108

Bf.13 Unsuitable Materials

Remove from site all unsuitable filling materials

Bf. 14 Spread and/or Remove Surplus

Spread and level surplus imported materials where directed. Remove any remaining surplus filling materials from the site

Bf. 15 Place Filling

Place filling using approved methods to required dimensions, levels, lines and compact in clearly defined layers

Bf. 16 Protection of Formation

Do not allow construction traffic on filling until the level has been raised not less than 150mm above formation level by properly compacted temporary protective filling. Remove temporary protective filling from the site before beginning permanaent construction. Do not stockpile materials on newly filled areas without permission.

Bf.17 Differing Materials

Where materials for widely different characteristics are sued for filling spread and compact in clearly defined different layers

Bf.18 Earthmoving Equipment

Do not usu earthmoving equipment for compaction

Bf. 19 Compaction Near Edge Supports

Ensure that edge supports are strong enough to support compaction forces without movement, cracking or other damage. Make good damage caused by compaction.

Bf.20 Moisture Content-General Fill

Moisture content at the time of compactionto be within the range of less 6% up to optimum. Do not use filling with moisture content above optimum level. If necessary adjust moisture content by:

- turning and drying if fill is too wet
- provide water sprinkling if fill is too dry

Bf. 21 Spread and Compact Granular Fill

Spread and level in layers of not more than 150mm loose depth. Compact filling in layers as specified by at least 4 passes of a vibrating roller having a static linear loading of 1.8 - 2.3 kg/mm or 12 passes of a vibrating roller having a static linear loading of 0.8 - 1.2 kg/mm. Achieve a density of not less than 95% of maximum at optimum moisture content to NZS4402

Bf. 22 Spread and Compact Rock Fill

Spread and compact in layers of not more than 200mm loose depth where designated on the drawings. Compact with suitable heavy plant to achieve dense unyielding base.

Bf. 23 Spread and Compact Hardfill

Spread and level in layers not exceeding 150mm loose depth to make up from approved subgrade to underside of basecourse, sitework construction or as shown on the drawings.

Compaction to be in accordance with granular fill requirements

Bf. 24 Spread and Compact Sand Filling

Spread and level in layers of not more than 100mm loose depth in areas designated on the drawings. Carry out vibrating compaction on a trial area to show than 90% of maximum density can be achieved.

Bf. 25 Blinding Surface

Blind surface of area to be covered with a concrete slab with clean sand to a thickness of no greater than 12mm. Compact with a vibrating plate compactor to take damproofing

Bf. 26 Backfill to Foundations

Backfill with approved materials compacted in 150mm (loose) layers using mechanical vibrating tampers weighing at least 70kg to achieve a a minimum density of 95% of maximum at optimum moisture content to NZS4402

Bf. 27 Backfill to Retaining Walls

Protect tanking membranes.
Backfill the drainage space with free draining aggregate in 200mm layers.
Do not disturb subsoil drains.

Bf. 28 Subgrade to Concrete Slabs

From approved subgrade spread and level granular base in 100mm maximum loose layers. Compact with a roller or a vibrating plate tamper of at least 70 kg to provide a dense unyielding base. Dress this surface with a 25mm layers of dressing course and roll to form a tight dense surface. Blind with a 12mm layer of sand and compact with a vibrating plate to leave ready for damproofing.

Bf.29 Take Away

Remove from the site all excavated material or imported material not used for backfilling leaving the site clear and tidy

Bf.30 Leave

Leave the site to the standard required by the following procedures.

Bf31. Remove

Remove all debris or unused materials from the site

Ti. Piling

Ti.1 Preliminary and General

The Preliminary and General Clauses apply.

Ti.2 Scope

To install all ***driven*** round timber as detailed on the stuctural drawings. Includes the provision of all nails, bolts and metal connectors as shown on the drawings.

Ti.3 Standards

All work and materials shall be in accordance with the following NZ Standards.

