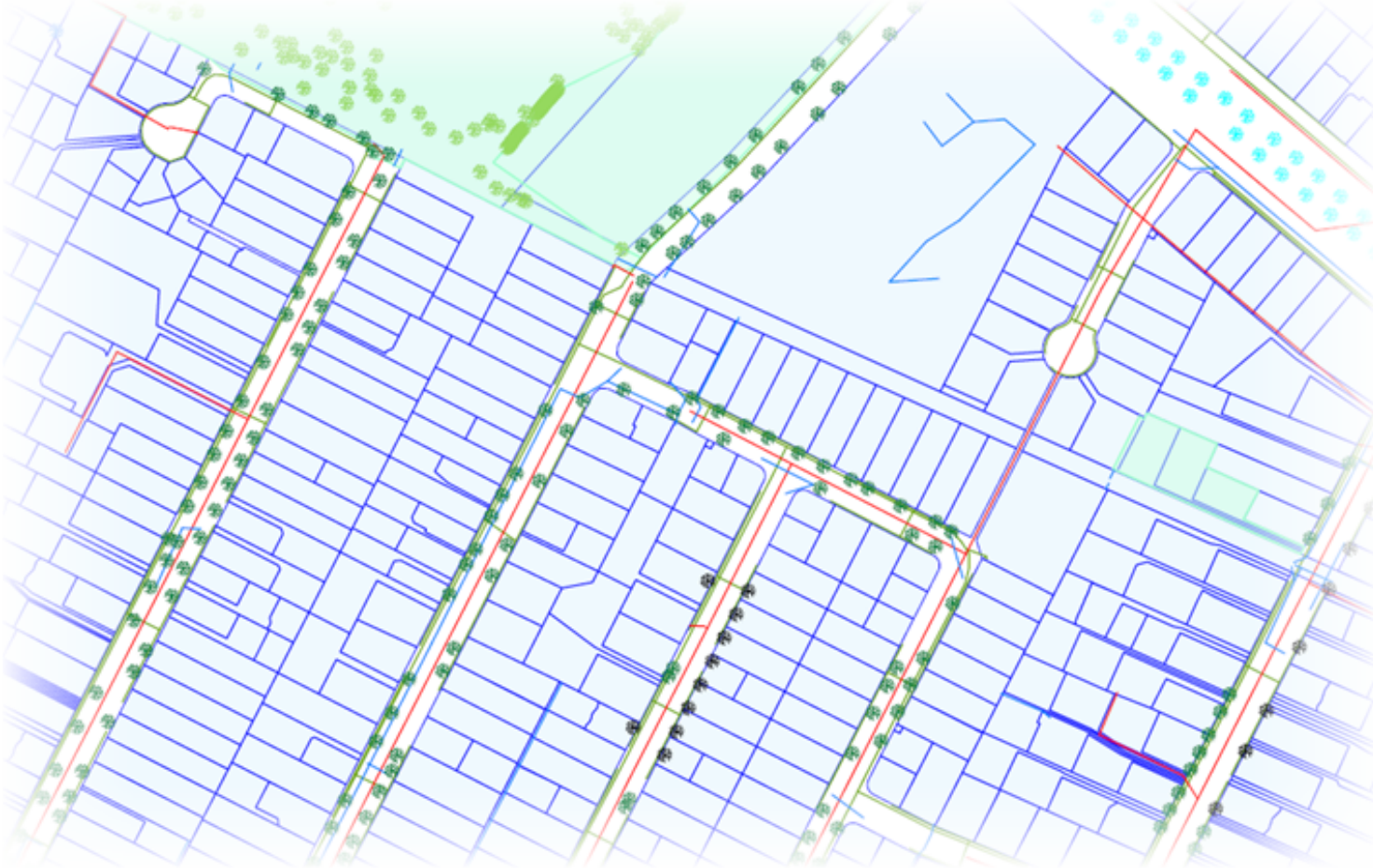
Christchurch City Council

Land Information Memorandum



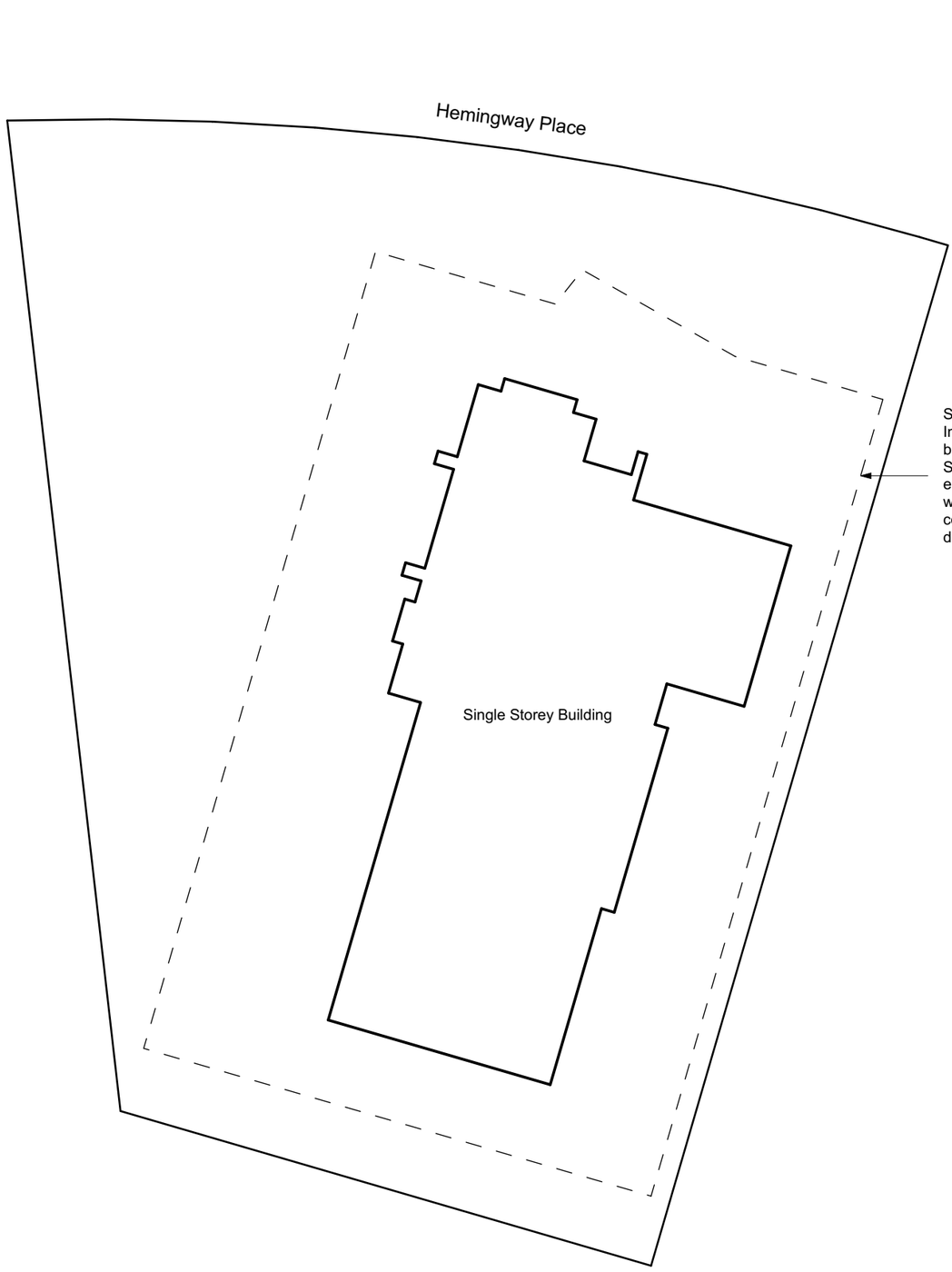
Property address:
16 Hemingway Place

LIM number: 70230364
Page 1

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

SITE DESCRIPTION:

Legal Description:	Lot 35 DP 319911
Address:	16 Hemingway Place, Spencerville
Earthquake Zone:	Zone 2
Exposure Zone:	Zone C
Climate Zone:	Zone 3
Wind Region:	A
Lee Zone:	
Rainfall Intensity:	30 - 40
Wind Zone:	High
Land status:	Green Zone, Technical Category 3, blue
Geotechnical Report:	Kirk Roberts Consulting Engineers Ltd.
Project Number:	121195
Date:	04/06/2012



Site Plan/Sediment Control Plan

SCALE 1:200

Note:
If any asbestos is discovered during the proposed building work, the following steps are required to be taken. Prior to removal, please contact the Department of Labour, telephone 0800 209020 for information on appropriate methods of handling asbestos.

FRONTIER ENGINEERS
CIVIL, STRUCTURAL & REMEDIAL

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Christchurch 8446

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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3	1:200
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved	
Date	

Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Site Plan/Sediment Control Plan
Project Number	170057
Sheet	S01
Rev ID	00
Project Status	Consent Issue

Earthquake Repairs

16 Hemingway Place, Spencerville
Christchurch 8083
Liam Brewer

Structural Sheet Index		
Sheet ID	**Sheet Name**	**Revi ID**
S00	Cover Sheet	00
S01	Site Plan/Sediment Control Plan	00
S02	Ground Floor Pre-Level Floor Survey	00
S03	Ground Floor Jack Pad Approximate Locations	00
S04	Smoke Detector Location	00
S05	Details	00
S06	General Notes	00

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Project Number
170057

Sheet
S00

Rev ID
00

Drawing Title
Cover Sheet

REDUCED COPY

31 JAN 2003

2029657 (AN)
Seafield Park Stage 2

Registered Owner

I hereby certify that this plan was approved by the Christchurch City Council, pursuant to Section 223 of the Resource Management Act 1991,
on the ____ day of _____ 2002
subject to the granting or reserving of the easements set out in the Memorandum hereon.

Authorised Officer

Notes 1. There are no Lots 1–2, 42–79 on this plan.
2. Survey is Class I.

MEMORANDUM OF EASEMENTS

Nature	Servient Tenement Lot No.	Servient Tenement Shown	Dominant Tenement
Right to drain sewage & convey water, electric power & telephonic communications	11	J	Lot 12
Right to drain water in gross	3 4 5 6 7 8 9 10 30	A B C D E F G H K	Christchurch City Council

SCHEDULE OF AREAS

Description	Area
Residential Lots (Lots 3–41)	3.9928ha
Recreation Reserve to Vest in the Christchurch City Council (lot 80)	1393m²
Road to Vest in the Christchurch City Council (lot 81)	9404m²

Total Area 5.0725ha

Comprised in All C.T.43596

I, Christopher David Hawes of Christchurch being a person entitled to practise as a licensed cadastral surveyor, certify that –
(a) The Surveys to which this dataset relates are accurate, and were undertaken by me or under my direction in accordance with the Cadastral Survey Act 2002 and the Surveyor-General's Rules for Cadastral Survey 2002/1:
(b) This dataset is accurate, and has been created in accordance with that Act and those Rules.

(Signature) ..... (Date) .....

Field Book ..... p..... Traverse Book.....p.....
Reference Plans D.P's
S.O.
Examined ..... Correct .....

Approved as to Survey

...../...../..... Approving Surveyor

Deposited this ..... day of ..... 20....

Registrar-General of Land

File
Received
Instructions

717900mN
717750mN
717600mN
297400mE
297550mE
297700mE

D. P. 18192
D. P. 11576
D. P. 311069
D.P.311069

HEMINGWAY
CALYPSO PLACE
PLACE
Legal Road
Road to Vest in Christchurch City Council (Irreg width)
Recreation Reserve to Vest in Christchurch City Council
See Diag. W Sht 3
See Diag. X Sht 4
See Diag. V Sht 4
See Diag. Y Sht 3
See Diag. Sht 2

Certificates of Title Allocated

Lots 3–41
Lot 80

Sheet 1 of 4

LAND DISTRICT Canterbury
SURVEY BLK. & DIST. IV Christchurch
NZMS 261 SHT..... Record Map No.....

LOTS 3 – 41, 80 & 81 BEING SUBDIVISION OF LOT 86 D.P.311069

TERRITORIAL AUTHORITY Christchurch City
Surveyed by Davie, Lovell-Smith Limited S.3947
Scale 1:1000 Date Dec2002-Jan2003

A.J. BEVIN, SURVEYOR GENERAL, LAND INFORMATION, NEW ZEALAND.

L.I.N.Z. FORM D15 "APPROVED CH 98/2"

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFT

22 March 2017

Frontier Engineers Limited
PO Box 79183
Avonhead
Christchurch 8446

Dear Sir/Madam

Building Act exemption: BCN/2017/1885
16 Hemingway Place Spencerville
Relevel existing floors

Building Act exemption approved

We have considered your application, under Schedule 1, clause 2(a) of the Building Act 2004, for exemption from the requirement to obtain building consent.

We are satisfied that the completed work is likely to comply with the building code, provided it is carried out in accordance with your proposal. Therefore, your application has been approved.

You can download stamped copies of your proposal documents from onlineservices.ccc.govt.nz. Please forward copies to the building owner.

Advice

- All building work must comply with the Building Act, building code, and all other applicable laws.
- This letter does not provide any approval that may be required, other than that stated.
- This approval is valid if the work is completed within two years of **22 March 2017.**
- Ensure all works also comply with the Christchurch City Plan, contact the duty planner on 941 8999 with any queries on this.
- **Please ensure all quality assurance procedures offered in the application are followed, including engineer construction monitoring and written sign off via producer statements. Construction Review Statement (PS4) and supporting evidence (Construction statements, site records/reports, photographs etc) should be provided to council on completion – propertyfileinfo@ccc.govt.nz**

As the Council does not inspect the work, it is recommended that completion verification documents be supplied to the Council on completion of the work. These will be placed on the file for the property, and may prove beneficial for future enquiries (for example, land information memoranda (LIMs) or property file requests).

Civic Offices, 53 Hereford Street, Christchurch 8011
PO Box 73013, Christchurch 8154
Phone: (03) 941-8999, Fax: (03) 941-8792
www.ccc.govt.nz

Yours sincerely

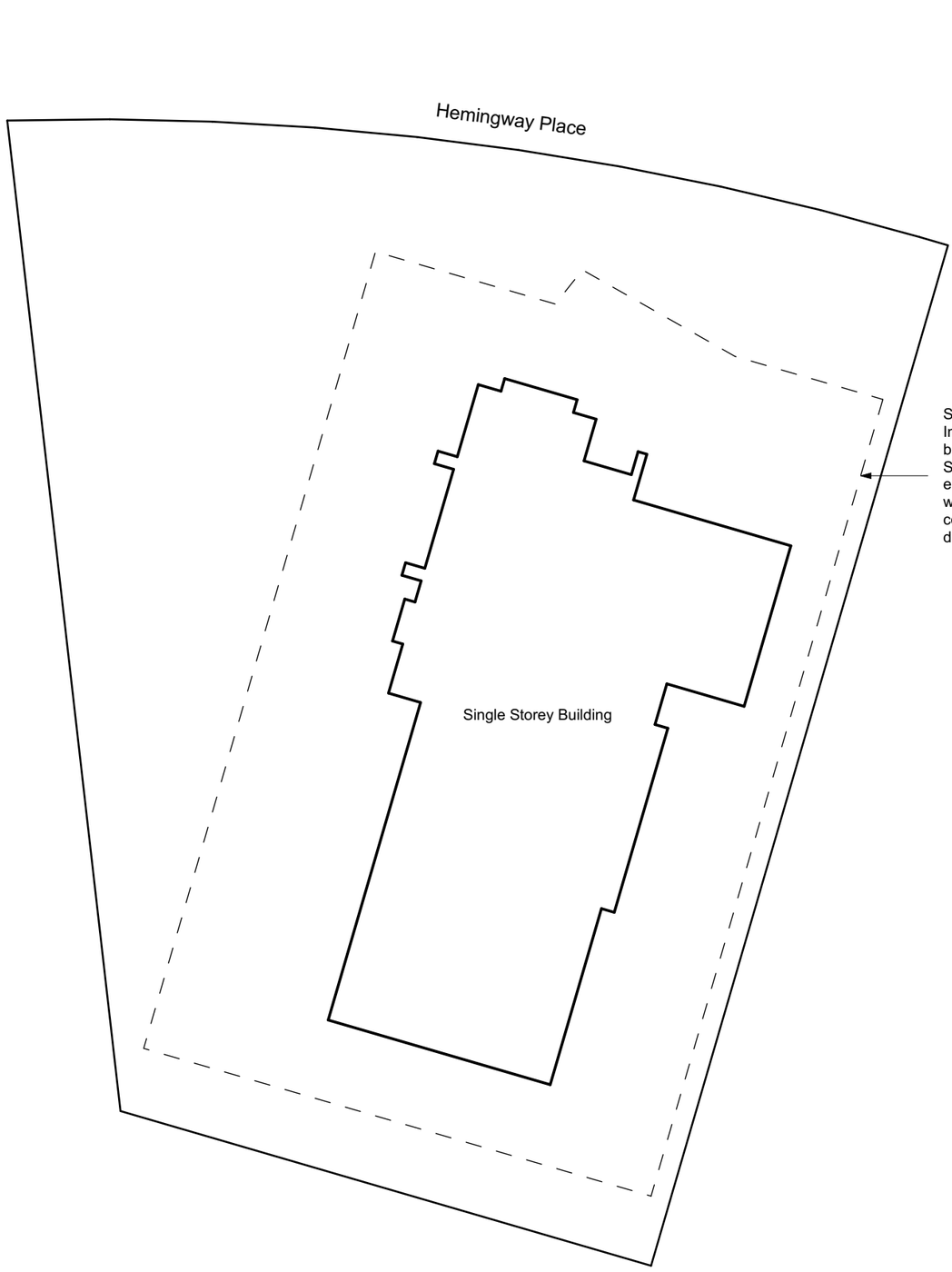


Andrew Eames
Building Control Officer
Building Certification & Exemption Team
Consenting & Compliance Group

Civic Offices, 53 Hereford Street, Christchurch 8011
PO Box 73013, Christchurch 8154
Phone: (03) 941-8999, Fax: (03) 941-8792
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SITE DESCRIPTION:

Legal Description:	Lot 35 DP 319911
Address:	16 Hemingway Place, Spencerville
Earthquake Zone:	Zone 2
Exposure Zone:	Zone C
Climate Zone:	Zone 3
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Lee Zone:	
Rainfall Intensity:	30 - 40
Wind Zone:	High
Land status:	Green Zone, Technical Category 3, blue
Geotechnical Report:	Kirk Roberts Consulting Engineers Ltd.
Project Number:	121195
Date:	04/06/2012



Site Plan/Sediment Control Plan

SCALE 1:200

Note:
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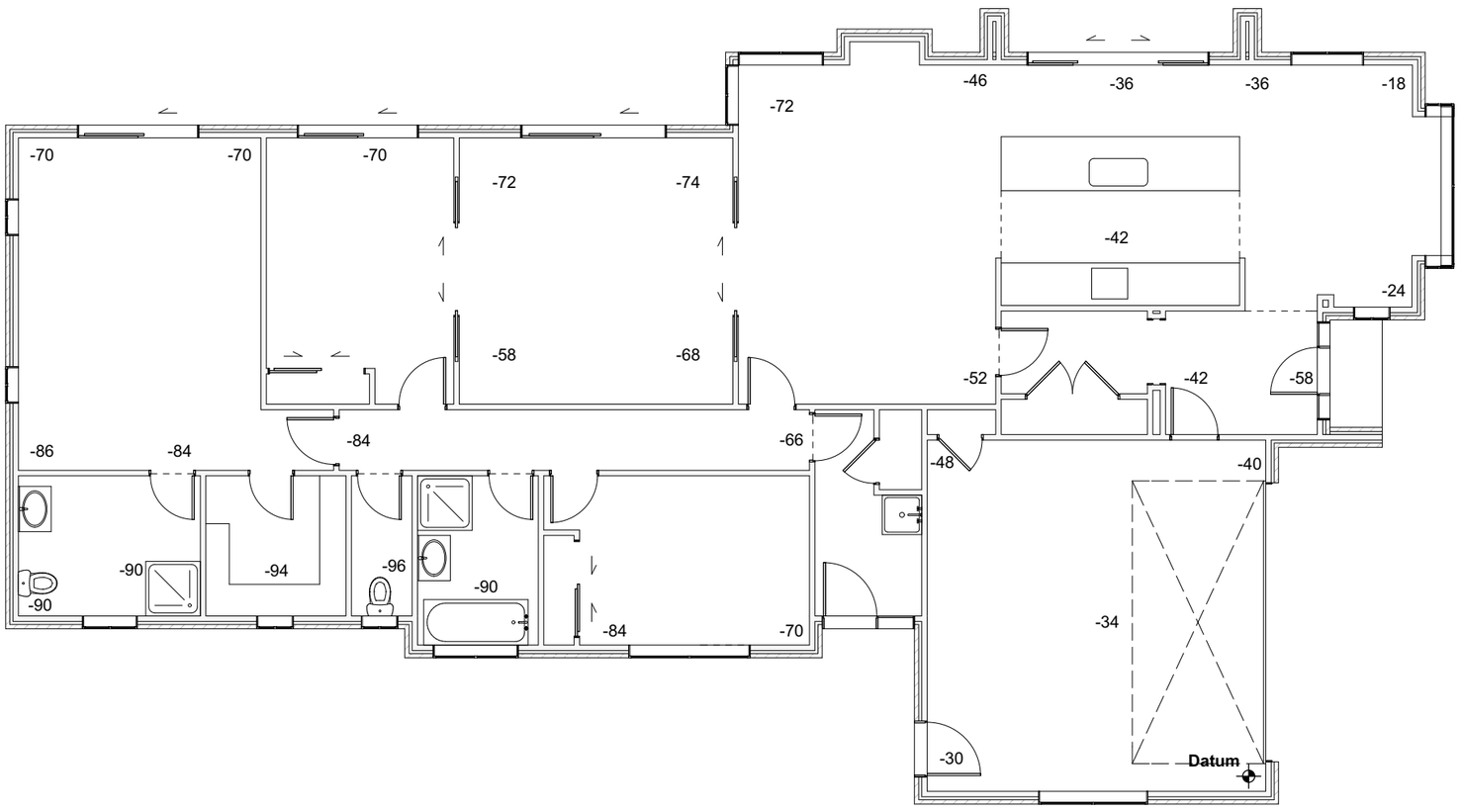
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00	Issued for Consent	16/03/2017

Scale at A3	1:200
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved	
Date	

Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Site Plan/Sediment Control Plan
Project Number	170057
Sheet	S01
Rev ID	00
Project Status	Consent Issue



Ground Floor Pre-Level Survey

SCALE 1:100

Legend:

±X	Indicates floor level above or below datum
- - - - - - -	Indicates change in floor type

Notes:

1. Following relevelling the floor at each unit shall have
   i. maximum differential height of 50mm overall
   ii. 10mm within any room.
   iii. have a maximum slope of 1:200 (0.5%) between any to points more than 2m apart.
2. All levels shown on this plan are relative to the indicated datum.
3. All floor levels locations and slopes approximate

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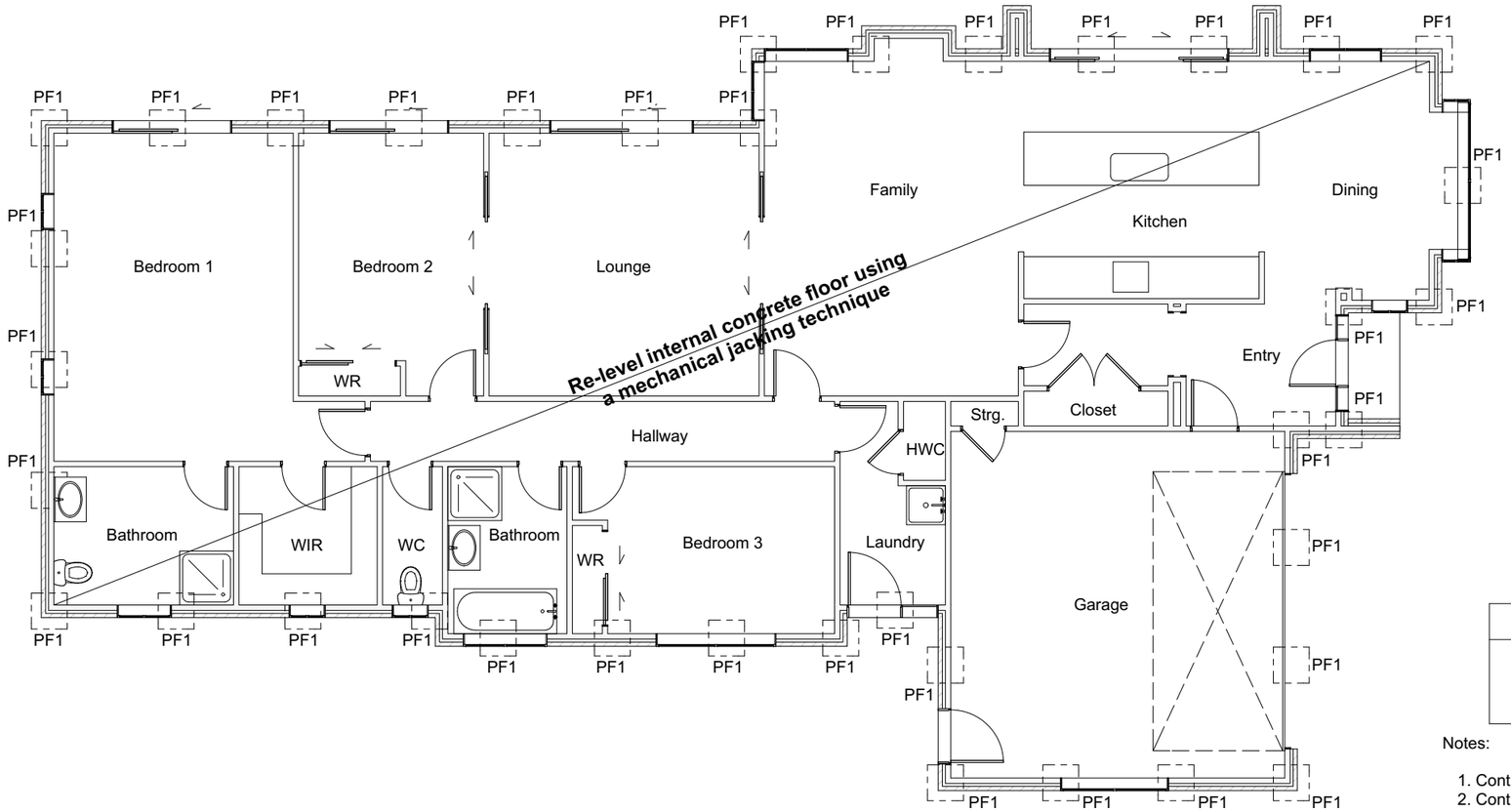
Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Project Number: 170057

Sheet: S02
Rev ID: 00

Drawing Title: Ground Floor Pre-Level Floor Survey

Project Status: Consent Issue



Jack Pad Approximate Locations

SCALE 1:100

Schedule	
PF1	600x600sq. concrete pad footing at 2.0m crs*

Notes:

1. Contractor is to confirm all dimensions on site before commencing work
2. Contractor is to confirm floor levels at each pile or bearer support location to be packed.
3. Pad target depth is 0.5m min. below ground level.
4. Disconnect and reconnect services as required.
5. Ensure guttering falls to downpipes after relevelling.
6. Ensure all doors open and close properly.
7. All work to be carried out in accordance with NZS3604-2011.
8. Contractor to make all walls plumb.
9. Cracks in all concrete structures are to be repaired using proprietary product crack bond 'LR321G' supplied by adhesives technology corporation or approved equivalent.
   Cracks to be repaired up to a maximum of 5mm and any cracks of more than 5mm are to be repaired by using Helibar or any approved equivalent.
   Product to be installed strictly in accordance with manufacturers instructions

* Please note, positions of concrete pads are an approximate location setting

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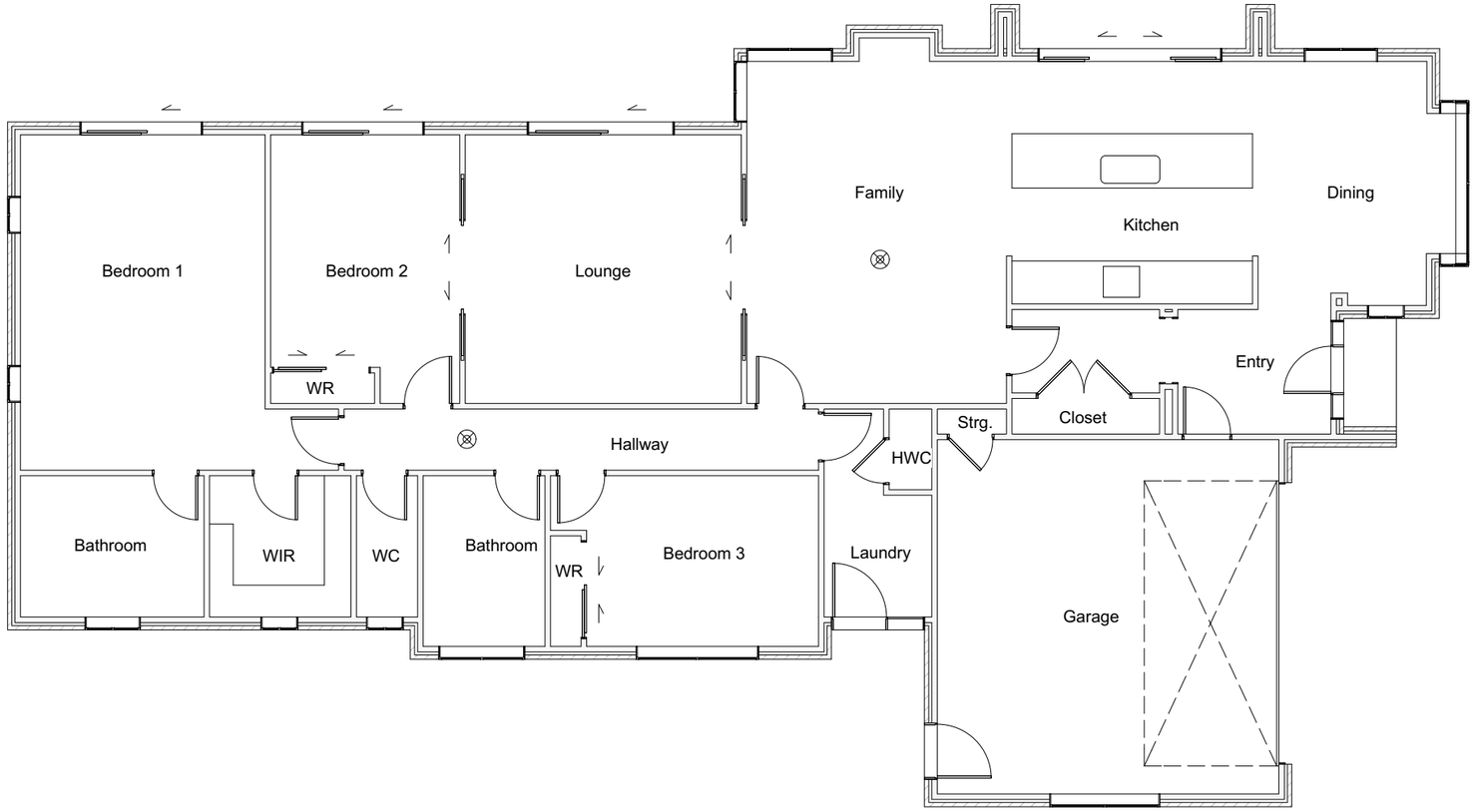
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Scale at A3	1:100
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved Date	

Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Ground Floor Jack Pad Approximate Locations
Project Number	170057
Sheet	S03
Rev ID	00
Project Status	Consent Issue



Smoke Detector Location

SCALE 1:100

Schedule	
⊗	Smoke Detector

Note:
All smoke detectors will be checked for complience with F7/AS1, and if non-compliant will be moved and/or installed to meet compliance as per drawing.

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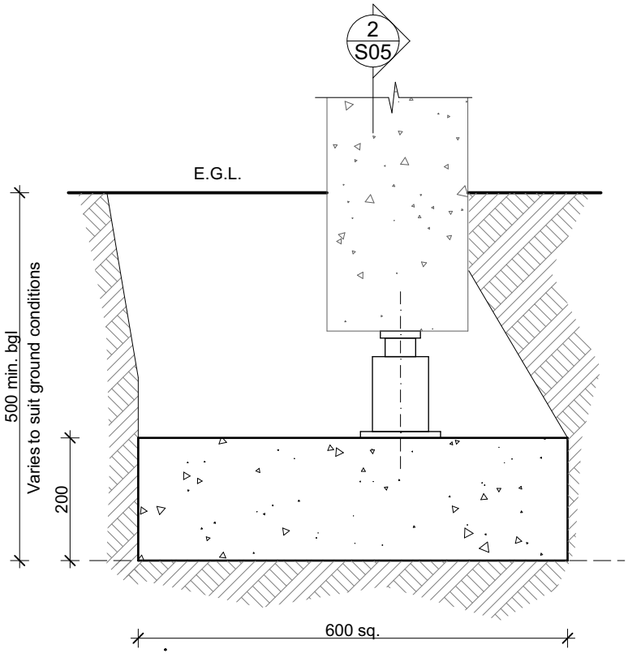
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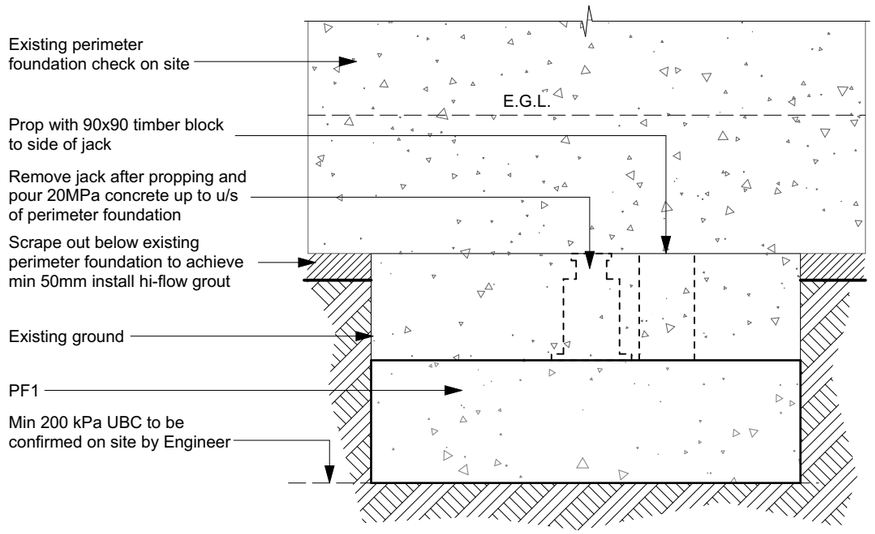
Scale at A3	1:100
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved	
Date	

Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Smoke Detector Location
Project Number	170057
Sheet	S04
Rev ID	00
Project Status	Consent Issue



1 - Re-levelling Pad Detail

SCALE 1:10



2 - Section

SCALE 1:10

Schedule	
PF1	600x600sq. concrete pad footing at 2.0m crs.

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Date: 16/03/2017
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Drawn by: DC
Approved
Date

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Project Number: 170057
Sheet: S05
Rev ID: 00
Drawing Title: Details
Project Status: Consent Issue

GENERAL

G1. Read these drawings in conjunction with all architectural and other working drawings, specifications and with such other written instructions as may be issued during the course of the contract.
G2. Provide all workmanship and materials in accordance with the requirements of the current editions of the NZ Building Act, the NZ Building Code, the New Zealand Standards and the by-laws and ordinances of the relevant building consent authority.
G3. Comply as the builder, with requirements of the workplace health & safety act.
G4. Refer any conflict between these notes, the specification, the drawings or any other relevant documents to the engineer for decision prior to proceeding with the work.
G5. Do not obtain dimensions by scaling the drawings. For setting out dimensions and levels refer to the architectural drawings.
G6. The builder is responsible for the provision of all shoring to maintain the stability and integrity of excavations and adjacent structures. Provide details, for review by the Engineer, of any necessary temporary works, including shoring, prior to commencing construction.
G7. During construction it is the builder's responsibility to maintain the structure in a stable condition and to ensure no part is overstressed.
G8. The design and drawings are copyright and may not be used or reproduced in whole or in part without the written permission of the Engineer.
G9. Fire-resistance levels (FRL's) required for the various structural elements must be confirmed by the Building Surveyor or Architect.

LOADINGS

L1. Superimposed floor loads are generally in accordance with AS/NZS 1170.1 and specifically:

	1.5 kPa	Generally
	2.0 kPa	Balconies
	2.5kPa	Stairs

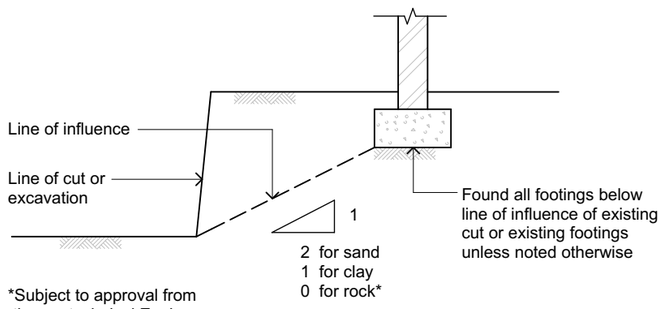
L2. Wind loads are in accordance with AS/NZS1170.2 for:

Terrain category:	2.5	Region: A7
Topographical multiplier of:	1.0	
Shielding multiplier of	1.0	

L2.2 Snow loads are in accordance with AS/NZS 1170.3 0.9kPa
L2.3 Earthquake loads are in accordance with NZS 1170.5

FOUNDATIONS

F1. The minimum safe ultimate bearing capacity of foundation material shall be:
Slabs & Footings: 200 kPa in natural substrate unless noted otherwise (U.N.O.)
F2. Foundation material shall be approved by the engineer prior to placing concrete.
F3. The bases of footing excavations shall be finished clean and horizontal and be embedded 300 into naturally occurring material.
F4. Founding levels where shown are for tender purposes only.
F5. Any proposed footing excavation near boundaries, other structures or services shall be approved by the Engineer.
F6. Subgrade shall be approved material compacted to 98% standard dry density determined by testing to the relevant part of NZS 4402:1986 U.N.O.
F7. Locate all new footings relative to line of cut/excavation including excavations as shown below:



*Subject to approval from the geotechnical Engineer

REINFORCED CONCRETE

C1. Provide all workmanship and materials in accordance with NZS 3101.1:2006, NZS 3109:1997 and NZS 3605:2011, their referenced documents, the drawings and the specification.
C2. Provide concrete grade and minimum clear concrete cover to reinforcement in accordance with NZS 3101:2006 & NZS 3604:2011 U.N.O.

CONCRETE GRADE	ELEMENT LOCATION U.N.O	MINIMUM CONCRETE COVER (mm)
20 MPa	Pad Footings Steps & Landings Paths & Driveways	25 against ground with DPM 75 against ground with no DPM 30 interior protected areas 50 exposed areas
25 MPa	Slabs & Foundations Suspended Stairs	25 against ground with DPM 75 against ground with no DPM 25 interior protected areas 50 exposed areas
30 MPa	Where Noted	20 against ground with DPM 45 against ground with no DPM 20 interior protected areas 50 exposed areas

C3. Support all reinforcement at 1 metre maximum centres both ways on mild steel plastic tipped chairs, plastic chairs or concrete chairs. Use only plastic chairs for externally exposed soffits.
C4. Provide all concrete with 80mm maximum slump and 20mm maximum aggregate unless approved by the Engineer.
C5. Sizes of concrete elements are net, exclusive of applied finishes. Beam depths are written first and include slab thickness.
C6. Properly form construction joints and use only where shown or approved by the Engineer.
C7. Reinforcement is represented diagrammatically and is not necessarily shown in true projection.
C8. Weld or splice reinforcement only in positions approved by the Engineer.
C9. Provide the minimum clear spacing between conduits, cables, pipes and bars as required by NZS 3109 but not less than three bar diameters. Do not place conduits in slabs above top reinforcement or below bottom reinforcement.
C10.

D	Denotes hot rolled deformed bars grade 300E.
HD, H	Denotes hot rolled deformed bars grade 500E.
R	Denotes hot rolled plain round bars grade 300E.
SE,RE	Denotes hard drawn wire fabric grade 500E.

C11. Notify the Engineer a minimum of 24 hours before reinforcement has been completed.
C12. Allow 2 hours after the completion of the reinforcement for the Engineer's inspection.
C13. Do not order concrete until reinforcement has been approved by the Engineer.
C14. Cure concrete in accordance with NZS 3109. Commence curing within two hours of finishing operations and continue for a minimum of seven days by using an approved proprietary compound or by keeping continuously wet.
C15. Tie all unsupported bars in transverse direction to D12-300, lapped 500 U.N.O.
C16. Lap fabric in accordance with clause 8.7.6 of NZS 3109.
C17. Provide hooks, laps and bends in accordance with NZS 3101 & NZS 3109 U.N.O.
C18. Provide chamfers, drip grooves etc. in accordance with the Architect's details.
C19. Design, construct and strip formwork in accordance with NZS 3109.
C20. Pre camber formwork upwards by 1/500 of the clear span U.N.O. where supported beams and slabs span greater than 5m.
C21. The concrete elements detailed have a F.R.L. of 60/60/60 U.N.O.

TIMBER

T1. Ensure all workmanship and materials are in accordance with NZS 3603:1993 and NZS 3604:2011, their referenced documents and the specification.
T2. Provide all interior timber as SG6 (dry) U.N.O.
T3. Provide all external timber as SG8 (dry) U.N.O.
T4. Where the use of treated timber for durability is noted on the structural drawings, ensure it complies with the parameters: Exposure Zone C in accordance with NZS 3604.
T5. Install proprietary timber connectors in accordance with the manufacturers written instructions.
T6. Retighten bolted connections in unseasoned timber prior to the fixing of cladding.
T7. Timber elements or timber framing have not been designed unless noted.
T8. All trusses to be pre-cambered upward 1/240 span.

STEELWORK

S1. Ensure materials, fabrication and erection are in accordance with NZS 3404, it's referenced documents and the specification.
S2. Shop drawings are to be approved by the Engineer prior to fabrication.
S3. Provide all welds as 6mm continuous fillet from E41xx electrodes, all bolts as M16-4.6/S and all cleats and gussets as 10mm plate U.N.O.
S4. For bolts, the following notation is used:
4/M16-4.6/s denotes 4 x M16 commercial grade bolts snug tight.
6/M20-8.8/tf denotes 6 x M20 high strength structural bolts fully tensioned in a no slip joint.
8/M24-8.8/tb denotes 8 x M24 high strength structural bolts fully tensioned in a bearing joint.
S5. Leave mating surfaces of 'tf' connections unpainted and free of mill scale and rust.
S6. Tighten bolts in 'tf' and 'tb' connections using the part turn method or load indicating washers. Do not use calibrated torque wrenches. Use a hardened washer under the bolt head or nut, whichever is rotated. The re-use of fully tensioned bolts is prohibited.
S7. Provide all cleats and drill all holes necessary for fixing steel to steel or timber.
S8. Fabricate steel beams and trusses spanning greater than 5m with an upward pre camber of 1/500 span U.N.O.
S9. Prepare structural steelwork to class 2 and paint with zinc phosphate primer to a thickness of 70 micrometres U.N.O.
S10. Hot dip galvanise all exposed external steelwork and all steelwork built into an external masonry skin, in accordance with grade HDG600 to AS/NZS 2312.
S11. Within 100m from the non-surf coast or 1 km from the surf coast, hot dip galvanise above in accordance with grade HDG900 to AS/NZS 2312.
S12. Provide fire protection to all steelwork as required.
S13. Ensure all cold formed sections conform to AS/NZS 4600 and are roll-formed from steel strip, minimum yield stress 450 MPa, 300 g/m² minimum zinc coating mass U.N.O.

MASONRY

M1. Ensure all workmanship and materials are in accordance with NZS 4230, the drawings & project specifications.
M2. Where masonry supports concrete slabs or beams, lay the top course with frogs down and covered with 2 layers of approved slip joint material.
M3. Walls shown shaded on plan are load bearing. Separate non-load bearing walls under slabs from the slab by 15mm of approved compressible material. Where masonry abuts slab downturns, form a 15mm gap between brickwork and side of downturn.
M4. Do not erect masonry supported by concrete slabs or beams until all formwork and props under have been removed.
M5. Provide all bricks of ultimate compressive strength $f'uc$ = 20 MPa U.N.O.
M6. Provide all hollow concrete masonry of ultimate compressive strength $f'uc$ = 15 MPa U.N.O.
M7. Provide classification M3 masonry mortar U.N.O. Note that within 100m from non-surf coast, or 1km from surf coast, provide classification M4 masonry mortar.
M8. Cut no chases into loadbearing masonry without the approval of the Engineer.
M9. Provide movement control joints vertically for full height of wall as follows:
For general masonry, at 8m maximum centres & 4m maximum from corners.
For articulated masonry, at 6m maximum centres & 4m maximum from corners.
Provide 15mm minimum joints with an approved compressible filler, tied together every 4th course with a MET 3.3 masonry sliding tie or approved equivalent.
M10. Construct hollow walls to full height or maximum 3m before filling cores. Provide cleanout openings at the base of all cores to be filled.
M11. Core fill $f'uc$ = 20 MPa concrete with 10mm aggregate, 180 slump U.N.O.
M12. Construct hollow masonry retaining walls using "double U blocks".
M13. Unreinforced masonry walls have not been designed unless noted.

FRONTIER ENGINEERS
CIVIL, STRUCTURAL & REMEDIAL

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Christchurch 8446

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Phone: 03 359 9192
Free Call: 0508 FRONTIER (0508 376 684)

Email: admin@frontierengineers.co.nz

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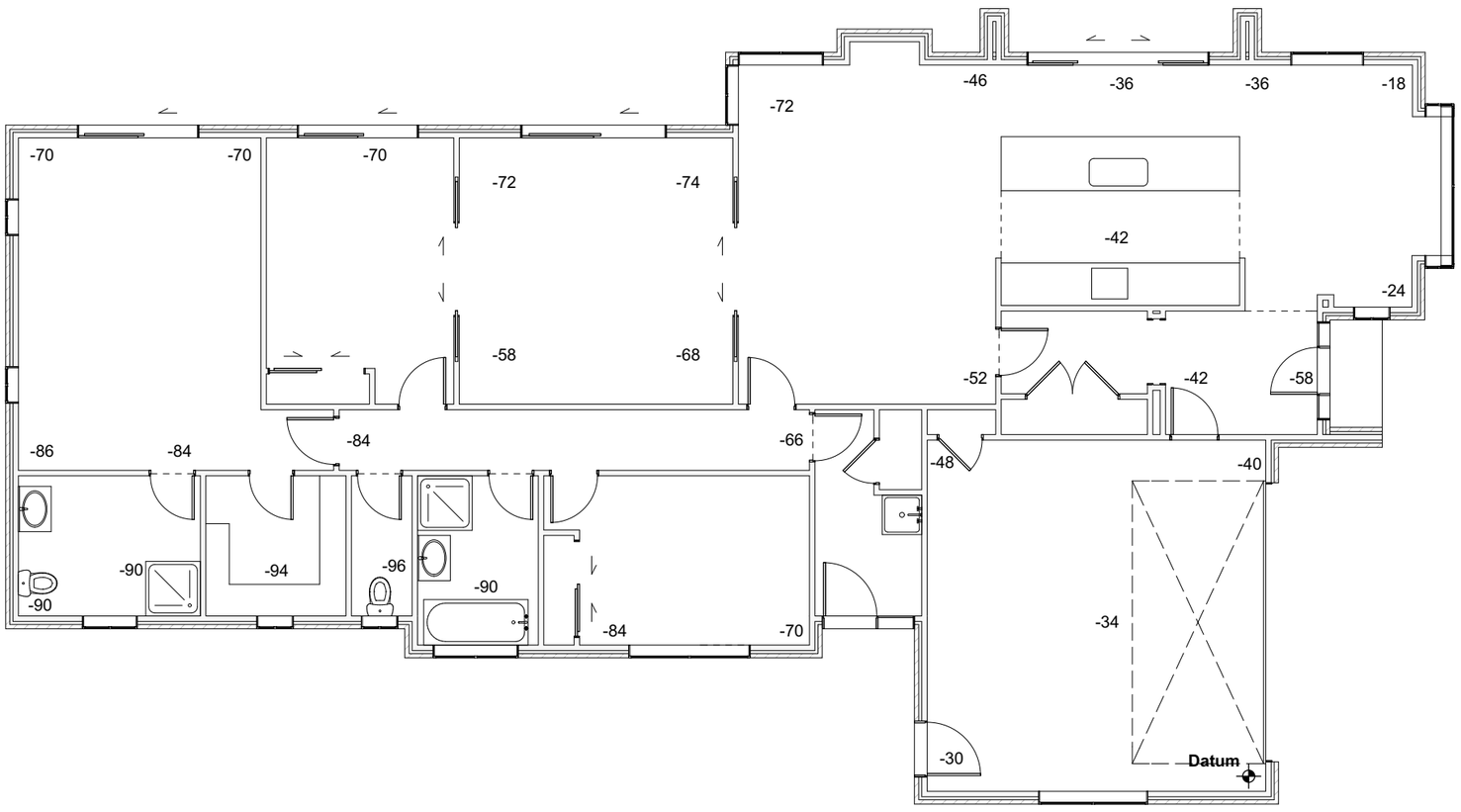
Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3: 1:1
Date: 16/03/2017
Design by: DC
Drawn by: DC
Approved
Date

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Drawing Title: General Notes

Project Number: 170057
Sheet: S06
Rev ID: 00
Project Status: Consent Issue



Ground Floor Pre-Level Survey

SCALE 1:100

Legend:

±X	Indicates floor level above or below datum
- - - - - - -	Indicates change in floor type

Notes:

1. Following relevelling the floor at each unit shall have
   i. maximum differential height of 50mm overall
   ii. 10mm within any room.
   iii. have a maximum slope of 1:200 (0.5%) between any to points more than 2m apart.
2. All levels shown on this plan are relative to the indicated datum.
3. All floor levels locations and slopes approximate

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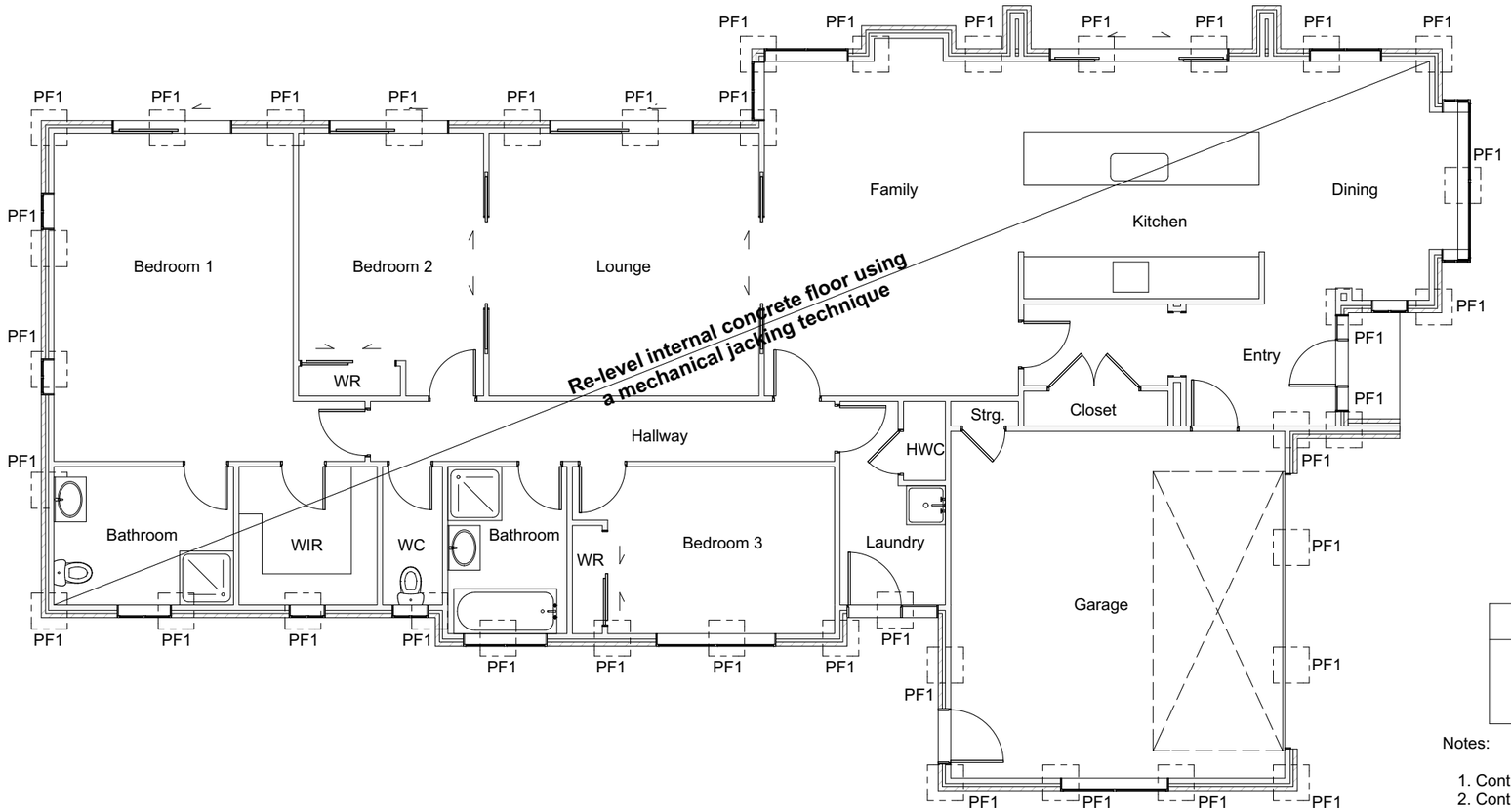
Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Project Number: 170057

Sheet: S02
Rev ID: 00

Drawing Title: Ground Floor Pre-Level Floor Survey

Project Status: Consent Issue



Jack Pad Approximate Locations

SCALE 1:100

Schedule	
PF1	600x600sq. concrete pad footing at 2.0m crs*

Notes:

1. Contractor is to confirm all dimensions on site before commencing work
2. Contractor is to confirm floor levels at each pile or bearer support location to be packed.
3. Pad target depth is 0.5m min. below ground level.
4. Disconnect and reconnect services as required.
5. Ensure guttering falls to downpipes after relevelling.
6. Ensure all doors open and close properly.
7. All work to be carried out in accordance with NZS3604-2011.
8. Contractor to make all walls plumb.
9. Cracks in all concrete structures are to be repaired using proprietary product crack bond 'LR321G' supplied by adhesives technology corporation or approved equivalent.
   Cracks to be repaired up to a maximum of 5mm and any cracks of more than 5mm are to be repaired by using Helibar or any approved equivalent.
   Product to be installed strictly in accordance with manufacturers instructions

* Please note, positions of concrete pads are an approximate location setting

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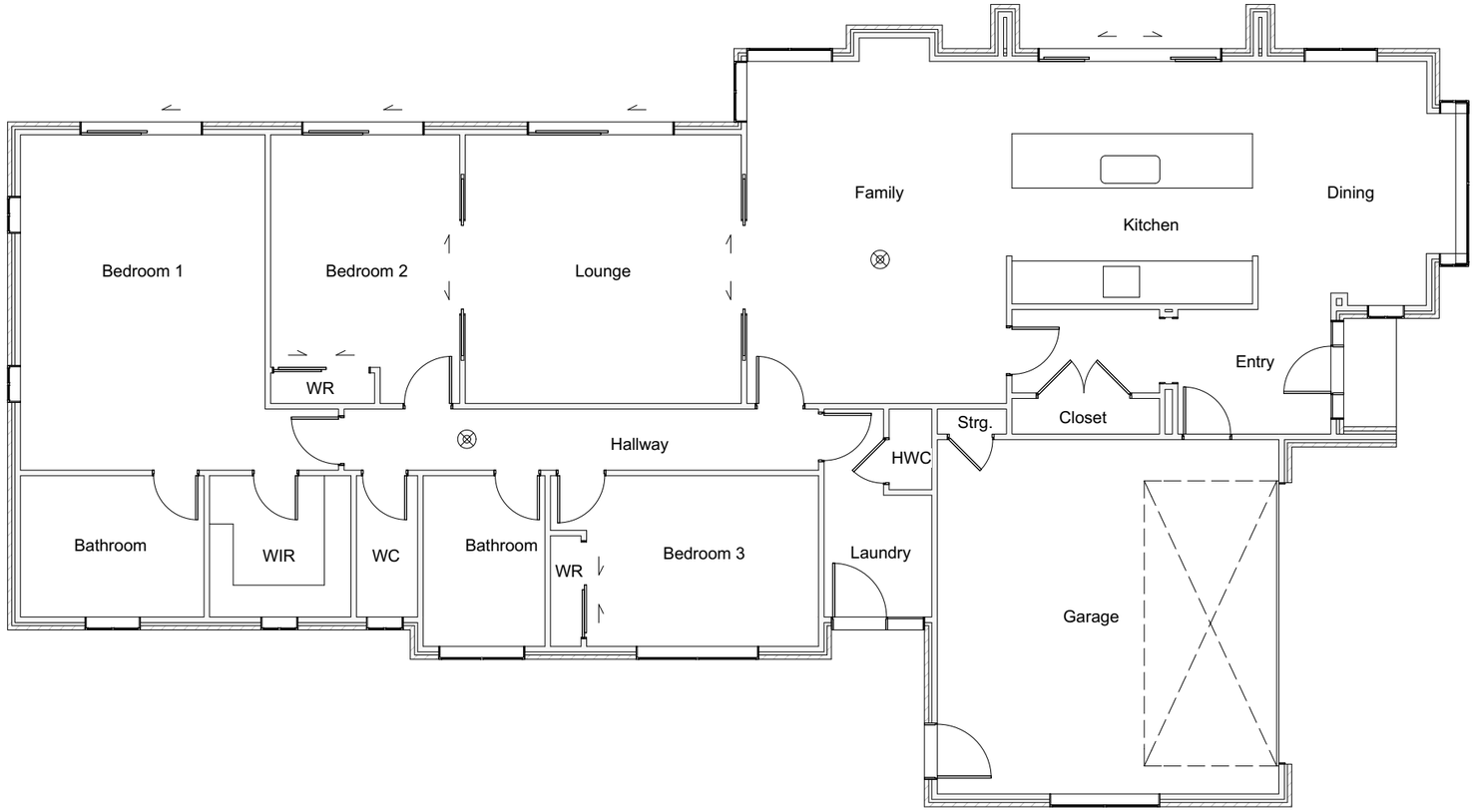
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Scale at A3	1:100
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved Date	

Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Ground Floor Jack Pad Approximate Locations
Project Number	170057
Sheet	S03
Rev ID	00
Project Status	Consent Issue



Smoke Detector Location

SCALE 1:100

Schedule	
⊗	Smoke Detector

Note:
All smoke detectors will be checked for complience with F7/AS1, and if non-compliant will be moved and/or installed to meet compliance as per drawing.

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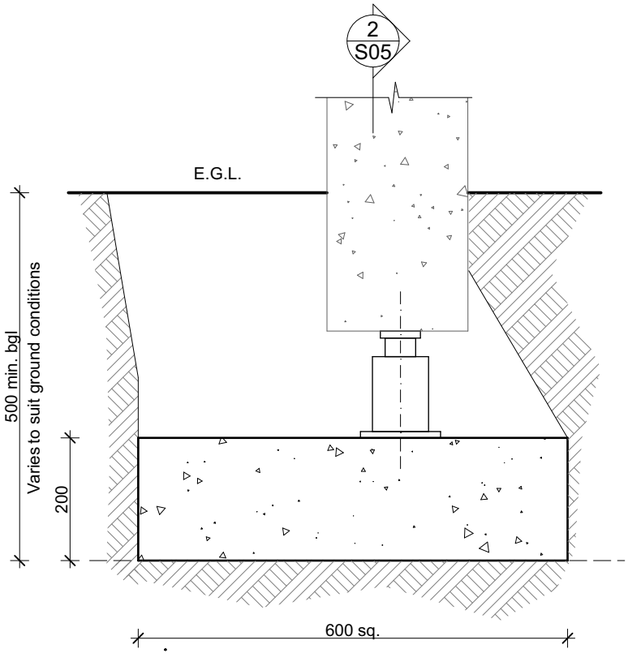
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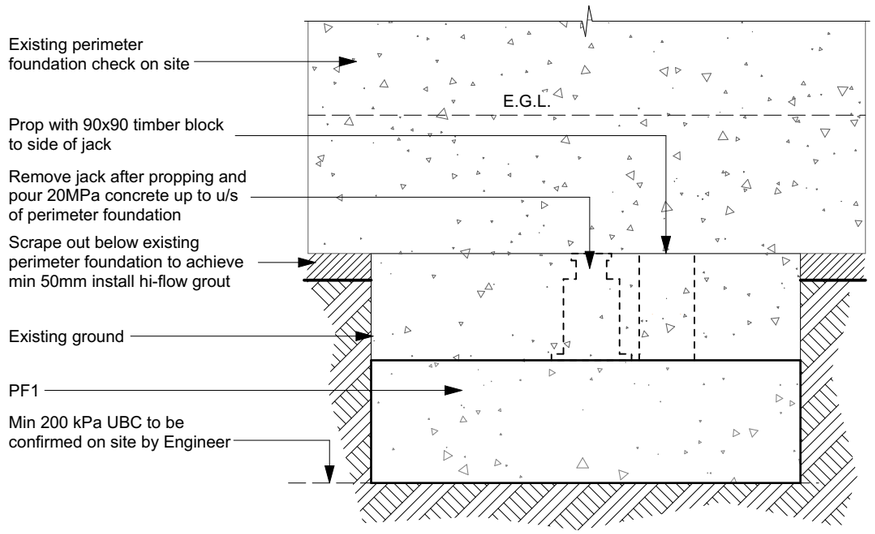
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Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Smoke Detector Location
Project Number	170057
Sheet	S04
Rev ID	00
Project Status	Consent Issue



1 - Re-levelling Pad Detail

SCALE 1:10



2 - Section

SCALE 1:10

Schedule	
PF1	600x600sq. concrete pad footing at 2.0m crs.

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Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Project Number: 170057
Sheet: S05
Rev ID: 00
Drawing Title: Details
Project Status: Consent Issue

GENERAL

G1. Read these drawings in conjunction with all architectural and other working drawings, specifications and with such other written instructions as may be issued during the course of the contract.
G2. Provide all workmanship and materials in accordance with the requirements of the current editions of the NZ Building Act, the NZ Building Code, the New Zealand Standards and the by-laws and ordinances of the relevant building consent authority.
G3. Comply as the builder, with requirements of the workplace health & safety act.
G4. Refer any conflict between these notes, the specification, the drawings or any other relevant documents to the engineer for decision prior to proceeding with the work.
G5. Do not obtain dimensions by scaling the drawings. For setting out dimensions and levels refer to the architectural drawings.
G6. The builder is responsible for the provision of all shoring to maintain the stability and integrity of excavations and adjacent structures. Provide details, for review by the Engineer, of any necessary temporary works, including shoring, prior to commencing construction.
G7. During construction it is the builder's responsibility to maintain the structure in a stable condition and to ensure no part is overstressed.
G8. The design and drawings are copyright and may not be used or reproduced in whole or in part without the written permission of the Engineer.
G9. Fire-resistance levels (FRL's) required for the various structural elements must be confirmed by the Building Surveyor or Architect.

LOADINGS

L1. Superimposed floor loads are generally in accordance with AS/NZS 1170.1 and specifically:

	1.5 kPa	Generally
	2.0 kPa	Balconies
	2.5kPa	Stairs

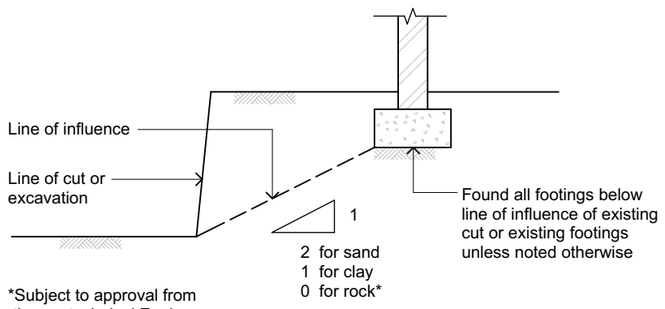
L2. Wind loads are in accordance with AS/NZS1170.2 for:

Terrain category:	2.5	Region: A7
Topographical multiplier of:	1.0	
Shielding multiplier of	1.0	

L2.2 Snow loads are in accordance with AS/NZS 1170.3 0.9kPa
L2.3 Earthquake loads are in accordance with NZS 1170.5

FOUNDATIONS

F1. The minimum safe ultimate bearing capacity of foundation material shall be:
Slabs & Footings: 200 kPa in natural substrate unless noted otherwise (U.N.O.)
F2. Foundation material shall be approved by the engineer prior to placing concrete.
F3. The bases of footing excavations shall be finished clean and horizontal and be embedded 300 into naturally occurring material.
F4. Founding levels where shown are for tender purposes only.
F5. Any proposed footing excavation near boundaries, other structures or services shall be approved by the Engineer.
F6. Subgrade shall be approved material compacted to 98% standard dry density determined by testing to the relevant part of NZS 4402:1986 U.N.O.
F7. Locate all new footings relative to line of cut/excavation including excavations as shown below:



*Subject to approval from the geotechnical Engineer

REINFORCED CONCRETE

C1. Provide all workmanship and materials in accordance with NZS 3101.1:2006, NZS 3109:1997 and NZS 3605:2011, their referenced documents, the drawings and the specification.
C2. Provide concrete grade and minimum clear concrete cover to reinforcement in accordance with NZS 3101:2006 & NZS 3604:2011 U.N.O.

CONCRETE GRADE	ELEMENT LOCATION U.N.O	MINIMUM CONCRETE COVER (mm)
20 MPa	Pad Footings Steps & Landings Paths & Driveways	25 against ground with DPM 75 against ground with no DPM 30 interior protected areas 50 exposed areas
25 MPa	Slabs & Foundations Suspended Stairs	25 against ground with DPM 75 against ground with no DPM 25 interior protected areas 50 exposed areas
30 MPa	Where Noted	20 against ground with DPM 45 against ground with no DPM 20 interior protected areas 50 exposed areas

C3. Support all reinforcement at 1 metre maximum centres both ways on mild steel plastic tipped chairs, plastic chairs or concrete chairs. Use only plastic chairs for externally exposed soffits.
C4. Provide all concrete with 80mm maximum slump and 20mm maximum aggregate unless approved by the Engineer.
C5. Sizes of concrete elements are net, exclusive of applied finishes. Beam depths are written first and include slab thickness.
C6. Properly form construction joints and use only where shown or approved by the Engineer.
C7. Reinforcement is represented diagrammatically and is not necessarily shown in true projection.
C8. Weld or splice reinforcement only in positions approved by the Engineer.
C9. Provide the minimum clear spacing between conduits, cables, pipes and bars as required by NZS 3109 but not less than three bar diameters. Do not place conduits in slabs above top reinforcement or below bottom reinforcement.
C10.

D	Denotes hot rolled deformed bars grade 300E.
HD, H	Denotes hot rolled deformed bars grade 500E.
R	Denotes hot rolled plain round bars grade 300E.
SE,RE	Denotes hard drawn wire fabric grade 500E.

C11. Notify the Engineer a minimum of 24 hours before reinforcement has been completed.
C12. Allow 2 hours after the completion of the reinforcement for the Engineer's inspection.
C13. Do not order concrete until reinforcement has been approved by the Engineer.
C14. Cure concrete in accordance with NZS 3109. Commence curing within two hours of finishing operations and continue for a minimum of seven days by using an approved proprietary compound or by keeping continuously wet.
C15. Tie all unsupported bars in transverse direction to D12-300, lapped 500 U.N.O.
C16. Lap fabric in accordance with clause 8.7.6 of NZS 3109.
C17. Provide hooks, laps and bends in accordance with NZS 3101 & NZS 3109 U.N.O.
C18. Provide chamfers, drip grooves etc. in accordance with the Architect's details.
C19. Design, construct and strip formwork in accordance with NZS 3109.
C20. Pre camber formwork upwards by 1/500 of the clear span U.N.O. where supported beams and slabs span greater than 5m.
C21. The concrete elements detailed have a F.R.L. of 60/60/60 U.N.O.

TIMBER

T1. Ensure all workmanship and materials are in accordance with NZS 3603:1993 and NZS 3604:2011, their referenced documents and the specification.
T2. Provide all interior timber as SG6 (dry) U.N.O.
T3. Provide all external timber as SG8 (dry) U.N.O.
T4. Where the use of treated timber for durability is noted on the structural drawings, ensure it complies with the parameters: Exposure Zone C in accordance with NZS 3604.
T5. Install proprietary timber connectors in accordance with the manufacturers written instructions.
T6. Retighten bolted connections in unseasoned timber prior to the fixing of cladding.
T7. Timber elements or timber framing have not been designed unless noted.
T8. All trusses to be pre-cambered upward 1/240 span.

STEELWORK

S1. Ensure materials, fabrication and erection are in accordance with NZS 3404, it's referenced documents and the specification.
S2. Shop drawings are to be approved by the Engineer prior to fabrication.
S3. Provide all welds as 6mm continuous fillet from E41xx electrodes, all bolts as M16-4.6/S and all cleats and gussets as 10mm plate U.N.O.
S4. For bolts, the following notation is used:
4/M16-4.6/s denotes 4 x M16 commercial grade bolts snug tight.
6/M20-8.8/tf denotes 6 x M20 high strength structural bolts fully tensioned in a no slip joint.
8/M24-8.8/tb denotes 8 x M24 high strength structural bolts fully tensioned in a bearing joint.
S5. Leave mating surfaces of 'tf' connections unpainted and free of mill scale and rust.
S6. Tighten bolts in 'tf' and 'tb' connections using the part turn method or load indicating washers. Do not use calibrated torque wrenches. Use a hardened washer under the bolt head or nut, whichever is rotated. The re-use of fully tensioned bolts is prohibited.
S7. Provide all cleats and drill all holes necessary for fixing steel to steel or timber.
S8. Fabricate steel beams and trusses spanning greater than 5m with an upward pre camber of 1/500 span U.N.O.
S9. Prepare structural steelwork to class 2 and paint with zinc phosphate primer to a thickness of 70 micrometres U.N.O.
S10. Hot dip galvanise all exposed external steelwork and all steelwork built into an external masonry skin, in accordance with grade HDG600 to AS/NZS 2312.
S11. Within 100m from the non-surf coast or 1 km from the surf coast, hot dip galvanise above in accordance with grade HDG900 to AS/NZS 2312.
S12. Provide fire protection to all steelwork as required.
S13. Ensure all cold formed sections conform to AS/NZS 4600 and are roll-formed from steel strip, minimum yield stress 450 MPa, 300 g/m² minimum zinc coating mass U.N.O.

MASONRY

M1. Ensure all workmanship and materials are in accordance with NZS 4230, the drawings & project specifications.
M2. Where masonry supports concrete slabs or beams, lay the top course with frogs down and covered with 2 layers of approved slip joint material.
M3. Walls shown shaded on plan are load bearing. Separate non-load bearing walls under slabs from the slab by 15mm of approved compressible material. Where masonry abuts slab downturns, form a 15mm gap between brickwork and side of downturn.
M4. Do not erect masonry supported by concrete slabs or beams until all formwork and props under have been removed.
M5. Provide all bricks of ultimate compressive strength $f'uc$ = 20 MPa U.N.O.
M6. Provide all hollow concrete masonry of ultimate compressive strength $f'uc$ = 15 MPa U.N.O.
M7. Provide classification M3 masonry mortar U.N.O. Note that within 100m from non-surf coast, or 1km from surf coast, provide classification M4 masonry mortar.
M8. Cut no chases into loadbearing masonry without the approval of the Engineer.
M9. Provide movement control joints vertically for full height of wall as follows:
For general masonry, at 8m maximum centres & 4m maximum from corners.
For articulated masonry, at 6m maximum centres & 4m maximum from corners.
Provide 15mm minimum joints with an approved compressible filler, tied together every 4th course with a MET 3.3 masonry sliding tie or approved equivalent.
M10. Construct hollow walls to full height or maximum 3m before filling cores. Provide cleanout openings at the base of all cores to be filled.
M11. Core fill $f'uc$ = 20 MPa concrete with 10mm aggregate, 180 slump U.N.O.
M12. Construct hollow masonry retaining walls using "double U blocks".
M13. Unreinforced masonry walls have not been designed unless noted.

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Design by: DC
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Approved
Date

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Drawing Title: General Notes

Project Number: 170057
Sheet: S06
Rev ID: 00
Project Status: Consent Issue

Land Information Memorandum

Christchurch City Council

Application details

Please supply to	BAYLEYS REAL ESTATE - HAREWOOD PO BOX 36533 MERIVALE CHRISTCHURCH 8146
Client reference	MC4770-6
Phone number	
Fax number	(03) 357 2111
Date issued	10 March 2020
Date received	2 March 2020

Property details

Property address	16 Hemingway Place
Valuation roll number	21852 83700
Valuation information	Capital Value: $580000 Land Value: $175000 Improvements Value: $405000 *Please note: these values are intended for Rating purposes*
Legal description	Lot 35 DP 319911
Existing owner	Liam Patrick Brewer Leanne Rosemary Brewer 16 Hemingway Place Christchurch 8083

Council references

Debtor number	3189236
Rate account ID	73134309
LIM number	70230364
Property ID	1133253

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

Land Information Memorandum

Document information

This Land Information Memorandum (LIM) has been prepared for the purpose of section 44A of the Local Government Official Information and Meetings Act 1987 (LGOIMA). It is a summary of the information that we hold on the property. Each heading or "clause" in this LIM corresponds to a part of section 44A.

Sections 1 to 10 contain all of the information known to the Christchurch City Council that must be included under section 44A(2) LGOIMA. Any other information concerning the land as the Council considers, at its discretion, to be relevant is included at section 11 of this LIM (section 44A(3) LGOIMA).

The information included in this LIM is based on a search of Council records only and there may be other information relating to the land which is unknown to the Council. Council records may not show illegal or unauthorised building or works on the property. The applicant is solely responsible for ensuring that the land is suitable for a particular purpose.

If there are no comments or information provided in any section of this LIM this means that the Council does not hold information on the property that corresponds to that part of section 44A.

A LIM is only valid at the date of issue as information is based only upon information the Council held at the time of that LIM request being made.

Property file service

This Land Information Memorandum does not contain all information held on a property file. Customers may request property files by phoning the Council's Customer Call Centre on (03) 941 8999, or visiting any of the Council Service Centres. For further information please visit www.ccc.govt.nz .

To enable the Council to measure the accuracy of this LIM document based on our current records, we would appreciate your response should you find any information contained therein which may be considered to be incorrect or omitted. Please telephone the Customer Call Centre on (03) 941 8999.

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

A search of records held by the Council has revealed the following information:

1. Special features and characteristics of the land

Section 44A(2)(a) LGOIMA. This is information known to the Council but not apparent from the district scheme under the Town and Country Planning Act 1977 or a district plan under the Resource Management Act 1991. It identifies each (if any) special feature or characteristic of the land concerned, including but not limited to potential erosion, avulsion, falling debris, subsidence, slippage, alluvion, or inundation, or likely presence of hazardous contaminants.

For enquiries, please phone (03) 941 8999 or visit www.ccc.govt.nz.

ECan Liquefaction Assessment

ECan holds indicative information on liquefaction hazard in the Christchurch area.Information on liquefaction can be found on the ECan website at www.ecan.govt.nz/liq or by calling ECan customer services on Ph 03 353 9007. The Christchurch City Council may require site-specific investigations before granting future subdivision or building consent for the property, depending on the liquefaction potential of the area that the property is in.

Borelog/Engineer Report Image Available

Borelog/Engineer Report Image Available

Consultant Report Available

Land Information New Zealand (LINZ) engaged Tonkin and Taylor to provide a Geotechnical Report on Ground Movements that occurred as a result of the Canterbury Earthquake Sequence. The report indicates this property may have been effected by a degree of earthquake induced subsidence. The report obtained by LINZ can be accessed on their website at https://www.linz.govt.nz/land/surveying/earthquakes/canterbu ry-earthquakes/information-for-canterbury-surveyors

Consultant Report Available

The Tonkin & Taylor Darfield Earthquake 4 September 2010 Geotechnical Land Damage Assessment & Reinstatement Stage 1 Report indicates areas of observed surface manifestations of liquefaction resulting from the earthquake. This property is within one of the identified areas. The report can be viewed at www.eqc.govt.nz/canterbury-quake/stage-one/stage1.aspx

Coastal Hazard Inundation

The Council has a report, Coastal Hazard Assessment for Christchurch and Banks Peninsula (2017), that indicates this property or part of this property may be susceptible to coastal inundation (flooding by the sea). The 2017 report considers four sea level rise scenarios through to the year 2120. A copy of the 2017 report and other coastal hazard information can be found at www.ccc.govt.nz/coastalhazards.

Fill

This property is located in an area known to have been filled. The year the fill occurred is Unknown. The filling was, according to the Councils records carried out in a controlled manner and comprises Engineered Fill.

Fill

This property is located in an area known to have been filled. The year the fill occurred is Unknown. The filling was, according to the Councils records carried out in a controlled manner and comprises Unknown Material.

Property Affected by Stormwater to Ground Area

Stormwater drainage to an approved soakage chamber (for roof stormwater only) is a condition of any future building on this site unless it is a known or declared hazardous site.

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

Distant Source Tsunami - Area of Potential Inundation

This property may be affected by flooding by some tsunami scenarios as shown in reports by GNS and NIWA commissioned by ECan and CCC. Links to reports can be found at https://ccc.govt.nz/tsunami-evacuation-zones-and-routes/ and on ECan's web site https://www.ecan.govt.nz by searching for the terms tsunami hazard.

Related information

There are attached hazard/special site characteristics supplementary sheet/s.

There is attached a soil investigation report for this property.

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

2. Private and public stormwater and sewerage drains

Section 44A(2)(b) LGOIMA. This is information about private and public stormwater and sewerage drains as shown in the Council's records.

For stormwater and sewerage enquiries, please phone (03) 941 8999 or visit www.ccc.govt.nz.

Related information

The dwelling/building is shown to be served by a sewer drain and a stormwater drain.

The drainage works associated with this property have not been plotted on the Council's drainage plan. A copy of the field Inspectors pickup/approved site plan showing the drains and house outline is attached.

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

3. Drinking Water Supply

Section 44A(2)(ba) and (bb) LGOIMA. This is information notified to the Council about whether the land is supplied with drinking water, whether the supplier is the owner of the land or a networked supplier, any conditions that are applicable, and any information the Council has about the supply.

Please note the council does not guarantee a particular water quality to its customers. If you require information on current water quality at this property please contact the Three Waters & Waste Unit.

For water supply queries, please phone (03) 941 8999 or visit www.ccc.govt.nz.

Water Supply

Christchurch City Council is the networked supplier of water to this property. This property is connected to the Christchurch City Council Water Supply. The conditions of supply are set out in the Christchurch City Council Water Supply, Wastewater & Stormwater Bylaw (2014), refer to www.ccc.govt.nz.

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

4. Rates

Section 44A(2)(c) LGOIMA. This is information on any rates owing in relation to the land.

For rates enquiries, please phone (03) 941 8999 or visit www.ccc.govt.nz.

(a) Annual rates

Annual rates to 30/06/2020: $ 3,311.68

	Instalment Amount	Date Due
Instalment 1	$ 827.87	31/08/2019
Instalment 2	$ 827.87	30/11/2019
Instalment 3	$ 827.87	29/02/2020
Instalment 4	$ 828.07	31/05/2020

Rates owing as at 10/03/2020: $ 0.00

(b) Excess water charges

$ 0.00

For water charge enquiries, please phone (03) 941 8999 or visit www.ccc.govt.nz.

(c) Final water meter reading required?

No Reading Required

To arrange a final water meter reading, please phone (03) 941 8999 or visit www.ccc.govt.nz.

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

5. Consents, certificates, notices, orders, or requisitions affecting the land and buildings

Section 44A(2)(d) LGOIMA. This is information concerning any consent, certificate, notice, order, or requisition, affecting the land or any building on the land, previously issued by the Council.

Section 44A(2)(da) LGOIMA. The information required to be provided to a territorial authority under section 362T(2) of the Building Act 2004. There is currently no information required to be provided by a building contractor to a territorial authority under section 362T(2) of the Building Act 2004. The Building (Residential Consumer Rights and Remedies) Regulations 2014 only prescribed the information that must be given to the clients of a building contractor.

For building enquiries, please phone (03) 941 8999, email EPADutyBCO@ccc.govt.nz or visit www.ccc.govt.nz.

(a) Consents

BCN/2003/9244 Applied: 05/11/2003 Status: Completed
16 Hemingway Place Spencerville
Accepted for processing 05/11/2003
PIM Granted 24/11/2003
PIM Issued 24/11/2003
DWELLING WITH AN ATTACHED GARAGE- Historical Reference ABA10040372

BCN/2003/9910 Applied: 27/11/2003 Status: Completed
16 Hemingway Place Spencerville
PIM Granted 24/11/2003
PIM Issued 24/11/2003
Accepted for processing 27/11/2003
Building consent granted 22/12/2003
Building consent issued 09/01/2004
Code Compliance Certificate Granted 04/08/2004
Code Compliance Certificate Issued 04/08/2004
DWELLING WITH ATTACHED GARAGE- Historical Reference ABA10041003

BCN/2017/1885 Applied: 17/03/2017 Status: Completed
16 Hemingway Place Spencerville
Exemption from building consent approved 22/03/2017
Relevel existing floors

(b) Certificates

Note: Code Compliance Certificates were only issued by the Christchurch City Council since January 1993.

(c) Notices

Ministry of Business, Innovation & Employment Foundation Design

Some properties have experienced land damage and considerable settlement during the sequence of Canterbury earthquakes. While land in the green zone is still generally considered suitable for residential construction, houses in some areas will need more robust foundations or site foundation design where foundation repairs or rebuilding are required. Most properties have been assigned a technical category. Details of the MBIE guidance can be found at www.building.govt.nz/

(d) Orders

(e) Requisitions

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

6. Certificates issued by a building certifier

Section 44A(2)(e) LGOIMA. This is information notified to the Council concerning any certificate issued by a building certifier pursuant to the Building Act 1991 or the Building Act 2004.

For building enquiries, please phone (03) 941 8999, email EPADutyBCO@ccc.govt.nz or visit www.ccc.govt.nz.

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

7. Weathertightness

Section 44A(2)(ea) LGOIMA. This is information notified to the Council under section 124 of the Weathertight Homes Resolution Services Act 2006.

For weathertight homes enquiries, please phone (03) 941 8999 or visit www.ccc.govt.nz.

If there is no information below this means Council is unaware of any formal Weathertight Homes Resolution Services claim lodged against this property.

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

8. Land use and conditions

Section 44A(2)(f) LGOIMA. This is information relating to the use to which the land may be put and conditions attached to that use. The planning information provided below is not exhaustive and reference to the Christchurch District Plan and any notified proposed changes to that plan is recommended: https://ccc.govt.nz/the-council/plans-strategies-policies-and-bylaws/plans/christchurch-district-plan/.

There maybe some provisions of the Christchurch City Plan or Banks Peninsula District Plan that affect this property that are still operative.

For planning queries, please phone (03) 941 8999, email DutyPlanner@ccc.govt.nz or visit www.ccc.govt.nz.

Regional plan or bylaw

There may be objectives, policies or rules in a regional plan or a regional bylaw that regulate land use and activities on this site. Please direct enquiries to Canterbury Regional Council (Environment Canterbury).

(a)(i)Christchurch City Plan & Banks Peninsula District Plan

(ii)Christchurch District Plan

Flood Ponding

Property or part of property within the Christchurch District Plan Flood Ponding Management Area overlay.

Liquefaction Management Area (LMA)

Property or part of property within the Liquefaction Management Area (LMA) Overlay which is operative.

Spencerville Overlay

Property or part of property within the Christchurch District Plan (operative) Spencerville Overlay

Flood Management Area

Property or part of property within the Flood Management Area (FMA) Overlay which is operative.

Fixed Minimum Floor Overlay

This property or parts of the property are located within the Fixed Minimum Floor Overlay level in the Christchurch District Plan. Under this plan pre-set minimum floor level requirements apply to new buildings and additions to existing buildings. The fixed minimum floor level can be searched at http://ccc.govt.nz/floorlevelmap. For more information please contact a CCC duty planner on 941 8999.

District Plan Zone

Property or part of property within the Residential Small Settlement Zone which is operative.

(b) Resource consents

If there are any land use resource consents issued for this property the Council recommends that you check those resource consents on the property file. There may be conditions attached to those resource consents for the property that are still required to be complied with.

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

RMA/2000/976 - Subdivision Consent
75 LOT FEE SIMPLE SUBDIVISION 223 recieved 26/6/02 Certified 5/7/02 224 REQUESTED 4/7/02 ISSUED 22/8/02 DP 311069 - Historical Reference RMA20001657
Status: Processing complete
Applied 11/04/2000
Granted 03/10/2000
Decision issued 03/10/2000

RMA/2002/1320 - Subdivision Consent
FEE SIMPLE SUBDIVISION - 76 LOTS 224 requested 04/07/02 Issued 22/8/02 DP 311069 224 requested 10/03/03 Issued 14/5/03 DP 319911 - Historical Reference RMA20010325
Status: Processing complete
Applied 06/06/2002
Granted 20/06/2002
Decision issued 20/06/2002

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

9. Other land and building classifications

Section 44A(2)(g) LGOIMA. This is information notified to the Council by any statutory organisation having the power to classify land or buildings for any purpose.

For land and building enquiries, please phone (03) 941 8999 or visit www.ccc.govt.nz.

Please refer to Section 1 for details

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

10. Network utility information

Section 44A(2)(h) LGOIMA. This is information notified to the Council by any network utility operator pursuant to the Building Act 1991 or the Building Act 2004.

For network enquiries, please phone (03) 941 8999 or visit www.ccc.govt.nz.

None recorded for this property

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

11. Other information

Section 44A(3) LGOIMA. This is information concerning the land that the Council has the discretion to include if it considers it to be relevant.

For any enquiries, please phone (03) 941 8999 or visit www.ccc.govt.nz.

(a) Kerbside waste collection

Your recycling is collected Fortnightly on the Week 2 collection cycle on a Wednesday. Please leave your recycling at the Kerbside by 6:00 a.m. Your nearest recycling depot is the Styx Mill EcoDrop.

Your refuse is collected Fortnightly on the Week 2 collection cycle on a Wednesday. Please leave your rubbish at the Kerbside by 6:00 a.m. Your nearest rubbish depot is the Styx Mill EcoDrop.

Your organics are collected Weekly on Wednesday. Please leave your organics at the Kerbside by 6:00 a.m.

(b) Other

Community Board

Property located in Coastal-Burwood Community Board.

Guest Accommodation

Guest accommodation (including whole unit listings on Airbnb; BookaBach; etc.) generally requires a resource consent in this zone when the owner is not residing on the site. For more information, please refer to: https://ccc.govt.nz/providing-guest-accommodation/.

Tsunami Evacuation Zone

This property is in the orange tsunami evacuation zone, and should be evacuated immediately after a long or strong earthquake, or when told to by an official civil defence warning. Residents should make a plan for where they would go in a tsunami evacuation and stay out of this zone until told it is safe to go back.More information can be found at https://ccc.govt.nz/services/civil-defence/hazards/tsunami-e vacuation-zones-and-routes/

Electoral Ward

Property located in Coastal Electoral Ward

Listed Land Use Register

Hazardous activities and industries involve the use, storage or disposal of hazardous substances. These substances can sometimes contaminate the soil. Environment Canterbury identifies land that is used or has been used for hazardous activities and industries. This information is held on a publically available database called the Listed Land Use Register (LLUR). The Christchurch City Council may not hold information that is held on the LLUR Therefore, it is recommended that you check Environment Canterbury's online database at www.llur.ecan.govt.nz

Spatial Query Report

A copy of the spatial query report is attached at the end of this LIM. The spatial query report lists land use resource consents that have been granted within 100 metres of this property.

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFS

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

RESOURCE MANAGEMENT ACT 1991/BUILDING ACT 1991

HAZARDS OR SPECIAL SITE CHARACTERISTICS

LOCATION: Hemingway Place ..... **NUMBER:** 16 .....
LEGAL DESCRIPTION: LOT: 35 ..... **D.P:** 319911 ..... **WARD:** Papanui .....
ALTERNATIVE ADDRESS: .....

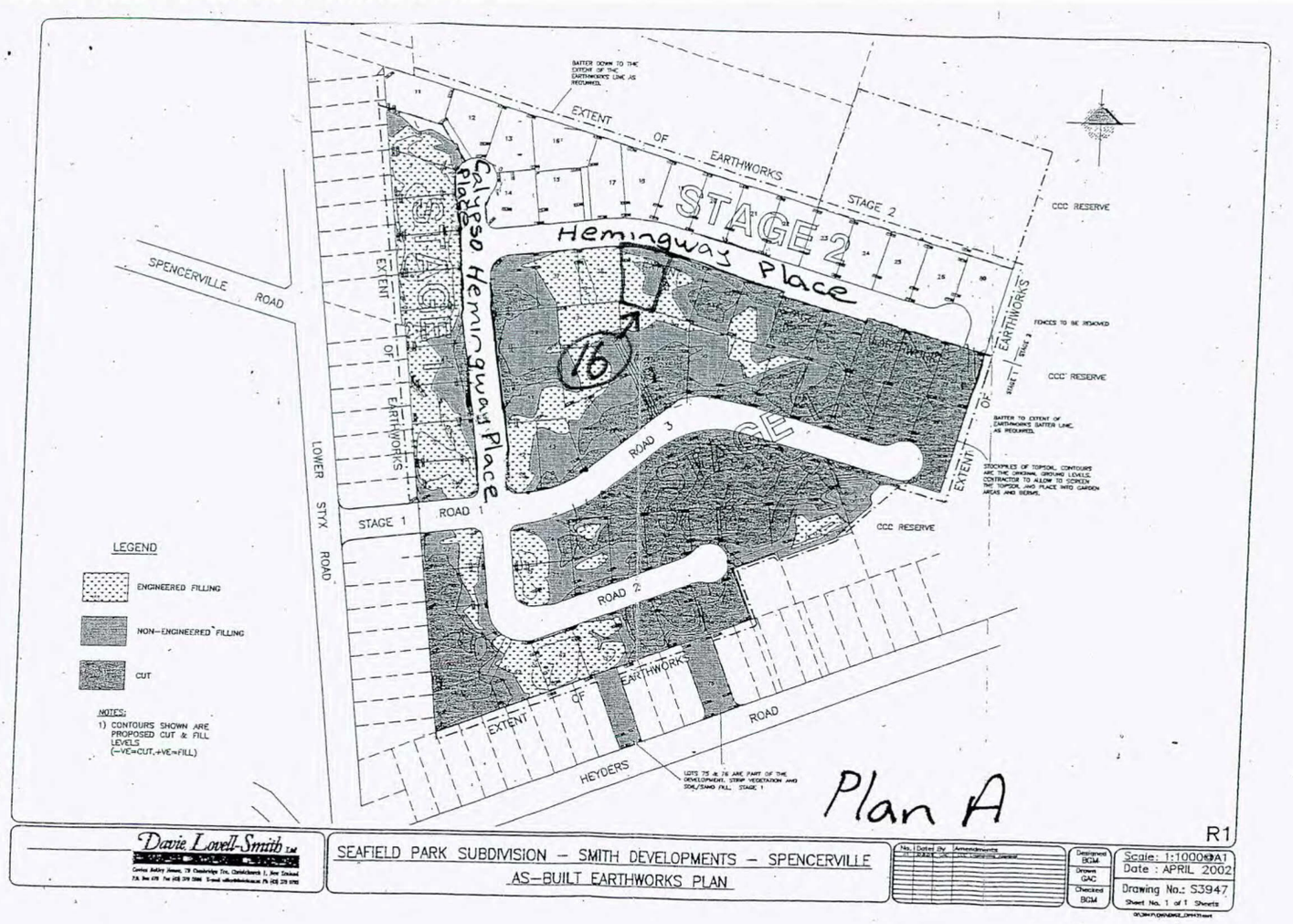
DATE RECORDED: 26-6-2003 ..... **SEVERITY:** 1 ..... **ACCURACY:** A .....
RECORDED BY: Leo O'Loughlin **COMPUTER ENTRY:** ..... **MAP ENTRY:** 26-6-2003 ..
DETAILS: Fill to NZS 4431: 1989. (For location see plan A on back) .....
Normal inspections and design of foundations as would be made in natural ground required. .....
Location of cut/fill interface to be noted (and confirmed on site) and foundation designed accordingly .
BUILDING PERMIT/CONSENT: .....
LOCATION OF INFORMATION: Civic Office Property File: .....
SOURCE OF INFORMATION: Davie, Lovell – Smith Ltd ..... **FILE NO:** S3947 . **DATE:** 21-2-2003 .
Subdivision File : PAP - 20010325 ..... **FILE NO:** ..... **DATE:** .....

DATE RECORDED: ..... **SEVERITY:** ..... **ACCURACY:** .....
RECORDED BY: Leo O'Loughlin **COMPUTER ENTRY:** ..... **MAP ENTRY:** .....
DETAILS: **Minimum Floor Levels :** The minimum floor level for all dwellings is to be 11.225m in terms of the Christchurch Drainage Datum as per consent notice dated 14 May 2003 (see Consent Notice on back) .....
.....
.....
BUILDING PERMIT/CONSENT: .....
LOCATION OF INFORMATION: Civic Office Property File: .....
SOURCE OF INFORMATION: Subdivision File : PAP - 20010325 **FILE NO:** ..... **DATE:** .....
Consent Notice Pursuant to Section 221 Resource Management Act 1991 **FILE NO: DATE:** 14-5-2003 ..

DATE RECORDED: ..... **SEVERITY:** ..... **ACCURACY:** .....
RECORDED BY: Leo O'Loughlin **COMPUTER ENTRY:** ..... **MAP ENTRY:** .....
DETAILS: .....
.....
.....
BUILDING PERMIT/CONSENT: .....
LOCATION OF INFORMATION: Civic Office Property File: .....
SOURCE OF INFORMATION: ..... **FILE NO:** ..... **DATE:** .....
..... **FILE NO:** ..... **DATE:** .....

KEY **Severity** [1] Low [2] Moderate [3] Extreme [4] Unknown
Accuracy [A] Confirmed [B] Unconfirmed [C] Personal Observation

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFS



APPENDIX A
STATEMENT OF SUITABILITY OF EARTHFILL
FOR RESIDENTIAL DEVELOPMENT

To **Christchurch City Council**
PO Box 237
Christchurch

Attention Mr B Craig

STATEMENT OF SUITABILITY OF EARTH FILL FOR RESIDENTIAL DEVELOPMENT

Subdivision **Seafield Park Subdivision-Stage I**

Owner/Developer **Smith Developments Limited**

Location **Cnr Lower Styx & Heyders Road, Spencerville**

The earth fill shown on the attached plan No. S3947 Sheet 1 dated April 2002 have been placed in compliance with the terms of NZS 4431.

While work was in progress I retained as my inspecting engineer (or staff under his control) the engineer named below who is registered in terms of the Engineers Registration Act 1924.

John Bannock (Registration Number 10545)
Address C/- **Davie, Lovell-Smith Limited, PO Box 679, Christchurch**

During the work, the inspecting engineer or staff under his control made periodic visits of inspection to the site as detailed in his report No S3947 which is attached. Details of the soil testing carried out to check the quality of the fill by the inspecting engineer and his testing agency are also included in this report.

The attached plan No S3947 Sheet 1 shows Lot Nos. 1-10, 57-65, 68, 72, 73, 74, 30-53, 75 & 76 to be affected by filling and the extent of the fill.

In the opinion of the inspecting engineer the following special limitations should be observed:

NA

This certification, that the earth fills have been placed in compliance with the terms of NZS 4431 does not remove the necessity for the normal inspection and design of foundations as would be made in natural ground.

Registered Engineer

22 April 2002

on behalf of:
(Owner/ Developer)

NZS 4431:1989
3947/ENG/4431_Earthfill-stg1

IN THE MATTER OF the Resource Management Act 1991
AND
IN THE MATTER OF Subdivision Consent Application PAP/20010325 affecting Lots 3-41 DP 319911

CONSENT NOTICE PURSUANT TO SECTION 221, RESOURCE MANAGEMENT ACT 1991

To: Registrar-General of Lands
Canterbury Land Registration District
LAND INFORMATION NEW ZEALAND

TAKE NOTICE that the land hereinafter described is subject to conditions in relation to a subdivision consent as follows:-

Minimum Floor Levels.

The minimum floor level for all dwellings is to be 11.225m in terms of the Christchurch Drainage Datum.

AND THAT you are hereby directed and required to register the same pursuant to Section 221 Resource Management Act 1991.

DESCRIPTION OF LAND BY CONSENT NOTICE

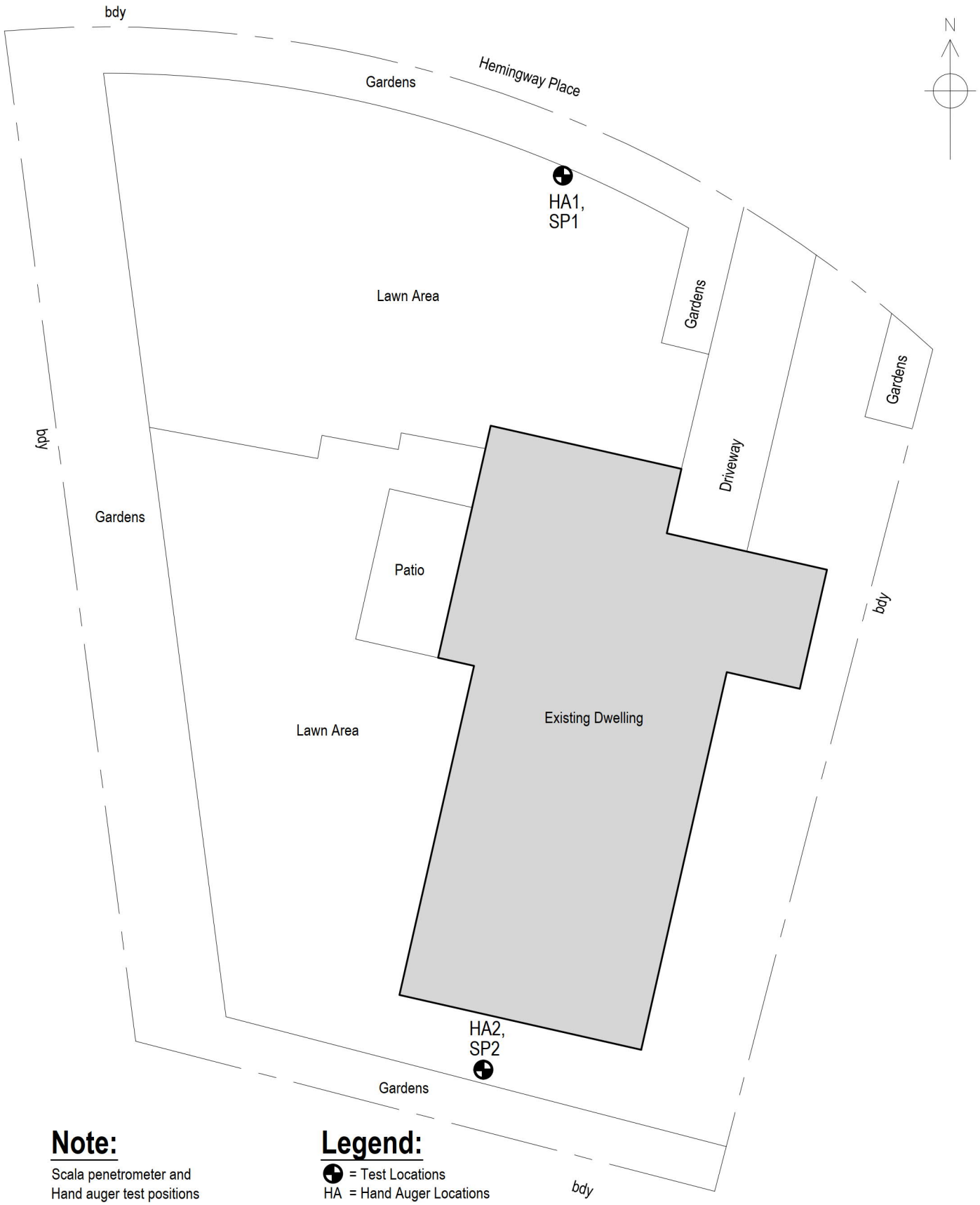
ALL THOSE PARCELS OF LAND COMPRISING:
- Lots 3 – 41 DP 319911comprised in Certificates of Title 78436 - 78474 (Canterbury Land District)

DATED this 14th day of May 2003

SIGNED for and on behalf of
THE CHRISTCHURCH CITY COUNCIL
pursuant to Section 252 of the
Local Government Act 1974

Principal Officer
(for the purposes of Section 221
Resource Management Act 1991)

KIRK | ROBERTS
CONSULTING ENGINEERS LTD



Note:

Scala penetrometer and Hand auger test positions and boundaries are indicative only

Legend:

= Test Locations
HA = Hand Auger Locations
SP = Scala Penetrometer Locations
Bdy = Boundary Locations

DO NOT SCALE - IF IN DOUBT, ASK
ORIGINAL SIZE A4
CAD REF :

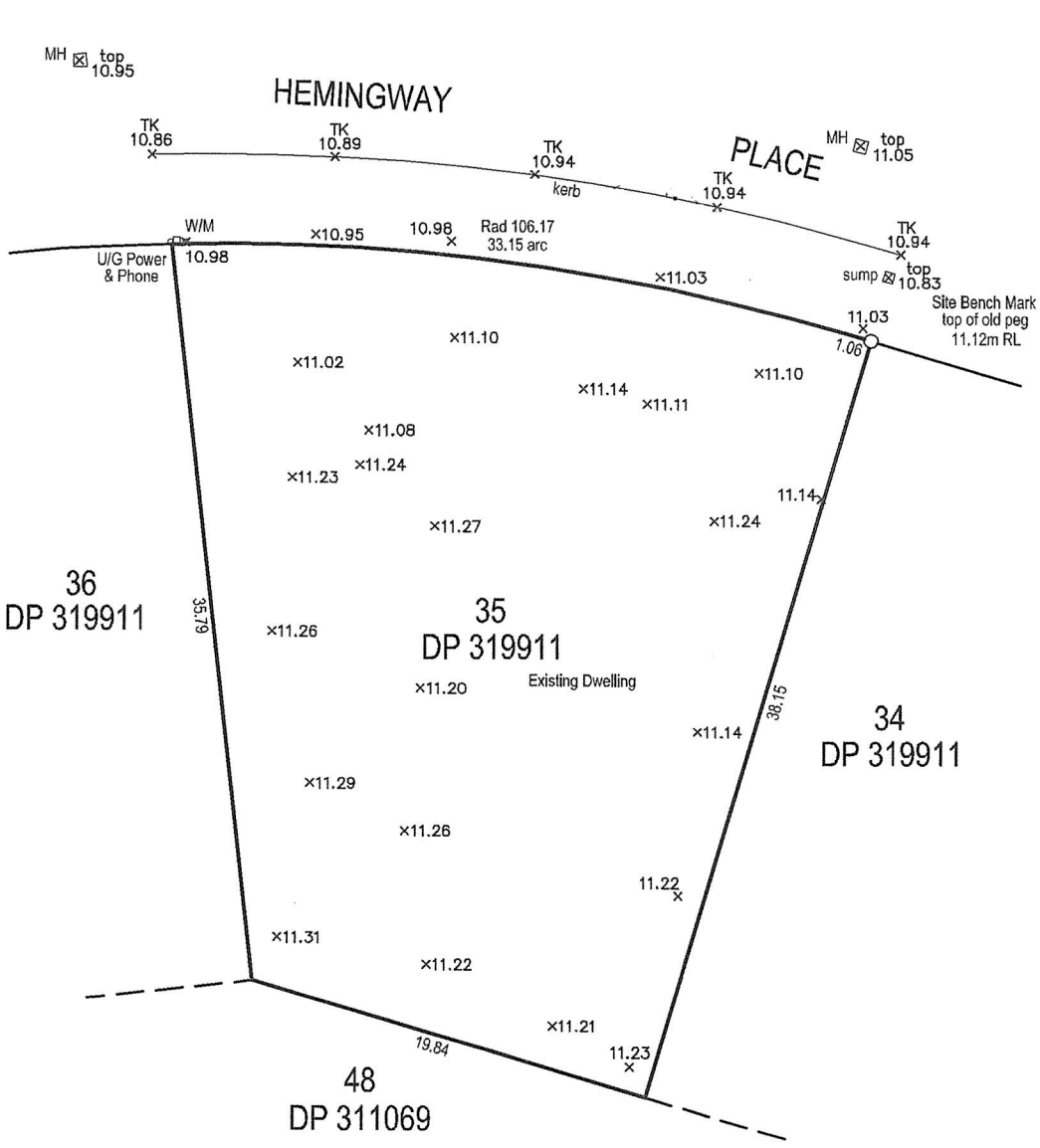
SCALES :	1:200
	DATE
DESIGNED	
DRAWN	05.07.12 - GJT
CHECKED	
APPROVED	

RUSSEL WENN AND JULIE COLLIER
16 HEMINGWAY PLACE

SOIL TEST LOCATIONS

ACENZ

Job No.	Sheet No.	Rev.
121195	SK1	1



SURVUS CONSULTANTS
surveying engineering property development
www.survus.co.nz

4 Meadow Street, PO Box 5558, Papanui, Christchurch
P 03 352 5599
F 03 352 5527
TOLL FREE 0508 787 887
AMBERLEY 03 314 9200
ASHBURTON 03 307 7021
DARFIELD 03 318 8151

Levels at No.16 Hemingway Place, Spencerville

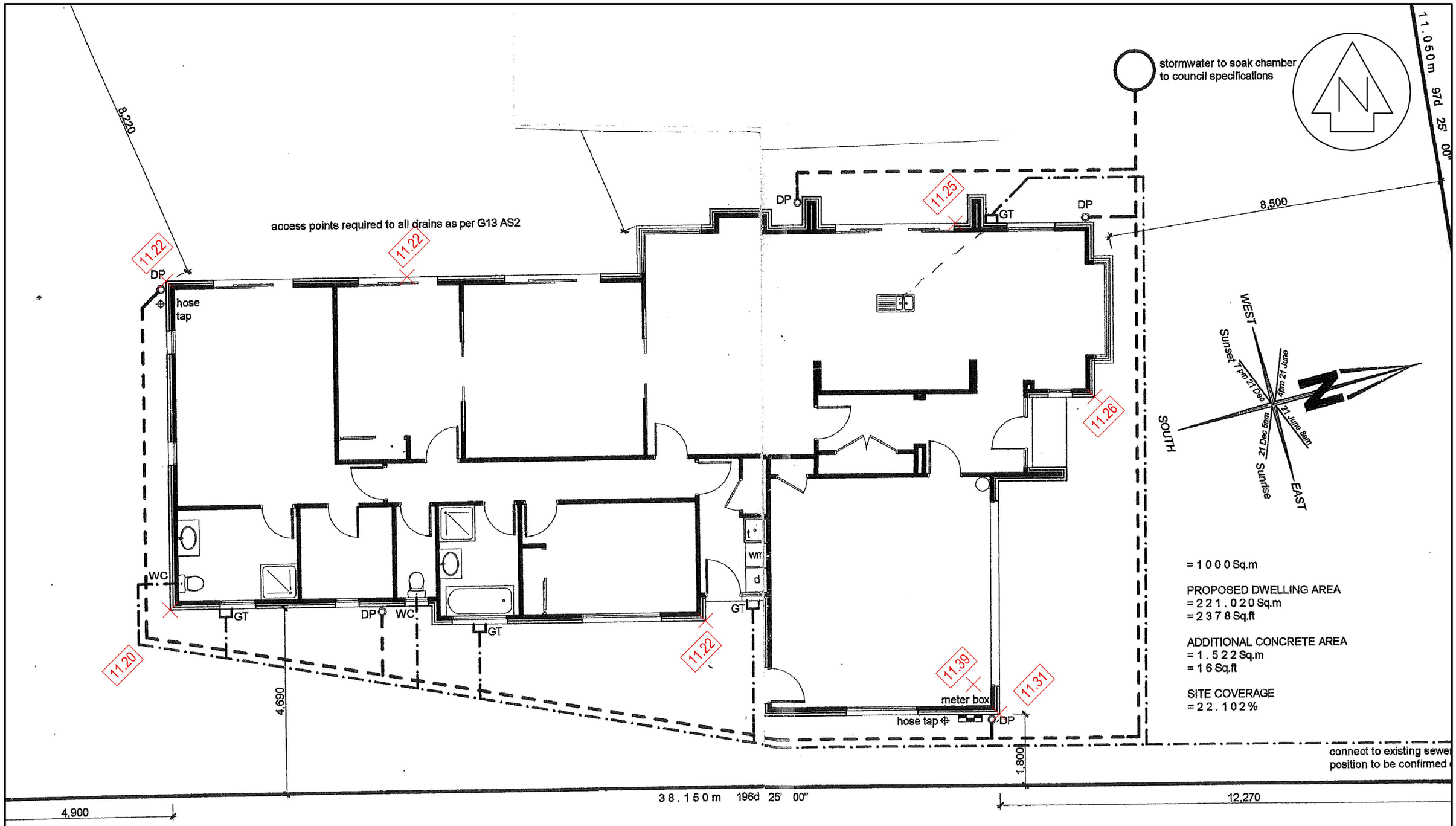
Russell Wenn & Julie Collier

Rev	Date	By	Amendments
A	03/08/12	SRS	Levels

Note:
Levels are in terms of CCC Datum
BM EHDB 11.31m RL

DATE	SHEET	REV
August 2012	1 of 1	A
SCALES	JOB REF	
1 : 250 (A3)	10791	

This drawing and its contents are the property of Survus Consultants. Any unauthorised employment or reproduction, in full or in part, is forbidden.



Peter Ray Homes

NOTE

1. All work shall comply with NZS 3604:1999
2. All windows and doors to comply with NZS 4211:1985
3. Glazing to comply with NZS 4223:1985 & Pt 3 1993
4. Contractor must verify all dimensions on site prior to

Rev No.	Date	Amendment
A	03.11.03	remove gas fire, move gas bottles, change bay window

Drawn: A. Fahey
Date: 28.10.03
Scale:

Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title

Sheet No. 4

SURVUS CONSULTANTS
surveying engineering property development
www.survus.co.nz
4 Meadow Street, PO Box 5558, Papanui, Christchurch
P 03 352 5599 AMBERLEY 03 314 9200
F 03 352 5527 ASHBURTON 03 307 7021
TOLL FREE 0508 787 887 DARFIELD 03 318 8151

Foundation Levels

16 Hemingway Place, Spencerville — Russell Wenn & Julie Collier

Rev	Date	By	Amendments
A	03/08/12	SRS	Levels

Note:
Levels are in terms of CCC Datum
BM EHDB 11.31m RL

DATE	SHEET	REV
August 2012	1 of 1	A
SCALES: Proportional	JOB REF: 10791	

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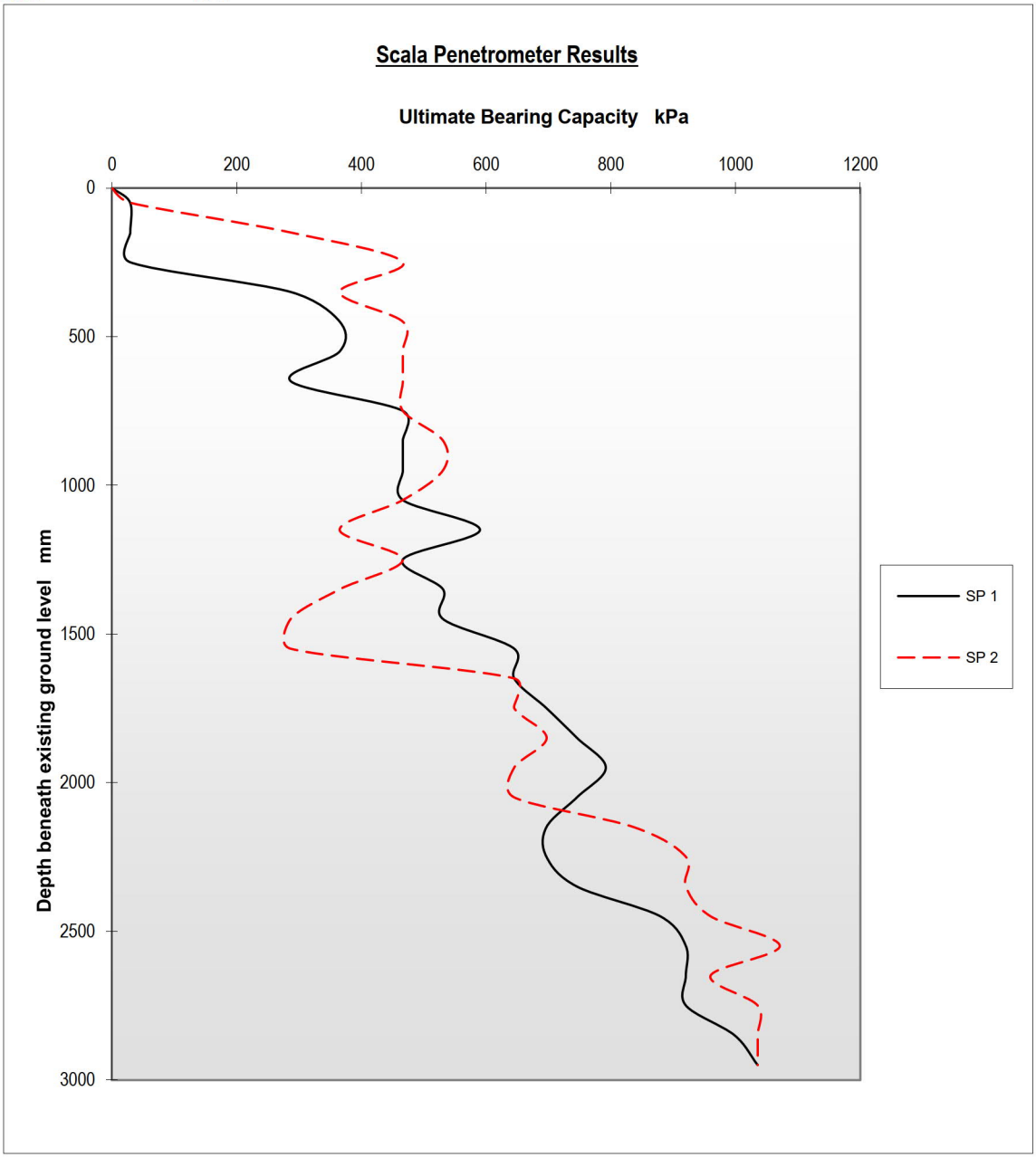
Location:				16 Hemingway Place_CPTU001
Date:				4/03/2013
Core %	Method	Moisture	Depth	Soil Description:
				Soil Type, minor components, plasticity or particle size, colour Rock Description: SUBSTANCE: Rock Type, particle size, colour, minor components DEFECTS: Type, inclination, thickness, roughness, filling.
			0m	
	CPTU		15m	CPTU001 to 15m
			END	

Location:				16 Hemingway Place_CPTU002
Date:				4/03/2013
Core %	Method	Moisture	Depth	Soil Description:
				Soil Type, minor components, plasticity or particle size, colour Rock Description: SUBSTANCE: Rock Type, particle size, colour, minor components DEFECTS: Type, inclination, thickness, roughness, filling.
			0m	
	CPTU		15m	CPTU002 to 15m
			END	

SCALA PENETROMETER RESULTS - COMBINED

JOB NUMBER 121195

Job Name:	Russell Wenn and Julie Collier
Site Address:	16 Hemingway Place
Town/City	Brooklands
Date:	4-Jun-12
Weather:	Wet
Operator:	HAV



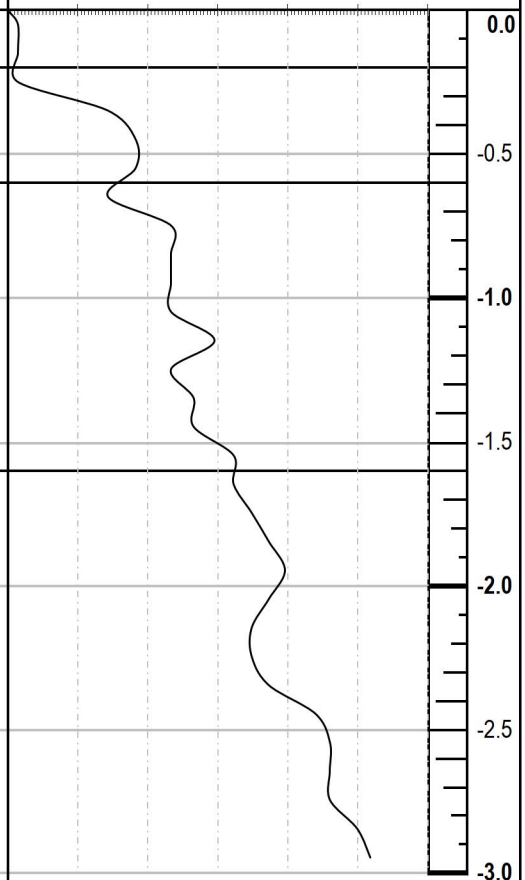
THIS REPORT IS PREPARED SOLEY FOR THE CLIENT WHO COMMISSIONED IT AND KIRK ROBERTS LTD WILL NOT ACCEPT ANY LIABILITY OF ANY KIND FOR THE USE OF ITS CONTENTS BY ANY OTHER PERSON.
BORE LOGS AND SCALA PENETROMETER TESTS ARE DISCRETE TESTS OF THE GROUND AT THE LOCATION OF THE TESTS ONLY. WHILE THEY ARE REPRESENTATIVE OF TYPICAL CONDITIONS, THEY DO NOT IDENTIFY VARIATIONS IN THE GROUND IN LOCATIONS AWAY FROM THE TEST AREAS.

SCALA PENETROMETER & HAND AUGER RESULTS

KIRK ROBERTS CONSULTING ENGINEERS LTD

		Scala Penetrometer:	**SP1**
		Hand Auger:	**HA1**
		Project No.:	**121195**
Client:	Russell Wenn and Julie Collier	**Date:**	04/06/12
Site Address:	16 Hemingway Place	**Weather:**	Wet
Town/City:	Brooklands	**Operator:**	HAV

Geological Formation:	Depth (m)	Sample Description:	Graphic:	USCS	Water Table	Undrained Shear Strength Su (kPa)
	0.0	**TOPSOIL** Brown organic silt, soft, wet.		OL		
	-0.5	**silty SAND** Light brown silty sand, fine to medium sand medium dense, wet.		SM		
	-1.0	**SAND** Brown fine sand, medium dense, wet. Becoming dark brown-grey, medium dense, saturated.		S	04/06/12 ▼	
	-1.5	Sand becoming dense.				
	-2.0	EOH at 1.6 m depth in dense saturated collapsing sand.				
	-2.5					
	-3.0					
	-3.5					
	-4.0					
	-4.5					



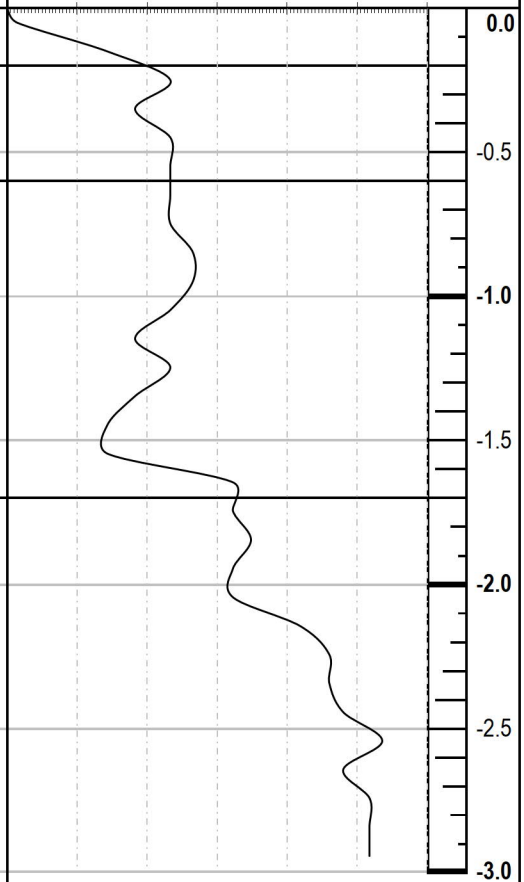
Scala Penetrometer and Test Bore log tests give an indication of the ground condition at the location of the tests only. While they are representative of typical conditions across the site, they do not identify variations in the ground away from the test locations.

SCALA PENETROMETER & HAND AUGER RESULTS

KIRK ROBERTS CONSULTING ENGINEERS LTD

		Scala Penetrometer:	**SP2**
		Hand Auger:	**HA2**
		Project No.:	**121195**
Client:	Russell Wenn and Julie Collier	**Date:**	4 June 2012
Site Address:	16 Hemingway Place	**Weather:**	Wet
Town/City:	Brooklands	**Operator:**	HAV

Geological Formation:	Depth (m)	Sample Description:	Graphic:	USCS	Water Table	Undrained Shear Strength Su (kPa)
	0.0	**TOPSOIL** Brown organic silt, soft, wet.		OL		
	-0.5	**silty SAND** Light brown silty sand, fine to medium sand medium dense, wet		SM		
	-1.0	**SAND** Brown fine sand, medium dense, wet. Becoming dark brown-grey, medium dense, saturated.		S	04/06/12 ▼	
	-1.5	Sand becoming dense.				
	-2.0	EOH at 1.7 m depth in dense saturated collapsing sand.				
	-2.5					
	-3.0					
	-3.5					
	-4.0					
	-4.5					



Scala Penetrometer and Test Bore log tests give an indication of the ground condition at the location of the tests only. While they are representative of typical conditions across the site, they do not identify variations in the ground away from the test locations.

APPENDIX B

- Project Orbit: Canterbury Geotechnical Database
    - Geological Section location plan



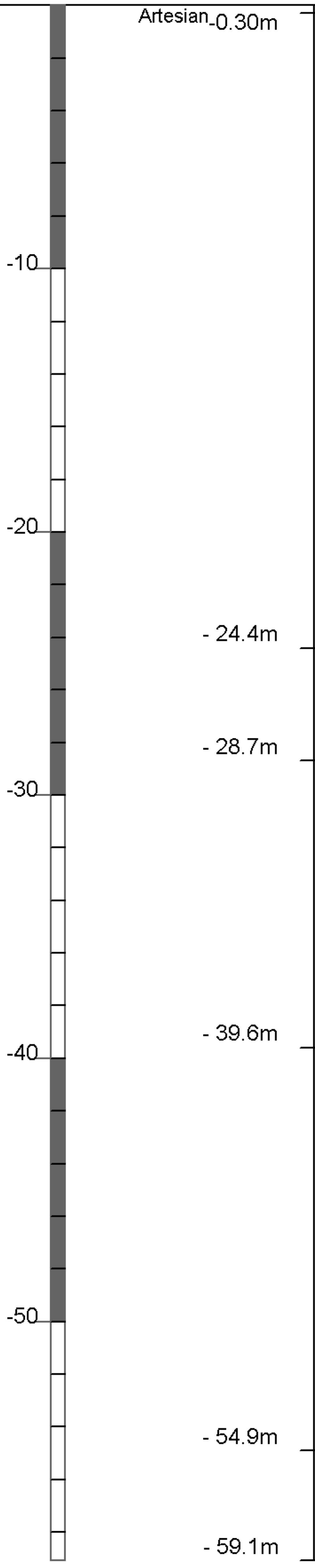
Figure 1: Geological Section location plan.

- Tonkin & Taylor Limited Geological Cross Sections
    - XS-SPE-02
    - XS-SPE-06

Borelog for well M35/1338

Gridref: M35:8527-5332 Accuracy : 3 (1=high, 5=low)
Ground Level Altitude : 2.8 +MSD
Driller : not known
Drill Method : Driven Pipe
Drill Depth : -59.09m Drill Date :

Environment Canterbury Regional Council



Scale(m)	Water Level	Depth(m)	Full Drillers Description	Formation Code
	Artesian	0.30m	Topsoil	ch
			Blue sand	
		- 24.4m	Blue shingle	ch
		- 28.7m	Brown shingle. Water level rises o.6m	ri
		- 39.6m	Yellow clay, Blue sand, peat	ri
		- 54.9m	Brown shingle. Water level rises 1.8m	br
		- 59.1m		li-1

Borelog for well M35/5965

Gridref: M35:8559-5274 Accuracy : 4 (1=high, 5=low)
Ground Level Altitude : 2 +MSD
Driller : Stevens J O
Drill Method : Cable Tool
Drill Depth : -34m Drill Date : 1/06/1988

Environment Canterbury Regional Council

Scale(m)	Water Level	Depth(m)	Full Drillers Description	Formation Code
	-1.7CalcMin		Coarse sand	
		- 12.2m	Fine Blue sand	ch
		- 25.6m	Fine gravel shells & sand	ch
		- 28.1m		ch
		- 28.7m	Peat & pug	ch
			Sandy Blue gravel ,no water movement	
		- 31.6m		ri
		- 32.0m	Mixed Blue & Brown gravel.good water	ri
			Brown gravel.good water	
		- 34.0m		ri

-5 -10 -15 -20 -25 -30

APPENDIX C

- Liquefaction analysis results for:
  - 25 year earthquake event (PGA = 0.13)
  - 500 year earthquake event (PGA = 0.35)

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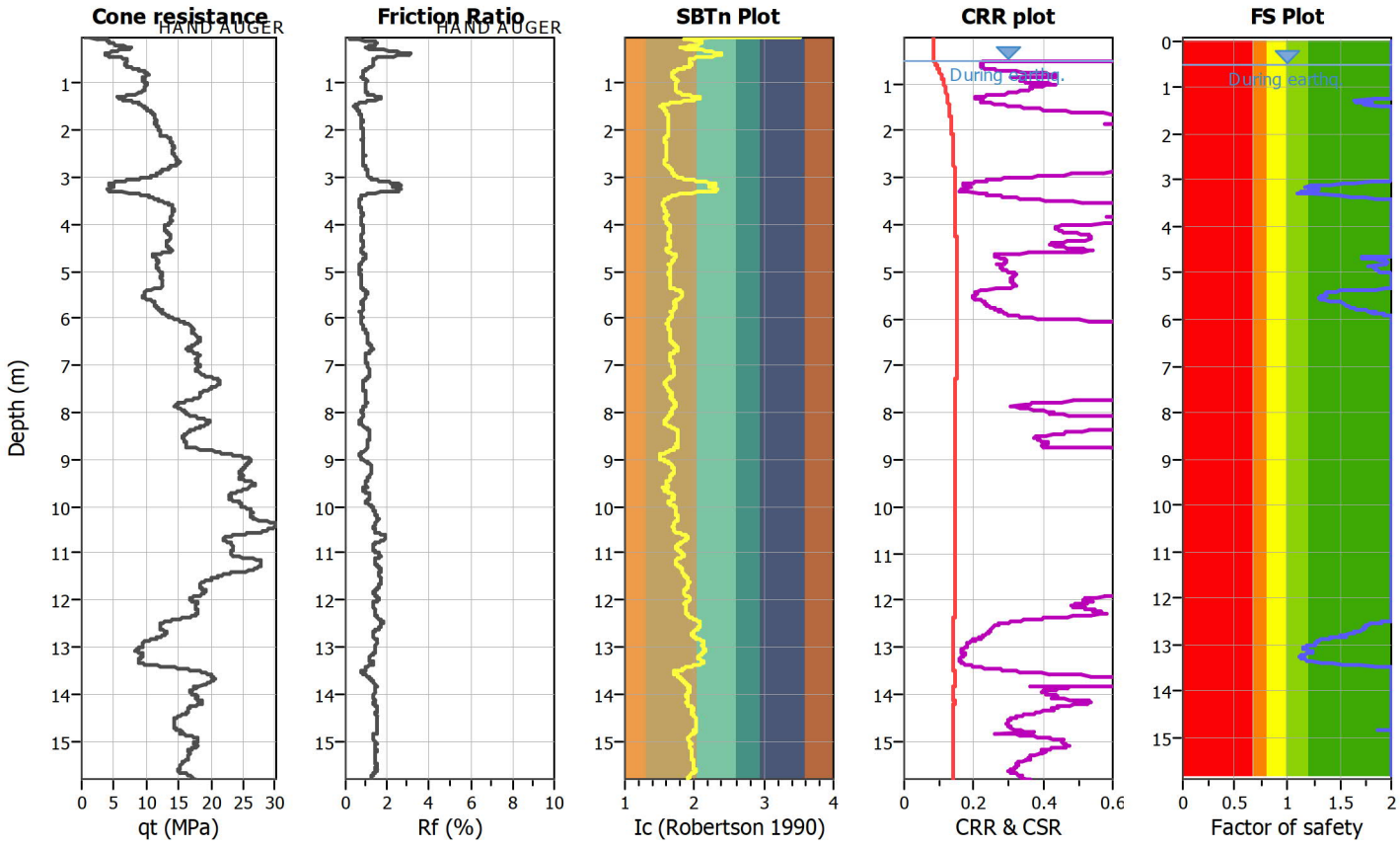
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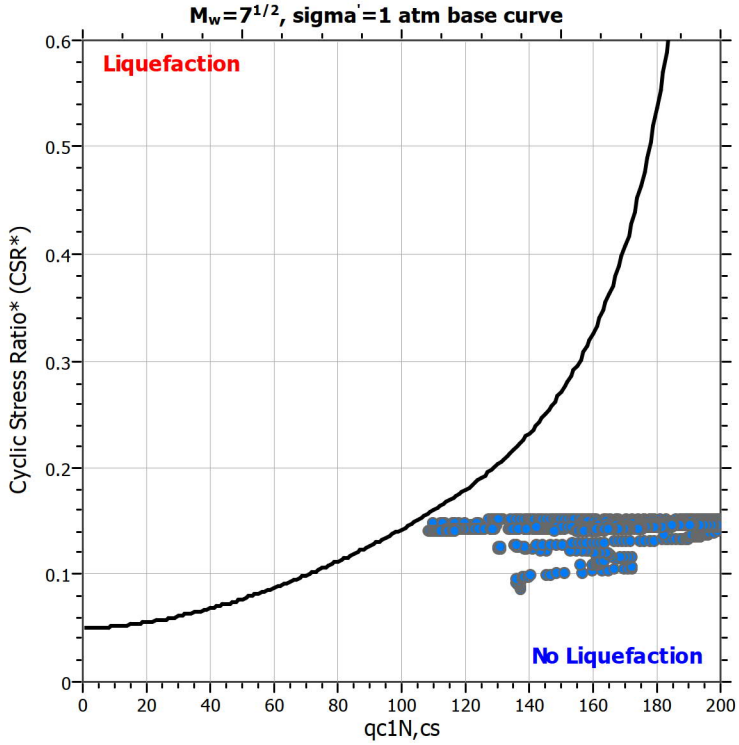
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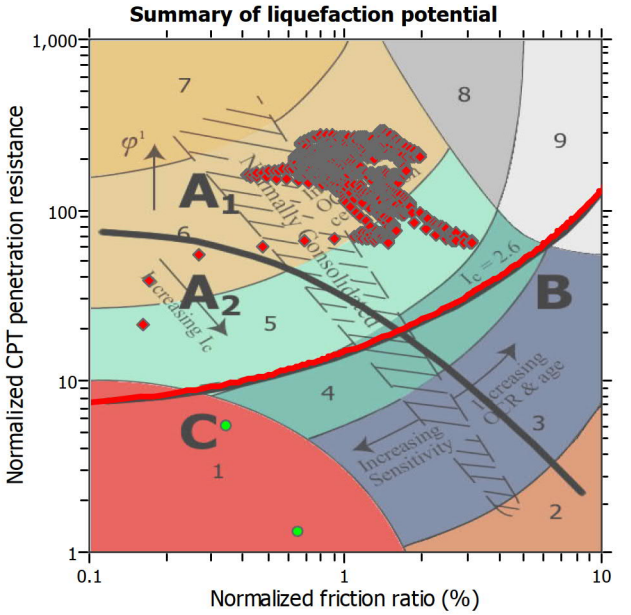
CPT file : CPTU001 SLS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

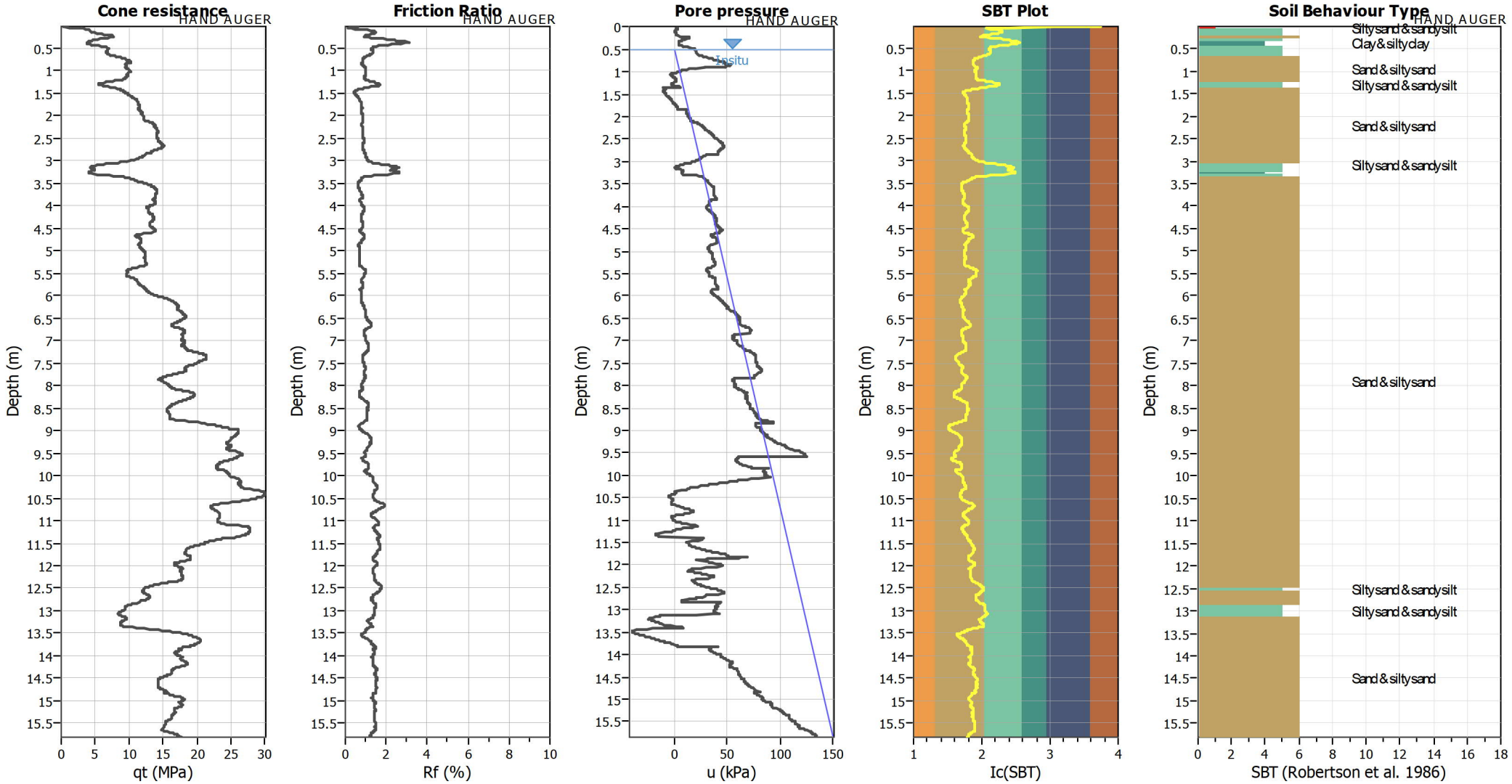






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



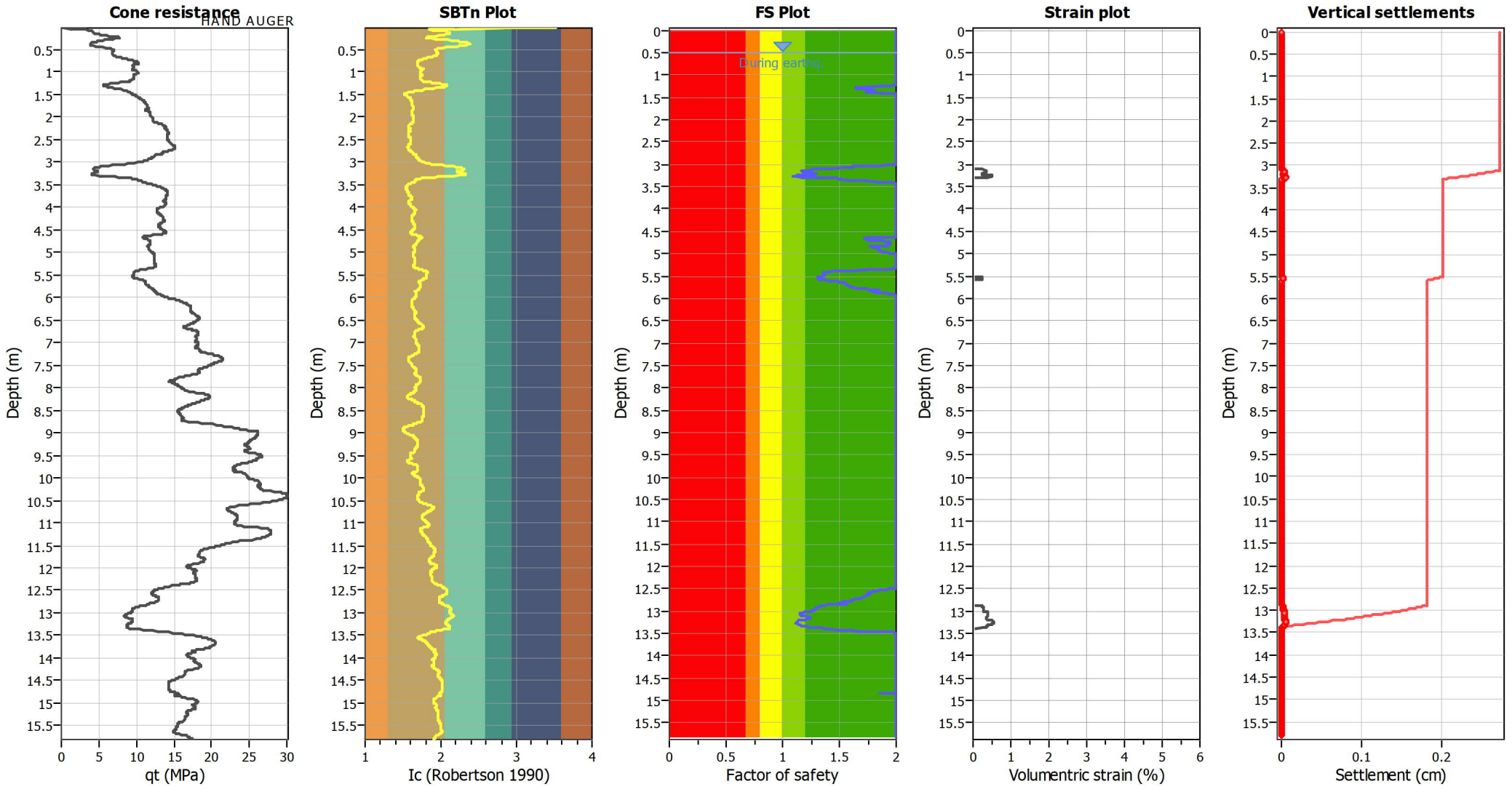
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.13	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

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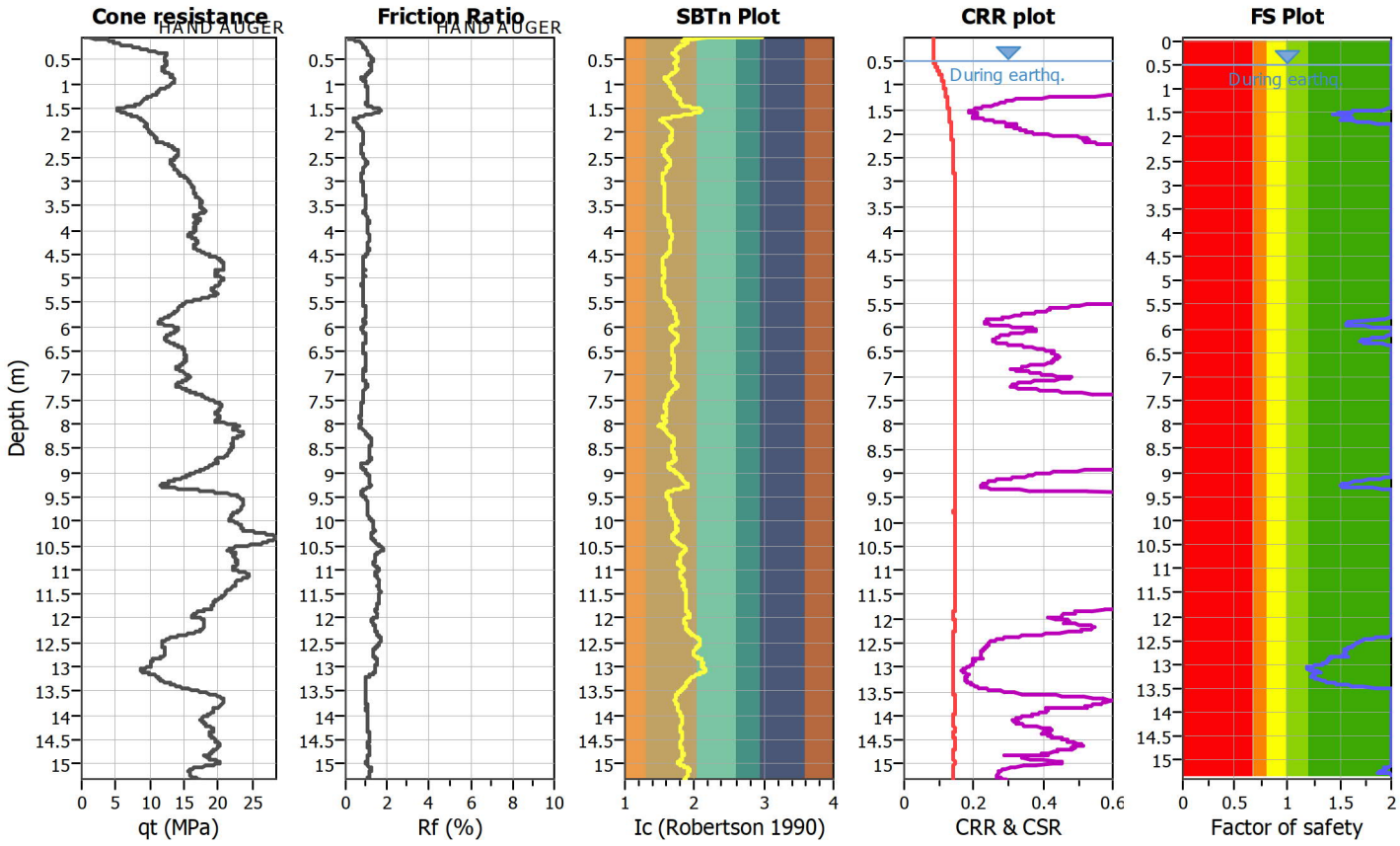
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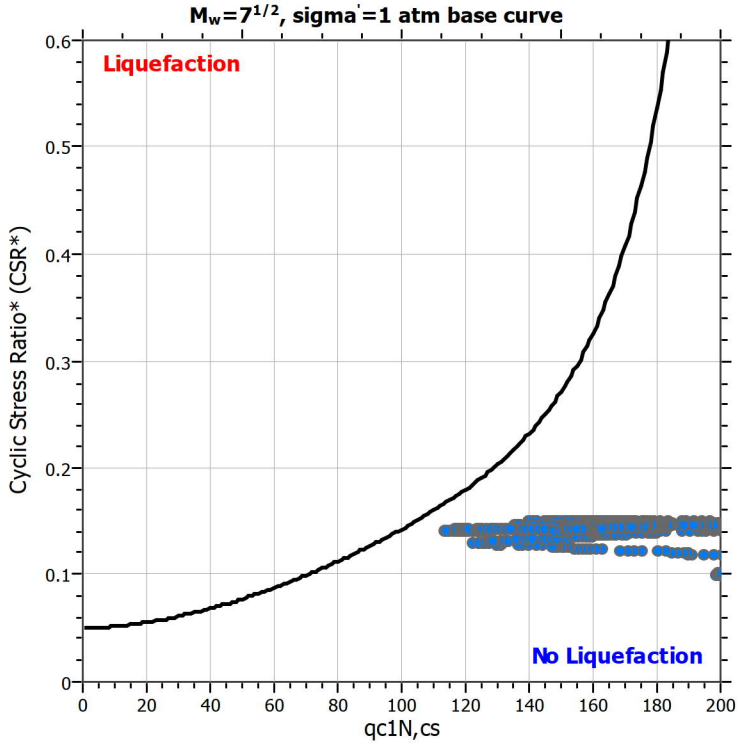
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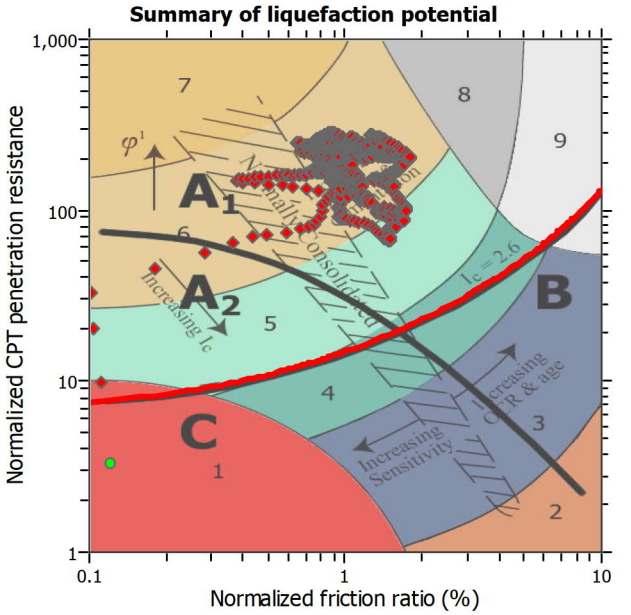
CPT file : CPTU002 SLS

Input parameters and analysis data

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Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

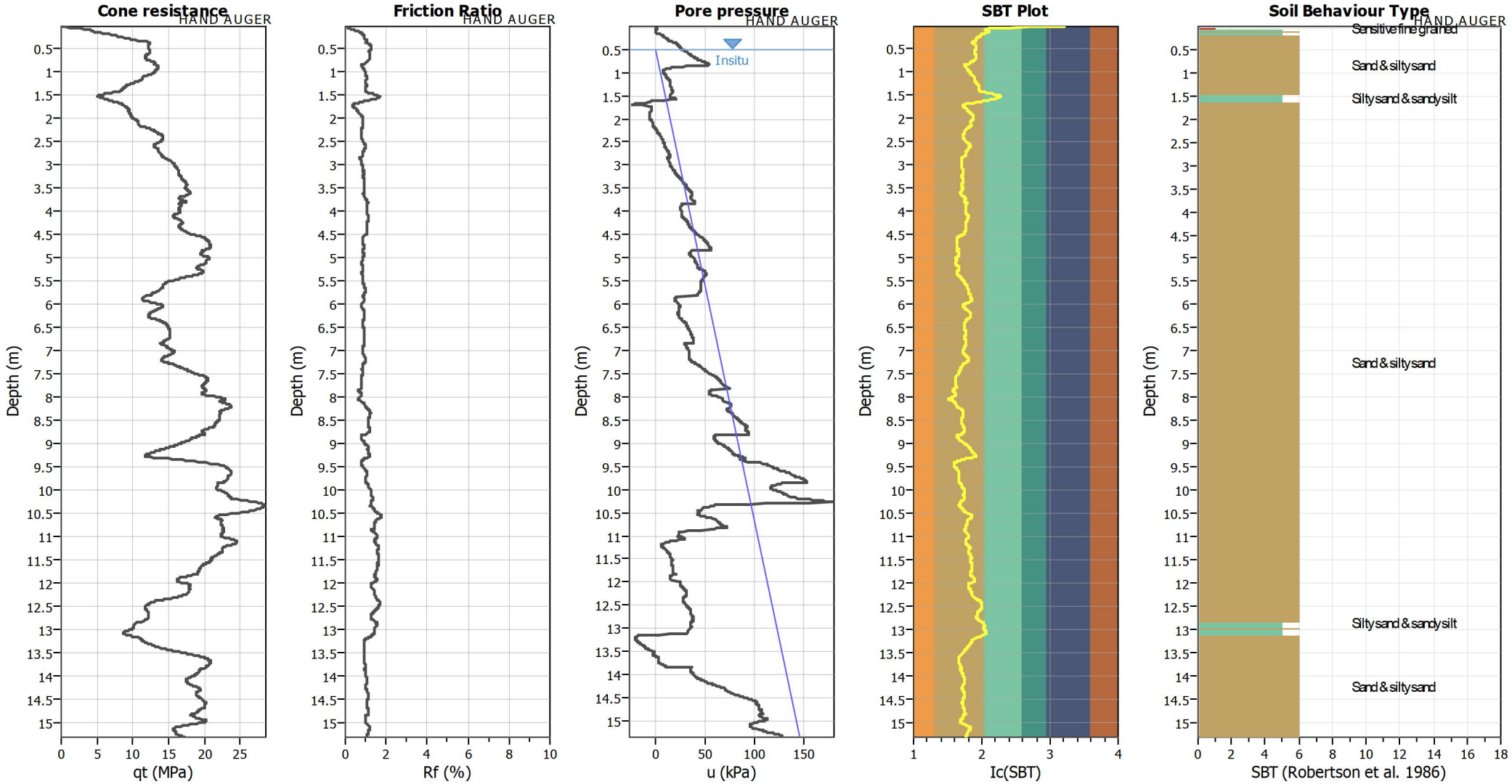






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



Input parameters and analysis data

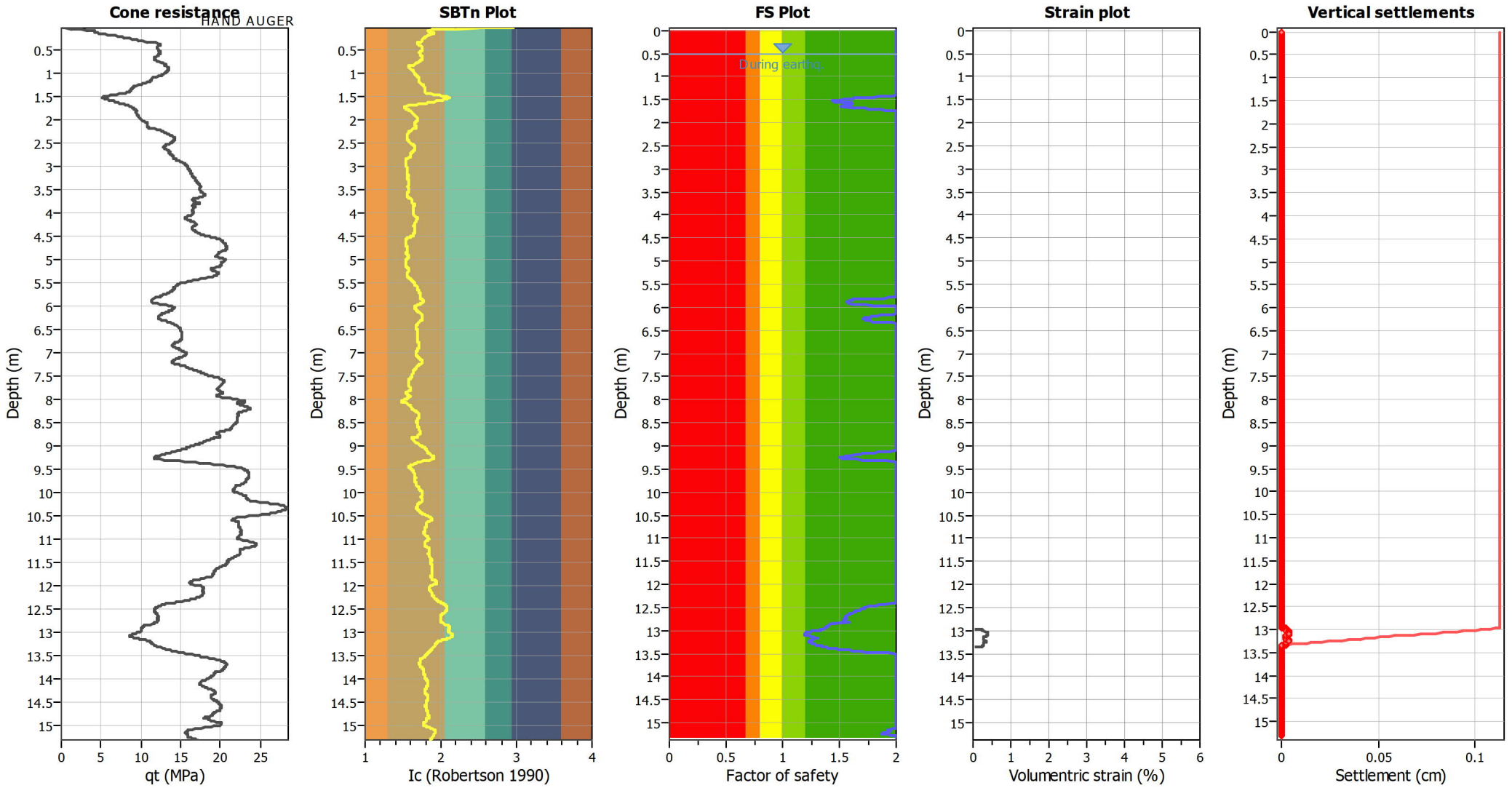
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Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.13	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

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Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
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Volumentric strain:	Post-liquefaction volumentric strain

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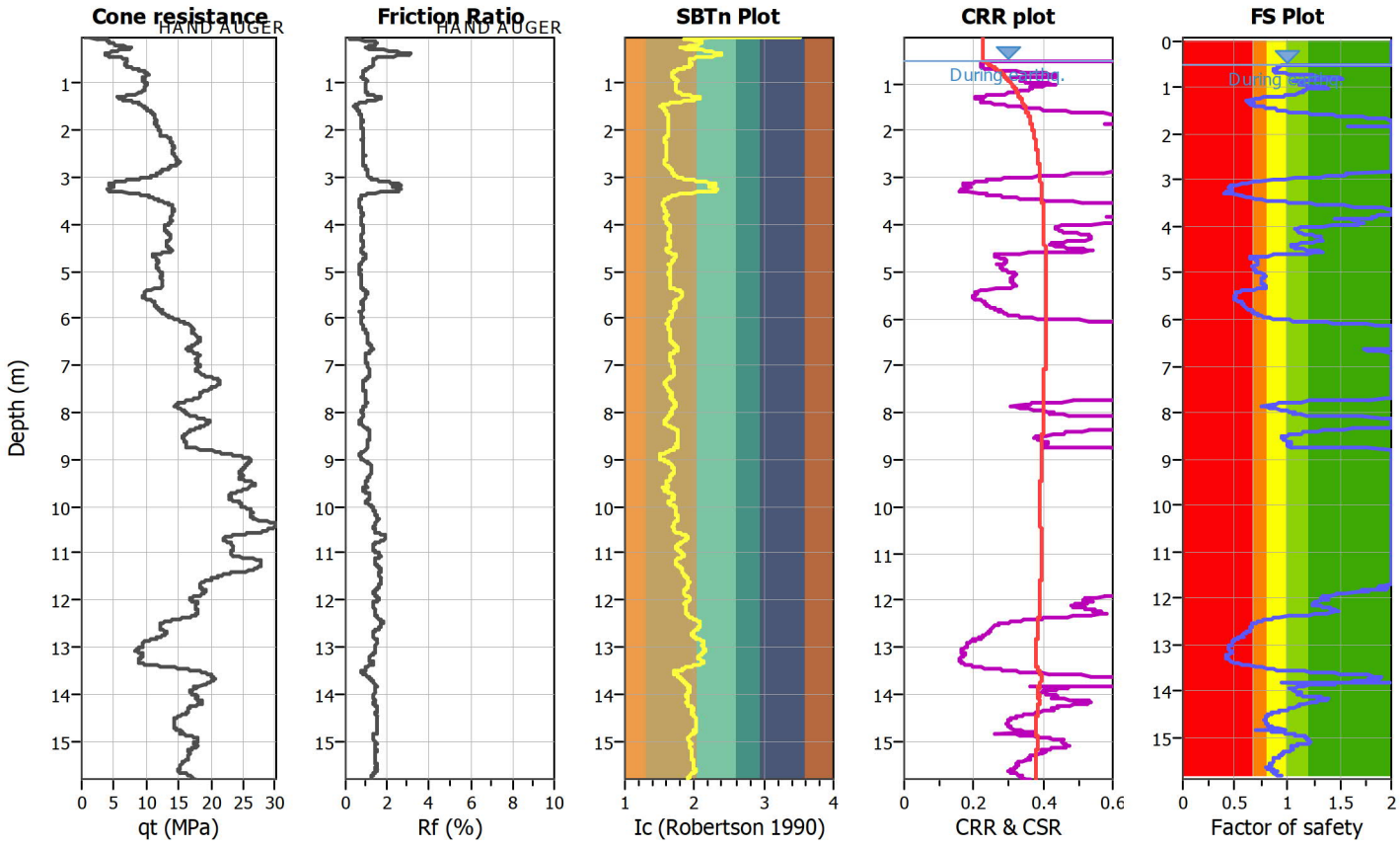
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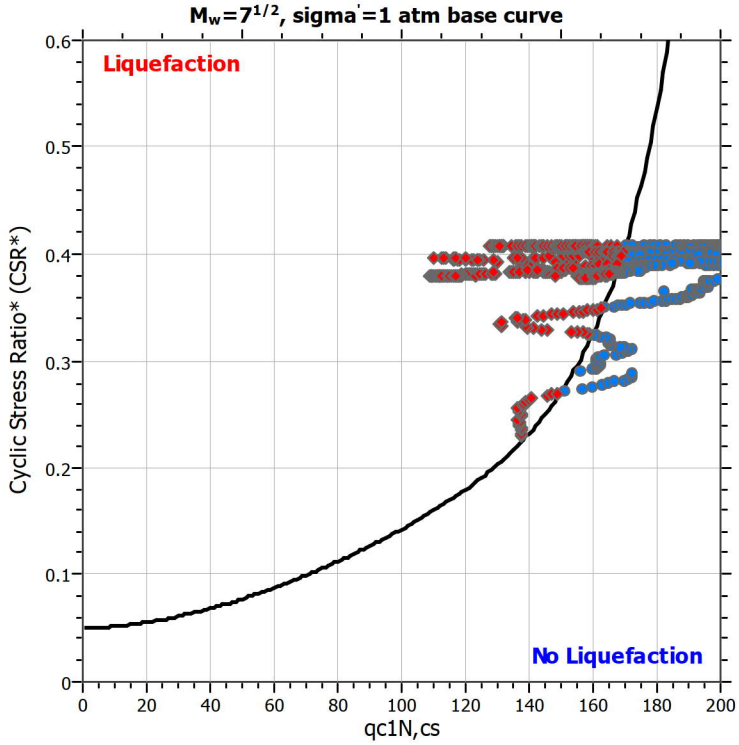
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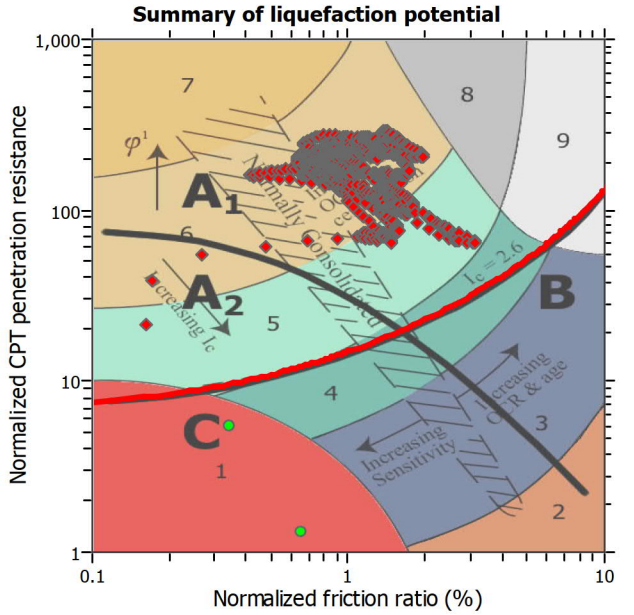
CPT file : CPTU001 ULS

Input parameters and analysis data

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Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.35	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

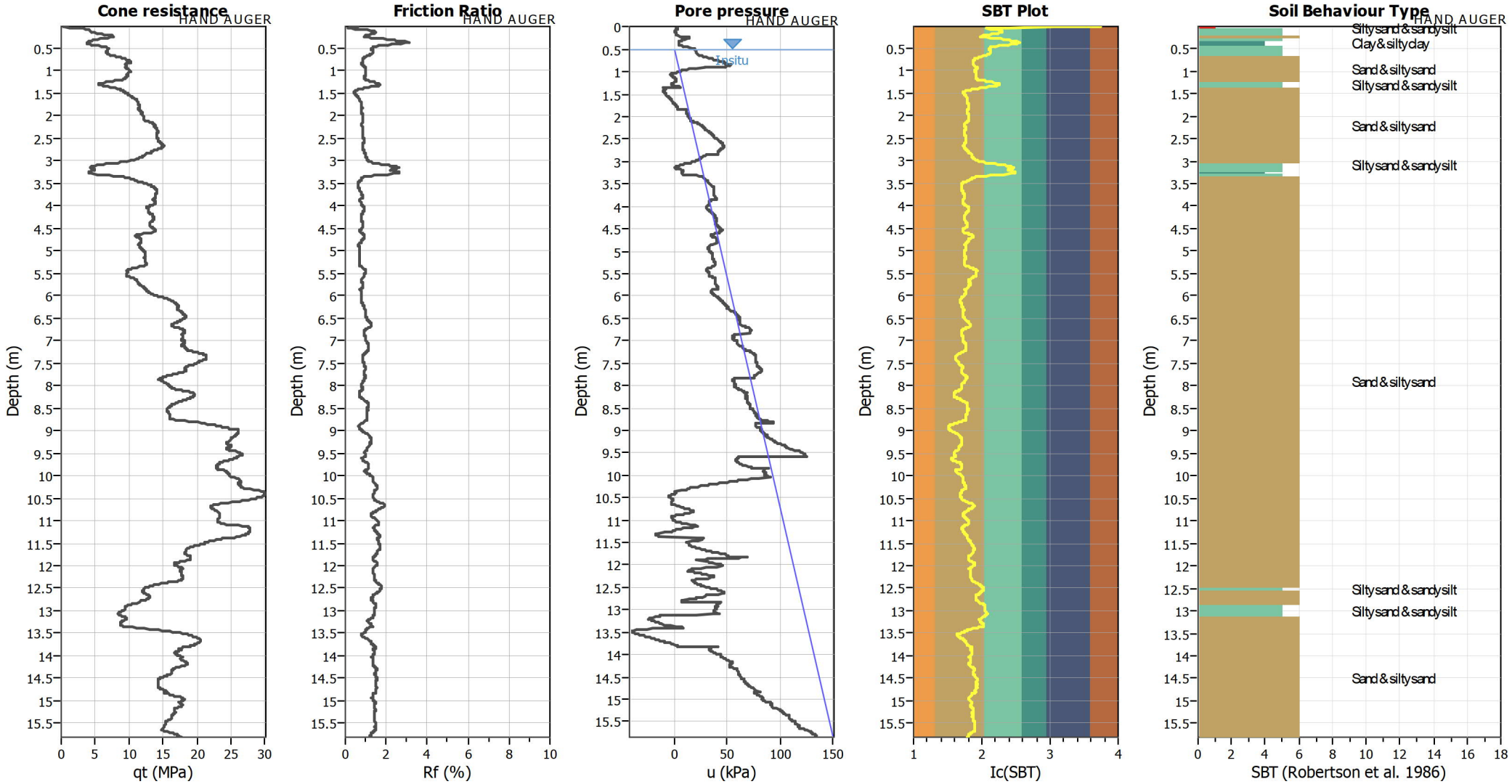






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
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CPT basic interpretation plots



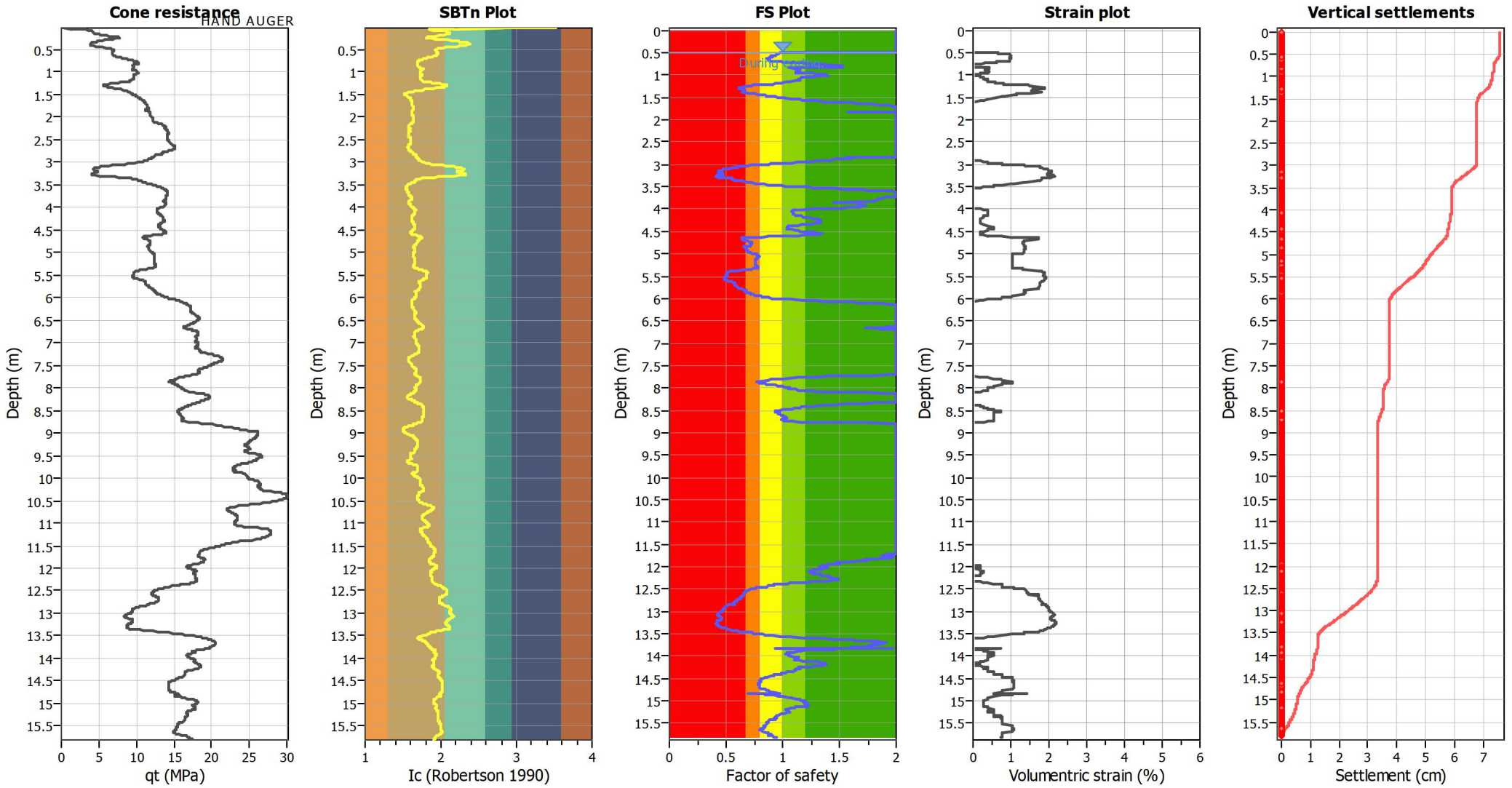
Input parameters and analysis data

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Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.35	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

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8. Very stiff sand to
9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

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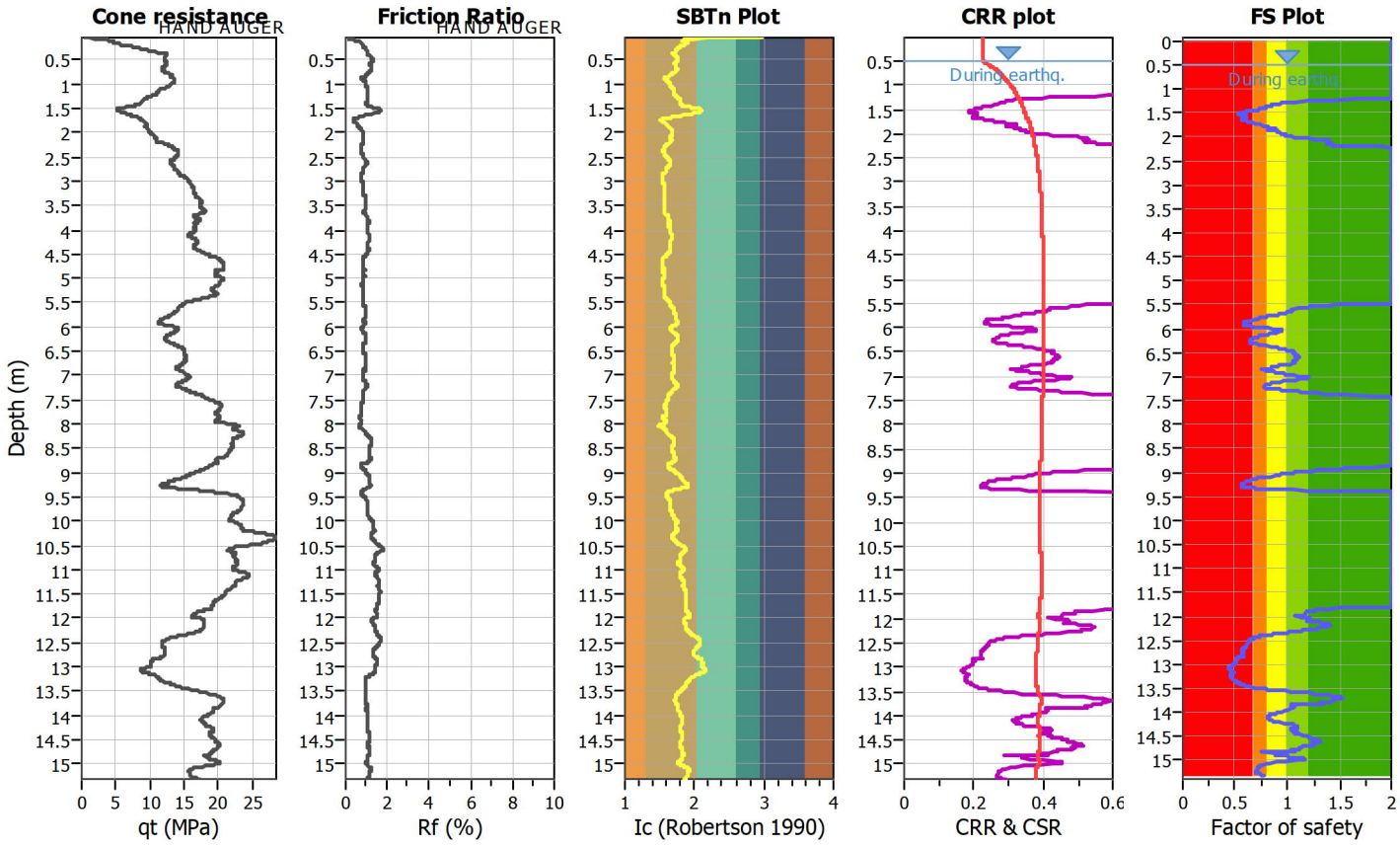
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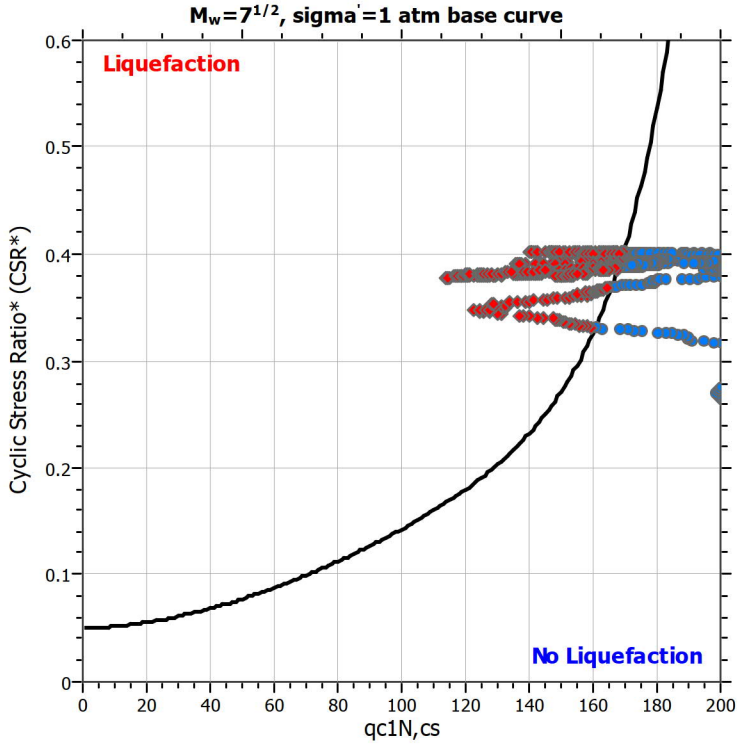
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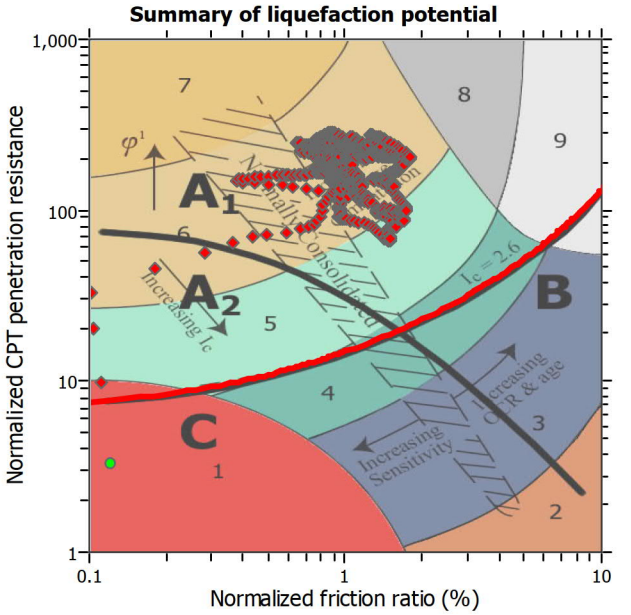
CPT file : CPTU002 ULS

Input parameters and analysis data

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Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.35	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

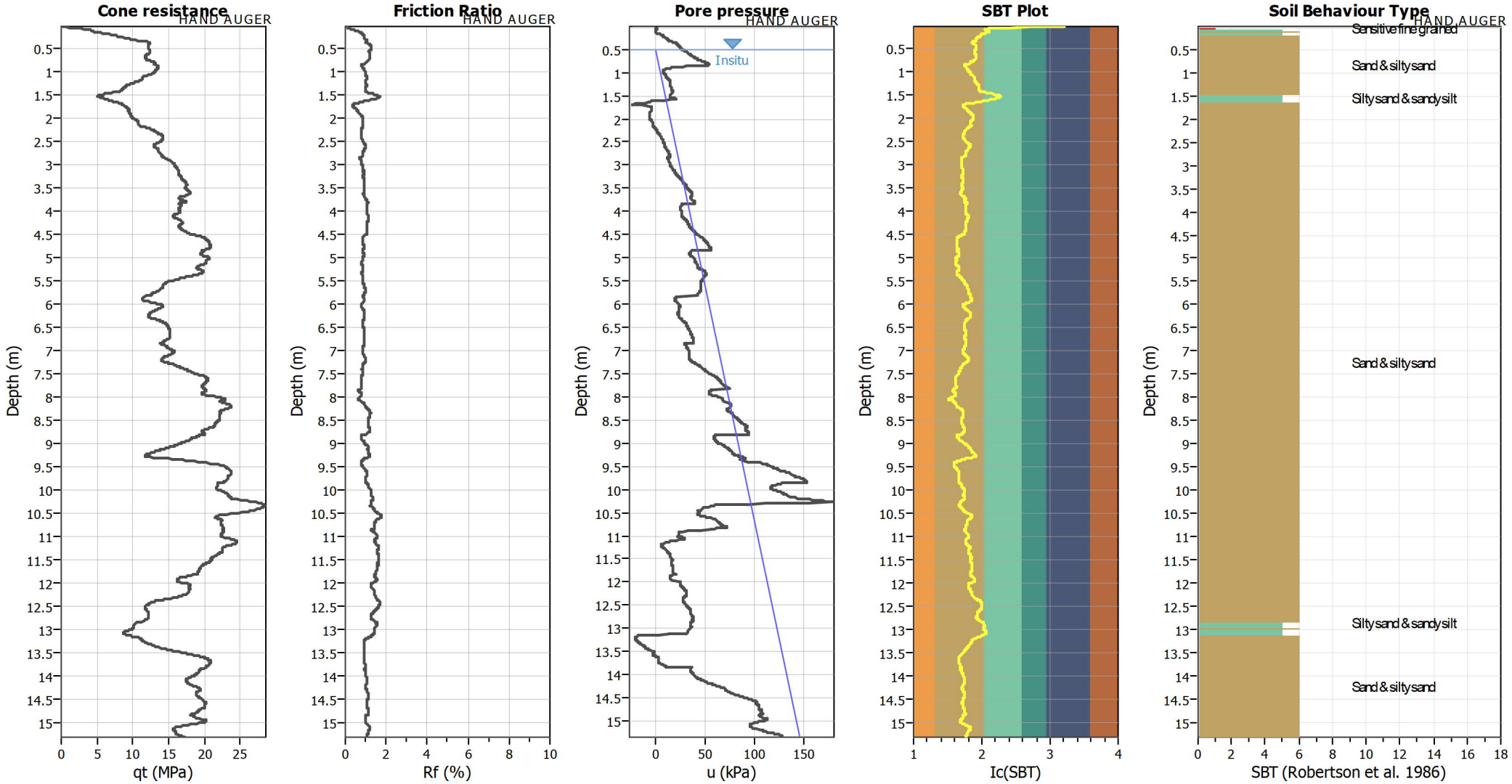






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
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CPT basic interpretation plots



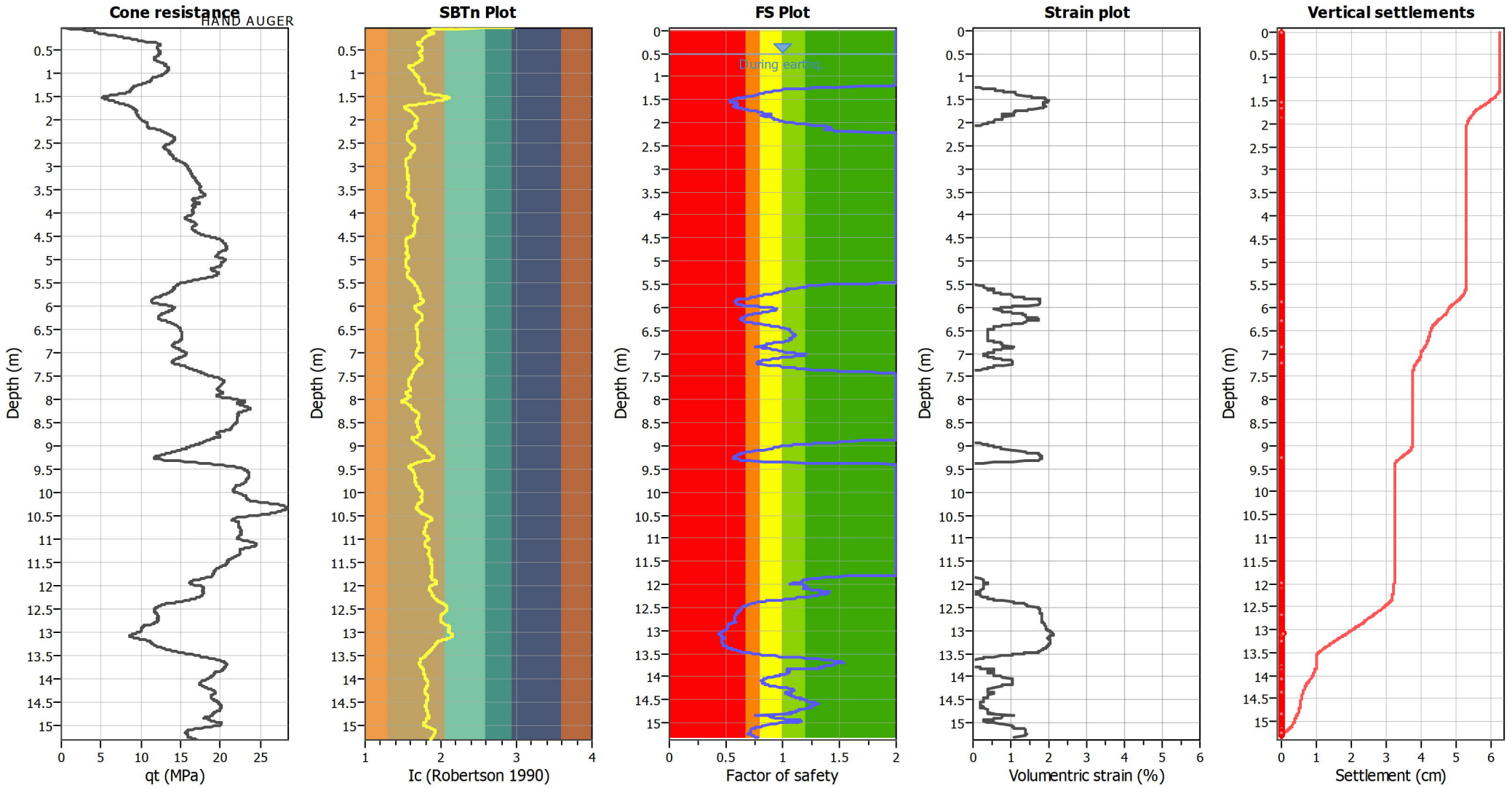
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.35	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

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3. Clay to silty clay
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Estimation of post-earthquake settlements



Abbreviations

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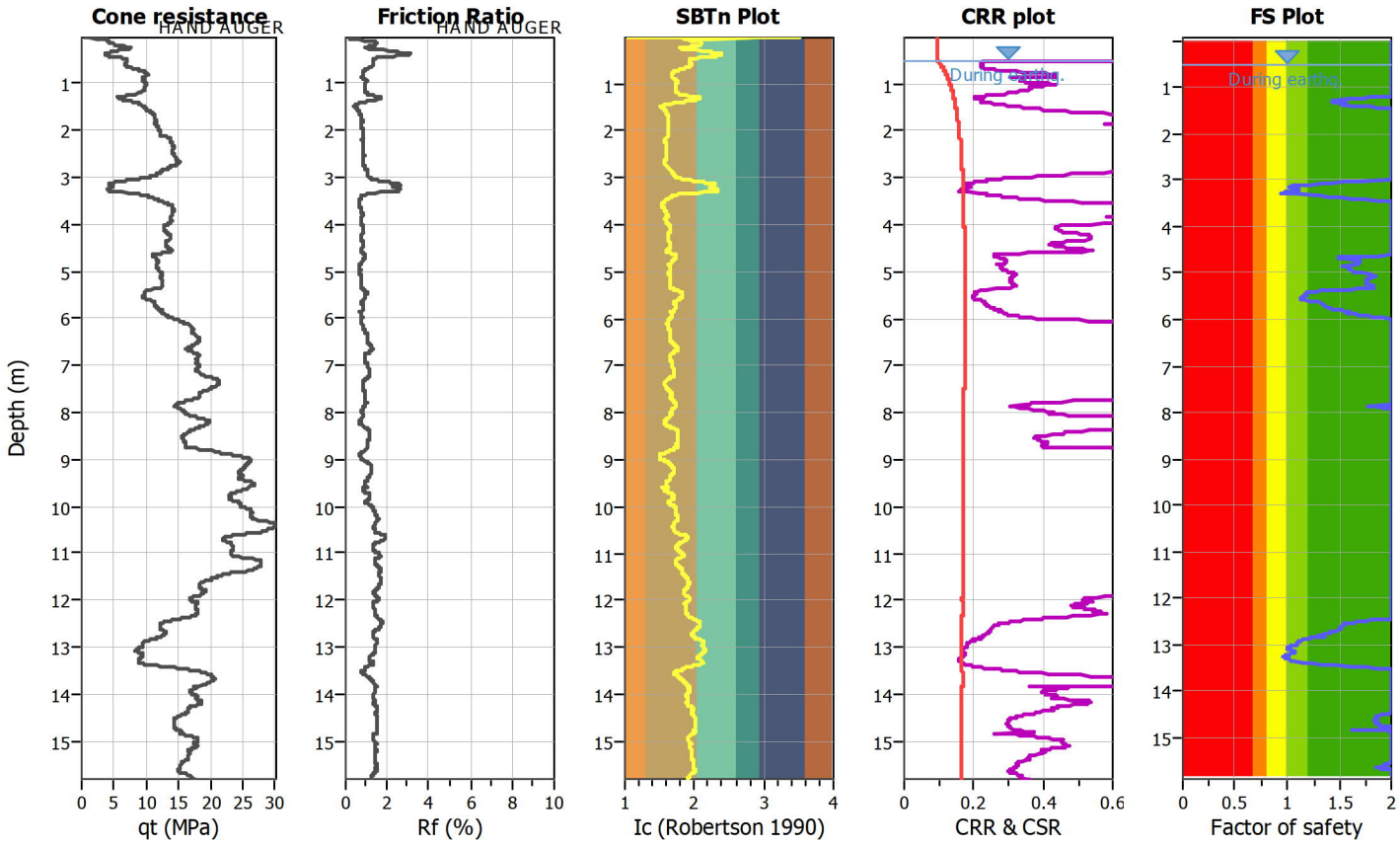
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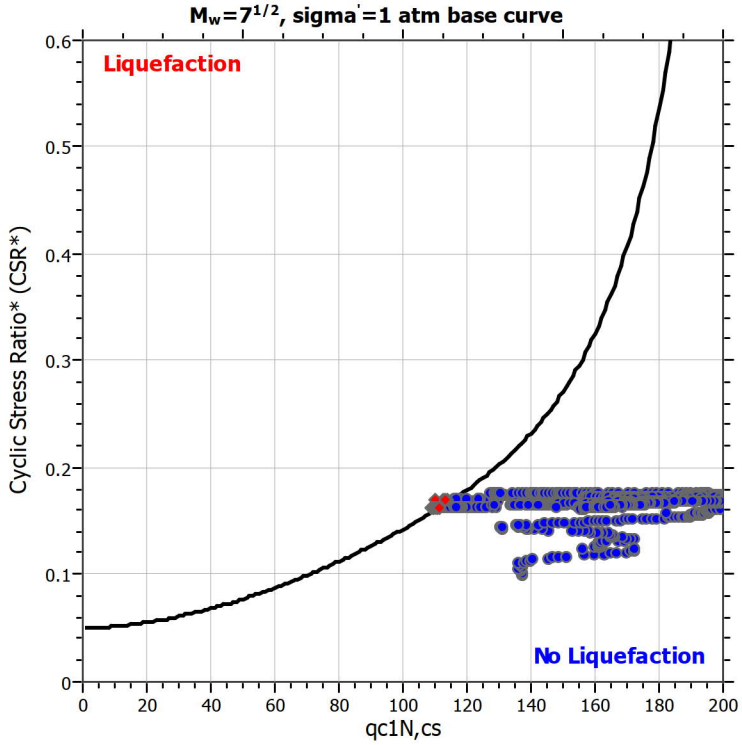
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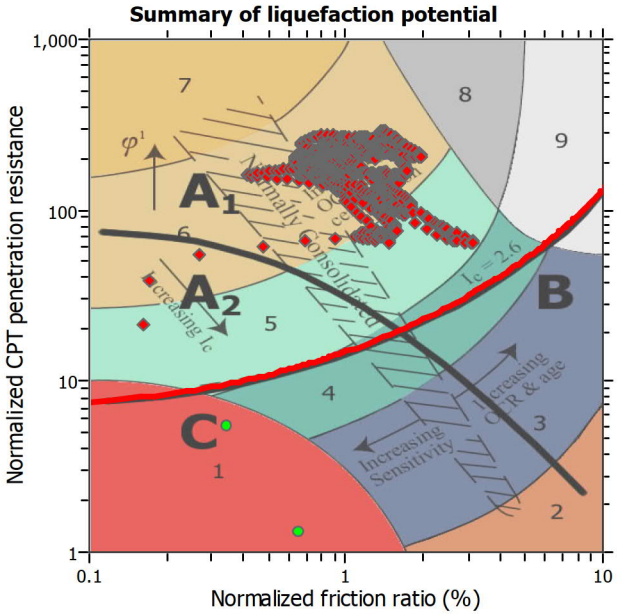
CPT file : CPTU001 SLS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

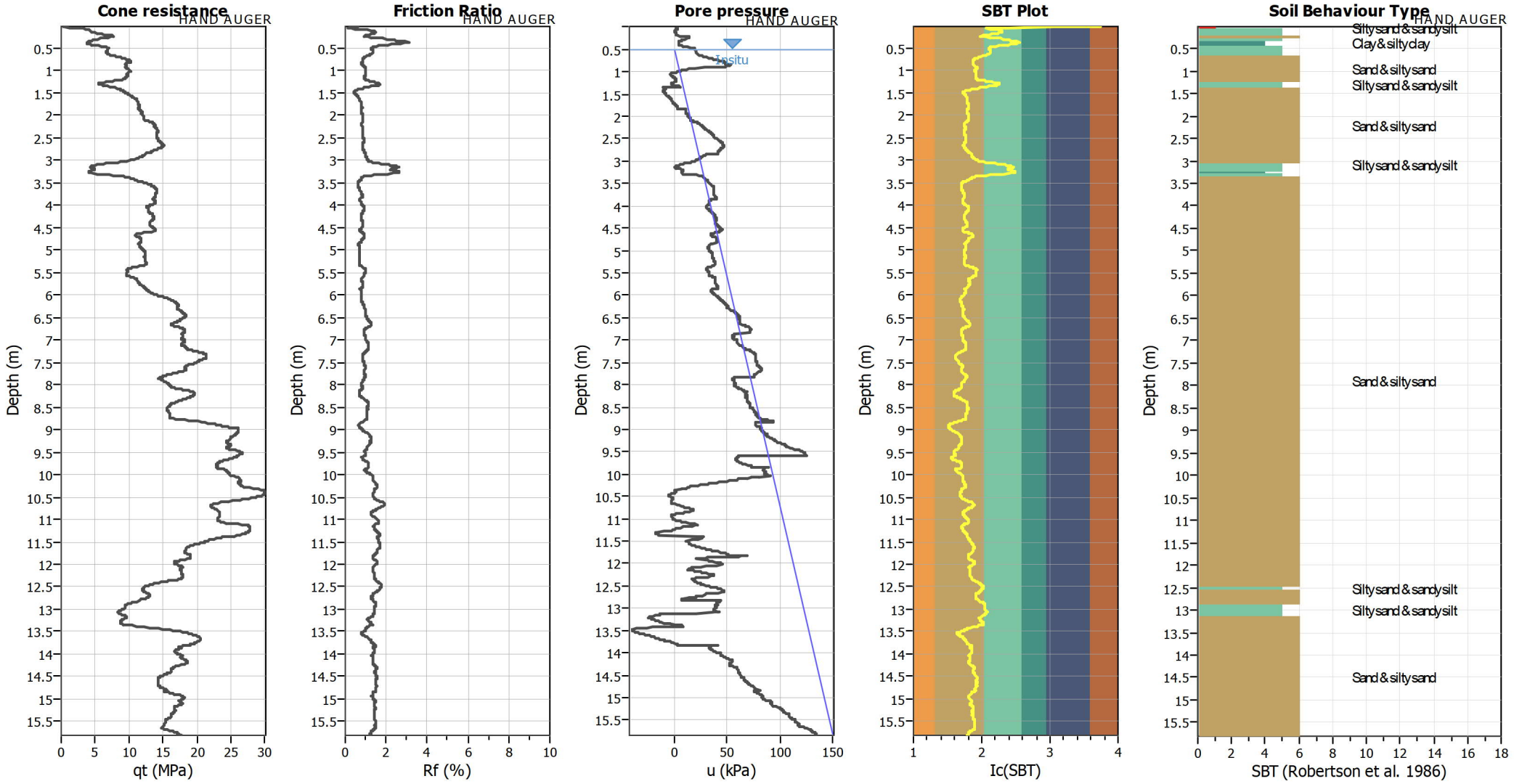






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
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Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



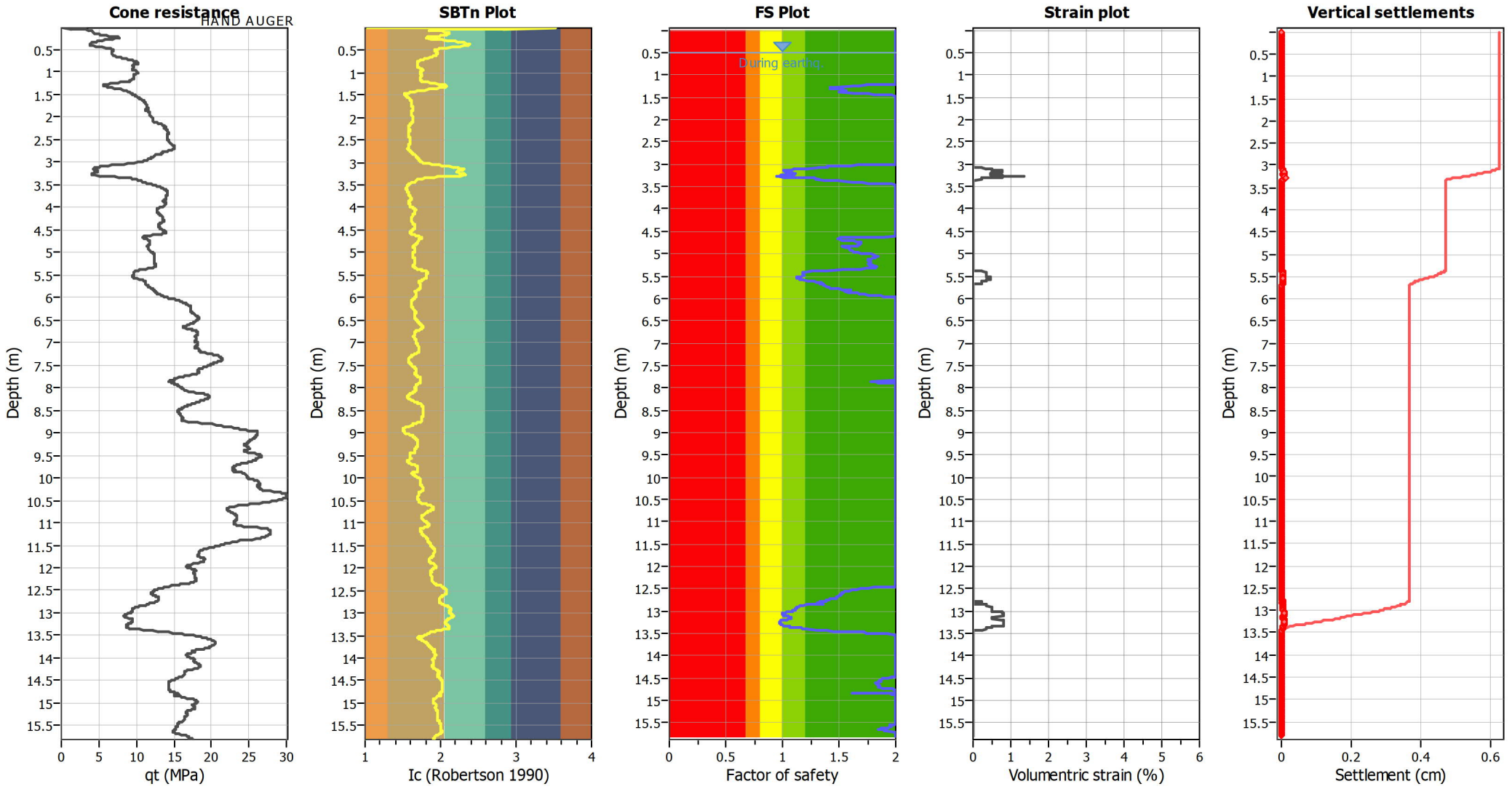
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