NZS 3603: 1993	Timber Structures Standard
NZS 3605:2001	Timber Piles and Poles for Use in Building
MP3640:1992	Minimum Requirements of the NZ Timber Treatments Council

Ti.4 Timber Preservation

	Timber	Preservation Treatment
All timber piles cast driven into the ground	Pinus Radiata	H5

Ti.5 Pile Density and Size

All piles shall have a minimum "outer zone" density of 350 kg/m3.
Timber piles shall be driven with a minimum small end diameter of 175mm.

Ti.6 Pile Bearing Capacity

Pile end bearing capacities shall be as follows:

Working Load capacity	= 5 Tonnes
ULS Load capacity	= 10 Tonnes
Failure Load capacity	= 15 Tonnes

Ti.7 Pile Driving Records

The pile driving contractor shall driving records for all the driven piles Information to be recorded shall include:

- Length of pile used at each location..and
- Weight of hammer and length of drop of hammer...and
- Final set for last 10 blows and
- Final depth below ground

Co. Concrete

Co.1 Scope

This section of the specification includes the supplying, positioning and placing of all reinforcing steel, bolts, concrete and all other materials and work necessary for the completion of the concrete work as shown on the drawings and specification.

Co.2 Materials and Workmanship

The materials and workmanship for this section of the Contract shall conform to the following standards:

NZS3109: 1997	Specification for Concrete Construction
NZS3104: 2003	Specification for Concrete Production
AS/NZS 4671:2001	Steel Reinforcement for Concrete
NZS3114: 1987	Concrete Surface Finishes
NZS3121: 1986	Water and Aggregate for Concrete

Co.3 Production of Concrete

All concrete shall be supplied from a recognised batching plant, unless written approval is given otherwise by the Engineer. All delivery dockets shall be kept and made available for inspection by the Engineer, if required.

Co.4 Required Concrete Strengths

The minimum 28 day compression strengths required are as follows:

Foundations	25 MPa	High Grade

Co.5 Slump

The maximum slump for foundations and floor slab shall be 100mm

Co.6 Handling and Placing

The Engineer is to be advised 24 hours before any pouring of concrete. Concrete shall not be poured unless the Engineer, or his representative, has approved (in writting) the preparation of the formwork and the placement of the reinforcement.

Co. 7 Placement of Concrete

Thoroughly compact all concrete using a suitable vibrator. Remove vibrator slowly to avoid forming voids and ensure that the zones of vibration overlap. Deposit concrete as nearly as possible to its final location.

Co.8 Not Required

Co.9 Weather Protection

Do not start concreting when heavy rain is threatening, and if rain occurs during a pour, protect the work until the concrete has set to a stage at which cement does not leach. Protect new work form hot or cold weather, from direct sunshine and from drying winds.

Co.10 Rejection of Faulty Concrete

The Engineer has the right to reject at any stage of construction any concrete showing defects caused by, in his opinion, faulty workmanship or faulty materials which would render the finished structure unsuitable.

Concrete which does not comply with the requirements of this specification due to any cause shall be rejected. The following are typical causes of non compliance :

- Lack of workability due to low sand content
- Lack of density in place
- Tendency to segregate

Co.11 Formwork

Build and maintain formwork with tight joints and an even casting surface, sufficiently strong to prevent distortion under the loads imposed by the wet concrete. The formwork used shall be suitable to provide the standard of finish specified.

Just before any concreting is commenced, all shavings, sawdust and any other dirt shall be removed. If necessary temporary openings may be left for this purpose.

Co.12 Removal of Formwork

The minimum time to be allowed before formwork is stripped shall be

Sides of foundations..... 24 hours

Re. Steel Reinforcement

Re.1 Scope

Concrete shall be reinforced in accordance with the drawings and as specified. The Contractor shall allow for all supports, spacers, ties as required below.

Re.2 Materials and Workmanship

The materials and workmanship shall conform to the following standards:

AS/NZS 4671:2001	HRC and Grade 300 or 500E MPa Reinforcement
NZS 3109:1997	Concrete Construction

Re.3 Designation

Following are examples of reinforcement designations:

R10	means a 10mm diameter round bar of Grade 300 MPa
D16	means a 16mm diameter deformed bar of Grade 300 MPa
DH20	means a 20mm diameter deformed bar of Grade 500E MPa

Re.4 Protection and Cleanliness

Reinforcement shall be protected from damage at all times. At the time the concrete is placed, reinforcement shall be free of oil, grease, loose material, loose rust,concrete splatter, or any other foreign matter which may reduce bond between the reinforcement and the concrete.

Re.5 Securing of Reinforcement Prior to Concrete Placement

Reinforcement shall be fixed/secured in position prior to the pouring of concrete. Chairs, spacers, concrete blocks shall be used to secure reinforcement. Slab reinforcement shall be supported on chairs or concrete blocks spaced no further apart than 1.0 metre in each direction.

Re.6 Fabrication

Steel reinforcement shall be accurately cut and bent to the shapes and dimensions as required by the drawings. Hook dimensions, minimum bend diameters, standard stirrup and tie anchorages shall be in accordance with NZS 3109. All reinforcement shall be straight between required bends.

All reinforcement shall be bent cold.

Re.7 Placing Tolerances

Placing tolerances shall be in accordance with Clause 3.8 of NZS 3109. These tolerances shall not allow any reduction in the specified concrete cover or the specified anchorage or splice lengths.

Re.8 Lap Lengths

Where the lap lengths are not shown the following lap lengths are to be used:

Grade 300 Deformed Bars..... lap length = 45*bar diameter
Grade 500 Deformed Bars..... lap length = 65*bar diameter

Grade 300 Round Bars.....lap length = 90*bar diameter
Grade 500 Round Bars..... lap length = 130*bar diameter

Re.9 Inspection Prior to Concreting

The Engineer must inspect and approve in writting the placement of reinforcement before placing of the concrete begins. Concrete placed in violation of this provision shall be liable to rejection and removal.

The Contractor must notify the Local Body Building Inspector before any concrete is poured.

No extra payments will be made for any remedial work necessary to enable the reinforcement to pass the inspection before concreting.

Re.10 Minimum Concrete Cover Requirements

Minimum concrete covers shall be provided for reinforcing in accordance with the following table unless shown otherwise on the drawings.

Cast against and permanently exposed to the earth		75mm
Exposed to earth or weather		
Slabs and walls	All reinforcement	45mm
Beams and Columns	Principle longitudinal reinforcement	50mm
	Ties, stirrups and spirals	40mm
Not exposed to weather or earth		
Slabs walls and ribs	All reinforcement	30mm
Beams and Columns	Principle longitudinal reinforcement	40mm
	Ties, stirrups and spirals	25mm

00014

Meyers & Associates LTD
CONSULTING STRUCTURAL ENGINEERS

PRODUCER STATEMENT for DESIGN
PS1 - DESIGN

ISSUED BY:	**Meyers and Associates Ltd**
TO:	**Guy Shaw**
TO BE SUPPLIED TO:	**Kapiti Coast District Council**
IN RESPECT OF:	**Stage 1 Foundations for New House**
AT:	**3 Bressay Way, Waikanae**

Meyers and Associates Ltd has been engaged by **Guy Shaw** to provide Structural Engineering Design Services in accordance with Clause B1 Structural of the Building Code. The following work was carried out:

- Design of foundations

The design carried out has been prepared in accordance with:

- AS/NZS1170:2003 Loadings Code
- NZS3603:2011 Timber Structures Standard
- NZS3604:2001 Light Timber Framed Structures

The proposed work covered by this Producer Statement is described on the drawings by Meyers and Associates Ltd titled **3 Bressay Way, Waikanae. Stage 1 Foundations for New House** (refer to drawing title page for drawing numbers and revisions) dated **4 March 2016** together with the specification and other documents as set out in the schedule attached to this statement.