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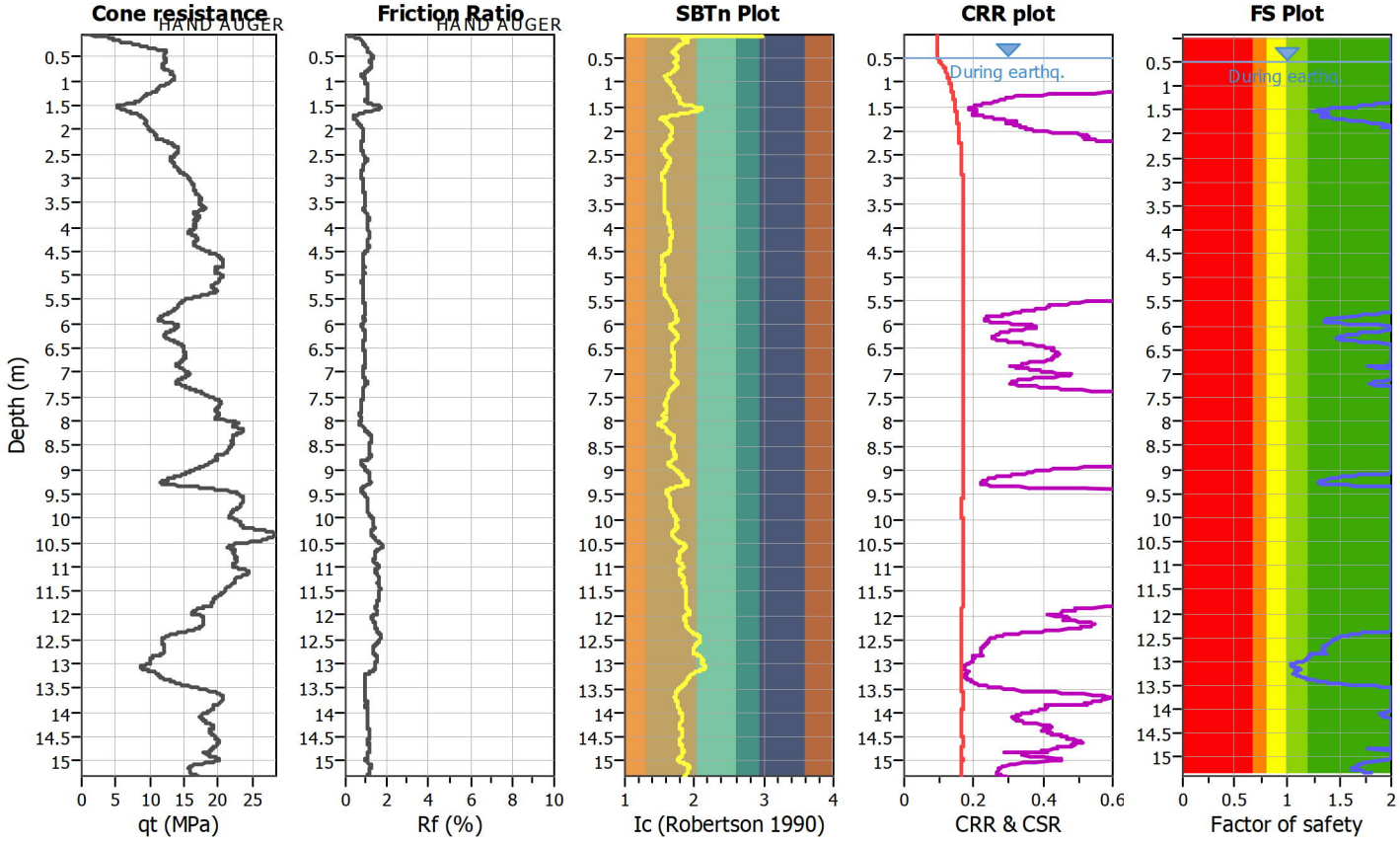
LIQUEFACTION ANALYSIS REPORT

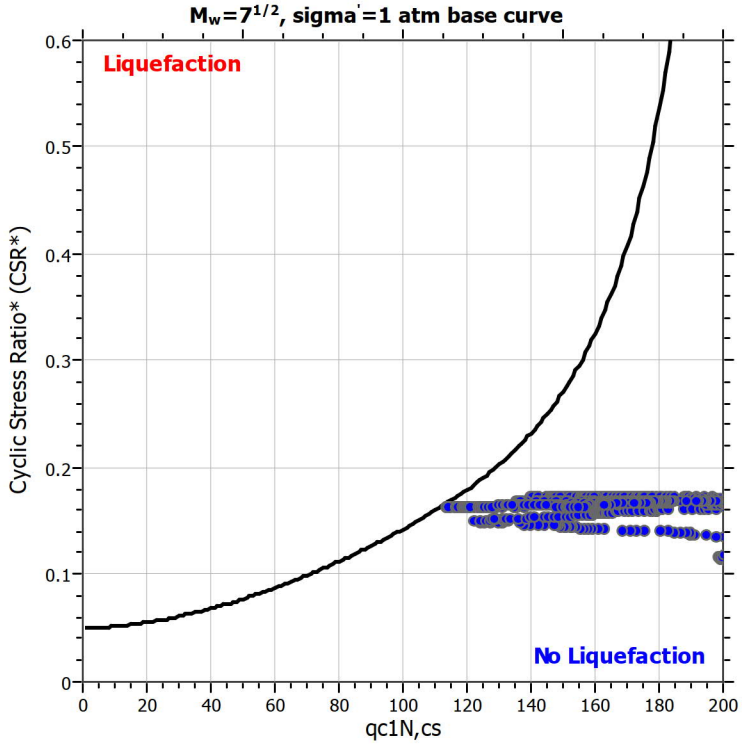
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

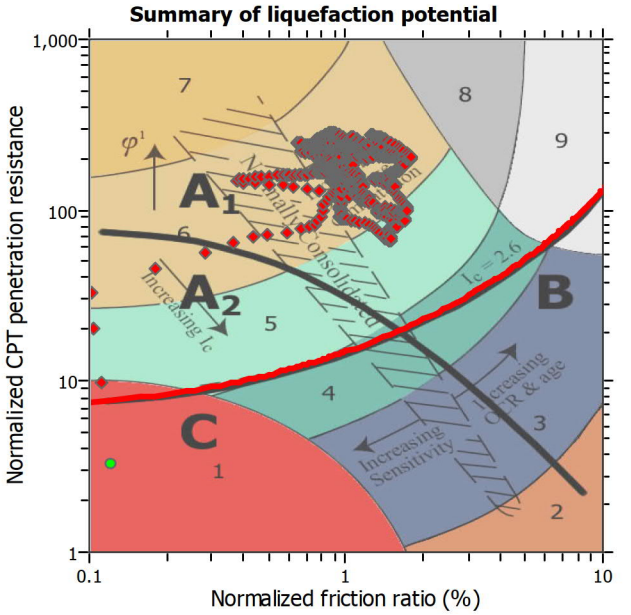
CPT file : CPTU002 SLS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

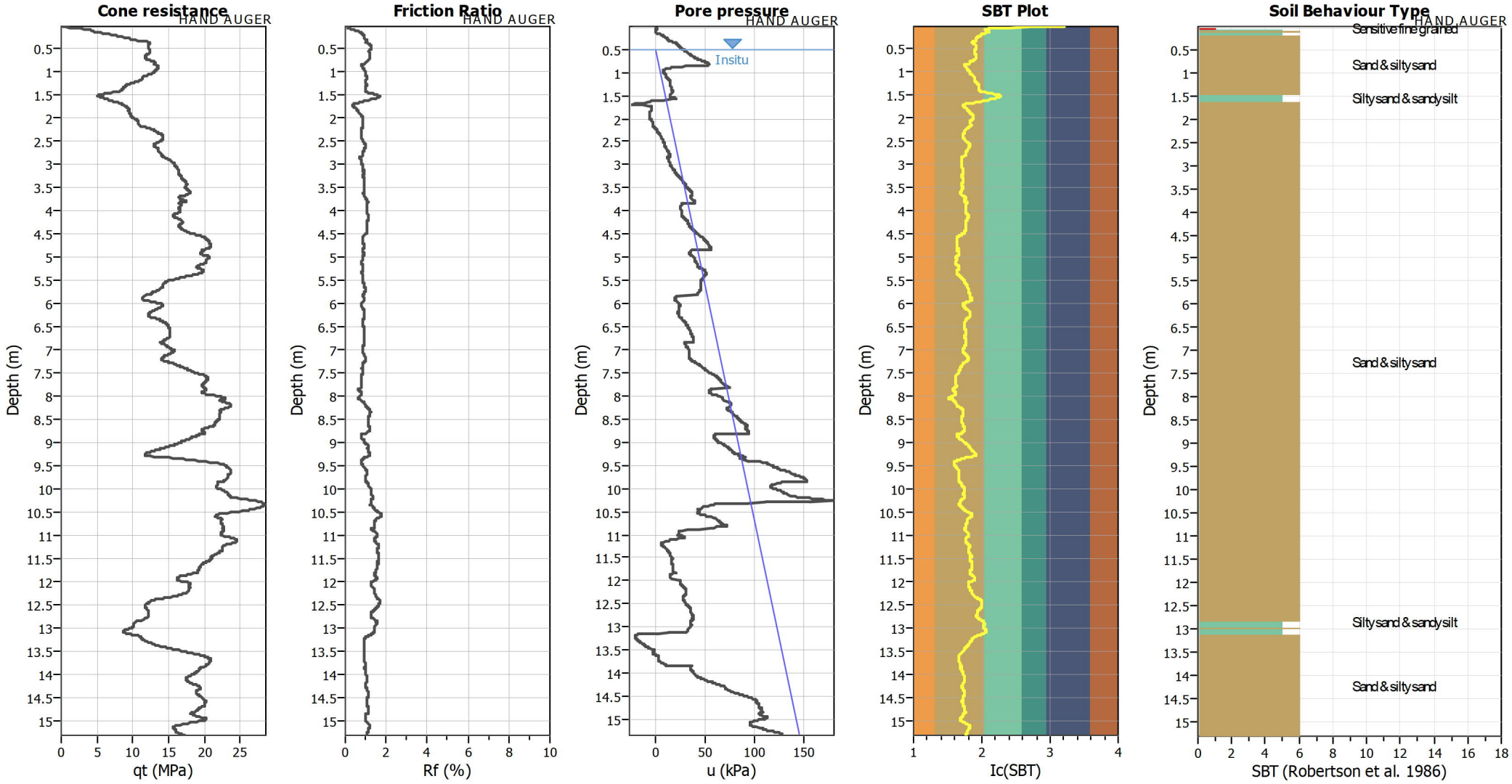






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



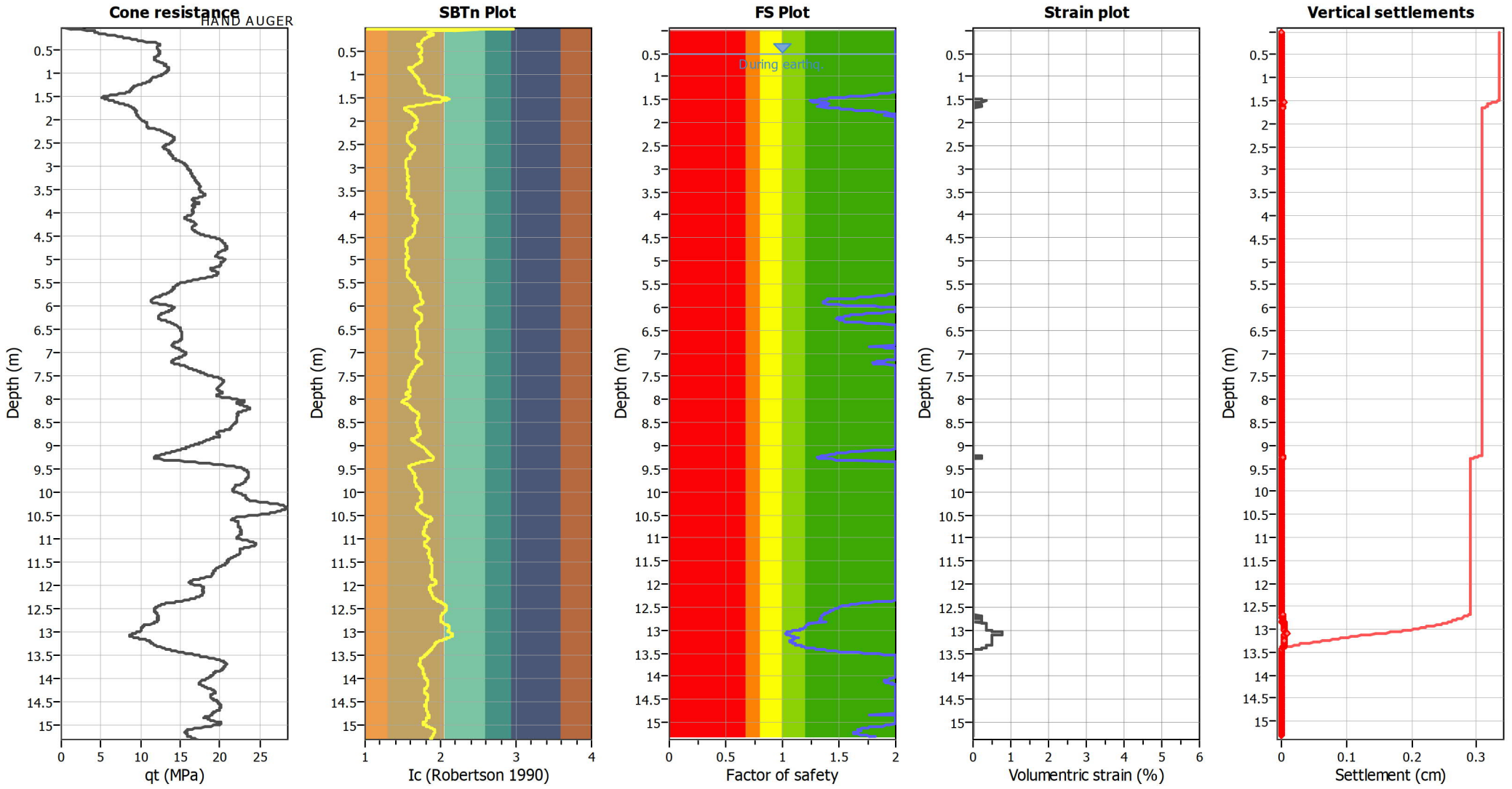
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Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
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Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
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Volumentric strain:	Post-liquefaction volumentric strain

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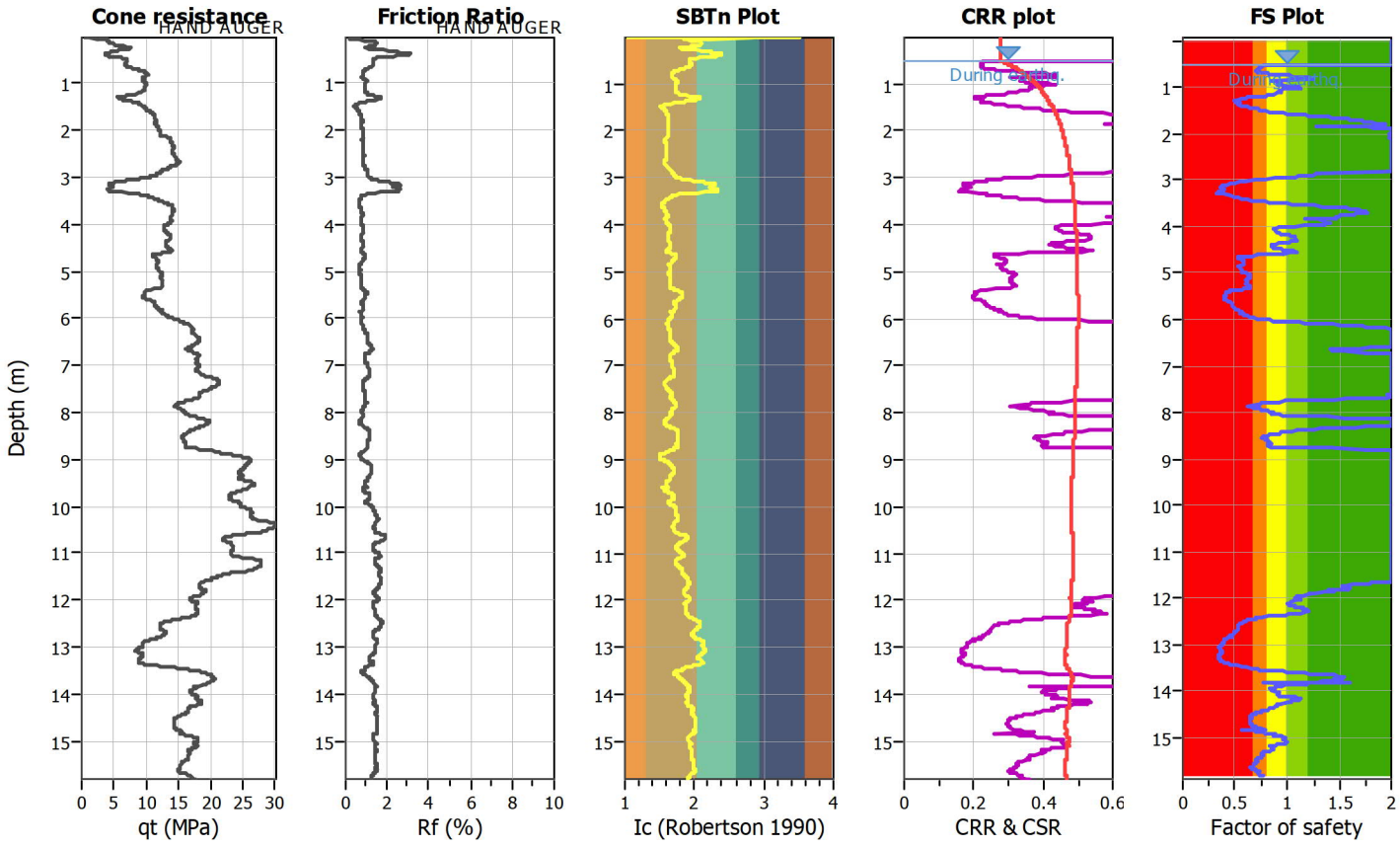
LIQUEFACTION ANALYSIS REPORT

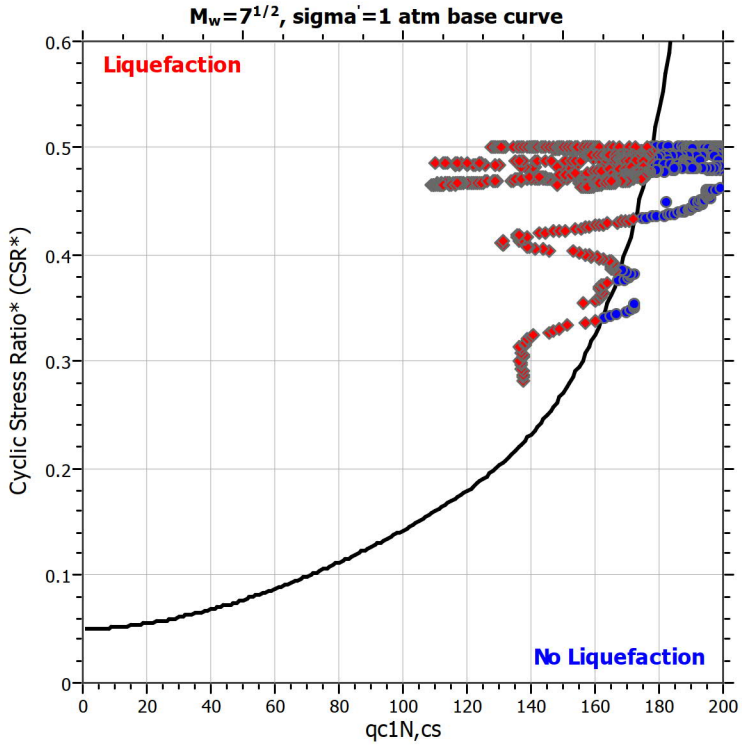
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

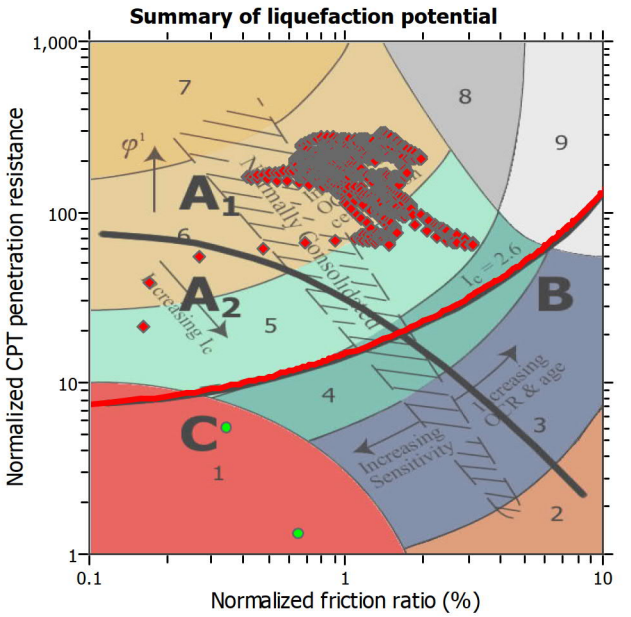
CPT file : CPTU001 ULS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.43	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

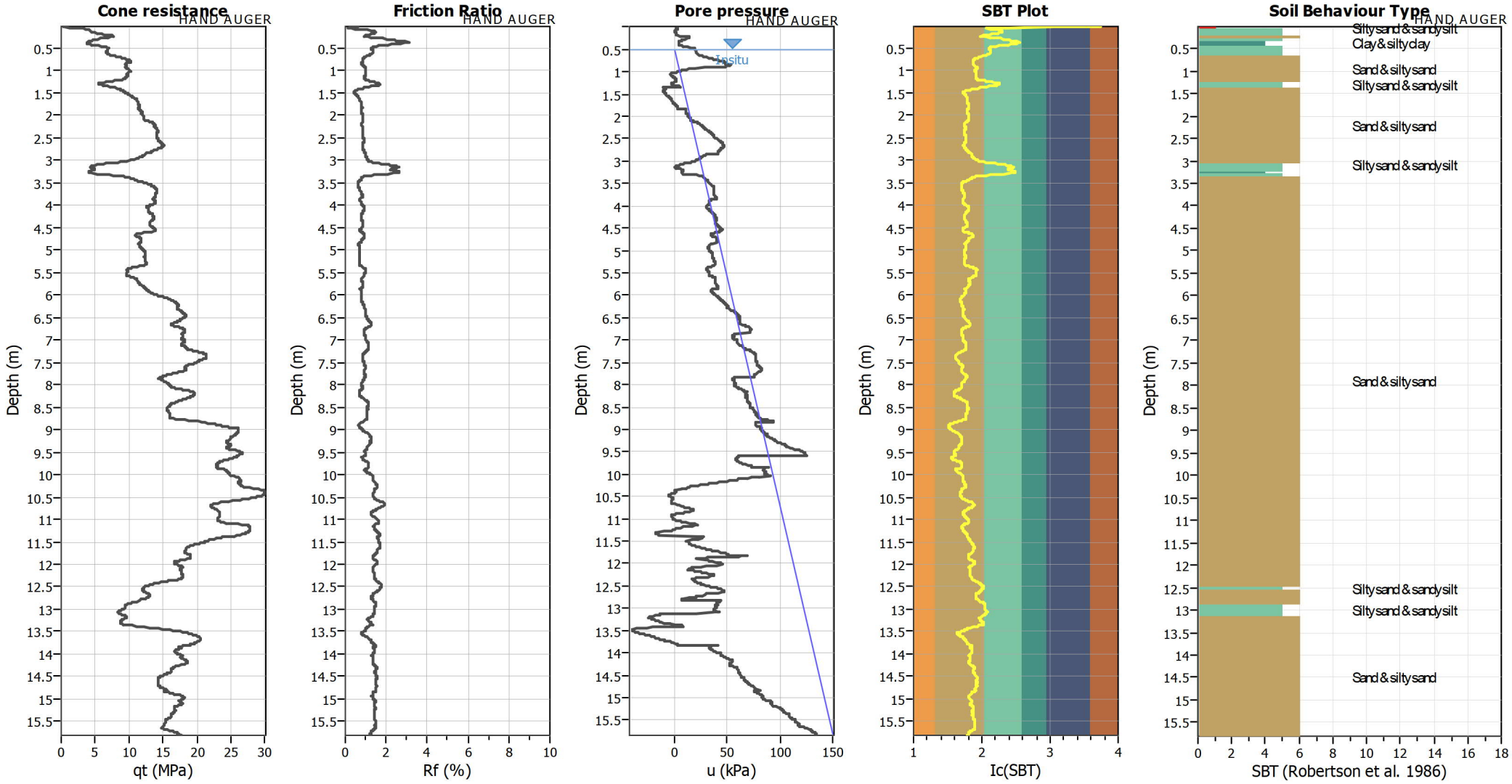






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
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CPT basic interpretation plots



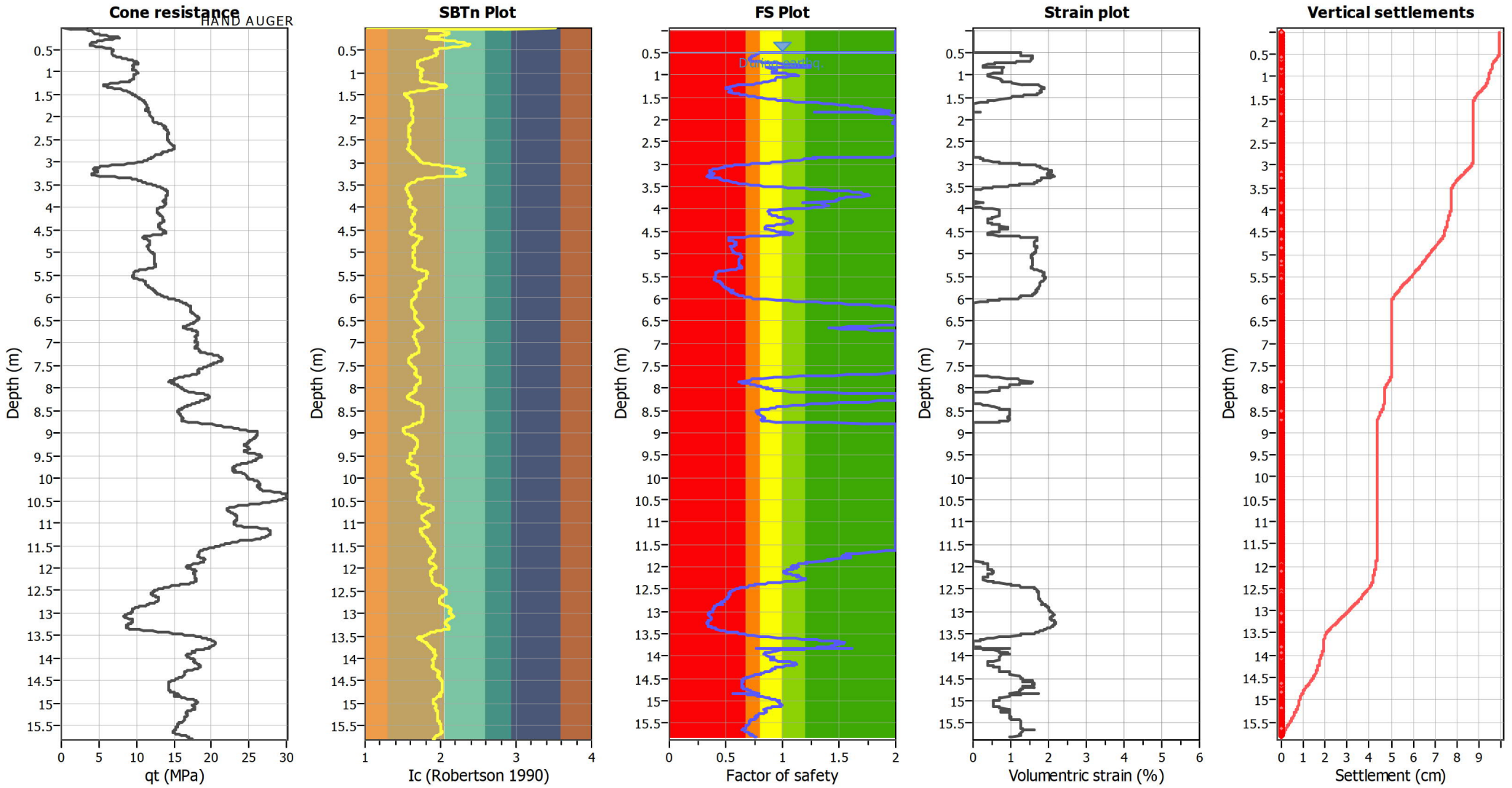
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.43	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
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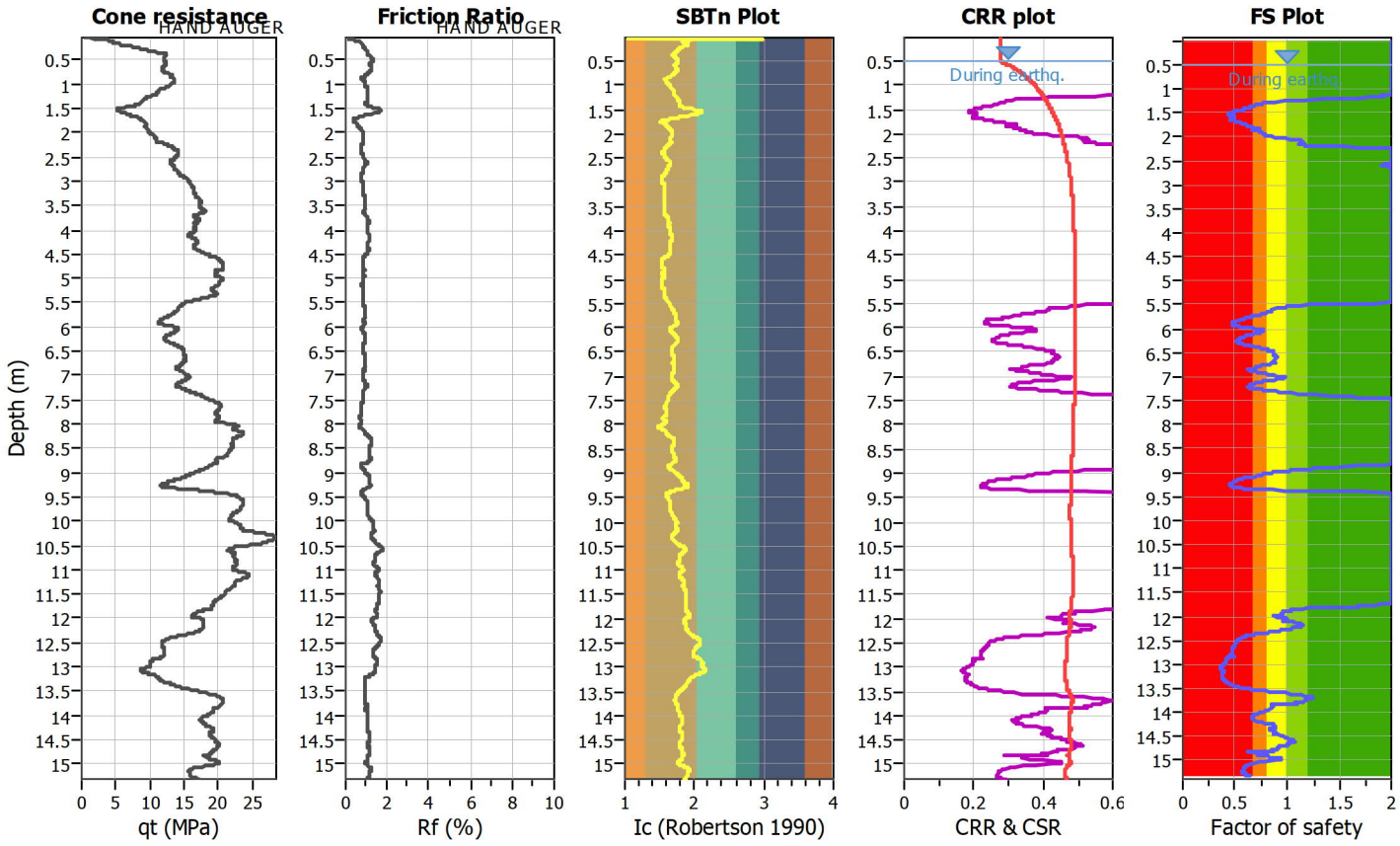
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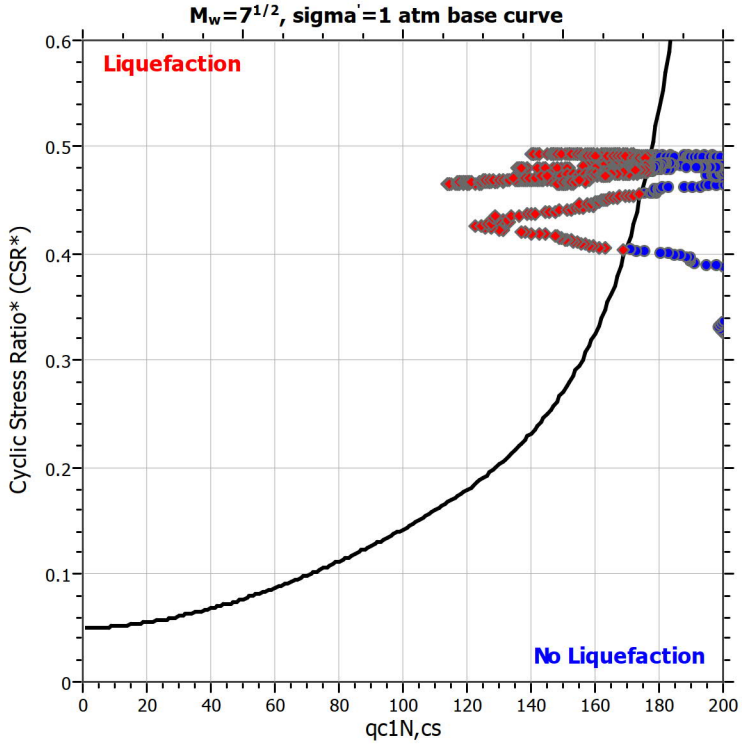
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

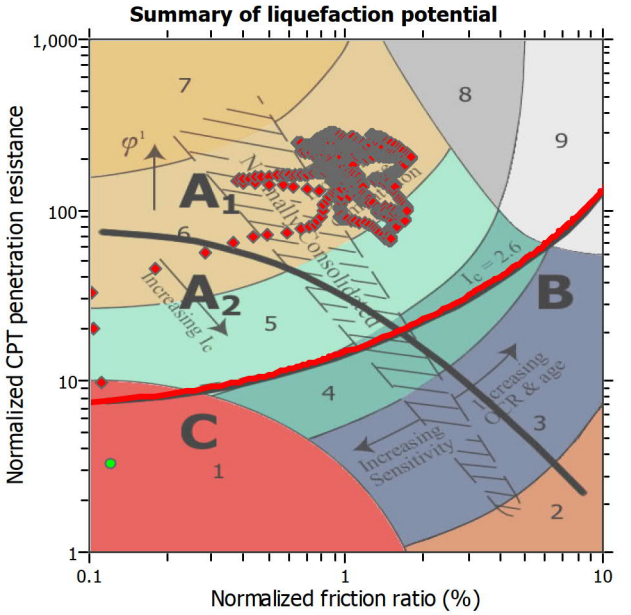
CPT file : CPTU002 ULS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
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Peak ground acceleration:	0.43	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

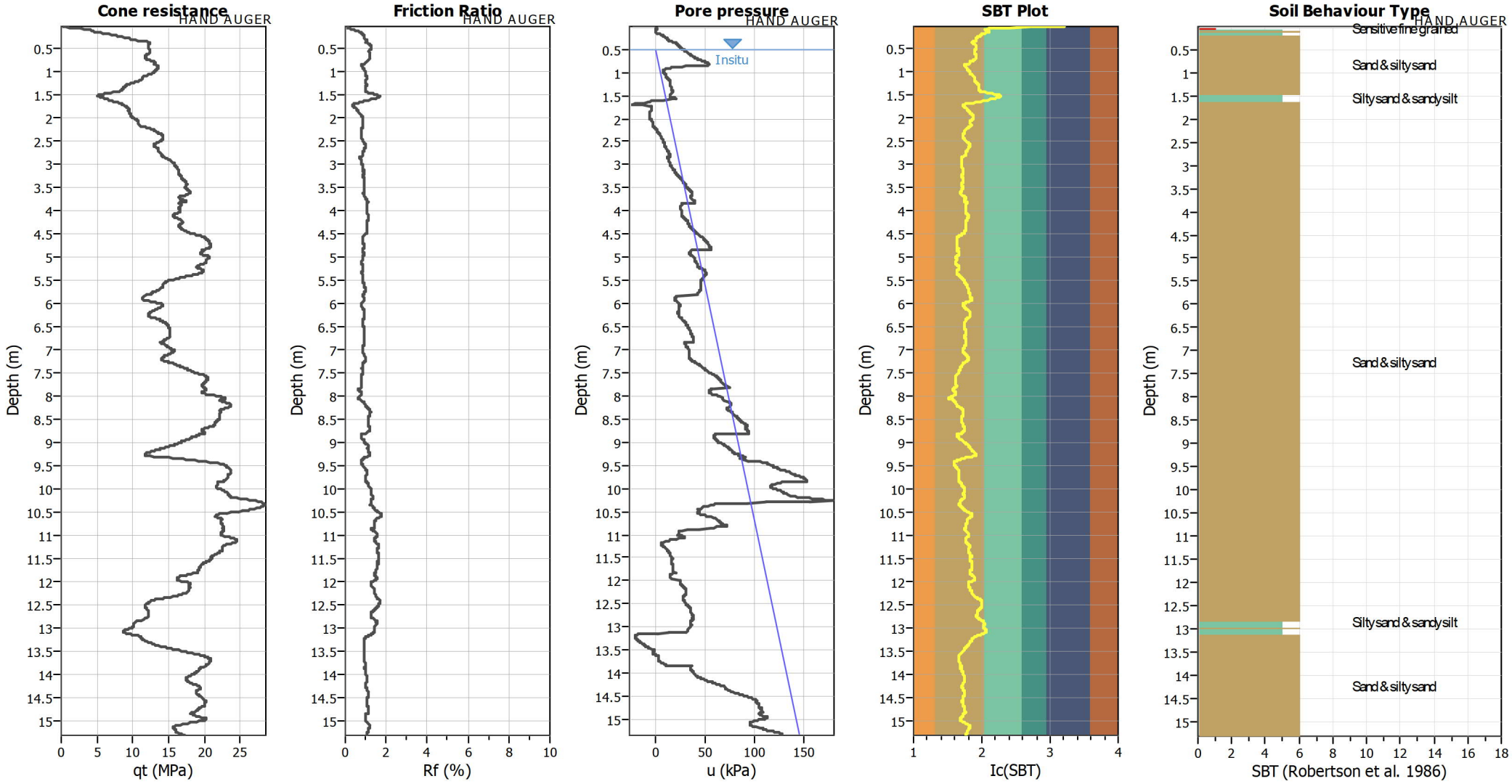






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CPT basic interpretation plots



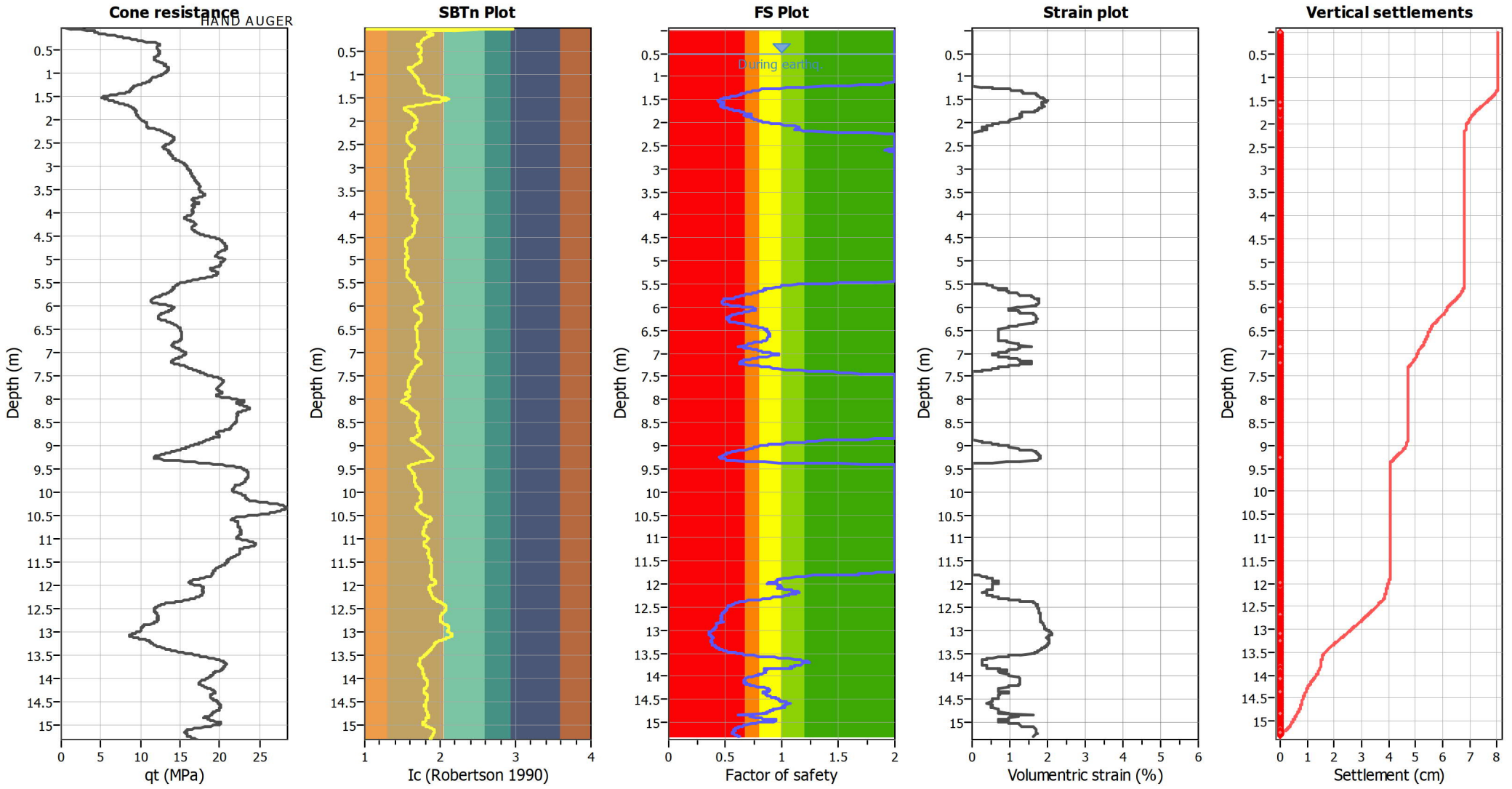
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.43	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

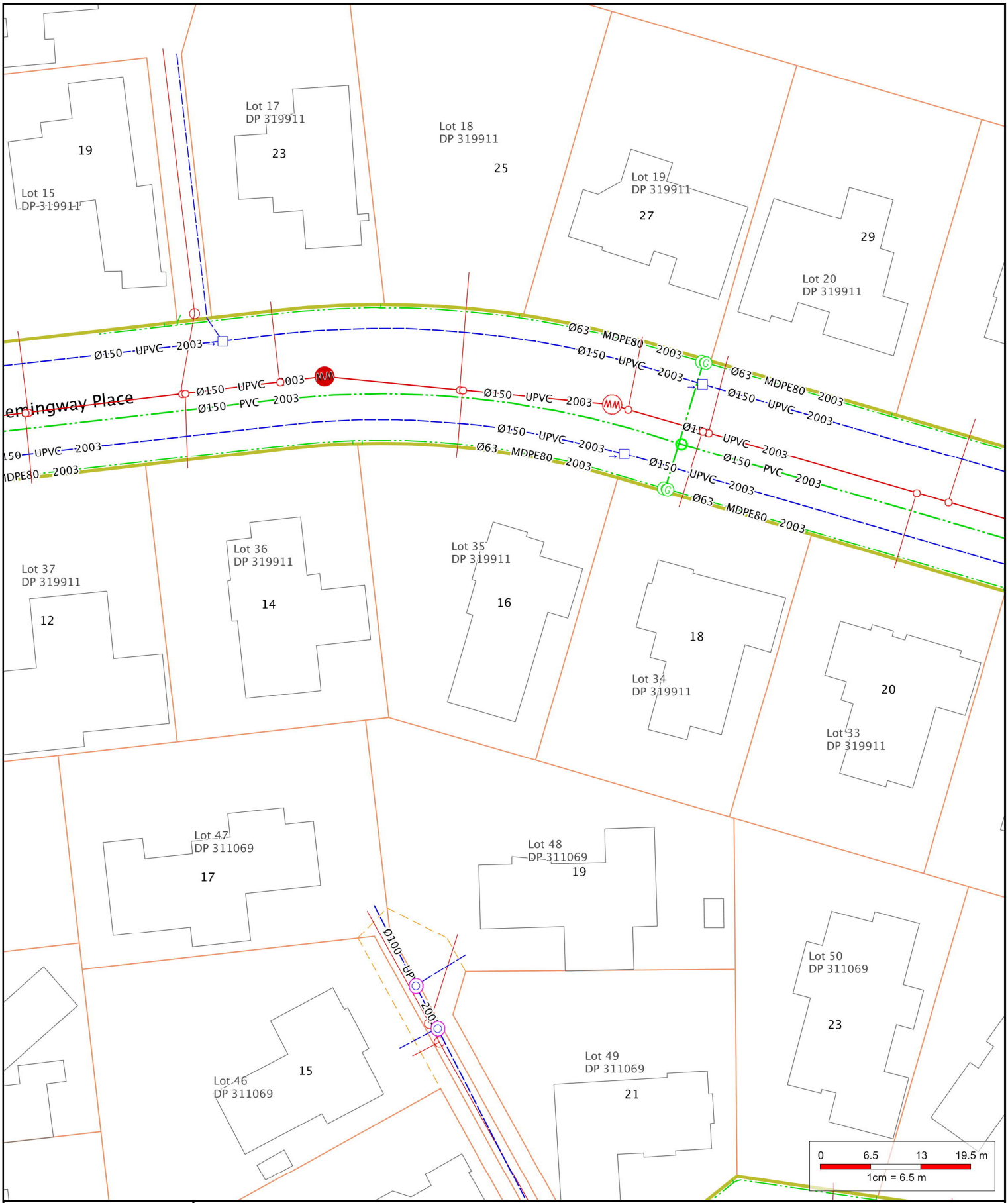
1. Sensitive fine grained
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9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
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Volumentric strain:	Post-liquefaction volumentric strain



1 : 650 on A4

10/03/2020 9:48:42 AM

Christchurch City Council

ph: 941-8300 fax: 941-8385

Accuracy not guaranteed. Onsite verification required. Display of data scale dependent, full detail available at 1:500.

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Private Drainage

Standard Infrastructure
- Bio Gas
- Condensate Trap
- End Cap
- Inlet
- Outlet
- Valve
- Main
- Cable

Water Intake/Supply
- Connector
- Bellows
- Connector
- Hydrant

Water Intake/Supply
- Inlet
- Meter
- Outlet
- Pump
- Restrictor
- Valve
- Air Release
- Butterfly
- Flow restriction
- Gate
- Pressure Activated
- Sluice
- Valve
- Reservoir
- Structure
- Lateral
- Main
- Sub Main

Wastewater
- End Cap
- Valve
- Air Gap Separator
- Vent
- Eye
- Eye (Vertical)
- Outfall
- Pump
- Junction
- Access
- Flush Manhole
- Inspection Point
- Standard Manhole
- Trap
- Vented Manhole
- Lateral
- Main
- Pressure Main

Wastewater
- Lateral Fitting

Local Pressure
- Control Panel
- Boundary Kit
- Tank System
- Site
- Vacuum Chamber
- Vacuum Breather

Stormwater
- Bend
- Change
- Eye
- Flow Restriction
- Inlet
- Dome Sump
- Double Sump
- Gross Debris Trap

Stormwater
- Inlet
- Inlet
- Inlet Headwall
- Pipe End
- Silt Trap
- Single Sump
- Soak Pit
- Triple Sump
- Junction
- Standard Manhole
- Outlet
- Pump
- Structure
- Basin
- Lateral
- Main
- Lateral Fitting
- Double Sump

Stormwater
- Lateral Fitting
- Single Sump
- Soak Pit
- Inspection point
- Manhole

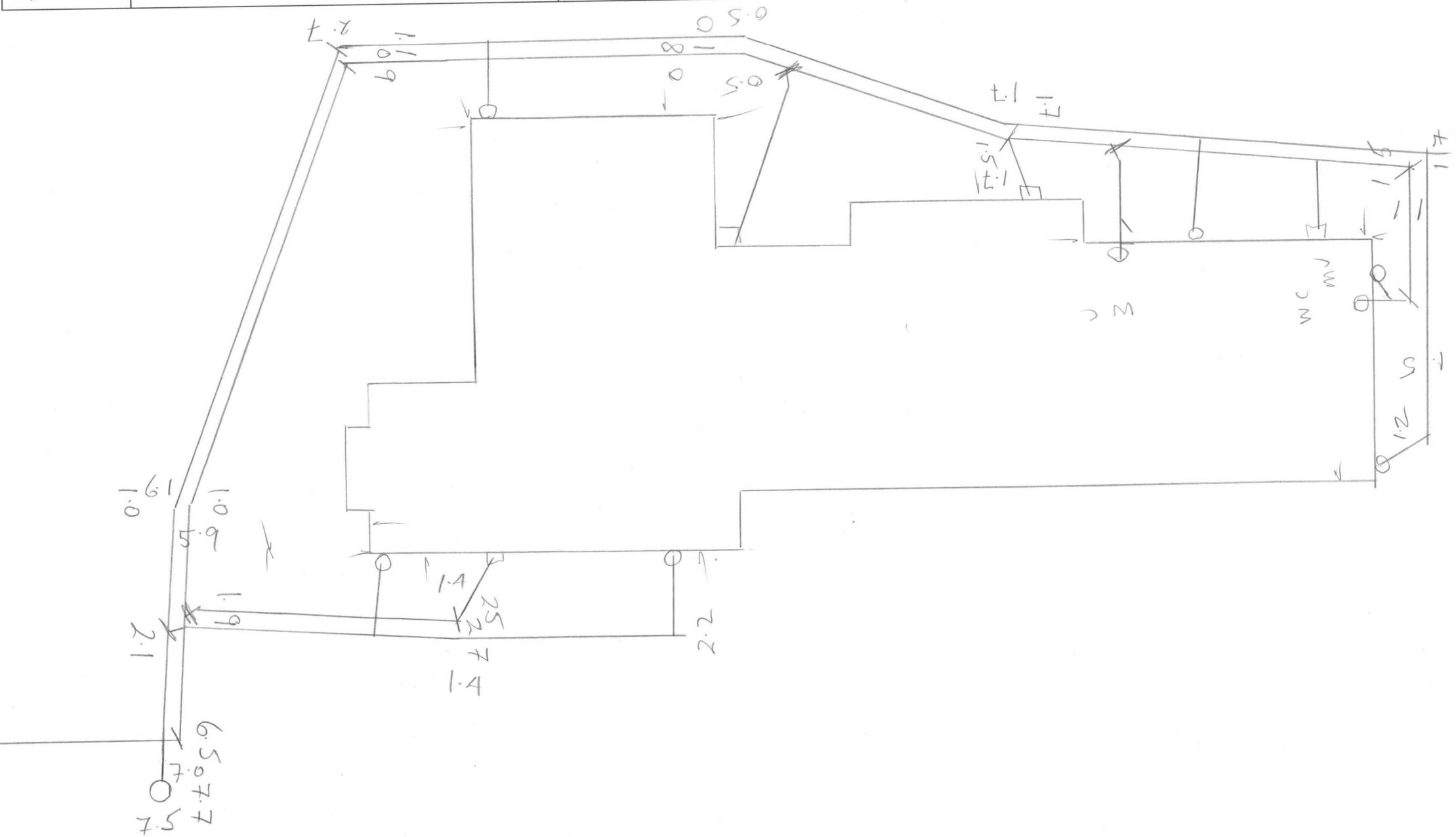
All services
- Pipe Protection
- *a* Abandoned
- *p* Proposed
- *os* Out of service

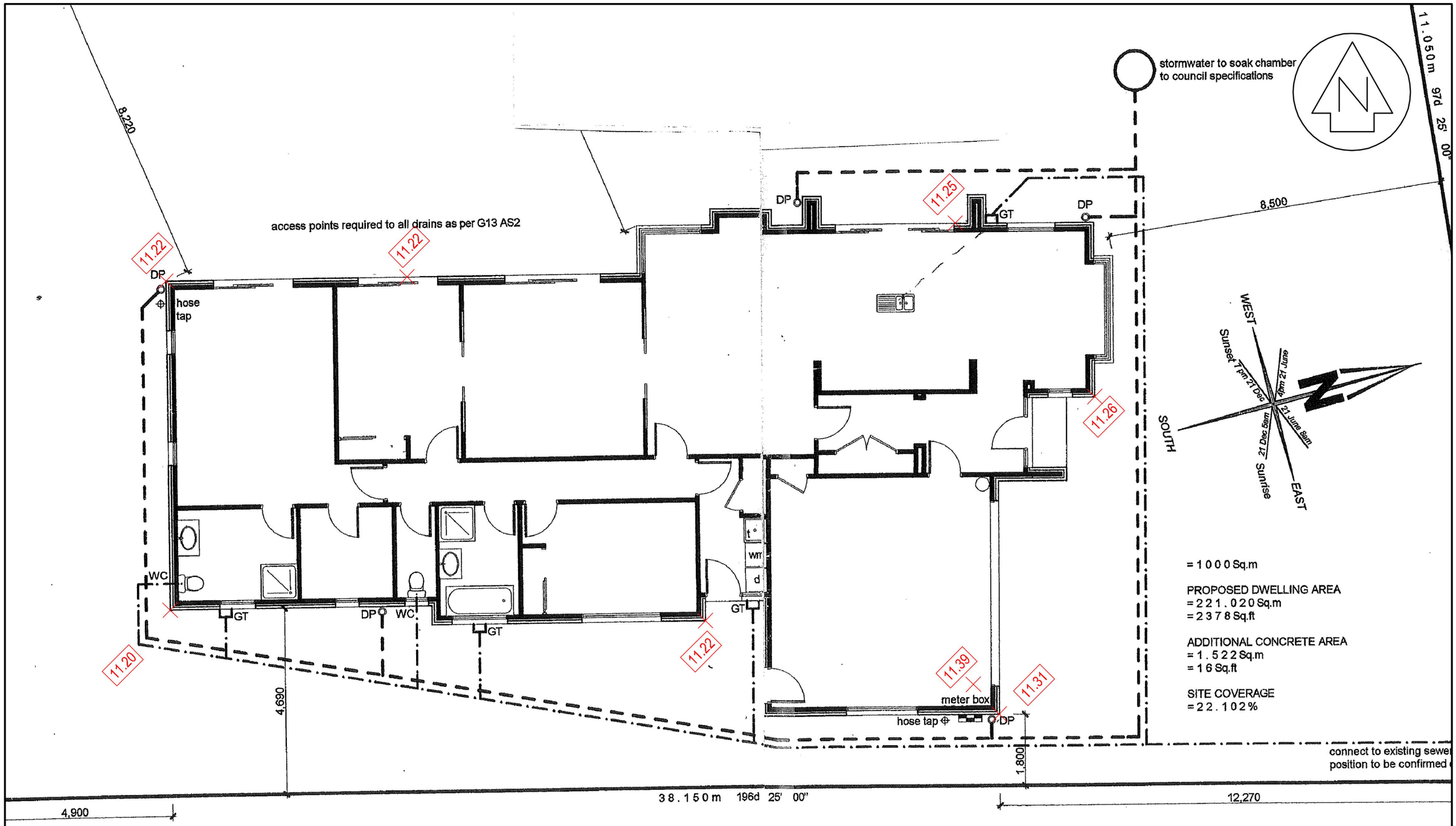
Landbase
- Easement

CHRISTCHURCH CITY COUNCIL – DRAINAGE PICK UP

CHRISTCHURCH
THE GARDEN CITY
The city that shines

ADDRESS: 16 HEMINGWAY PL	OWNER:	RECEIVED:	
LEGAL DESCRIPTION:	DRAINLAYER: CORNERSTONE	BLOCK PLAN:	CONNECTION NUMBER
PROJECT No.: 10041003	PLUMBER:	PLOTTED: / /	
DATE: 15.7.1.	FIELD OFFICER: STUBBS	EYE BOOK:	





Peter Ray Homes

NOTE

1. All work shall comply with NZS 3604:1999
2. All windows and doors to comply with NZS 4211:1985
3. Glazing to comply with NZS 4223:1985 & Pt 3 1993
4. Contractor must verify all dimensions on site prior to

Rev No.	Date	Amendment
A	03.11.03	remove gas fire, move gas bottles, change bay window

Drawn: A. Fahey
Date: 28.10.03
Scale:

Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title

Sheet No. 4

SURVUS CONSULTANTS
surveying engineering property development
www.survus.co.nz
4 Meadow Street, PO Box 5558, Papanui, Christchurch
P 03 352 5599 AMBERLEY 03 314 9200
F 03 352 5527 ASHBURTON 03 307 7021
TOLL FREE 0508 787 887 DARFIELD 03 318 8151

Foundation Levels

16 Hemingway Place, Spencerville — Russell Wenn & Julie Collier

Rev	Date	By	Amendments
A	03/08/12	SRS	Levels

Note:
Levels are in terms of CCC Datum
BM EHDB 11.31m RL

DATE	SHEET	REV
August 2012	1 of 1	A
SCALES: Proportional	JOB REF: 10791	

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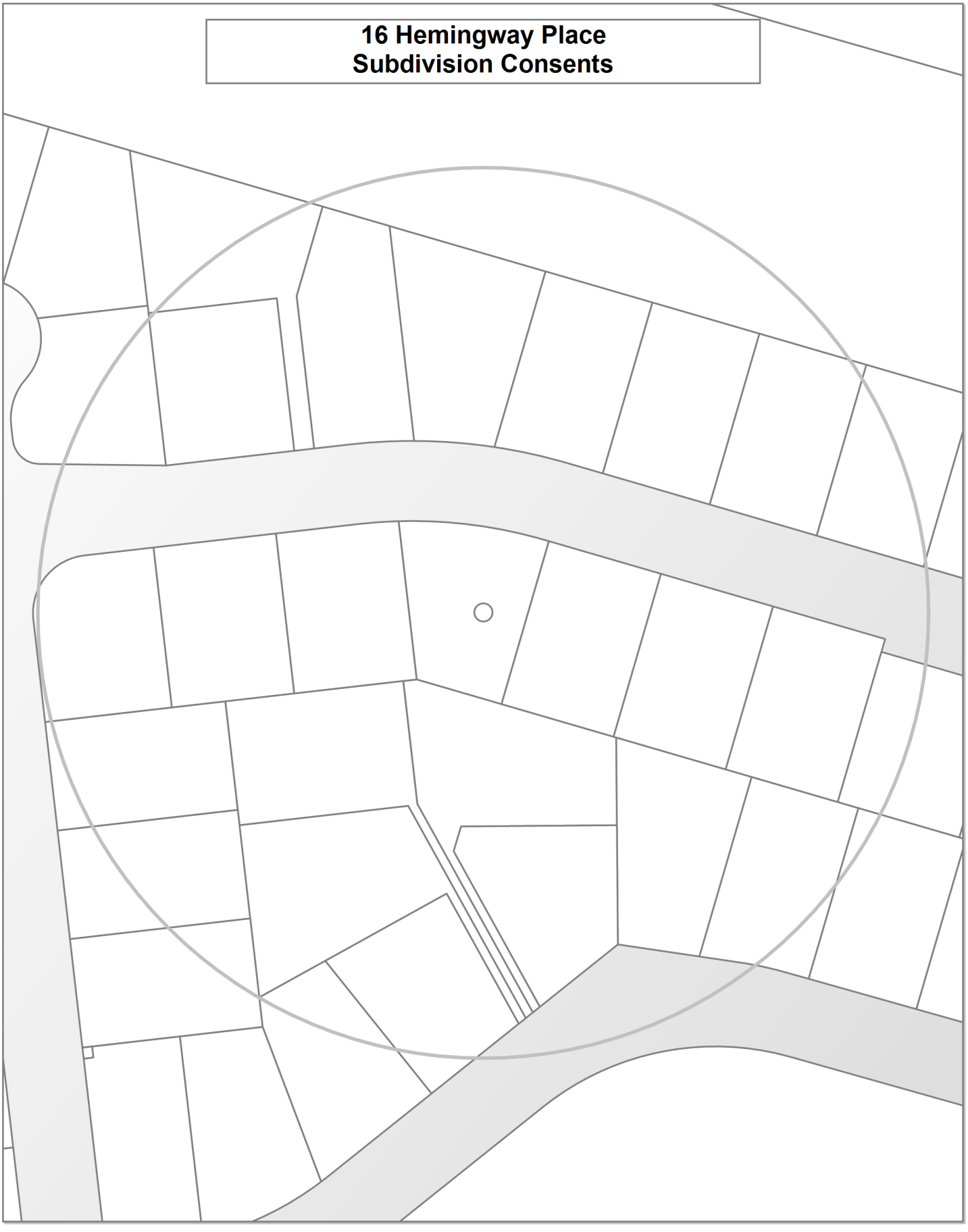
Spatial Query Report

Christchurch City Council

16 Hemingway Place
Land Use Consents



Christchurch City Council



Spatial Query Report

Christchurch City Council

Land Use Resource Consents within 100 metres of 16 Hemingway Place

Note:This list does not include subdivision Consents and Certificates of Compliance issued under the Resource Management Act.

10 Hemingway Place

RMA/2008/1882

Alteration and extension to an existing dwelling - Historical Reference RMA92012765

Processing complete

Applied 09/09/2008

Decision issued 12/11/2008

Granted 12/11/2008

12 Hemingway Place

RMA/2003/3216

Erect a dwelling and garage that exceeds site coverage. - Historical Reference RMA20015566

Processing complete

Applied 10/12/2003

Decision issued 18/12/2003

Granted 18/12/2003

14 Hemingway Place

RMA/2018/2707

Swimming Pool

Processing complete

Applied 07/11/2018

Decision issued 22/11/2018

Granted 22/11/2018

17 Seabrooke Drive

RMA/2014/2627

Dwelling with attached garage - Historical Reference RMA92027317

Processing complete

Applied 08/10/2014

Decision issued 09/10/2014

Granted 09/10/2014

2 Calypso Place

RMA/2003/2676

To erect a new dwelling and garage that exceeds site coverage of 25%. - Historical Reference RMA20015009

Processing complete

Applied 10/10/2003

Decision issued 24/10/2003

Granted 24/10/2003

21 Seabrooke Drive

RMA/2002/3185

Dwelling that exceeds 20m continuous building length - Historical Reference RMA20012239

Withdrawn

Applied 11/12/2002

23 Seabrooke Drive

RMA/2003/1935

Erect a new dwelling and garage that exceeds site coverage of 25%. - Historical Reference RMA20014242

Processing complete

Applied 30/07/2003

Decision issued 12/08/2003

Granted 11/08/2003

24 Hemingway Place

RMA/2016/394

Dwelling with Attached Garage - Historical Reference RMA92032466

Withdrawn

Applied 22/02/2016

25 Hemingway Place

RMA/2004/2386

New house and garage that exceeds site coverage. - Historical Reference RMA20018030

Processing complete

Applied 20/09/2004

Decision issued 12/10/2004

Granted 12/10/2004

29 Hemingway Place

RMA/2014/2745

Construct a new dwelling within a Flood Management Area - Historical Reference RMA92027439

Processing complete

Applied 16/10/2014

Decision issued 29/10/2014

Granted 29/10/2014

35 Hemingway Place

RMA/2012/1810

Erect a new dwelling with detached garage - Historical Reference RMA92021245

Processing complete

Applied 12/11/2012

Decision issued 26/11/2012

Granted 26/11/2012

396 Lower Styx Road

RMA/1984/495

Specified departure to establish a rabbit Farm and ancillary activities including the erection of a building and subsequent use of the land for this purpose. 1 objection. - Historical Reference RES9210036

Processing complete

Applied 20/08/1984

Decision issued 07/11/1984

Granted 07/11/1984

Outcome not recorded 07/11/1984

RMA/2005/2765

relocated building - Historical Reference RMA20021669

Processing complete

Applied 06/12/2005

Decision issued 24/05/2006

Granted 24/05/2006

4 Hemingway Place

RMA/2004/2498

Application to erect a dwelling with attached garage - Historical Reference RMA20018144

Processing complete

Applied 29/09/2004

Decision issued 30/09/2004

Granted 30/09/2004

6 Hemingway Place

RMA/2004/1765

Dwelling with site coverage issues also refer to RMA20016495 - Historical Reference RMA20017386

Processing complete

Applied 08/07/2004

Decision issued 23/07/2004

Granted 23/07/2004

RMA/2004/905

New residential unit which exceeds site coverage and in trudes the recession plane and an internal boundary set back. - Historical Reference RMA20016495

Processing complete

Applied 01/04/2004

Decision issued 08/04/2004

Granted 08/04/2004

Data Quality Statement

Land Use Consents

All resource consents are shown for sites that have been labelled with an address. For sites that have been labelled with a cross (+) no resource consents have been found. Sites that have no label have not been checked for resource consents. This will be particularly noticeable on the margins of the search radius. If there are such sites and you would like them included in the check, please ask for the LIM spatial query to be rerun accordingly. This will be done free of charge although there may be a short delay. Resource consents which are on land occupied by roads, railways or rivers are not, and currently cannot be displayed, either on the map or in the list. Resource consents that relate to land that has since been subdivided, will be shown in the list, but not on the map. They will be under the address of the land as it was at the time the resource consent was applied for. Resource consents that are listed as Non-notified and are current, may in fact be notified resource consents that have not yet been through the notification process. If in doubt. Please phone (03)941 8999.

The term “resource consents” in this context means land use consents. Subdivision consents and certificates of compliance are excluded.

Subdivision Consents

All subdivision consents are shown for the sites that have been labelled with consent details. For Sites that have been labelled with a cross (+) no records have been found. Sites that have no label have not been checked for subdivision consents. This will be particularly noticeable on the margins of the search radius. If there are such sites and you would like them included in the check, please ask for the LIM spatial query to be rerun accordingly. This will be done free of charge although there may be a short delay.

The term “subdivision consents” in this context means a resource consent application to subdivide land. Non subdivision land use resource consents and certificates of compliance are excluded.

This report will only record those subdivision applications which have not been completed i.e once a subdivision has been given effect to and the new lots/properties have been established the application which created those lots will not be shown

All subdivision consent information is contained on the map and no separate list is supplied

20 March 2017

L P Brewer and L R Brewer
c/-L P Brewer
16 Hemingway Place
Christchurch 8083

Dear Liam

Building Act Exemption: BCN/2017/1885
16 Hemingway Place Spencerville
Relevel existing floors

Application accepted

Thank you for submitting the above application for a Building Act Exemption.

Following a pre-acceptance technical check, your application has been accepted and forwarded for allocation to processing officer to review. Please note that during processing, you may be asked to provide further information so we can assess you application.

Please find attached an invoice for processing costs. This can be paid by cheque or internet banking. Payment details are included on the invoice.

This invoice must be paid before any documentation relating to your application is released.

You can use internet banking to pay building consent fees. Please note that all payments will be credited to our account on the next business day. Any payment made without your details below may take some time to be lodged against the correct account. Our details are:

Bank	Bank of New Zealand
Account name	Christchurch City Council
Account number	02 0800 0044765 03

The information that you need to enter that will help us identify your payment is:

Particulars	91427
Code	10-76430
Reference	1191576

Once you have made payment, please reply to this email, with proof of payment, to notify us. If you are paying more than one invoice, please send remittance advice to revenue@ccc.govt.nz.

Where an invoiced amount has not been paid by the stated due date, the Council may commence debt recovery action. The Council reserves the right to charge interest, payable from the date the debt became due, and recover costs incurred in pursuing recovery of the debt.

Yours sincerely

Civic Offices, 53 Hereford Street, Christchurch 8011
PO Box 73013, Christchurch 8154
Phone: (03) 941-8999, Fax: (03) 941-8792
www.ccc.govt.nz

20 March 2017

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c/-L P Brewer
16 Hemingway Place
Christchurch 8083

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www.ccc.govt.nz

Earthquake Repairs

16 Hemingway Place, Spencerville
Christchurch 8083
Liam Brewer

Christchurch City Council

Page 1 of 62

BCN/2017/1885
Exemption from building consent
22/03/2017

Notwithstanding any drawings or specifications accepted herein, all building work must comply with the New Zealand Building Code.

Structural Sheet Index		
Sheet ID	**Sheet Name**	**Revi ID**
S00	Cover Sheet	00
S01	Site Plan/Sediment Control Plan	00
S02	Ground Floor Pre-Level Floor Survey	00
S03	Ground Floor Jack Pad Approximate Locations	00
S04	Smoke Detector Location	00
S05	Details	00
S06	General Notes	00

FRONTIER ENGINEERS
CIVIL, STRUCTURAL & REMEDIAL

PO Box 79183 Avonhead
Christchurch 8446

Unit 1, 35 Sheffield Crescent, Burnside 8053

Phone: 03 359 9192
Free Call: 0508 FRONTIER (0508 376 684)

Email: admin@frontierengineers.co.nz

Project Number
170057

Sheet
S00

Rev ID
00

Drawing Title
Cover Sheet

Earthquake Repairs

16 Hemingway Place, Spencerville
Christchurch 8083
Liam Brewer

Christchurch City Council

Page 1 of 62

BCN/2017/1885
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Project Number
170057

Sheet
S00

Rev ID
00

Drawing Title
Cover Sheet

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

Environmental Services Unit

FINAL CODE COMPLIANCE CERTIFICATE

Issued by
BUILDING CONTROL INSPECTION SERVICES
CHRISTCHURCH CITY COUNCIL

BUILDING CONSENT No.
10041003

Project Location

Street Address: 16 HEMINGWAY PLACE, SPENCERVILLE, CHRISTCHURC
Legal description: LOT 35 DP 319911

Project Particulars

THIS CERTIFICATION IS FOR:

New Construction

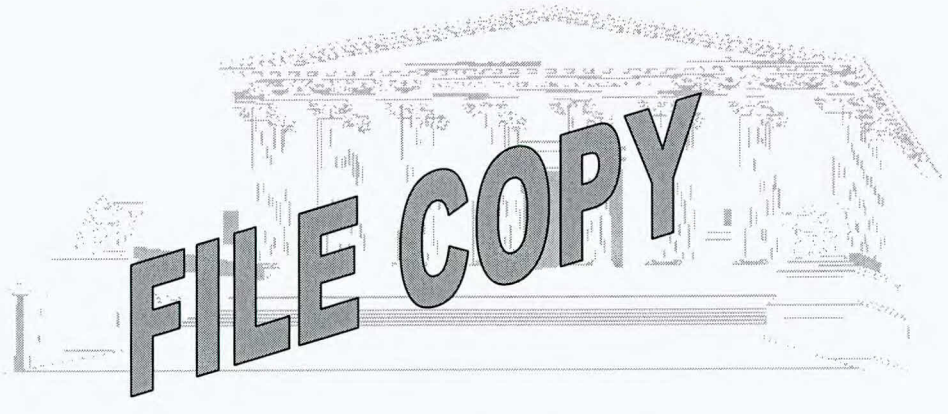
THE INTENDED USE(S) FOR THIS BUILDING WORK IS FOR:

Dwelling

WORK DETAILS:

DWELLING WITH ATTACHED GARAGE

The intended life of this building work is Indefinite, but not less than 50 years.



This certificate is issued under Section 43 clause (3) of the Building Act 1991 and is a Final Code Compliance issued in respect of all work under the above Building Consent.

Signed for and on behalf of the Christchurch City Council:

Date of Issue: 04/08/2004
Name:
Position: Building Inspection Co-ordinator

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFU

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL

CIVIC BUILDING TEAM

24 November 2003

FILE COPY

In-Spect
35 Maces Road
CHRISTCHURCH

Dear Sir/Madam

PROJECT INFORMATION MEMORANDUM
PROJECT NUMBER - 10040372
SITE ADDRESS - 16 HEMMINGWAY PLACE

Please find enclosed your Project Information Memorandum in respect of the proposed work at the above address.

You may now proceed with an application for a Building Consent in respect of this proposal. Please note that the Project Information Memorandum will lapse and be of no effect if a Building Consent for the building work concerned has not been issued within 24 calendar months of its date of issue.

Please note that the Project Information Memorandum may reveal matters affecting compliance with the Building Act 1991, or other authorisations required.

Yours faithfully

AGapper

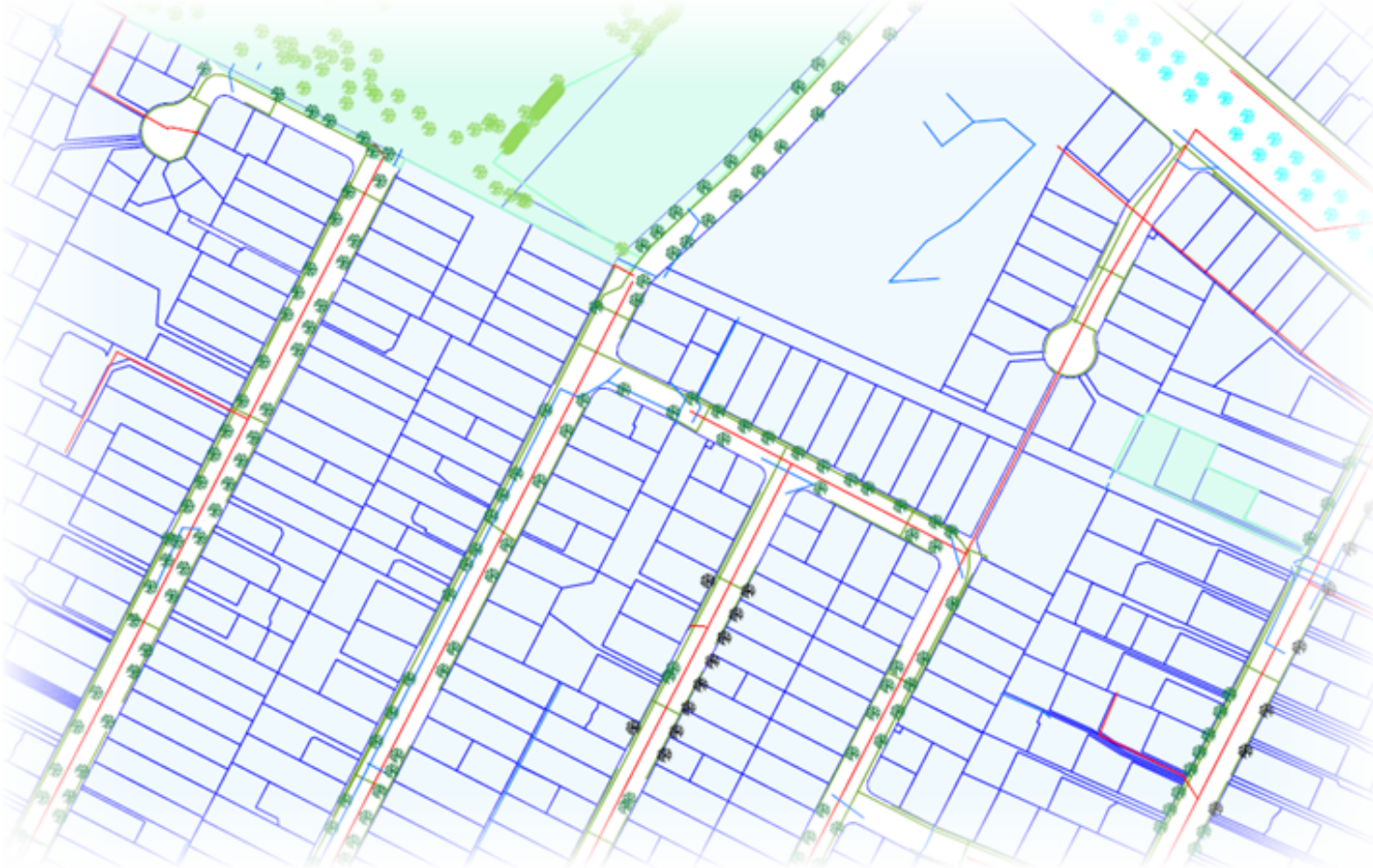
Amiria Gapper
Technical Clerk
for
TEAM LEADER CIVIC BUILDING TEAM

encl

John Clark • Environmental Services Unit • Civic Offices • 163-173 Tuam Street • P O Box 237 • Christchurch • New Zealand •
Telephone 941- 6474 • Fax 941-8920 •**http://www.ccc.govt.nz/unit/esu**

Christchurch City Council

Land Information Memorandum



Property address:
16 Hemingway Place

LIM number: 70230364
Page 1

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

Building Code Clause(s)…B1 ……

PRODUCER STATEMENT – PS1 – DESIGN

(Guidance notes on the use of this form are printed on page 2)

ISSUED BY: Frontier Engineers Ltd.....
(Design Firm)

TO: Liam Brewer
(Owner/Developer)

TO BE SUPPLIED TO: Christchurch City Council……
(Building Consent Authority)

IN RESPECT OF: Re-level of existing dwelling only.
(Description of Building Work)

AT: 16 Hemingway Place, Spencerville, Christchurch 8083
(Address)

…… **LOT** 35…… **DP** 319911 **SO** …….

We have been engaged by the owner/developer referred to above to provide …Structural Design of specific building elements and Supervision……..…. services in respect of the requirements of
(Extent of Engagement)
Clause(s) B1/VM1 ..of the Building Code for
All ☐ or Part only ☒ (as specified in the attachment to this statement), of the proposed building work.

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

☒ Compliance Documents issued by the Ministry of Business, Innovation & Employment…B1/VM1 … …….or
(verification method / acceptable solution)

☐ Alternative solution as per the attached schedule … …

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

…Earthquake Repairs, 16 Hemingway Place, Spencerville, Christchurch 8083 and numbered 170057 S00-S06……;
together with the specification, and other documents set out in the schedule attached to this statement.
On behalf of the Design Firm, and subject to:
(i) Site verification of the following design assumptions ground as per Kirk Roberts Consulting Engineers report dated 4 June 2012…
(ii) All proprietary products meeting their performance specification requirements;

I **believe on reasonable grounds** that a) the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached schedule, will comply with the relevant provisions of the Building Code and that b), the persons who have undertaken the design have the necessary competency to do so. I also recommend the following level of construction monitoring/observation:
☐CM1 ☐CM2 ☐CM3 ☐CM4 ☐CM5 (Engineering Categories) or ☒ as per agreement with owner/developer (Architectural)

I, Alan Pearson … am: ☒CPEng 1024104 #
(Name of Design Professional)
☐Reg Arch …… .#

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

SIGNED BY …Alan Pearson…… ON BEHALF OF Frontier Engineers
(Design Firm)

Date …16/03/2017… (signature)……

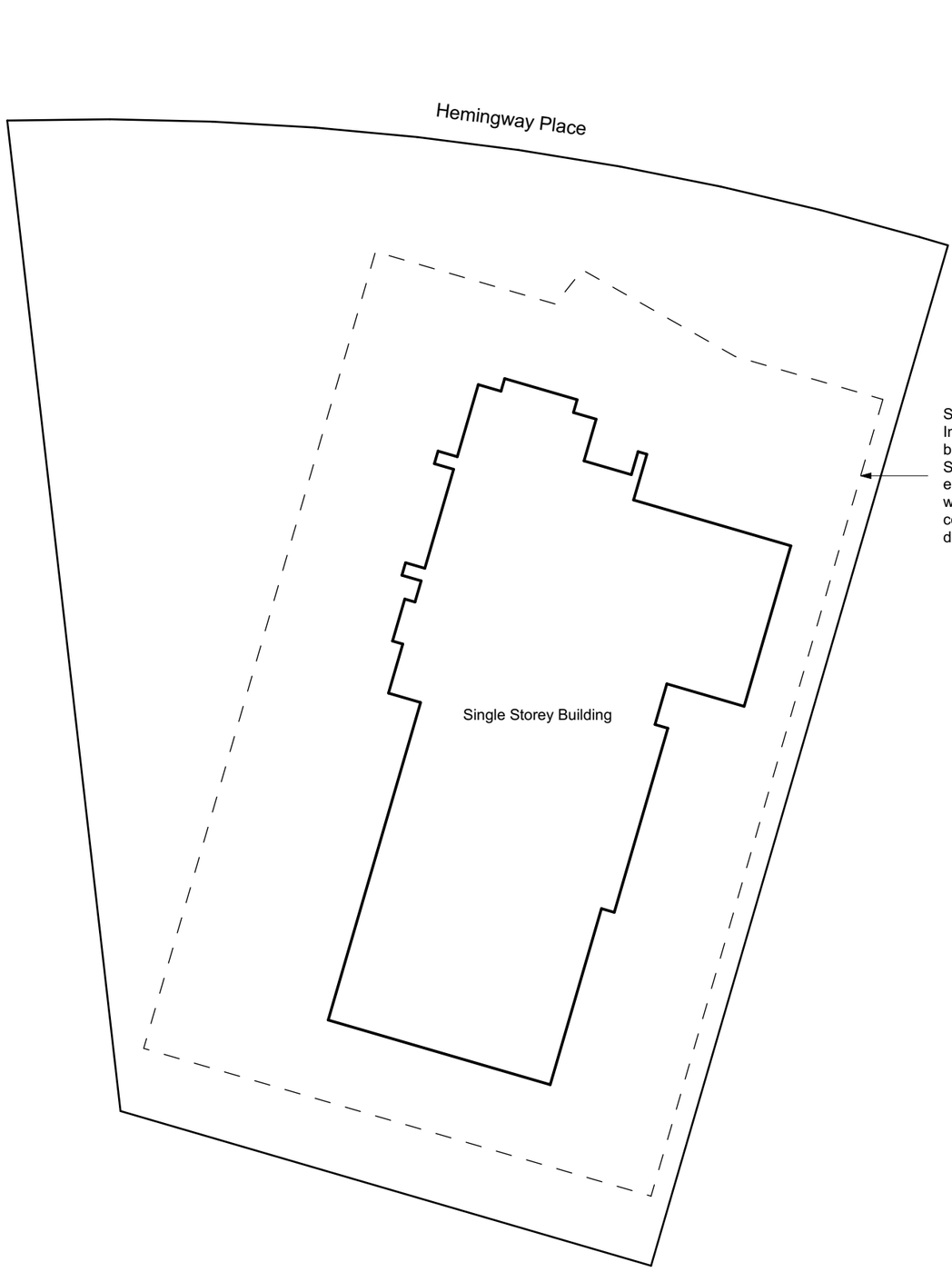
Note: This statement shall only be relied upon by the Building Consent Authority named above. Liability under this statement accrues to the Design Firm only. The total maximum amount of damages payable arising from this statement and all other statements provided to the Building Consent Authority in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

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

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

SITE DESCRIPTION:

Legal Description:	Lot 35 DP 319911
Address:	16 Hemingway Place, Spencerville
Earthquake Zone:	Zone 2
Exposure Zone:	Zone C
Climate Zone:	Zone 3
Wind Region:	A
Lee Zone:	
Rainfall Intensity:	30 - 40
Wind Zone:	High
Land status:	Green Zone, Technical Category 3, blue
Geotechnical Report:	Kirk Roberts Consulting Engineers Ltd.
Project Number:	121195
Date:	04/06/2012



Site Plan/Sediment Control Plan

SCALE 1:200

Note:
If any asbestos is discovered during the proposed building work, the following steps are required to be taken. Prior to removal, please contact the Department of Labour, telephone 0800 209020 for information on appropriate methods of handling asbestos.

FRONTIER ENGINEERS
CIVIL, STRUCTURAL & REMEDIAL

PO Box 79183 Avonhead
Christchurch 8446

Unit 1, 35 Sheffield Crescent, Burnside 8053

Phone: 03 359 9192
Free Call: 0508 FRONTIER (0508 376 684)

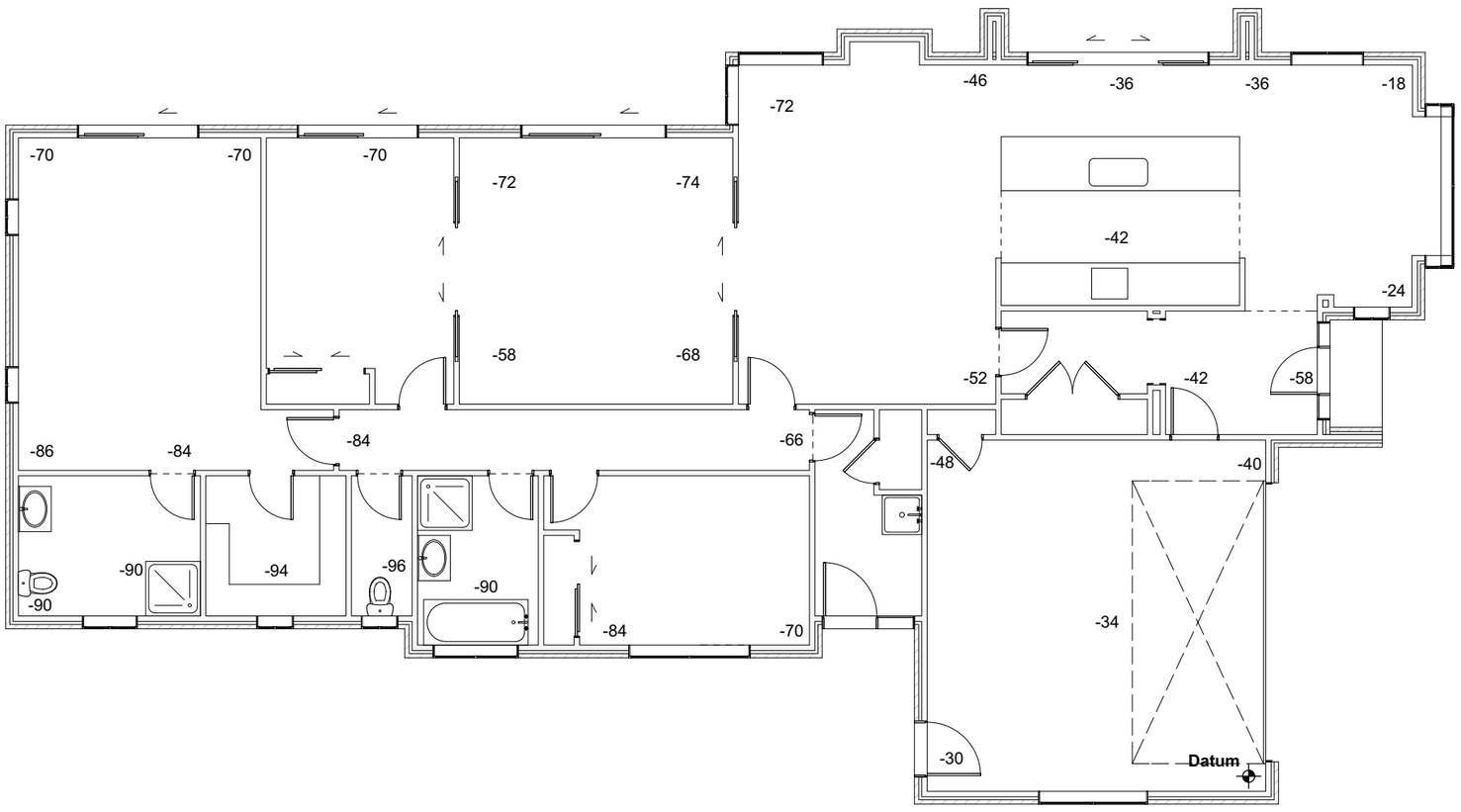
Email: admin@frontierengineers.co.nz

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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3	1:200
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved	
Date	

Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Site Plan/Sediment Control Plan
Project Number	170057
Sheet	S01
Rev ID	00
Project Status	Consent Issue



Ground Floor Pre-Level Survey

SCALE 1:100

Legend:

±X	Indicates floor level above or below datum
- - - - - - -	Indicates change in floor type

Notes:

1. Following relevelling the floor at each unit shall have
   i. maximum differential height of 50mm overall
   ii. 10mm within any room.
   iii. have a maximum slope of 1:200 (0.5%) between any to points more than 2m apart.
2. All levels shown on this plan are relative to the indicated datum.
3. All floor levels locations and slopes approximate

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Scale at A3	1:100
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved	
Date	

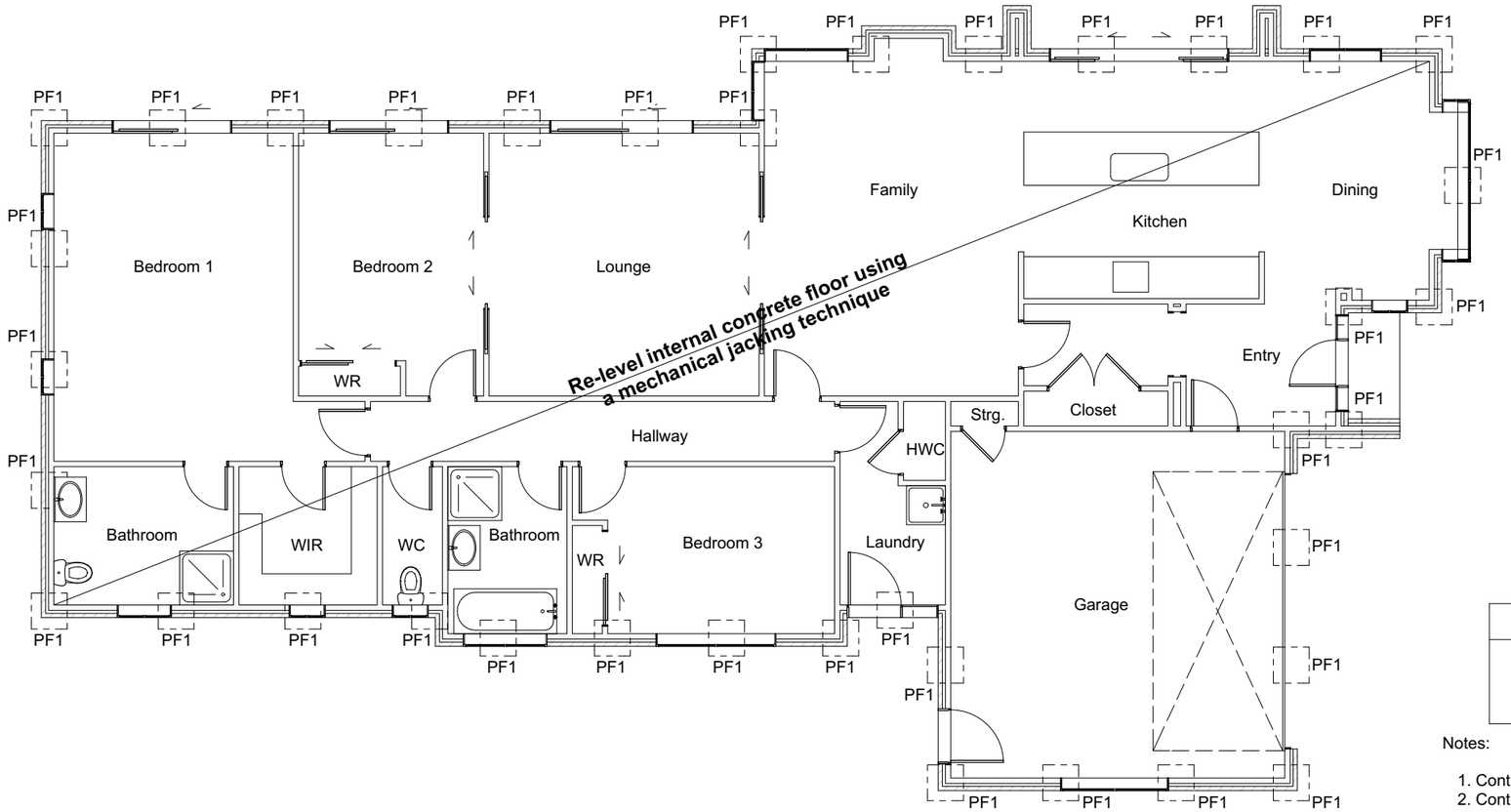
Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Project Number: 170057

Sheet: S02
Rev ID: 00

Drawing Title: Ground Floor Pre-Level Floor Survey

Project Status: Consent Issue



Jack Pad Approximate Locations

SCALE 1:100

Schedule	
PF1	600x600sq. concrete pad footing at 2.0m crs*

Notes:

1. Contractor is to confirm all dimensions on site before commencing work
2. Contractor is to confirm floor levels at each pile or bearer support location to be packed.
3. Pad target depth is 0.5m min. below ground level.
4. Disconnect and reconnect services as required.
5. Ensure guttering falls to downpipes after relevelling.
6. Ensure all doors open and close properly.
7. All work to be carried out in accordance with NZS3604-2011.
8. Contractor to make all walls plumb.
9. Cracks in all concrete structures are to be repaired using proprietary product crack bond 'LR321G' supplied by adhesives technology corporation or approved equivalent.
   Cracks to be repaired up to a maximum of 5mm and any cracks of more than 5mm are to be repaired by using Helibar or any approved equivalent.
   Product to be installed strictly in accordance with manufacturers instructions

* Please note, positions of concrete pads are an approximate location setting

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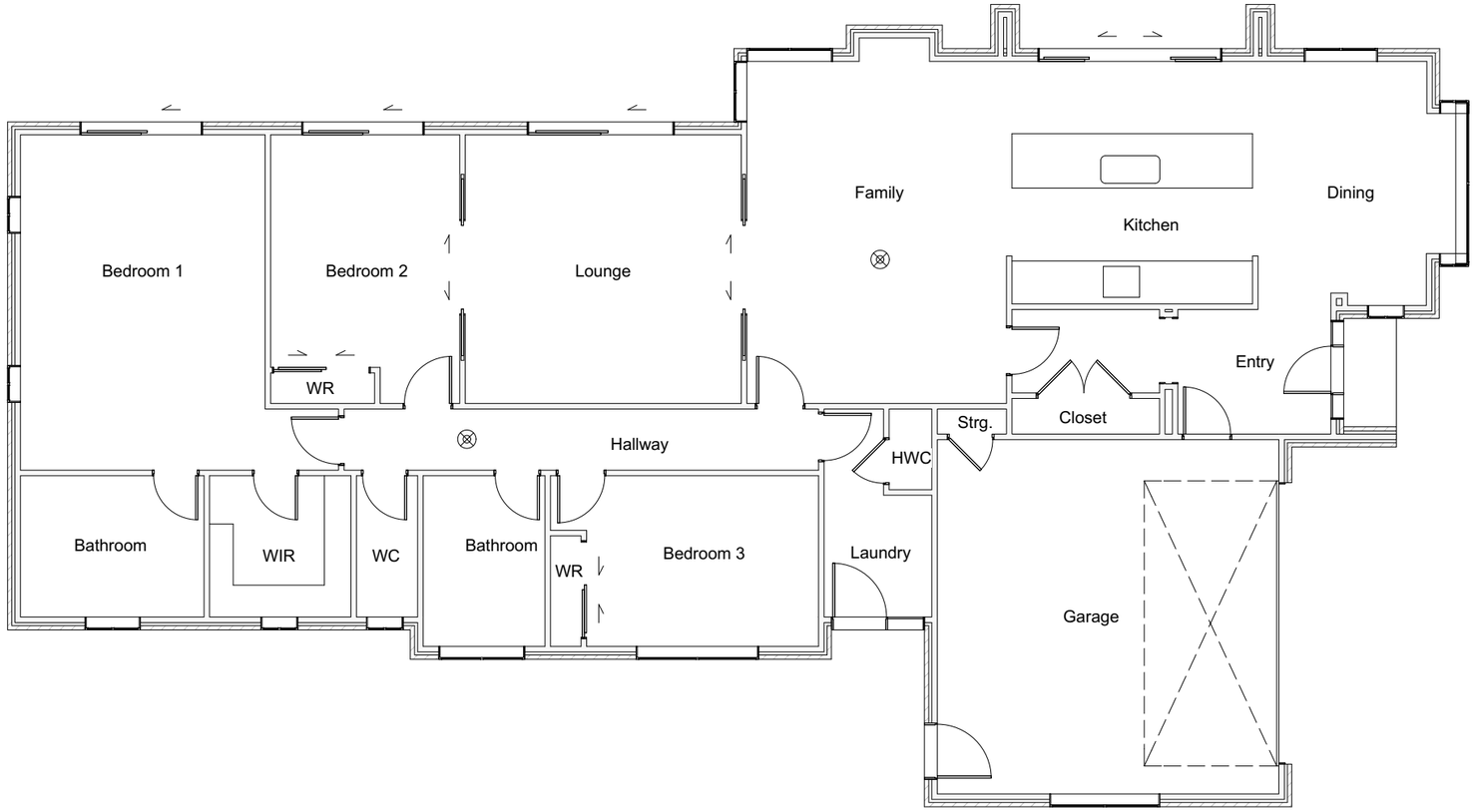
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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3	1:100
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved Date	

Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Ground Floor Jack Pad Approximate Locations
Project Number	170057
Sheet	S03
Rev ID	00
Project Status	Consent Issue



Smoke Detector Location

SCALE 1:100

Schedule	
⊗	Smoke Detector

Note:
All smoke detectors will be checked for complience with F7/AS1, and if non-compliant will be moved and/or installed to meet compliance as per drawing.

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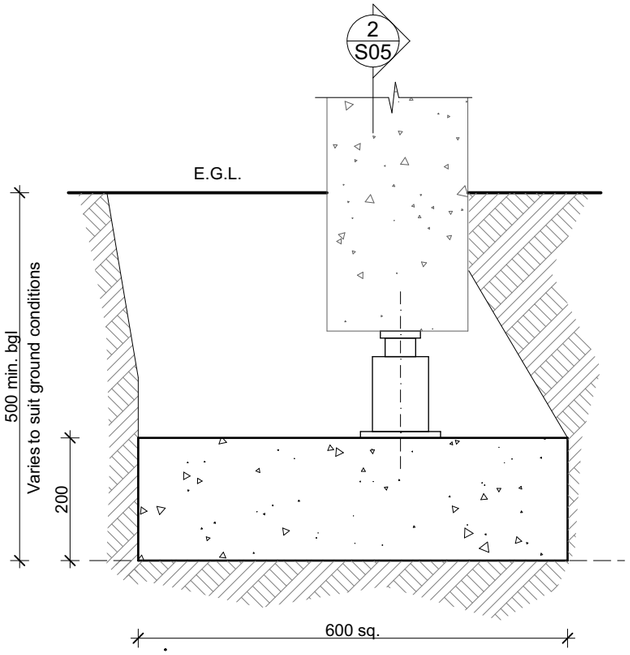
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Rev ID	Description	Date
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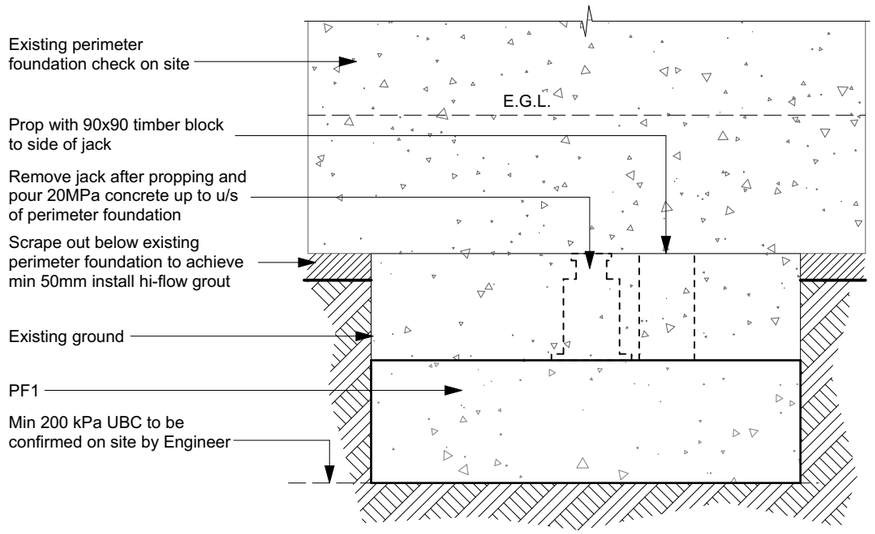
Scale at A3	1:100
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved	
Date	

Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Smoke Detector Location
Project Number	170057
Sheet	S04
Rev ID	00
Project Status	Consent Issue



1 - Re-levelling Pad Detail

SCALE 1:10



2 - Section

SCALE 1:10

Schedule	
PF1	600x600sq. concrete pad footing at 2.0m crs.

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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3: 1:10
Date: 16/03/2017
Design by: DC
Drawn by: DC
Approved
Date

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Project Number: 170057
Sheet: S05
Rev ID: 00
Drawing Title: Details
Project Status: Consent Issue

GENERAL

G1. Read these drawings in conjunction with all architectural and other working drawings, specifications and with such other written instructions as may be issued during the course of the contract.
G2. Provide all workmanship and materials in accordance with the requirements of the current editions of the NZ Building Act, the NZ Building Code, the New Zealand Standards and the by-laws and ordinances of the relevant building consent authority.
G3. Comply as the builder, with requirements of the workplace health & safety act.
G4. Refer any conflict between these notes, the specification, the drawings or any other relevant documents to the engineer for decision prior to proceeding with the work.
G5. Do not obtain dimensions by scaling the drawings. For setting out dimensions and levels refer to the architectural drawings.
G6. The builder is responsible for the provision of all shoring to maintain the stability and integrity of excavations and adjacent structures. Provide details, for review by the Engineer, of any necessary temporary works, including shoring, prior to commencing construction.
G7. During construction it is the builder's responsibility to maintain the structure in a stable condition and to ensure no part is overstressed.
G8. The design and drawings are copyright and may not be used or reproduced in whole or in part without the written permission of the Engineer.
G9. Fire-resistance levels (FRL's) required for the various structural elements must be confirmed by the Building Surveyor or Architect.

LOADINGS

L1. Superimposed floor loads are generally in accordance with AS/NZS 1170.1 and specifically:

	1.5 kPa	Generally
	2.0 kPa	Balconies
	2.5kPa	Stairs

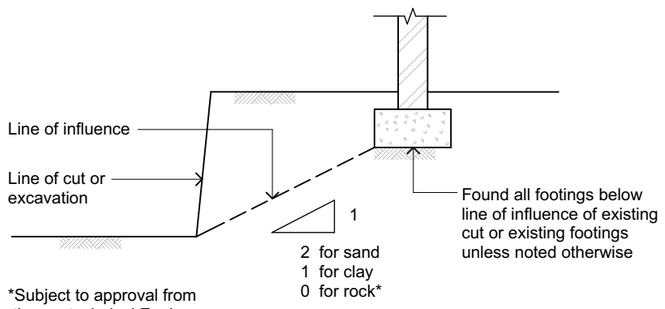
L2. Wind loads are in accordance with AS/NZS1170.2 for:

Terrain category:	2.5	Region: A7
Topographical multiplier of:	1.0	
Shielding multiplier of	1.0	

L2.2 Snow loads are in accordance with AS/NZS 1170.3 0.9kPa
L2.3 Earthquake loads are in accordance with NZS 1170.5

FOUNDATIONS

F1. The minimum safe ultimate bearing capacity of foundation material shall be:
Slabs & Footings: 200 kPa in natural substrate unless noted otherwise (U.N.O.)
F2. Foundation material shall be approved by the engineer prior to placing concrete.
F3. The bases of footing excavations shall be finished clean and horizontal and be embedded 300 into naturally occurring material.
F4. Founding levels where shown are for tender purposes only.
F5. Any proposed footing excavation near boundaries, other structures or services shall be approved by the Engineer.
F6. Subgrade shall be approved material compacted to 98% standard dry density determined by testing to the relevant part of NZS 4402:1986 U.N.O.
F7. Locate all new footings relative to line of cut/excavation including excavations as shown below:



*Subject to approval from the geotechnical Engineer

REINFORCED CONCRETE

C1. Provide all workmanship and materials in accordance with NZS 3101.1:2006, NZS 3109:1997 and NZS 3605:2011, their referenced documents, the drawings and the specification.
C2. Provide concrete grade and minimum clear concrete cover to reinforcement in accordance with NZS 3101:2006 & NZS 3604:2011 U.N.O.

CONCRETE GRADE	ELEMENT LOCATION U.N.O	MINIMUM CONCRETE COVER (mm)
20 MPa	Pad Footings Steps & Landings Paths & Driveways	25 against ground with DPM 75 against ground with no DPM 30 interior protected areas 50 exposed areas
25 MPa	Slabs & Foundations Suspended Stairs	25 against ground with DPM 75 against ground with no DPM 25 interior protected areas 50 exposed areas
30 MPa	Where Noted	20 against ground with DPM 45 against ground with no DPM 20 interior protected areas 50 exposed areas

C3. Support all reinforcement at 1 metre maximum centres both ways on mild steel plastic tipped chairs, plastic chairs or concrete chairs. Use only plastic chairs for externally exposed soffits.
C4. Provide all concrete with 80mm maximum slump and 20mm maximum aggregate unless approved by the Engineer.
C5. Sizes of concrete elements are net, exclusive of applied finishes. Beam depths are written first and include slab thickness.
C6. Properly form construction joints and use only where shown or approved by the Engineer.
C7. Reinforcement is represented diagrammatically and is not necessarily shown in true projection.
C8. Weld or splice reinforcement only in positions approved by the Engineer.
C9. Provide the minimum clear spacing between conduits, cables, pipes and bars as required by NZS 3109 but not less than three bar diameters. Do not place conduits in slabs above top reinforcement or below bottom reinforcement.
C10.

D	Denotes hot rolled deformed bars grade 300E.
HD, H	Denotes hot rolled deformed bars grade 500E.
R	Denotes hot rolled plain round bars grade 300E.
SE,RE	Denotes hard drawn wire fabric grade 500E.

C11. Notify the Engineer a minimum of 24 hours before reinforcement has been completed.
C12. Allow 2 hours after the completion of the reinforcement for the Engineer's inspection.
C13. Do not order concrete until reinforcement has been approved by the Engineer.
C14. Cure concrete in accordance with NZS 3109. Commence curing within two hours of finishing operations and continue for a minimum of seven days by using an approved proprietary compound or by keeping continuously wet.
C15. Tie all unsupported bars in transverse direction to D12-300, lapped 500 U.N.O.
C16. Lap fabric in accordance with clause 8.7.6 of NZS 3109.
C17. Provide hooks, laps and bends in accordance with NZS 3101 & NZS 3109 U.N.O.
C18. Provide chamfers, drip grooves etc. in accordance with the Architect's details.
C19. Design, construct and strip formwork in accordance with NZS 3109.
C20. Pre camber formwork upwards by 1/500 of the clear span U.N.O. where supported beams and slabs span greater than 5m.
C21. The concrete elements detailed have a F.R.L. of 60/60/60 U.N.O.

TIMBER

T1. Ensure all workmanship and materials are in accordance with NZS 3603:1993 and NZS 3604:2011, their referenced documents and the specification.
T2. Provide all interior timber as SG6 (dry) U.N.O.
T3. Provide all external timber as SG8 (dry) U.N.O.
T4. Where the use of treated timber for durability is noted on the structural drawings, ensure it complies with the parameters: Exposure Zone C in accordance with NZS 3604.
T5. Install proprietary timber connectors in accordance with the manufacturers written instructions.
T6. Retighten bolted connections in unseasoned timber prior to the fixing of cladding.
T7. Timber elements or timber framing have not been designed unless noted.
T8. All trusses to be pre-cambered upward 1/240 span.

STEELWORK

S1. Ensure materials, fabrication and erection are in accordance with NZS 3404, it's referenced documents and the specification.
S2. Shop drawings are to be approved by the Engineer prior to fabrication.
S3. Provide all welds as 6mm continuous fillet from E41xx electrodes, all bolts as M16-4.6/S and all cleats and gussets as 10mm plate U.N.O.
S4. For bolts, the following notation is used:
4/M16-4.6/s denotes 4 x M16 commercial grade bolts snug tight.
6/M20-8.8/tf denotes 6 x M20 high strength structural bolts fully tensioned in a no slip joint.
8/M24-8.8/tb denotes 8 x M24 high strength structural bolts fully tensioned in a bearing joint.
S5. Leave mating surfaces of 'tf' connections unpainted and free of mill scale and rust.
S6. Tighten bolts in 'tf' and 'tb' connections using the part turn method or load indicating washers. Do not use calibrated torque wrenches. Use a hardened washer under the bolt head or nut, whichever is rotated. The re-use of fully tensioned bolts is prohibited.
S7. Provide all cleats and drill all holes necessary for fixing steel to steel or timber.
S8. Fabricate steel beams and trusses spanning greater than 5m with an upward pre camber of 1/500 span U.N.O.
S9. Prepare structural steelwork to class 2 and paint with zinc phosphate primer to a thickness of 70 micrometres U.N.O.
S10. Hot dip galvanise all exposed external steelwork and all steelwork built into an external masonry skin, in accordance with grade HDG600 to AS/NZS 2312.
S11. Within 100m from the non-surf coast or 1 km from the surf coast, hot dip galvanise above in accordance with grade HDG900 to AS/NZS 2312.
S12. Provide fire protection to all steelwork as required.
S13. Ensure all cold formed sections conform to AS/NZS 4600 and are roll-formed from steel strip, minimum yield stress 450 MPa, 300 g/m² minimum zinc coating mass U.N.O.

MASONRY

M1. Ensure all workmanship and materials are in accordance with NZS 4230, the drawings & project specifications.
M2. Where masonry supports concrete slabs or beams, lay the top course with frogs down and covered with 2 layers of approved slip joint material.
M3. Walls shown shaded on plan are load bearing. Separate non-load bearing walls under slabs from the slab by 15mm of approved compressible material. Where masonry abuts slab downturns, form a 15mm gap between brickwork and side of downturn.
M4. Do not erect masonry supported by concrete slabs or beams until all formwork and props under have been removed.
M5. Provide all bricks of ultimate compressive strength $f'uc$ = 20 MPa U.N.O.
M6. Provide all hollow concrete masonry of ultimate compressive strength $f'uc$ = 15 MPa U.N.O.
M7. Provide classification M3 masonry mortar U.N.O. Note that within 100m from non-surf coast, or 1km from surf coast, provide classification M4 masonry mortar.
M8. Cut no chases into loadbearing masonry without the approval of the Engineer.
M9. Provide movement control joints vertically for full height of wall as follows:
For general masonry, at 8m maximum centres & 4m maximum from corners.
For articulated masonry, at 6m maximum centres & 4m maximum from corners.
Provide 15mm minimum joints with an approved compressible filler, tied together every 4th course with a MET 3.3 masonry sliding tie or approved equivalent.
M10. Construct hollow walls to full height or maximum 3m before filling cores. Provide cleanout openings at the base of all cores to be filled.
M11. Core fill $f'uc$ = 20 MPa concrete with 10mm aggregate, 180 slump U.N.O.
M12. Construct hollow masonry retaining walls using "double U blocks".
M13. Unreinforced masonry walls have not been designed unless noted.

FRONTIER ENGINEERS
CIVIL, STRUCTURAL & REMEDIAL

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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3: 1:1
Date: 16/03/2017
Design by: DC
Drawn by: DC
Approved
Date

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Drawing Title: General Notes

Project Number: 170057
Sheet: S06
Rev ID: 00
Project Status: Consent Issue

Form 2A

Memorandum from licensed building practitioner: Certificate of design work

Section 45 and Section 30C, Building Act 2004

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

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

THE BUILDING

Street address: 16 Hemingway Place	
Suburb: Spencerville	
Town/City: Christchurch	Postcode: 8083

THE OWNER

Name(s):	
Mailing address:	
Suburb:	PO Box/Private Bag:
Town/City:	Postcode:
Phone number:	Email address:

BASIS FOR PROVIDING THIS MEMORANDUM

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

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

I, Alan Pearson carried out / ~~supervised~~ the following design work that is restricted building work

PRIMARY STRUCTURE: B1

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

PRIMARY STRUCTURE: B1

All RBW Design work relating to B1 (x)		( ) Carried out ( ) Supervised	
Foundations and subfloor framing (✓)	*Re-level of existing foundation only*	(x) Carried out (✓) Supervised	Refer drawing set from Frontier Engineers 170057
Walls (x)		( ) Carried out ( ) Supervised	
Roof (x)		( ) Carried out ( ) Supervised	
Columns and beams (x)		( ) Carried out ( ) Supervised	
Columns and beams (x)		( ) Carried out ( ) Supervised	
Other (x)		( ) Carried out ( ) Supervised	

EXTERNAL MOISTURE MANAGEMENT SYSTEMS: E2

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

		( ) Supervised	
Other (x)		( ) Carried out ( ) Supervised	

FIRE SAFETY SYSTEMS: C1 – C6

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

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

Note: continue on another page if necessary.

WAIVERS AND MODIFICATIONS

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

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

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

Note: continue on another page if necessary.

ISSUED BY

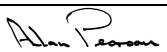
Name: Alan Pearson	LBP or Registration number: 1024104
The practitioner is a: (x) Design LBP (x) Registered architect (✓) Chartered professional engineer	
Design Entity or Company (optional): Frontier Engineers Ltd.	
Mailing address (if different from below): PO Box 79183, Avonhead, Christchurch, 8446	
Street address / Registered office: 1/35 Sheffield Crescent	
Suburb: Burnside	Town/City: Christchurch
PO Box/Private Bag:	Postcode: 8053
Phone number:	Mobile: 027 923 7888
After Hours:	Fax:
Email address: admin@frontierengineers.co.nz	Website: www.frontierengineers.co.nz

DECLARATION

I, Alan Pearson , CP Eng 1024104,

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

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

Signature: 

Date: 16 Mar 2017

CONSTRUCTION MONITORING SCHEDULE
JOB LOCATION: 16 Hemingway Place, Spencerville, Christchurch 8083
FILE NUMBER: 170057

Construction monitoring site visits relating to compliance with the building consent documentation and for verification of design assumptions are required as follows:

	TIME	NUMBER OF VISITS
1	Base of excavation pads	1-2
2	Post floor level survey	1-2

A site inspection report will be sent within 24hrs after inspection to the Client. A Producer Statement 4, Construction Review, could be issued once the above monitoring site visits have been completed. It is the Clients responsibility to notify the Engineer to enable the above site visits to be completed.

D. Chernushkin

Dmitry Chernushkin
Frontier Engineers Ltd.

FRONTIER ENGINEERS
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Design Feature Report

Re-level of Existing Residential Building

Location 16 Hemingway Place, Spencerville, Christchurch 8083
Client Liam Brewer

Job No: 170057
Issue Date: 16-Mar-17
Revision: 00

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Document Transmittal

Rev	Date	Revision Details/Status	Author	Approver
00	16 March 2017	Issue to Client	Dmitry Chernushkin	Alan Pearson

Author Signature:		**Approver Signature:**	
Name:	Dmitry Chernushkin	**Name:**	Alan Pearson
Title	Engineer	**Title**	Director CPEng 1024104

Introduction:

The existing Residential Building was damaged in the Canterbury Earthquake Sequence (CES) including differential settlement. The structural integrity of the dwelling is satisfactory; however, re-levelling is required to amend floor slopes that exceed slopes of 1:200.

Scope of work:

Frontier Engineers has been engaged by Liam Brewer to prepare technical documentation and certification for the re-level of the existing Residential only:

- Technical drawings of the proposed repairs
- Producer Statement 1
- Memorandum of Works
- Construction Monitoring Schedule
- Site inspection reports
- Producer Statement 4

Exclusions:

- All repair works other than re-levelling or direct repairs to the foundation system
- Strengthening of the Residential Building in anyway
- Future proofing of the Residential Building in anyway
- Any work above foundation level
- The works are assumed to be carried out under a Consent Exemption, and on this basis we refer to the Guidance for Building Work that Does Not Require a Building Consent (Building Act 2004) issued by the MBIE regarding section 42A of the Building Act,

  (a) the building work complies with the building code to the extent required by this Act:
  (b) after the building work is completed, the building:
  (i) if it complied with the building code immediately before the building work began, continues to comply with the building code; or
  (ii) if it did not comply with the building code immediately before the building work began, continues to comply at least to the same extent as it did then comply.

I.e. where specific parts of the building are modified our intention is to ensure that the building will function structurally to at least the same extent as it did prior to repairs, but may not necessarily be brought up to the current building code requirements.

Reference:

- Geotechnical report by Kirk Roberts Consulting Engineers Ltd Project No. 121195, dated 4 June 2012.
- NZS3101 Concrete Structures
- MBIE Guidance

Building Summary:

Foundation Type:	C – Concrete slab on grade
Structural Framing:	Timber framing
No. of Storeys:	1
Wall Cladding Weight:	Heavy – clay brick veneer
Roof Cladding Weight:	Light – pressed steel
Technical Category:	TC3
200kPa Bearing:	@ 0.5mbgl
Target Pad Depth:	0.5mbgl
Minimum Pad Size:	600mm x 600mm
Typical Pad Spacing:	2.0m
Max Pad Spacing:	2.5m

Design Philosophy:

Re-levelling

Mechanical jacking of the concrete structures using portable jacks and excavations at the lifting locations. The lifting locations are considered temporary until the dwelling is reinstated to its pre-earthquake condition. Any additional material or concrete works that remain on site are not considered to decrease any future performance, nor is it to be relied on as betterment or considered to increase performance during future earthquake events.

It is common for further cracking to occur as a result of re-levelling processes, which may require additional repairs, and needs to be completed prior to completion of works.

The concrete foundations have been assessed based on minimum steel design, but an additional design check has been made to consider the consequences of no reinforcement, and the concrete required to span using the flexure tensile capacity only.

As part of this assessment we have not considered the permanent lateral stretch of the building, or any other complications that may arise from re-levelling the building. Additionally, we do not know the condition of the dwelling prior to re-levelling, or the differential settlement of the foundations prior to the earthquake events. For this reason, it may not be practical to re-level the foundations where historical or long term settlement has previously occurred.

As the loading on the re-levelling pads is temporary, we have considered a safety factor of 2 for the ultimate bearing capacity.

APPENDIX – Design calculations

- Foundation Loading
- Re-levelling pads
- Concrete beam span
- Relevant Geotechnical

STANDARD CALCULATION TEMPLATE

JOB NAME: 16 Hemingway Place
JOB NO.: 170057
ENGINEER: DC
DATE: 09.03.2017

JOB DESCRIPTION:

Re-level of existing residential dwelling using a mechanical jacking technique

- Type C2 foundation
- Single storey dwelling
- Brick veneer wall cladding
- Light pressed steel roof cladding

STANDARD NOTATION AND DEFINITIONS

ACRONYMS

Foundations		**Floor**	
SF1	Strip Footing	FB1	Floor Bearer
PF1	Pad Footing	FJ1	Floor Joist
EB1	Edge Beam	SP1	Stringer Plate
IB1	Internal Beam	FP1	Pile
IR1	Internal Rib	VCJ	Vertical Control Joint
WP	Weld Plate		
SCJ	Saw Cut Joint		
CJ1	Control Joint		
CKJ	Connolly Key Joint		

Wall		**Roof**	
EW1	External Wall	R1	Rafter
IW1	Internal Wall	P1	Purlins
FW1	Fire Wall	VB	Veranda Beam
L1	Lintel	RB1	Roof Bracing
C1	Column	B1	Beam (steel or timber)
		B1	Ridge Beam

Other

TC#	Technical Category according to CERA for liquefaction risk
NZS	New Zealand Standard
MBIE	Ministry of Building, Innovation and Employment

DEFINITIONS

Along	Along the ridge line (Longitudinal)
Across	Across the ridge line (Transverse)

NZS 1170.0 - DESIGN ACTIONS - PART 0: GENERAL PRINCIPALS

REF

3.3 IMPORTANCE LEVEL

T 3.1 Structure designed for importance level **2**

T3.1 Consequence of failure ORDINARY

T3.1 Description: Medium consequence for loss of human life, or considerable economic, social or environmental consequences

T3.1 Comment: Normal structures and structures not falling into other levels

T3.2 Importance level desciption: Normal structures and structures not in other importance levels

3.4 ANNUAL PROBABLITY OF EXCEEDENCE

T3.3 Design working life **< 6 months**

Design annual probability of exceedence

Wind	ULS	1/100
Snow	ULS	1/50
Earthquake	ULS	1/100
SLS1	Service	1/25
SLS2	Service	-

3.4.2 *SLS1 — the structure and the non-structural components do not require repair after the*

3.4.2 *SLS1 earthquake, snow or wind event*

SLS2—the structure maintains operational continuity after the SLS2 earthquake (Importance L4 only)

NZS 1170.1 - PART 1: PERMANENT, IMPOSED AND OTHER LOADS

REF

4.2 COMBINATION FACTORS

G	Dead Loads (Permanent)
Q	Live Loads (Imposed)
ψ	load factor

4.2.2 Design Combinations for Strength

1.35G	Dominate Permernate Action
1.2G + 1.5Q	Permanent and Imposed Action
1.2G + W_u (Down) + ψ_cQ	Permanent , Wind and Imposed Action
0.9G + W_u (Up)	Permanent , Wind Reversal
1.2G + S_u + ψ_cQ	Permanent, Snow and Imposed
1.0G + E_u + ψ_cQ	Earthquake ULS

T4.1 ψ_c = 0.4 for roofs

0.6 storage

S_u = 0.9kPa Minimum for Christchurch

4.3 Design Combinations for Servicabiltiy

G + ψ_cQ	Permanent and Imposed Action
E_s	Earthuquake SLS1

S5 METHOD OF ANALYSIS

STATIC

ELASTIC

NZS 1170.1 - PART 1: PERMANENT, IMPOSED AND OTHER LOADS
NZS 3604 - TIMBER FRAMED BUILDINGS - DESIGN LOADING

REF

3604 **Live Loading (Q)**

T1.2	Dwelling Floor Live Load	1.5	kPa	A1
	Dwelling Balconies/Decks	2.0	kPa	A1
	Dwelling Bathrooms	2.0	kPa	A2
	Communal Kitchens	3.0	kPa	A2
	Offices and Work Areas	3.0	kPa	B
	Dwelling Roof Load	0.25	kPa	

Dead Loading (G) - including timber framing

Branz	Light Roof	0.40	kPa		
3604	Heavy Roof	0.85	kPa		
	Light Wall	1.20	kN/m	H=	2.4
	Medium Wall	2.80	kN/m	H=	2.4
	Heavy Wall	6.40	kN/m	H=	2.4
	190 Block Wall	8.40	kN/m	H=	2.4
	190 Block Wall	11.40	kN/m	H=	2.4
	Timber Subfloor	0.40	kPa		
	Suspended Timber Floor	0.40	kPa		

Material Densities

$\mu_{Concrete}$	25.0	kN/m^3
μ_{Timber}	6.0	kN/m^3
μ_{Steel}	72.5	kN/m^3

NZS 3604 - TIMBER FRAMED BUILDINGS - DURABILITY

REF

3604 **Exposure Zone for Chrisrchurch** C

F4.2



NOTE – Zone D includes all offshore islands, the area within 500 m of the coastline of New Zealand, and those areas shown in white. The map shall be read in conjunction with 4.2.2.

T4.1

ZONES B AND C	Treated timber pile connections more than 600 mm from the ground and all subfloor connections	Subfloors vented 7000 mm² or less	SHELTERED[4]	Hot-dipped galvanized steel[2]
		Subfloors vented more than 7000 mm²	EXPOSED	Type 304 stainless steel[5]
	Treated timber pile connections within 600 mm of the ground	SHELTERED[4] AND EXPOSED		Type 304 stainless steel[5]
	All other structural fixings, except fabricated brackets[3]	SHELTERED[4]		Hot-dipped galvanized steel[2]
		EXPOSED		Type 304 stainless steel[5]
ZONE D	All structural fixings	SHELTERED[4] AND EXPOSED		Type 304 stainless steel[5]

SPECIFIC ENGINEERING DESIGN - RE-LEVELLING PAD
MBIE - Mechanical Re-levelling of Concrete Perimeter Beam (Type B1/B2)

Roof Load width	**6.5**	m	
First Floor Load Width	**0.0**	m	
` Ground Floor Load With	**4.5**	m	(Worst Case)

Dead Loads		**Mass**	**Load**
Roof	**Light**	0.40	2.60
First Floor Wall	**Nil**	0.00	0.00
First Floor	**Nil**	0.00	0.00
Ground Floor Wall	**Heavy**	2.20	5.28
Ground Floor	**Heavy**	2.50	11.25
Foundation	**Heavy**	-	4.50
		Total	**23.63**
Live Load			
Roof	**Ped Traffic**	0.25	1.63
First Floor	**Nil**	0.00	0.00
Ground Floor	**Residential**	1.50	6.75
		Total	**8.38**

Load Case	G + 0.3Q		**26.14**

Max Spacing of Jack Points	2.00	m	
Design Lift Load	52.29	kN	
Min Pad Size	**0.6 x 0.6**	m	
Min Pad Area	0.36	m^2	
Max Bearing Load	145.24	kPa	
Min Soil UBC	**200**	kPa	
Design Soil SBC	100	kPa	L.o.S = 2
Capacity Ratio	**0.7**		

SPECIFIC ENGINEERING DESIGN - RE-LEVELLING PAD
MBIE - Mechanical Re-levelling of Conc Edge Beam (Type C1/C2)

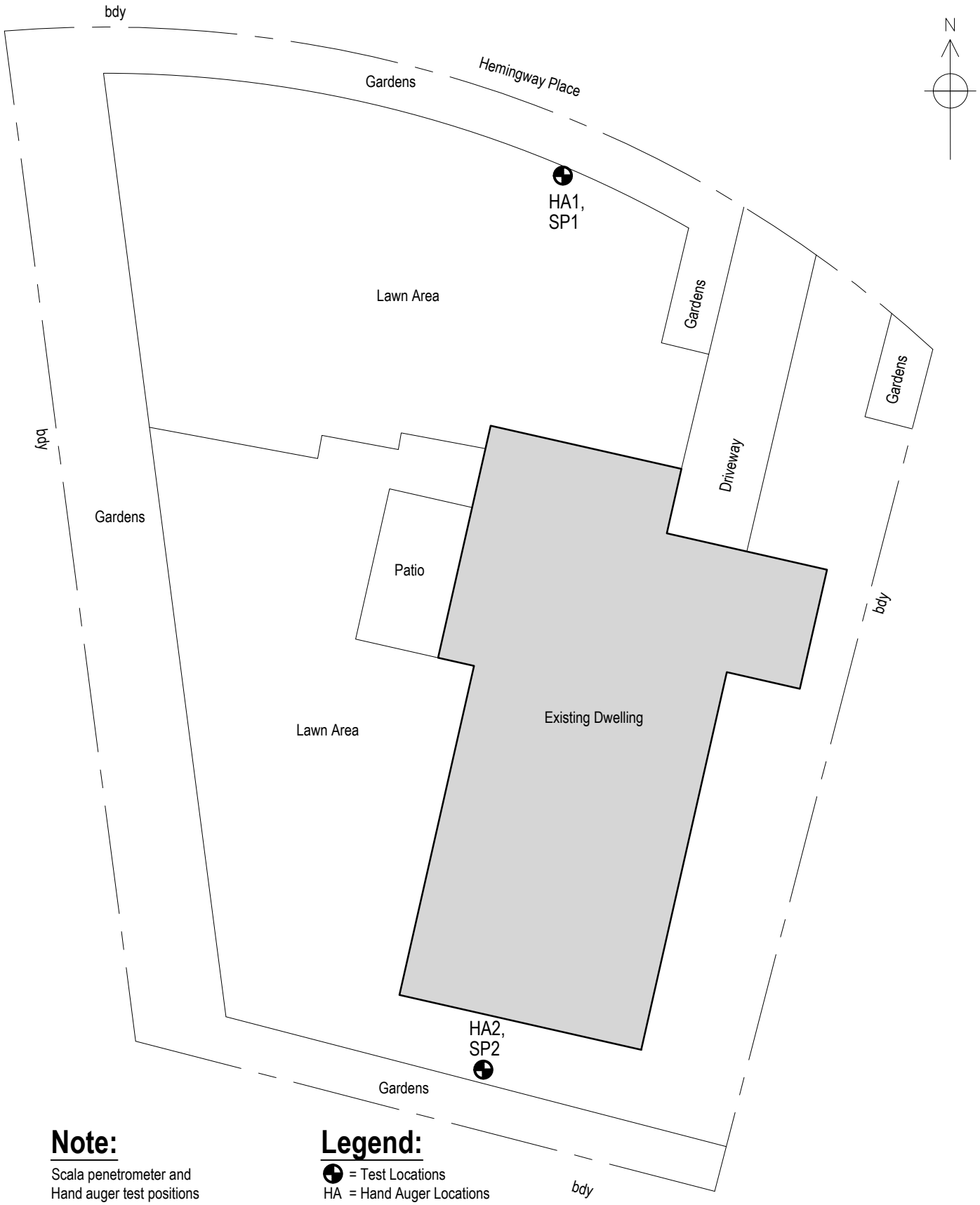
Beam Type	**Slab Edge Thickening**			
Assumed Size	450Dx250W			
Assumed No. Reo Bars	**2**			
Assumed Size of Reo Bars	**D16**		402.1	mm^2
Assumed grade of Reo	**300**			
Assumed concrete strength	**17.5**			

For conservative design assumed simply supported conditions

Design Load	26.14	kN/m	
Design Span	2.00	m	
Design Moment	13.07	kN.m	$wL^2/8$
Design Shear	52.3	kN	wL
Beam Check 1 - Moment	35.63	kN.m	$\phi Mb = \phi As\ fy\ (d-a/2)$
Capacity Ratio	**2.7**		
Beam Check 2 - Shear	33.1	kN	$0.08\sqrt{f_c'}$ ..
Capacity Ratio	**0.6**		NZS 3101 EQ 9-5

NAME: 16 Hemingway Place **SHEET No.**
DATE: 09.03.2017 **REF: 170057**

KIRK | ROBERTS
CONSULTING ENGINEERS LTD



Note:

Scala penetrometer and Hand auger test positions and boundaries are indicative only

Legend:

= Test Locations
HA = Hand Auger Locations
SP = Scala Penetrometer Locations
Bdy = Boundary Locations

DO NOT SCALE - IF IN DOUBT, ASK

ORIGINAL SIZE A4

CAD REF :

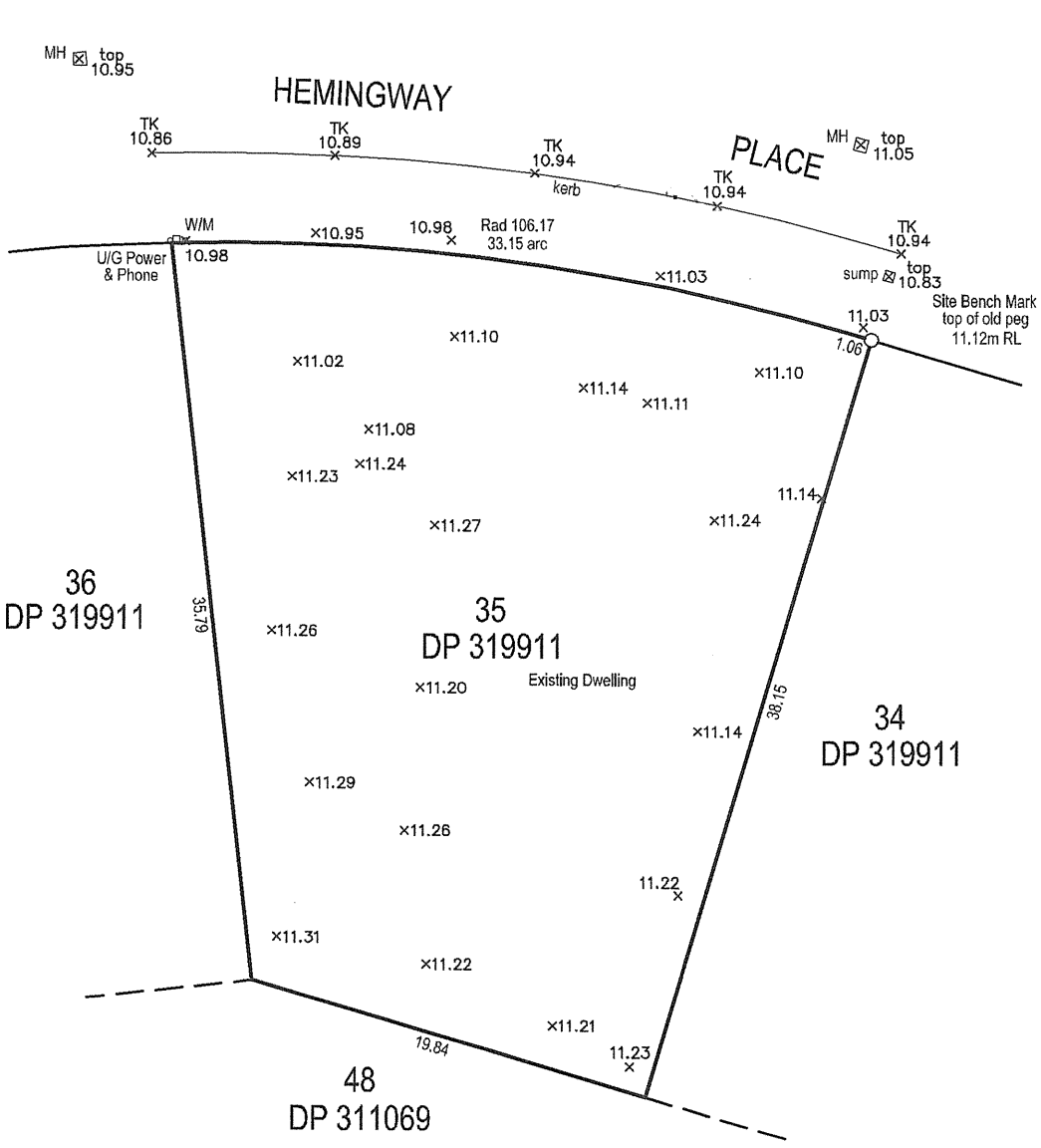
SCALES :	1:200
	DATE
DESIGNED	
DRAWN	05.07.12 - GJT
CHECKED	
APPROVED	

RUSSEL WENN AND JULIE COLLIER
16 HEMINGWAY PLACE

SOIL TEST LOCATIONS

AGENZ

Job No.	Sheet No.	Rev.
121195	SK1	1



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ASHBURTON 03 307 7021
DARFIELD 03 318 8151

Levels at No.16 Hemingway Place, Spencerville

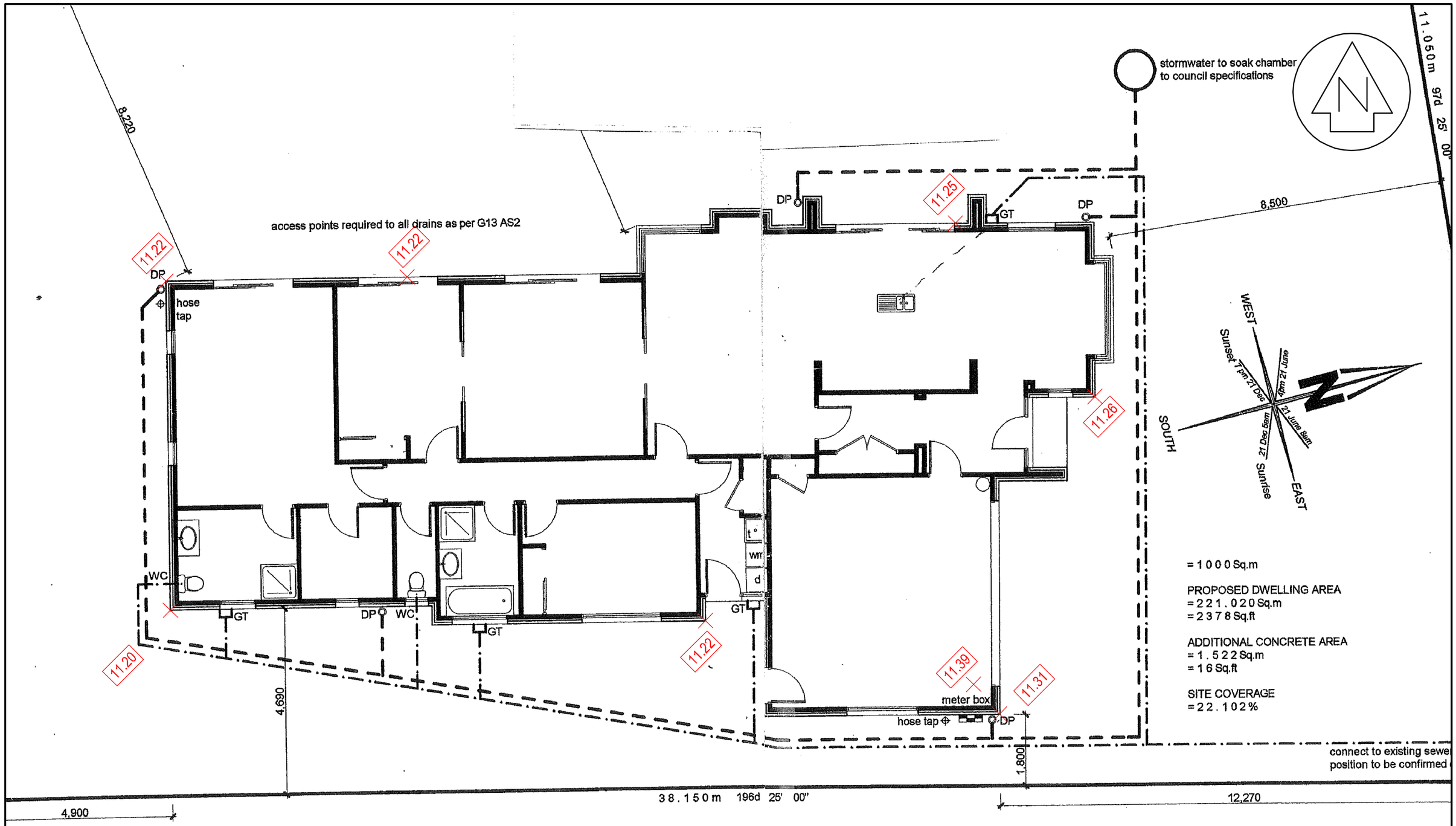
Russell Wenn & Julie Collier

Rev	Date	By	Amendments
A	03/08/12	SRS	Levels

Note:
Levels are in terms of CCC Datum
BM EHDB 11.31m RL

DATE	SHEET	REV
August 2012	1 of 1	A
SCALES	JOB REF	
1 : 250 (A3)	10791	

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Peter Ray Homes

NOTE

1. All work shall comply with NZS 3604:1999
2. All windows and doors to comply with NZS 4211:1985
3. Glazing to comply with NZS 4223:1985 & Pt 3 1993
4. Contractor must verify all dimensions on site prior to

Rev No.	Date	Amendment
A	03.11.03	remove gas fire, move gas bottles, change bay window

Drawn: A. Fahey
Date: 28.10.03
Scale:

Job Name & Location
Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title

Sheet No. 4

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F 03 352 5527 ASHBURTON 03 307 7021
TOLL FREE 0508 787 887 DARFIELD 03 318 8151

Foundation Levels

16 Hemingway Place, Spencerville — Russell Wenn & Julie Collier

Rev	Date	By	Amendments
A	03/08/12	SRS	Levels

Note:
Levels are in terms of CCC Datum
BM EHDB 11.31m RL

DATE	SHEET	REV
August 2012	1 of 1	A
SCALES	JOB REF	
Proportional	10791	

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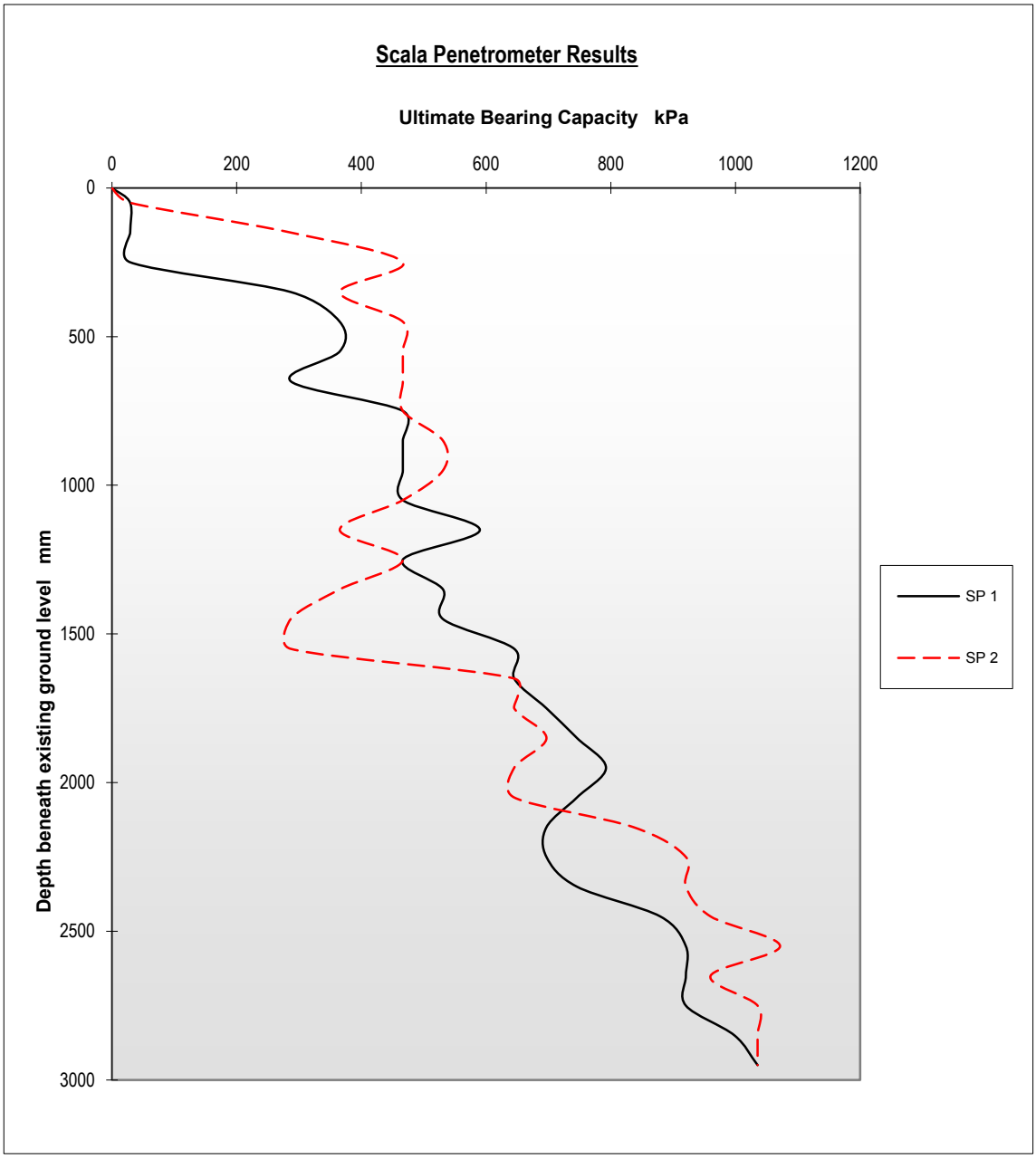
Location:				16 Hemingway Place_CPTU001
Date:				4/03/2013
Core %	Method	Moisture	Depth	Soil Description:
				Soil Type, minor components, plasticity or particle size, colour Rock Description: SUBSTANCE: Rock Type, particle size, colour, minor components DEFECTS: Type, inclination, thickness, roughness, filling.
			0m	
	CPTU		15m	CPTU001 to 15m
			END	

Location:				16 Hemingway Place_CPTU002
Date:				4/03/2013
Core %	Method	Moisture	Depth	Soil Description:
				Soil Type, minor components, plasticity or particle size, colour Rock Description: SUBSTANCE: Rock Type, particle size, colour, minor components DEFECTS: Type, inclination, thickness, roughness, filling.
			0m	
	CPTU		15m	CPTU002 to 15m
			END	

SCALA PENETROMETER RESULTS - COMBINED

JOB NUMBER 121195

Job Name:	Russell Wenn and Julie Collier
Site Address:	16 Hemingway Place
Town/City	Brooklands
Date:	4-Jun-12
Weather:	Wet
Operator:	HAV



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BORE LOGS AND SCALA PENETROMETER TESTS ARE DISCRETE TESTS OF THE GROUND AT THE LOCATION OF THE TESTS ONLY. WHILE THEY ARE REPRESENTATIVE OF TYPICAL CONDITIONS, THEY DO NOT IDENTIFY VARIATIONS IN THE GROUND IN LOCATIONS AWAY FROM THE TEST AREAS.

Earthquake Repairs

16 Hemingway Place, Spencerville
Christchurch 8083
Liam Brewer

Structural Sheet Index		
Sheet ID	**Sheet Name**	**Revi ID**
S00	Cover Sheet	00
S01	Site Plan/Sediment Control Plan	00
S02	Ground Floor Pre-Level Floor Survey	00
S03	Ground Floor Jack Pad Approximate Locations	00
S04	Smoke Detector Location	00
S05	Details	00
S06	General Notes	00

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CIVIL, STRUCTURAL & REMEDIAL

PO Box 79183 Avonhead
Christchurch 8446

Unit 1, 35 Sheffield Crescent, Burnside 8053

Phone: 03 359 9192
Free Call: 0508 FRONTIER (0508 376 684)

Email: admin@frontierengineers.co.nz

Project Number
170057

Sheet
S00

Rev ID
00

Drawing Title
Cover Sheet

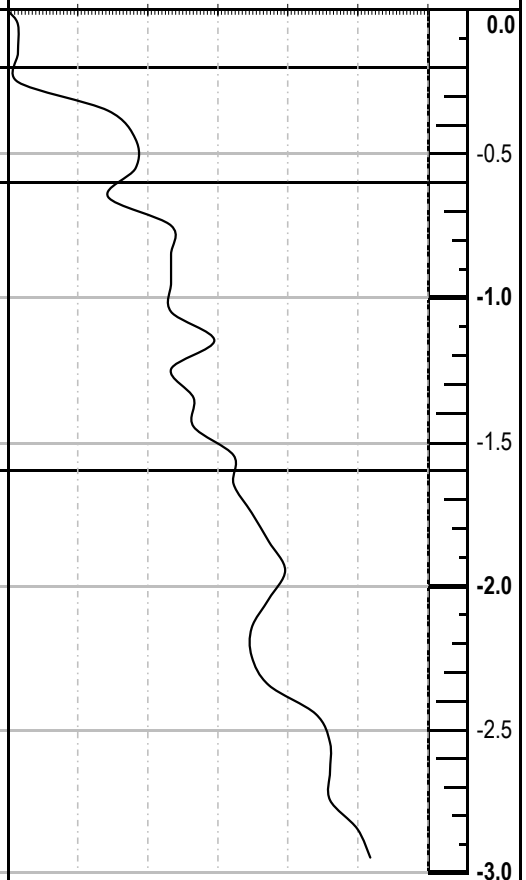
SCALA PENETROMETER & HAND AUGER RESULTS

KIRK | ROBERTS
CONSULTING ENGINEERS LTD

		Scala Penetrometer:	**SP1**
		Hand Auger:	**HA1**
		Project No.:	**121195**
Client:	Russell Wenn and Julie Collier	**Date:**	04/06/12
Site Address:	16 Hemingway Place	**Weather:**	Wet
Town/City:	Brooklands	**Operator:**	HAV

Geological Formation:	Depth (m)	Sample Description:	Graphic:	USCS	Water Table	Undrained Shear Strength Su (kPa)
	0.0	**TOPSOIL** Brown organic silt, soft, wet.		OL		
	-0.5	**silty SAND** Light brown silty sand, fine to medium sand medium dense, wet.		SM		
	-1.0	**SAND** Brown fine sand, medium dense, wet. Becoming dark brown-grey, medium dense, saturated.		S	04/06/12 ▼	
	-1.5	Sand becoming dense.				
	-2.0	EOH at 1.6 m depth in dense saturated collapsing sand.				
	-2.5					
	-3.0					
	-3.5					
	-4.0					
	-4.5					

Ultimate Bearing Capacity (kPa)



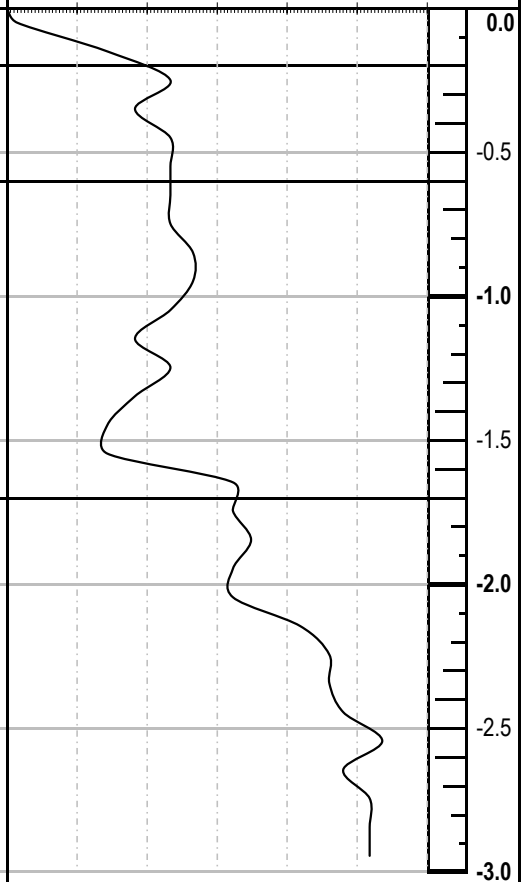
Scala Penetrometer and Test Bore log tests give an indication of the ground condition at the location of the tests only. While they are representative of typical conditions across the site, they do not identify variations in the ground away from the test locations.

SCALA PENETROMETER & HAND AUGER RESULTS

KIRK ROBERTS CONSULTING ENGINEERS LTD

		Scala Penetrometer:	**SP2**
		Hand Auger:	**HA2**
		Project No.:	**121195**
Client:	Russell Wenn and Julie Collier	**Date:**	4 June 2012
Site Address:	16 Hemingway Place	**Weather:**	Wet
Town/City:	Brooklands	**Operator:**	HAV

Geological Formation:	Depth (m)	Sample Description:	Graphic:	USCS	Water Table	Undrained Shear Strength Su (kPa)
	0.0	**TOPSOIL** Brown organic silt, soft, wet.		OL		
	-0.5	**silty SAND** Light brown silty sand, fine to medium sand medium dense, wet		SM		
	-1.0	**SAND** Brown fine sand, medium dense, wet. Becoming dark brown-grey, medium dense, saturated.		S	04/06/12 ▼	
	-1.5	Sand becoming dense.				
	-2.0	EOH at 1.7 m depth in dense saturated collapsing sand.				
	-2.5					
	-3.0					
	-3.5					
	-4.0					
	-4.5					



Scala Penetrometer and Test Bore log tests give an indication of the ground condition at the location of the tests only. While they are representative of typical conditions across the site, they do not identify variations in the ground away from the test locations.

APPENDIX B

- Project Orbit: Canterbury Geotechnical Database
    - Geological Section location plan



Figure 1: Geological Section location plan.

- Tonkin & Taylor Limited Geological Cross Sections
    - XS-SPE-02
    - XS-SPE-06

Borelog for well M35/1338

Gridref: M35:8527-5332 Accuracy : 3 (1=high, 5=low)
Ground Level Altitude : 2.8 +MSD
Driller : not known
Drill Method : Driven Pipe
Drill Depth : -59.09m Drill Date :

Environment Canterbury Regional Council

Scale(m)	Water Level	Depth(m)	Full Drillers Description	Formation Code
	Artesian	-0.30m	Topsoil	ch
			Blue sand	
-10				
-20				
		- 24.4m		ch
			Blue shingle	
		- 28.7m		ri
-30			Brown shingle. Water level rises o.6m	
		- 39.6m		ri
-40			Yellow clay, Blue sand, peat	
-50				
		- 54.9m		br
			Brown shingle. Water level rises 1.8m	
		- 59.1m		li-1

Borelog for well M35/5965

Gridref: M35:8559-5274 Accuracy : 4 (1=high, 5=low)
Ground Level Altitude : 2 +MSD
Driller : Stevens J O
Drill Method : Cable Tool
Drill Depth : -34m Drill Date : 1/06/1988

Environment Canterbury Regional Council

Scale(m)	Water Level	Depth(m)	Full Drillers Description	Formation Code
	-1.7CalcMin		Coarse sand	
-5				
-10				
		- 12.2m	Fine Blue sand	ch
-15				
-20				
-25				
		- 25.6m		ch
			Fine gravel,shells & sand	
		- 28.1m		ch
		- 28.7m	Peat & pug	ch
-30			Sandy Blue gravel ,no water movement	
		- 31.6m		ri
		- 32.0m	Mixed Blue & Brown gravel.good water	ri
			Brown gravel.good water	
		- 34.0m		ri

APPENDIX C

- Liquefaction analysis results for:
  - 25 year earthquake event (PGA = 0.13)
  - 500 year earthquake event (PGA = 0.35)

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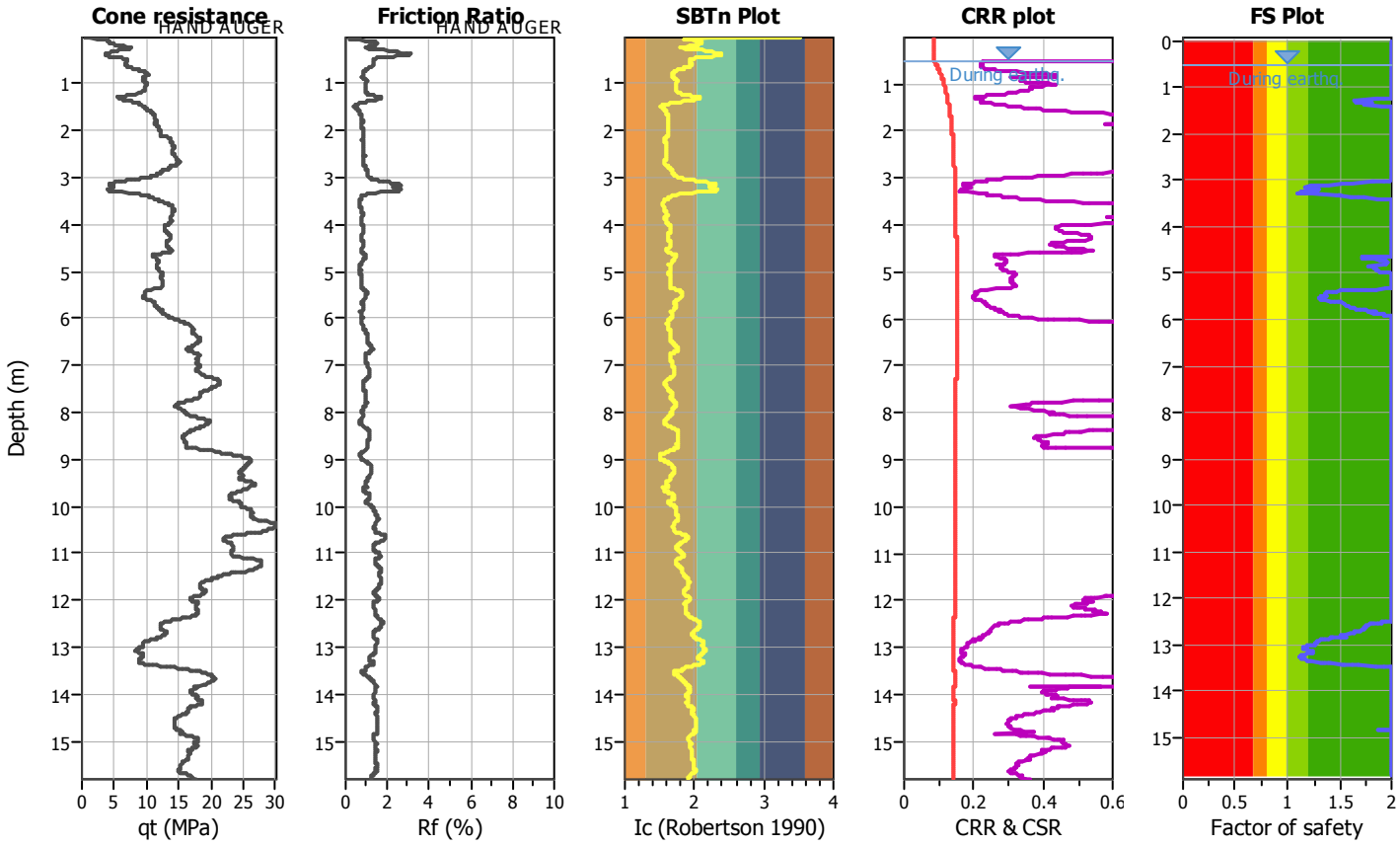
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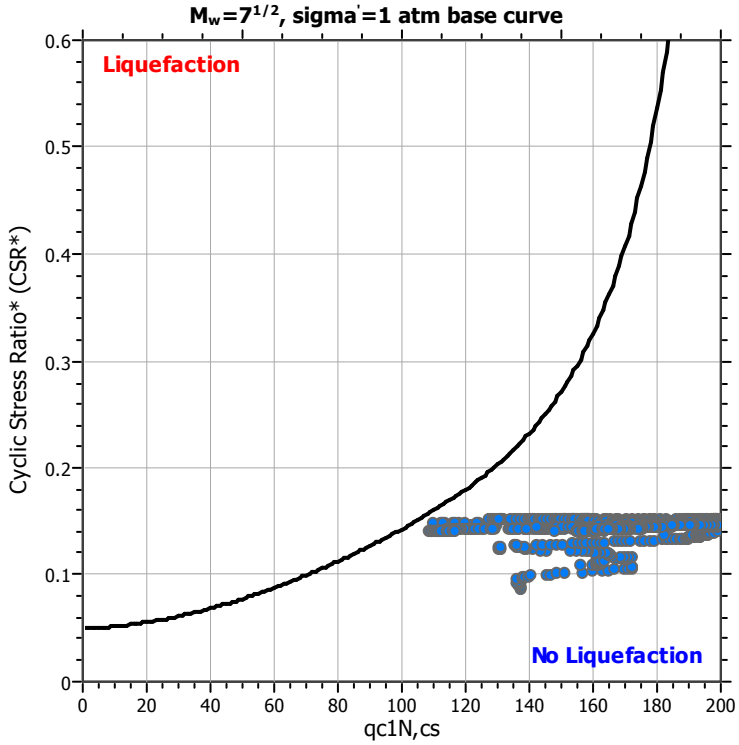
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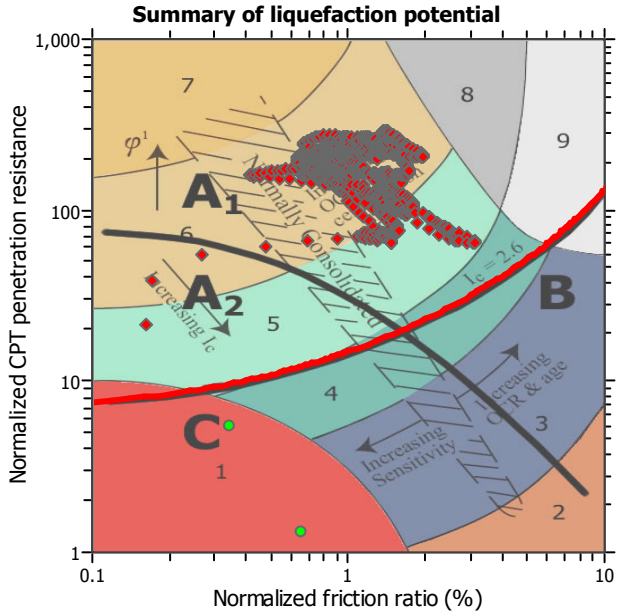
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Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

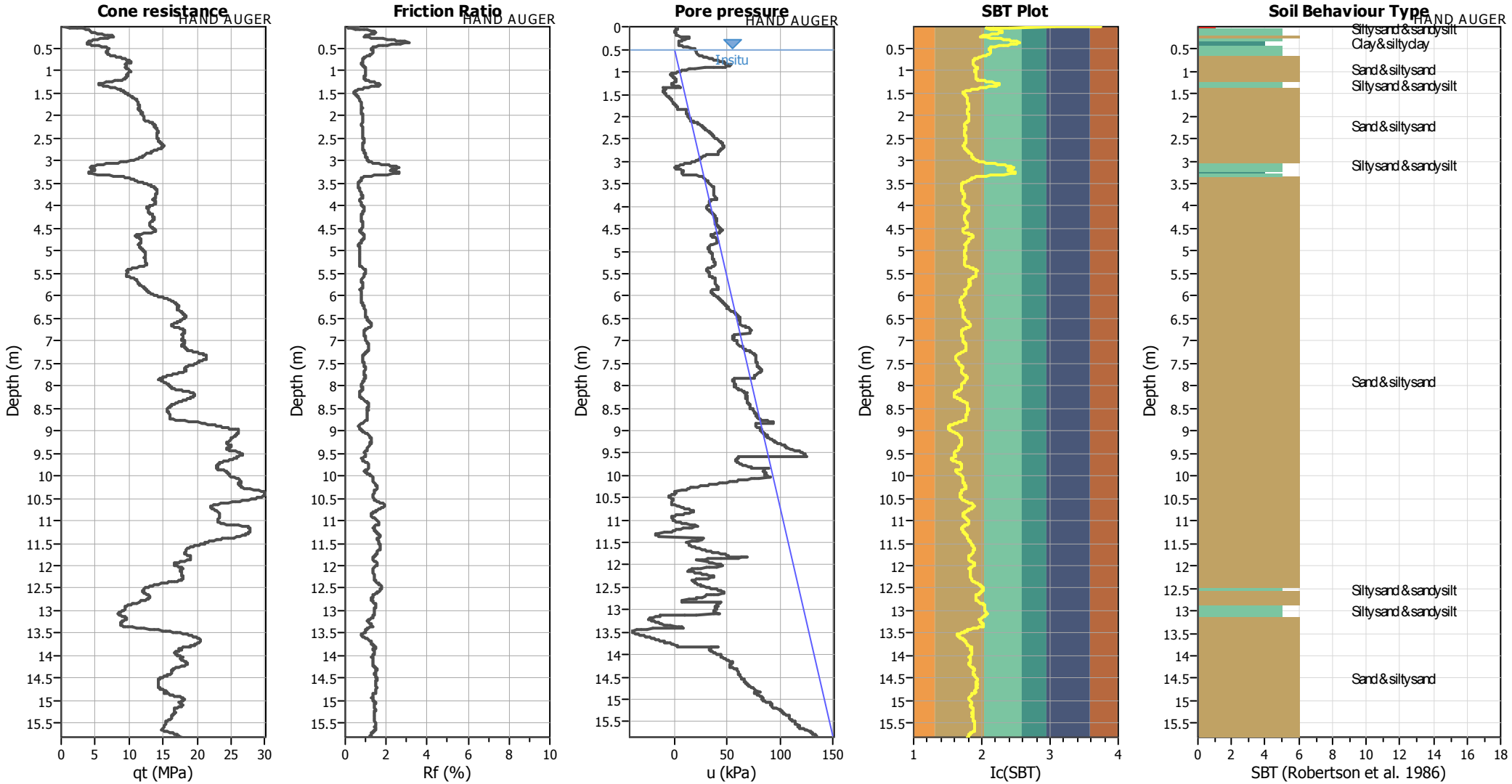






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



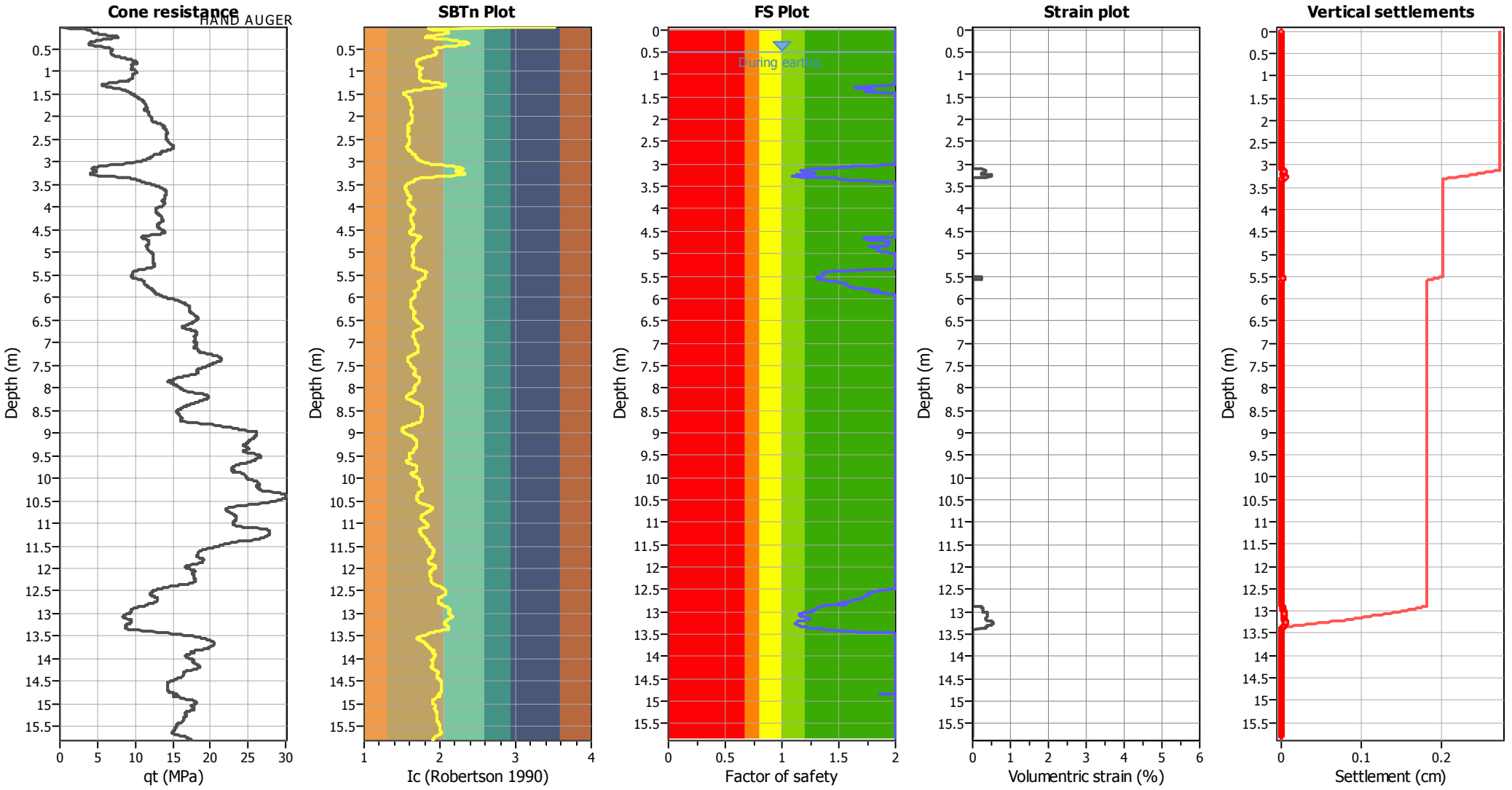
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.13	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

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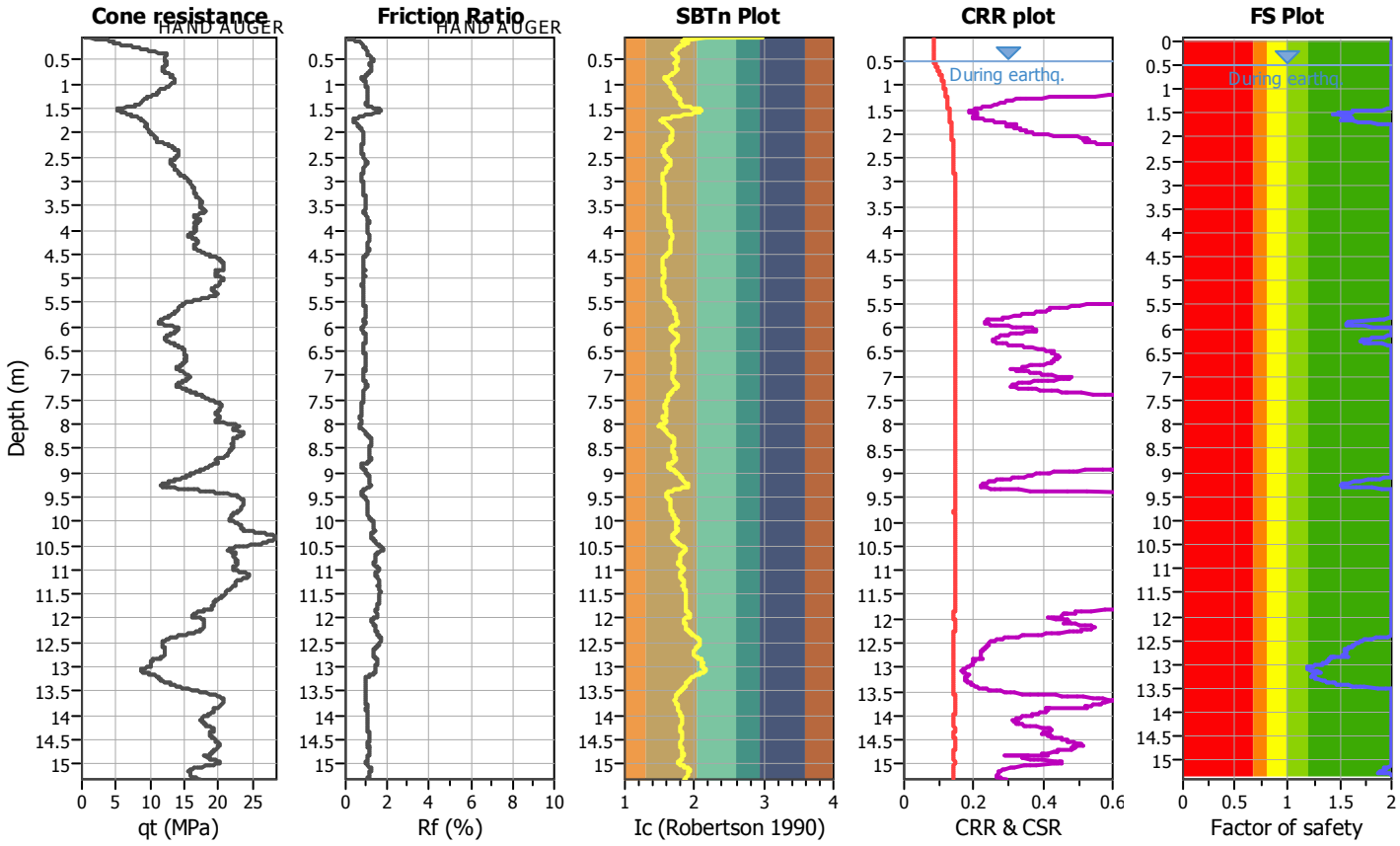
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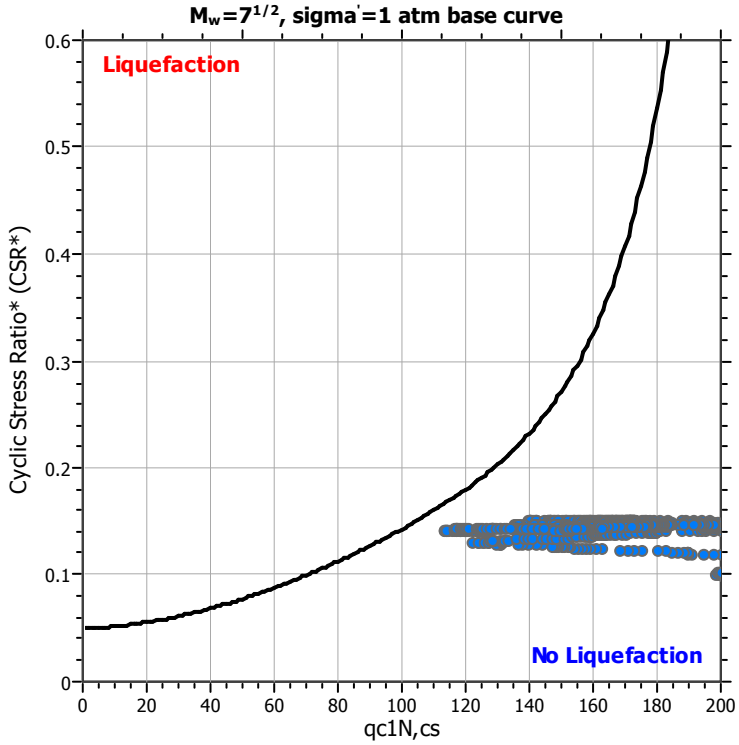
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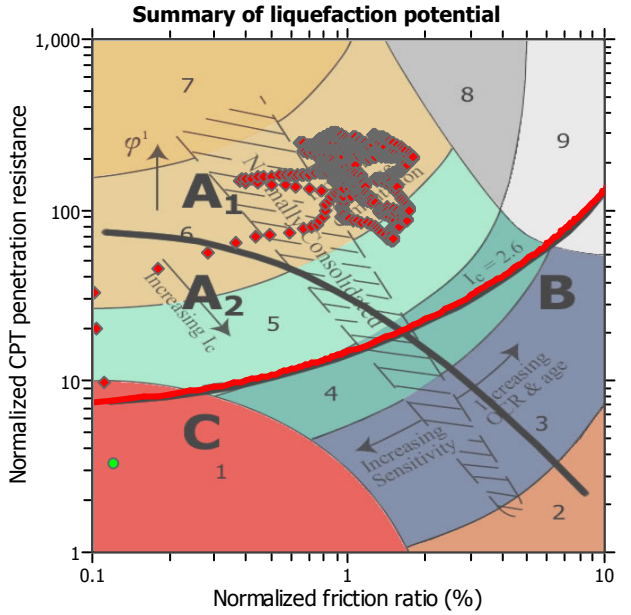
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Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_o applied:	Yes		

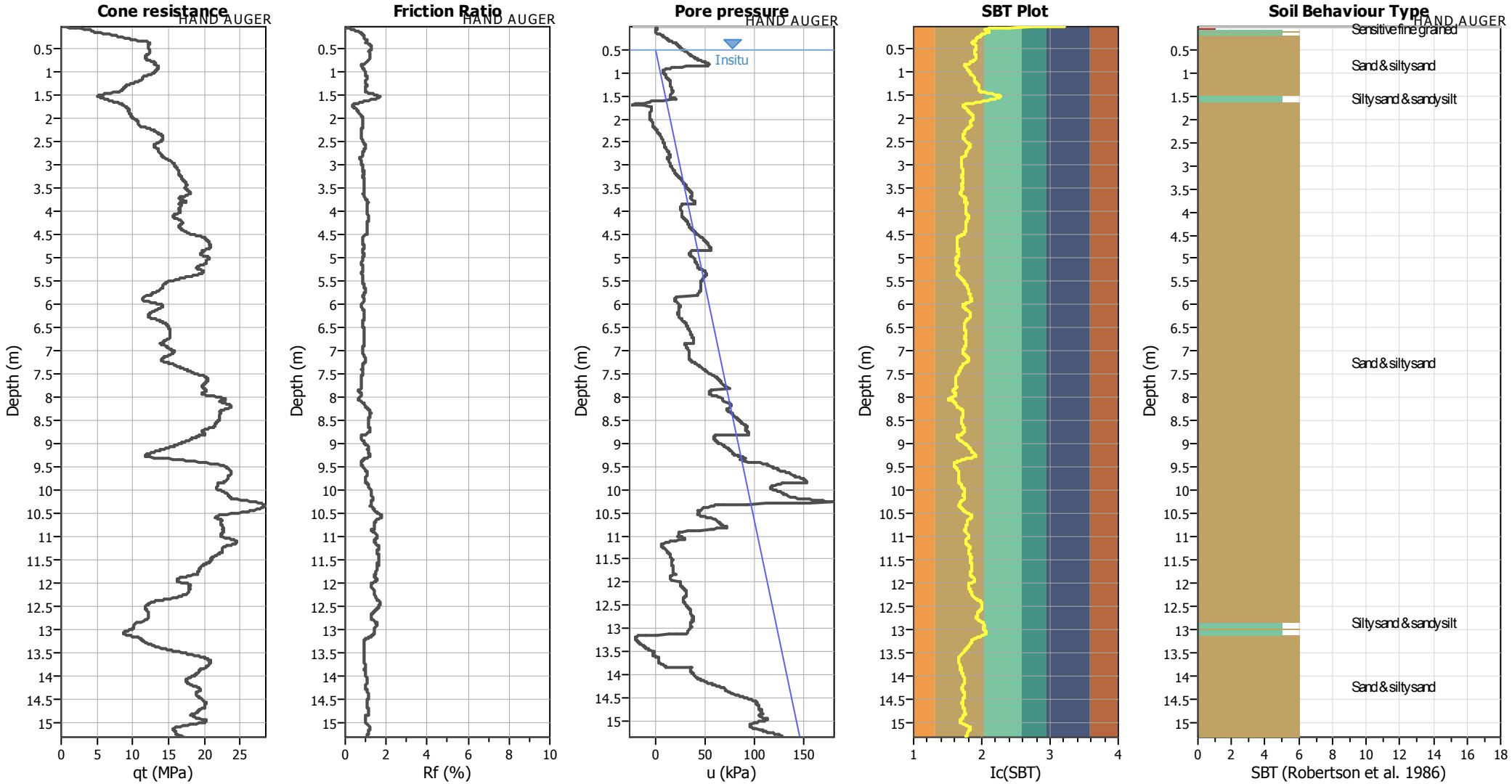






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
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Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



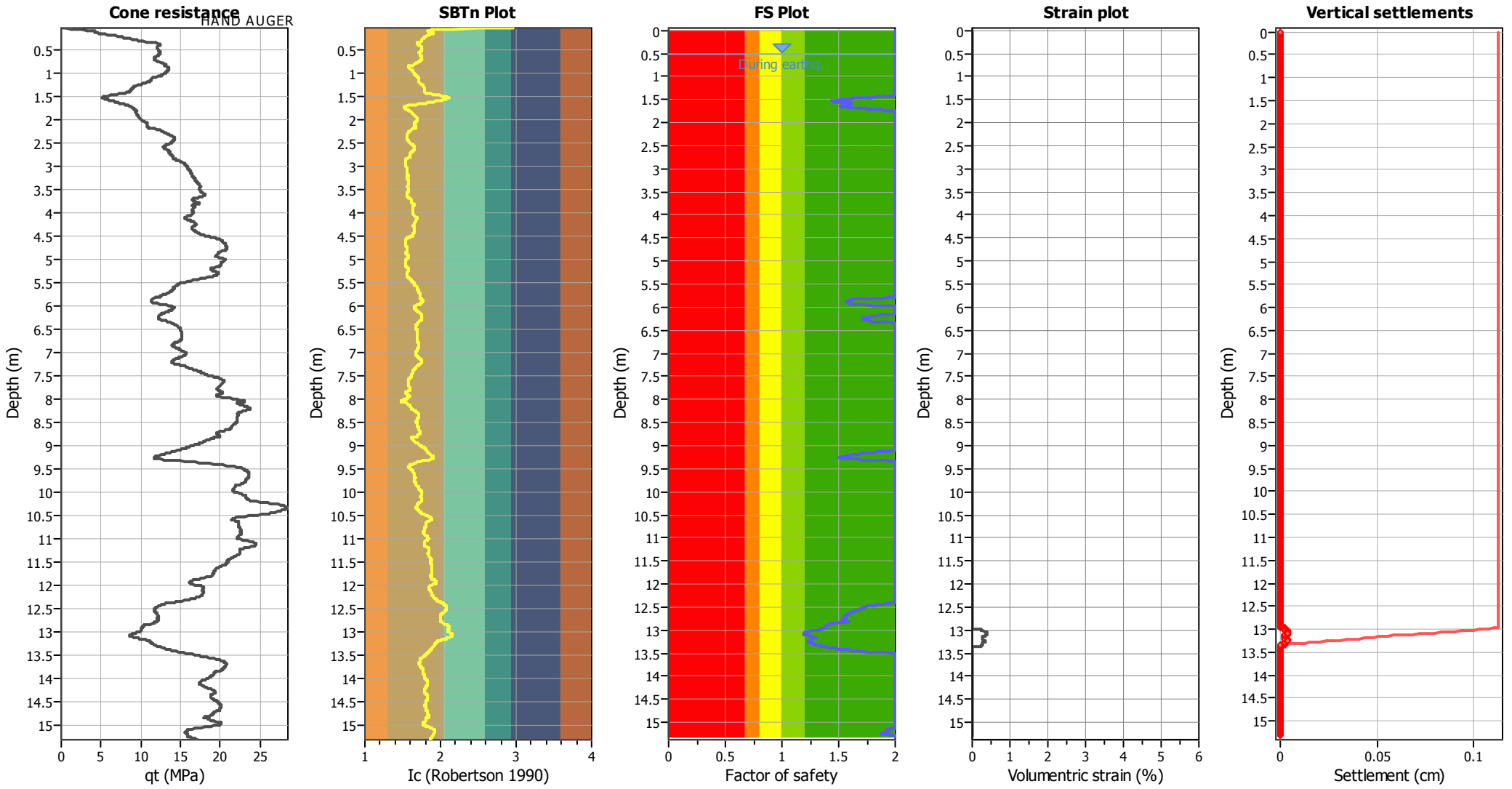
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Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.13	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
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8. Very stiff sand to
9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

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I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

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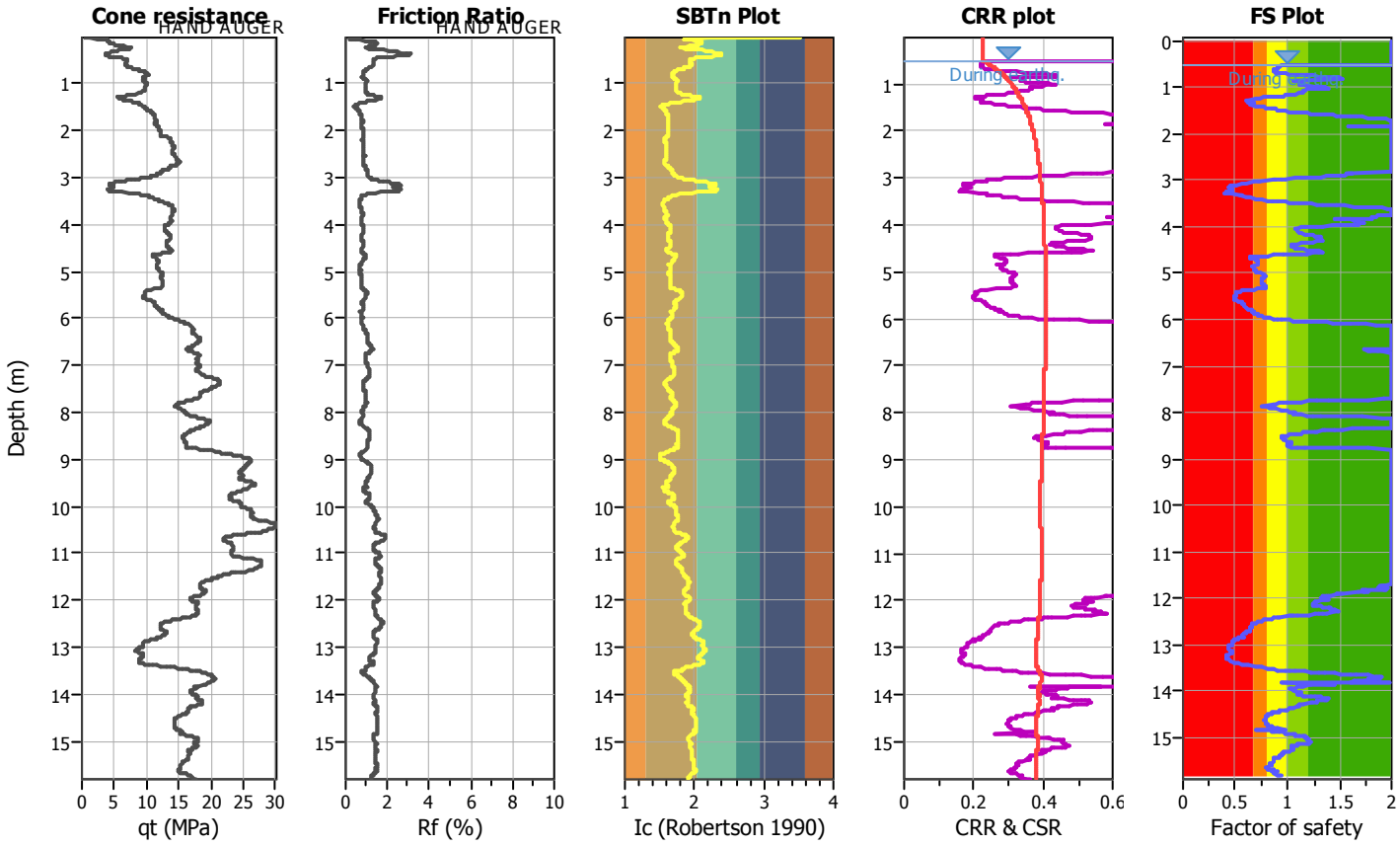
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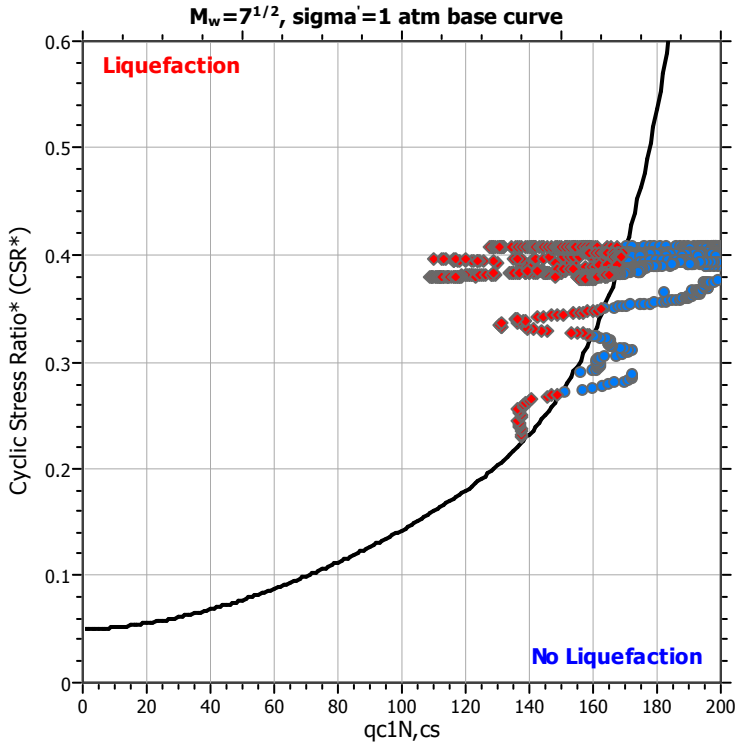
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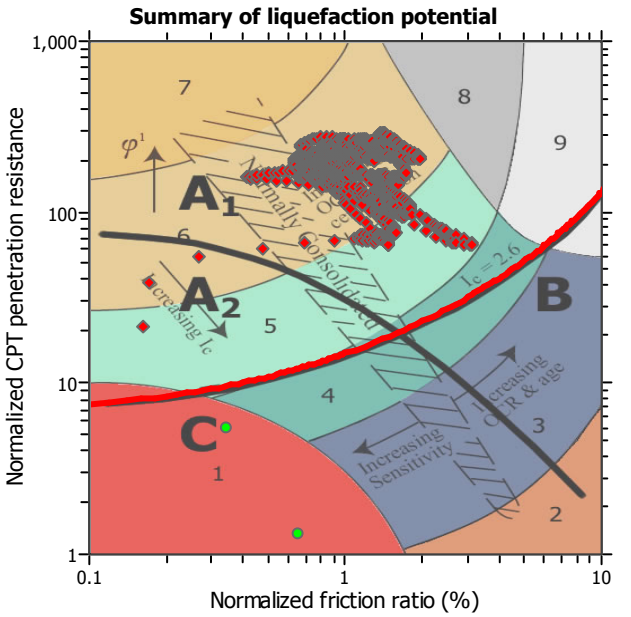
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Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.35	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

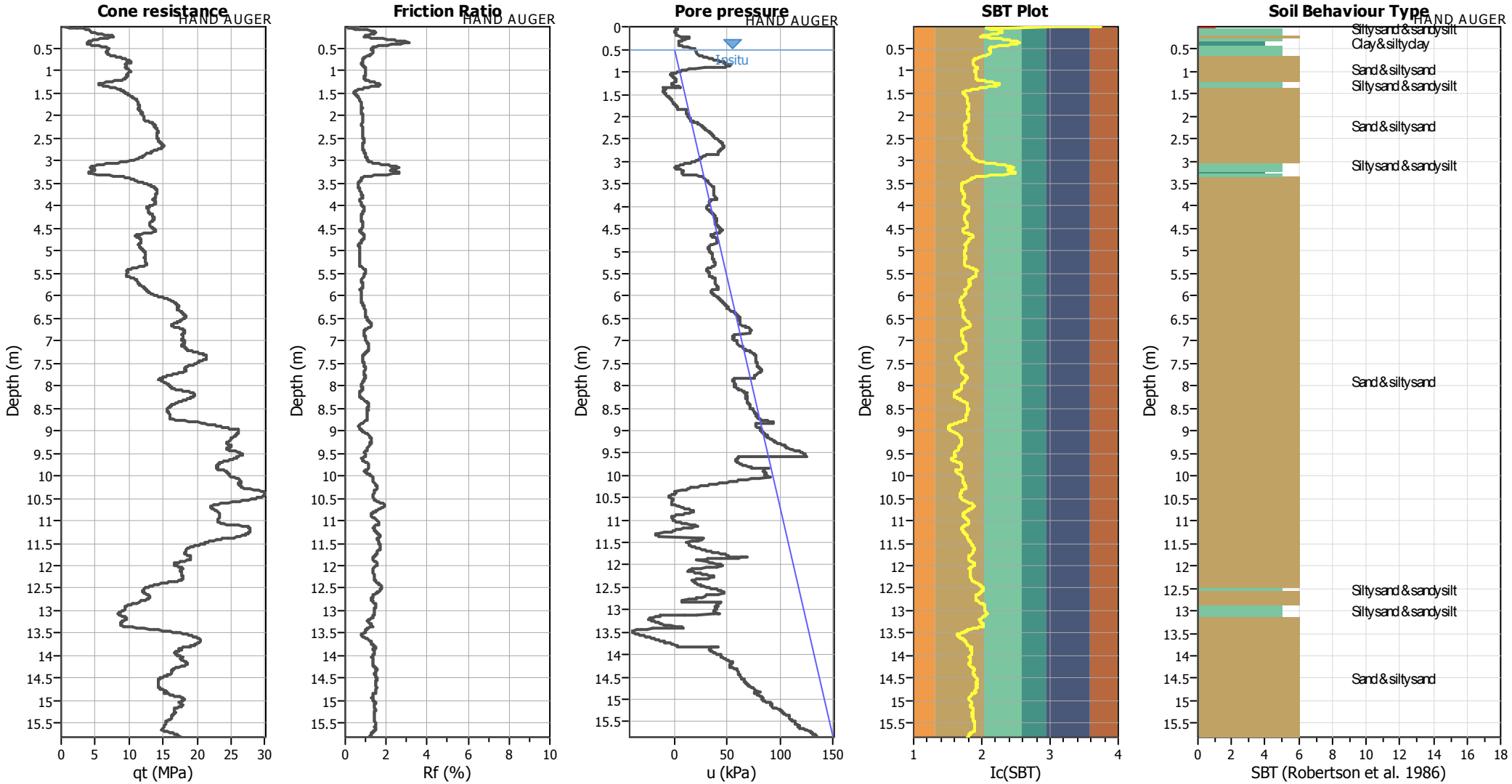






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
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CPT basic interpretation plots



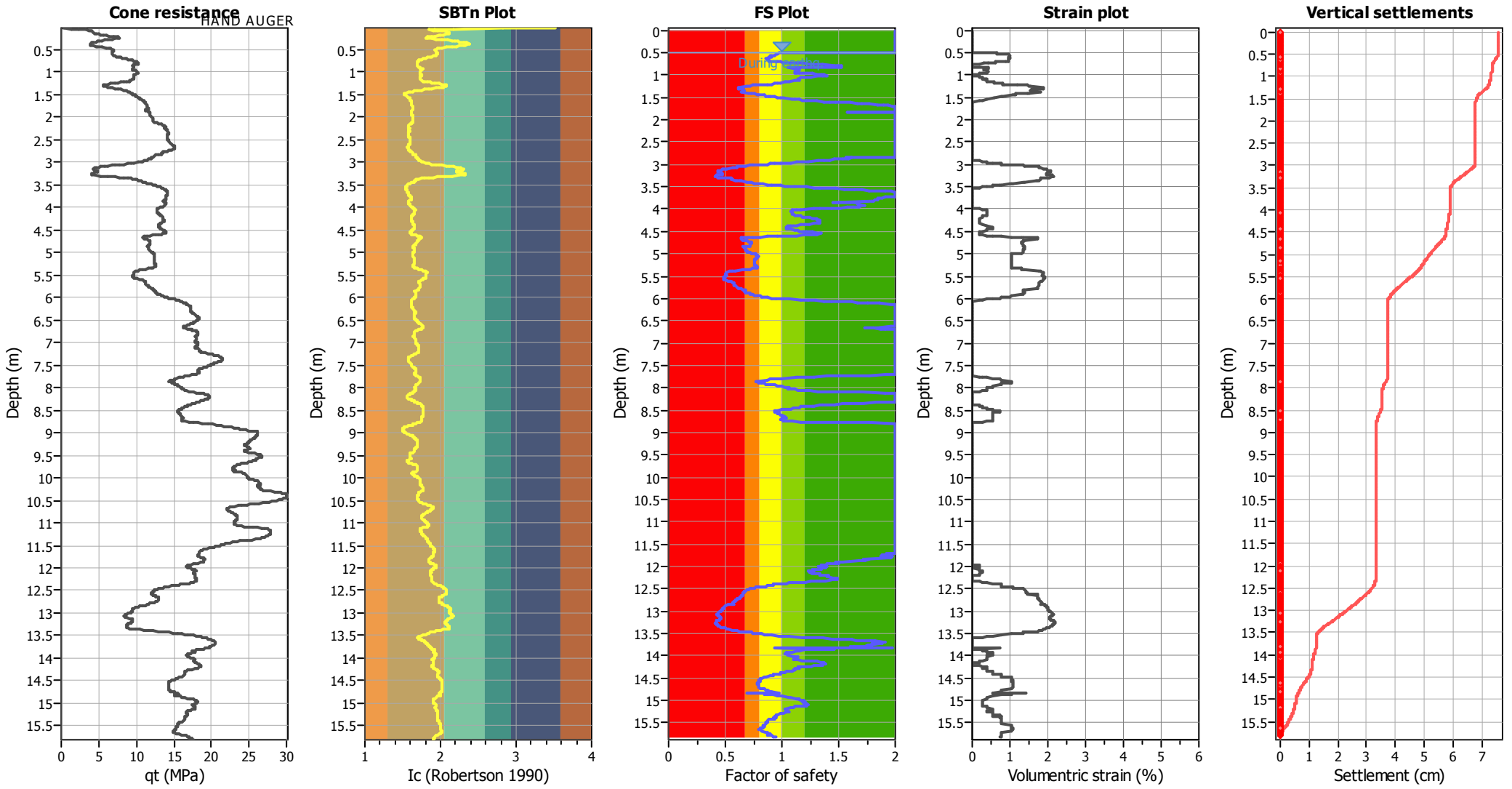
Input parameters and analysis data

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Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.35	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
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Estimation of post-earthquake settlements



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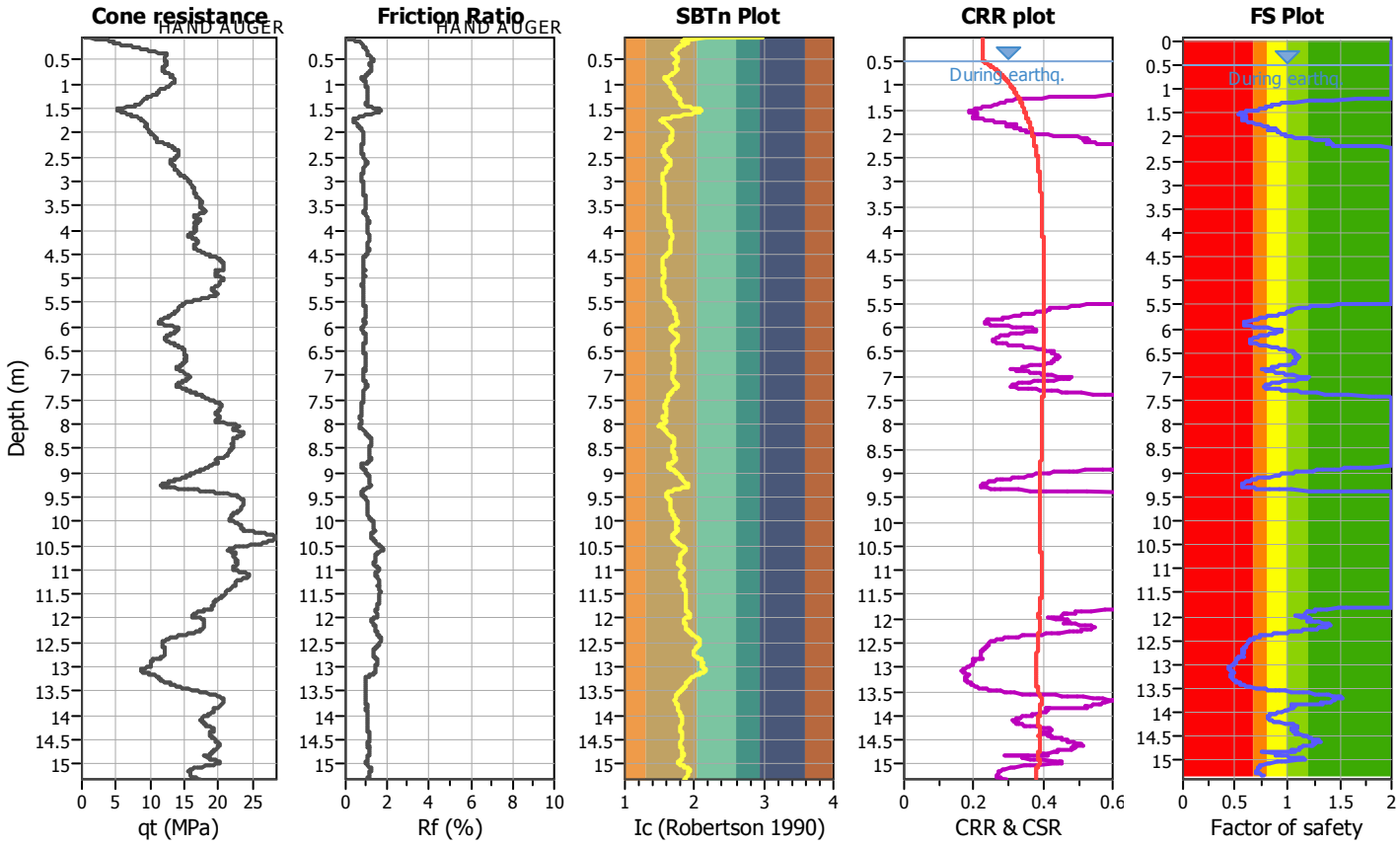
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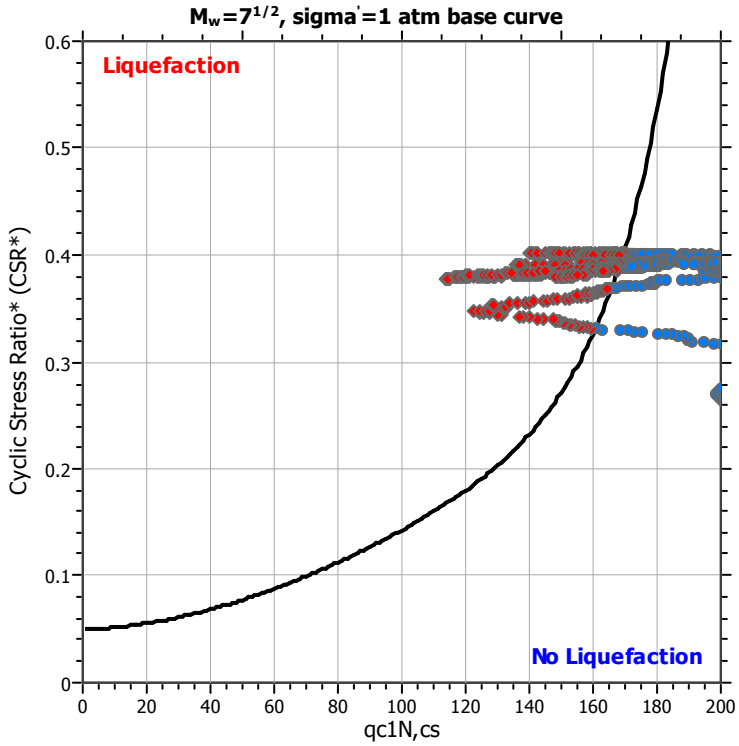
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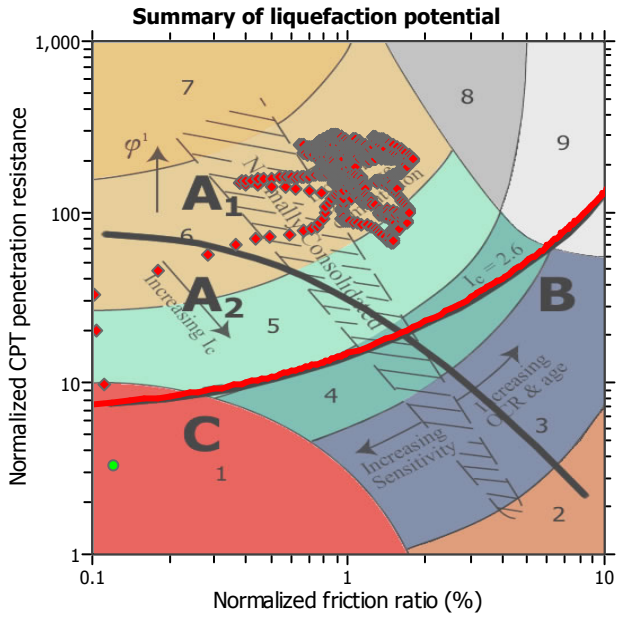
CPT file : CPTU002 ULS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.35	Unit weight calculation:	Based on SBT	K_o applied:	Yes		

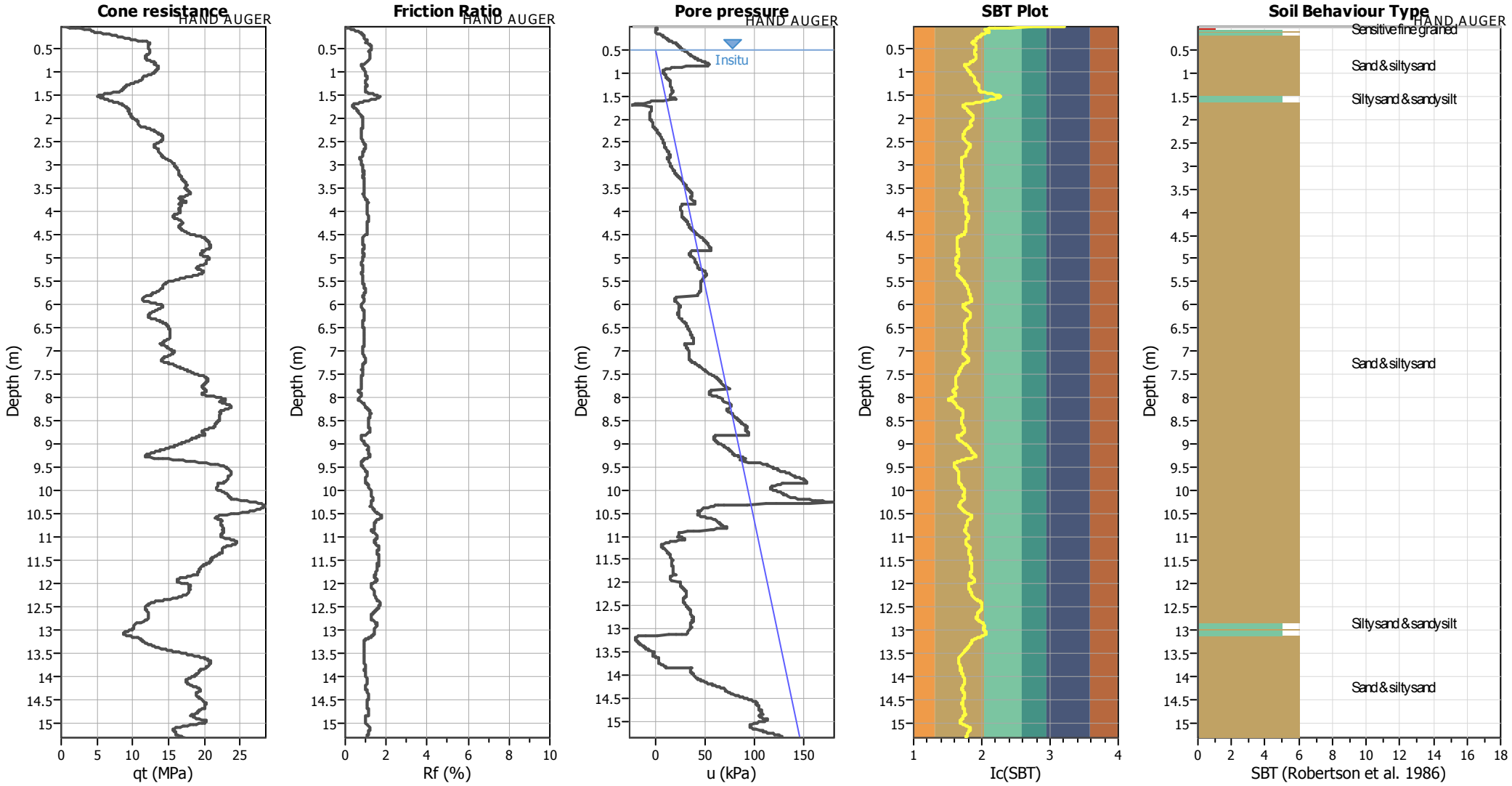






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
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Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



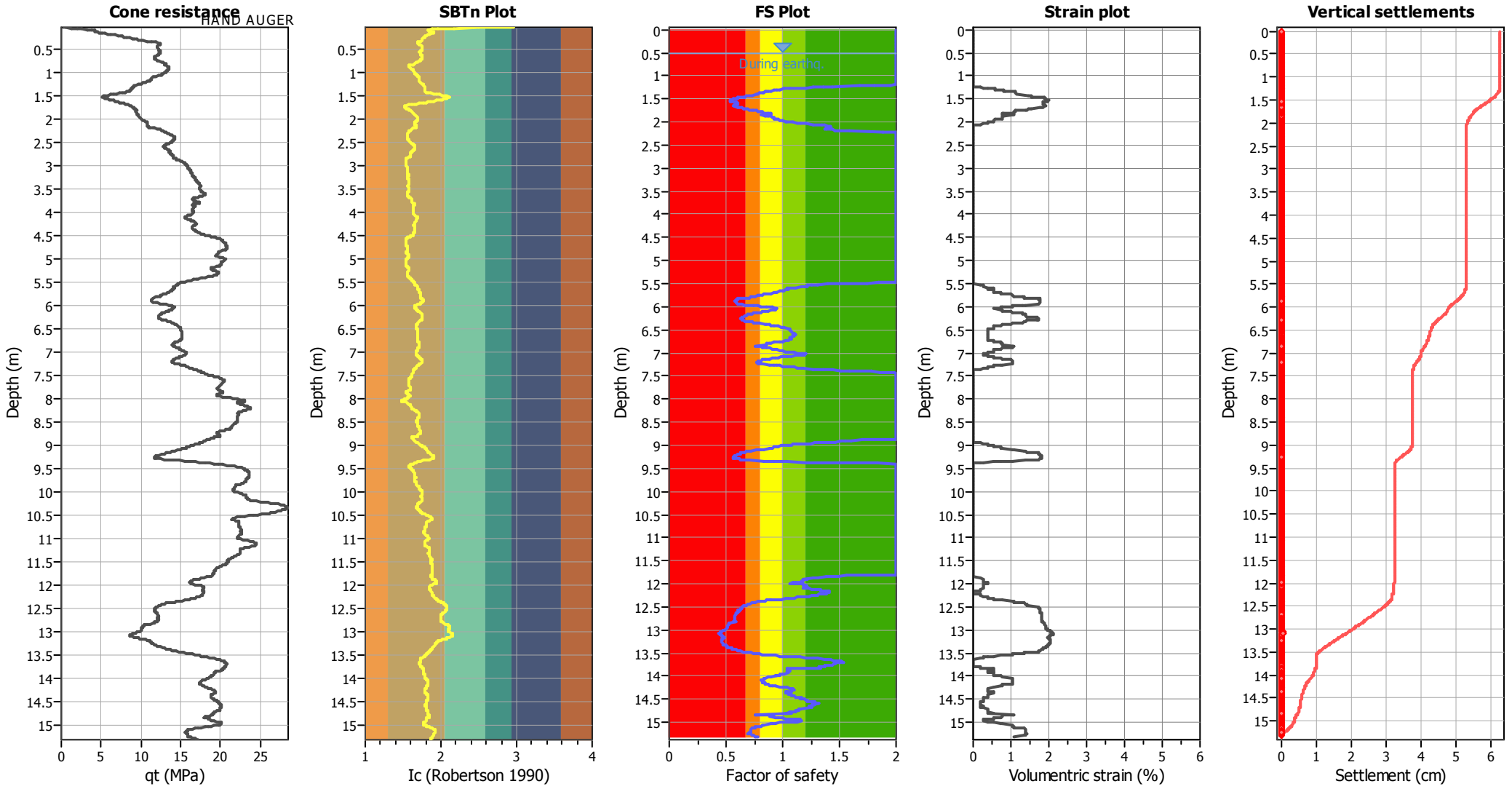
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Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.35	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

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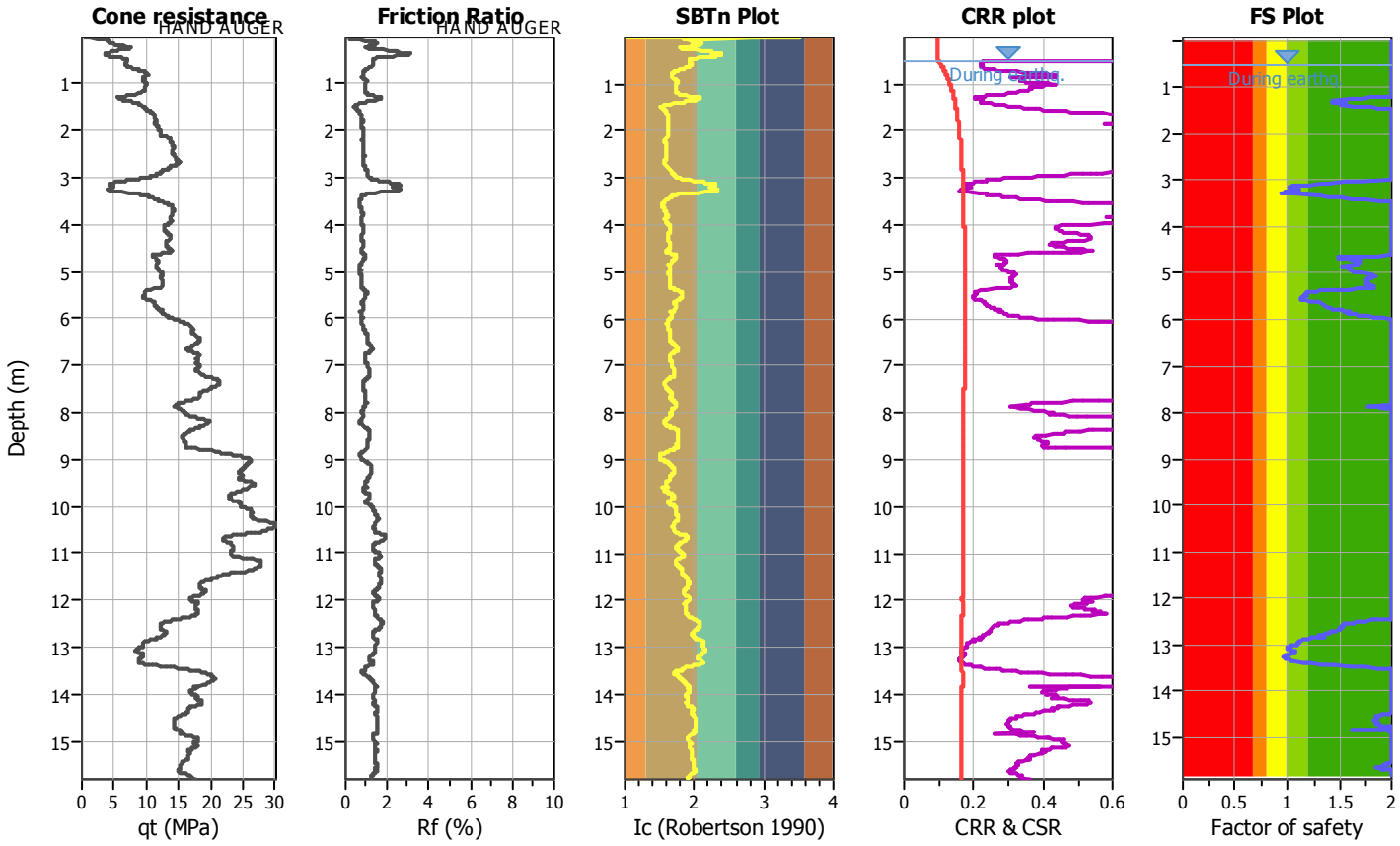
LIQUEFACTION ANALYSIS REPORT

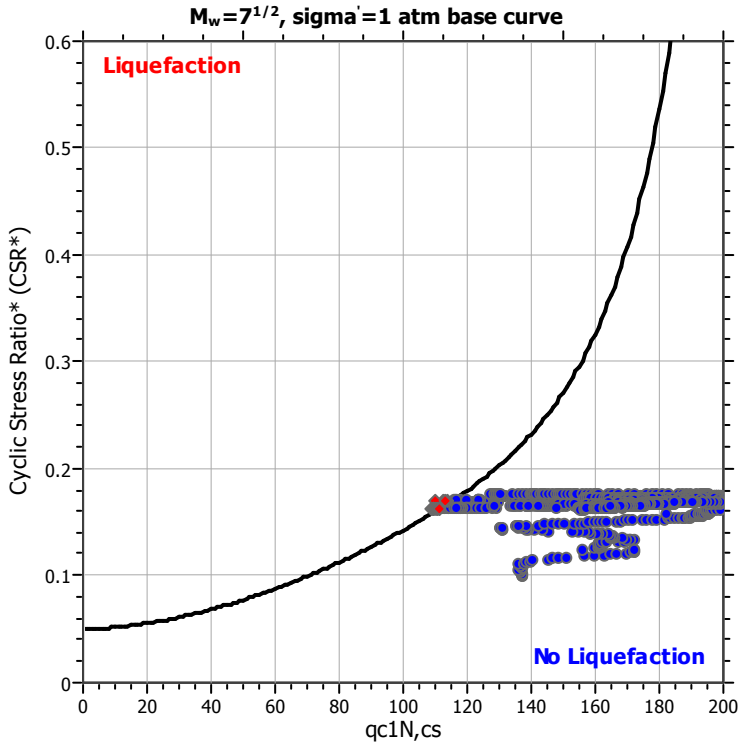
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

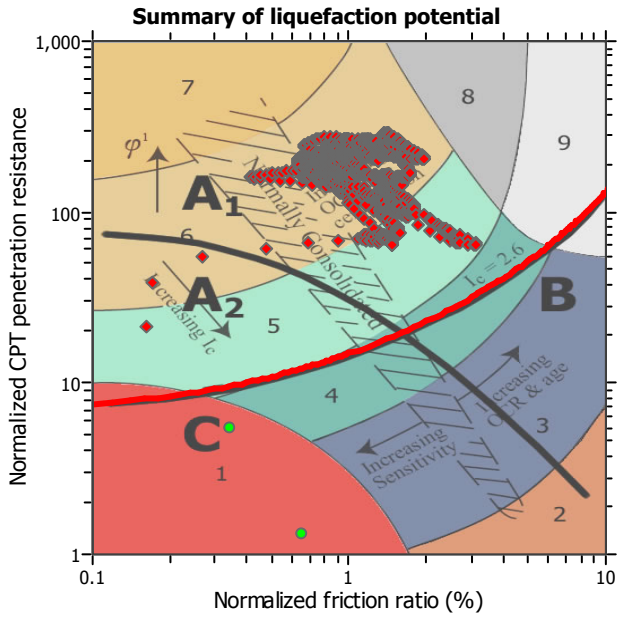
CPT file : CPTU001 SLS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_o applied:	Yes		

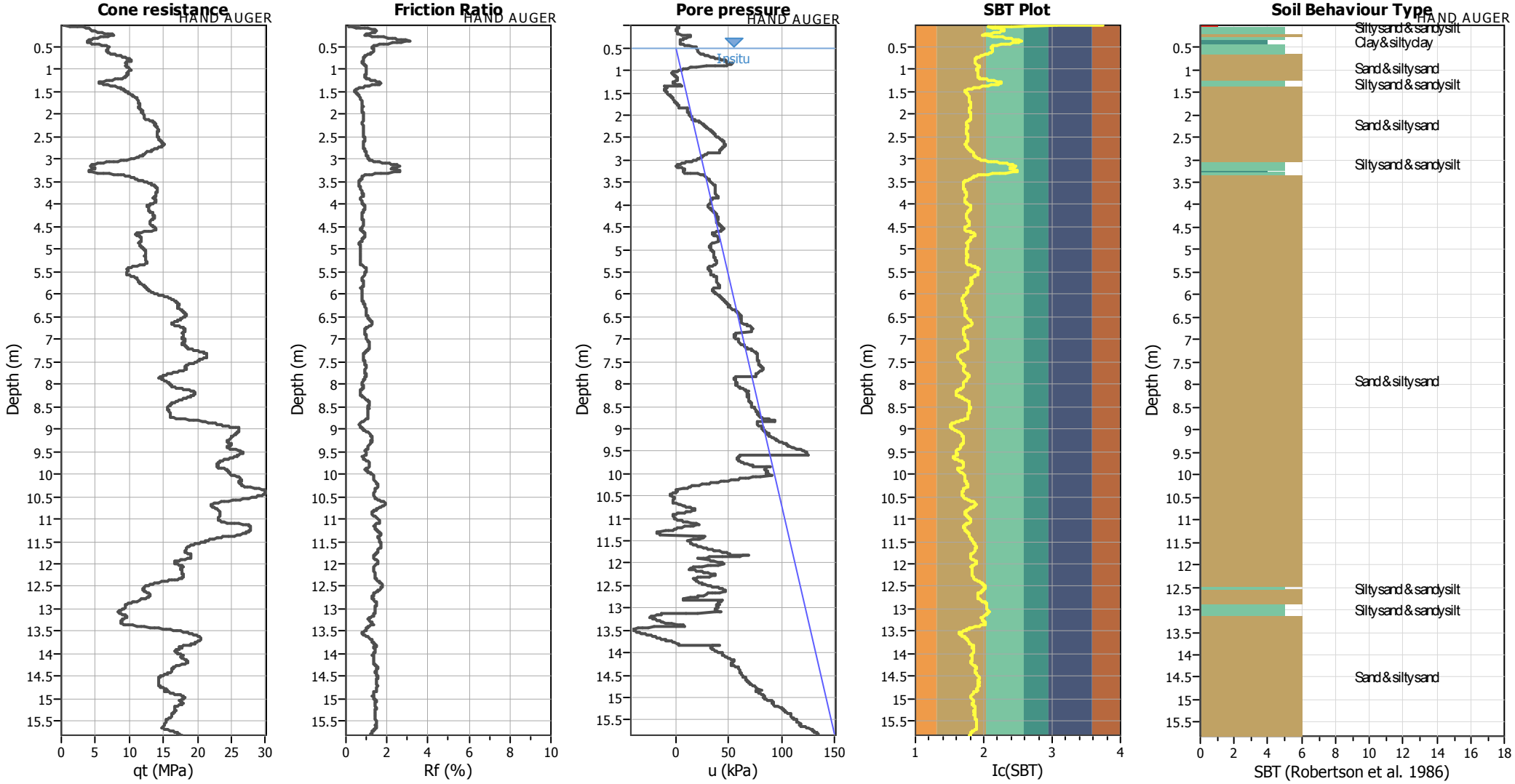






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CPT basic interpretation plots



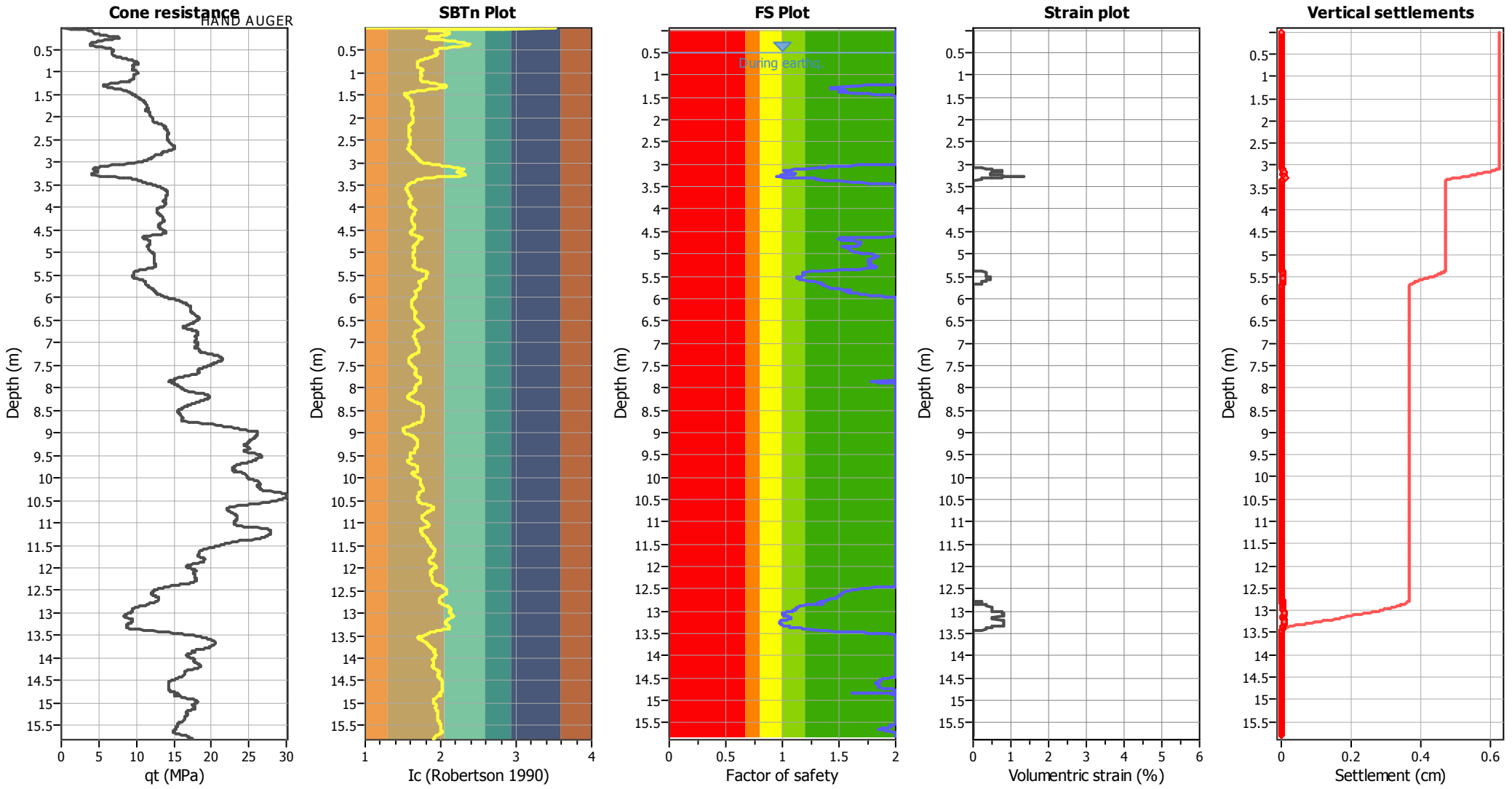
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Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
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Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	No
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SBT legend

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Estimation of post-earthquake settlements



Abbreviations

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I_c:	Soil Behaviour Type Index
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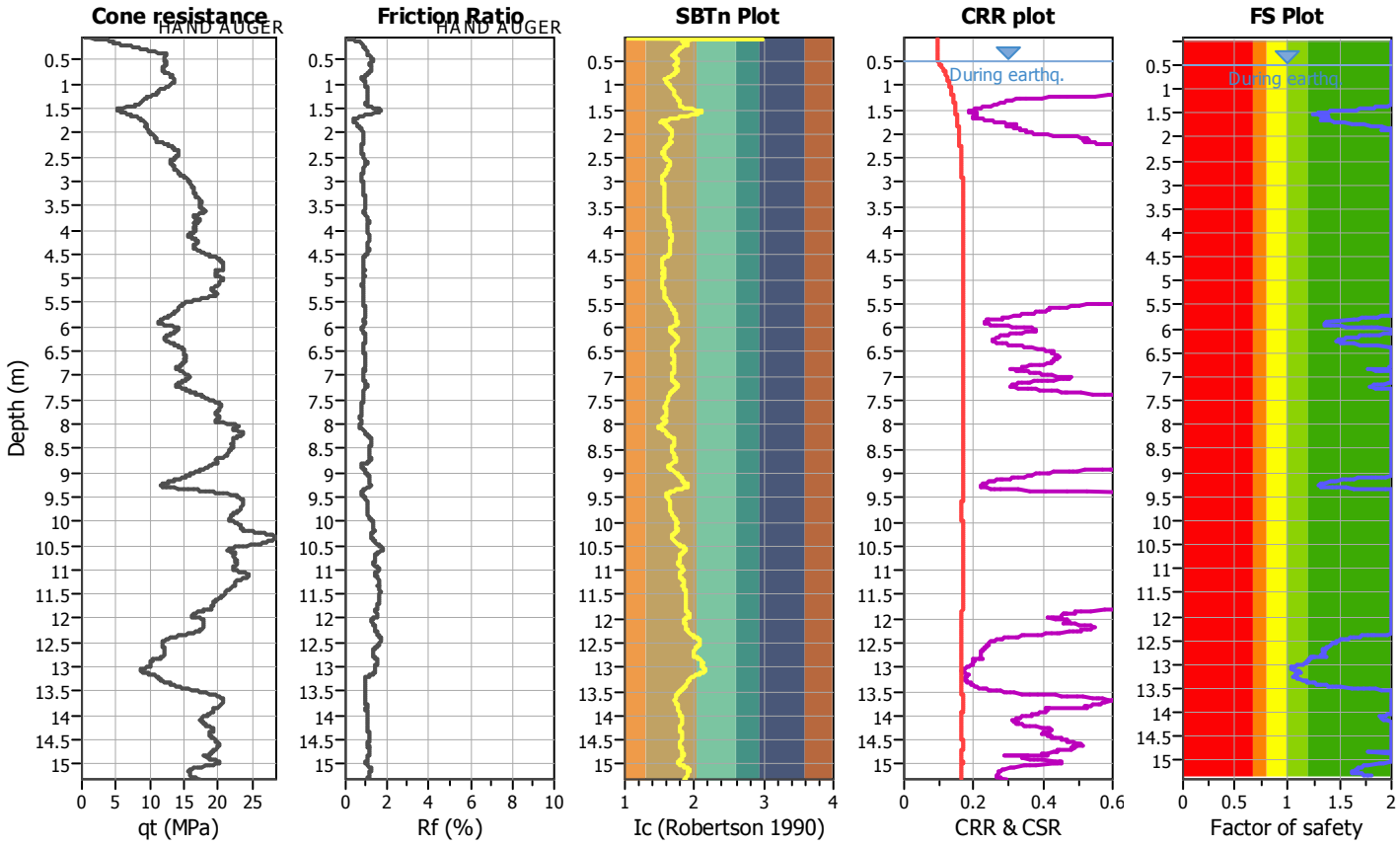
LIQUEFACTION ANALYSIS REPORT

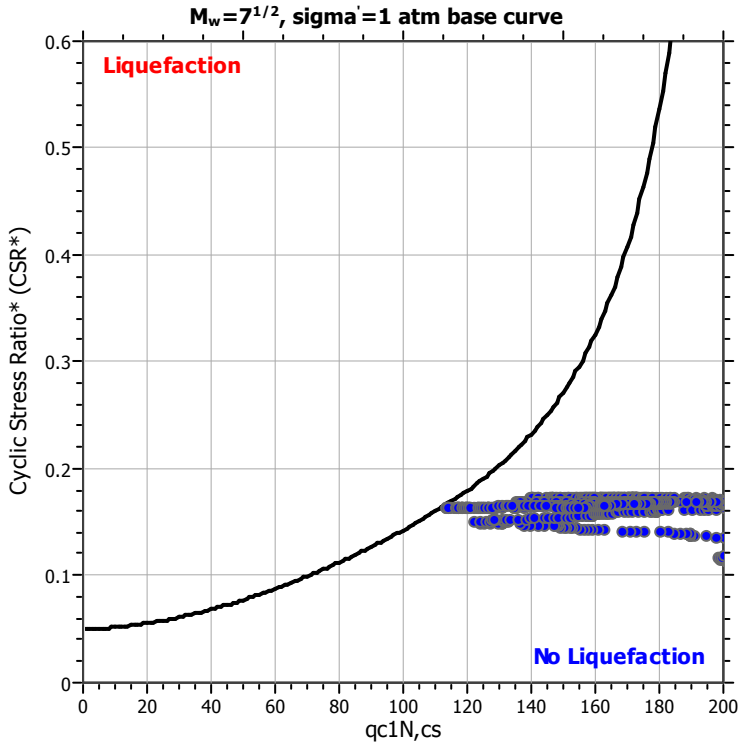
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

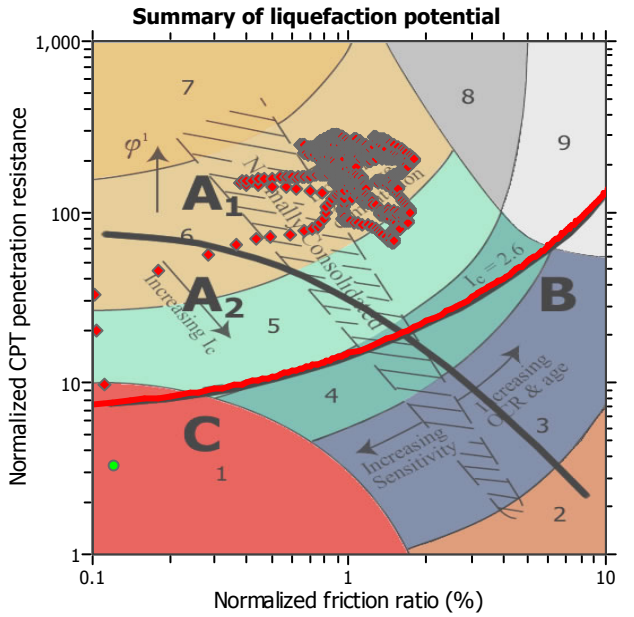
CPT file : CPTU002 SLS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
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Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_o applied:	Yes		

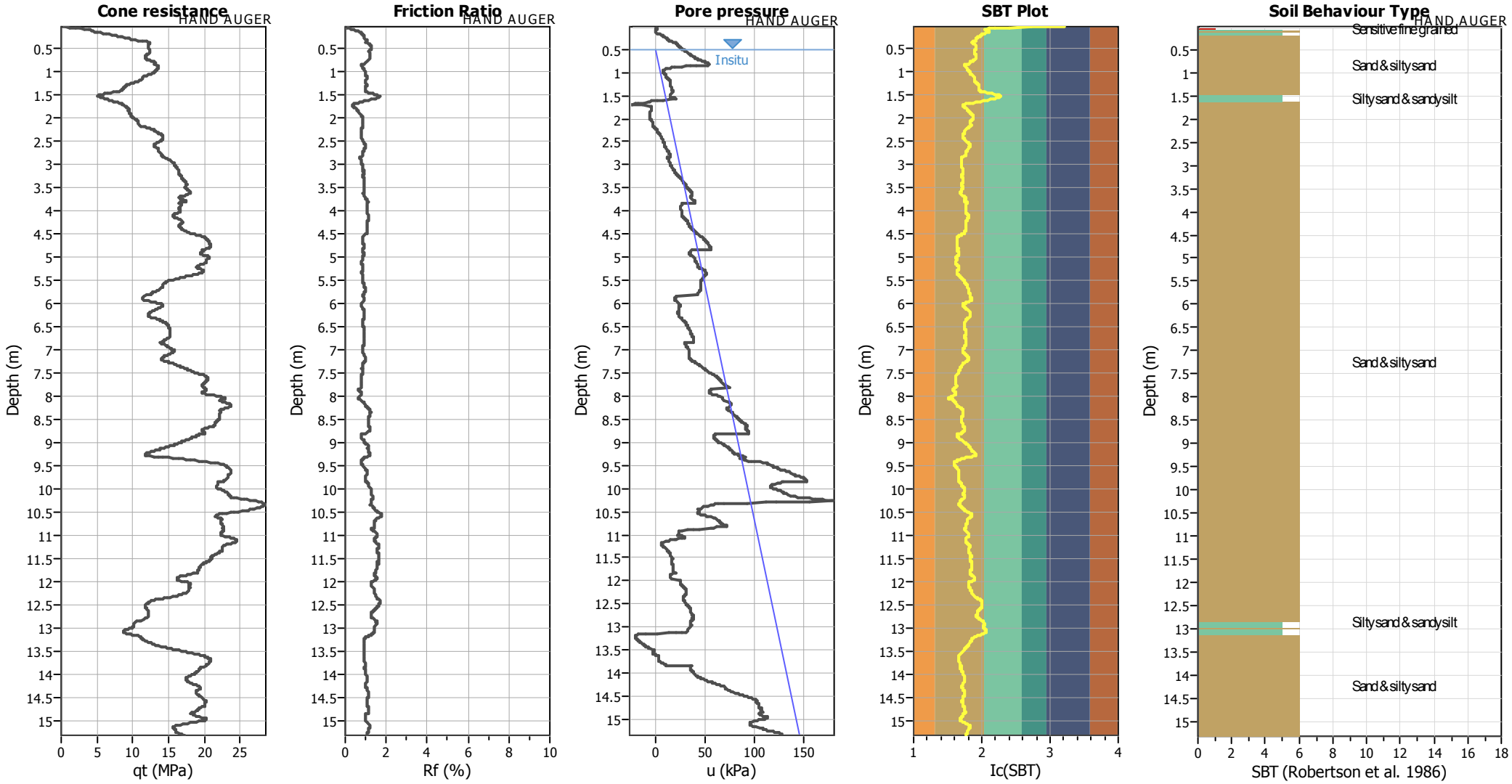






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CPT basic interpretation plots



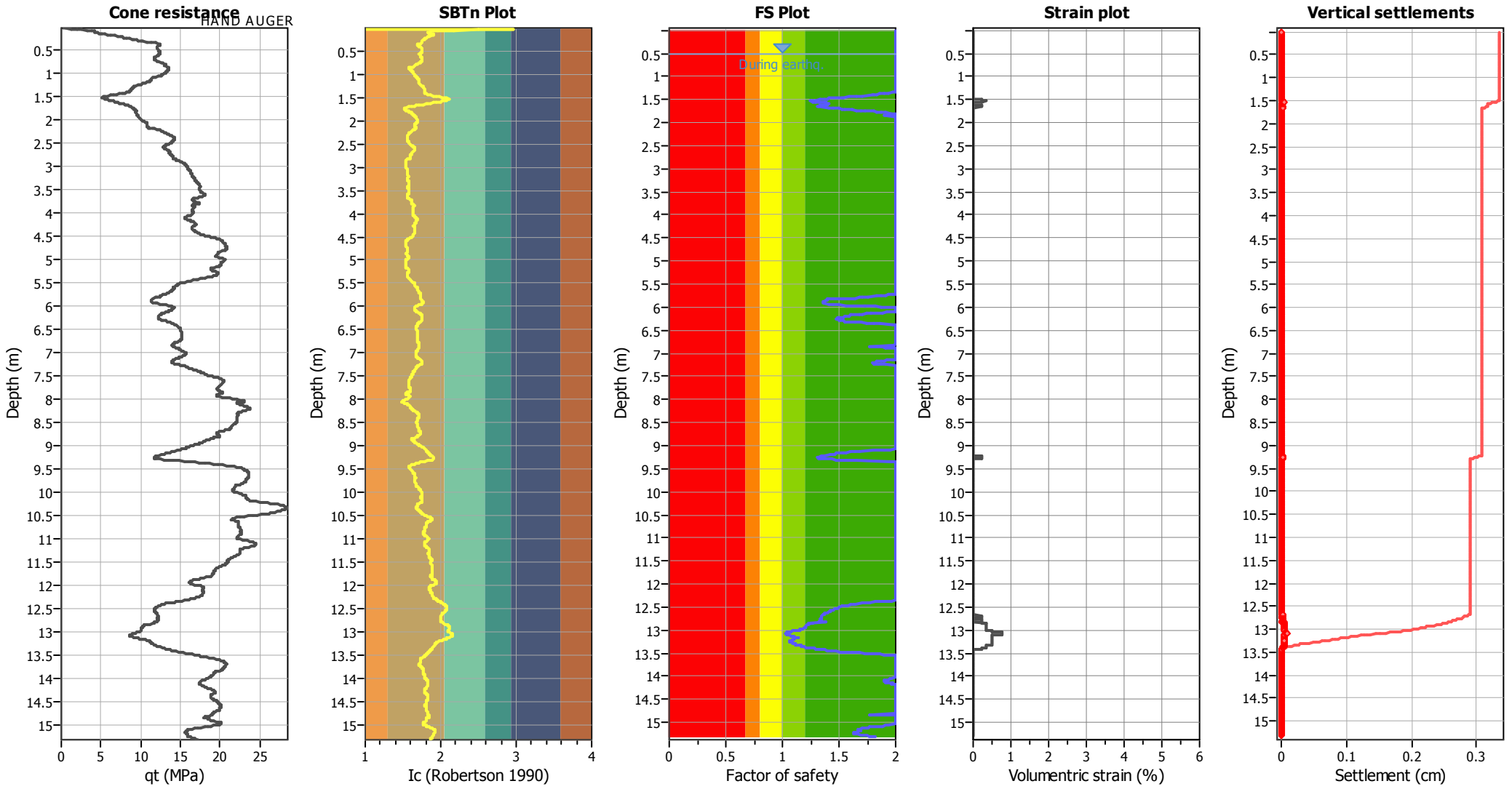
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Estimation of post-earthquake settlements



Abbreviations

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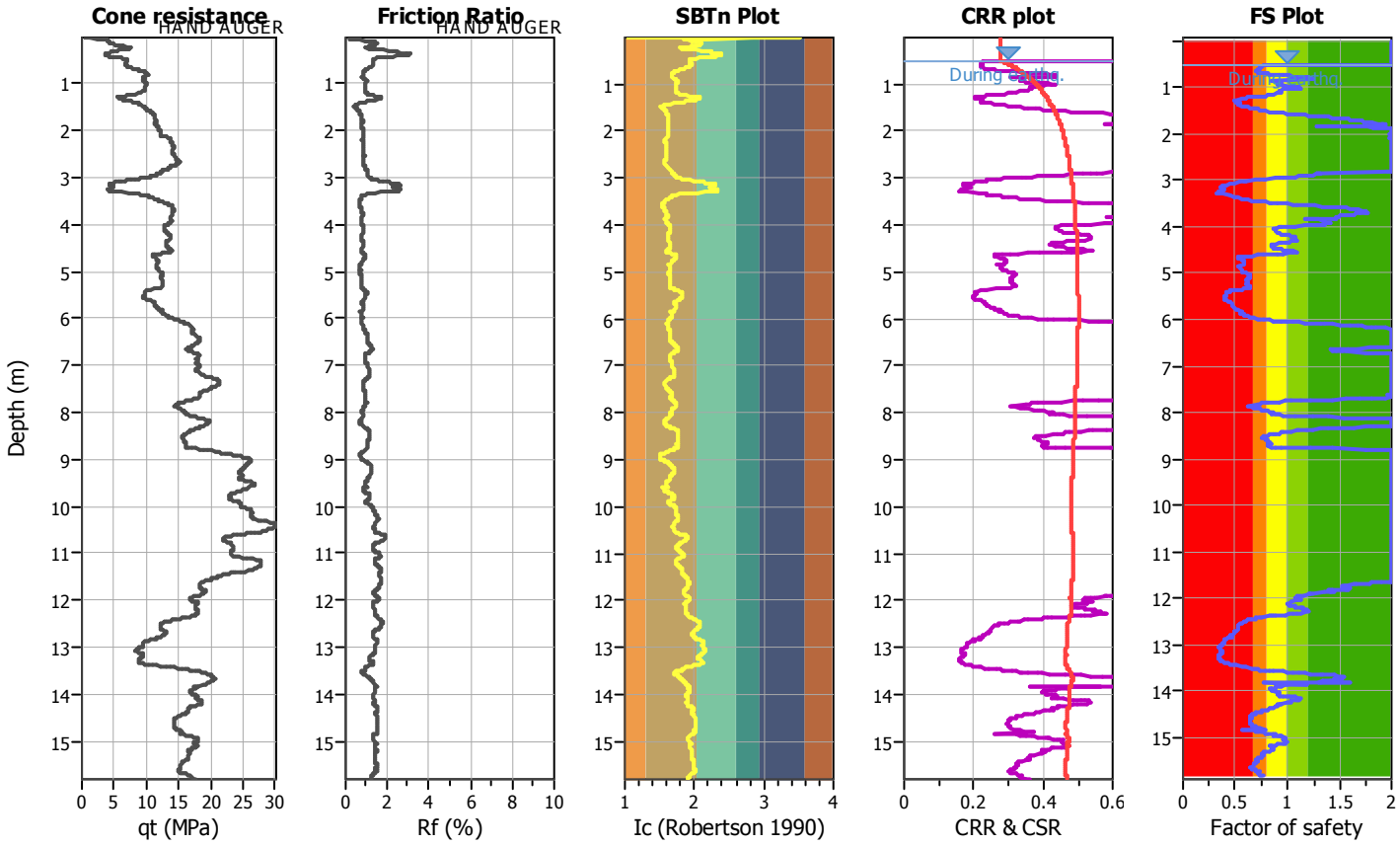
LIQUEFACTION ANALYSIS REPORT

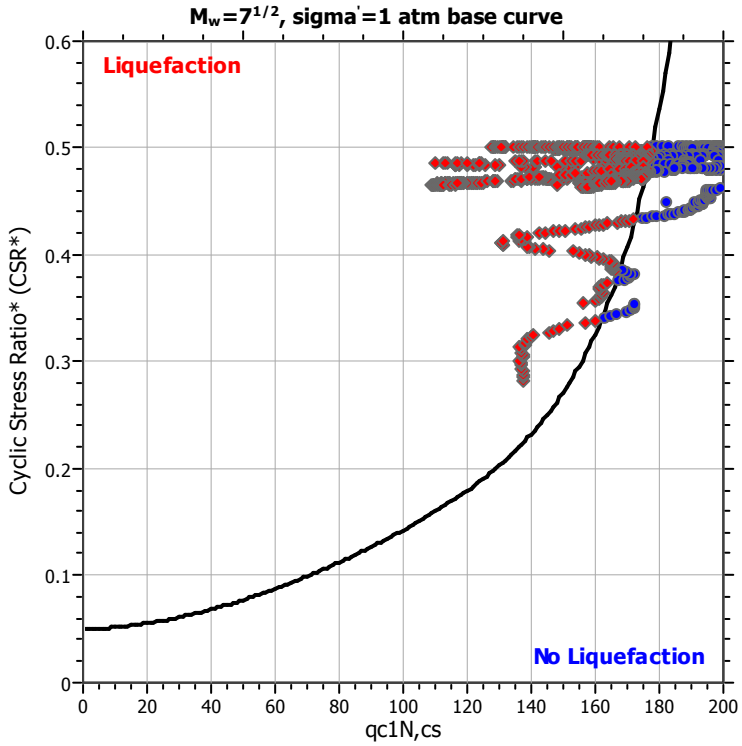
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

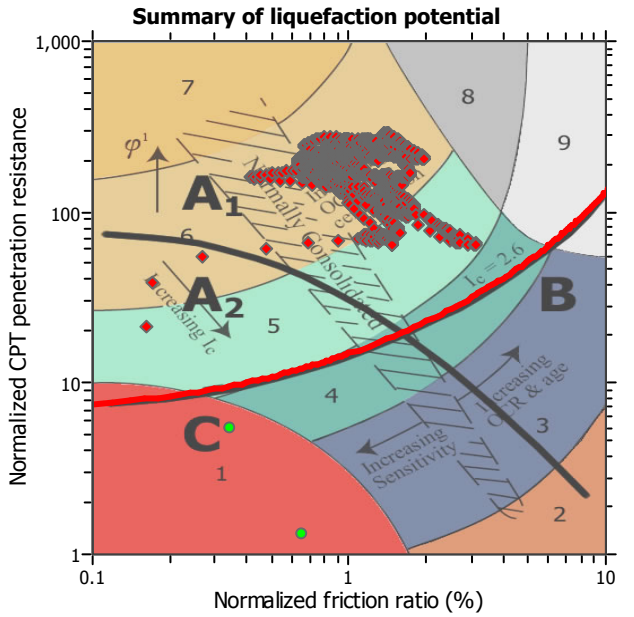
CPT file : CPTU001 ULS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.43	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

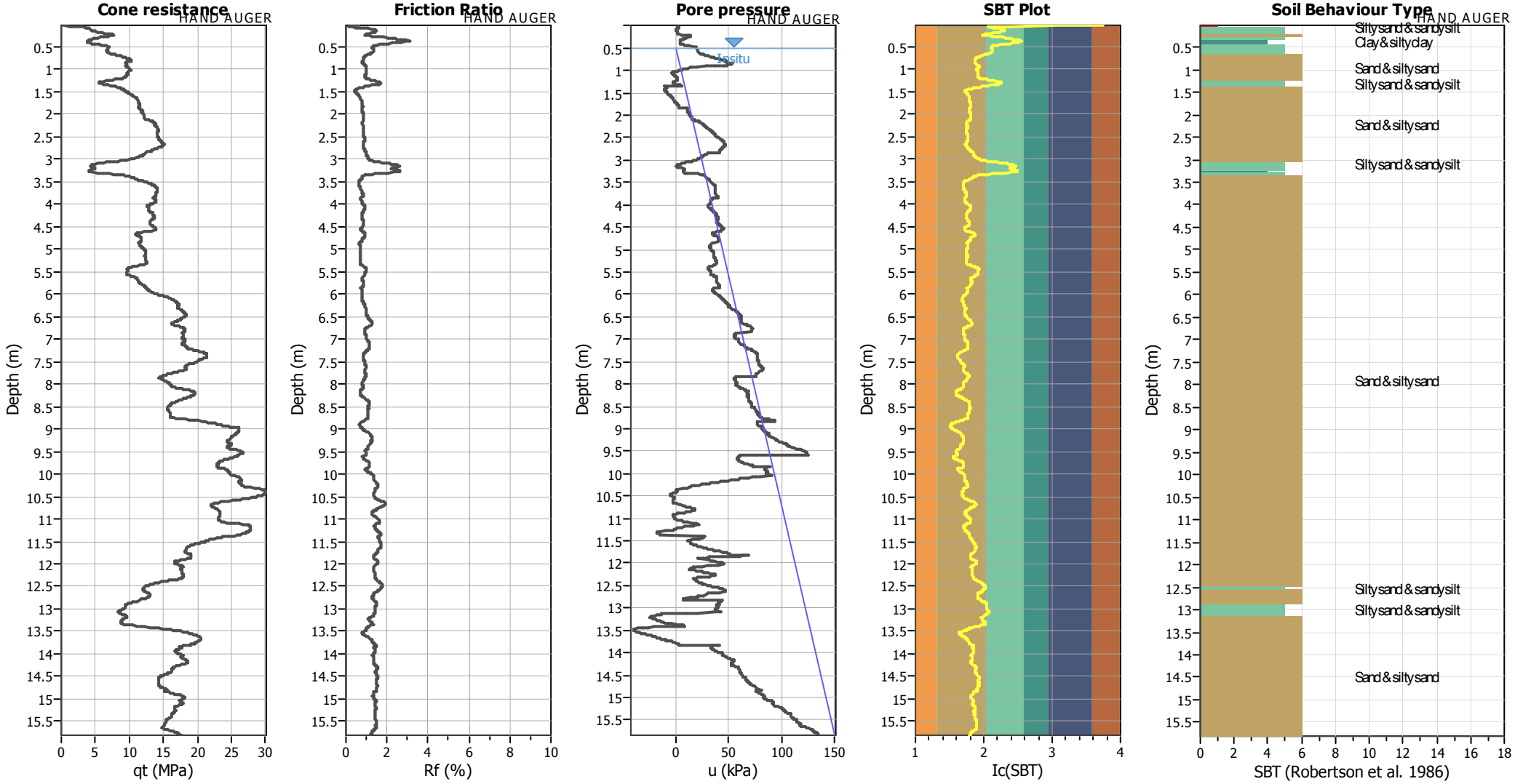






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
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CPT basic interpretation plots



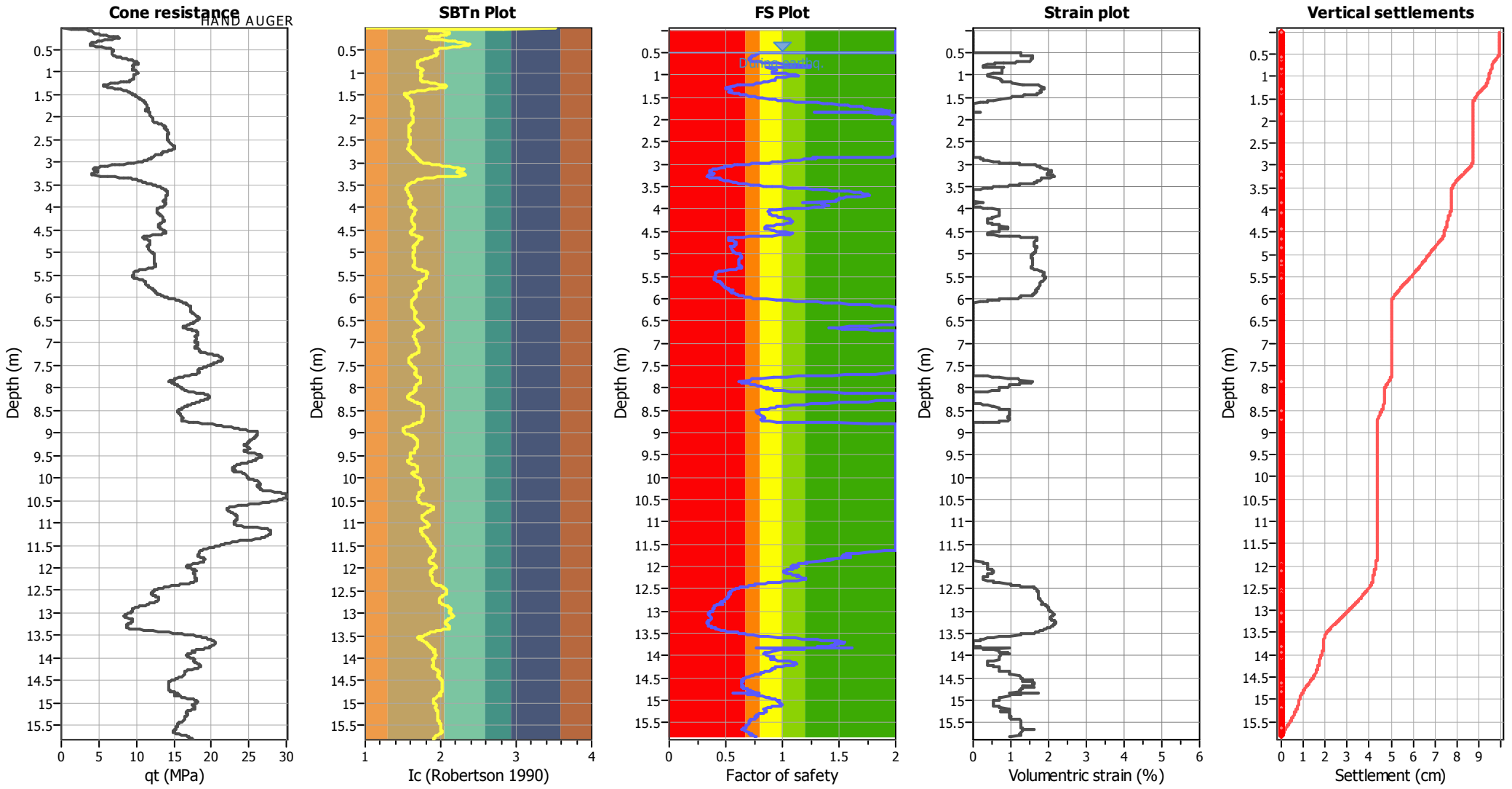
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SBT legend

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Estimation of post-earthquake settlements



Abbreviations

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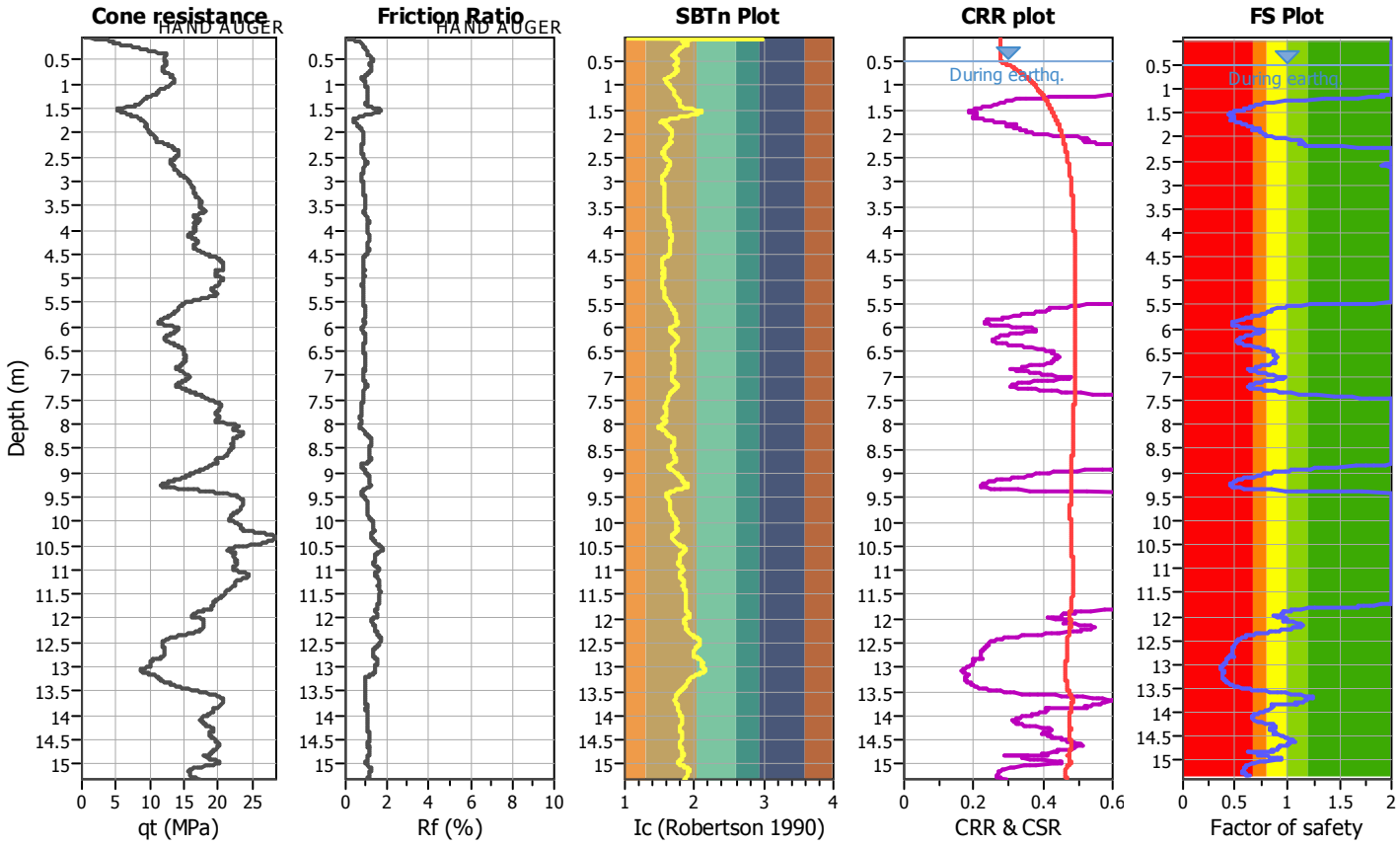
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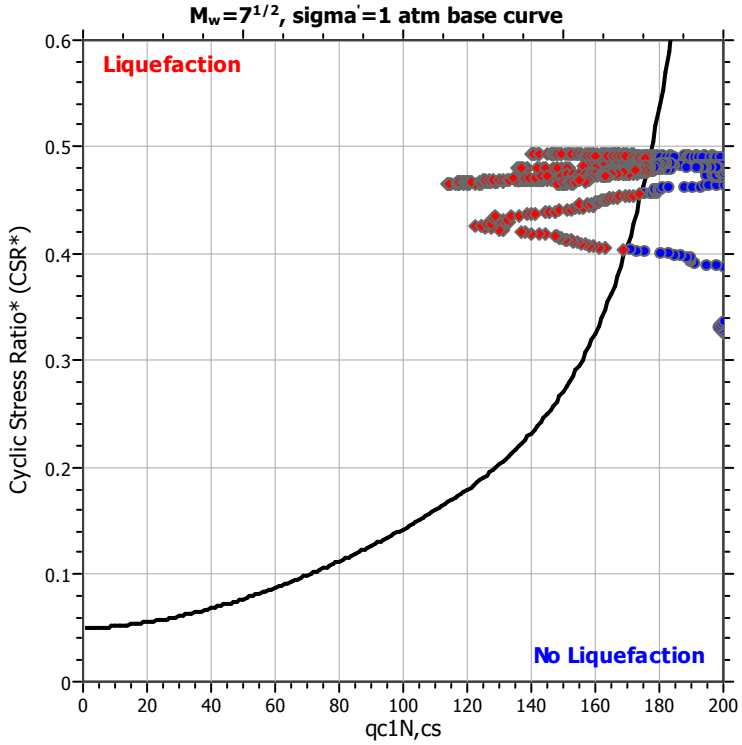
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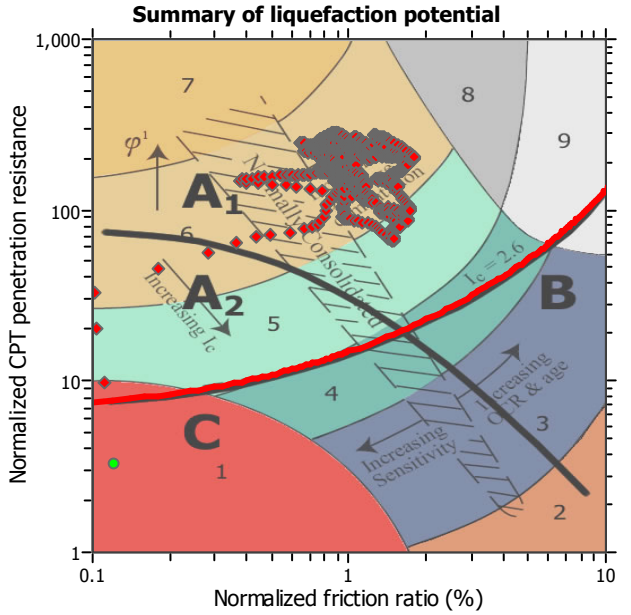
CPT file : CPTU002 ULS

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Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
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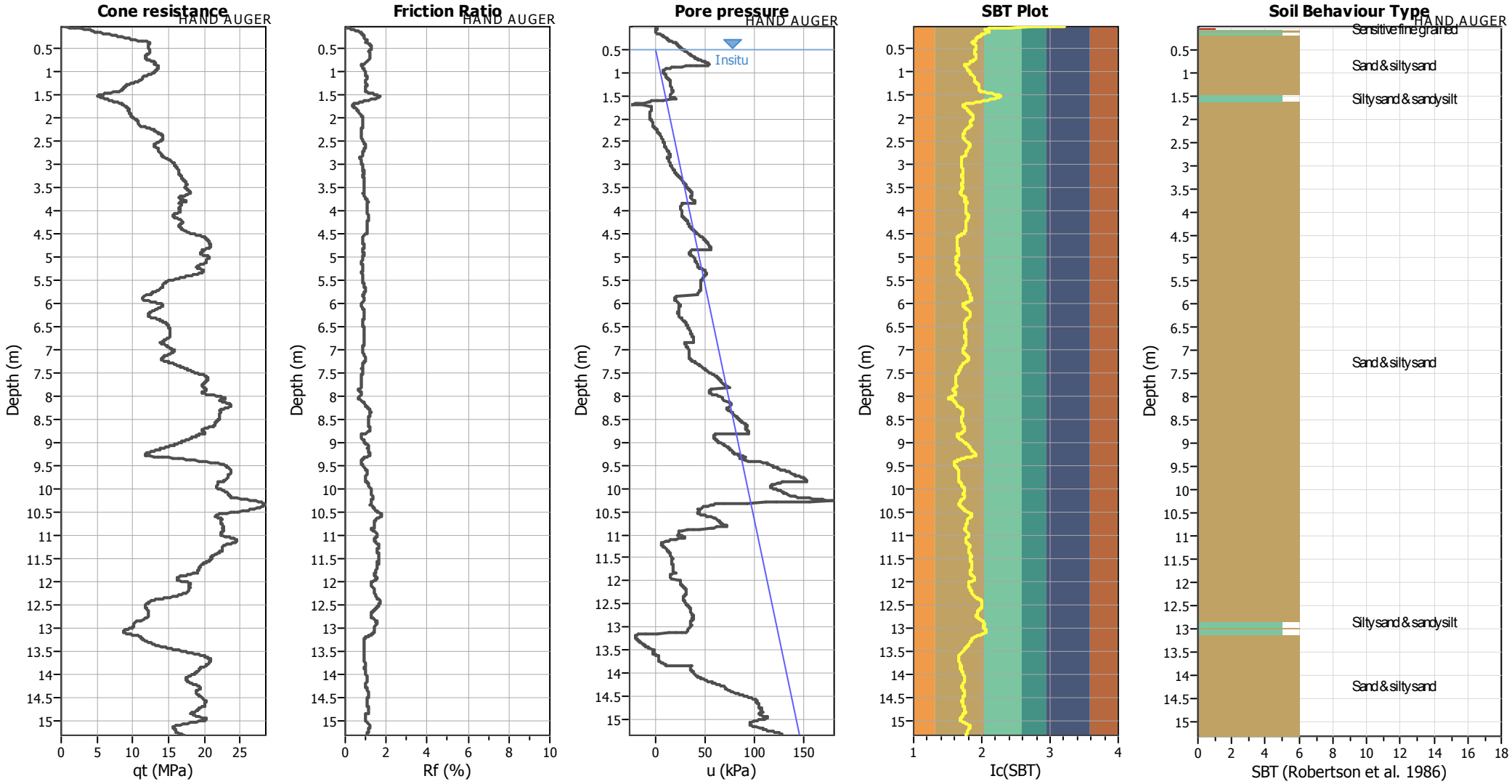






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CPT basic interpretation plots



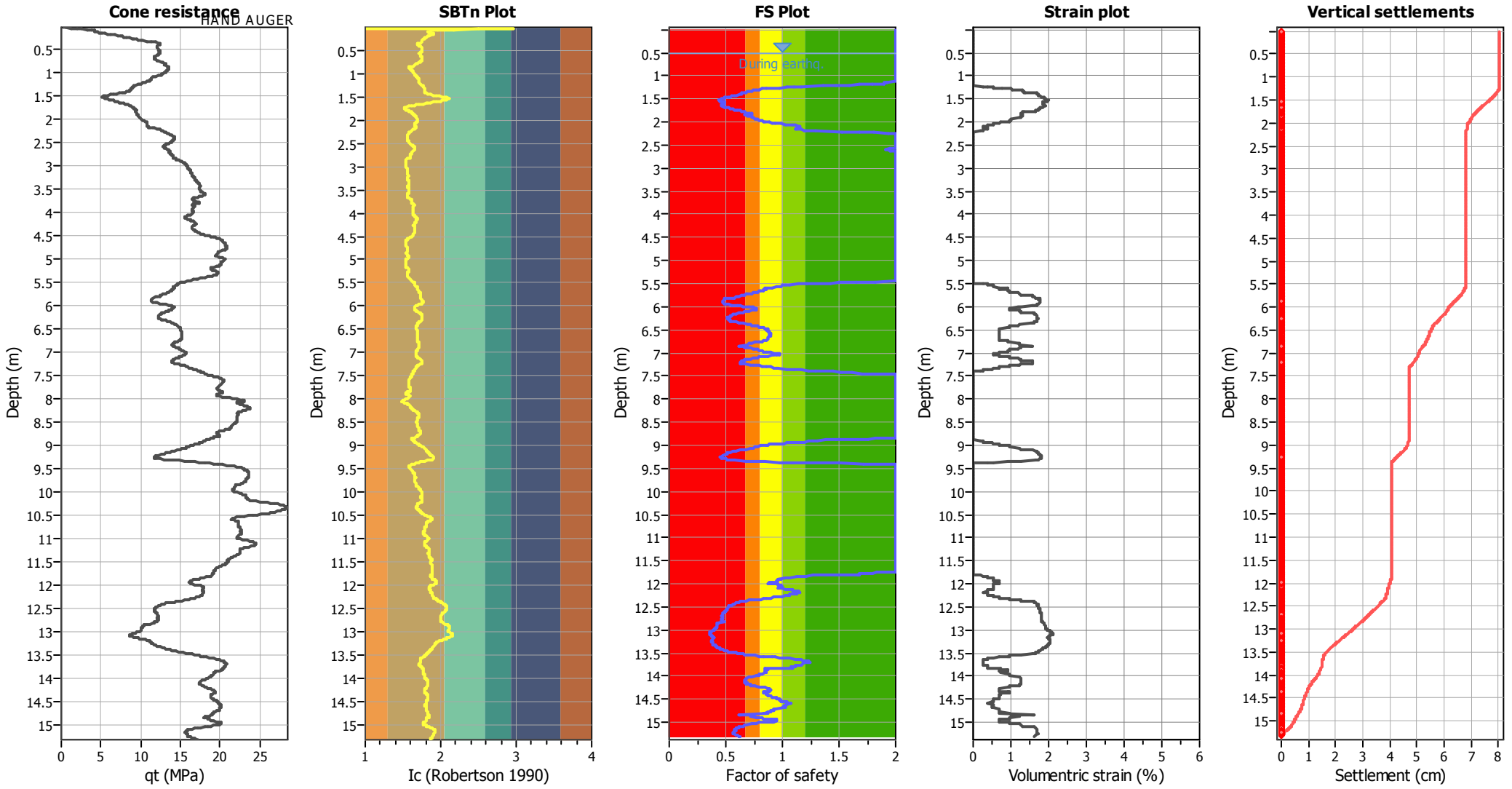
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Estimation of post-earthquake settlements

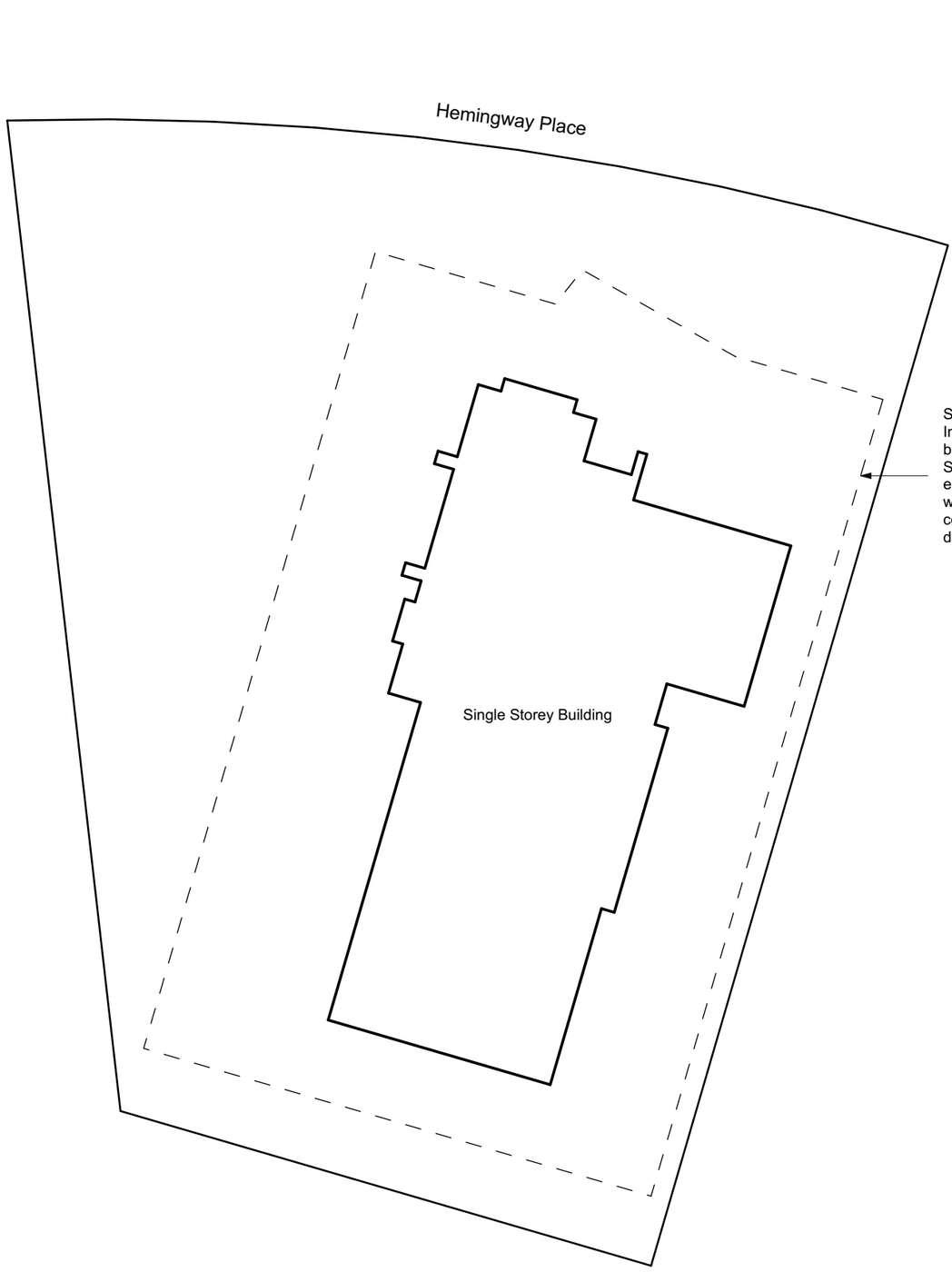


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SITE DESCRIPTION:

Legal Description:	Lot 35 DP 319911
Address:	16 Hemingway Place, Spencerville
Earthquake Zone:	Zone 2
Exposure Zone:	Zone C
Climate Zone:	Zone 3
Wind Region:	A
Lee Zone:	
Rainfall Intensity:	30 - 40
Wind Zone:	High
Land status:	Green Zone, Technical Category 3, blue
Geotechnical Report:	Kirk Roberts Consulting Engineers Ltd.
Project Number:	121195
Date:	04/06/2012



Site Plan/Sediment Control Plan

SCALE 1:200

Note:
If any asbestos is discovered during the proposed building work, the following steps are required to be taken. Prior to removal, please contact the Department of Labour, telephone 0800 209020 for information on appropriate methods of handling asbestos.

FRONTIER ENGINEERS
CIVIL, STRUCTURAL & REMEDIAL

PO Box 79183 Avonhead
Christchurch 8446

Unit 1, 35 Sheffield Crescent, Burnside 8053

Phone: 03 359 9192
Free Call: 0508 FRONTIER (0508 376 684)

Email: admin@frontierengineers.co.nz

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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3	1:200
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved	
Date	

Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Site Plan/Sediment Control Plan
Project Number	170057
Sheet	S01
Rev ID	00
Project Status	Consent Issue

Earthquake Repairs

16 Hemingway Place, Spencerville
Christchurch 8083
Liam Brewer

Structural Sheet Index		
Sheet ID	**Sheet Name**	**Revi ID**
S00	Cover Sheet	00
S01	Site Plan/Sediment Control Plan	00
S02	Ground Floor Pre-Level Floor Survey	00
S03	Ground Floor Jack Pad Approximate Locations	00
S04	Smoke Detector Location	00
S05	Details	00
S06	General Notes	00

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Email: admin@frontierengineers.co.nz

Project Number
170057

Sheet
S00

Rev ID
00

Drawing Title
Cover Sheet

REDUCED COPY

31 JAN 2003

2029657 (AN)
Seafield Park Stage 2

Registered Owner

I hereby certify that this plan was approved by the Christchurch City Council, pursuant to Section 223 of the Resource Management Act 1991,
on the ____ day of _____ 2002
subject to the granting or reserving of the easements set out in the Memorandum hereon.

Authorised Officer

Notes 1. There are no Lots 1–2, 42–79 on this plan.
2. Survey is Class I.

MEMORANDUM OF EASEMENTS

Nature	Servient Tenement Lot No.	Servient Tenement Shown	Dominant Tenement
Right to drain sewage & convey water, electric power & telephonic communications	11	J	Lot 12
Right to drain water in gross	3 4 5 6 7 8 9 10 30	A B C D E F G H K	Christchurch City Council

SCHEDULE OF AREAS

Description	Area
Residential Lots (Lots 3–41)	3.9928ha
Recreation Reserve to Vest in the Christchurch City Council (lot 80)	1393m²
Road to Vest in the Christchurch City Council (lot 81)	9404m²

Total Area 5.0725ha

Comprised in All C.T.43596

I, Christopher David Hawes of Christchurch being a person entitled to practise as a licensed cadastral surveyor, certify that –
(a) The Surveys to which this dataset relates are accurate, and were undertaken by me or under my direction in accordance with the Cadastral Survey Act 2002 and the Surveyor-General's Rules for Cadastral Survey 2002/1:
(b) This dataset is accurate, and has been created in accordance with that Act and those Rules.

(Signature) ..... (Date) .....

Field Book ..... p..... Traverse Book.....p.....
Reference Plans D.P's
S.O.
Examined ..... Correct .....

Approved as to Survey

...../...../..... Approving Surveyor

Deposited this ..... day of ..... 20....

Registrar-General of Land

File
Received
Instructions

717900mN
717750mN
717600mN
297400mE
297550mE
297700mE

D. P. 18192
D. P. 11576
D. P. 311069
D.P.311069

HEMINGWAY
CALYPSO PLACE
PLACE
Legal Road
Road to Vest in Christchurch City Council (Irreg width)
Recreation Reserve to Vest in Christchurch City Council
See Diag. W Sht 3
See Diag. X Sht 4
See Diag. V Sht 4
See Diag. Y Sht 3
See Diag. Sht 2

Certificates of Title Allocated

Lots 3–41
Lot 80

Sheet 1 of 4

LAND DISTRICT Canterbury
SURVEY BLK. & DIST. IV Christchurch
NZMS 261 SHT..... Record Map No.....

LOTS 3 – 41, 80 & 81 BEING SUBDIVISION OF LOT 86 D.P.311069

TERRITORIAL AUTHORITY Christchurch City
Surveyed by Davie, Lovell-Smith Limited S.3947
Scale 1:1000 Date Dec2002-Jan2003

A.J. BEVIN, SURVEYOR GENERAL, LAND INFORMATION, NEW ZEALAND.

L.I.N.Z. FORM D15 "APPROVED CH 98/2"

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFT

22 March 2017

Frontier Engineers Limited
PO Box 79183
Avonhead
Christchurch 8446

Dear Sir/Madam

Building Act exemption: BCN/2017/1885
16 Hemingway Place Spencerville
Relevel existing floors

Building Act exemption approved

We have considered your application, under Schedule 1, clause 2(a) of the Building Act 2004, for exemption from the requirement to obtain building consent.

We are satisfied that the completed work is likely to comply with the building code, provided it is carried out in accordance with your proposal. Therefore, your application has been approved.

You can download stamped copies of your proposal documents from onlineservices.ccc.govt.nz. Please forward copies to the building owner.

Advice

- All building work must comply with the Building Act, building code, and all other applicable laws.
- This letter does not provide any approval that may be required, other than that stated.
- This approval is valid if the work is completed within two years of **22 March 2017.**
- Ensure all works also comply with the Christchurch City Plan, contact the duty planner on 941 8999 with any queries on this.
- **Please ensure all quality assurance procedures offered in the application are followed, including engineer construction monitoring and written sign off via producer statements. Construction Review Statement (PS4) and supporting evidence (Construction statements, site records/reports, photographs etc) should be provided to council on completion – propertyfileinfo@ccc.govt.nz**

As the Council does not inspect the work, it is recommended that completion verification documents be supplied to the Council on completion of the work. These will be placed on the file for the property, and may prove beneficial for future enquiries (for example, land information memoranda (LIMs) or property file requests).

Civic Offices, 53 Hereford Street, Christchurch 8011
PO Box 73013, Christchurch 8154
Phone: (03) 941-8999, Fax: (03) 941-8792
www.ccc.govt.nz

Yours sincerely

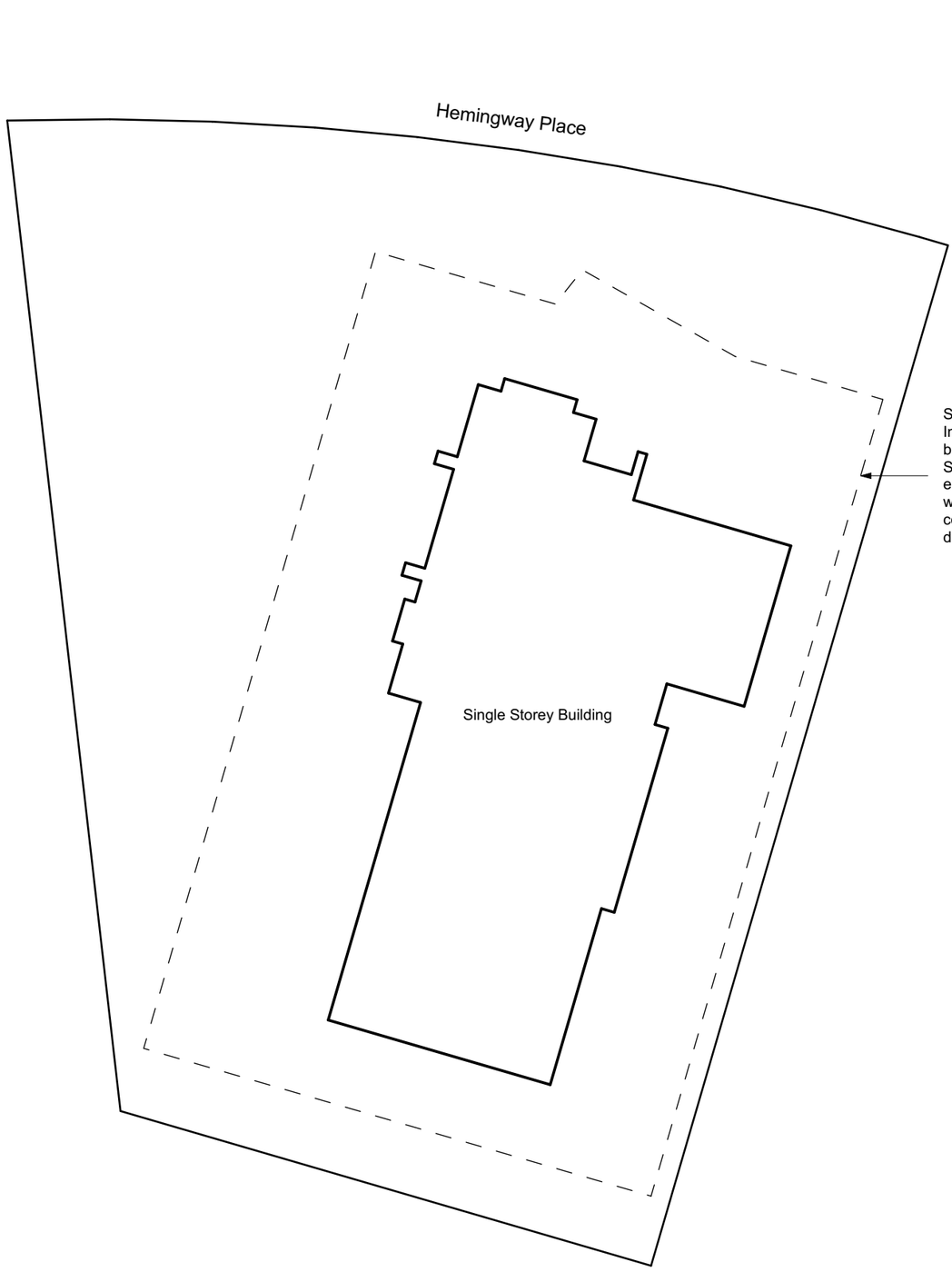


Andrew Eames
Building Control Officer
Building Certification & Exemption Team
Consenting & Compliance Group

Civic Offices, 53 Hereford Street, Christchurch 8011
PO Box 73013, Christchurch 8154
Phone: (03) 941-8999, Fax: (03) 941-8792
www.ccc.govt.nz

SITE DESCRIPTION:

Legal Description:	Lot 35 DP 319911
Address:	16 Hemingway Place, Spencerville
Earthquake Zone:	Zone 2
Exposure Zone:	Zone C
Climate Zone:	Zone 3
Wind Region:	A
Lee Zone:	
Rainfall Intensity:	30 - 40
Wind Zone:	High
Land status:	Green Zone, Technical Category 3, blue
Geotechnical Report:	Kirk Roberts Consulting Engineers Ltd.
Project Number:	121195
Date:	04/06/2012



Site Plan/Sediment Control Plan

SCALE 1:200

Note:
If any asbestos is discovered during the proposed building work, the following steps are required to be taken. Prior to removal, please contact the Department of Labour, telephone 0800 209020 for information on appropriate methods of handling asbestos.

FRONTIER ENGINEERS
CIVIL, STRUCTURAL & REMEDIAL

PO Box 79183 Avonhead
Christchurch 8446

Unit 1, 35 Sheffield Crescent, Burnside 8053

Phone: 03 359 9192
Free Call: 0508 FRONTIER (0508 376 684)

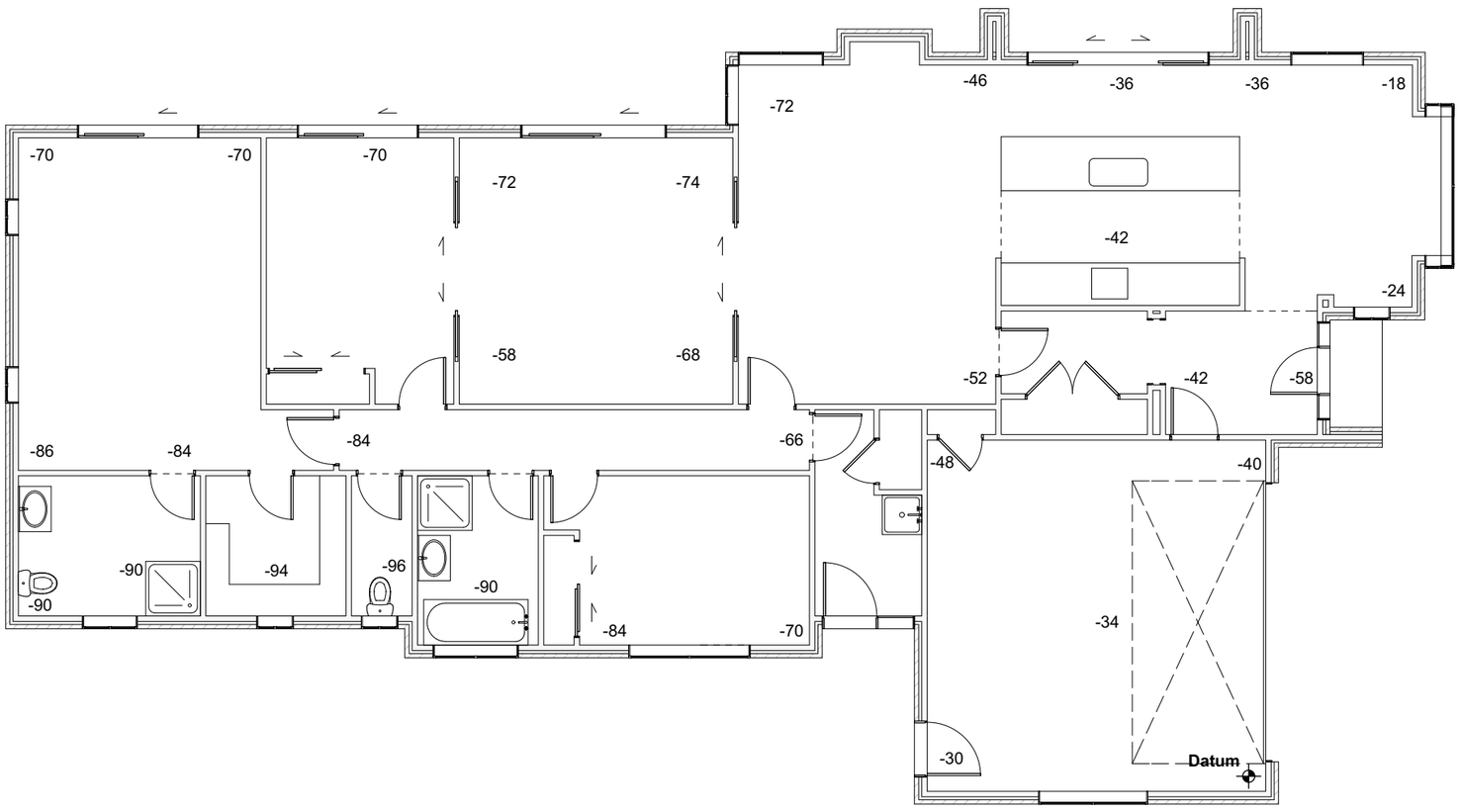
Email: admin@frontierengineers.co.nz

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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3	1:200
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved	
Date	

Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Site Plan/Sediment Control Plan
Project Number	170057
Sheet	S01
Rev ID	00
Project Status	Consent Issue



Ground Floor Pre-Level Survey

SCALE 1:100

Legend:

±X	Indicates floor level above or below datum
- - - - - - -	Indicates change in floor type

Notes:

1. Following relevelling the floor at each unit shall have
   i. maximum differential height of 50mm overall
   ii. 10mm within any room.
   iii. have a maximum slope of 1:200 (0.5%) between any to points more than 2m apart.
2. All levels shown on this plan are relative to the indicated datum.
3. All floor levels locations and slopes approximate

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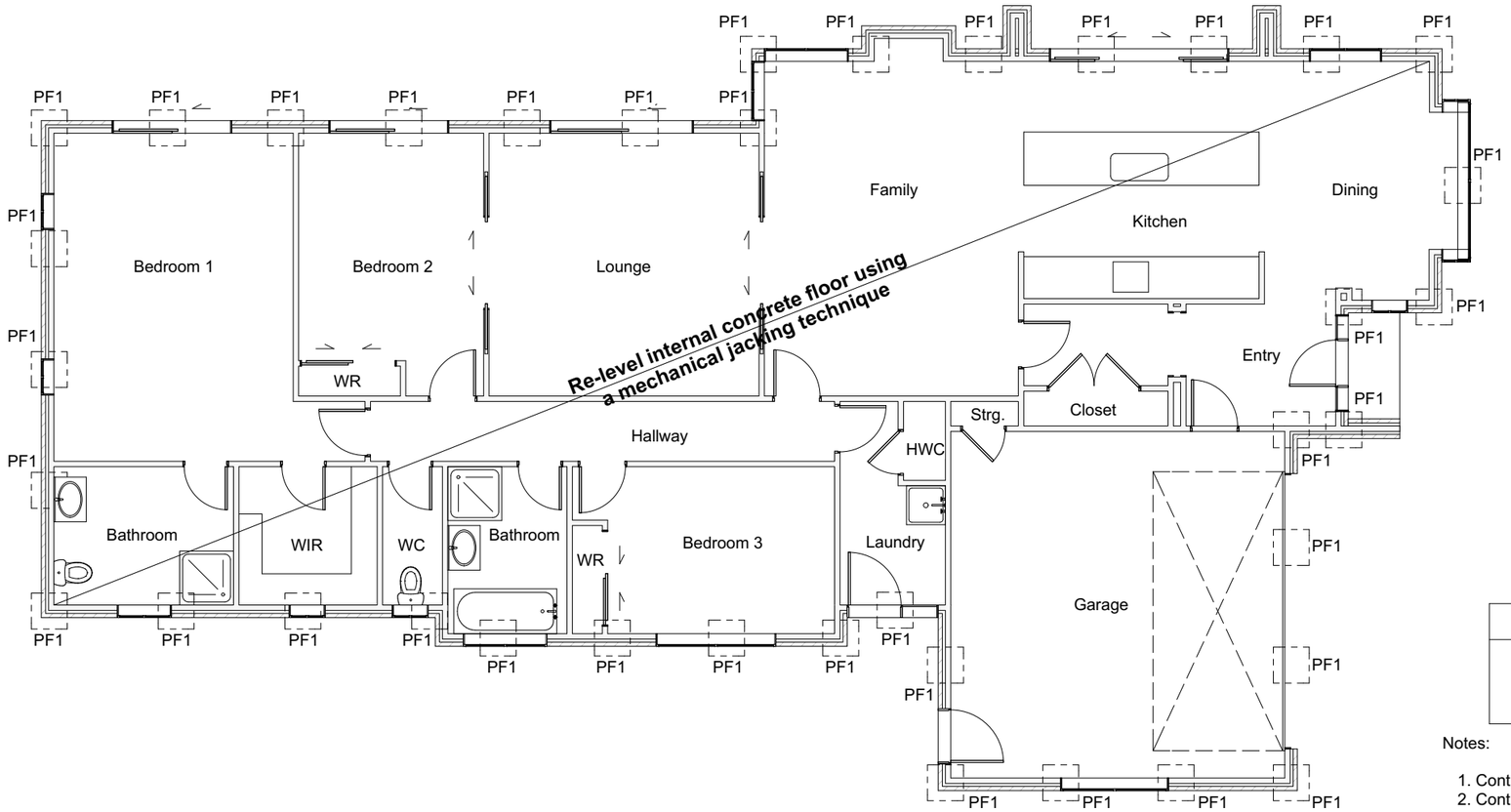
Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Project Number: 170057

Sheet: S02
Rev ID: 00

Drawing Title: Ground Floor Pre-Level Floor Survey

Project Status: Consent Issue



Jack Pad Approximate Locations

SCALE 1:100

Schedule	
PF1	600x600sq. concrete pad footing at 2.0m crs*

Notes:

1. Contractor is to confirm all dimensions on site before commencing work
2. Contractor is to confirm floor levels at each pile or bearer support location to be packed.
3. Pad target depth is 0.5m min. below ground level.
4. Disconnect and reconnect services as required.
5. Ensure guttering falls to downpipes after relevelling.
6. Ensure all doors open and close properly.
7. All work to be carried out in accordance with NZS3604-2011.
8. Contractor to make all walls plumb.
9. Cracks in all concrete structures are to be repaired using proprietary product crack bond 'LR321G' supplied by adhesives technology corporation or approved equivalent.
   Cracks to be repaired up to a maximum of 5mm and any cracks of more than 5mm are to be repaired by using Helibar or any approved equivalent.
   Product to be installed strictly in accordance with manufacturers instructions

* Please note, positions of concrete pads are an approximate location setting

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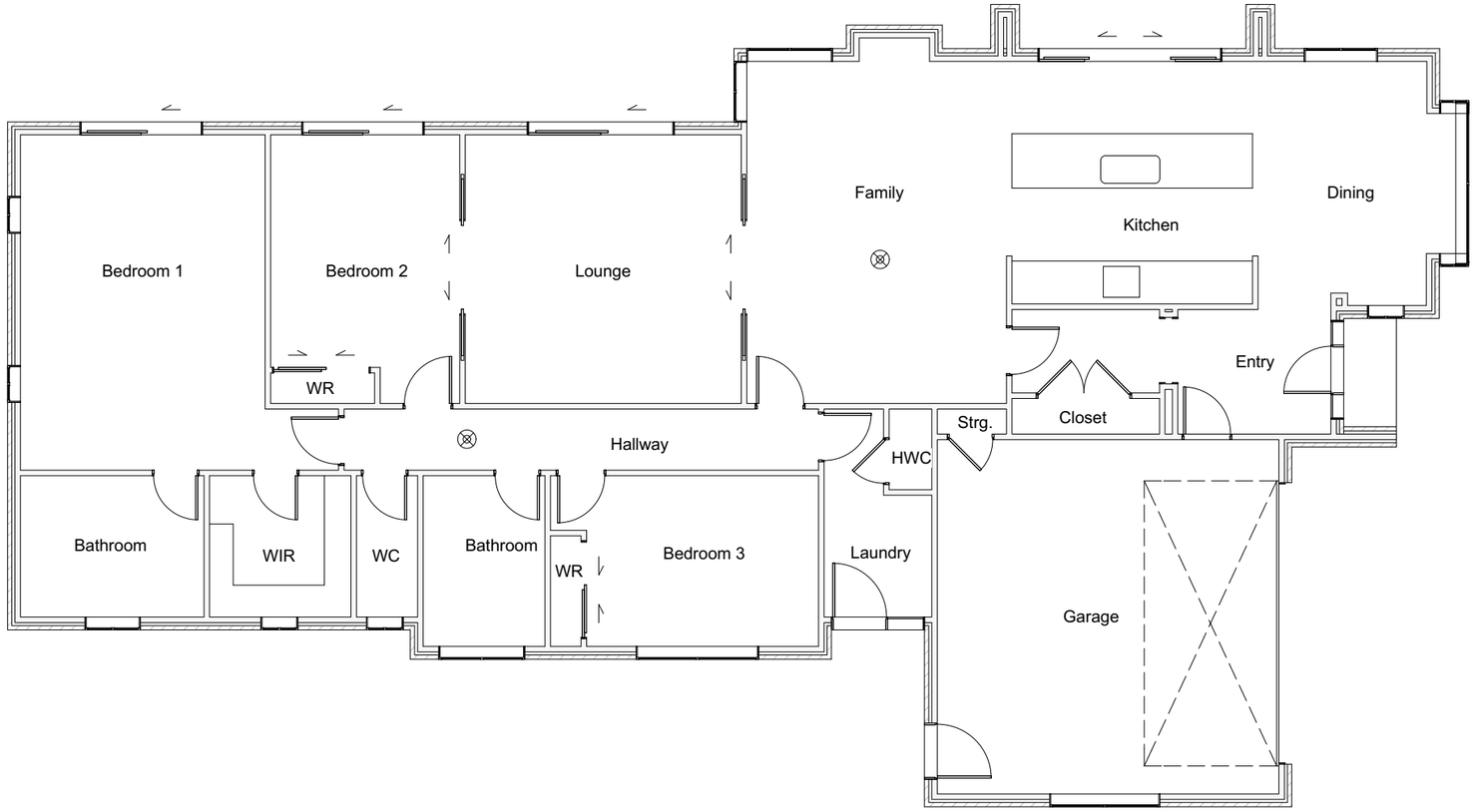
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Rev ID	Description	Date
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Scale at A3	1:100
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved Date	

Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Ground Floor Jack Pad Approximate Locations
Project Number	170057
Sheet	S03
Rev ID	00
Project Status	Consent Issue



Smoke Detector Location

SCALE 1:100

Schedule	
⊗	Smoke Detector

Note:
All smoke detectors will be checked for complience with F7/AS1, and if non-compliant will be moved and/or installed to meet compliance as per drawing.

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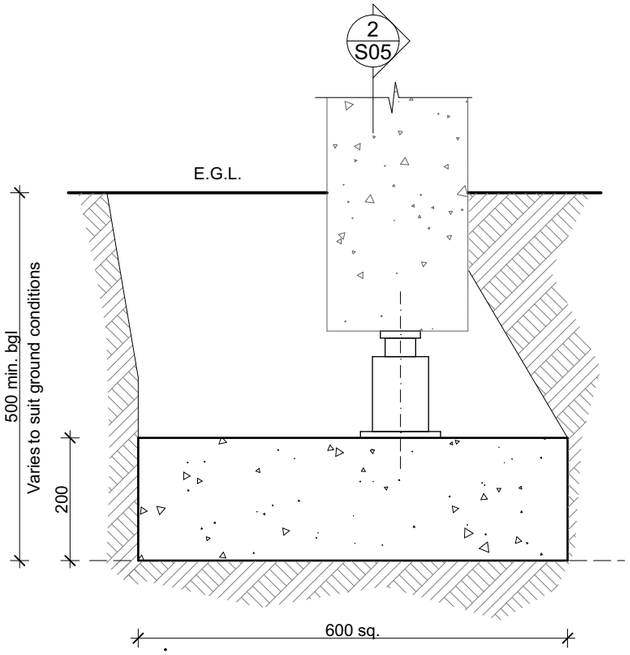
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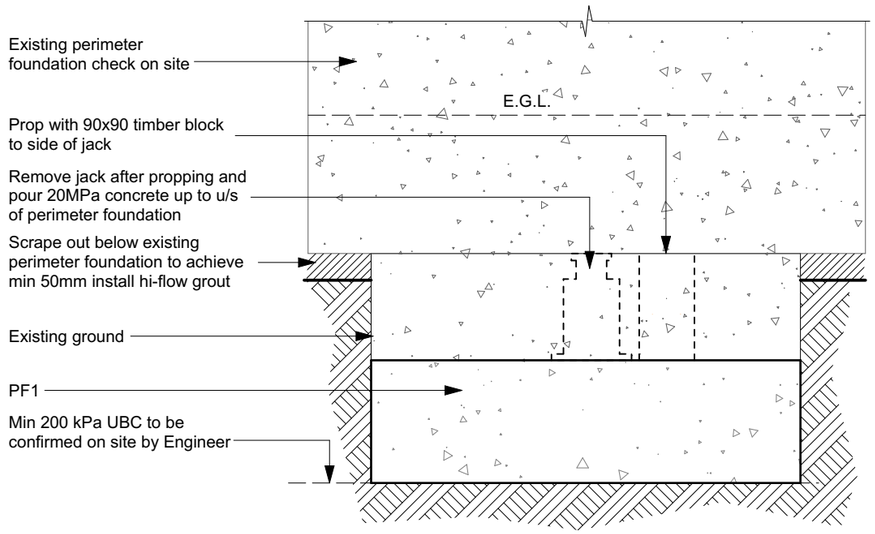
Scale at A3	1:100
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved	
Date	

Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Smoke Detector Location
Project Number	170057
Sheet	S04
Rev ID	00
Project Status	Consent Issue



1 - Re-levelling Pad Detail

SCALE 1:10



2 - Section

SCALE 1:10

Schedule	
PF1	600x600sq. concrete pad footing at 2.0m crs.

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Scale at A3: 1:10
Date: 16/03/2017
Design by: DC
Drawn by: DC
Approved
Date

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Project Number: 170057
Sheet: S05
Rev ID: 00
Drawing Title: Details
Project Status: Consent Issue

GENERAL

G1. Read these drawings in conjunction with all architectural and other working drawings, specifications and with such other written instructions as may be issued during the course of the contract.
G2. Provide all workmanship and materials in accordance with the requirements of the current editions of the NZ Building Act, the NZ Building Code, the New Zealand Standards and the by-laws and ordinances of the relevant building consent authority.
G3. Comply as the builder, with requirements of the workplace health & safety act.
G4. Refer any conflict between these notes, the specification, the drawings or any other relevant documents to the engineer for decision prior to proceeding with the work.
G5. Do not obtain dimensions by scaling the drawings. For setting out dimensions and levels refer to the architectural drawings.
G6. The builder is responsible for the provision of all shoring to maintain the stability and integrity of excavations and adjacent structures. Provide details, for review by the Engineer, of any necessary temporary works, including shoring, prior to commencing construction.
G7. During construction it is the builder's responsibility to maintain the structure in a stable condition and to ensure no part is overstressed.
G8. The design and drawings are copyright and may not be used or reproduced in whole or in part without the written permission of the Engineer.
G9. Fire-resistance levels (FRL's) required for the various structural elements must be confirmed by the Building Surveyor or Architect.

LOADINGS

L1. Superimposed floor loads are generally in accordance with AS/NZS 1170.1 and specifically:

	1.5 kPa	Generally
	2.0 kPa	Balconies
	2.5kPa	Stairs

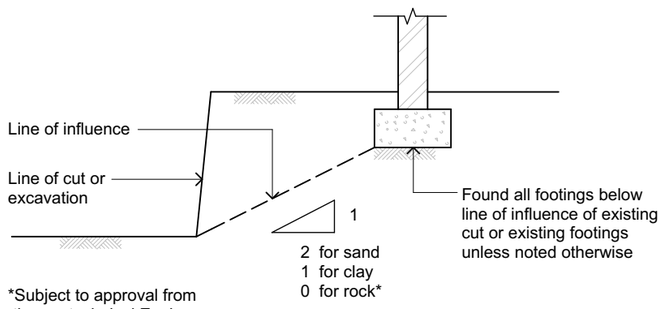
L2. Wind loads are in accordance with AS/NZS1170.2 for:

Terrain category:	2.5	Region: A7
Topographical multiplier of:	1.0	
Shielding multiplier of	1.0	

L2.2 Snow loads are in accordance with AS/NZS 1170.3 0.9kPa
L2.3 Earthquake loads are in accordance with NZS 1170.5

FOUNDATIONS

F1. The minimum safe ultimate bearing capacity of foundation material shall be:
Slabs & Footings: 200 kPa in natural substrate unless noted otherwise (U.N.O.)
F2. Foundation material shall be approved by the engineer prior to placing concrete.
F3. The bases of footing excavations shall be finished clean and horizontal and be embedded 300 into naturally occurring material.
F4. Founding levels where shown are for tender purposes only.
F5. Any proposed footing excavation near boundaries, other structures or services shall be approved by the Engineer.
F6. Subgrade shall be approved material compacted to 98% standard dry density determined by testing to the relevant part of NZS 4402:1986 U.N.O.
F7. Locate all new footings relative to line of cut/excavation including excavations as shown below:



*Subject to approval from the geotechnical Engineer

REINFORCED CONCRETE

C1. Provide all workmanship and materials in accordance with NZS 3101.1:2006, NZS 3109:1997 and NZS 3605:2011, their referenced documents, the drawings and the specification.
C2. Provide concrete grade and minimum clear concrete cover to reinforcement in accordance with NZS 3101:2006 & NZS 3604:2011 U.N.O.

CONCRETE GRADE	ELEMENT LOCATION U.N.O	MINIMUM CONCRETE COVER (mm)
20 MPa	Pad Footings Steps & Landings Paths & Driveways	25 against ground with DPM 75 against ground with no DPM 30 interior protected areas 50 exposed areas
25 MPa	Slabs & Foundations Suspended Stairs	25 against ground with DPM 75 against ground with no DPM 25 interior protected areas 50 exposed areas
30 MPa	Where Noted	20 against ground with DPM 45 against ground with no DPM 20 interior protected areas 50 exposed areas

C3. Support all reinforcement at 1 metre maximum centres both ways on mild steel plastic tipped chairs, plastic chairs or concrete chairs. Use only plastic chairs for externally exposed soffits.
C4. Provide all concrete with 80mm maximum slump and 20mm maximum aggregate unless approved by the Engineer.
C5. Sizes of concrete elements are net, exclusive of applied finishes. Beam depths are written first and include slab thickness.
C6. Properly form construction joints and use only where shown or approved by the Engineer.
C7. Reinforcement is represented diagrammatically and is not necessarily shown in true projection.
C8. Weld or splice reinforcement only in positions approved by the Engineer.
C9. Provide the minimum clear spacing between conduits, cables, pipes and bars as required by NZS 3109 but not less than three bar diameters. Do not place conduits in slabs above top reinforcement or below bottom reinforcement.
C10.

D	Denotes hot rolled deformed bars grade 300E.
HD, H	Denotes hot rolled deformed bars grade 500E.
R	Denotes hot rolled plain round bars grade 300E.
SE,RE	Denotes hard drawn wire fabric grade 500E.

C11. Notify the Engineer a minimum of 24 hours before reinforcement has been completed.
C12. Allow 2 hours after the completion of the reinforcement for the Engineer's inspection.
C13. Do not order concrete until reinforcement has been approved by the Engineer.
C14. Cure concrete in accordance with NZS 3109. Commence curing within two hours of finishing operations and continue for a minimum of seven days by using an approved proprietary compound or by keeping continuously wet.
C15. Tie all unsupported bars in transverse direction to D12-300, lapped 500 U.N.O.
C16. Lap fabric in accordance with clause 8.7.6 of NZS 3109.
C17. Provide hooks, laps and bends in accordance with NZS 3101 & NZS 3109 U.N.O.
C18. Provide chamfers, drip grooves etc. in accordance with the Architect's details.
C19. Design, construct and strip formwork in accordance with NZS 3109.
C20. Pre camber formwork upwards by 1/500 of the clear span U.N.O. where supported beams and slabs span greater than 5m.
C21. The concrete elements detailed have a F.R.L. of 60/60/60 U.N.O.

TIMBER

T1. Ensure all workmanship and materials are in accordance with NZS 3603:1993 and NZS 3604:2011, their referenced documents and the specification.
T2. Provide all interior timber as SG6 (dry) U.N.O.
T3. Provide all external timber as SG8 (dry) U.N.O.
T4. Where the use of treated timber for durability is noted on the structural drawings, ensure it complies with the parameters: Exposure Zone C in accordance with NZS 3604.
T5. Install proprietary timber connectors in accordance with the manufacturers written instructions.
T6. Retighten bolted connections in unseasoned timber prior to the fixing of cladding.
T7. Timber elements or timber framing have not been designed unless noted.
T8. All trusses to be pre-cambered upward 1/240 span.

STEELWORK

S1. Ensure materials, fabrication and erection are in accordance with NZS 3404, it's referenced documents and the specification.
S2. Shop drawings are to be approved by the Engineer prior to fabrication.
S3. Provide all welds as 6mm continuous fillet from E41xx electrodes, all bolts as M16-4.6/S and all cleats and gussets as 10mm plate U.N.O.
S4. For bolts, the following notation is used:
4/M16-4.6/s denotes 4 x M16 commercial grade bolts snug tight.
6/M20-8.8/tf denotes 6 x M20 high strength structural bolts fully tensioned in a no slip joint.
8/M24-8.8/tb denotes 8 x M24 high strength structural bolts fully tensioned in a bearing joint.
S5. Leave mating surfaces of 'tf' connections unpainted and free of mill scale and rust.
S6. Tighten bolts in 'tf' and 'tb' connections using the part turn method or load indicating washers. Do not use calibrated torque wrenches. Use a hardened washer under the bolt head or nut, whichever is rotated. The re-use of fully tensioned bolts is prohibited.
S7. Provide all cleats and drill all holes necessary for fixing steel to steel or timber.
S8. Fabricate steel beams and trusses spanning greater than 5m with an upward pre camber of 1/500 span U.N.O.
S9. Prepare structural steelwork to class 2 and paint with zinc phosphate primer to a thickness of 70 micrometres U.N.O.
S10. Hot dip galvanise all exposed external steelwork and all steelwork built into an external masonry skin, in accordance with grade HDG600 to AS/NZS 2312.
S11. Within 100m from the non-surf coast or 1 km from the surf coast, hot dip galvanise above in accordance with grade HDG900 to AS/NZS 2312.
S12. Provide fire protection to all steelwork as required.
S13. Ensure all cold formed sections conform to AS/NZS 4600 and are roll-formed from steel strip, minimum yield stress 450 MPa, 300 g/m² minimum zinc coating mass U.N.O.

MASONRY

M1. Ensure all workmanship and materials are in accordance with NZS 4230, the drawings & project specifications.
M2. Where masonry supports concrete slabs or beams, lay the top course with frogs down and covered with 2 layers of approved slip joint material.
M3. Walls shown shaded on plan are load bearing. Separate non-load bearing walls under slabs from the slab by 15mm of approved compressible material. Where masonry abuts slab downturns, form a 15mm gap between brickwork and side of downturn.
M4. Do not erect masonry supported by concrete slabs or beams until all formwork and props under have been removed.
M5. Provide all bricks of ultimate compressive strength $f'uc$ = 20 MPa U.N.O.
M6. Provide all hollow concrete masonry of ultimate compressive strength $f'uc$ = 15 MPa U.N.O.
M7. Provide classification M3 masonry mortar U.N.O. Note that within 100m from non-surf coast, or 1km from surf coast, provide classification M4 masonry mortar.
M8. Cut no chases into loadbearing masonry without the approval of the Engineer.
M9. Provide movement control joints vertically for full height of wall as follows:
For general masonry, at 8m maximum centres & 4m maximum from corners.
For articulated masonry, at 6m maximum centres & 4m maximum from corners.
Provide 15mm minimum joints with an approved compressible filler, tied together every 4th course with a MET 3.3 masonry sliding tie or approved equivalent.
M10. Construct hollow walls to full height or maximum 3m before filling cores. Provide cleanout openings at the base of all cores to be filled.
M11. Core fill $f'uc$ = 20 MPa concrete with 10mm aggregate, 180 slump U.N.O.
M12. Construct hollow masonry retaining walls using "double U blocks".
M13. Unreinforced masonry walls have not been designed unless noted.

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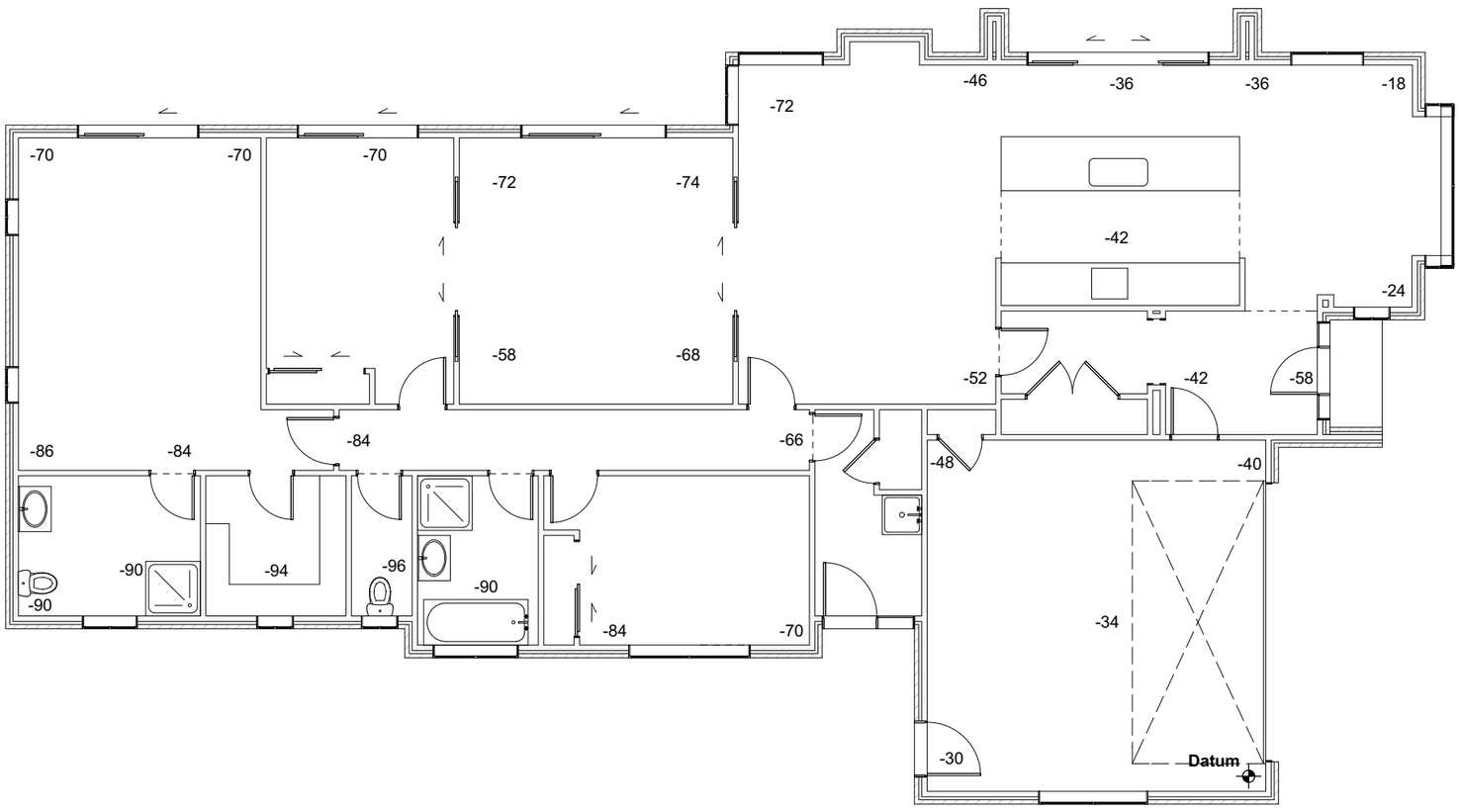
Rev ID	Description	Date
00	Issued for Consent	16/03/2017

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Date: 16/03/2017
Design by: DC
Drawn by: DC
Approved
Date

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Drawing Title: General Notes

Project Number: 170057
Sheet: S06
Rev ID: 00
Project Status: Consent Issue



Ground Floor Pre-Level Survey

SCALE 1:100

Legend:

±X	Indicates floor level above or below datum
- - - - - - -	Indicates change in floor type

Notes:

1. Following relevelling the floor at each unit shall have
   i. maximum differential height of 50mm overall
   ii. 10mm within any room.
   iii. have a maximum slope of 1:200 (0.5%) between any to points more than 2m apart.
2. All levels shown on this plan are relative to the indicated datum.
3. All floor levels locations and slopes approximate

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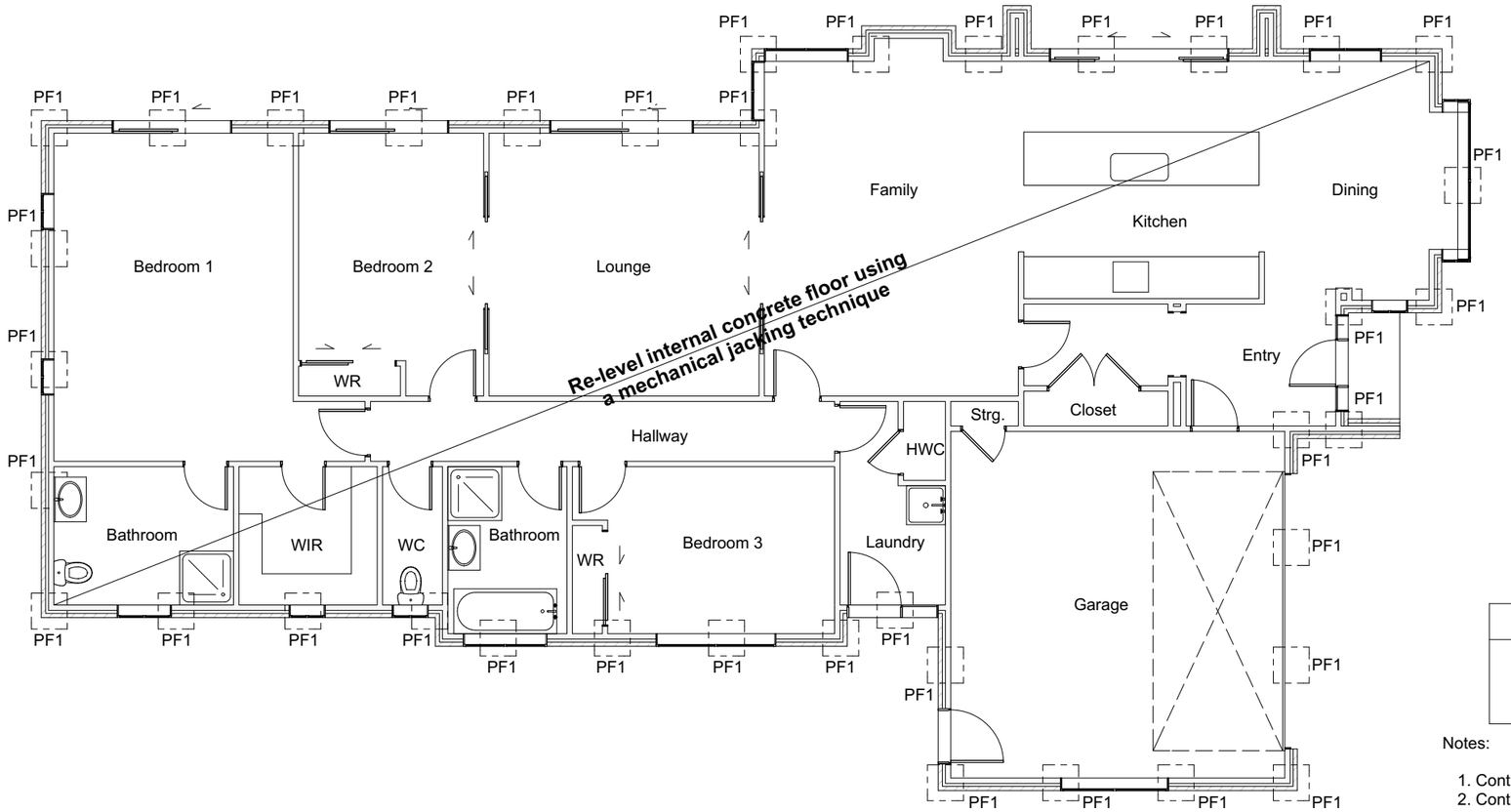
Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Project Number: 170057

Sheet: S02
Rev ID: 00

Drawing Title: Ground Floor Pre-Level Floor Survey

Project Status: Consent Issue



Jack Pad Approximate Locations

SCALE 1:100

Schedule	
PF1	600x600sq. concrete pad footing at 2.0m crs*

Notes:

1. Contractor is to confirm all dimensions on site before commencing work
2. Contractor is to confirm floor levels at each pile or bearer support location to be packed.
3. Pad target depth is 0.5m min. below ground level.
4. Disconnect and reconnect services as required.
5. Ensure guttering falls to downpipes after relevelling.
6. Ensure all doors open and close properly.
7. All work to be carried out in accordance with NZS3604-2011.
8. Contractor to make all walls plumb.
9. Cracks in all concrete structures are to be repaired using proprietary product crack bond 'LR321G' supplied by adhesives technology corporation or approved equivalent.
   Cracks to be repaired up to a maximum of 5mm and any cracks of more than 5mm are to be repaired by using Helibar or any approved equivalent.
   Product to be installed strictly in accordance with manufacturers instructions

* Please note, positions of concrete pads are an approximate location setting

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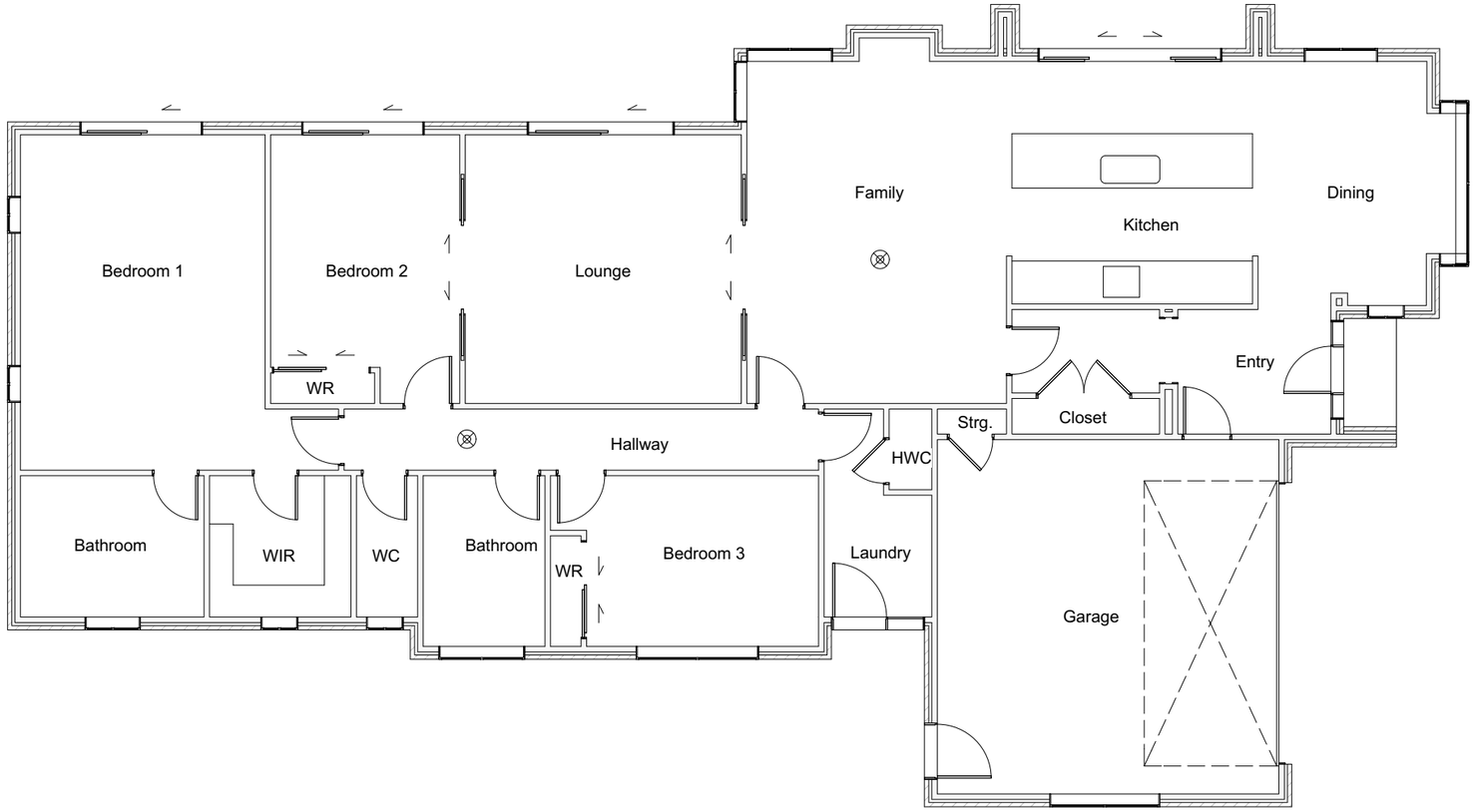
Email: admin@frontierengineers.co.nz

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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3	1:100
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved Date	

Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Ground Floor Jack Pad Approximate Locations
Project Number	170057
Sheet	S03
Rev ID	00
Project Status	Consent Issue



Smoke Detector Location

SCALE 1:100

Schedule	
⊗	Smoke Detector

Note:
All smoke detectors will be checked for complience with F7/AS1, and if non-compliant will be moved and/or installed to meet compliance as per drawing.

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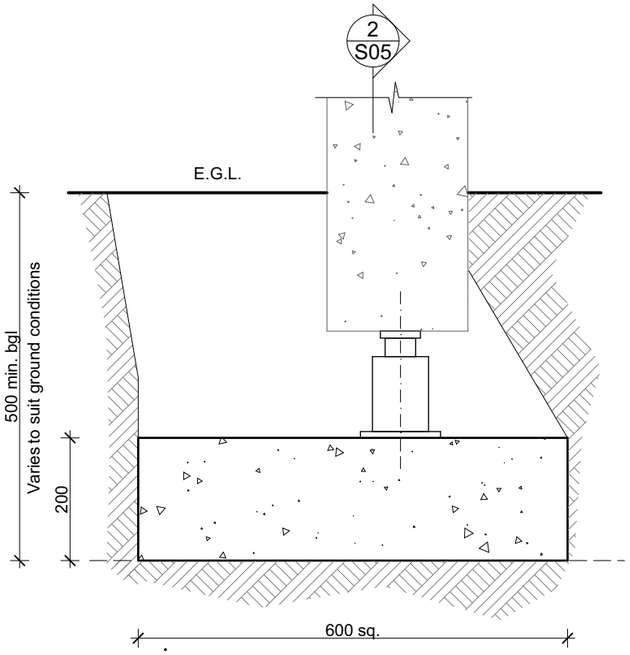
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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

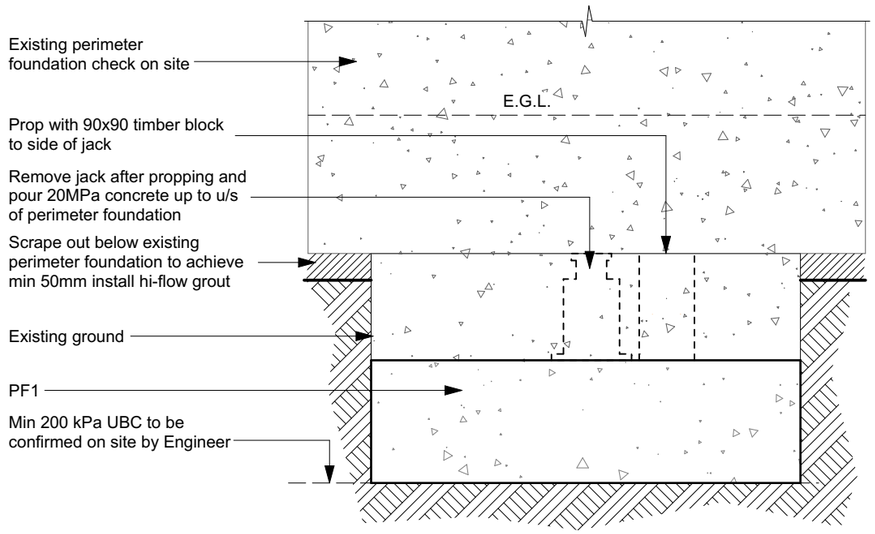
Scale at A3	1:100
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved	
Date	

Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Smoke Detector Location
Project Number	170057
Sheet	S04
Rev ID	00
Project Status	Consent Issue



1 - Re-levelling Pad Detail

SCALE 1:10



2 - Section

SCALE 1:10

Schedule	
PF1	600x600sq. concrete pad footing at 2.0m crs.

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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3: 1:10
Date: 16/03/2017
Design by: DC
Drawn by: DC
Approved
Date

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Project Number: 170057
Sheet: S05
Rev ID: 00
Drawing Title: Details
Project Status: Consent Issue

GENERAL

G1. Read these drawings in conjunction with all architectural and other working drawings, specifications and with such other written instructions as may be issued during the course of the contract.
G2. Provide all workmanship and materials in accordance with the requirements of the current editions of the NZ Building Act, the NZ Building Code, the New Zealand Standards and the by-laws and ordinances of the relevant building consent authority.
G3. Comply as the builder, with requirements of the workplace health & safety act.
G4. Refer any conflict between these notes, the specification, the drawings or any other relevant documents to the engineer for decision prior to proceeding with the work.
G5. Do not obtain dimensions by scaling the drawings. For setting out dimensions and levels refer to the architectural drawings.
G6. The builder is responsible for the provision of all shoring to maintain the stability and integrity of excavations and adjacent structures. Provide details, for review by the Engineer, of any necessary temporary works, including shoring, prior to commencing construction.
G7. During construction it is the builder's responsibility to maintain the structure in a stable condition and to ensure no part is overstressed.
G8. The design and drawings are copyright and may not be used or reproduced in whole or in part without the written permission of the Engineer.
G9. Fire-resistance levels (FRL's) required for the various structural elements must be confirmed by the Building Surveyor or Architect.

LOADINGS

L1. Superimposed floor loads are generally in accordance with AS/NZS 1170.1 and specifically:

	1.5 kPa	Generally
	2.0 kPa	Balconies
	2.5kPa	Stairs

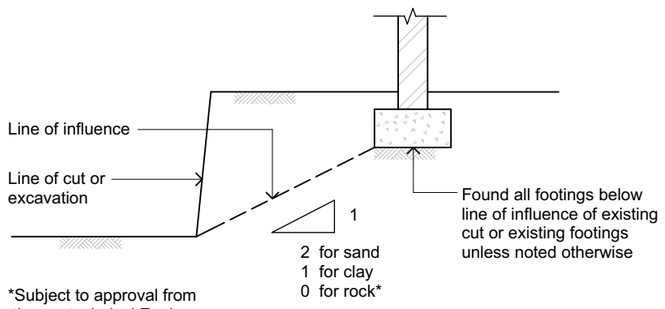
L2. Wind loads are in accordance with AS/NZS1170.2 for:

Terrain category:	2.5	Region: A7
Topographical multiplier of:	1.0	
Shielding multiplier of	1.0	

L2.2 Snow loads are in accordance with AS/NZS 1170.3 0.9kPa
L2.3 Earthquake loads are in accordance with NZS 1170.5

FOUNDATIONS

F1. The minimum safe ultimate bearing capacity of foundation material shall be:
Slabs & Footings: 200 kPa in natural substrate unless noted otherwise (U.N.O.)
F2. Foundation material shall be approved by the engineer prior to placing concrete.
F3. The bases of footing excavations shall be finished clean and horizontal and be embedded 300 into naturally occurring material.
F4. Founding levels where shown are for tender purposes only.
F5. Any proposed footing excavation near boundaries, other structures or services shall be approved by the Engineer.
F6. Subgrade shall be approved material compacted to 98% standard dry density determined by testing to the relevant part of NZS 4402:1986 U.N.O.
F7. Locate all new footings relative to line of cut/excavation including excavations as shown below:



*Subject to approval from the geotechnical Engineer

REINFORCED CONCRETE

C1. Provide all workmanship and materials in accordance with NZS 3101.1:2006, NZS 3109:1997 and NZS 3605:2011, their referenced documents, the drawings and the specification.
C2. Provide concrete grade and minimum clear concrete cover to reinforcement in accordance with NZS 3101:2006 & NZS 3604:2011 U.N.O.

CONCRETE GRADE	ELEMENT LOCATION U.N.O	MINIMUM CONCRETE COVER (mm)
20 MPa	Pad Footings Steps & Landings Paths & Driveways	25 against ground with DPM 75 against ground with no DPM 30 interior protected areas 50 exposed areas
25 MPa	Slabs & Foundations Suspended Stairs	25 against ground with DPM 75 against ground with no DPM 25 interior protected areas 50 exposed areas
30 MPa	Where Noted	20 against ground with DPM 45 against ground with no DPM 20 interior protected areas 50 exposed areas

C3. Support all reinforcement at 1 metre maximum centres both ways on mild steel plastic tipped chairs, plastic chairs or concrete chairs. Use only plastic chairs for externally exposed soffits.
C4. Provide all concrete with 80mm maximum slump and 20mm maximum aggregate unless approved by the Engineer.
C5. Sizes of concrete elements are net, exclusive of applied finishes. Beam depths are written first and include slab thickness.
C6. Properly form construction joints and use only where shown or approved by the Engineer.
C7. Reinforcement is represented diagrammatically and is not necessarily shown in true projection.
C8. Weld or splice reinforcement only in positions approved by the Engineer.
C9. Provide the minimum clear spacing between conduits, cables, pipes and bars as required by NZS 3109 but not less than three bar diameters. Do not place conduits in slabs above top reinforcement or below bottom reinforcement.
C10.

D	Denotes hot rolled deformed bars grade 300E.
HD, H	Denotes hot rolled deformed bars grade 500E.
R	Denotes hot rolled plain round bars grade 300E.
SE,RE	Denotes hard drawn wire fabric grade 500E.

C11. Notify the Engineer a minimum of 24 hours before reinforcement has been completed.
C12. Allow 2 hours after the completion of the reinforcement for the Engineer's inspection.
C13. Do not order concrete until reinforcement has been approved by the Engineer.
C14. Cure concrete in accordance with NZS 3109. Commence curing within two hours of finishing operations and continue for a minimum of seven days by using an approved proprietary compound or by keeping continuously wet.
C15. Tie all unsupported bars in transverse direction to D12-300, lapped 500 U.N.O.
C16. Lap fabric in accordance with clause 8.7.6 of NZS 3109.
C17. Provide hooks, laps and bends in accordance with NZS 3101 & NZS 3109 U.N.O.
C18. Provide chamfers, drip grooves etc. in accordance with the Architect's details.
C19. Design, construct and strip formwork in accordance with NZS 3109.
C20. Pre camber formwork upwards by 1/500 of the clear span U.N.O. where supported beams and slabs span greater than 5m.
C21. The concrete elements detailed have a F.R.L. of 60/60/60 U.N.O.

TIMBER

T1. Ensure all workmanship and materials are in accordance with NZS 3603:1993 and NZS 3604:2011, their referenced documents and the specification.
T2. Provide all interior timber as SG6 (dry) U.N.O.
T3. Provide all external timber as SG8 (dry) U.N.O.
T4. Where the use of treated timber for durability is noted on the structural drawings, ensure it complies with the parameters: Exposure Zone C in accordance with NZS 3604.
T5. Install proprietary timber connectors in accordance with the manufacturers written instructions.
T6. Retighten bolted connections in unseasoned timber prior to the fixing of cladding.
T7. Timber elements or timber framing have not been designed unless noted.
T8. All trusses to be pre-cambered upward 1/240 span.

STEELWORK

S1. Ensure materials, fabrication and erection are in accordance with NZS 3404, it's referenced documents and the specification.
S2. Shop drawings are to be approved by the Engineer prior to fabrication.
S3. Provide all welds as 6mm continuous fillet from E41xx electrodes, all bolts as M16-4.6/S and all cleats and gussets as 10mm plate U.N.O.
S4. For bolts, the following notation is used:
4/M16-4.6/s denotes 4 x M16 commercial grade bolts snug tight.
6/M20-8.8/tf denotes 6 x M20 high strength structural bolts fully tensioned in a no slip joint.
8/M24-8.8/tb denotes 8 x M24 high strength structural bolts fully tensioned in a bearing joint.
S5. Leave mating surfaces of 'tf' connections unpainted and free of mill scale and rust.
S6. Tighten bolts in 'tf' and 'tb' connections using the part turn method or load indicating washers. Do not use calibrated torque wrenches. Use a hardened washer under the bolt head or nut, whichever is rotated. The re-use of fully tensioned bolts is prohibited.
S7. Provide all cleats and drill all holes necessary for fixing steel to steel or timber.
S8. Fabricate steel beams and trusses spanning greater than 5m with an upward pre camber of 1/500 span U.N.O.
S9. Prepare structural steelwork to class 2 and paint with zinc phosphate primer to a thickness of 70 micrometres U.N.O.
S10. Hot dip galvanise all exposed external steelwork and all steelwork built into an external masonry skin, in accordance with grade HDG600 to AS/NZS 2312.
S11. Within 100m from the non-surf coast or 1 km from the surf coast, hot dip galvanise above in accordance with grade HDG900 to AS/NZS 2312.
S12. Provide fire protection to all steelwork as required.
S13. Ensure all cold formed sections conform to AS/NZS 4600 and are roll-formed from steel strip, minimum yield stress 450 MPa, 300 g/m² minimum zinc coating mass U.N.O.

MASONRY

M1. Ensure all workmanship and materials are in accordance with NZS 4230, the drawings & project specifications.
M2. Where masonry supports concrete slabs or beams, lay the top course with frogs down and covered with 2 layers of approved slip joint material.
M3. Walls shown shaded on plan are load bearing. Separate non-load bearing walls under slabs from the slab by 15mm of approved compressible material. Where masonry abuts slab downturns, form a 15mm gap between brickwork and side of downturn.
M4. Do not erect masonry supported by concrete slabs or beams until all formwork and props under have been removed.
M5. Provide all bricks of ultimate compressive strength $f'uc$ = 20 MPa U.N.O.
M6. Provide all hollow concrete masonry of ultimate compressive strength $f'uc$ = 15 MPa U.N.O.
M7. Provide classification M3 masonry mortar U.N.O. Note that within 100m from non-surf coast, or 1km from surf coast, provide classification M4 masonry mortar.
M8. Cut no chases into loadbearing masonry without the approval of the Engineer.
M9. Provide movement control joints vertically for full height of wall as follows:
For general masonry, at 8m maximum centres & 4m maximum from corners.
For articulated masonry, at 6m maximum centres & 4m maximum from corners.
Provide 15mm minimum joints with an approved compressible filler, tied together every 4th course with a MET 3.3 masonry sliding tie or approved equivalent.
M10. Construct hollow walls to full height or maximum 3m before filling cores. Provide cleanout openings at the base of all cores to be filled.
M11. Core fill $f'uc$ = 20 MPa concrete with 10mm aggregate, 180 slump U.N.O.
M12. Construct hollow masonry retaining walls using "double U blocks".
M13. Unreinforced masonry walls have not been designed unless noted.

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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3: 1:1
Date: 16/03/2017
Design by: DC
Drawn by: DC
Approved
Date

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Drawing Title: General Notes

Project Number: 170057
Sheet: S06
Rev ID: 00
Project Status: Consent Issue

Land Information Memorandum

Christchurch City Council

Application details

Please supply to	BAYLEYS REAL ESTATE - HAREWOOD PO BOX 36533 MERIVALE CHRISTCHURCH 8146
Client reference	MC4770-6
Phone number	
Fax number	(03) 357 2111
Date issued	10 March 2020
Date received	2 March 2020

Property details

Property address	16 Hemingway Place
Valuation roll number	21852 83700
Valuation information	Capital Value: $580000 Land Value: $175000 Improvements Value: $405000 *Please note: these values are intended for Rating purposes*
Legal description	Lot 35 DP 319911
Existing owner	Liam Patrick Brewer Leanne Rosemary Brewer 16 Hemingway Place Christchurch 8083

Council references

Debtor number	3189236
Rate account ID	73134309
LIM number	70230364
Property ID	1133253

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

Land Information Memorandum

Document information

This Land Information Memorandum (LIM) has been prepared for the purpose of section 44A of the Local Government Official Information and Meetings Act 1987 (LGOIMA). It is a summary of the information that we hold on the property. Each heading or "clause" in this LIM corresponds to a part of section 44A.

Sections 1 to 10 contain all of the information known to the Christchurch City Council that must be included under section 44A(2) LGOIMA. Any other information concerning the land as the Council considers, at its discretion, to be relevant is included at section 11 of this LIM (section 44A(3) LGOIMA).

The information included in this LIM is based on a search of Council records only and there may be other information relating to the land which is unknown to the Council. Council records may not show illegal or unauthorised building or works on the property. The applicant is solely responsible for ensuring that the land is suitable for a particular purpose.

If there are no comments or information provided in any section of this LIM this means that the Council does not hold information on the property that corresponds to that part of section 44A.

A LIM is only valid at the date of issue as information is based only upon information the Council held at the time of that LIM request being made.

Property file service

This Land Information Memorandum does not contain all information held on a property file. Customers may request property files by phoning the Council's Customer Call Centre on (03) 941 8999, or visiting any of the Council Service Centres. For further information please visit www.ccc.govt.nz .

To enable the Council to measure the accuracy of this LIM document based on our current records, we would appreciate your response should you find any information contained therein which may be considered to be incorrect or omitted. Please telephone the Customer Call Centre on (03) 941 8999.

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A search of records held by the Council has revealed the following information:

1. Special features and characteristics of the land

Section 44A(2)(a) LGOIMA. This is information known to the Council but not apparent from the district scheme under the Town and Country Planning Act 1977 or a district plan under the Resource Management Act 1991. It identifies each (if any) special feature or characteristic of the land concerned, including but not limited to potential erosion, avulsion, falling debris, subsidence, slippage, alluvion, or inundation, or likely presence of hazardous contaminants.

For enquiries, please phone (03) 941 8999 or visit www.ccc.govt.nz.

ECan Liquefaction Assessment

ECan holds indicative information on liquefaction hazard in the Christchurch area.Information on liquefaction can be found on the ECan website at www.ecan.govt.nz/liq or by calling ECan customer services on Ph 03 353 9007. The Christchurch City Council may require site-specific investigations before granting future subdivision or building consent for the property, depending on the liquefaction potential of the area that the property is in.

Borelog/Engineer Report Image Available

Borelog/Engineer Report Image Available

Consultant Report Available

Land Information New Zealand (LINZ) engaged Tonkin and Taylor to provide a Geotechnical Report on Ground Movements that occurred as a result of the Canterbury Earthquake Sequence. The report indicates this property may have been effected by a degree of earthquake induced subsidence. The report obtained by LINZ can be accessed on their website at https://www.linz.govt.nz/land/surveying/earthquakes/canterbu ry-earthquakes/information-for-canterbury-surveyors

Consultant Report Available

The Tonkin & Taylor Darfield Earthquake 4 September 2010 Geotechnical Land Damage Assessment & Reinstatement Stage 1 Report indicates areas of observed surface manifestations of liquefaction resulting from the earthquake. This property is within one of the identified areas. The report can be viewed at www.eqc.govt.nz/canterbury-quake/stage-one/stage1.aspx

Coastal Hazard Inundation

The Council has a report, Coastal Hazard Assessment for Christchurch and Banks Peninsula (2017), that indicates this property or part of this property may be susceptible to coastal inundation (flooding by the sea). The 2017 report considers four sea level rise scenarios through to the year 2120. A copy of the 2017 report and other coastal hazard information can be found at www.ccc.govt.nz/coastalhazards.

Fill

This property is located in an area known to have been filled. The year the fill occurred is Unknown. The filling was, according to the Councils records carried out in a controlled manner and comprises Engineered Fill.

Fill

This property is located in an area known to have been filled. The year the fill occurred is Unknown. The filling was, according to the Councils records carried out in a controlled manner and comprises Unknown Material.

Property Affected by Stormwater to Ground Area

Stormwater drainage to an approved soakage chamber (for roof stormwater only) is a condition of any future building on this site unless it is a known or declared hazardous site.

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Distant Source Tsunami - Area of Potential Inundation

This property may be affected by flooding by some tsunami scenarios as shown in reports by GNS and NIWA commissioned by ECan and CCC. Links to reports can be found at https://ccc.govt.nz/tsunami-evacuation-zones-and-routes/ and on ECan's web site https://www.ecan.govt.nz by searching for the terms tsunami hazard.

Related information

There are attached hazard/special site characteristics supplementary sheet/s.

There is attached a soil investigation report for this property.

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www.ccc.govt.nz

2. Private and public stormwater and sewerage drains

Section 44A(2)(b) LGOIMA. This is information about private and public stormwater and sewerage drains as shown in the Council's records.

For stormwater and sewerage enquiries, please phone (03) 941 8999 or visit www.ccc.govt.nz.

Related information

The dwelling/building is shown to be served by a sewer drain and a stormwater drain.

The drainage works associated with this property have not been plotted on the Council's drainage plan. A copy of the field Inspectors pickup/approved site plan showing the drains and house outline is attached.

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3. Drinking Water Supply

Section 44A(2)(ba) and (bb) LGOIMA. This is information notified to the Council about whether the land is supplied with drinking water, whether the supplier is the owner of the land or a networked supplier, any conditions that are applicable, and any information the Council has about the supply.

Please note the council does not guarantee a particular water quality to its customers. If you require information on current water quality at this property please contact the Three Waters & Waste Unit.

For water supply queries, please phone (03) 941 8999 or visit www.ccc.govt.nz.

Water Supply

Christchurch City Council is the networked supplier of water to this property. This property is connected to the Christchurch City Council Water Supply. The conditions of supply are set out in the Christchurch City Council Water Supply, Wastewater & Stormwater Bylaw (2014), refer to www.ccc.govt.nz.

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Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

4. Rates

Section 44A(2)(c) LGOIMA. This is information on any rates owing in relation to the land.

For rates enquiries, please phone (03) 941 8999 or visit www.ccc.govt.nz.

(a) Annual rates

Annual rates to 30/06/2020: $ 3,311.68

	Instalment Amount	Date Due
Instalment 1	$ 827.87	31/08/2019
Instalment 2	$ 827.87	30/11/2019
Instalment 3	$ 827.87	29/02/2020
Instalment 4	$ 828.07	31/05/2020

Rates owing as at 10/03/2020: $ 0.00

(b) Excess water charges

$ 0.00

For water charge enquiries, please phone (03) 941 8999 or visit www.ccc.govt.nz.

(c) Final water meter reading required?

No Reading Required

To arrange a final water meter reading, please phone (03) 941 8999 or visit www.ccc.govt.nz.

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5. Consents, certificates, notices, orders, or requisitions affecting the land and buildings

Section 44A(2)(d) LGOIMA. This is information concerning any consent, certificate, notice, order, or requisition, affecting the land or any building on the land, previously issued by the Council.

Section 44A(2)(da) LGOIMA. The information required to be provided to a territorial authority under section 362T(2) of the Building Act 2004. There is currently no information required to be provided by a building contractor to a territorial authority under section 362T(2) of the Building Act 2004. The Building (Residential Consumer Rights and Remedies) Regulations 2014 only prescribed the information that must be given to the clients of a building contractor.

For building enquiries, please phone (03) 941 8999, email EPADutyBCO@ccc.govt.nz or visit www.ccc.govt.nz.

(a) Consents

BCN/2003/9244 Applied: 05/11/2003 Status: Completed
16 Hemingway Place Spencerville
Accepted for processing 05/11/2003
PIM Granted 24/11/2003
PIM Issued 24/11/2003
DWELLING WITH AN ATTACHED GARAGE- Historical Reference ABA10040372

BCN/2003/9910 Applied: 27/11/2003 Status: Completed
16 Hemingway Place Spencerville
PIM Granted 24/11/2003
PIM Issued 24/11/2003
Accepted for processing 27/11/2003
Building consent granted 22/12/2003
Building consent issued 09/01/2004
Code Compliance Certificate Granted 04/08/2004
Code Compliance Certificate Issued 04/08/2004
DWELLING WITH ATTACHED GARAGE- Historical Reference ABA10041003

BCN/2017/1885 Applied: 17/03/2017 Status: Completed
16 Hemingway Place Spencerville
Exemption from building consent approved 22/03/2017
Relevel existing floors

(b) Certificates

Note: Code Compliance Certificates were only issued by the Christchurch City Council since January 1993.

(c) Notices

Ministry of Business, Innovation & Employment Foundation Design

Some properties have experienced land damage and considerable settlement during the sequence of Canterbury earthquakes. While land in the green zone is still generally considered suitable for residential construction, houses in some areas will need more robust foundations or site foundation design where foundation repairs or rebuilding are required. Most properties have been assigned a technical category. Details of the MBIE guidance can be found at www.building.govt.nz/

(d) Orders

(e) Requisitions

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

6. Certificates issued by a building certifier

Section 44A(2)(e) LGOIMA. This is information notified to the Council concerning any certificate issued by a building certifier pursuant to the Building Act 1991 or the Building Act 2004.

For building enquiries, please phone (03) 941 8999, email EPADutyBCO@ccc.govt.nz or visit www.ccc.govt.nz.

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

7. Weathertightness

Section 44A(2)(ea) LGOIMA. This is information notified to the Council under section 124 of the Weathertight Homes Resolution Services Act 2006.

For weathertight homes enquiries, please phone (03) 941 8999 or visit www.ccc.govt.nz.

If there is no information below this means Council is unaware of any formal Weathertight Homes Resolution Services claim lodged against this property.

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

8. Land use and conditions

Section 44A(2)(f) LGOIMA. This is information relating to the use to which the land may be put and conditions attached to that use. The planning information provided below is not exhaustive and reference to the Christchurch District Plan and any notified proposed changes to that plan is recommended: https://ccc.govt.nz/the-council/plans-strategies-policies-and-bylaws/plans/christchurch-district-plan/.

There maybe some provisions of the Christchurch City Plan or Banks Peninsula District Plan that affect this property that are still operative.

For planning queries, please phone (03) 941 8999, email DutyPlanner@ccc.govt.nz or visit www.ccc.govt.nz.

Regional plan or bylaw

There may be objectives, policies or rules in a regional plan or a regional bylaw that regulate land use and activities on this site. Please direct enquiries to Canterbury Regional Council (Environment Canterbury).

(a)(i)Christchurch City Plan & Banks Peninsula District Plan

(ii)Christchurch District Plan

Flood Ponding

Property or part of property within the Christchurch District Plan Flood Ponding Management Area overlay.

Liquefaction Management Area (LMA)

Property or part of property within the Liquefaction Management Area (LMA) Overlay which is operative.

Spencerville Overlay

Property or part of property within the Christchurch District Plan (operative) Spencerville Overlay

Flood Management Area

Property or part of property within the Flood Management Area (FMA) Overlay which is operative.

Fixed Minimum Floor Overlay

This property or parts of the property are located within the Fixed Minimum Floor Overlay level in the Christchurch District Plan. Under this plan pre-set minimum floor level requirements apply to new buildings and additions to existing buildings. The fixed minimum floor level can be searched at http://ccc.govt.nz/floorlevelmap. For more information please contact a CCC duty planner on 941 8999.

District Plan Zone

Property or part of property within the Residential Small Settlement Zone which is operative.

(b) Resource consents

If there are any land use resource consents issued for this property the Council recommends that you check those resource consents on the property file. There may be conditions attached to those resource consents for the property that are still required to be complied with.

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

RMA/2000/976 - Subdivision Consent
75 LOT FEE SIMPLE SUBDIVISION 223 recieved 26/6/02 Certified 5/7/02 224 REQUESTED 4/7/02 ISSUED 22/8/02 DP 311069 - Historical Reference RMA20001657
Status: Processing complete
Applied 11/04/2000
Granted 03/10/2000
Decision issued 03/10/2000

RMA/2002/1320 - Subdivision Consent
FEE SIMPLE SUBDIVISION - 76 LOTS 224 requested 04/07/02 Issued 22/8/02 DP 311069 224 requested 10/03/03 Issued 14/5/03 DP 319911 - Historical Reference RMA20010325
Status: Processing complete
Applied 06/06/2002
Granted 20/06/2002
Decision issued 20/06/2002

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

9. Other land and building classifications

Section 44A(2)(g) LGOIMA. This is information notified to the Council by any statutory organisation having the power to classify land or buildings for any purpose.

For land and building enquiries, please phone (03) 941 8999 or visit www.ccc.govt.nz.

Please refer to Section 1 for details

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

10. Network utility information

Section 44A(2)(h) LGOIMA. This is information notified to the Council by any network utility operator pursuant to the Building Act 1991 or the Building Act 2004.

For network enquiries, please phone (03) 941 8999 or visit www.ccc.govt.nz.

None recorded for this property

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

11. Other information

Section 44A(3) LGOIMA. This is information concerning the land that the Council has the discretion to include if it considers it to be relevant.

For any enquiries, please phone (03) 941 8999 or visit www.ccc.govt.nz.

(a) Kerbside waste collection

Your recycling is collected Fortnightly on the Week 2 collection cycle on a Wednesday. Please leave your recycling at the Kerbside by 6:00 a.m. Your nearest recycling depot is the Styx Mill EcoDrop.

Your refuse is collected Fortnightly on the Week 2 collection cycle on a Wednesday. Please leave your rubbish at the Kerbside by 6:00 a.m. Your nearest rubbish depot is the Styx Mill EcoDrop.

Your organics are collected Weekly on Wednesday. Please leave your organics at the Kerbside by 6:00 a.m.

(b) Other

Community Board

Property located in Coastal-Burwood Community Board.

Guest Accommodation

Guest accommodation (including whole unit listings on Airbnb; BookaBach; etc.) generally requires a resource consent in this zone when the owner is not residing on the site. For more information, please refer to: https://ccc.govt.nz/providing-guest-accommodation/.

Tsunami Evacuation Zone

This property is in the orange tsunami evacuation zone, and should be evacuated immediately after a long or strong earthquake, or when told to by an official civil defence warning. Residents should make a plan for where they would go in a tsunami evacuation and stay out of this zone until told it is safe to go back.More information can be found at https://ccc.govt.nz/services/civil-defence/hazards/tsunami-e vacuation-zones-and-routes/

Electoral Ward

Property located in Coastal Electoral Ward

Listed Land Use Register

Hazardous activities and industries involve the use, storage or disposal of hazardous substances. These substances can sometimes contaminate the soil. Environment Canterbury identifies land that is used or has been used for hazardous activities and industries. This information is held on a publically available database called the Listed Land Use Register (LLUR). The Christchurch City Council may not hold information that is held on the LLUR Therefore, it is recommended that you check Environment Canterbury's online database at www.llur.ecan.govt.nz

Spatial Query Report

A copy of the spatial query report is attached at the end of this LIM. The spatial query report lists land use resource consents that have been granted within 100 metres of this property.

Christchurch City Council
53 Hereford Street, PO Box 73015
Christchurch 8154, New Zealand
Tel 64 3 941 8999
Fax 64 3 941 8984
www.ccc.govt.nz

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFS

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

RESOURCE MANAGEMENT ACT 1991/BUILDING ACT 1991

HAZARDS OR SPECIAL SITE CHARACTERISTICS

LOCATION: Hemingway Place ..... **NUMBER:** 16 .....
LEGAL DESCRIPTION: LOT: 35 ..... **D.P:** 319911 ..... **WARD:** Papanui .....
ALTERNATIVE ADDRESS: .....

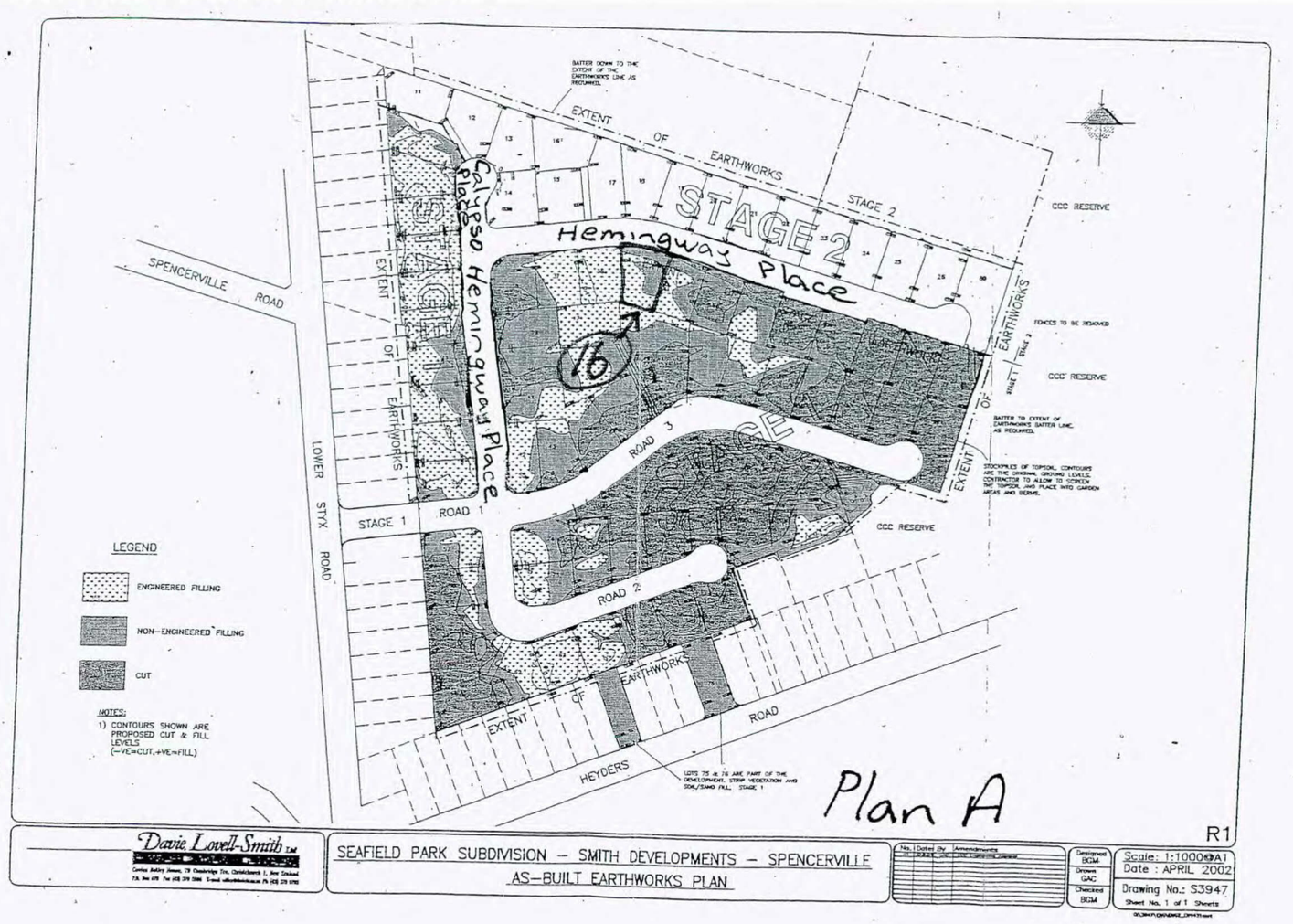
DATE RECORDED: 26-6-2003 ..... **SEVERITY:** 1 ..... **ACCURACY:** A .....
RECORDED BY: Leo O'Loughlin **COMPUTER ENTRY:** ..... **MAP ENTRY:** 26-6-2003 ..
DETAILS: Fill to NZS 4431: 1989. (For location see plan A on back) .....
Normal inspections and design of foundations as would be made in natural ground required. .....
Location of cut/fill interface to be noted (and confirmed on site) and foundation designed accordingly .
BUILDING PERMIT/CONSENT: .....
LOCATION OF INFORMATION: Civic Office Property File: .....
SOURCE OF INFORMATION: Davie, Lovell – Smith Ltd ..... **FILE NO:** S3947 . **DATE:** 21-2-2003 .
Subdivision File : PAP - 20010325 ..... **FILE NO:** ..... **DATE:** .....

DATE RECORDED: ..... **SEVERITY:** ..... **ACCURACY:** .....
RECORDED BY: Leo O'Loughlin **COMPUTER ENTRY:** ..... **MAP ENTRY:** .....
DETAILS: **Minimum Floor Levels :** The minimum floor level for all dwellings is to be 11.225m in terms of the Christchurch Drainage Datum as per consent notice dated 14 May 2003 (see Consent Notice on back) .....
.....
.....
BUILDING PERMIT/CONSENT: .....
LOCATION OF INFORMATION: Civic Office Property File: .....
SOURCE OF INFORMATION: Subdivision File : PAP - 20010325 **FILE NO:** ..... **DATE:** .....
Consent Notice Pursuant to Section 221 Resource Management Act 1991 **FILE NO: DATE:** 14-5-2003 ..

DATE RECORDED: ..... **SEVERITY:** ..... **ACCURACY:** .....
RECORDED BY: Leo O'Loughlin **COMPUTER ENTRY:** ..... **MAP ENTRY:** .....
DETAILS: .....
.....
.....
BUILDING PERMIT/CONSENT: .....
LOCATION OF INFORMATION: Civic Office Property File: .....
SOURCE OF INFORMATION: ..... **FILE NO:** ..... **DATE:** .....
..... **FILE NO:** ..... **DATE:** .....

KEY **Severity** [1] Low [2] Moderate [3] Extreme [4] Unknown
Accuracy [A] Confirmed [B] Unconfirmed [C] Personal Observation

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFS



APPENDIX A
STATEMENT OF SUITABILITY OF EARTHFILL
FOR RESIDENTIAL DEVELOPMENT

To **Christchurch City Council**
PO Box 237
Christchurch

Attention Mr B Craig

STATEMENT OF SUITABILITY OF EARTH FILL FOR RESIDENTIAL DEVELOPMENT

Subdivision **Seafield Park Subdivision-Stage I**

Owner/Developer **Smith Developments Limited**

Location **Cnr Lower Styx & Heyders Road, Spencerville**

The earth fill shown on the attached plan No. S3947 Sheet 1 dated April 2002 have been placed in compliance with the terms of NZS 4431.

While work was in progress I retained as my inspecting engineer (or staff under his control) the engineer named below who is registered in terms of the Engineers Registration Act 1924.

John Bannock (Registration Number 10545)
Address C/- **Davie, Lovell-Smith Limited, PO Box 679, Christchurch**

During the work, the inspecting engineer or staff under his control made periodic visits of inspection to the site as detailed in his report No S3947 which is attached. Details of the soil testing carried out to check the quality of the fill by the inspecting engineer and his testing agency are also included in this report.

The attached plan No S3947 Sheet 1 shows Lot Nos. 1-10, 57-65, 68, 72, 73, 74, 30-53, 75 & 76 to be affected by filling and the extent of the fill.

In the opinion of the inspecting engineer the following special limitations should be observed:

NA

This certification, that the earth fills have been placed in compliance with the terms of NZS 4431 does not remove the necessity for the normal inspection and design of foundations as would be made in natural ground.

Registered Engineer

22 April 2002

on behalf of:
(Owner/ Developer)

NZS 4431:1989
3947/ENG/4431_Earthfill-stg1

IN THE MATTER OF the Resource Management Act 1991
AND
IN THE MATTER OF Subdivision Consent Application PAP/20010325 affecting Lots 3-41 DP 319911

CONSENT NOTICE PURSUANT TO SECTION 221, RESOURCE MANAGEMENT ACT 1991

To: Registrar-General of Lands
Canterbury Land Registration District
LAND INFORMATION NEW ZEALAND

TAKE NOTICE that the land hereinafter described is subject to conditions in relation to a subdivision consent as follows:-

Minimum Floor Levels.

The minimum floor level for all dwellings is to be 11.225m in terms of the Christchurch Drainage Datum.

AND THAT you are hereby directed and required to register the same pursuant to Section 221 Resource Management Act 1991.

DESCRIPTION OF LAND BY CONSENT NOTICE

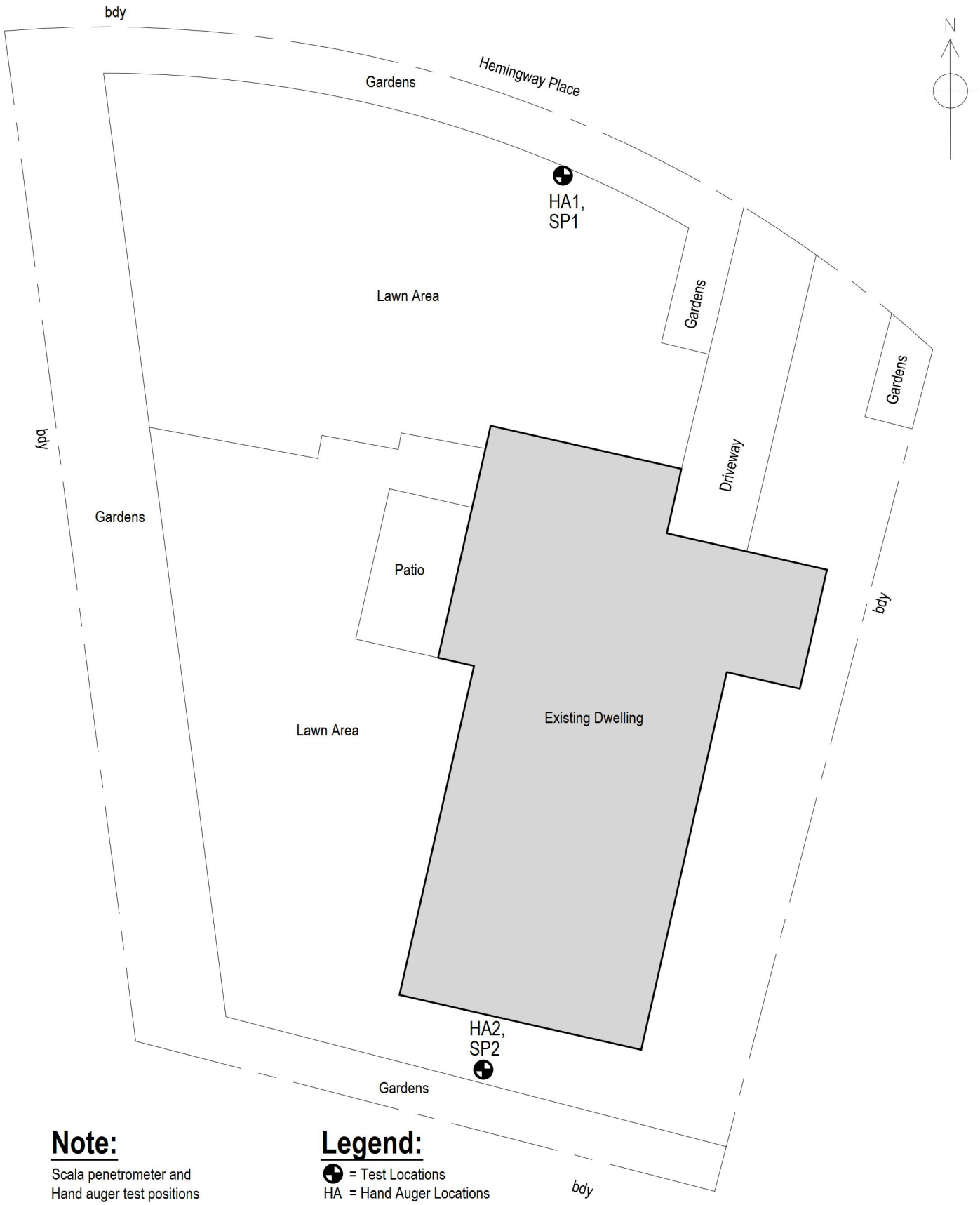
ALL THOSE PARCELS OF LAND COMPRISING:
- Lots 3 – 41 DP 319911comprised in Certificates of Title 78436 - 78474 (Canterbury Land District)

DATED this 14th day of May 2003

SIGNED for and on behalf of
THE CHRISTCHURCH CITY COUNCIL
pursuant to Section 252 of the
Local Government Act 1974

Principal Officer
(for the purposes of Section 221
Resource Management Act 1991)

KIRK | ROBERTS
CONSULTING ENGINEERS LTD



Note:

Scala penetrometer and Hand auger test positions and boundaries are indicative only

Legend:

= Test Locations
HA = Hand Auger Locations
SP = Scala Penetrometer Locations
Bdy = Boundary Locations

DO NOT SCALE - IF IN DOUBT, ASK
ORIGINAL SIZE A4
CAD REF :

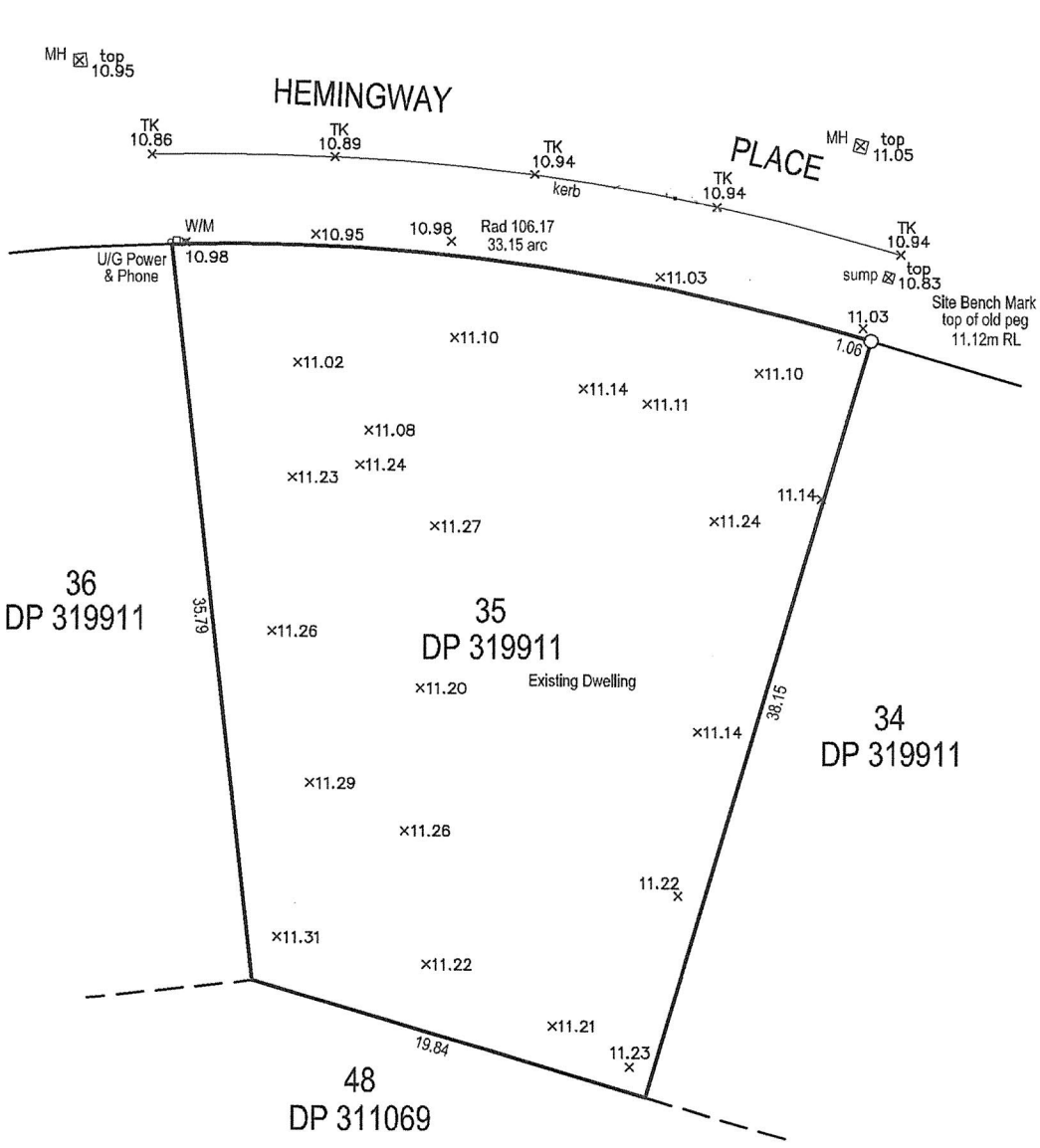
SCALES :	1:200
	DATE
DESIGNED	
DRAWN	05.07.12 - GJT
CHECKED	
APPROVED	

RUSSEL WENN AND JULIE COLLIER
16 HEMINGWAY PLACE

SOIL TEST LOCATIONS

ACENZ

Job No.	Sheet No.	Rev.
121195	SK1	1



SURVUS CONSULTANTS
surveying engineering property development
www.survus.co.nz

4 Meadow Street, PO Box 5558, Papanui, Christchurch
P 03 352 5599
F 03 352 5527
TOLL FREE 0508 787 887
AMBERLEY 03 314 9200
ASHBURTON 03 307 7021
DARFIELD 03 318 8151

Levels at No.16 Hemingway Place, Spencerville

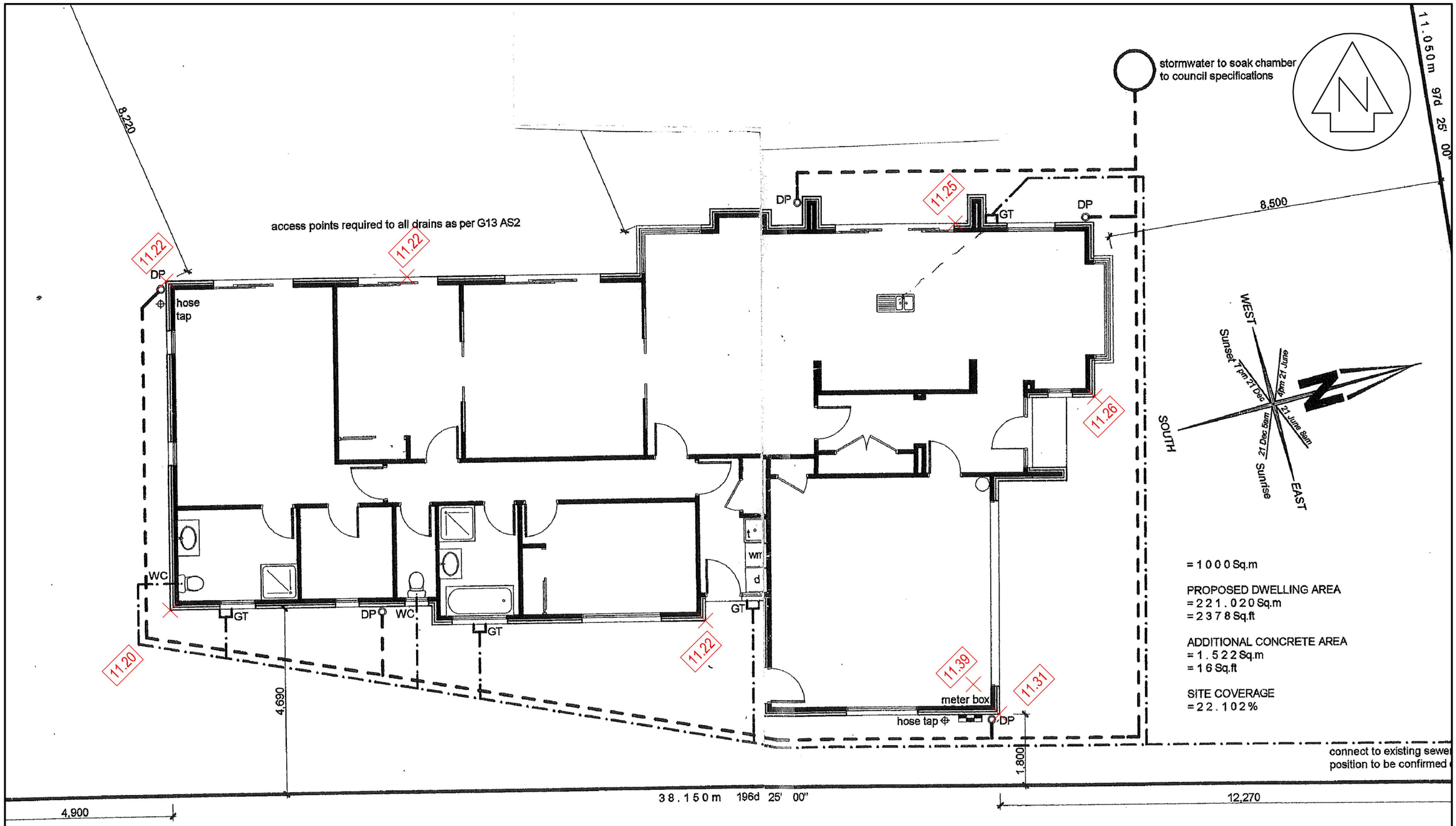
Russell Wenn & Julie Collier

Rev	Date	By	Amendments
A	03/08/12	SRS	Levels

Note:
Levels are in terms of CCC Datum
BM EHDB 11.31m RL

DATE	SHEET	REV
August 2012	1 of 1	A
SCALES	JOB REF	
1 : 250 (A3)	10791	

This drawing and its contents are the property of Survus Consultants. Any unauthorised employment or reproduction, in full or in part, is forbidden.



Peter Ray Homes

NOTE

1. All work shall comply with NZS 3604:1999
2. All windows and doors to comply with NZS 4211:1985
3. Glazing to comply with NZS 4223:1985 & Pt 3 1993
4. Contractor must verify all dimensions on site prior to

Rev No.	Date	Amendment
A	03.11.03	remove gas fire, move gas bottles, change bay window

Drawn: A. Fahey
Date: 28.10.03
Scale:

Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title

Sheet No. 4

SURVUS CONSULTANTS
surveying engineering property development
www.survus.co.nz
4 Meadow Street, PO Box 5558, Papanui, Christchurch
P 03 352 5599 AMBERLEY 03 314 9200
F 03 352 5527 ASHBURTON 03 307 7021
TOLL FREE 0508 787 887 DARFIELD 03 318 8151

Foundation Levels

16 Hemingway Place, Spencerville — Russell Wenn & Julie Collier

Rev	Date	By	Amendments
A	03/08/12	SRS	Levels

Note:
Levels are in terms of CCC Datum
BM EHDB 11.31m RL

DATE	SHEET	REV
August 2012	1 of 1	A
SCALES: Proportional	JOB REF: 10791	

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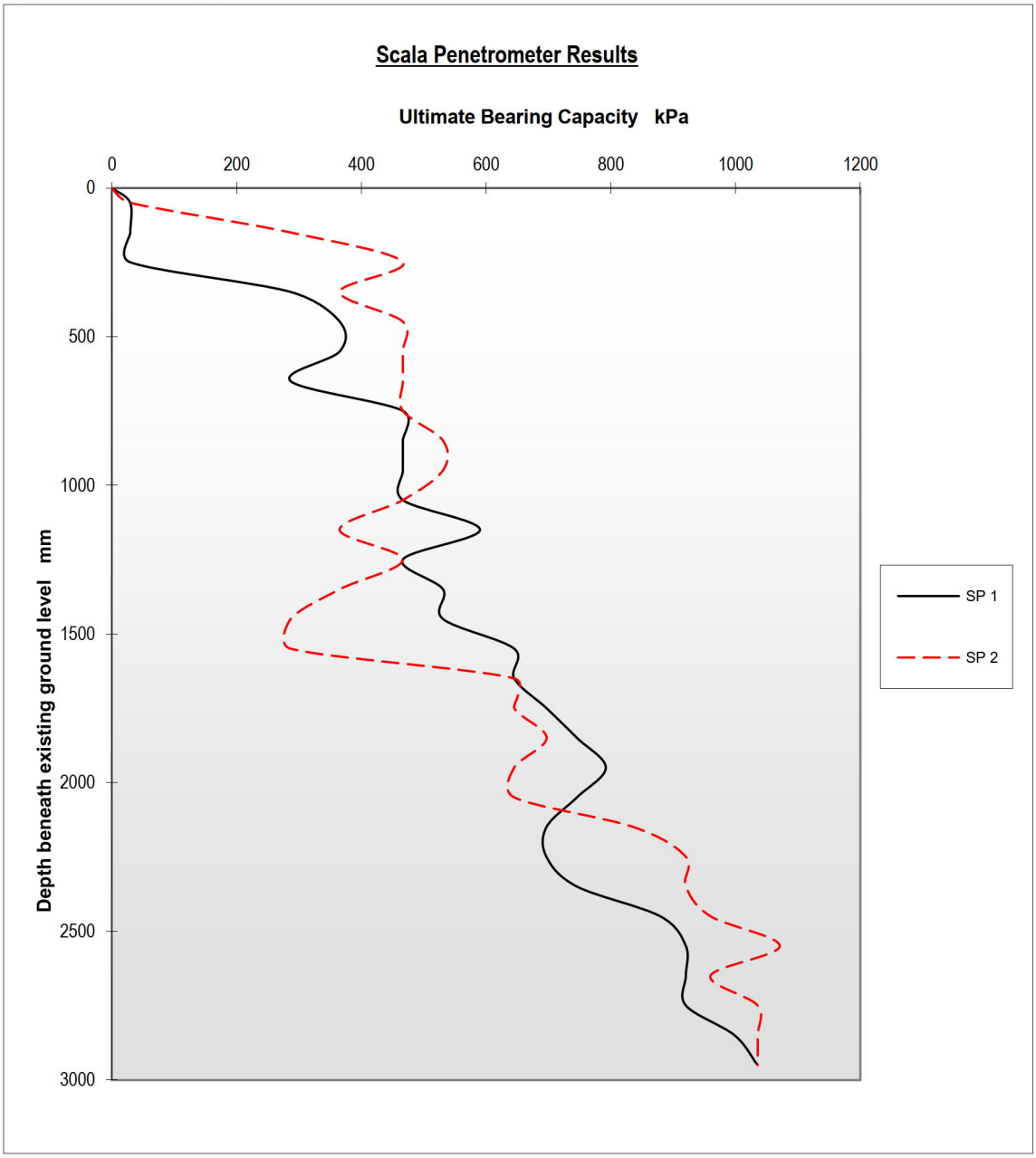
Location:				16 Hemingway Place_CPTU001
Date:				4/03/2013
Core %	Method	Moisture	Depth	Soil Description:
				Soil Type, minor components, plasticity or particle size, colour Rock Description: SUBSTANCE: Rock Type, particle size, colour, minor components DEFECTS: Type, inclination, thickness, roughness, filling.
			0m	
	CPTU		15m	CPTU001 to 15m
			END	

Location:				16 Hemingway Place_CPTU002
Date:				4/03/2013
Core %	Method	Moisture	Depth	Soil Description:
				Soil Type, minor components, plasticity or particle size, colour Rock Description: SUBSTANCE: Rock Type, particle size, colour, minor components DEFECTS: Type, inclination, thickness, roughness, filling.
			0m	
	CPTU		15m	CPTU002 to 15m
			END	

SCALA PENETROMETER RESULTS - COMBINED

JOB NUMBER 121195

Job Name:	Russell Wenn and Julie Collier
Site Address:	16 Hemingway Place
Town/City	Brooklands
Date:	4-Jun-12
Weather:	Wet
Operator:	HAV



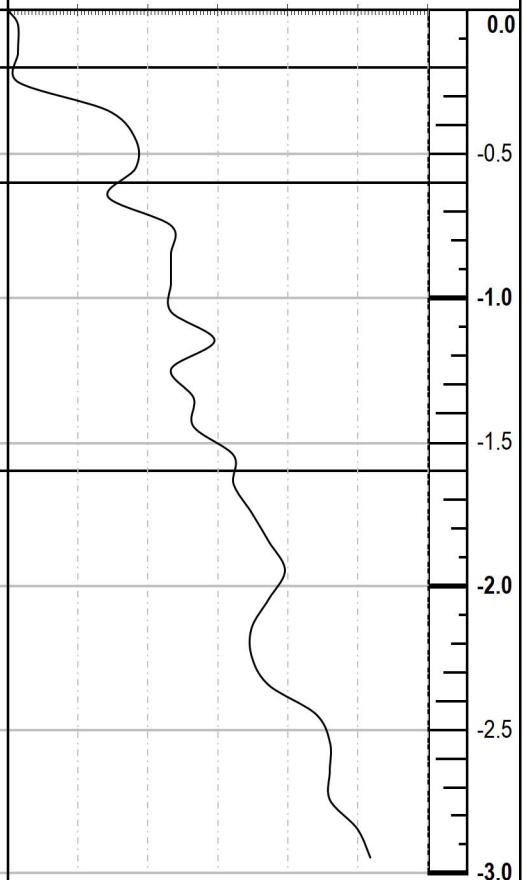
THIS REPORT IS PREPARED SOLEY FOR THE CLIENT WHO COMMISSIONED IT AND KIRK ROBERTS LTD WILL NOT ACCEPT ANY LIABILITY OF ANY KIND FOR THE USE OF ITS CONTENTS BY ANY OTHER PERSON.
BORE LOGS AND SCALA PENETROMETER TESTS ARE DISCRETE TESTS OF THE GROUND AT THE LOCATION OF THE TESTS ONLY. WHILE THEY ARE REPRESENTATIVE OF TYPICAL CONDITIONS, THEY DO NOT IDENTIFY VARIATIONS IN THE GROUND IN LOCATIONS AWAY FROM THE TEST AREAS.

SCALA PENETROMETER & HAND AUGER RESULTS

KIRK ROBERTS CONSULTING ENGINEERS LTD

		Scala Penetrometer:	**SP1**
		Hand Auger:	**HA1**
		Project No.:	**121195**
Client:	Russell Wenn and Julie Collier	**Date:**	04/06/12
Site Address:	16 Hemingway Place	**Weather:**	Wet
Town/City:	Brooklands	**Operator:**	HAV

Geological Formation:	Depth (m)	Sample Description:	Graphic:	USCS	Water Table	Undrained Shear Strength Su (kPa)
	0.0	**TOPSOIL** Brown organic silt, soft, wet.		OL		
	-0.5	**silty SAND** Light brown silty sand, fine to medium sand medium dense, wet.		SM		
	-1.0	**SAND** Brown fine sand, medium dense, wet. Becoming dark brown-grey, medium dense, saturated.		S	04/06/12 ▼	
	-1.5	Sand becoming dense.				
	-2.0	EOH at 1.6 m depth in dense saturated collapsing sand.				
	-2.5					
	-3.0					
	-3.5					
	-4.0					
	-4.5					



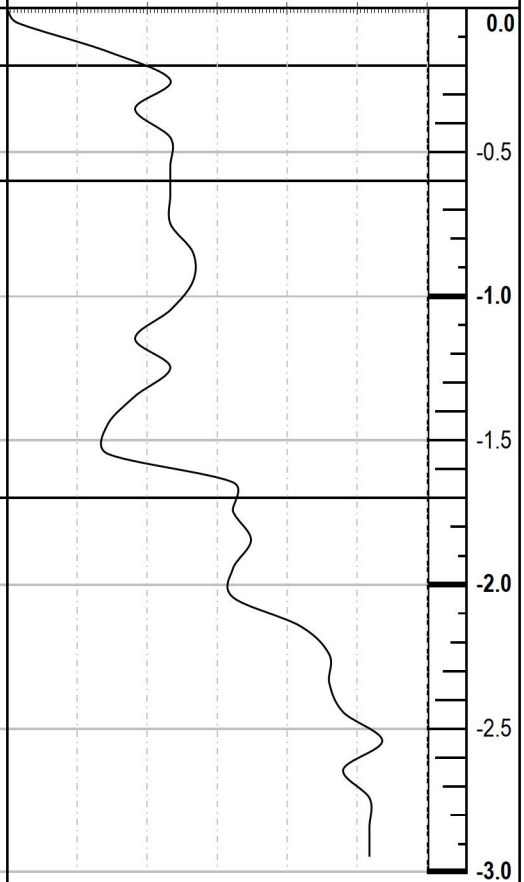
Scala Penetrometer and Test Bore log tests give an indication of the ground condition at the location of the tests only. While they are representative of typical conditions across the site, they do not identify variations in the ground away from the test locations.

SCALA PENETROMETER & HAND AUGER RESULTS

KIRK ROBERTS CONSULTING ENGINEERS LTD

		Scala Penetrometer:	**SP2**
		Hand Auger:	**HA2**
		Project No.:	**121195**
Client:	Russell Wenn and Julie Collier	**Date:**	4 June 2012
Site Address:	16 Hemingway Place	**Weather:**	Wet
Town/City:	Brooklands	**Operator:**	HAV

Geological Formation:	Depth (m)	Sample Description:	Graphic:	USCS	Water Table	Undrained Shear Strength Su (kPa)
	0.0	**TOPSOIL** Brown organic silt, soft, wet.		OL		
	-0.5	**silty SAND** Light brown silty sand, fine to medium sand medium dense, wet		SM		
	-1.0	**SAND** Brown fine sand, medium dense, wet. Becoming dark brown-grey, medium dense, saturated.		S	04/06/12 ▼	
	-1.5	Sand becoming dense.				
	-2.0	EOH at 1.7 m depth in dense saturated collapsing sand.				
	-2.5					
	-3.0					
	-3.5					
	-4.0					
	-4.5					



Scala Penetrometer and Test Bore log tests give an indication of the ground condition at the location of the tests only. While they are representative of typical conditions across the site, they do not identify variations in the ground away from the test locations.

APPENDIX B

- Project Orbit: Canterbury Geotechnical Database
    - Geological Section location plan



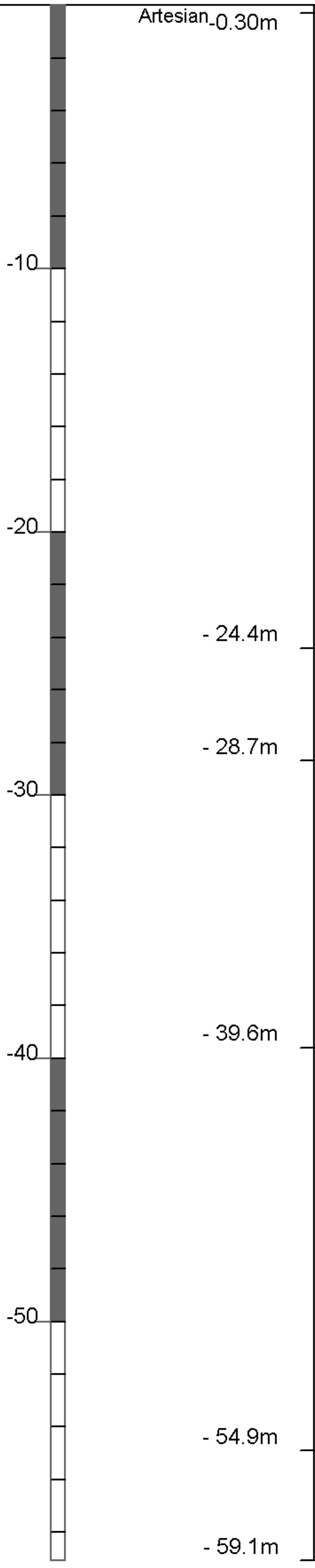
Figure 1: Geological Section location plan.