On behalf of the Design Firm, and subject to:

1. Design Firm inspecting all aspects of construction detailed on their drawings. Refer to drawing SO.1 for Engineers inspection requirements.
2. Site verification of the following design assumptions
   - Existing structure being in reasonable condition
3. All proprietary products meeting their performance specification requirements

I believe on reasonable grounds that a) the building, if constructed in accordance with the drawings, specifications and other documents provided or listed in the attached schedule, will comply with the relevant provisions of the Building Code and that b) persons that have undertaken the design have the necessary competency to do so. I recommend the level of construction monitoring / observation to be CM3.

I, Martin Meyers am a member of IPENZ (member number 71054) and a Chartered Professional Engineer. My qualifications include: BE, MIPENZ (Structural), CPEng and IntPE. The Design Firm issuing this statement holds a current policy of Professional Indemnity of no less than NZ$500,000. The Design Firm is not a member of ACENZ.

Martin Meyers
BE, MIPENZ (Structural), CPEng, IntPE

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 NZ$500,000.

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

47 Cuba Street, PO Box 24-120, Wellington
Phone: 04 472-3198, Fax: 04 473 0456
email: martin@meyers.co.nz / www.meyers.co.nz

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 suitable 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 competence 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 designers standing within the profession. If the design firm is a member of the Association of Consulting Engineers New Zealand (ACENZ), this provides addition assurance about the standing of the firm.

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

***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 Service 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 the producer statements for the construction phase of building work at the time building consent is issued as no Design professional should be expected to provide a producer statement unless such a requirement forms part of the Designs Firms 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 of 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)*

MEMORANDUM OF DESIGN OF RESTRICTED BUILDING WORK FROM LICENSED BUILDING PRACTIONER (LBP)

The Building: 3 Bressay Way, Waikanae 5036

The Client: Guy Shaw

LBP: MARTIN MEYERS, 47 CUBA STREET, WELLINGTON. **EMAIL:** martin@meyers.co.nz

CPEng Reg: No: 71054 **Practice Area:** Structural

Design Legal Entity: MEYERS AND ASSOCIATES LTD, 47 CUBA STREET, WELLINGTON.
E-Mail: martin@meyers.co.nz Ph +64 4 4723198

Identification of design work that is Restricted Building Work

Description of Restricted Building Work	BC Clause	Means of compliance	Reliance on other LBPs	Reliance on Proprietary Elements	Waiver
Design of new foundations • Design of new structural concrete slab. • Design of new driven timber piles.	B1	NZS3604:2011 NZS1170 NZS3603:1993 NZS3101-2006 NZS4230:2004	Builder		

Accompanying Documents

Drawing Register	Yes	Specifications	Yes	PS 1	Yes
Drawings	Yes	Design Report	Yes	PS 2	No By .....
Calculations	Yes	Geotechnical Report	Yes	Other	No

Declaration

I, Martin Meyers, 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 described on this form and that based on this I also state that the RBW:
(a) complies with the Building Code clauses identified on this form; or
(b) complies with the Building Code subject to any waiver or modification of the Building Code recorded on this form.

Signature: Date: 4 March 2016

Note: This form is consistent with clause 45(a) of the Building Act 2004. The form shall only be used for residential projects less than 10 metres high.

00015

Legend

- Parcel
- Uncertain Poorly Constrained
- LatestFaultDistributedZones
- Well Defined
- Well Defined Extension
- Uncertain Constrained
- IRBA Northern Ohariu Distributed/Well D Zones Revisions 2009
- SubdivFillFromMar2014
- River Corridor
- Stream Corridor
- Overflow Path
- Residual Overflow
- Fill Control
- Storage
- Ponding
- Residual Ponding
- Shallow Surface Flow

SCALE 1: 637 @A4

Date Printed: 07-March-2016

RECEIVED
07 MAR 2016
BY:

Kāpiti Coast DISTRICT COUNCIL

00017

Thursday, 14 January 2016

Ian & Diane Christison
125 Tutere St
Waikanae 5036
Kapiti

To whom it may concern,
We (Ian & Diane Christison) grant authorisation to Guy Shaw of Energy Architecture NZ Ltd to act as our agent in respect of the building consent application(s) for as proposed new dwelling at Lot 2 DP 473745 / 3 Bressay Way (A recent subdivision of 236 Te Moana Rd, Waikanae 5036).