- Tonkin & Taylor Limited Geological Cross Sections
    - XS-SPE-02
    - XS-SPE-06

Borelog for well M35/1338

Gridref: M35:8527-5332 Accuracy : 3 (1=high, 5=low)
Ground Level Altitude : 2.8 +MSD
Driller : not known
Drill Method : Driven Pipe
Drill Depth : -59.09m Drill Date :

Environment Canterbury Regional Council



Scale(m)	Water Level	Depth(m)	Full Drillers Description	Formation Code
	Artesian	0.30m	Topsoil	ch
			Blue sand	
		- 24.4m	Blue shingle	ch
		- 28.7m	Brown shingle. Water level rises o.6m	ri
		- 39.6m	Yellow clay, Blue sand, peat	ri
		- 54.9m	Brown shingle. Water level rises 1.8m	br
		- 59.1m		li-1

Borelog for well M35/5965

Gridref: M35:8559-5274 Accuracy : 4 (1=high, 5=low)
Ground Level Altitude : 2 +MSD
Driller : Stevens J O
Drill Method : Cable Tool
Drill Depth : -34m Drill Date : 1/06/1988

Environment Canterbury Regional Council

Scale(m)	Water Level	Depth(m)	Full Drillers Description	Formation Code
	-1.7CalcMin		Coarse sand	
		- 12.2m	Fine Blue sand	ch
		- 25.6m	Fine gravel shells & sand	ch
		- 28.1m		ch
		- 28.7m	Peat & pug	ch
			Sandy Blue gravel ,no water movement	
		- 31.6m		ri
		- 32.0m	Mixed Blue & Brown gravel.good water	ri
			Brown gravel.good water	
		- 34.0m		ri

-5 -10 -15 -20 -25 -30

APPENDIX C

- Liquefaction analysis results for:
  - 25 year earthquake event (PGA = 0.13)
  - 500 year earthquake event (PGA = 0.35)

Kirk Roberts Consulting Engineers
Geotechnical Engineers
221 Barbadoes Street
www.kirkroberts.co.nz

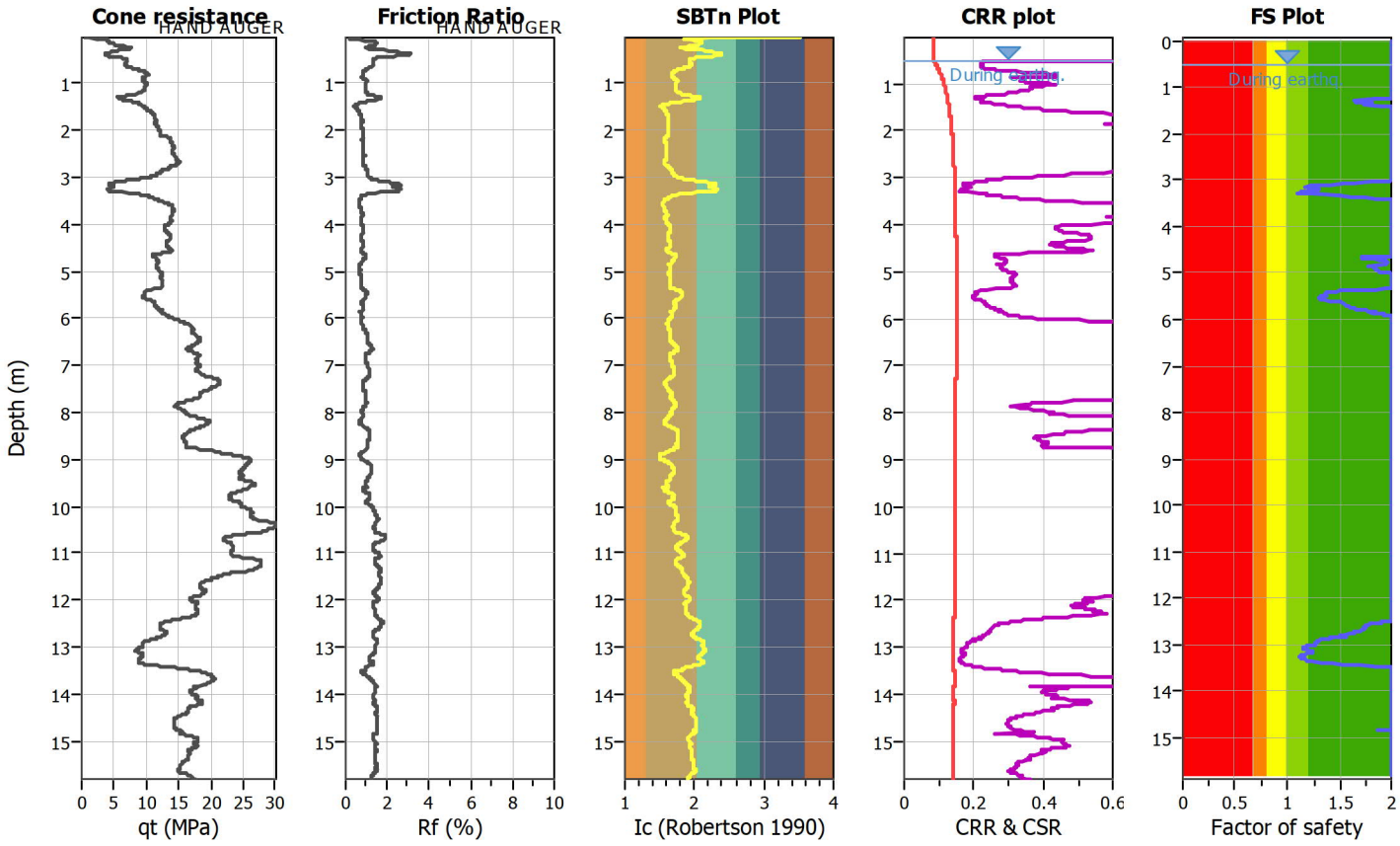
LIQUEFACTION ANALYSIS REPORT

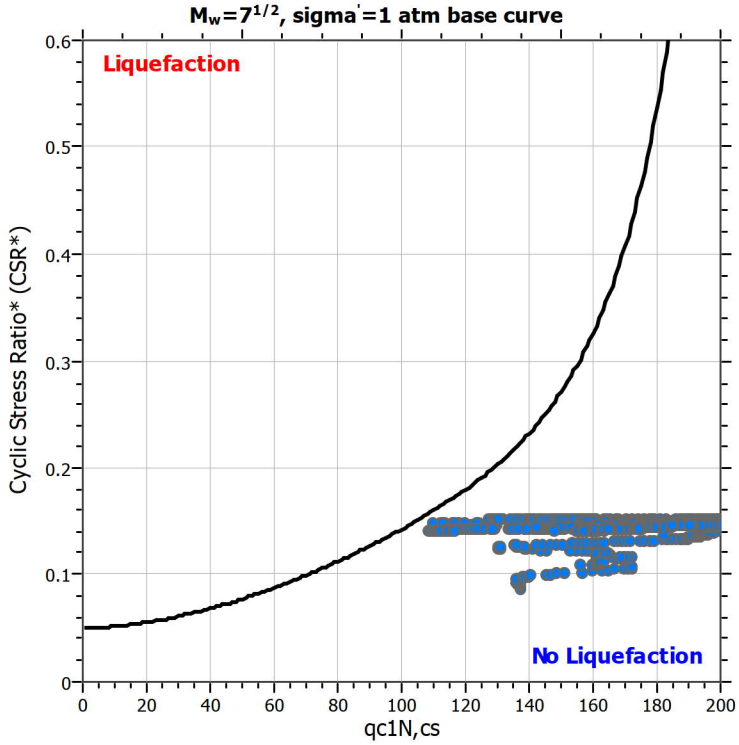
Project title : **Location :**

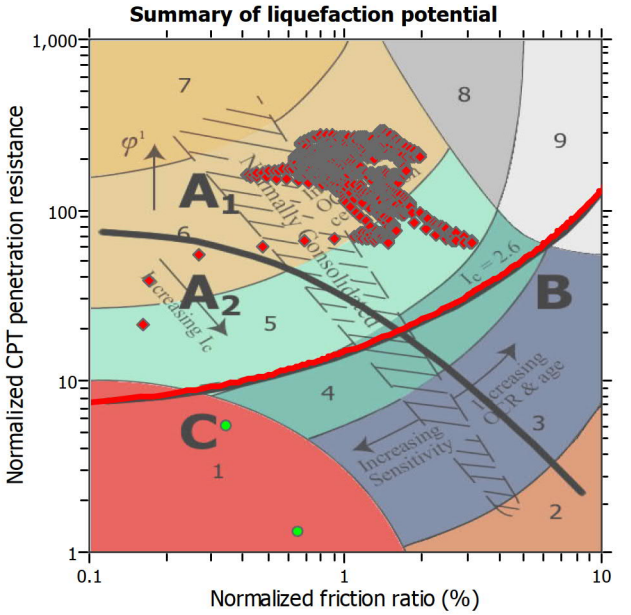
CPT file : CPTU001 SLS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

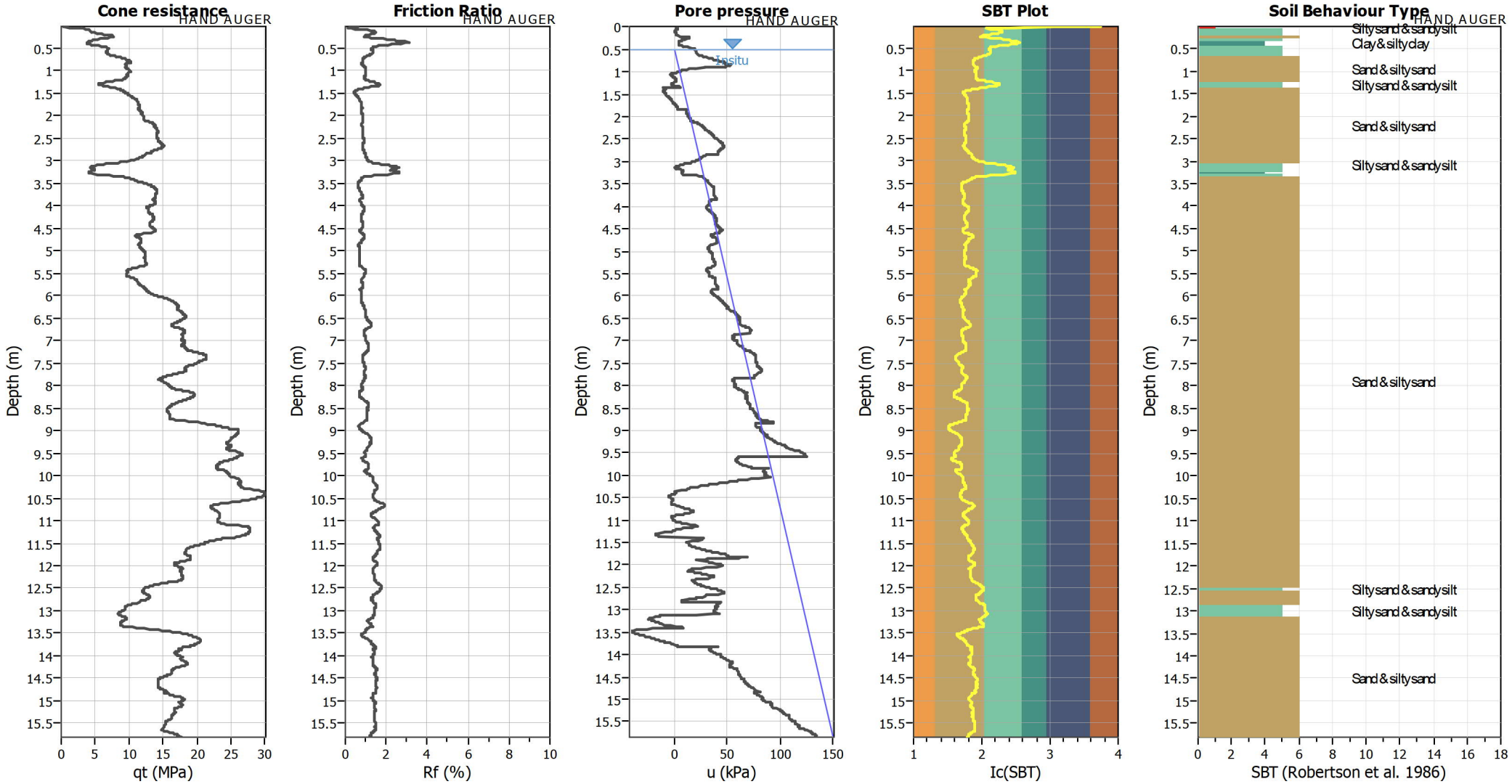






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



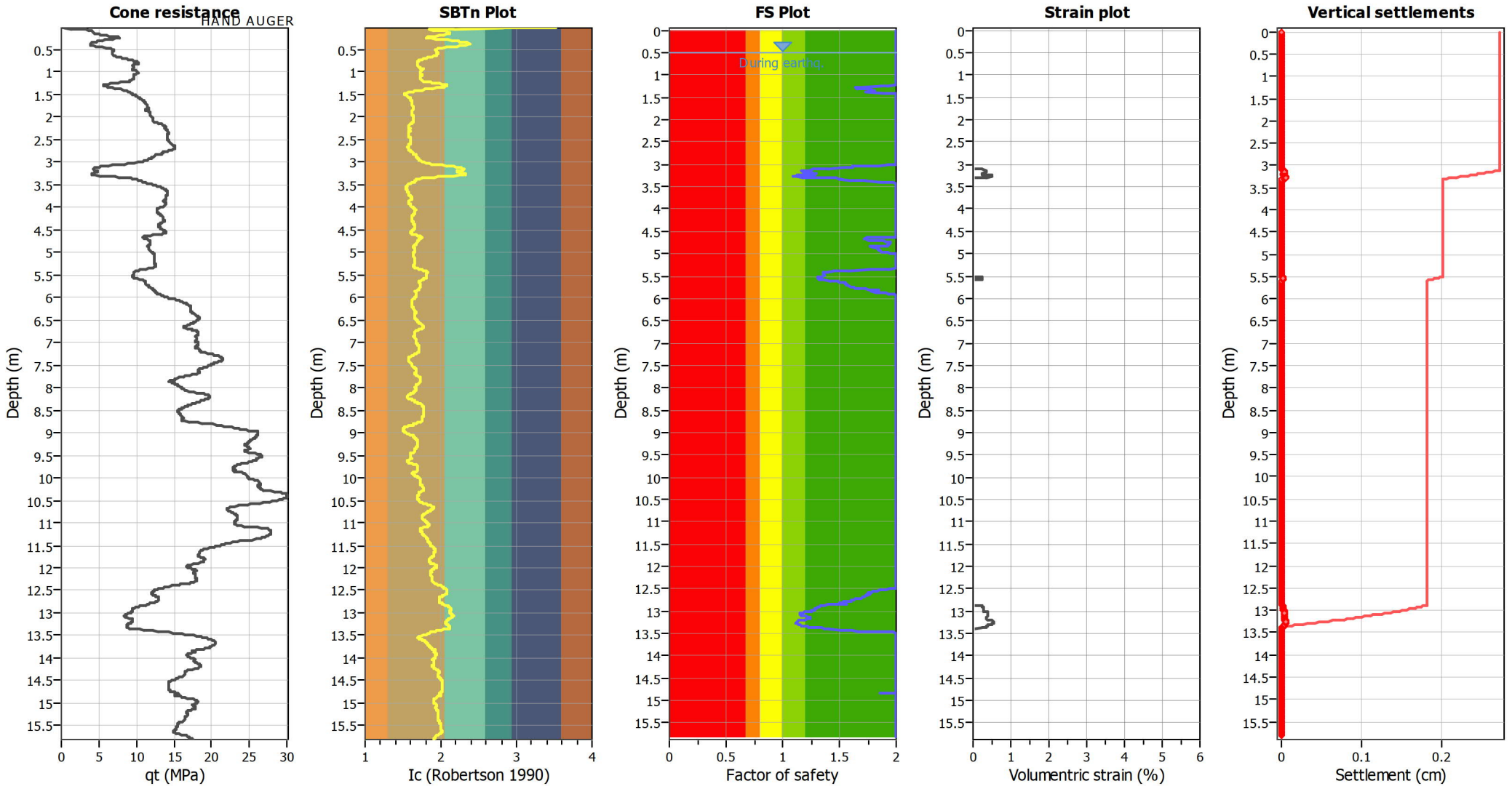
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.13	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

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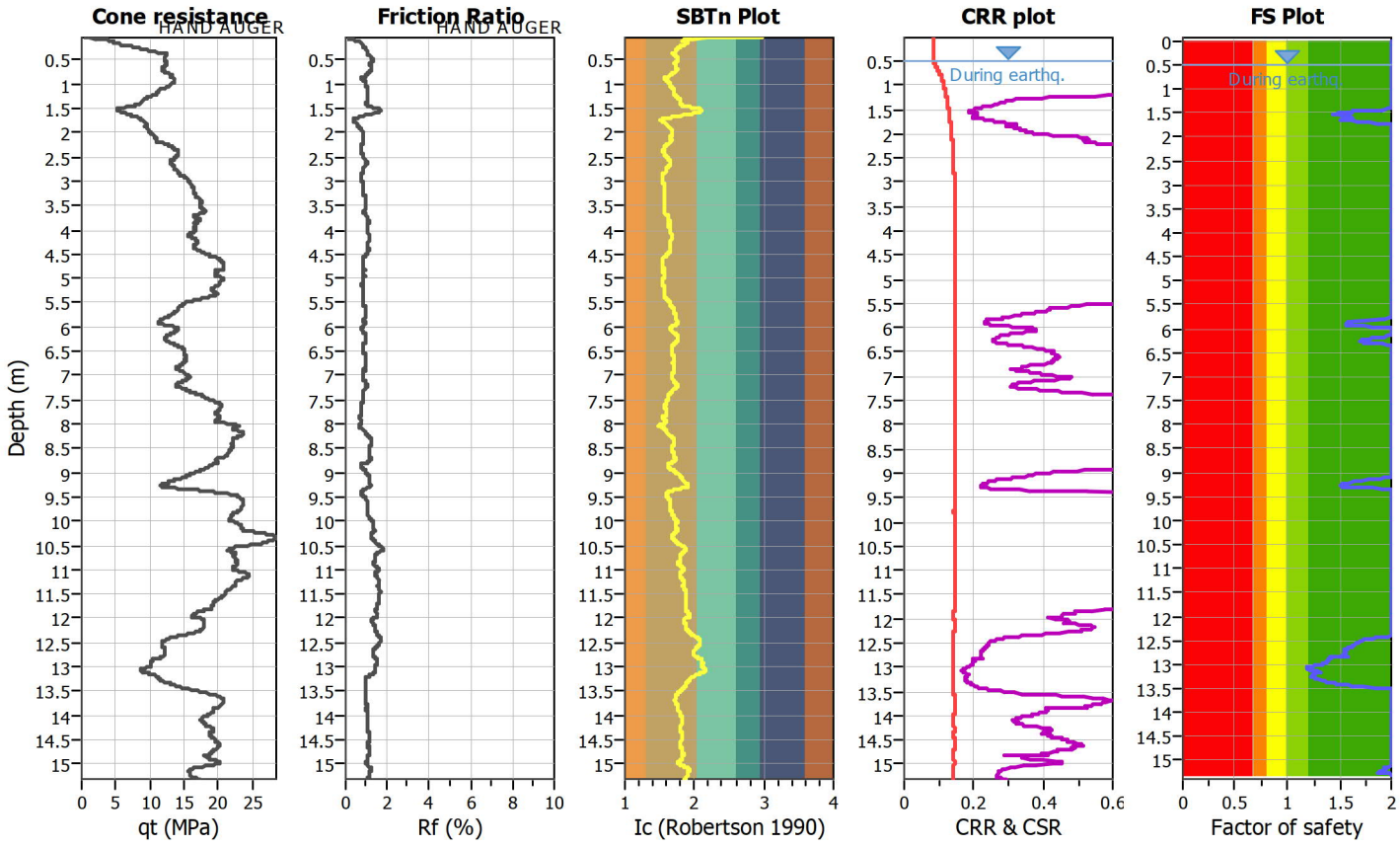
LIQUEFACTION ANALYSIS REPORT

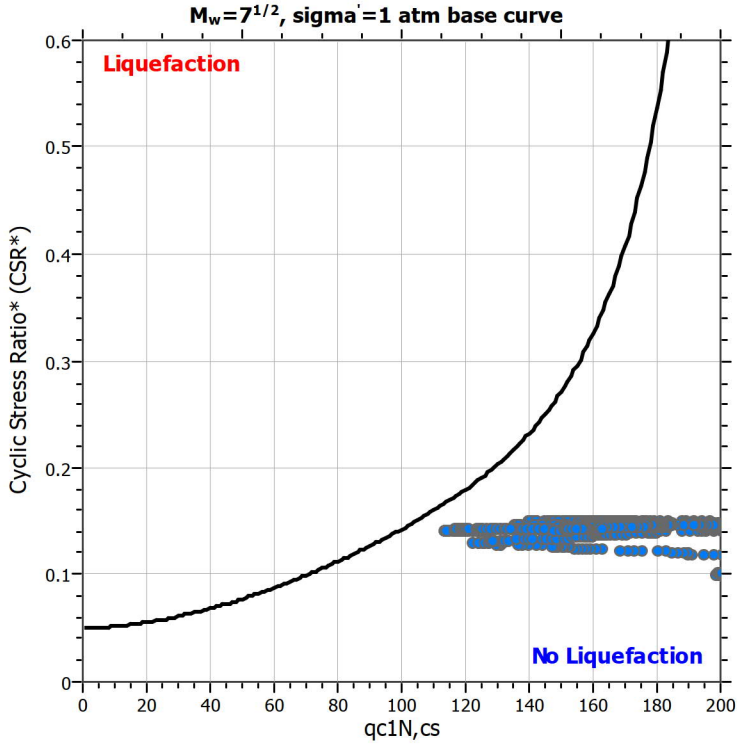
Project title : **Location :**

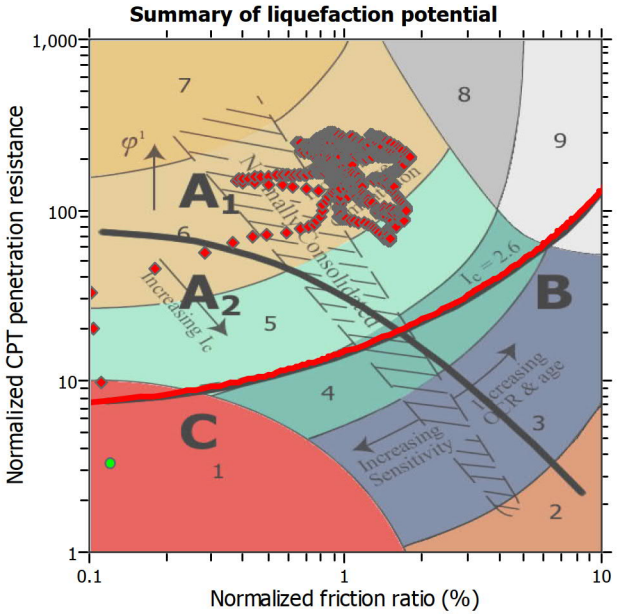
CPT file : CPTU002 SLS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

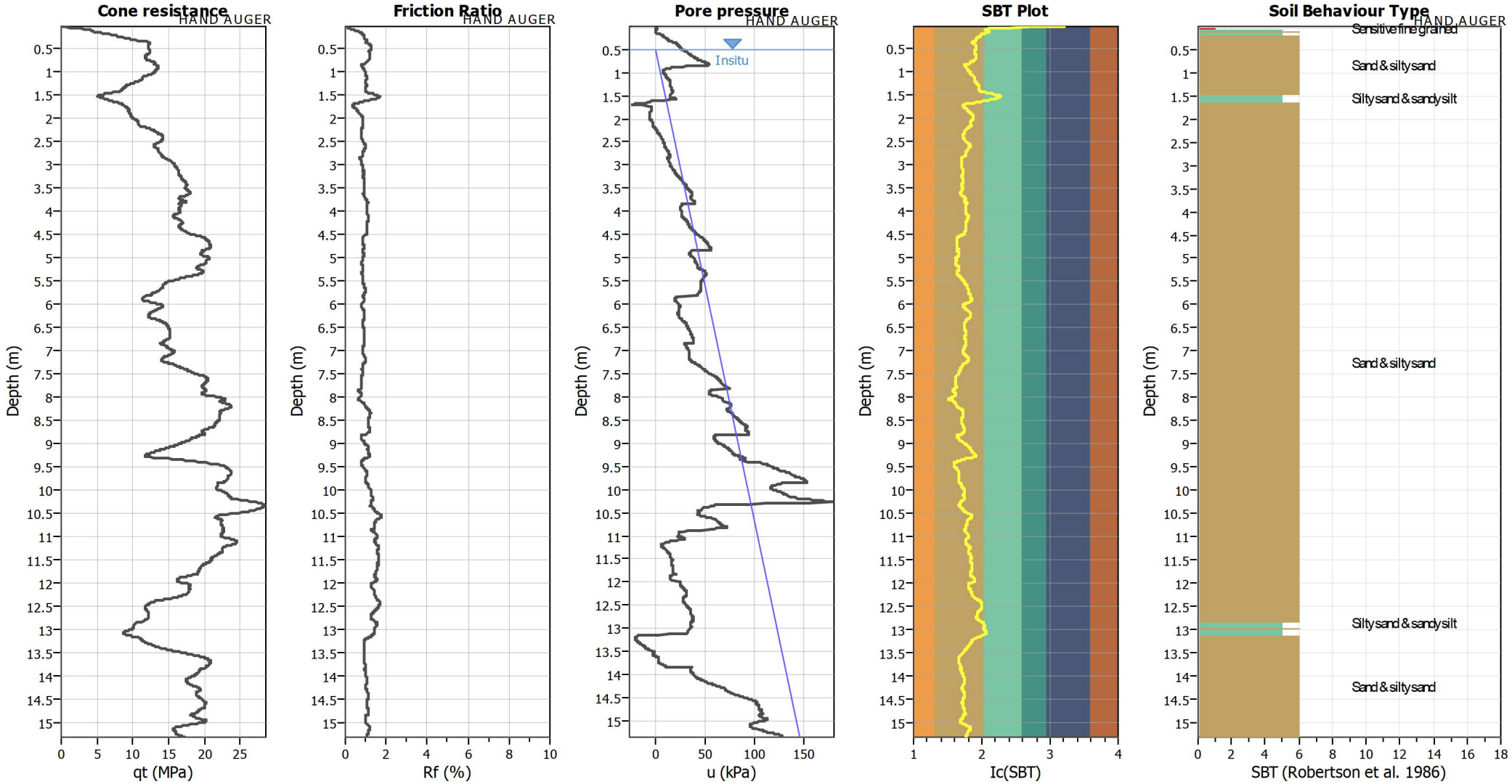






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
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Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



Input parameters and analysis data

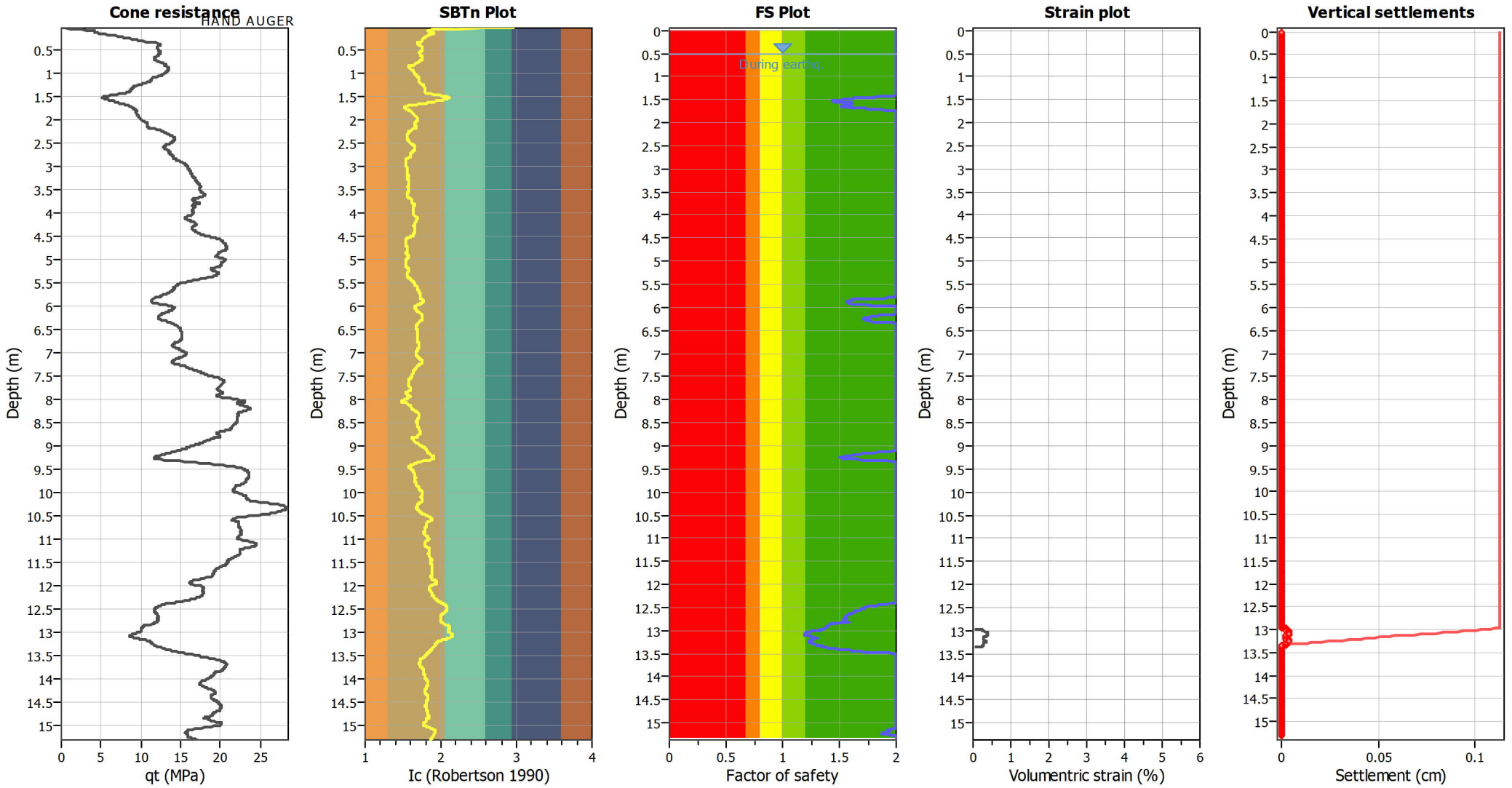
Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.13	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

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Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
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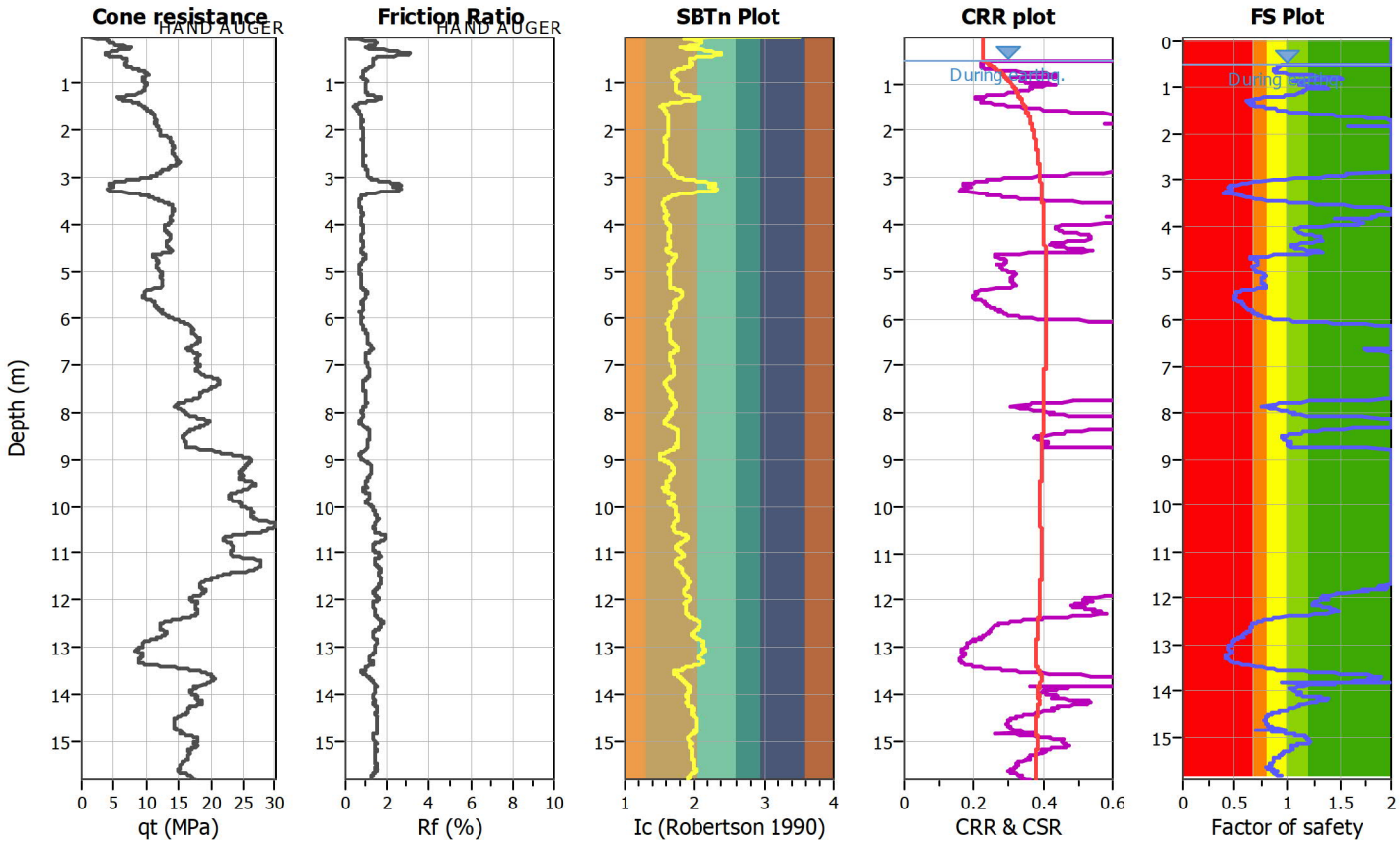
LIQUEFACTION ANALYSIS REPORT

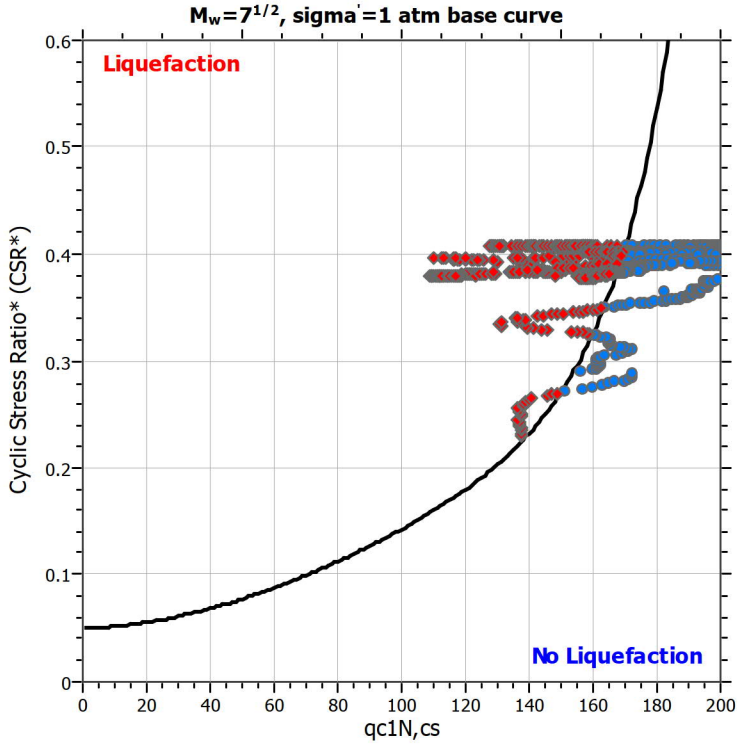
Project title : **Location :**

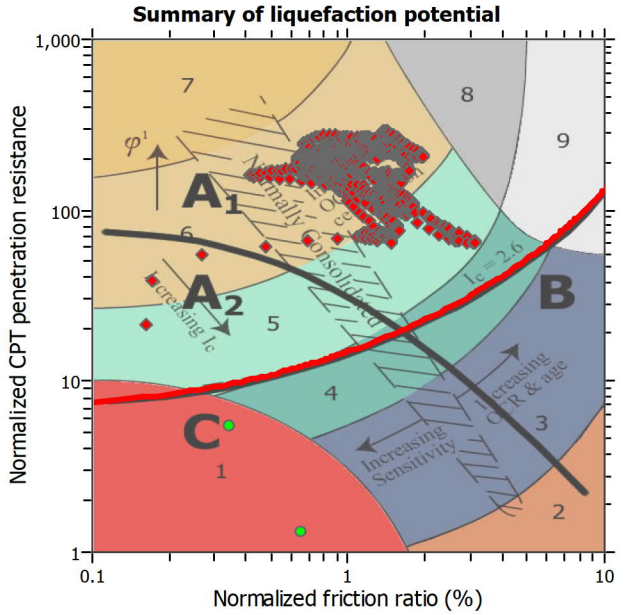
CPT file : CPTU001 ULS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.35	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

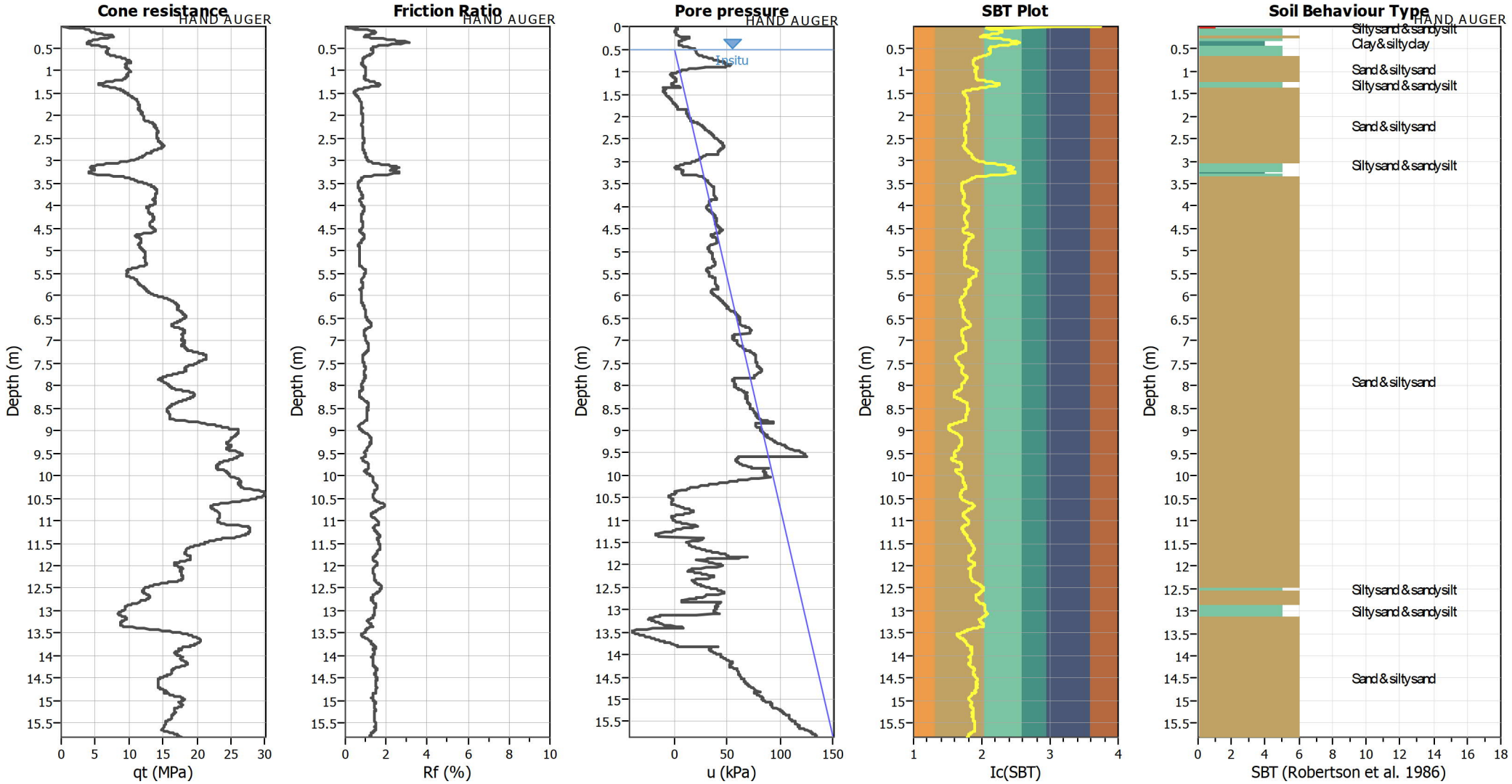






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
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CPT basic interpretation plots



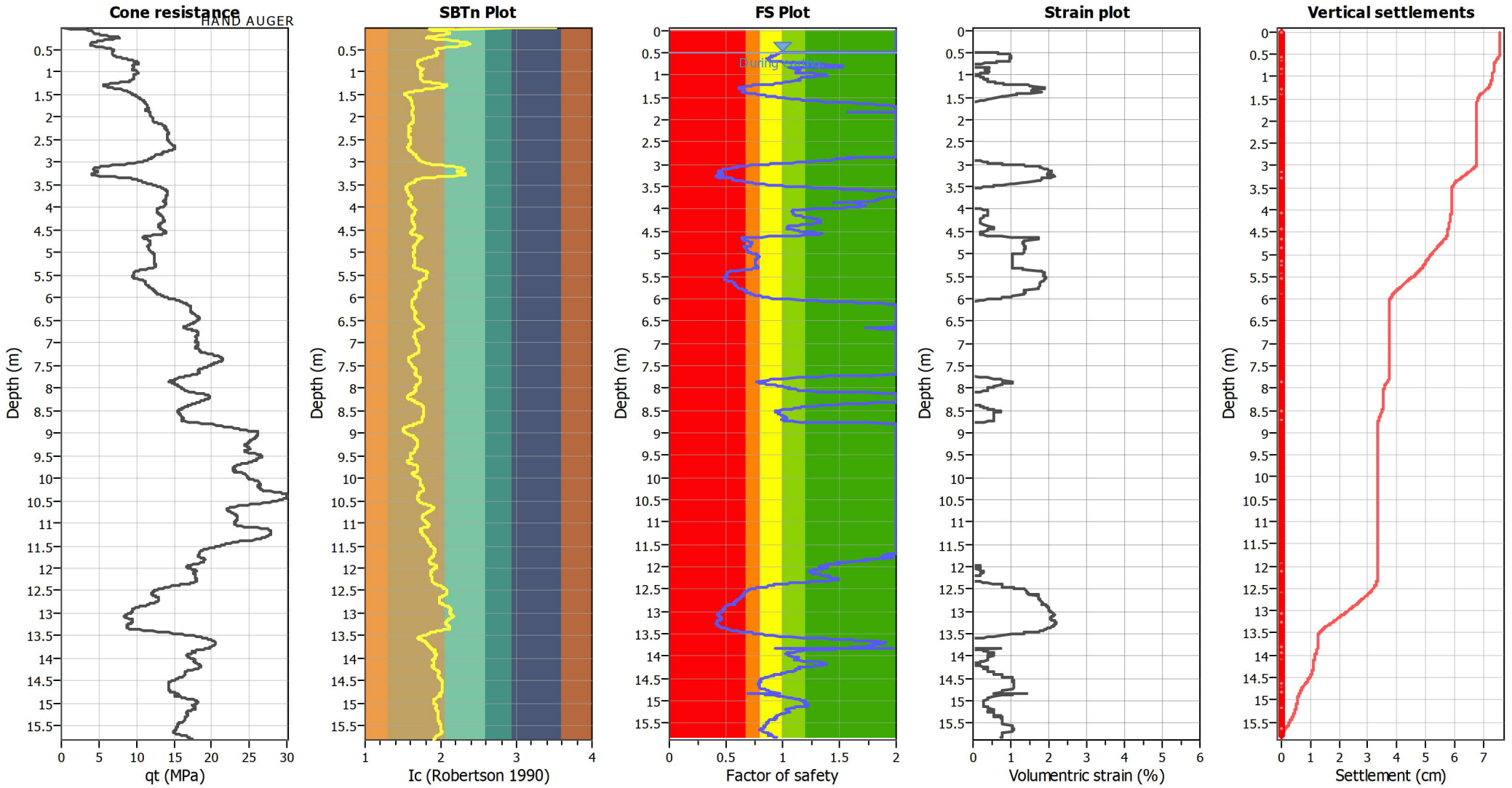
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.35	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
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6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

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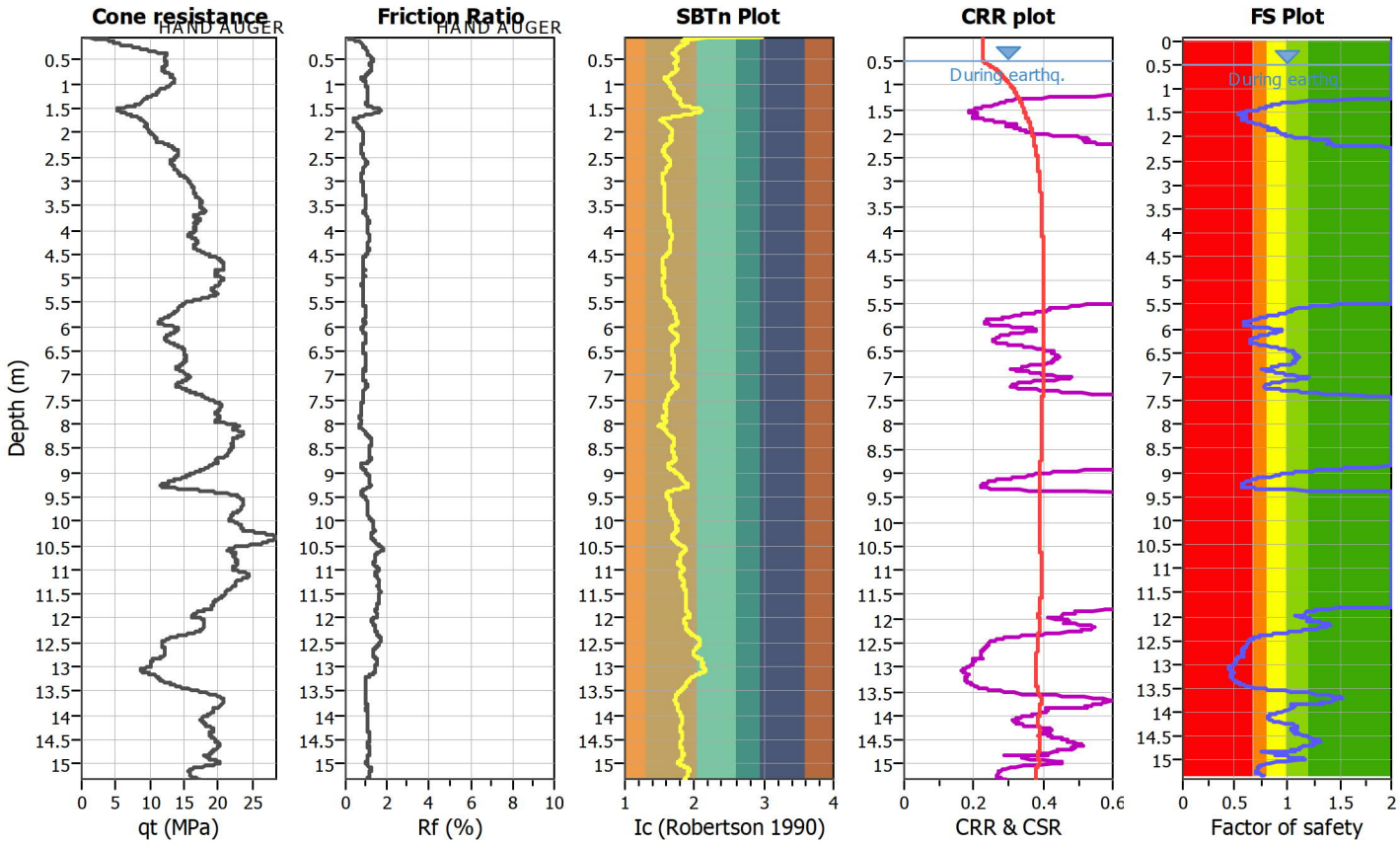
LIQUEFACTION ANALYSIS REPORT

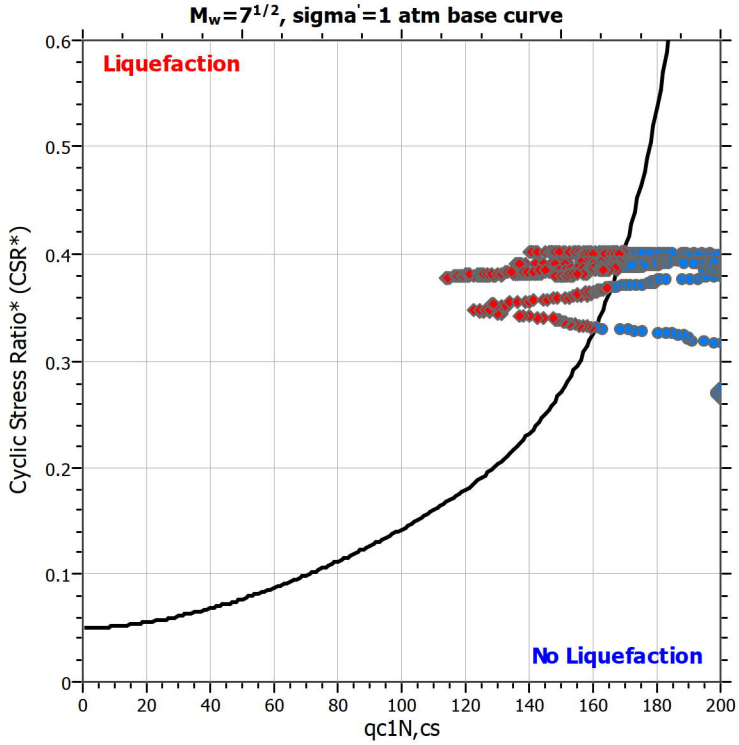
Project title : **Location :**

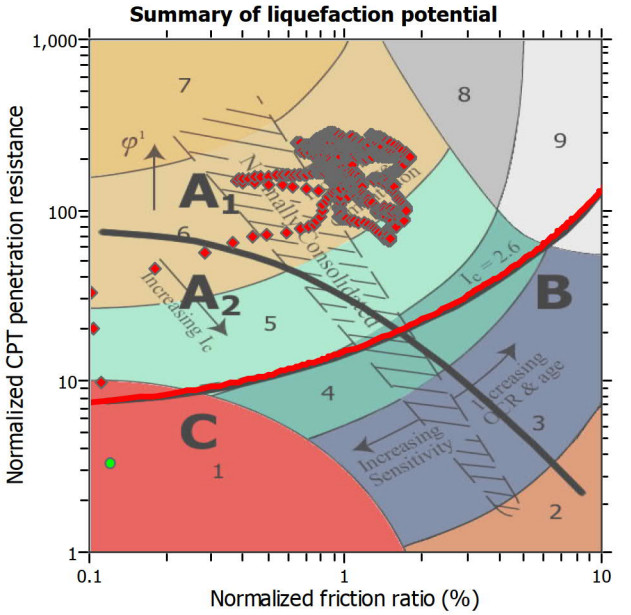
CPT file : CPTU002 ULS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.35	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

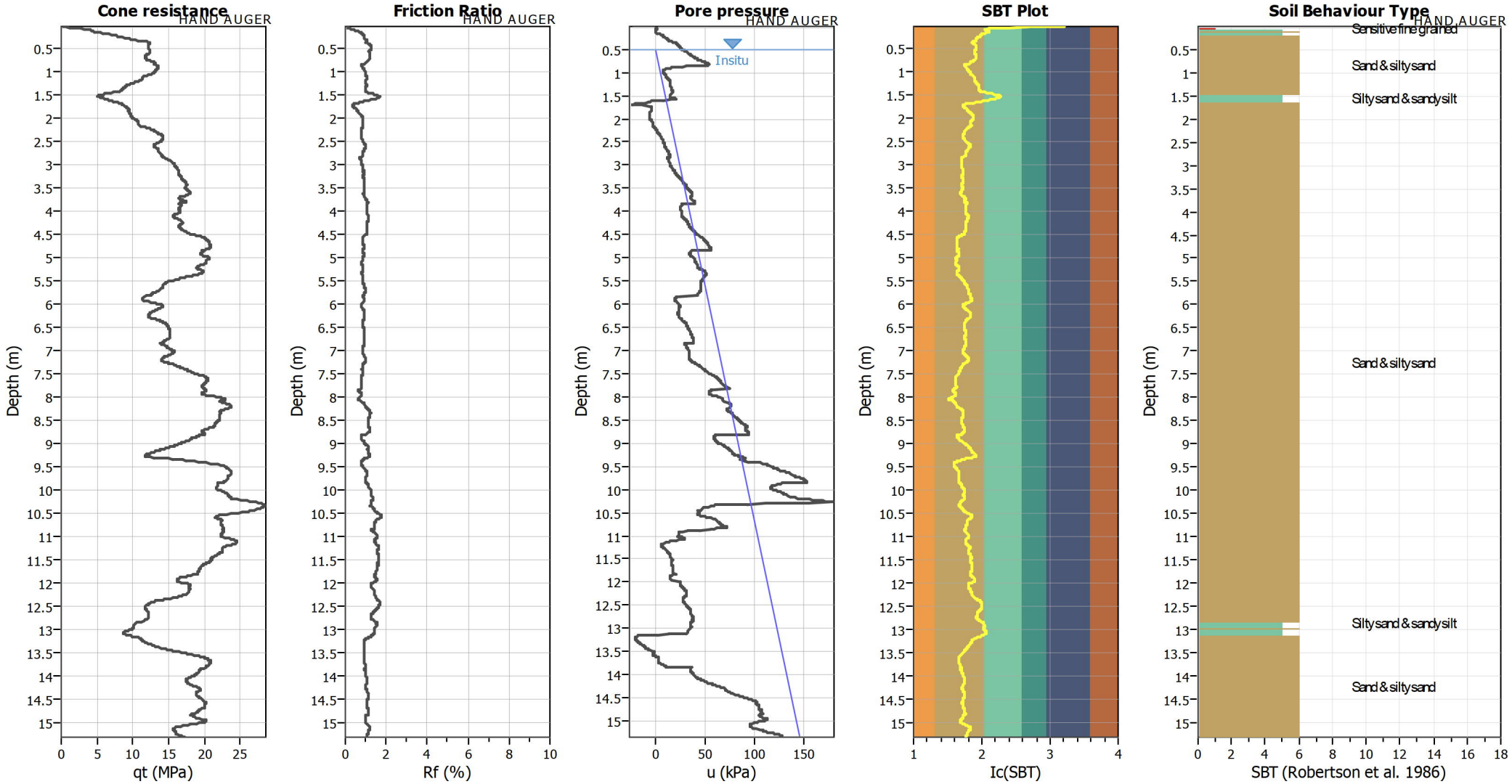






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
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CPT basic interpretation plots



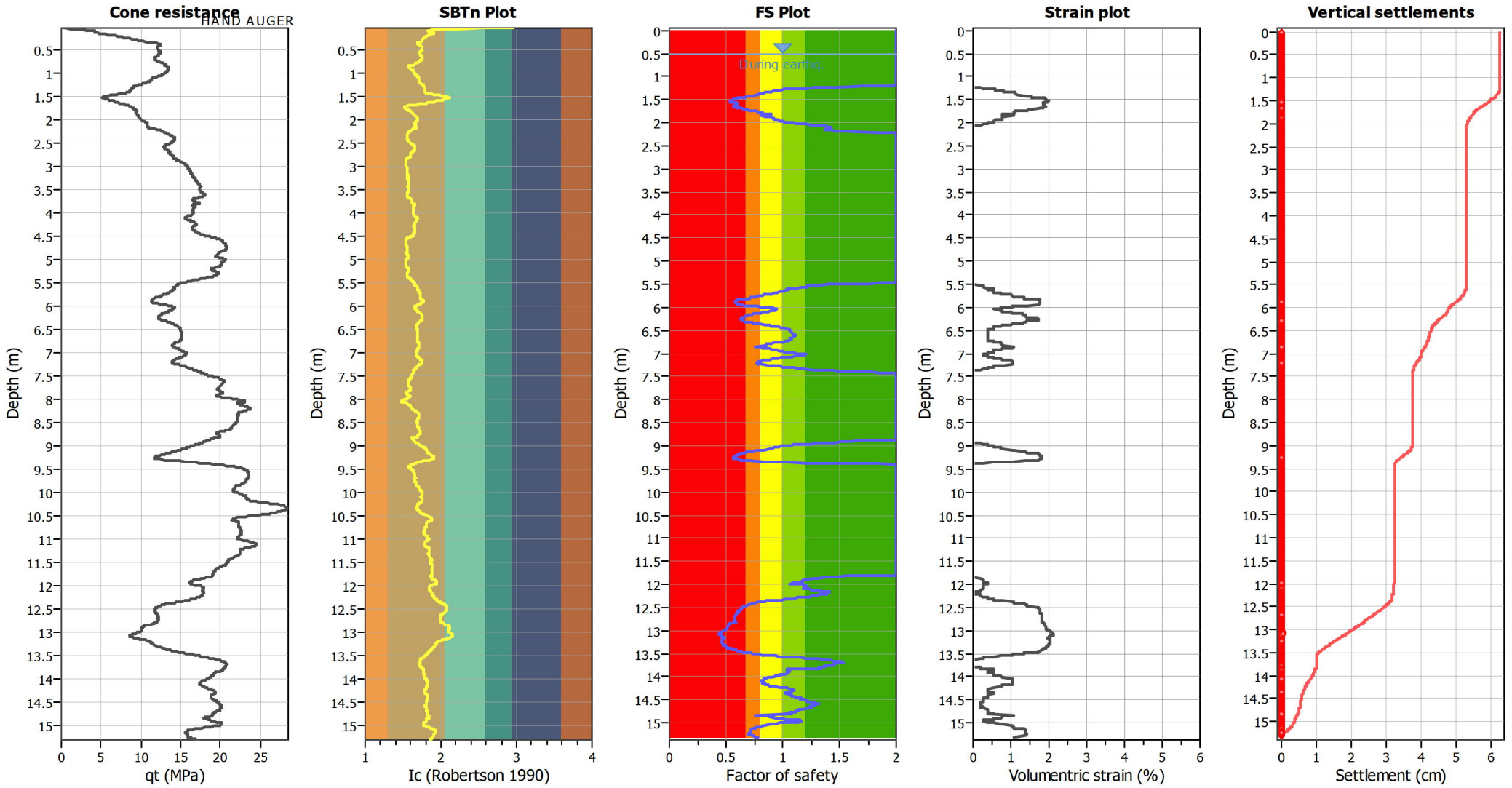
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.35	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
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7. Gravely sand to sand
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9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
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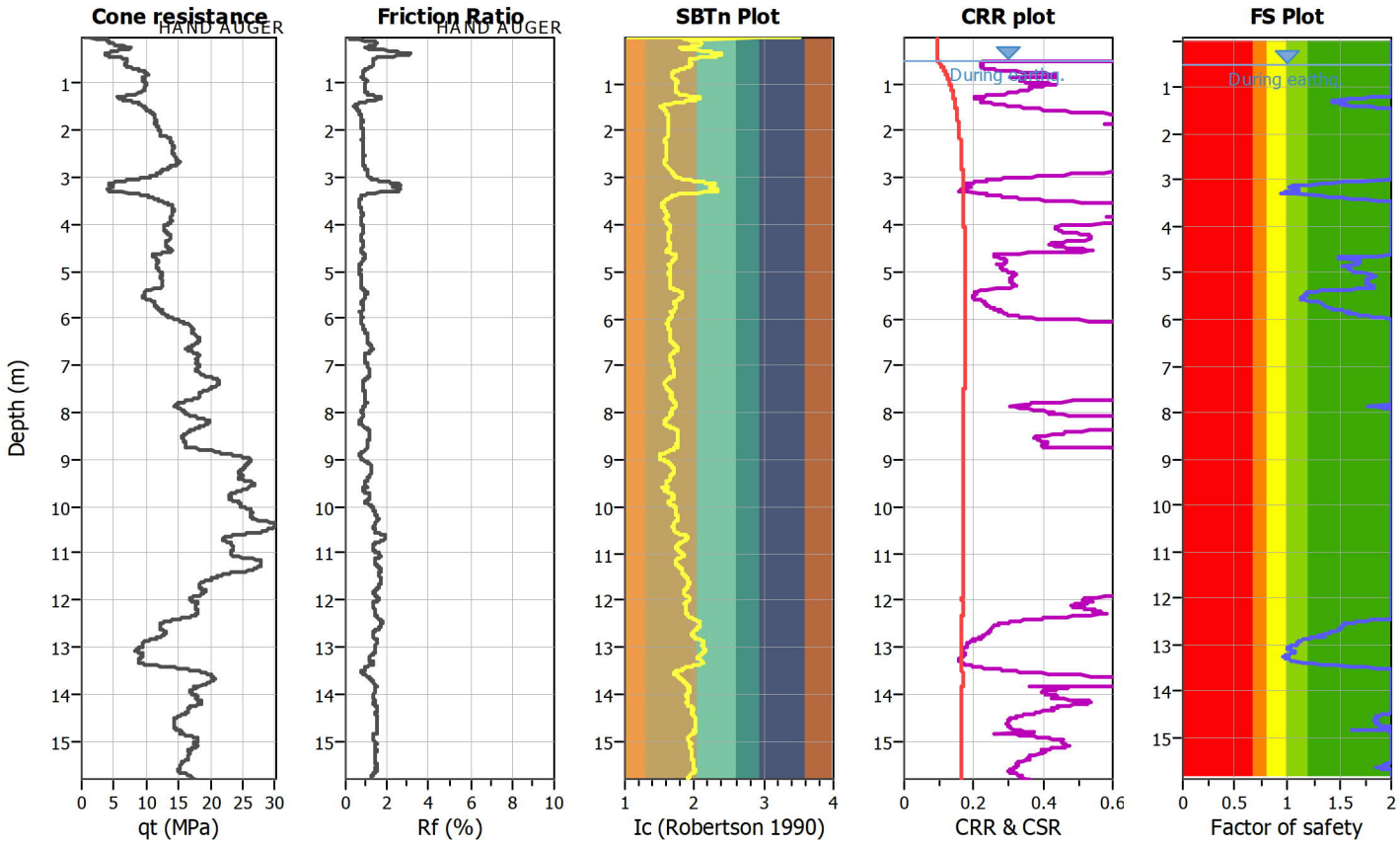
LIQUEFACTION ANALYSIS REPORT

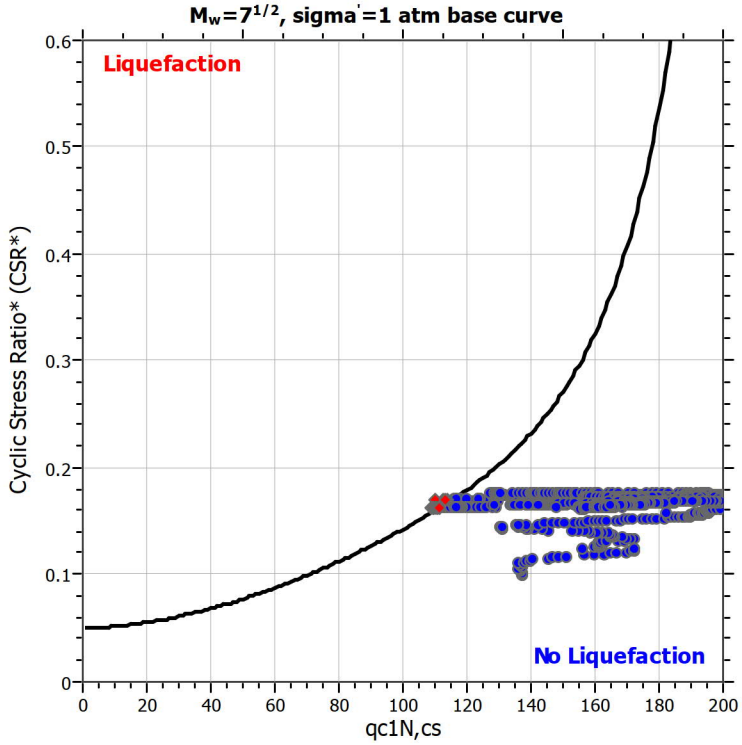
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

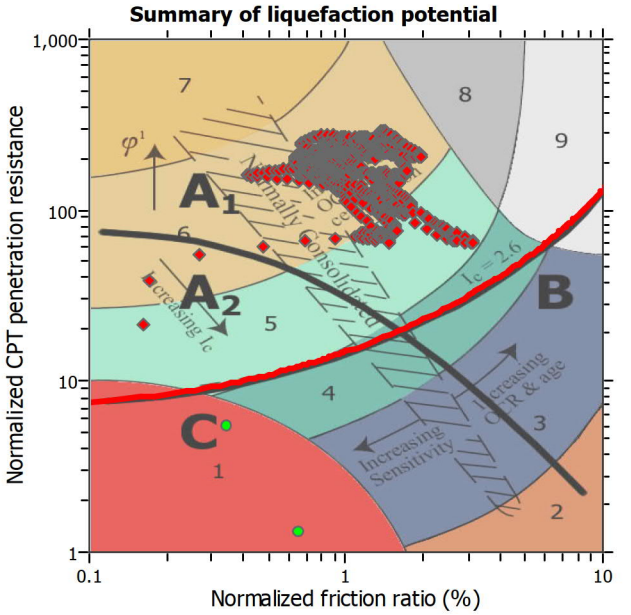
CPT file : CPTU001 SLS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

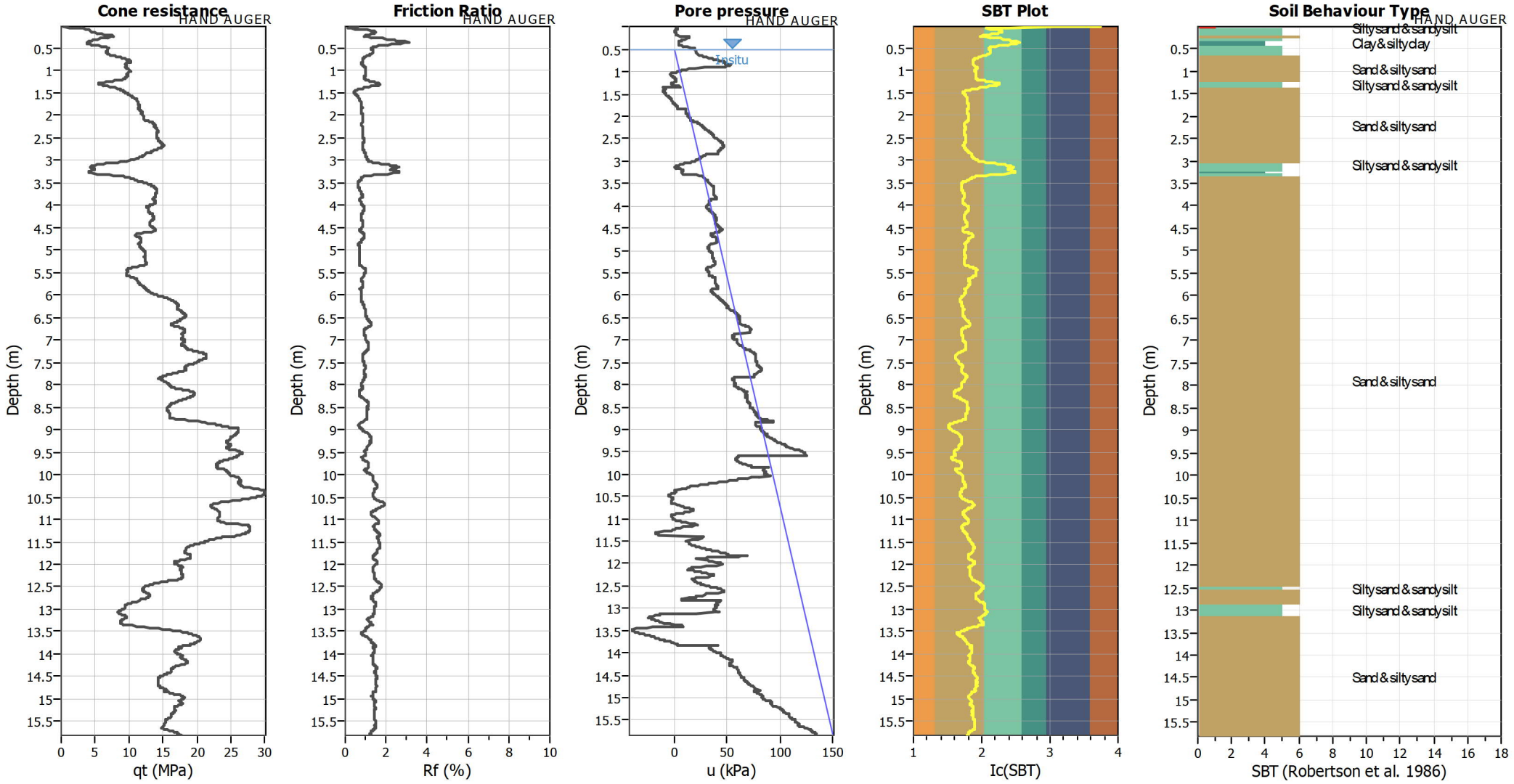






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
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CPT basic interpretation plots



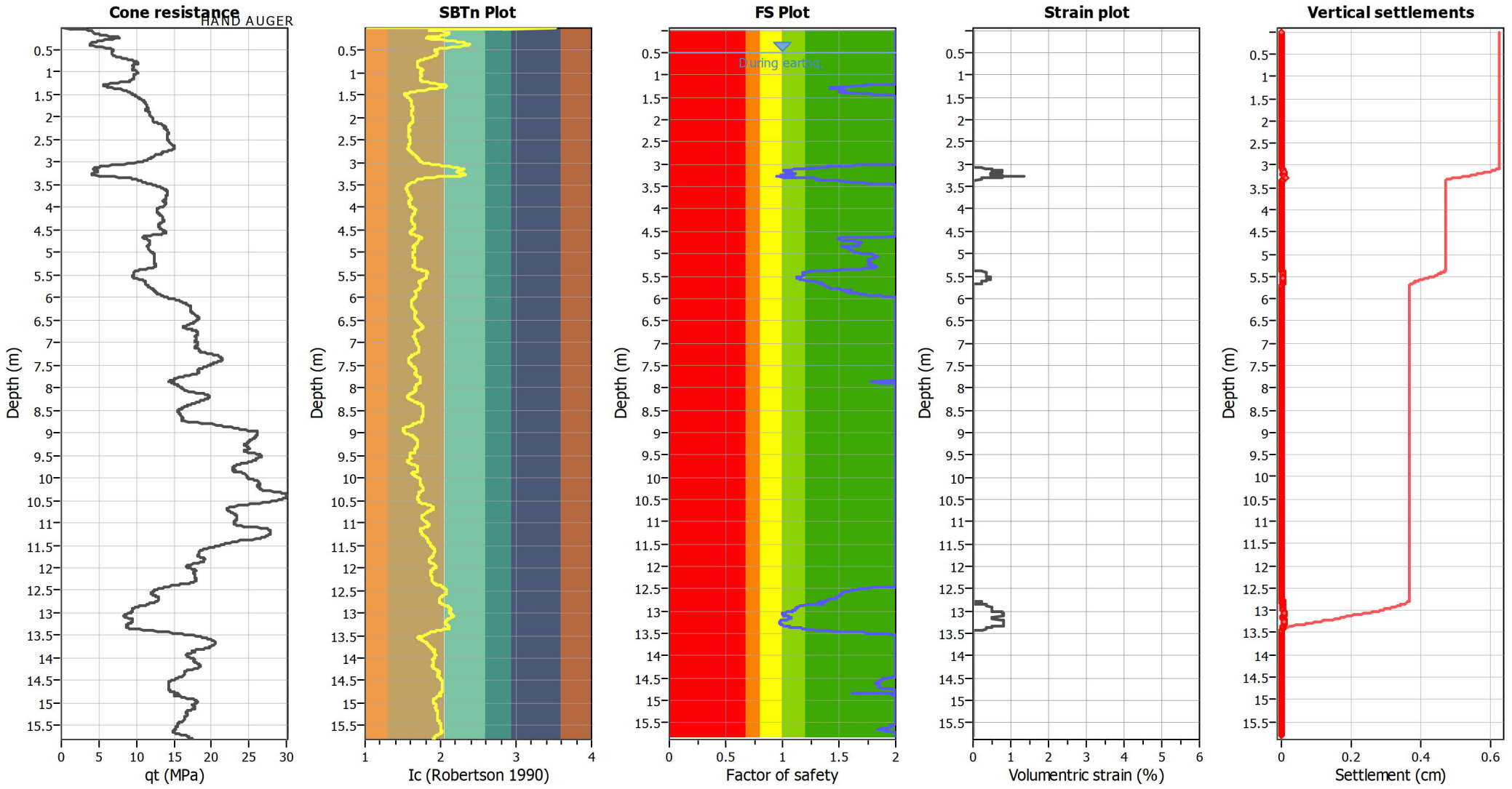
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
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Estimation of post-earthquake settlements



Abbreviations

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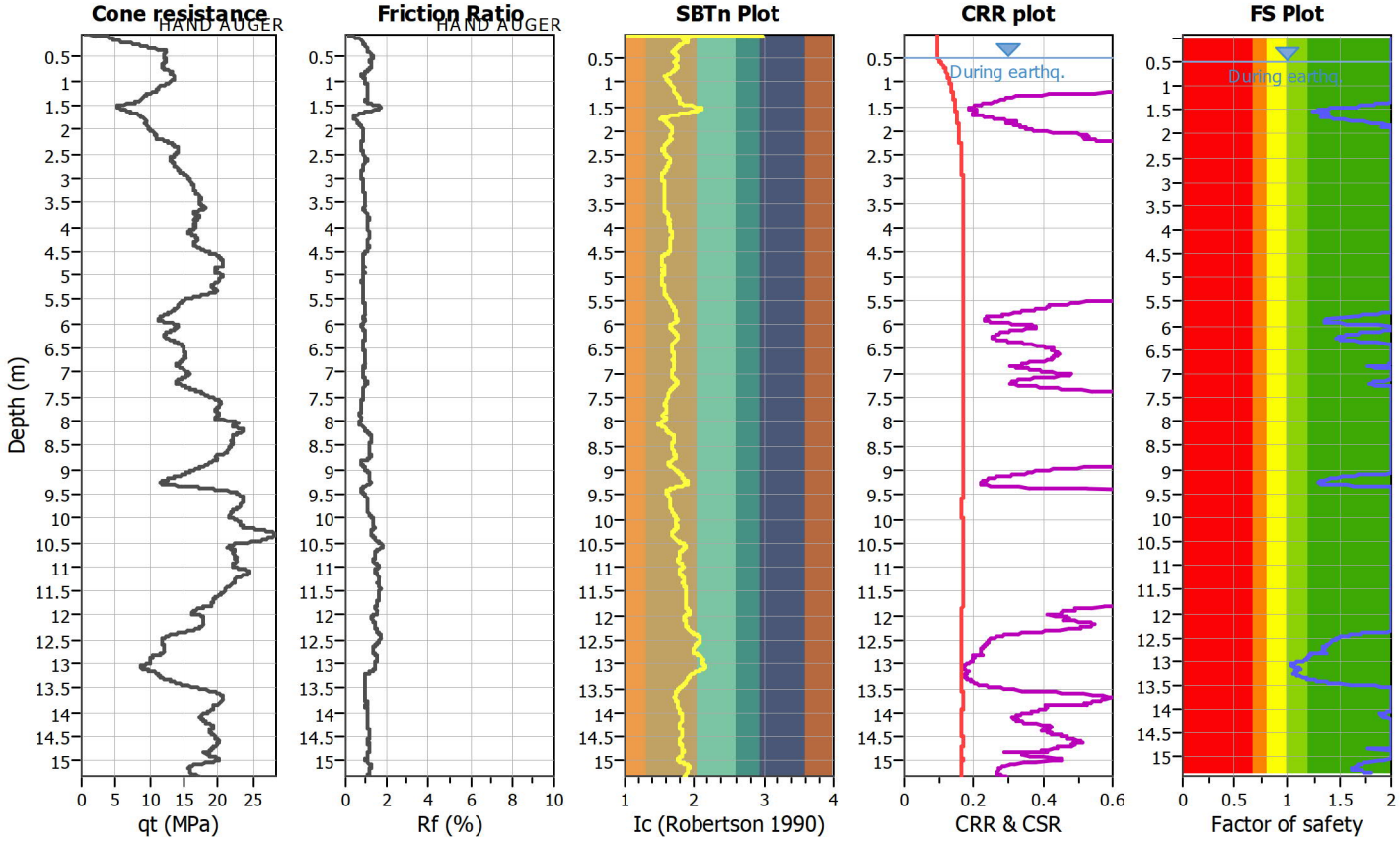
LIQUEFACTION ANALYSIS REPORT

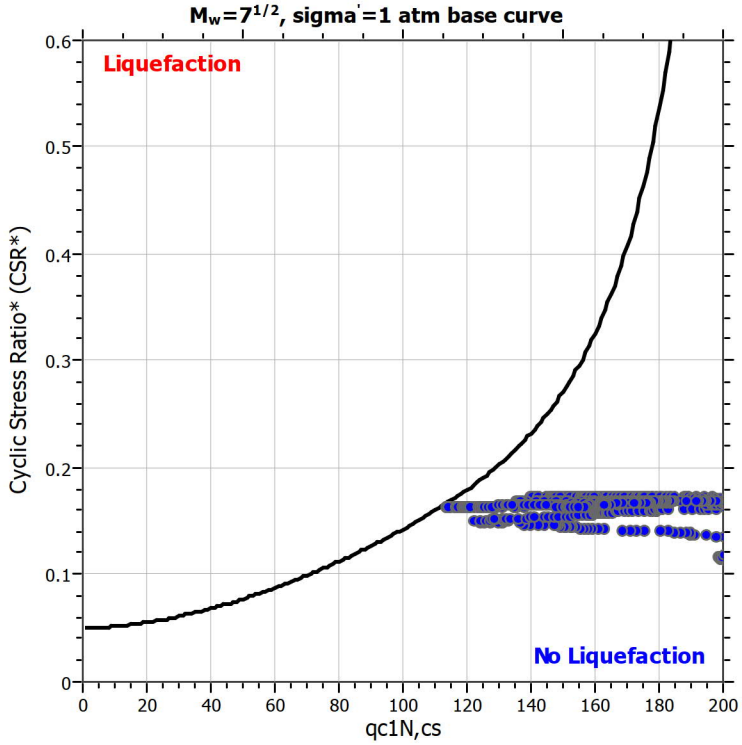
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

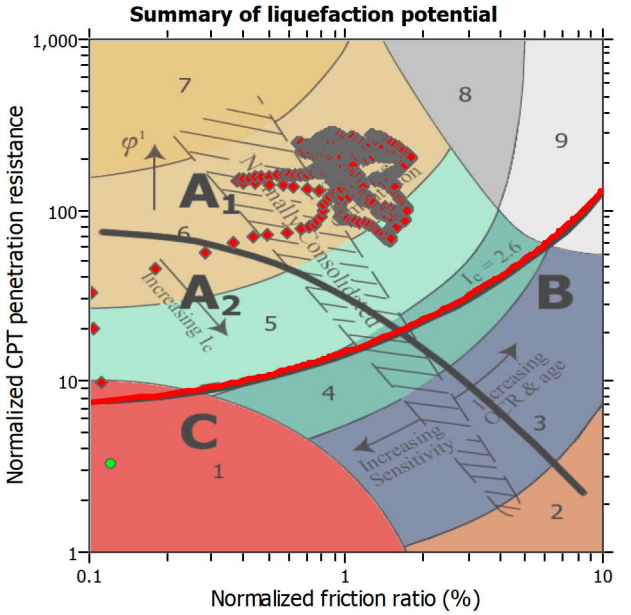
CPT file : CPTU002 SLS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
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Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

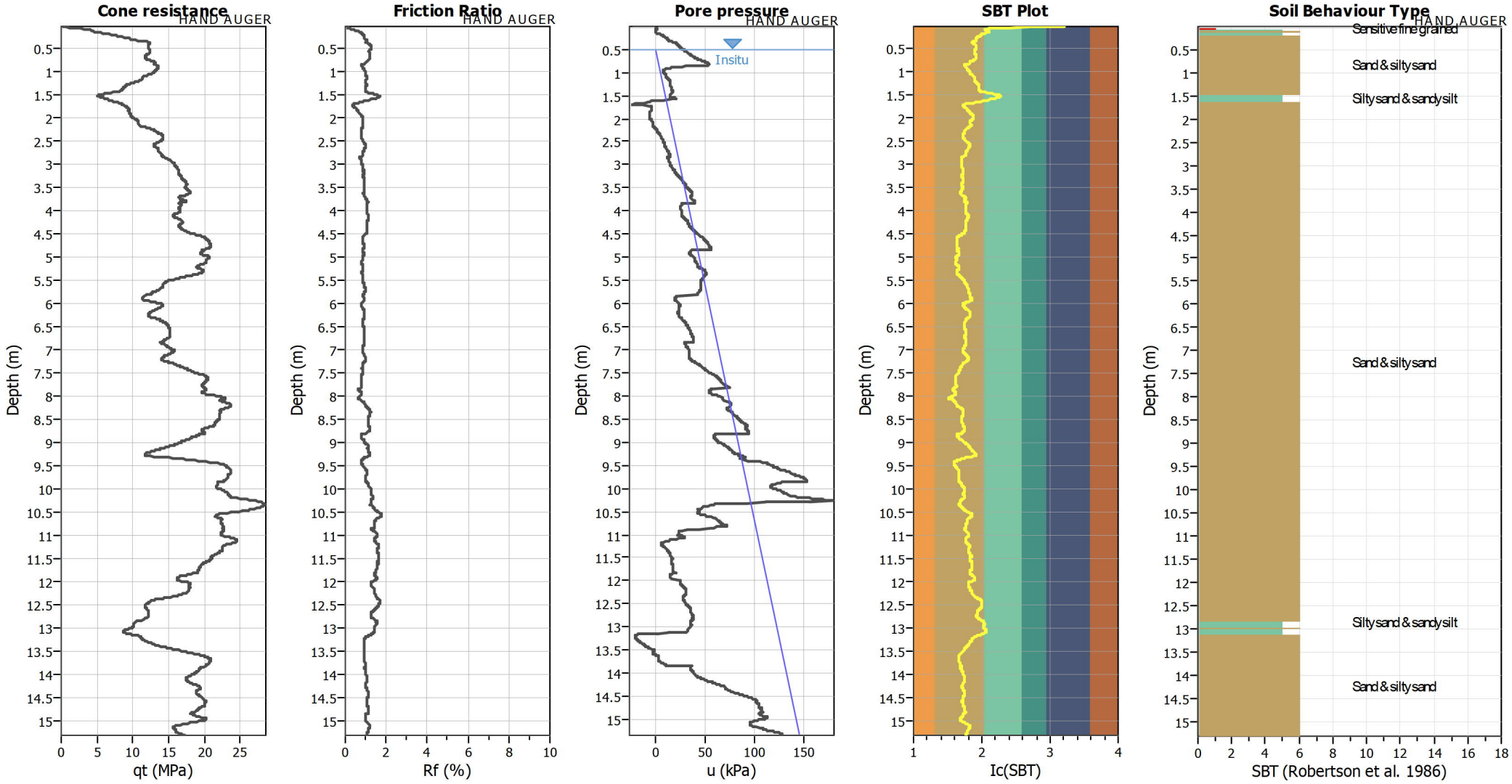






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
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CPT basic interpretation plots



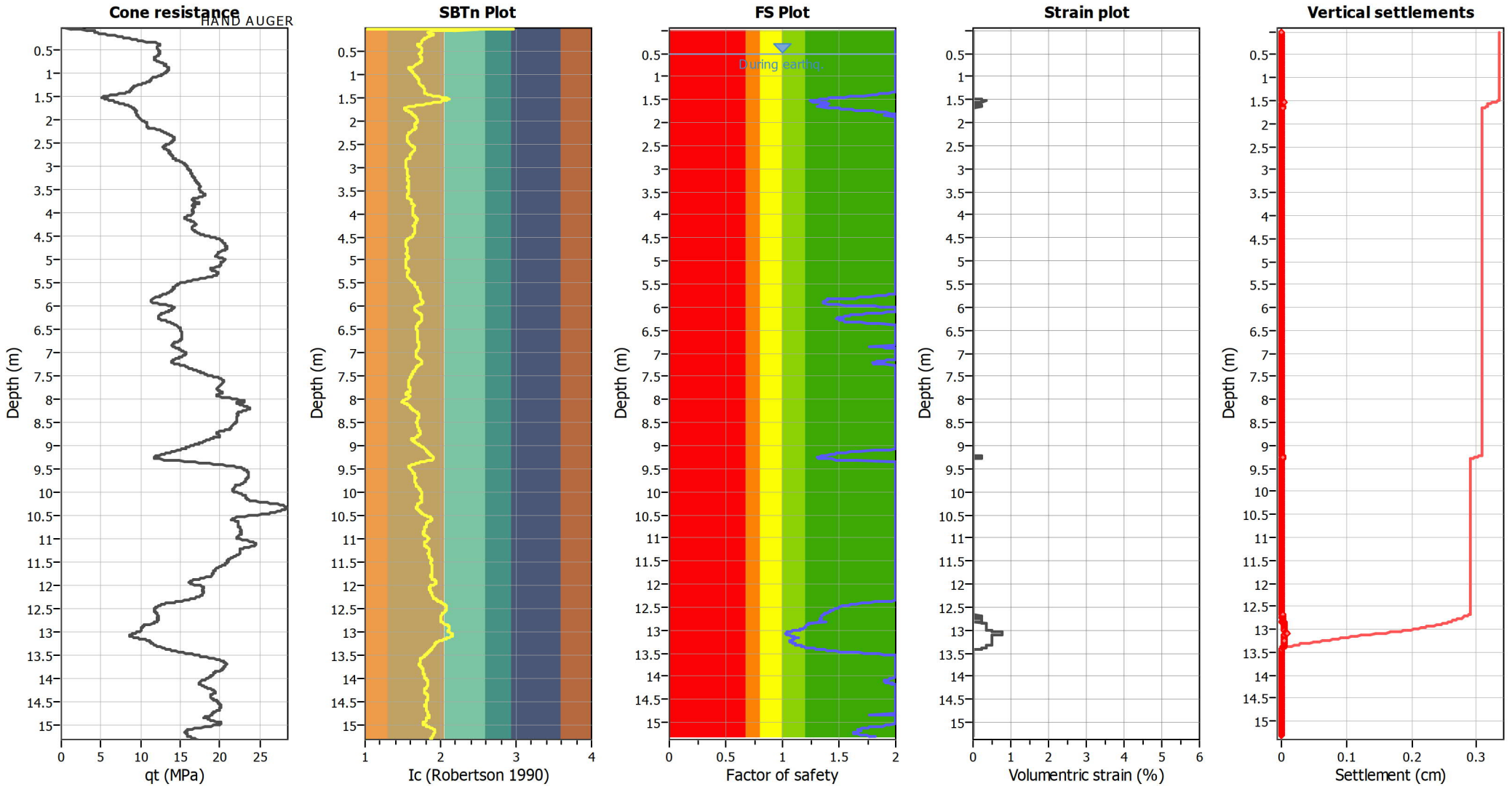
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Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
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Estimation of post-earthquake settlements



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FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

Kirk Roberts Consulting Engineers
Geotechnical Engineers
221 Barbadoes Street
www.kirkroberts.co.nz

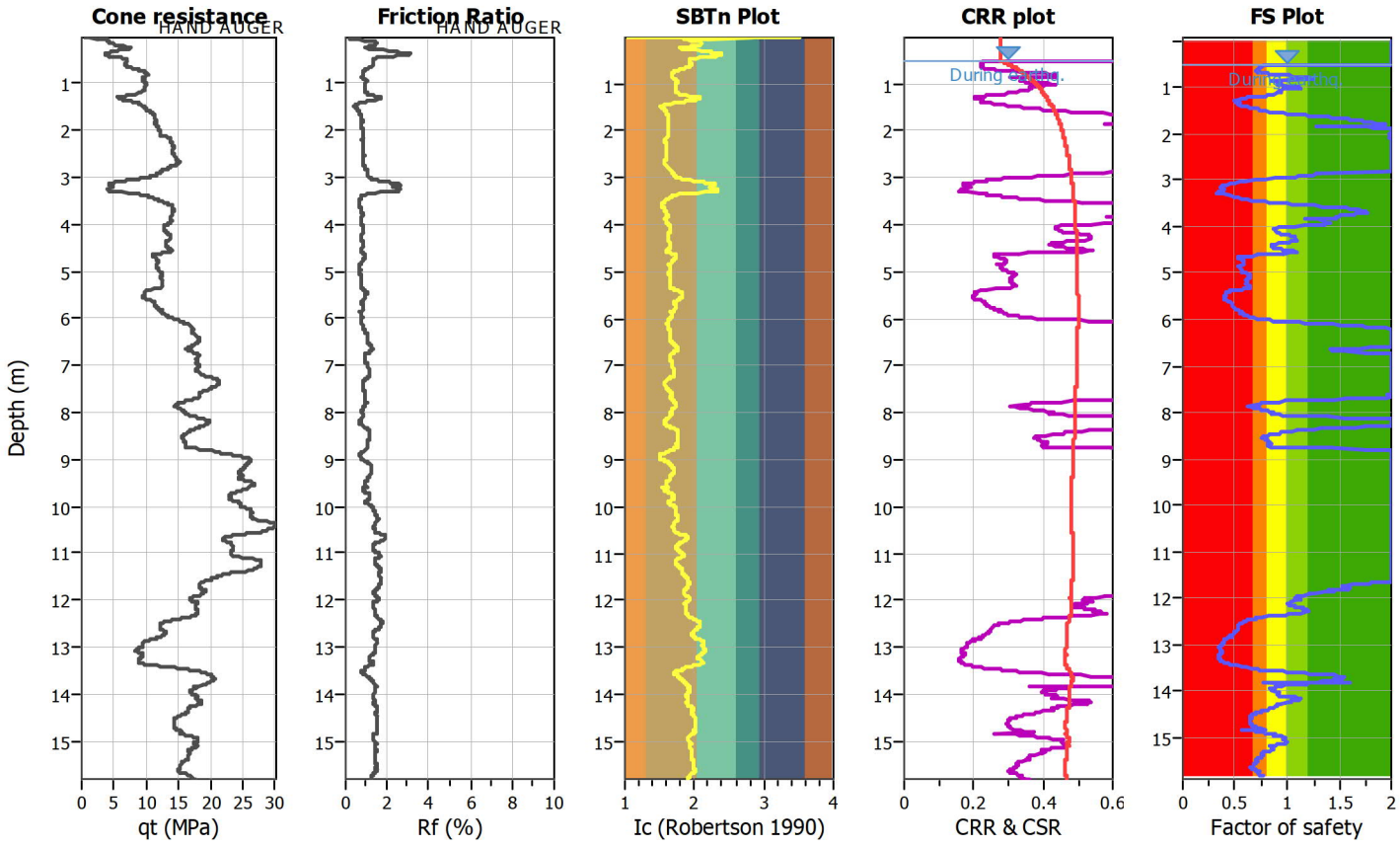
LIQUEFACTION ANALYSIS REPORT

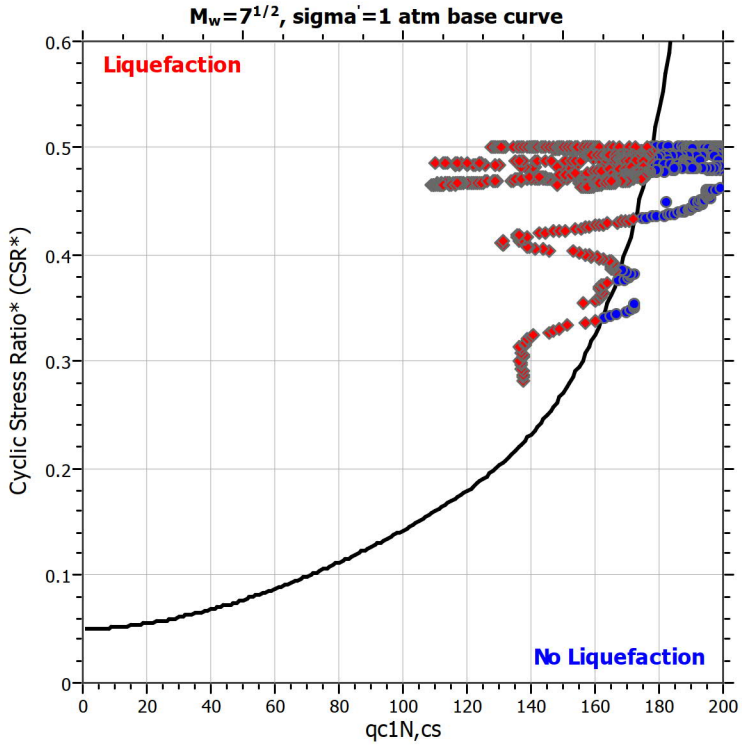
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

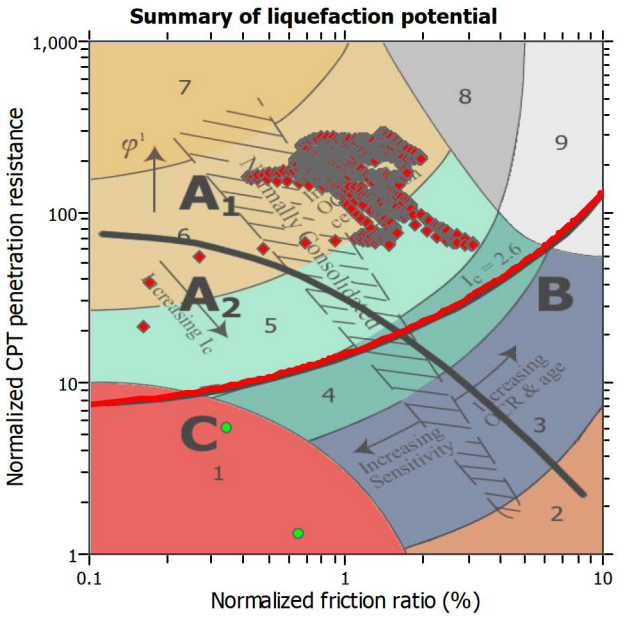
CPT file : CPTU001 ULS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.43	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

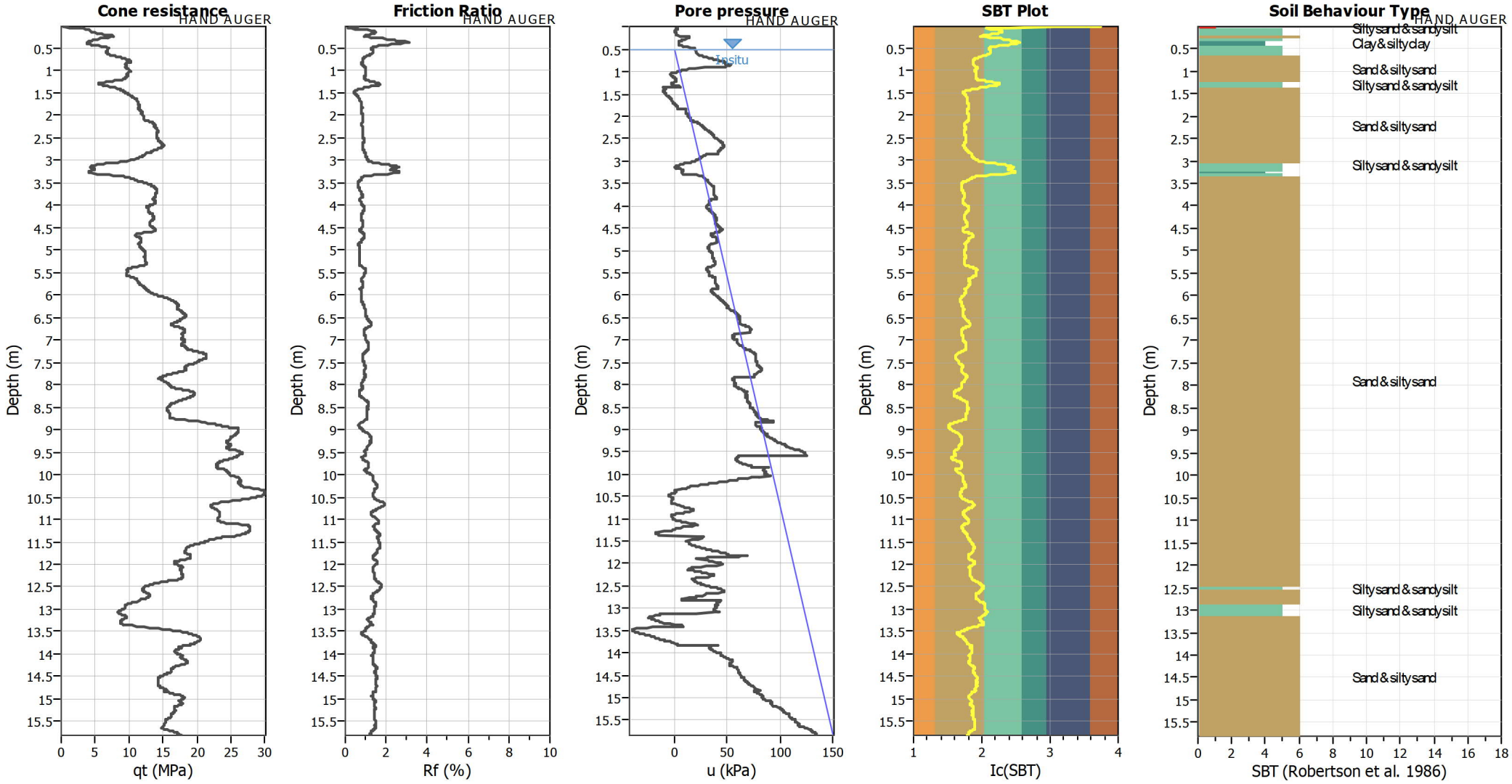






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



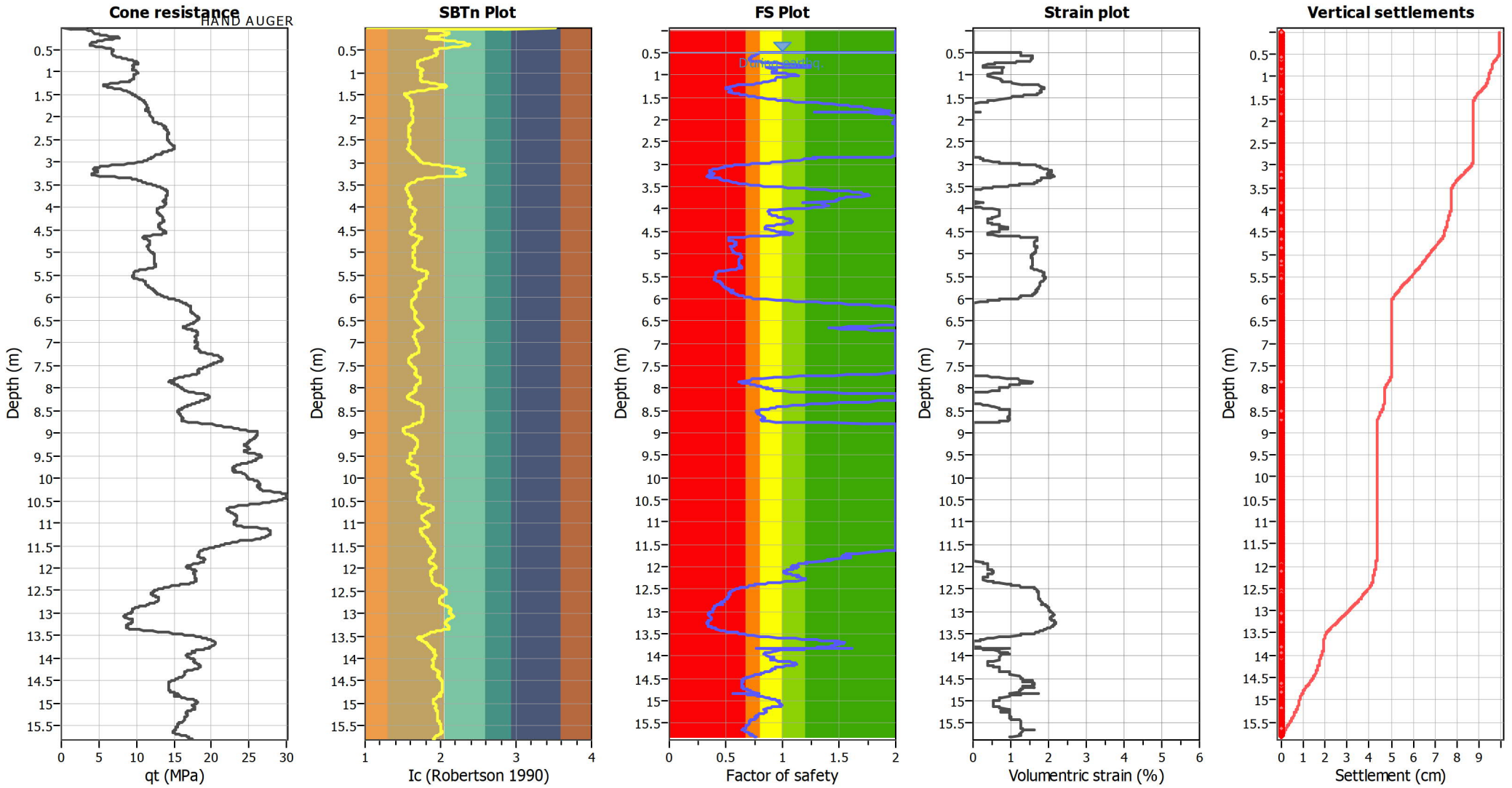
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.43	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
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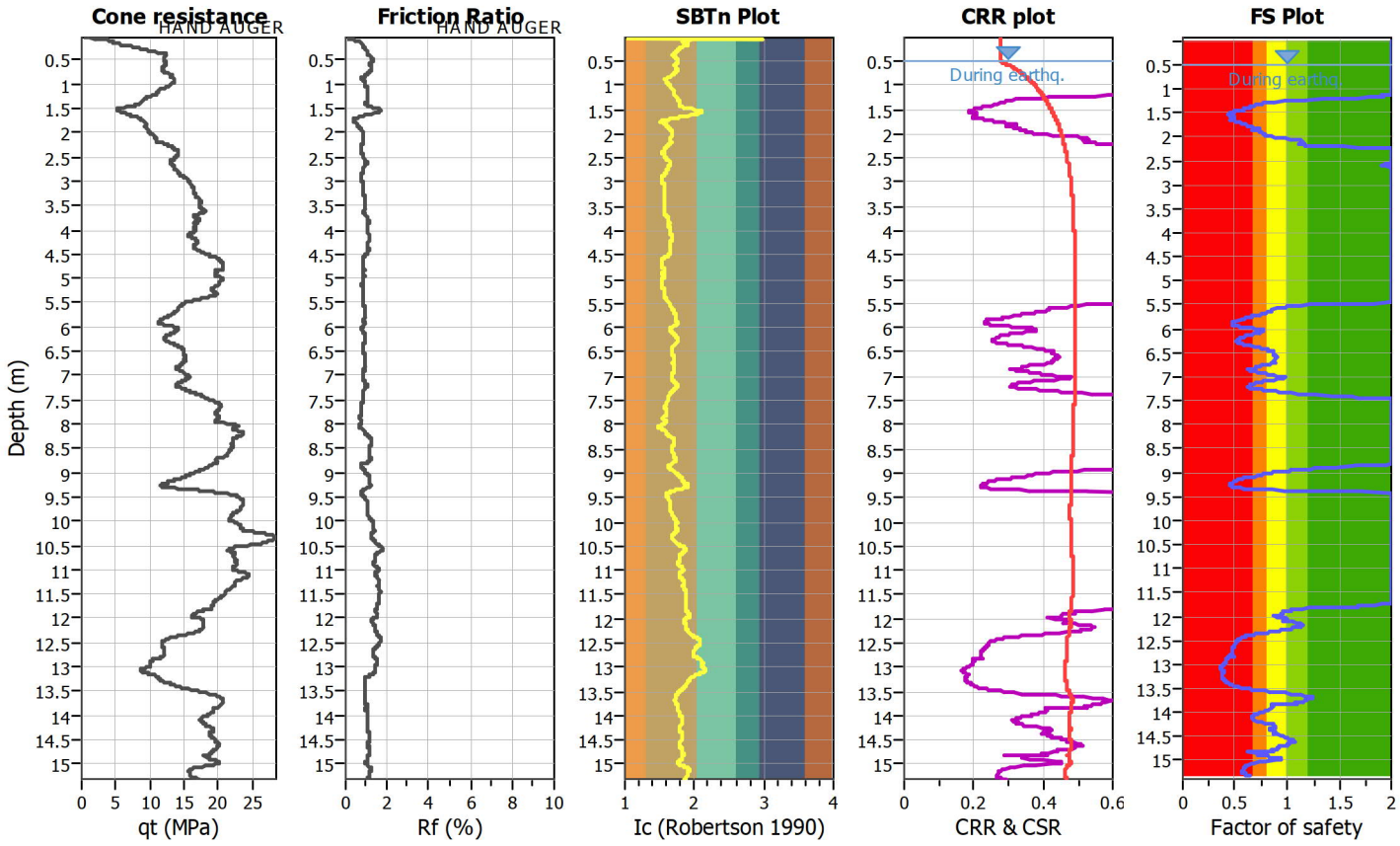
LIQUEFACTION ANALYSIS REPORT

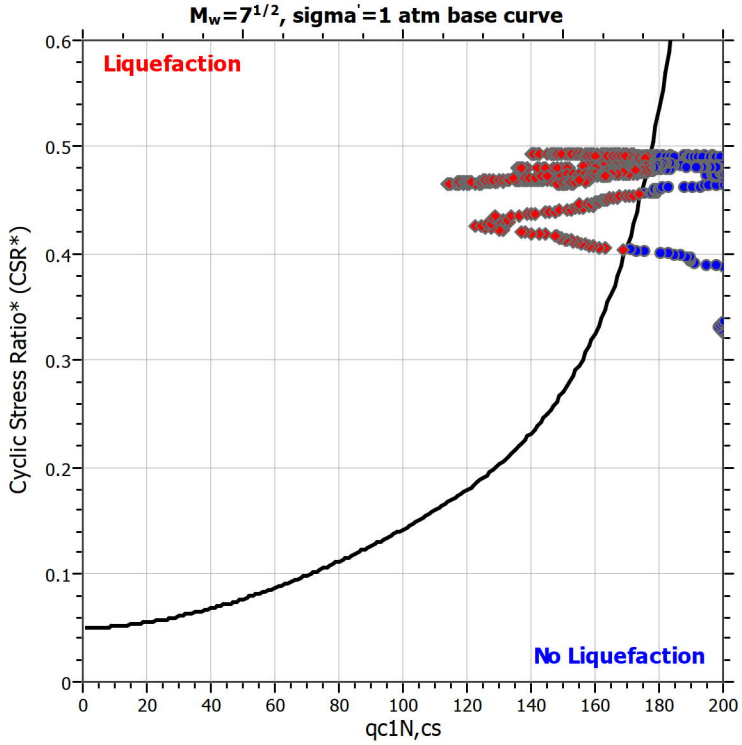
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

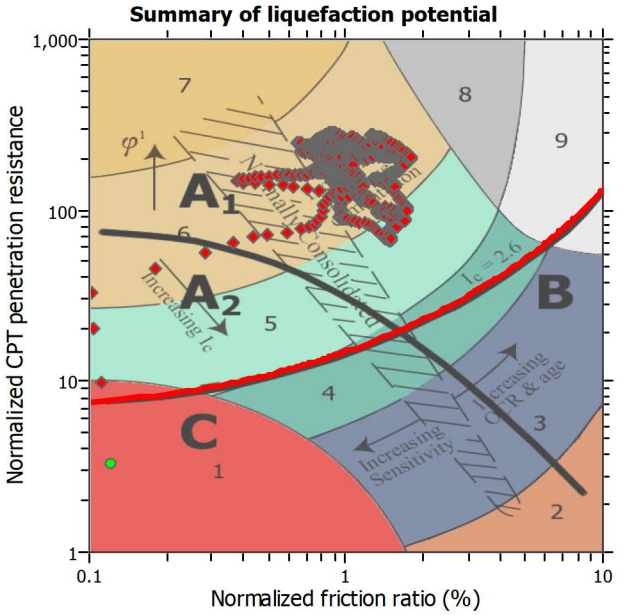
CPT file : CPTU002 ULS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.43	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

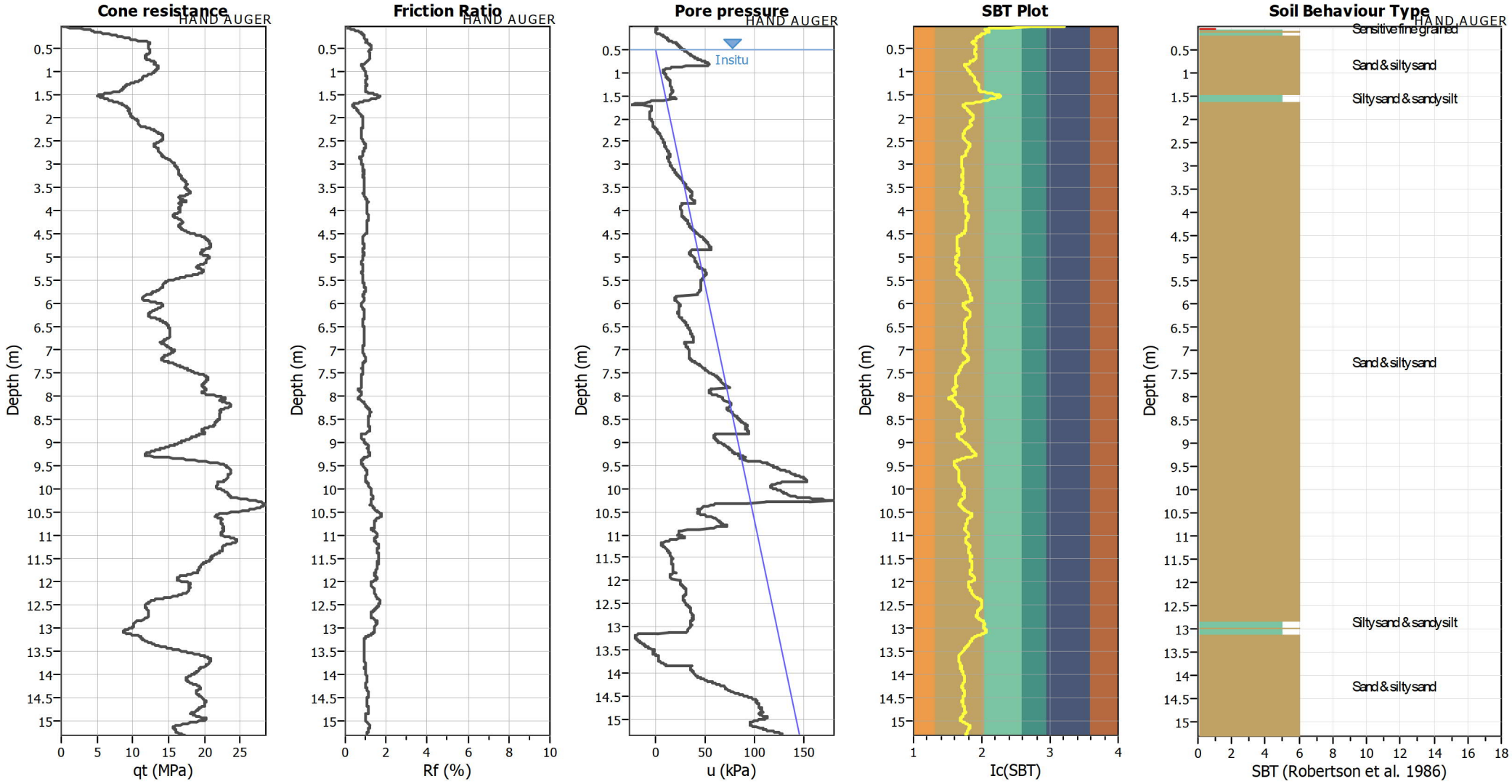






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CPT basic interpretation plots



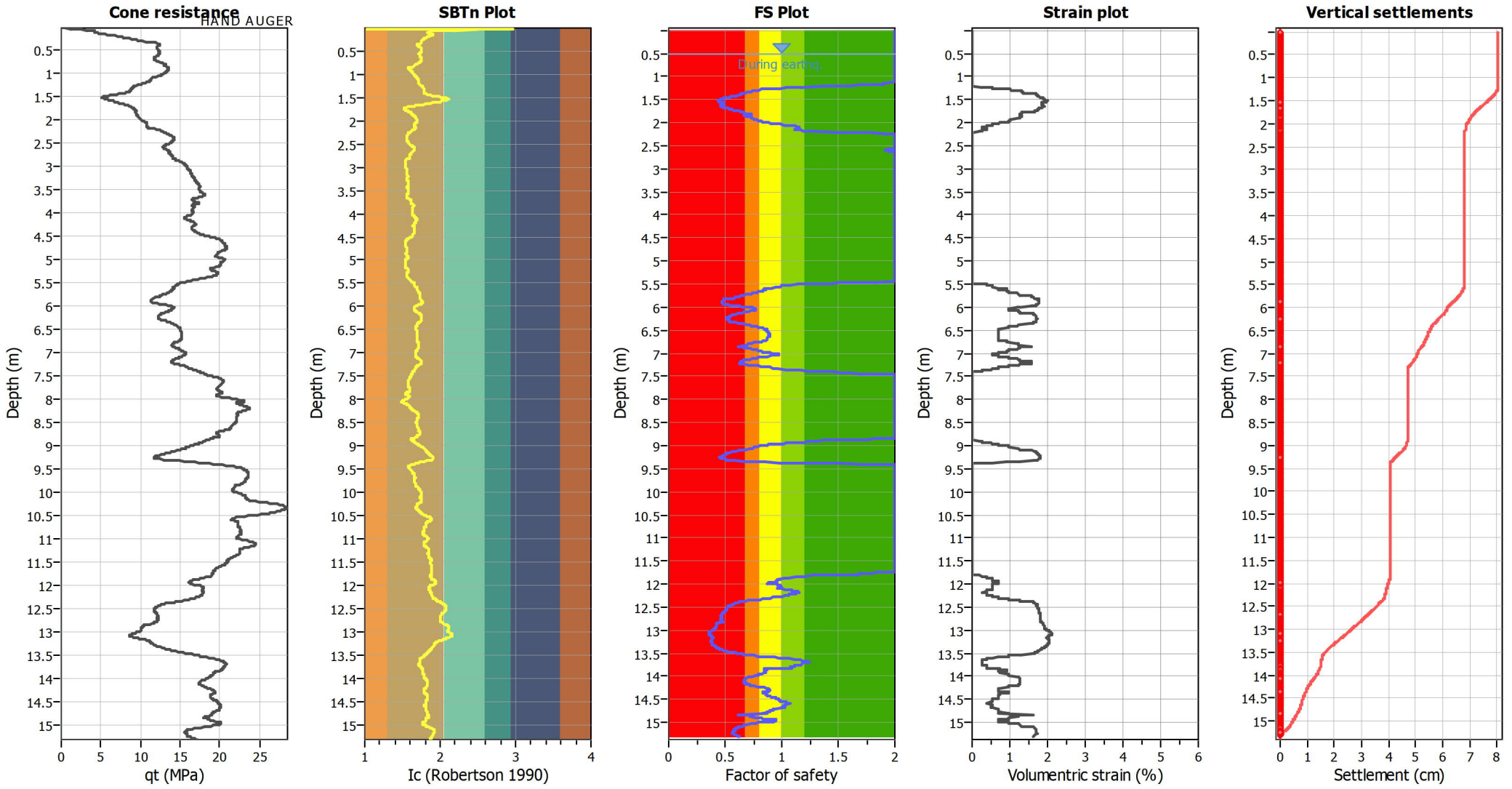
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
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Peak ground acceleration:	0.43	Use fill:	No	Limit depth applied:	No
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SBT legend

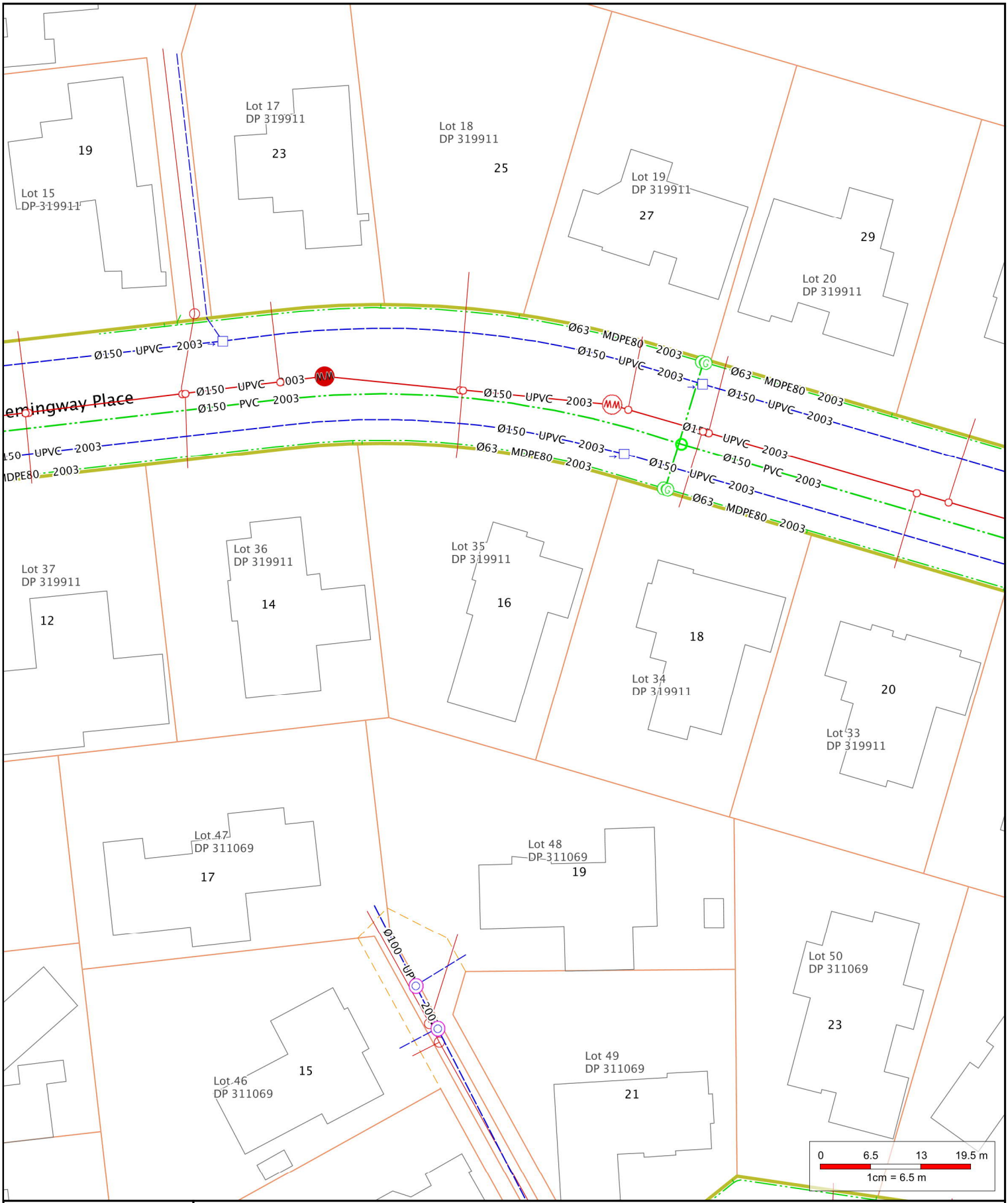
1. Sensitive fine grained
2. Organic material
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FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain



1 : 650 on A4

10/03/2020 9:48:42 AM

Christchurch City Council

ph: 941-8300 fax: 941-8385

Accuracy not guaranteed. Onsite verification required. Display of data scale dependent, full detail available at 1:500.

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Private Drainage

Standard Infrastructure
- Bio Gas
- Condensate Trap
- End Cap
- Inlet
- Outlet
- Valve
- Main
- Cable

Water Intake/Supply
- Connector
- Bellows
- Connector
- Hydrant

Water Intake/Supply
- Inlet
- Meter
- Outlet
- Pump
- Restrictor
- Valve
- Air Release
- Butterfly
- Flow restriction
- Gate
- Pressure Activated
- Sluice
- Valve
- Reservoir
- Structure
- Lateral
- Main
- Sub Main

Wastewater
- End Cap
- Valve
- Air Gap Separator
- Vent
- Eye
- Eye (Vertical)
- Outfall
- Pump
- Junction
- Access
- Flush Manhole
- Inspection Point
- Standard Manhole
- Trap
- Vented Manhole
- Lateral
- Main
- Pressure Main

Wastewater
- Lateral Fitting

Local Pressure
- Control Panel
- Boundary Kit
- Tank System
- Site
- Vacuum Chamber
- Vacuum Breather

Stormwater
- Bend
- Change
- Eye
- Flow Restriction
- Inlet
- Dome Sump
- Double Sump
- Gross Debris Trap

Stormwater
- Inlet
- Inlet
- Inlet Headwall
- Pipe End
- Silt Trap
- Single Sump
- Soak Pit
- Triple Sump
- Junction
- Standard Manhole
- Outlet
- Pump
- Structure
- Basin
- Lateral
- Main
- Lateral Fitting
- Double Sump

Stormwater
- Lateral Fitting
- Single Sump
- Soak Pit
- Inspection point
- Manhole

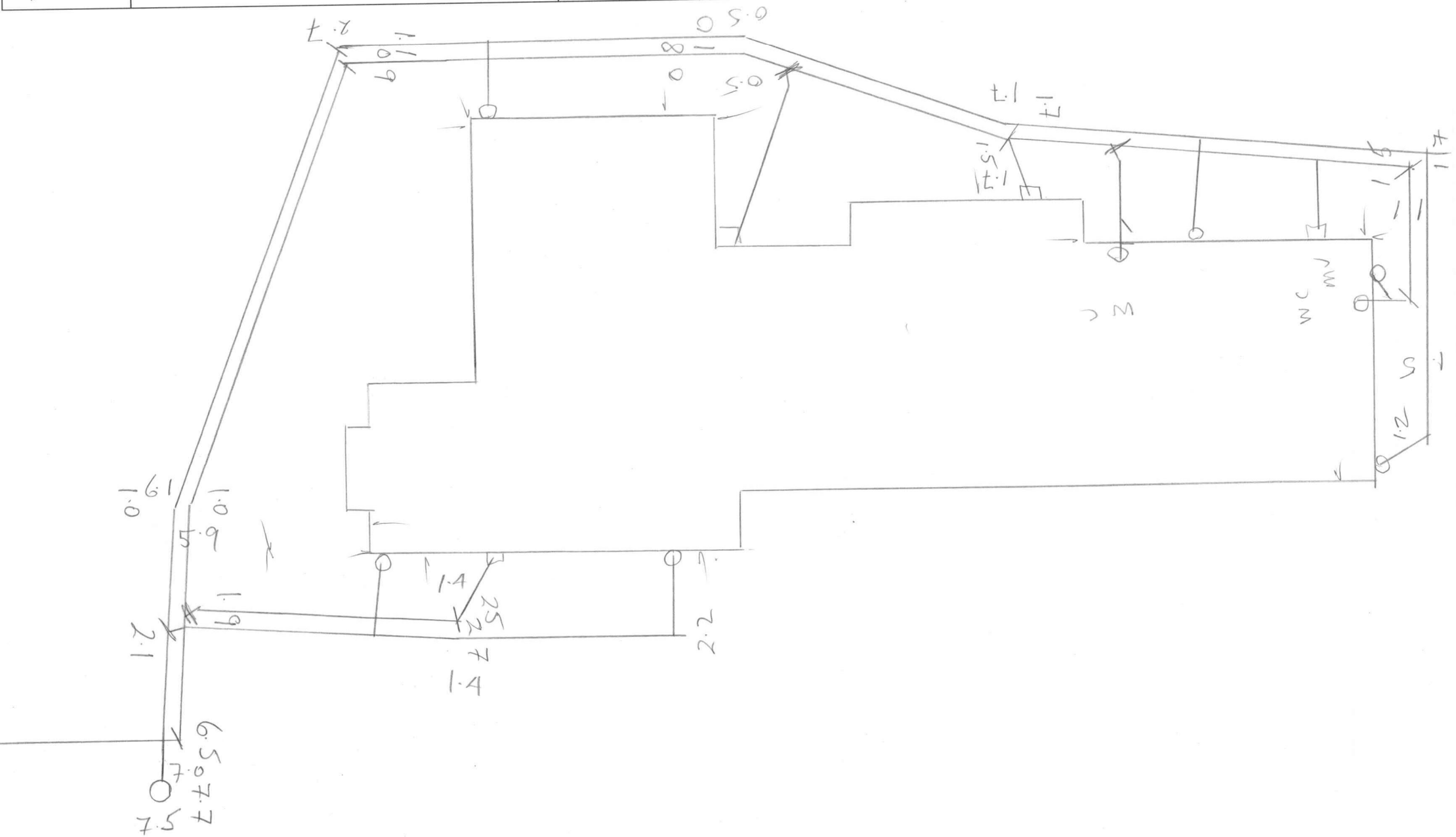
All services
- Pipe Protection
- *a* Abandoned
- *p* Proposed
- *os* Out of service

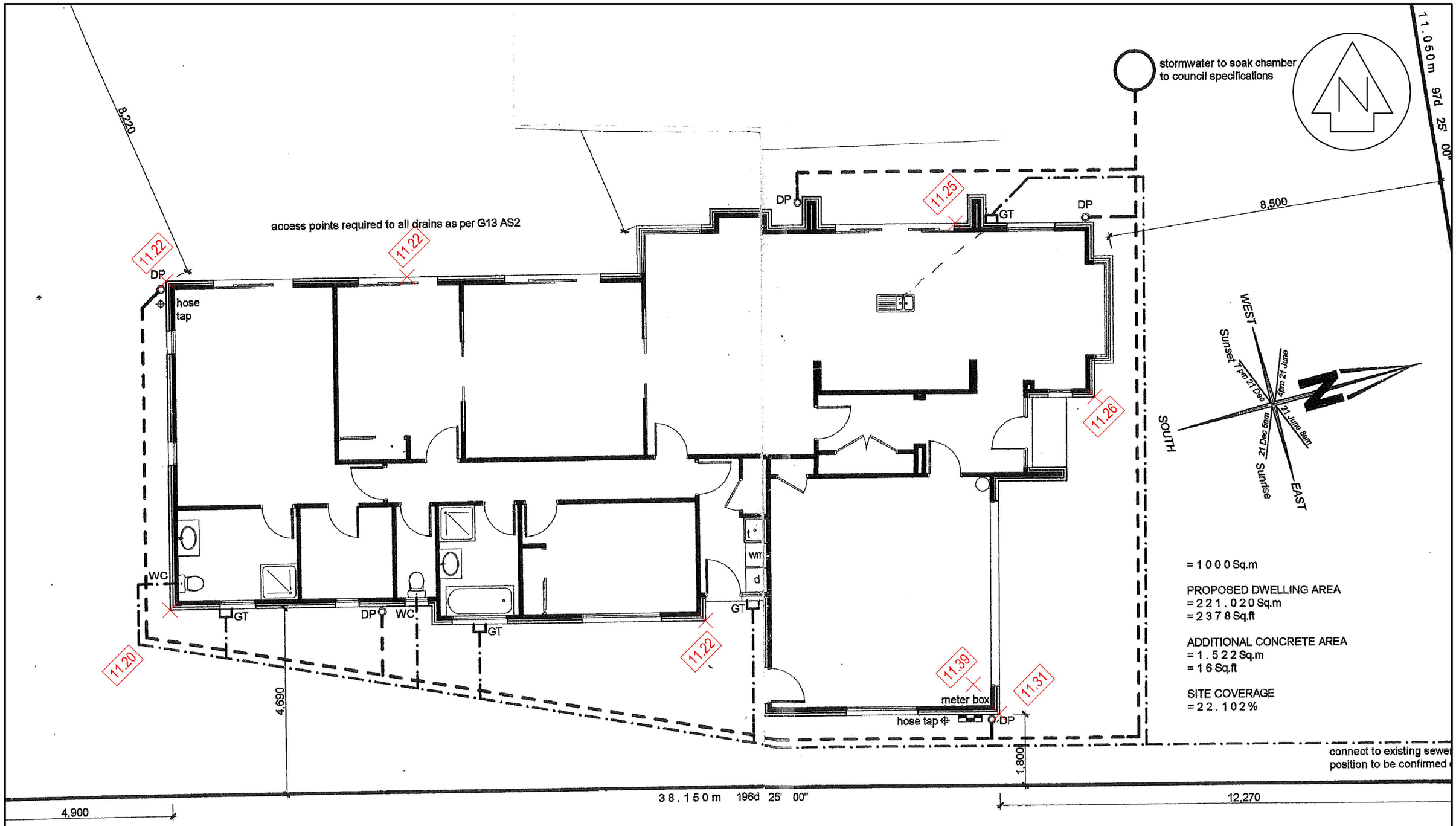
Landbase
- Easement

CHRISTCHURCH CITY COUNCIL – DRAINAGE PICK UP

CHRISTCHURCH
THE GARDEN CITY
The city that shines

ADDRESS: 16 HEMINGWAY PL	OWNER:	RECEIVED:	
LEGAL DESCRIPTION:	DRAINLAYER: CORNERSTONE	BLOCK PLAN:	CONNECTION NUMBER
PROJECT No.: 10041003	PLUMBER:	PLOTTED: / /	
DATE: 15.7.1.	FIELD OFFICER: STUBBS	EYE BOOK:	





Peter Ray Homes

NOTE

1. All work shall comply with NZS 3604:1999
2. All windows and doors to comply with NZS 4211:1985
3. Glazing to comply with NZS 4223:1985 & Pt 3 1993
4. Contractor must verify all dimensions on site prior to

Rev No.	Date	Amendment
A	03.11.03	remove gas fire, move gas bottles, change bay window

Drawn: A. Fahey
Date: 28.10.03
Scale:

Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title

Sheet No. 4

SURVUS CONSULTANTS
surveying engineering property development
www.survus.co.nz
4 Meadow Street, PO Box 5558, Papanui, Christchurch
P 03 352 5599 AMBERLEY 03 314 9200
F 03 352 5527 ASHBURTON 03 307 7021
TOLL FREE 0508 787 887 DARFIELD 03 318 8151

Foundation Levels

16 Hemingway Place, Spencerville — Russell Wenn & Julie Collier

Rev	Date	By	Amendments
A	03/08/12	SRS	Levels

Note:
Levels are in terms of CCC Datum
BM EHDB 11.31m RL

DATE	SHEET	REV
August 2012	1 of 1	A
SCALES: Proportional	JOB REF: 10791	

This drawing and its contents are the property of Survus Consultants. Any unauthorised employment or reproduction, in full or in part, is forbidden.

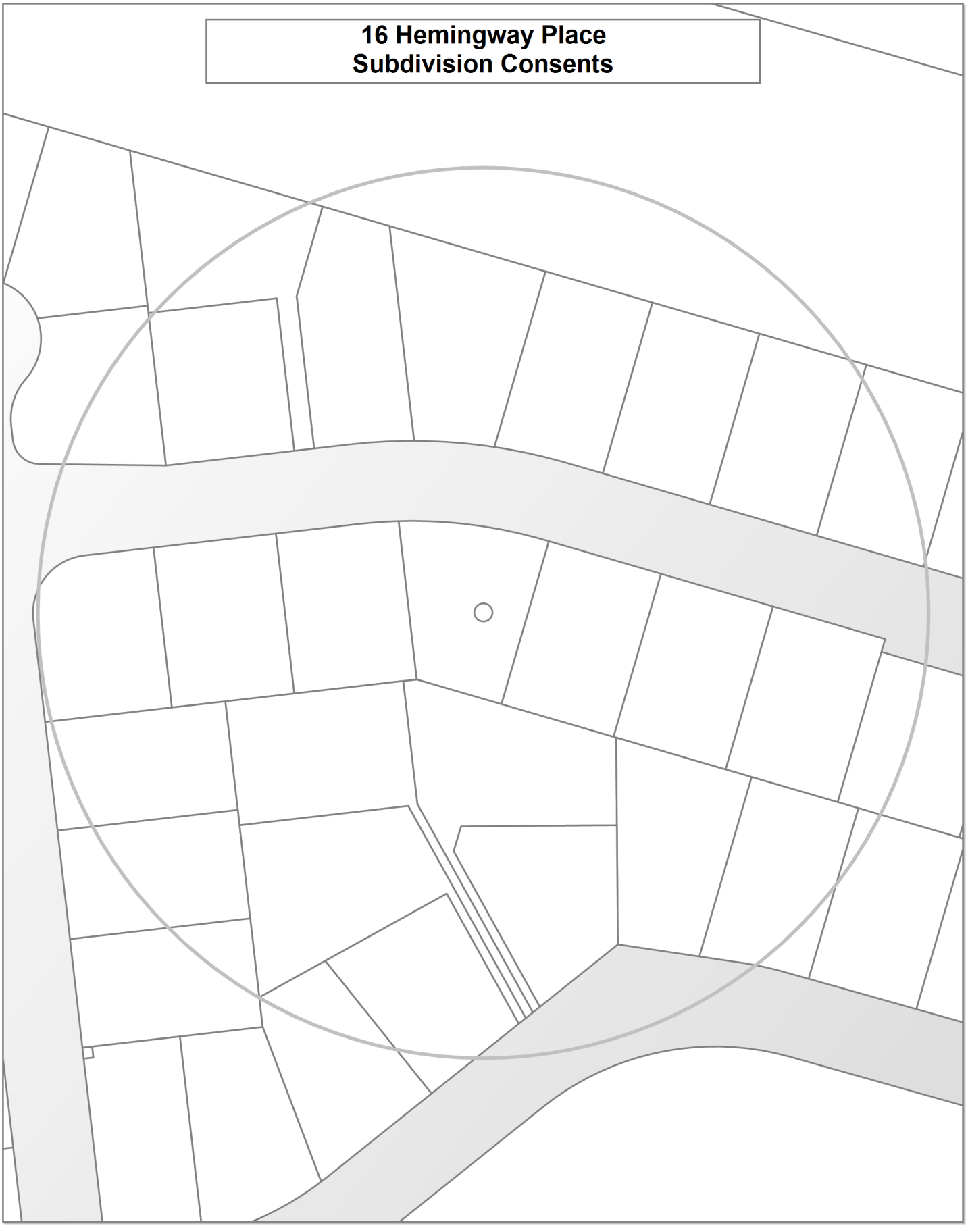
Spatial Query Report

Christchurch City Council

16 Hemingway Place
Land Use Consents



Christchurch City Council



Spatial Query Report

Christchurch City Council

Land Use Resource Consents within 100 metres of 16 Hemingway Place

Note:This list does not include subdivision Consents and Certificates of Compliance issued under the Resource Management Act.

10 Hemingway Place

RMA/2008/1882

Alteration and extension to an existing dwelling - Historical Reference RMA92012765

Processing complete

Applied 09/09/2008

Decision issued 12/11/2008

Granted 12/11/2008

12 Hemingway Place

RMA/2003/3216

Erect a dwelling and garage that exceeds site coverage. - Historical Reference RMA20015566

Processing complete

Applied 10/12/2003

Decision issued 18/12/2003

Granted 18/12/2003

14 Hemingway Place

RMA/2018/2707

Swimming Pool

Processing complete

Applied 07/11/2018

Decision issued 22/11/2018

Granted 22/11/2018

17 Seabrooke Drive

RMA/2014/2627

Dwelling with attached garage - Historical Reference RMA92027317

Processing complete

Applied 08/10/2014

Decision issued 09/10/2014

Granted 09/10/2014

2 Calypso Place

RMA/2003/2676

To erect a new dwelling and garage that exceeds site coverage of 25%. - Historical Reference RMA20015009

Processing complete

Applied 10/10/2003

Decision issued 24/10/2003

Granted 24/10/2003

21 Seabrooke Drive

RMA/2002/3185

Dwelling that exceeds 20m continuous building length - Historical Reference RMA20012239

Withdrawn

Applied 11/12/2002

23 Seabrooke Drive

RMA/2003/1935

Erect a new dwelling and garage that exceeds site coverage of 25%. - Historical Reference RMA20014242

Processing complete

Applied 30/07/2003

Decision issued 12/08/2003

Granted 11/08/2003

24 Hemingway Place

RMA/2016/394

Dwelling with Attached Garage - Historical Reference RMA92032466

Withdrawn

Applied 22/02/2016

25 Hemingway Place

RMA/2004/2386

New house and garage that exceeds site coverage. - Historical Reference RMA20018030

Processing complete

Applied 20/09/2004

Decision issued 12/10/2004

Granted 12/10/2004

29 Hemingway Place

RMA/2014/2745

Construct a new dwelling within a Flood Management Area - Historical Reference RMA92027439

Processing complete

Applied 16/10/2014

Decision issued 29/10/2014

Granted 29/10/2014

35 Hemingway Place

RMA/2012/1810

Erect a new dwelling with detached garage - Historical Reference RMA92021245

Processing complete

Applied 12/11/2012

Decision issued 26/11/2012

Granted 26/11/2012

396 Lower Styx Road

RMA/1984/495

Specified departure to establish a rabbit Farm and ancillary activities including the erection of a building and subsequent use of the land for this purpose. 1 objection. - Historical Reference RES9210036

Processing complete

Applied 20/08/1984

Decision issued 07/11/1984

Granted 07/11/1984

Outcome not recorded 07/11/1984

RMA/2005/2765

relocated building - Historical Reference RMA20021669

Processing complete

Applied 06/12/2005

Decision issued 24/05/2006

Granted 24/05/2006

4 Hemingway Place

RMA/2004/2498

Application to erect a dwelling with attached garage - Historical Reference RMA20018144

Processing complete

Applied 29/09/2004

Decision issued 30/09/2004

Granted 30/09/2004

6 Hemingway Place

RMA/2004/1765

Dwelling with site coverage issues also refer to RMA20016495 - Historical Reference RMA20017386

Processing complete

Applied 08/07/2004

Decision issued 23/07/2004

Granted 23/07/2004

RMA/2004/905

New residential unit which exceeds site coverage and in trudes the recession plane and an internal boundary set back. - Historical Reference RMA20016495

Processing complete

Applied 01/04/2004

Decision issued 08/04/2004

Granted 08/04/2004

Data Quality Statement

Land Use Consents

All resource consents are shown for sites that have been labelled with an address. For sites that have been labelled with a cross (+) no resource consents have been found. Sites that have no label have not been checked for resource consents. This will be particularly noticeable on the margins of the search radius. If there are such sites and you would like them included in the check, please ask for the LIM spatial query to be rerun accordingly. This will be done free of charge although there may be a short delay. Resource consents which are on land occupied by roads, railways or rivers are not, and currently cannot be displayed, either on the map or in the list. Resource consents that relate to land that has since been subdivided, will be shown in the list, but not on the map. They will be under the address of the land as it was at the time the resource consent was applied for. Resource consents that are listed as Non-notified and are current, may in fact be notified resource consents that have not yet been through the notification process. If in doubt. Please phone (03)941 8999.

The term “resource consents” in this context means land use consents. Subdivision consents and certificates of compliance are excluded.

Subdivision Consents

All subdivision consents are shown for the sites that have been labelled with consent details. For Sites that have been labelled with a cross (+) no records have been found. Sites that have no label have not been checked for subdivision consents. This will be particularly noticeable on the margins of the search radius. If there are such sites and you would like them included in the check, please ask for the LIM spatial query to be rerun accordingly. This will be done free of charge although there may be a short delay.

The term “subdivision consents” in this context means a resource consent application to subdivide land. Non subdivision land use resource consents and certificates of compliance are excluded.

This report will only record those subdivision applications which have not been completed i.e once a subdivision has been given effect to and the new lots/properties have been established the application which created those lots will not be shown

All subdivision consent information is contained on the map and no separate list is supplied

20 March 2017

L P Brewer and L R Brewer
c/-L P Brewer
16 Hemingway Place
Christchurch 8083

Dear Liam

Building Act Exemption: BCN/2017/1885
16 Hemingway Place Spencerville
Relevel existing floors

Application accepted

Thank you for submitting the above application for a Building Act Exemption.

Following a pre-acceptance technical check, your application has been accepted and forwarded for allocation to processing officer to review. Please note that during processing, you may be asked to provide further information so we can assess you application.

Please find attached an invoice for processing costs. This can be paid by cheque or internet banking. Payment details are included on the invoice.

This invoice must be paid before any documentation relating to your application is released.

You can use internet banking to pay building consent fees. Please note that all payments will be credited to our account on the next business day. Any payment made without your details below may take some time to be lodged against the correct account. Our details are:

Bank	Bank of New Zealand
Account name	Christchurch City Council
Account number	02 0800 0044765 03

The information that you need to enter that will help us identify your payment is:

Particulars	91427
Code	10-76430
Reference	1191576

Once you have made payment, please reply to this email, with proof of payment, to notify us. If you are paying more than one invoice, please send remittance advice to revenue@ccc.govt.nz.

Where an invoiced amount has not been paid by the stated due date, the Council may commence debt recovery action. The Council reserves the right to charge interest, payable from the date the debt became due, and recover costs incurred in pursuing recovery of the debt.

Yours sincerely

Civic Offices, 53 Hereford Street, Christchurch 8011
PO Box 73013, Christchurch 8154
Phone: (03) 941-8999, Fax: (03) 941-8792
www.ccc.govt.nz

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PO Box 73013, Christchurch 8154
Phone: (03) 941-8999, Fax: (03) 941-8792
www.ccc.govt.nz

Earthquake Repairs

16 Hemingway Place, Spencerville
Christchurch 8083
Liam Brewer

Christchurch City Council

Page 1 of 62

BCN/2017/1885
Exemption from building consent
22/03/2017

Notwithstanding any drawings or specifications accepted herein, all building work must comply with the New Zealand Building Code.

Structural Sheet Index		
Sheet ID	**Sheet Name**	**Revi ID**
S00	Cover Sheet	00
S01	Site Plan/Sediment Control Plan	00
S02	Ground Floor Pre-Level Floor Survey	00
S03	Ground Floor Jack Pad Approximate Locations	00
S04	Smoke Detector Location	00
S05	Details	00
S06	General Notes	00

FRONTIER ENGINEERS
CIVIL, STRUCTURAL & REMEDIAL

PO Box 79183 Avonhead
Christchurch 8446

Unit 1, 35 Sheffield Crescent, Burnside 8053

Phone: 03 359 9192
Free Call: 0508 FRONTIER (0508 376 684)

Email: admin@frontierengineers.co.nz

Project Number
170057

Sheet
S00

Rev ID
00

Drawing Title
Cover Sheet

Earthquake Repairs

16 Hemingway Place, Spencerville
Christchurch 8083
Liam Brewer

Christchurch City Council

Page 1 of 62

BCN/2017/1885
Exemption from building consent
22/03/2017

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CIVIL, STRUCTURAL & REMEDIAL

PO Box 79183 Avonhead
Christchurch 8446

Unit 1, 35 Sheffield Crescent, Burnside 8053

Phone: 03 359 9192
Free Call: 0508 FRONTIER (0508 376 684)

Email: admin@frontierengineers.co.nz

Project Number
170057

Sheet
S00

Rev ID
00

Drawing Title
Cover Sheet

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

Environmental Services Unit

FINAL CODE COMPLIANCE CERTIFICATE

Issued by
BUILDING CONTROL INSPECTION SERVICES
CHRISTCHURCH CITY COUNCIL

BUILDING CONSENT No.
10041003

Project Location

Street Address: 16 HEMINGWAY PLACE, SPENCERVILLE, CHRISTCHURC
Legal description: LOT 35 DP 319911

Project Particulars

THIS CERTIFICATION IS FOR:

New Construction

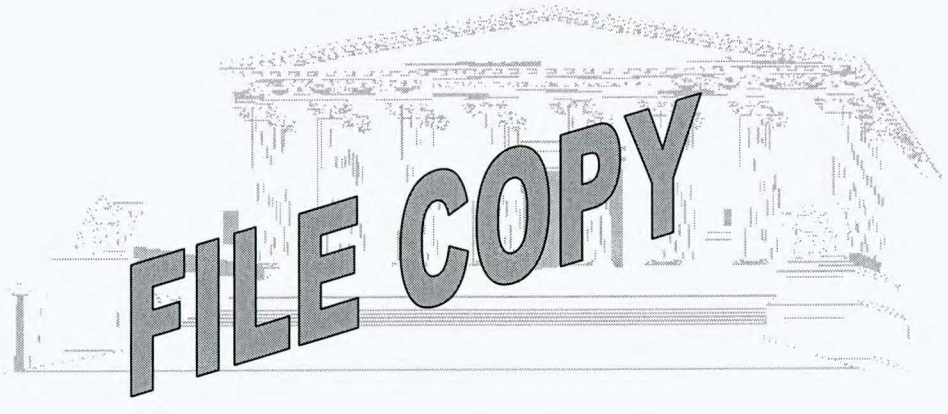
THE INTENDED USE(S) FOR THIS BUILDING WORK IS FOR:

Dwelling

WORK DETAILS:

DWELLING WITH ATTACHED GARAGE

The intended life of this building work is Indefinite, but not less than 50 years.



This certificate is issued under Section 43 clause (3) of the Building Act 1991 and is a Final Code Compliance issued in respect of all work under the above Building Consent.

Signed for and on behalf of the Christchurch City Council:

Date of Issue: 04/08/2004
Name:
Position: Building Inspection Co-ordinator

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFU

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL

CIVIC BUILDING TEAM

24 November 2003

FILE COPY

In-Spect
35 Maces Road
CHRISTCHURCH

Dear Sir/Madam

PROJECT INFORMATION MEMORANDUM
PROJECT NUMBER - 10040372
SITE ADDRESS - 16 HEMMINGWAY PLACE

Please find enclosed your Project Information Memorandum in respect of the proposed work at the above address.

You may now proceed with an application for a Building Consent in respect of this proposal. Please note that the Project Information Memorandum will lapse and be of no effect if a Building Consent for the building work concerned has not been issued within 24 calendar months of its date of issue.

Please note that the Project Information Memorandum may reveal matters affecting compliance with the Building Act 1991, or other authorisations required.

Yours faithfully

AGapper

Amiria Gapper
Technical Clerk
for
TEAM LEADER CIVIC BUILDING TEAM

encl

John Clark • Environmental Services Unit • Civic Offices • 163-173 Tuam Street • P O Box 237 • Christchurch • New Zealand •
Telephone 941- 6474 • Fax 941-8920 •**http://www.ccc.govt.nz/unit/esu**

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CHRISTCHURCH CITY COUNCIL · ENVIRONMENT	**CHRISTCHURCH CITY COUNCIL** BUILDING ACT 1991 **Project Information Memorandum (PIM)**	FORM BA2 PROJECT NO: **10040372**

Issued Date: 24 November 2003

Site Address: 16 Hemingway Place

Legal Desc: **Lot No:** 35 **DP No:** 319911

Owner: Russell Wenn and Julie Collier

Applicant: In-Spect
35 Maces Road
CHRISTCHURCH

Proposal: Dwelling with attached garage

FILE COPY

The following matters have been identified in respect of the above Building Project.

HAZARDS/SPECIAL LAND CHARACTERISTICS

- **Ground Conditions:** The site has been filled and Council's records show that the fill has been placed and compacted to NZS 4431. This is unlikely to affect the buildings of standard construction.

  Refer location plan attached. Normal inspections and design of foundations as would be made in natural ground required.

  Location of cut/fill interface to be noted (and confirmed on site) and foundation designed accordingly.

DRAINAGE/WATER

Contact – Heath Wells

- **Levels**

  Development Standards for the Brooklands / Spencerville / Kainga Area:

  GROUND level to be the higher of:
  i) RL 10.85m in terms of the CCC datum.
  ii) Crown of road.

  Finished floor level for DWELLINGS & GARAGES to be the higher of:
  i) A minimum level of RL 11.225m in terms of the CCC datum
  ii) 150mm above the crown of the road.

- **Water Supply**
  - The water supply headworks fee is not required as the property is within the Brooklands, Spencerville and Kainga LRV and LRS zones.

- **Sanitary Sewer**
  - A Wastewater reticulation capacity upgrade contribution is not required for this proposal.

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- The Wastewater Treatment Plant capacity upgrade contribution fee has been addressed as part of the underlying subdivision and is not required for this proposal
- Sanitary sewer is to be discharged to the existing lateral installed at subdivision stage.

- **Stormwater**
  - Roof water is to discharge to an approved soakage chamber at a point close to the road boundary of the property. See C.C.C. Standard detail 8024 for soakage chamber details. (Detail attached)
    Only roof stormwater may be discharged into a soakage chamber. Interceptor / Silt traps will be required where surface drainage is proposed to connect directly to any open or piped stormwater system under the control of the Council.

- **General**
  - **Sewer Connections** to Council Services in the street are ***authorised work*** and must be carried out by a ***Council authorised drainlayer***. This includes all drainage laterals on roads, footpaths and verges that connect the property to public drains.
  - A list of **Council authorised drainlayers** is available on request or online at website www.ccc.govt.nz/WasteWater/AuthorisedDrainLayers/.
  - For further information the applicant is advised to contact either Tony Borkus (941-8376) or Gordon Taylor (941-8375.)

  - The developer is required to mitigate any adverse affects on adjoining properties. Failure to undertake such works may mean that the developer has some responsibility to adjacent owners at law.
  - Any requests for a variation to the above requirements to be made to a Building Consent Officer at the Councils Environmental Services Unit (Ph 941-8675). The developer should supply plans showing:
    i) Proposed Pipework, outfalls and connections etc
    ii) Existing and proposed Ground levels.
    iii) Detailed plumbing and drainage drawings.
  - Benchmarks and manhole levels may be obtained from the Essential Services Customer Centre (Ph 941-8300) at no charge.

- **Drainage Plan:** A drainage plan is provided.

OTHER ISSUES

- **Construction Nuisance:** The project must comply with the Health Act 1956, Section 29. The premises should be constructed or demolished so as not to cause a nuisance in terms of the Act (ie. dust).

  The Resource Management Act 1991 places a general obligation on persons, including builders and demolition contractors to adopt the best practicable option to ensure that the emission of noise does not exceed a reasonable level.

- **Vehicle Crossings** are required to be constructed in accordance with Council's Standard Specifications (a copy of which is available from the Council). On default the Council will undertake to repair or construct the crossing at the ***property owners cost***.

  The City Streets Unit is to be notified 24 hours prior to:

  1. The concrete to the culvert being poured; ***and***
  2. Final sealing of the crossing.

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Where alterations are required to stormwater pipes or other on street facilities, eg, manhole tops, poles, trees etc, the owner is to meet the cost of the required alterations.

Fees for the application are shown below.

- **Damage to Council Assets:** At all times the roadway, footpath, berm and landscaped areas adjacent to the construction site are to be kept tidy and safe for all road users. The developer/owner is responsible to repair any damages to the roading assets that occurred as soon as is practicable. The Council reserves the rights to repair all damages. Any cost incurred by Council for this will be recovered from the developer/owner.

The following Council fees will be charged with the uplift of the Building Consent and are additional to the Building Consent fees. These fees are subject to change depending on the date of issue of the Building Consent.

Vehicle Crossing (inspection fee only)	$ 60.00
Water Supply (One 15mm Supply)	$ 425.00

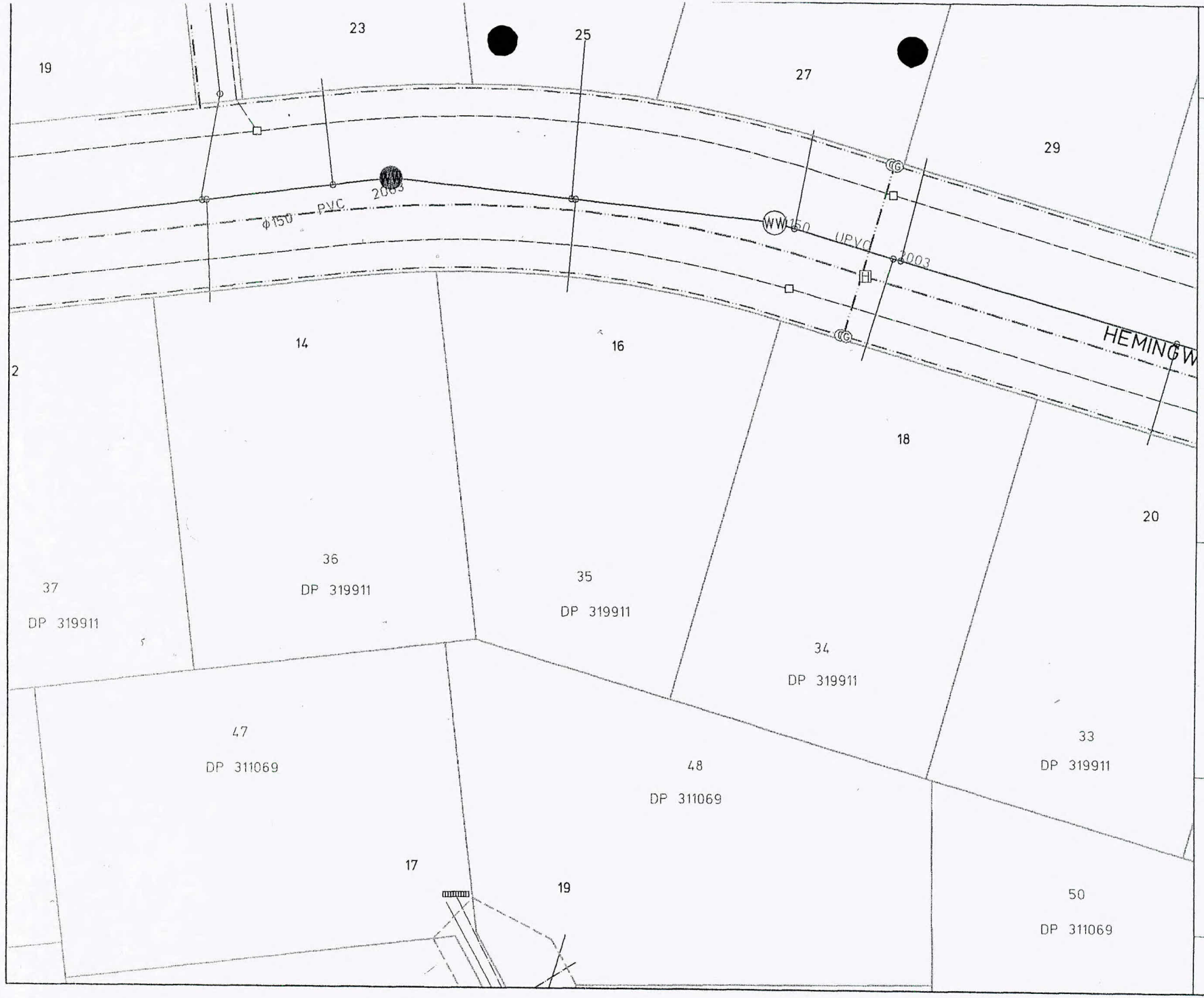
Total Project Information Memorandum fees $ 170.00
Paid $ 170.00 **Receipt No.:** 919020
Balance to pay $ NIL

Signed for and on behalf of the Council: _____ Date: 24 November 2003

Name: John Clark
Position: for **BUILDING CONSENT OFFICER**

This project may proceed subject to the issue of a Building Consent and any other necessary authorisations being obtained.

NB: This Project Information Memorandum will lapse and be of no effect if a Building Consent has not been issued by 24 November 2005



Cadastral Plan

Ph: 371-1300
Fax: 371-1385

LEGEND

- WASTE WATER MAIN
- STORM WATER MAIN
- WATER SUPPLY MAIN
- WASTE WATER DRAIN
- STORM WATER DRAIN
- WATER SUPPLY SUBMAIN
- STD MANHOLE (WASTE)
- VENTED MANHOLE (WASTE)
- STD MANHOLE (STORM)
- SUMP (STORM)
- FIRE HYDRANT (WATER)
- VALVE (WATER)
- METER (WATER)
- CONNECTOR (WATER)
- END CAP (WATER)
- KERB & CHANNEL

CAUTION
THE ACCURACY OF THIS PLAN IS NOT GUARANTEED, ONSITE VERIFICATION REQUIRED.

SCALE 1:500 on A4

Christchurch City Counc
6 Nov 2003 8:08AM

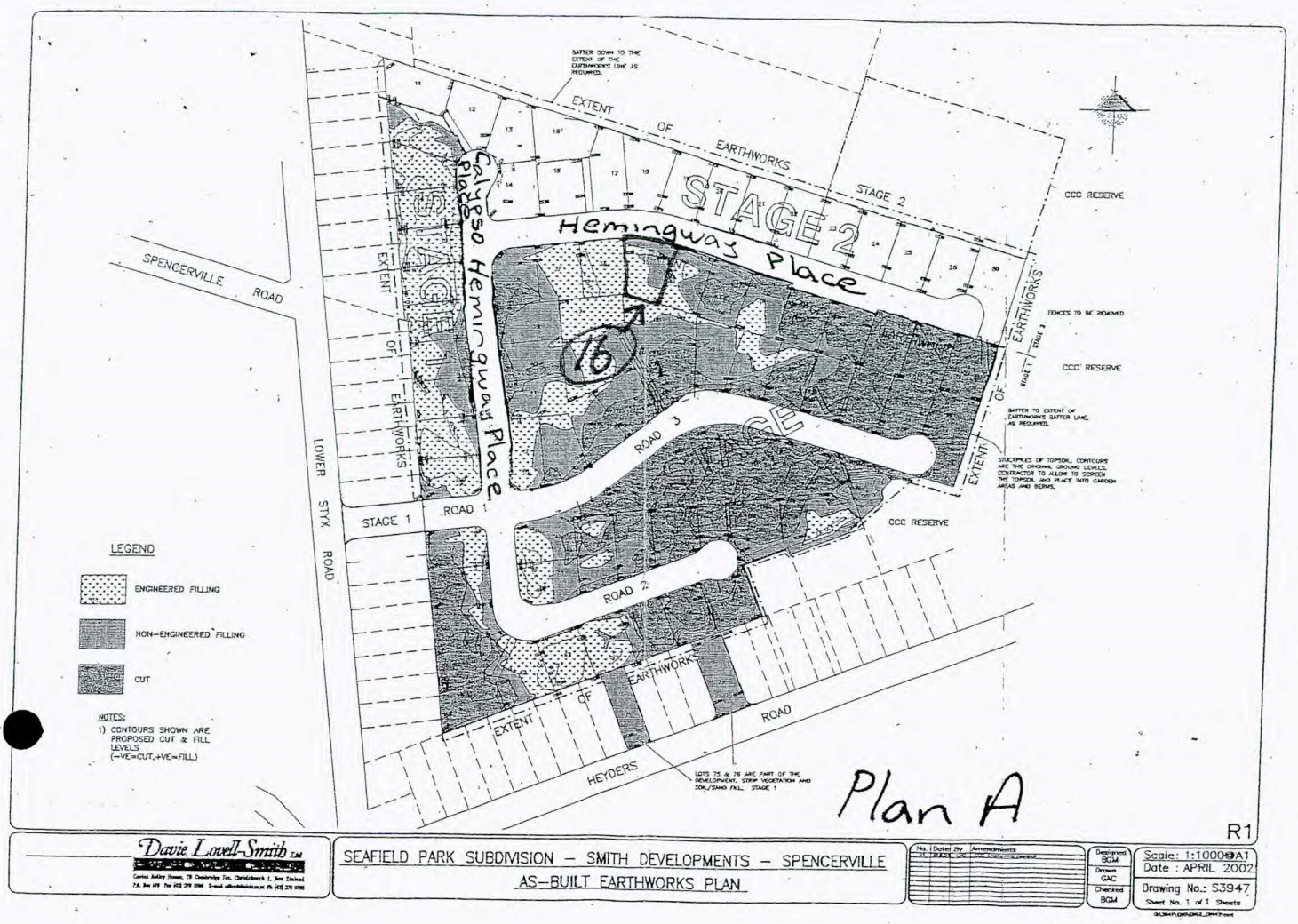
CHRISTCHURCH
CITY COUNCIL - GEODATA SERVICES

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10040372

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APPENDIX A
STATEMENT OF SUITABILITY OF EARTHFILL
FOR RESIDENTIAL DEVELOPMENT

To **Christchurch City Council**
PO Box 237
Christchurch

Attention Mr B Craig

STATEMENT OF SUITABILITY OF EARTH FILL FOR RESIDENTIAL DEVELOPMENT

Subdivision **Seafield Park Subdivision-Stage I**

Owner/Developer **Smith Developments Limited**

Location **Cnr Lower Styx & Heyders Road, Spencerville**

The earth fill shown on the attached plan No. S3947 Sheet 1 dated April 2002 have been placed in compliance with the terms of NZS 4431.

While work was in progress I retained as my inspecting engineer (or staff under his control) the engineer named below who is registered in terms of the Engineers Registration Act 1924.

John Bannock (Registration Number 10545)
Address C/- **Davie, Lovell-Smith Limited, PO Box 679, Christchurch**

During the work, the inspecting engineer or staff under his control made periodic visits of inspection to the site as detailed in his report No S3947 which is attached. Details of the soil testing carried out to check the quality of the fill by the inspecting engineer and his testing agency are also included in this report.

The attached plan No S3947 Sheet 1 shows Lot Nos. 1-10, 57-65, 68, 72, 73, 74, 30-53, 75 & 76 to be affected by filling and the extent of the fill.

In the opinion of the inspecting engineer the following special limitations should be observed:

NA

This certification, that the earth fills have been placed in compliance with the terms of NZS 4431 does not remove the necessity for the normal inspection and design of foundations as would be made in natural ground.

Registered Engineer

22 April 2002

on behalf of:
(Owner/ Developer)

NZS 4431:1989
3947/ENG/4431_Earthfill-stg1

IN THE MATTER OF the Resource Management Act 1991
AND
IN THE MATTER OF Subdivision Consent Application PAP/20010325 affecting Lots 3-41 DP 319911

CONSENT NOTICE PURSUANT TO SECTION 221, RESOURCE MANAGEMENT ACT 1991

To: Registrar-General of Lands
Canterbury Land Registration District
LAND INFORMATION NEW ZEALAND

TAKE NOTICE that the land hereinafter described is subject to conditions in relation to a subdivision consent as follows:-

Minimum Floor Levels.

The minimum floor level for all dwellings is to be 11.225m in terms of the Christchurch Drainage Datum.

AND THAT you are hereby directed and required to register the same pursuant to Section 221 Resource Management Act 1991.

DESCRIPTION OF LAND BY CONSENT NOTICE

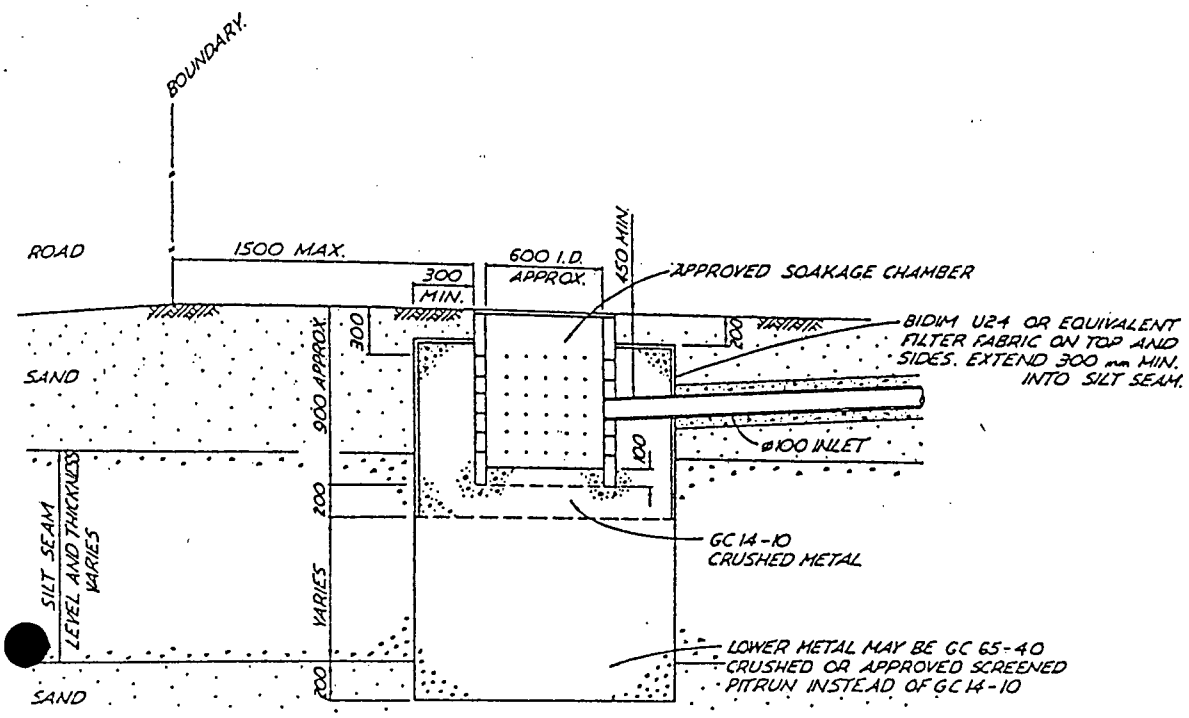
ALL THOSE PARCELS OF LAND COMPRISING:
- Lots 3 – 41 DP 319911comprised in Certificates of Title 78436 - 78474 (Canterbury Land District)

DATED this 14th day of May 2003

SIGNED for and on behalf of
THE CHRISTCHURCH CITY COUNCIL
pursuant to Section 252 of the
Local Government Act 1974

Principal Officer
(for the purposes of Section 221
Resource Management Act 1991)

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TYPICAL SECTION - FOOT TRAFFIC ONLY

NOTES:

1. CHAMBER TO BE CONCRETE OR RIGID PLASTIC OF APPROVED STRENGTH PERFORATED WITH 5mm HOLES AT 100 CTRS. EACH WAY FOR PLASTIC OR 10mm HOLES AT 200 CTRS. EACH WAY FOR CONC.
2. CHAMBER COVERED WITH 5mm GALV. PLATE LID.
3. INVERT OF CHAMBER TO BE REGULARLY CLEANED OF SILT AND LEAVES TO MAINTAIN SOAKAGE. BOTTOM 100mm LAYER MAY OCCASIONALLY NEED REPLACEMENT.
4. ALL PIPING TO BE LAID TO C.O.B. SW80 DETAILS ("REQUIREMENTS FOR PRIVATE STORMWATER DRAINAGE 1980")
5. APPROX. VOLUME GC 14-10 - SOAKAGE CHAMBER - 1.5 m^3 LOOSE MEASURE.
   APPROX. VOLUME GC 65-40 - LOWER SOAK PIT - 1.4 m^3 LOOSE PER METRE DEPTH.
6. DESIGN SUITABLE FOR FOOT TRAFFIC AREAS ONLY.

DESIGNED Various	Christchurch Drainage Board	STANDARD SOAKAGE CHAMBER	8024
DRAWN K.J. SLADE.			
CHECKED [illegible]	APPROVED		SHEET OF SHEETS 15 185
RECOMMENDED	ENGINEER TO THE BOARD		

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CHRISTCHURCH CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL

APPLICATION FOR

PROJECT INFORMATION MEMORANDUM

FORM: BA1

PROJECT NO: 10040372

APPLICATION DETAILS [ ]	PROJECT [ ]
• **OWNER** (as defined by the Building Act 1991) Name: Russell Martin Wenn Mailing Address: & Julie Collier. Street Address: po Box 161 Lyttleton Phone: _____ Fax: _____	• **LOCATION** Street Address: 16 Hemmingway Place Seafield Park Lot: 35 DP: 319911 Other: _____
• **APPLICANT** (Must be authorised by the owner to make this application) Name: IN-Spect Company: " Mailing Address: 35 Mace Rd Street Address: " Phone: 3844492 Fax: 3846588	• **DESCRIPTION OF WORK:** New Dwelling & attached garage.
Signature: K Hawman. Position (if Lessee): _____ Date: 5/11/03	• **INTENDED USE:** Domestic living
• **FLOOR AREA** *Gnd Floor:* Existing _____ m^2 Add 221 m2 *Other Floor:* Existing _____ m^2 Add _____ m^2 *Accessory Building Area:* Existing _____ m^2 Add _____ m^2 • **Planning - Site Coverage** *Total area of all buildings over foundation at ground level.* Existing _____ m^2 Proposed 221 m^2	• Intended 1 stages of Building Consent • Will the building undergo a change of use? ☐ Yes ☑ No • Estimated Value of proposed work (inclusive of GST) $ 160,000

FOR COUNCIL USE ONLY

Date Received: 5/11/2003

Prepaid Fee: $170-00

Receipt No: 919020

Receiving Officer's Name: Alarah

DRAINAGE INFORMATION

Not Required ☐ Block Plan Only ☐

Full PIM ☑ Date Requested 5/11/03

Hazards: _____

THE INFORMATION CONTAINED IN THIS APPLICATION MAY BE MADE AVAILABLE TO OTHER UNITS OF THE COUNCIL.

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFU

RESIDENTIAL/LIVING

PIM APPLICATION CHECK SHEET

Project Number: 10040372

Location: 16 Hemingway Place

Proposal: Dwelling/garage

Checked	Comment		Officer	Date	Time
☑ Planning	☐ Yes	☑ No	JUNE.	21-11-03	
☐ Traffic	☐ Yes	☐ No			
☑ Building	☑ Yes	☐ No	JUNE.	21-11-03	
☐ Envir. Health	☐ Yes	☐ No			
☐ Seaspray Zone	☐ Yes	☐ No			
☐ Section 36	☐ Yes	☐ No			

Transitional District Plan			Proposed City Plan		
Zoning			Zoning		LIVING 1RS
Designations			Designations		
Road widening			Footprint/Sam		
Protected Item			Protected Item		
Airport Noise			Airport Noise		
Site area		Sept. 19	Site area		1001
Shape factor			Net site area		1001
Res. Site Density/Plot Ratio			Res. Site Density/Plot Ratio		
Site coverage			Site coverage 221		22.08% 25
Height			Height		
Recession Planes			Recession Planes		
Street scene			Street scene		
Garage setback			Garage setback		
Internal boundary setback			Internal boundary setback		
Waterway setback			Waterway setback		
Separation distance/windows/balcony			Window/balcony setback		
Outdoor living/service area			Outdoor living/service area		
Landscaping			Landscaping		
Storage space			Storage space		
Accessory building length			Accessory building length		
Accessory building area			Cont. building length		
Design and appearance			External appearance		
Other			Other		

Traffic					
Car parking/garageable spaces			Car parking/garageable space		
Visitor park			Visitor park		
Access/gradients			Access/gradients		
Manoeuvring			Manoeuvring		
Crossing separation			Crossing separation		
Crossing distance			Crossing distance		
Crossing width			Crossing width		
Other			Other		

Other			Activity		
Relocated buildings			Permitted		
Family flat			Controlled		
Reserve Contrib/Dev Levy (Central)			Discretionary		
(Suburbs)			Non-complying		
Subdivision/Title issued					
Cross-lease Owners consent					
Resource Consents recorded					
Other					

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Common Clauses	Std Clause	Notes:
Planning	261	– refer location plan attached. Normal inspections & design of foundations as would be made in natural ground required.
☐ 1e7 Signs Not Shown		Location of cut/fill interface to be noted (and confirmed on site) and foundation designed accordingly.
☐ 1e1 (S35 Sur Cert)		
R.P		
Height		
Boundary		
☐ 1e2 (Close)		
R.P		
Height		
Boundary Dist		
Hazards		
☐ 2d6 Potential Hazards		
Drainage		
☑ 3a Drainage Plan		
☑ Insert Full PIM		
Other Issues		
☐ 4g1 Asbestos		
☐ 4g2 Const Nuisance		
☑ 4h1 Vehicle Crossing		
☐ 4h2 Laterals		
☑ 4h5 Damage to Street		
☐ 4h7 Nuisance on Street		
☐ Demo		
Fees:		
Vehicle Crossing $ 60		
Water Supply $ 425		
Headworks $		
Waste Upgrade		
– (T Plant) $		
– (Retic) $		
Devt Levy (Suburbs/Central) $		
S/W Footpath opening $		
Sewer Road Opening $		

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CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL

ENVIRONMENTAL SERVICES UNIT

TAX INVOICE WHEN PAID

BUILDING CONSENT FEES

INV 98681
GST NO 53-198-554
DATE 05/11/2003

WENN, RUSSELL MARTIN
COLLIER, JULIE
C/O INSPECT
35 MACES ROAD
CHRISTCHURCH

919020
5/11/03.

CONSENT APPLICATION NO: ABA 10040372

OWNERS NAME: SMITH DEVELOPMENTS LIMITED

PROJECT STREET ADDRESS: 16 HEMINGWAY PLACE
SPENCERVILLE

CUSTOMER CODE: 3258891

INVOICED TO DATE: $0.00

FEE CODE	DESCRIPTION	THIS INVOICE (GST exclusive)
B01	Project Information Memorandum	151.11

GST Exclusive Total	$151.11
GST Total	$18.89
TOTAL PAYABLE (GST Inclusive)	**$170.00**

bcinv.frm

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AGREEMENT FOR SALE AND PURCHASE OF REAL ESTATE

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

DATE: 10 September 2003

VENDOR: Smith Developments Ltd

PURCHASER: Russell Martin Wenn + Julie Collier

PROPERTY
Address of property: 16 Hemingway Place, Seafield Park, Spencerville, Christchurch
Estate: **FEE SIMPLE** ~~**LEASEHOLD**~~ ~~**CROSSLEASE**~~ ~~**UNIT TITLE**~~ (if none is deleted fee simple)

Legal Description:
Area: 1000 m² more or less ***Lot:*** 35 ***DP:*** 319911 ***CT:*** 78468

PURCHASE PRICE
Purchase Price: $95,000 Ninety five thousand dollars only

~~**Plus GST**~~ (if any) OR **Inclusive of GST** (if any).
If neither is deleted the purchase price includes GST (if any).

GST date: (refer clause 12)

Deposit A $10,000 To be Paid to Smith Developments Ltd Stakeholders Account on signing this Agreement.

Deposit: (refer clause 2) $ Deposit B $500 Refer clause 14

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

In Cash In One Sum on the Possession Date

© Copyright The Auckland District Law Society & The Real Estate Institute of New Zealand Incorporated JULY 1999

POSSESSION (refer clause 3)
Possession date: 10th March 2004 or sooner by mutual agreement

Interest rate for late settlement: 14 % p.a.

CONDITIONS (refer clause 8)
Financial condition (if any):
Lender:
Amount required:
Finance date:
LIM required: Yes/~~No~~
OIA Consent required: Yes/No
Land Act/OIA date:

TENANCIES (if any)
Name of tenant: Vacant Section
Bond: **Rent:** **Term:** **Right of renewal:**

FILE COPY

CHATTELS
The following chattels if now situated on the property are included in the sale.
(*strike out or add as applicable*):
~~**STOVE**~~ ~~**TV AERIALS**~~ ~~**FIXED FLOOR COVERINGS**~~ ~~**BLINDS**~~ ~~**CURTAINS**~~ ~~**DRAPES**~~ ~~**TELEPHONES**~~ ~~**LIGHT FITTINGS**~~

Sale by (name of real estate agent):

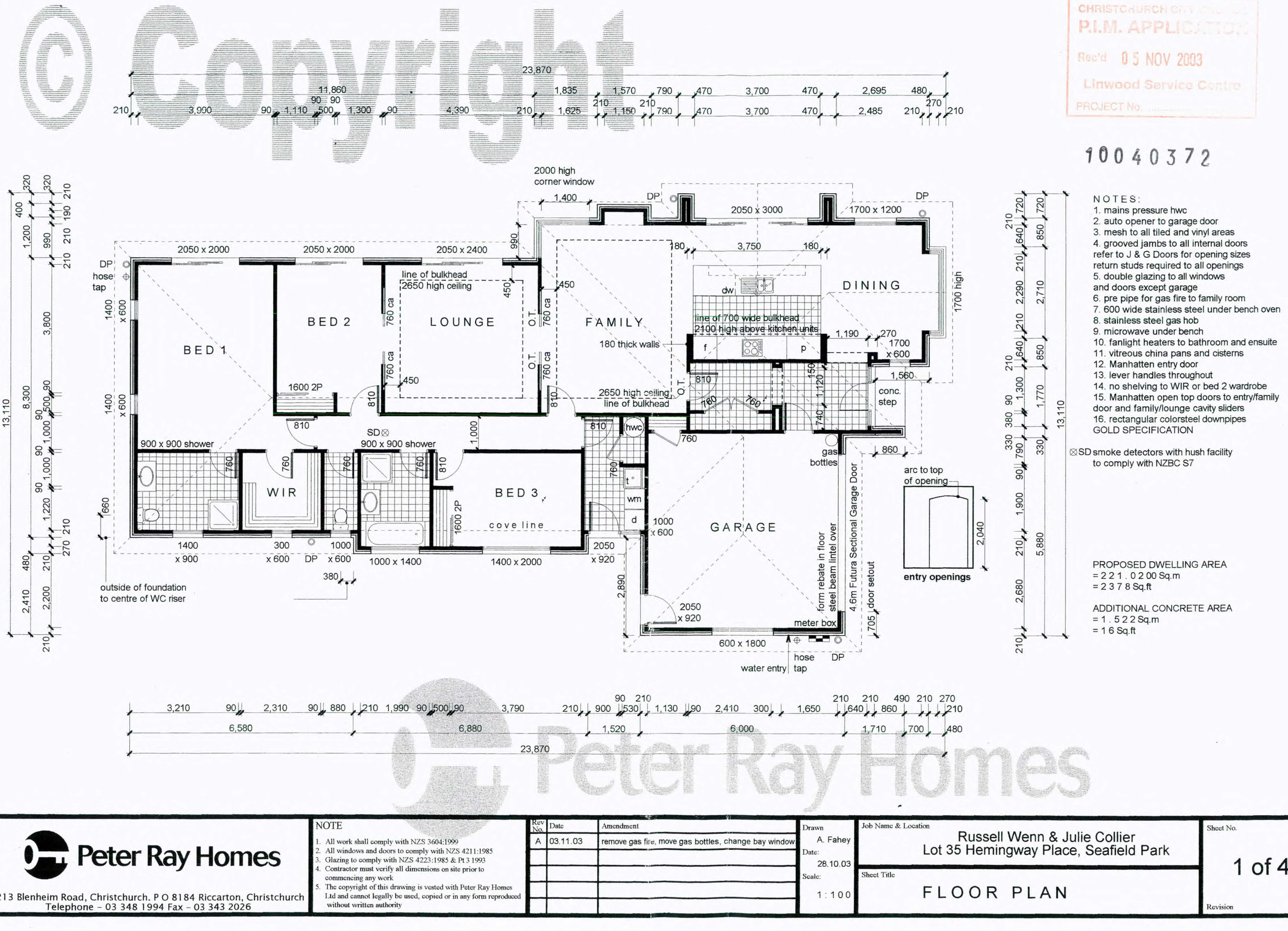
St Albans
Cornelius Realty Ltd - MREINZ

It is agreed that the vendor sells and the purchaser purchases the above described property, and the chattels included in the sale, on the terms set out above, and the General and Further Terms of Sale

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CHRISTCHURCH CITY COUNCIL
P.I.M. APPLICATION
Rec'd 05 NOV 2003
Linwood Service Centre
PROJECT No.

10040372



NOTES:
1. mains pressure hwc
2. auto opener to garage door
3. mesh to all tiled and vinyl areas
4. grooved jambs to all internal doors refer to J & G Doors for opening sizes return studs required to all openings
5. double glazing to all windows and doors except garage
6. pre pipe for gas fire to family room
7. 600 wide stainless steel under bench oven
8. stainless steel gas hob
9. microwave under bench
10. fanlight heaters to bathroom and ensuite
11. vitreous china pans and cisterns
12. Manhatten entry door
13. lever handles throughout
14. no shelving to WIR or bed 2 wardrobe
15. Manhatten open top doors to entry/family door and family/lounge cavity sliders
16. rectangular colorsteel downpipes

GOLD SPECIFICATION

⊗SD smoke detectors with hush facility to comply with NZBC S7

PROPOSED DWELLING AREA
= 2 2 1 . 0 2 00 Sq.m
= 2 3 7 8 Sq.ft

ADDITIONAL CONCRETE AREA
= 1 . 5 2 2 Sq.m
= 1 6 Sq.ft

Peter Ray Homes

Peter Ray Homes
213 Blenheim Road, Christchurch. P O 8184 Riccarton, Christchurch
Telephone - 03 348 1994 Fax - 03 343 2026

NOTE
1. All work shall comply with NZS 3604:1999
2. All windows and doors to comply with NZS 4211:1985
3. Glazing to comply with NZS 4223:1985 & Pt 3 1993
4. Contractor must verify all dimensions on site prior to commencing any work
5. The copyright of this drawing is vested with Peter Ray Homes Ltd and cannot legally be used, copied or in any form reproduced without written authority

Rev No.	Date	Amendment
A	03.11.03	remove gas fire, move gas bottles, change bay window

Drawn: A. Fahey
Date: 28.10.03
Scale: 1:100

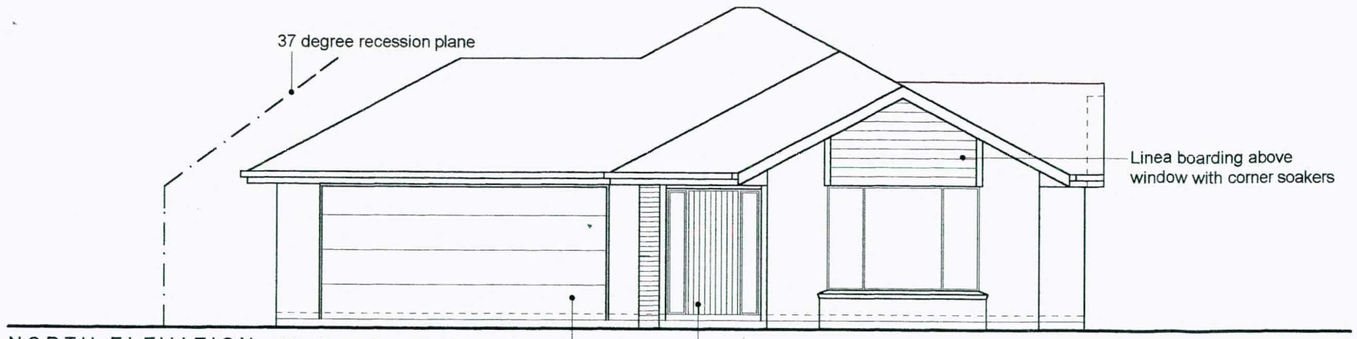
Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title: FLOOR PLAN

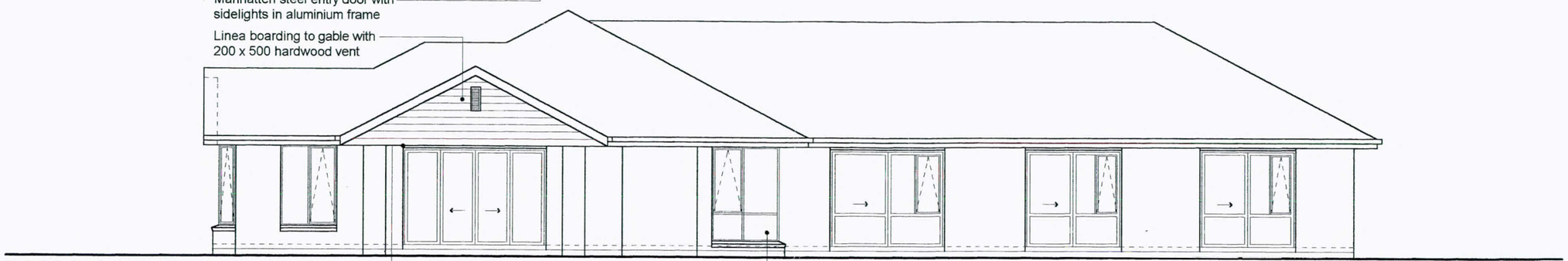
Sheet No.: 1 of 4

Revision

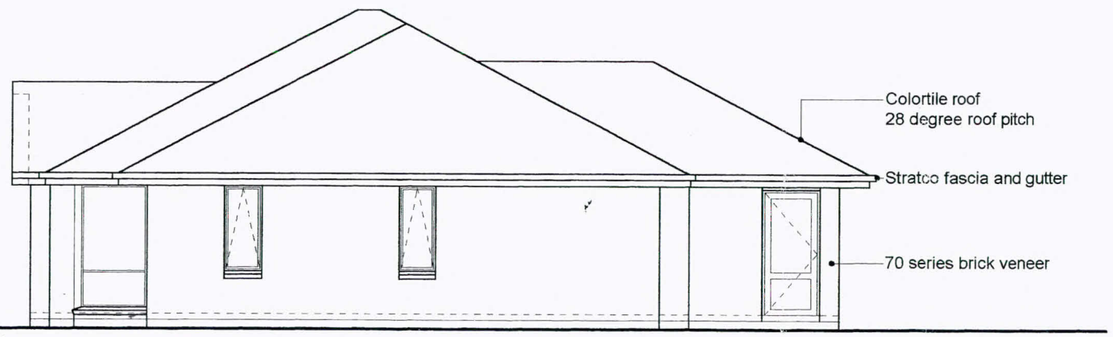
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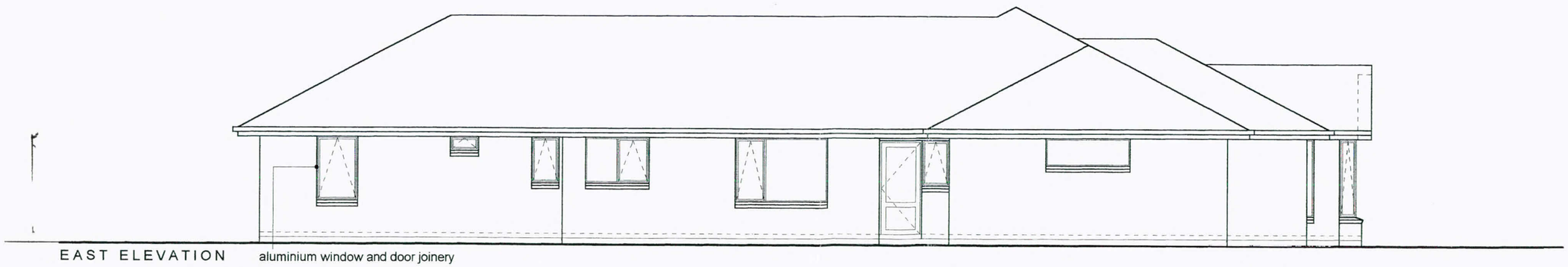
NORTH ELEVATION



WEST ELEVATION



SOUTH ELEVATION



EAST ELEVATION

Peter Ray Homes
213 Blenheim Road, Christchurch. P O 8184 Riccarton, Christchurch
Telephone – 03 348 1994 Fax – 03 343 2026

NOTE

1. All work shall comply with NZS 3604:1999
2. All windows and doors to comply with NZS 4211:1985
3. Glazing to comply with NZS 4223:1985 & Pt 3 1993
4. Contractor must verify all dimensions on site prior to commencing any work
5. The copyright of this drawing is vested with Peter Ray Homes Ltd and cannot legally be used, copied or in any form reproduced without written authority

Rev No.	Date	Amendment
A	03.11.03	remove gas fire, move gas bottles, change bay window

Drawn: A. Fahey
Date: 28.10.03
Scale: 1:100

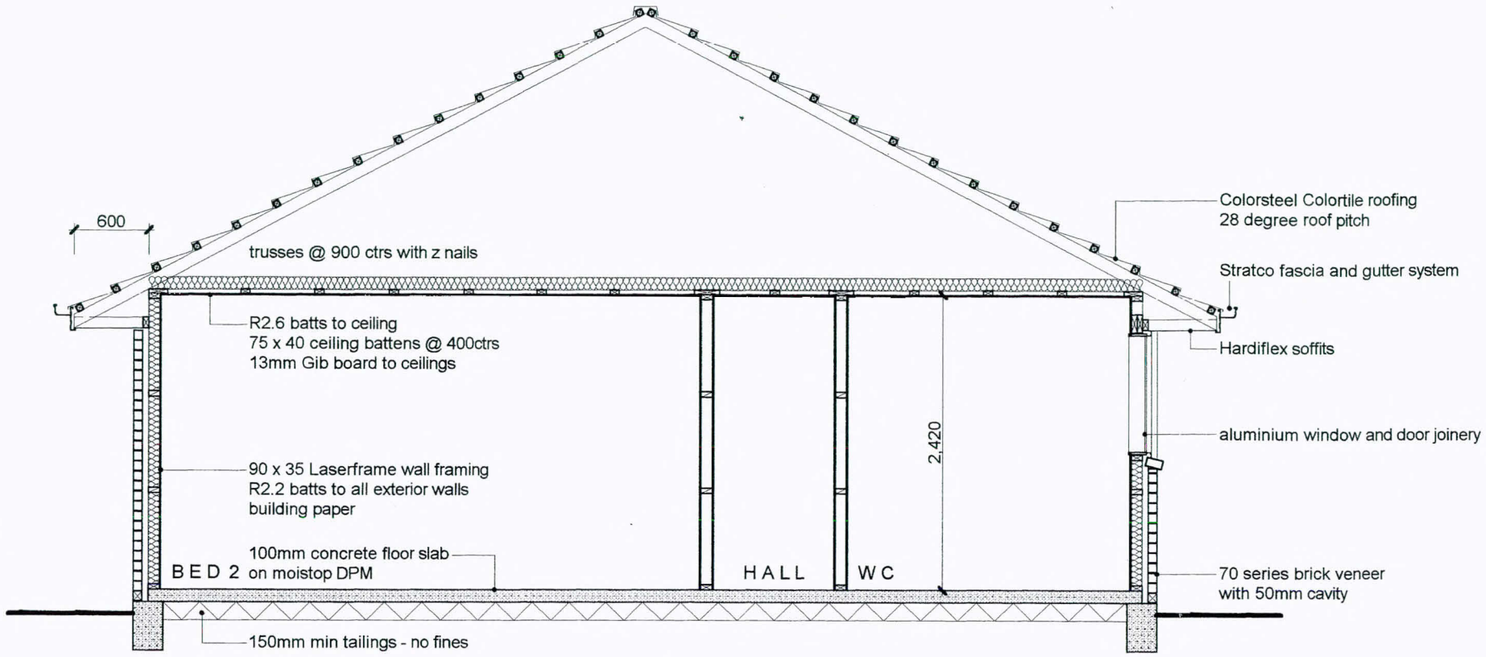
Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title: ELEVATIONS

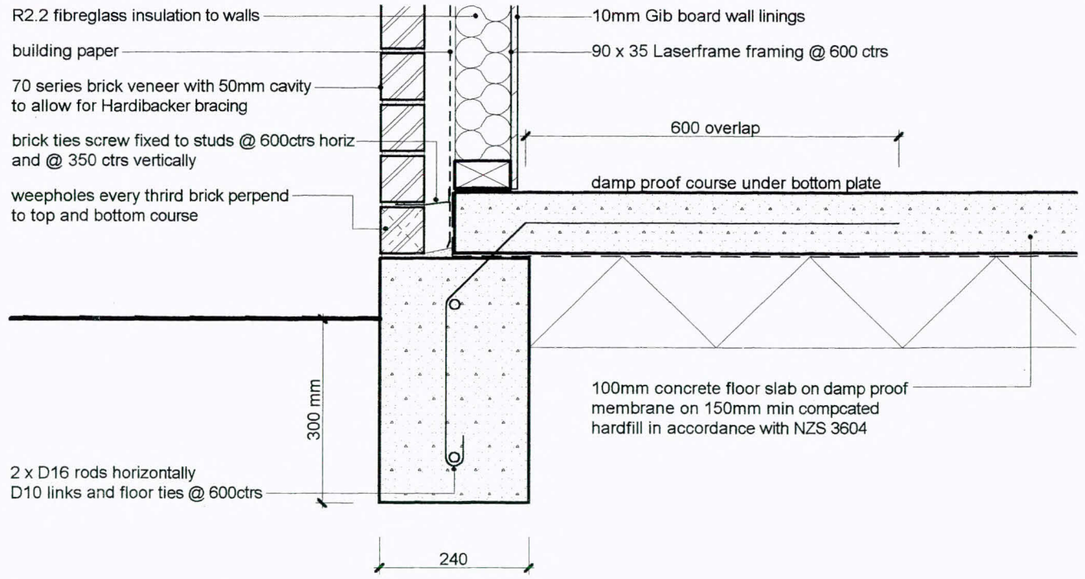
Sheet No. 2 of 4

Revision

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFU



CROSS SECTION
scale 1:50



FOUNDATION DETAIL
scale 1:10

Peter Ray Homes
213 Blenheim Road, Christchurch. P O 8184 Riccarton, Christchurch
Telephone – 03 348 1994 Fax – 03 343 2026

NOTE
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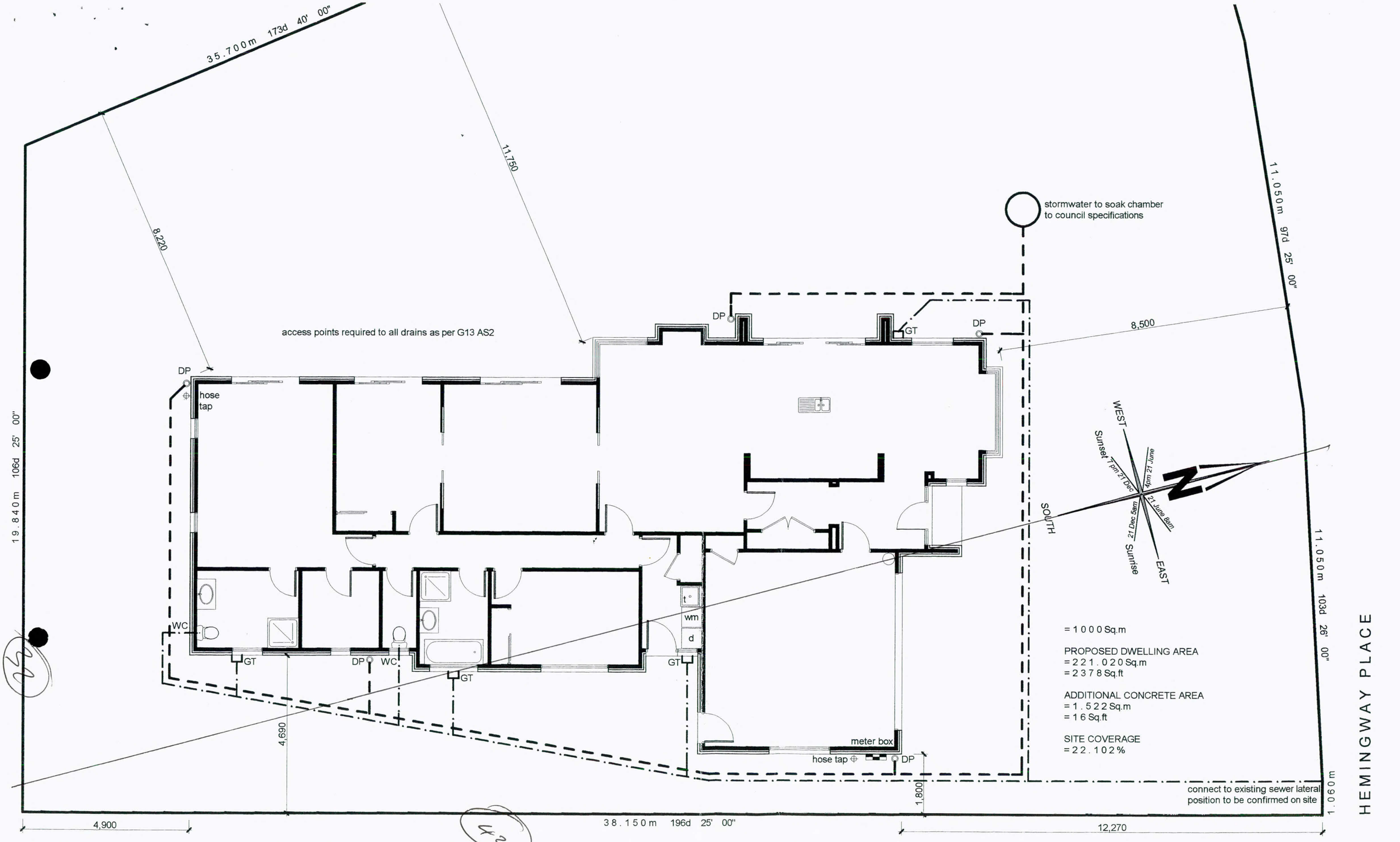
Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title: CROSS SECTION

Sheet No. 3 of 4

Revision

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFU



Peter Ray Homes
213 Blenheim Road, Christchurch. P O 8184 Riccarton, Christchurch
Telephone - 03 348 1994 Fax - 03 343 2026

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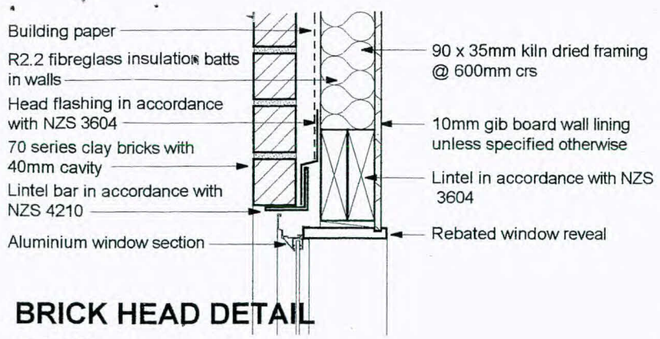
Job Name & Location
Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title
SITE PLAN

Sheet No.
4 of 4

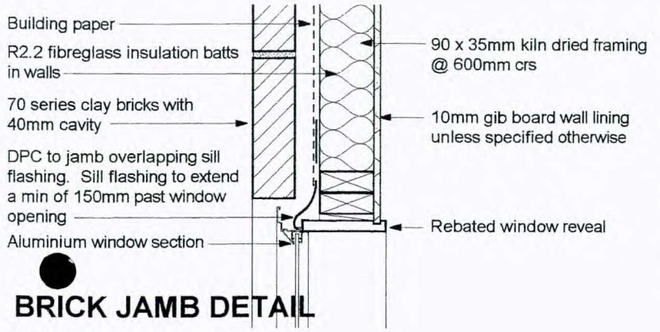
Revision

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFU



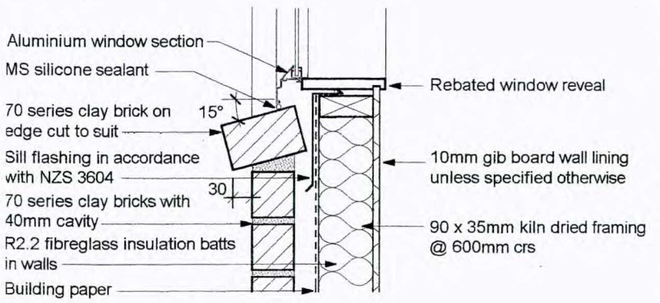
BRICK HEAD DETAIL

Scale 1:10



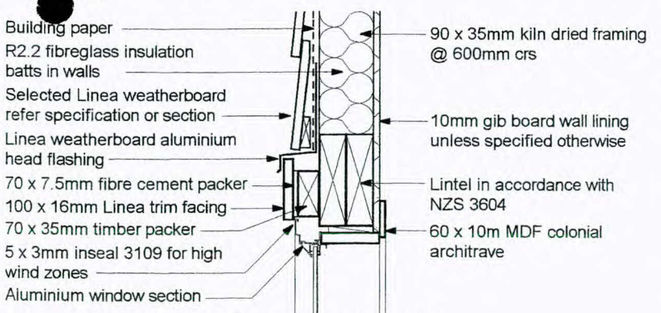
BRICK JAMB DETAIL

Scale 1:10



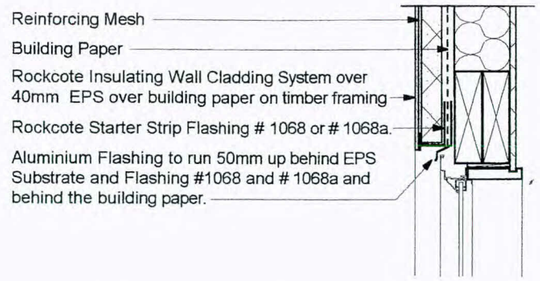
BRICK SILL DETAIL

Scale 1:10



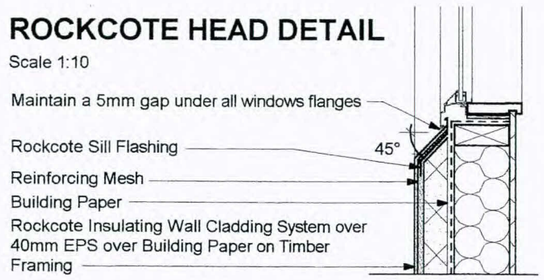
LINEA WINDOW HEAD DETAIL with facing board

Scale 1:10



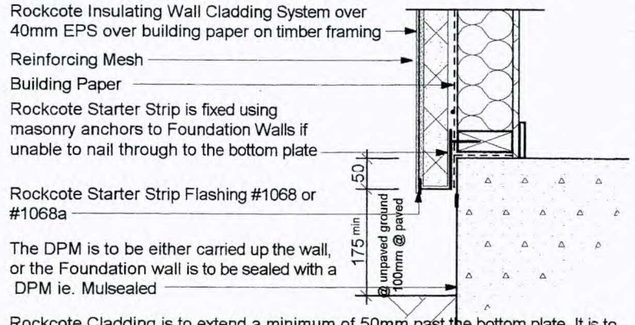
ROCKCOTE HEAD DETAIL

Scale 1:10



ROCKCOTE SILL DETAIL

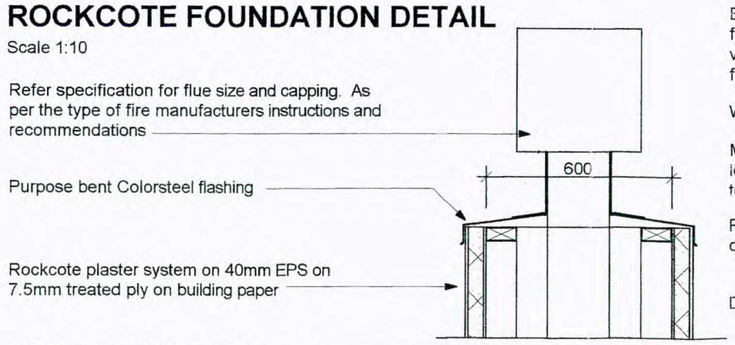
Scale 1:10



Rockcote Cladding is to extend a minimum of 50mm past the bottom plate. It is to be 6mm clear off the Foundation Wall. Refer to NZS 3604:1999 Fig 7.10.
The distance from the top of the floor slab to cleared ground is to be a minimum of 225mm, to a paved surface this shall be a minimum of 150mm. Refer to NZBC E2/AS1 Paragraph 4.2.5 or NZS 3604:1999 Fig 7.10.

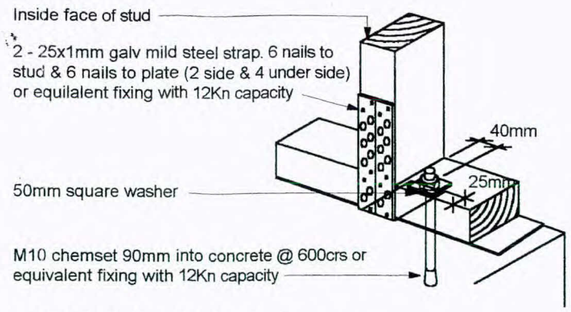
ROCKCOTE FOUNDATION DETAIL

Scale 1:10

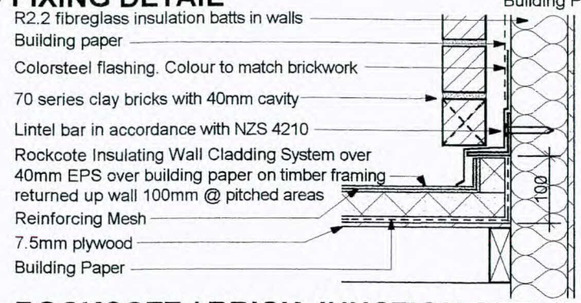


CHIMNEY CAPPING DETAIL

Scale 1:20

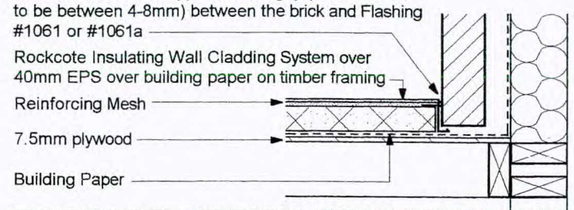


STUD FIXING DETAIL



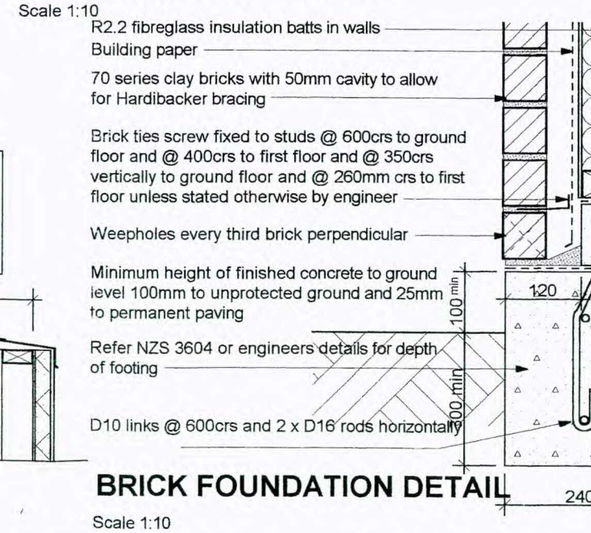
ROCKCOTE / BRICK JUNCTION DETAIL @ sloped areas of chimney

Scale 1:10



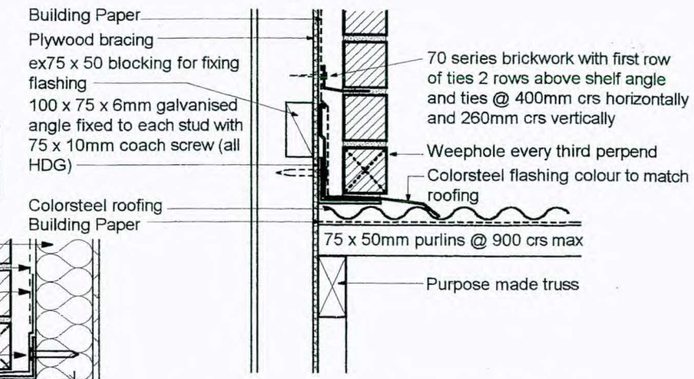
ROCKCOTE / BRICK JUNCTION DETAIL @ chimney internal corner

Scale 1:10



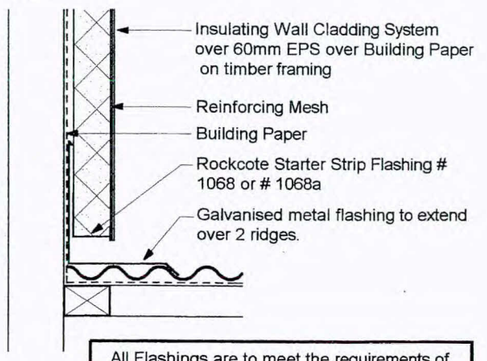
BRICK FOUNDATION DETAIL

Scale 1:10



BRICK ROOF FLASHING DETAIL

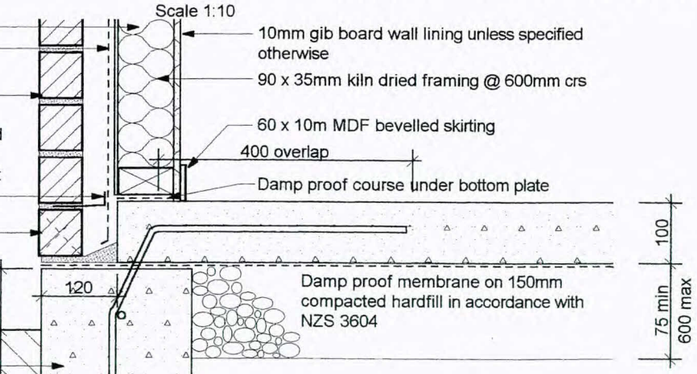
Scale 1:10



All Flashings are to meet the requirements of Section 4 of NZS 3604:1999

ROCKCOTE ROOF FLASHING DETAIL

Scale 1:10



Peter Ray Homes
213 Blenheim Road, Christchurch. P O 8184 Riccarton, Christchurch
Telephone – 03 348 1994 Fax – 03 343 2026

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Rev No.	Date	Amendment

Drawn: J Stadnyk
Date: December 02
Scale: 1:10, 1:20

Job Name & Location: PETER RAY HOMES LIMITED

Sheet Title: Standard Details for Single Storey Homes

Sheet No.

Revision

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFU

CHRISTCHURCH CITY COUNCIL · ENVIRONMENT	**CHRISTCHURCH CITY COUNCIL** BUILDING ACT 1991 **Project Information Memorandum (PIM)**	FORM BA2 PROJECT NO: **10040372**

Issued Date: 24 November 2003

Site Address: 16 Hemingway Place

Legal Desc: **Lot No:** 35 **DP No:** 319911

Owner: Russell Wenn and Julie Collier

Applicant: In-Spect
35 Maces Road
CHRISTCHURCH

Proposal: Dwelling with attached garage

CONSENTS COPY

The following matters have been identified in respect of the above Building Project.

HAZARDS/SPECIAL LAND CHARACTERISTICS

- **Ground Conditions:** The site has been filled and Council's records show that the fill has been placed and compacted to NZS 4431. This is unlikely to affect the buildings of standard construction.

  Refer location plan attached. Normal inspections and design of foundations as would be made in natural ground required.

  Location of cut/fill interface to be noted (and confirmed on site) and foundation designed accordingly.

DRAINAGE/WATER

Contact – Heath Wells

- **Levels**

  Development Standards for the Brooklands / Spencerville / Kainga Area:

  GROUND level to be the higher of:
  i) RL 10.85m in terms of the CCC datum.
  ii) Crown of road.

  Finished floor level for DWELLINGS & GARAGES to be the higher of:
  i) A minimum level of RL 11.225m in terms of the CCC datum
  ii) 150mm above the crown of the road.

- **Water Supply**
  - The water supply headworks fee is not required as the property is within the Brooklands, Spencerville and Kainga LRV and LRS zones.

- **Sanitary Sewer**
  - A Wastewater reticulation capacity upgrade contribution is not required for this proposal.

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- The Wastewater Treatment Plant capacity upgrade contribution fee has been addressed as part of the underlying subdivision and is not required for this proposal
- Sanitary sewer is to be discharged to the existing lateral installed at subdivision stage.

- **Stormwater**
  - Roof water is to discharge to an approved soakage chamber at a point close to the road boundary of the property. See C.C.C. Standard detail 8024 for soakage chamber details. (Detail attached)
    Only roof stormwater may be discharged into a soakage chamber. Interceptor / Silt traps will be required where surface drainage is proposed to connect directly to any open or piped stormwater system under the control of the Council.

- **General**
  - **Sewer Connections** to Council Services in the street are ***authorised work*** and must be carried out by a ***Council authorised drainlayer***. This includes all drainage laterals on roads, footpaths and verges that connect the property to public drains.
  - A list of **Council authorised drainlayers** is available on request or online at website www.ccc.govt.nz/WasteWater/AuthorisedDrainLayers/.
  - For further information the applicant is advised to contact either Tony Borkus (941-8376) or Gordon Taylor (941-8375.)

  - The developer is required to mitigate any adverse affects on adjoining properties. Failure to undertake such works may mean that the developer has some responsibility to adjacent owners at law.
  - Any requests for a variation to the above requirements to be made to a Building Consent Officer at the Councils Environmental Services Unit (Ph 941-8675). The developer should supply plans showing:
    i) Proposed Pipework, outfalls and connections etc
    ii) Existing and proposed Ground levels.
    iii) Detailed plumbing and drainage drawings.
  - Benchmarks and manhole levels may be obtained from the Essential Services Customer Centre (Ph 941-8300) at no charge.

- **Drainage Plan:** A drainage plan is provided.

OTHER ISSUES

- **Construction Nuisance:** The project must comply with the Health Act 1956, Section 29. The premises should be constructed or demolished so as not to cause a nuisance in terms of the Act (ie. dust).

  The Resource Management Act 1991 places a general obligation on persons, including builders and demolition contractors to adopt the best practicable option to ensure that the emission of noise does not exceed a reasonable level.

- **Vehicle Crossings** are required to be constructed in accordance with Council's Standard Specifications (a copy of which is available from the Council). On default the Council will undertake to repair or construct the crossing at the ***property owners cost.***

  The City Streets Unit is to be notified 24 hours prior to:

  1. The concrete to the culvert being poured; ***and***
  2. Final sealing of the crossing.

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Where alterations are required to stormwater pipes or other on street facilities, eg, manhole tops, poles, trees etc, the owner is to meet the cost of the required alterations.

Fees for the application are shown below.

- **Damage to Council Assets:** At all times the roadway, footpath, berm and landscaped areas adjacent to the construction site are to be kept tidy and safe for all road users. The developer/owner is responsible to repair any damages to the roading assets that occurred as soon as is practicable. The Council reserves the rights to repair all damages. Any cost incurred by Council for this will be recovered from the developer/owner.

The following Council fees will be charged with the uplift of the Building Consent and are additional to the Building Consent fees. These fees are subject to change depending on the date of issue of the Building Consent.

Vehicle Crossing (inspection fee only)	$ 60.00
Water Supply (One 15mm Supply)	$ 425.00

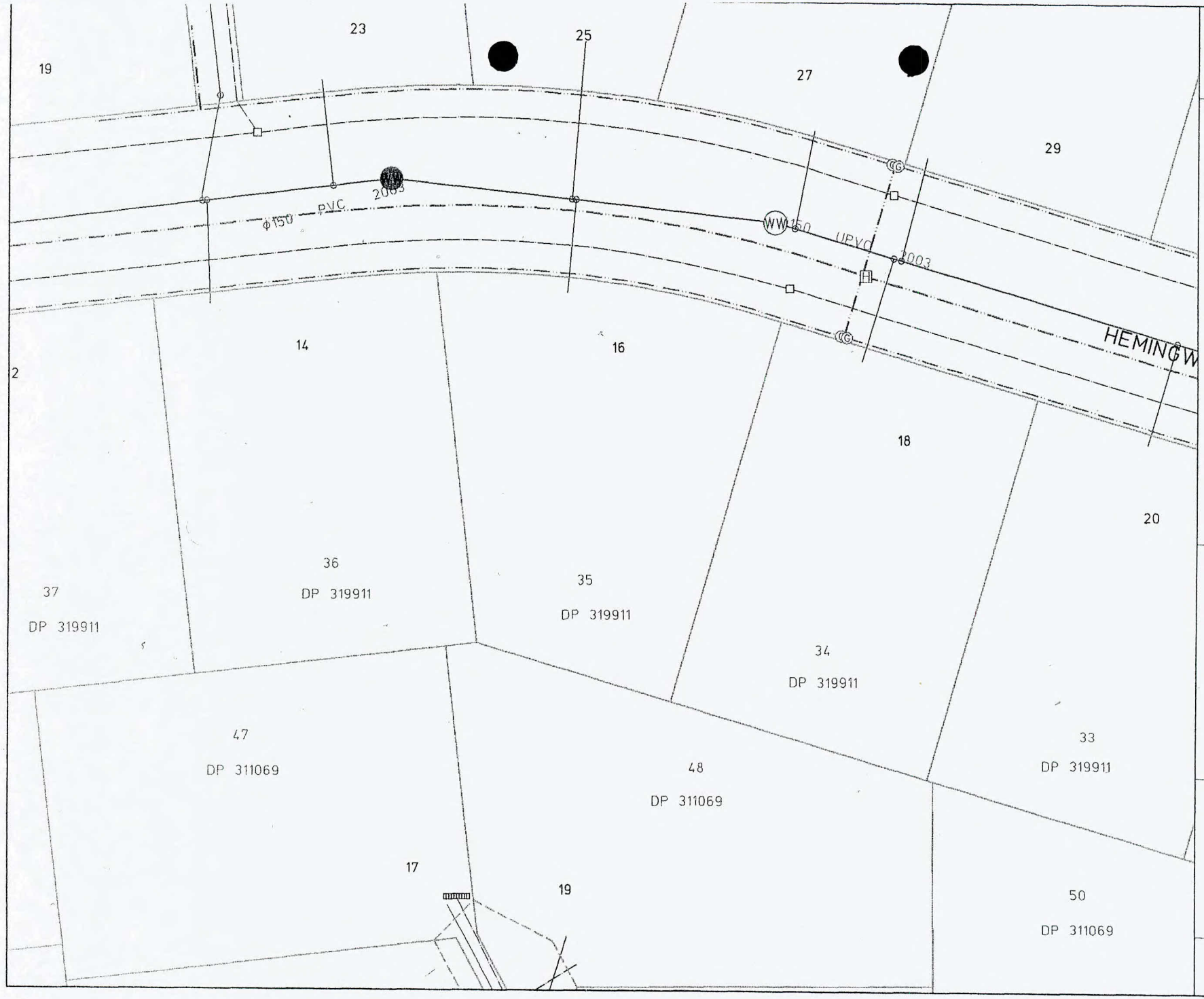
Total Project Information Memorandum fees $ 170.00
Paid $ 170.00 **Receipt No.:** 919020
Balance to pay $ NIL

Signed for and on behalf of the Council: _____ Date: 24 November 2003

Name: John Clark
Position: for **BUILDING CONSENT OFFICER**

This project may proceed subject to the issue of a Building Consent and any other necessary authorisations being obtained.

NB: This Project Information Memorandum will lapse and be of no effect if a Building Consent has not been issued by 24 November 2005



Cadastral Plan

Ph: 371-1300
Fax: 371-1385

LEGEND

- WASTE WATER MAIN
- STORM WATER MAIN
- WATER SUPPLY MAIN
- WASTE WATER DRAIN
- STORM WATER DRAIN
- WATER SUPPLY SUBMAIN
- STD MANHOLE (WASTE)
- VENTED MANHOLE (WASTE)
- STD MANHOLE (STORM)
- SUMP (STORM)
- FIRE HYDRANT (WATER)
- VALVE (WATER)
- METER (WATER)
- CONNECTOR (WATER)
- END CAP (WATER)
- KERB & CHANNEL

CAUTION
THE ACCURACY OF THIS PLAN IS NOT GUARANTEED. ONSITE VERIFICATION REQUIRED.

SCALE 1:500 on A4

Christchurch City Counc
6 Nov 2003 8:08AM

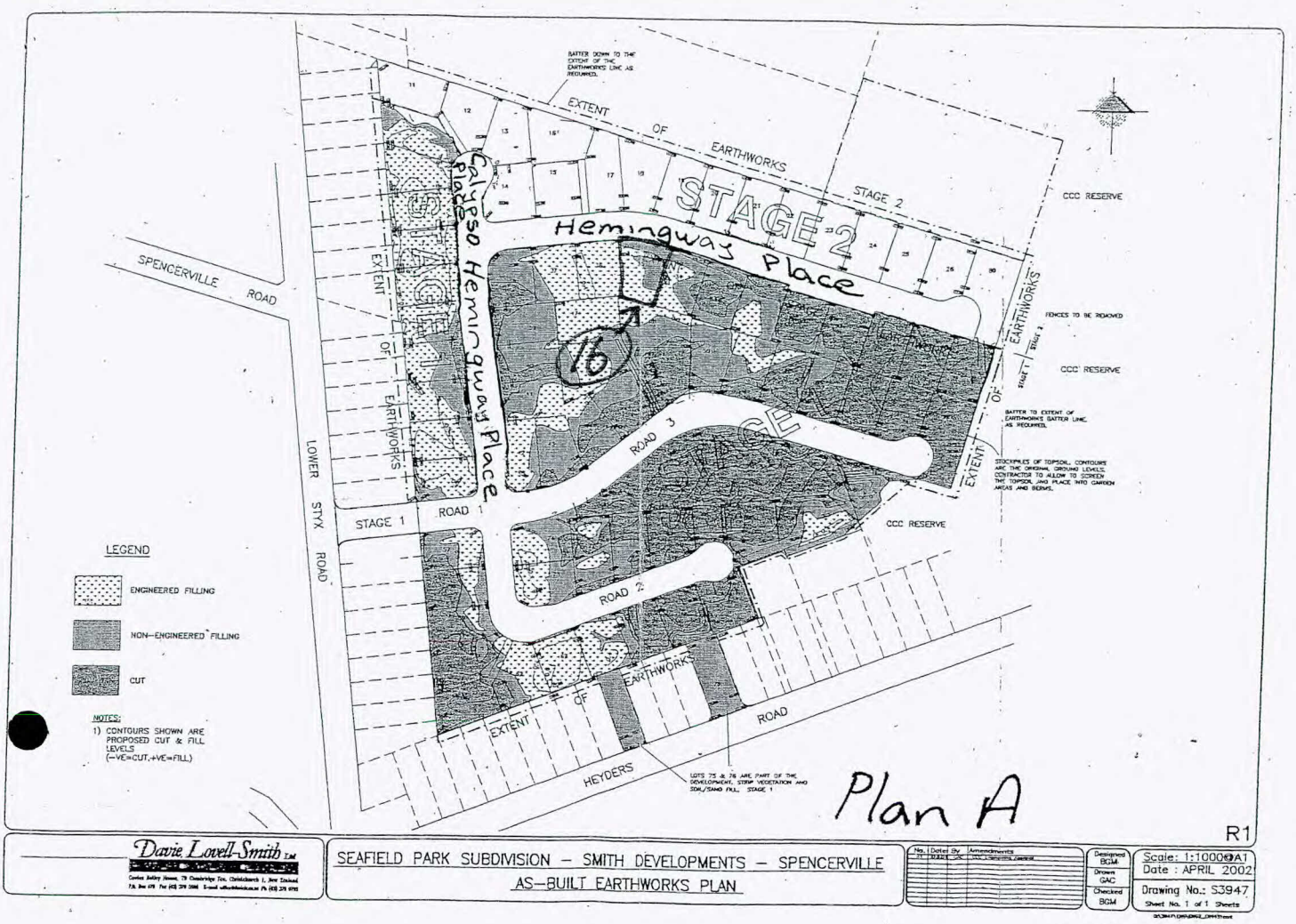
CHRISTCHURCH
CITY COUNCIL - GEODATA SERVICES

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10040372

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APPENDIX A
STATEMENT OF SUITABILITY OF EARTHFILL
FOR RESIDENTIAL DEVELOPMENT

To **Christchurch City Council**
PO Box 237
Christchurch

Attention Mr B Craig

STATEMENT OF SUITABILITY OF EARTH FILL FOR RESIDENTIAL DEVELOPMENT

Subdivision **Seafield Park Subdivision-Stage I**

Developer **Smith Developments Limited**

Location **Cnr Lower Styx & Heyders Road, Spencerville**

The earth fill shown on the attached plan No. S3947 Sheet 1 dated April 2002 have been placed in compliance with the terms of NZS 4431.

While work was in progress I retained as my inspecting engineer (or staff under his control) the engineer named below who is registered in terms of the Engineers Registration Act 1924.

John Bannock (Registration Number 10545)
Address C/- **Davie, Lovell-Smith Limited, PO Box 679, Christchurch**

During the work, the inspecting engineer or staff under his control made periodic visits of inspection to the site as detailed in his report No S3947 which is attached. Details of the soil testing carried out to check the quality of the fill by the inspecting engineer and his testing agency are also included in this report.

The attached plan No S3947 Sheet 1 shows Lot Nos. 1-10, 57-65, 68, 72, 73, 74, 30-53, 75 & 76 to be affected by filling and the extent of the fill.

In the opinion of the inspecting engineer the following special limitations should be observed:

NA

This certification, that the earth fills have been placed in compliance with the terms of NZS 4431 does not remove the necessity for the normal inspection and design of foundations as would be made in natural ground.

Registered Engineer

22 April 2002

on behalf of:
(Owner/ Developer)

NZS 4431:1989
3947/ENG/4431_ Earthfill-stg1

IN THE MATTER OF the Resource Management Act 1991
AND
IN THE MATTER OF Subdivision Consent Application PAP/20010325 affecting Lots 3-41 DP 319911

CONSENT NOTICE PURSUANT TO
SECTION 221, RESOURCE MANAGEMENT ACT 1991

To: Registrar-General of Lands
Canterbury Land Registration District
LAND INFORMATION NEW ZEALAND

TAKE NOTICE that the land hereinafter described is subject to conditions in relation to a subdivision consent as follows:-

Minimum Floor Levels.

The minimum floor level for all dwellings is to be 11.225m in terms of the Christchurch Drainage Datum.

AND THAT you are hereby directed and required to register the same pursuant to Section 221 Resource Management Act 1991.

DESCRIPTION OF LAND BY CONSENT NOTICE

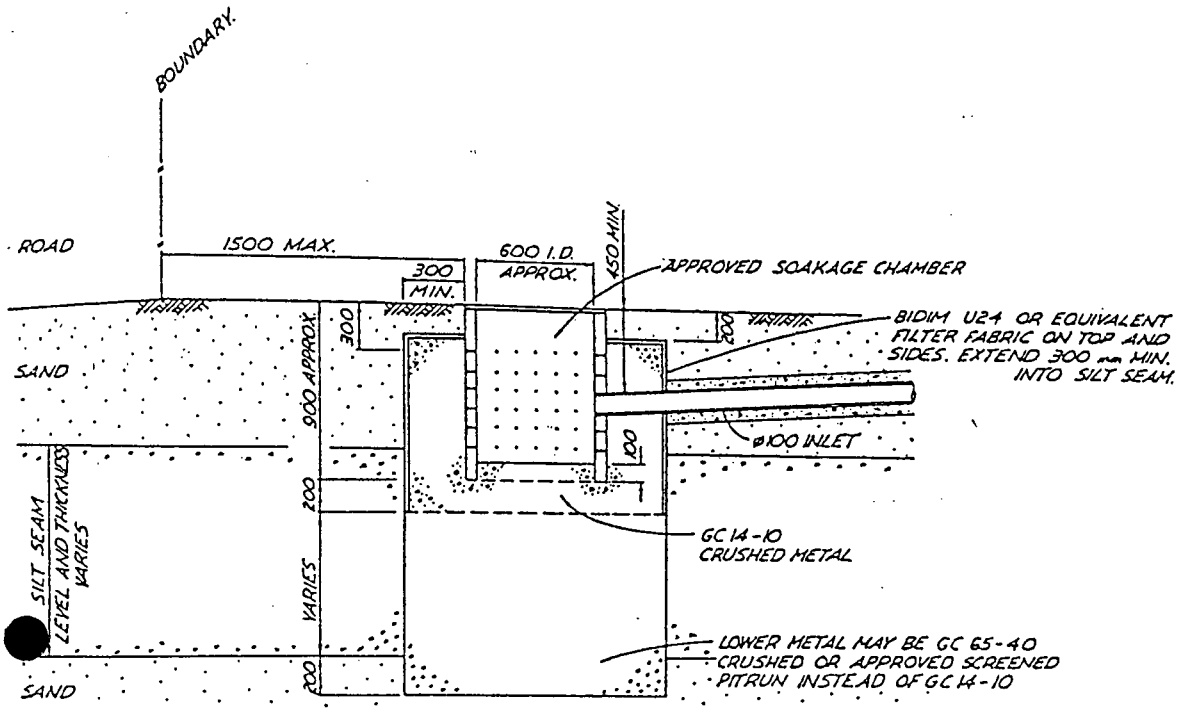
ALL THOSE PARCELS OF LAND COMPRISING:
- Lots 3 – 41 DP 319911comprised in Certificates of Title 78436 - 78474 (Canterbury Land District)

DATED this 14th day of May 2003

SIGNED for and on behalf of
THE CHRISTCHURCH CITY COUNCIL
pursuant to Section 252 of the
Local Government Act 1974

Principal Officer
(for the purposes of Section 221
Resource Management Act 1991)

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFU



TYPICAL SECTION - FOOT TRAFFIC ONLY

NOTES:

1. CHAMBER TO BE CONCRETE OR RIGID PLASTIC OF APPROVED STRENGTH PERFORATED WITH 5mm HOLES AT 100 CTRS. EACH WAY FOR PLASTIC OR 10mm HOLES AT 200 CTRS. EACH WAY FOR CONC.
2. CHAMBER COVERED WITH 5mm GALV. PLATE LID.
3. INVERT OF CHAMBER TO BE REGULARLY CLEANED OF SILT AND LEAVES TO MAINTAIN SOAKAGE. BOTTOM 100mm LAYER MAY OCCASIONALLY NEED REPLACEMENT.
4. ALL PIPING TO BE LAID TO C.D.B. SW80 DETAILS ("REQUIREMENTS FOR PRIVATE STORMWATER DRAINAGE 1980")
5. APPROX. VOLUME GC 14-10 - SOAKAGE CHAMBER - 1.5m³ LOOSE MEASURE.
   APPROX. VOLUME GC 65-40 - LOWER SOAK PIT - 1.4m³ LOOSE PER METRE DEPTH.
6. DESIGN SUITABLE FOR FOOT TRAFFIC AREAS ONLY.

DESIGNED Various	Christchurch Drainage Board	STANDARD SOAKAGE CHAMBER	8024
DRAWN K.J. SLADE.			
CHECKED [illegible]	APPROVED		SHEET OF SHEETS 15
RECOMMENDED	ENGINEER TO THE BOARD		185

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL
BUILDING INSPECTION SERVICES

Site Address: 16 Hemmingway Place

Description of Consent: Dwelling + Garage

PROJECT NO: 1904/1003

Demolition		Fire Resistant Rating	—	Final (Comm/Ind)	M8	Producer Statement	
Site Cleared		Smoke Alarms	✓	BA9 Received		Structural ( )	
FW Cut and Sealed		Glazing	✓	Car Parking Marked		As Built Drainage Plan	
Final (Residential)	**M8**	Access Routes Non-slip		Downpipes		HVAC	
BA9 Received		Retaining Wall Drainage		Stormwater		Fire Alarm Installer	
Wall Cladding Cert	✓	Swimming Pool		Rainheads		FPIS	
Downpipes	✓	Swimming Pool Fence		Gully Traps		Fire Engineer	
Stormwater	✓	Balconies		Main Vents		Emergency Lighting	
Flashings	✓	Overflow		Surface Water Sumps		Pressurisation	
Gully Dishes	✓	Overflow Relief		Trade Waste		Extraction	
Waste Pipes	✓	Pickup completed		Glass Safety		Sprinklers	
Main Vents	✓	Landscaping (Y/N)	—	Glass Visibility		Back Flow IQP Test	
Air Admittance Valve	—	Structural P/S		Barriers		Elect Certificate	
face Water Sumps	—	Photos taken	✓	Stairs		Gas Certificate	
Submersed Outlets	—	**Solid Fuel Heater**	**MH**	Hand Rails		Section 37 Certificate	
Hard Standing Levels	✓	Seismic Restraint		HWC Restraints		Lift	
HWC Restraint	✓	Hearth		Anti Scald		Lift As Built	
HWC Valves	✓	Flue		Emergency Lighting		Smoke Test	
Anti Scald Protection	✓	Clearances		Ventilation (HVAC)		Construction	
Barriers	—	Mantle		Fire Resistant Rating			
Landing	—	BA30 Form		Fire Alarm Type			
Flashings	—	Smoke Alarms		Egress			
Hand Rails	—	**Accessible Facilities**		Signage		BI 1 Form completed	
Stair Treads	—	" Route				**Reconciliation of Inspection**	
Stair Risers	—	" Toilet				Estimate	10
Ventilation of Spaces	✓	" Grab Rails				Actual	6
Mechanical Ventilation	✓	" Hardware				Interim CCC	
Range Hoods	✓	" Carpark				Amended Plan Fees	
Ceiling Insulation	✓	" Signage				Refund/Debit	

Comments

Project Completed

PROJECT COMPLETE
SIGNED 4
DATE 2/8/04

Electrical Cert No H54064 (P. McMahon-Brown) E24272C

All work inspected is in accordance with the Building Consent.

Some work is not satisfactory as detailed above and rectification is required.

Inspection Type **FINAL**

Rectfn T Fm ...../...../.....

Signed: ..... Date: 30/7/04

Heat Heat Seal

SITE INSPECTION REPORT

This is not a Code Compliance Certificate

Key
R = Rectification
– = Not Applicable
✓ = Approved

May 2004

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL
BUILDING INSPECTION SERVICES

Site Address: 16 HOWICK WAY BRACE

Description of Consent: NEW DWELLING

PROJECT NO: DD41003

Prepour Foundation	**M1**	Bracing		**Concrete Construction**	**220**	Grade	
Siting		Weatherboards		Reinforcing		Water Test	
Levels		Connections		Engineering Reports		Pick-up Completed	
Bearing		Floor Joist Layout		**Blockwork Construction**	**221**	Yard Sumps	
Reinforcing		Lintels		Reinforcing		Bubble Up Chambers	
Slab Ties		Insulation Walls		Cleanouts		**Pre Stopping**	**M7**
Engineering Report		Insulation Ceilings		**Steel Construction**	**222**	Brace Element Fixings	✓
Surveyors Certificate		Roof Cladding		Beam Size		Fire Lining Fixings	
Sub-floor Drainage	**M1A**	Ceiling Fans		Connections		**Flashings**	**213**
AS 3500 Drainage		Range Hoods		Beam Support		Windows	
Overflow Relief		Bottom Plates		**Solid Plaster**	**224**	Doors	
Prepour Slab	**M2**	Building Wrap		Expansion		**Monolithic Cladding**	**214**
Tailings		Engineering Verification		Substrate		System	
[redacted]M		**Preline Plumbing**	**M4B**	Control Joints		Fixings	
Mesh		Pipe Type/Sizing		Flashings		Bottom Plates	
Slab Thickening		Backflow Prevention		**Brick/Shelf Angle**	**225**	Balcony	
Wastes		Water Isolation Valve		Connections		Hand Rails	
Shrinkage Control		Lagging		**½ High Brick Insp.**	**211**	Overflow	
EPS		Pressure Test		Cavity		Penetrations	
Sub Floor	**M3**	Anti-scald, fitted		Ties		Cavity	
Pile Connections		Soil Pipes		Building Wrap		Parapets	
Bearers		Vents		Penetrations		Window Trim	
Joists		**Fire Resistant Lining**	**M5**	Flashings		Building Wrap	
Treatment		Penetrations		**Drainage**	**M6**	Sill Tray	
Sub Ventilation		Connections		Bedding		**Retaining Wall**	**212**
Sub Insulation		Fixings		Cover		Novacoil	
Preline Building	**M4A**	**Building & Sill Wrap**	**215**	Inspection Points		DPC	
M/C - walls/ceilings %				F/W→Approved Outfall		DPC Protection	
Framing		**Bathroom & Deck Tanking**	**216**	S/W→Approved Outfall		Novacoil connected to sw system	
[redacted]de/Treatment				Main Vent Positions			

Comments

1 - BIB 2 NOT FIXED ON RIGHT SIDE
- GIB STOPPER WILL DO - MARKED ON PLAN
ALL OTHER BRACING PANELS OK
- OK TO STOP WALLS & CEILINGS

Inspection Bookings Telephone Number: 941 8904 or to book online: www.ccc.govt.nz/building/forms/frmInspection.asp

Builder: | **Craftsman Plumber:** | **Reg Drainlayer:**

All work inspected is in accordance with the Building Consent. ✓

Some work is not satisfactory as detailed above and rectification is required.

Signed: ..... Date: 27/5/04

Inspection Type M7

SITE INSPECTION REPORT
This is not a Code Compliance Certificate

January 2004

Key
R = Rectification
– = Not Applicable
✓ = Approved

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL

BUILDING INSPECTION SERVICES

Site Address: 16 DOMINO WAY PLACE

Description of Consent: NEW DWELLING

PROJECT NO: 1/04/2003

Prepour Foundation	**M1**	Bracing	✓	**Concrete Construction**	**220**	Grade	
Siting		Weatherboards	–	Reinforcing		Water Test	
Levels		Connections	✓	Engineering Reports		Pick-up Completed	
Bearing		Floor Joist Layout	✓	**Blockwork Construction**	**221**	Yard Sumps	
Reinforcing		Lintels	✓	Reinforcing		Bubble Up Chambers	
Slab Ties		Insulation Walls	✓	Cleanouts		**Pre Stopping**	**M7**
Engineering Report		Insulation Ceilings	✓	**Steel Construction**	**222**	Brace Element Fixings	
Surveyors Certificate		Roof Cladding	✓	Beam Size		Fire Lining Fixings	
Sub-floor Drainage	**M1A**	Ceiling Fans	–	Connections		**Flashings**	**213**
AS 3500 Drainage		Range Hoods	–	Beam Support		Windows	
Overflow Relief		Bottom Plates	✓	**Solid Plaster**	**224**	Doors	
Prepour Slab	**M2**	Building Wrap	✓	Expansion		**Monolithic Cladding**	**214**
Tailings		Engineering Verification	–	Substrate		System	
[redacted]M		**Preline Plumbing**	**M4B**	Control Joints		Fixings	
Mesh		Pipe Type/Sizing	✓	Flashings		Bottom Plates	
Slab Thickening		Backflow Prevention		**Brick/Shelf Angle**	**225**	Balcony	
Wastes		Water Isolation Valve	R	Connections		Hand Rails	
Shrinkage Control		Lagging	✓	**½ High Brick Insp.**	**211**	Overflow	
EPS		Pressure Test	R	Cavity		Penetrations	
Sub Floor	**M3**	Anti-scald, fitted	R	Ties		Cavity	
Pile Connections		Soil Pipes	✓	Building Wrap		Parapets	
Bearers		Vents	✓	Penetrations		Window Trim	
Joists		**Fire Resistant Lining**	**M5**	Flashings		Building Wrap	
Treatment		Penetrations		**Drainage**	**M6**	Sill Tray	
Sub Ventilation		Connections		Bedding		**Retaining Wall**	**212**
Sub Insulation		Fixings		Cover		Novacoil	
Preline Building	**M4A**	**Building & Sill Wrap**	**215**	Inspection Points		DPC	
M/C - walls/ceilings %	✓			F/W→Approved Outfall		DPC Protection	
Framing	✓	**Bathroom & Deck Tanking**	**216**	S/W→Approved Outfall		Novacoil connected to sw system	
[redacted]de/Treatment	✓			Main Vent Positions			

Comments

M/C FRAMING / BATTENS — 10-15% — OK.
BRACING OK. INSULATION IN WALLS & CEILINGS.
PIPEWORK FIXED AND CLIPPED OK.
HWC AND ANTISCALD CATER. MV LATER
OK TO LINE WALLS & CEILINGS

Inspection Bookings Telephone Number: 941 8904 or to book online: www.ccc.govt.nz/building/forms/frmInspection.asp

Builder: **Craftsman Plumber:** ROBIN COOPER LTD **Reg Drainlayer:**

All work inspected is in accordance with the Building Consent.

Some work is not satisfactory as detailed above and rectification is required.

Signed: ..... Date: 18/5/04

Inspection Type M4A

SITE INSPECTION REPORT

This is not a Code Compliance Certificate

Key
R = Rectification
– = Not Applicable
✓ = Approved

January 2004

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL
BUILDING INSPECTION SERVICES

Site Address: 16 HEMINGWAY - KAIK

Description of Consent: DWELLING & GARAGE

PROJECT NO: 10041003

Prepour Foundation	**M1**	Bracing		**Concrete Construction**	**220**	Grade	
Siting	✓	Weatherboards		Reinforcing		Water Test	
Levels	✓	Connections		Engineering Reports		Pick-up Completed	
Bearing	✓	Floor Joist Layout		**Blockwork Construction**	**221**	Yard Sumps	
Reinforcing	✓	Lintels		Reinforcing		Bubble Up Chambers	
Slab Ties	✓	Insulation Walls		Cleanouts		**Pre Stopping**	**M7**
Engineering Report	–	Insulation Ceilings		**Steel Construction**	**222**	Brace Element Fixings	
Surveyors Certificate	–	Roof Cladding		Beam Size		Fire Lining Fixings	
Sub-floor Drainage	**M1A**	Ceiling Fans		Connections		**Flashings**	**213**
AS 3500 Drainage		Range Hoods		Beam Support		Windows	
Overflow Relief		Bottom Plates		**Solid Plaster**	**224**	Doors	
Prepour Slab	**M2**	Building Wrap		Expansion		**Monolithic Cladding**	**214**
Tailings		Engineering Verification		Substrate		System	
[redacted]M		**Preline Plumbing**	**M4B**	Control Joints		Fixings	
Mesh		Pipe Type/Sizing		Flashings		Bottom Plates	
Slab Thickening		Backflow Prevention		**Brick/Shelf Angle**	**225**	Balcony	
Wastes		Water Isolation Valve		Connections		Hand Rails	
Shrinkage Control		Lagging		**½ High Brick Insp.**	**211**	Overflow	
EPS		Pressure Test		Cavity		Penetrations	
Sub Floor	**M3**	Anti-scald, fitted		Ties		Cavity	
Pile Connections		Soil Pipes		Building Wrap		Parapets	
Bearers		Vents		Penetrations		Window Trim	
Joists		**Fire Resistant Lining**	**M5**	Flashings		Building Wrap	
Treatment		Penetrations		**Drainage**	**M6**	Sill Tray	
Sub Ventilation		Connections		Bedding		**Retaining Wall**	**212**
Sub Insulation		Fixings		Cover		Novacoil	
Preline Building	**M4A**	**Building & Sill Wrap**	**215**	Inspection Points		DPC	
M/C - walls/ceilings %				F/W→Approved Outfall		DPC Protection	
Framing		**Bathroom & Deck Tanking**	**216**	S/W→Approved Outfall		Novacoil connected to sw system	
[redacted]ade/Treatment				Main Vent Positions			

Comments

2. D. 16 PODS - 2 10 FLOOR TIES @ 600CRS

SITING OK

FOOTINGS 300 DEEP x 400 WIDE

Inspection Bookings Telephone Number: 941 8904 or to book online: www.ccc.govt.nz/building/forms/frmInspection.asp

Builder:	**Craftsman Plumber:**	**Reg Drainlayer:**

All work inspected is in accordance with the Building Consent.

Some work is not satisfactory as detailed above and rectification is required.

Inspection Type

1 1 1

Signed:.....Date: ...../...../.....

MICHAEL HENDERSON

January 2004

SITE INSPECTION REPORT
This is not a Code Compliance Certificate

Key

R = Rectification
– = Not Applicable
✓ = Approved

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL
BUILDING INSPECTION SERVICES

Site Address: 16 Hemingway Place

Description of Consent: Dwelling + Garage

PROJECT NO: 1004 1003

Prepour Foundation	**M1**	Bracing		**Concrete Construction**	**220**	Grade	
Siting		Weatherboards		Reinforcing		Water Test	
Levels		Connections		Engineering Reports		Pick-up Completed	
Bearing		Floor Joist Layout		**Blockwork Construction**	**221**	Yard Sumps	
Reinforcing		Lintels		Reinforcing		Bubble Up Chambers	
Slab Ties		Insulation Walls		Cleanouts		**Pre Stopping**	**M7**
Engineering Report		Insulation Ceilings		**Steel Construction**	**222**	Brace Element Fixings	
Surveyors Certificate		Roof Cladding		Beam Size		Fire Lining Fixings	
Sub-floor Drainage	**M1A**	Ceiling Fans		Connections		**Flashings**	**213**
AS 3500 Drainage		Range Hoods		Beam Support		Windows	
Overflow Relief		Bottom Plates		**Solid Plaster**	**224**	Doors	
Prepour Slab	**M2**	Building Wrap		Expansion		**Monolithic Cladding**	**214**
Tailings		Engineering Verification		Substrate		System	
[redacted]M		**Preline Plumbing**	**M4B**	Control Joints		Fixings	
Mesh		Pipe Type/Sizing		Flashings		Bottom Plates	
Slab Thickening		Backflow Prevention		**Brick/Shelf Angle**	**225**	Balcony	
Wastes		Water Isolation Valve		Connections		Hand Rails	
Shrinkage Control		Lagging		**½ High Brick Insp.**	**211**	Overflow	
EPS		Pressure Test		Cavity		Penetrations	
Sub Floor	**M3**	Anti-scald, fitted		Ties		Cavity	
Pile Connections		Soil Pipes		Building Wrap		Parapets	
Bearers		Vents		Penetrations		Window Trim	
Joists		**Fire Resistant Lining**	**M5**	Flashings		Building Wrap	
Treatment		Penetrations		**Drainage**	**M6**	Sill Tray	
Sub Ventilation		Connections		Bedding		**Retaining Wall**	**212**
Sub Insulation		Fixings		Cover		Novacoil	
Preline Building	**M4A**	**Building & Sill Wrap**	**215**	Inspection Points		DPC	
M/C - walls/ceilings %				F/W→Approved Outfall		DPC Protection	
Framing		**Bathroom & Deck Tanking**	**216**	S/W→Approved Outfall		Novacoil connected to sw system	
[redacted]de/Treatment				Main Vent Positions			

Comments

D.P.M TAPED + LAID ON TRENCHES
665 MESH IN TIED HEADS ON CHAIRS
WASTE PIES LAGGED + TAPED
OK TO POUR

Inspection Bookings Telephone Number: 941 8904 or to book online: www.ccc.govt.nz/building/forms/frmInspection.asp

Builder: | **Craftsman Plumber:** | **Reg Drainlayer:**

All work inspected is in accordance with the Building Consent.

Some work is not satisfactory as detailed above and rectification is required.

Inspection Type M2

Signed: ..... Date: 18/3/04

Mccall Hutchison

January 2004

SITE INSPECTION REPORT
This is not a Code Compliance Certificate

Key
R = Rectification
– = Not Applicable
✓ = Approved

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL
BUILDING INSPECTION SERVICES

Site Address: 16 Hemingway Pl.

Description of Consent:

PROJECT NO: 10041003

Prepour Foundation	**M1**	Bracing		**Concrete Construction**	**220**	Grade	✓
Siting		Weatherboards		Reinforcing		Water Test	✓
Levels		Connections		Engineering Reports		Pick-up Completed	✓
Bearing		Floor Joist Layout		**Blockwork Construction**	**221**	Yard Sumps	
Reinforcing		Lintels		Reinforcing		Bubble Up Chambers	
Slab Ties		Insulation Walls		Cleanouts		**Pre Stopping**	**M7**
Engineering Report		Insulation Ceilings		**Steel Construction**	**222**	Brace Element Fixings	
Surveyors Certificate		Roof Cladding		Beam Size		Fire Lining Fixings	
Sub-floor Drainage	**M1A**	Ceiling Fans		Connections		**Flashings**	**213**
AS 3500 Drainage		Range Hoods		Beam Support		Windows	
Overflow Relief		Bottom Plates		**Solid Plaster**	**224**	Doors	
Prepour Slab	**M2**	Building Wrap		Expansion		**Monolithic Cladding**	**214**
Tailings		Engineering Verification		Substrate		System	
M/M		**Preline Plumbing**	**M4B**	Control Joints		Fixings	
Mesh		Pipe Type/Sizing		Flashings		Bottom Plates	
Slab Thickening		Backflow Prevention		**Brick/Shelf Angle**	**225**	Balcony	
Wastes		Water Isolation Valve		Connections		Hand Rails	
Shrinkage Control		Lagging		**½ High Brick Insp.**	**211**	Overflow	
EPS		Pressure Test		Cavity		Penetrations	
Sub Floor	**M3**	Anti-scald, fitted		Ties		Cavity	
Pile Connections		Soil Pipes		Building Wrap		Parapets	
Bearers		Vents		Penetrations		Window Trim	
Joists		**Fire Resistant Lining**	**M5**	Flashings		Building Wrap	
Treatment		Penetrations		**Drainage**	**M6**	Sill Tray	
Sub Ventilation		Connections		Bedding	✓	**Retaining Wall**	**212**
Sub Insulation		Fixings		Cover	✓	Novacoil	
Preline Building	**M4A**	**Building & Sill Wrap**	**215**	Inspection Points	✓	DPC	
M/C - walls/ceilings %				F/W→Approved Outfall	✓	DPC Protection	
Framing		**Bathroom & Deck Tanking**	**216**	S/W→Approved Outfall	✓	Novacoil connected to sw system	
Grade/Treatment				Main Vent Positions	✓		

Comments

Cornerstone

Arauko

Inspection Bookings Telephone Number: 941 8904 or to book online: www.ccc.govt.nz/building/forms/frmInspection.asp

Builder:	**Craftsman Plumber:**	**Reg Drainlayer:**
	✓	

All work inspected is in accordance with the Building Consent. ✓

~~Some work is not satisfactory as detailed above and rectification is required.~~

Inspection Type m 6.

Signed: AJBS Date: 15/7/14

SITE INSPECTION REPORT

This is not a Code Compliance Certificate

Key
R = Rectification
– = Not Applicable
✓ = Approved

January 2004

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL
BUILDING INSPECTION SERVICES

Site Address: 16 Hemmingway Plc.

Description of Consent: Dwg/Gge

PROJECT NO: 1904/1003

Prepour Foundation	**M1**	Bracing		**Concrete Construction**	**220**	Grade	
Siting		Weatherboards		Reinforcing		Water Test	
Levels		Connections		Engineering Reports		Pick-up Completed	
Bearing		Floor Joist Layout		**Blockwork Construction**	**221**	Yard Sumps	
Reinforcing		Lintels		Reinforcing		Bubble Up Chambers	
Slab Ties		Insulation Walls		Cleanouts		**Pre Stopping**	**M7**
Engineering Report		Insulation Ceilings		**Steel Construction**	**222**	Brace Element Fixings	
Surveyors Certificate		Roof Cladding		Beam Size		Fire Lining Fixings	
Sub-floor Drainage	**M1A**	Ceiling Fans		Connections		**Flashings**	**213**
AS 3500 Drainage		Range Hoods		Beam Support		Windows	
Overflow Relief		Bottom Plates		**Solid Plaster**	**224**	Doors	
Prepour Slab	**M2**	Building Wrap		Expansion		**Monolithic Cladding**	**214**
Tailings		Engineering Verification		Substrate		System	
[redacted]M		**Preline Plumbing**	**M4B**	Control Joints		Fixings	
Mesh		Pipe Type/Sizing		Flashings		Bottom Plates	
Slab Thickening		Backflow Prevention		**Brick/Shelf Angle**	**225**	Balcony	
Wastes		Water Isolation Valve		Connections		Hand Rails	
Shrinkage Control		Lagging		**½ High Brick Insp.**	**211**	Overflow	
EPS		Pressure Test		Cavity	✓	Penetrations	
Sub Floor	**M3**	Anti-scald, fitted		Ties	✓	Cavity	
Pile Connections		Soil Pipes		Building Wrap	✓	Parapets	
Bearers		Vents		Penetrations	✓	Window Trim	
Joists		**Fire Resistant Lining**	**M5**	Flashings	✓	Building Wrap	
Treatment		Penetrations		**Drainage**	**M6**	Sill Tray	
Sub Ventilation		Connections		Bedding		**Retaining Wall**	**212**
Sub Insulation		Fixings		Cover		Novacoil	
Preline Building	**M4A**	**Building & Sill Wrap**	**215**	Inspection Points		DPC	
M/C - walls/ceilings %				F/W→Approved Outfall		DPC Protection	
Framing		**Bathroom & Deck Tanking**	**216**	S/W→Approved Outfall		Novacoil connected to sw system	
[redacted]rade/Treatment				Main Vent Positions			

Comments

Brick work OK

Inspection Bookings Telephone Number: 941 8904 or to book online: www.ccc.govt.nz/building/forms/frmInspection.asp

Builder: **Craftsman Plumber:** **Reg Drainlayer:**

All work inspected is in accordance with the Building Consent. ✓

Some work is not satisfactory as detailed above and rectification is required.

Signed: [redacted] Date: 17/6/04

Inspection Type

211

January 2004

SITE INSPECTION REPORT
This is not a Code Compliance Certificate

Key
R = Rectification
– = Not Applicable
✓ = Approved

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH CITY COUNCIL · ENVIRONMENT	**CHRISTCHURCH CITY COUNCIL** **ENVIRONMENTAL SERVICES UNIT** PO Box 237, Christchurch Fax 941-8920, Telephone 941-8904	**FORM: BA9**

Dear Building Owner

COMPLETION OF YOUR BUILDING PROJECT
FINAL INSPECTION AND CODE COMPLIANCE CERTIFICATE

Once your building project has been completed you are required to advise the City Council's Building Inspection Team so that they can carry out a final inspection.

Following this inspection you will receive a Code Compliance Certificate providing that the building work is correctly completed in accordance with the Building Code.

Therefore, to set this process in motion you need only complete and detach the lower part of this form labelled Form BA9 and return it to the City Council.

Note, that before completing Form BA9, please check that you have fulfilled the conditions of Building Consent, if any. This is important if you have been employing professional consultants to carry out inspection work during the course of construction, as a confirming "Producer Statement" may be required by the Council as part of the conditions.

FURTHER NOTE: Before the Council issues the Building Project's Code Compliance Certificate a copy of a Certificate of Compliance for any electrical work and/or certification certificate for any gas fitting work carried out with this project must be provided.

Yours faithfully
ENVIRONMENTAL SERVICES MANAGER

FORM BA9 — APPLICANTS ADVICE NOTICE OF COMPLETED BUILDING WORK

To: Team Leader Building Inspections
Christchurch City Council
PO Box 237, Christchurch

PROJECT NO 10041003

[*Cross each applicable box and attach relevant documents*]

You are hereby advised that:

☐ All

☐ Part only as specified in the attached particulars

of the building work under the above building consent is believed to have been completed to the extent required by that Building Consent.

You are requested to issue:

☐ A final Code Compliance Certificate

☐ An interim Code Compliance Certificate for ..... only

The attached particulars include:

☐ Producer statements (if required)

I _____ advise that the above building project is complete to the extent required by the building consent (including any conditions) and hereby request the Council to make a final inspection for the purposes of obtaining a Code Compliance Certificate:

(please tick)

Date Inspection Required: _____ Time: AM ☐ PM ☐

Site Address: 16 Hemingway Place

Contact Name: _____ Contact Phone: _____

Postal Address for receipt of Code Compliance Certificate or any further correspondence:

Signed by or for and on behalf of the owner: _____ Date: 30/7/04

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

ESTIMATE OF CONSTRUCTION INSPECTIONS: Date: 7 January 2004

PROJECT NO. 10041003

DESCRIPTION OF CONSENT: DWELLING WITH ATTACHED GARAGE

SITE ADDRESS: 16 HEMMINGWAY PLACE

INSPECTIONS REQUIRED	No.
201 Excavation / Foundation / Reinforcing	1
203 Slab on Grade / DPC	1
215 Building and Sill wrap	1
213 Flashings - Windows and Doors	**1**
211 Half High Brick Inspection	1
214 Monolithic Cladding - Pre-Coating	1
205 Pre-line including Plumbing	1
209 Pre-Stopping / Bracing	1
208 Drains	1
210 M8 Final Inspection	**1**

The fees for these inspections have been included in the overall building consent fees.

Notes:

1. The above mandatory notice inspections will be carried out by the Council for which one day notice shall be given as required by Regulation 7(1)(b)(i-v).
2. Inspections which are necessary due to non-complying or incomplete work or that rise as a result of a rectification notice are additional, and will be charged at the rate of $68.00/hour and invoiced separately.
3. ***DESTRUCTIVE INVESTIGATIONS MAY BE REQUIRED IF WORK IS COVERED IN PRIOR TO THE COUNCIL'S INSPECTIONS TAKING PLACE.***

For all inspection requests pertaining to this consent, please phone 941-8904.
Inspections for the following day must be booked prior to 4pm.

Book an inspection by fax - http://www.ccc.govt.nz/building/forms/Faxtobookaninspection.pdf
Or Request Form by fax 941-8920
Book an Inspection On-Line - http://www.ccc.govt.nz/building/forms/frmInspection.asp
If you do not have internet access but would like to request a form, fax your request to 941-8920.

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL

ENVIRONMENTAL SERVICES UNIT

TAX INVOICE WHEN PAID

BUILDING CONSENT FEES

INV 103943
GST NO 53-198-554
DATE 07/01/2004

WENN, RUSSELL MARTIN
COLLIER, JULIE
C/O IN-SPECT BUILDING CERTIFICATION
35 MACES ROAD
CHRISTCHURCH 8006

CONSENT APPLICATION NO: ABA 10041003

OWNERS NAME: SMITH DEVELOPMENTS LIMITED

PROJECT STREET ADDRESS: 16 HEMINGWAY PLACE
SPENCERVILLE

CUSTOMER CODE: 3258891

INVOICED TO DATE: $0.00

FEE CODE	DESCRIPTION	THIS INVOICE (GST exclusive)
B02	Accept & Issue Consent	111.11
B03	Process and Grant	127.11
[redacted]4	Compliance Fees	520.00
B05	Code Compliance Grant/Issue	40.00
B06	BRANZ Levy (no GST applicable)	160.00
B07	Building Industry Auth. Levy	92.44
VCI	Vehicle Crossing Inspn Fee	53.33
WCN	Std Water Connection Fee	377.78

GST Exclusive Total	$1481.77
GST Total	$165.23
TOTAL PAYABLE (GST Inclusive)	**$1647.00**

bcinv.frm

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL

ENVIRONMENTAL SERVICES UNIT

TAX INVOICE WHEN PAID

BUILDING CONSENT FEES

INV 103943
GST NO 53-198-554
DATE 07/01/2004

WENN, RUSSELL MARTIN
COLLIER, JULIE
C/O IN-SPECT BUILDING CERTIFICATION
35 MACES ROAD
CHRISTCHURCH 8006

CONSENT APPLICATION NO:	ABA 10041003
OWNERS NAME:	SMITH DEVELOPMENTS LIMITED
PROJECT STREET ADDRESS:	16 HEMINGWAY PLACE SPENCERVILLE
CUSTOMER CODE:	3258891
INVOICED TO DATE:	$0.00

FEE CODE	DESCRIPTION	THIS INVOICE (GST exclusive)
B02	Accept & Issue Consent	111.11
B03	Process and Grant	127.11
[redacted]4	Compliance Fees	520.00
B05	Code Compliance Grant/Issue	40.00
B06	BRANZ Levy (no GST applicable)	160.00
B07	Building Industry Auth. Levy	92.44
VCI	Vehicle Crossing Inspn Fee	53.33
WCN	Std Water Connection Fee	377.78

GST Exclusive Total	$1481.77
GST Total	$165.23
TOTAL PAYABLE (GST Inclusive)	**$1647.00**

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SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL

ENVIRONMENTAL SERVICES UNIT

CREDIT NOTE

BUILDING CONSENT FEES

INV 103942
GST NO 53-198-554
DATE 07/01/2004

WENN, RUSSELL MARTIN
COLLIER, JULIE
C/O IN-SPECT BUILDING CERTIFICATION
35 MACES ROAD
CHRISTCHURCH 8006

CONSENT APPLICATION NO: ABA 10041003
OWNERS NAME: SMITH DEVELOPMENTS LIMITED
PROJECT STREET ADDRESS: 16 HEMINGWAY PLACE SPENCERVILLE
CUSTOMER CODE: 3258891
INVOICED TO DATE: $1296.00

FEE CODE	DESCRIPTION	THIS INVOICE (GST exclusive)
B02	Accept & Issue Consent	111.11 CR
B03	Process and Grant	127.11 CR
[redacted]4	Compliance Fees	208.00 CR
B05	Code Compliance Grant/Issue	40.00 CR
B06	BRANZ Levy (no GST applicable)	160.00 CR
B07	Building Industry Auth. Levy	92.44 CR
VCI	Vehicle Crossing Inspn Fee	53.33 CR
WCN	Std Water Connection Fee	377.78 CR

GST Exclusive Total	$1169.77 CR
GST Total	$126.23 CR
TOTAL PAYABLE (GST Inclusive)	**$1296.00 CR**

bcinv.frm

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL

ENVIRONMENTAL SERVICES UNIT

TAX INVOICE WHEN PAID

BUILDING CONSENT FEES

INV 103315
GST NO 53-198-554
DATE 22/12/2003

WENN, RUSSELL MARTIN
COLLIER, JULIE
C/O IN-SPECT BUILDING CERTIFICATION
35 MACES ROAD
CHRISTCHURCH 8006

CONSENT APPLICATION NO: ABA 10041003
OWNERS NAME: SMITH DEVELOPMENTS LIMITED
PROJECT STREET ADDRESS: 16 HEMINGWAY PLACE SPENCERVILLE
CUSTOMER CODE: 3258891
INVOICED TO DATE: $0.00

FEE CODE	DESCRIPTION	THIS INVOICE (GST exclusive)
B02	Accept & Issue Consent	111.11
B03	Process and Grant	127.11
B04	Compliance Fees	~~208.00~~
B05	Code Compliance Grant/Issue	40.00
B06	BRANZ Levy (no GST applicable)	160.00
B07	Building Industry Auth. Levy	92.44
VCI	Vehicle Crossing Inspn Fee	53.33
WCN	Std Water Connection Fee	377.78

10 Insp

change screen.

GST Exclusive Total	~~$1169.77~~
GST Total	~~$126.23~~
TOTAL PAYABLE (GST Inclusive)	**$1296.00**

bcinv.frm

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CONSENT TIME RECORD SHEET

Occupant Numbers:

FOR PROJECT NO: 10041003 UPLIFT CENTRE: Kimwood BUILDING VALUE $ 160 000

Copied for rates ☐ PIM required ☐ Res Con required ☐ Landscape Plan copied ☐

BUILDING CONSENT CONDITIONS

									OTHERS:
~~8~~	C3	C1	C2						

PERSONNEL TIME AND FEES

Name	DD	4											Total Time	$ Rate	Fee Hrs x rate
	MM	12													
	YY	03													
KT															103
							C1	C2	C3						30
										1/4pm					10

Administration Charge	~~$90.00~~
Consultants Fees (if Applicable)	
Total Process and Grant *	

Accept & Issue <$10,000	$ 90.00		HCS	Heathcote Cost Sharing	
Accept & Issue $10,000-$50,000	$ 110.00		LAT	Sewer Lateral Fee	
Accept & Issue >$50,000	$ 115.00		MOE	Memo of Encumbrance	
Dwelling	$ 125.00	ONE FEE ONLY	RCC	Reserve Contribution	
Apartments & Commercial >$100,000	$135.00		RCS	Reserve Contribution	
Process & Grant *	143		S36	Section 36 (2)	
Grant & Issue Code Compliance Cert	$45.00 ✓		S37	Section 37 (2)	
Building Research Levy	160		SEW	Sewer Opening	
Building Industry Authority Levy	104		STW	Stormwater Opening	
Compliance Schedule	~~334~~		VCI	Vehicle Crossing Inspection	60
Inspections	104 ~~115.50~~ 585		WAL	Water Supply Headworks	
	Sub Total A		WAS	Sewer Cost Sharing	
PIM Fee (if app.) [$]	Total A		WAT	Water Cost Sharing	
			WAU	Stormwater Cost Sharing	
			WCN	Water Connection	425
			WST	Treatment Plant Upgrade	
			WRU	Waste Water Reticulation	
				Total B	
				PLUS Total A	
				FINAL TOTAL	~~1094.50~~ 1286

Prepaid Consents	
Type	
Fee	
Receipt	
Additional Fees	
Processing	
Inspections	
Other from above	
Total to Pay	$

~~+10 TMS~~ +585

$1647.00



SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

64 3 3481044

Peter Ray Homes

the key to better living

fax

To: Allan Harrison	From: Joy – Reception
Co: Christchurch City Council	Pages including coversheet: 4
Fax: 03 941 8920	Date: Tuesday, August 03, 2004
Ph:	Re: Truss Layout

If you do not receive all the pages, please telephone (03) 348 1994 as soon as possible.

Allan,

Please find attached Truss Layout for Wenn and Collier, 16 Hemingway Place as requested today.

Please may I have the Code of Compliance Certificate as soon as possible?

Regards,

Joy Morgan
Receptionist
Peter Ray Homes

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213 Blenheim Road PO Box 8184 Christchurch phone 348 1994 fax 348 1044
www.peterrayhomes.co.nz

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

64 3 3481044 **Frames & Truss** Producer Statement Page

Job: 3553 Client: PETER RAY HOMES Site: LOT 35 HEMINGWAY PLACE SEAFIELD PARK

Description: WELLS r COLLIER. Phone: Phone:

MiTek 20/20 - Engineering 4.3 Canterbury (Build 1723) MiTek New Zealand Ltd. Printed: 09:20:56.01 Aug 2004

PRODUCER STATEMENT
MiTek 20/20™ TRUSS DESIGN PROGRAM

Certification of MiTek 20/20™ Truss Design Program

The MiTek 20/20™ truss design program has been developed by MiTek New Zealand Ltd for the design of GANG-NAIL timber roof, floor and attic trusses in New Zealand. The truss design this program are prepared using sound and widely accepted engineering principles, and in accordance with NZS 4203, NZS 3603 and NZS 3604 as verification methods and acceptable solu approved documents issued by the Building Industry Authority to satisfy the requirements of Clause B1:Structure of the Building Regulations 1992. This computer design for the proposed b complies with the relevant provisions of the NZ Building Code. This is subject to all proprietary products meeting their performance specification requirements, the provision of adequate bra and the correct input of design data carried out by suitably trained personnel.

Summary of MiTek 20/20™ Truss Design Data and Output

The MiTek 20/20™ computer design output for this job titled and located at the site identified on the top of this page is based on the following parameters entered into the program. The own that the following job details below are current and relevant to the project before fabrication and erection of the GANG-NAIL trusses.

Job Details

Roof Truss

Timber Group: F5CTCD35

Roof

Material: Metal Tiles
Dead Load: 0.210 kPa
Restraints: 400 mm centres
Live Load: Qur = 0.250 kPa
Qc = 1.000 kN

Pitch: 28.00 deg

Ceiling

Material: Standard
Dead Load: 0.200 kPa
Restraints: 400 mm centres

Std Overhang: 600 mm

Wind

Area: High (44.0 m/s)
Pressure Coeff: Cpe = varies; Cpi = -0.30, 0.20

Snow

Location: Christchurch at 100 m
Open Ground Load: 0.550 kPa
Basic Roof Load: 0.440 kPa

The trusses must be fabricated and erected in accordance with the GANG-NAIL manual. Proper erection bracing must be installed to hold the components true and plumb and in a safe c permanent bracing is fixed. All permanent bracing and fixing must be installed before any loads are applied. The specifications for timber shall be as shown on the output. The timber shall gauged and treated to the requirements of NZMP 3640. Unless otherwise noted, this design assumes that the steel fixings and timber connectors are situated in a closed environment, as d NZS3604:1999 Section 4.

Truss List

Legend: * = detail only, ? = input or truss failed design, Unmarked trusses = designed successfully

Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)
V10	1	1313	28.00	900	T02	3	4170	28.00	729	J10A	1	2945	28.00	900	J03B	1	2622	28.00	900
V09	1	2213	28.00	900	T01	1	6270	28.00	900	J10	1	2945	28.00	900	J03A	1	2622	28.00	900
V08	1	3113	28.00	900	*R10	1	1748	28.00	900	J09B	1	3845	28.00	900	J03	1	2622	28.00	900
V07	1	1404	28.00	900	*R09A	1	1655	28.00	900	J09A	1	3845	28.00	900	J02	1	1317	28.00	900
V06	1	2604	28.00	900	*R09	1	1655	28.00	900	J09	1	3845	28.00	900	J01A	1	2068	28.00	900
V05	1	1268	28.00	900	*R08	1	4016	0.00	900	J08D	1	1962	28.00	900	J01	1	2217	28.00	900
V04	1	1165	28.00	900	*R07	1	784	28.00	900	J08C	1	1962	28.00	900	*HB08	1	7057	20.60	900
V03	1	775	28.00	900	*R06	1	1328	28.00	900	J08B	1	1962	28.00	900	*HB07	2	4852	20.60	900
V02	1	1295	28.00	900	*R05C	1	1015	28.00	900	J08A	1	1962	28.00	900	*HB06	1	1632	20.60	900
V01	1	2195	28.00	900	*R05B	1	1015	28.00	900	J08	1	1962	28.00	900	*HB05	1	1797	20.60	900
TG05	1	5230	28.00	900	*R05A	1	1015	28.00	900	J07A	1	3095	28.00	900	*HB04	2	5478	20.60	900
TG04	1	5760	28.00	900	*R05	1	1015	28.00	900	J07	1	3095	28.00	900	*HB03	1	2501	20.60	900
TG03	1	8880	28.00	900	*R04	1	1678	0.00	900	J06A	1	1312	28.00	900	*HB02	1	2210	20.61	900
TG02	1	8060	28.00	900	*R03A	1	1020	28.00	900	J06	1	1312	28.00	900	*HB01	1	5212	20.60	900
TG01	1	6270	28.00	900	*R03	1	1020	28.00	900	J05C	1	2212	28.00	900	ET03	1	4400	28.00	683
T11	3	8080	28.00	911	*R02	1	898	28.00	900	J05B	1	2212	28.00	900	ET02	1	2470	28.00	900
T10	1	4400	28.00	683	*R01D	1	901	28.00	900	J05A	1	2212	28.00	900	ET01	1	4170	28.00	729
T09	2	8880	28.00	900	*R01C	3	903	28.00	900	J05	1	2212	28.00	900	CT04	3	3970	28.00	911
T08	3	5760	28.00	781	*R01B	1	903	28.00	900	J04D	1	3112	28.00	900	CT03	1	8540	28.00	750
T07	1	5760	28.00	900	*R01A	1	903	28.00	900	J04C	1	3112	28.00	900	CT02A	1	8540	28.00	751
T06	1	8880	28.00	900	*R01	3	903	28.00	900	J04B	1	3112	28.00	900	CT02	1	8540	28.00	751
T05	3	8060	28.00	781	PTG01	1	3548	0.00	900	J04A	1	3112	28.00	900	CT01	1	8540	28.00	900
T04	1	8050	28.00	850	J11A	1	2045	28.00	900	J04	1	3112	28.00	900	CJ01	2	3575	28.00	900
T03	1	4990	28.00	900	J11	1	2045	28.00	900	J03C	1	2622	28.00	900					

Total quantity : 113

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

64 3 3481044 **Frames & Truss** Producer Statement . Page

Job. . 3553 Client: PETER RAY HOMES Site: LOT 35 HEMINGWAY PLACE SEAFIELD PARK

Description: WEKA + COLLIER. Phone: Phone:

MiTek 20/20 - Engineering 4.3 Gamma (Build 1228) MiTek New Zealand Ltd. Printed: 09:20:56 03 Aug 2004

The computer design input has been carried out by:

Signed D Griffin Date: 3-8-04

Name of Computer Operator: Daniel Griffin

Qualifications and Title: Detailer.

Company: **Dyers Road Frames & Truss**

Verification / Acceptance of Input Data:

I have checked the input data against the construction drawings and specifications and verify that they are correct and suitable for this job.

Signed: Date:

Name: Company:

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

Clyde Road Trusses

190 Main Road
Christchurch
New Zealand
Telephone: PH 03 359 6819
Fax: Fax 03 359 8231

PETER RAY HOMES
LOT 35 HERMITAGE PLACE
SEAFIELD PARK

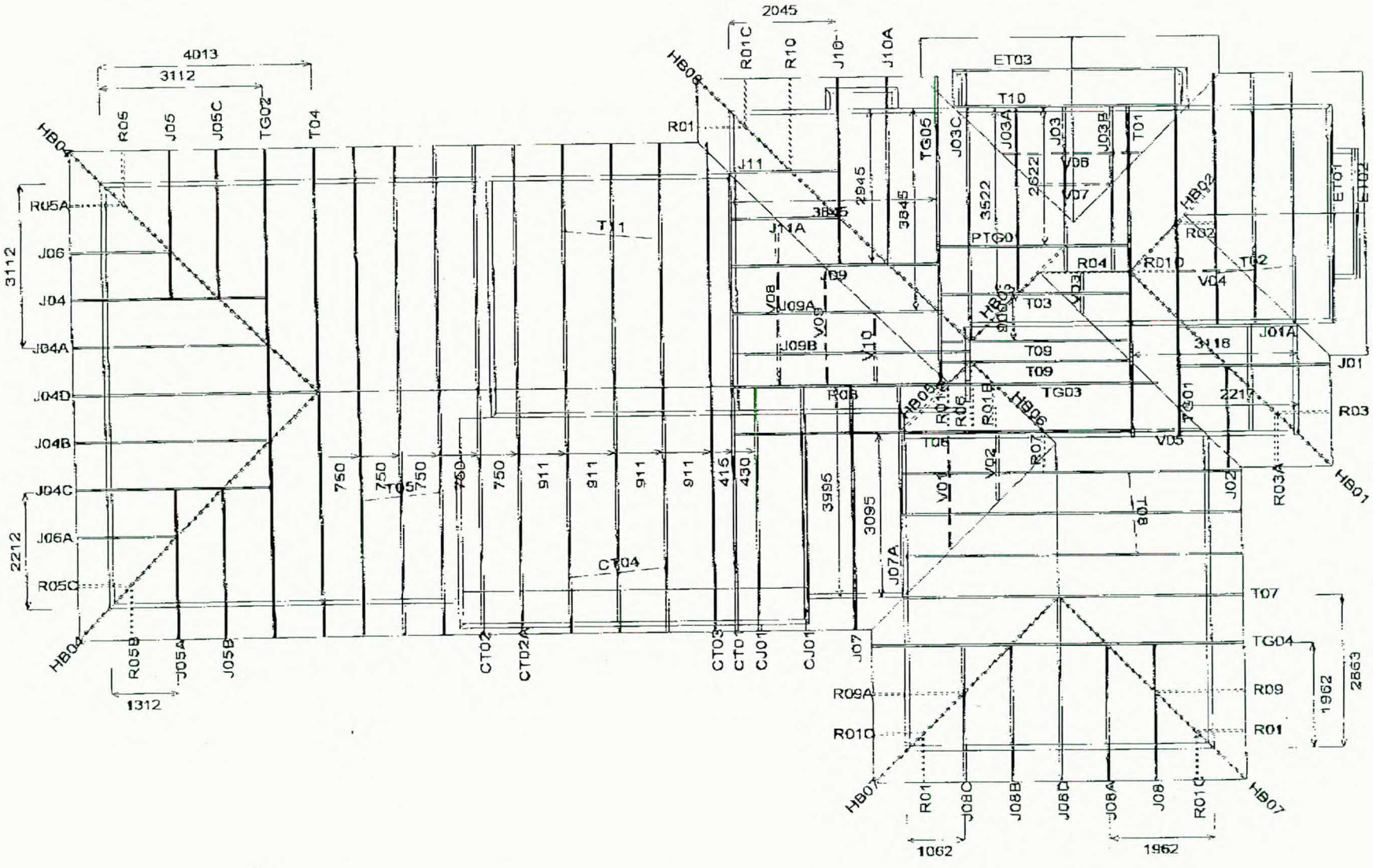
WEIR & COLLIER.

Job: 3553

Scale: 1 : 10 | Date: 25/03/2004 | Drawn By: DANIEL GRIFFIN

Job Details:

Snow Zone:	Christchurch	Snow Allowance:	1600 m
Wind Area:	High	Design Wind Speed	44.0 m/s
EC Restraints:	400 mm	BC Restraints:	400 mm
Roof Material:	Metal Tiles	Ceiling Material	Standard
Roof Live Load:	0.250 kPa	Snow Load:	0.440 kPa
Roof Pitch:	28.00 deg	Truss Centres:	900 mm



SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

Housing

CHRISTCHURCH CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL
Environmental Services Unit
ESTIMATE OF CONSTRUCTION INSPECTIONS

BC2

PROJECT NO: 19041003

DESCRIPTION OF CONSENT: _____

SITE ADDRESS: 16 Hemmingway PL

INSPECTIONS REQUIRED		No	Notes
201	Excavation/Foundation/Reinforcing	1	
202	Sub-Floor Drainage		
203	Slab on Grade/DPC	1	
221	Blockwork Construction		
204	Frame Construction Sub-Floor		
215	Building and Sill wrap	✓	
213	Flashings – Windows and Doors	✓	
211	Half High Brick Inspection	1	
225	Brick Shelf Angle		Condition 52
214	Monolithic Cladding – Pre-Coating	✓	
224	Solid Plaster		Condition 51
205	Pre-lining/including Plumbing	1	
216	Bathroom & Deck Tanking (before tiling)		
206	Plumbing		
220	Concrete Construction		
222	Steel Construction		
223	Timber Construction		
207	Fire Resistant Linings		
209	Pre-Stopping/Bracing	1	
212	Retaining Wall Drainage		
208	Drains	1	
226	Fire Safety Systems		
232	Solid Fuel Heater		
210	**M8 FINAL Inspection**	✓	
	SUB TOTALS		
RECTIFICATION INSPECTIONS			
COMPLETED BY SBI'S	TOTALS	9	10

1	58.50
2	117.00
3	175.50
4	234.00
5	292.50
6	351.00
7	409.50
8	468.00
9	526.50
10	585.00
11	643.50
12	702.00
13	760.50
14	819.00
15	877.50
16	936.00
17	994.50
18	1,053.00
19	1,111.50
20	1,170.00

NOTES FOR FIELD INSPECTION TEAM:

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

ESTIMATE OF CONSTRUCTION INSPECTIONS: Date: 22 December 2003

PROJECT NO. 10041003

DESCRIPTION OF CONSENT: DWELLING WITH GARAGE

SITE ADDRESS: 16 HEMMINGWAY PLACE

INSPECTIONS REQUIRED	No.
215 Building and Sill wrap	1
213 Flashings - Windows and Doors	**1**
214 Monolithic Cladding - Pre-Coating	1
210 M8 Final Inspection	**1**

The fees for these inspections have been included in the overall building consent fees.

Notes:

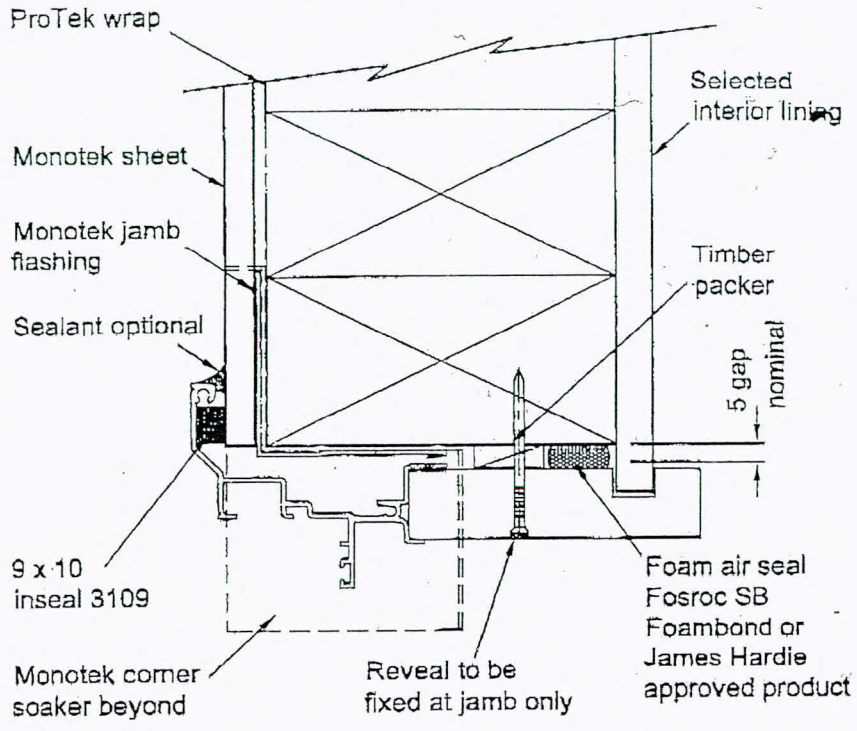
1. The above mandatory notice inspections will be carried out by the Council for which one day notice shall be given as required by Regulation 7(1)(b)(i-v).
2. Inspections which are necessary due to non-complying or incomplete work or that rise as a result of a rectification notice are additional, and will be charged at the rate of $68.00/hour and invoiced separately.
3. ***DESTRUCTIVE INVESTIGATIONS MAY BE REQUIRED IF WORK IS COVERED IN PRIOR TO THE COUNCIL'S INSPECTIONS TAKING PLACE.***

For all inspection requests pertaining to this consent, please phone 941-8904.
Inspections for the following day must be booked prior to 4pm.

Book an inspection by fax - http://www.ccc.govt.nz/building/forms/Faxtobookaninspection.pdf
Or Request Form by fax 941-8920
Book an Inspection On-Line - http://www.ccc.govt.nz/building/forms/frmInspection.asp
If you do not have internet access but would like to request a form, fax your request to 941-8920.

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

033131299



Detail 23 - Section through window jamb

Scale 1:2

d sill
sheet

CHRISTCHURCH CITY COUNCIL
FILE COPY
CONSENT
All building work shall comply with the NEW Zealand Building Code notwithstanding any inconsistencies which may occur in the drawings and specifications.

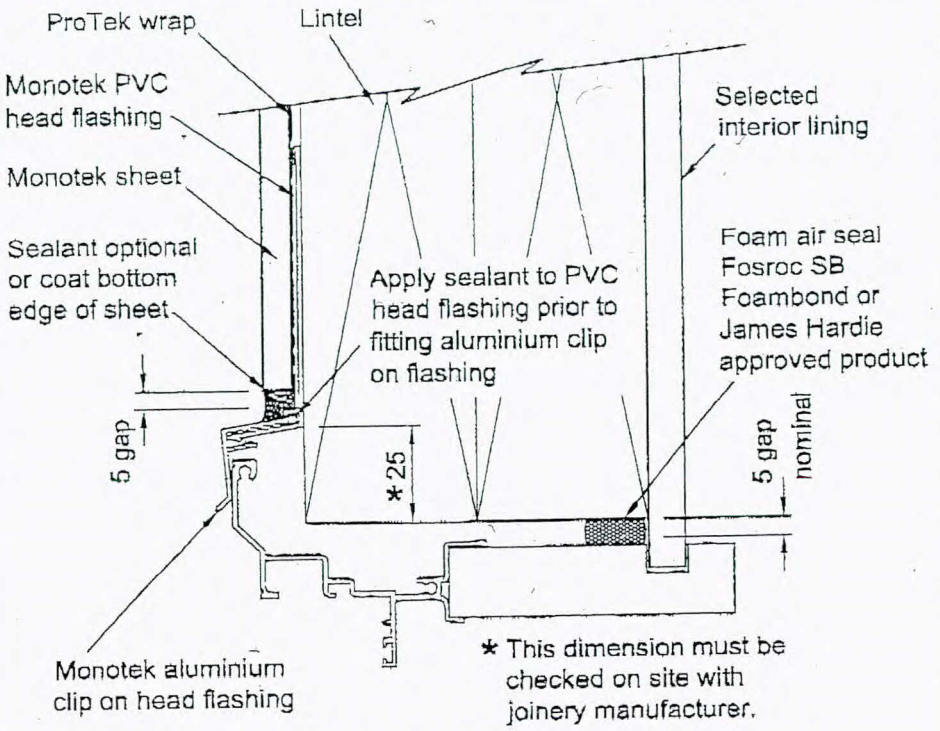
Rev	Description	Date

Scale	Original size	Date
As ntd	A3	01.06.0

INDOW FLASHINGS
ETAILS 21 - 25

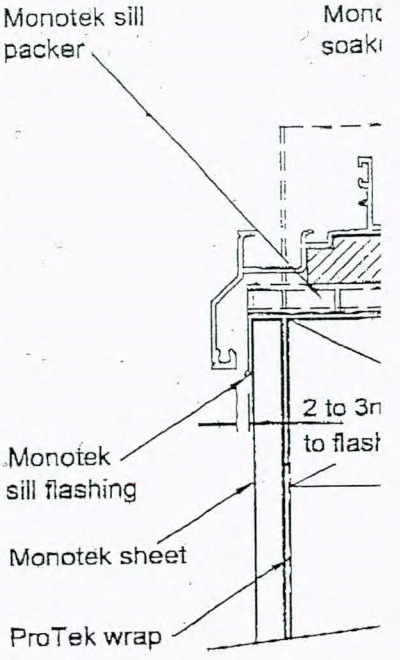
Drawing No.
JH-MONOTEK-009

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV



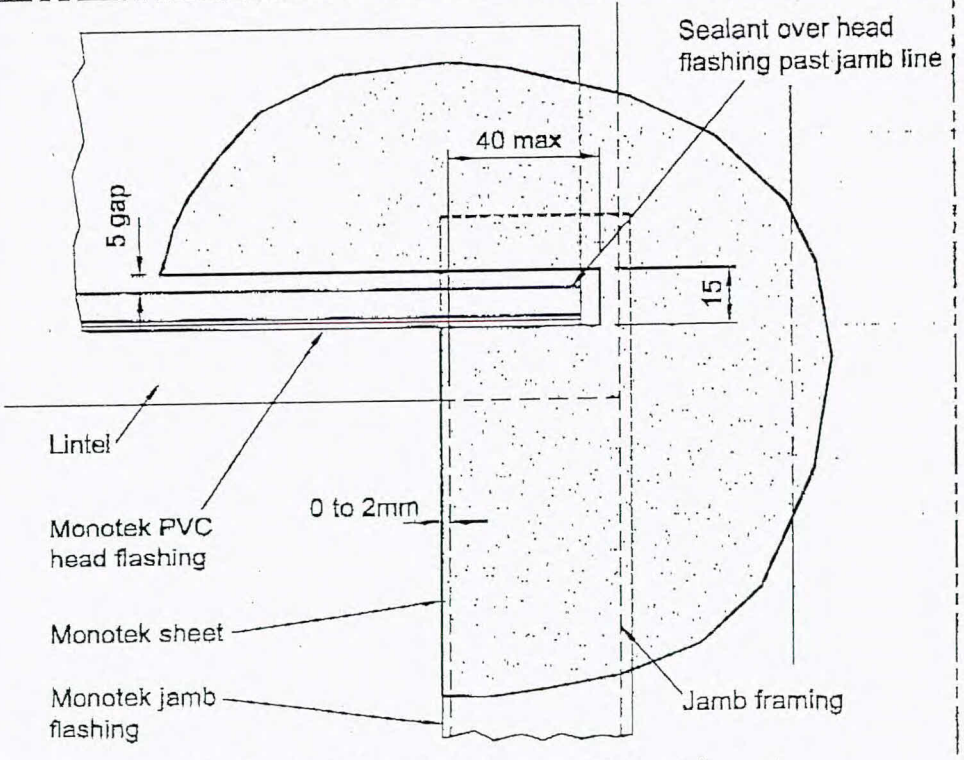
Detail 21 - Section through window head

Scale 1:2



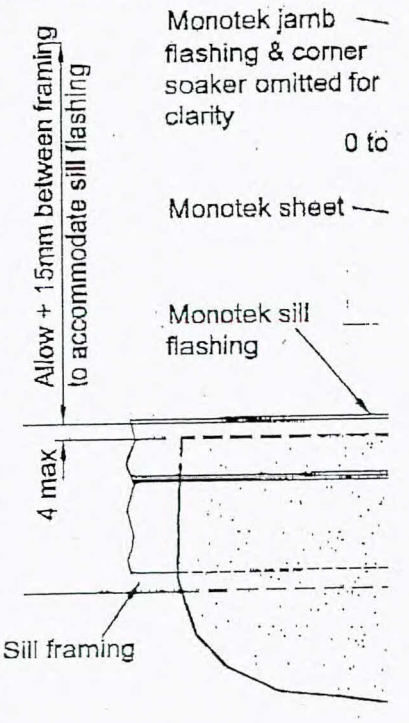
Detail 22 - Sec

Scale 1:2



Detail 24 - Sheet cutting detail at head

Scale 1:2



Detail 25 - Sh

Scale 1:2

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DIMENSIONS IN mm

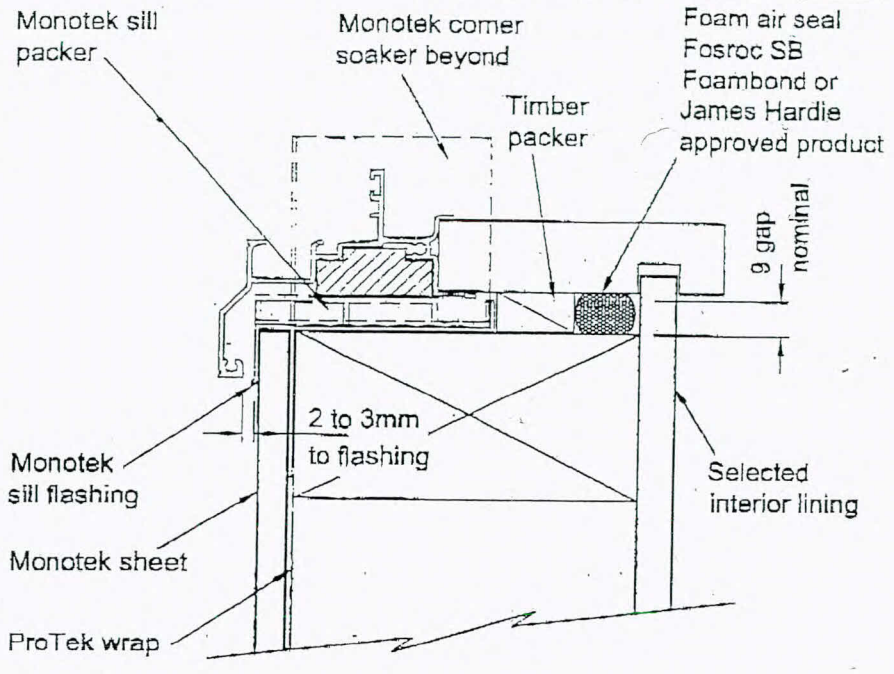
FOR STRUCTURAL LAYOUT REFER TO ARCHITECT'S DRAWINGS.

MONOTEK

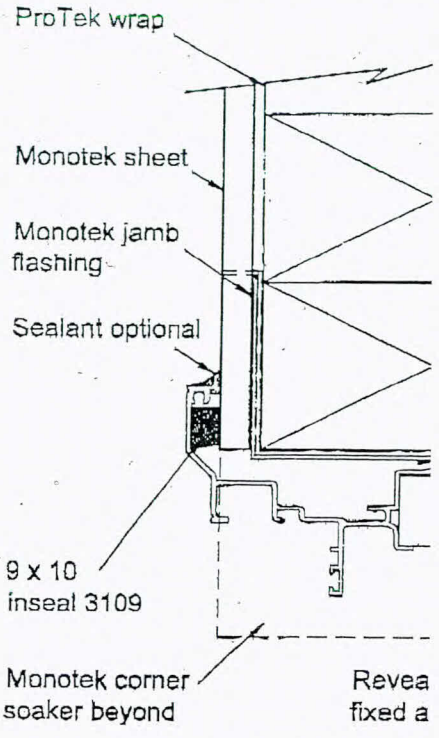
50 O'Rorke Road
Penrose, Auckland
New Zealand

©JAMES HARDIE BUILDING

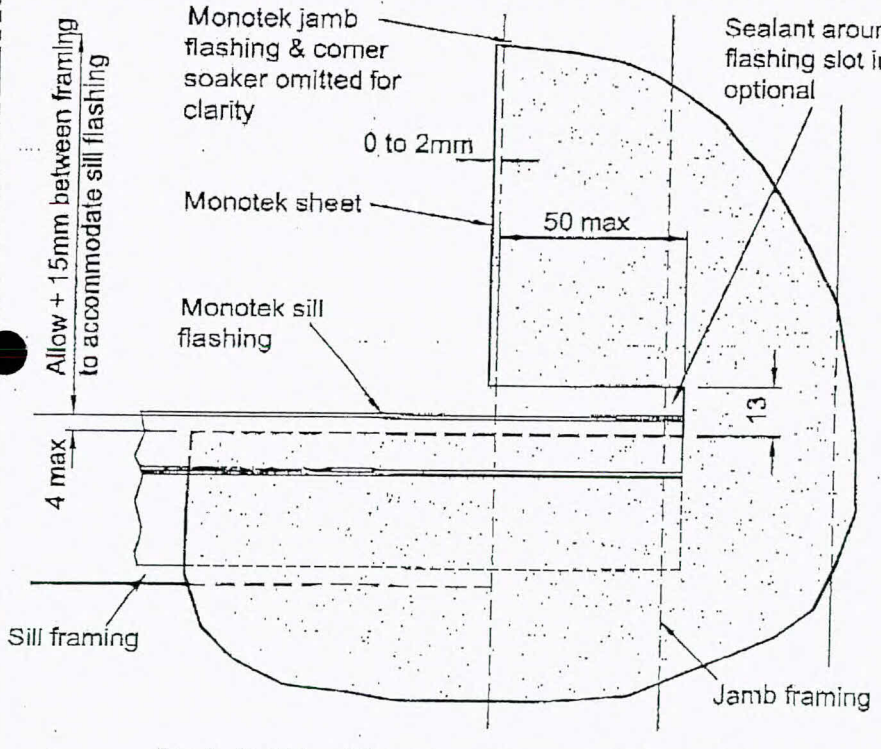
SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV



Detail 22 - Section through window sill
Scale 1:2



Detail 23 - Section t
Scale 1:2



Detail 25 - Sheet cutting detail at sill
Scale 1:2

MONOTEK

Monotek Cladding System by James Hardie

50 O'Rorke Road
Penrose, Auckland
New Zealand

Phone: 0800 808 888
Fax: 0800 808 988

WINDOW FLASHINGS DETAILS 21 - 25

© JAMES HARDIE BUILDING PRODUCTS

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SMOKE DETECTORS ARE REQUIRED TO COMPLY WITH SECTION 3 F7 NEW ZEALAND BUILDING CODE

SPECIFICATIONS

Peter Ray Homes Ltd

All work to comply with NZ Building Code 1991.

CHRISTCHURCH CITY COUNCIL FILE COPY CONSENT DOCUMENT 04 DEC 2003 All building work shall comply with the New Zealand Building Code notwithstanding any inconsistency which may occur in the plans and specifications.

SITE SCRAPE

The area of the site to be covered by the building shall be stripped of all top growth and vegetation matter.
Should soft clay, peat or filled ground be encountered on the site, an Engineer shall be consulted for additional foundation details.

CONCRETE FOUNDATION AND FLOOR

Concrete shall be 20 MPA at 28 days and comply with NZS 3109.
Reinforcing to foundation beam 2 x D16mm bars with R10 links at 600 crs and R10 starters at 600 crs 600mm into floor slab.
A 20 MPA concrete floor 100mm thick to be poured over 0.25 micron polythene on 150mm min (20-40mm) round tailings.
The slab shall be finished while still green.
A high standard of finish is expected.
NZS 3114:1987.
Floor level height 250mm min above ground level.
B2 durability.

CHRISTCHURCH CITY COUNCIL
P.I.M. APPLICATION
Rec'd 27 NOV 2003
Linwood Service Centre
PROJECT No. 10041003

WALL FRAMING

All work to comply with NZS 3604.
Framing to be 90 x 35 Laserframe, studs at 600 crs and dwangs at 800 crs.
Bracing to be as per schedule and will be steel angle brace, ply sheet bracing or Gib braceline.
Use Malthoid DPC between concrete and timber.
Lintels – size from NZS 3604 table 6.7.
All timber treated to NZ Timber Preservation Council 3650:1992.
B2 durability. B1 stability.

ROOF FRAMING

Gang nail trusses at 900 crs fixed with Z nails designed and manufactured by a licensed manufacturer.
For long run iron type roofing, purlins to be 75 x 50 at 900 crs.
Ceiling battens to be H1 treated ex 75 x 40 at 400 crs.
B2 durability. B1 stability.

IN-SPECT BUILDING CERTIFICATION CO LTD
THESE PLANS AND SPECIFICATIONS ARE APPROVED BY IN-SPECT BUILDING CERTIFICATION CO LTD AS MEETING THE REQUIREMENTS OF THE BUILDING CODE SUBJECT TO SUCH CONDITIONS AS ENDORSED HEREON.

SOFFITS

Fit 4.5mm Hardiflex sheets generally 600mm wide to 75 x 40 H1 treated ribbon plates and sprockets.
B2 durability.

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Long run
Fit 0.40 Trimline G2 long run colour steel to manufacturers specifications on self supporting roofing underlay on 75 x 50 H1 treated purlins 900 crs.
B2 durability 15 years.

FASCIA AND GUTTER

Stratco colour steel, fascia and gutter system fixed to rafters.
Fix fascia and gutter system to manufacturers specification and NZS 3617:1979.
B2 durability.

MASONRY VENEER

Run breather type building paper to NZS/BS 1521:1972, NZS 2295:1988 horizontally and well secure to outside face of framing.
Repair tears and holes before constructing veneer.
Construct brick veneer with approved face fixed ties at correct spacing in accordance with appendix F of NZS 3604 and materials and workmanship to NZS 4203, 4229.

PLUMBING AND DRAINAGE

Cold Water Reticulation
15mm PVC main through house to all fittings including two hose taps.

Hot Water Reticulation
Polybutylene pipework on all fittings via a tempering valve fitted at the cylinder. Cylinder to be 300 Litre mains pressure or as an alternative,270 low pressure and a pressure reducing valve or gas hot water as an alternative to the above if specified.
Fit 65mm PVC downpipes to stormwater risers.
All plumbibg to comply with NZ Building Code 1991.
G 12 and G 13 ASI, B2 durability.

Drainage and stormwater to site plan to comply with G13, G14, B2, E1 in accordance with AS2 NZ Building Code 1991.

ELECTRICAL WORK

All electrical work to be carried out in a tradesman like manner and comply with the relevant Codes of Practice G8, G9 NZBC. Lighting to comply with NZS 6703:1984.
Private heating to give an adequate controlled interior temperature per NZBC G5 2.1 (a) G5/AS1.

INSPECT BUILDING CERTIFICATION CO LTD
PLANS AND SPECIFICATIONS ARE APPROVED BY INSPECT BUILDING CERTIFICATION CO LTD AS MEETING THE REQUIREMENTS OF THE BUILDING CODE SUBJECT TO SUCH CONDITIONS AS ENDORSED HEREON.

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JOINERY

Kitchen units are made from white Melamine with vinyl backs.
All doors, drawer fronts and seen ends are made from woodgrain or colour Melamine.
Bench top is Formica with a delux 90 degree rolled edge with coved upstand behind sink.
Wall oven and under bench oven cabinets to manufacturers specifications.

EXTERNAL JOINERY

Aluminium windows with rimu or pine reveals, glazed with float glass, thickness as required per NZS 4223:1985 + Pt 3:1993, 4211:1985. B2 durability 15 years.

INTERNAL DOORS

Fit rimu or paint grade flush panel prehung doors in 30mm Gib groved jambs.
B2 durability 15 years.

LININGS

Wall and ceiling linings to be 9.5mm Gib board fixed to manufacturers specifications and finished to accept the finish required by the owner. B2 durability 5 years.

INSULATION

All ceilings to be insulated with R2.6 fibreglass batts.
All external walls to be insulated with R2.2 fibreglass batts. No insulation is required to the Garage. Insulation to comply with NZS 4214:1977. B2 durability.

PAINTER

All painting work to be carried out in a tradesman-like manner.
Internal surfaces shall have 3 coats of acrylic paint and/or polyurethane (owner's choice), sanding out blemishes between each coat.
All walls to be sized before wall papering.

WET AREAS

All wet areas to be lined with 9.5mm standard Gib board and painted with Dulux Low Sheen wash'n'wear paint. Floor coverings in wet areas to be vinyl or tiled to an acceptable finish required by the owner. □

IN-SPECT BUILDING CERTIFICATION CO LTD
THESE PLANS AND SPECIFICATIONS ARE APPROVED BY IN-SPECT BUILDING CERTIFICATION CO LTD AS MEETING THE REQUIREMENTS OF THE BUILDING CODE SUBJECT TO SUCH CONDITIONS AS ENDORSED HEREON.
May, 00

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

35 MACES ROAD
PHONE - 3844492
FAX - 3846588
MOBILE - 025 374641

Dear Consents Officer:

Please find enclosed: Stamped approved plans and specifications along with a Building Certificate for the Wenn / Collee application.

Listed below are things that fall outside my scope of approval (No. 11)
Please note Producer Statements have been or will be supplied for these areas.

CHRISTCHURCH CITY COUNCIL
P.I.M. APPLICATION
Rec'd 27 NOV 2003
Linwood Service Centre
PROJECT 10041003

- ☑ Truss Design.
- ☑ Producer Statement for beams falling outside the scope of NZ 3604.
- ☐ Producer Statement foundation design.
- ☐ Producer Statement retaining wall design.
- ☐ Engineering design to steelwork.
- ☐ Producer Statement block work design.
- ☐ Inspection procedure for work engineer wishes to inspect.
- ☐ Producer Statement for Plaster System.
- ☐ Effluent Design

In addition.
☑ Gas – To be Self Certified by a Registered Gas-fitter.
☑ Electrical – Self Certified by a Registered Electrician.
If any further matters require clarification please phone or fax on the above numbers.

Sincerely K J Newman.

KELVIN NEWMAN

DIRECTOR: IN-SPECT BUILDING CERTIFICATION CO LTD.

1999/5

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CHRISTCHURCH CITY COUNCIL ENVIRONMENT

CHRISTCHURCH CITY COUNCIL

APPLICATION FOR BUILDING CONSENT

FORM: BA3

PROJECT NO: 10041003

PLEASE COMPLETE ALL SECTIONS OF THIS FORM (IF APPLICABLE TO YOUR APPLICATION)

Has a Project Information Memorandum been issued for this project? ☐ No ☑ Yes ⇒ Project No.: 3258890 10040372

APPLICATION DETAILS [3258891]

- **OWNER (as defined by the Building Act 1991)**

Full Name(s): Russell Martin Wenn + Julie Collier

Street Address: PO Box 161 Lyttelton

Mailing Address: _____

Phone: _____ Fax: _____

- **APPLICANT (Must be authorised by the owner to make this application)**

Name: In-Spect

Company: _____

Mailing Address: 35 Maces Road

Street Address: Chch

Phone: 3844492 Fax: 3846588

Estimated Value of proposed work (inclusive of GST):

$ 160,000

Building Consent to be uplifted from:

☐ LINWOOD Service Centre

☐ If prepaid post to **Owner / Applicant** (delete one)

- **Water Supply**

Is a new supply required? ☑ Yes ☐ No

Residential / Commercial (DELETE ONE)

If commercial, has estimate been obtained from the Council? ☐ Yes ☐ No

Distance from LH / RH boundary (looking from street) _____ metres Nominate street if a corner site:

NEXT TO POWER SUPPLY

- **Road Opening / Footpath Opening**

Is an opening required? ☐ Yes ☑ No

Select type of service: Sewer / Stormwater

PROJECT DETAILS [868925]

- **LOCATION**

Street Address: 16 Hemmingway Place Seafield Park

Lot: 35 DP: 319911

Other: _____

- **DESCRIPTION OF WORK:** Dwelling + attached garage

- **INTENDED USE:** Domestic living

- Will the building undergo a change of use? ☐ Yes ☐ No

- Intended Life if less than 50 years: _____ years

- Being stage 1 of an intended 1 stages

- **FLOOR AREA**

Ground Floor: Existing _____ m^2 Add 221 m^2

Other Floor: Existing _____ m^2 Add _____ m^2

Accessory Building Area:

Existing _____ m^2 Add _____ m^2

- **Planning - Site Coverage**

Total area of all buildings over foundation at ground level.

Existing _____ m^2 Proposed 221 m^2

- **Vehicle Crossing** (in relation to this Building Consent)

Is a vehicle crossing required? ☑ Yes ☐ No

Select: New / Extension / Residential / Commercial

SECTION 1

FOR COUNCIL USE ONLY

Prepaid Fee: $ _____

Receipt No: _____

Receiving Officer's Name: W. Payne

Date Received:: _____

DRAINAGE INFORMATION

Block Plan ☐ Full PIM ☐ N/A ☐

Date Requested _____ / _____ / _____

CHRISTCHURCH CITY COUNCIL P.I.M. APPLICATION Rec'd 27 NOV 2003 Linwood Service Centre PROJECT No. 10041003

CATS WBS CODE 401/.138 10041003

HAZARDS: _____

Date of Issue: March 2000

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

Have you provided the following information?

Please tick the appropriate box

SECTION 2	Yes	No	N/A
• Site Plan: Fully dimensioned, scaled, showing all buildings & easements (proposed/existing)			
• Certificate of Title: Recent search copy of (less than 6 months old)			
• Plans & specification of an acceptable standard			
• Plans, elevations, cross sections of the proposal in triplicate (in duplicate if PIM issued)			
• Recession planes (including to internal boundaries) indicated			
• Site levels relating to top of roadside kerb, and finished floor level indicated			
• Hill sites: indicate contours, drive gradients and building heights			
• Site boundaries nominated			
• Shared access ways/other areas			
• Foulwater drains			
• Stormwater drains			
• Stormwater discharge for hardstanding areas detailed to an approved outfall			
• Water Service Details			
• Vehicle crossing position indicated on site plan			
• Vehicle access manoeuvre and parking area indicated			
• Street trees, poles, sumps, manholes, traffic islands affecting vehicle access			
• Site area per unit indicated			
• Site coverage: % details			
• Living and service courts indicated			
• Landscaped area indicated and planting plan produced			
• Demolition Details			
• Swimming pool: design, fence and discharge			
• Backflow prevention			
• Waterway setbacks indicated			
• Notable and protected site trees indicated			
• Heritage site or building affected?			
• Resource Consent Application			
• Development Application			
• Subdivision details			

SECTION 3	Yes	No	N/A
• Structural drawings			
• Foundation design and report on ground conditions			
• Blockwork: design including foundations			
• Retaining walls: design heights, position, sub soil drainage and safety barriers			
• Fire partitions: dividing walls, common walls			
• Window positions & opening windows indicated			
• Safety glass provisions specified			
• Thermal insulation and R value indicated			
• Sound insulation indicated			
• Stairs/steps/landings/balconies: dimensions, handrail and barrier details			
• Solid fuel heater: make, model and location			
• Accurate layout & details of plumbing systems			
• Alternative Solutions details			
• Access and facilities for people with disabilities			
• Access Route Details			
• Dangerous goods: storage and sign details			
• Gas bottle: storage location and capacity if over 10kg			
• Soakpit, septic tank and pumping station design details.			
• Earthworks: Identify proposed cut or fill where more than 10 m^3 of soil is being moved			
• Specifications in duplicate			
• Pegging certificate for two or more units on site			
• Bracing calculations and layout			
• Roof truss design statement and layout			
• Producer statement: Specific design details for work outside the scope of **NZS 3604** & **NZS 4229**			
• BA20 form (Producer Statement information)			
• Fire Safety Summary or Fire Design Statement			
• Compliance Schedule details			

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CHRISTCHURCH CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL

BUILDING CERTIFICATE

PROJECT NO: 10041003

Address of Project: 16 Hemmingway Place

PIM 10040372

Enclosed is a copy of the PIM: YES ☑ NO ☐

And PIM Plans: YES ☑ NO ☐

The Building Plans Show

☑ No Changes to PIM Plans

☐ Changes as listed below:

.....

.....

.....

.....

Resource Consent application

☑ Is not required

☐ Is to be made or

☐ Has been made for:

.....

.....

.....

.....

A section 35(1A) certificate is required: ☐ Yes No ☑

For:

.....

.....

.....

.....

CHRISTCHURCH CITY COUNCIL
P.I.M. APPLICATION
Rec'd 27 NOV 2003
Linwood Service Centre
PROJECT NO 10041003

CATS WBS CODE
401/.138/ 10041003

KELVIN NEWMAN

BUILDING CERTIFIER

Signed: K J Newman Date: 25/11/03

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64 3 3846588

Peter Ray Homes

the key to better living

19 December 2003

Christchurch City Council
C/- Mr Kelvin Newman
In-Spect Building Certification Co. Ltd
CHRISTCHURCH

Fax 3846 588

Dear ~~Kelvin~~ Ken Thompson

Re: R Wenn and J Collier
Site Address: 16 Hemingway Place
Legal Description: Lot No. 35 DP 319911

We wish to confirm that the ground level of the above Building Project will be higher than RL 10.85m in terms of the Christchurch City Council datum.

Should you have any further queries, please do not hesitate to contact me.

Yours sincerely

Ian Creamer
General Manager
Peter Ray Homes Ltd

213 Blenheim Road, P.O. Box 8184, Riccarton, Chch. Ph (03) 348 1994, Fax (03) 348 1044, www.peterrayhomes.co.nz

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CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL
ENVIRONMENTAL SERVICES UNIT

FACSIMILE MESSAGE

TO: Kelvin
FAX NO:
ORGANISATION:
LOCATION:

SENDER: Ken
DATE: 4-12-05
DESIGNATION:
NO. OF PAGES (including this page): 1

16 Hammingway – 10041003

Please provide levels to show compliance with PIM

thanks

Ken

PLEASE ADVISE BY FAX IF ALL PAGES NOT RECEIVED

Fax No 03-941-8920 or International Fax No +-64-3-941-8920 (Building Consents, Field Inspections, Building Support)

Civic Offices • 163-173 Tuam Street • PO Box 237 • Christchurch • New Zealand • Telephone (03) 941 8999

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SECTION 4

The information offered in this section is to assist the Council in the review process, including the assessment of the number of inspections. Statements offered by the applicant will be used as a guide rather than a commitment.

- Is the project to be erected in stages? ☐ Yes ☐ No

  If yes briefly describe your proposed programme: _____

  _____

  _____

- Estimated start date:_____ (please note building work must be started within 6 months of Consent issue date)
- Estimated finish date: _____
- Is a registered engineer involved?

  For design ☐ Yes ☐ No

  For Inspection ☐ Yes ☐ No

- Is a Producer Statement to be offered?

  Producer Statement: Design ☐ Yes ☐ No

  Producer Statement: Inspection ☐ Yes ☐ No

- Is a registered master builder involved in the project? ☐ Yes ☐ No

_____ Name (optional)

_____

SECTION 5

COMPLETE THIS SECTION FOR ALL NEW BUILDINGS AND ALTERATIONS, EXCEPT SINGLE RESIDENTIAL DWELLINGS

Please tick the relevant boxes to show which systems are included or to be included in the building project	EXTG	NEW
(a) Automatic sprinkler systems or other systems of automatic fire protection	☐	☐
(b) Automatic doors which form part of any fire wall and which are designed to close shut and remain shut on an alarm of fire	☐	☐
(c) Emergency warning systems for fire or other dangers	☐	☐
(d) Emergency lighting systems	☐	☐
(e) Escape route pressurisation systems	☐	☐
(f) Riser mains for fire service use	☐	☐
(g) Any automatic backflow preventer connected to a potable water supply	☐	☐
(h) Lifts, escalators, or travelators or other similar systems	☐	☐
(i) Mechanical ventilation or air conditioning system serving all or a major part of the building	☐	☐
(j) Any other mechanical, electrical, hydraulic, or electronic system whose proper operation is necessary for compliance with the building code	☐	☐
(k) Building maintenance units for providing access to the exterior and interior walls of buildings	☐	☐
(l) Such signs as are required by the building code in respect of the above mentioned systems	☐	☐
NONE OF THE ABOVE		☐

SECTION 5A

COMPLETE THIS SECTION ONLY IF THE BUILDING CONTAINS OR WILL CONTAIN ANY OF THE SYSTEMS IN SECTION 5

	EXTG	NEW
(m)Means of escape from fire	☐	☐
(n) Safety barriers	☐	☐
(o) Means of access and facilities for use by persons with disabilities which meet the requirements of section 47a of the Building Act 1991	☐	☐
(p) Handheld hoses for fire fighting	☐	☐
(q) Such signs as are required by the building code or section 47a of the Building Act 1991	☐	☐

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SECTION 6

☐ **Builder's Name:** Peter Ray Homes Phone: 348 1994
Address: PO Box 8184 CHCH Fax:

☐ **Building Certifier's Name:** Kelvin Newman II Phone: 3846492
Address: 35 Maces Road CHCH Fax:

☐ **Plumber's Name:** Ross Cordy 04916 Phone: 025 324 858
Address: 148 Sparks Road Fax:

☐ **Drainlayer's Name:** Kees Zandbergen 16400 Phone: 025 325286
Address: 55 Hackthorne Rd Fax:

☐ **Engineer's Name:** Phone:
Address: Fax:

☐ **Designer's Name:** Peter Ray Homes Phone:
Address: Fax:

Have you fully completed:	YES / NO / NA		YES / NO / NA		YES / NO / NA	
	Section 1		Section 4		Section 6	
	Section 2		Section 5		Section 7	
	Section 3		Section 5A			

SECTION 7

- **IF THIS PROJECT CONSTITUTES A DEVELOPMENT PURSUANT TO SECTION 409 OF THE RESOURCE MANAGEMENT ACT 1991, THEN THIS APPLICATION IS ALSO DEEMED TO BE A NOTIFICATION BY THE OWNER OF A RESOURCE CONSENT APPLICATION FOR A DEVELOPMENT.**
- **Please note this application may not be processed further until any outstanding items have been submitted. Completion of this check sheet is not approval to start work.**
- **No work is to commence until the Building Consent is uplifted.**
- **Building Consent Fees**
  The charges incurred by the Council in processing this application are payable whether or not the project proceeds. Note: Fees for some minor works (eg drainage only works, detached accessory buildings with a value of less than $5,000) are required to be paid at the time of application.
- **I DECLARE I HAVE BEEN AUTHORISED BY THE OWNER TO MAKE THIS APPLICATION**

Print Name: Linda Reenan **Date:**

Signature:
SIGNED BY *or* FOR AND ON BEHALF OF THE OWNER

Project Information Memorandums (PIMs) and Building Consents can be lodged and uplifted at the following centres, where there are Building Information Officers available to assist you.

Civic Offices	Linwood Service Centre	Sockburn Service Centre
163-173 Tuam Street PO Box 237 Telephone 371 1995 Fax 371 1792	180 Smith Street PO Box 24 214 Telephone 389 1477 Fax 372 2639	149 Main South Road PO Box 11 011 Telephone 348 5119 Fax 372 2539

Project Information Memorandums (PIMs) and Building Consents can also be lodged and uplifted at these Service Centres.

Beckenham Service Centre	Fendalton Service Centre	Papanui Service Centre	Shirley Service Centre
66 Colombo Street PO Box 12-033 Telephone 332 3099 Fax 332-3443	Cnr Jeffreys & Clyde Roads PO 29183 Telephone 351 7109 Fax 372 2748	Cnr Langdons Rd & Restell St PO Box 5142 Telephone 352 8117 Fax 352 1308	36 Marshland Road PO Box 27 043 Telephone 385 3079 Fax 385 4224

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

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35.700m 173d 40' 00"

11,750

8,220

finished floor level of dwelling
to be the higher of:
a) a minimum level of RL 11.225m
in terms of the CCC datum
b) 150mm above the crown of the road

stormwater to soak chamber
to council specifications

11.050m 97d 25' 00"

access points required to all drains as per G13 AS2

DP

hose tap

DP

GT

DP

8,500

WEST

Sunset 1pm 21 Dec

4pm 21 June

21 June 8am

SOUTH

21 Dec 5am

Sunrise

EAST

WC

GT

DP

WC

GT

t°

wm

d

GT

meter box

hose tap

DP

4,690

1,800

11.050m 103d 26' 00"

HEMINGWAY PLACE

= 1000 Sq.m

PROPOSED DWELLING AREA
= 221.020 Sq.m
= 2378 Sq.ft

ADDITIONAL CONCRETE AREA
= 1.522 Sq.m
= 16 Sq.ft

SITE COVERAGE
= 22.102%

connect to existing sewer lateral
position to be confirmed on site

4,900

38.150m 196d 25' 00"

12,270

CHRISTCHURCH CITY COUNCIL
FILE COPY
CONSENT DOCUMENT
2003

IN-SPECT BUILDING CERTIFICATION CO LTD
THESE PLANS AND SPECIFICATIONS ARE APPROVED BY IN-SPECT BUILDING CERTIFICATION CO LTD AS MEETING THE REQUIREMENTS OF THE BUILDING CODE SUBJECT TO SUCH CONDITIONS AS ENDORSED HEREON.

Peter Ray Homes
213 Blenheim Road, Christchurch. P O 8184 Riccarton, Christchurch
Telephone – 03 348 1994 Fax – 03 343 2026

NOTE

1. All work shall comply with NZS 3604:1999
2. All windows and doors to comply with NZS 4211:1985
3. Glazing to comply with NZS 4223:1985 & Pt 3 1993
4. Contractor must verify all dimensions on site prior to commencing any work
5. The copyright of this drawing is vested with Peter Ray Homes Ltd and cannot legally be used, copied or in any form reproduced without written authority

Rev No.	Date	Amendment
A	03.11.03	remove gas fire, move gas bottles, change bay window

Drawn: A. Fahey
Date: 28.10.03
Scale: 1:100

Job Name & Location
Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title
SITE PLAN

Sheet No.
4 of 4

Revision

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

BUILDING CERTIFICATE NO: 03/799

Section 56, Building Act 1991

Issued by: Kelvin Newman
currently approved and registered as a Building Certifier-Rego No: 11.

To: Christchurch City Council

Project Information Memorandum No: 100403721
Building Consent No: .....

PROJECT		PROJECT LOCATION
New or Relocated Building	✓	Street Address:
Alteration or Addition	☐	16 Hemmingway Place
Log Fire	☐	
Intended use (*s*) [*In detail*]:		Legal Description:
Domestic Living	✓	Lot No: 35 Dp: 319911
Out Building	☐	
Intended life:		
Indefinite but not less than 50 years.	✓	
Demolition or Removal	☐	
Being stage one of an intended one stages.		

CHRISTCHURCH CITY COUNCIL
P.I.M. APPLICATION
Rec'd 27 NOV 2003
Linwood Service Centre
PROJECT NO 10041003

This is to certify that:

The Building Certifier has been engaged to inspect specified building work in relation to listed provisions of the Building Code as detailed in the one page headed "Scope of Building Certifier's Engagement Building Certificate No: 03/799" attached to this notice.

The Building Certifier is satisfied on reasonable grounds that:

✓ The proposed building work would comply with the listed provisions of the Building Code if properly completed in accordance with the listed plans and specifications.

☐ The building work complied with the listed provisions of the Building Code on the date of certification.

Signed by or on behalf of the Building Certifier:

Name: Kelvin Newman ..... K J Newman .....
Position: Building Certifier Date: 25/11/03.

2001/2

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

SCOPE OF BUILDING CERTIFIERS ENGAGEMENT
BUILDING CERTIFICATE NO: 03/799

Checking of Plans & Specifications for compliance with provisions of the Building Code listed in Building Certifiers Scope of approval.

Inspection procedures required during construction.

Issue of Code Compliance Certificate when work meets the requirements of the Building Certificate & Building Code.

Items not covered by the Building Certificate are listed on the separate page attached to the Building Consent application.

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

No. 11

Register of Building Certifiers

established under section 53
of the Building Act 1991

Building Industry Authority

Name: NEWMAN, Kelvin John

Registration No: 11

Date of approval: 6/10/1997
Date of renewal: 16/9/2003

Date of expiry of approval: 16/9/2004
Date of amendment: 16/9/2003

Address:
In-Spect Building Certification Company Ltd
35 Maces Road, Christchurch
Phone 03 384 4492
Fax 03 384 6588

Approved by the Building Industry Authority under Part VII of the Building Act 1991 in respect of the provisions of the building code listed below subject to the limitations listed below:

General limitations
Detached dwellings in accordance with clause A1 2.0.2 of the building code and multi-unit dwellings in accordance with clause A1 2.0.3 of the building code that: 1. Are stand-alone structures intended as a home or residence of not more than two households, and 2. If a duplex, are restricted to two adjoining dwelling units under a single roof, and 3. Do not include any unit that is a unit under the Unit Titles Act 1972, or any unit that is a hostel, boarding house or other specialised accommodation, and 4. where each household unit has more than one other household unit vertically above it, and in which each household unit has an escape route that is not shared with any other household unit. Outbuildings and ancillary buildings in accordance with clauses A1 7.0.1 and A1 8.0.1 respectively of the building code and associated with such dwellings.

Provisions of the building code in respect of which the approval applies and any limitations in respect of each such provision	
Provision	***Limitations***
B1 "Structure"	In respect of proposed building work for building consent purposes: Compliance with B1/AS1, B1/AS2, B1/AS3, and B1/AS4 only. In respect of completed building work for code compliance certificate purposes: Compliance with B1/AS1, B1/AS2, B1/AS3, B1/AS4, including proprietary fixings and the use of proprietary materials for bracing elements, and with B1/VM1 and B1/VM4.

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Provision	***Limitations***
B2 "Durability"	Compliance with B2/AS1 only in relation to the other provisions of the building code listed herein.
C1 "Outbreak of fire"	Compliance with C/AS1 Part 9 for solid fuel appliances and chimneys only.
C2 "Means of escape", C3 "Spread of fire" and C4 "Structural stability during fire"	Compliance with C/AS1 only, but excluding any building of which all or any part is of fire hazard category 4, or for situations requiring the judgement of a qualified fire or structural engineer.
D1 "Access routes"	Compliance with D1/AS1 only.
E1 "Surface water"	Compliance with E1/AS1 only.
E2 "External moisture"	Compliance with E2/AS1 only.
E3 "Internal moisture"	Compliance with E3/AS1 only.
F2 "Hazardous building materials"	Compliance with F2/AS1 only in relation to the other provisions of the building code listed herein.
F4 "Safety from falling"	Compliance with F4/AS1 only.
F5 "Construction and demolition hazards"	Compliance with F5/AS1 only.
F7 "Warning Systems"	Compliance with F7/AS1 but only in respect of Section 3 Domestic Smoke Alarms, and the relevant parts of C/AS1.
F8 "Signs"	Compliance with F8/AS1 only in relation to the other provisions of the building code listed herein.
G1 "Personal hygiene"	Compliance with G1/AS1 only.
G2 "Laundering"	Compliance with G2/AS1 only.
G3 "Food preparation and prevention of contamination"	Compliance with G3/AS1 only.
G4 "Ventilation"	Compliance with G4/AS1 only, but excluding mechanical systems.
G5 "Interior environment"	Compliance with G5/AS1 only.
G6 "Airborne and impact sound"	Compliance with G6/AS1 only.
G7 "Natural light"	Compliance with G7/AS1 only.
G12 "Water supplies"	Compliance with G12/AS1 only.
G13 "Foul water"	Compliance with G13/AS1 excluding Section 8 and G13/AS2 excluding Section 7.
G14 "Industrial Liquid Waste"	In respect of completed building work for the on-site disposal of foul water for code compliance certificate purposes only.
G15 "Solid waste"	Compliance with G15/AS1 only.
H1 "Energy efficiency"	Compliance with H1/AS1 only.
Each of the provisions listed above	Compliance with a current certificate of accreditation.

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IN-SPECT BUILDING CERTIFICATION CO LTD.

35 Maces Road Ch-Ch 6.
Phone - 3844492.
Fax - 3846588.
Bob - 0274 898605

CHRISTCHURCH CITY COUNCIL
P.I.M. APPLICATION
Rec'd 27 NOV 2003
Linwood Service Centre
PROJECT No. 10041003

INSPECTIONS REQUIRED

Wenn / Collier

COUNCIL CONSENT NO:.....

PROJECT LOCATION: 16 Hemmingway Place

- ☑ Pre-pour foundation.
- ☑ Pre-pour slab.
- ☑ Pre-line plumbing.
- ☑ Post lining prior to stopping.
- ☑ Half high veneer.
- ☐ Fixings/Substraight for plaster system.
- ☑ Drainage prior to back fill.
- ☐ Reinforcing to block work prior to pouring concrete.
- ☑ Final inspection for Code Compliance Certificate issue.
- ☐ Solid Fuel Heater prior to lighting.

Inspection booking can be made during working hours 7.30am-5.30pm on the above numbers.
If absolutely necessary after hours bookings can be made on 3844492.
24 Hours notice of inspection would be required.
Inspection bookings with less notice can only be done if there is an available time.
When booking inspections please quote the above consent number and project location, contact phone number and if the inspection is required AM or PM.

Yours sincerely.
Kelvin Newman.
Director: In-Spect Building Certification Co Ltd.

K J Newman

1999/1

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Job Details

box 1

Name RUSSELL WENN + JULIE COLLIER

Street and Number HEMINGWAY PLACE.

Lot and DP Number LOT 35

City/Town/District SEAFIELD PARK.

Location of Storey: single/~~upper of two/lower of two~~ ~~Floor load: 2kPa/3kPa~~

Building height to apex	5.300 m	Roof weight	light/~~heavy~~
		Cladding weights:	
Roof height above eaves	2.700 m	~~Subfloor~~	~~light/medium/heavy~~
		Lower storey	~~light/medium~~/heavy
Stud height	2.400 m	~~Upper storey~~	~~light/medium/heavy~~
Average roof pitch	28°	Room in roof space	~~yes~~/no
Building length	24.550 m	Gross building	
Building width	13.890 m	Plan Area,	GPA = 221. Sq.m

***Note:** When the average roof pitch is over 25 degrees, use the eaves length and width to determine BL and BW*
***Note:** For heavy roofs use the roof plan at eaves level to determine GPA*

Wind Zone

box 2

Region:		Terrain:		Exposure:		Topography:	
R1	0	Inland	0	Sheltered	0	Gentle	0
R2	1	Coastal	1	Exposed	1 1	Moderate	1
						Extreme	3

Total points

Wind Zone: Low (0) Very high (3)

1 Medium (1) Specific Design (4)

High (2)

Earthquake Zone

box 3

From figure EQ1 select Earthquake Zone: A (B) C

BUs required Wind

box 4

From Table W1A/W1B

W along = 54 BUs/m

W across = 54 BUs/m

Total wind load,

W ALONG:
W along x BW = 750. BUs
W ACROSS:
W across x BL = 1326. BUs

BUs required Earthquake

box 5

From Table EQ1/EQ2/EQ3/EQ4/EQ5/EQ6

E = 4.2 BUs/Sq.m

Note: For a room in the roof space use E + 3

Total earthquake load,

EQ ALONG and EQ ACROSS

E x GPA BUs = 928. BUs

Along

Wall or Bracing Line		Bracing Elements Provided			Wind		Earthquake	
1	2	3	4	5	6W	7W	6E	7E
Line Label	Minimum BUs Required	Bracing Element No.	Bracing Type	Length Element (m) L	Rating BU/m W	BUs Achieved (BU/m x L) W	Rating BU/m E	BUs Achieved (BU/m x L) E
A	236	1	HBK4	0.9	110	99	85	76
		2	HBK4	1.2	110	132	85	102
		3	HBK4	0.9	110	99	85	76
		4	HBK4	0.9	110	99	85	76
B	100	1	Gib2a	2.4	75	180	60	144
		2	Gib2a	1.8	75	135	60	108
C	151	1	HBK4	0.9	110	99	85	76
		2	HBK4	1.2	110	132	85	102
D	61	1	Gib1a	1.8	55	99	50	90
		2	Gib1a	1.8	55	99	50	90
Totals Achieved					**W**	1164.	**E**	940
From Sheet A	**Totals Required**				**W**	750	**E**	928
Wreq/Ereq =			*					

*** If Wreq/Ereq is 1 or less complete E column only**
If Wreq/Ereq is 1.5 or more complete W column only
Otherwise complete both E And W

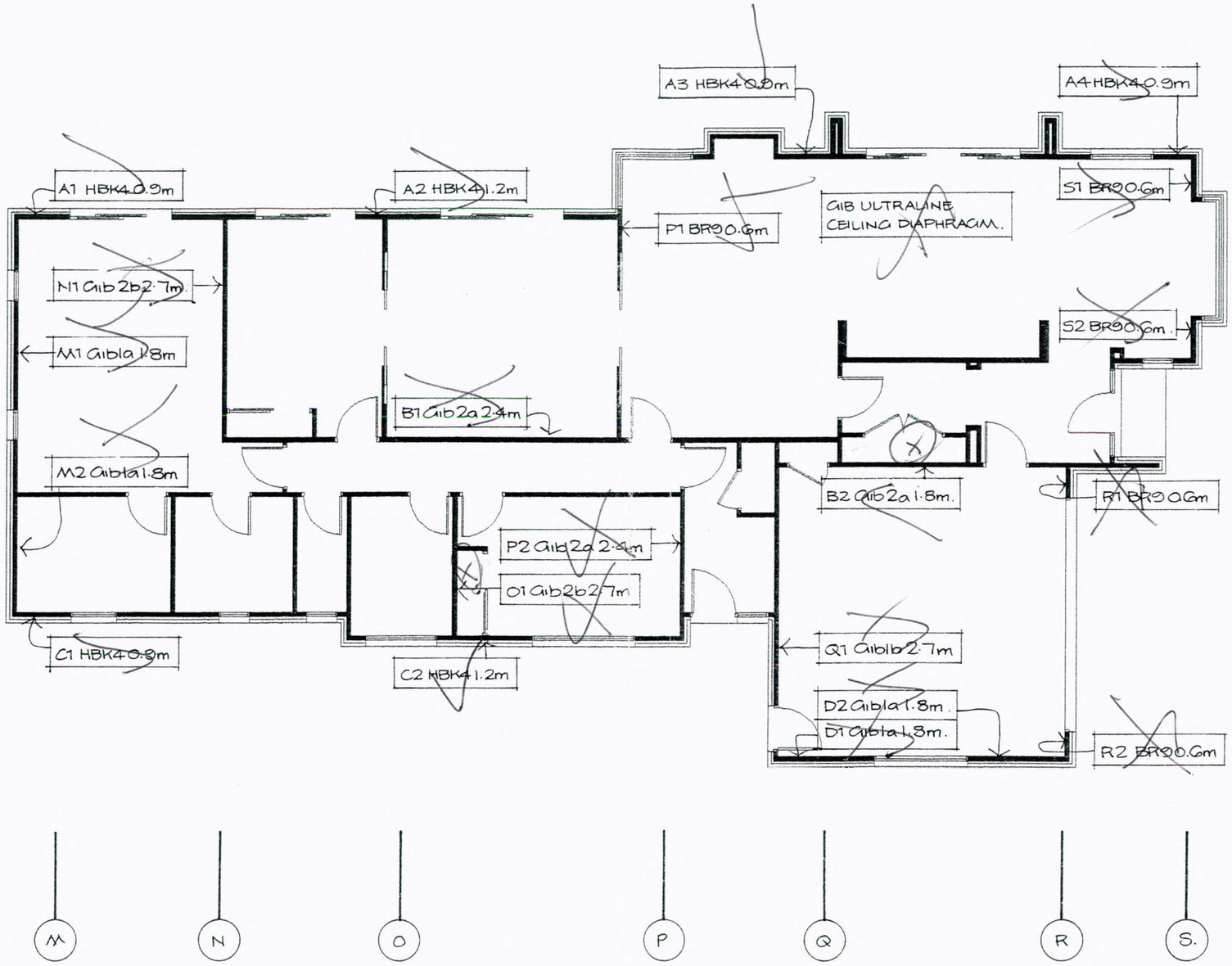
Across

Wall or Bracing Line		Bracing Elements Provided			Wind		Earthquake	
1	2	3	4	5	6W	7W	6E	7E
Line Label	Minimum BUs Required	Bracing Element No.	Bracing Type	Length Element (m) L	Rating BU/m W	BUs Achieved (BU/m x L) W	Rating BU/m E	BUs Achieved (BU/m x L) E
M	83	1	Gib1a	1.8	55	99	50	90
		2	Gib1a	1.8	55	99	50	90
N	70	1	Gib2b	2.7	80	216	70	189
O	75	1	Gib2b	2.7	80	216	70	189
P	100	1	BR9	0.6	110	66	95	57
		2	Gib2a	2.4	75	180	60	144
Q	100	1	Gib1b	2.7	75	202	50	135
R	129	1	BR9	0.6	110	66	95	57
		2	BR9	0.6	110	66	95	57
S	100	1	BR9	0.6	110	66	95	57
		2	BR9	0.6	110	66	95	57
Totals Achieved					**W**	1342	**E**	1122
From Sheet A	**Totals Required**				**W**	1326	**E**	928.
Wreq/Ereq =			*					

CHRISTCHURCH CITY COUNCIL
P.I.M. APPLICATION
Rec'd 27 NOV 2003
Linwood Service Centre
PROJECT No 10041003

IN-SPECT BUILDING CERTIFICATION CO LTD
THESE PLANS AND SPECIFICATIONS ARE APPROVED BY IN-SPECT BUILDING CERTIFICATION CO LTD AS MEETING THE REQUIREMENTS OF THE BUILDING CODE SUBJECT TO SUCH CONDITIONS AS ENDORSED HEREON.

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Peter Ray Homes
213 Blenheim Road, Christchurch. P O 8184 Riccarton, Christchurch
Telephone – 03 348 1994 Fax – 03 343 2026

NOTE

1. All work shall comply with NZS 3604:1999
2. All windows and doors to comply with NZS 4211:1985
3. Glazing to comply with NZS 4223.1985 & Pt 3 1993
4. Contractor must verify all dimensions on site prior to commencing any work
5. The copyright of this drawing is vested with Peter Ray Homes Ltd and cannot legally be used, copied or in any form reproduced without written authority

Rev No.	Date	Amendment
A	03.11.03	remove gas fire, move gas bottles, change bay window

Drawn: A Fahey
Date: 03.11.03
Scale: 1:100

Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title: BRACING PLAN

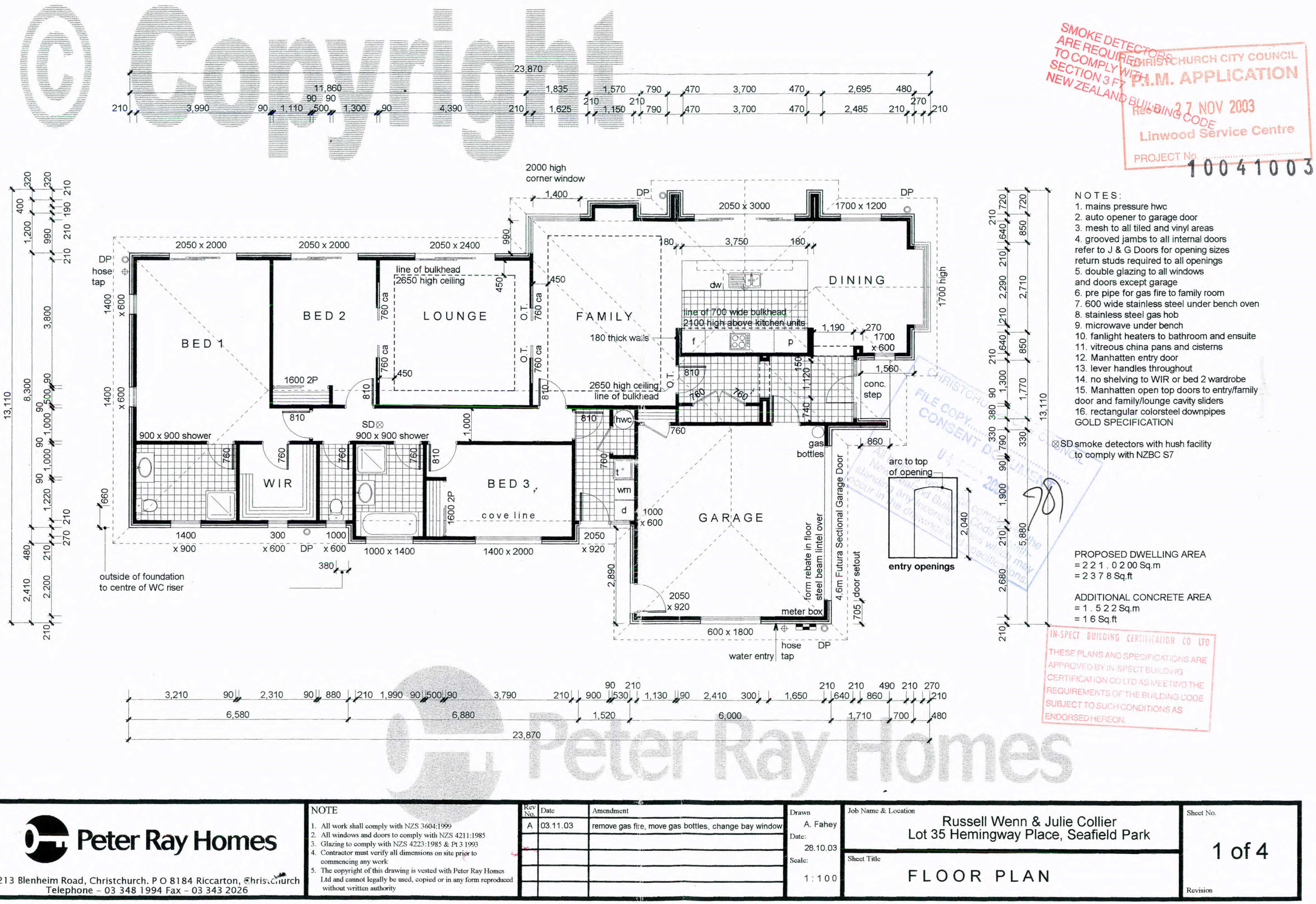
Sheet No. 1 of 1

Revision

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

SMOKE DETECTORS ARE REQUIRED TO COMPLY WITH SECTION 3 F7 NEW ZEALAND BUILDING CODE

CHRISTCHURCH CITY COUNCIL
P.H.M. APPLICATION
Received
27 NOV 2003
Linwood Service Centre
PROJECT No
10041003



NOTES:
1. mains pressure hwc
2. auto opener to garage door
3. mesh to all tiled and vinyl areas
4. grooved jambs to all internal doors refer to J & G Doors for opening sizes return studs required to all openings
5. double glazing to all windows and doors except garage
6. pre pipe for gas fire to family room
7. 600 wide stainless steel under bench oven
8. stainless steel gas hob
9. microwave under bench
10. fanlight heaters to bathroom and ensuite
11. vitreous china pans and cisterns
12. Manhatten entry door
13. lever handles throughout
14. no shelving to WIR or bed 2 wardrobe
15. Manhatten open top doors to entry/family door and family/lounge cavity sliders
16. rectangular colorsteel downpipes

GOLD SPECIFICATION

⊗SD smoke detectors with hush facility to comply with NZBC S7

PROPOSED DWELLING AREA
= 2 2 1 . 0 2 0 0 Sq.m
= 2 3 7 8 Sq.ft

ADDITIONAL CONCRETE AREA
= 1 . 5 2 2 Sq.m
= 1 6 Sq.ft

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A	03.11.03	remove gas fire, move gas bottles, change bay window

Drawn: A. Fahey
Date: 26.10.03
Scale: 1 : 100

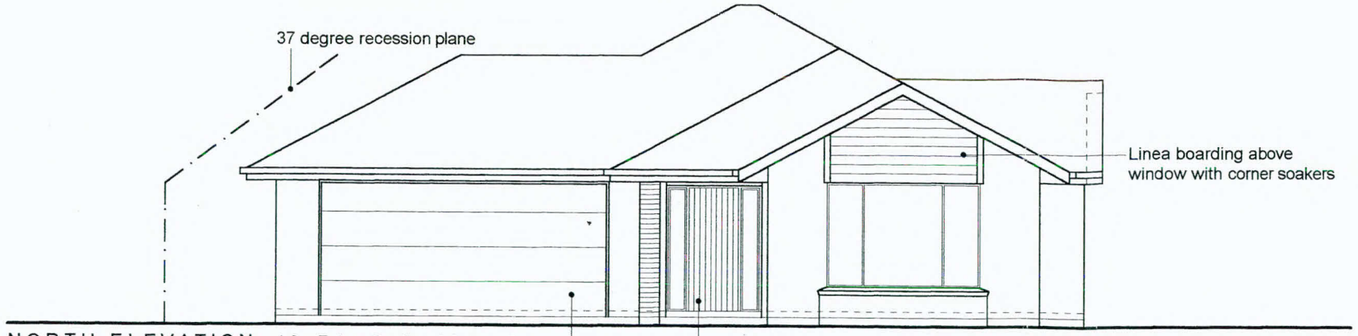
Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title: FLOOR PLAN

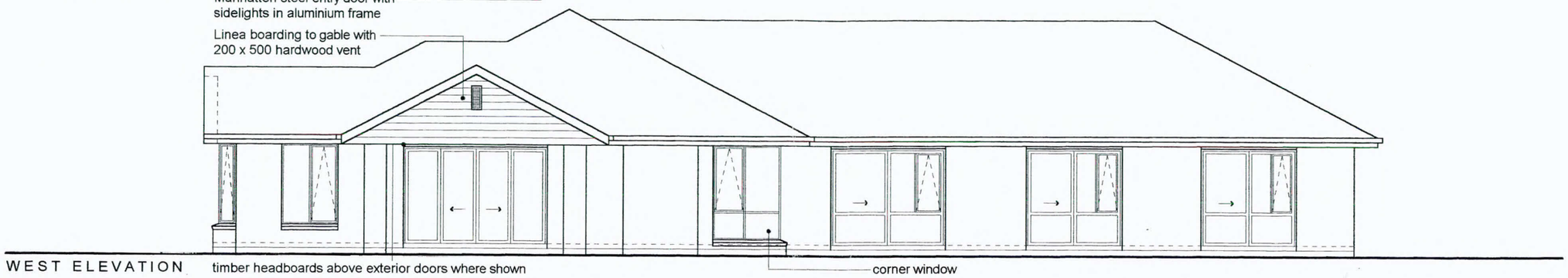
Sheet No.: 1 of 4

Revision

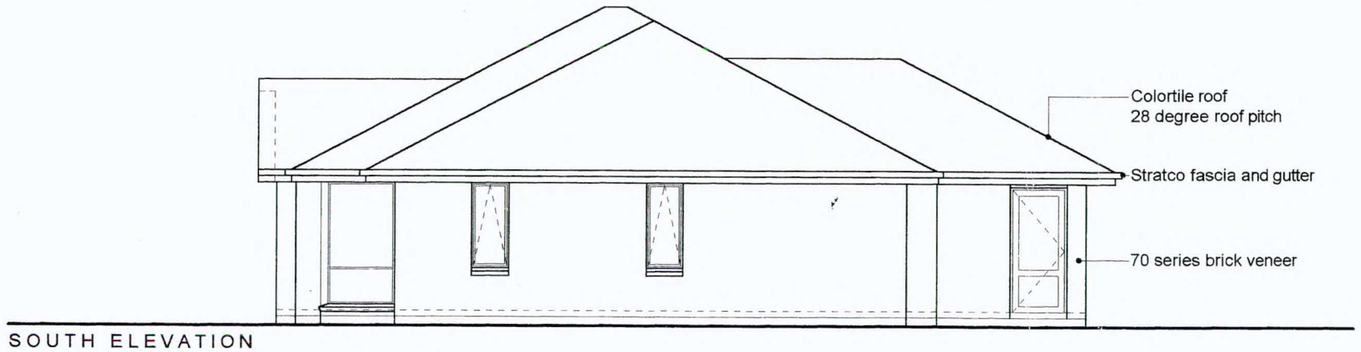
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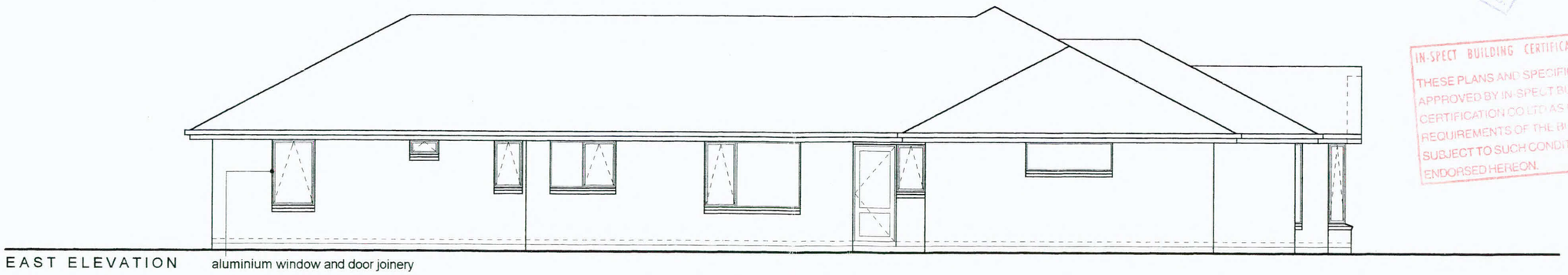
NORTH ELEVATION



WEST ELEVATION



SOUTH ELEVATION



EAST ELEVATION

CHRISTCHURCH CITY COUNCIL
FILE COPY
CONSENT DOCUMENT
04 DEC 2003
All building work shall comply with the New Zealand Building Code notwithstanding any inconsistencies which may occur in the drawings and specifications.
IN-SPECT BUILDING CERTIFICATION CO LTD
THESE PLANS AND SPECIFICATIONS ARE APPROVED BY IN-SPECT BUILDING CERTIFICATION CO LTD AS MEETING THE REQUIREMENTS OF THE BUILDING CODE SUBJECT TO SUCH CONDITIONS AS ENDORSED HEREON.

Peter Ray Homes
213 Blenheim Road, Christchurch. P O 8184 Riccarton, Christchurch
Telephone – 03 348 1994 Fax – 03 343 2026

NOTE

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3. Glazing to comply with NZS 4223:1985 & Pt 3 1993
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5. The copyright of this drawing is vested with Peter Ray Homes Ltd and cannot legally be used, copied or in any form reproduced without written authority

Rev No.	Date	Amendment
A	03.11.03	remove gas fire, move gas bottles, change bay window

Drawn: A. Fahey
Date: 28.10.03
Scale: 1 : 100

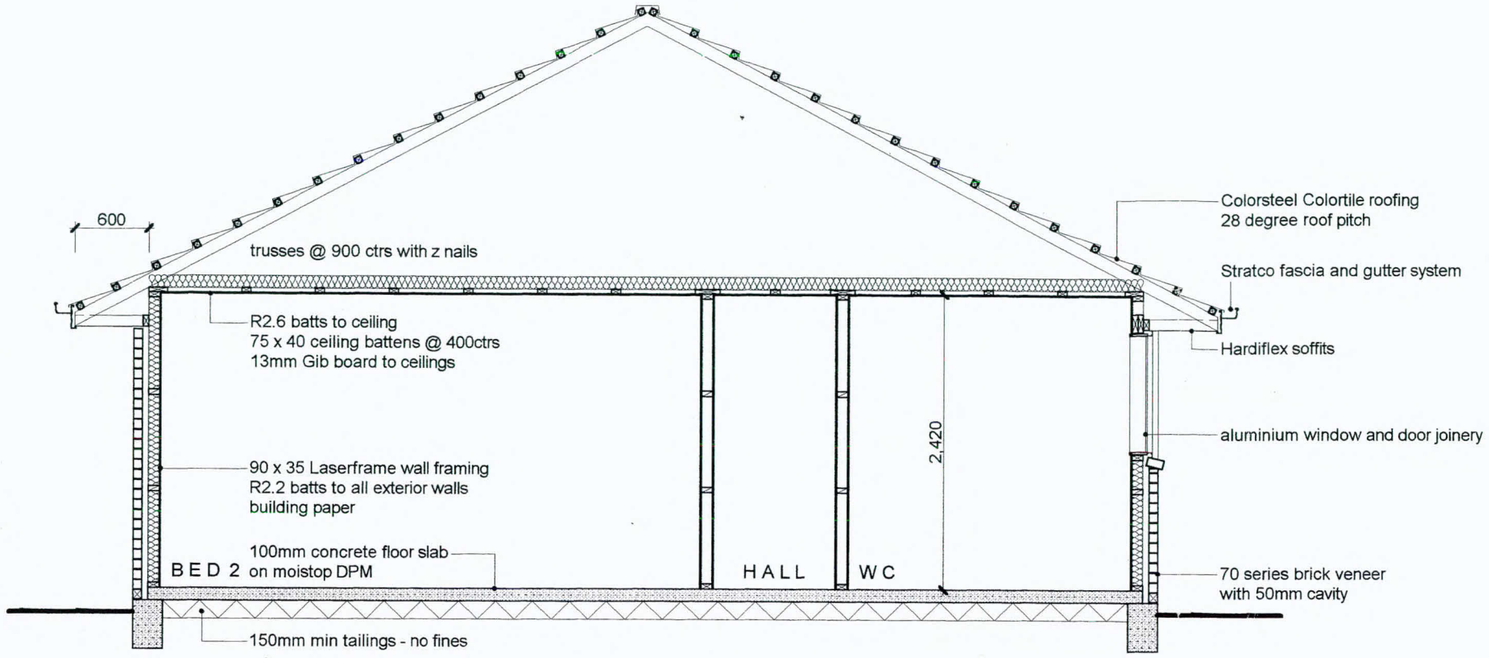
Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title: ELEVATIONS

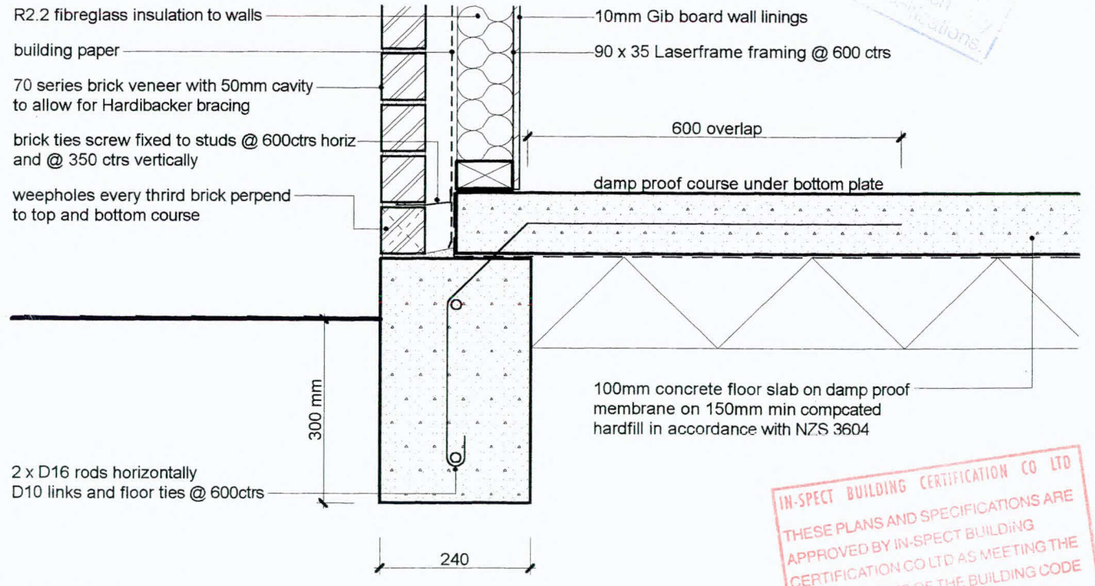
Sheet No.: 2 of 4

Revision

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CROSS SECTION
scale 1:50



FOUNDATION DETAIL
scale 1:10

CHRISTCHURCH CITY COUNCIL
FILE COPY
CONSENT DOCUMENTS
DEC 2003
All building work shall comply with the New Zealand Building Code notwithstanding any ... existencies which occur in the ... s and ...
IN-SPECT BUILDING CERTIFICATION CO LTD
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Drawn: A. Fahey
Date: 28.10.03
Scale: 1:50

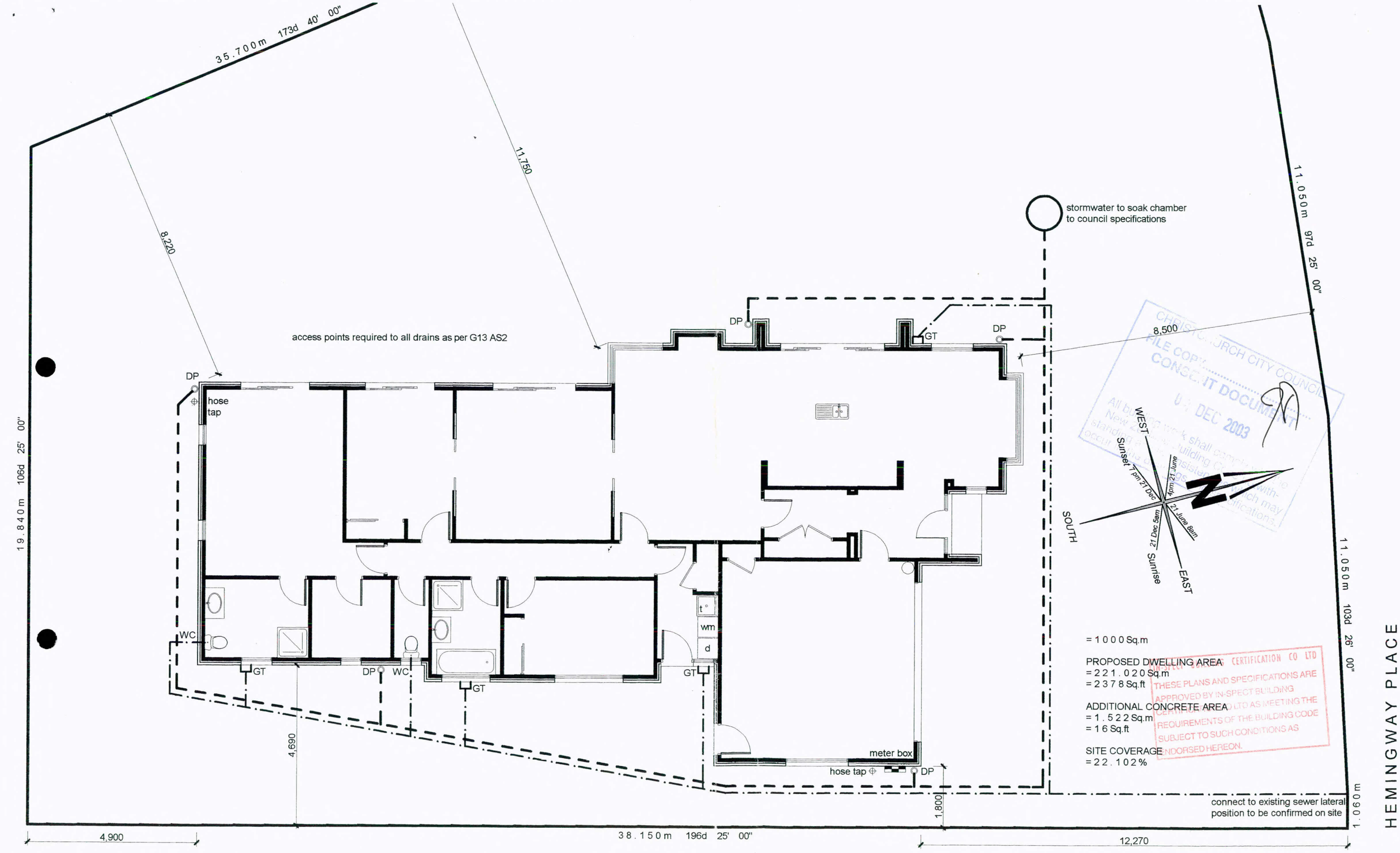
Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title: CROSS SECTION

Sheet No.: 3 of 4

Revision

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CHRISTCHURCH CITY COUNCIL
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CONSENT DOCUMENT
DEC 2003
All building work shall comply with the New Zealand Building Code and shall not commence until building consent has been issued. Work which may encroach on adjoining sites, or which may affect the stability of adjoining buildings, shall not commence until adequate provision has been made to support and protect such adjoining sites and buildings. Refer to engineer's specifications.
BUILDING CERTIFICATION CO LTD
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Scale: 1:100

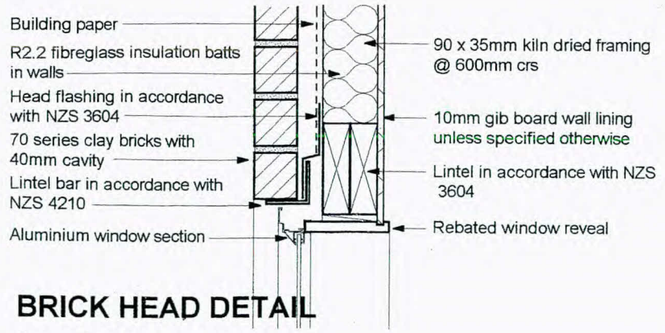
Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title: SITE PLAN

Sheet No.: 4 of 4

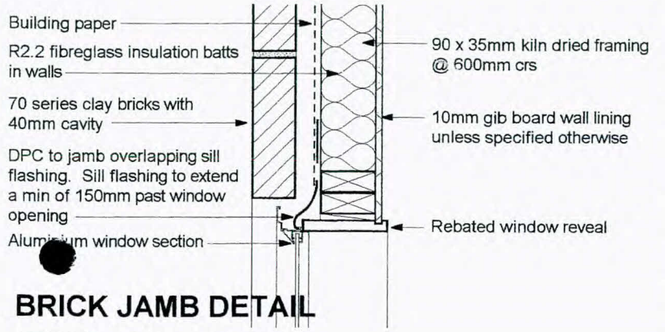
Revision

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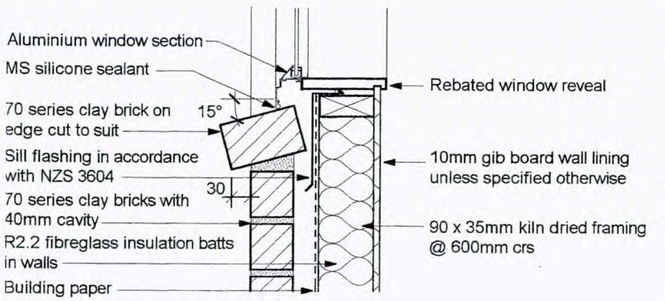
BRICK HEAD DETAIL

Scale 1:10



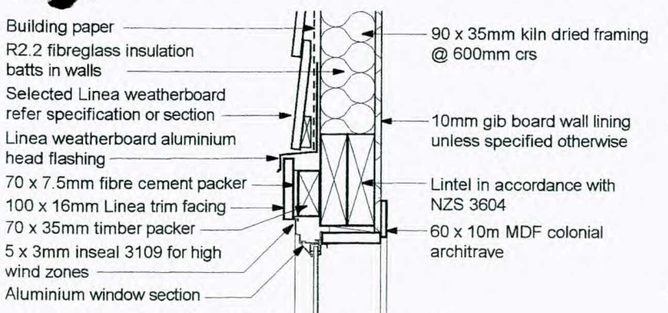
BRICK JAMB DETAIL

Scale 1:10



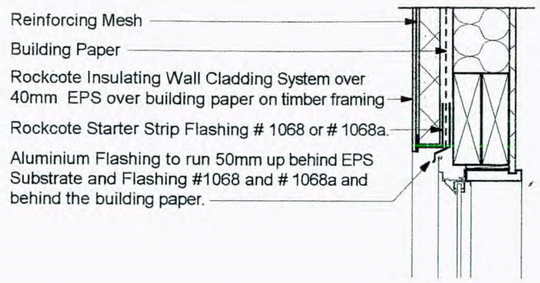
BRICK SILL DETAIL

Scale 1:10



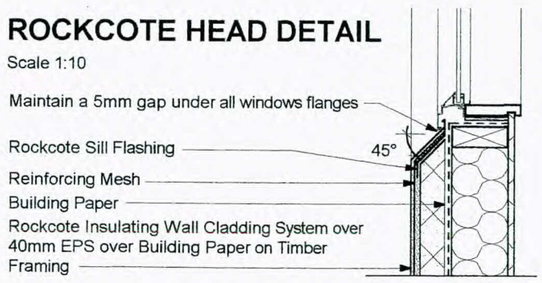
LINEA WINDOW HEAD DETAIL with facing board

Scale 1:10



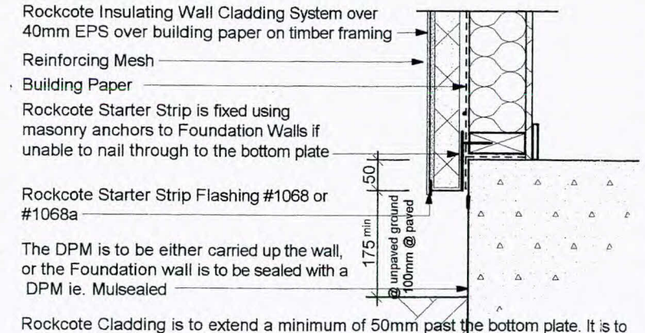
ROCKCOTE HEAD DETAIL

Scale 1:10



ROCKCOTE SILL DETAIL

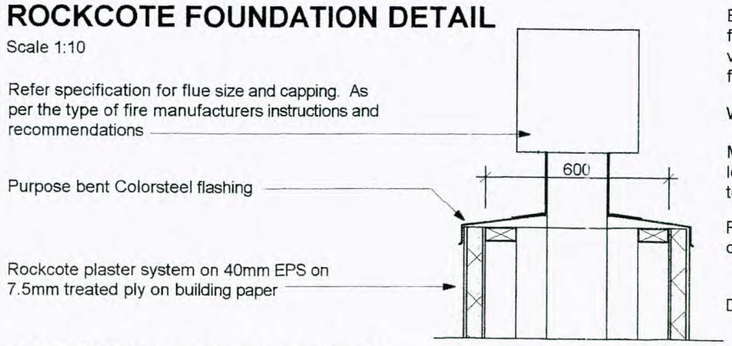
Scale 1:10



Rockcote Cladding is to extend a minimum of 50mm past the bottom plate. It is to be 6mm clear off the Foundation Wall. Refer to NZS 3604:1999 Fig 7.10.
The distance from the top of the floor slab to cleared ground is to be a minimum of 225mm, to a paved surface this shall be a minimum of 150mm. Refer to NZBC E2/AS1 Paragraph 4.2.5 or NZS 3604:1999 Fig 7.10.

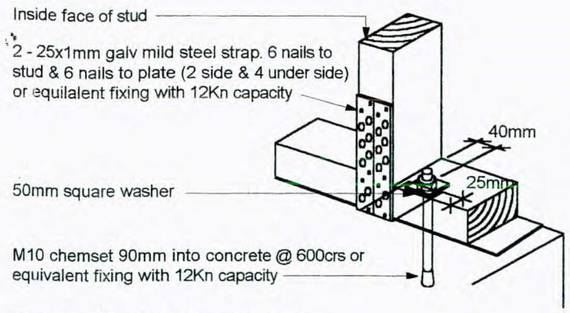
ROCKCOTE FOUNDATION DETAIL

Scale 1:10

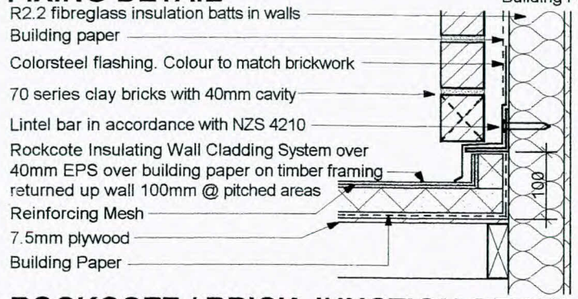


CHIMNEY CAPPING DETAIL

Scale 1:20

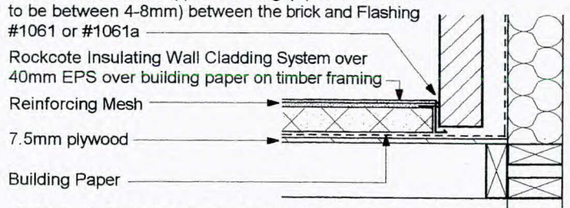


STUD FIXING DETAIL



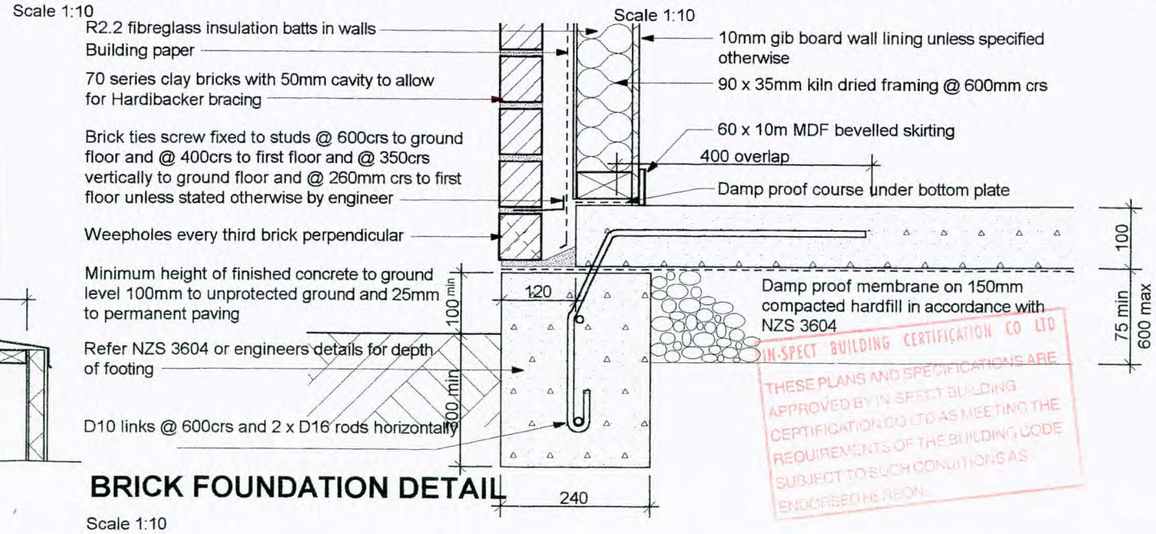
ROCKCOTE / BRICK JUNCTION DETAIL @ sloped areas of chimney

Scale 1:10



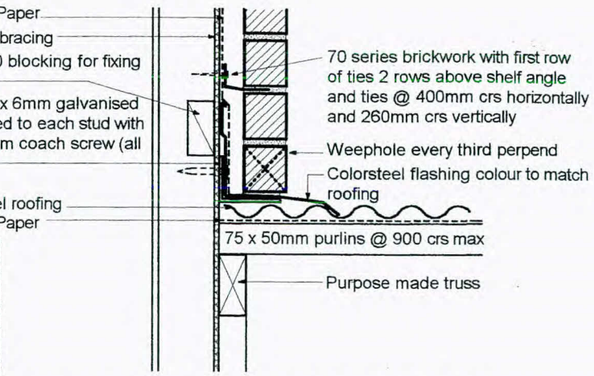
ROCKCOTE / BRICK JUNCTION DETAIL @ chimney internal corner

Scale 1:10



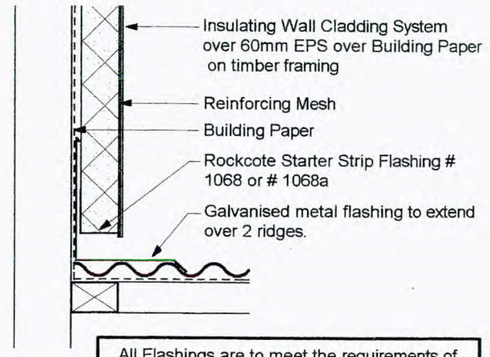
BRICK FOUNDATION DETAIL

Scale 1:10



BRICK ROOF FLASHING DETAIL

Scale 1:10



All Flashings are to meet the requirements of Section 4 of NZS 3604:1999

ROCKCOTE ROOF FLASHING DETAIL

IN-SPECT BUILDING CERTIFICATION CO LTD
THESE PLANS AND SPECIFICATIONS ARE APPROVED BY IN SPECT BUILDING CERTIFICATION CO LTD AS MEETING THE REQUIREMENTS OF THE BUILDING CODE SUBJECT TO SUCH CONDITIONS AS ENDORSED HEREON.

Peter Ray Homes
213 Blenheim Road, Christchurch. P O 8184 Riccarton, Christchurch
Telephone – 03 348 1994 Fax – 03 343 2026

NOTE

1. All work shall comply with NZS 3604:1999
2. All windows and doors to comply with NZS 4211:1985
3. Glazing to comply with NZS 4223:1985 & Pt 3 1993
4. Contractor must verify all dimensions on site prior to commencing any work
5. The copyright of this drawing is vested with Peter Ray Homes Ltd and cannot legally be used, copied or in any form reproduced without written authority

Rev No.	Date	Amendment

Drawn: J Stadnyk
Date: December 02
Scale: 1:10, 1:20

Job Name & Location: PETER RAY HOMES LIMITED

Sheet Title: Standard Details for Single Storey Homes

Sheet No.

Revision

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

BUILDING CONSENT CONDITIONS

As at : 22 December 2003

PROJECT NO.: **10041003**

DESCRIPTION OF CONSENT: **DWELLING WITH GARAGE**

SITE ADDRESS: **16 HEMINGWAY PLACE**

The Building Consent is subject to the following conditions, which must be satisfied before the Code Compliance Certificate can be issued:

- The manufacturer's approved applicator of the exterior cladding system is to supply a certificate to the Christchurch City Council stating that the cladding has been installed to the manufacturer's specification.
- Roof truss design and layout plan complying with New Zealand Standard 3604:1999, Clause 10.2.2 and C.8.6.1.4. being supplied to the Team Leader Building Inspections, Christchurch City Council for approval prior to erection.
- Registered Engineer's Producer Statement Design for beams and supports shall be supplied to the Christchurch City Council prior to construction commencing.

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

Roof truss Design needed?

exterior cladding

Harry

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL
BUILDING ACT 1991

BUILDING CONSENT

FORM: BA4

PROJECT NO.
10041003

PROJECT LOCATION AND DESCRIPTION

Street Address: 16 HEMINGWAY PLACE, SPENCERVILLE, CHRISTCHURC

Description of Work: DWELLING WITH ATTACHED GARAGE

Legal Description: LOT 35 DP 319911

Valuation Roll : 21852 83700

FILE

OWNER/APPLICANT

Name: WENN, RUSSELL MARTIN

Mailing Address: C/O IN-SPECT BUILDING CERTIFICATION
35 MACES ROAD
CHRISTCHURCH 8006

Contact: KELVIN NEWMAN

PROJECT DETAILS

Type description:
New Construction

Application Received: 27/11/2003

Intended life:
Indefinite, but not less than 50 years

Intended uses(s):
Dwelling

Estimated value (inclusive of GST): $ 160000.00

COPY

This Building Consent is a consent under the Building Act 1991 to undertake building work in accordance with the attached plans and specifications so as to comply with the provisions of the building code. It does not affect any duty nor permit any breach of any other Act.

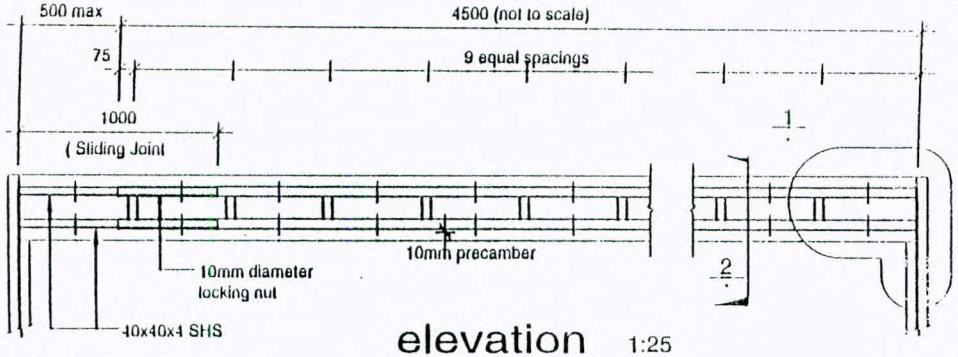
Please note that your Building Consent will lapse if work has not commenced within six months of its date of issue or if reasonable progress has not been made within twelve months after work has commenced, unless an extension of time has been approved by the Council.

This Building Consent is issued subject to the conditions specified in the attached pages (if any) headed 'Conditions of Project No.: 10041003'

Signed for and on behalf of the Council:

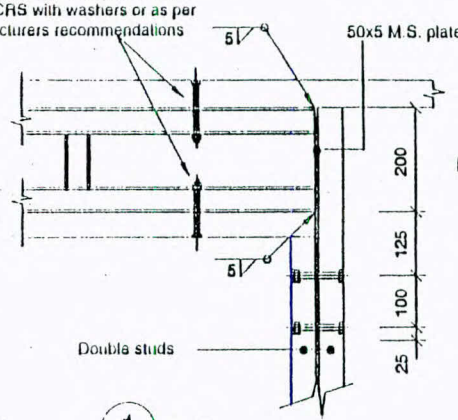
Name: .....

Position: K. THOMPSON Consent Officer ..... Date: 22/12/2003

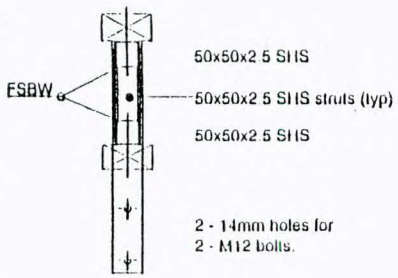


elevation 1:25

M10 bolts @ 500 crs
through timber plates
or 65x3.7mm min dia power nails
@ 250CRS with washers or as per
manufacturers recommendations



1 (1:10)



2 (1:10)

NOTES :

All materials and work to be in accordance with NZS 3404 : 1992
Beam to be fabricated from grade C450 LO steel.

This beam is suitable for the following :-

1. Snow and wind loadings as defined on producer statement dated 28.6.99
2. Light roof, ie maximum weight 0.45 kPa including ceiling lining.
3. Where used as door lintel, roof framing to be in accordance with drawing number 1816/10/EB3

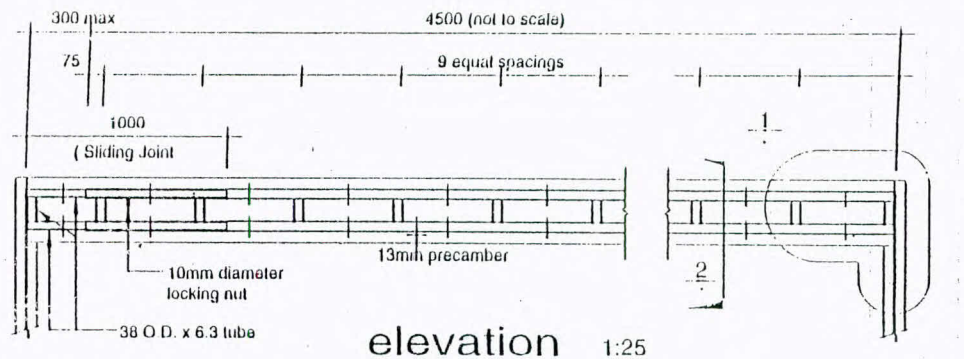
EasyBeam (Light Duty)

Manufactured by McCALLUM ENGINEERING

O'Loughlin Taylor Spence Ltd
CONSULTING ENGINEERS
Level 4
St Elmo Courts
47 Hereford Street
Christchurch 1
P O Box 2373
Fax: 379 1642
Telephone: 379 2734
E-mail: consultants@ots.co.nz

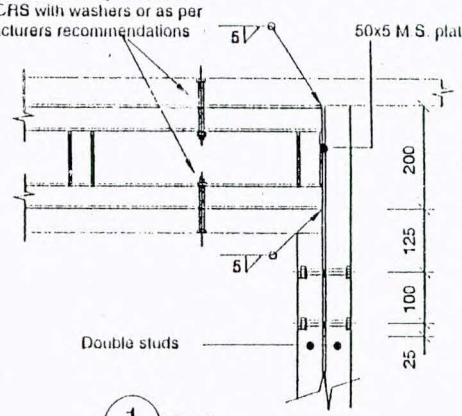
scales as shown
date 28 Jun 99
drn Wade
file

sheet EB1 rev.

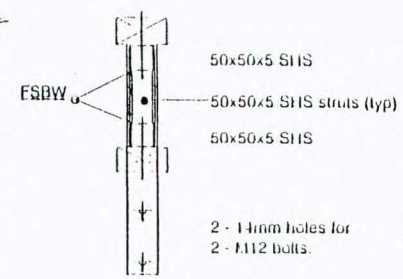


elevation 1:25

M10 bolts @ 500 crs
through timber plates
or 65x3.7mm min dia power nails
@ 250CRS with washers or as per
manufacturers recommendations



1 (1:10)



2 (1:10)

NOTES :

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Beam to be fabricated from grade C450 LO steel.

This beam is suitable for the following :-

1. Snow and wind loadings as defined on producer statement dated 28.6.99
2. Light roof, ie maximum weight 0.45 kPa including ceiling lining.
3. Where used as door lintel, roof framing to be in accordance with drawing number 1816/10/EB3

EasyBeam (Heavy Duty)

Manufactured by McCALLUM ENGINEERING

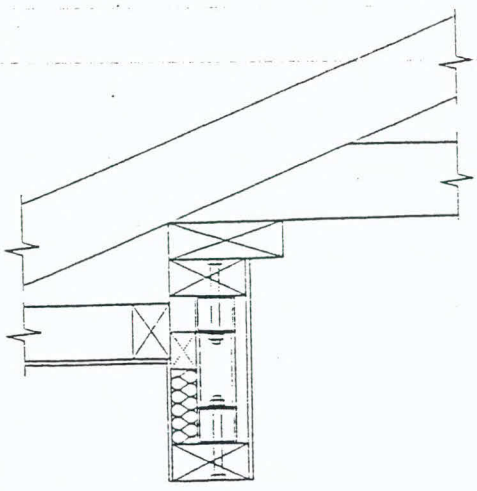
O'Loughlin Taylor Spence Ltd
CONSULTING ENGINEERS
Level 4
St Elmo Courts
47 Hereford Street
Christchurch 1
P O Box 2373
Fax: 379 1642
Telephone: 379 2734
E-mail: consultants@ots.co.nz

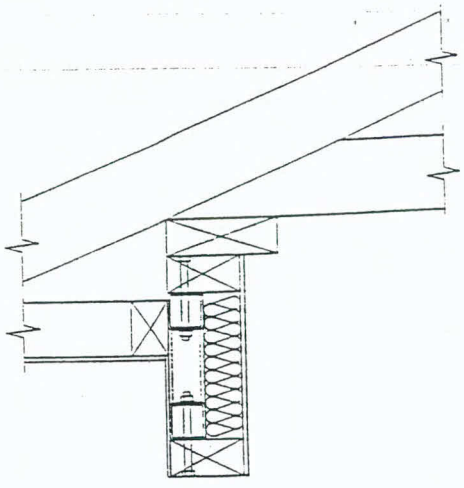
scales as shown
date 28 Jun 99
drn Wade
file

sheet EB2 rev.

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Suggested Easybeam Construction details.

1:10

O'Loughlin Taylor Spence Ltd
CONSULTING ENGINEERS
Level 4
St Elmo Courts
47 Hereford Stree
Christchurch 1
P.O. Box 2373
Fax: 379 1642
Telephone: 379 2734
E-mail: consultants@ots.co.nz

scales	as shown	sheet	rev.
date	22 Dec 99	EB4	
drn	John	file	

Proudly Distributed by:

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Know how. Can do.

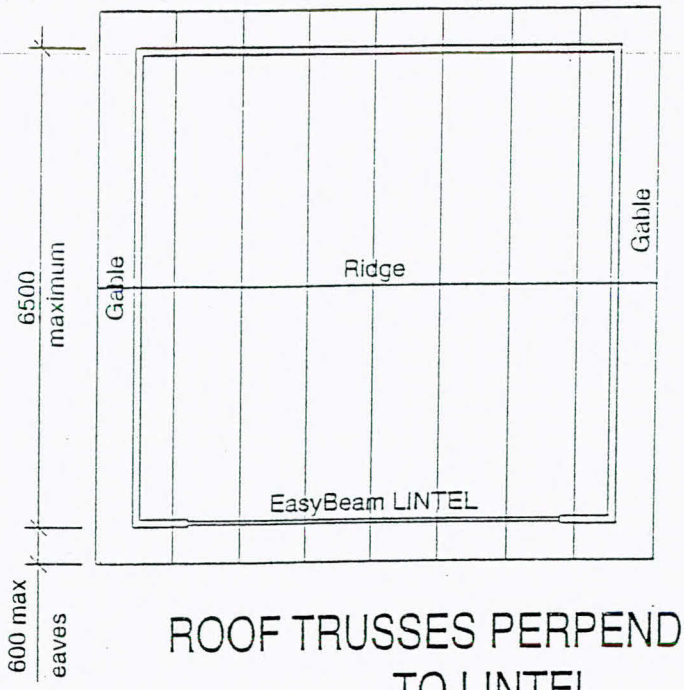
For special designs please contact the supplier above.

EasyBeam

Manufactured by McCALLUM ENGINEERING

FLETCHER EASYSTEEL

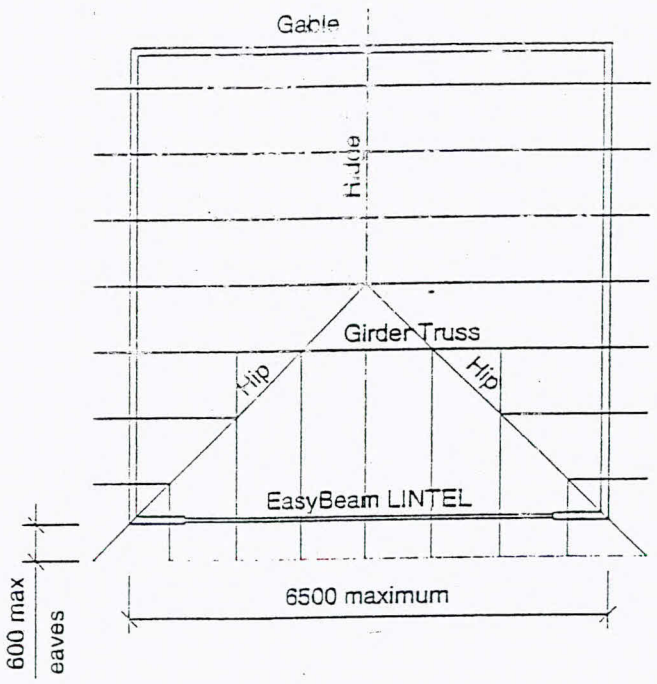
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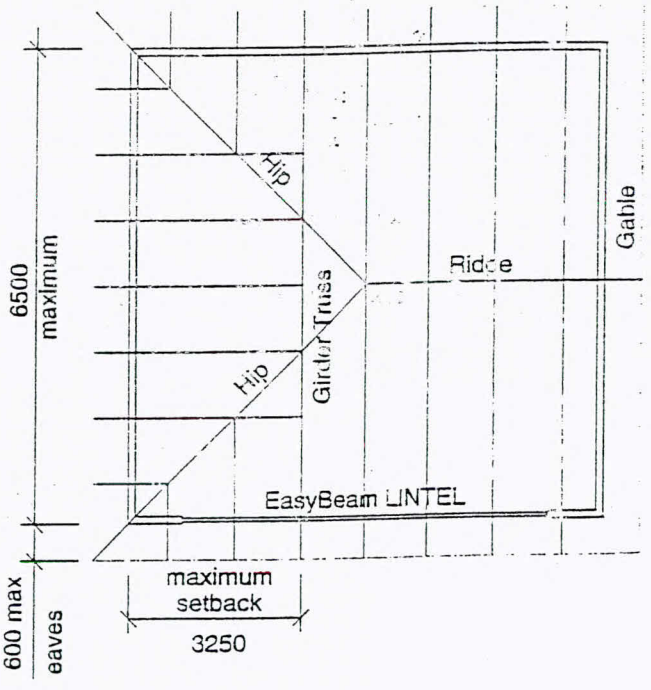


NOTES :

1. This drawing is to be read in conjunction with drawings numbers 1816/10/EB1 and EB2 Producer Statement dated 28.6.99

ROOF TRUSSES PERPENDICULAR TO LINTEL





ROOF TRUSSES FOR HIP ROOFS

ROOF FRAMING FOR EasyBeam LINTELS

O'Loughlin Taylor Spence Ltd
CONSULTING ENGINEERS
Level 4
St Elmo Courts
47 Hereford Street
Christchurch 1
P.O. Box 2373
Fax: 379 1642
Telephone: 379 2734
E-mail: consultants@ots.co.nz

scales	1:100	sheet	rev.
date	28 Jun 99	EB3	
drn	Wade	file	

O'Loughlin Taylor Spence Ltd
CONSULTING ENGINEERS

St Elmo Courts
47 Hereford Street
Christchurch 1
P.O. Box 2373
Telephone 379-2734
Fax 379-1642
Email: consultants@ots.co.nz

J.S. O'Loughlin BSc BE (Hons) MIPENZ
J.S. Spence BE (Hons) MIPENZ

MEMBERS OF THE ASSOCIATION OF CONSULTING ENGINEERS NEW ZEALAND

PRODUCER STATEMENT
STRUCTURAL DESIGN
EASY BEAM – HEAVY DUTY AND LIGHT DUTY

Issued by John Stanley Spence in respect of "Easy Beam", manufactured by McCallum Engineering.

The beam is as shown on O'Loughlin Taylor Spence Ltd drawings numbers EB1, EB2 and EB3, file 1816/10, wi additional requirements and limitations as detailed below:-

O'Loughlin Taylor Spence Ltd has been engaged to carry out the structural design in respect of the requirements of Clau B1 - Structure, of the Building Regulations 1992.

The design has been carried out in accordance with the standards listed in Section B1/VM1 of the approved documer issued by the Building Industry Authority.

The beam has been designed for the loads set out in NZS 4203: 1992 for the following situations:-

1. Maximum altitude

Snow Zone 1	500m
Snow Zone 2	400m
Snow Zone 3	350m
Snow Zone 4	100m
Snow Zone 5	150m

2. Basic non-direcitonal wind speed 48m/sec.
3. Terrain Categoy - 3.
4. Shielding Multiplier - 1.0
5. Hill Shape Multiplier - 1.0
6. Structure Risk Multiplier - 1.0.

CHRISTCHURCH CITY COUNCIL
P.I.M. APPLICATION
Rec'd 27 NOV 2003
Linwood Service Centre
PROJECT ID 10041003

As an independent design professional covered by a current policy of Professional Indemnity Insurance to the value $200,000:00, I believe on reasonable grounds that structural design of the beam complies with the relevant provisions the building code.

This consulting practice has not been engaged for supervision of the manufacture or installation of the beams.

Signed _____ Date 31 December 1999

ERB No. 7406

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

Fulton Hogan Canterbury Laboratory
PO Box 16-064, Hornby, Christchurch. 325 Pound Rd, Yaldhurst, Christchurch.
Telephone: 03 349 9142 - Fax: 03 349 9143 - Manager's Mobile: 025 377 318

Laboratory Reference: 2002/1517/35

DYNAMIC CONE PENETROMETER TEST REPORT

ATTENTION:	**Dean Gregory – Davie Lovell-Smith Ltd**
CLIENT:	Davie Lovell-Smith Ltd
TEST SITE:	Lot 35– Seafield Park Subdivision, Spencerville
SITE SELECTION METHOD USED:	As Directed by Site Engineer
TEST METHODS USED:	NZS 4402:1988 Test 6.5.2 (modified – kPa) NZS 3604:1999 Section 3 *
TESTED BY:	M Clay on 1/8/02

RESULTS:

This residential lot was tested in accordance with NZS 3604:1999 Section 3 using the test procedure detailed in NZS 4402:1988 Test 6.5.2.

A single site was tested to a depth of 1.2m below the finished ground surface level as per the client's instructions. This was positioned in the centre of the lot (refer to the site diagram on page 3). A bore log was taken adjacent to the test site.

Please refer to page 2 for a graphical plot of the inferred kPa / depth results. Bearing capacity has been inferred from M.J Stockwell's charts.

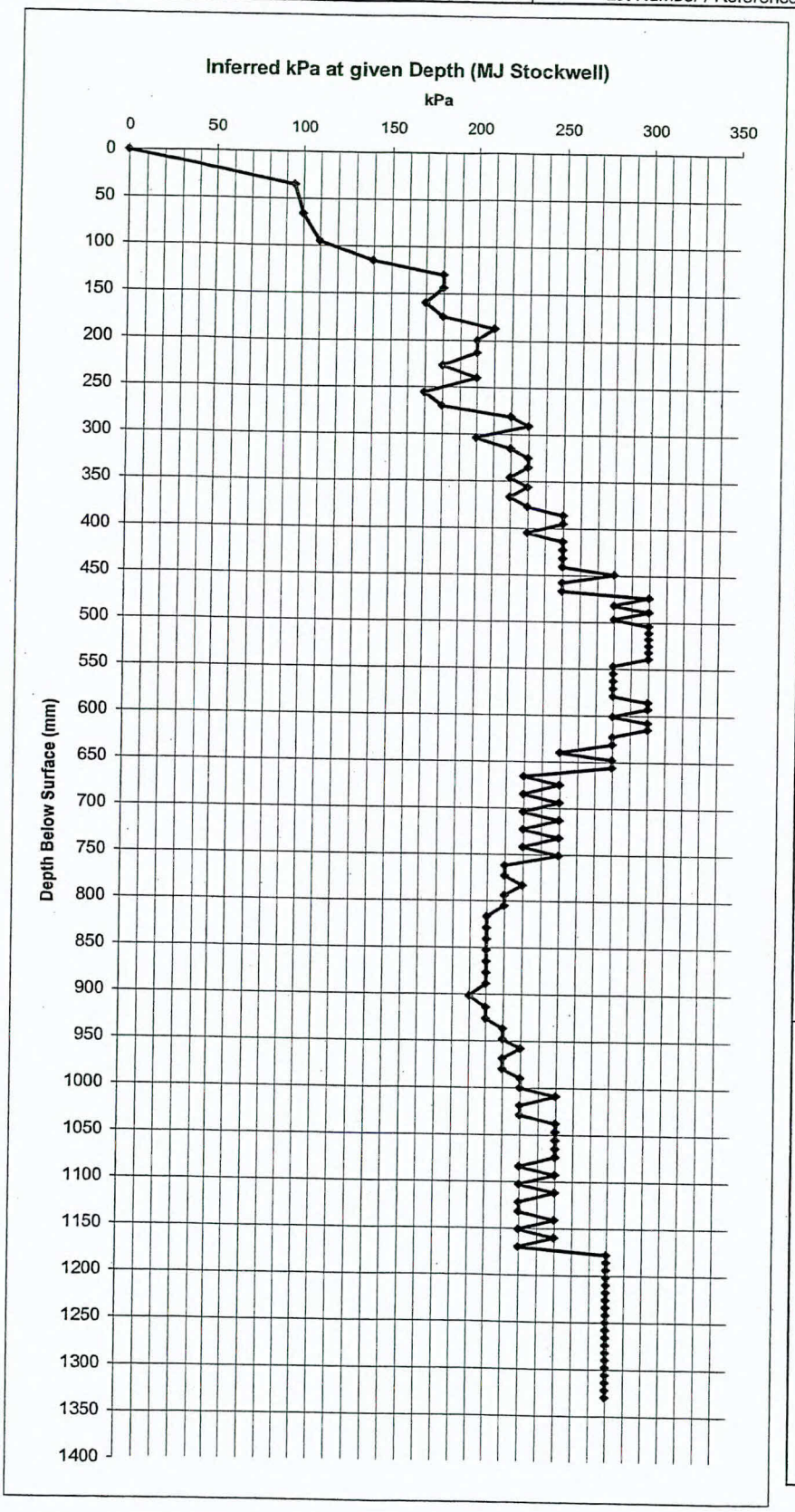
Report Issued By: Blair Trousselot on 6/8/02

Report Checked By: _____ Approved Signatory: _____
Laboratory Manager

This Laboratory is accredited by International Accreditation New Zealand. The tests reported herein (unless otherwise indicated by an *) have been performed in accordance with the laboratory's certificate to the schedule of accreditation. This report may not be reproduced except in full. The results given in this report apply only to the specific sites as tested by the laboratory.

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Seafield Subdivision			Lab Reference:	2002/1517/35	Page 2 of 3
Date Tested:	1/08/02	Tested By:	MC	Lot Number / Reference:	Lot No 35



Bore Log

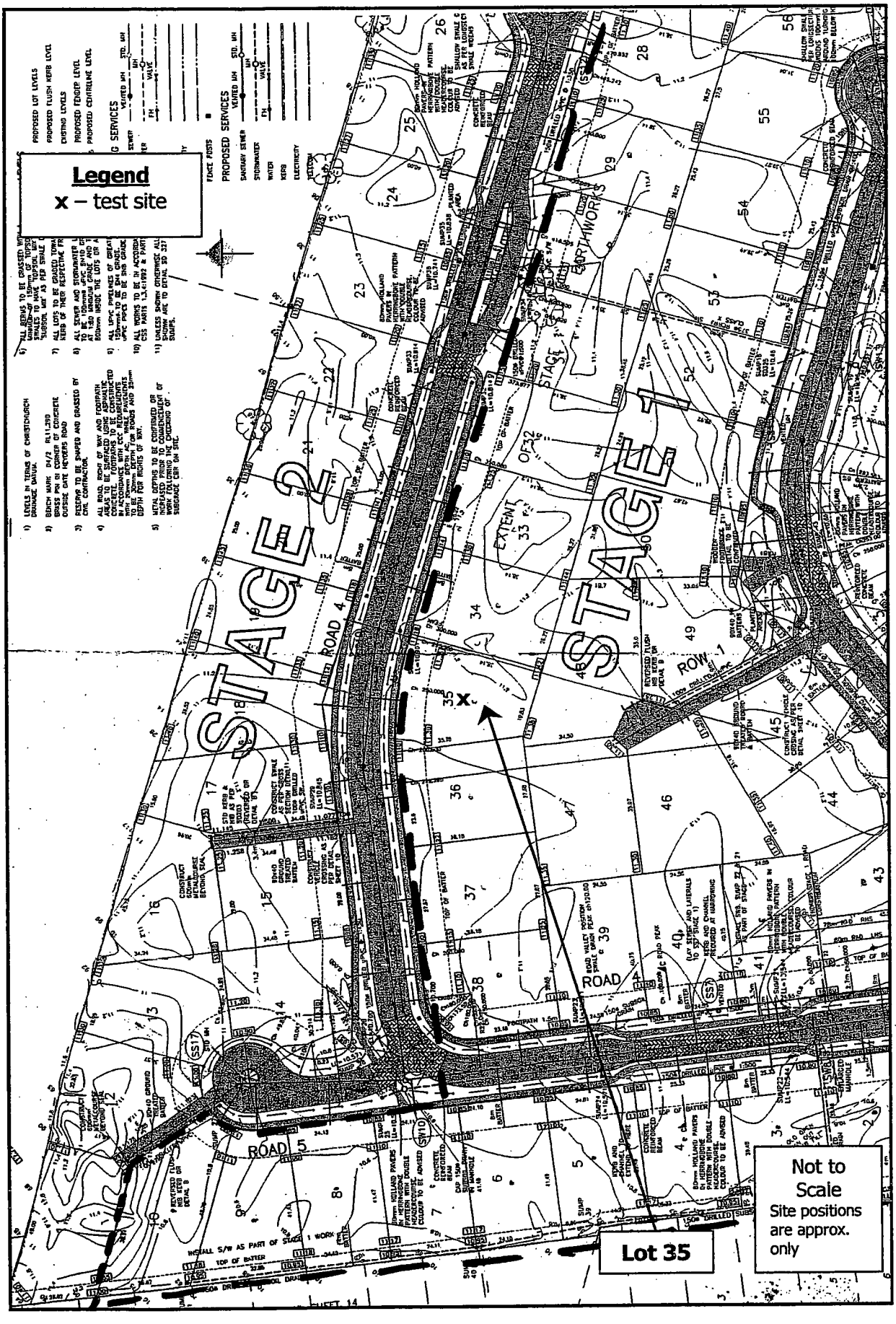
Dark Fine Sand with organics

Light Grey Fine Sand

Water Table

Notes:

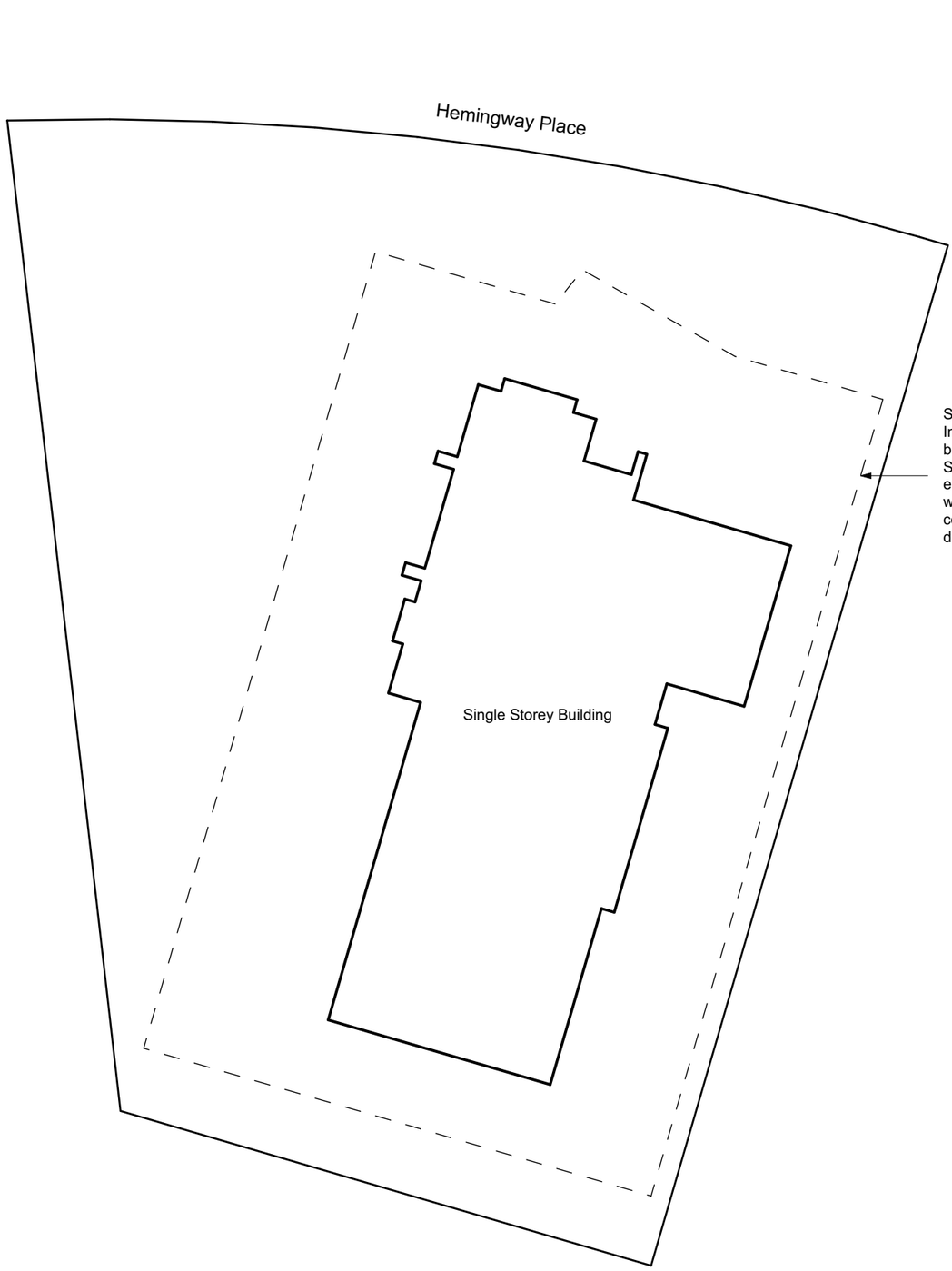
SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV



A member of the Fulton Hogan Ltd. Group

SITE DESCRIPTION:

Legal Description:	Lot 35 DP 319911
Address:	16 Hemingway Place, Spencerville
Earthquake Zone:	Zone 2
Exposure Zone:	Zone C
Climate Zone:	Zone 3
Wind Region:	A
Lee Zone:	
Rainfall Intensity:	30 - 40
Wind Zone:	High
Land status:	Green Zone, Technical Category 3, blue
Geotechnical Report:	Kirk Roberts Consulting Engineers Ltd.
Project Number:	121195
Date:	04/06/2012



Site Plan/Sediment Control Plan

SCALE 1:200

Note:
If any asbestos is discovered during the proposed building work, the following steps are required to be taken. Prior to removal, please contact the Department of Labour, telephone 0800 209020 for information on appropriate methods of handling asbestos.