Yours Sincerely

I. & D. Christison

Ian & Diane Christison

CHECKSHEET: SINGLE RESIDENTIAL DWELLING AND ACCESSORY BUILDING

J0019

Including single stand-alone dwellings, dwelling additions and/or alterations, re-piling, garages, decks, gazebos, sheds, retaining walls etc.

Kāpiti Coast DISTRICT COUNCIL
Ki Uta Ki Tai

RECEIVED
07 MAR 2016
BY:

Kapiti Coast District Council,
175 Rimu Road, Paraparaumu 5032
Private Bag 60601, Paraparaumu 5254
For enquiries, phone 04 296 4700

Address of Project: 3 Bressay Way, Waikanae

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

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

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

An Application Form is attached to this checksheet — Please include this checksheet with your application.

Customer Use	1	GENERAL Complete this section for all applications	For Office Use Only
☑	a	**Building Consent Application Form (1 copy)** Completed and signed by the owner or by an agent on behalf of the owner	☑
☑ ☐	b	**Proof of Ownership (1 copy)** One recent copy of current certificates/s of title (not older than 3 months) **AND** where applicable one copy of purchase agreement (if recently purchased) or one copy of relevant portions of current lease.	☑ ☐
☑	c	**Locality Plan (1:500) showing:** Physical location of the subject building in relation to streets or landmarks, north point, name of building and lot and DP number.	☑
☑	d	**Restricted Building Work** Does the application involved restricted building work? ☑ Yes ☐ No If Yes, provide certificate(s) of design work and advise Council of your Licensed Building Practitioner(s) as per the Advise of Licensed Building Practitioners Guidance sheet.	☑
☐	e	**Inspections and Monitoring** Details of proposed inspection regime including monitoring by council officers and other professionals e.g. architects, engineers, surveyors and certification to be supplied on completion.	☐
☑	f	**Site Plan (1:100) showing:** Dimensions of all boundaries, north point, finished floor levels, site area, street name and number, lot and DP number, outline of building, distance to boundaries and the position of swimming or spa pools, ground contours (extended to boundaries) and/or levels and designated wind zone of the site (e.g. specific design, very high, high, medium or low). In addition, if a site is identified as being subject to flooding, ponding, on an overflow path, river or stream corridor, or other natural hazards, indicate on plans proposed design will mitigate natural or created hazards. Additional information is available on these sites by request from Kapiti Coast District Council.	☑
☐	g	**Application Fee** Applications will not be accepted without payment of the appropriate fees. Fees payable are set out in the published fee schedule of the council that has jurisdiction over the project site.	☐

For Office Use Only: Building Consent Officer: Application Accepted? ☑ Yes ☐ No

Give reason:

Name: Scott Kyle	Date: 7/3/16	Signature:

2		**CHANGE OF USE** Complete for all existing buildings where the proposal involves forming a household unit where one did not exist before Example: the conversion of a garage or shed into a residential unit	
☒	a	**Assessment of the Building for Compliance with the Building Code** Section 115(a) of the Building Act 2004 requires that the building, in its new use, complies fully with all clauses of the Building Code.	☐
☒	b	**Reasonably Practicable** The above assessment must relate to all building code clauses. If the proposal is for the project to meet anything less than full compliance with any clauses, your application must clearly state your reasoning, with supporting documentation, and show how you will meet the highest level of compliance that can be considered reasonably practicable.	☐
3		**FOUNDATIONS / FLOOR** Complete for all new buildings, for existing buildings where the footprint of the building will change or where an additional storey is being added	
☑	a	**Foundation Plan (1:100 / 1:50) showing:** • Dimensions of all new foundations • Sub-floor, including bracing • Footing details • If a concrete slab, show basic details including reinforcing and contractions joints • Piles and footing • If the addition is an upper storey show details on upgrading existing foundations, joints, piles etc • Indicate ventilation to sub floor spaces	☑
☒	b	**Subfloor Bracing** Provide subfloor bracing plan and calculations for all piled structures. Where the structure is specifically engineered, this should be included with the structural calculations. Subfloor bracing plan and calculations are required where an additional storey is to be added	☐
4		**CONSTRUCTION** Complete for all new structures or alterations to existing structures	
☒	a	**Existing Floor Plan (1:100 / 1:50) showing:** (For additions and alterations only) • All levels • All designated spaces • All removals • Sanitary fixtures • Smoke detectors	☐
☒	b	**Proposed Floor Plans (1:100 / 1:50) showing:** • Room dimensions • Location of partitions • All designated spaces • All floors (new or altered) • Location of sanitary fixtures • Stairs, barriers, handrails, floor joists and beams • Floor joist layout for each level with timber floors • Smoke detectors • Note where wall will form part of the swimming pool fence	☐
☒	c	**Pre-nail Truss and Frames** • Specific design wall framing requires clarification • Truss layout must be supported by design certification and design of fixing details, including consideration of load paths to ground • Lintels carrying point loads, such as from girder trusses, require specific engineering design	☐

☒	d	**Wall Bracing Plan (1:100 / 1:50) showing:** • Bracing details and calculations for wall bracing (also required for existing lower storeys where an additional storey is being added) • Sub-floor bracing for decks projecting more than 2m from the house • Location, type and number of bracing elements to indicate compliance with NZS 3604:2011 (include calculations) • If the bracing was specifically designed by a structural engineer, provide calculations (required for specific design wind zones and lateral distribution of upper floor loads where lower storey bracing is provided in walls beyond the upper storey footprint)	☐
☒	e	**Sections and Details (1:50 / 1:20 / 1:10) showing:** • Foundation details involving reinforcing and connections • Stairs, handrails, decks and decking • Insulation systems and materials to floors, walls and roof • Barriers providing safety from falling. Specific engineering design required where detail does not comply with NZBC B1/AS2 • Framing sizes, beams, lintels • Roof cladding, eaves, fascias, gutters • Flashings to openings • Fire rated systems on all walls – closer than 1 metre to boundary • Stud heights of rooms and total height from lowest ground floor level to top of ridge • Window and door installation details • Retaining wall details e.g. type, height of retained ground, relationship to boundary, waterproof membrane and proposed drainage	☐
☒	f	**Fire Report** For domestic dwellings of 4 storeys or more, or buildings providing more than one household unit	☐
	5	**EXTERNAL** Complete for new buildings or existing buildings with alternations to the external shell	
☒	a	**Elevations (1:100 / 1:50) showing:** Accurate lines from boundary to boundary on each elevation, relevant District Plan daylight control lines, the maximum height on each elevation, location of door and window openings, fixed and opening sashes, sill heights, floor levels in relation to ground levels, exterior cladding nominated to all elevations, down pipes and spouting, ventilators to sub-floor area (suspended floors only)	☐
☒	b	**Risk Assessment** *(Risk matrix in E2/AS1 may be used for buildings within scope)* Consider exposure, design and detailing to support appropriate selection of cladding	☐
☒	c	**Cladding Details (1:50 / 1:20 / 1:10)** Provide details around all penetrations, joinery and other junctions at a level appropriate to the level of risk e.g. roof/wall, balcony/wall, junction of different types of cladding, back flashing details for cavity systems	☐
☒	d	**Production Certification** Supply copies of product certificates relied on as compliance documents	☐
☒	e	**Alternative Solutions** If the proposal uses products or systems that are not covered in the Acceptable Solutions of clause E2 of the Building Code provide supporting current information including test results (fully signed reports), case studies, expert opinion (including evidence of experience/qualification, basis for forming opinion and statement of independence) etc to demonstrate compliance	☐
	6	**SERVICES** Complete for all projects with new installations or alteration of plumbing or drainage services	
☒	a	**Plumbing and Drainage Plan 1:100 / 1:50) showing:** *Note: if you have supplied drainage details for surface water disposal on the site plan, no drainage plan is required.* • Sizes of pipe work and drains • Fixtures and fittings, hot water system(s) • If the building is more than one storey with sanitary fittings on upper floors, provide an isometric layout showing wastes, pipes and falls • Drainage layout with inspection bends and junctions indicated for both sewer and stormwater • Any other drainage on site including council mains and retaining wall field drains • Ventilation of sanitary rooms • Calculations for sizing of down pipes • Gully traps including overflow relief gullies	☐