FRONTIER ENGINEERS
CIVIL, STRUCTURAL & REMEDIAL

PO Box 79183 Avonhead
Christchurch 8446

Unit 1, 35 Sheffield Crescent, Burnside 8053

Phone: 03 359 9192
Free Call: 0508 FRONTIER (0508 376 684)

Email: admin@frontierengineers.co.nz

This drawing was produced for and remains the property of Frontier Engineers Ltd. This drawing shall not be used in any manner without the prior agreement of Frontier Engineers Ltd. Frontier Engineers Ltd does not accept any responsibility or liability to any third party as a result of the content contained on this drawing. The Contractor must verify all dimensions on site before commencing any work or making any shop drawings. Figured dimensions must be taken in preference to scaled dimensions. All dimensions are in millimetres unless noted otherwise. © Frontier Engineers Limited 2012

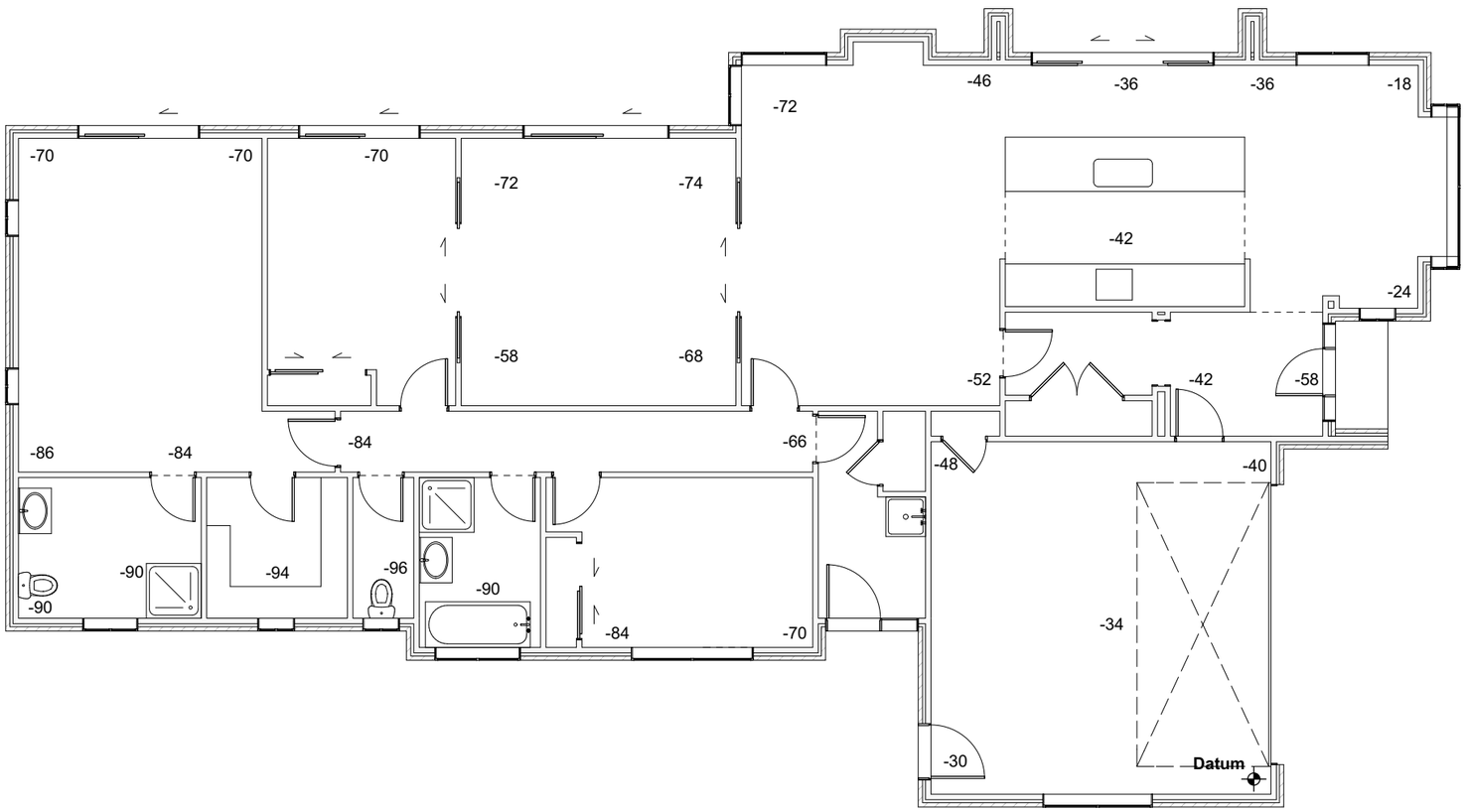
Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3	1:200
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved	
Date	

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Project Number: 170057
Sheet: S01
Rev ID: 00

Drawing Title: Site Plan/Sediment Control Plan
Project Status: Consent Issue



Ground Floor Pre-Level Survey

SCALE 1:100

Legend:

±X Indicates floor level above or below datum

- - - - - - - Indicates change in floor type

Notes:

1. Following relevelling the floor at each unit shall have
   i. maximum differential height of 50mm overall
   ii. 10mm within any room.
   iii. have a maximum slope of 1:200 (0.5%) between any to points more than 2m apart.
2. All levels shown on this plan are relative to the indicated datum.
3. All floor levels locations and slopes approximate

FRONTIER ENGINEERS
CIVIL, STRUCTURAL & REMEDIAL

PO Box 79183 Avonhead
Christchurch 8446

Unit 1, 35 Sheffield Crescent, Burnside 8053

Phone: 03 359 9192
Free Call: 0508 FRONTIER (0508 376 684)

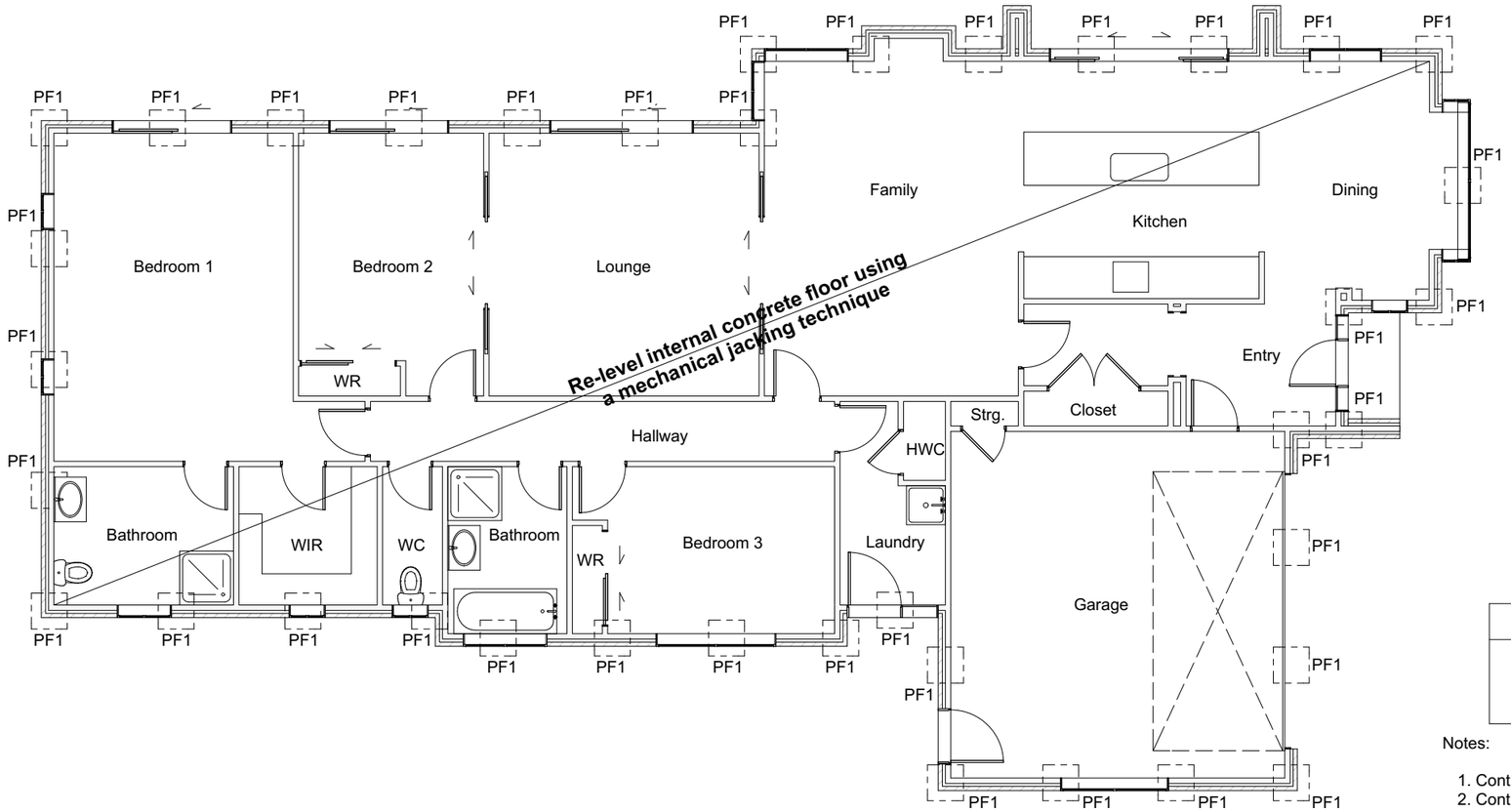
Email: admin@frontierengineers.co.nz

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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3	1:100
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved	
Date	

Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Ground Floor Pre-Level Floor Survey
Project Number	170057
Sheet	S02
Rev ID	00
Project Status	Consent Issue



Jack Pad Approximate Locations

SCALE 1:100

Schedule	
PF1	600x600sq. concrete pad footing at 2.0m crs*

Notes:

1. Contractor is to confirm all dimensions on site before commencing work
2. Contractor is to confirm floor levels at each pile or bearer support location to be packed.
3. Pad target depth is 0.5m min. below ground level.
4. Disconnect and reconnect services as required.
5. Ensure guttering falls to downpipes after relevelling.
6. Ensure all doors open and close properly.
7. All work to be carried out in accordance with NZS3604-2011.
8. Contractor to make all walls plumb.
9. Cracks in all concrete structures are to be repaired using proprietary product crack bond 'LR321G' supplied by adhesives technology corporation or approved equivalent.
   Cracks to be repaired up to a maximum of 5mm and any cracks of more than 5mm are to be repaired by using Helibar or any approved equivalent.
   Product to be installed strictly in accordance with manufacturers instructions

* Please note, positions of concrete pads are an approximate location setting

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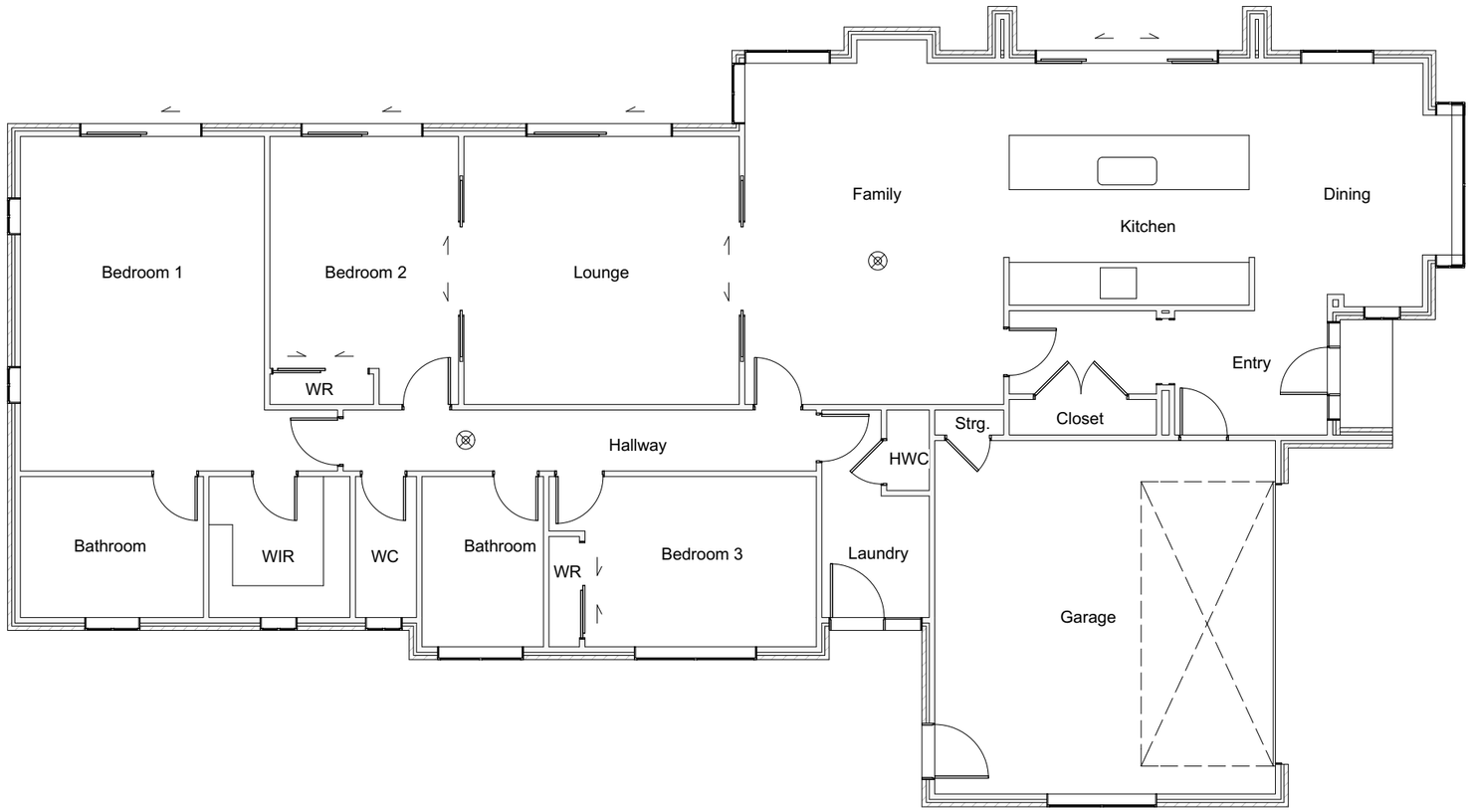
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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3	1:100
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved Date	

Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Ground Floor Jack Pad Approximate Locations
Project Number	170057
Sheet	S03
Rev ID	00
Project Status	Consent Issue



Smoke Detector Location

SCALE 1:100

Schedule	
⊗	Smoke Detector

Note:
All smoke detectors will be checked for complience with F7/AS1, and if non-compliant will be moved and/or installed to meet compliance as per drawing.

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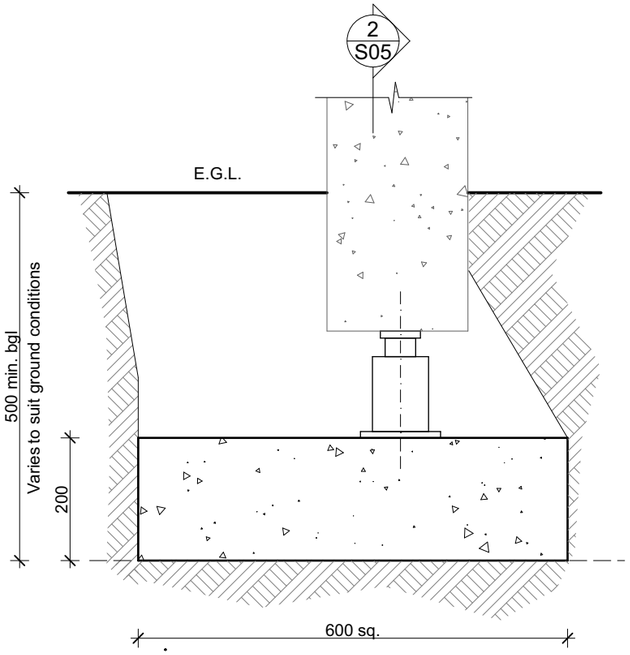
Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3: 1:100
Date: 16/03/2017
Design by: DC
Drawn by: DC
Approved
Date

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

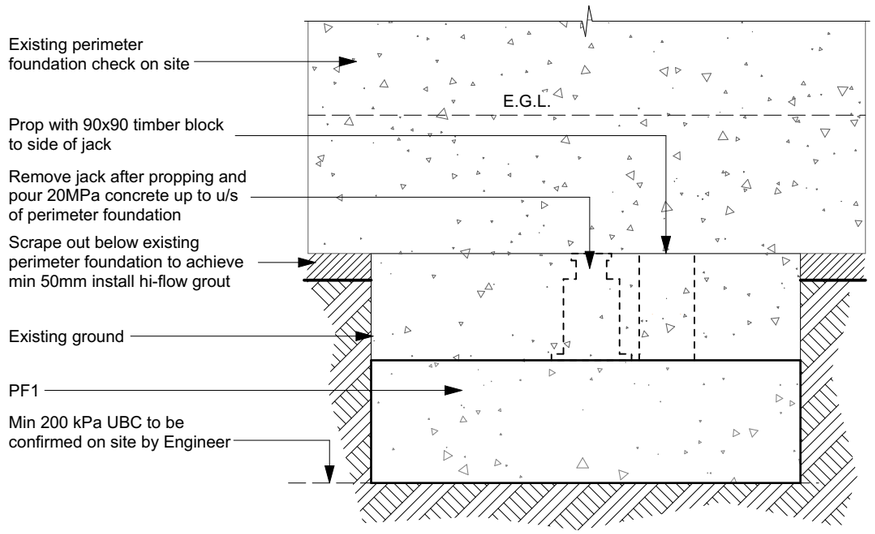
Project Number: 170057
Sheet: S04
Rev ID: 00

Drawing Title: Smoke Detector Location
Project Status: Consent Issue



1 - Re-levelling Pad Detail

SCALE 1:10



2 - Section

SCALE 1:10

Schedule	
PF1	600x600sq. concrete pad footing at 2.0m crs.

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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3	1:10
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved Date	

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Project Number: 170057

Drawing Title: Details

Sheet: S05

Rev ID: 00

Project Status: Consent Issue

GENERAL

G1. Read these drawings in conjunction with all architectural and other working drawings, specifications and with such other written instructions as may be issued during the course of the contract.
G2. Provide all workmanship and materials in accordance with the requirements of the current editions of the NZ Building Act, the NZ Building Code, the New Zealand Standards and the by-laws and ordinances of the relevant building consent authority.
G3. Comply as the builder, with requirements of the workplace health & safety act.
G4. Refer any conflict between these notes, the specification, the drawings or any other relevant documents to the engineer for decision prior to proceeding with the work.
G5. Do not obtain dimensions by scaling the drawings. For setting out dimensions and levels refer to the architectural drawings.
G6. The builder is responsible for the provision of all shoring to maintain the stability and integrity of excavations and adjacent structures. Provide details, for review by the Engineer, of any necessary temporary works, including shoring, prior to commencing construction.
G7. During construction it is the builder's responsibility to maintain the structure in a stable condition and to ensure no part is overstressed.
G8. The design and drawings are copyright and may not be used or reproduced in whole or in part without the written permission of the Engineer.
G9. Fire-resistance levels (FRL's) required for the various structural elements must be confirmed by the Building Surveyor or Architect.

LOADINGS

L1. Superimposed floor loads are generally in accordance with AS/NZS 1170.1 and specifically:

	1.5 kPa	Generally
	2.0 kPa	Balconies
	2.5kPa	Stairs

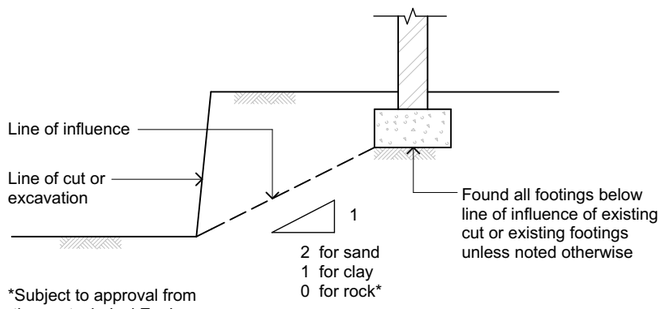
L2. Wind loads are in accordance with AS/NZS1170.2 for:

Terrain category:	2.5	Region: A7
Topographical multiplier of:	1.0	
Shielding multiplier of	1.0	

L2.2 Snow loads are in accordance with AS/NZS 1170.3 0.9kPa
L2.3 Earthquake loads are in accordance with NZS 1170.5

FOUNDATIONS

F1. The minimum safe ultimate bearing capacity of foundation material shall be:
Slabs & Footings: 200 kPa in natural substrate unless noted otherwise (U.N.O.)
F2. Foundation material shall be approved by the engineer prior to placing concrete.
F3. The bases of footing excavations shall be finished clean and horizontal and be embedded 300 into naturally occurring material.
F4. Founding levels where shown are for tender purposes only.
F5. Any proposed footing excavation near boundaries, other structures or services shall be approved by the Engineer.
F6. Subgrade shall be approved material compacted to 98% standard dry density determined by testing to the relevant part of NZS 4402:1986 U.N.O.
F7. Locate all new footings relative to line of cut/excavation including excavations as shown below:



*Subject to approval from the geotechnical Engineer

REINFORCED CONCRETE

C1. Provide all workmanship and materials in accordance with NZS 3101.1:2006, NZS 3109:1997 and NZS 3605:2011, their referenced documents, the drawings and the specification.
C2. Provide concrete grade and minimum clear concrete cover to reinforcement in accordance with NZS 3101:2006 & NZS 3604:2011 U.N.O.

CONCRETE GRADE	ELEMENT LOCATION U.N.O	MINIMUM CONCRETE COVER (mm)
20 MPa	Pad Footings Steps & Landings Paths & Driveways	25 against ground with DPM 75 against ground with no DPM 30 interior protected areas 50 exposed areas
25 MPa	Slabs & Foundations Suspended Stairs	25 against ground with DPM 75 against ground with no DPM 25 interior protected areas 50 exposed areas
30 MPa	Where Noted	20 against ground with DPM 45 against ground with no DPM 20 interior protected areas 50 exposed areas

C3. Support all reinforcement at 1 metre maximum centres both ways on mild steel plastic tipped chairs, plastic chairs or concrete chairs. Use only plastic chairs for externally exposed soffits.
C4. Provide all concrete with 80mm maximum slump and 20mm maximum aggregate unless approved by the Engineer.
C5. Sizes of concrete elements are net, exclusive of applied finishes. Beam depths are written first and include slab thickness.
C6. Properly form construction joints and use only where shown or approved by the Engineer.
C7. Reinforcement is represented diagrammatically and is not necessarily shown in true projection.
C8. Weld or splice reinforcement only in positions approved by the Engineer.
C9. Provide the minimum clear spacing between conduits, cables, pipes and bars as required by NZS 3109 but not less than three bar diameters. Do not place conduits in slabs above top reinforcement or below bottom reinforcement.
C10.

D	Denotes hot rolled deformed bars grade 300E.
HD, H	Denotes hot rolled deformed bars grade 500E.
R	Denotes hot rolled plain round bars grade 300E.
SE,RE	Denotes hard drawn wire fabric grade 500E.

C11. Notify the Engineer a minimum of 24 hours before reinforcement has been completed.
C12. Allow 2 hours after the completion of the reinforcement for the Engineer's inspection.
C13. Do not order concrete until reinforcement has been approved by the Engineer.
C14. Cure concrete in accordance with NZS 3109. Commence curing within two hours of finishing operations and continue for a minimum of seven days by using an approved proprietary compound or by keeping continuously wet.
C15. Tie all unsupported bars in transverse direction to D12-300, lapped 500 U.N.O.
C16. Lap fabric in accordance with clause 8.7.6 of NZS 3109.
C17. Provide hooks, laps and bends in accordance with NZS 3101 & NZS 3109 U.N.O.
C18. Provide chamfers, drip grooves etc. in accordance with the Architect's details.
C19. Design, construct and strip formwork in accordance with NZS 3109.
C20. Pre camber formwork upwards by 1/500 of the clear span U.N.O. where supported beams and slabs span greater than 5m.
C21. The concrete elements detailed have a F.R.L. of 60/60/60 U.N.O.

TIMBER

T1. Ensure all workmanship and materials are in accordance with NZS 3603:1993 and NZS 3604:2011, their referenced documents and the specification.
T2. Provide all interior timber as SG6 (dry) U.N.O.
T3. Provide all external timber as SG8 (dry) U.N.O.
T4. Where the use of treated timber for durability is noted on the structural drawings, ensure it complies with the parameters: Exposure Zone C in accordance with NZS 3604.
T5. Install proprietary timber connectors in accordance with the manufacturers written instructions.
T6. Retighten bolted connections in unseasoned timber prior to the fixing of cladding.
T7. Timber elements or timber framing have not been designed unless noted.
T8. All trusses to be pre-cambered upward 1/240 span.

STEELWORK

S1. Ensure materials, fabrication and erection are in accordance with NZS 3404, it's referenced documents and the specification.
S2. Shop drawings are to be approved by the Engineer prior to fabrication.
S3. Provide all welds as 6mm continuous fillet from E41xx electrodes, all bolts as M16-4.6/S and all cleats and gussets as 10mm plate U.N.O.
S4. For bolts, the following notation is used:
4/M16-4.6/s denotes 4 x M16 commercial grade bolts snug tight.
6/M20-8.8/tf denotes 6 x M20 high strength structural bolts fully tensioned in a no slip joint.
8/M24-8.8/tb denotes 8 x M24 high strength structural bolts fully tensioned in a bearing joint.
S5. Leave mating surfaces of 'tf' connections unpainted and free of mill scale and rust.
S6. Tighten bolts in 'tf' and 'tb' connections using the part turn method or load indicating washers. Do not use calibrated torque wrenches. Use a hardened washer under the bolt head or nut, whichever is rotated. The re-use of fully tensioned bolts is prohibited.
S7. Provide all cleats and drill all holes necessary for fixing steel to steel or timber.
S8. Fabricate steel beams and trusses spanning greater than 5m with an upward pre camber of 1/500 span U.N.O.
S9. Prepare structural steelwork to class 2 and paint with zinc phosphate primer to a thickness of 70 micrometres U.N.O.
S10. Hot dip galvanise all exposed external steelwork and all steelwork built into an external masonry skin, in accordance with grade HDG600 to AS/NZS 2312.
S11. Within 100m from the non-surf coast or 1 km from the surf coast, hot dip galvanise above in accordance with grade HDG900 to AS/NZS 2312.
S12. Provide fire protection to all steelwork as required.
S13. Ensure all cold formed sections conform to AS/NZS 4600 and are roll-formed from steel strip, minimum yield stress 450 MPa, 300 g/m² minimum zinc coating mass U.N.O.

MASONRY

M1. Ensure all workmanship and materials are in accordance with NZS 4230, the drawings & project specifications.
M2. Where masonry supports concrete slabs or beams, lay the top course with frogs down and covered with 2 layers of approved slip joint material.
M3. Walls shown shaded on plan are load bearing. Separate non-load bearing walls under slabs from the slab by 15mm of approved compressible material. Where masonry abuts slab downturns, form a 15mm gap between brickwork and side of downturn.
M4. Do not erect masonry supported by concrete slabs or beams until all formwork and props under have been removed.
M5. Provide all bricks of ultimate compressive strength $f'uc$ = 20 MPa U.N.O.
M6. Provide all hollow concrete masonry of ultimate compressive strength $f'uc$ = 15 MPa U.N.O.
M7. Provide classification M3 masonry mortar U.N.O. Note that within 100m from non-surf coast, or 1km from surf coast, provide classification M4 masonry mortar.
M8. Cut no chases into loadbearing masonry without the approval of the Engineer.
M9. Provide movement control joints vertically for full height of wall as follows:
For general masonry, at 8m maximum centres & 4m maximum from corners.
For articulated masonry, at 6m maximum centres & 4m maximum from corners.
Provide 15mm minimum joints with an approved compressible filler, tied together every 4th course with a MET 3.3 masonry sliding tie or approved equivalent.
M10. Construct hollow walls to full height or maximum 3m before filling cores. Provide cleanout openings at the base of all cores to be filled.
M11. Core fill $f'uc$ = 20 MPa concrete with 10mm aggregate, 180 slump U.N.O.
M12. Construct hollow masonry retaining walls using "double U blocks".
M13. Unreinforced masonry walls have not been designed unless noted.

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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3 1:1
Date 16/03/2017
Design by DC
Drawn by DC
Approved
Date

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Project Number: 170057
Sheet: S06
Rev ID: 00
Drawing Title: General Notes
Project Status: Consent Issue

Building Code Clause(s)…B1 ……

PRODUCER STATEMENT – PS1 – DESIGN

(Guidance notes on the use of this form are printed on page 2)

ISSUED BY: Frontier Engineers Ltd.....
(Design Firm)

TO: Liam Brewer
(Owner/Developer)

TO BE SUPPLIED TO: Christchurch City Council……
(Building Consent Authority)

IN RESPECT OF: Re-level of existing dwelling only.
(Description of Building Work)

AT: 16 Hemingway Place, Spencerville, Christchurch 8083
(Address)

…… **LOT** 35…… **DP** 319911 **SO** …….

We have been engaged by the owner/developer referred to above to provide …Structural Design of specific building elements and Supervision……..… services in respect of the requirements of
(Extent of Engagement)
Clause(s) B1/VM1 ..of the Building Code for
All ☐ or Part only ☒ (as specified in the attachment to this statement), of the proposed building work.

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

☒ Compliance Documents issued by the Ministry of Business, Innovation & Employment…B1/VM1 … …….or
(verification method / acceptable solution)

☐ Alternative solution as per the attached schedule … …

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

…Earthquake Repairs, 16 Hemingway Place, Spencerville, Christchurch 8083 and numbered 170057 S00-S06……;
together with the specification, and other documents set out in the schedule attached to this statement.
On behalf of the Design Firm, and subject to:
(i) Site verification of the following design assumptions ground as per Kirk Roberts Consulting Engineers report dated 4 June 2012…
(ii) All proprietary products meeting their performance specification requirements;

I **believe on reasonable grounds** that a) the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached schedule, will comply with the relevant provisions of the Building Code and that b), the persons who have undertaken the design have the necessary competency to do so. I also recommend the following level of construction monitoring/observation:
☐CM1 ☐CM2 ☐CM3 ☐CM4 ☐CM5 (Engineering Categories) or ☒ as per agreement with owner/developer (Architectural)

I, Alan Pearson … am: ☒CPEng 1024104 #
(Name of Design Professional)
☐Reg Arch …… .#

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

SIGNED BY …Alan Pearson…… ON BEHALF OF Frontier Engineers
(Design Firm)

Date …16/03/2017… (signature)……

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

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

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

Form 2A

Memorandum from licensed building practitioner: Certificate of design work

Section 45 and Section 30C, Building Act 2004

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

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

THE BUILDING

Street address: 16 Hemingway Place	
Suburb: Spencerville	
Town/City: Christchurch	Postcode: 8083

THE OWNER

Name(s):	
Mailing address:	
Suburb:	PO Box/Private Bag:
Town/City:	Postcode:
Phone number:	Email address:

BASIS FOR PROVIDING THIS MEMORANDUM

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

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

I, Alan Pearson carried out / ~~supervised~~ the following design work that is restricted building work

PRIMARY STRUCTURE: B1

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

PRIMARY STRUCTURE: B1

All RBW Design work relating to B1 (x)		( ) Carried out ( ) Supervised	
Foundations and subfloor framing (✓)	*Re-level of existing foundation only*	(x) Carried out (✓) Supervised	Refer drawing set from Frontier Engineers 170057
Walls (x)		( ) Carried out ( ) Supervised	
Roof (x)		( ) Carried out ( ) Supervised	
Columns and beams (x)		( ) Carried out ( ) Supervised	
Columns and beams (x)		( ) Carried out ( ) Supervised	
Other (x)		( ) Carried out ( ) Supervised	

EXTERNAL MOISTURE MANAGEMENT SYSTEMS: E2

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

		( ) Supervised	
Other (x)		( ) Carried out ( ) Supervised	

FIRE SAFETY SYSTEMS: C1 – C6

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

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

Note: continue on another page if necessary.

WAIVERS AND MODIFICATIONS

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

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

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

Note: continue on another page if necessary.

ISSUED BY

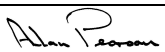
Name: Alan Pearson	LBP or Registration number: 1024104
The practitioner is a: (x) Design LBP (x) Registered architect (✓) Chartered professional engineer	
Design Entity or Company (optional): Frontier Engineers Ltd.	
Mailing address (if different from below): PO Box 79183, Avonhead, Christchurch, 8446	
Street address / Registered office: 1/35 Sheffield Crescent	
Suburb: Burnside	Town/City: Christchurch
PO Box/Private Bag:	Postcode: 8053
Phone number:	Mobile: 027 923 7888
After Hours:	Fax:
Email address: admin@frontierengineers.co.nz	Website: www.frontierengineers.co.nz

DECLARATION

I, Alan Pearson , CP Eng 1024104,

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

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

Signature: 

Date: 16 Mar 2017

CONSTRUCTION MONITORING SCHEDULE
JOB LOCATION: 16 Hemingway Place, Spencerville, Christchurch 8083
FILE NUMBER: 170057

Construction monitoring site visits relating to compliance with the building consent documentation and for verification of design assumptions are required as follows:

	TIME	NUMBER OF VISITS
1	Base of excavation pads	1-2
2	Post floor level survey	1-2

A site inspection report will be sent within 24hrs after inspection to the Client. A Producer Statement 4, Construction Review, could be issued once the above monitoring site visits have been completed. It is the Clients responsibility to notify the Engineer to enable the above site visits to be completed.

D. Chernushkin

Dmitry Chernushkin
Frontier Engineers Ltd.

Design Feature Report

Re-level of Existing Residential Building

Location 16 Hemingway Place, Spencerville, Christchurch 8083
Client Liam Brewer

Job No: 170057
Issue Date: 16-Mar-17
Revision: 00

FRONTIER ENGINEERS Ltd
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Document Quality Assurance Record

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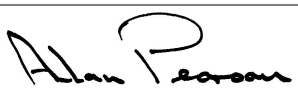
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Document Transmittal

Rev	Date	Revision Details/Status	Author	Approver
00	16 March 2017	Issue to Client	Dmitry Chernushkin	Alan Pearson

Author Signature:		**Approver Signature:**	
Name:	Dmitry Chernushkin	**Name:**	Alan Pearson
Title	Engineer	**Title**	Director CPEng 1024104

Introduction:

The existing Residential Building was damaged in the Canterbury Earthquake Sequence (CES) including differential settlement. The structural integrity of the dwelling is satisfactory; however, re-levelling is required to amend floor slopes that exceed slopes of 1:200.

Scope of work:

Frontier Engineers has been engaged by Liam Brewer to prepare technical documentation and certification for the re-level of the existing Residential only:

- Technical drawings of the proposed repairs
- Producer Statement 1
- Memorandum of Works
- Construction Monitoring Schedule
- Site inspection reports
- Producer Statement 4

Exclusions:

- All repair works other than re-levelling or direct repairs to the foundation system
- Strengthening of the Residential Building in anyway
- Future proofing of the Residential Building in anyway
- Any work above foundation level
- The works are assumed to be carried out under a Consent Exemption, and on this basis we refer to the Guidance for Building Work that Does Not Require a Building Consent (Building Act 2004) issued by the MBIE regarding section 42A of the Building Act,

  (a) the building work complies with the building code to the extent required by this Act:
  (b) after the building work is completed, the building:
  (i) if it complied with the building code immediately before the building work began, continues to comply with the building code; or
  (ii) if it did not comply with the building code immediately before the building work began, continues to comply at least to the same extent as it did then comply.

I.e. where specific parts of the building are modified our intention is to ensure that the building will function structurally to at least the same extent as it did prior to repairs, but may not necessarily be brought up to the current building code requirements.

Reference:

- Geotechnical report by Kirk Roberts Consulting Engineers Ltd Project No. 121195, dated 4 June 2012.
- NZS3101 Concrete Structures
- MBIE Guidance

Building Summary:

Foundation Type:	C – Concrete slab on grade
Structural Framing:	Timber framing
No. of Storeys:	1
Wall Cladding Weight:	Heavy – clay brick veneer
Roof Cladding Weight:	Light – pressed steel
Technical Category:	TC3
200kPa Bearing:	@ 0.5mbgl
Target Pad Depth:	0.5mbgl
Minimum Pad Size:	600mm x 600mm
Typical Pad Spacing:	2.0m
Max Pad Spacing:	2.5m

Design Philosophy:

Re-levelling

Mechanical jacking of the concrete structures using portable jacks and excavations at the lifting locations. The lifting locations are considered temporary until the dwelling is reinstated to its pre-earthquake condition. Any additional material or concrete works that remain on site are not considered to decrease any future performance, nor is it to be relied on as betterment or considered to increase performance during future earthquake events.

It is common for further cracking to occur as a result of re-levelling processes, which may require additional repairs, and needs to be completed prior to completion of works.

The concrete foundations have been assessed based on minimum steel design, but an additional design check has been made to consider the consequences of no reinforcement, and the concrete required to span using the flexure tensile capacity only.

As part of this assessment we have not considered the permanent lateral stretch of the building, or any other complications that may arise from re-levelling the building. Additionally, we do not know the condition of the dwelling prior to re-levelling, or the differential settlement of the foundations prior to the earthquake events. For this reason, it may not be practical to re-level the foundations where historical or long term settlement has previously occurred.

As the loading on the re-levelling pads is temporary, we have considered a safety factor of 2 for the ultimate bearing capacity.

APPENDIX – Design calculations

- Foundation Loading
- Re-levelling pads
- Concrete beam span
- Relevant Geotechnical

STANDARD CALCULATION TEMPLATE

JOB NAME: 16 Hemingway Place
JOB NO.: 170057
ENGINEER: DC
DATE: 09.03.2017

JOB DESCRIPTION:

Re-level of existing residential dwelling using a mechanical jacking technique

- Type C2 foundation
- Single storey dwelling
- Brick veneer wall cladding
- Light pressed steel roof cladding

STANDARD NOTATION AND DEFINITIONS

ACRONYMS

Foundations		Floor	
SF1	Strip Footing	FB1	Floor Bearer
PF1	Pad Footing	FJ1	Floor Joist
EB1	Edge Beam	SP1	Stringer Plate
IB1	Internal Beam	FP1	Pile
IR1	Internal Rib	VCJ	Vertical Control Joint
WP	Weld Plate		
SCJ	Saw Cut Joint		
CJ1	Control Joint		
CKJ	Connolly Key Joint		

Wall		Roof	
EW1	External Wall	R1	Rafter
IW1	Internal Wall	P1	Purlins
FW1	Fire Wall	VB	Veranda Beam
L1	Lintel	RB1	Roof Bracing
C1	Column	B1	Beam (steel or timber)
		B1	Ridge Beam

Other

TC#	Technical Category according to CERA for liquefaction risk
NZS	New Zealand Standard
MBIE	Ministry of Building, Innovation and Employment

DEFINITIONS

Along	Along the ridge line (Longitudinal)
Across	Across the ridge line (Transverse)

NZS 1170.0 - DESIGN ACTIONS - PART 0: GENERAL PRINCIPALS

REF

3.3 IMPORTANCE LEVEL

T 3.1 Structure designed for importance level **2**

T3.1 Consequence of failure ORDINARY

T3.1 Description: Medium consequence for loss of human life, or considerable economic, social or environmental consequences

T3.1 Comment: Normal structures and structures not falling into other levels

T3.2 Importance level desciption: Normal structures and structures not in other importance levels

3.4 ANNUAL PROBABLITY OF EXCEEDENCE

T3.3 Design working life **< 6 months**

Design annual probability of exceedence

Wind	ULS	1/100
Snow	ULS	1/50
Earthquake	ULS	1/100
SLS1	Service	1/25
SLS2	Service	-

3.4.2 *SLS1 — the structure and the non-structural components do not require repair after the*

3.4.2 *SLS1 earthquake, snow or wind event*

SLS2—the structure maintains operational continuity after the SLS2 earthquake (Importance L4 only)

NZS 1170.1 - PART 1: PERMANENT, IMPOSED AND OTHER LOADS

REF

4.2 COMBINATION FACTORS

G	Dead Loads (Permanent)
Q	Live Loads (Imposed)
ψ	load factor

4.2.2 Design Combinations for Strength

1.35G	Dominate Permernate Action
1.2G + 1.5Q	Permanent and Imposed Action
$1.2G + W_u$ (Down) + $\psi_c Q$	Permanent , Wind and Imposed Action
$0.9G + W_u$ (Up)	Permanent , Wind Reversal
$1.2G + S_u + \psi_c Q$	Permanent, Snow and Imposed
$1.0G + E_u + \psi_c Q$	Earthquake ULS

T4.1

ψ_c =	0.4 for roofs
	0.6 storage
S_u =	0.9kPa Minimum for Christchurch

4.3 Design Combinations for Servicabiltiy

$G + \psi_c Q$	Permanent and Imposed Action
E_s	Earthuquake SLS1

S5 METHOD OF ANALYSIS

STATIC

ELASTIC

NZS 1170.1 - PART 1: PERMANENT, IMPOSED AND OTHER LOADS
NZS 3604 - TIMBER FRAMED BUILDINGS - DESIGN LOADING

REF

3604 **Live Loading (Q)**

T1.2	Dwelling Floor Live Load	1.5	kPa	A1
	Dwelling Balconies/Decks	2.0	kPa	A1
	Dwelling Bathrooms	2.0	kPa	A2
	Communal Kitchens	3.0	kPa	A2
	Offices and Work Areas	3.0	kPa	B
	Dwelling Roof Load	0.25	kPa	

Dead Loading (G) - including timber framing

Branz	Light Roof	0.40	kPa		
3604	Heavy Roof	0.85	kPa		
	Light Wall	1.20	kN/m	H=	2.4
	Medium Wall	2.80	kN/m	H=	2.4
	Heavy Wall	6.40	kN/m	H=	2.4
	190 Block Wall	8.40	kN/m	H=	2.4
	190 Block Wall	11.40	kN/m	H=	2.4
	Timber Subfloor	0.40	kPa		
	Suspended Timber Floor	0.40	kPa		

Material Densities

$\mu_{Concrete}$	25.0	kN/m^3
μ_{Timber}	6.0	kN/m^3
μ_{Steel}	72.5	kN/m^3

NZS 3604 - TIMBER FRAMED BUILDINGS - DURABILITY

REF

3604 **Exposure Zone for Chrisrchurch** C

F4.2



NOTE – Zone D includes all offshore islands, the area within 500 m of the coastline of New Zealand, and those areas shown in white. The map shall be read in conjunction with 4.2.2.

T4.1

ZONES B AND C	Treated timber pile connections more than 600 mm from the ground and all subfloor connections	Subfloors vented 7000 mm² or less	SHELTERED[4]	Hot-dipped galvanized steel[2]
		Subfloors vented more than 7000 mm²	EXPOSED	Type 304 stainless steel[5]
	Treated timber pile connections within 600 mm of the ground	SHELTERED[4] AND EXPOSED		Type 304 stainless steel[5]
	All other structural fixings, except fabricated brackets[3]	SHELTERED[4]		Hot-dipped galvanized steel[2]
		EXPOSED		Type 304 stainless steel[5]
ZONE D	All structural fixings	SHELTERED[4] AND EXPOSED		Type 304 stainless steel[5]

SPECIFIC ENGINEERING DESIGN - RE-LEVELLING PAD
MBIE - Mechanical Re-levelling of Concrete Perimeter Beam (Type B1/B2)

Roof Load width	**6.5**	m	
First Floor Load Width	**0.0**	m	
` Ground Floor Load With	**4.5**	m	(Worst Case)

Dead Loads		**Mass**	**Load**
Roof	**Light**	0.40	2.60
First Floor Wall	**Nil**	0.00	0.00
First Floor	**Nil**	0.00	0.00
Ground Floor Wall	**Heavy**	2.20	5.28
Ground Floor	**Heavy**	2.50	11.25
Foundation	**Heavy**	-	4.50
		Total	**23.63**
Live Load			
Roof	**Ped Traffic**	0.25	1.63
First Floor	**Nil**	0.00	0.00
Ground Floor	**Residential**	1.50	6.75
		Total	**8.38**
Load Case	G + 0.3Q		**26.14**

Max Spacing of Jack Points	2.00	m	
Design Lift Load	52.29	kN	
Min Pad Size	**0.6 x 0.6**	m	
Min Pad Area	0.36	m^2	
Max Bearing Load	145.24	kPa	
Min Soil UBC	**200**	kPa	
Design Soil SBC	100	kPa	L.o.S = 2
Capacity Ratio	**0.7**		

NAME: 16 Hemingway Place **SHEET No.** 8
DATE: 09.03.2017 **REF: 170057**

SPECIFIC ENGINEERING DESIGN - RE-LEVELLING PAD
MBIE - Mechanical Re-levelling of Conc Edge Beam (Type C1/C2)

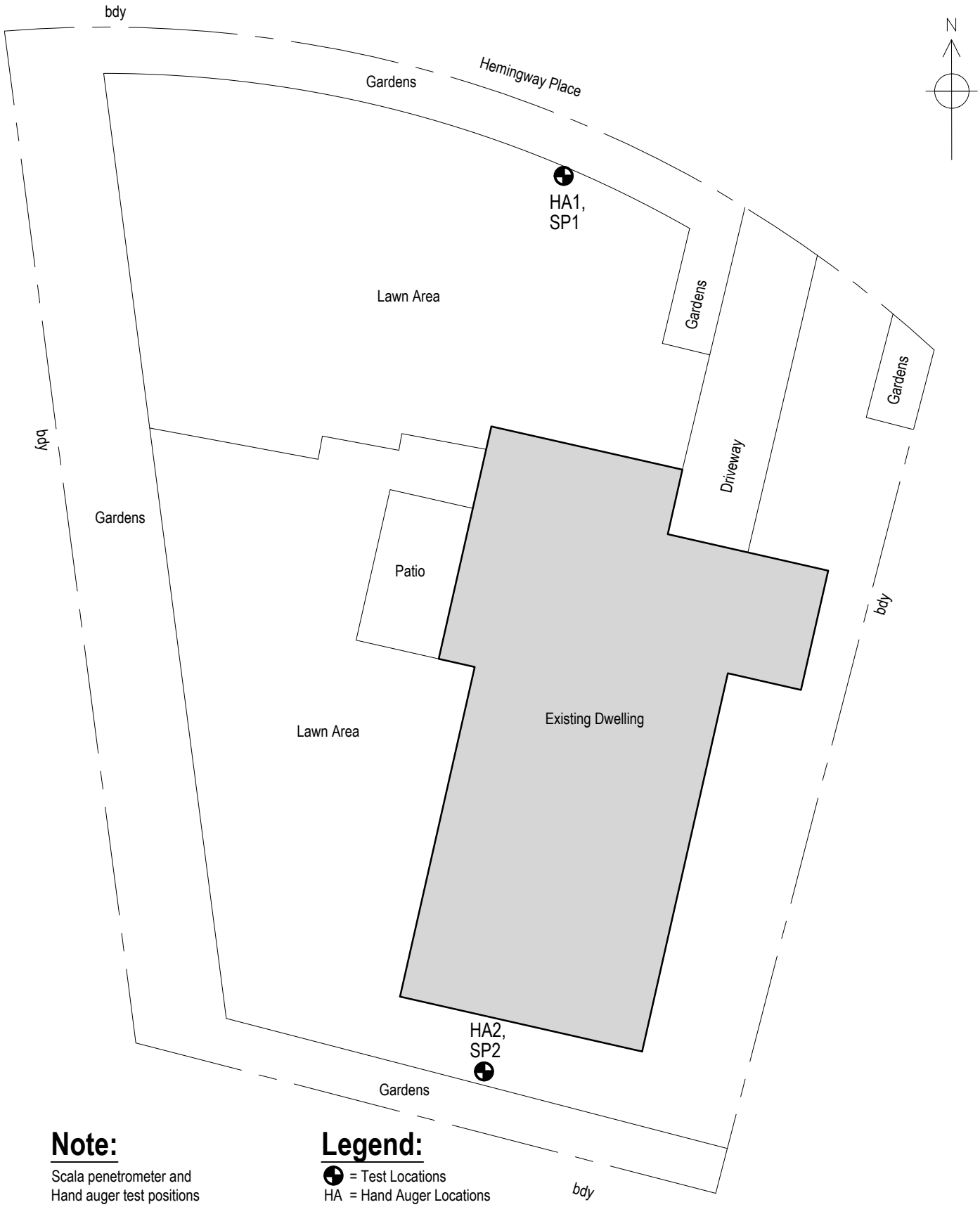
Beam Type	**Slab Edge Thickening**		
Assumed Size	450Dx250W		
Assumed No. Reo Bars	**2**		
Assumed Size of Reo Bars	**D16**	402.1	mm^2
Assumed grade of Reo	**300**		
Assumed concrete strength	**17.5**		

For conservative design assumed simply supported conditions

Design Load	26.14	kN/m	
Design Span	2.00	m	
Design Moment	13.07	kN.m	$wL^2/8$
Design Shear	52.3	kN	wL
Beam Check 1 - Moment	35.63	kN.m	$\phi Mb = \phi As\ fy\ (d-a/2)$
Capacity Ratio	**2.7**		
Beam Check 2 - Shear	33.1	kN	$0.08\sqrt{f_c'}$ ..
Capacity Ratio	**0.6**		NZS 3101 EQ 9-5

NAME: 16 Hemingway Place **SHEET No.**
DATE: 09.03.2017 **REF: 170057**

KIRK | ROBERTS
CONSULTING ENGINEERS LTD



Note:

Scala penetrometer and Hand auger test positions and boundaries are indicative only

Legend:

= Test Locations
HA = Hand Auger Locations
SP = Scala Penetrometer Locations
Bdy = Boundary Locations

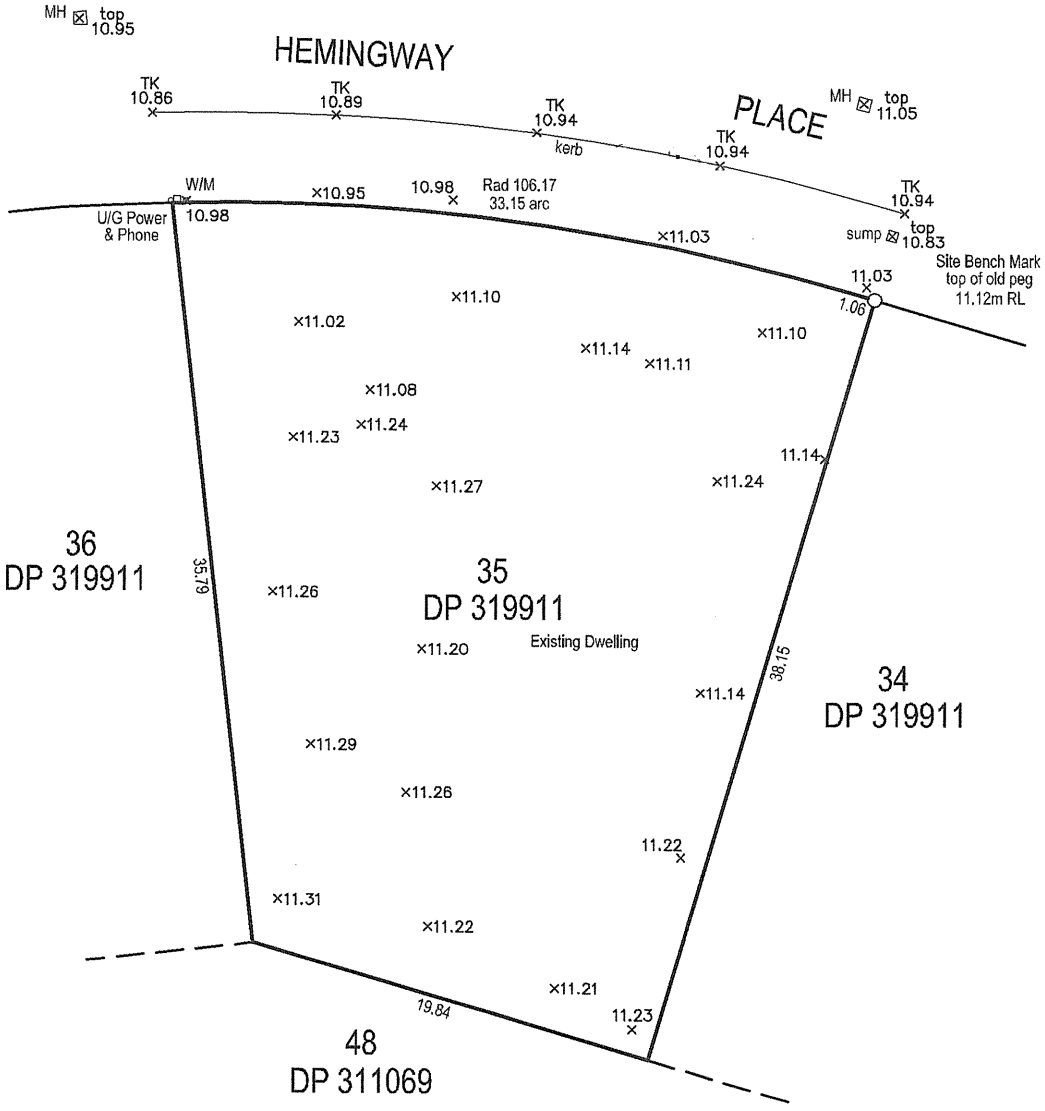
DO NOT SCALE - IF IN DOUBT, ASK
ORIGINAL SIZE A4
CAD REF :

SCALES :	1:200
	DATE
DESIGNED	
DRAWN	05.07.12 - GJT
CHECKED	
APPROVED	

RUSSEL WENN AND JULIE COLLIER
16 HEMINGWAY PLACE

SOIL TEST LOCATIONS

Job No.	Sheet No.	Rev.
121195	SK1	1



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4 Meadow Street, PO Box 5558, Papanui, Christchurch
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F 03 352 5527
TOLL FREE 0508 787 887
AMBERLEY 03 314 9200
ASHBURTON 03 307 7021
DARFIELD 03 318 8151

Levels at No.16 Hemingway Place, Spencerville

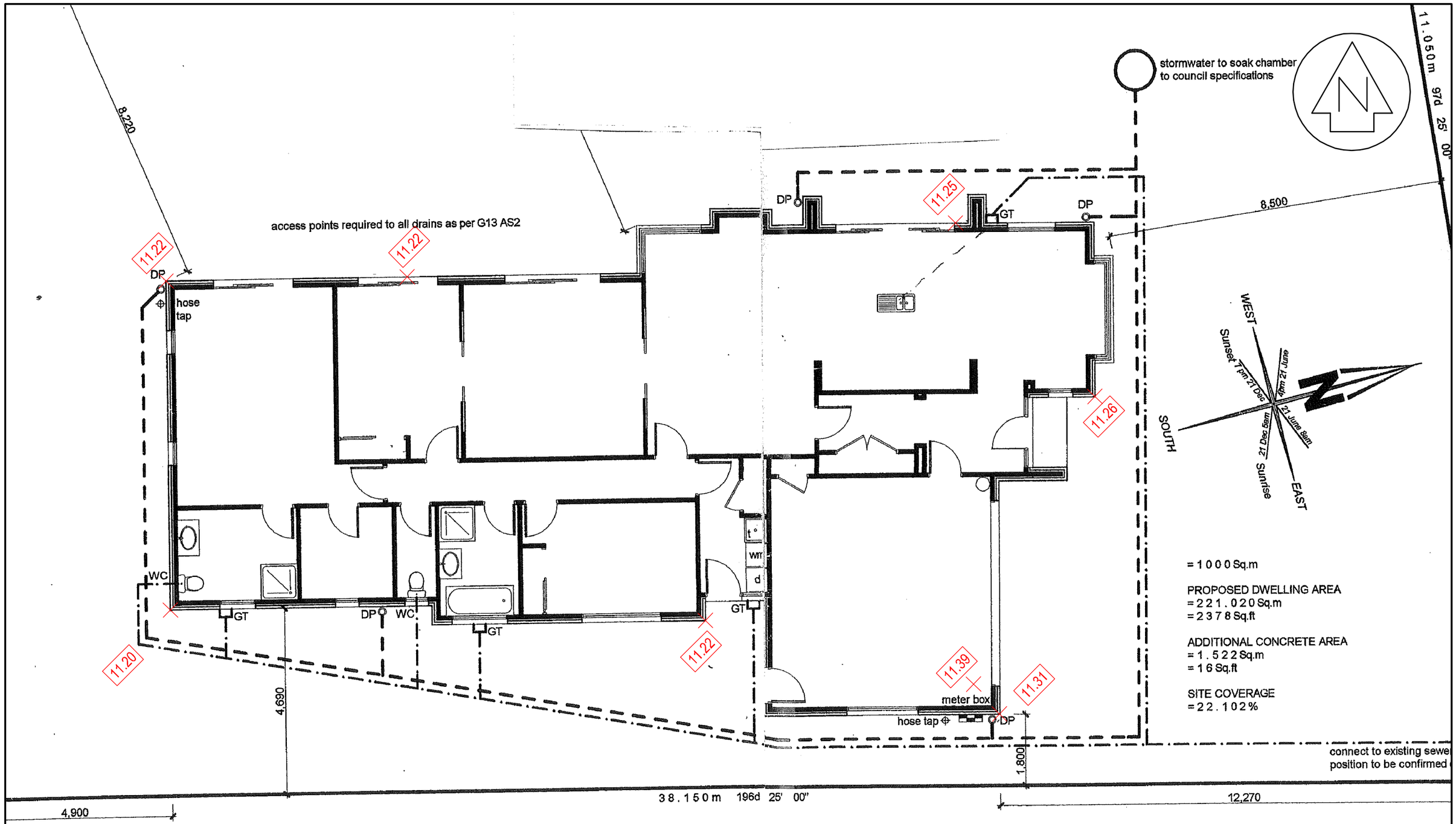
Russell Wenn & Julie Collier

Rev	Date	By	Amendments
A	03/08/12	SRS	Levels

Note:
Levels are in terms of CCC Datum
BM EHDB 11.31m RL

DATE	SHEET	REV
August 2012	1 of 1	A
SCALES	JOB REF	
1 : 250 (A3)	10791	

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Peter Ray Homes

NOTE

1. All work shall comply with NZS 3604:1999
2. All windows and doors to comply with NZS 4211:1985
3. Glazing to comply with NZS 4223:1985 & Pt 3 1993
4. Contractor must verify all dimensions on site prior to

Rev No.	Date	Amendment
A	03.11.03	remove gas fire, move gas bottles, change bay window

Drawn: A. Fahey
Date: 28.10.03
Scale:

Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title

Sheet No. 4

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Foundation Levels

16 Hemingway Place, Spencerville — Russell Wenn & Julie Collier

Rev	Date	By	Amendments
A	03/08/12	SRS	Levels

Note:
Levels are in terms of CCC Datum
BM EHDB 11.31m RL

DATE	SHEET	REV
August 2012	1 of 1	A
SCALES: Proportional	JOB REF: 10791	

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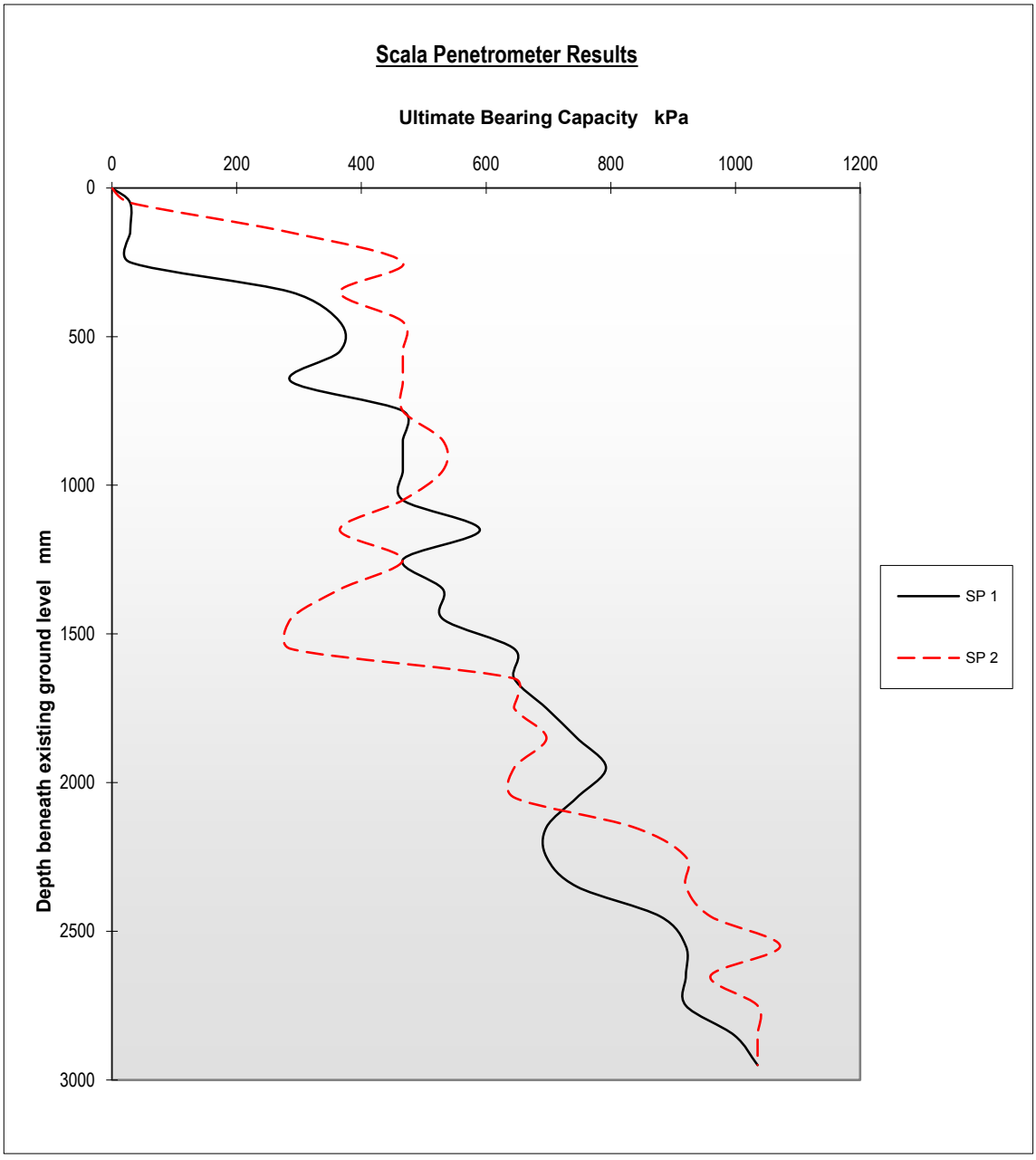
Location:				16 Hemingway Place_CPTU001
Date:				4/03/2013
Core %	Method	Moisture	Depth	Soil Description:
				Soil Type, minor components, plasticity or particle size, colour Rock Description: SUBSTANCE: Rock Type, particle size, colour, minor components DEFECTS: Type, inclination, thickness, roughness, filling.
			0m	
	CPTU		15m	CPTU001 to 15m
			END	

Location:				16 Hemingway Place_CPTU002
Date:				4/03/2013
Core %	Method	Moisture	Depth	Soil Description:
				Soil Type, minor components, plasticity or particle size, colour Rock Description: SUBSTANCE: Rock Type, particle size, colour, minor components DEFECTS: Type, inclination, thickness, roughness, filling.
			0m	
	CPTU		15m	CPTU002 to 15m
			END	

SCALA PENETROMETER RESULTS - COMBINED

JOB NUMBER 121195

Job Name:	Russell Wenn and Julie Collier
Site Address:	16 Hemingway Place
Town/City	Brooklands
Date:	4-Jun-12
Weather:	Wet
Operator:	HAV



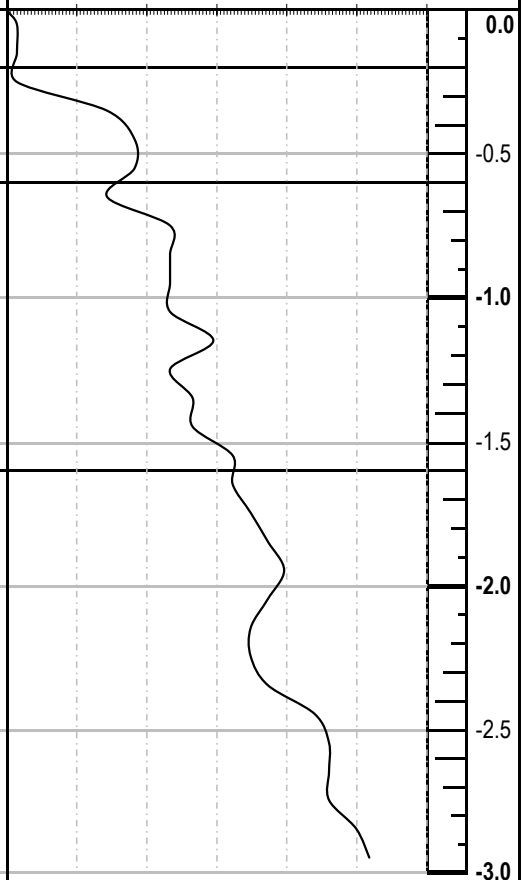
THIS REPORT IS PREPARED SOLEY FOR THE CLIENT WHO COMMISSIONED IT AND KIRK ROBERTS LTD WILL NOT ACCEPT ANY LIABILITY OF ANY KIND FOR THE USE OF ITS CONTENTS BY ANY OTHER PERSON.
BORE LOGS AND SCALA PENETROMETER TESTS ARE DISCRETE TESTS OF THE GROUND AT THE LOCATION OF THE TESTS ONLY. WHILE THEY ARE REPRESENTATIVE OF TYPICAL CONDITIONS, THEY DO NOT IDENTIFY VARIATIONS IN THE GROUND IN LOCATIONS AWAY FROM THE TEST AREAS.

SCALA PENETROMETER & HAND AUGER RESULTS

KIRK ROBERTS CONSULTING ENGINEERS LTD

		Scala Penetrometer:	**SP1**
		Hand Auger:	**HA1**
		Project No.:	**121195**
Client:	Russell Wenn and Julie Collier	**Date:**	04/06/12
Site Address:	16 Hemingway Place	**Weather:**	Wet
Town/City:	Brooklands	**Operator:**	HAV

Geological Formation:	Depth (m)	Sample Description:	Graphic:	USCS	Water Table	Undrained Shear Strength Su (kPa)
	0.0	**TOPSOIL** Brown organic silt, soft, wet.		OL		
	-0.5	**silty SAND** Light brown silty sand, fine to medium sand medium dense, wet.		SM		
	-1.0	**SAND** Brown fine sand, medium dense, wet. Becoming dark brown-grey, medium dense, saturated.		S	04/06/12 ▼	
	-1.5	Sand becoming dense.				
	-2.0	EOH at 1.6 m depth in dense saturated collapsing sand.				
	-2.5					
	-3.0					
	-3.5					
	-4.0					
	-4.5					



Scala Penetrometer and Test Bore log tests give an indication of the ground condition at the location of the tests only. While they are representative of typical conditions across the site, they do not identify variations in the ground away from the test locations.

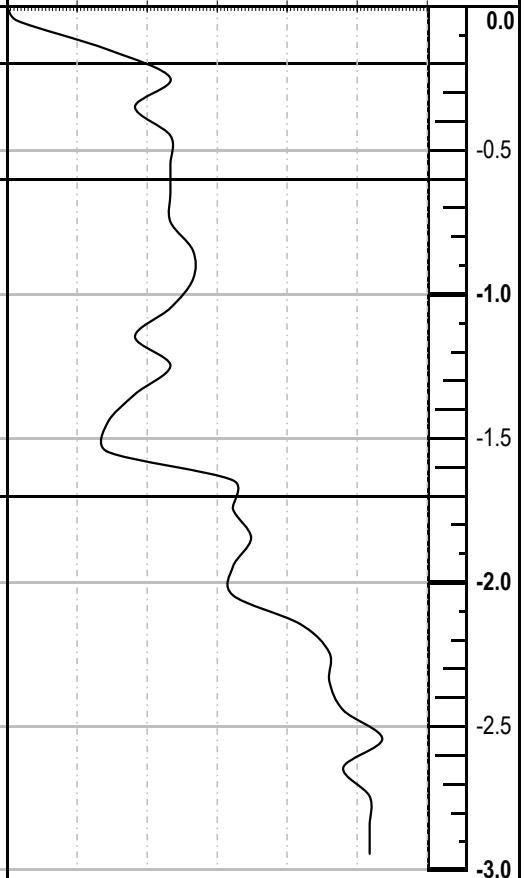
SCALA PENETROMETER & HAND AUGER RESULTS

KIRK ROBERTS CONSULTING ENGINEERS LTD

		Scala Penetrometer:	**SP2**
		Hand Auger:	**HA2**
		Project No.:	**121195**
Client:	Russell Wenn and Julie Collier	**Date:**	4 June 2012
Site Address:	16 Hemingway Place	**Weather:**	Wet
Town/City:	Brooklands	**Operator:**	HAV

Geological Formation:	Depth (m)	Sample Description:	Graphic:	USCS	Water Table	Undrained Shear Strength Su (kPa)
	0.0	**TOPSOIL** Brown organic silt, soft, wet.		OL		
	-0.5	**silty SAND** Light brown silty sand, fine to medium sand medium dense, wet		SM		
	-1.0	**SAND** Brown fine sand, medium dense, wet. Becoming dark brown-grey, medium dense, saturated.		S	04/06/12 ▼	
	-1.5	Sand becoming dense.				
	-2.0	EOH at 1.7 m depth in dense saturated collapsing sand.				
	-2.5					
	-3.0					
	-3.5					
	-4.0					
	-4.5					

Ultimate Bearing Capacity (kPa)



Scala Penetrometer and Test Bore log tests give an indication of the ground condition at the location of the tests only. While they are representative of typical conditions across the site, they do not identify variations in the ground away from the test locations.

APPENDIX B

- Project Orbit: Canterbury Geotechnical Database
    - Geological Section location plan



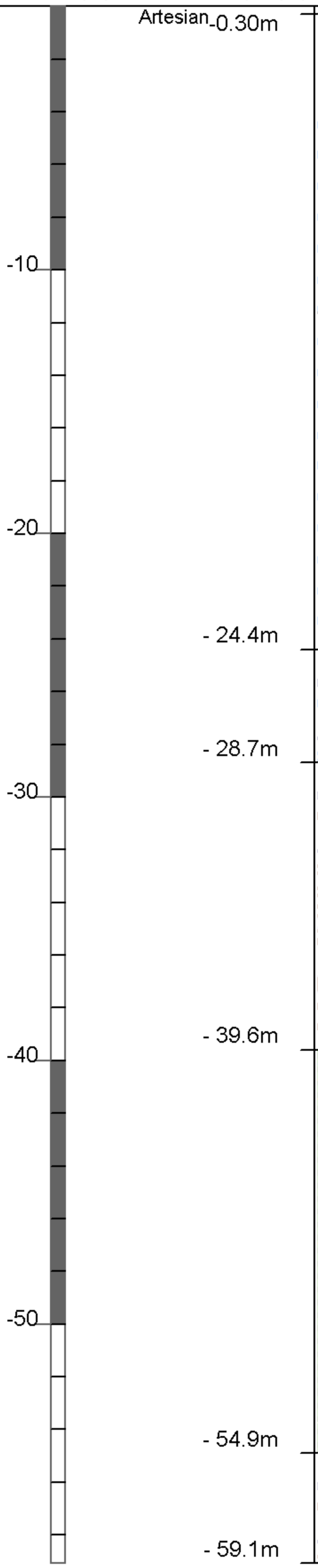
Figure 1: Geological Section location plan.

- Tonkin & Taylor Limited Geological Cross Sections
    - XS-SPE-02
    - XS-SPE-06

Borelog for well M35/1338

Gridref: M35:8527-5332 Accuracy : 3 (1=high, 5=low)
Ground Level Altitude : 2.8 +MSD
Driller : not known
Drill Method : Driven Pipe
Drill Depth : -59.09m Drill Date :

Environment Canterbury Regional Council



Scale(m)	Water Level	Depth(m)	Full Drillers Description	Formation Code
	Artesian	0.30m	Topsoil	ch
			Blue sand	
		- 24.4m	Blue shingle	ch
		- 28.7m	Brown shingle. Water level rises o.6m	ri
		- 39.6m	Yellow clay, Blue sand, peat	ri
		- 54.9m	Brown shingle. Water level rises 1.8m	br
		- 59.1m		li-1

Borelog for well M35/5965

Gridref: M35:8559-5274 Accuracy : 4 (1=high, 5=low)
Ground Level Altitude : 2 +MSD
Driller : Stevens J O
Drill Method : Cable Tool
Drill Depth : -34m Drill Date : 1/06/1988

Environment Canterbury Regional Council

Scale(m)	Water Level	Depth(m)	Full Drillers Description	Formation Code
	-1.7CalcMin		Coarse sand	
-5				
-10				
		- 12.2m	Fine Blue sand	ch
-15				
-20				
-25				
		- 25.6m	Fine gravel,shells & sand	ch
		- 28.1m		ch
		- 28.7m	Peat & pug	ch
-30			Sandy Blue gravel ,no water movement	
		- 31.6m		ri
		- 32.0m	Mixed Blue & Brown gravel.good water	ri
			Brown gravel.good water	
		- 34.0m		ri

APPENDIX C

- Liquefaction analysis results for:
  - 25 year earthquake event (PGA = 0.13)
  - 500 year earthquake event (PGA = 0.35)

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Geotechnical Engineers
221 Barbadoes Street
www.kirkroberts.co.nz

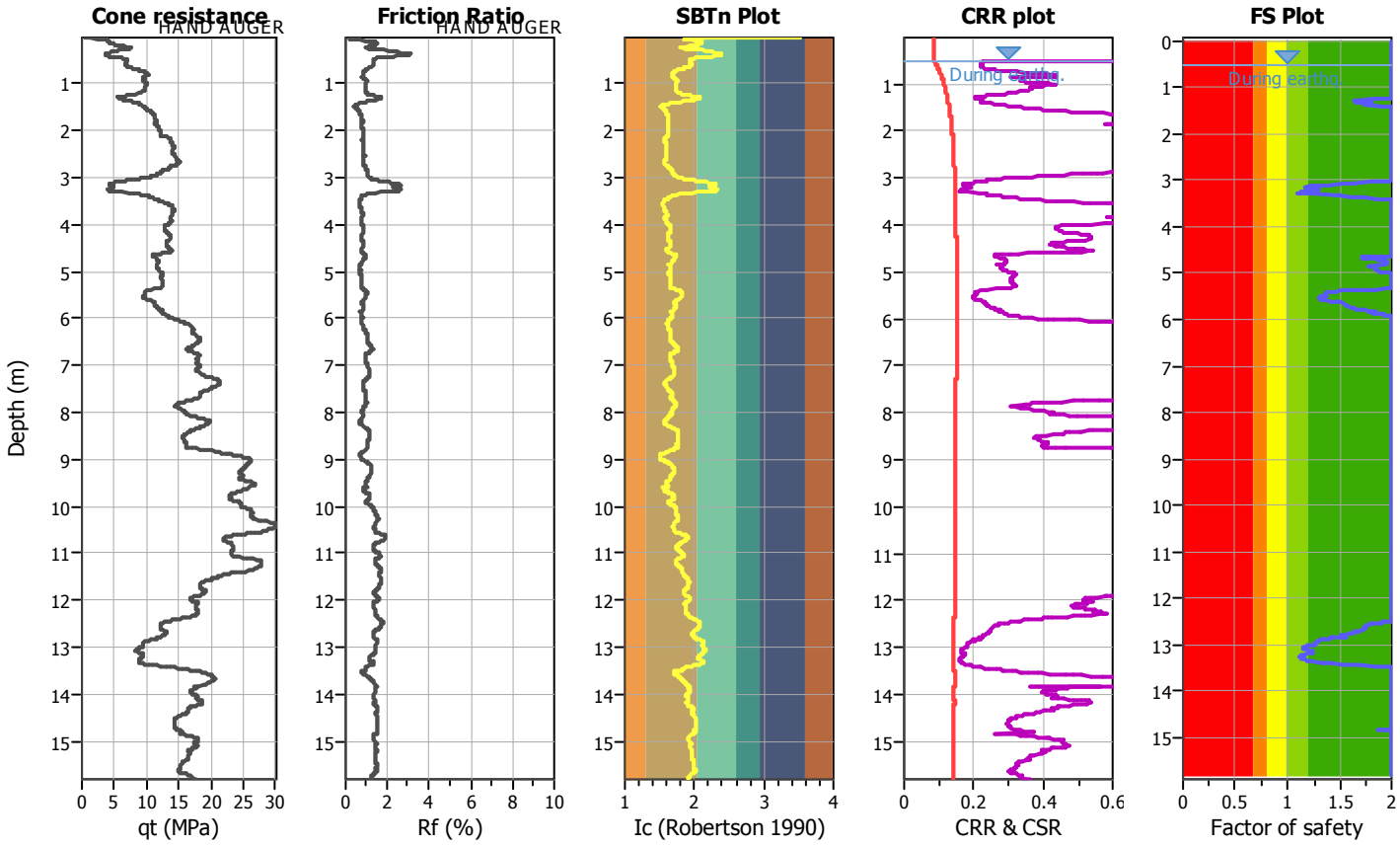
LIQUEFACTION ANALYSIS REPORT

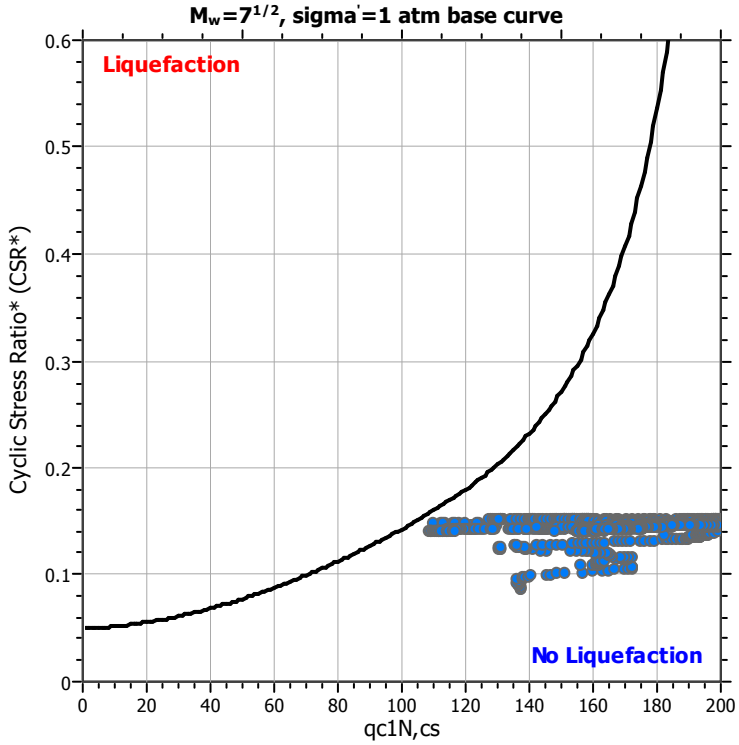
Project title : **Location :**

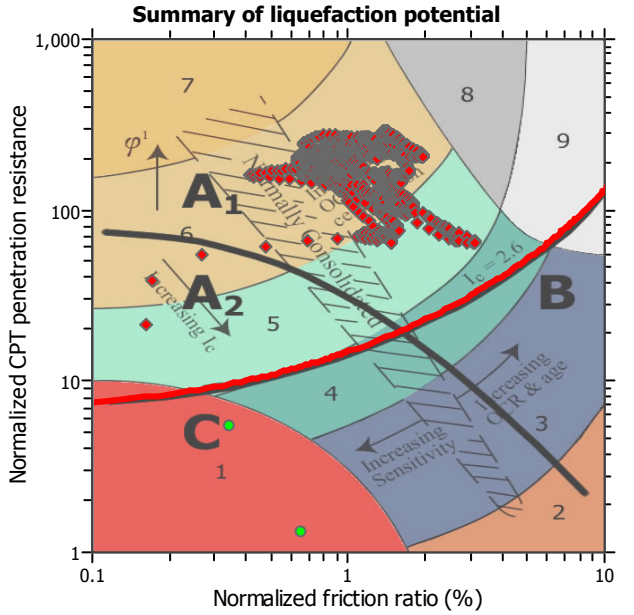
CPT file : CPTU001 SLS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

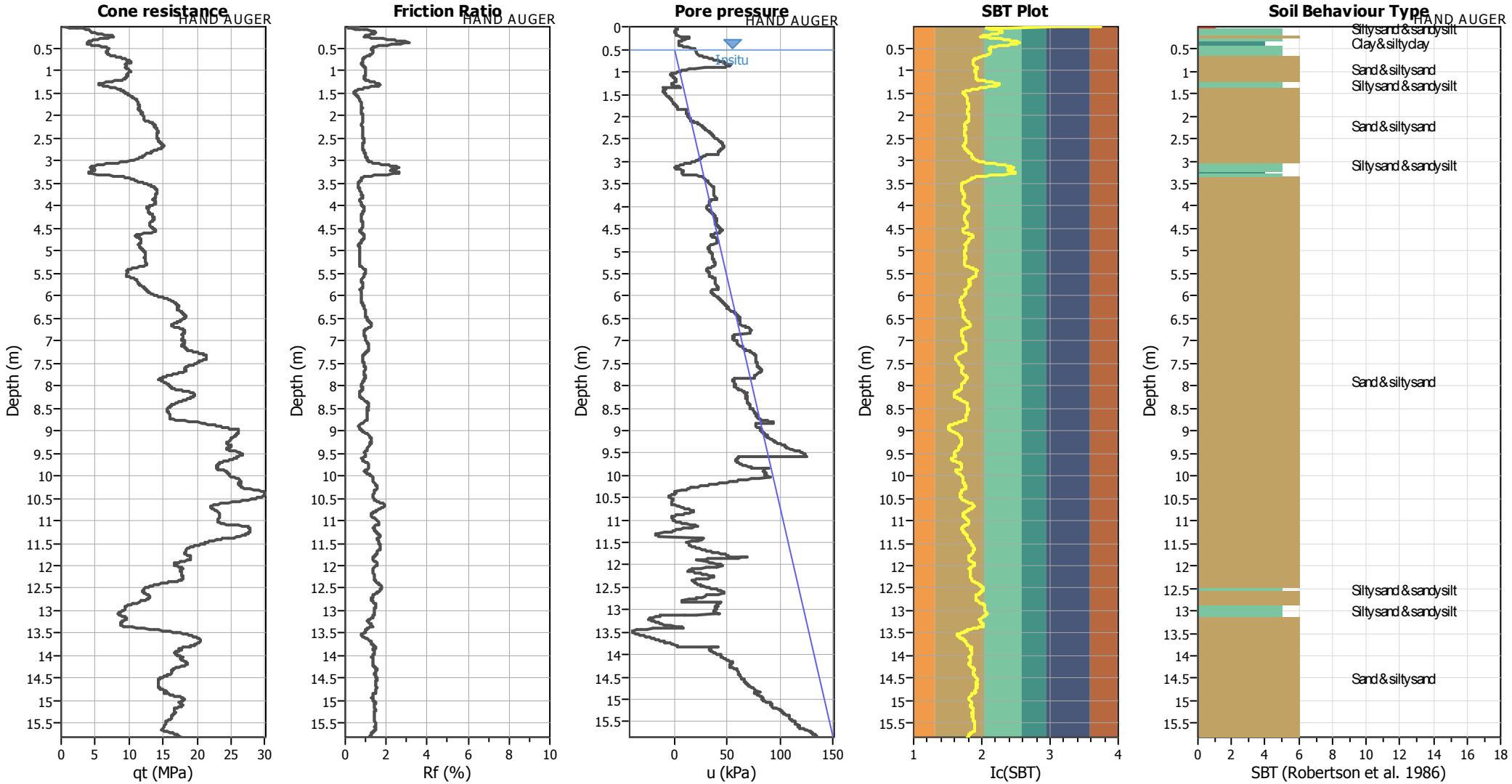






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



Input parameters and analysis data

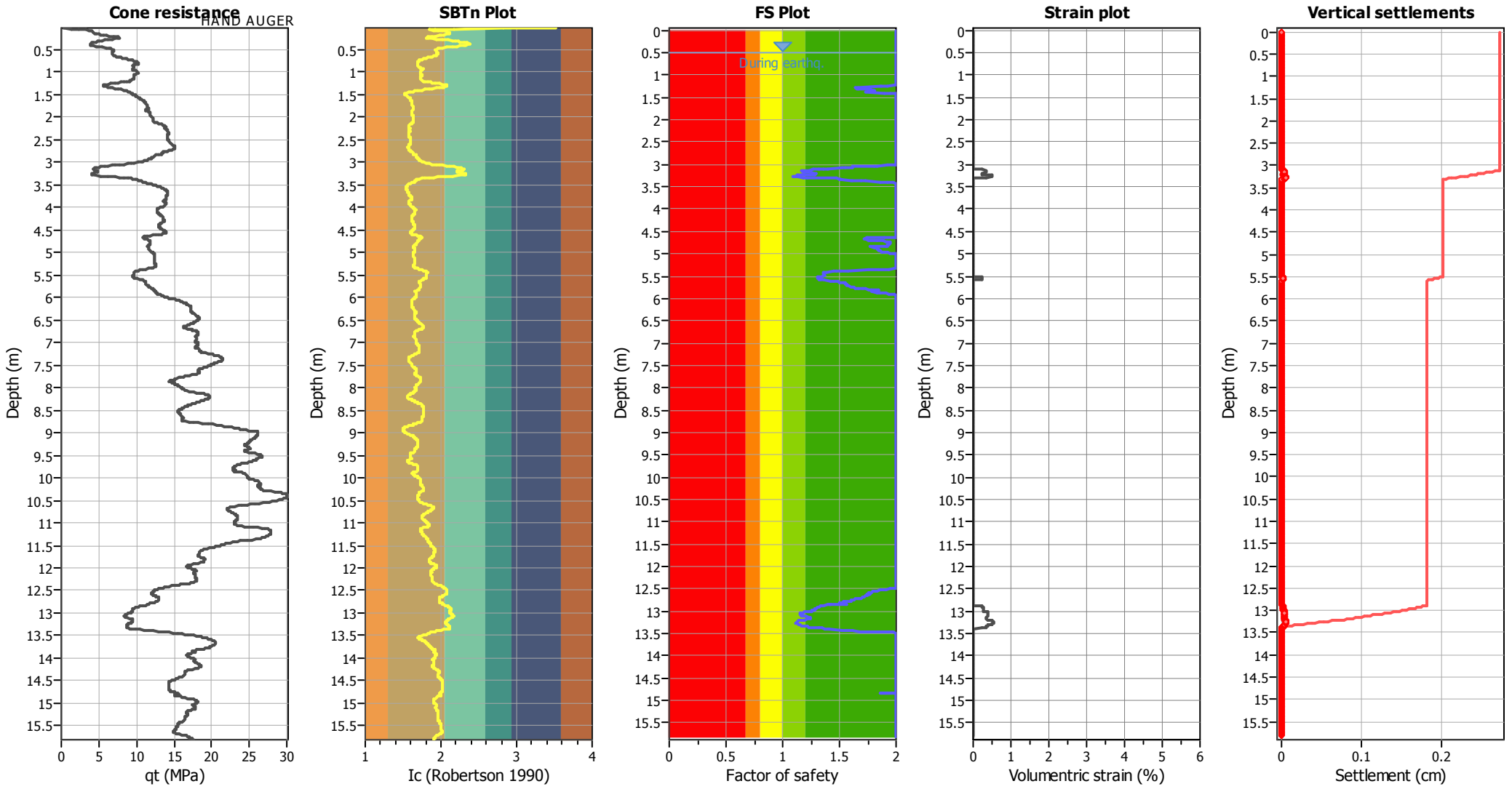
Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.13	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

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Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

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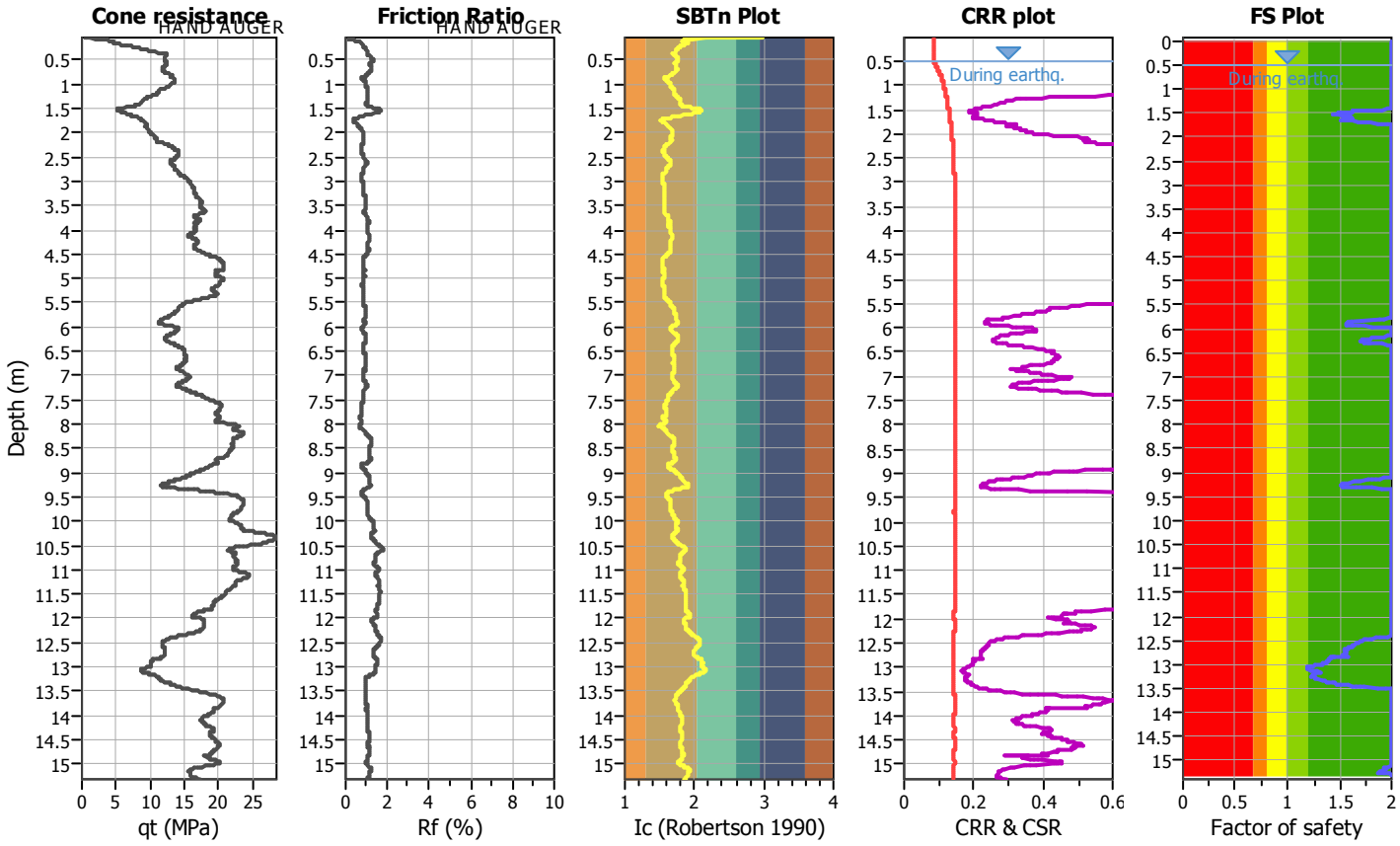
LIQUEFACTION ANALYSIS REPORT

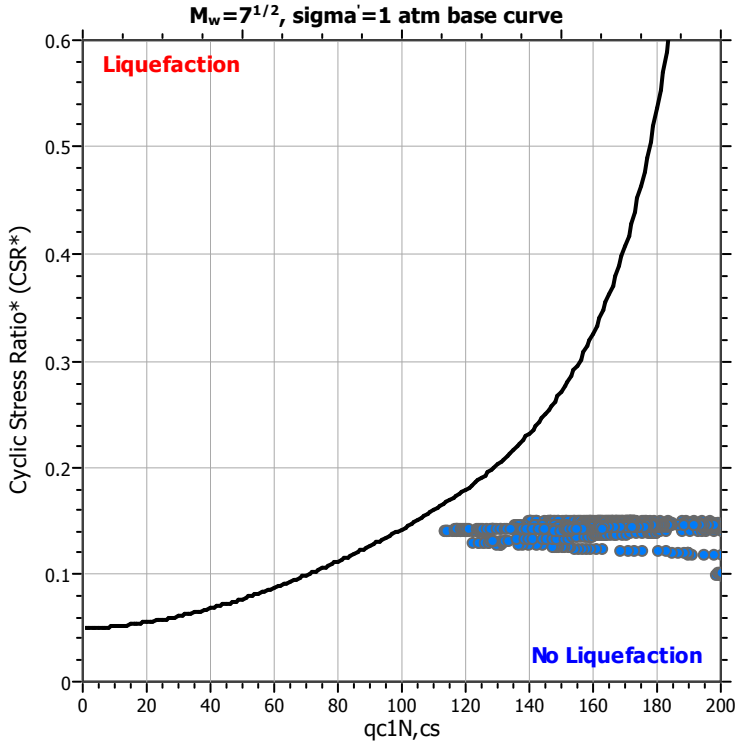
Project title : **Location :**

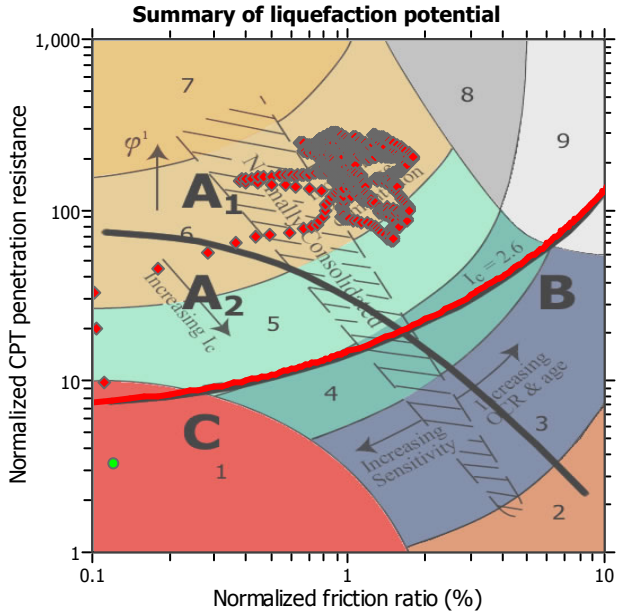
CPT file : CPTU002 SLS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

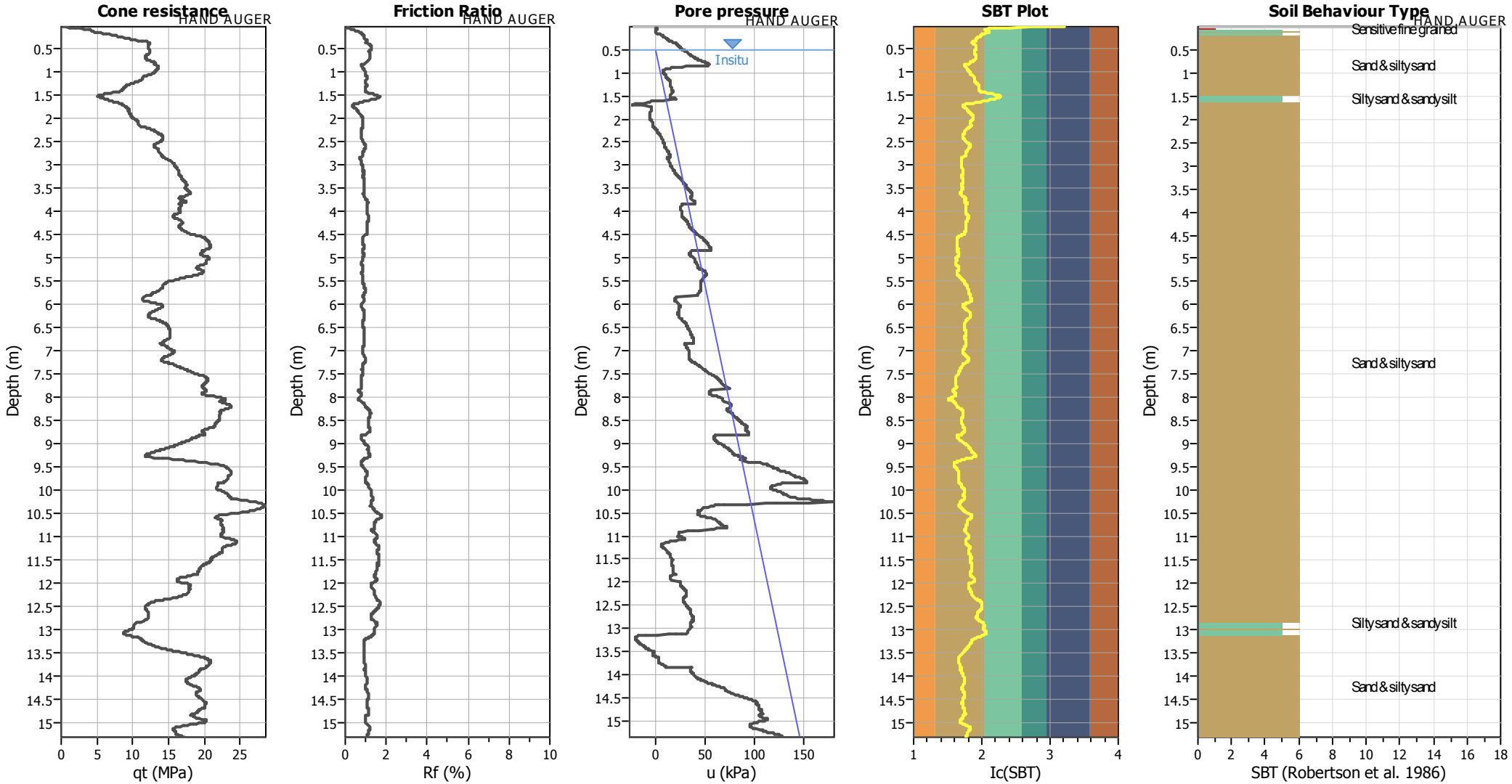






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



Input parameters and analysis data

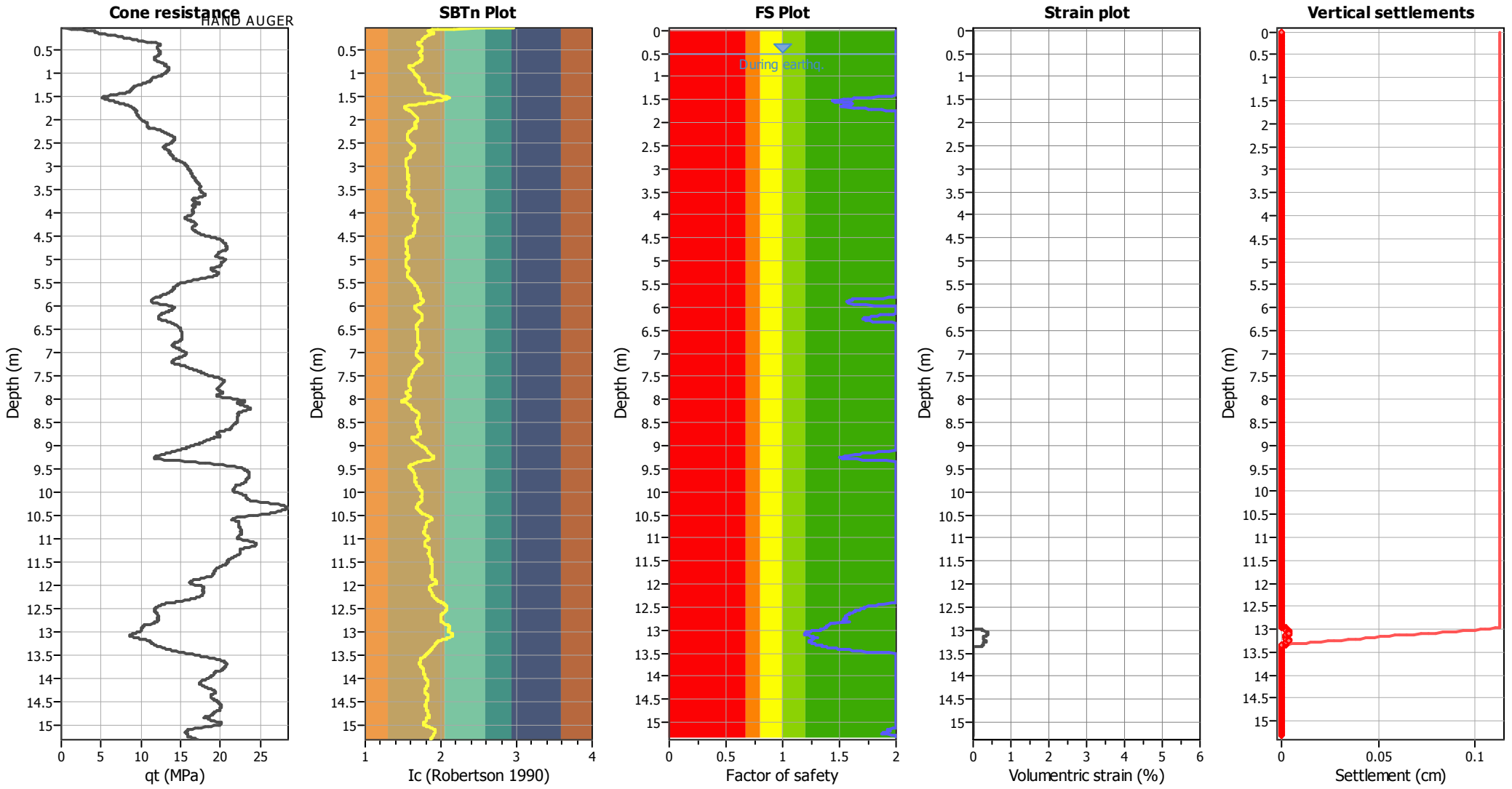
Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.13	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

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Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

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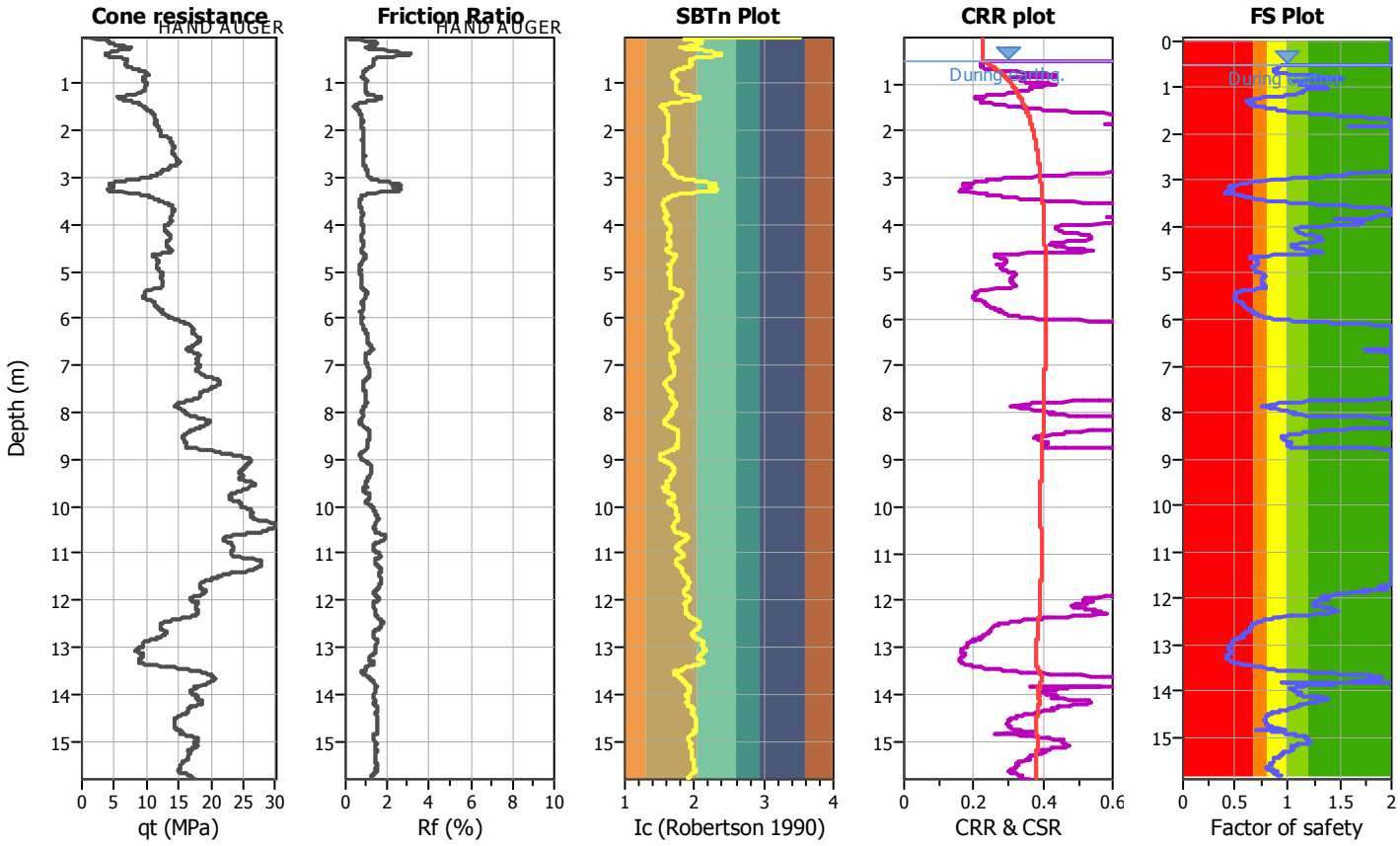
LIQUEFACTION ANALYSIS REPORT

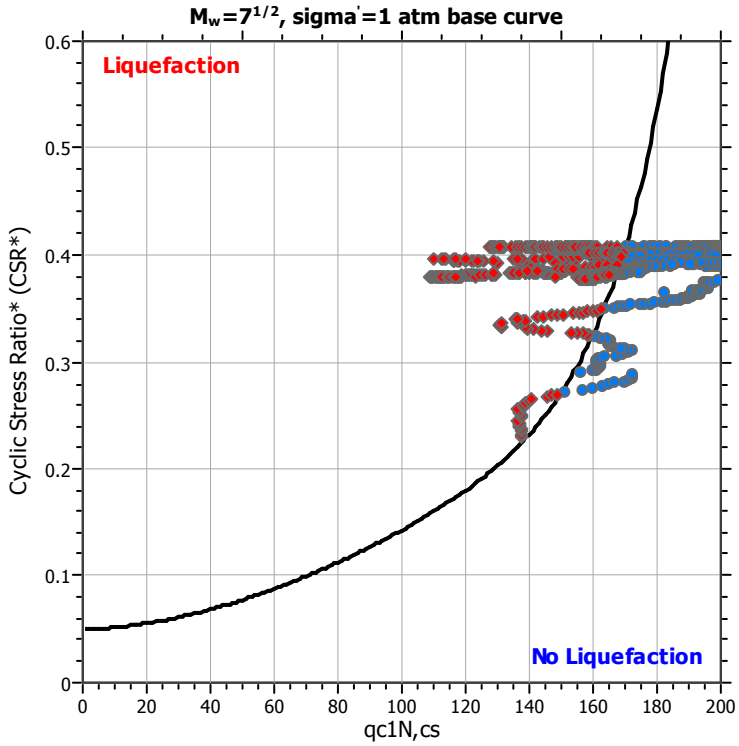
Project title : **Location :**

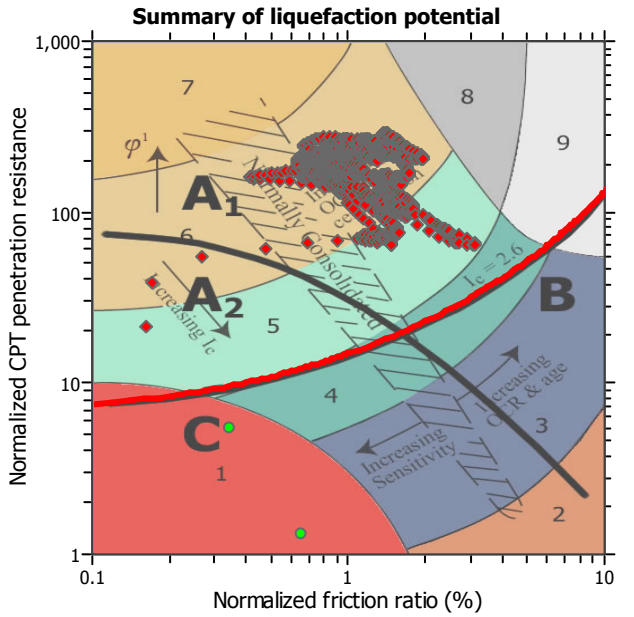
CPT file : CPTU001 ULS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.35	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		



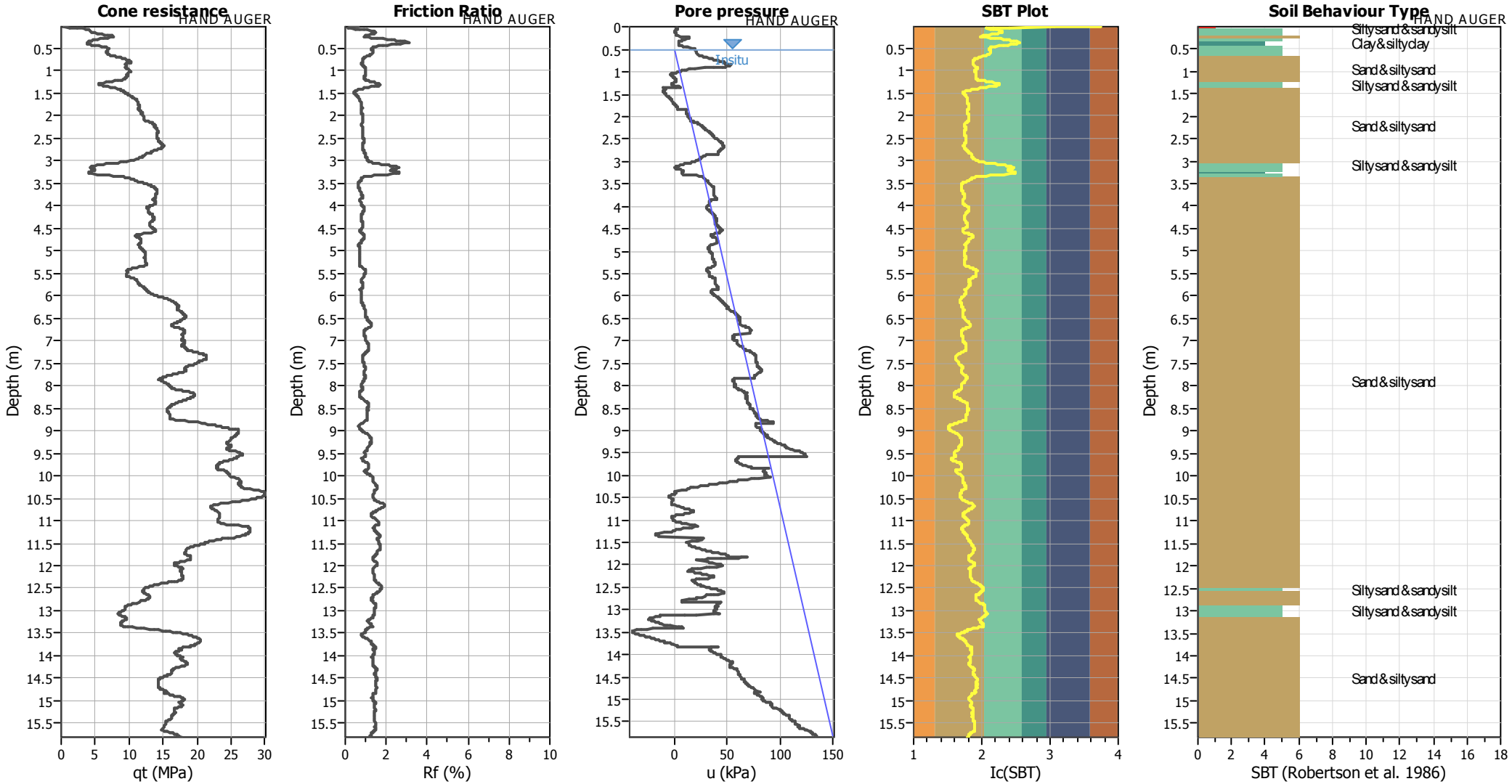




Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

Christchurch City Council I Exemption from building consent I BCN/2017/1885 I 22/03/2017 I Page 45 of 62

CPT basic interpretation plots



Input parameters and analysis data

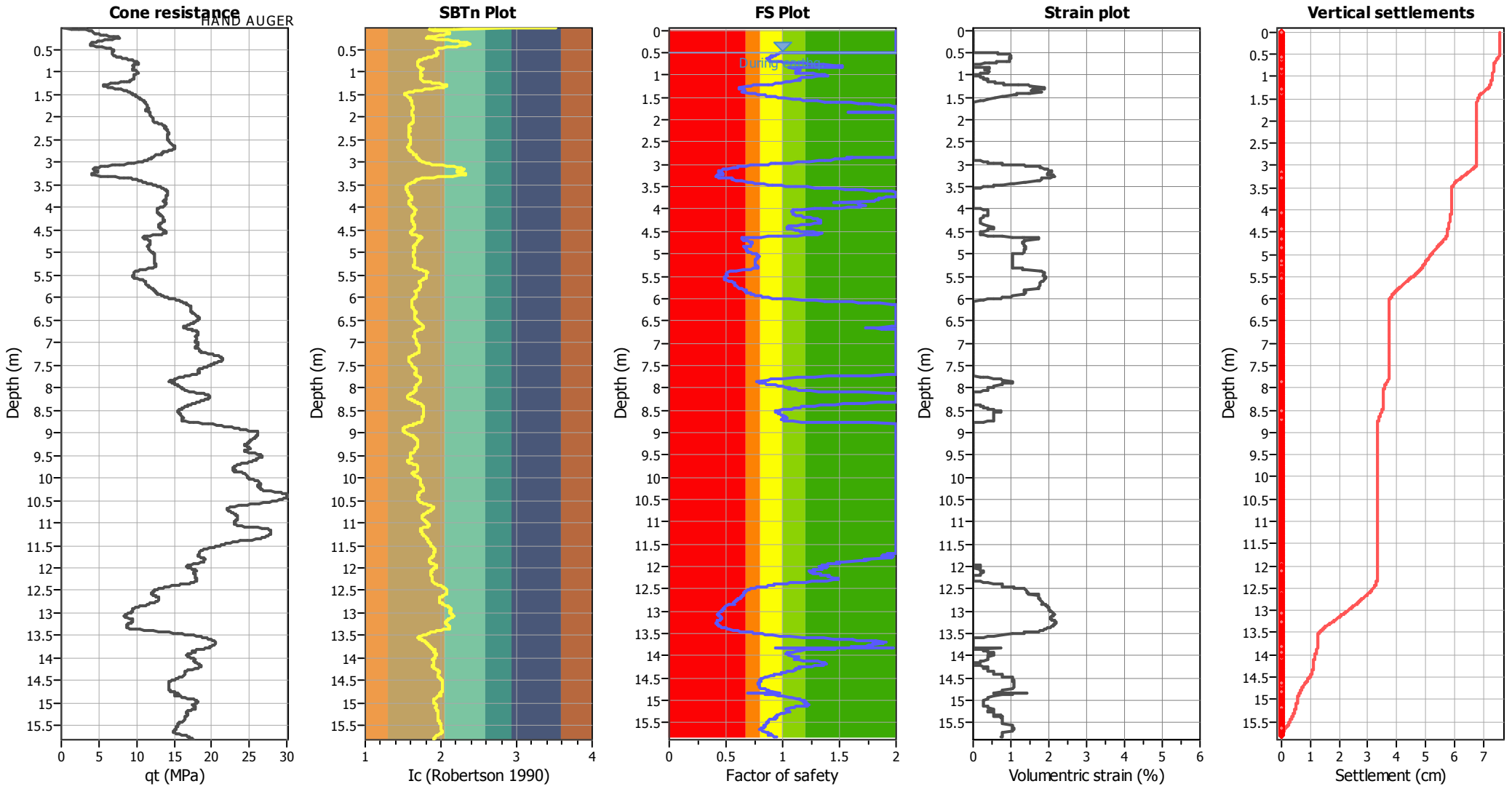
Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.35	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

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Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

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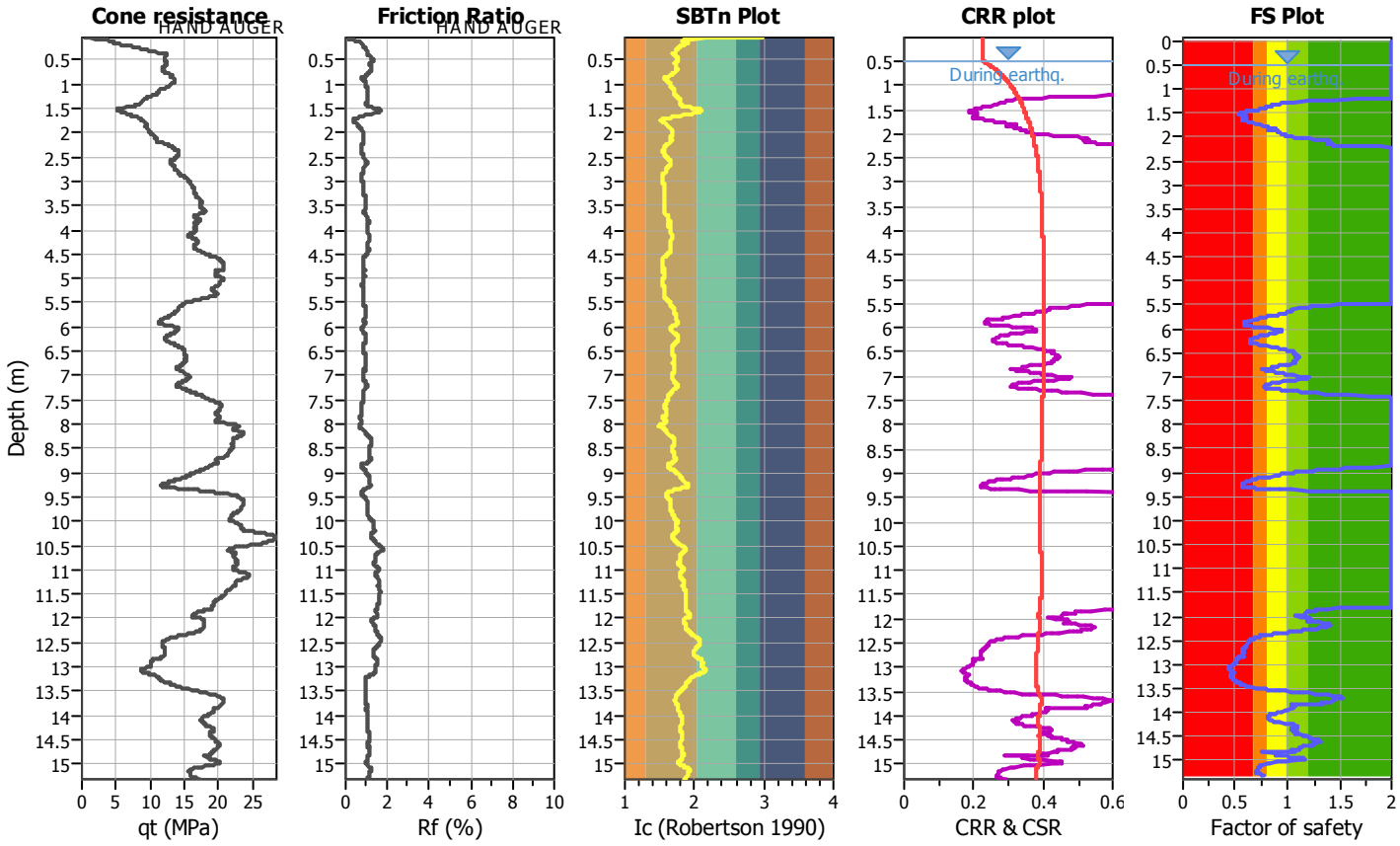
LIQUEFACTION ANALYSIS REPORT

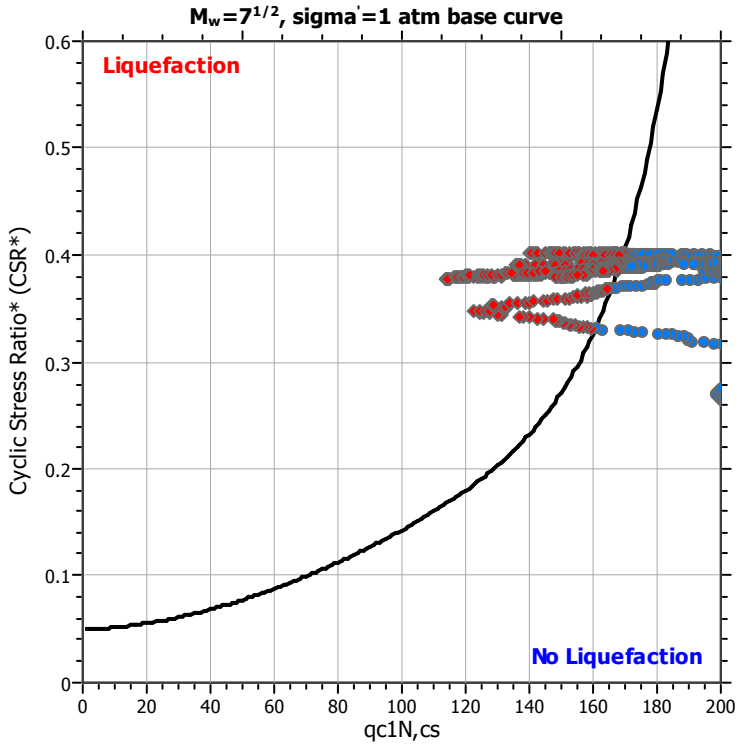
Project title : **Location :**

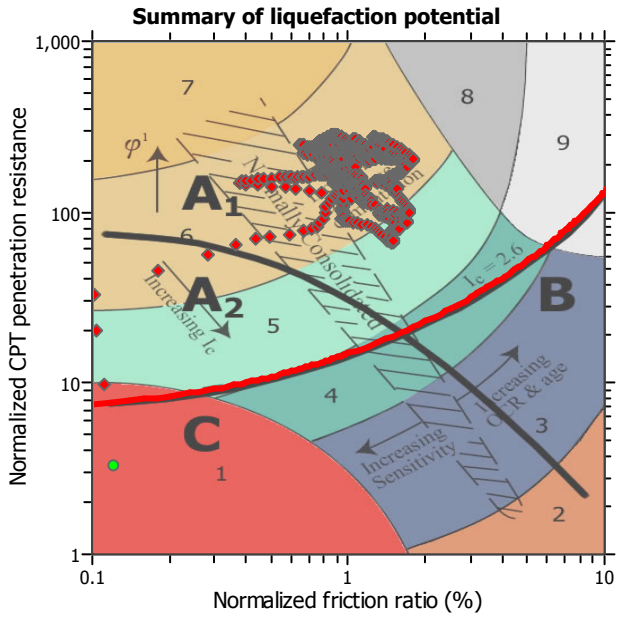
CPT file : CPTU002 ULS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.35	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		



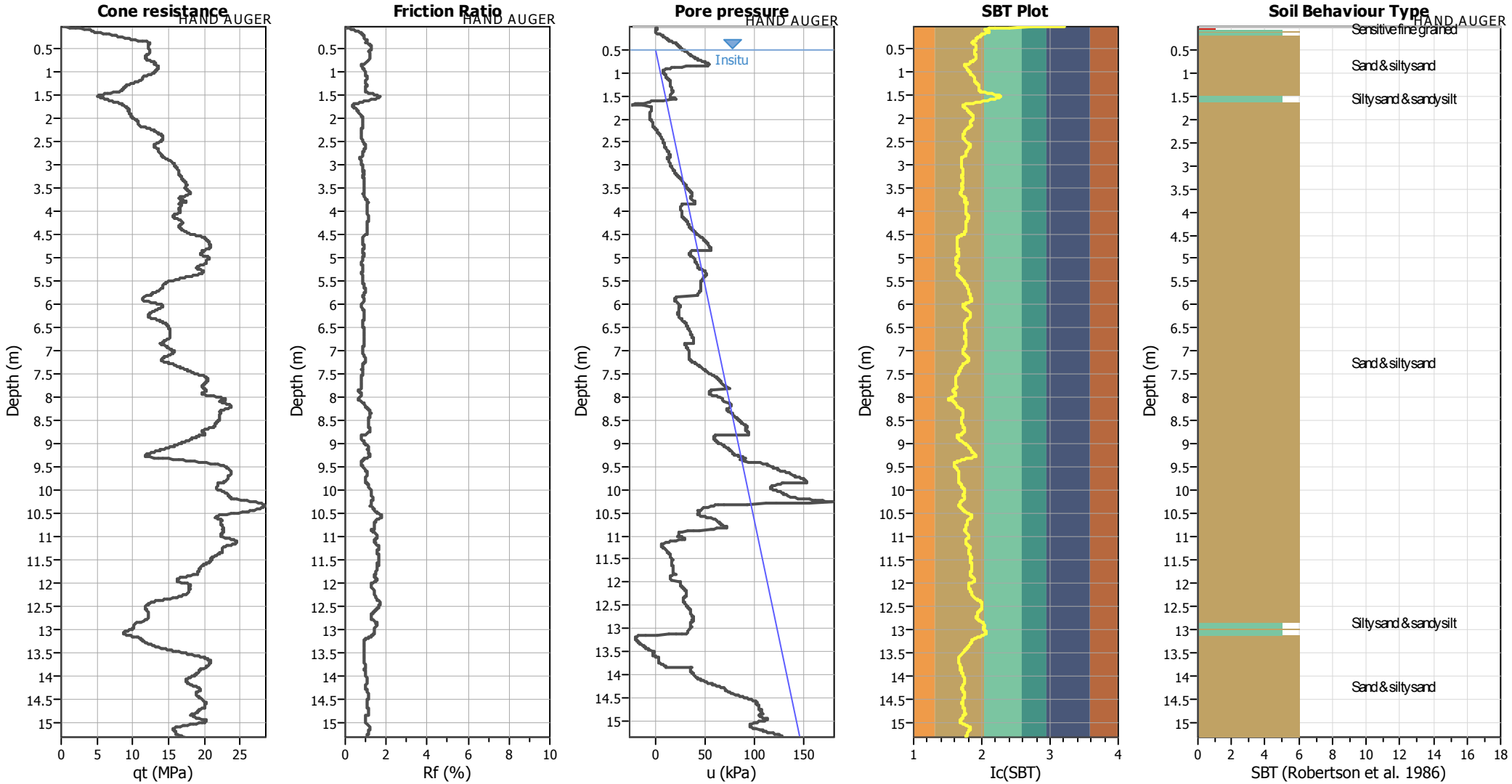




Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

Christchurch City Council I Exemption from building consent I BCN/2017/1885 I 22/03/2017 I Page 48 of 62

CPT basic interpretation plots



Input parameters and analysis data

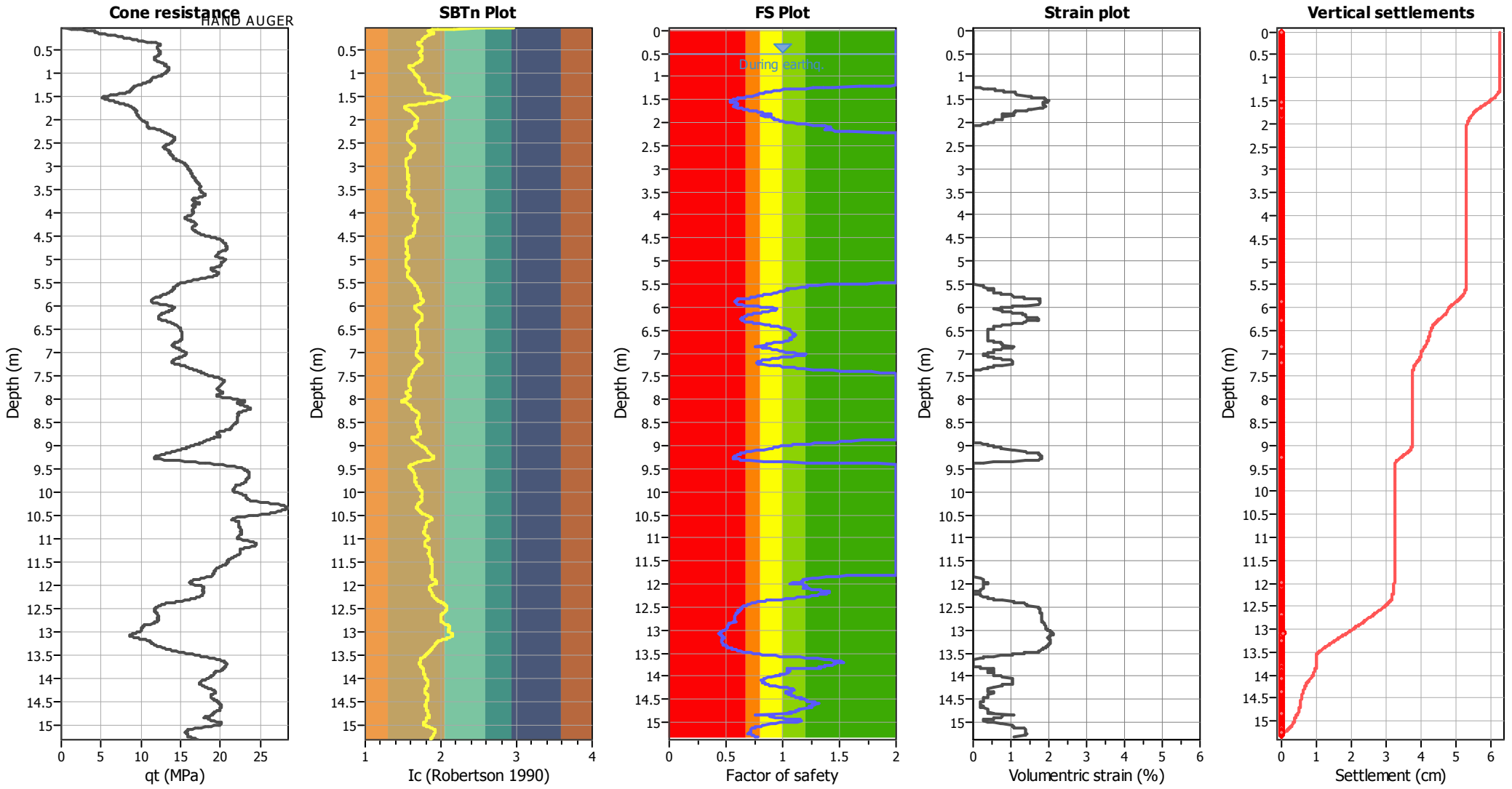
Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.35	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

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Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

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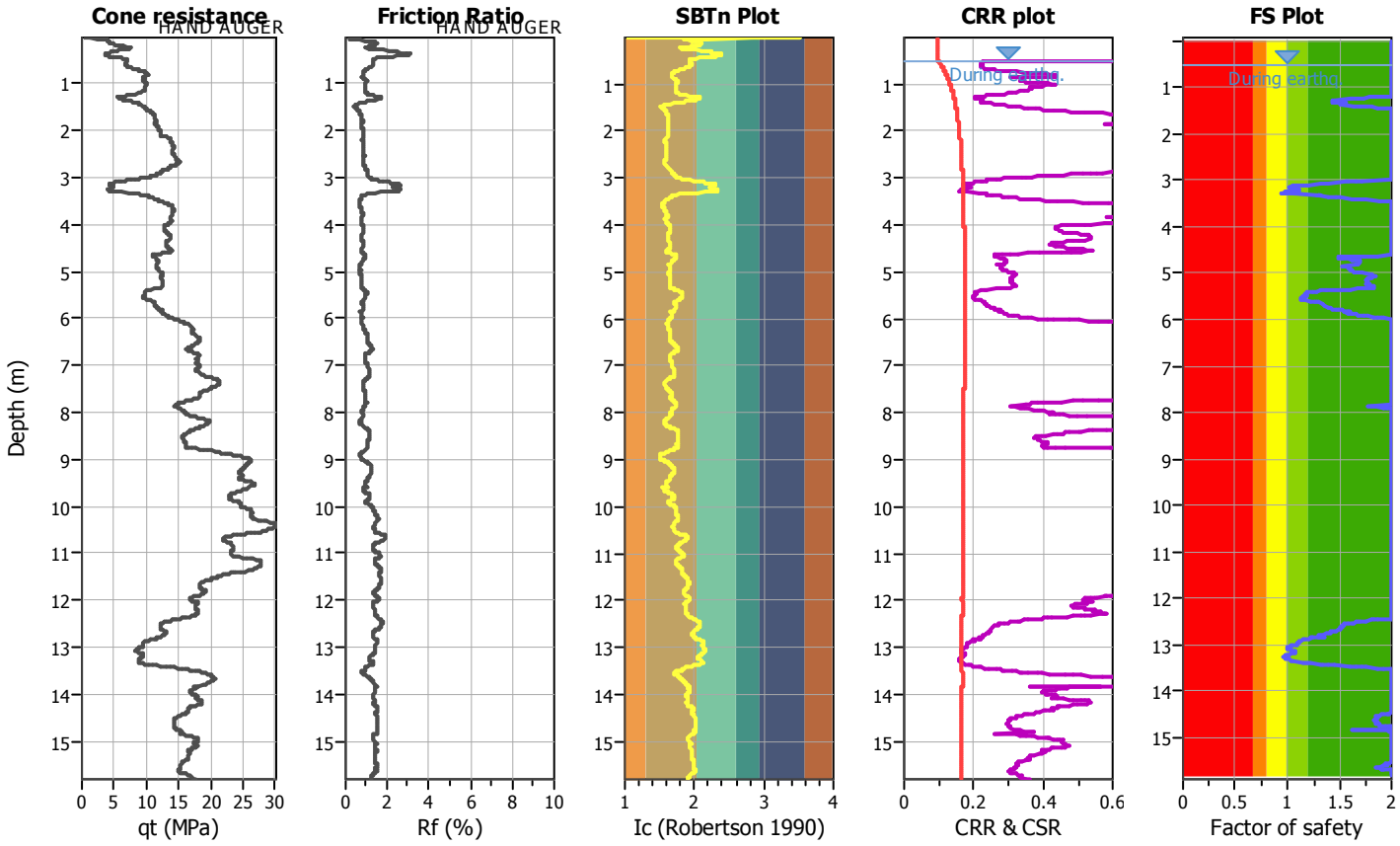
LIQUEFACTION ANALYSIS REPORT

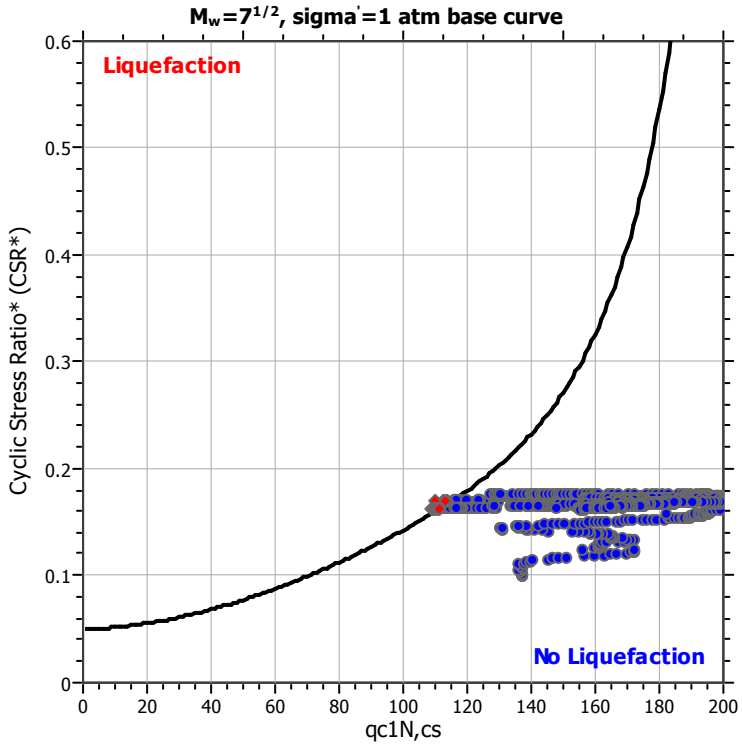
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

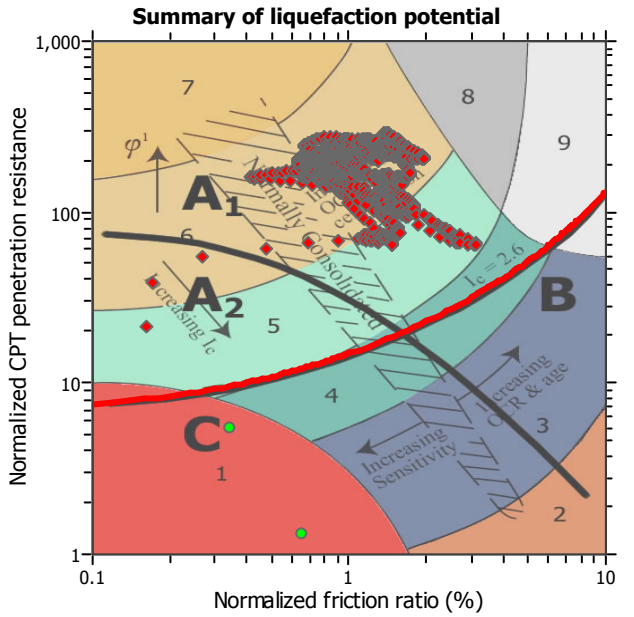
CPT file : CPTU001 SLS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_o applied:	Yes		

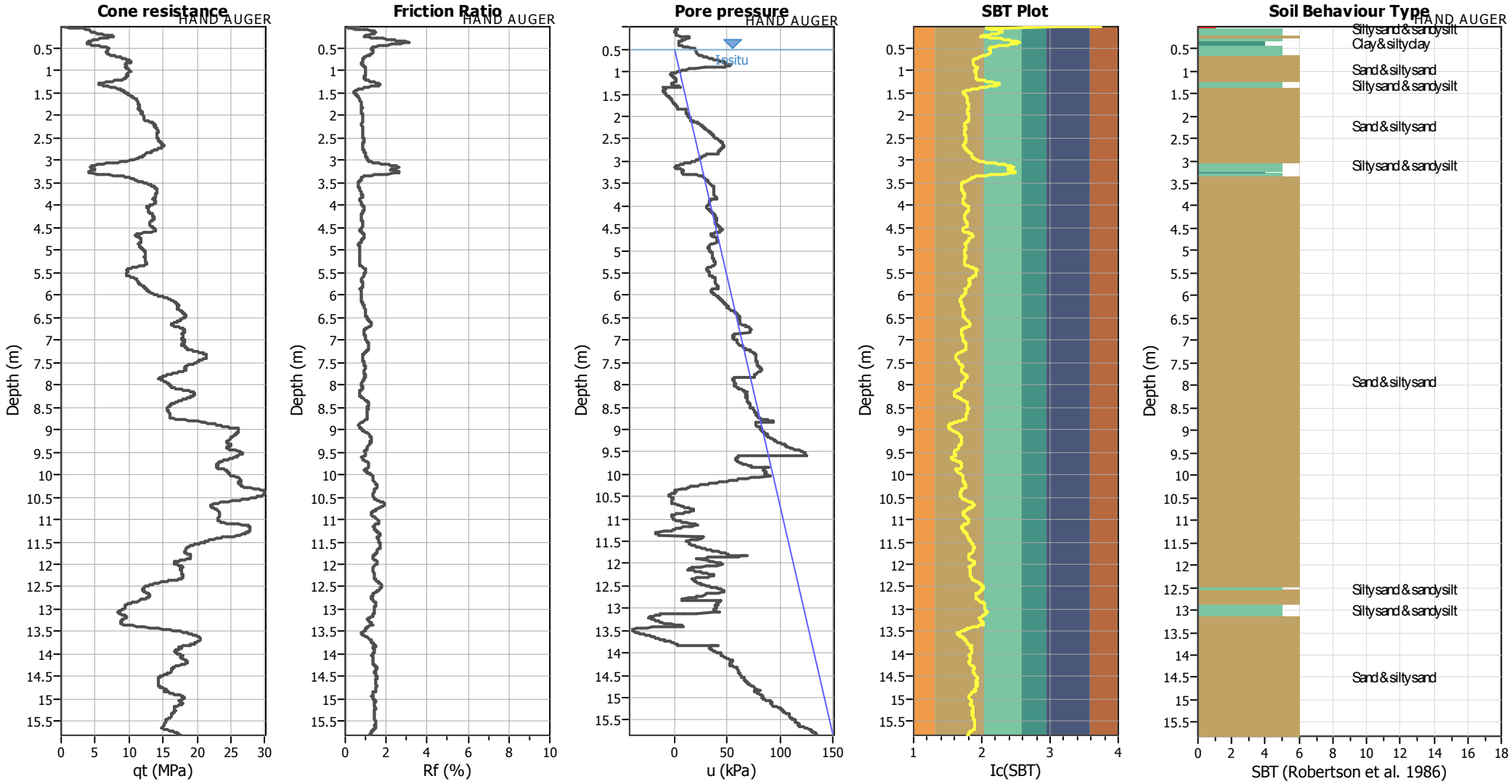






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



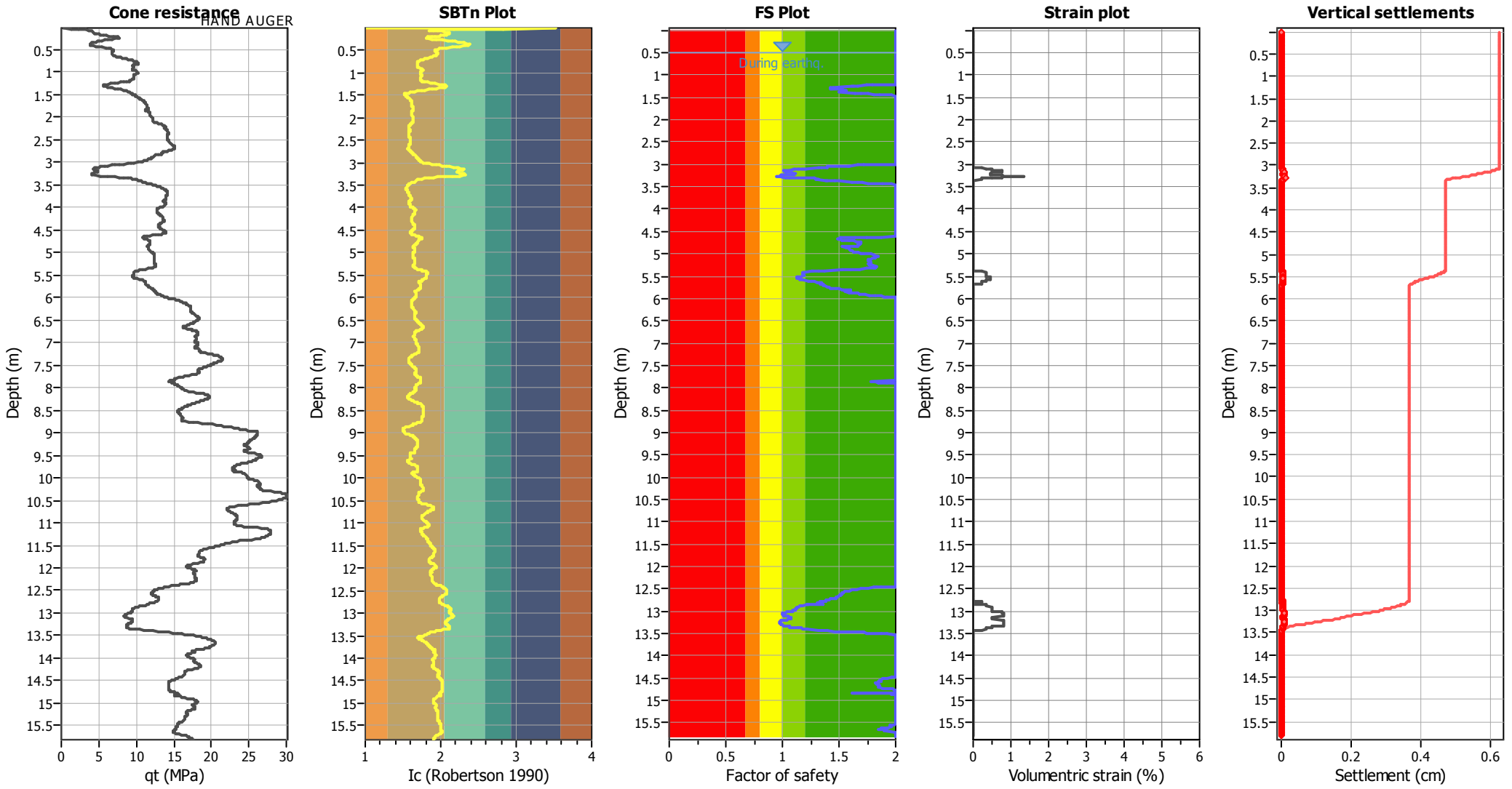
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

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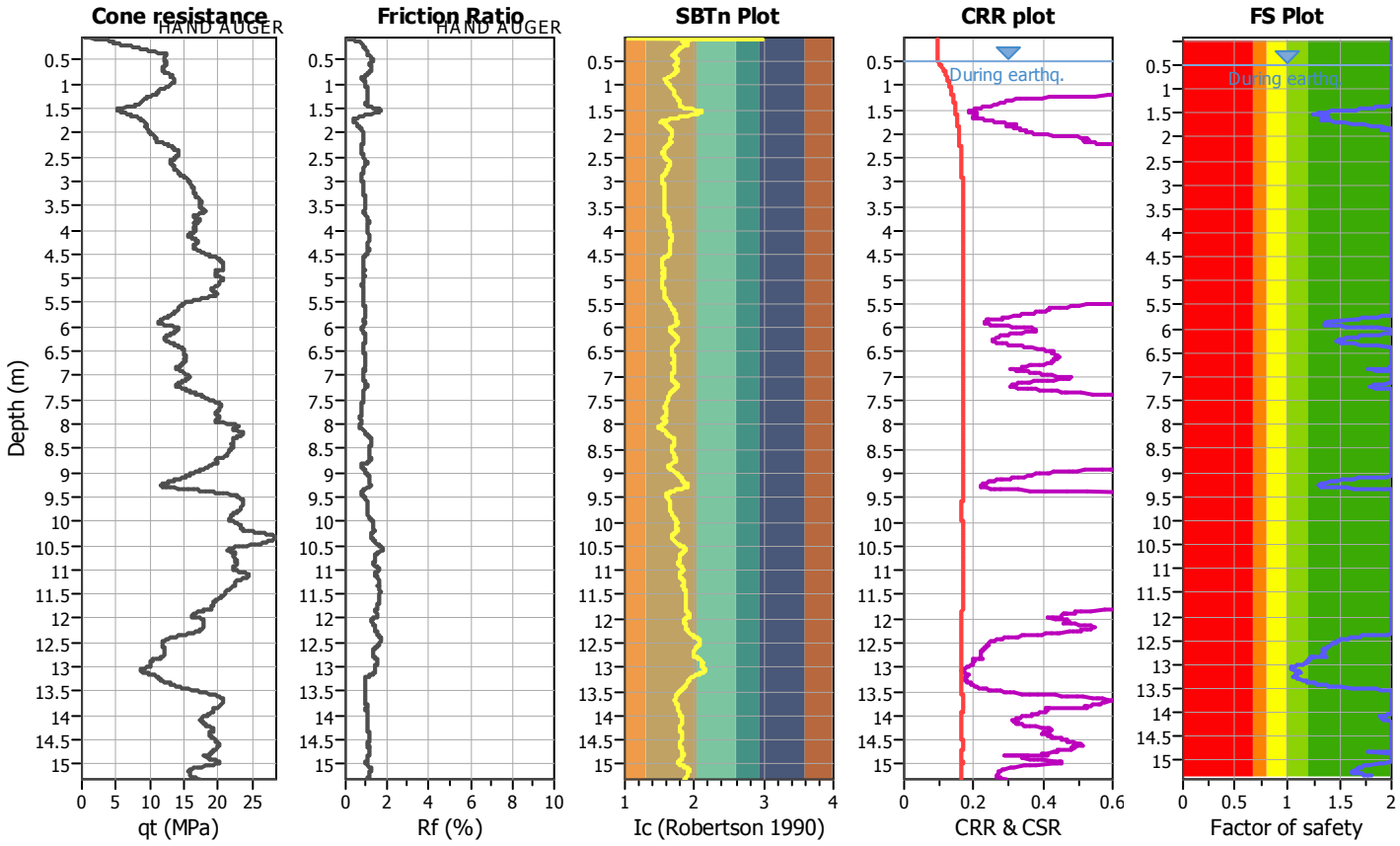
LIQUEFACTION ANALYSIS REPORT

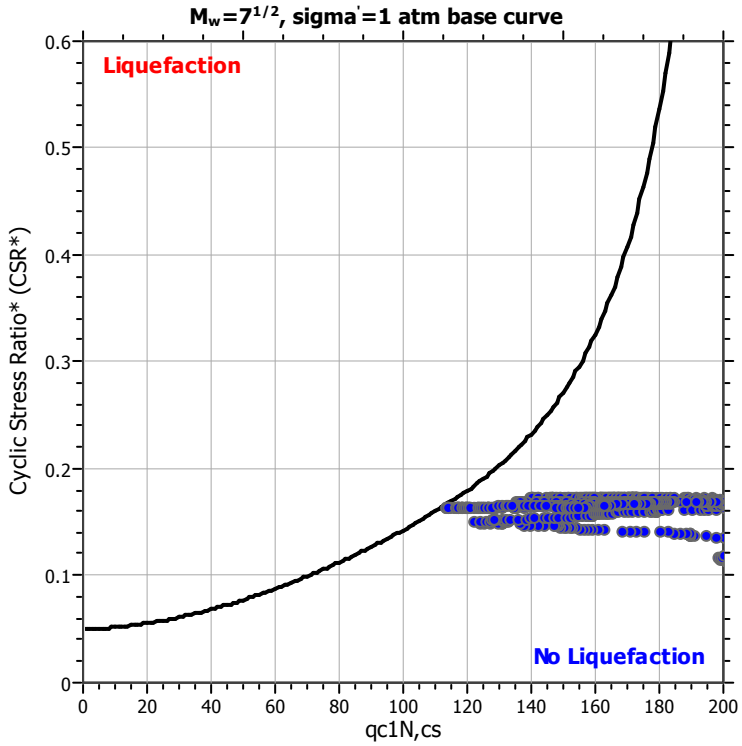
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

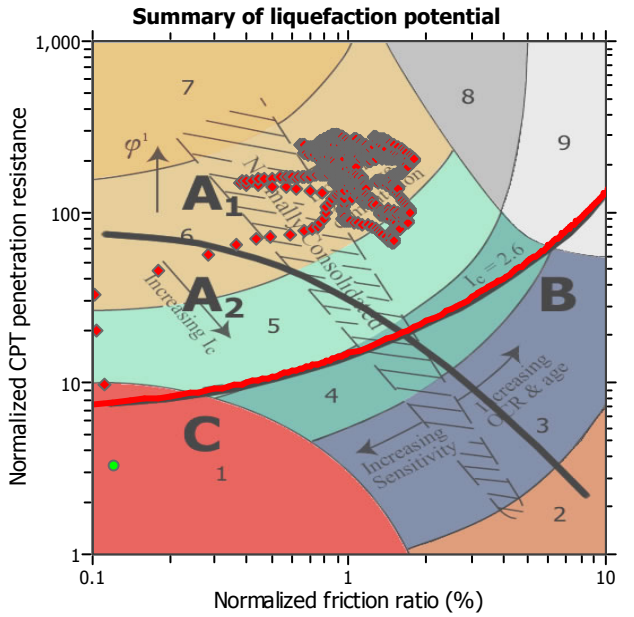
CPT file : CPTU002 SLS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_o applied:	Yes		

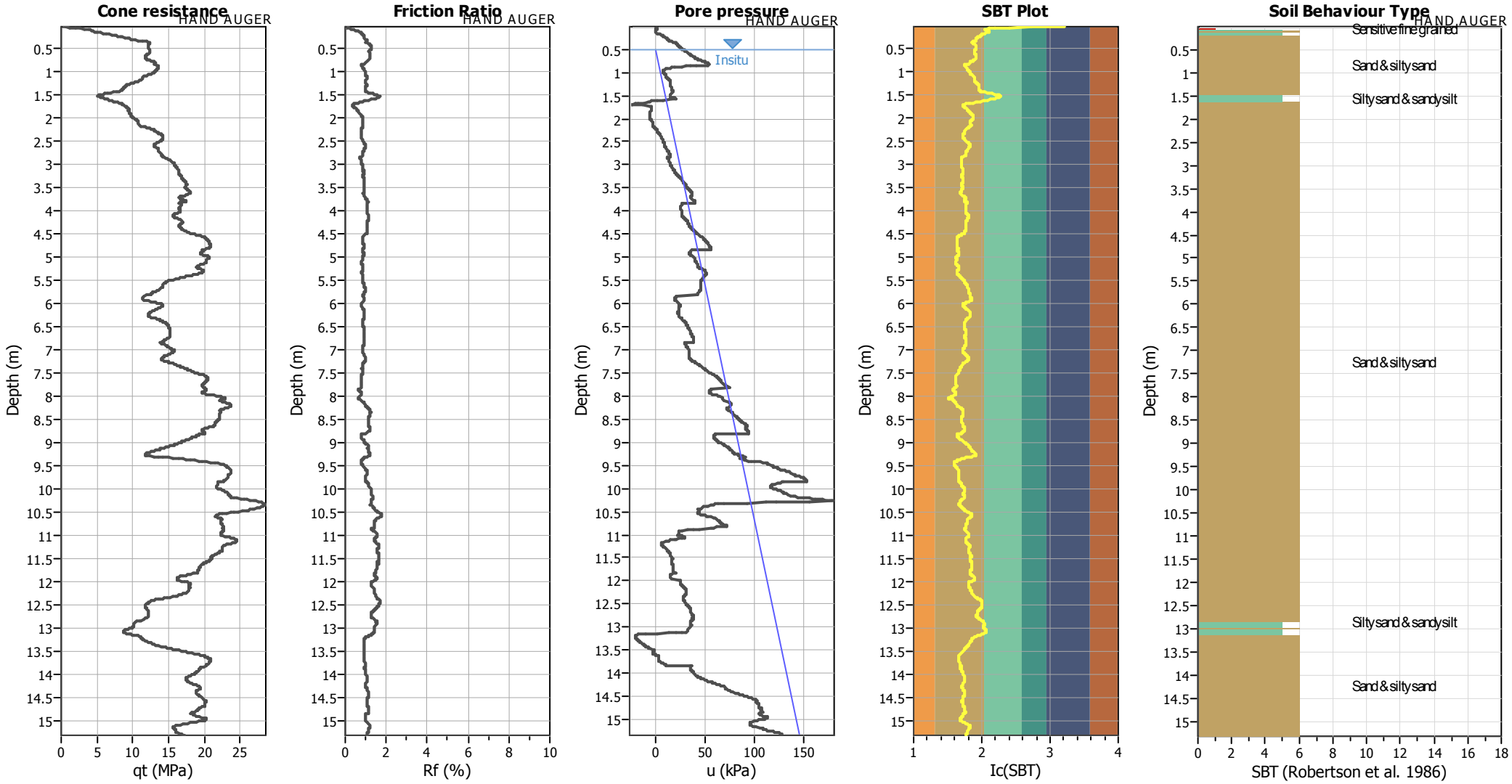






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
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CPT basic interpretation plots



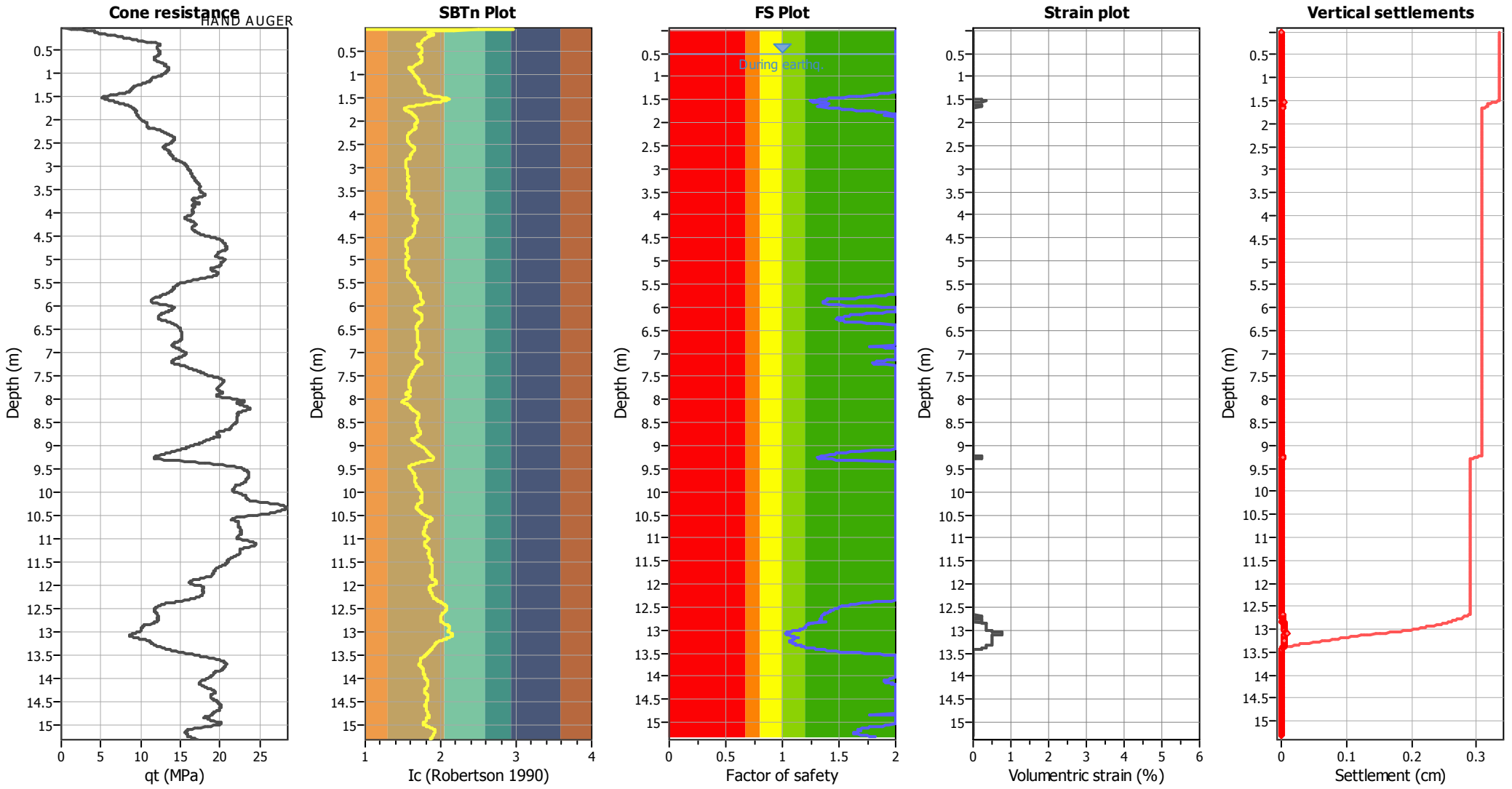
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
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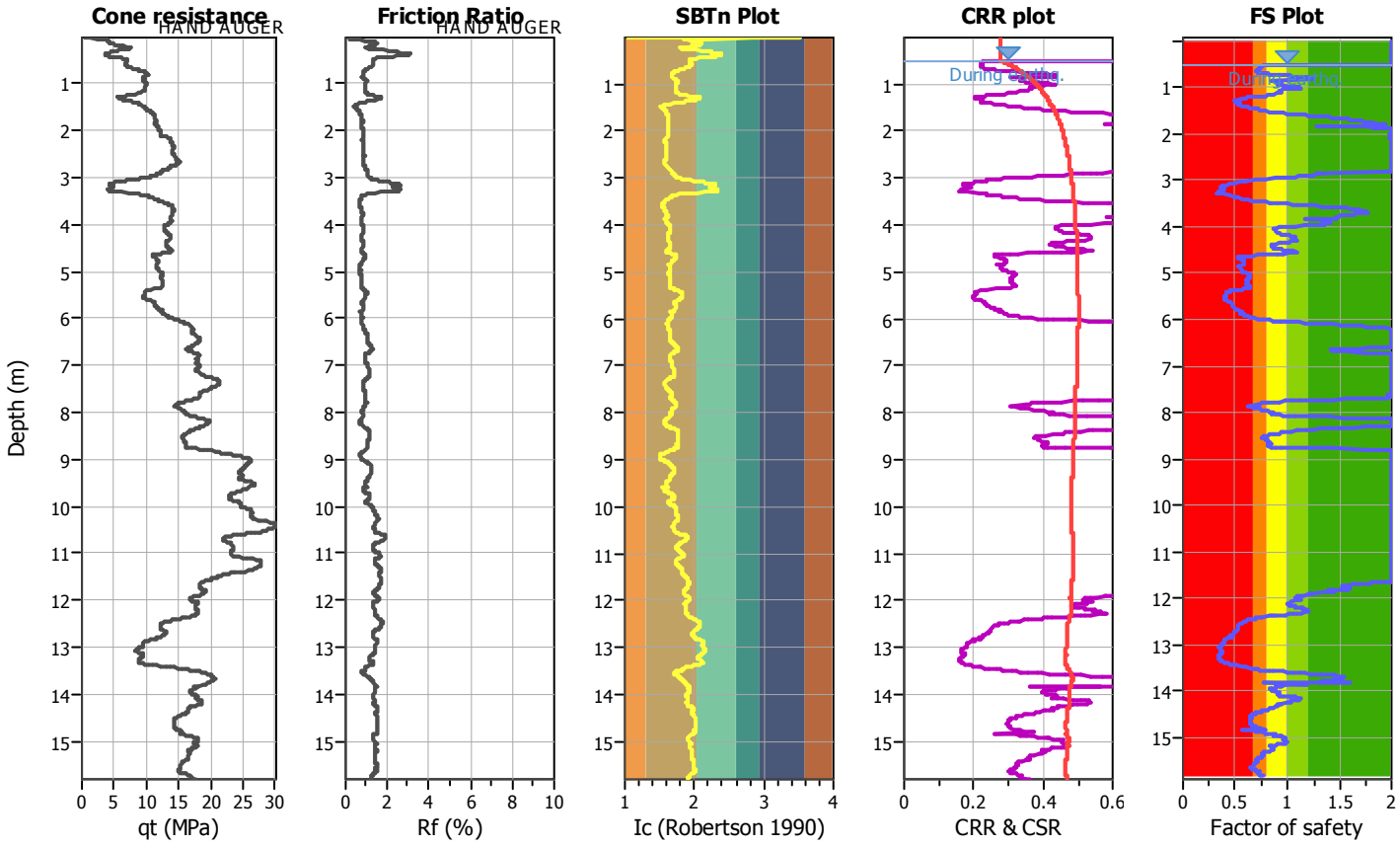
LIQUEFACTION ANALYSIS REPORT

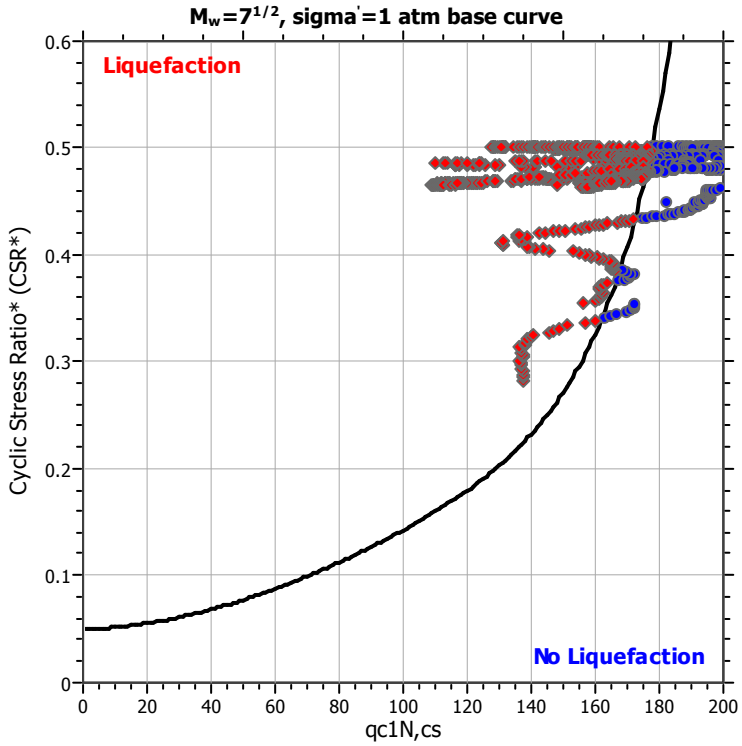
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

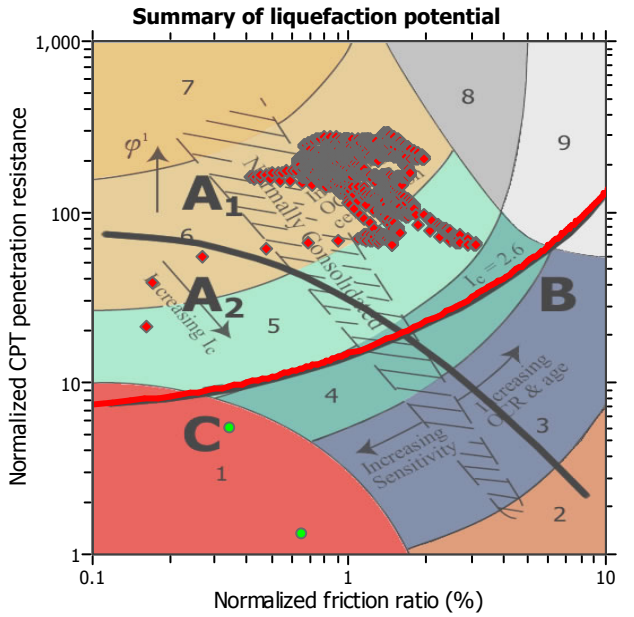
CPT file : CPTU001 ULS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.43	Unit weight calculation:	Based on SBT	K_o applied:	Yes		

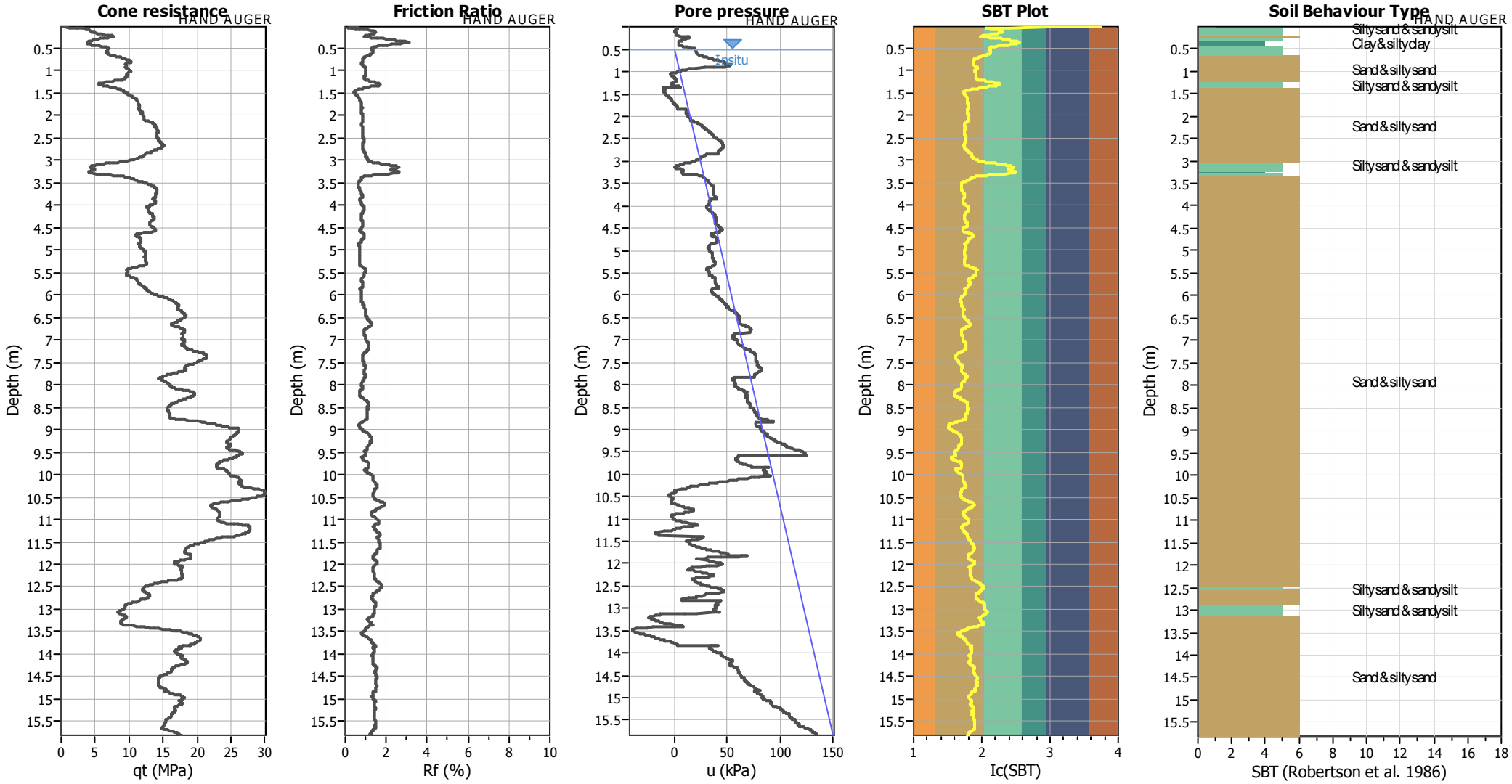






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



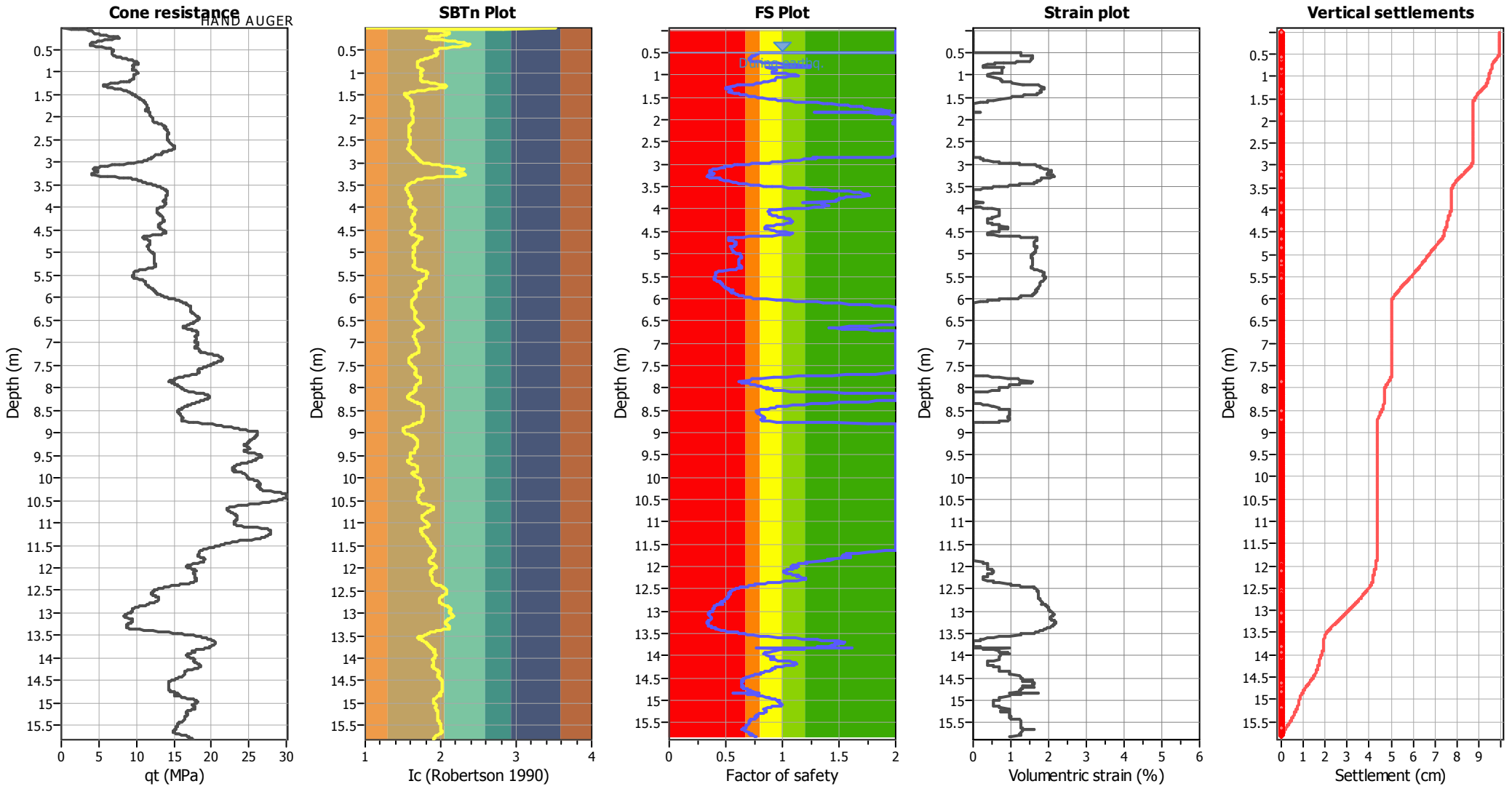
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.43	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

Kirk Roberts Consulting Engineers
Geotechnical Engineers
221 Barbadoes Street
www.kirkroberts.co.nz

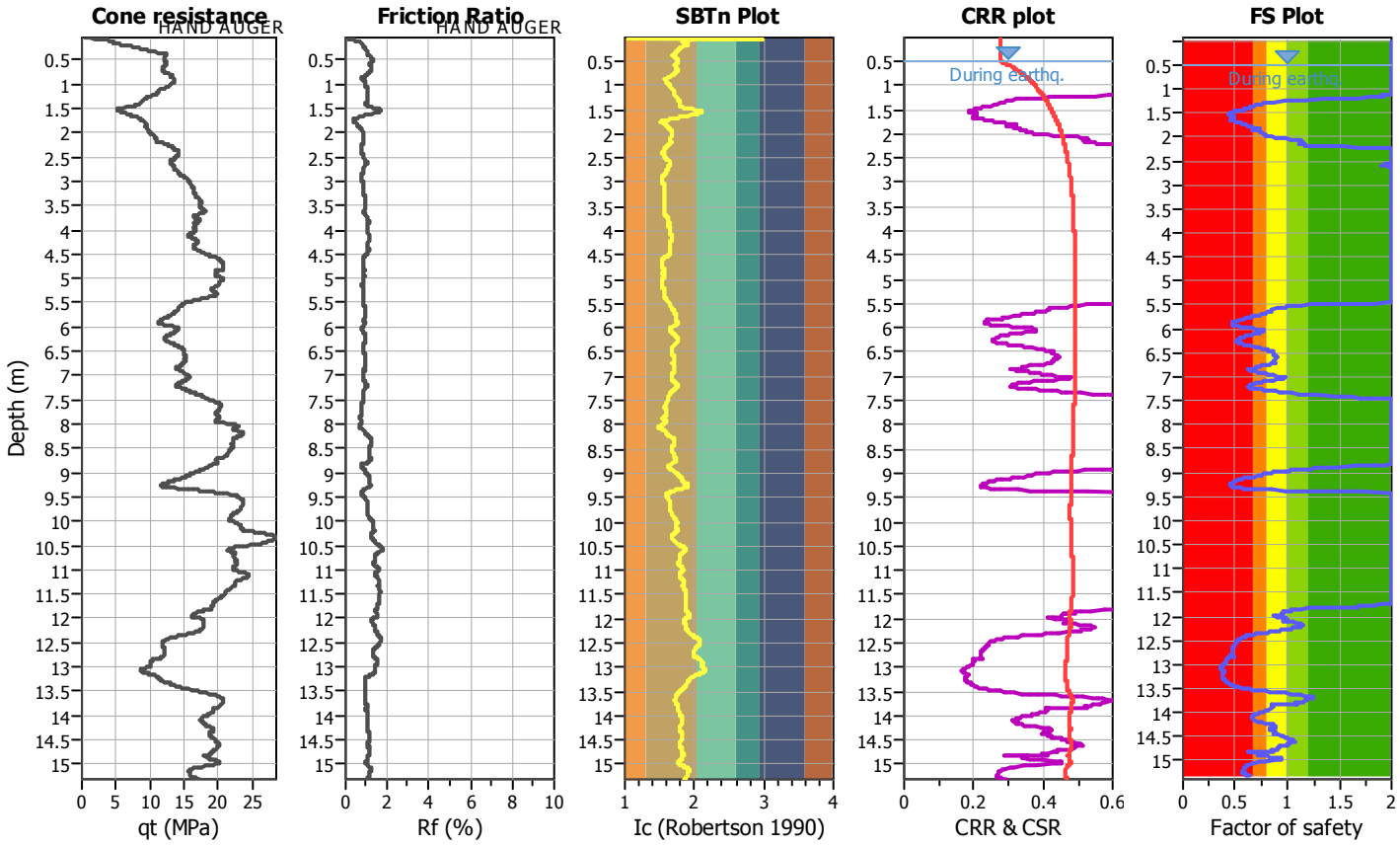
LIQUEFACTION ANALYSIS REPORT

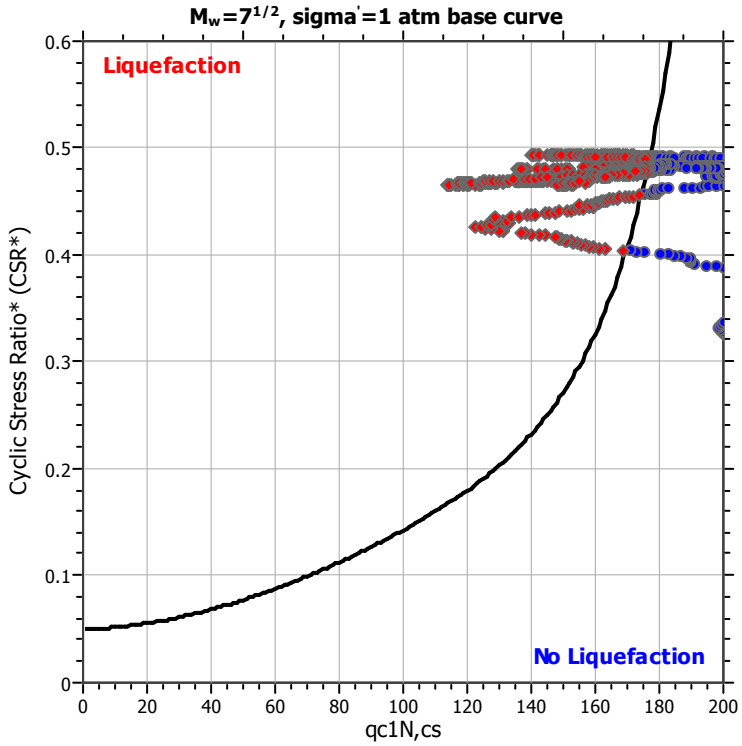
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

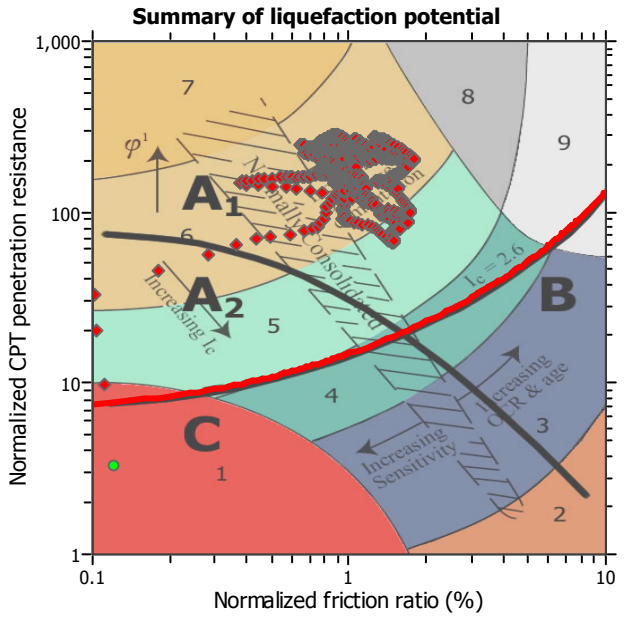
CPT file : CPTU002 ULS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
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Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.43	Unit weight calculation:	Based on SBT	K_o applied:	Yes		

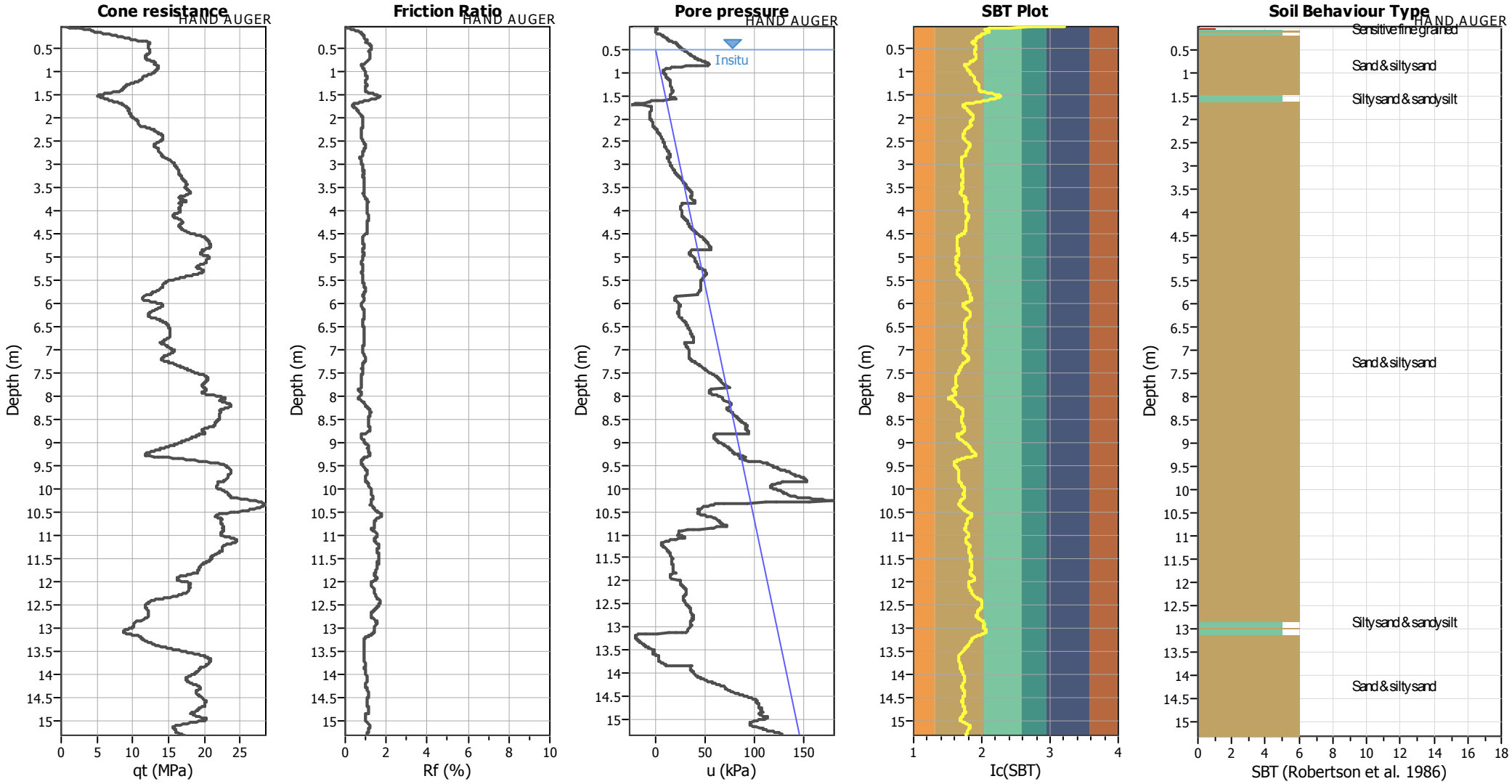






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
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CPT basic interpretation plots



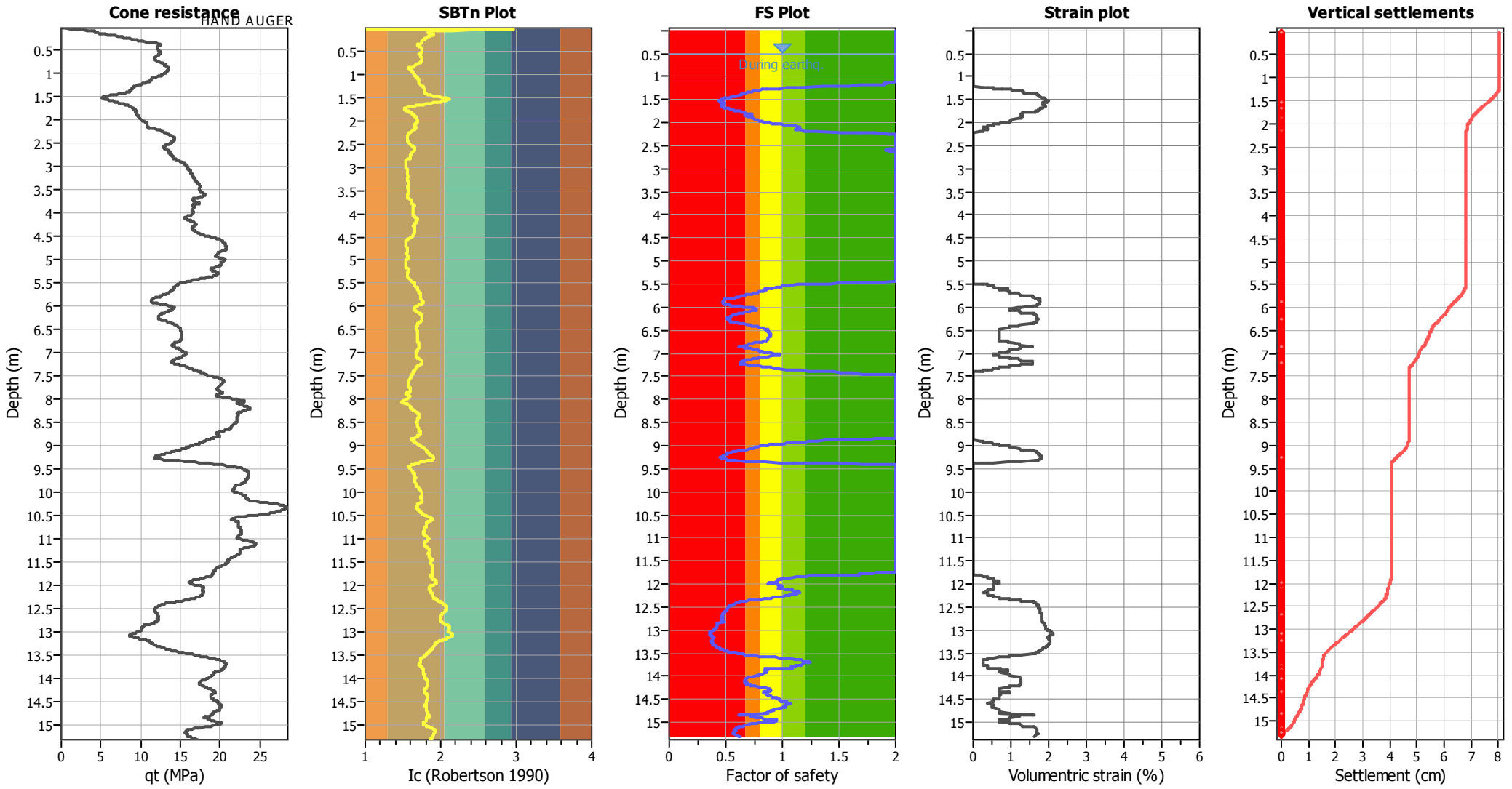
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
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Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

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Estimation of post-earthquake settlements

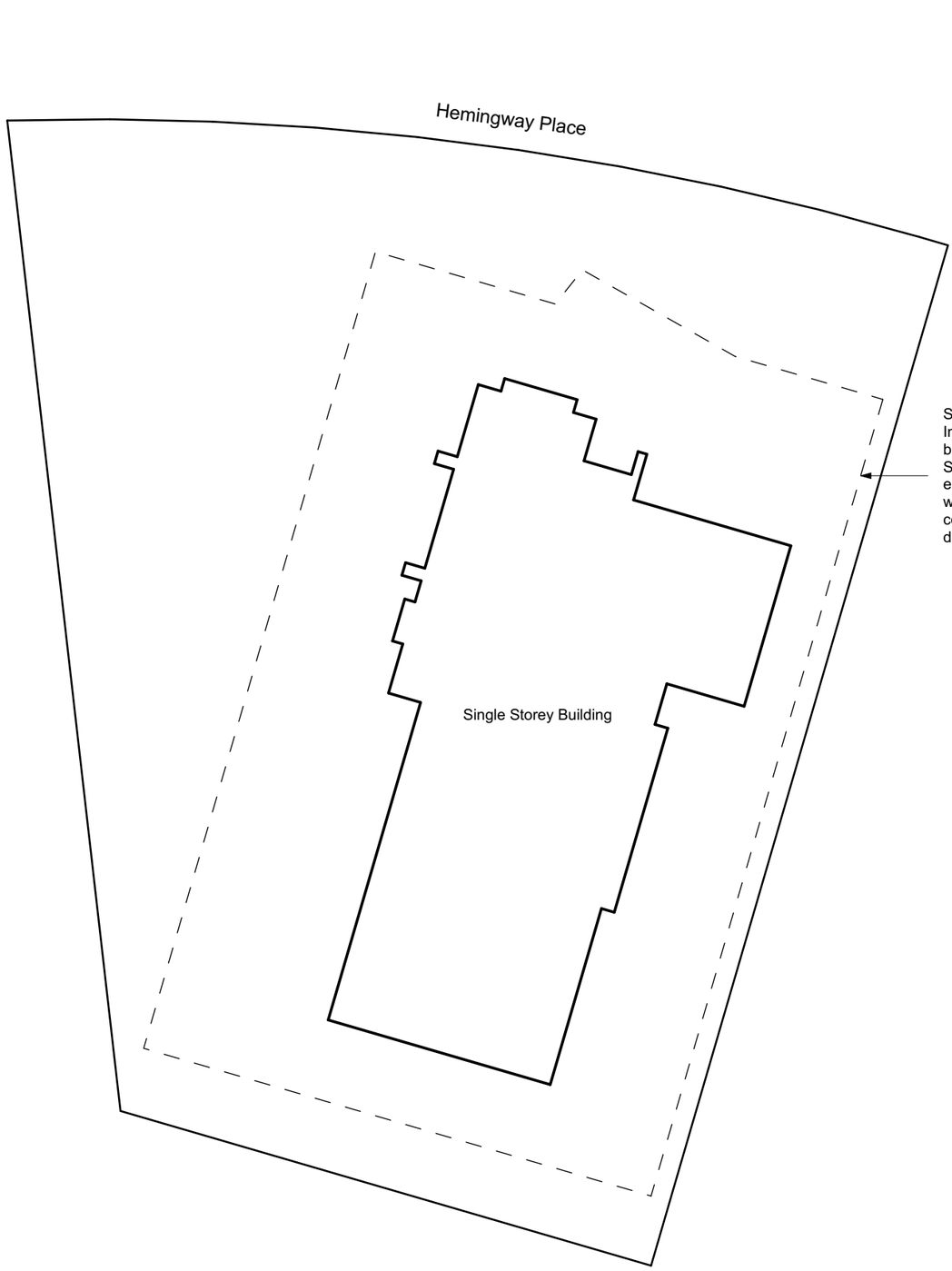


Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

SITE DESCRIPTION:

Legal Description:	Lot 35 DP 319911
Address:	16 Hemingway Place, Spencerville
Earthquake Zone:	Zone 2
Exposure Zone:	Zone C
Climate Zone:	Zone 3
Wind Region:	A
Lee Zone:	
Rainfall Intensity:	30 - 40
Wind Zone:	High
Land status:	Green Zone, Technical Category 3, blue
Geotechnical Report:	Kirk Roberts Consulting Engineers Ltd.
Project Number:	121195
Date:	04/06/2012



Site Plan/Sediment Control Plan

SCALE 1:200

Note:
If any asbestos is discovered during the proposed building work, the following steps are required to be taken. Prior to removal, please contact the Department of Labour, telephone 0800 209020 for information on appropriate methods of handling asbestos.

FRONTIER ENGINEERS
CIVIL, STRUCTURAL & REMEDIAL

PO Box 79183 Avonhead
Christchurch 8446

Unit 1, 35 Sheffield Crescent, Burnside 8053

Phone: 03 359 9192
Free Call: 0508 FRONTIER (0508 376 684)

Email: admin@frontierengineers.co.nz

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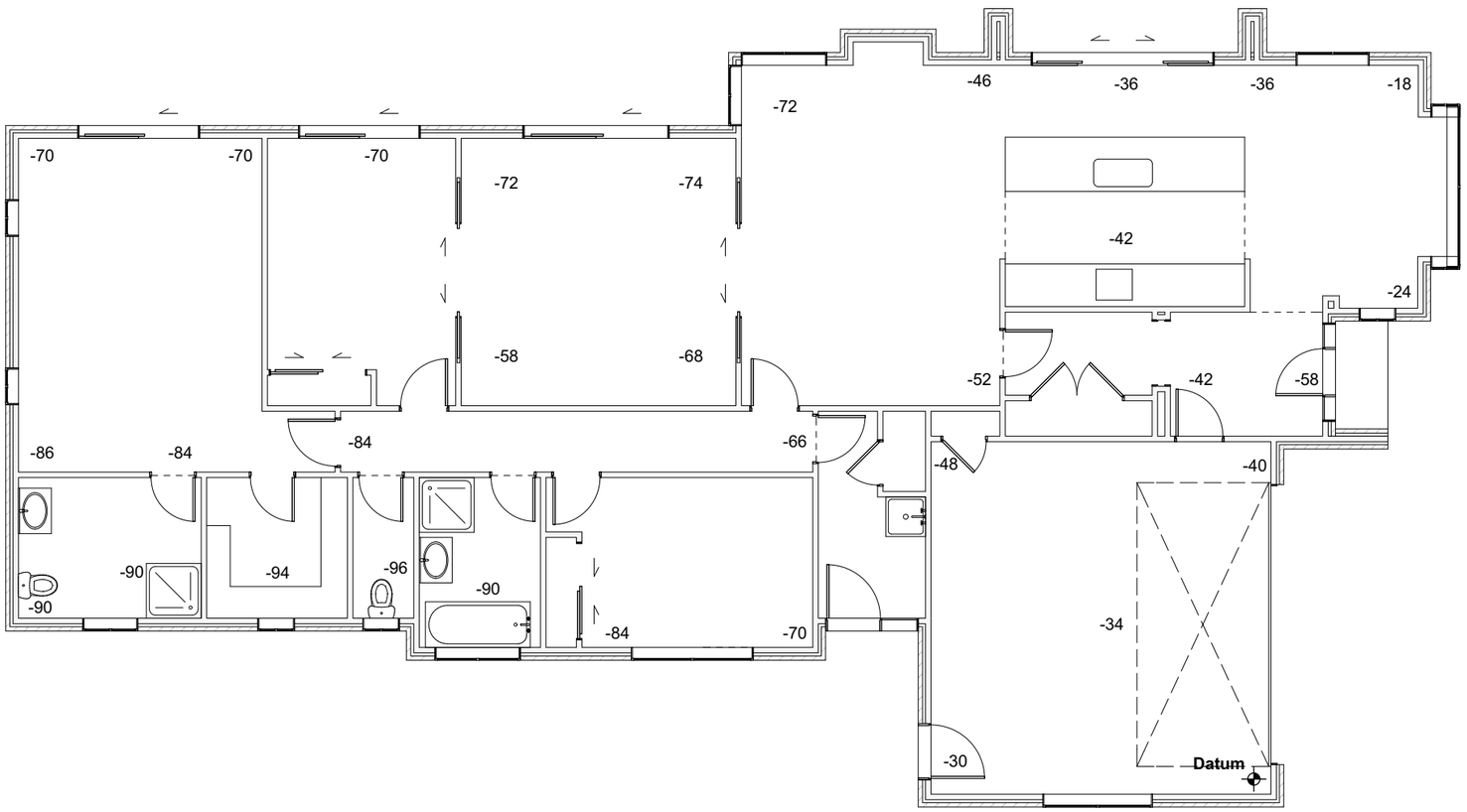
Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3	1:200
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved	
Date	

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Project Number: 170057
Sheet: S01
Rev ID: 00

Drawing Title: Site Plan/Sediment Control Plan
Project Status: Consent Issue



Ground Floor Pre-Level Survey

SCALE 1:100

Legend:

±X Indicates floor level above or below datum

- - - - - - - Indicates change in floor type

Notes:

1. Following relevelling the floor at each unit shall have
   i. maximum differential height of 50mm overall
   ii. 10mm within any room.
   iii. have a maximum slope of 1:200 (0.5%) between any to points more than 2m apart.
2. All levels shown on this plan are relative to the indicated datum.
3. All floor levels locations and slopes approximate

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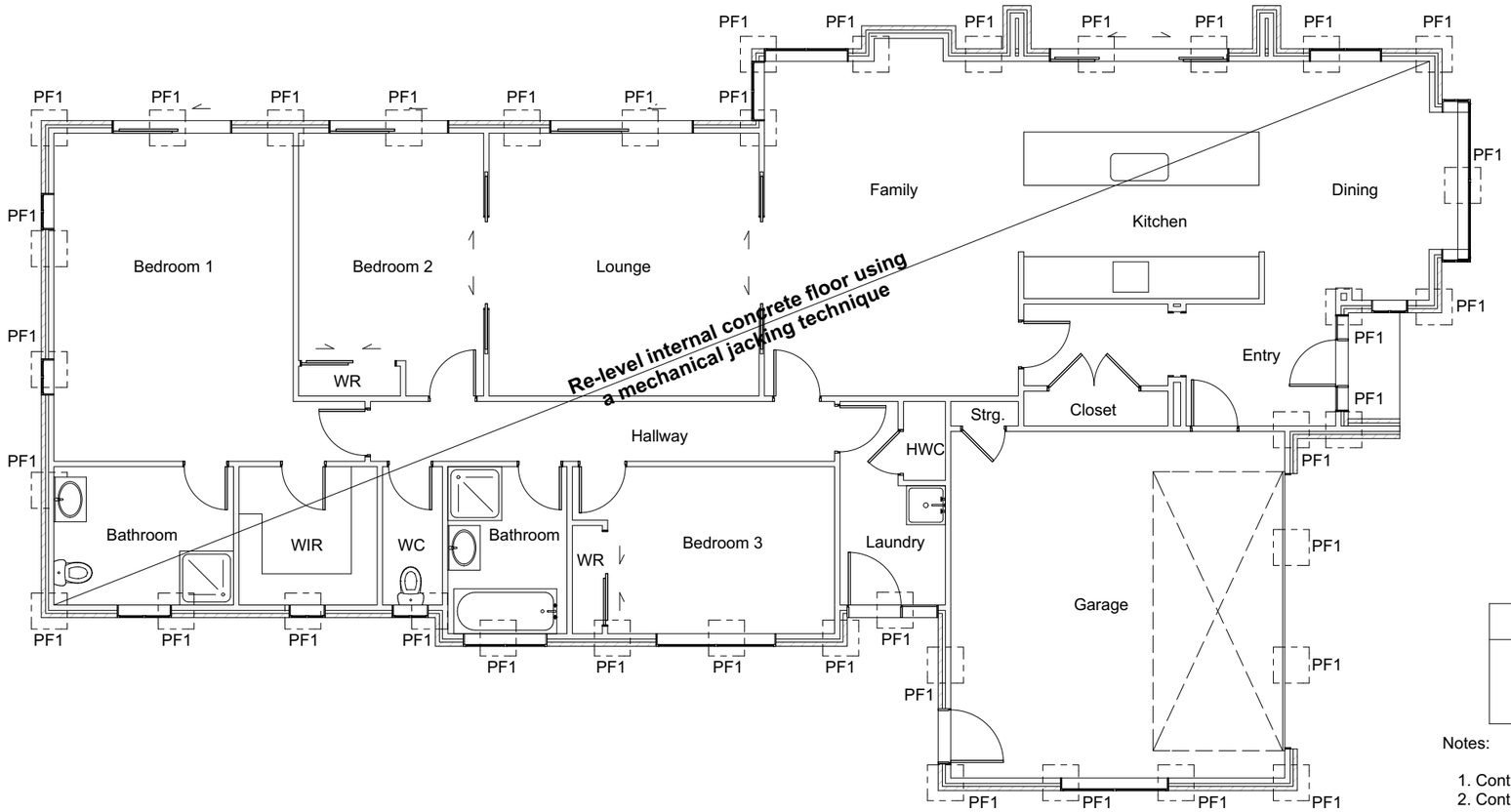
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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3	1:100
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved	
Date	

Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Ground Floor Pre-Level Floor Survey
Project Number	170057
Sheet	S02
Rev ID	00
Project Status	Consent Issue



Jack Pad Approximate Locations

SCALE 1:100

Schedule	
PF1	600x600sq. concrete pad footing at 2.0m crs*

Notes:

1. Contractor is to confirm all dimensions on site before commencing work
2. Contractor is to confirm floor levels at each pile or bearer support location to be packed.
3. Pad target depth is 0.5m min. below ground level.
4. Disconnect and reconnect services as required.
5. Ensure guttering falls to downpipes after relevelling.
6. Ensure all doors open and close properly.
7. All work to be carried out in accordance with NZS3604-2011.
8. Contractor to make all walls plumb.
9. Cracks in all concrete structures are to be repaired using proprietary product crack bond 'LR321G' supplied by adhesives technology corporation or approved equivalent.
   Cracks to be repaired up to a maximum of 5mm and any cracks of more than 5mm are to be repaired by using Helibar or any approved equivalent.
   Product to be installed strictly in accordance with manufacturers instructions

* Please note, positions of concrete pads are an approximate location setting

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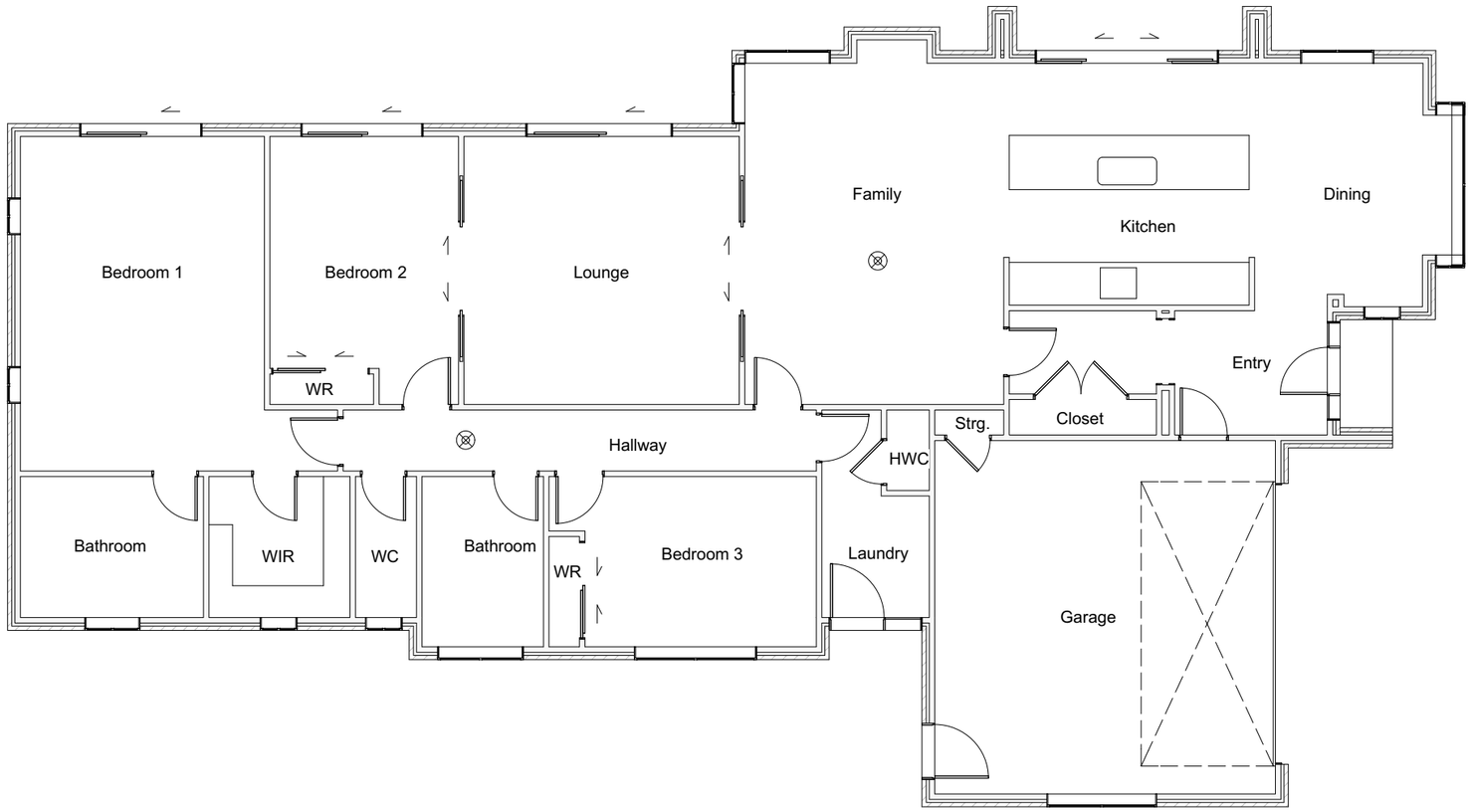
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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3	1:100
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved Date	

Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Ground Floor Jack Pad Approximate Locations
Project Number	170057
Sheet	S03
Rev ID	00
Project Status	Consent Issue



Smoke Detector Location

SCALE 1:100

Schedule	
⊗	Smoke Detector

Note:
All smoke detectors will be checked for complience with F7/AS1, and if non-compliant will be moved and/or installed to meet compliance as per drawing.

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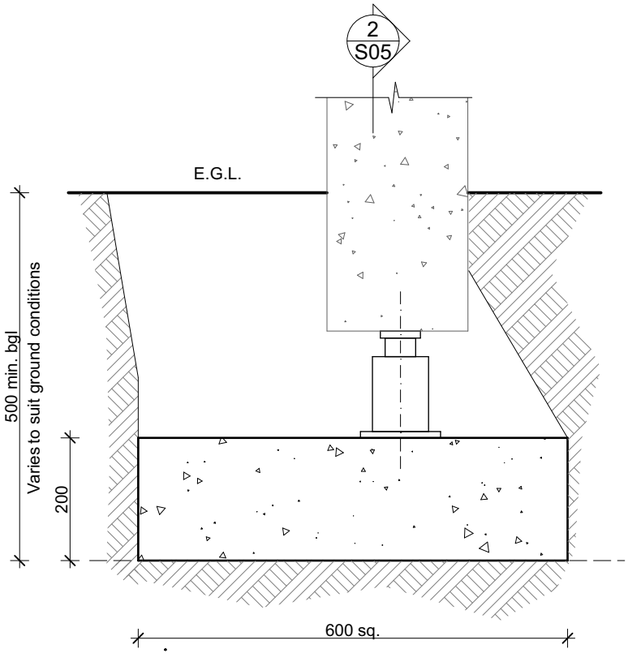
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Scale at A3: 1:100
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Design by: DC
Drawn by: DC
Approved
Date

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

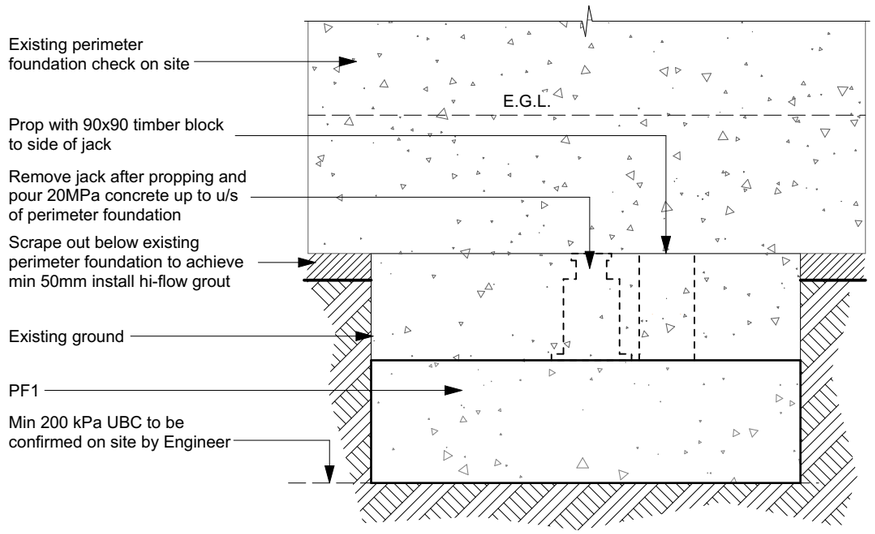
Project Number: 170057
Sheet: S04
Rev ID: 00

Drawing Title: Smoke Detector Location
Project Status: Consent Issue



1 - Re-levelling Pad Detail

SCALE 1:10



2 - Section

SCALE 1:10

Schedule	
PF1	600x600sq. concrete pad footing at 2.0m crs.

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Design by	DC
Drawn by	DC
Approved Date	

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Project Number: 170057

Drawing Title: Details

Sheet: S05

Rev ID: 00

Project Status: Consent Issue

GENERAL

G1. Read these drawings in conjunction with all architectural and other working drawings, specifications and with such other written instructions as may be issued during the course of the contract.
G2. Provide all workmanship and materials in accordance with the requirements of the current editions of the NZ Building Act, the NZ Building Code, the New Zealand Standards and the by-laws and ordinances of the relevant building consent authority.
G3. Comply as the builder, with requirements of the workplace health & safety act.
G4. Refer any conflict between these notes, the specification, the drawings or any other relevant documents to the engineer for decision prior to proceeding with the work.
G5. Do not obtain dimensions by scaling the drawings. For setting out dimensions and levels refer to the architectural drawings.
G6. The builder is responsible for the provision of all shoring to maintain the stability and integrity of excavations and adjacent structures. Provide details, for review by the Engineer, of any necessary temporary works, including shoring, prior to commencing construction.
G7. During construction it is the builder's responsibility to maintain the structure in a stable condition and to ensure no part is overstressed.
G8. The design and drawings are copyright and may not be used or reproduced in whole or in part without the written permission of the Engineer.
G9. Fire-resistance levels (FRL's) required for the various structural elements must be confirmed by the Building Surveyor or Architect.

LOADINGS

L1. Superimposed floor loads are generally in accordance with AS/NZS 1170.1 and specifically:

	1.5 kPa	Generally
	2.0 kPa	Balconies
	2.5kPa	Stairs

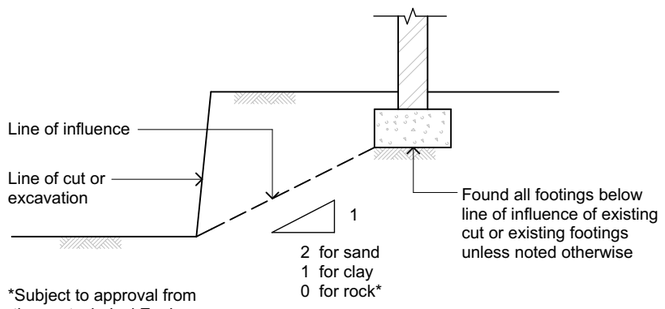
L2. Wind loads are in accordance with AS/NZS1170.2 for:

Terrain category:	2.5	Region: A7
Topographical multiplier of:	1.0	
Shielding multiplier of	1.0	

L2.2 Snow loads are in accordance with AS/NZS 1170.3 0.9kPa
L2.3 Earthquake loads are in accordance with NZS 1170.5

FOUNDATIONS

F1. The minimum safe ultimate bearing capacity of foundation material shall be:
Slabs & Footings: 200 kPa in natural substrate unless noted otherwise (U.N.O.)
F2. Foundation material shall be approved by the engineer prior to placing concrete.
F3. The bases of footing excavations shall be finished clean and horizontal and be embedded 300 into naturally occurring material.
F4. Founding levels where shown are for tender purposes only.
F5. Any proposed footing excavation near boundaries, other structures or services shall be approved by the Engineer.
F6. Subgrade shall be approved material compacted to 98% standard dry density determined by testing to the relevant part of NZS 4402:1986 U.N.O.
F7. Locate all new footings relative to line of cut/excavation including excavations as shown below:



*Subject to approval from the geotechnical Engineer

REINFORCED CONCRETE

C1. Provide all workmanship and materials in accordance with NZS 3101.1:2006, NZS 3109:1997 and NZS 3605:2011, their referenced documents, the drawings and the specification.
C2. Provide concrete grade and minimum clear concrete cover to reinforcement in accordance with NZS 3101:2006 & NZS 3604:2011 U.N.O.

CONCRETE GRADE	ELEMENT LOCATION U.N.O	MINIMUM CONCRETE COVER (mm)
20 MPa	Pad Footings Steps & Landings Paths & Driveways	25 against ground with DPM 75 against ground with no DPM 30 interior protected areas 50 exposed areas
25 MPa	Slabs & Foundations Suspended Stairs	25 against ground with DPM 75 against ground with no DPM 25 interior protected areas 50 exposed areas
30 MPa	Where Noted	20 against ground with DPM 45 against ground with no DPM 20 interior protected areas 50 exposed areas

C3. Support all reinforcement at 1 metre maximum centres both ways on mild steel plastic tipped chairs, plastic chairs or concrete chairs. Use only plastic chairs for externally exposed soffits.
C4. Provide all concrete with 80mm maximum slump and 20mm maximum aggregate unless approved by the Engineer.
C5. Sizes of concrete elements are net, exclusive of applied finishes. Beam depths are written first and include slab thickness.
C6. Properly form construction joints and use only where shown or approved by the Engineer.
C7. Reinforcement is represented diagrammatically and is not necessarily shown in true projection.
C8. Weld or splice reinforcement only in positions approved by the Engineer.
C9. Provide the minimum clear spacing between conduits, cables, pipes and bars as required by NZS 3109 but not less than three bar diameters. Do not place conduits in slabs above top reinforcement or below bottom reinforcement.
C10.

D	Denotes hot rolled deformed bars grade 300E.
HD, H	Denotes hot rolled deformed bars grade 500E.
R	Denotes hot rolled plain round bars grade 300E.
SE,RE	Denotes hard drawn wire fabric grade 500E.

C11. Notify the Engineer a minimum of 24 hours before reinforcement has been completed.
C12. Allow 2 hours after the completion of the reinforcement for the Engineer's inspection.
C13. Do not order concrete until reinforcement has been approved by the Engineer.
C14. Cure concrete in accordance with NZS 3109. Commence curing within two hours of finishing operations and continue for a minimum of seven days by using an approved proprietary compound or by keeping continuously wet.
C15. Tie all unsupported bars in transverse direction to D12-300, lapped 500 U.N.O.
C16. Lap fabric in accordance with clause 8.7.6 of NZS 3109.
C17. Provide hooks, laps and bends in accordance with NZS 3101 & NZS 3109 U.N.O.
C18. Provide chamfers, drip grooves etc. in accordance with the Architect's details.
C19. Design, construct and strip formwork in accordance with NZS 3109.
C20. Pre camber formwork upwards by 1/500 of the clear span U.N.O. where supported beams and slabs span greater than 5m.
C21. The concrete elements detailed have a F.R.L. of 60/60/60 U.N.O.

TIMBER

T1. Ensure all workmanship and materials are in accordance with NZS 3603:1993 and NZS 3604:2011, their referenced documents and the specification.
T2. Provide all interior timber as SG6 (dry) U.N.O.
T3. Provide all external timber as SG8 (dry) U.N.O.
T4. Where the use of treated timber for durability is noted on the structural drawings, ensure it complies with the parameters: Exposure Zone C in accordance with NZS 3604.
T5. Install proprietary timber connectors in accordance with the manufacturers written instructions.
T6. Retighten bolted connections in unseasoned timber prior to the fixing of cladding.
T7. Timber elements or timber framing have not been designed unless noted.
T8. All trusses to be pre-cambered upward 1/240 span.

STEELWORK

S1. Ensure materials, fabrication and erection are in accordance with NZS 3404, it's referenced documents and the specification.
S2. Shop drawings are to be approved by the Engineer prior to fabrication.
S3. Provide all welds as 6mm continuous fillet from E41xx electrodes, all bolts as M16-4.6/S and all cleats and gussets as 10mm plate U.N.O.
S4. For bolts, the following notation is used:
4/M16-4.6/s denotes 4 x M16 commercial grade bolts snug tight.
6/M20-8.8/tf denotes 6 x M20 high strength structural bolts fully tensioned in a no slip joint.
8/M24-8.8/tb denotes 8 x M24 high strength structural bolts fully tensioned in a bearing joint.
S5. Leave mating surfaces of 'tf' connections unpainted and free of mill scale and rust.
S6. Tighten bolts in 'tf' and 'tb' connections using the part turn method or load indicating washers. Do not use calibrated torque wrenches. Use a hardened washer under the bolt head or nut, whichever is rotated. The re-use of fully tensioned bolts is prohibited.
S7. Provide all cleats and drill all holes necessary for fixing steel to steel or timber.
S8. Fabricate steel beams and trusses spanning greater than 5m with an upward pre camber of 1/500 span U.N.O.
S9. Prepare structural steelwork to class 2 and paint with zinc phosphate primer to a thickness of 70 micrometres U.N.O.
S10. Hot dip galvanise all exposed external steelwork and all steelwork built into an external masonry skin, in accordance with grade HDG600 to AS/NZS 2312.
S11. Within 100m from the non-surf coast or 1 km from the surf coast, hot dip galvanise above in accordance with grade HDG900 to AS/NZS 2312.
S12. Provide fire protection to all steelwork as required.
S13. Ensure all cold formed sections conform to AS/NZS 4600 and are roll-formed from steel strip, minimum yield stress 450 MPa, 300 g/m² minimum zinc coating mass U.N.O.

MASONRY

M1. Ensure all workmanship and materials are in accordance with NZS 4230, the drawings & project specifications.
M2. Where masonry supports concrete slabs or beams, lay the top course with frogs down and covered with 2 layers of approved slip joint material.
M3. Walls shown shaded on plan are load bearing. Separate non-load bearing walls under slabs from the slab by 15mm of approved compressible material. Where masonry abuts slab downturns, form a 15mm gap between brickwork and side of downturn.
M4. Do not erect masonry supported by concrete slabs or beams until all formwork and props under have been removed.
M5. Provide all bricks of ultimate compressive strength $f'uc$ = 20 MPa U.N.O.
M6. Provide all hollow concrete masonry of ultimate compressive strength $f'uc$ = 15 MPa U.N.O.
M7. Provide classification M3 masonry mortar U.N.O. Note that within 100m from non-surf coast, or 1km from surf coast, provide classification M4 masonry mortar.
M8. Cut no chases into loadbearing masonry without the approval of the Engineer.
M9. Provide movement control joints vertically for full height of wall as follows:
For general masonry, at 8m maximum centres & 4m maximum from corners.
For articulated masonry, at 6m maximum centres & 4m maximum from corners.
Provide 15mm minimum joints with an approved compressible filler, tied together every 4th course with a MET 3.3 masonry sliding tie or approved equivalent.
M10. Construct hollow walls to full height or maximum 3m before filling cores. Provide cleanout openings at the base of all cores to be filled.
M11. Core fill $f'uc$ = 20 MPa concrete with 10mm aggregate, 180 slump U.N.O.
M12. Construct hollow masonry retaining walls using "double U blocks".
M13. Unreinforced masonry walls have not been designed unless noted.

FRONTIER ENGINEERS
CIVIL, STRUCTURAL & REMEDIAL

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Christchurch 8446

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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3 1:1
Date 16/03/2017
Design by DC
Drawn by DC
Approved
Date

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Project Number: 170057
Sheet: S06
Rev ID: 00
Drawing Title: General Notes
Project Status: Consent Issue

Building Code Clause(s)…B1 ……

PRODUCER STATEMENT – PS1 – DESIGN

(Guidance notes on the use of this form are printed on page 2)

ISSUED BY: Frontier Engineers Ltd.....
(Design Firm)

TO: Liam Brewer
(Owner/Developer)

TO BE SUPPLIED TO: Christchurch City Council……
(Building Consent Authority)

IN RESPECT OF: Re-level of existing dwelling only.
(Description of Building Work)

AT: 16 Hemingway Place, Spencerville, Christchurch 8083
(Address)

…… **LOT** 35…… **DP** 319911 **SO** …….

We have been engaged by the owner/developer referred to above to provide …Structural Design of specific building elements and Supervision……..… services in respect of the requirements of
(Extent of Engagement)
Clause(s) B1/VM1 ..of the Building Code for
All ☐ or Part only ☒ (as specified in the attachment to this statement), of the proposed building work.

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

☒ Compliance Documents issued by the Ministry of Business, Innovation & Employment…B1/VM1 … …….or
(verification method / acceptable solution)

☐ Alternative solution as per the attached schedule … …

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

…Earthquake Repairs, 16 Hemingway Place, Spencerville, Christchurch 8083 and numbered 170057 S00-S06……;
together with the specification, and other documents set out in the schedule attached to this statement.
On behalf of the Design Firm, and subject to:
(i) Site verification of the following design assumptions ground as per Kirk Roberts Consulting Engineers report dated 4 June 2012…
(ii) All proprietary products meeting their performance specification requirements;

I **believe on reasonable grounds** that a) the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached schedule, will comply with the relevant provisions of the Building Code and that b), the persons who have undertaken the design have the necessary competency to do so. I also recommend the following level of construction monitoring/observation:
☐CM1 ☐CM2 ☐CM3 ☐CM4 ☐CM5 (Engineering Categories) or ☒ as per agreement with owner/developer (Architectural)

I, Alan Pearson … am: ☒CPEng 1024104 #
(Name of Design Professional)
☐Reg Arch …… .#

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

SIGNED BY …Alan Pearson…… ON BEHALF OF Frontier Engineers
(Design Firm)

Date …16/03/2017… (signature)……

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

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

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

Form 2A

Memorandum from licensed building practitioner: Certificate of design work

Section 45 and Section 30C, Building Act 2004

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

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

THE BUILDING

Street address: 16 Hemingway Place	
Suburb: Spencerville	
Town/City: Christchurch	Postcode: 8083

THE OWNER

Name(s):	
Mailing address:	
Suburb:	PO Box/Private Bag:
Town/City:	Postcode:
Phone number:	Email address:

BASIS FOR PROVIDING THIS MEMORANDUM

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

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

I, Alan Pearson carried out / ~~supervised~~ the following design work that is restricted building work

PRIMARY STRUCTURE: B1

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

PRIMARY STRUCTURE: B1

All RBW Design work relating to B1 (x)		( ) Carried out ( ) Supervised	
Foundations and subfloor framing (✓)	*Re-level of existing foundation only*	(x) Carried out (✓) Supervised	Refer drawing set from Frontier Engineers 170057
Walls (x)		( ) Carried out ( ) Supervised	
Roof (x)		( ) Carried out ( ) Supervised	
Columns and beams (x)		( ) Carried out ( ) Supervised	
Columns and beams (x)		( ) Carried out ( ) Supervised	
Other (x)		( ) Carried out ( ) Supervised	

EXTERNAL MOISTURE MANAGEMENT SYSTEMS: E2

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

		( ) Supervised	
Other (x)		( ) Carried out ( ) Supervised	

FIRE SAFETY SYSTEMS: C1 – C6

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

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

Note: continue on another page if necessary.

WAIVERS AND MODIFICATIONS

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

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

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

Note: continue on another page if necessary.

ISSUED BY

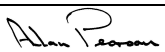
Name: Alan Pearson	LBP or Registration number: 1024104
The practitioner is a: (x) Design LBP (x) Registered architect (✓) Chartered professional engineer	
Design Entity or Company (optional): Frontier Engineers Ltd.	
Mailing address (if different from below): PO Box 79183, Avonhead, Christchurch, 8446	
Street address / Registered office: 1/35 Sheffield Crescent	
Suburb: Burnside	Town/City: Christchurch
PO Box/Private Bag:	Postcode: 8053
Phone number:	Mobile: 027 923 7888
After Hours:	Fax:
Email address: admin@frontierengineers.co.nz	Website: www.frontierengineers.co.nz

DECLARATION

I, Alan Pearson , CP Eng 1024104,

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

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

Signature: 

Date: 16 Mar 2017

CONSTRUCTION MONITORING SCHEDULE
JOB LOCATION: 16 Hemingway Place, Spencerville, Christchurch 8083
FILE NUMBER: 170057

Construction monitoring site visits relating to compliance with the building consent documentation and for verification of design assumptions are required as follows:

	TIME	NUMBER OF VISITS
1	Base of excavation pads	1-2
2	Post floor level survey	1-2

A site inspection report will be sent within 24hrs after inspection to the Client. A Producer Statement 4, Construction Review, could be issued once the above monitoring site visits have been completed. It is the Clients responsibility to notify the Engineer to enable the above site visits to be completed.

D. Chernushkin

Dmitry Chernushkin
Frontier Engineers Ltd.

Design Feature Report

Re-level of Existing Residential Building

Location 16 Hemingway Place, Spencerville, Christchurch 8083
Client Liam Brewer

Job No: 170057
Issue Date: 16-Mar-17
Revision: 00

FRONTIER ENGINEERS Ltd
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Document Quality Assurance Record

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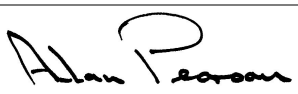
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Document Transmittal

Rev	Date	Revision Details/Status	Author	Approver
00	16 March 2017	Issue to Client	Dmitry Chernushkin	Alan Pearson

Author Signature:		**Approver Signature:**	
Name:	Dmitry Chernushkin	**Name:**	Alan Pearson
Title	Engineer	**Title**	Director CPEng 1024104

Introduction:

The existing Residential Building was damaged in the Canterbury Earthquake Sequence (CES) including differential settlement. The structural integrity of the dwelling is satisfactory; however, re-levelling is required to amend floor slopes that exceed slopes of 1:200.

Scope of work:

Frontier Engineers has been engaged by Liam Brewer to prepare technical documentation and certification for the re-level of the existing Residential only:

- Technical drawings of the proposed repairs
- Producer Statement 1
- Memorandum of Works
- Construction Monitoring Schedule
- Site inspection reports
- Producer Statement 4

Exclusions:

- All repair works other than re-levelling or direct repairs to the foundation system
- Strengthening of the Residential Building in anyway
- Future proofing of the Residential Building in anyway
- Any work above foundation level
- The works are assumed to be carried out under a Consent Exemption, and on this basis we refer to the Guidance for Building Work that Does Not Require a Building Consent (Building Act 2004) issued by the MBIE regarding section 42A of the Building Act,

  (a) the building work complies with the building code to the extent required by this Act:
  (b) after the building work is completed, the building:
  (i) if it complied with the building code immediately before the building work began, continues to comply with the building code; or
  (ii) if it did not comply with the building code immediately before the building work began, continues to comply at least to the same extent as it did then comply.

I.e. where specific parts of the building are modified our intention is to ensure that the building will function structurally to at least the same extent as it did prior to repairs, but may not necessarily be brought up to the current building code requirements.

Reference:

- Geotechnical report by Kirk Roberts Consulting Engineers Ltd Project No. 121195, dated 4 June 2012.
- NZS3101 Concrete Structures
- MBIE Guidance

Building Summary:

Foundation Type:	C – Concrete slab on grade
Structural Framing:	Timber framing
No. of Storeys:	1
Wall Cladding Weight:	Heavy – clay brick veneer
Roof Cladding Weight:	Light – pressed steel
Technical Category:	TC3
200kPa Bearing:	@ 0.5mbgl
Target Pad Depth:	0.5mbgl
Minimum Pad Size:	600mm x 600mm
Typical Pad Spacing:	2.0m
Max Pad Spacing:	2.5m

Design Philosophy:

Re-levelling

Mechanical jacking of the concrete structures using portable jacks and excavations at the lifting locations. The lifting locations are considered temporary until the dwelling is reinstated to its pre-earthquake condition. Any additional material or concrete works that remain on site are not considered to decrease any future performance, nor is it to be relied on as betterment or considered to increase performance during future earthquake events.

It is common for further cracking to occur as a result of re-levelling processes, which may require additional repairs, and needs to be completed prior to completion of works.

The concrete foundations have been assessed based on minimum steel design, but an additional design check has been made to consider the consequences of no reinforcement, and the concrete required to span using the flexure tensile capacity only.

As part of this assessment we have not considered the permanent lateral stretch of the building, or any other complications that may arise from re-levelling the building. Additionally, we do not know the condition of the dwelling prior to re-levelling, or the differential settlement of the foundations prior to the earthquake events. For this reason, it may not be practical to re-level the foundations where historical or long term settlement has previously occurred.

As the loading on the re-levelling pads is temporary, we have considered a safety factor of 2 for the ultimate bearing capacity.

APPENDIX – Design calculations

- Foundation Loading
- Re-levelling pads
- Concrete beam span
- Relevant Geotechnical

STANDARD CALCULATION TEMPLATE

JOB NAME: 16 Hemingway Place
JOB NO.: 170057
ENGINEER: DC
DATE: 09.03.2017

JOB DESCRIPTION:

Re-level of existing residential dwelling using a mechanical jacking technique

- Type C2 foundation
- Single storey dwelling
- Brick veneer wall cladding
- Light pressed steel roof cladding

STANDARD NOTATION AND DEFINITIONS

ACRONYMS

Foundations		Floor	
SF1	Strip Footing	FB1	Floor Bearer
PF1	Pad Footing	FJ1	Floor Joist
EB1	Edge Beam	SP1	Stringer Plate
IB1	Internal Beam	FP1	Pile
IR1	Internal Rib	VCJ	Vertical Control Joint
WP	Weld Plate		
SCJ	Saw Cut Joint		
CJ1	Control Joint		
CKJ	Connolly Key Joint		

Wall		Roof	
EW1	External Wall	R1	Rafter
IW1	Internal Wall	P1	Purlins
FW1	Fire Wall	VB	Veranda Beam
L1	Lintel	RB1	Roof Bracing
C1	Column	B1	Beam (steel or timber)
		B1	Ridge Beam

Other

TC#	Technical Category according to CERA for liquefaction risk
NZS	New Zealand Standard
MBIE	Ministry of Building, Innovation and Employment

DEFINITIONS

Along	Along the ridge line (Longitudinal)
Across	Across the ridge line (Transverse)

NZS 1170.0 - DESIGN ACTIONS - PART 0: GENERAL PRINCIPALS

REF

3.3 IMPORTANCE LEVEL

T 3.1 Structure designed for importance level **2**

T3.1 Consequence of failure ORDINARY

T3.1 Description: Medium consequence for loss of human life, or considerable economic, social or environmental consequences

T3.1 Comment: Normal structures and structures not falling into other levels

T3.2 Importance level desciption: Normal structures and structures not in other importance levels

3.4 ANNUAL PROBABLITY OF EXCEEDENCE

T3.3 Design working life **< 6 months**

Design annual probability of exceedence

Wind	ULS	1/100
Snow	ULS	1/50
Earthquake	ULS	1/100
SLS1	Service	1/25
SLS2	Service	-

3.4.2 *SLS1 — the structure and the non-structural components do not require repair after the*

3.4.2 *SLS1 earthquake, snow or wind event*

SLS2—the structure maintains operational continuity after the SLS2 earthquake (Importance L4 only)

NZS 1170.1 - PART 1: PERMANENT, IMPOSED AND OTHER LOADS

REF

4.2 COMBINATION FACTORS

G	Dead Loads (Permanent)
Q	Live Loads (Imposed)
ψ	load factor

4.2.2 Design Combinations for Strength

1.35G	Dominate Permernate Action
1.2G + 1.5Q	Permanent and Imposed Action
$1.2G + W_u$ (Down) + $\psi_c Q$	Permanent , Wind and Imposed Action
$0.9G + W_u$ (Up)	Permanent , Wind Reversal
$1.2G + S_u + \psi_c Q$	Permanent, Snow and Imposed
$1.0G + E_u + \psi_c Q$	Earthquake ULS

T4.1

ψ_c =	0.4 for roofs
	0.6 storage
S_u =	0.9kPa Minimum for Christchurch

4.3 Design Combinations for Servicabiltiy

$G + \psi_c Q$	Permanent and Imposed Action
E_s	Earthuquake SLS1

S5 METHOD OF ANALYSIS

STATIC

ELASTIC

NZS 1170.1 - PART 1: PERMANENT, IMPOSED AND OTHER LOADS
NZS 3604 - TIMBER FRAMED BUILDINGS - DESIGN LOADING

REF

3604 **Live Loading (Q)**

T1.2	Dwelling Floor Live Load	1.5	kPa	A1
	Dwelling Balconies/Decks	2.0	kPa	A1
	Dwelling Bathrooms	2.0	kPa	A2
	Communal Kitchens	3.0	kPa	A2
	Offices and Work Areas	3.0	kPa	B
	Dwelling Roof Load	0.25	kPa	

Dead Loading (G) - including timber framing

Branz	Light Roof	0.40	kPa		
3604	Heavy Roof	0.85	kPa		
	Light Wall	1.20	kN/m	H=	2.4
	Medium Wall	2.80	kN/m	H=	2.4
	Heavy Wall	6.40	kN/m	H=	2.4
	190 Block Wall	8.40	kN/m	H=	2.4
	190 Block Wall	11.40	kN/m	H=	2.4
	Timber Subfloor	0.40	kPa		
	Suspended Timber Floor	0.40	kPa		

Material Densities

$\mu_{Concrete}$	25.0	kN/m^3
μ_{Timber}	6.0	kN/m^3
μ_{Steel}	72.5	kN/m^3

NZS 3604 - TIMBER FRAMED BUILDINGS - DURABILITY

REF

3604 **Exposure Zone for Chrisrchurch** C

F4.2



NOTE – Zone D includes all offshore islands, the area within 500 m of the coastline of New Zealand, and those areas shown in white. The map shall be read in conjunction with 4.2.2.

T4.1

ZONES B AND C	Treated timber pile connections more than 600 mm from the ground and all subfloor connections	Subfloors vented 7000 mm² or less	SHELTERED[4]	Hot-dipped galvanized steel[2]
		Subfloors vented more than 7000 mm²	EXPOSED	Type 304 stainless steel[5]
	Treated timber pile connections within 600 mm of the ground	SHELTERED[4] AND EXPOSED		Type 304 stainless steel[5]
	All other structural fixings, except fabricated brackets[3]	SHELTERED[4]		Hot-dipped galvanized steel[2]
		EXPOSED		Type 304 stainless steel[5]
ZONE D	All structural fixings	SHELTERED[4] AND EXPOSED		Type 304 stainless steel[5]

SPECIFIC ENGINEERING DESIGN - RE-LEVELLING PAD
MBIE - Mechanical Re-levelling of Concrete Perimeter Beam (Type B1/B2)

Roof Load width	**6.5**	m	
First Floor Load Width	**0.0**	m	
` Ground Floor Load With	**4.5**	m	(Worst Case)

Dead Loads		**Mass**	**Load**
Roof	**Light**	0.40	2.60
First Floor Wall	**Nil**	0.00	0.00
First Floor	**Nil**	0.00	0.00
Ground Floor Wall	**Heavy**	2.20	5.28
Ground Floor	**Heavy**	2.50	11.25
Foundation	**Heavy**	-	4.50
		Total	**23.63**
Live Load			
Roof	**Ped Traffic**	0.25	1.63
First Floor	**Nil**	0.00	0.00
Ground Floor	**Residential**	1.50	6.75
		Total	**8.38**
Load Case	G + 0.3Q		**26.14**

Max Spacing of Jack Points	2.00	m	
Design Lift Load	52.29	kN	
Min Pad Size	**0.6 x 0.6**	m	
Min Pad Area	0.36	m^2	
Max Bearing Load	145.24	kPa	
Min Soil UBC	**200**	kPa	
Design Soil SBC	100	kPa	L.o.S = 2
Capacity Ratio	**0.7**		

NAME: 16 Hemingway Place **SHEET No.** 8
DATE: 09.03.2017 **REF: 170057**

SPECIFIC ENGINEERING DESIGN - RE-LEVELLING PAD
MBIE - Mechanical Re-levelling of Conc Edge Beam (Type C1/C2)

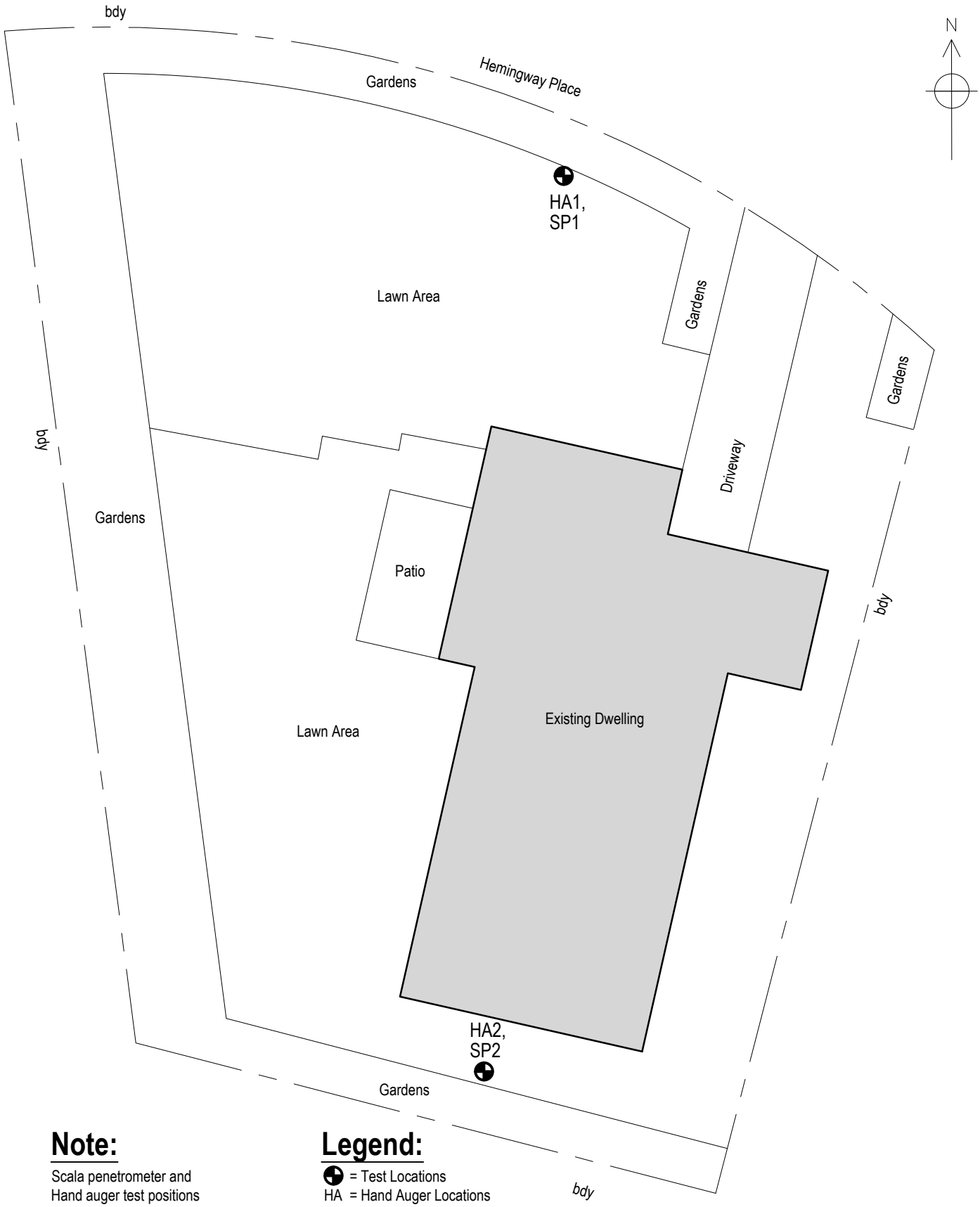
Beam Type	**Slab Edge Thickening**		
Assumed Size	450Dx250W		
Assumed No. Reo Bars	**2**		
Assumed Size of Reo Bars	**D16**	402.1	mm^2
Assumed grade of Reo	**300**		
Assumed concrete strength	**17.5**		

For conservative design assumed simply supported conditions

Design Load	26.14	kN/m	
Design Span	2.00	m	
Design Moment	13.07	kN.m	$wL^2/8$
Design Shear	52.3	kN	wL
Beam Check 1 - Moment	35.63	kN.m	$\phi Mb = \phi As\ fy\ (d-a/2)$
Capacity Ratio	**2.7**		
Beam Check 2 - Shear	33.1	kN	$0.08\sqrt{f_c'}$ ..
Capacity Ratio	**0.6**		NZS 3101 EQ 9-5

NAME: 16 Hemingway Place **SHEET No.**
DATE: 09.03.2017 **REF: 170057**

KIRK | ROBERTS
CONSULTING ENGINEERS LTD



Note:

Scala penetrometer and Hand auger test positions and boundaries are indicative only

Legend:

= Test Locations
HA = Hand Auger Locations
SP = Scala Penetrometer Locations
Bdy = Boundary Locations

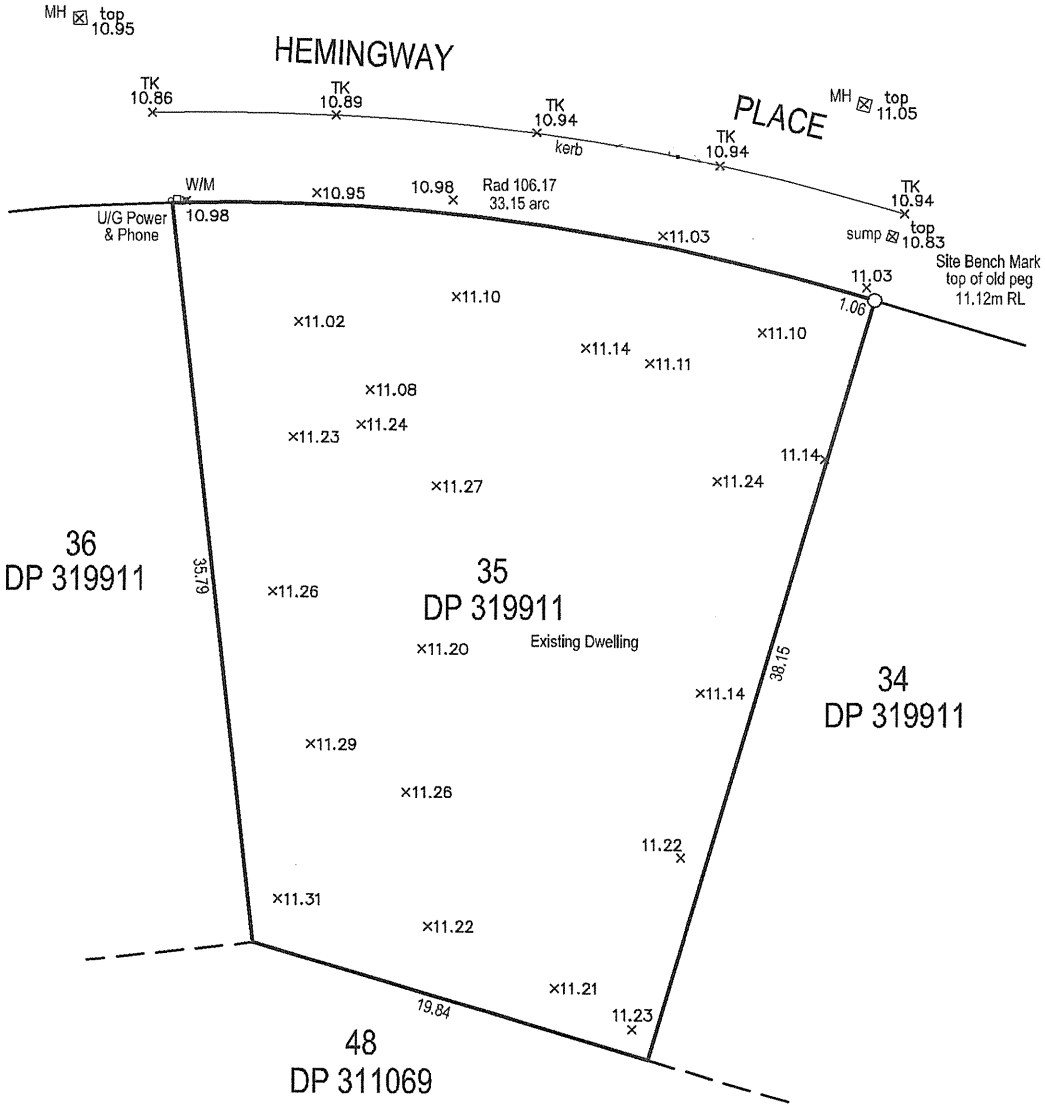
DO NOT SCALE - IF IN DOUBT, ASK
ORIGINAL SIZE A4
CAD REF :

SCALES :	1:200
	DATE
DESIGNED	
DRAWN	05.07.12 - GJT
CHECKED	
APPROVED	

RUSSEL WENN AND JULIE COLLIER
16 HEMINGWAY PLACE

SOIL TEST LOCATIONS

Job No.	Sheet No.	Rev.
121195	SK1	1



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AMBERLEY 03 314 9200
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DARFIELD 03 318 8151

Levels at No.16 Hemingway Place, Spencerville

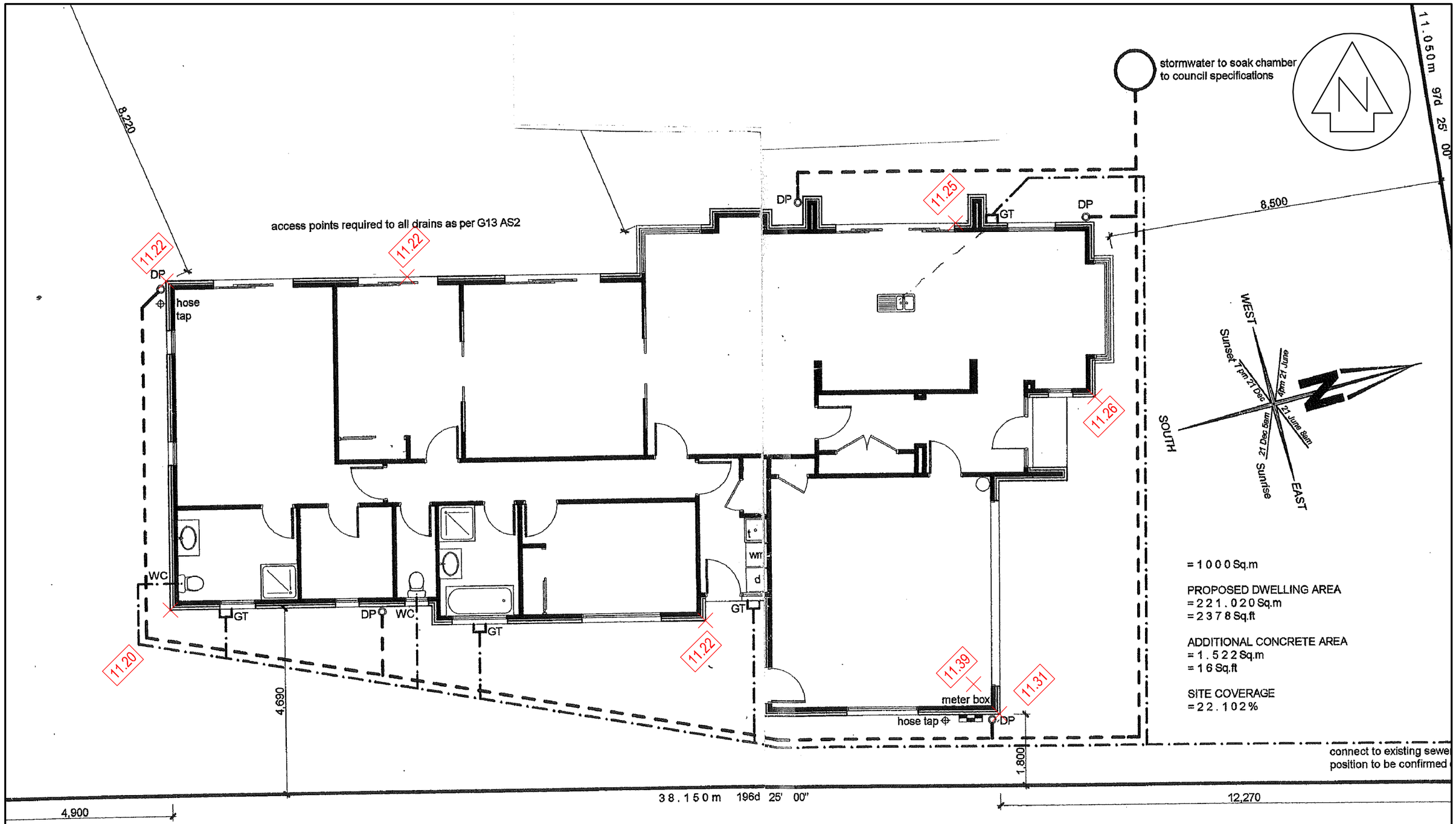
Russell Wenn & Julie Collier

Rev	Date	By	Amendments
A	03/08/12	SRS	Levels

Note:
Levels are in terms of CCC Datum
BM EHDB 11.31m RL

DATE	SHEET	REV
August 2012	1 of 1	A
SCALES	JOB REF	
1 : 250 (A3)	10791	

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Peter Ray Homes

NOTE

1. All work shall comply with NZS 3604:1999
2. All windows and doors to comply with NZS 4211:1985
3. Glazing to comply with NZS 4223:1985 & Pt 3 1993
4. Contractor must verify all dimensions on site prior to

Rev No.	Date	Amendment
A	03.11.03	remove gas fire, move gas bottles, change bay window

Drawn: A. Fahey
Date: 28.10.03
Scale:

Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title

Sheet No. 4

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Foundation Levels

16 Hemingway Place, Spencerville — Russell Wenn & Julie Collier

Rev	Date	By	Amendments
A	03/08/12	SRS	Levels

Note:
Levels are in terms of CCC Datum
BM EHDB 11.31m RL

DATE	SHEET	REV
August 2012	1 of 1	A
SCALES: Proportional	JOB REF: 10791	

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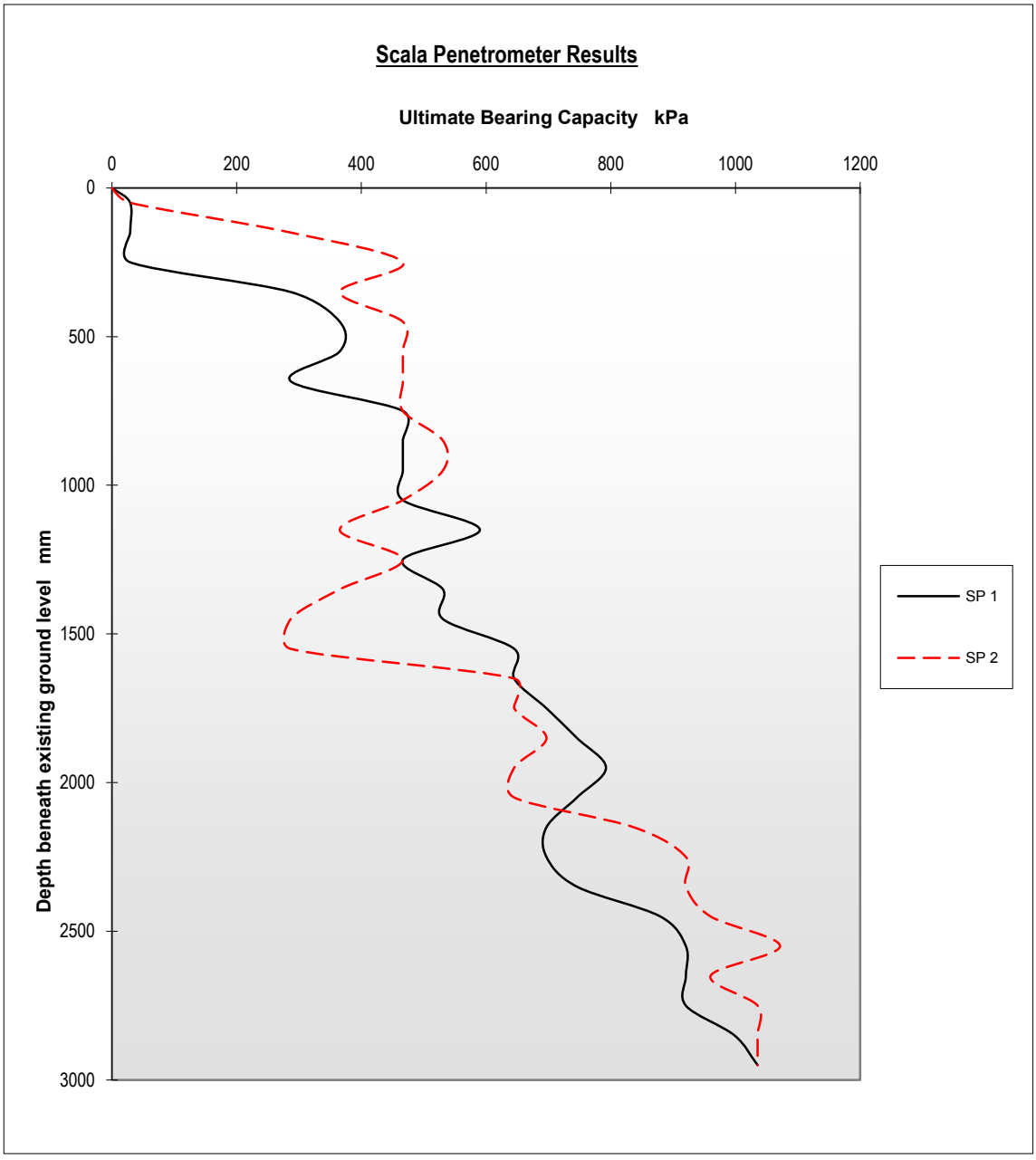
Location:				16 Hemingway Place_CPTU001
Date:				4/03/2013
Core %	Method	Moisture	Depth	Soil Description:
				Soil Type, minor components, plasticity or particle size, colour Rock Description: SUBSTANCE: Rock Type, particle size, colour, minor components DEFECTS: Type, inclination, thickness, roughness, filling.
			0m	
	CPTU		15m	CPTU001 to 15m
			END	

Location:				16 Hemingway Place_CPTU002
Date:				4/03/2013
Core %	Method	Moisture	Depth	Soil Description:
				Soil Type, minor components, plasticity or particle size, colour Rock Description: SUBSTANCE: Rock Type, particle size, colour, minor components DEFECTS: Type, inclination, thickness, roughness, filling.
			0m	
	CPTU		15m	CPTU002 to 15m
			END	

SCALA PENETROMETER RESULTS - COMBINED

JOB NUMBER 121195

Job Name:	Russell Wenn and Julie Collier
Site Address:	16 Hemingway Place
Town/City	Brooklands
Date:	4-Jun-12
Weather:	Wet
Operator:	HAV



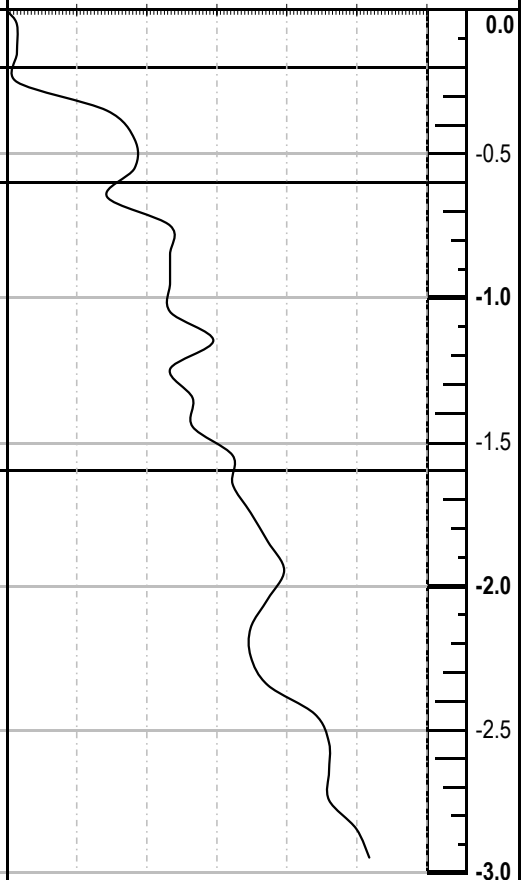
THIS REPORT IS PREPARED SOLEY FOR THE CLIENT WHO COMMISSIONED IT AND KIRK ROBERTS LTD WILL NOT ACCEPT ANY LIABILITY OF ANY KIND FOR THE USE OF ITS CONTENTS BY ANY OTHER PERSON.
BORE LOGS AND SCALA PENETROMETER TESTS ARE DISCRETE TESTS OF THE GROUND AT THE LOCATION OF THE TESTS ONLY. WHILE THEY ARE REPRESENTATIVE OF TYPICAL CONDITIONS, THEY DO NOT IDENTIFY VARIATIONS IN THE GROUND IN LOCATIONS AWAY FROM THE TEST AREAS.

SCALA PENETROMETER & HAND AUGER RESULTS

KIRK ROBERTS CONSULTING ENGINEERS LTD

		Scala Penetrometer:	**SP1**
		Hand Auger:	**HA1**
		Project No.:	**121195**
Client:	Russell Wenn and Julie Collier	**Date:**	04/06/12
Site Address:	16 Hemingway Place	**Weather:**	Wet
Town/City:	Brooklands	**Operator:**	HAV

Geological Formation:	Depth (m)	Sample Description:	Graphic:	USCS	Water Table	Undrained Shear Strength Su (kPa)
	0.0	**TOPSOIL** Brown organic silt, soft, wet.		OL		
	-0.5	**silty SAND** Light brown silty sand, fine to medium sand medium dense, wet.		SM		
	-1.0	**SAND** Brown fine sand, medium dense, wet. Becoming dark brown-grey, medium dense, saturated.		S	04/06/12 ▼	
	-1.5	Sand becoming dense.				
	-2.0	EOH at 1.6 m depth in dense saturated collapsing sand.				
	-2.5					
	-3.0					
	-3.5					
	-4.0					
	-4.5					



Scala Penetrometer and Test Bore log tests give an indication of the ground condition at the location of the tests only. While they are representative of typical conditions across the site, they do not identify variations in the ground away from the test locations.

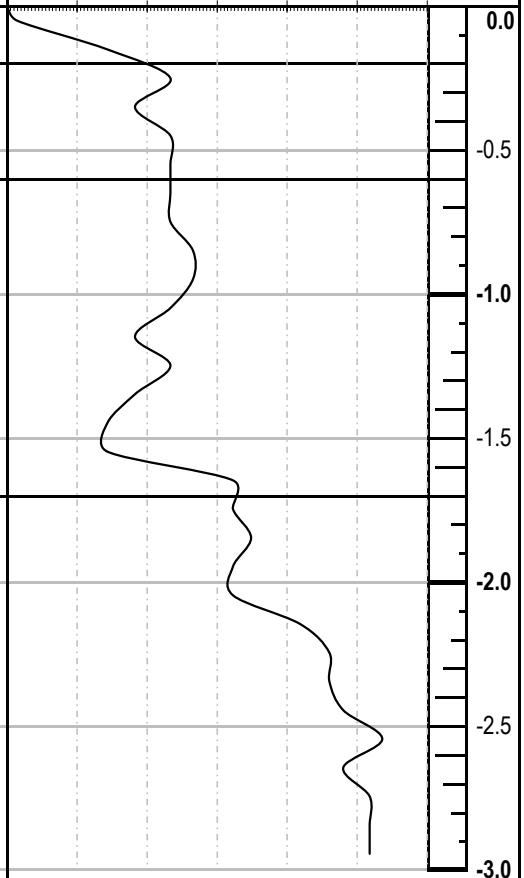
SCALA PENETROMETER & HAND AUGER RESULTS

KIRK ROBERTS CONSULTING ENGINEERS LTD

		Scala Penetrometer:	**SP2**
		Hand Auger:	**HA2**
		Project No.:	**121195**
Client:	Russell Wenn and Julie Collier	**Date:**	4 June 2012
Site Address:	16 Hemingway Place	**Weather:**	Wet
Town/City:	Brooklands	**Operator:**	HAV

Geological Formation:	Depth (m)	Sample Description:	Graphic:	USCS	Water Table	Undrained Shear Strength Su (kPa)
	0.0	**TOPSOIL** Brown organic silt, soft, wet.		OL		
	-0.5	**silty SAND** Light brown silty sand, fine to medium sand medium dense, wet		SM		
	-1.0	**SAND** Brown fine sand, medium dense, wet. Becoming dark brown-grey, medium dense, saturated.		S	04/06/12 ▼	
	-1.5	Sand becoming dense.				
	-2.0	EOH at 1.7 m depth in dense saturated collapsing sand.				
	-2.5					
	-3.0					
	-3.5					
	-4.0					
	-4.5					

Ultimate Bearing Capacity (kPa)



Scala Penetrometer and Test Bore log tests give an indication of the ground condition at the location of the tests only. While they are representative of typical conditions across the site, they do not identify variations in the ground away from the test locations.

APPENDIX B

- Project Orbit: Canterbury Geotechnical Database
    - Geological Section location plan



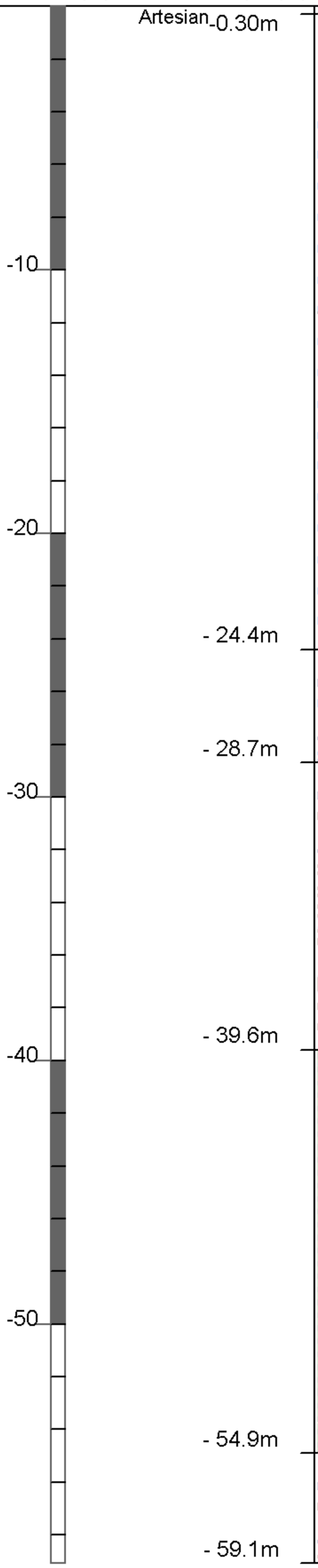
Figure 1: Geological Section location plan.

- Tonkin & Taylor Limited Geological Cross Sections
    - XS-SPE-02
    - XS-SPE-06

Borelog for well M35/1338

Gridref: M35:8527-5332 Accuracy : 3 (1=high, 5=low)
Ground Level Altitude : 2.8 +MSD
Driller : not known
Drill Method : Driven Pipe
Drill Depth : -59.09m Drill Date :

Environment Canterbury Regional Council



Scale(m)	Water Level	Depth(m)	Full Drillers Description	Formation Code
	Artesian	0.30m	Topsoil	ch
			Blue sand	
		- 24.4m	Blue shingle	ch
		- 28.7m	Brown shingle. Water level rises o.6m	ri
		- 39.6m	Yellow clay, Blue sand, peat	ri
		- 54.9m	Brown shingle. Water level rises 1.8m	br
		- 59.1m		li-1

Borelog for well M35/5965

Gridref: M35:8559-5274 Accuracy : 4 (1=high, 5=low)
Ground Level Altitude : 2 +MSD
Driller : Stevens J O
Drill Method : Cable Tool
Drill Depth : -34m Drill Date : 1/06/1988

Environment Canterbury Regional Council

Scale(m)	Water Level	Depth(m)	Full Drillers Description	Formation Code
	-1.7CalcMin		Coarse sand	
-5				
-10				
		- 12.2m	Fine Blue sand	ch
-15				
-20				
-25				
		- 25.6m	Fine gravel,shells & sand	ch
		- 28.1m		ch
		- 28.7m	Peat & pug	ch
-30			Sandy Blue gravel ,no water movement	
		- 31.6m		ri
		- 32.0m	Mixed Blue & Brown gravel.good water	ri
			Brown gravel.good water	
		- 34.0m		ri

APPENDIX C

- Liquefaction analysis results for:
  - 25 year earthquake event (PGA = 0.13)
  - 500 year earthquake event (PGA = 0.35)

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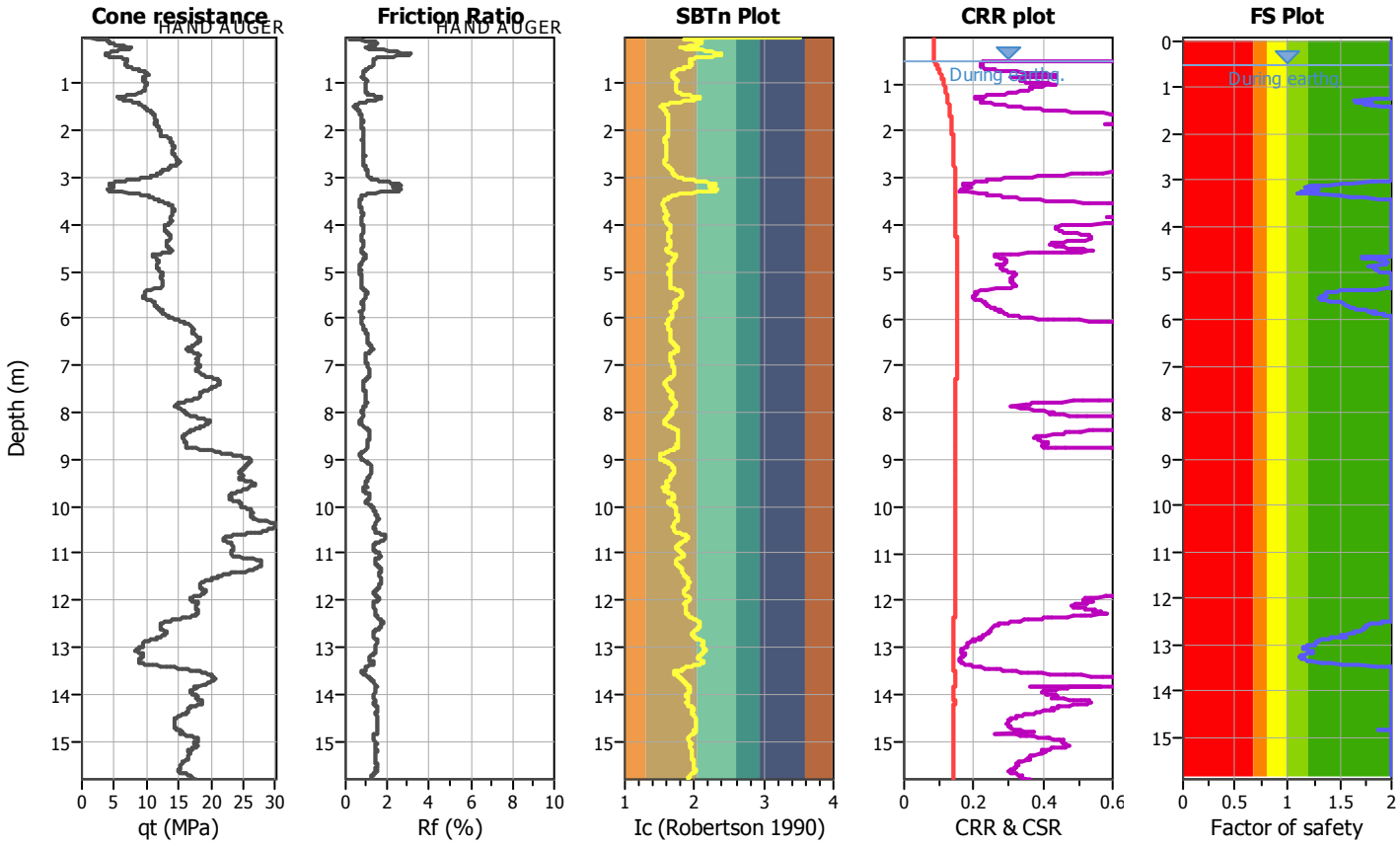
LIQUEFACTION ANALYSIS REPORT

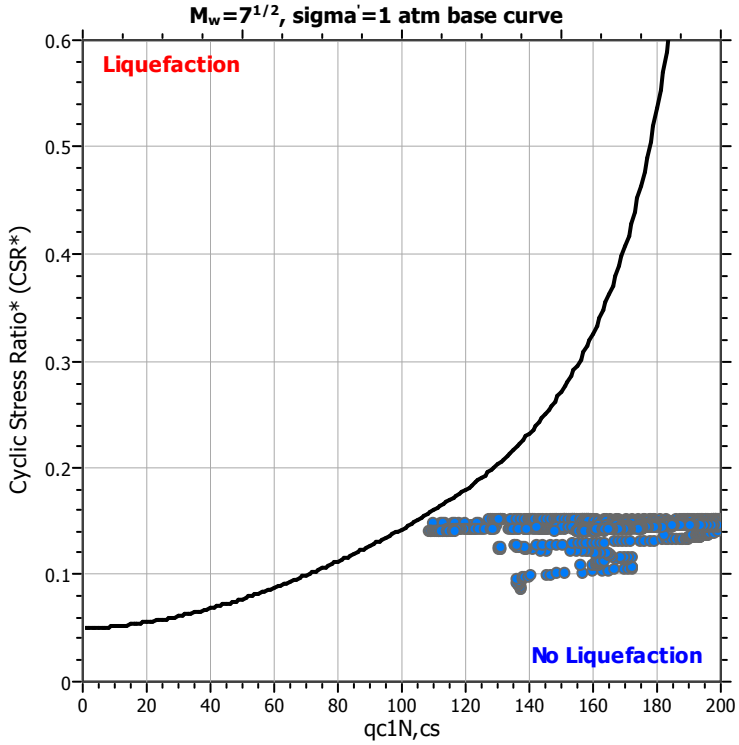
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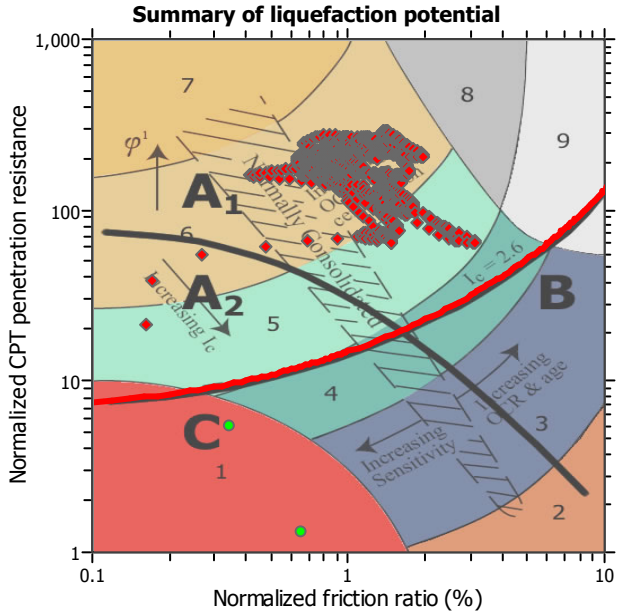
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Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

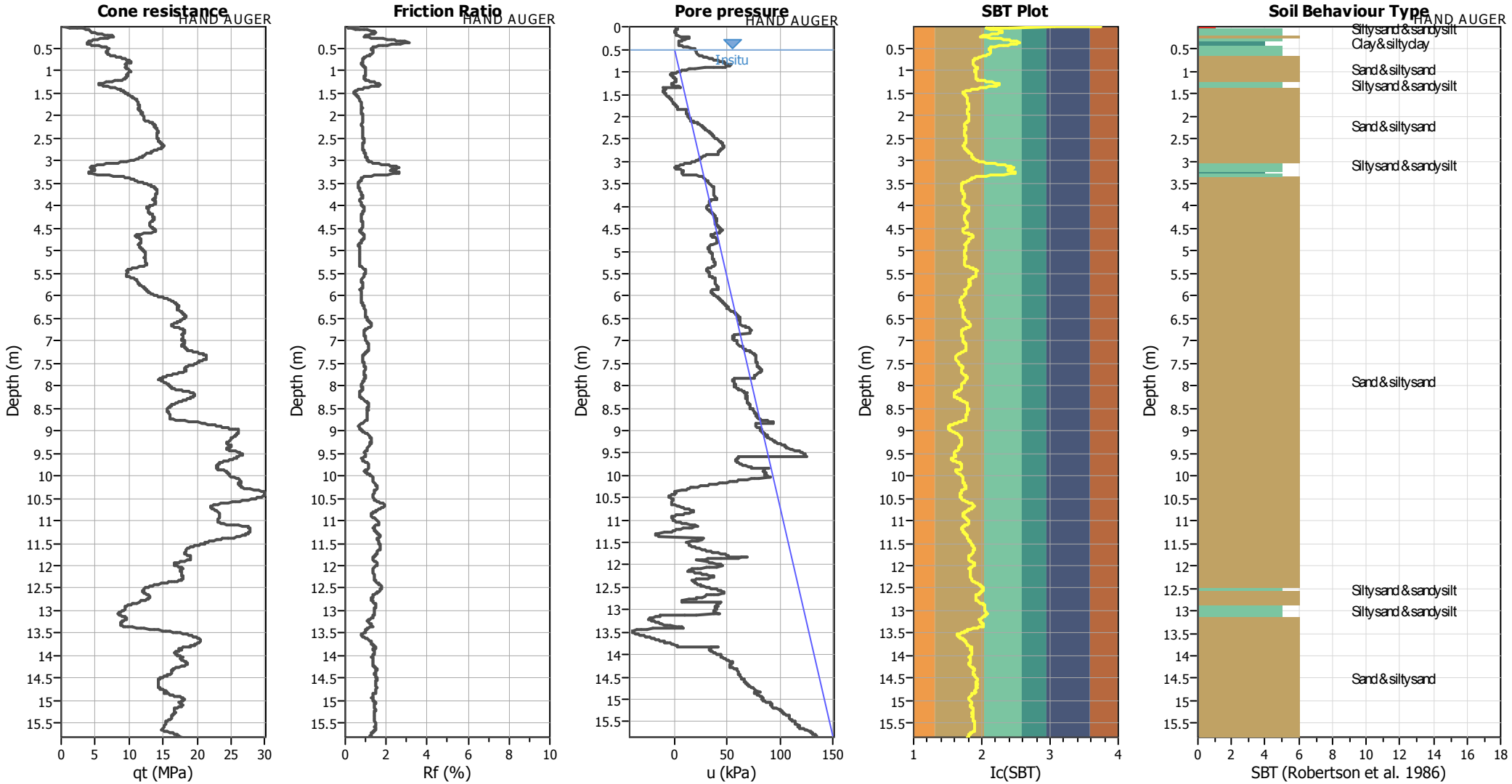






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



Input parameters and analysis data

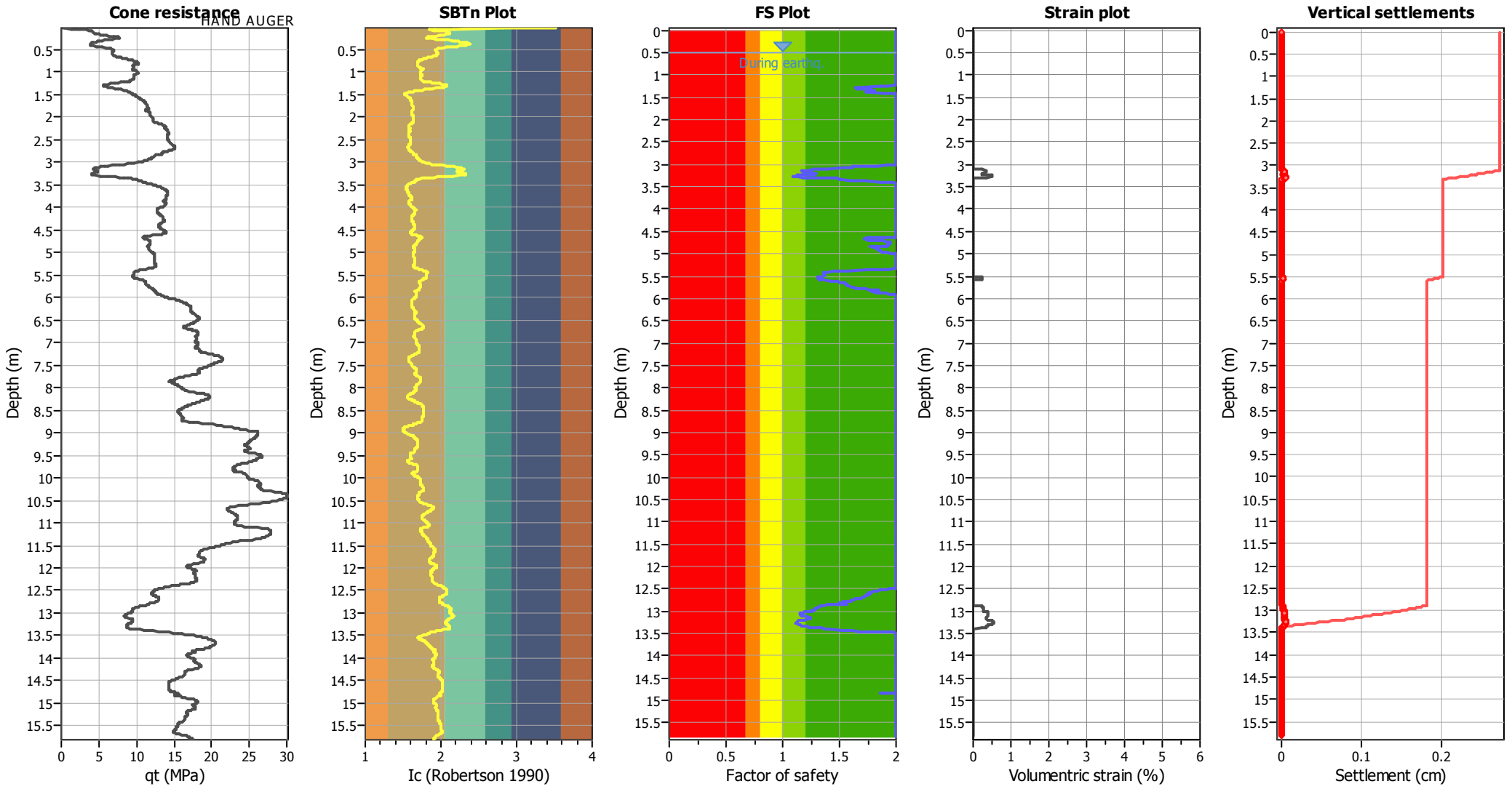
Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.13	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

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Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

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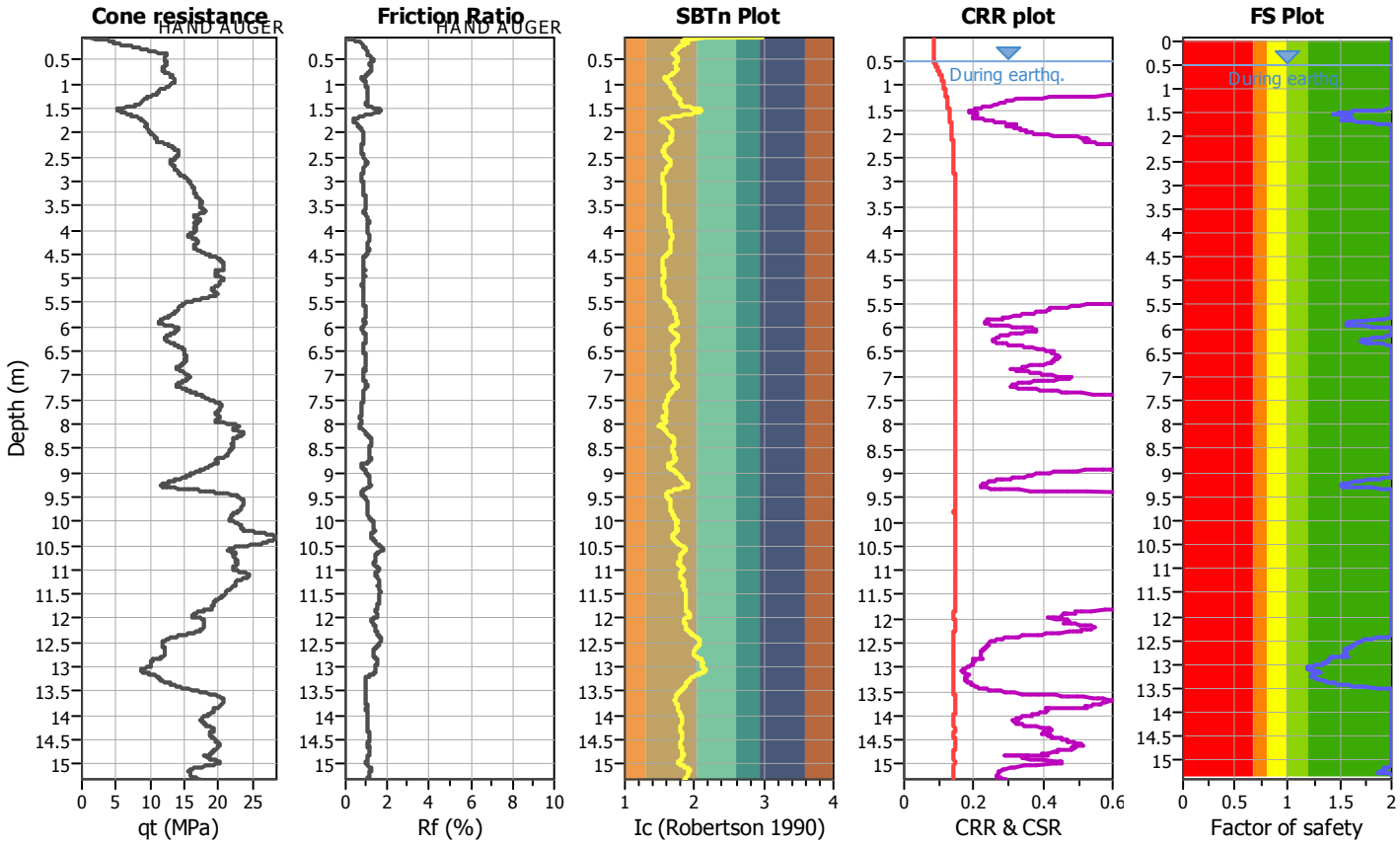
LIQUEFACTION ANALYSIS REPORT

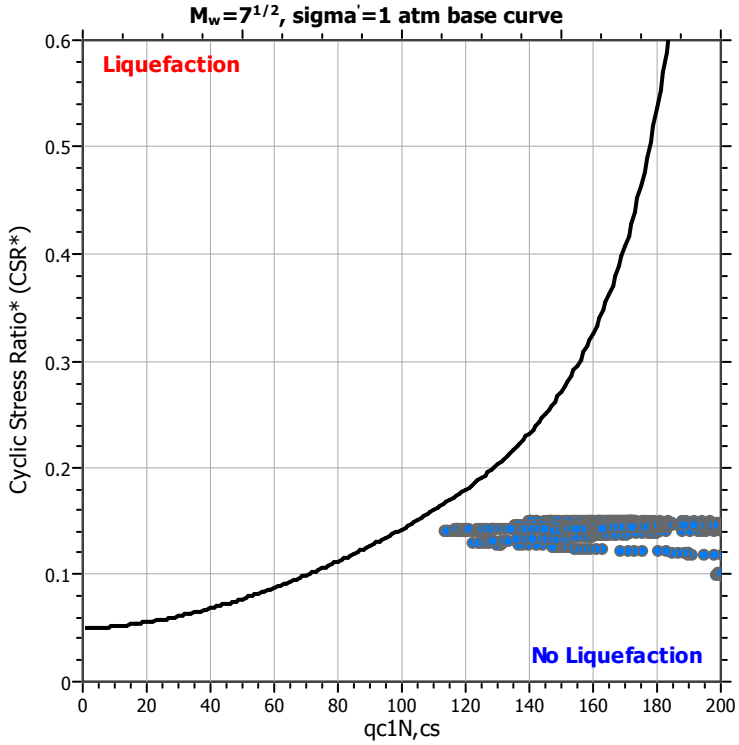
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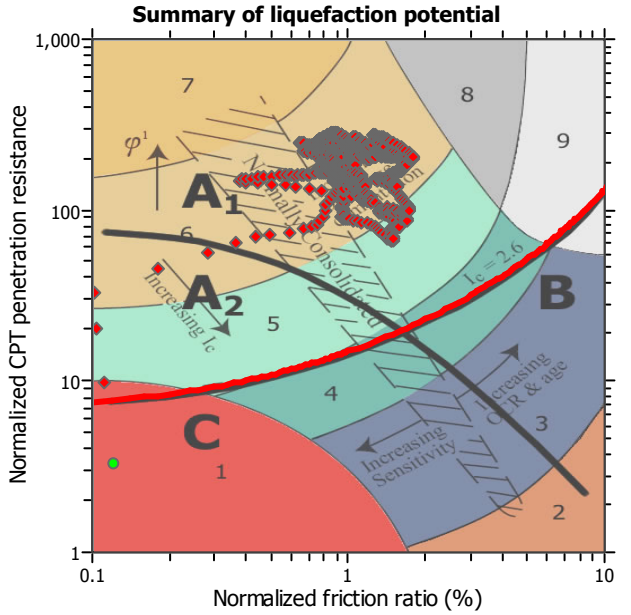
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Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

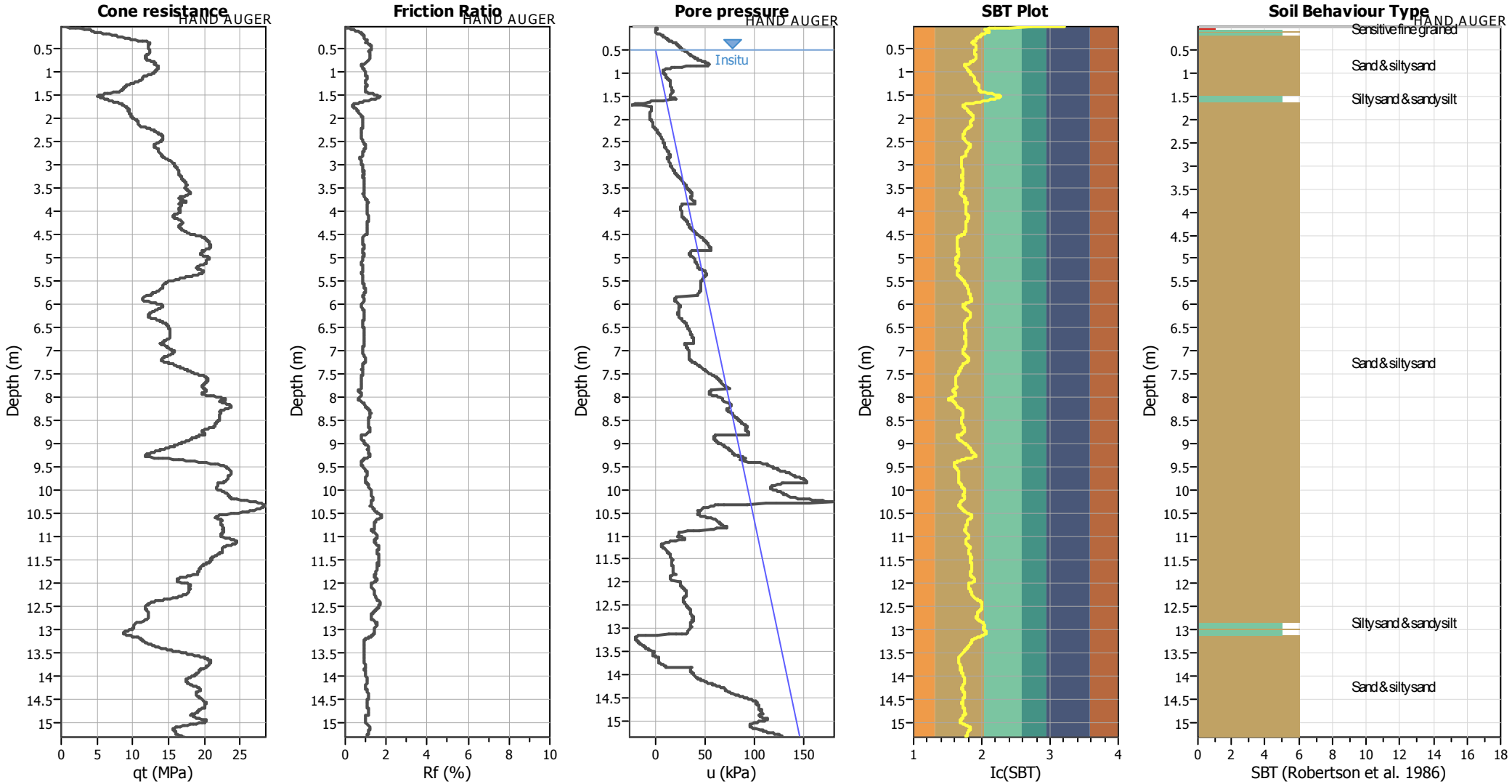






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



Input parameters and analysis data

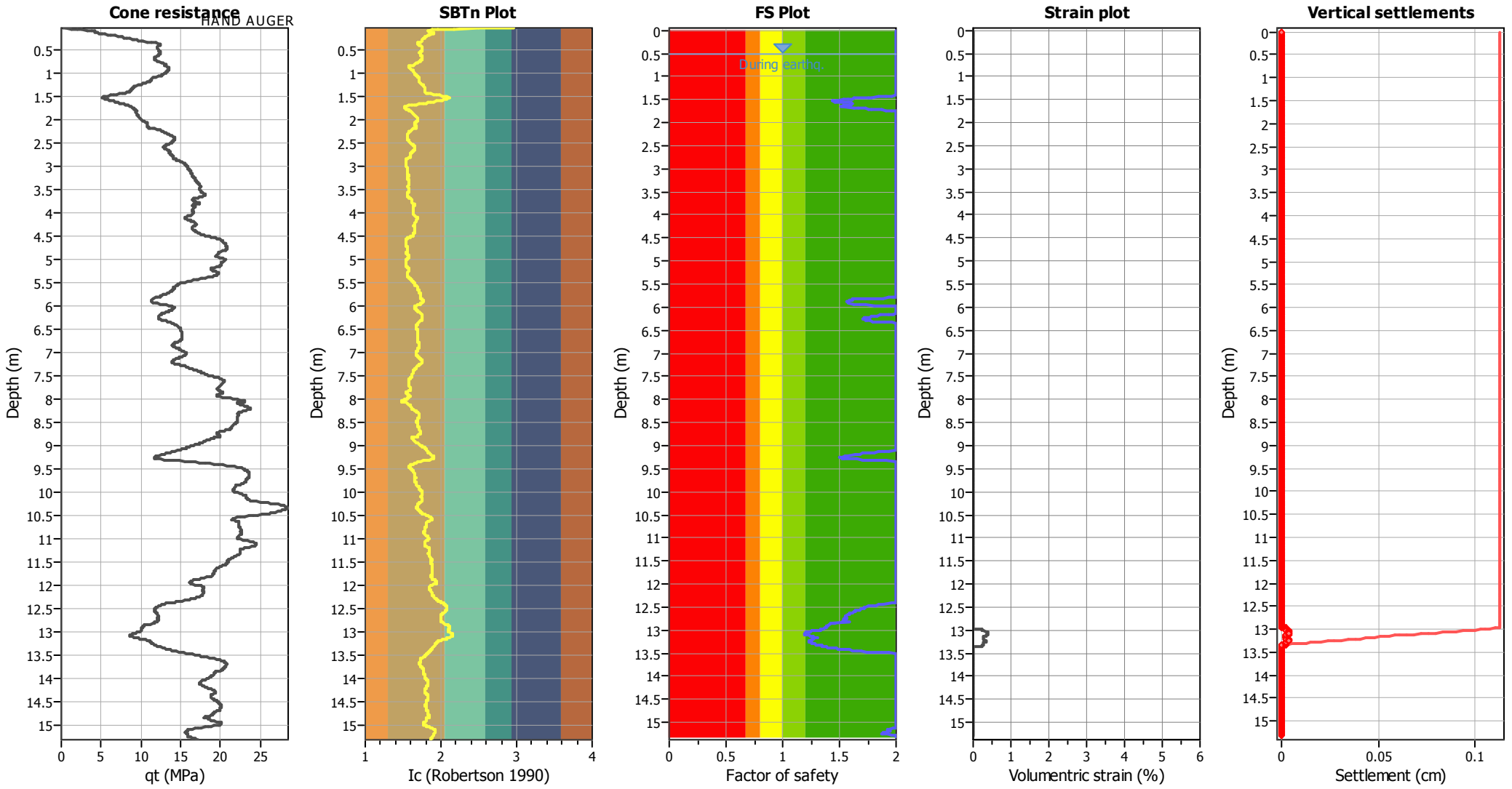
Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.13	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

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Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

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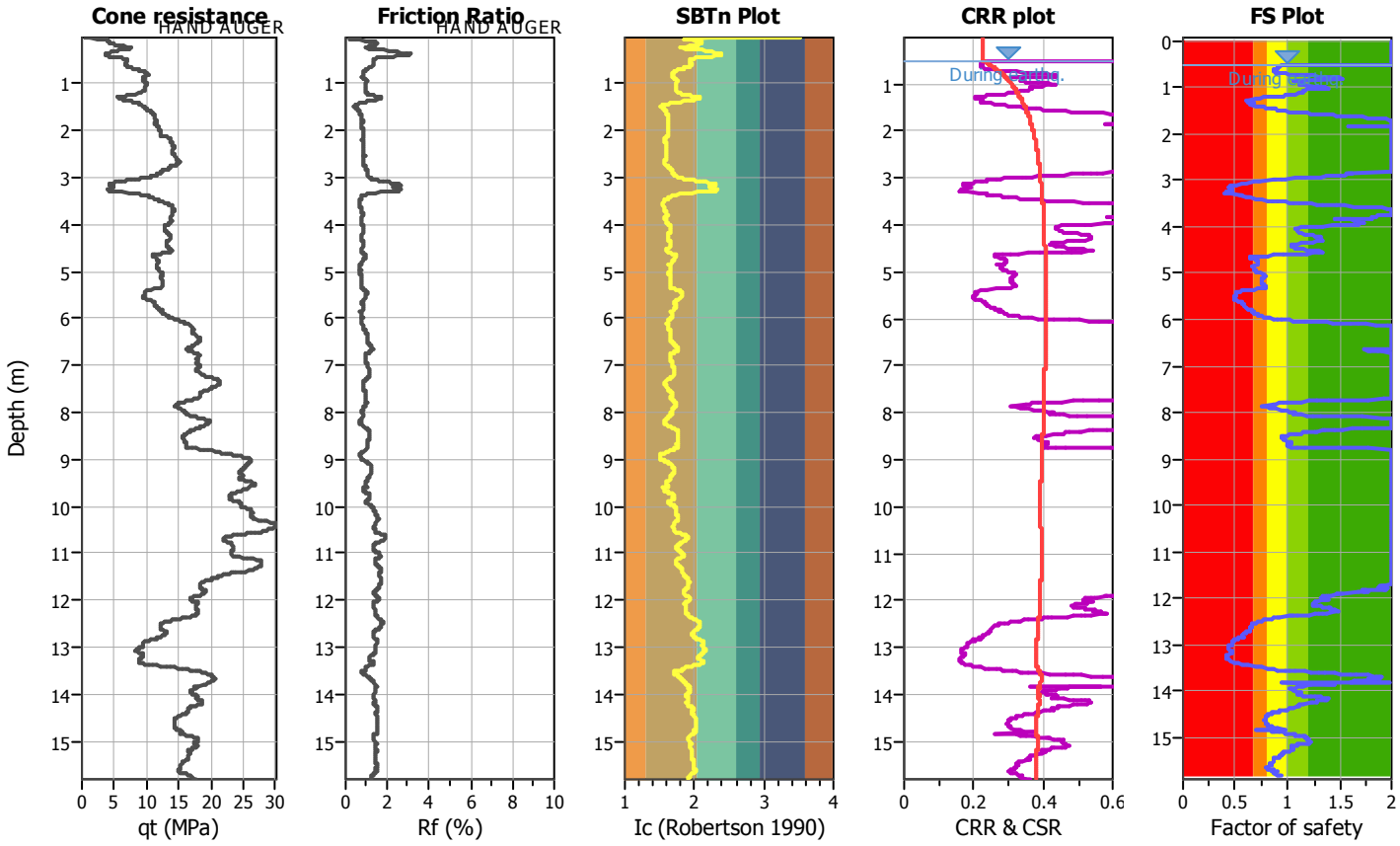
LIQUEFACTION ANALYSIS REPORT

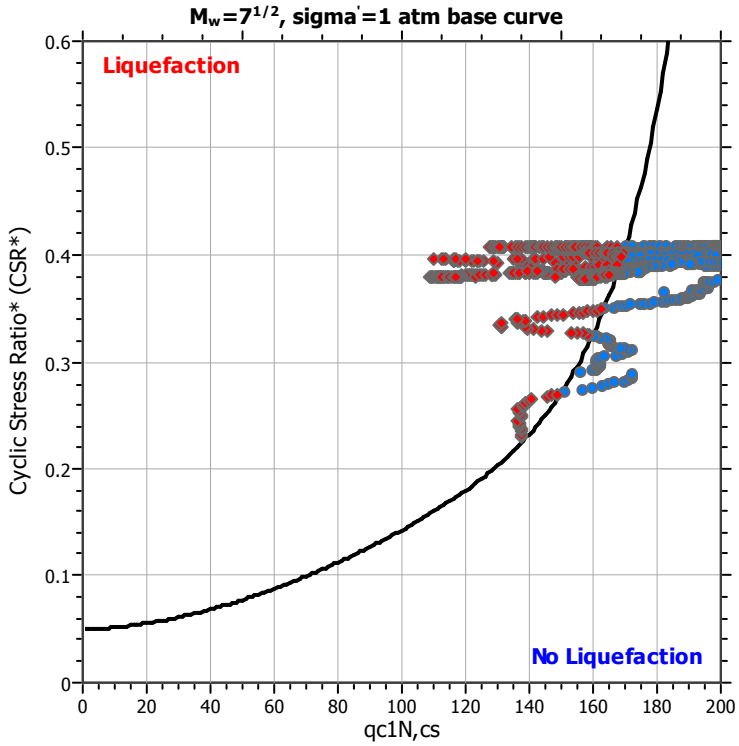
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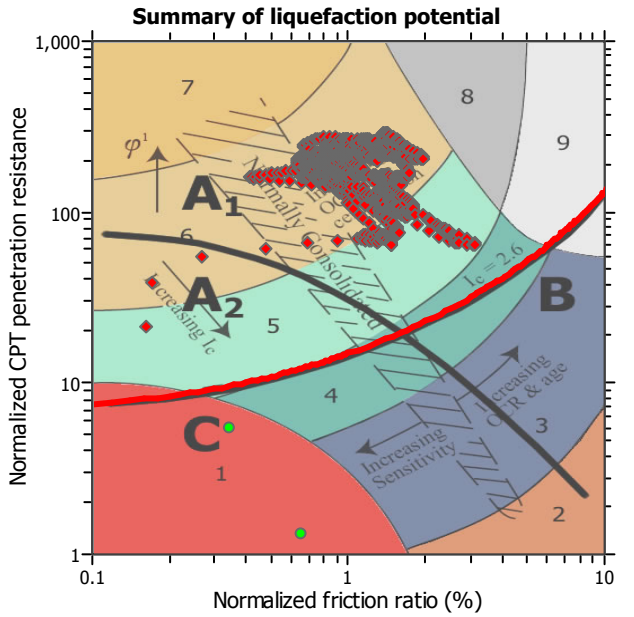
CPT file : CPTU001 ULS

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Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.35	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		



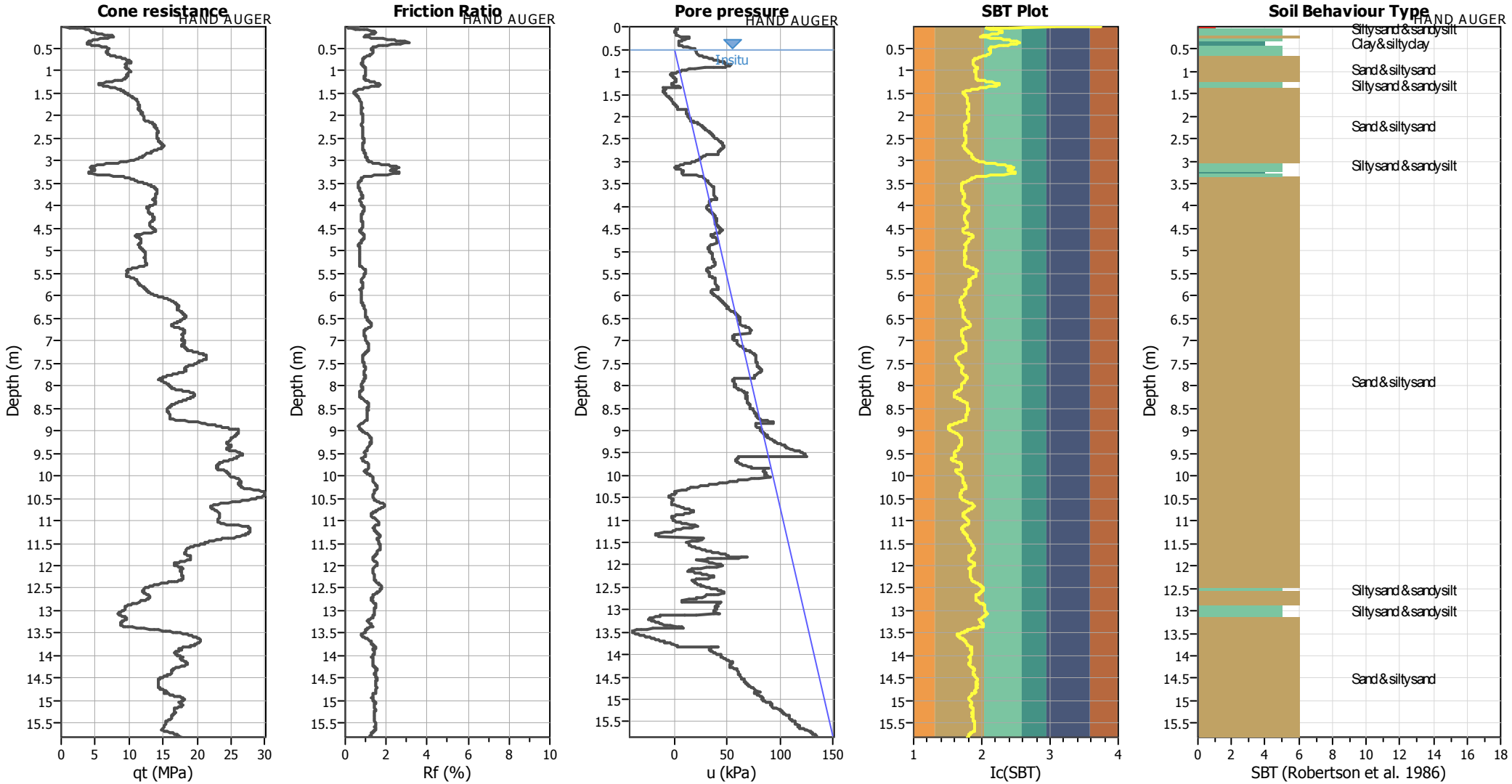




Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
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Christchurch City Council I Exemption from building consent I BCN/2017/1885 I 22/03/2017 I Page 45 of 62

CPT basic interpretation plots



Input parameters and analysis data

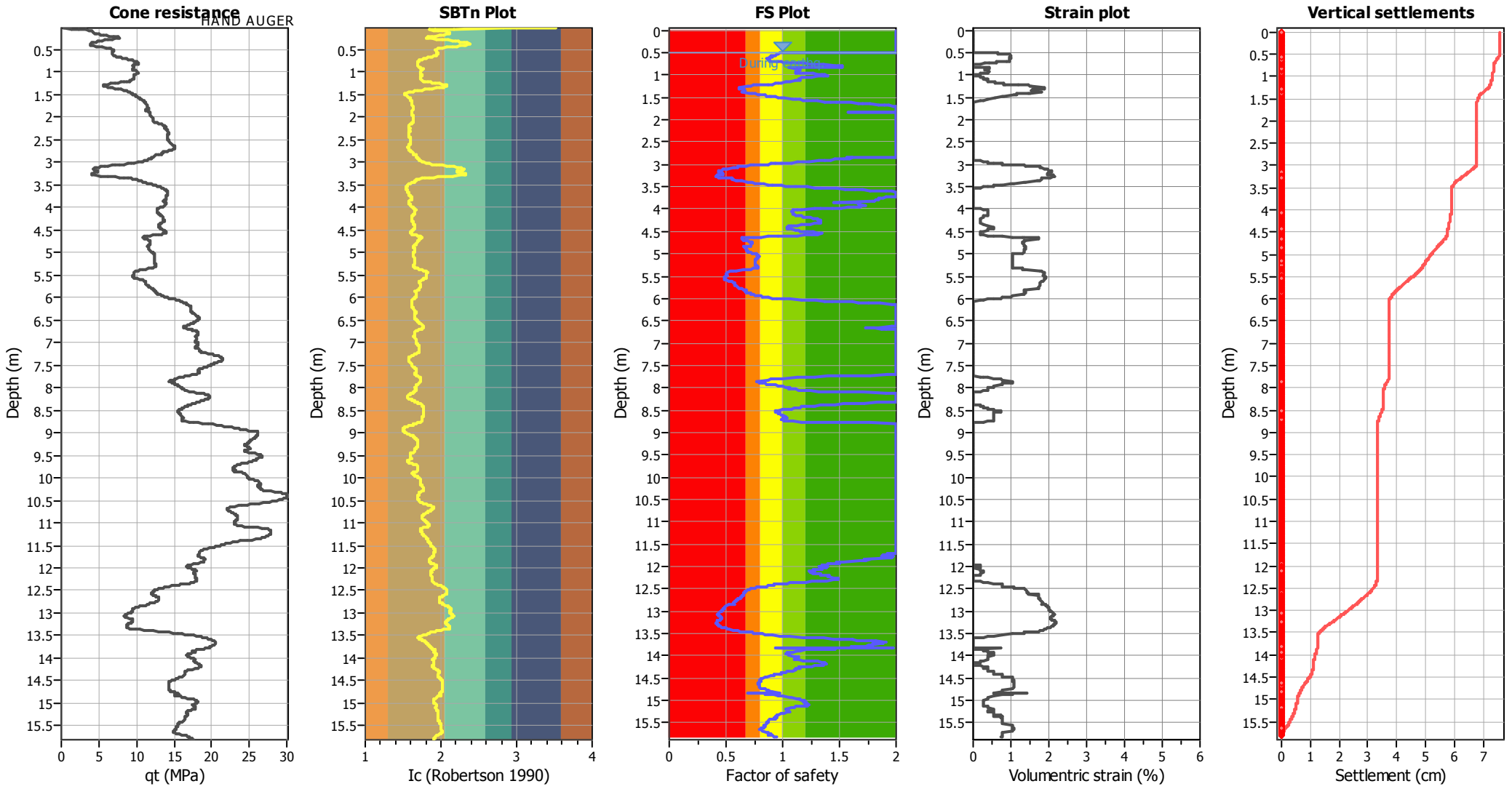
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Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.35	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

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Estimation of post-earthquake settlements



Abbreviations

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I_c:	Soil Behaviour Type Index
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Volumentric strain:	Post-liquefaction volumentric strain

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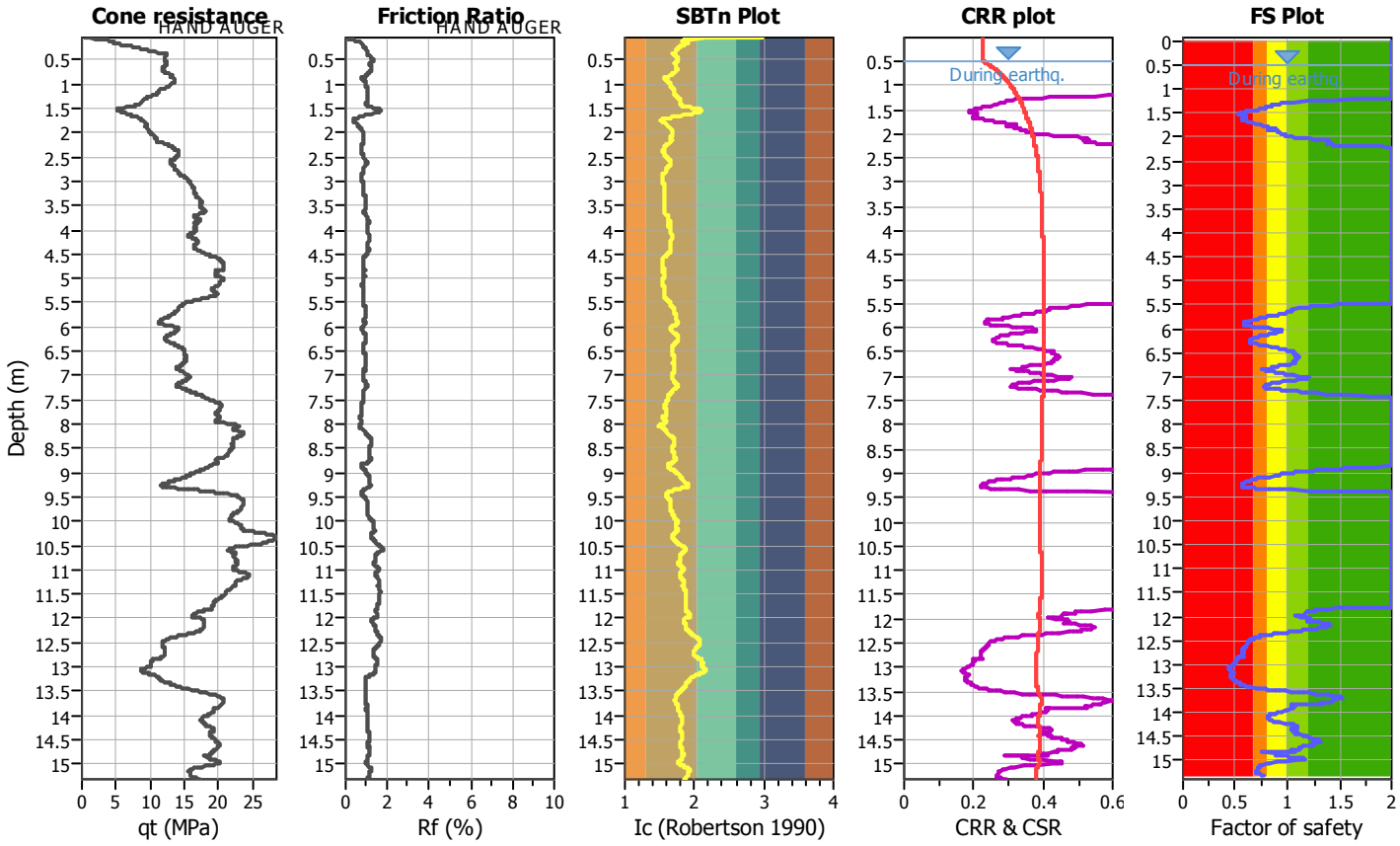
LIQUEFACTION ANALYSIS REPORT

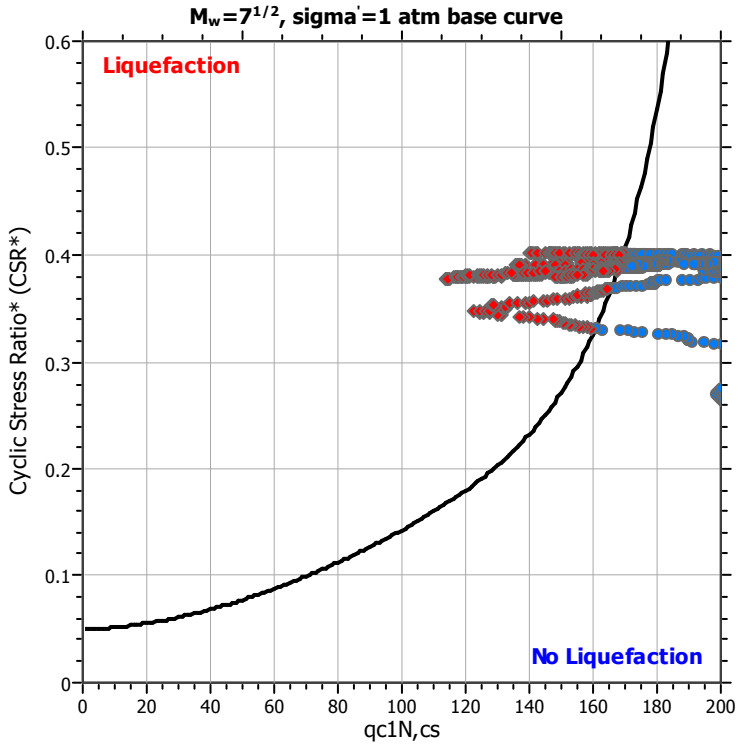
Project title : **Location :**

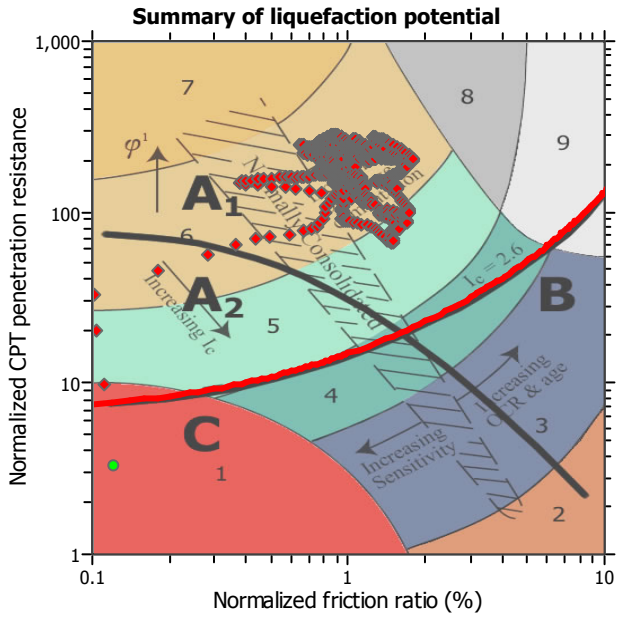
CPT file : CPTU002 ULS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.35	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		



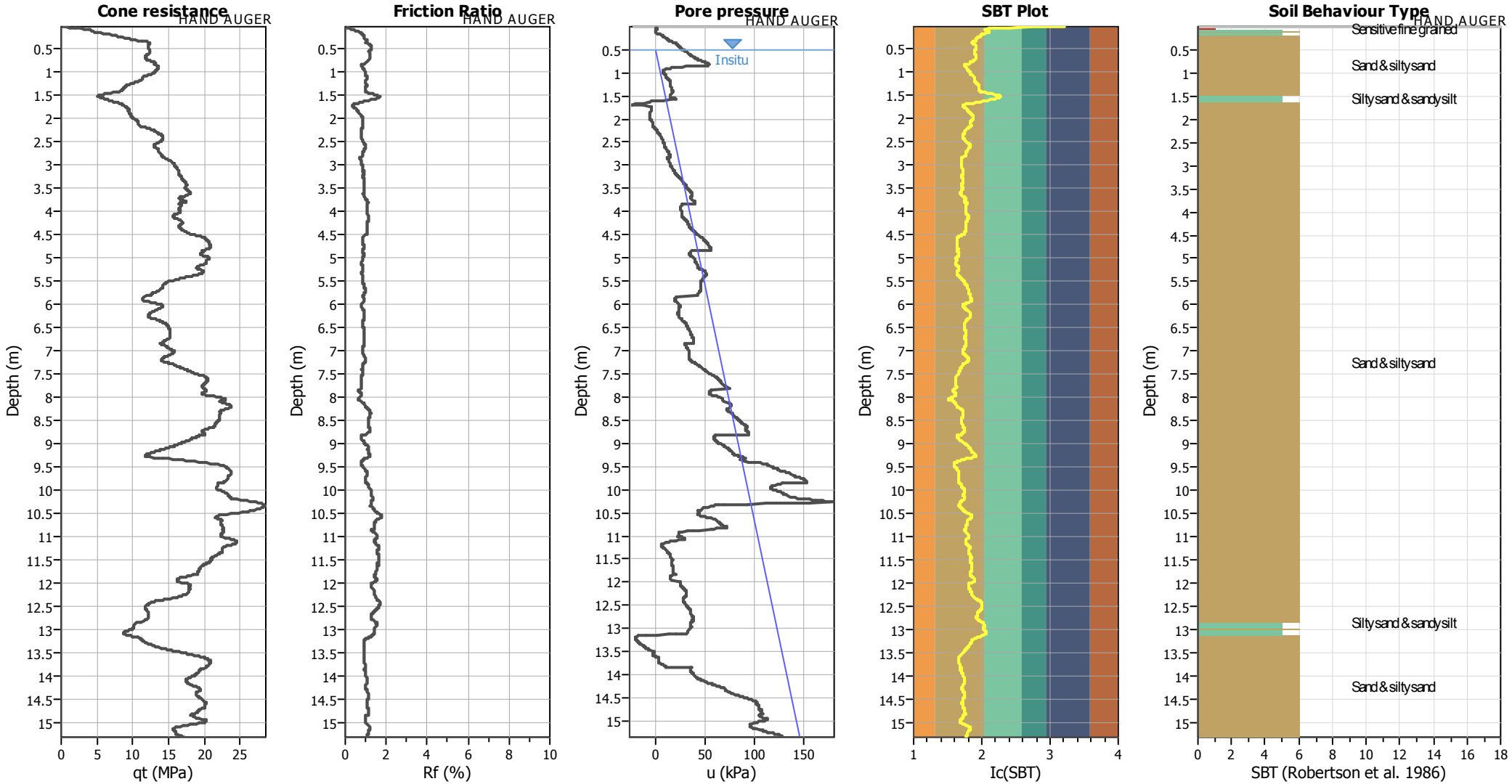




Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

Christchurch City Council I Exemption from building consent I BCN/2017/1885 I 22/03/2017 I Page 48 of 62

CPT basic interpretation plots



Input parameters and analysis data

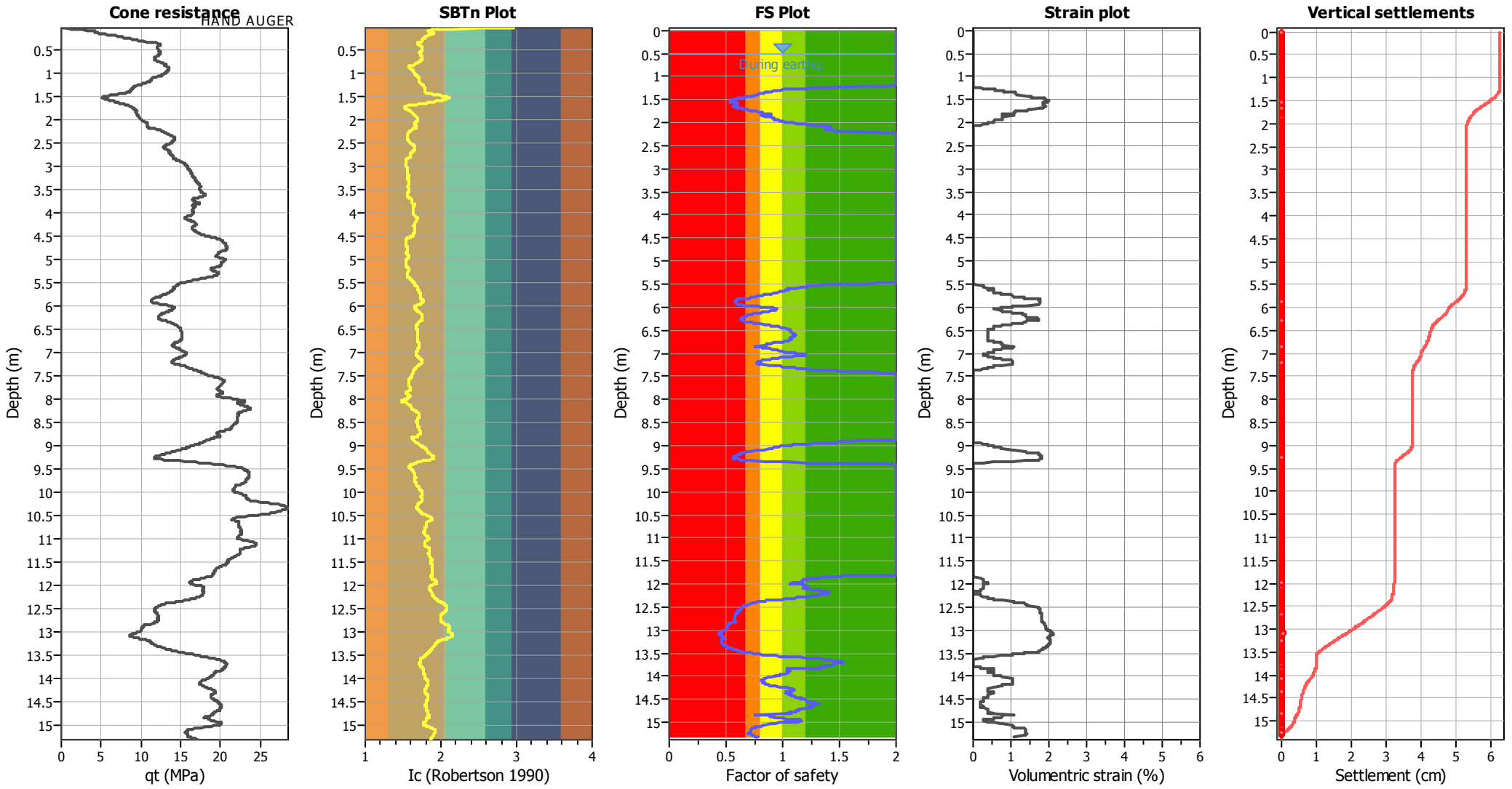
Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.35	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Christchurch City Council I Exemption from building consent I BCN/2017/1885 I 22/03/2017 I Page 49 of 62

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

Christchurch City Council I Exemption from building consent I BCN/2017/1885 I 22/03/2017 I Page 50 of 62

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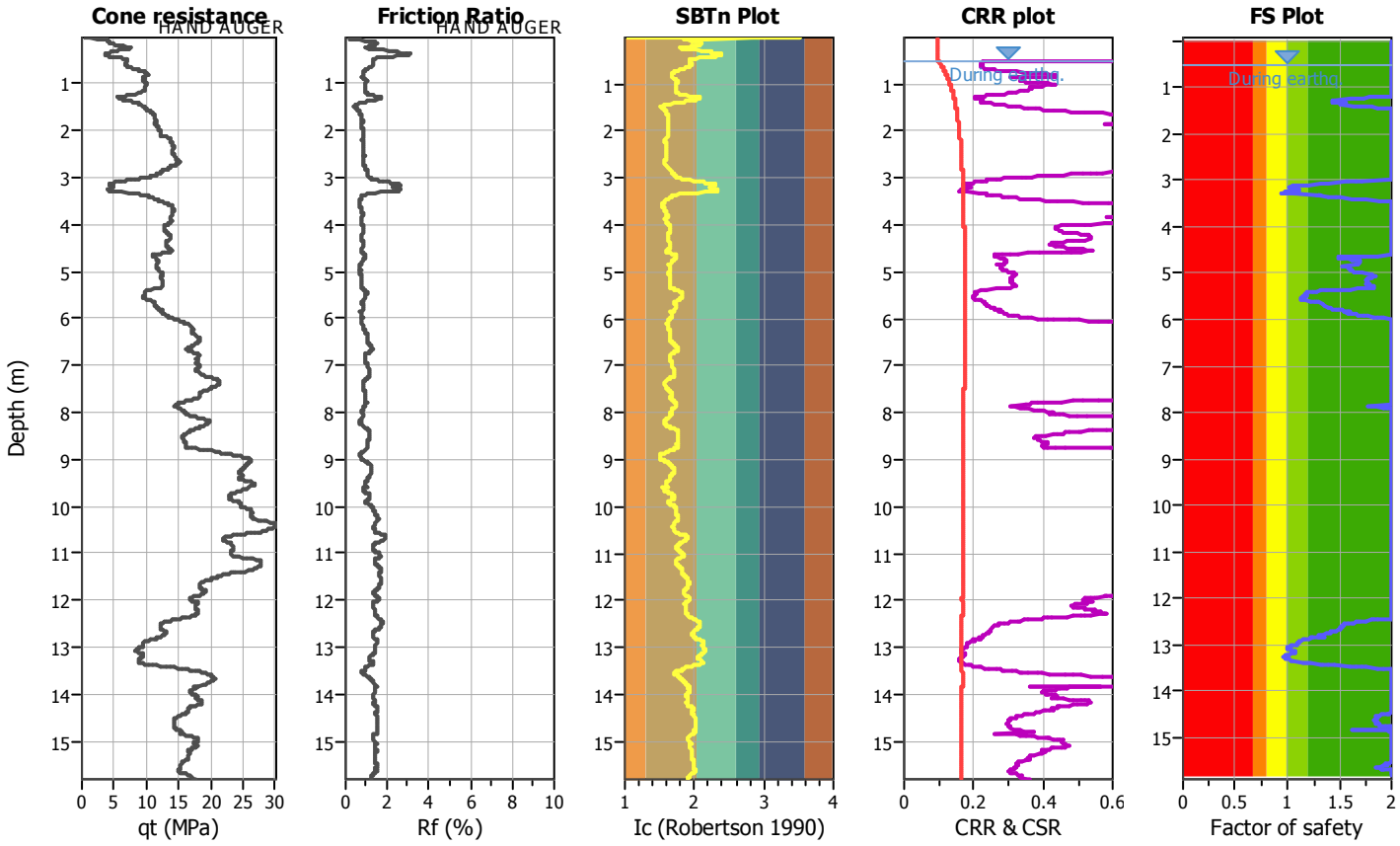
LIQUEFACTION ANALYSIS REPORT

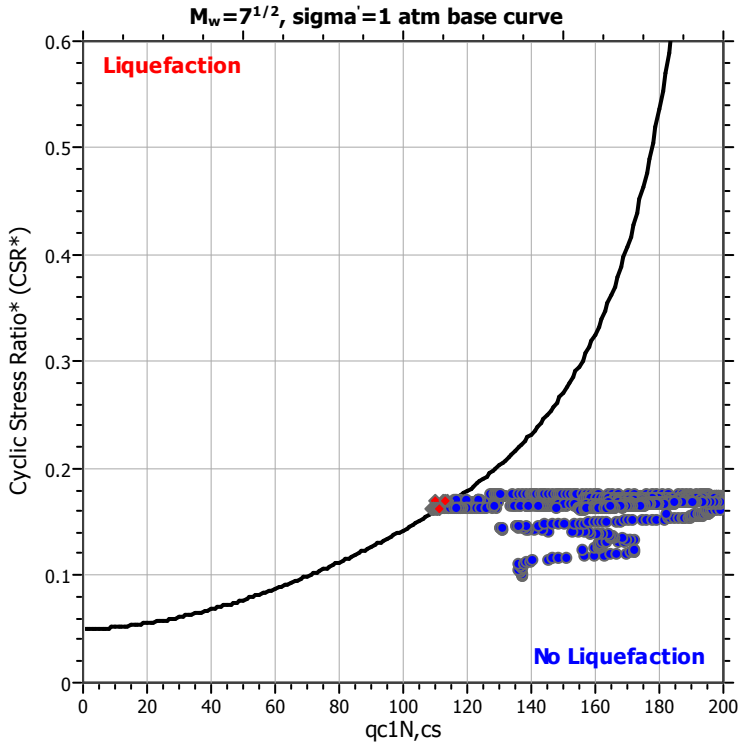
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

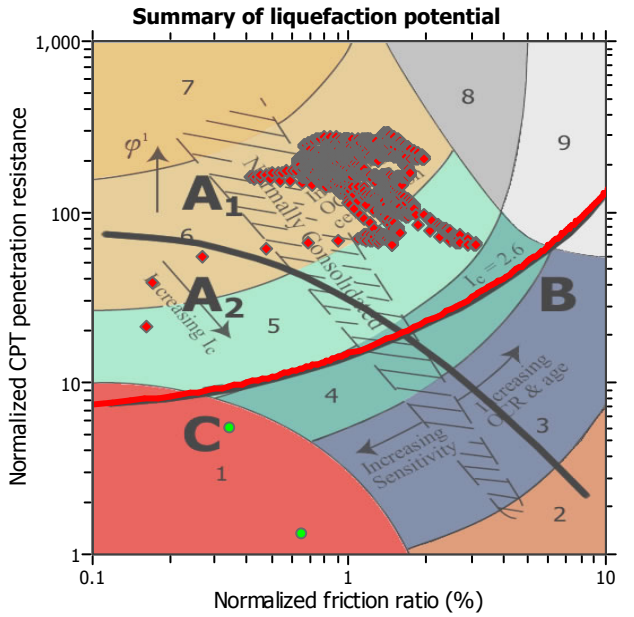
CPT file : CPTU001 SLS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_o applied:	Yes		

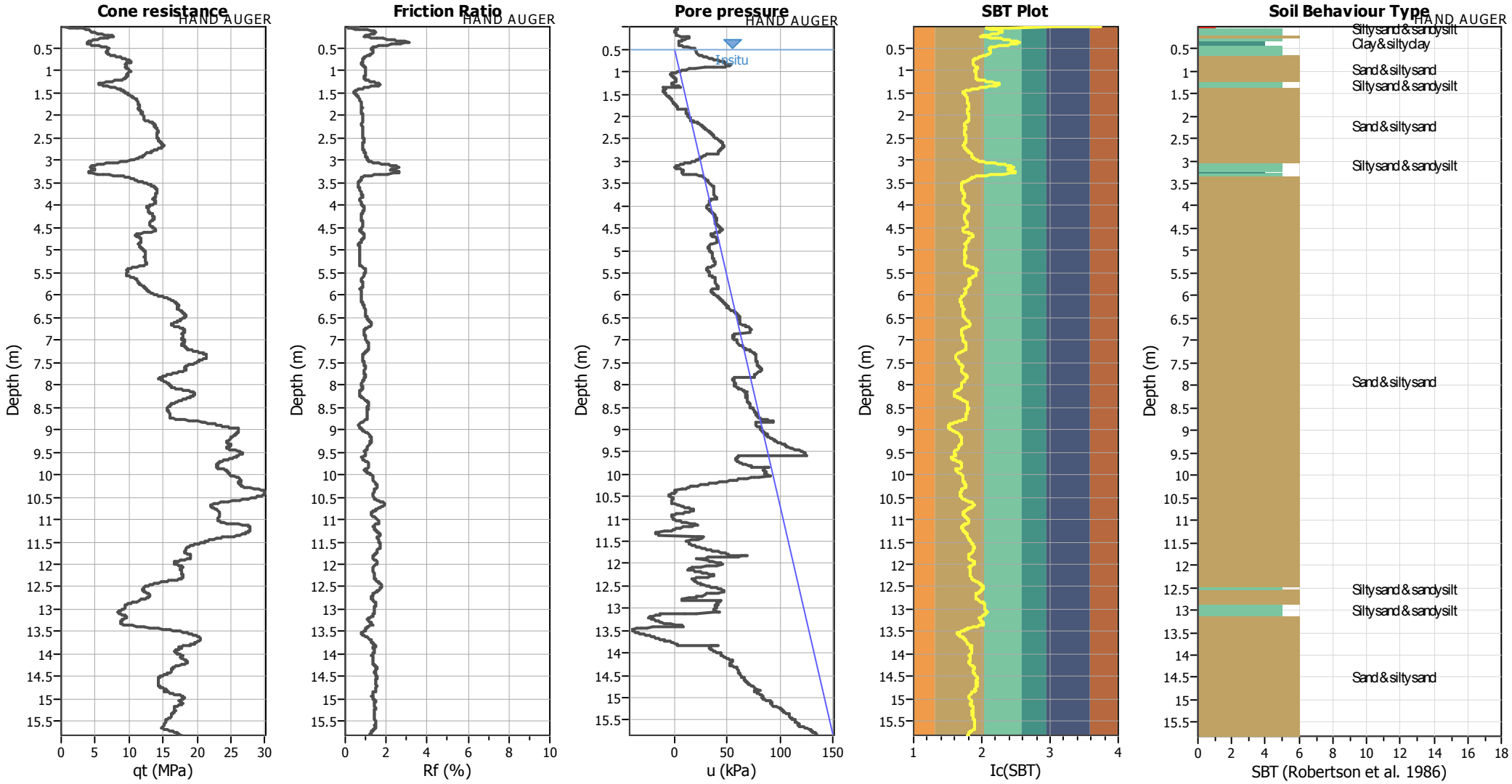






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



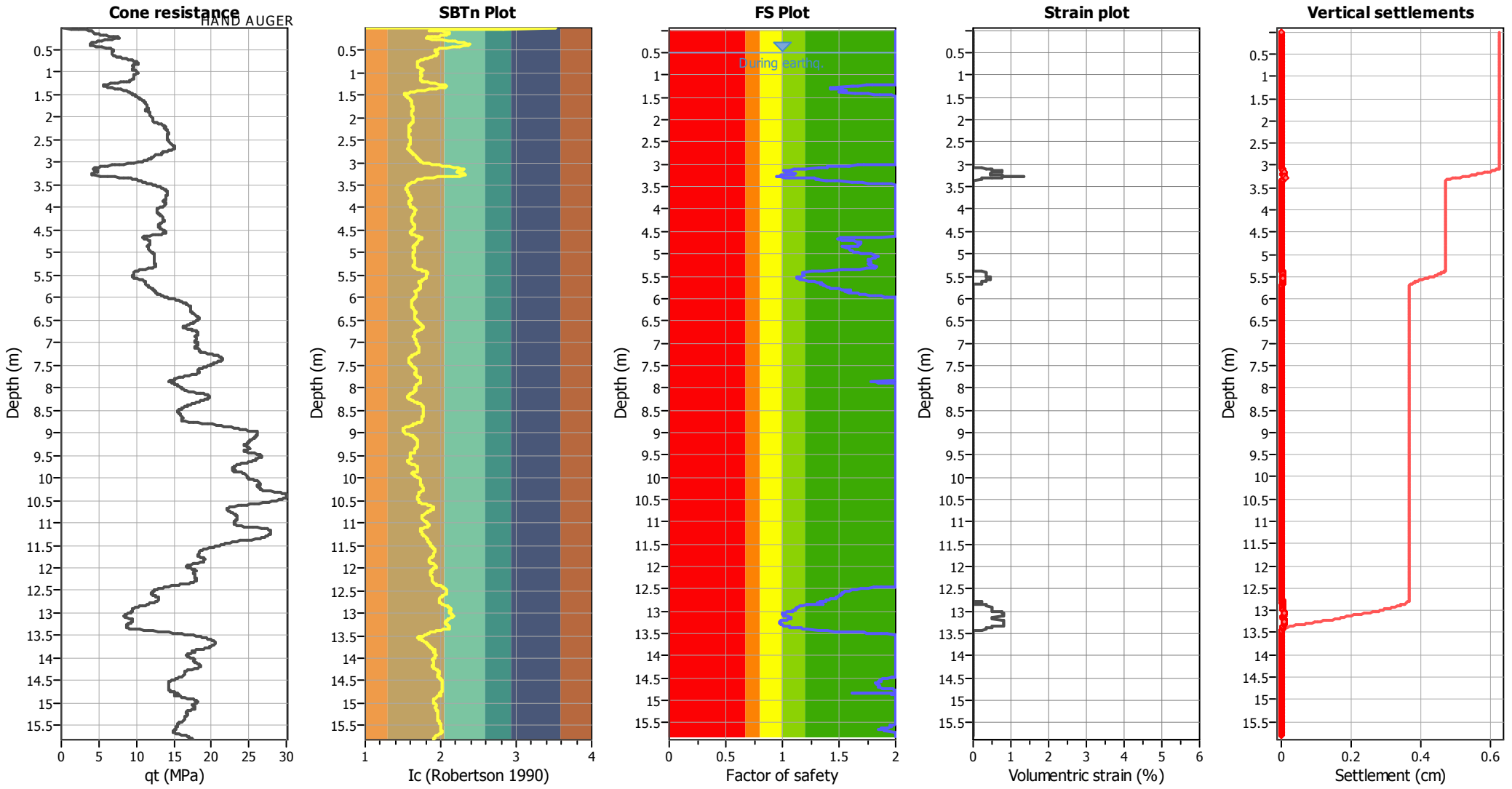
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
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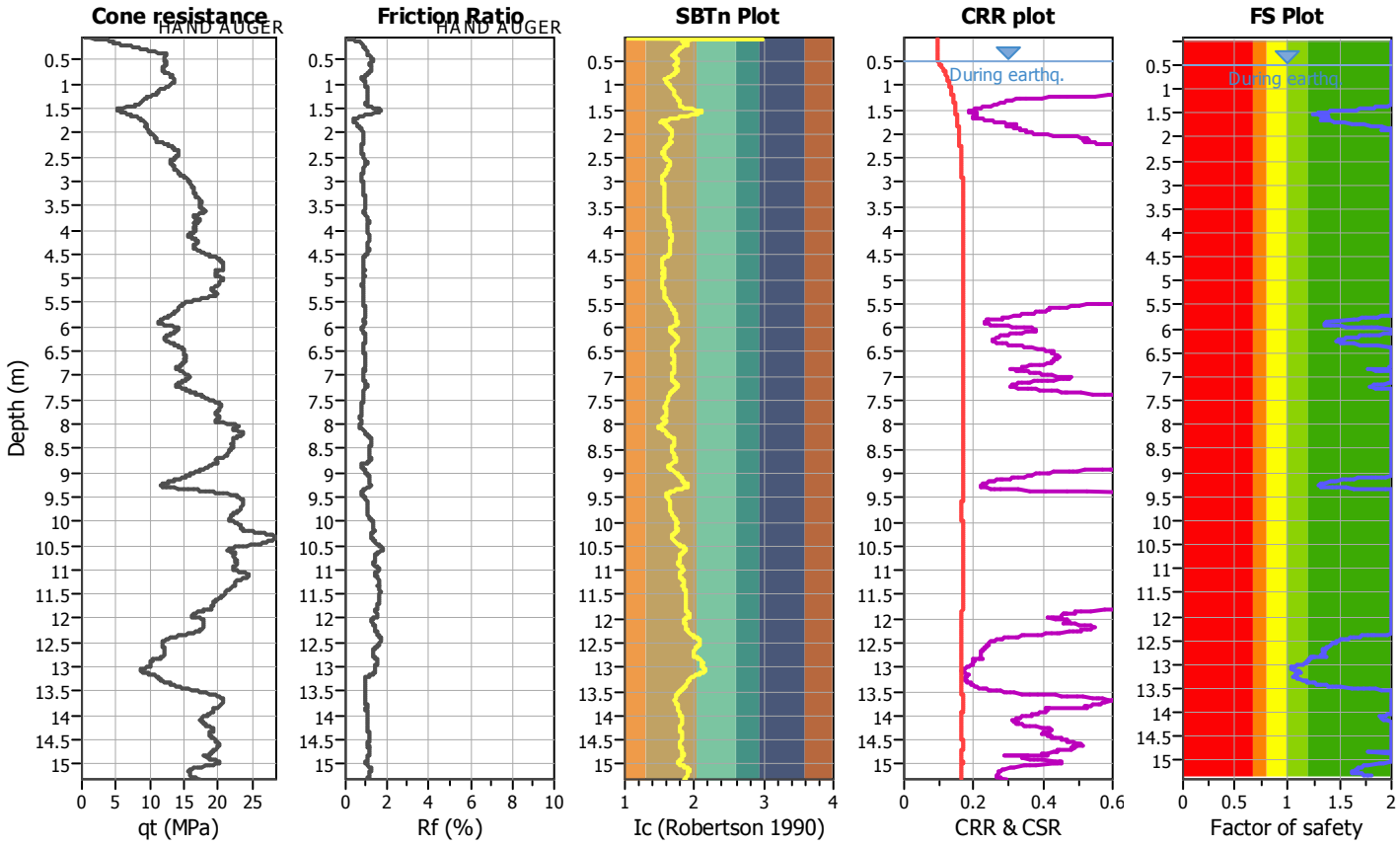
LIQUEFACTION ANALYSIS REPORT

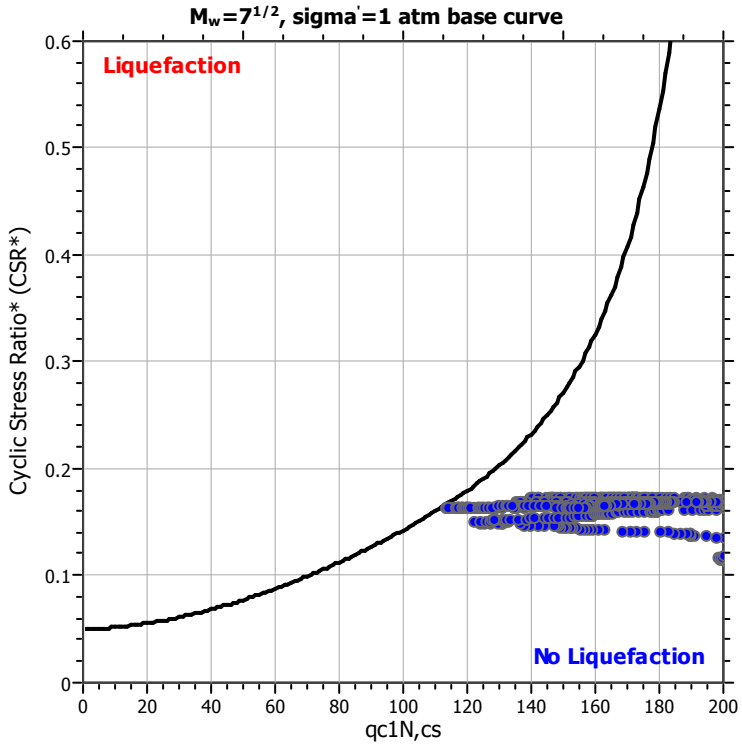
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

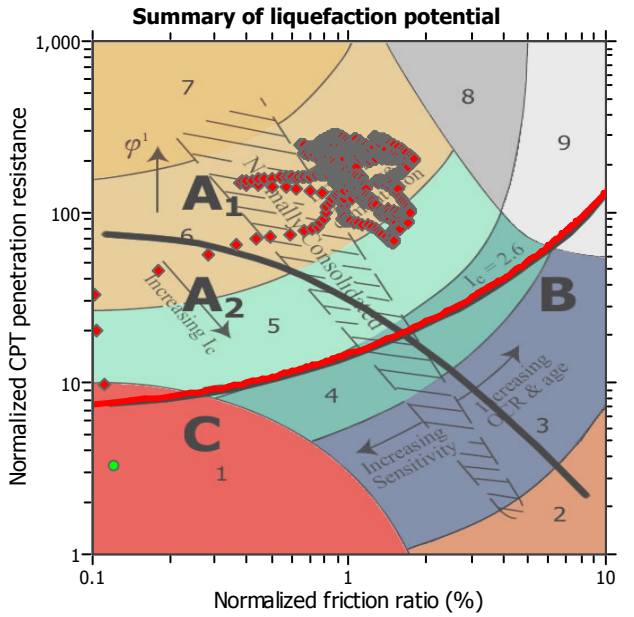
CPT file : CPTU002 SLS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_o applied:	Yes		

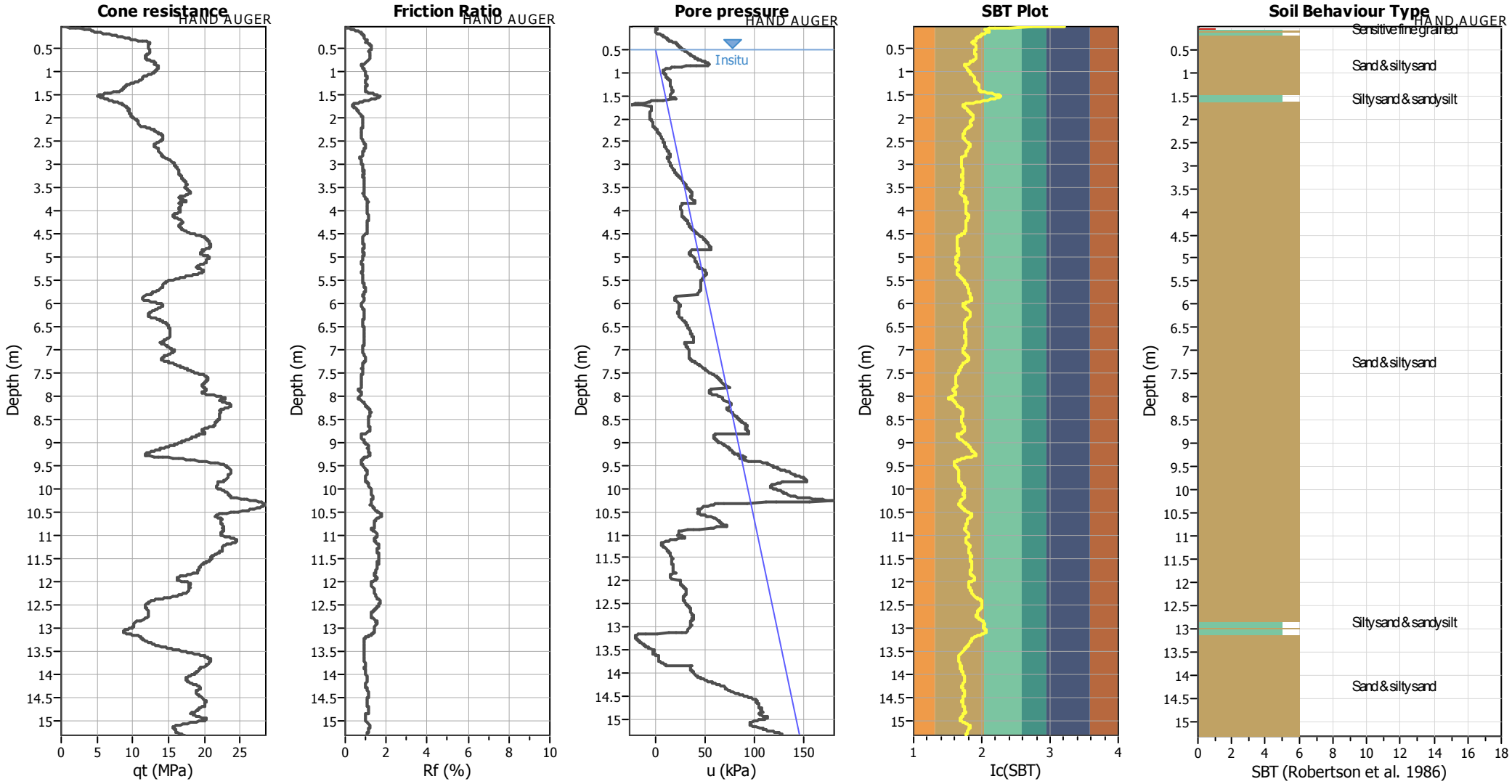






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
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CPT basic interpretation plots



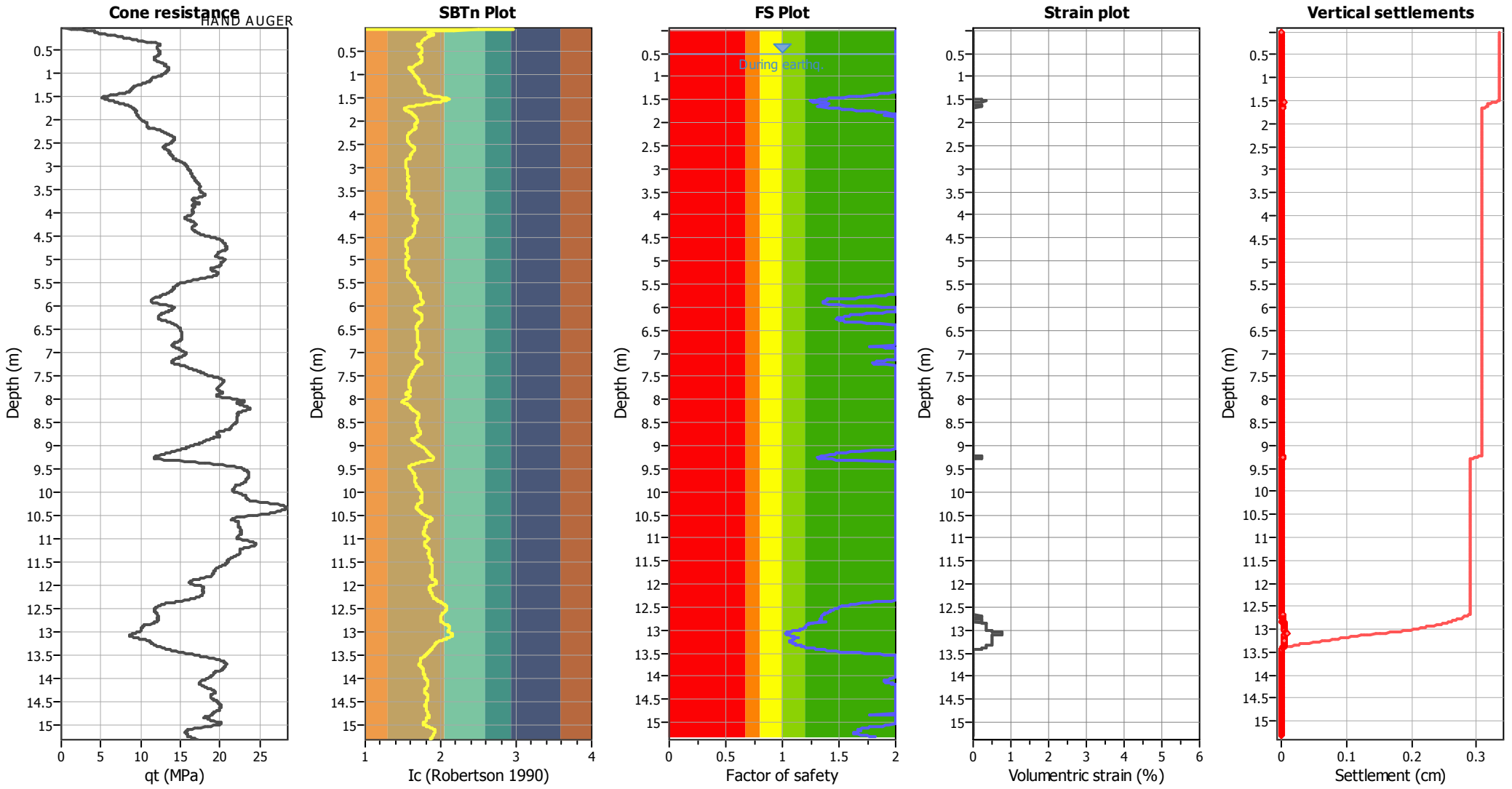
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
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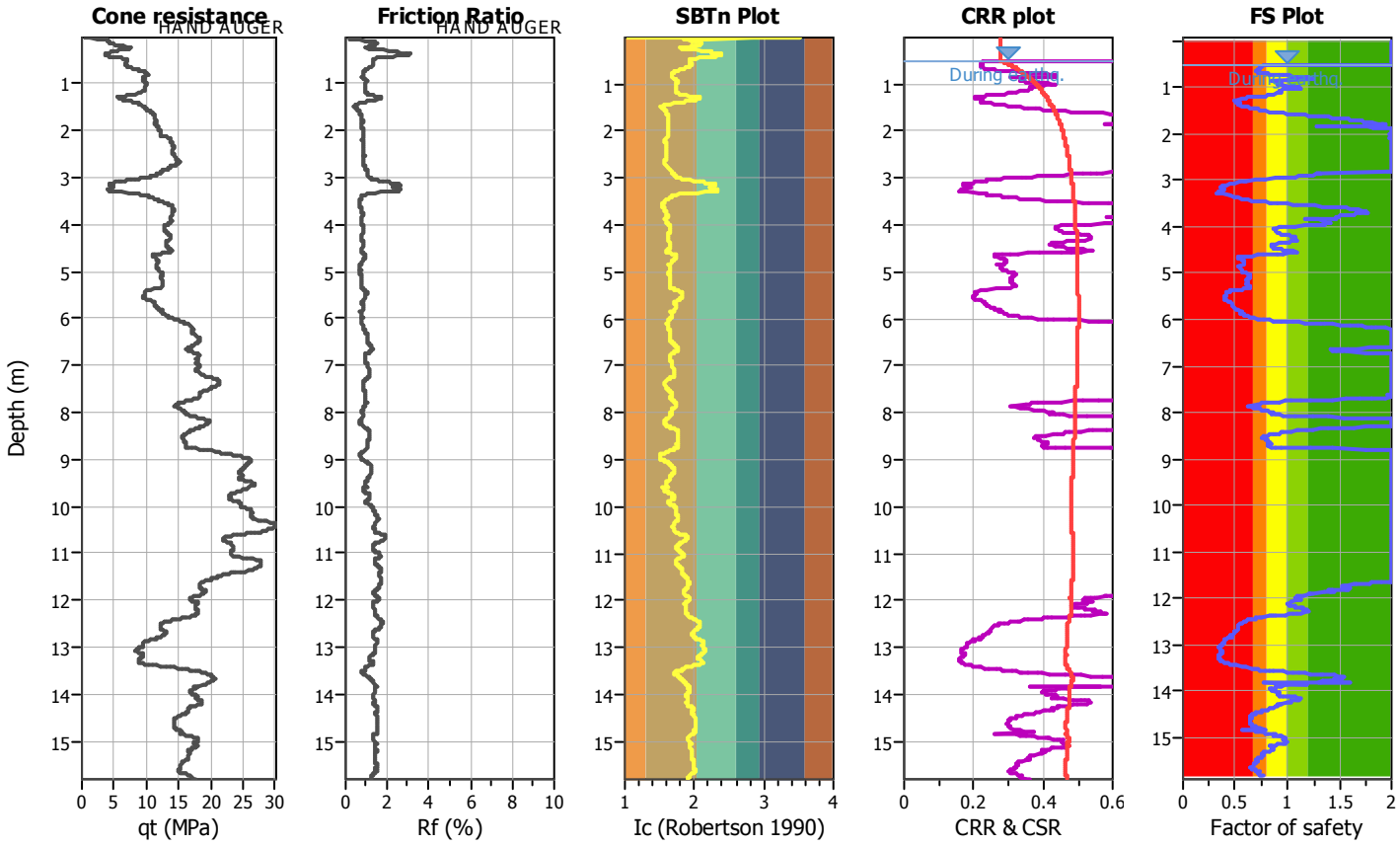
LIQUEFACTION ANALYSIS REPORT

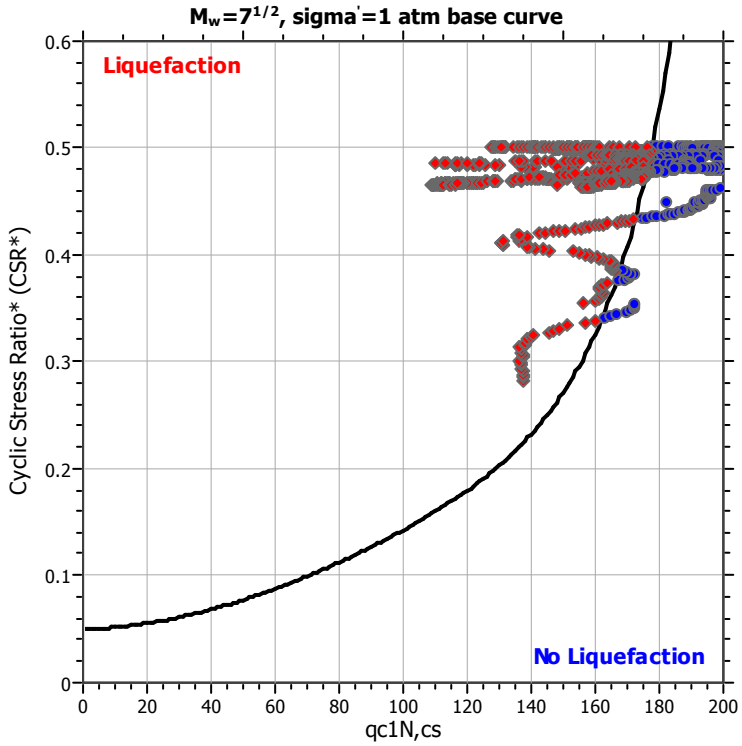
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

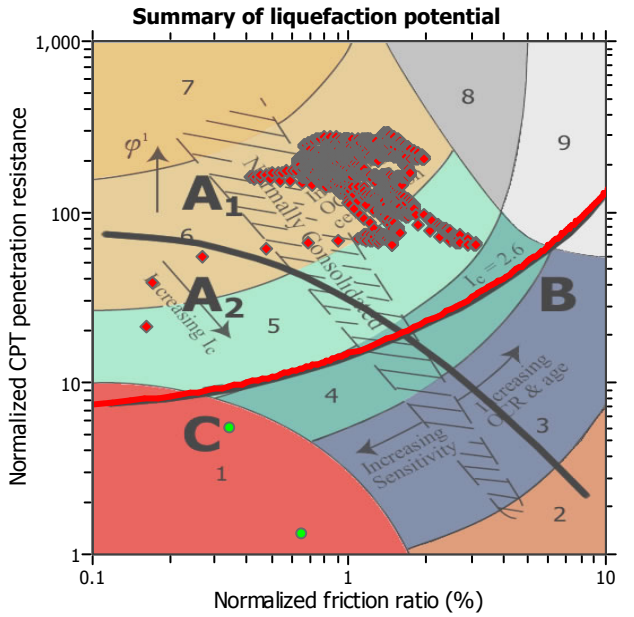
CPT file : CPTU001 ULS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.43	Unit weight calculation:	Based on SBT	K_o applied:	Yes		

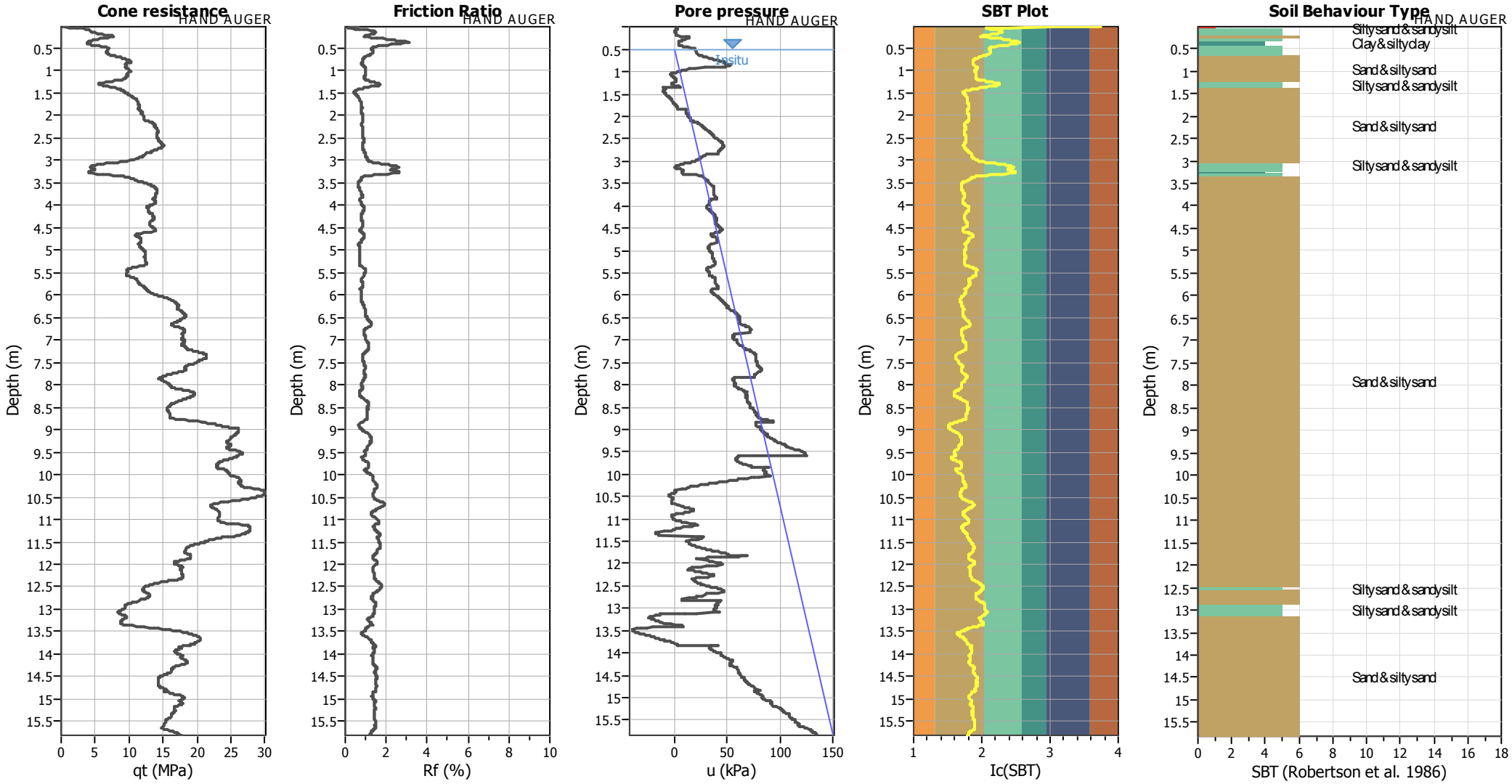






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
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CPT basic interpretation plots



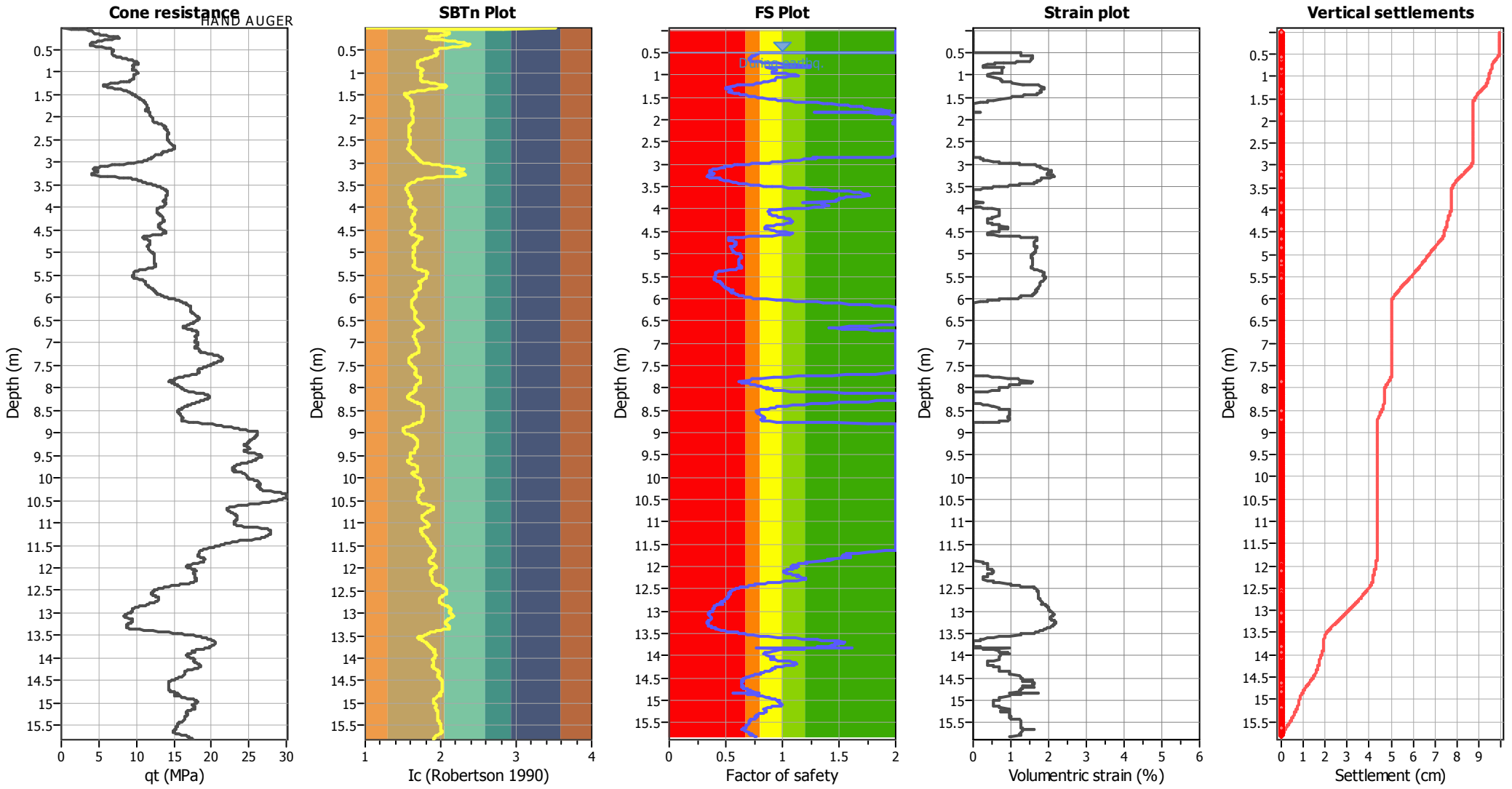
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.43	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
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Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
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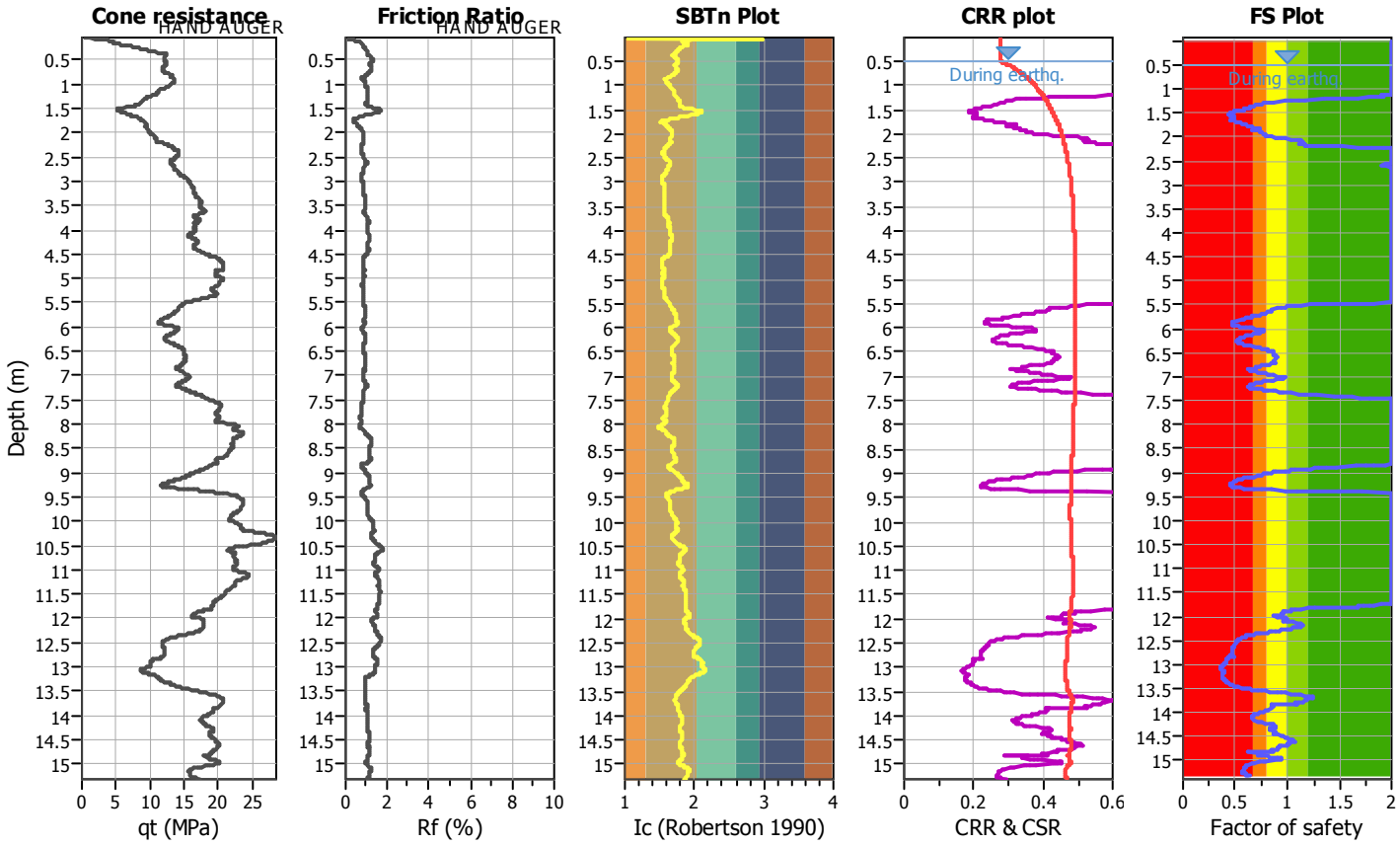
LIQUEFACTION ANALYSIS REPORT

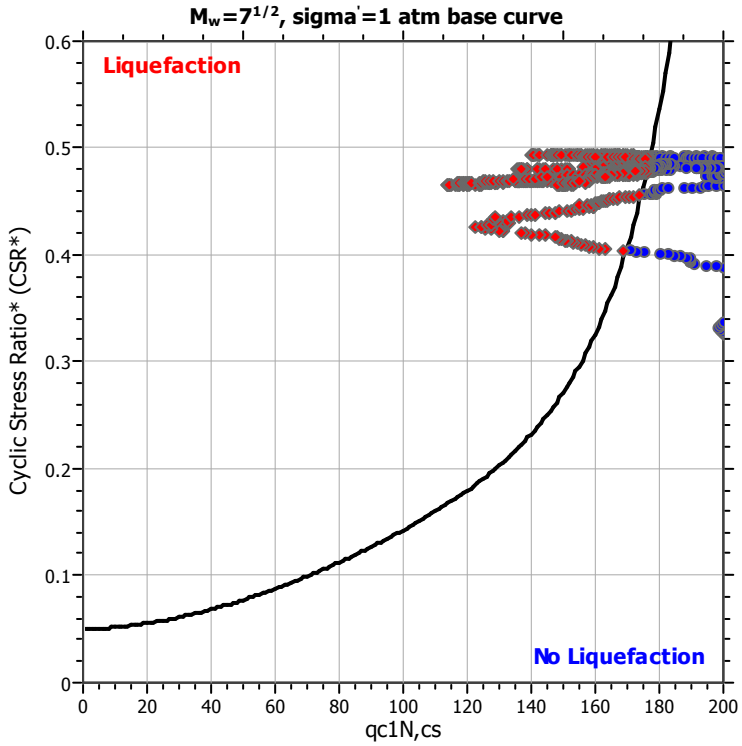
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

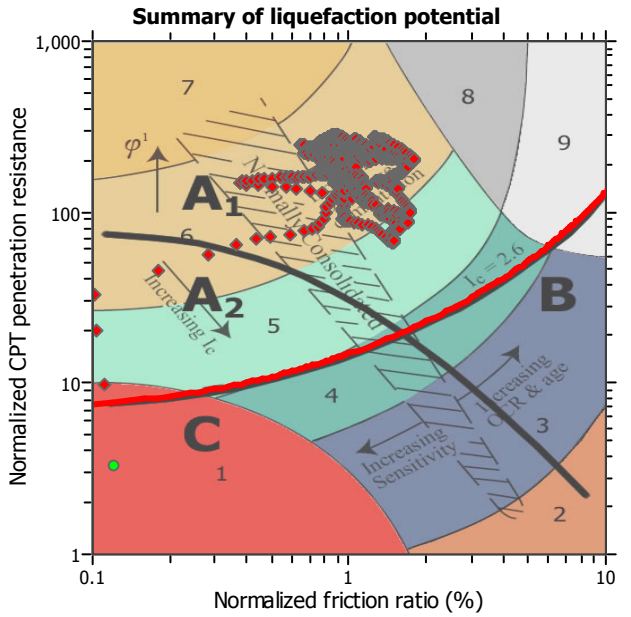
CPT file : CPTU002 ULS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.43	Unit weight calculation:	Based on SBT	K_o applied:	Yes		

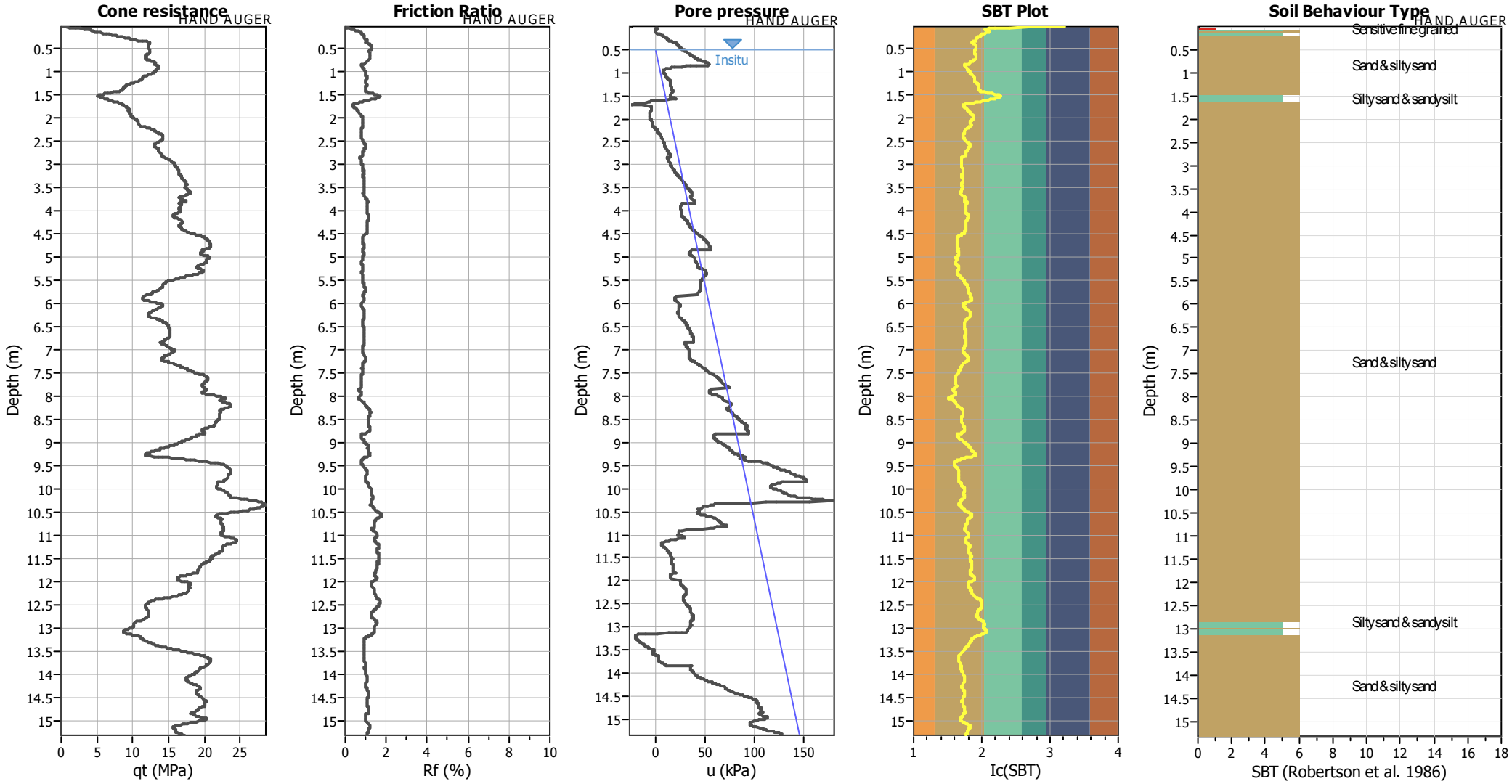






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
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CPT basic interpretation plots



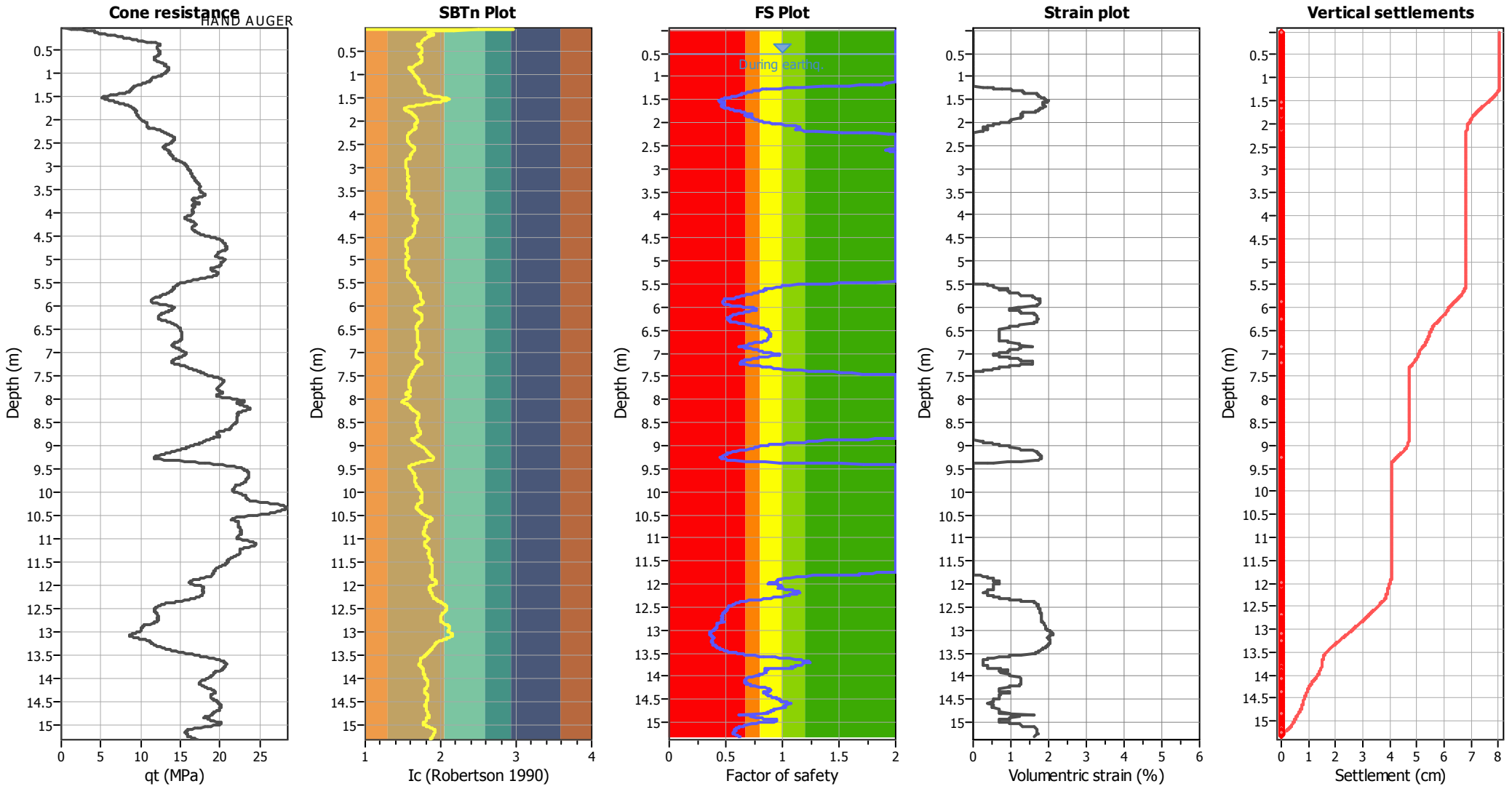
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.43	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
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Estimation of post-earthquake settlements



Abbreviations

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Anne Edwards
Building Administration Officer
CCBC Residential Building Administration Team
Phone: 941 5262
Email: anne.edwards@ccc.govt.nz

Tax Invoice

GST number 53-198-554

L P Brewer
16 Hemingway Place
Christchurch 8083

Invoice number **91427**
Invoice date 20 March 2017
Customer number 4041200

Application number	BCN/2017/1885
Property address	16 Hemingway Place Spencerville
Owner	L P Brewer and L R Brewer
Invoiced to date	$0.00

Description	**GST**	**Amount (GST incl.)**
Exemption from building consent	$70.43	$540.00
	$70.43	**$540.00**

Balance to be paid **$540.00**
(GST inclusive)

These fees are due within 30 days from the date of this invoice. Please ensure payment is made by the due date.
Where the Council has issued an invoice for the payment of any fee or charge under this section and the amount invoiced has not been paid by the stated due date, the Council may commence debt recovery action. The Council reserves the right to charge interest, payable from the date the debt became due, and recover costs incurred in pursuing recovery of the debt on a solicitor / client basis as outlined in the Fees and Charges Schedule of the Council's Long Term Plan.

To pay by Internet banking, use the following details:
Account **02 0800 0044765 03**
Particulars **91427**
Code **10-76430**
Reference **1191576**
Send remittance advice to revenue@ccc.govt.nz.

Civic Offices, 53 Hereford Street, Christchurch 8011
PO Box 73013, Christchurch 8154
Phone: (03) 941-8999, Fax: (03) 941-8792
www.ccc.govt.nz



Anne Edwards
Building Administration Officer
CCBC Residential Building Administration Team
Phone: 941 5262
Email: anne.edwards@ccc.govt.nz

Tax Invoice

GST number 53-198-554

L P Brewer
16 Hemingway Place
Christchurch 8083

Invoice number **91427**
Invoice date 20 March 2017
Customer number 4041200

Application number	BCN/2017/1885
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Description	**GST**	**Amount (GST incl.)**
Exemption from building consent	$70.43	$540.00
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Reference **1191576**
Send remittance advice to revenue@ccc.govt.nz.

Civic Offices, 53 Hereford Street, Christchurch 8011
PO Box 73013, Christchurch 8154
Phone: (03) 941-8999, Fax: (03) 941-8792
www.ccc.govt.nz

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFU

CHRISTCHURCH CITY COUNCIL · ENVIRONMENT	**CHRISTCHURCH CITY COUNCIL** BUILDING ACT 1991 **Project Information Memorandum (PIM)**	FORM BA2 PROJECT NO: **10040372**

Issued Date: 24 November 2003

Site Address: 16 Hemingway Place

Legal Desc: **Lot No:** 35 **DP No:** 319911

Owner: Russell Wenn and Julie Collier

Applicant: In-Spect
35 Maces Road
CHRISTCHURCH

Proposal: Dwelling with attached garage

FILE COPY

The following matters have been identified in respect of the above Building Project.

HAZARDS/SPECIAL LAND CHARACTERISTICS

- **Ground Conditions:** The site has been filled and Council's records show that the fill has been placed and compacted to NZS 4431. This is unlikely to affect the buildings of standard construction.

  Refer location plan attached. Normal inspections and design of foundations as would be made in natural ground required.

  Location of cut/fill interface to be noted (and confirmed on site) and foundation designed accordingly.

DRAINAGE/WATER

Contact – Heath Wells

- **Levels**

  Development Standards for the Brooklands / Spencerville / Kainga Area:

  GROUND level to be the higher of:
  i) RL 10.85m in terms of the CCC datum.
  ii) Crown of road.

  Finished floor level for DWELLINGS & GARAGES to be the higher of:
  i) A minimum level of RL 11.225m in terms of the CCC datum
  ii) 150mm above the crown of the road.

- **Water Supply**
  - The water supply headworks fee is not required as the property is within the Brooklands, Spencerville and Kainga LRV and LRS zones.

- **Sanitary Sewer**
  - A Wastewater reticulation capacity upgrade contribution is not required for this proposal.

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- The Wastewater Treatment Plant capacity upgrade contribution fee has been addressed as part of the underlying subdivision and is not required for this proposal
- Sanitary sewer is to be discharged to the existing lateral installed at subdivision stage.

- **Stormwater**
  - Roof water is to discharge to an approved soakage chamber at a point close to the road boundary of the property. See C.C.C. Standard detail 8024 for soakage chamber details. (Detail attached)
    Only roof stormwater may be discharged into a soakage chamber. Interceptor / Silt traps will be required where surface drainage is proposed to connect directly to any open or piped stormwater system under the control of the Council.

- **General**
  - **Sewer Connections** to Council Services in the street are ***authorised work*** and must be carried out by a ***Council authorised drainlayer***. This includes all drainage laterals on roads, footpaths and verges that connect the property to public drains.
  - A list of **Council authorised drainlayers** is available on request or online at website www.ccc.govt.nz/WasteWater/AuthorisedDrainLayers/.
  - For further information the applicant is advised to contact either Tony Borkus (941-8376) or Gordon Taylor (941-8375.)

  - The developer is required to mitigate any adverse affects on adjoining properties. Failure to undertake such works may mean that the developer has some responsibility to adjacent owners at law.
  - Any requests for a variation to the above requirements to be made to a Building Consent Officer at the Councils Environmental Services Unit (Ph 941-8675). The developer should supply plans showing:
    i) Proposed Pipework, outfalls and connections etc
    ii) Existing and proposed Ground levels.
    iii) Detailed plumbing and drainage drawings.
  - Benchmarks and manhole levels may be obtained from the Essential Services Customer Centre (Ph 941-8300) at no charge.

- **Drainage Plan:** A drainage plan is provided.

OTHER ISSUES

- **Construction Nuisance:** The project must comply with the Health Act 1956, Section 29. The premises should be constructed or demolished so as not to cause a nuisance in terms of the Act (ie. dust).

  The Resource Management Act 1991 places a general obligation on persons, including builders and demolition contractors to adopt the best practicable option to ensure that the emission of noise does not exceed a reasonable level.

- **Vehicle Crossings** are required to be constructed in accordance with Council's Standard Specifications (a copy of which is available from the Council). On default the Council will undertake to repair or construct the crossing at the ***property owners cost***.

  The City Streets Unit is to be notified 24 hours prior to:

  1. The concrete to the culvert being poured; ***and***
  2. Final sealing of the crossing.

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Where alterations are required to stormwater pipes or other on street facilities, eg, manhole tops, poles, trees etc, the owner is to meet the cost of the required alterations.

Fees for the application are shown below.

- **Damage to Council Assets:** At all times the roadway, footpath, berm and landscaped areas adjacent to the construction site are to be kept tidy and safe for all road users. The developer/owner is responsible to repair any damages to the roading assets that occurred as soon as is practicable. The Council reserves the rights to repair all damages. Any cost incurred by Council for this will be recovered from the developer/owner.

The following Council fees will be charged with the uplift of the Building Consent and are additional to the Building Consent fees. These fees are subject to change depending on the date of issue of the Building Consent.

Vehicle Crossing (inspection fee only)	$ 60.00
Water Supply (One 15mm Supply)	$ 425.00

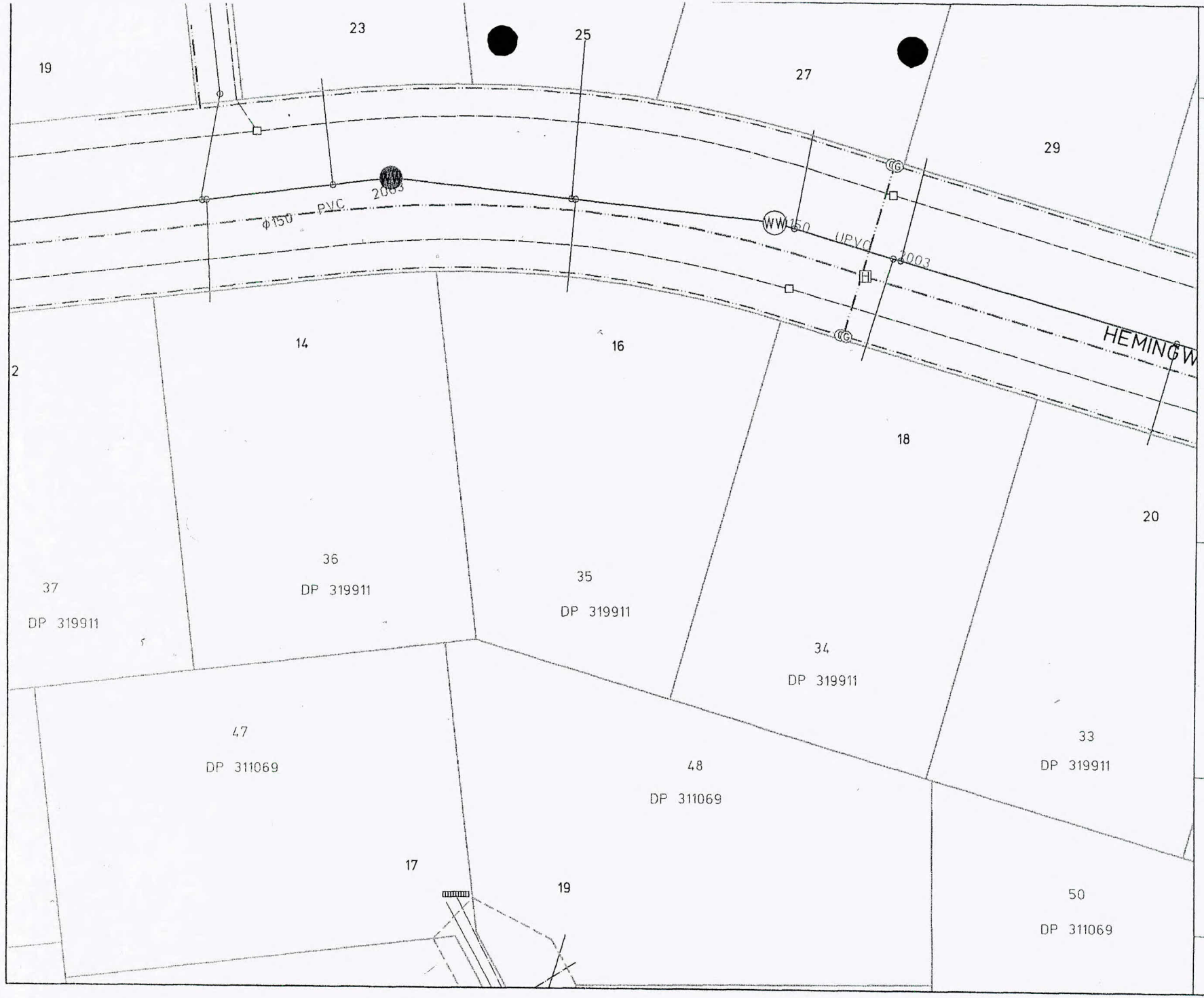
Total Project Information Memorandum fees $ 170.00
Paid $ 170.00 **Receipt No.:** 919020
Balance to pay $ NIL

Signed for and on behalf of the Council: _____ Date: 24 November 2003

Name: John Clark
Position: for **BUILDING CONSENT OFFICER**

This project may proceed subject to the issue of a Building Consent and any other necessary authorisations being obtained.

NB: This Project Information Memorandum will lapse and be of no effect if a Building Consent has not been issued by 24 November 2005



Cadastral Plan

Ph: 371-1300
Fax: 371-1385

LEGEND

- WASTE WATER MAIN
- STORM WATER MAIN
- WATER SUPPLY MAIN
- WASTE WATER DRAIN
- STORM WATER DRAIN
- WATER SUPPLY SUBMAIN
- STD MANHOLE (WASTE)
- VENTED MANHOLE (WASTE)
- STD MANHOLE (STORM)
- SUMP (STORM)
- FIRE HYDRANT (WATER)
- VALVE (WATER)
- METER (WATER)
- CONNECTOR (WATER)
- END CAP (WATER)
- KERB & CHANNEL

CAUTION
THE ACCURACY OF THIS PLAN IS NOT GUARANTEED, ONSITE VERIFICATION REQUIRED.

SCALE 1:500 on A4

Christchurch City Counc
6 Nov 2003 8:08AM

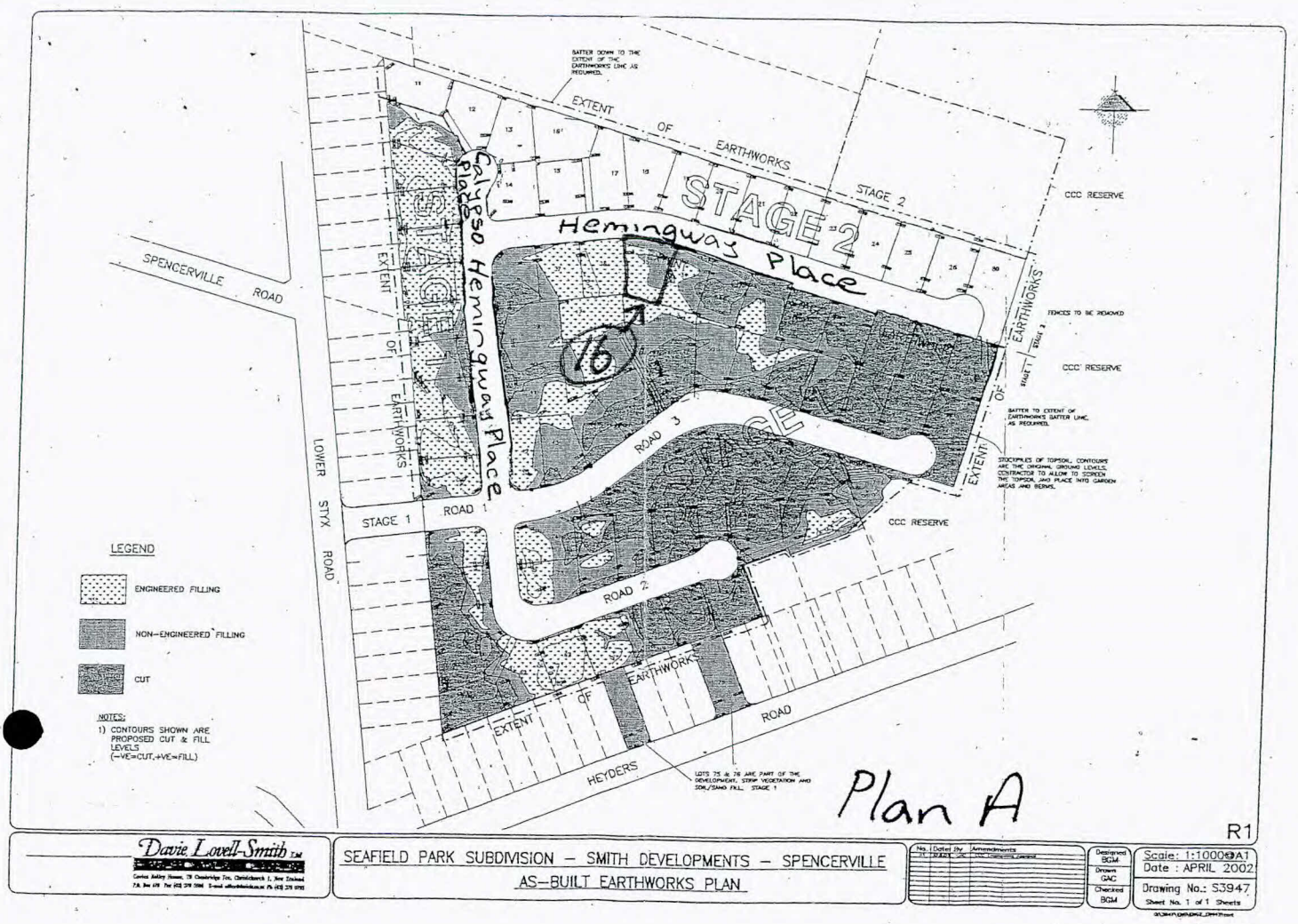
CHRISTCHURCH
CITY COUNCIL - GEODATA SERVICES

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10040372

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APPENDIX A
STATEMENT OF SUITABILITY OF EARTHFILL
FOR RESIDENTIAL DEVELOPMENT

To **Christchurch City Council**
PO Box 237
Christchurch

Attention Mr B Craig

STATEMENT OF SUITABILITY OF EARTH FILL FOR RESIDENTIAL DEVELOPMENT

Subdivision **Seafield Park Subdivision-Stage I**

Owner/Developer **Smith Developments Limited**

Location **Cnr Lower Styx & Heyders Road, Spencerville**

The earth fill shown on the attached plan No. S3947 Sheet 1 dated April 2002 have been placed in compliance with the terms of NZS 4431.