	7	**STRUCTURAL** Complete for all projects incorporating specific structural design	
☑	a	**Structural Calculations** If any design work required the services of a structural engineer, attach 2 copies of the calculations with this. The calculations must be prefaced with information explaining the design philosophy and justification of assumptions and methodologies used in analysis	☑
☑	b	**Expert Opinion (Producer Statements)** If this application for consent relies on any expert opinion including Producer Statements certifying compliance with the New Zealand Building Code, a copy must be attached with this application. (Note all structural Producer Statements are required to have accompanying calculations.)	☐
	8	**SPECIFICATIONS** **Complete for all applications** *Note: the specification must be specific to the project and cover all aspects of the proposed work*	
☒	a	**Specification: General** • Elements of structure (size, spacing, timber treatment) • Finish or fixings to meet durability requirements • Plumbing and drainage materials and design that installation is to comply with • Wet area surfaces • Ventilation systems • Flooring slip resistance for access routes • Glazing • Type of smoke detectors (including existing smoke detectors where they will remain)	☐
☒	b	**External Claddings** For each of the following claddings provide details of the product name, manufacturer, maintenance requirements and warranties offered • Building wraps • Wall claddings • Roof claddings • Membranes (roof and decks) • Tanking • Joinery	☐
	9	**DEMOLITION / REMOVAL** Complete for all projects involving demolition of significant parts of buildings or the demolition or removal of whole buildings	
☒	a	**Means of Barricading the Site** Provide details of temporary barriers, gates which swing inwards or other means of restricting public access to the area	☐
☒	b	**Proposed Tipping Location for Demolition Materials (address/landfill)**	☐
☒	c	**Hazardous Building Material** Provide safety plan detailing the safe handling and disposal of hazardous materials	☐
☒	d	**Site Management Plan Covering** Management to control silt runoff, noise and dust	☐
☒	e	**Proposed Destination for Relocate Building**	☐
☒	f	**Access To and From the Site (including use of kerb crossings)**	☐
☒	g	**Specify Termination of Existing Services** • Water • Sewer • Stormwater	☐

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

		Note: You will need to contact the relevant service authorities specified below to advise them of the extent of your work: • electricity, • gas, • drainage, • water, • transport, • telecommunications, • cable television, or • any other services that may be affected. **Transportation of Relocated Building** You will be required to contact and provide details to Councils Transportation and Traffic Department.	
10		**OTHER APPROVALS** Complete for all projects involving demolition of significant parts of buildings or the demolition or removal of whole buildings	
☒		Please check Territorial Authority regarding the requirement for other approvals required and fees payable. These may include: • Consents under the Resource Management Act • Approvals under bylaws including earthworks, vehicle crossings, road openings and water connections. Show the location of swimming or spa pools on the property and describe how compliance with the Fencing of Swimming Pools Act will be achieved.	☐

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