While work was in progress I retained as my inspecting engineer (or staff under his control) the engineer named below who is registered in terms of the Engineers Registration Act 1924.

John Bannock (Registration Number 10545)
Address C/- **Davie, Lovell-Smith Limited, PO Box 679, Christchurch**

During the work, the inspecting engineer or staff under his control made periodic visits of inspection to the site as detailed in his report No S3947 which is attached. Details of the soil testing carried out to check the quality of the fill by the inspecting engineer and his testing agency are also included in this report.

The attached plan No S3947 Sheet 1 shows Lot Nos. 1-10, 57-65, 68, 72, 73, 74, 30-53, 75 & 76 to be affected by filling and the extent of the fill.

In the opinion of the inspecting engineer the following special limitations should be observed:

NA

This certification, that the earth fills have been placed in compliance with the terms of NZS 4431 does not remove the necessity for the normal inspection and design of foundations as would be made in natural ground.

Registered Engineer

22 April 2002

on behalf of:
(Owner/ Developer)

NZS 4431:1989
3947/ENG/4431_Earthfill-stg1

IN THE MATTER OF the Resource Management Act 1991
AND
IN THE MATTER OF Subdivision Consent Application PAP/20010325 affecting Lots 3-41 DP 319911

CONSENT NOTICE PURSUANT TO SECTION 221, RESOURCE MANAGEMENT ACT 1991

To: Registrar-General of Lands
Canterbury Land Registration District
LAND INFORMATION NEW ZEALAND

TAKE NOTICE that the land hereinafter described is subject to conditions in relation to a subdivision consent as follows:-

Minimum Floor Levels.

The minimum floor level for all dwellings is to be 11.225m in terms of the Christchurch Drainage Datum.

AND THAT you are hereby directed and required to register the same pursuant to Section 221 Resource Management Act 1991.

DESCRIPTION OF LAND BY CONSENT NOTICE

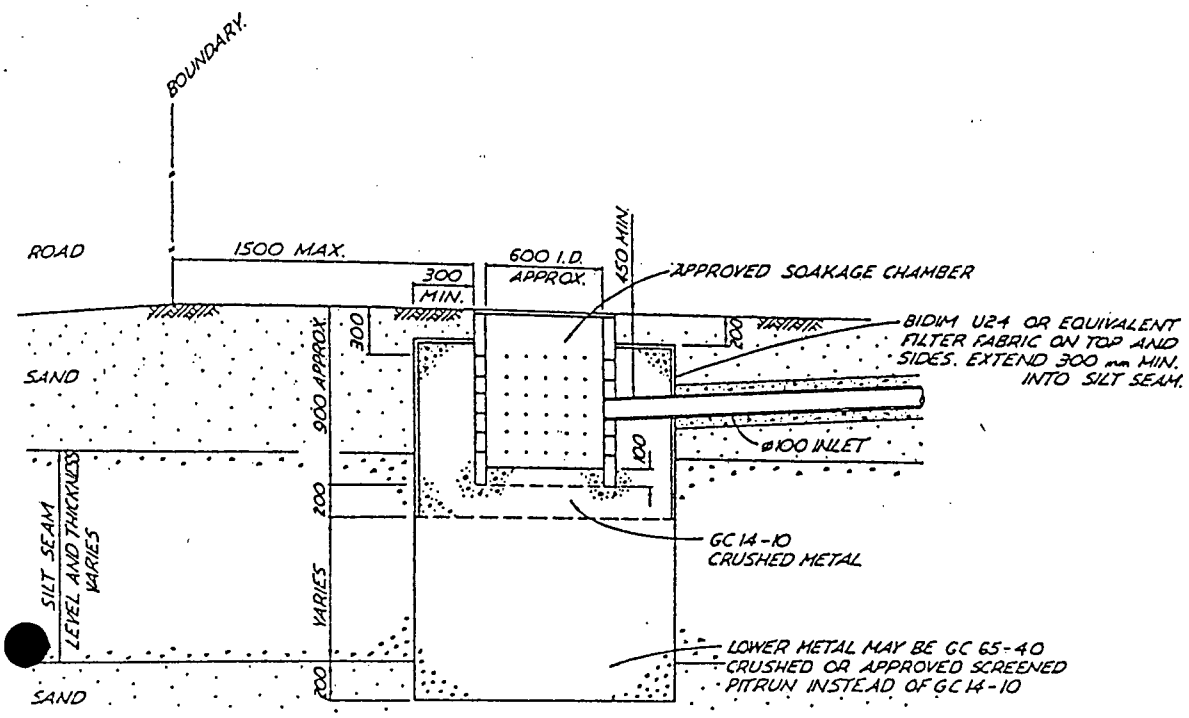
ALL THOSE PARCELS OF LAND COMPRISING:
- Lots 3 – 41 DP 319911comprised in Certificates of Title 78436 - 78474 (Canterbury Land District)

DATED this 14th day of May 2003

SIGNED for and on behalf of
THE CHRISTCHURCH CITY COUNCIL
pursuant to Section 252 of the
Local Government Act 1974

Principal Officer
(for the purposes of Section 221
Resource Management Act 1991)

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TYPICAL SECTION - FOOT TRAFFIC ONLY

NOTES:

1. CHAMBER TO BE CONCRETE OR RIGID PLASTIC OF APPROVED STRENGTH PERFORATED WITH 5mm HOLES AT 100 CTRS. EACH WAY FOR PLASTIC OR 10mm HOLES AT 200 CTRS. EACH WAY FOR CONC.
2. CHAMBER COVERED WITH 5mm GALV. PLATE LID.
3. INVERT OF CHAMBER TO BE REGULARLY CLEANED OF SILT AND LEAVES TO MAINTAIN SOAKAGE. BOTTOM 100mm LAYER MAY OCCASIONALLY NEED REPLACEMENT.
4. ALL PIPING TO BE LAID TO C.O.B. SW80 DETAILS ("REQUIREMENTS FOR PRIVATE STORMWATER DRAINAGE 1980")
5. APPROX. VOLUME GC 14-10 - SOAKAGE CHAMBER - 1.5 m^3 LOOSE MEASURE.
   APPROX. VOLUME GC 65-40 - LOWER SOAK PIT - 1.4 m^3 LOOSE PER METRE DEPTH.
6. DESIGN SUITABLE FOR FOOT TRAFFIC AREAS ONLY.

DESIGNED Various	Christchurch Drainage Board	STANDARD SOAKAGE CHAMBER	8024
DRAWN K.J. SLADE.			
CHECKED [illegible]	APPROVED		SHEET OF SHEETS 15 185
RECOMMENDED	ENGINEER TO THE BOARD		

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CHRISTCHURCH CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL

APPLICATION FOR

PROJECT INFORMATION MEMORANDUM

FORM: BA1

PROJECT NO: 10040372

APPLICATION DETAILS [ ]	PROJECT [ ]
• **OWNER** (as defined by the Building Act 1991) Name: Russell Martin Wenn Mailing Address: & Julie Collier. Street Address: po Box 161 Lyttleton Phone: _____ Fax: _____	• **LOCATION** Street Address: 16 Hemmingway Place Seafield Park Lot: 35 DP: 319911 Other: _____
• **APPLICANT** (Must be authorised by the owner to make this application) Name: IN-Spect Company: " Mailing Address: 35 Mace Rd Street Address: " Phone: 3844492 Fax: 3846588	• **DESCRIPTION OF WORK:** New Dwelling & attached garage.
Signature: K Hawman. Position (if Lessee): _____ Date: 5/11/03	• **INTENDED USE:** Domestic living
• **FLOOR AREA** *Gnd Floor:* Existing _____ m^2 Add 221 m2 *Other Floor:* Existing _____ m^2 Add _____ m^2 *Accessory Building Area:* Existing _____ m^2 Add _____ m^2 • **Planning - Site Coverage** *Total area of all buildings over foundation at ground level.* Existing _____ m^2 Proposed 221 m^2	• Intended 1 stages of Building Consent • Will the building undergo a change of use? ☐ Yes ☑ No • Estimated Value of proposed work (inclusive of GST) $ 160,000

FOR COUNCIL USE ONLY

Date Received: 5/11/2003

Prepaid Fee: $170-00

Receipt No: 919020

Receiving Officer's Name: Alarah

DRAINAGE INFORMATION

Not Required ☐ Block Plan Only ☐

Full PIM ☑ Date Requested 5/11/03

Hazards: _____

THE INFORMATION CONTAINED IN THIS APPLICATION MAY BE MADE AVAILABLE TO OTHER UNITS OF THE COUNCIL.

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFU

RESIDENTIAL/LIVING

PIM APPLICATION CHECK SHEET

Project Number: 10040372

Location: 16 Hemingway Place

Proposal: Dwelling/garage

Checked	Comment		Officer	Date	Time
☑ Planning	☐ Yes	☑ No	JUNE.	21-11-03	
☐ Traffic	☐ Yes	☐ No			
☑ Building	☑ Yes	☐ No	JUNE.	21-11-03	
☐ Envir. Health	☐ Yes	☐ No			
☐ Seaspray Zone	☐ Yes	☐ No			
☐ Section 36	☐ Yes	☐ No			

Transitional District Plan			Proposed City Plan		
Zoning			Zoning		LIVING 1RS
Designations			Designations		
Road widening			Footprint/Sam		
Protected Item			Protected Item		
Airport Noise			Airport Noise		
Site area		Sept. 19	Site area		1001
Shape factor			Net site area		1001
Res. Site Density/Plot Ratio			Res. Site Density/Plot Ratio		
Site coverage			Site coverage 221		22.08% 25
Height			Height		
Recession Planes			Recession Planes		
Street scene			Street scene		
Garage setback			Garage setback		
Internal boundary setback			Internal boundary setback		
Waterway setback			Waterway setback		
Separation distance/windows/balcony			Window/balcony setback		
Outdoor living/service area			Outdoor living/service area		
Landscaping			Landscaping		
Storage space			Storage space		
Accessory building length			Accessory building length		
Accessory building area			Cont. building length		
Design and appearance			External appearance		
Other			Other		

Traffic					
Car parking/garageable spaces			Car parking/garageable space		
Visitor park			Visitor park		
Access/gradients			Access/gradients		
Manoeuvring			Manoeuvring		
Crossing separation			Crossing separation		
Crossing distance			Crossing distance		
Crossing width			Crossing width		
Other			Other		

Other			Activity		
Relocated buildings			Permitted		
Family flat			Controlled		
Reserve Contrib/Dev Levy (Central)			Discretionary		
(Suburbs)			Non-complying		
Subdivision/Title issued					
Cross-lease Owners consent					
Resource Consents recorded					
Other					

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Common Clauses	Std Clause	Notes:
Planning	261	– refer location plan attached. Normal inspections & design of foundations as would be made in natural ground required.
☐ 1e7 Signs Not Shown		Location of cut/fill interface to be noted (and confirmed on site) and foundation designed accordingly.
☐ 1e1 (S35 Sur Cert)		
R.P		
Height		
Boundary		
☐ 1e2 (Close)		
R.P		
Height		
Boundary Dist		
Hazards		
☐ 2d6 Potential Hazards		
Drainage		
☑ 3a Drainage Plan		
☑ Insert Full PIM		
Other Issues		
☐ 4g1 Asbestos		
☐ 4g2 Const Nuisance		
☑ 4h1 Vehicle Crossing		
☐ 4h2 Laterals		
☑ 4h5 Damage to Street		
☐ 4h7 Nuisance on Street		
☐ Demo		
Fees:		
Vehicle Crossing $ 60		
Water Supply $ 425		
Headworks $		
Waste Upgrade		
– (T Plant) $		
– (Retic) $		
Devt Levy (Suburbs/Central) $		
S/W Footpath opening $		
Sewer Road Opening $		

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CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL

ENVIRONMENTAL SERVICES UNIT

TAX INVOICE WHEN PAID

BUILDING CONSENT FEES

INV 98681
GST NO 53-198-554
DATE 05/11/2003

WENN, RUSSELL MARTIN
COLLIER, JULIE
C/O INSPECT
35 MACES ROAD
CHRISTCHURCH

919020
5/11/03.

CONSENT APPLICATION NO: ABA 10040372

OWNERS NAME: SMITH DEVELOPMENTS LIMITED

PROJECT STREET ADDRESS: 16 HEMINGWAY PLACE
SPENCERVILLE

CUSTOMER CODE: 3258891

INVOICED TO DATE: $0.00

FEE CODE	DESCRIPTION	THIS INVOICE (GST exclusive)
B01	Project Information Memorandum	151.11

GST Exclusive Total	$151.11
GST Total	$18.89
TOTAL PAYABLE (GST Inclusive)	**$170.00**

bcinv.frm

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AGREEMENT FOR SALE AND PURCHASE OF REAL ESTATE

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

DATE: 10 September 2003

VENDOR: Smith Developments Ltd

PURCHASER: Russell Martin Wenn + Julie Collier

PROPERTY
Address of property: 16 Hemingway Place, Seafield Park, Spencerville, Christchurch
Estate: **FEE SIMPLE** ~~**LEASEHOLD**~~ ~~**CROSSLEASE**~~ ~~**UNIT TITLE**~~ (if none is deleted fee simple)

Legal Description:
Area: 1000 m² more or less ***Lot:*** 35 ***DP:*** 319911 ***CT:*** 78468

PURCHASE PRICE
Purchase Price: $95,000 Ninety five thousand dollars only

~~**Plus GST**~~ (if any) OR **Inclusive of GST** (if any).
If neither is deleted the purchase price includes GST (if any).

GST date: (refer clause 12)

Deposit A $10,000 To be Paid to Smith Developments Ltd Stakeholders Account on signing this Agreement.

Deposit: (refer clause 2) $ Deposit B $500 Refer clause 14

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

In Cash In One Sum on the Possession Date

© Copyright The Auckland District Law Society & The Real Estate Institute of New Zealand Incorporated JULY 1999

POSSESSION (refer clause 3)
Possession date: 10th March 2004 or sooner by mutual agreement

Interest rate for late settlement: 14 % p.a.

CONDITIONS (refer clause 8)
Financial condition (if any):
Lender:
Amount required:
Finance date:
LIM required: Yes/~~No~~
OIA Consent required: Yes/No
Land Act/OIA date:

TENANCIES (if any)
Name of tenant: Vacant Section
Bond: **Rent:** **Term:** **Right of renewal:**

FILE COPY

CHATTELS
The following chattels if now situated on the property are included in the sale.
(*strike out or add as applicable*):
~~**STOVE**~~ ~~**TV AERIALS**~~ ~~**FIXED FLOOR COVERINGS**~~ ~~**BLINDS**~~ ~~**CURTAINS**~~ ~~**DRAPES**~~ ~~**TELEPHONES**~~ ~~**LIGHT FITTINGS**~~

Sale by (name of real estate agent):

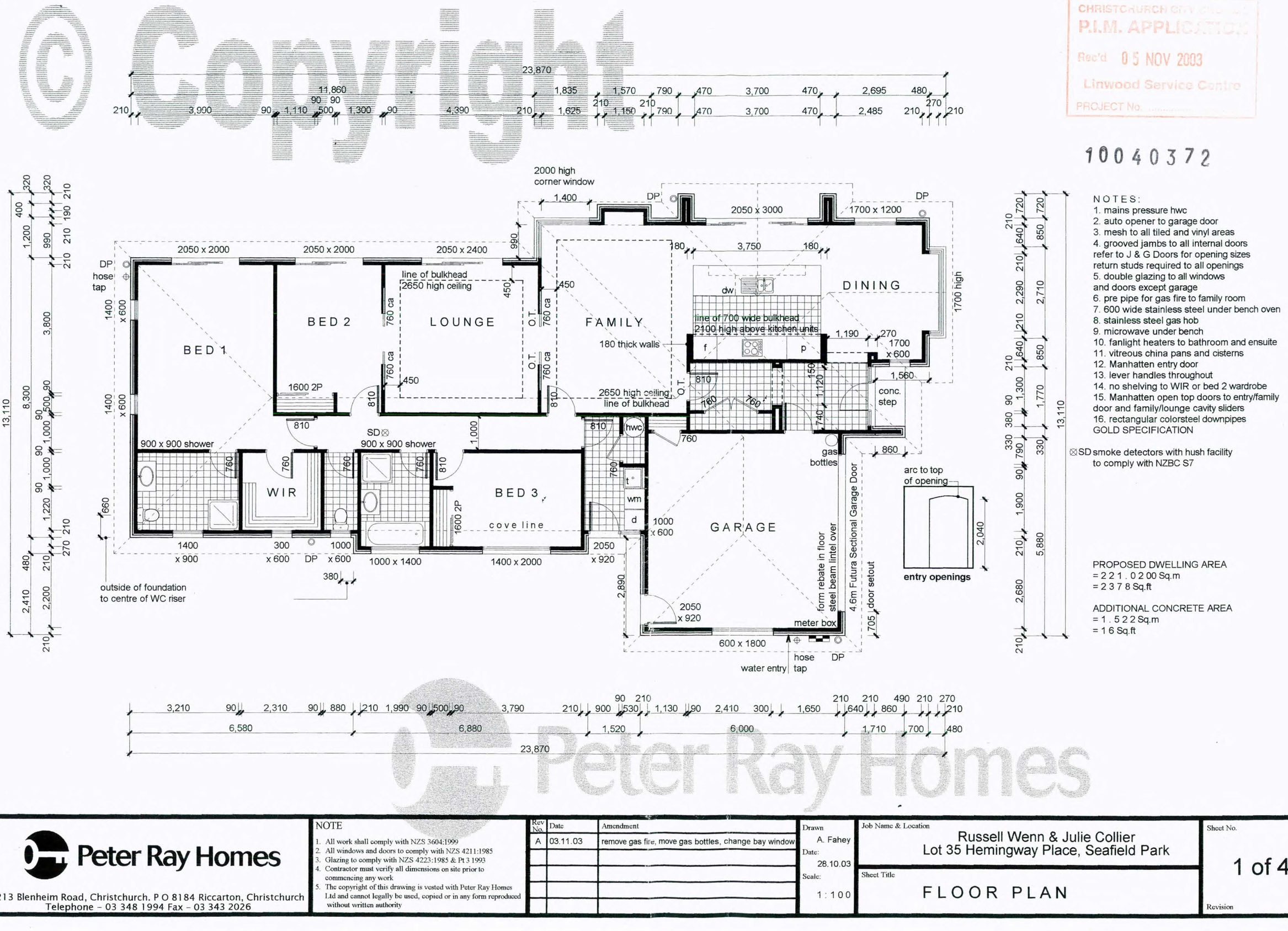
St Albans
Cornelius Realty Ltd - MREINZ

It is agreed that the vendor sells and the purchaser purchases the above described property, and the chattels included in the sale, on the terms set out above, and the General and Further Terms of Sale

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFU

CHRISTCHURCH CITY COUNCIL
P.I.M. APPLICATION
Rec'd 05 NOV 2003
Linwood Service Centre
PROJECT No.

10040372



NOTES:
1. mains pressure hwc
2. auto opener to garage door
3. mesh to all tiled and vinyl areas
4. grooved jambs to all internal doors refer to J & G Doors for opening sizes return studs required to all openings
5. double glazing to all windows and doors except garage
6. pre pipe for gas fire to family room
7. 600 wide stainless steel under bench oven
8. stainless steel gas hob
9. microwave under bench
10. fanlight heaters to bathroom and ensuite
11. vitreous china pans and cisterns
12. Manhatten entry door
13. lever handles throughout
14. no shelving to WIR or bed 2 wardrobe
15. Manhatten open top doors to entry/family door and family/lounge cavity sliders
16. rectangular colorsteel downpipes

GOLD SPECIFICATION

⊗SD smoke detectors with hush facility to comply with NZBC S7

PROPOSED DWELLING AREA
= 2 2 1 . 0 2 00 Sq.m
= 2 3 7 8 Sq.ft

ADDITIONAL CONCRETE AREA
= 1 . 5 2 2 Sq.m
= 1 6 Sq.ft

Peter Ray Homes

Peter Ray Homes
213 Blenheim Road, Christchurch. P O 8184 Riccarton, Christchurch
Telephone - 03 348 1994 Fax - 03 343 2026

NOTE
1. All work shall comply with NZS 3604:1999
2. All windows and doors to comply with NZS 4211:1985
3. Glazing to comply with NZS 4223:1985 & Pt 3 1993
4. Contractor must verify all dimensions on site prior to commencing any work
5. The copyright of this drawing is vested with Peter Ray Homes Ltd and cannot legally be used, copied or in any form reproduced without written authority

Rev No.	Date	Amendment
A	03.11.03	remove gas fire, move gas bottles, change bay window

Drawn: A. Fahey
Date: 28.10.03
Scale: 1:100

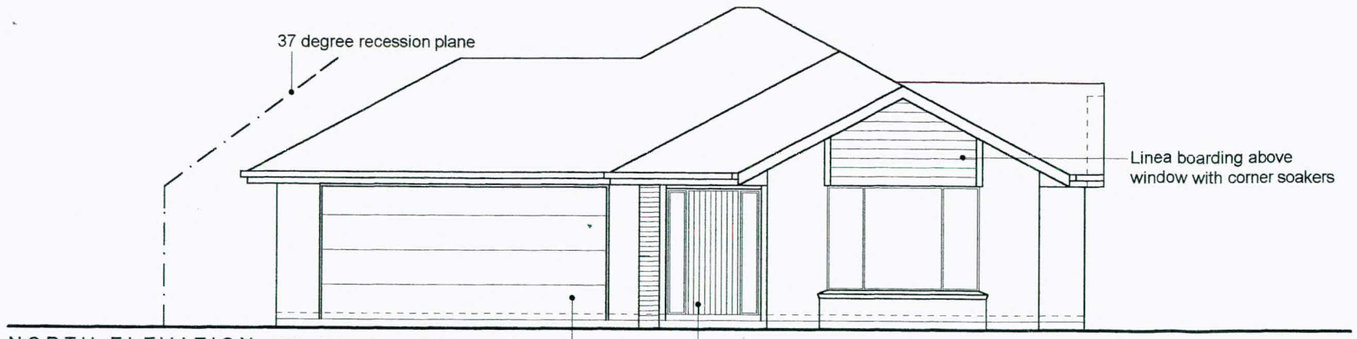
Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title: FLOOR PLAN

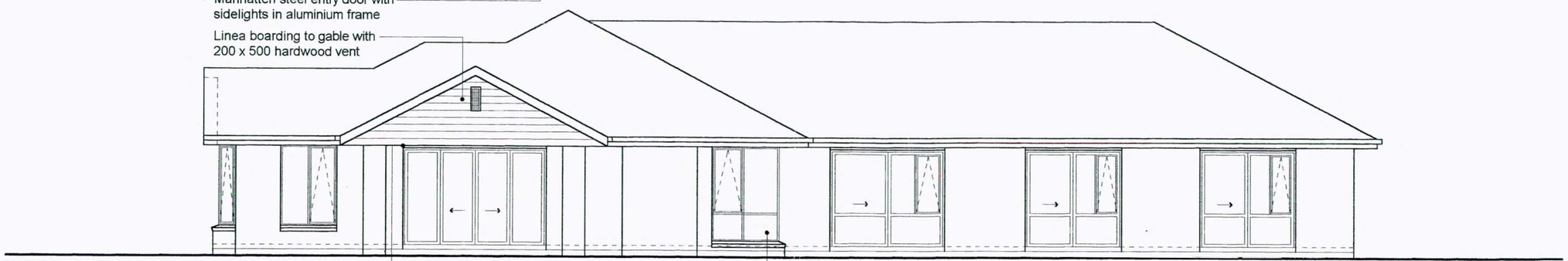
Sheet No.: 1 of 4

Revision

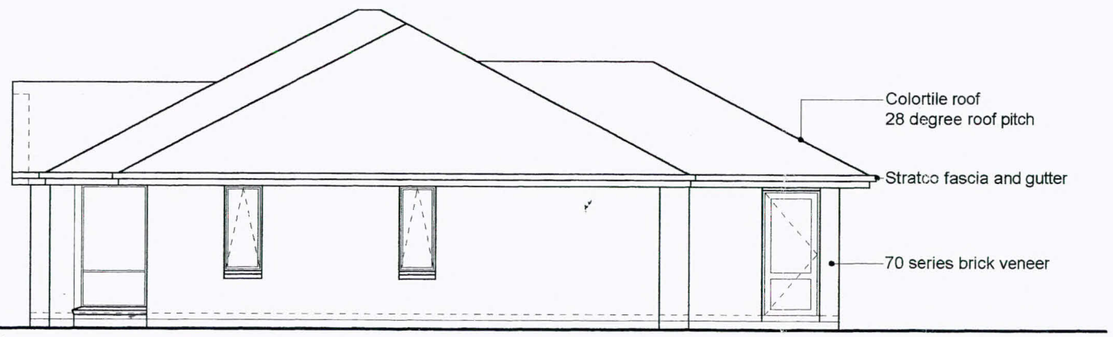
SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFU



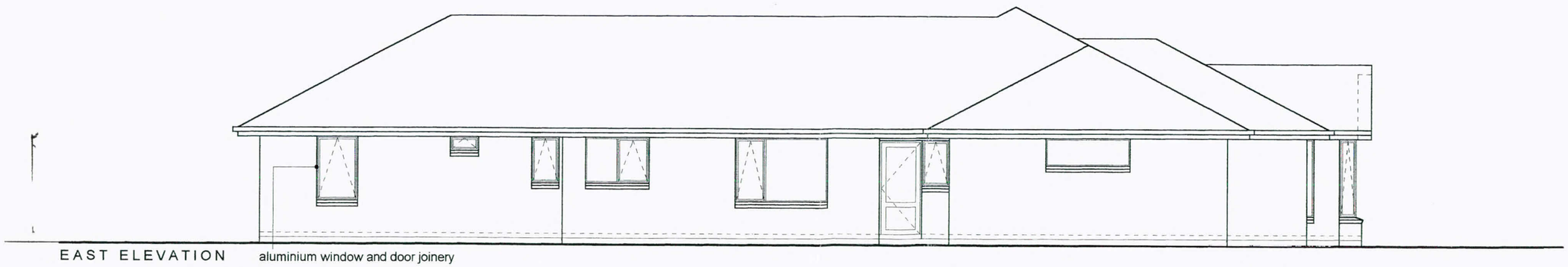
NORTH ELEVATION



WEST ELEVATION



SOUTH ELEVATION



EAST ELEVATION

Peter Ray Homes
213 Blenheim Road, Christchurch. P O 8184 Riccarton, Christchurch
Telephone – 03 348 1994 Fax – 03 343 2026

NOTE

1. All work shall comply with NZS 3604:1999
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Rev No.	Date	Amendment
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Drawn: A. Fahey
Date: 28.10.03
Scale: 1:100

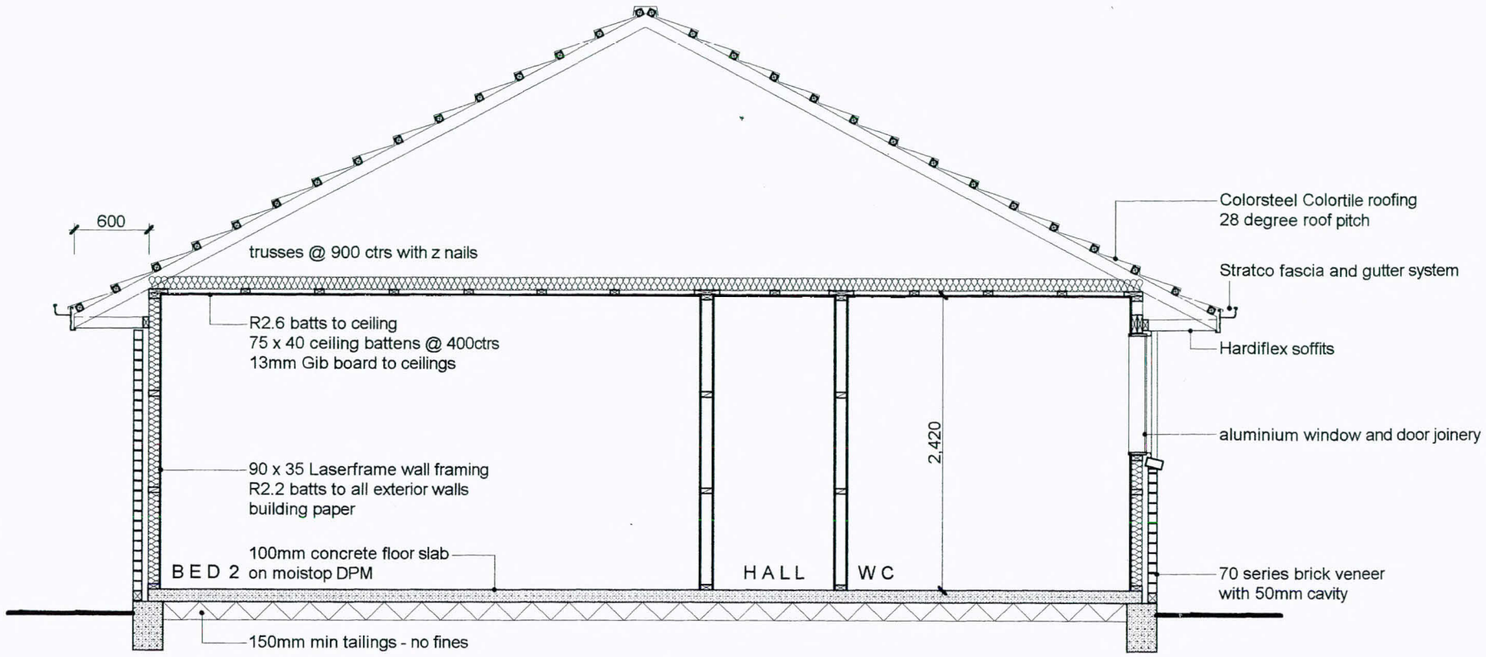
Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title: ELEVATIONS

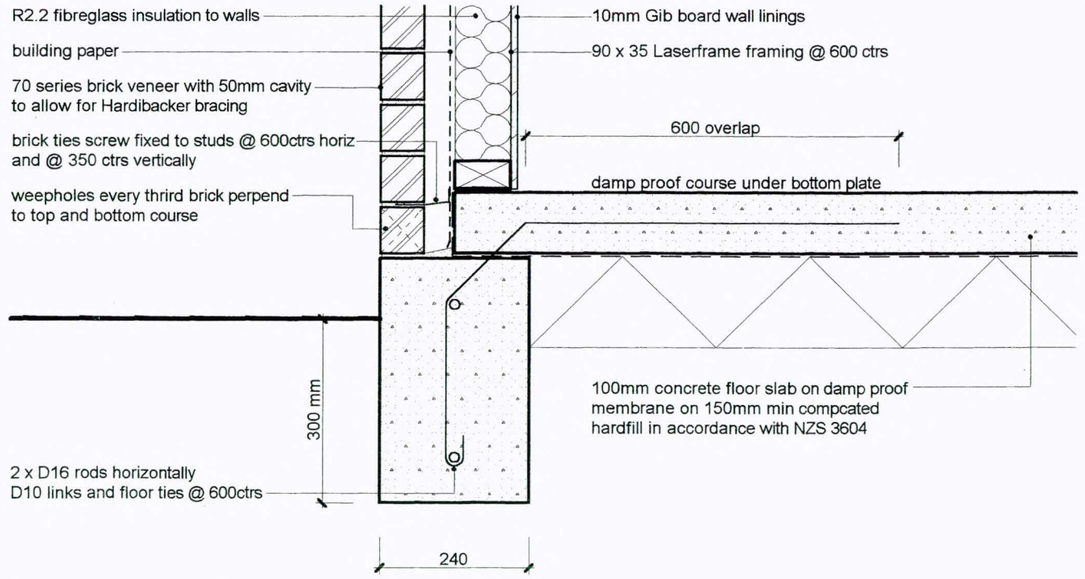
Sheet No. 2 of 4

Revision

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFU



CROSS SECTION
scale 1:50



FOUNDATION DETAIL
scale 1:10

Peter Ray Homes
213 Blenheim Road, Christchurch. P O 8184 Riccarton, Christchurch
Telephone – 03 348 1994 Fax – 03 343 2026

NOTE
1. All work shall comply with NZS 3604:1999
2. All windows and doors to comply with NZS 4211:1985
3. Glazing to comply with NZS 4223:1985 & Pt 3 1993
4. Contractor must verify all dimensions on site prior to commencing any work
5. The copyright of this drawing is vested with Peter Ray Homes Ltd and cannot legally be used, copied or in any form reproduced without written authority

Rev No.	Date	Amendment
A	03.11.03	remove gas fire, move gas bottles, change bay window

Drawn: A. Fahey
Date: 28.10.03
Scale: 1:50

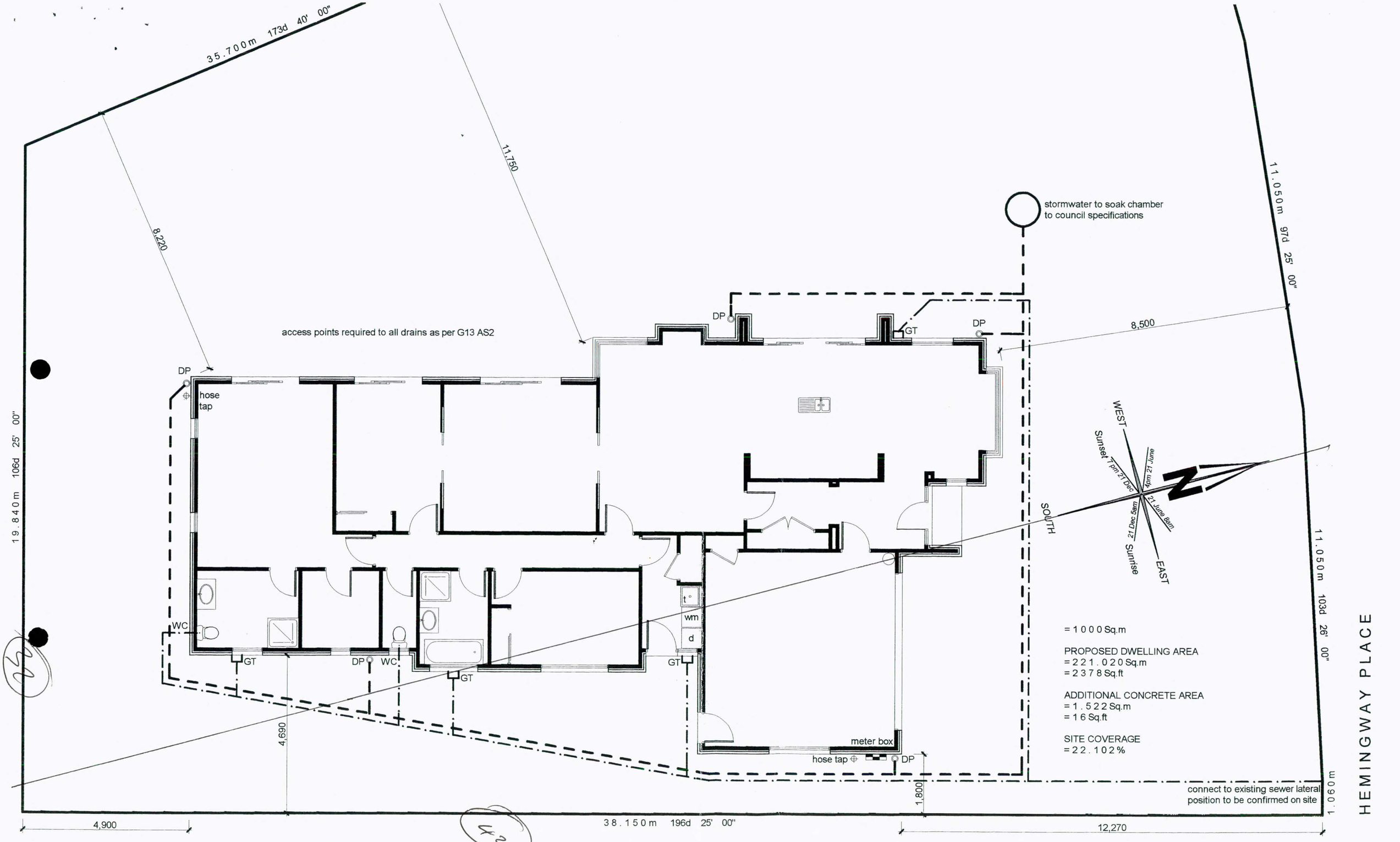
Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title: CROSS SECTION

Sheet No. 3 of 4

Revision

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFU



Peter Ray Homes

213 Blenheim Road, Christchurch. P O 8184 Riccarton, Christchurch
Telephone - 03 348 1994 Fax - 03 343 2026

NOTE

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2. All windows and doors to comply with NZS 4211:1985
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5. The copyright of this drawing is vested with Peter Ray Homes Ltd and cannot legally be used, copied or in any form reproduced without written authority

Rev No.	Date	Amendment
A	03.11.03	remove gas fire, move gas bottles, change bay window

Drawn: A. Fahey
Date: 28.10.03
Scale: 1:100

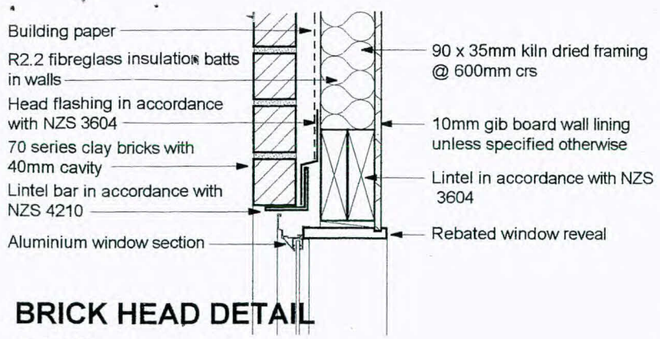
Job Name & Location
Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title
SITE PLAN

Sheet No.
4 of 4

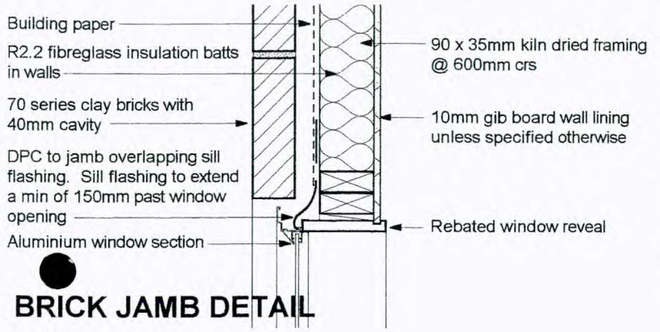
Revision

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFU



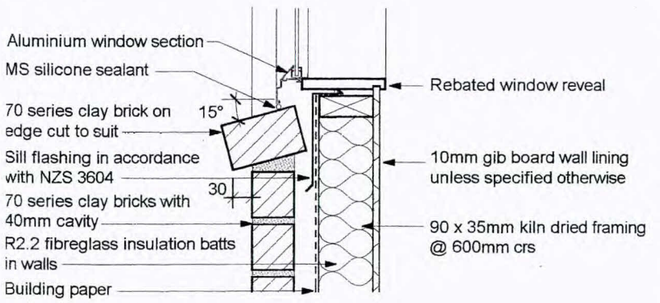
BRICK HEAD DETAIL

Scale 1:10



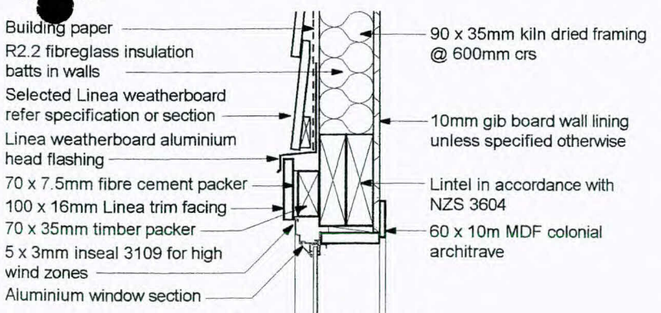
BRICK JAMB DETAIL

Scale 1:10



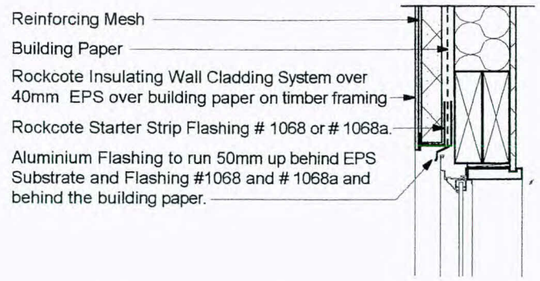
BRICK SILL DETAIL

Scale 1:10



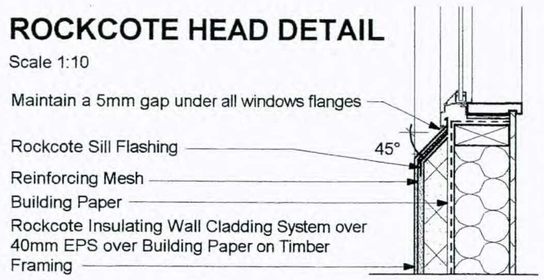
LINEA WINDOW HEAD DETAIL with facing board

Scale 1:10



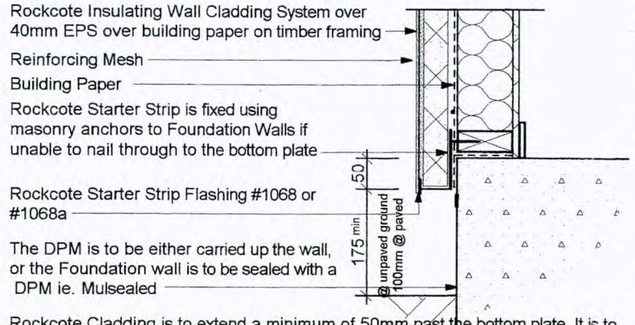
ROCKCOTE HEAD DETAIL

Scale 1:10



ROCKCOTE SILL DETAIL

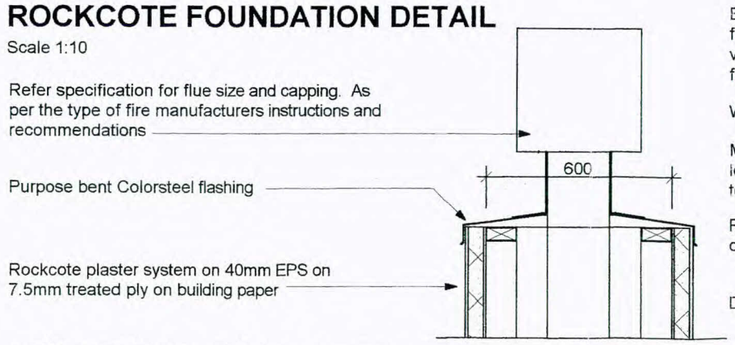
Scale 1:10



Rockcote Cladding is to extend a minimum of 50mm past the bottom plate. It is to be 6mm clear off the Foundation Wall. Refer to NZS 3604:1999 Fig 7.10.
The distance from the top of the floor slab to cleared ground is to be a minimum of 225mm, to a paved surface this shall be a minimum of 150mm. Refer to NZBC E2/AS1 Paragraph 4.2.5 or NZS 3604:1999 Fig 7.10.

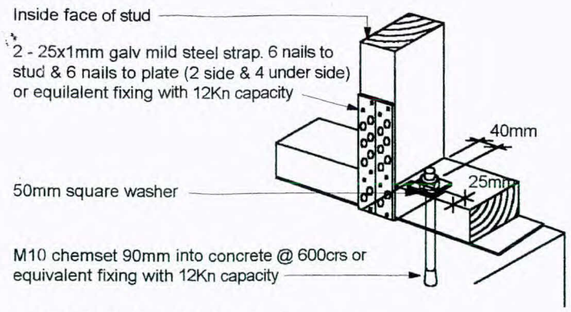
ROCKCOTE FOUNDATION DETAIL

Scale 1:10

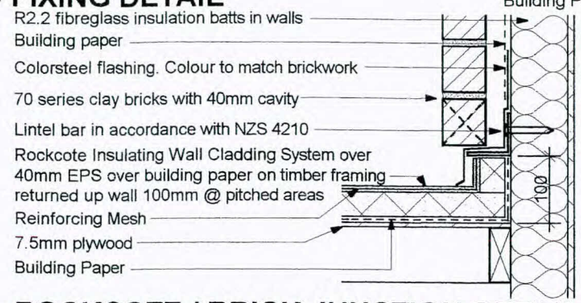


CHIMNEY CAPPING DETAIL

Scale 1:20

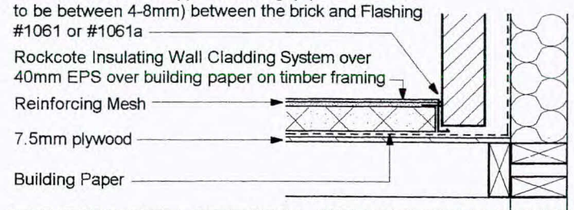


STUD FIXING DETAIL



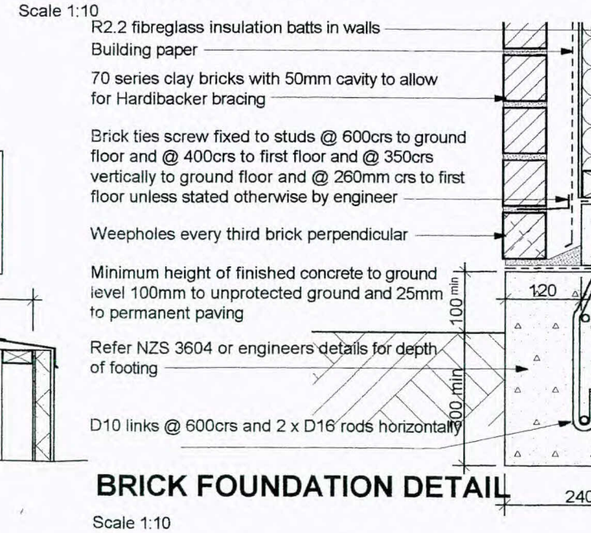
ROCKCOTE / BRICK JUNCTION DETAIL @ sloped areas of chimney

Scale 1:10



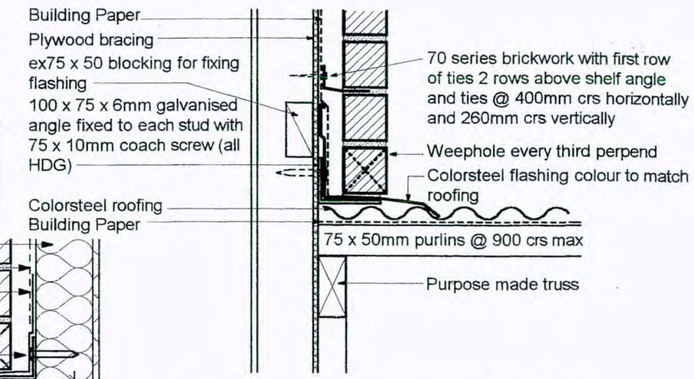
ROCKCOTE / BRICK JUNCTION DETAIL @ chimney internal corner

Scale 1:10



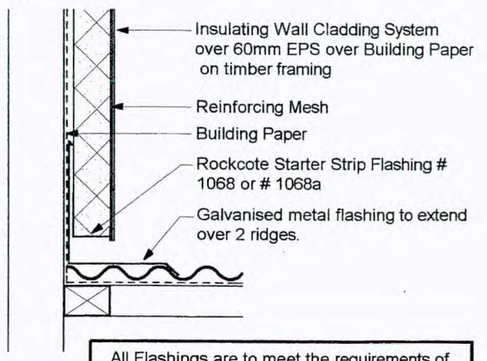
BRICK FOUNDATION DETAIL

Scale 1:10



BRICK ROOF FLASHING DETAIL

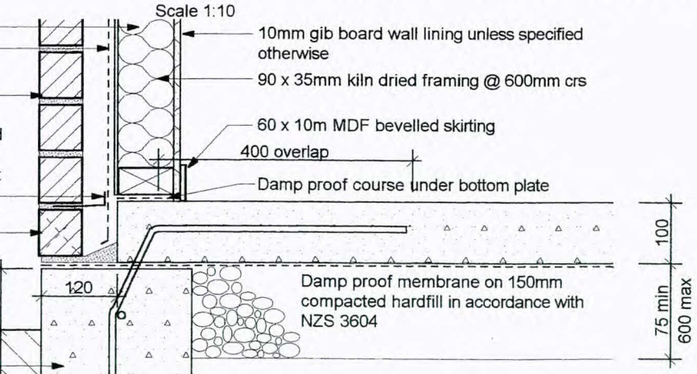
Scale 1:10



All Flashings are to meet the requirements of Section 4 of NZS 3604:1999

ROCKCOTE ROOF FLASHING DETAIL

Scale 1:10



Peter Ray Homes
213 Blenheim Road, Christchurch. P O 8184 Riccarton, Christchurch
Telephone – 03 348 1994 Fax – 03 343 2026

NOTE

1. All work shall comply with NZS 3604:1999
2. All windows and doors to comply with NZS 4211:1985
3. Glazing to comply with NZS 4223:1985 & Pt 3 1993
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Rev No.	Date	Amendment

Drawn: J Stadnyk
Date: December 02
Scale: 1:10, 1:20

Job Name & Location: PETER RAY HOMES LIMITED

Sheet Title: Standard Details for Single Storey Homes

Sheet No.

Revision

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFU

CHRISTCHURCH CITY COUNCIL · ENVIRONMENT	**CHRISTCHURCH CITY COUNCIL** BUILDING ACT 1991 **Project Information Memorandum (PIM)**	FORM BA2 PROJECT NO: **10040372**

Issued Date: 24 November 2003

Site Address: 16 Hemingway Place

Legal Desc: **Lot No:** 35 **DP No:** 319911

Owner: Russell Wenn and Julie Collier

Applicant: In-Spect
35 Maces Road
CHRISTCHURCH

Proposal: Dwelling with attached garage

CONSENTS COPY

The following matters have been identified in respect of the above Building Project.

HAZARDS/SPECIAL LAND CHARACTERISTICS

- **Ground Conditions:** The site has been filled and Council's records show that the fill has been placed and compacted to NZS 4431. This is unlikely to affect the buildings of standard construction.

  Refer location plan attached. Normal inspections and design of foundations as would be made in natural ground required.

  Location of cut/fill interface to be noted (and confirmed on site) and foundation designed accordingly.

DRAINAGE/WATER

Contact – Heath Wells

- **Levels**

  Development Standards for the Brooklands / Spencerville / Kainga Area:

  GROUND level to be the higher of:
  i) RL 10.85m in terms of the CCC datum.
  ii) Crown of road.

  Finished floor level for DWELLINGS & GARAGES to be the higher of:
  i) A minimum level of RL 11.225m in terms of the CCC datum
  ii) 150mm above the crown of the road.

- **Water Supply**
  - The water supply headworks fee is not required as the property is within the Brooklands, Spencerville and Kainga LRV and LRS zones.

- **Sanitary Sewer**
  - A Wastewater reticulation capacity upgrade contribution is not required for this proposal.

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- The Wastewater Treatment Plant capacity upgrade contribution fee has been addressed as part of the underlying subdivision and is not required for this proposal
- Sanitary sewer is to be discharged to the existing lateral installed at subdivision stage.

- **Stormwater**
  - Roof water is to discharge to an approved soakage chamber at a point close to the road boundary of the property. See C.C.C. Standard detail 8024 for soakage chamber details. (Detail attached)
    Only roof stormwater may be discharged into a soakage chamber. Interceptor / Silt traps will be required where surface drainage is proposed to connect directly to any open or piped stormwater system under the control of the Council.

- **General**
  - **Sewer Connections** to Council Services in the street are ***authorised work*** and must be carried out by a ***Council authorised drainlayer***. This includes all drainage laterals on roads, footpaths and verges that connect the property to public drains.
  - A list of **Council authorised drainlayers** is available on request or online at website www.ccc.govt.nz/WasteWater/AuthorisedDrainLayers/.
  - For further information the applicant is advised to contact either Tony Borkus (941-8376) or Gordon Taylor (941-8375.)

  - The developer is required to mitigate any adverse affects on adjoining properties. Failure to undertake such works may mean that the developer has some responsibility to adjacent owners at law.
  - Any requests for a variation to the above requirements to be made to a Building Consent Officer at the Councils Environmental Services Unit (Ph 941-8675). The developer should supply plans showing:
    i) Proposed Pipework, outfalls and connections etc
    ii) Existing and proposed Ground levels.
    iii) Detailed plumbing and drainage drawings.
  - Benchmarks and manhole levels may be obtained from the Essential Services Customer Centre (Ph 941-8300) at no charge.

- **Drainage Plan:** A drainage plan is provided.

OTHER ISSUES

- **Construction Nuisance:** The project must comply with the Health Act 1956, Section 29. The premises should be constructed or demolished so as not to cause a nuisance in terms of the Act (ie. dust).

  The Resource Management Act 1991 places a general obligation on persons, including builders and demolition contractors to adopt the best practicable option to ensure that the emission of noise does not exceed a reasonable level.

- **Vehicle Crossings** are required to be constructed in accordance with Council's Standard Specifications (a copy of which is available from the Council). On default the Council will undertake to repair or construct the crossing at the ***property owners cost.***

  The City Streets Unit is to be notified 24 hours prior to:

  1. The concrete to the culvert being poured; ***and***
  2. Final sealing of the crossing.

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Where alterations are required to stormwater pipes or other on street facilities, eg, manhole tops, poles, trees etc, the owner is to meet the cost of the required alterations.

Fees for the application are shown below.

- **Damage to Council Assets:** At all times the roadway, footpath, berm and landscaped areas adjacent to the construction site are to be kept tidy and safe for all road users. The developer/owner is responsible to repair any damages to the roading assets that occurred as soon as is practicable. The Council reserves the rights to repair all damages. Any cost incurred by Council for this will be recovered from the developer/owner.

The following Council fees will be charged with the uplift of the Building Consent and are additional to the Building Consent fees. These fees are subject to change depending on the date of issue of the Building Consent.

Vehicle Crossing (inspection fee only)	$ 60.00
Water Supply (One 15mm Supply)	$ 425.00

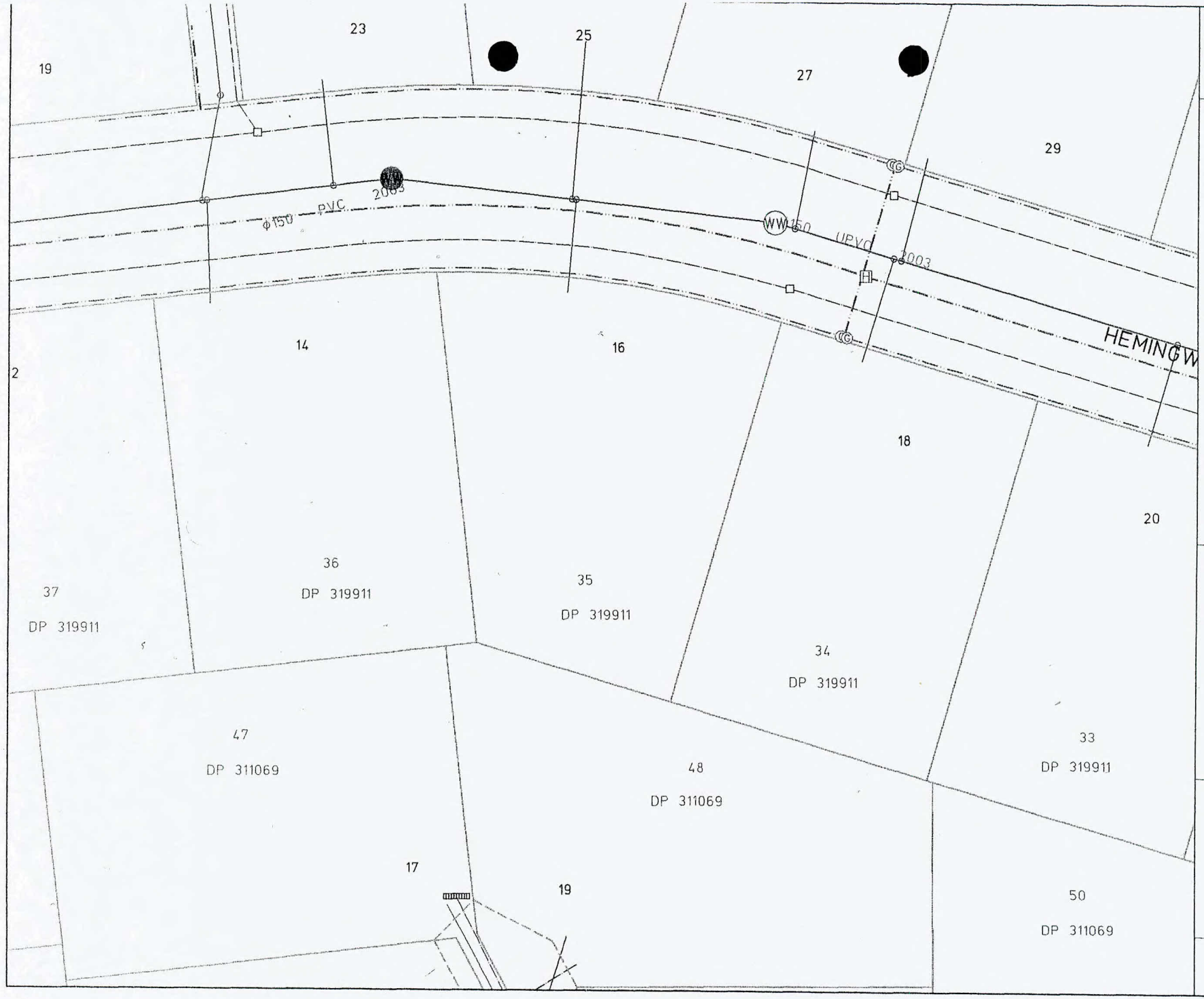
Total Project Information Memorandum fees $ 170.00
Paid $ 170.00 **Receipt No.:** 919020
Balance to pay $ NIL

Signed for and on behalf of the Council: _____ Date: 24 November 2003

Name: John Clark
Position: for **BUILDING CONSENT OFFICER**

This project may proceed subject to the issue of a Building Consent and any other necessary authorisations being obtained.

NB: This Project Information Memorandum will lapse and be of no effect if a Building Consent has not been issued by 24 November 2005



Cadastral Plan

Ph: 371-1300
Fax: 371-1385

LEGEND

- WASTE WATER MAIN
- STORM WATER MAIN
- WATER SUPPLY MAIN
- WASTE WATER DRAIN
- STORM WATER DRAIN
- WATER SUPPLY SUBMAIN
- STD MANHOLE (WASTE)
- VENTED MANHOLE (WASTE)
- STD MANHOLE (STORM)
- SUMP (STORM)
- FIRE HYDRANT (WATER)
- VALVE (WATER)
- METER (WATER)
- CONNECTOR (WATER)
- END CAP (WATER)
- KERB & CHANNEL

CAUTION
THE ACCURACY OF THIS PLAN IS NOT GUARANTEED. ONSITE VERIFICATION REQUIRED.

SCALE 1:500 on A4

Christchurch City Counc
6 Nov 2003 8:08AM

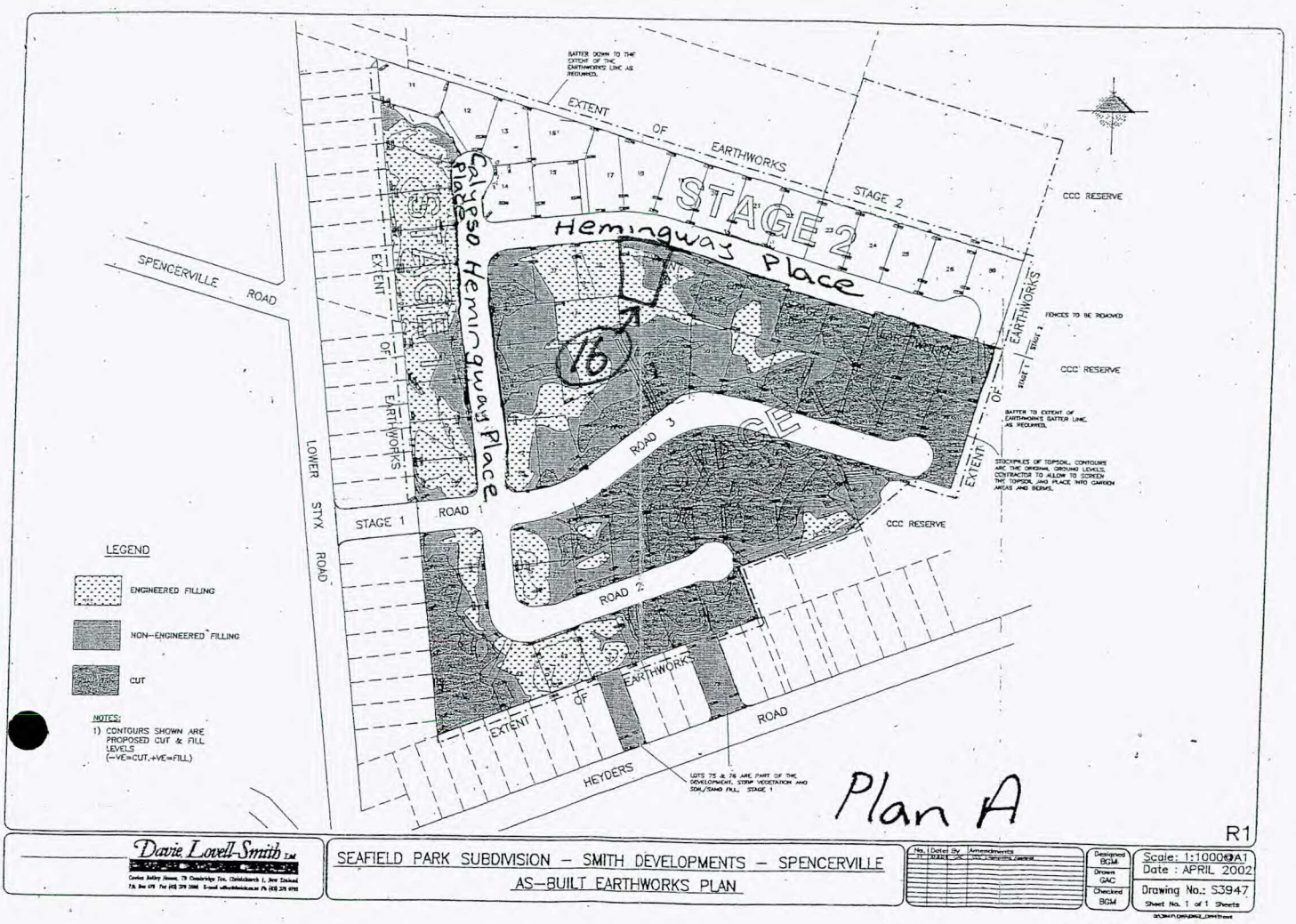
CHRISTCHURCH
CITY COUNCIL - GEODATA SERVICES

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10040372

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APPENDIX A
STATEMENT OF SUITABILITY OF EARTHFILL
FOR RESIDENTIAL DEVELOPMENT

To **Christchurch City Council**
PO Box 237
Christchurch

Attention Mr B Craig

STATEMENT OF SUITABILITY OF EARTH FILL FOR RESIDENTIAL DEVELOPMENT

Subdivision **Seafield Park Subdivision-Stage I**

Developer **Smith Developments Limited**

Location **Cnr Lower Styx & Heyders Road, Spencerville**

The earth fill shown on the attached plan No. S3947 Sheet 1 dated April 2002 have been placed in compliance with the terms of NZS 4431.

While work was in progress I retained as my inspecting engineer (or staff under his control) the engineer named below who is registered in terms of the Engineers Registration Act 1924.

John Bannock (Registration Number 10545)
Address C/- **Davie, Lovell-Smith Limited, PO Box 679, Christchurch**

During the work, the inspecting engineer or staff under his control made periodic visits of inspection to the site as detailed in his report No S3947 which is attached. Details of the soil testing carried out to check the quality of the fill by the inspecting engineer and his testing agency are also included in this report.

The attached plan No S3947 Sheet 1 shows Lot Nos. 1-10, 57-65, 68, 72, 73, 74, 30-53, 75 & 76 to be affected by filling and the extent of the fill.

In the opinion of the inspecting engineer the following special limitations should be observed:

NA

This certification, that the earth fills have been placed in compliance with the terms of NZS 4431 does not remove the necessity for the normal inspection and design of foundations as would be made in natural ground.

Registered Engineer

22 April 2002

on behalf of:
(Owner/ Developer)

NZS 4431:1989
3947/ENG/4431_ Earthfill-stg1

IN THE MATTER OF the Resource Management Act 1991
AND
IN THE MATTER OF Subdivision Consent Application PAP/20010325 affecting Lots 3-41 DP 319911

CONSENT NOTICE PURSUANT TO
SECTION 221, RESOURCE MANAGEMENT ACT 1991

To: Registrar-General of Lands
Canterbury Land Registration District
LAND INFORMATION NEW ZEALAND

TAKE NOTICE that the land hereinafter described is subject to conditions in relation to a subdivision consent as follows:-

Minimum Floor Levels.

The minimum floor level for all dwellings is to be 11.225m in terms of the Christchurch Drainage Datum.

AND THAT you are hereby directed and required to register the same pursuant to Section 221 Resource Management Act 1991.

DESCRIPTION OF LAND BY CONSENT NOTICE

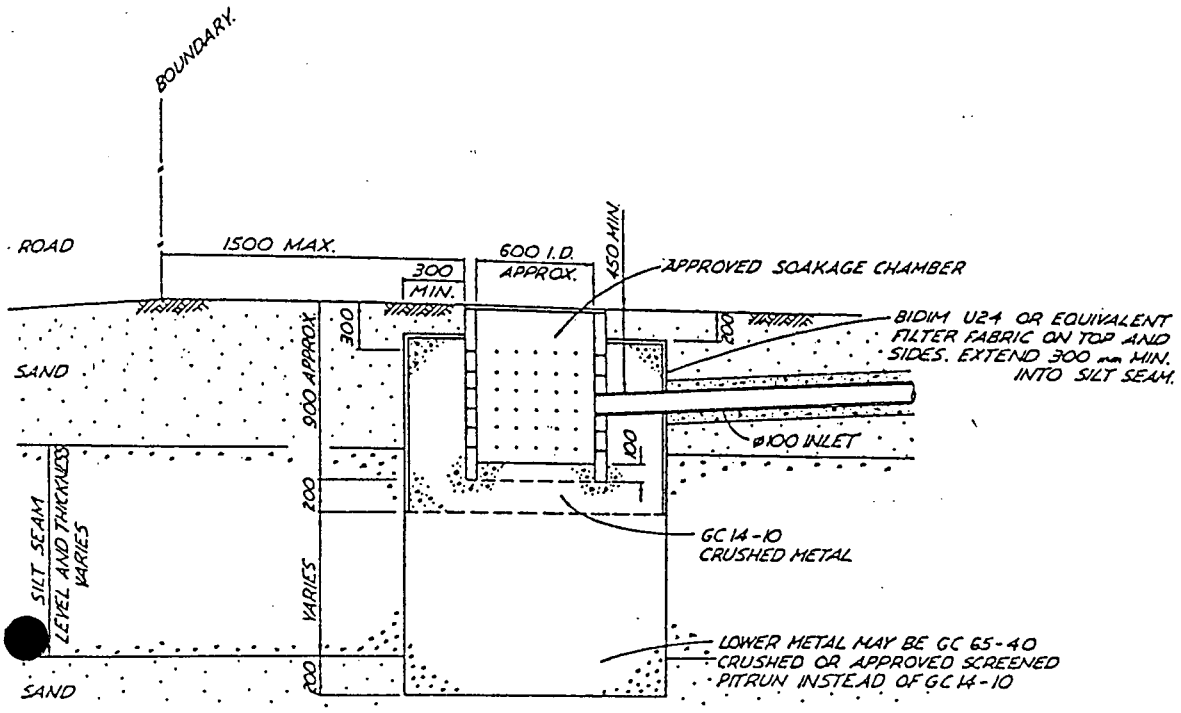
ALL THOSE PARCELS OF LAND COMPRISING:
- Lots 3 – 41 DP 319911comprised in Certificates of Title 78436 - 78474 (Canterbury Land District)

DATED this 14th day of May 2003

SIGNED for and on behalf of
THE CHRISTCHURCH CITY COUNCIL
pursuant to Section 252 of the
Local Government Act 1974

Principal Officer
(for the purposes of Section 221
Resource Management Act 1991)

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFU



TYPICAL SECTION - FOOT TRAFFIC ONLY

NOTES:

1. CHAMBER TO BE CONCRETE OR RIGID PLASTIC OF APPROVED STRENGTH PERFORATED WITH 5mm HOLES AT 100 CTRS. EACH WAY FOR PLASTIC OR 10mm HOLES AT 200 CTRS. EACH WAY FOR CONC.
2. CHAMBER COVERED WITH 5mm GALV. PLATE LID.
3. INVERT OF CHAMBER TO BE REGULARLY CLEANED OF SILT AND LEAVES TO MAINTAIN SOAKAGE. BOTTOM 100mm LAYER MAY OCCASIONALLY NEED REPLACEMENT.
4. ALL PIPING TO BE LAID TO C.D.B. SW80 DETAILS ("REQUIREMENTS FOR PRIVATE STORMWATER DRAINAGE 1980")
5. APPROX. VOLUME GC 14-10 - SOAKAGE CHAMBER - 1.5m³ LOOSE MEASURE.
   APPROX. VOLUME GC 65-40 - LOWER SOAK PIT - 1.4m³ LOOSE PER METRE DEPTH.
6. DESIGN SUITABLE FOR FOOT TRAFFIC AREAS ONLY.

DESIGNED Various	Christchurch Drainage Board	STANDARD SOAKAGE CHAMBER	8024
DRAWN K.J. SLADE.			
CHECKED [illegible]	APPROVED		SHEET OF SHEETS 15
RECOMMENDED	ENGINEER TO THE BOARD		185

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CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL
BUILDING INSPECTION SERVICES

Site Address: 16 Hemmingway Place

Description of Consent: Dwelling + Garage

PROJECT NO: 1904/1003

Demolition		Fire Resistant Rating	—	Final (Comm/Ind)	M8	Producer Statement	
Site Cleared		Smoke Alarms	✓	BA9 Received		Structural ( )	
FW Cut and Sealed		Glazing	✓	Car Parking Marked		As Built Drainage Plan	
Final (Residential)	**M8**	Access Routes Non-slip		Downpipes		HVAC	
BA9 Received		Retaining Wall Drainage		Stormwater		Fire Alarm Installer	
Wall Cladding Cert	✓	Swimming Pool		Rainheads		FPIS	
Downpipes	✓	Swimming Pool Fence		Gully Traps		Fire Engineer	
Stormwater	✓	Balconies		Main Vents		Emergency Lighting	
Flashings	✓	Overflow		Surface Water Sumps		Pressurisation	
Gully Dishes	✓	Overflow Relief		Trade Waste		Extraction	
Waste Pipes	✓	Pickup completed		Glass Safety		Sprinklers	
Main Vents	✓	Landscaping (Y/N)	—	Glass Visibility		Back Flow IQP Test	
Air Admittance Valve	—	Structural P/S		Barriers		Elect Certificate	
face Water Sumps	—	Photos taken	✓	Stairs		Gas Certificate	
Submersed Outlets	—	**Solid Fuel Heater**	**MH**	Hand Rails		Section 37 Certificate	
Hard Standing Levels	✓	Seismic Restraint		HWC Restraints		Lift	
HWC Restraint	✓	Hearth		Anti Scald		Lift As Built	
HWC Valves	✓	Flue		Emergency Lighting		Smoke Test	
Anti Scald Protection	✓	Clearances		Ventilation (HVAC)		Construction	
Barriers	—	Mantle		Fire Resistant Rating			
Landing	—	BA30 Form		Fire Alarm Type			
Flashings	—	Smoke Alarms		Egress			
Hand Rails	—	**Accessible Facilities**		Signage		BI 1 Form completed	
Stair Treads	—	" Route				**Reconciliation of Inspection**	
Stair Risers	—	" Toilet				Estimate	10
Ventilation of Spaces	✓	" Grab Rails				Actual	6
Mechanical Ventilation	✓	" Hardware				Interim CCC	
Range Hoods	✓	" Carpark				Amended Plan Fees	
Ceiling Insulation	✓	" Signage				Refund/Debit	

Comments

Project Completed

PROJECT COMPLETE
SIGNED 4
DATE 2/8/04

Electrical Cert No H54064 (P. McMahon-Brown) E24272C

All work inspected is in accordance with the Building Consent.

Some work is not satisfactory as detailed above and rectification is required.

Inspection Type **FINAL**

Rectfn T Fm ...../...../.....

Signed: ..... Date: 30/7/04

Heat Heat Seal

SITE INSPECTION REPORT

This is not a Code Compliance Certificate

Key
R = Rectification
– = Not Applicable
✓ = Approved

May 2004

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CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL
BUILDING INSPECTION SERVICES

Site Address: 16 HOWICK WAY BRACE

Description of Consent: NEW DWELLING

PROJECT NO: DD41003

Prepour Foundation	**M1**	Bracing		**Concrete Construction**	**220**	Grade	
Siting		Weatherboards		Reinforcing		Water Test	
Levels		Connections		Engineering Reports		Pick-up Completed	
Bearing		Floor Joist Layout		**Blockwork Construction**	**221**	Yard Sumps	
Reinforcing		Lintels		Reinforcing		Bubble Up Chambers	
Slab Ties		Insulation Walls		Cleanouts		**Pre Stopping**	**M7**
Engineering Report		Insulation Ceilings		**Steel Construction**	**222**	Brace Element Fixings	✓
Surveyors Certificate		Roof Cladding		Beam Size		Fire Lining Fixings	
Sub-floor Drainage	**M1A**	Ceiling Fans		Connections		**Flashings**	**213**
AS 3500 Drainage		Range Hoods		Beam Support		Windows	
Overflow Relief		Bottom Plates		**Solid Plaster**	**224**	Doors	
Prepour Slab	**M2**	Building Wrap		Expansion		**Monolithic Cladding**	**214**
Tailings		Engineering Verification		Substrate		System	
[redacted]M		**Preline Plumbing**	**M4B**	Control Joints		Fixings	
Mesh		Pipe Type/Sizing		Flashings		Bottom Plates	
Slab Thickening		Backflow Prevention		**Brick/Shelf Angle**	**225**	Balcony	
Wastes		Water Isolation Valve		Connections		Hand Rails	
Shrinkage Control		Lagging		**½ High Brick Insp.**	**211**	Overflow	
EPS		Pressure Test		Cavity		Penetrations	
Sub Floor	**M3**	Anti-scald, fitted		Ties		Cavity	
Pile Connections		Soil Pipes		Building Wrap		Parapets	
Bearers		Vents		Penetrations		Window Trim	
Joists		**Fire Resistant Lining**	**M5**	Flashings		Building Wrap	
Treatment		Penetrations		**Drainage**	**M6**	Sill Tray	
Sub Ventilation		Connections		Bedding		**Retaining Wall**	**212**
Sub Insulation		Fixings		Cover		Novacoil	
Preline Building	**M4A**	**Building & Sill Wrap**	**215**	Inspection Points		DPC	
M/C - walls/ceilings %				F/W→Approved Outfall		DPC Protection	
Framing		**Bathroom & Deck Tanking**	**216**	S/W→Approved Outfall		Novacoil connected to sw system	
[redacted]de/Treatment				Main Vent Positions			

Comments

1 - BIB 2 NOT FIXED ON RIGHT SIDE
- GIB STOPPER WILL DO - MARKED ON PLAN
ALL OTHER BRACING PANELS OK
- OK TO STOP WALLS & CEILINGS

Inspection Bookings Telephone Number: 941 8904 or to book online: www.ccc.govt.nz/building/forms/frmInspection.asp

Builder: | **Craftsman Plumber:** | **Reg Drainlayer:**

All work inspected is in accordance with the Building Consent. ✓

Some work is not satisfactory as detailed above and rectification is required.

Signed: ..... Date: 27/5/04

Inspection Type M7

SITE INSPECTION REPORT
This is not a Code Compliance Certificate

January 2004

Key
R = Rectification
– = Not Applicable
✓ = Approved

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL

BUILDING INSPECTION SERVICES

Site Address: 16 DOMINO WAY PLACE

Description of Consent: NEW DWELLING

PROJECT NO: 1/04/2003

Prepour Foundation	**M1**	Bracing	✓	**Concrete Construction**	**220**	Grade	
Siting		Weatherboards	–	Reinforcing		Water Test	
Levels		Connections	✓	Engineering Reports		Pick-up Completed	
Bearing		Floor Joist Layout	✓	**Blockwork Construction**	**221**	Yard Sumps	
Reinforcing		Lintels	✓	Reinforcing		Bubble Up Chambers	
Slab Ties		Insulation Walls	✓	Cleanouts		**Pre Stopping**	**M7**
Engineering Report		Insulation Ceilings	✓	**Steel Construction**	**222**	Brace Element Fixings	
Surveyors Certificate		Roof Cladding	✓	Beam Size		Fire Lining Fixings	
Sub-floor Drainage	**M1A**	Ceiling Fans	–	Connections		**Flashings**	**213**
AS 3500 Drainage		Range Hoods	–	Beam Support		Windows	
Overflow Relief		Bottom Plates	✓	**Solid Plaster**	**224**	Doors	
Prepour Slab	**M2**	Building Wrap	✓	Expansion		**Monolithic Cladding**	**214**
Tailings		Engineering Verification	–	Substrate		System	
[redacted]M		**Preline Plumbing**	**M4B**	Control Joints		Fixings	
Mesh		Pipe Type/Sizing	✓	Flashings		Bottom Plates	
Slab Thickening		Backflow Prevention		**Brick/Shelf Angle**	**225**	Balcony	
Wastes		Water Isolation Valve	R	Connections		Hand Rails	
Shrinkage Control		Lagging	✓	**½ High Brick Insp.**	**211**	Overflow	
EPS		Pressure Test	R	Cavity		Penetrations	
Sub Floor	**M3**	Anti-scald, fitted	R	Ties		Cavity	
Pile Connections		Soil Pipes	✓	Building Wrap		Parapets	
Bearers		Vents	✓	Penetrations		Window Trim	
Joists		**Fire Resistant Lining**	**M5**	Flashings		Building Wrap	
Treatment		Penetrations		**Drainage**	**M6**	Sill Tray	
Sub Ventilation		Connections		Bedding		**Retaining Wall**	**212**
Sub Insulation		Fixings		Cover		Novacoil	
Preline Building	**M4A**	**Building & Sill Wrap**	**215**	Inspection Points		DPC	
M/C - walls/ceilings %	✓			F/W→Approved Outfall		DPC Protection	
Framing	✓	**Bathroom & Deck Tanking**	**216**	S/W→Approved Outfall		Novacoil connected to sw system	
[redacted]de/Treatment	✓			Main Vent Positions			

Comments

M/C FRAMING / BATTENS — 10-15% — OK.
BRACING OK. INSULATION IN WALLS & CEILINGS.
PIPEWORK FIXED AND CLIPPED OK.
HWC AND ANTISCALD CATER. MV LATER
OK TO LINE WALLS & CEILINGS

Inspection Bookings Telephone Number: 941 8904 or to book online: www.ccc.govt.nz/building/forms/frmInspection.asp

Builder: **Craftsman Plumber:** ROBIN COOPER LTD **Reg Drainlayer:**

All work inspected is in accordance with the Building Consent.

Some work is not satisfactory as detailed above and rectification is required.

Signed: ..... Date: 18/5/04

Inspection Type M4A

SITE INSPECTION REPORT

This is not a Code Compliance Certificate

Key
R = Rectification
– = Not Applicable
✓ = Approved

January 2004

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL
BUILDING INSPECTION SERVICES

Site Address: 16 HEMINGWAY - KAIK

Description of Consent: DWELLING & GARAGE

PROJECT NO: 10041003

Prepour Foundation	**M1**	Bracing		**Concrete Construction**	**220**	Grade	
Siting	✓	Weatherboards		Reinforcing		Water Test	
Levels	✓	Connections		Engineering Reports		Pick-up Completed	
Bearing	✓	Floor Joist Layout		**Blockwork Construction**	**221**	Yard Sumps	
Reinforcing	✓	Lintels		Reinforcing		Bubble Up Chambers	
Slab Ties	✓	Insulation Walls		Cleanouts		**Pre Stopping**	**M7**
Engineering Report	–	Insulation Ceilings		**Steel Construction**	**222**	Brace Element Fixings	
Surveyors Certificate	–	Roof Cladding		Beam Size		Fire Lining Fixings	
Sub-floor Drainage	**M1A**	Ceiling Fans		Connections		**Flashings**	**213**
AS 3500 Drainage		Range Hoods		Beam Support		Windows	
Overflow Relief		Bottom Plates		**Solid Plaster**	**224**	Doors	
Prepour Slab	**M2**	Building Wrap		Expansion		**Monolithic Cladding**	**214**
Tailings		Engineering Verification		Substrate		System	
[redacted]M		**Preline Plumbing**	**M4B**	Control Joints		Fixings	
Mesh		Pipe Type/Sizing		Flashings		Bottom Plates	
Slab Thickening		Backflow Prevention		**Brick/Shelf Angle**	**225**	Balcony	
Wastes		Water Isolation Valve		Connections		Hand Rails	
Shrinkage Control		Lagging		**½ High Brick Insp.**	**211**	Overflow	
EPS		Pressure Test		Cavity		Penetrations	
Sub Floor	**M3**	Anti-scald, fitted		Ties		Cavity	
Pile Connections		Soil Pipes		Building Wrap		Parapets	
Bearers		Vents		Penetrations		Window Trim	
Joists		**Fire Resistant Lining**	**M5**	Flashings		Building Wrap	
Treatment		Penetrations		**Drainage**	**M6**	Sill Tray	
Sub Ventilation		Connections		Bedding		**Retaining Wall**	**212**
Sub Insulation		Fixings		Cover		Novacoil	
Preline Building	**M4A**	**Building & Sill Wrap**	**215**	Inspection Points		DPC	
M/C - walls/ceilings %				F/W→Approved Outfall		DPC Protection	
Framing		**Bathroom & Deck Tanking**	**216**	S/W→Approved Outfall		Novacoil connected to sw system	
[redacted]ade/Treatment				Main Vent Positions			

Comments

2. D. 16 PODS - 2 10 FLOOR TIES @ 600CRS

SITING OK

FOOTINGS 300 DEEP x 400 WIDE

Inspection Bookings Telephone Number: 941 8904 or to book online: www.ccc.govt.nz/building/forms/frmInspection.asp

Builder:	**Craftsman Plumber:**	**Reg Drainlayer:**

All work inspected is in accordance with the Building Consent.

Some work is not satisfactory as detailed above and rectification is required.

Inspection Type

1 1 1

Signed:.....Date: ...../...../.....

MICHAEL HENDERSON

January 2004

SITE INSPECTION REPORT
This is not a Code Compliance Certificate

Key

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– = Not Applicable
✓ = Approved

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL
BUILDING INSPECTION SERVICES

Site Address: 16 Hemingway Place

Description of Consent: Dwelling + Garage

PROJECT NO: 1004 1003

Prepour Foundation	**M1**	Bracing		**Concrete Construction**	**220**	Grade	
Siting		Weatherboards		Reinforcing		Water Test	
Levels		Connections		Engineering Reports		Pick-up Completed	
Bearing		Floor Joist Layout		**Blockwork Construction**	**221**	Yard Sumps	
Reinforcing		Lintels		Reinforcing		Bubble Up Chambers	
Slab Ties		Insulation Walls		Cleanouts		**Pre Stopping**	**M7**
Engineering Report		Insulation Ceilings		**Steel Construction**	**222**	Brace Element Fixings	
Surveyors Certificate		Roof Cladding		Beam Size		Fire Lining Fixings	
Sub-floor Drainage	**M1A**	Ceiling Fans		Connections		**Flashings**	**213**
AS 3500 Drainage		Range Hoods		Beam Support		Windows	
Overflow Relief		Bottom Plates		**Solid Plaster**	**224**	Doors	
Prepour Slab	**M2**	Building Wrap		Expansion		**Monolithic Cladding**	**214**
Tailings		Engineering Verification		Substrate		System	
[redacted]M		**Preline Plumbing**	**M4B**	Control Joints		Fixings	
Mesh		Pipe Type/Sizing		Flashings		Bottom Plates	
Slab Thickening		Backflow Prevention		**Brick/Shelf Angle**	**225**	Balcony	
Wastes		Water Isolation Valve		Connections		Hand Rails	
Shrinkage Control		Lagging		**½ High Brick Insp.**	**211**	Overflow	
EPS		Pressure Test		Cavity		Penetrations	
Sub Floor	**M3**	Anti-scald, fitted		Ties		Cavity	
Pile Connections		Soil Pipes		Building Wrap		Parapets	
Bearers		Vents		Penetrations		Window Trim	
Joists		**Fire Resistant Lining**	**M5**	Flashings		Building Wrap	
Treatment		Penetrations		**Drainage**	**M6**	Sill Tray	
Sub Ventilation		Connections		Bedding		**Retaining Wall**	**212**
Sub Insulation		Fixings		Cover		Novacoil	
Preline Building	**M4A**	**Building & Sill Wrap**	**215**	Inspection Points		DPC	
M/C - walls/ceilings %				F/W→Approved Outfall		DPC Protection	
Framing		**Bathroom & Deck Tanking**	**216**	S/W→Approved Outfall		Novacoil connected to sw system	
[redacted]de/Treatment				Main Vent Positions			

Comments

D.P.M TAPED + LAID ON TRENCHES
665 MESH IN TIED HEADS ON CHAIRS
WASTE PIES LAGGED + TAPED
OK TO POUR

Inspection Bookings Telephone Number: 941 8904 or to book online: www.ccc.govt.nz/building/forms/frmInspection.asp

Builder: | **Craftsman Plumber:** | **Reg Drainlayer:**

All work inspected is in accordance with the Building Consent.

Some work is not satisfactory as detailed above and rectification is required.

Inspection Type M2

Signed: ..... Date: 18/3/04

Mccall Hutchison

January 2004

SITE INSPECTION REPORT
This is not a Code Compliance Certificate

Key
R = Rectification
– = Not Applicable
✓ = Approved

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL
BUILDING INSPECTION SERVICES

Site Address: 16 Hemingway Pl.

Description of Consent:

PROJECT NO: 10041003

Prepour Foundation	**M1**	Bracing		**Concrete Construction**	**220**	Grade	✓
Siting		Weatherboards		Reinforcing		Water Test	✓
Levels		Connections		Engineering Reports		Pick-up Completed	✓
Bearing		Floor Joist Layout		**Blockwork Construction**	**221**	Yard Sumps	
Reinforcing		Lintels		Reinforcing		Bubble Up Chambers	
Slab Ties		Insulation Walls		Cleanouts		**Pre Stopping**	**M7**
Engineering Report		Insulation Ceilings		**Steel Construction**	**222**	Brace Element Fixings	
Surveyors Certificate		Roof Cladding		Beam Size		Fire Lining Fixings	
Sub-floor Drainage	**M1A**	Ceiling Fans		Connections		**Flashings**	**213**
AS 3500 Drainage		Range Hoods		Beam Support		Windows	
Overflow Relief		Bottom Plates		**Solid Plaster**	**224**	Doors	
Prepour Slab	**M2**	Building Wrap		Expansion		**Monolithic Cladding**	**214**
Tailings		Engineering Verification		Substrate		System	
M/M		**Preline Plumbing**	**M4B**	Control Joints		Fixings	
Mesh		Pipe Type/Sizing		Flashings		Bottom Plates	
Slab Thickening		Backflow Prevention		**Brick/Shelf Angle**	**225**	Balcony	
Wastes		Water Isolation Valve		Connections		Hand Rails	
Shrinkage Control		Lagging		**½ High Brick Insp.**	**211**	Overflow	
EPS		Pressure Test		Cavity		Penetrations	
Sub Floor	**M3**	Anti-scald, fitted		Ties		Cavity	
Pile Connections		Soil Pipes		Building Wrap		Parapets	
Bearers		Vents		Penetrations		Window Trim	
Joists		**Fire Resistant Lining**	**M5**	Flashings		Building Wrap	
Treatment		Penetrations		**Drainage**	**M6**	Sill Tray	
Sub Ventilation		Connections		Bedding	✓	**Retaining Wall**	**212**
Sub Insulation		Fixings		Cover	✓	Novacoil	
Preline Building	**M4A**	**Building & Sill Wrap**	**215**	Inspection Points	✓	DPC	
M/C - walls/ceilings %				F/W→Approved Outfall	✓	DPC Protection	
Framing		**Bathroom & Deck Tanking**	**216**	S/W→Approved Outfall	✓	Novacoil connected to sw system	
Grade/Treatment				Main Vent Positions	✓		

Comments

Cornerstone

Arauko

Inspection Bookings Telephone Number: 941 8904 or to book online: www.ccc.govt.nz/building/forms/frmInspection.asp

Builder:	**Craftsman Plumber:**	**Reg Drainlayer:**
	✓	

All work inspected is in accordance with the Building Consent. ✓

~~Some work is not satisfactory as detailed above and rectification is required.~~

Inspection Type m 6.

Signed: AJBS Date: 15/7/14

SITE INSPECTION REPORT

This is not a Code Compliance Certificate

Key
R = Rectification
– = Not Applicable
✓ = Approved

January 2004

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL
BUILDING INSPECTION SERVICES

Site Address: 16 Hemmingway Plc.

Description of Consent: Dwg/Gge

PROJECT NO: 1904/1003

Prepour Foundation	**M1**	Bracing		**Concrete Construction**	**220**	Grade	
Siting		Weatherboards		Reinforcing		Water Test	
Levels		Connections		Engineering Reports		Pick-up Completed	
Bearing		Floor Joist Layout		**Blockwork Construction**	**221**	Yard Sumps	
Reinforcing		Lintels		Reinforcing		Bubble Up Chambers	
Slab Ties		Insulation Walls		Cleanouts		**Pre Stopping**	**M7**
Engineering Report		Insulation Ceilings		**Steel Construction**	**222**	Brace Element Fixings	
Surveyors Certificate		Roof Cladding		Beam Size		Fire Lining Fixings	
Sub-floor Drainage	**M1A**	Ceiling Fans		Connections		**Flashings**	**213**
AS 3500 Drainage		Range Hoods		Beam Support		Windows	
Overflow Relief		Bottom Plates		**Solid Plaster**	**224**	Doors	
Prepour Slab	**M2**	Building Wrap		Expansion		**Monolithic Cladding**	**214**
Tailings		Engineering Verification		Substrate		System	
[redacted]M		**Preline Plumbing**	**M4B**	Control Joints		Fixings	
Mesh		Pipe Type/Sizing		Flashings		Bottom Plates	
Slab Thickening		Backflow Prevention		**Brick/Shelf Angle**	**225**	Balcony	
Wastes		Water Isolation Valve		Connections		Hand Rails	
Shrinkage Control		Lagging		**½ High Brick Insp.**	**211**	Overflow	
EPS		Pressure Test		Cavity	✓	Penetrations	
Sub Floor	**M3**	Anti-scald, fitted		Ties	✓	Cavity	
Pile Connections		Soil Pipes		Building Wrap	✓	Parapets	
Bearers		Vents		Penetrations	✓	Window Trim	
Joists		**Fire Resistant Lining**	**M5**	Flashings	✓	Building Wrap	
Treatment		Penetrations		**Drainage**	**M6**	Sill Tray	
Sub Ventilation		Connections		Bedding		**Retaining Wall**	**212**
Sub Insulation		Fixings		Cover		Novacoil	
Preline Building	**M4A**	**Building & Sill Wrap**	**215**	Inspection Points		DPC	
M/C - walls/ceilings %				F/W→Approved Outfall		DPC Protection	
Framing		**Bathroom & Deck Tanking**	**216**	S/W→Approved Outfall		Novacoil connected to sw system	
[redacted]rade/Treatment				Main Vent Positions			

Comments

Brick work OK

Inspection Bookings Telephone Number: 941 8904 or to book online: www.ccc.govt.nz/building/forms/frmInspection.asp

Builder: **Craftsman Plumber:** **Reg Drainlayer:**

All work inspected is in accordance with the Building Consent. ✓

Some work is not satisfactory as detailed above and rectification is required.

Signed: [redacted] Date: 17/6/04

Inspection Type

211

January 2004

SITE INSPECTION REPORT
This is not a Code Compliance Certificate

Key
R = Rectification
– = Not Applicable
✓ = Approved

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH CITY COUNCIL · ENVIRONMENT	**CHRISTCHURCH CITY COUNCIL** **ENVIRONMENTAL SERVICES UNIT** PO Box 237, Christchurch Fax 941-8920, Telephone 941-8904	**FORM: BA9**

Dear Building Owner

COMPLETION OF YOUR BUILDING PROJECT
FINAL INSPECTION AND CODE COMPLIANCE CERTIFICATE

Once your building project has been completed you are required to advise the City Council's Building Inspection Team so that they can carry out a final inspection.

Following this inspection you will receive a Code Compliance Certificate providing that the building work is correctly completed in accordance with the Building Code.

Therefore, to set this process in motion you need only complete and detach the lower part of this form labelled Form BA9 and return it to the City Council.

Note, that before completing Form BA9, please check that you have fulfilled the conditions of Building Consent, if any. This is important if you have been employing professional consultants to carry out inspection work during the course of construction, as a confirming "Producer Statement" may be required by the Council as part of the conditions.

FURTHER NOTE: Before the Council issues the Building Project's Code Compliance Certificate a copy of a Certificate of Compliance for any electrical work and/or certification certificate for any gas fitting work carried out with this project must be provided.

Yours faithfully
ENVIRONMENTAL SERVICES MANAGER

FORM BA9 — APPLICANTS ADVICE NOTICE OF COMPLETED BUILDING WORK

To: Team Leader Building Inspections
Christchurch City Council
PO Box 237, Christchurch

PROJECT NO 10041003

[*Cross each applicable box and attach relevant documents*]

You are hereby advised that:

☐ All

☐ Part only as specified in the attached particulars

of the building work under the above building consent is believed to have been completed to the extent required by that Building Consent.

You are requested to issue:

☐ A final Code Compliance Certificate

☐ An interim Code Compliance Certificate for ..... only

The attached particulars include:

☐ Producer statements (if required)

I _____ advise that the above building project is complete to the extent required by the building consent (including any conditions) and hereby request the Council to make a final inspection for the purposes of obtaining a Code Compliance Certificate:

(please tick)

Date Inspection Required: _____ Time: AM ☐ PM ☐

Site Address: 16 Hemingway Place

Contact Name: _____ Contact Phone: _____

Postal Address for receipt of Code Compliance Certificate or any further correspondence:

Signed by or for and on behalf of the owner: _____ Date: 30/7/04

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

ESTIMATE OF CONSTRUCTION INSPECTIONS: Date: 7 January 2004

PROJECT NO. 10041003

DESCRIPTION OF CONSENT: DWELLING WITH ATTACHED GARAGE

SITE ADDRESS: 16 HEMMINGWAY PLACE

INSPECTIONS REQUIRED	No.
201 Excavation / Foundation / Reinforcing	1
203 Slab on Grade / DPC	1
215 Building and Sill wrap	1
213 Flashings - Windows and Doors	**1**
211 Half High Brick Inspection	1
214 Monolithic Cladding - Pre-Coating	1
205 Pre-line including Plumbing	1
209 Pre-Stopping / Bracing	1
208 Drains	1
210 M8 Final Inspection	**1**

The fees for these inspections have been included in the overall building consent fees.

Notes:

1. The above mandatory notice inspections will be carried out by the Council for which one day notice shall be given as required by Regulation 7(1)(b)(i-v).
2. Inspections which are necessary due to non-complying or incomplete work or that rise as a result of a rectification notice are additional, and will be charged at the rate of $68.00/hour and invoiced separately.
3. ***DESTRUCTIVE INVESTIGATIONS MAY BE REQUIRED IF WORK IS COVERED IN PRIOR TO THE COUNCIL'S INSPECTIONS TAKING PLACE.***

For all inspection requests pertaining to this consent, please phone 941-8904.
Inspections for the following day must be booked prior to 4pm.

Book an inspection by fax - http://www.ccc.govt.nz/building/forms/Faxtobookaninspection.pdf
Or Request Form by fax 941-8920
Book an Inspection On-Line - http://www.ccc.govt.nz/building/forms/frmInspection.asp
If you do not have internet access but would like to request a form, fax your request to 941-8920.

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL

ENVIRONMENTAL SERVICES UNIT

TAX INVOICE WHEN PAID

BUILDING CONSENT FEES

INV 103943
GST NO 53-198-554
DATE 07/01/2004

WENN, RUSSELL MARTIN
COLLIER, JULIE
C/O IN-SPECT BUILDING CERTIFICATION
35 MACES ROAD
CHRISTCHURCH 8006

CONSENT APPLICATION NO: ABA 10041003

OWNERS NAME: SMITH DEVELOPMENTS LIMITED

PROJECT STREET ADDRESS: 16 HEMINGWAY PLACE
SPENCERVILLE

CUSTOMER CODE: 3258891

INVOICED TO DATE: $0.00

FEE CODE	DESCRIPTION	THIS INVOICE (GST exclusive)
B02	Accept & Issue Consent	111.11
B03	Process and Grant	127.11
[redacted]4	Compliance Fees	520.00
B05	Code Compliance Grant/Issue	40.00
B06	BRANZ Levy (no GST applicable)	160.00
B07	Building Industry Auth. Levy	92.44
VCI	Vehicle Crossing Inspn Fee	53.33
WCN	Std Water Connection Fee	377.78

GST Exclusive Total	$1481.77
GST Total	$165.23
TOTAL PAYABLE (GST Inclusive)	**$1647.00**

bcinv.frm

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL

ENVIRONMENTAL SERVICES UNIT

TAX INVOICE WHEN PAID

BUILDING CONSENT FEES

INV 103943
GST NO 53-198-554
DATE 07/01/2004

WENN, RUSSELL MARTIN
COLLIER, JULIE
C/O IN-SPECT BUILDING CERTIFICATION
35 MACES ROAD
CHRISTCHURCH 8006

CONSENT APPLICATION NO:	ABA 10041003
OWNERS NAME:	SMITH DEVELOPMENTS LIMITED
PROJECT STREET ADDRESS:	16 HEMINGWAY PLACE SPENCERVILLE
CUSTOMER CODE:	3258891
INVOICED TO DATE:	$0.00

FEE CODE	DESCRIPTION	THIS INVOICE (GST exclusive)
B02	Accept & Issue Consent	111.11
B03	Process and Grant	127.11
[redacted]4	Compliance Fees	520.00
B05	Code Compliance Grant/Issue	40.00
B06	BRANZ Levy (no GST applicable)	160.00
B07	Building Industry Auth. Levy	92.44
VCI	Vehicle Crossing Inspn Fee	53.33
WCN	Std Water Connection Fee	377.78

GST Exclusive Total	$1481.77
GST Total	$165.23
TOTAL PAYABLE (GST Inclusive)	**$1647.00**

bcinv.frm

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL

ENVIRONMENTAL SERVICES UNIT

CREDIT NOTE

BUILDING CONSENT FEES

INV 103942
GST NO 53-198-554
DATE 07/01/2004

WENN, RUSSELL MARTIN
COLLIER, JULIE
C/O IN-SPECT BUILDING CERTIFICATION
35 MACES ROAD
CHRISTCHURCH 8006

CONSENT APPLICATION NO: ABA 10041003
OWNERS NAME: SMITH DEVELOPMENTS LIMITED
PROJECT STREET ADDRESS: 16 HEMINGWAY PLACE SPENCERVILLE
CUSTOMER CODE: 3258891
INVOICED TO DATE: $1296.00

FEE CODE	DESCRIPTION	THIS INVOICE (GST exclusive)
B02	Accept & Issue Consent	111.11 CR
B03	Process and Grant	127.11 CR
[redacted]4	Compliance Fees	208.00 CR
B05	Code Compliance Grant/Issue	40.00 CR
B06	BRANZ Levy (no GST applicable)	160.00 CR
B07	Building Industry Auth. Levy	92.44 CR
VCI	Vehicle Crossing Inspn Fee	53.33 CR
WCN	Std Water Connection Fee	377.78 CR

GST Exclusive Total	$1169.77 CR
GST Total	$126.23 CR
TOTAL PAYABLE (GST Inclusive)	**$1296.00 CR**

bcinv.frm

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL

ENVIRONMENTAL SERVICES UNIT

TAX INVOICE WHEN PAID

BUILDING CONSENT FEES

INV 103315
GST NO 53-198-554
DATE 22/12/2003

WENN, RUSSELL MARTIN
COLLIER, JULIE
C/O IN-SPECT BUILDING CERTIFICATION
35 MACES ROAD
CHRISTCHURCH 8006

CONSENT APPLICATION NO: ABA 10041003
OWNERS NAME: SMITH DEVELOPMENTS LIMITED
PROJECT STREET ADDRESS: 16 HEMINGWAY PLACE SPENCERVILLE
CUSTOMER CODE: 3258891
INVOICED TO DATE: $0.00

FEE CODE	DESCRIPTION	THIS INVOICE (GST exclusive)
B02	Accept & Issue Consent	111.11
B03	Process and Grant	127.11
B04	Compliance Fees	~~208.00~~
B05	Code Compliance Grant/Issue	40.00
B06	BRANZ Levy (no GST applicable)	160.00
B07	Building Industry Auth. Levy	92.44
VCI	Vehicle Crossing Inspn Fee	53.33
WCN	Std Water Connection Fee	377.78

10 Insp

change screen.

GST Exclusive Total	~~$1169.77~~
GST Total	~~$126.23~~
TOTAL PAYABLE (GST Inclusive)	**$1296.00**

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CONSENT TIME RECORD SHEET

Occupant Numbers:

FOR PROJECT NO: 10041003 UPLIFT CENTRE: Kimwood BUILDING VALUE $ 160 000

Copied for rates ☐ PIM required ☐ Res Con required ☐ Landscape Plan copied ☐

BUILDING CONSENT CONDITIONS

									OTHERS:
~~8~~	C3	C1	C2						

PERSONNEL TIME AND FEES

Name	DD	4											Total Time	$ Rate	Fee Hrs x rate
	MM	12													
	YY	03													
KT															103
							C1	C2	C3						30
										1/4pm					10

Administration Charge	~~$90.00~~
Consultants Fees (if Applicable)	
Total Process and Grant *	

Accept & Issue <$10,000	$ 90.00		HCS	Heathcote Cost Sharing	
Accept & Issue $10,000-$50,000	$ 110.00		LAT	Sewer Lateral Fee	
Accept & Issue >$50,000	$ 115.00		MOE	Memo of Encumbrance	
Dwelling	$ 125.00	ONE FEE ONLY	RCC	Reserve Contribution	
Apartments & Commercial >$100,000	$135.00		RCS	Reserve Contribution	
Process & Grant *	143		S36	Section 36 (2)	
Grant & Issue Code Compliance Cert	$45.00 ✓		S37	Section 37 (2)	
Building Research Levy	160		SEW	Sewer Opening	
Building Industry Authority Levy	104		STW	Stormwater Opening	
Compliance Schedule	~~334~~		VCI	Vehicle Crossing Inspection	60
Inspections	104 ~~115.50~~ 585		WAL	Water Supply Headworks	
	Sub Total A		WAS	Sewer Cost Sharing	
PIM Fee (if app.) [$]	Total A		WAT	Water Cost Sharing	
			WAU	Stormwater Cost Sharing	
			WCN	Water Connection	425
			WST	Treatment Plant Upgrade	
			WRU	Waste Water Reticulation	
				Total B	
				PLUS Total A	
				FINAL TOTAL	~~1094.50~~ 1286

Prepaid Consents	
Type	
Fee	
Receipt	
Additional Fees	
Processing	
Inspections	
Other from above	
Total to Pay	$

~~+10 TMS~~ +585

$1647.00



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SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

64 3 3481044

Peter Ray Homes

the key to better living

fax

To: Allan Harrison	From: Joy – Reception
Co: Christchurch City Council	Pages including coversheet: 4
Fax: 03 941 8920	Date: Tuesday, August 03, 2004
Ph:	Re: Truss Layout

If you do not receive all the pages, please telephone (03) 348 1994 as soon as possible.

Allan,

Please find attached Truss Layout for Wenn and Collier, 16 Hemingway Place as requested today.

Please may I have the Code of Compliance Certificate as soon as possible?

Regards,

Joy Morgan
Receptionist
Peter Ray Homes

Notice of Confidential Information
The information contained in this facsimile message is CONFIDENTIAL INFORMATION and may also be LEGALLY PRIVILEGED, intended only for the individual or entity named above. If you are not the intended recipient, you are hereby notified that any use, review, dissemination, distribution or copying from this document is strictly prohibited. If you have received this document in error, please notify us immediately by telephone (call collect to the person above) and destroy the original message. Thank you.

213 Blenheim Road PO Box 8184 Christchurch phone 348 1994 fax 348 1044
www.peterrayhomes.co.nz

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

64 3 3481044 **Frames & Truss** Producer Statement Page

Job: 3553 Client: PETER RAY HOMES Site: LOT 35 HEMINGWAY PLACE SEAFIELD PARK

Description: WELLS r COLLIER. Phone: Phone:

MiTek 20/20 - Engineering 4.3 Canterbury (Build 1723) MiTek New Zealand Ltd. Printed: 09:20:56.01 Aug 2004

PRODUCER STATEMENT
MiTek 20/20™ TRUSS DESIGN PROGRAM

Certification of MiTek 20/20™ Truss Design Program

The MiTek 20/20™ truss design program has been developed by MiTek New Zealand Ltd for the design of GANG-NAIL timber roof, floor and attic trusses in New Zealand. The truss design this program are prepared using sound and widely accepted engineering principles, and in accordance with NZS 4203, NZS 3603 and NZS 3604 as verification methods and acceptable solu approved documents issued by the Building Industry Authority to satisfy the requirements of Clause B1:Structure of the Building Regulations 1992. This computer design for the proposed b complies with the relevant provisions of the NZ Building Code. This is subject to all proprietary products meeting their performance specification requirements, the provision of adequate bra and the correct input of design data carried out by suitably trained personnel.

Summary of MiTek 20/20™ Truss Design Data and Output

The MiTek 20/20™ computer design output for this job titled and located at the site identified on the top of this page is based on the following parameters entered into the program. The own that the following job details below are current and relevant to the project before fabrication and erection of the GANG-NAIL trusses.

Job Details

Roof Truss

Timber Group: F5CTCD35

Roof

Material: Metal Tiles
Dead Load: 0.210 kPa
Restraints: 400 mm centres
Live Load: Qur = 0.250 kPa
Qc = 1.000 kN

Pitch: 28.00 deg

Ceiling

Material: Standard
Dead Load: 0.200 kPa
Restraints: 400 mm centres

Std Overhang: 600 mm

Wind

Area: High (44.0 m/s)
Pressure Coeff: Cpe = varies; Cpi = -0.30, 0.20

Snow

Location: Christchurch at 100 m
Open Ground Load: 0.550 kPa
Basic Roof Load: 0.440 kPa

The trusses must be fabricated and erected in accordance with the GANG-NAIL manual. Proper erection bracing must be installed to hold the components true and plumb and in a safe c permanent bracing is fixed. All permanent bracing and fixing must be installed before any loads are applied. The specifications for timber shall be as shown on the output. The timber shall gauged and treated to the requirements of NZMP 3640. Unless otherwise noted, this design assumes that the steel fixings and timber connectors are situated in a closed environment, as d NZS3604:1999 Section 4.

Truss List

Legend: * = detail only, ? = input or truss failed design, Unmarked trusses = designed successfully

Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)
V10	1	1313	28.00	900	T02	3	4170	28.00	729	J10A	1	2945	28.00	900	J03B	1	2622	28.00	900
V09	1	2213	28.00	900	T01	1	6270	28.00	900	J10	1	2945	28.00	900	J03A	1	2622	28.00	900
V08	1	3113	28.00	900	*R10	1	1748	28.00	900	J09B	1	3845	28.00	900	J03	1	2622	28.00	900
V07	1	1404	28.00	900	*R09A	1	1655	28.00	900	J09A	1	3845	28.00	900	J02	1	1317	28.00	900
V06	1	2604	28.00	900	*R09	1	1655	28.00	900	J09	1	3845	28.00	900	J01A	1	2068	28.00	900
V05	1	1268	28.00	900	*R08	1	4016	0.00	900	J08D	1	1962	28.00	900	J01	1	2217	28.00	900
V04	1	1165	28.00	900	*R07	1	784	28.00	900	J08C	1	1962	28.00	900	*HB08	1	7057	20.60	900
V03	1	775	28.00	900	*R06	1	1328	28.00	900	J08B	1	1962	28.00	900	*HB07	2	4852	20.60	900
V02	1	1295	28.00	900	*R05C	1	1015	28.00	900	J08A	1	1962	28.00	900	*HB06	1	1632	20.60	900
V01	1	2195	28.00	900	*R05B	1	1015	28.00	900	J08	1	1962	28.00	900	*HB05	1	1797	20.60	900
TG05	1	5230	28.00	900	*R05A	1	1015	28.00	900	J07A	1	3095	28.00	900	*HB04	2	5478	20.60	900
TG04	1	5760	28.00	900	*R05	1	1015	28.00	900	J07	1	3095	28.00	900	*HB03	1	2501	20.60	900
TG03	1	8880	28.00	900	*R04	1	1678	0.00	900	J06A	1	1312	28.00	900	*HB02	1	2210	20.61	900
TG02	1	8060	28.00	900	*R03A	1	1020	28.00	900	J06	1	1312	28.00	900	*HB01	1	5212	20.60	900
TG01	1	6270	28.00	900	*R03	1	1020	28.00	900	J05C	1	2212	28.00	900	ET03	1	4400	28.00	683
T11	3	8080	28.00	911	*R02	1	898	28.00	900	J05B	1	2212	28.00	900	ET02	1	2470	28.00	900
T10	1	4400	28.00	683	*R01D	1	901	28.00	900	J05A	1	2212	28.00	900	ET01	1	4170	28.00	729
T09	2	8880	28.00	900	*R01C	3	903	28.00	900	J05	1	2212	28.00	900	CT04	3	3970	28.00	911
T08	3	5760	28.00	781	*R01B	1	903	28.00	900	J04D	1	3112	28.00	900	CT03	1	8540	28.00	750
T07	1	5760	28.00	900	*R01A	1	903	28.00	900	J04C	1	3112	28.00	900	CT02A	1	8540	28.00	751
T06	1	8880	28.00	900	*R01	3	903	28.00	900	J04B	1	3112	28.00	900	CT02	1	8540	28.00	751
T05	3	8060	28.00	781	PTG01	1	3548	0.00	900	J04A	1	3112	28.00	900	CT01	1	8540	28.00	900
T04	1	8050	28.00	850	J11A	1	2045	28.00	900	J04	1	3112	28.00	900	CJ01	2	3575	28.00	900
T03	1	4990	28.00	900	J11	1	2045	28.00	900	J03C	1	2622	28.00	900					

Total quantity : 113

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64 3 3481044 **Frames & Truss** Producer Statement . Page

Job. . 3553 Client: PETER RAY HOMES Site: LOT 35 HEMINGWAY PLACE SEAFIELD PARK

Description: WEKA + COLLIER. Phone: Phone:

MiTek 20/20 - Engineering 4.3 Gamma (Build 1228) MiTek New Zealand Ltd. Printed: 09:20:56 03 Aug 2004

The computer design input has been carried out by:

Signed D Griffin Date: 3-8-04

Name of Computer Operator: Daniel Griffin

Qualifications and Title: Detailer.

Company: **Dyers Road Frames & Truss**

Verification / Acceptance of Input Data:

I have checked the input data against the construction drawings and specifications and verify that they are correct and suitable for this job.

Signed: Date:

Name: Company:

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

Clyde Road Trusses

190 Main Road
Christchurch
New Zealand
Telephone: PH 03 359 6819
Fax: Fax 03 359 8231

PETER RAY HOMES
LOT 35 HERMITAGE PLACE
SEAFIELD PARK

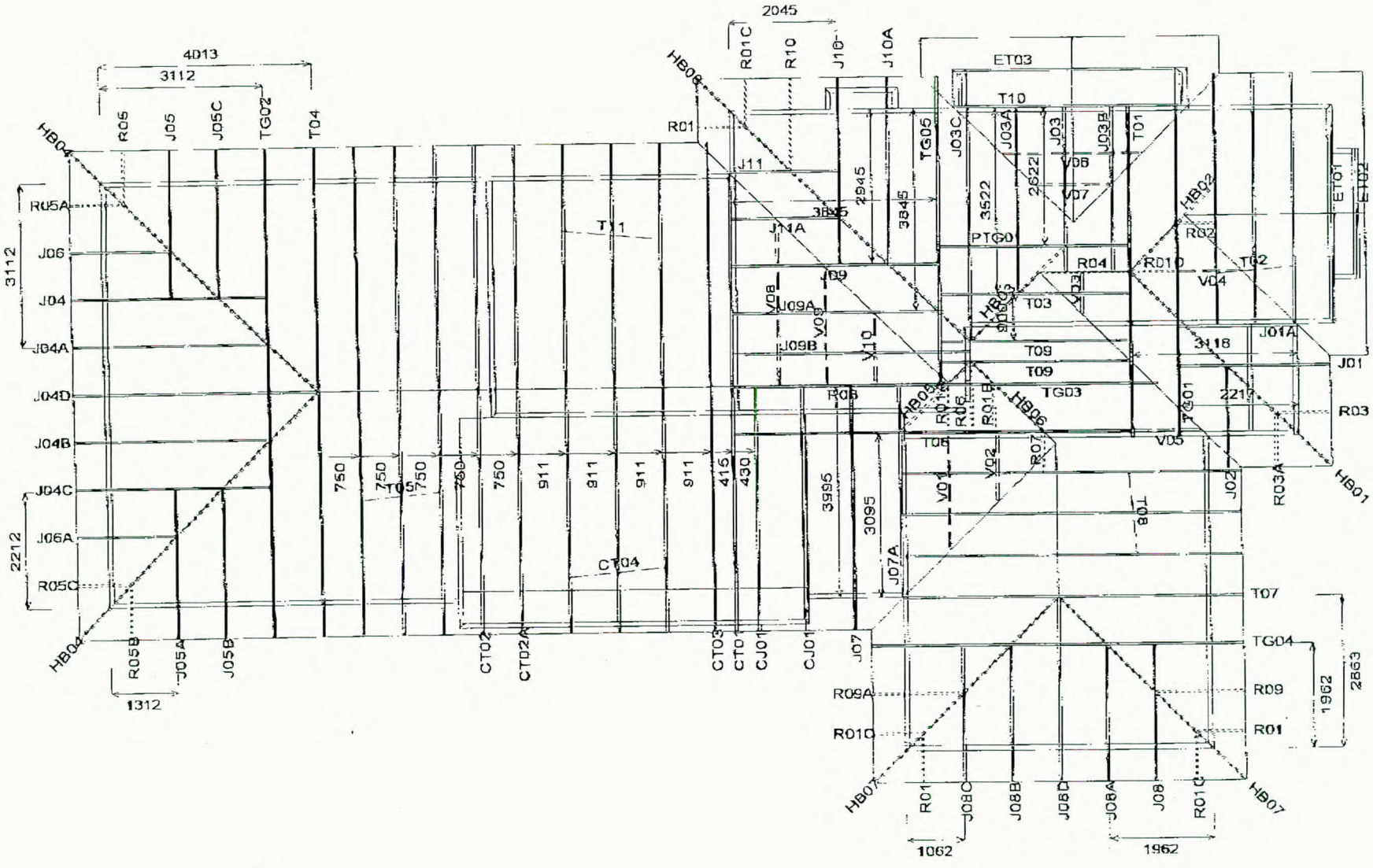
WEIR & COLLIER.

Job: 3553

Scale: 1 : 10 | Date: 25/03/2004 | Drawn By: DANIEL GRIFFIN

Job Details:

Snow Zone:	Christchurch	Snow Allowance:	1600 m
Wind Area:	High	Design Wind Speed	44.0 m/s
EC Restraints:	400 mm	BC Restraints:	400 mm
Roof Material:	Metal Tiles	Ceiling Material	Standard
Roof Live Load:	0.250 kPa	Snow Load:	0.440 kPa
Roof Pitch:	28.00 deg	Truss Centres:	900 mm



SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

Housing

CHRISTCHURCH CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL
Environmental Services Unit
ESTIMATE OF CONSTRUCTION INSPECTIONS

BC2

PROJECT NO: 19041003

DESCRIPTION OF CONSENT: _____

SITE ADDRESS: 16 Hemmingway PL

INSPECTIONS REQUIRED		No	Notes
201	Excavation/Foundation/Reinforcing	1	
202	Sub-Floor Drainage		
203	Slab on Grade/DPC	1	
221	Blockwork Construction		
204	Frame Construction Sub-Floor		
215	Building and Sill wrap	✓	
213	Flashings – Windows and Doors	✓	
211	Half High Brick Inspection	1	
225	Brick Shelf Angle		Condition 52
214	Monolithic Cladding – Pre-Coating	✓	
224	Solid Plaster		Condition 51
205	Pre-lining/including Plumbing	1	
216	Bathroom & Deck Tanking (before tiling)		
206	Plumbing		
220	Concrete Construction		
222	Steel Construction		
223	Timber Construction		
207	Fire Resistant Linings		
209	Pre-Stopping/Bracing	1	
212	Retaining Wall Drainage		
208	Drains	1	
226	Fire Safety Systems		
232	Solid Fuel Heater		
210	**M8 FINAL Inspection**	✓	
	SUB TOTALS		
RECTIFICATION INSPECTIONS			
COMPLETED BY SBI'S	TOTALS	9	10

1	58.50
2	117.00
3	175.50
4	234.00
5	292.50
6	351.00
7	409.50
8	468.00
9	526.50
10	585.00
11	643.50
12	702.00
13	760.50
14	819.00
15	877.50
16	936.00
17	994.50
18	1,053.00
19	1,111.50
20	1,170.00

NOTES FOR FIELD INSPECTION TEAM:

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

ESTIMATE OF CONSTRUCTION INSPECTIONS: Date: 22 December 2003

PROJECT NO. 10041003

DESCRIPTION OF CONSENT: DWELLING WITH GARAGE

SITE ADDRESS: 16 HEMMINGWAY PLACE

INSPECTIONS REQUIRED	No.
215 Building and Sill wrap	1
213 Flashings - Windows and Doors	**1**
214 Monolithic Cladding - Pre-Coating	1
210 M8 Final Inspection	**1**

The fees for these inspections have been included in the overall building consent fees.

Notes:

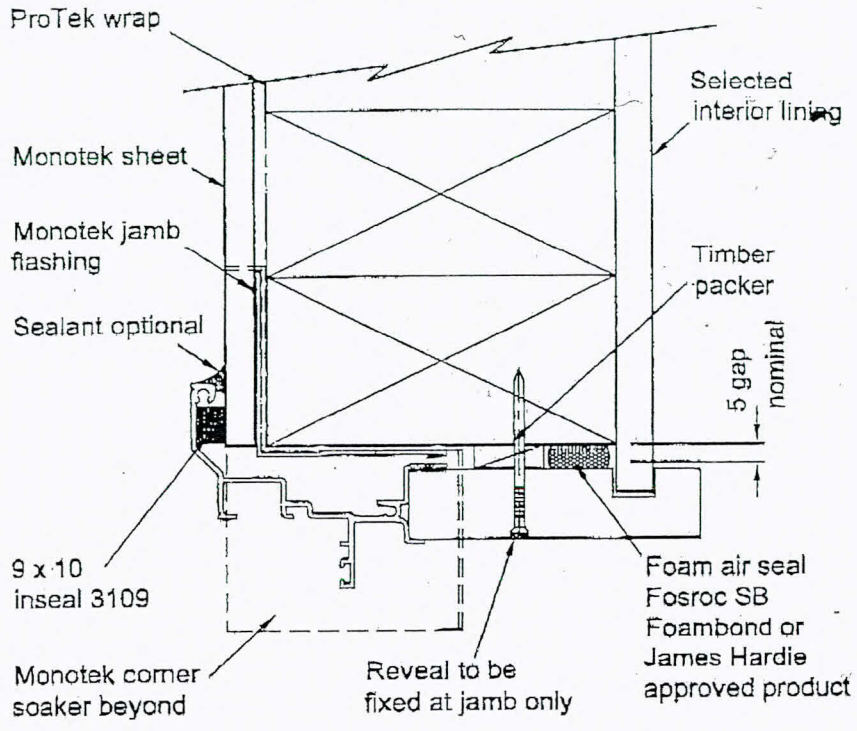
1. The above mandatory notice inspections will be carried out by the Council for which one day notice shall be given as required by Regulation 7(1)(b)(i-v).
2. Inspections which are necessary due to non-complying or incomplete work or that rise as a result of a rectification notice are additional, and will be charged at the rate of $68.00/hour and invoiced separately.
3. ***DESTRUCTIVE INVESTIGATIONS MAY BE REQUIRED IF WORK IS COVERED IN PRIOR TO THE COUNCIL'S INSPECTIONS TAKING PLACE.***

For all inspection requests pertaining to this consent, please phone 941-8904.
Inspections for the following day must be booked prior to 4pm.

Book an inspection by fax - http://www.ccc.govt.nz/building/forms/Faxtobookaninspection.pdf
Or Request Form by fax 941-8920
Book an Inspection On-Line - http://www.ccc.govt.nz/building/forms/frmInspection.asp
If you do not have internet access but would like to request a form, fax your request to 941-8920.

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

033131299



Detail 23 - Section through window jamb

Scale 1:2

d sill
sheet

CHRISTCHURCH CITY COUNCIL
FILE COPY
CONSENT
All building work shall comply with the NEW Zealand Building Code notwithstanding any inconsistencies which may occur in the drawings and specifications.

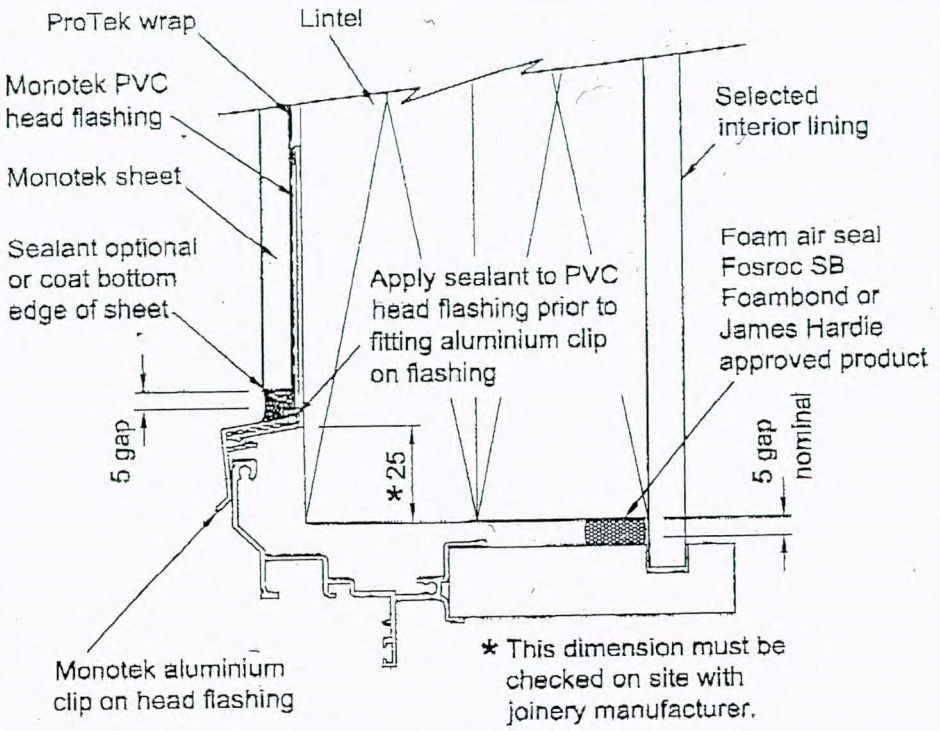
Rev	Description	Date

Scale	Original size	Date
As ntd	A3	01.06.0

INDOW FLASHINGS
ETAILS 21 - 25

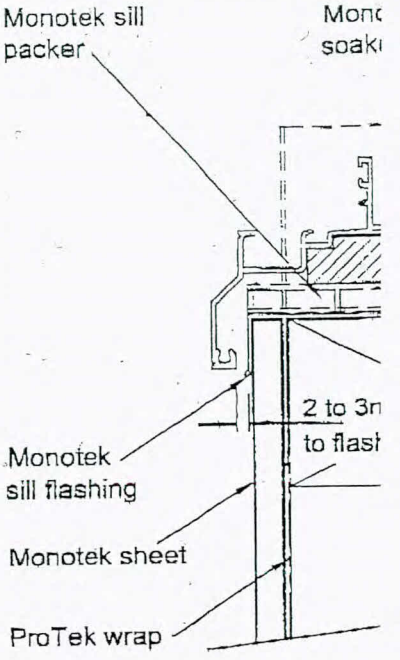
Drawing No.
JH-MONOTEK-009

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV



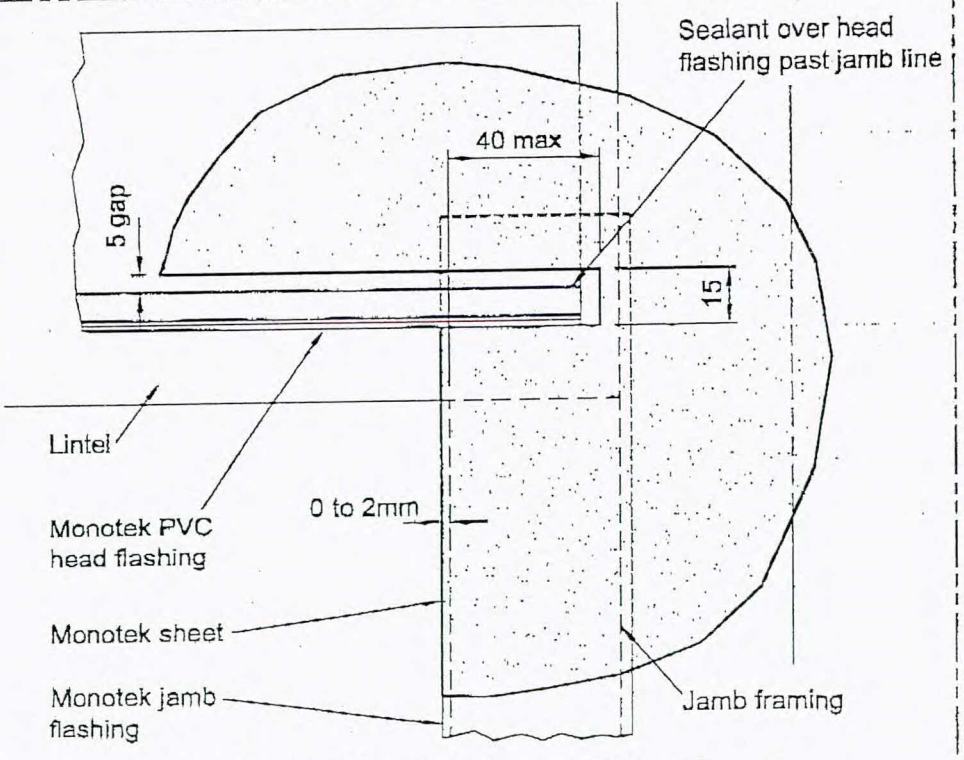
Detail 21 - Section through window head

Scale 1:2



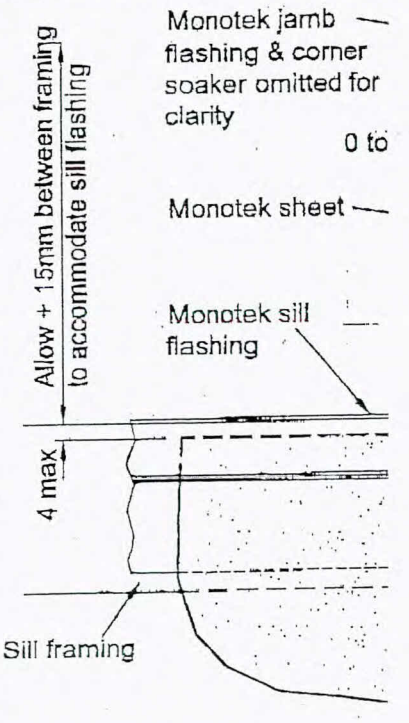
Detail 22 - Sec

Scale 1:2



Detail 24 - Sheet cutting detail at head

Scale 1:2



Detail 25 - Sh

Scale 1:2

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THE COPYRIGHT OF THIS DRAWING IS THE PROPERTY OF JAMES HARDIE NEW ZEALAND LIMITED. NO PART OF IT MAY BE REPRODUCED BY PHOTOCOPYING OR BY ANY OTHER MEANS AND MUST NOT BE PASSED ON TO A THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF THE TECHNICAL MANAGER.

DIMENSIONS IN mm

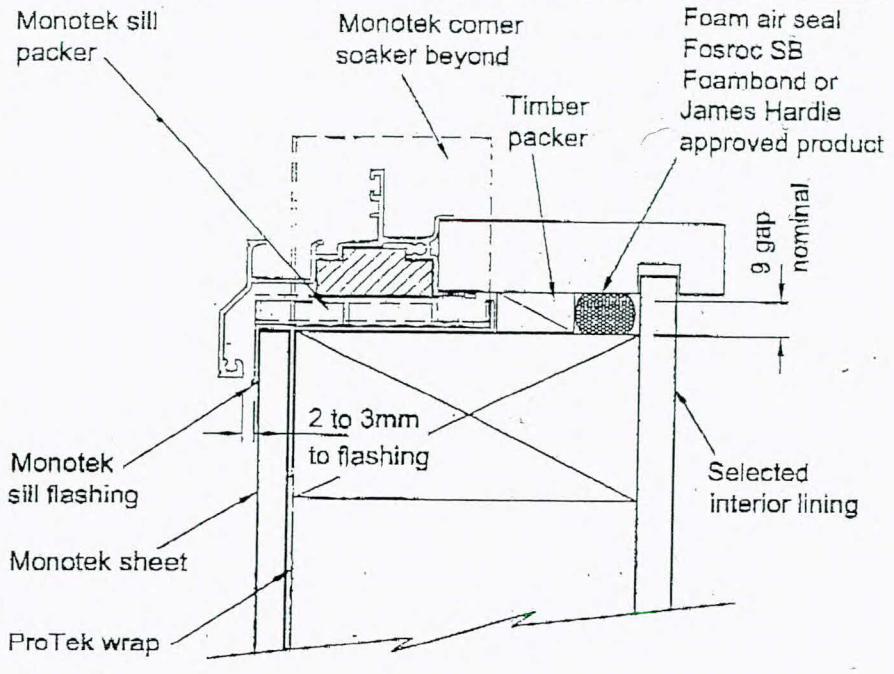
FOR STRUCTURAL LAYOUT REFER TO ARCHITECT'S DRAWINGS.

MONOTEK

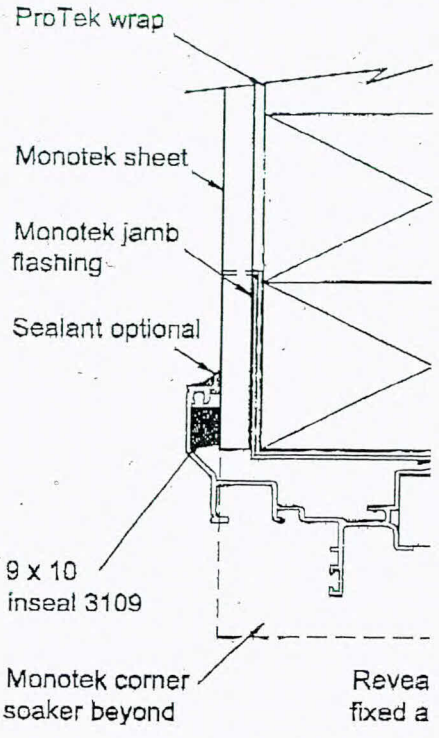
50 O'Rorke Road
Penrose, Auckland
New Zealand

©JAMES HARDIE BUILDING

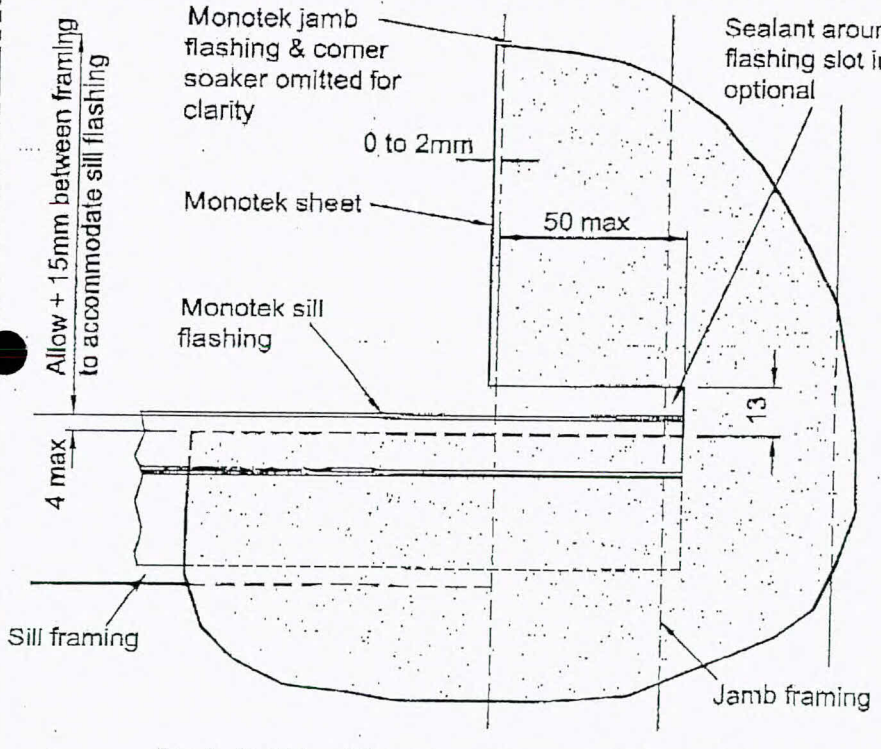
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Detail 22 - Section through window sill
Scale 1:2



Detail 23 - Section t
Scale 1:2



Detail 25 - Sheet cutting detail at sill
Scale 1:2

MONOTEK

Monotek Cladding System by James Hardie

50 O'Rorke Road
Penrose, Auckland
New Zealand

Phone: 0800 808 888
Fax: 0800 808 988

WINDOW FLASHINGS DETAILS 21 - 25

© JAMES HARDIE BUILDING PRODUCTS

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

SMOKE DETECTORS ARE REQUIRED TO COMPLY WITH SECTION 3 F7 NEW ZEALAND BUILDING CODE

SPECIFICATIONS

Peter Ray Homes Ltd

All work to comply with NZ Building Code 1991.

CHRISTCHURCH CITY COUNCIL FILE COPY CONSENT DOCUMENT 04 DEC 2003 All building work shall comply with the New Zealand Building Code notwithstanding any inconsistency which may occur in the plans and specifications.

SITE SCRAPE

The area of the site to be covered by the building shall be stripped of all top growth and vegetation matter.
Should soft clay, peat or filled ground be encountered on the site, an Engineer shall be consulted for additional foundation details.

CONCRETE FOUNDATION AND FLOOR

Concrete shall be 20 MPA at 28 days and comply with NZS 3109.
Reinforcing to foundation beam 2 x D16mm bars with R10 links at 600 crs and R10 starters at 600 crs 600mm into floor slab.
A 20 MPA concrete floor 100mm thick to be poured over 0.25 micron polythene on 150mm min (20-40mm) round tailings.
The slab shall be finished while still green.
A high standard of finish is expected.
NZS 3114:1987.
Floor level height 250mm min above ground level.
B2 durability.

CHRISTCHURCH CITY COUNCIL
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Linwood Service Centre
PROJECT No. 10041003

WALL FRAMING

All work to comply with NZS 3604.
Framing to be 90 x 35 Laserframe, studs at 600 crs and dwangs at 800 crs.
Bracing to be as per schedule and will be steel angle brace, ply sheet bracing or Gib braceline.
Use Malthoid DPC between concrete and timber.
Lintels – size from NZS 3604 table 6.7.
All timber treated to NZ Timber Preservation Council 3650:1992.
B2 durability. B1 stability.

ROOF FRAMING

Gang nail trusses at 900 crs fixed with Z nails designed and manufactured by a licensed manufacturer.
For long run iron type roofing, purlins to be 75 x 50 at 900 crs.
Ceiling battens to be H1 treated ex 75 x 40 at 400 crs.
B2 durability. B1 stability.

IN-SPECT BUILDING CERTIFICATION CO LTD
THESE PLANS AND SPECIFICATIONS ARE APPROVED BY IN-SPECT BUILDING CERTIFICATION CO LTD AS MEETING THE REQUIREMENTS OF THE BUILDING CODE SUBJECT TO SUCH CONDITIONS AS ENDORSED HEREON.

SOFFITS

Fit 4.5mm Hardiflex sheets generally 600mm wide to 75 x 40 H1 treated ribbon plates and sprockets.
B2 durability.

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Long run
Fit 0.40 Trimline G2 long run colour steel to manufacturers specifications on self supporting roofing underlay on 75 x 50 H1 treated purlins 900 crs.
B2 durability 15 years.

FASCIA AND GUTTER

Stratco colour steel, fascia and gutter system fixed to rafters.
Fix fascia and gutter system to manufacturers specification and NZS 3617:1979.
B2 durability.

MASONRY VENEER

Run breather type building paper to NZS/BS 1521:1972, NZS 2295:1988 horizontally and well secure to outside face of framing.
Repair tears and holes before constructing veneer.
Construct brick veneer with approved face fixed ties at correct spacing in accordance with appendix F of NZS 3604 and materials and workmanship to NZS 4203, 4229.

PLUMBING AND DRAINAGE

Cold Water Reticulation
15mm PVC main through house to all fittings including two hose taps.

Hot Water Reticulation
Polybutylene pipework on all fittings via a tempering valve fitted at the cylinder. Cylinder to be 300 Litre mains pressure or as an alternative,270 low pressure and a pressure reducing valve or gas hot water as an alternative to the above if specified.
Fit 65mm PVC downpipes to stormwater risers.
All plumbibg to comply with NZ Building Code 1991.
G 12 and G 13 ASI, B2 durability.

Drainage and stormwater to site plan to comply with G13, G14, B2, E1 in accordance with AS2 NZ Building Code 1991.

ELECTRICAL WORK

All electrical work to be carried out in a tradesman like manner and comply with the relevant Codes of Practice G8, G9 NZBC. Lighting to comply with NZS 6703:1984.
Private heating to give an adequate controlled interior temperature per NZBC G5 2.1 (a) G5/AS1.

INSPECT BUILDING CERTIFICATION CO LTD
PLANS AND SPECIFICATIONS ARE APPROVED BY INSPECT BUILDING CERTIFICATION CO LTD AS MEETING THE REQUIREMENTS OF THE BUILDING CODE SUBJECT TO SUCH CONDITIONS AS ENDORSED HEREON.

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JOINERY

Kitchen units are made from white Melamine with vinyl backs.
All doors, drawer fronts and seen ends are made from woodgrain or colour Melamine.
Bench top is Formica with a delux 90 degree rolled edge with coved upstand behind sink.
Wall oven and under bench oven cabinets to manufacturers specifications.

EXTERNAL JOINERY

Aluminium windows with rimu or pine reveals, glazed with float glass, thickness as required per NZS 4223:1985 + Pt 3:1993, 4211:1985. B2 durability 15 years.

INTERNAL DOORS

Fit rimu or paint grade flush panel prehung doors in 30mm Gib groved jambs.
B2 durability 15 years.

LININGS

Wall and ceiling linings to be 9.5mm Gib board fixed to manufacturers specifications and finished to accept the finish required by the owner. B2 durability 5 years.

INSULATION

All ceilings to be insulated with R2.6 fibreglass batts.
All external walls to be insulated with R2.2 fibreglass batts. No insulation is required to the Garage. Insulation to comply with NZS 4214:1977. B2 durability.

PAINTER

All painting work to be carried out in a tradesman-like manner.
Internal surfaces shall have 3 coats of acrylic paint and/or polyurethane (owner's choice), sanding out blemishes between each coat.
All walls to be sized before wall papering.

WET AREAS

All wet areas to be lined with 9.5mm standard Gib board and painted with Dulux Low Sheen wash'n'wear paint. Floor coverings in wet areas to be vinyl or tiled to an acceptable finish required by the owner. □

IN-SPECT BUILDING CERTIFICATION CO LTD
THESE PLANS AND SPECIFICATIONS ARE APPROVED BY IN-SPECT BUILDING CERTIFICATION CO LTD AS MEETING THE REQUIREMENTS OF THE BUILDING CODE SUBJECT TO SUCH CONDITIONS AS ENDORSED HEREON.
May, 00

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35 MACES ROAD
PHONE - 3844492
FAX - 3846588
MOBILE - 025 374641

Dear Consents Officer:

Please find enclosed: Stamped approved plans and specifications along with a Building Certificate for the Wenn / Collee application.

Listed below are things that fall outside my scope of approval (No. 11)
Please note Producer Statements have been or will be supplied for these areas.

CHRISTCHURCH CITY COUNCIL
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- ☑ Truss Design.
- ☑ Producer Statement for beams falling outside the scope of NZ 3604.
- ☐ Producer Statement foundation design.
- ☐ Producer Statement retaining wall design.
- ☐ Engineering design to steelwork.
- ☐ Producer Statement block work design.
- ☐ Inspection procedure for work engineer wishes to inspect.
- ☐ Producer Statement for Plaster System.
- ☐ Effluent Design

In addition.
☑ Gas – To be Self Certified by a Registered Gas-fitter.
☑ Electrical – Self Certified by a Registered Electrician.
If any further matters require clarification please phone or fax on the above numbers.

Sincerely K J Newman.

KELVIN NEWMAN

DIRECTOR: IN-SPECT BUILDING CERTIFICATION CO LTD.

1999/5

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CHRISTCHURCH CITY COUNCIL ENVIRONMENT

CHRISTCHURCH CITY COUNCIL

APPLICATION FOR BUILDING CONSENT

FORM: BA3

PROJECT NO: 10041003

PLEASE COMPLETE ALL SECTIONS OF THIS FORM (IF APPLICABLE TO YOUR APPLICATION)

Has a Project Information Memorandum been issued for this project? ☐ No ☑ Yes ⇒ Project No.: 3258890 10040372

APPLICATION DETAILS [3258891]

- **OWNER (as defined by the Building Act 1991)**

Full Name(s): Russell Martin Wenn + Julie Collier

Street Address: PO Box 161 Lyttelton

Mailing Address: _____

Phone: _____ Fax: _____

- **APPLICANT (Must be authorised by the owner to make this application)**

Name: In-Spect

Company: _____

Mailing Address: 35 Maces Road

Street Address: Chch

Phone: 3844492 Fax: 3846588

Estimated Value of proposed work (inclusive of GST):

$ 160,000

Building Consent to be uplifted from:

☐ LINWOOD Service Centre

☐ If prepaid post to **Owner / Applicant** (delete one)

- **Water Supply**

Is a new supply required? ☑ Yes ☐ No

Residential / Commercial (DELETE ONE)

If commercial, has estimate been obtained from the Council? ☐ Yes ☐ No

Distance from LH / RH boundary (looking from street) _____ metres Nominate street if a corner site:

NEXT TO POWER SUPPLY

- **Road Opening / Footpath Opening**

Is an opening required? ☐ Yes ☑ No

Select type of service: Sewer / Stormwater

PROJECT DETAILS [868925]

- **LOCATION**

Street Address: 16 Hemmingway Place Seafield Park

Lot: 35 DP: 319911

Other: _____

- **DESCRIPTION OF WORK:** Dwelling + attached garage

- **INTENDED USE:** Domestic living

- Will the building undergo a change of use? ☐ Yes ☐ No

- Intended Life if less than 50 years: _____ years

- Being stage 1 of an intended 1 stages

- **FLOOR AREA**

Ground Floor: Existing _____ m^2 Add 221 m^2

Other Floor: Existing _____ m^2 Add _____ m^2

Accessory Building Area:

Existing _____ m^2 Add _____ m^2

- **Planning - Site Coverage**

Total area of all buildings over foundation at ground level.

Existing _____ m^2 Proposed 221 m^2

- **Vehicle Crossing** (in relation to this Building Consent)

Is a vehicle crossing required? ☑ Yes ☐ No

Select: New / Extension / Residential / Commercial

SECTION 1

FOR COUNCIL USE ONLY

Prepaid Fee: $ _____

Receipt No: _____

Receiving Officer's Name: W. Payne

Date Received:: _____

DRAINAGE INFORMATION

Block Plan ☐ Full PIM ☐ N/A ☐

Date Requested _____ / _____ / _____

CHRISTCHURCH CITY COUNCIL P.I.M. APPLICATION Rec'd 27 NOV 2003 Linwood Service Centre PROJECT No. 10041003

CATS WBS CODE 401/.138 10041003

HAZARDS: _____

Date of Issue: March 2000

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

Have you provided the following information?

Please tick the appropriate box

SECTION 2	Yes	No	N/A
• Site Plan: Fully dimensioned, scaled, showing all buildings & easements (proposed/existing)			
• Certificate of Title: Recent search copy of (less than 6 months old)			
• Plans & specification of an acceptable standard			
• Plans, elevations, cross sections of the proposal in triplicate (in duplicate if PIM issued)			
• Recession planes (including to internal boundaries) indicated			
• Site levels relating to top of roadside kerb, and finished floor level indicated			
• Hill sites: indicate contours, drive gradients and building heights			
• Site boundaries nominated			
• Shared access ways/other areas			
• Foulwater drains			
• Stormwater drains			
• Stormwater discharge for hardstanding areas detailed to an approved outfall			
• Water Service Details			
• Vehicle crossing position indicated on site plan			
• Vehicle access manoeuvre and parking area indicated			
• Street trees, poles, sumps, manholes, traffic islands affecting vehicle access			
• Site area per unit indicated			
• Site coverage: % details			
• Living and service courts indicated			
• Landscaped area indicated and planting plan produced			
• Demolition Details			
• Swimming pool: design, fence and discharge			
• Backflow prevention			
• Waterway setbacks indicated			
• Notable and protected site trees indicated			
• Heritage site or building affected?			
• Resource Consent Application			
• Development Application			
• Subdivision details			

SECTION 3	Yes	No	N/A
• Structural drawings			
• Foundation design and report on ground conditions			
• Blockwork: design including foundations			
• Retaining walls: design heights, position, sub soil drainage and safety barriers			
• Fire partitions: dividing walls, common walls			
• Window positions & opening windows indicated			
• Safety glass provisions specified			
• Thermal insulation and R value indicated			
• Sound insulation indicated			
• Stairs/steps/landings/balconies: dimensions, handrail and barrier details			
• Solid fuel heater: make, model and location			
• Accurate layout & details of plumbing systems			
• Alternative Solutions details			
• Access and facilities for people with disabilities			
• Access Route Details			
• Dangerous goods: storage and sign details			
• Gas bottle: storage location and capacity if over 10kg			
• Soakpit, septic tank and pumping station design details.			
• Earthworks: Identify proposed cut or fill where more than 10 m^3 of soil is being moved			
• Specifications in duplicate			
• Pegging certificate for two or more units on site			
• Bracing calculations and layout			
• Roof truss design statement and layout			
• Producer statement: Specific design details for work outside the scope of **NZS 3604** & **NZS 4229**			
• BA20 form (Producer Statement information)			
• Fire Safety Summary or Fire Design Statement			
• Compliance Schedule details			

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CHRISTCHURCH CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL

BUILDING CERTIFICATE

PROJECT NO: 10041003

Address of Project: 16 Hemmingway Place

PIM 10040372

Enclosed is a copy of the PIM: YES ☑ NO ☐

And PIM Plans: YES ☑ NO ☐

The Building Plans Show

☑ No Changes to PIM Plans

☐ Changes as listed below:

.....

.....

.....

.....

Resource Consent application

☑ Is not required

☐ Is to be made or

☐ Has been made for:

.....

.....

.....

.....

A section 35(1A) certificate is required: ☐ Yes No ☑

For:

.....

.....

.....

.....

CHRISTCHURCH CITY COUNCIL
P.I.M. APPLICATION
Rec'd 27 NOV 2003
Linwood Service Centre
PROJECT NO 10041003

CATS WBS CODE
401/.138/ 10041003

KELVIN NEWMAN

BUILDING CERTIFIER

Signed: K J Newman Date: 25/11/03

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

64 3 3846588

Peter Ray Homes

the key to better living

19 December 2003

Christchurch City Council
C/- Mr Kelvin Newman
In-Spect Building Certification Co. Ltd
CHRISTCHURCH

Fax 3846 588

Dear ~~Kelvin~~ Ken Thompson

Re: R Wenn and J Collier
Site Address: 16 Hemingway Place
Legal Description: Lot No. 35 DP 319911

We wish to confirm that the ground level of the above Building Project will be higher than RL 10.85m in terms of the Christchurch City Council datum.

Should you have any further queries, please do not hesitate to contact me.

Yours sincerely

Ian Creamer
General Manager
Peter Ray Homes Ltd

213 Blenheim Road, P.O. Box 8184, Riccarton, Chch. Ph (03) 348 1994, Fax (03) 348 1044, www.peterrayhomes.co.nz

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CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL
ENVIRONMENTAL SERVICES UNIT

FACSIMILE MESSAGE

TO: Kelvin
FAX NO:
ORGANISATION:
LOCATION:

SENDER: Ken
DATE: 4-12-05
DESIGNATION:
NO. OF PAGES (including this page): 1

16 Hammingway – 10041003

Please provide levels to show compliance with PIM

thanks

Ken

PLEASE ADVISE BY FAX IF ALL PAGES NOT RECEIVED

Fax No 03-941-8920 or International Fax No +-64-3-941-8920 (Building Consents, Field Inspections, Building Support)

Civic Offices • 163-173 Tuam Street • PO Box 237 • Christchurch • New Zealand • Telephone (03) 941 8999

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SECTION 4

The information offered in this section is to assist the Council in the review process, including the assessment of the number of inspections. Statements offered by the applicant will be used as a guide rather than a commitment.

- Is the project to be erected in stages? ☐ Yes ☐ No

  If yes briefly describe your proposed programme: _____

  _____

  _____

- Estimated start date:_____ (please note building work must be started within 6 months of Consent issue date)
- Estimated finish date: _____
- Is a registered engineer involved?

  For design ☐ Yes ☐ No

  For Inspection ☐ Yes ☐ No

- Is a Producer Statement to be offered?

  Producer Statement: Design ☐ Yes ☐ No

  Producer Statement: Inspection ☐ Yes ☐ No

- Is a registered master builder involved in the project? ☐ Yes ☐ No

_____ Name (optional)

_____

SECTION 5

COMPLETE THIS SECTION FOR ALL NEW BUILDINGS AND ALTERATIONS, EXCEPT SINGLE RESIDENTIAL DWELLINGS

Please tick the relevant boxes to show which systems are included or to be included in the building project	EXTG	NEW
(a) Automatic sprinkler systems or other systems of automatic fire protection	☐	☐
(b) Automatic doors which form part of any fire wall and which are designed to close shut and remain shut on an alarm of fire	☐	☐
(c) Emergency warning systems for fire or other dangers	☐	☐
(d) Emergency lighting systems	☐	☐
(e) Escape route pressurisation systems	☐	☐
(f) Riser mains for fire service use	☐	☐
(g) Any automatic backflow preventer connected to a potable water supply	☐	☐
(h) Lifts, escalators, or travelators or other similar systems	☐	☐
(i) Mechanical ventilation or air conditioning system serving all or a major part of the building	☐	☐
(j) Any other mechanical, electrical, hydraulic, or electronic system whose proper operation is necessary for compliance with the building code	☐	☐
(k) Building maintenance units for providing access to the exterior and interior walls of buildings	☐	☐
(l) Such signs as are required by the building code in respect of the above mentioned systems	☐	☐
NONE OF THE ABOVE		☐

SECTION 5A

COMPLETE THIS SECTION ONLY IF THE BUILDING CONTAINS OR WILL CONTAIN ANY OF THE SYSTEMS IN SECTION 5

	EXTG	NEW
(m)Means of escape from fire	☐	☐
(n) Safety barriers	☐	☐
(o) Means of access and facilities for use by persons with disabilities which meet the requirements of section 47a of the Building Act 1991	☐	☐
(p) Handheld hoses for fire fighting	☐	☐
(q) Such signs as are required by the building code or section 47a of the Building Act 1991	☐	☐

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SECTION 6

☐ **Builder's Name:** Peter Ray Homes Phone: 348 1994
Address: PO Box 8184 CHCH Fax:

☐ **Building Certifier's Name:** Kelvin Newman II Phone: 3846492
Address: 35 Maces Road CHCH Fax:

☐ **Plumber's Name:** Ross Cordy 04916 Phone: 025 324 858
Address: 148 Sparks Road Fax:

☐ **Drainlayer's Name:** Kees Zandbergen 16400 Phone: 025 325286
Address: 55 Hackthorne Rd Fax:

☐ **Engineer's Name:** Phone:
Address: Fax:

☐ **Designer's Name:** Peter Ray Homes Phone:
Address: Fax:

Have you fully completed:	YES / NO / NA		YES / NO / NA		YES / NO / NA	
	Section 1		Section 4		Section 6	
	Section 2		Section 5		Section 7	
	Section 3		Section 5A			

SECTION 7

- **IF THIS PROJECT CONSTITUTES A DEVELOPMENT PURSUANT TO SECTION 409 OF THE RESOURCE MANAGEMENT ACT 1991, THEN THIS APPLICATION IS ALSO DEEMED TO BE A NOTIFICATION BY THE OWNER OF A RESOURCE CONSENT APPLICATION FOR A DEVELOPMENT.**
- **Please note this application may not be processed further until any outstanding items have been submitted. Completion of this check sheet is not approval to start work.**
- **No work is to commence until the Building Consent is uplifted.**
- **Building Consent Fees**
  The charges incurred by the Council in processing this application are payable whether or not the project proceeds. Note: Fees for some minor works (eg drainage only works, detached accessory buildings with a value of less than $5,000) are required to be paid at the time of application.
- **I DECLARE I HAVE BEEN AUTHORISED BY THE OWNER TO MAKE THIS APPLICATION**

Print Name: Linda Reenan **Date:**

Signature:
SIGNED BY *or* FOR AND ON BEHALF OF THE OWNER

Project Information Memorandums (PIMs) and Building Consents can be lodged and uplifted at the following centres, where there are Building Information Officers available to assist you.

Civic Offices	Linwood Service Centre	Sockburn Service Centre
163-173 Tuam Street PO Box 237 Telephone 371 1995 Fax 371 1792	180 Smith Street PO Box 24 214 Telephone 389 1477 Fax 372 2639	149 Main South Road PO Box 11 011 Telephone 348 5119 Fax 372 2539

Project Information Memorandums (PIMs) and Building Consents can also be lodged and uplifted at these Service Centres.

Beckenham Service Centre	Fendalton Service Centre	Papanui Service Centre	Shirley Service Centre
66 Colombo Street PO Box 12-033 Telephone 332 3099 Fax 332-3443	Cnr Jeffreys & Clyde Roads PO 29183 Telephone 351 7109 Fax 372 2748	Cnr Langdons Rd & Restell St PO Box 5142 Telephone 352 8117 Fax 352 1308	36 Marshland Road PO Box 27 043 Telephone 385 3079 Fax 385 4224

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

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

35.700m 173d 40' 00"

11,750

8,220

finished floor level of dwelling
to be the higher of:
a) a minimum level of RL 11.225m
in terms of the CCC datum
b) 150mm above the crown of the road

stormwater to soak chamber
to council specifications

11.050m 97d 25' 00"

access points required to all drains as per G13 AS2

DP

hose tap

DP

GT

DP

8,500

WEST

Sunset 1pm 21 Dec

4pm 21 June

21 June 8am

SOUTH

21 Dec 5am

Sunrise

EAST

WC

GT

DP

WC

GT

t°

wm

d

GT

meter box

hose tap

DP

4,690

1,800

11.050m 103d 26' 00"

HEMINGWAY PLACE

= 1000 Sq.m

PROPOSED DWELLING AREA
= 221.020 Sq.m
= 2378 Sq.ft

ADDITIONAL CONCRETE AREA
= 1.522 Sq.m
= 16 Sq.ft

SITE COVERAGE
= 22.102%

connect to existing sewer lateral
position to be confirmed on site

4,900

38.150m 196d 25' 00"

12,270

CHRISTCHURCH CITY COUNCIL
FILE COPY
CONSENT DOCUMENT
2003

IN-SPECT BUILDING CERTIFICATION CO LTD
THESE PLANS AND SPECIFICATIONS ARE APPROVED BY IN-SPECT BUILDING CERTIFICATION CO LTD AS MEETING THE REQUIREMENTS OF THE BUILDING CODE SUBJECT TO SUCH CONDITIONS AS ENDORSED HEREON.

Peter Ray Homes
213 Blenheim Road, Christchurch. P O 8184 Riccarton, Christchurch
Telephone – 03 348 1994 Fax – 03 343 2026

NOTE

1. All work shall comply with NZS 3604:1999
2. All windows and doors to comply with NZS 4211:1985
3. Glazing to comply with NZS 4223:1985 & Pt 3 1993
4. Contractor must verify all dimensions on site prior to commencing any work
5. The copyright of this drawing is vested with Peter Ray Homes Ltd and cannot legally be used, copied or in any form reproduced without written authority

Rev No.	Date	Amendment
A	03.11.03	remove gas fire, move gas bottles, change bay window

Drawn: A. Fahey
Date: 28.10.03
Scale: 1:100

Job Name & Location
Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title
SITE PLAN

Sheet No.
4 of 4

Revision

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

BUILDING CERTIFICATE NO: 03/799

Section 56, Building Act 1991

Issued by: Kelvin Newman
currently approved and registered as a Building Certifier-Rego No: 11.

To: Christchurch City Council

Project Information Memorandum No: 100403721
Building Consent No: .....

PROJECT		PROJECT LOCATION
New or Relocated Building	✓	Street Address:
Alteration or Addition	☐	16 Hemmingway Place
Log Fire	☐	
Intended use (*s*) [*In detail*]:		Legal Description:
Domestic Living	✓	Lot No: 35 Dp: 319911
Out Building	☐	
Intended life:		
Indefinite but not less than 50 years.	✓	
Demolition or Removal	☐	
Being stage one of an intended one stages.		

CHRISTCHURCH CITY COUNCIL
P.I.M. APPLICATION
Rec'd 27 NOV 2003
Linwood Service Centre
PROJECT NO 10041003

This is to certify that:

The Building Certifier has been engaged to inspect specified building work in relation to listed provisions of the Building Code as detailed in the one page headed "Scope of Building Certifier's Engagement Building Certificate No: 03/799" attached to this notice.

The Building Certifier is satisfied on reasonable grounds that:

✓ The proposed building work would comply with the listed provisions of the Building Code if properly completed in accordance with the listed plans and specifications.

☐ The building work complied with the listed provisions of the Building Code on the date of certification.

Signed by or on behalf of the Building Certifier:

Name: Kelvin Newman ..... K J Newman .....
Position: Building Certifier Date: 25/11/03.

2001/2

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

SCOPE OF BUILDING CERTIFIERS ENGAGEMENT
BUILDING CERTIFICATE NO: 03/799

Checking of Plans & Specifications for compliance with provisions of the Building Code listed in Building Certifiers Scope of approval.

Inspection procedures required during construction.

Issue of Code Compliance Certificate when work meets the requirements of the Building Certificate & Building Code.

Items not covered by the Building Certificate are listed on the separate page attached to the Building Consent application.

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

No. 11

Register of Building Certifiers

established under section 53
of the Building Act 1991

Building Industry Authority

Name: NEWMAN, Kelvin John

Registration No: 11

Date of approval: 6/10/1997
Date of renewal: 16/9/2003

Date of expiry of approval: 16/9/2004
Date of amendment: 16/9/2003

Address:
In-Spect Building Certification Company Ltd
35 Maces Road, Christchurch
Phone 03 384 4492
Fax 03 384 6588

Approved by the Building Industry Authority under Part VII of the Building Act 1991 in respect of the provisions of the building code listed below subject to the limitations listed below:

General limitations
Detached dwellings in accordance with clause A1 2.0.2 of the building code and multi-unit dwellings in accordance with clause A1 2.0.3 of the building code that: 1. Are stand-alone structures intended as a home or residence of not more than two households, and 2. If a duplex, are restricted to two adjoining dwelling units under a single roof, and 3. Do not include any unit that is a unit under the Unit Titles Act 1972, or any unit that is a hostel, boarding house or other specialised accommodation, and 4. where each household unit has more than one other household unit vertically above it, and in which each household unit has an escape route that is not shared with any other household unit. Outbuildings and ancillary buildings in accordance with clauses A1 7.0.1 and A1 8.0.1 respectively of the building code and associated with such dwellings.

Provisions of the building code in respect of which the approval applies and any limitations in respect of each such provision	
Provision	***Limitations***
B1 "Structure"	In respect of proposed building work for building consent purposes: Compliance with B1/AS1, B1/AS2, B1/AS3, and B1/AS4 only. In respect of completed building work for code compliance certificate purposes: Compliance with B1/AS1, B1/AS2, B1/AS3, B1/AS4, including proprietary fixings and the use of proprietary materials for bracing elements, and with B1/VM1 and B1/VM4.

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Provision	***Limitations***
B2 "Durability"	Compliance with B2/AS1 only in relation to the other provisions of the building code listed herein.
C1 "Outbreak of fire"	Compliance with C/AS1 Part 9 for solid fuel appliances and chimneys only.
C2 "Means of escape", C3 "Spread of fire" and C4 "Structural stability during fire"	Compliance with C/AS1 only, but excluding any building of which all or any part is of fire hazard category 4, or for situations requiring the judgement of a qualified fire or structural engineer.
D1 "Access routes"	Compliance with D1/AS1 only.
E1 "Surface water"	Compliance with E1/AS1 only.
E2 "External moisture"	Compliance with E2/AS1 only.
E3 "Internal moisture"	Compliance with E3/AS1 only.
F2 "Hazardous building materials"	Compliance with F2/AS1 only in relation to the other provisions of the building code listed herein.
F4 "Safety from falling"	Compliance with F4/AS1 only.
F5 "Construction and demolition hazards"	Compliance with F5/AS1 only.
F7 "Warning Systems"	Compliance with F7/AS1 but only in respect of Section 3 Domestic Smoke Alarms, and the relevant parts of C/AS1.
F8 "Signs"	Compliance with F8/AS1 only in relation to the other provisions of the building code listed herein.
G1 "Personal hygiene"	Compliance with G1/AS1 only.
G2 "Laundering"	Compliance with G2/AS1 only.
G3 "Food preparation and prevention of contamination"	Compliance with G3/AS1 only.
G4 "Ventilation"	Compliance with G4/AS1 only, but excluding mechanical systems.
G5 "Interior environment"	Compliance with G5/AS1 only.
G6 "Airborne and impact sound"	Compliance with G6/AS1 only.
G7 "Natural light"	Compliance with G7/AS1 only.
G12 "Water supplies"	Compliance with G12/AS1 only.
G13 "Foul water"	Compliance with G13/AS1 excluding Section 8 and G13/AS2 excluding Section 7.
G14 "Industrial Liquid Waste"	In respect of completed building work for the on-site disposal of foul water for code compliance certificate purposes only.
G15 "Solid waste"	Compliance with G15/AS1 only.
H1 "Energy efficiency"	Compliance with H1/AS1 only.
Each of the provisions listed above	Compliance with a current certificate of accreditation.

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IN-SPECT BUILDING CERTIFICATION CO LTD.

35 Maces Road Ch-Ch 6.
Phone - 3844492.
Fax - 3846588.
Bob - 0274 898605

CHRISTCHURCH CITY COUNCIL
P.I.M. APPLICATION
Rec'd 27 NOV 2003
Linwood Service Centre
PROJECT No. 10041003

INSPECTIONS REQUIRED

Wenn / Collier

COUNCIL CONSENT NO:.....

PROJECT LOCATION: 16 Hemmingway Place

- ☑ Pre-pour foundation.
- ☑ Pre-pour slab.
- ☑ Pre-line plumbing.
- ☑ Post lining prior to stopping.
- ☑ Half high veneer.
- ☐ Fixings/Substraight for plaster system.
- ☑ Drainage prior to back fill.
- ☐ Reinforcing to block work prior to pouring concrete.
- ☑ Final inspection for Code Compliance Certificate issue.
- ☐ Solid Fuel Heater prior to lighting.

Inspection booking can be made during working hours 7.30am-5.30pm on the above numbers.
If absolutely necessary after hours bookings can be made on 3844492.
24 Hours notice of inspection would be required.
Inspection bookings with less notice can only be done if there is an available time.
When booking inspections please quote the above consent number and project location, contact phone number and if the inspection is required AM or PM.

Yours sincerely.
Kelvin Newman.
Director: In-Spect Building Certification Co Ltd.

K J Newman

1999/1

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Job Details

box 1

Name RUSSELL WENN + JULIE COLLIER

Street and Number HEMINGWAY PLACE.

Lot and DP Number LOT 35

City/Town/District SEAFIELD PARK.

Location of Storey: single/~~upper of two/lower of two~~ ~~Floor load: 2kPa/3kPa~~

Building height to apex	5.300 m	Roof weight	light/~~heavy~~
		Cladding weights:	
Roof height above eaves	2.700 m	~~Subfloor~~	~~light/medium/heavy~~
		Lower storey	~~light/medium~~/heavy
Stud height	2.400 m	~~Upper storey~~	~~light/medium/heavy~~
Average roof pitch	28°	Room in roof space	~~yes~~/no
Building length	24.550 m	Gross building	
Building width	13.890 m	Plan Area,	GPA = 221. Sq.m

***Note:** When the average roof pitch is over 25 degrees, use the eaves length and width to determine BL and BW*
***Note:** For heavy roofs use the roof plan at eaves level to determine GPA*

Wind Zone

box 2

Region:		Terrain:		Exposure:		Topography:	
R1	0	Inland	0	Sheltered	0	Gentle	0
R2	1	Coastal	1	Exposed	1 1	Moderate	1
						Extreme	3

Total points

Wind Zone: Low (0) Very high (3)

1 Medium (1) Specific Design (4)

High (2)

Earthquake Zone

box 3

From figure EQ1 select Earthquake Zone: A (B) C

BUs required Wind

box 4

From Table W1A/W1B

W along = 54 BUs/m

W across = 54 BUs/m

Total wind load,

W ALONG:
W along x BW = 750. BUs
W ACROSS:
W across x BL = 1326. BUs

BUs required Earthquake

box 5

From Table EQ1/EQ2/EQ3/EQ4/EQ5/EQ6

E = 4.2 BUs/Sq.m

Note: For a room in the roof space use E + 3

Total earthquake load,

EQ ALONG and EQ ACROSS

E x GPA BUs = 928. BUs

Along

Wall or Bracing Line		Bracing Elements Provided			Wind		Earthquake	
1	2	3	4	5	6W	7W	6E	7E
Line Label	Minimum BUs Required	Bracing Element No.	Bracing Type	Length Element (m) L	Rating BU/m W	BUs Achieved (BU/m x L) W	Rating BU/m E	BUs Achieved (BU/m x L) E
A	236	1	HBK4	0.9	110	99	85	76
		2	HBK4	1.2	110	132	85	102
		3	HBK4	0.9	110	99	85	76
		4	HBK4	0.9	110	99	85	76
B	100	1	Gib2a	2.4	75	180	60	144
		2	Gib2a	1.8	75	135	60	108
C	151	1	HBK4	0.9	110	99	85	76
		2	HBK4	1.2	110	132	85	102
D	61	1	Gib1a	1.8	55	99	50	90
		2	Gib1a	1.8	55	99	50	90
Totals Achieved					**W**	1164.	**E**	940
From Sheet A	**Totals Required**				**W**	750	**E**	928
Wreq/Ereq =			*					

*** If Wreq/Ereq is 1 or less complete E column only**
If Wreq/Ereq is 1.5 or more complete W column only
Otherwise complete both E And W

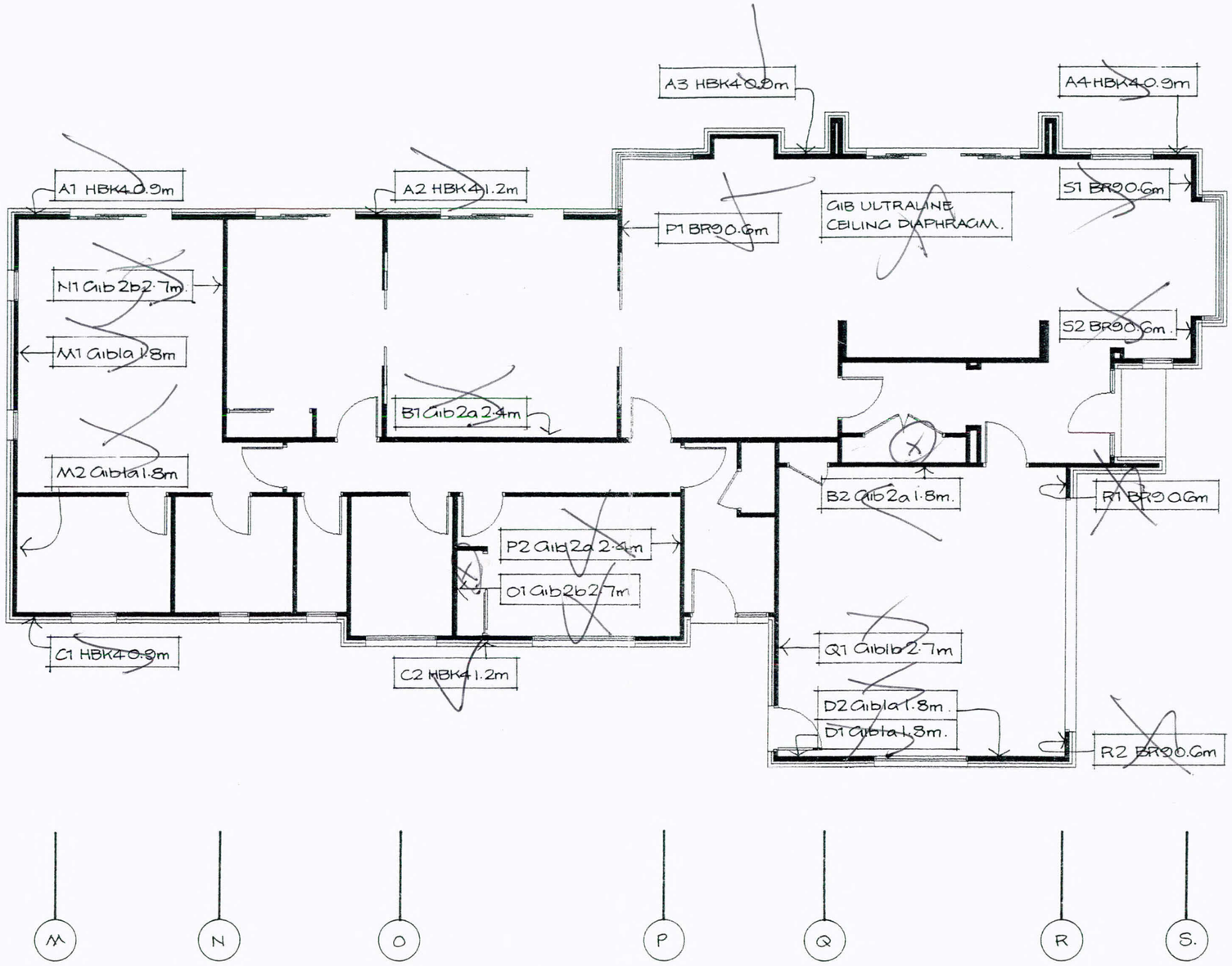
Across

Wall or Bracing Line		Bracing Elements Provided			Wind		Earthquake	
1	2	3	4	5	6W	7W	6E	7E
Line Label	Minimum BUs Required	Bracing Element No.	Bracing Type	Length Element (m) L	Rating BU/m W	BUs Achieved (BU/m x L) W	Rating BU/m E	BUs Achieved (BU/m x L) E
M	83	1	Gib1a	1.8	55	99	50	90
		2	Gib1a	1.8	55	99	50	90
N	70	1	Gib2b	2.7	80	216	70	189
O	75	1	Gib2b	2.7	80	216	70	189
P	100	1	BR9	0.6	110	66	95	57
		2	Gib2a	2.4	75	180	60	144
Q	100	1	Gib1b	2.7	75	202	50	135
R	129	1	BR9	0.6	110	66	95	57
		2	BR9	0.6	110	66	95	57
S	100	1	BR9	0.6	110	66	95	57
		2	BR9	0.6	110	66	95	57
Totals Achieved					**W**	1342	**E**	1122
From Sheet A	**Totals Required**				**W**	1326	**E**	928.
Wreq/Ereq =			*					

CHRISTCHURCH CITY COUNCIL
P.I.M. APPLICATION
Rec'd 27 NOV 2003
Linwood Service Centre
PROJECT No 10041003

IN-SPECT BUILDING CERTIFICATION CO LTD
THESE PLANS AND SPECIFICATIONS ARE APPROVED BY IN-SPECT BUILDING CERTIFICATION CO LTD AS MEETING THE REQUIREMENTS OF THE BUILDING CODE SUBJECT TO SUCH CONDITIONS AS ENDORSED HEREON.

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Peter Ray Homes
213 Blenheim Road, Christchurch. P O 8184 Riccarton, Christchurch
Telephone – 03 348 1994 Fax – 03 343 2026

NOTE

1. All work shall comply with NZS 3604:1999
2. All windows and doors to comply with NZS 4211:1985
3. Glazing to comply with NZS 4223.1985 & Pt 3 1993
4. Contractor must verify all dimensions on site prior to commencing any work
5. The copyright of this drawing is vested with Peter Ray Homes Ltd and cannot legally be used, copied or in any form reproduced without written authority

Rev No.	Date	Amendment
A	03.11.03	remove gas fire, move gas bottles, change bay window

Drawn: A Fahey
Date: 03.11.03
Scale: 1:100

Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title: BRACING PLAN

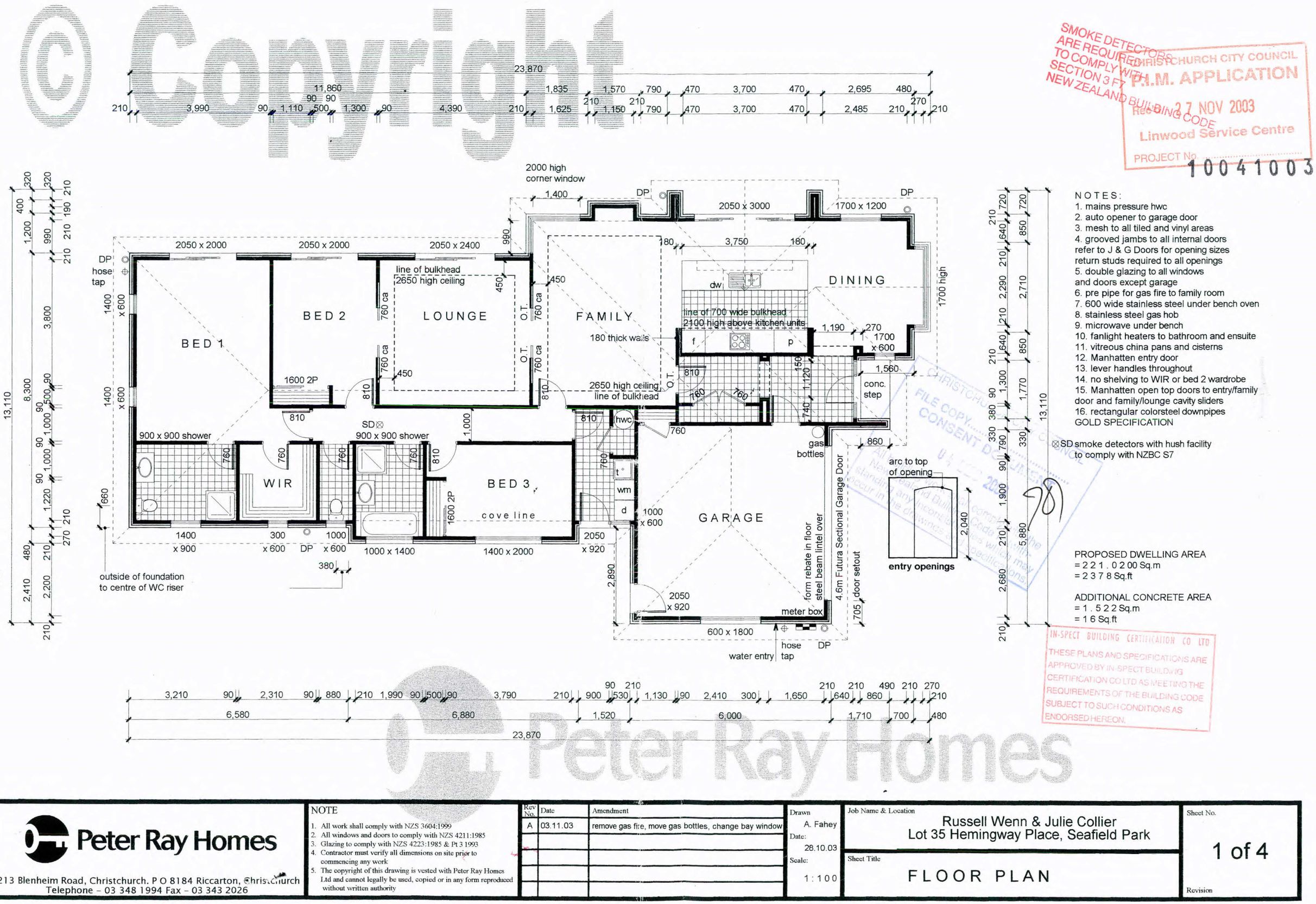
Sheet No.: 1 of 1

Revision

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

SMOKE DETECTORS ARE REQUIRED TO COMPLY WITH SECTION 3 F7 NEW ZEALAND BUILDING CODE

CHRISTCHURCH CITY COUNCIL
P.H.M. APPLICATION
Received
27 NOV 2003
Linwood Service Centre
PROJECT No
10041003



NOTES:
1. mains pressure hwc
2. auto opener to garage door
3. mesh to all tiled and vinyl areas
4. grooved jambs to all internal doors refer to J & G Doors for opening sizes return studs required to all openings
5. double glazing to all windows and doors except garage
6. pre pipe for gas fire to family room
7. 600 wide stainless steel under bench oven
8. stainless steel gas hob
9. microwave under bench
10. fanlight heaters to bathroom and ensuite
11. vitreous china pans and cisterns
12. Manhatten entry door
13. lever handles throughout
14. no shelving to WIR or bed 2 wardrobe
15. Manhatten open top doors to entry/family door and family/lounge cavity sliders
16. rectangular colorsteel downpipes

GOLD SPECIFICATION

⊗SD smoke detectors with hush facility to comply with NZBC S7

PROPOSED DWELLING AREA
= 2 2 1 . 0 2 0 0 Sq.m
= 2 3 7 8 Sq.ft

ADDITIONAL CONCRETE AREA
= 1 . 5 2 2 Sq.m
= 1 6 Sq.ft

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Rev No.	Date	Amendment
A	03.11.03	remove gas fire, move gas bottles, change bay window

Drawn: A. Fahey
Date: 26.10.03
Scale: 1 : 100

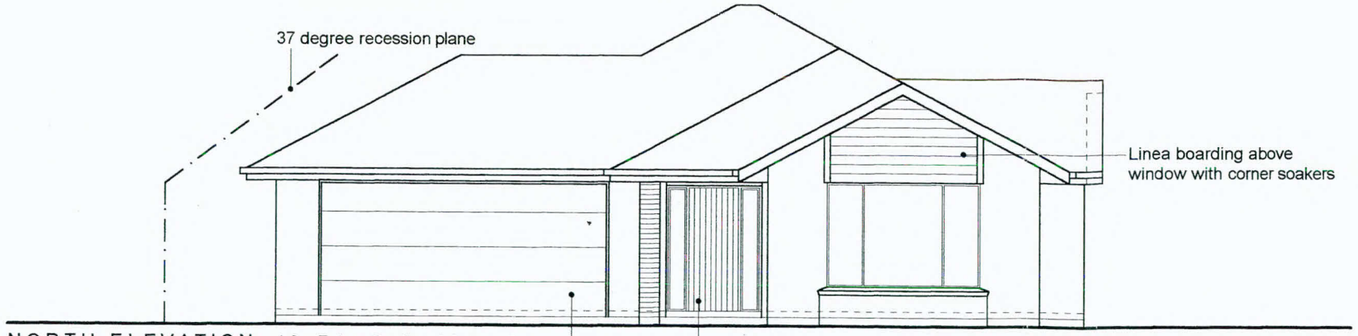
Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title: FLOOR PLAN

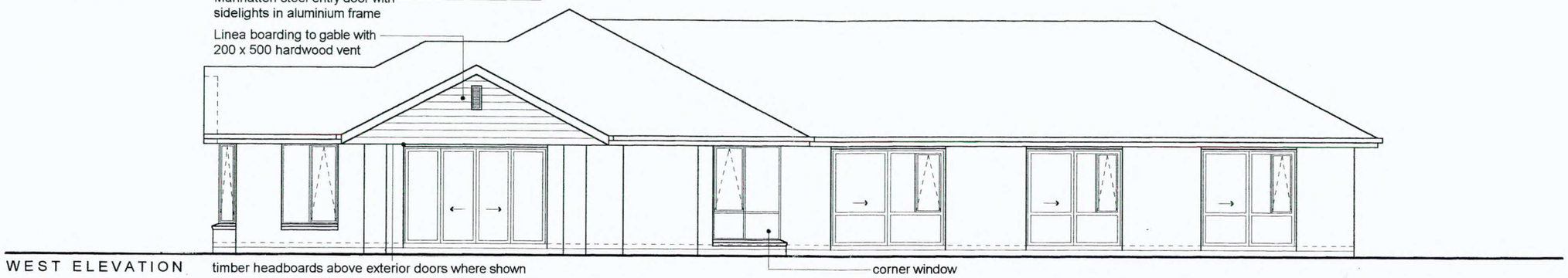
Sheet No.: 1 of 4

Revision

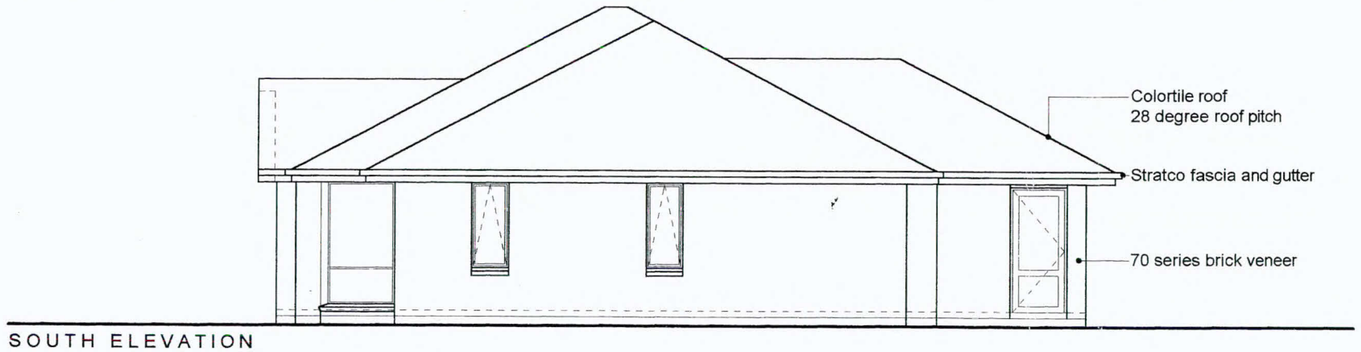
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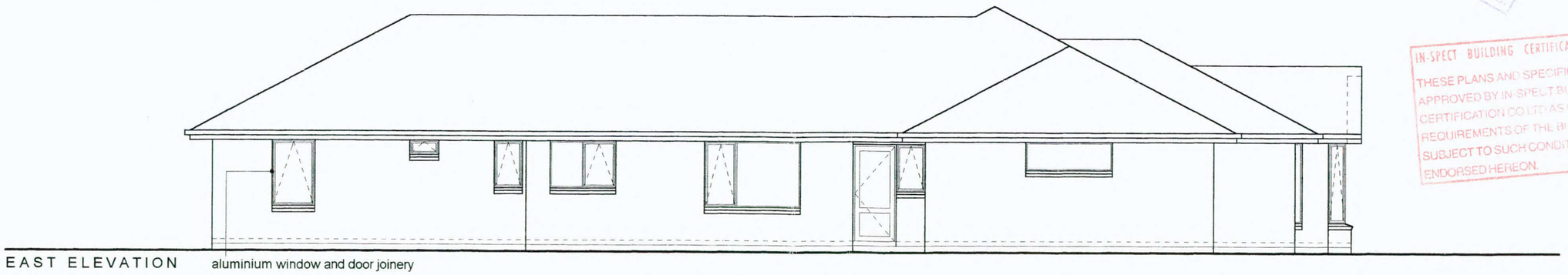
NORTH ELEVATION



WEST ELEVATION



SOUTH ELEVATION



EAST ELEVATION

CHRISTCHURCH CITY COUNCIL
FILE COPY
CONSENT DOCUMENT
04 DEC 2003
All building work shall comply with the New Zealand Building Code notwithstanding any inconsistencies which may occur in the drawings and specifications.
IN-SPECT BUILDING CERTIFICATION CO LTD
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Peter Ray Homes
213 Blenheim Road, Christchurch. P O 8184 Riccarton, Christchurch
Telephone – 03 348 1994 Fax – 03 343 2026

NOTE

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Rev No.	Date	Amendment
A	03.11.03	remove gas fire, move gas bottles, change bay window

Drawn: A. Fahey
Date: 28.10.03
Scale: 1 : 100

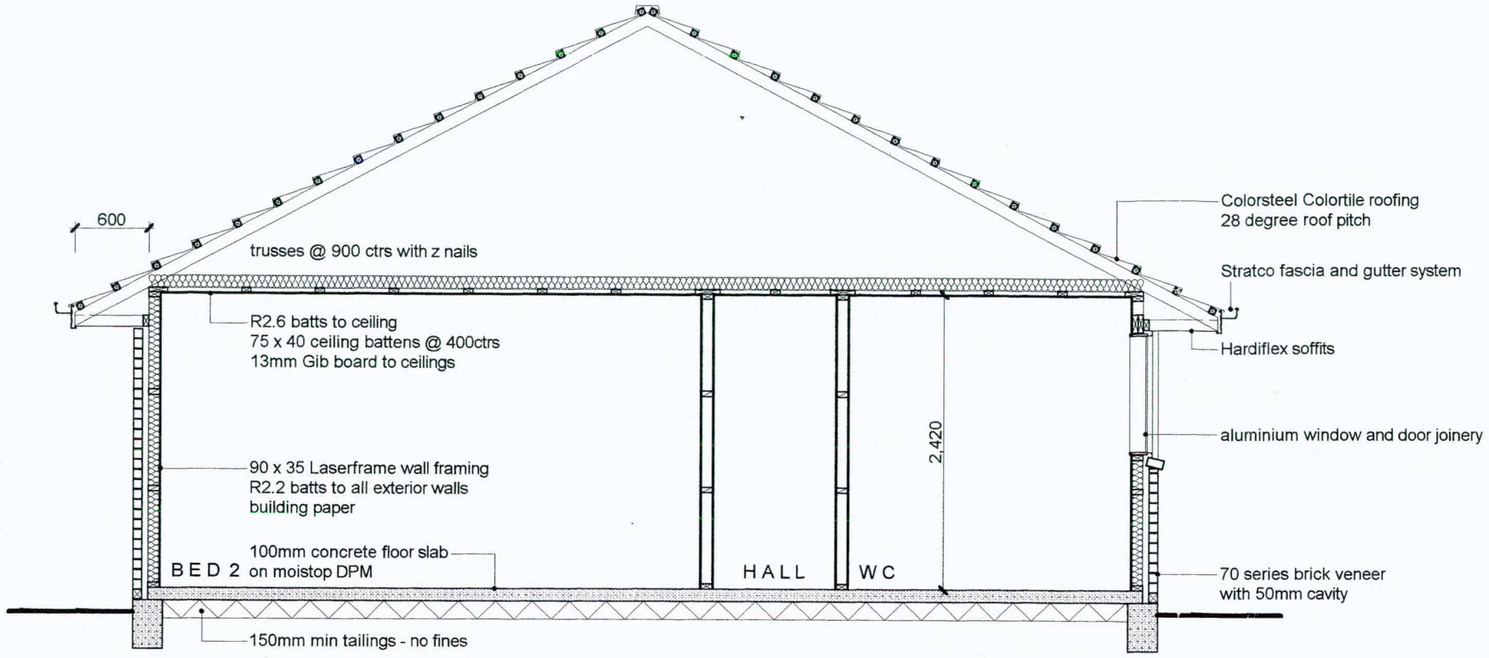
Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title: ELEVATIONS

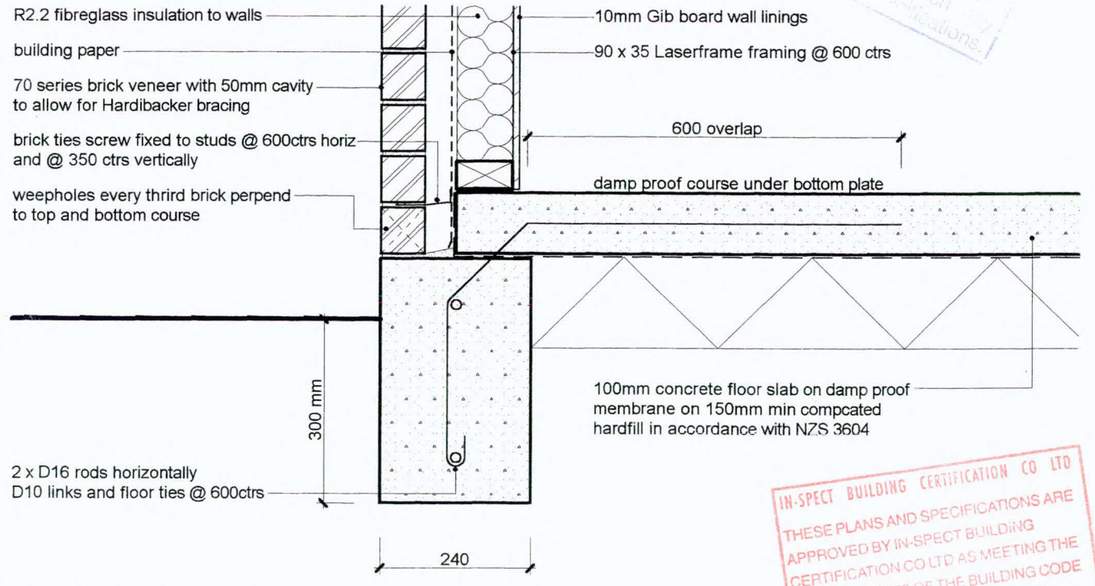
Sheet No.: 2 of 4

Revision

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CROSS SECTION
scale 1:50



FOUNDATION DETAIL
scale 1:10

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CONSENT DOCUMENTS
DEC 2003
All building work shall comply with the New Zealand Building Code notwithstanding any ... existencies which occur in the ... s and ...
IN-SPECT BUILDING CERTIFICATION CO LTD
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Drawn: A. Fahey
Date: 28.10.03
Scale: 1:50

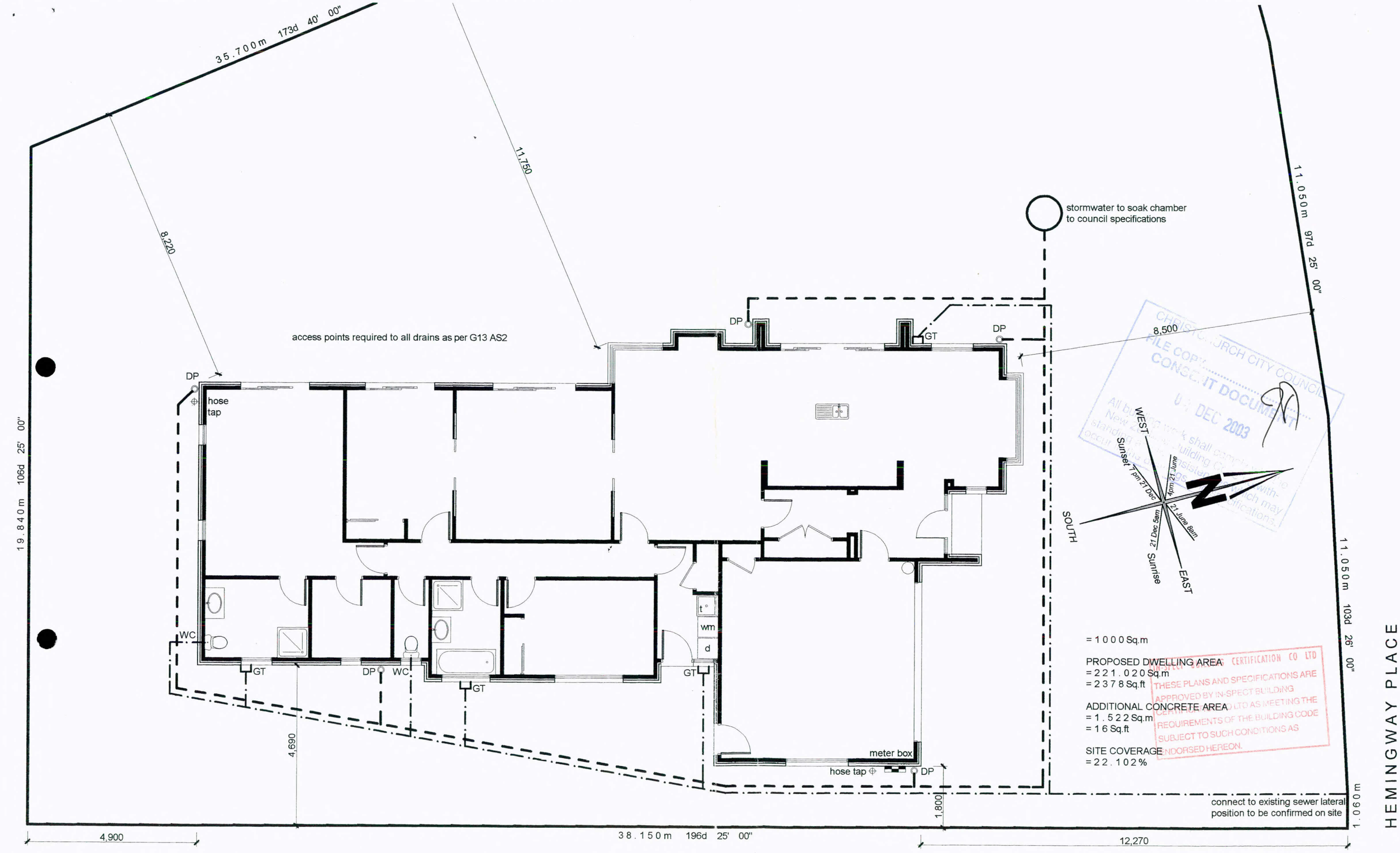
Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title: CROSS SECTION

Sheet No.: 3 of 4

Revision

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CONSENT DOCUMENT
DEC 2003
All building work shall comply with the New Zealand Building Code and shall not commence until building consent has been issued. Work which may encroach on adjoining sites, or which may affect the stability of adjoining buildings, shall not commence until adequate provision has been made to support and protect such adjoining sites and buildings. Refer to engineer's specifications.
BUILDING CERTIFICATION CO LTD
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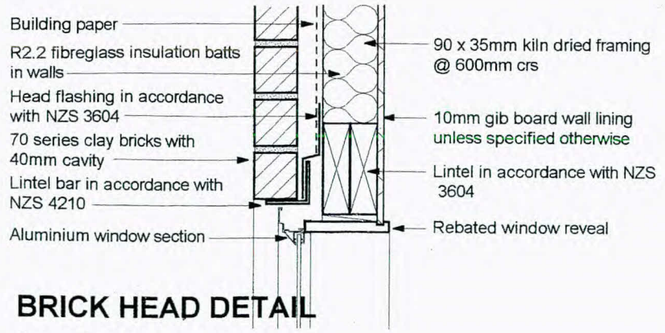
Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title: SITE PLAN

Sheet No.: 4 of 4

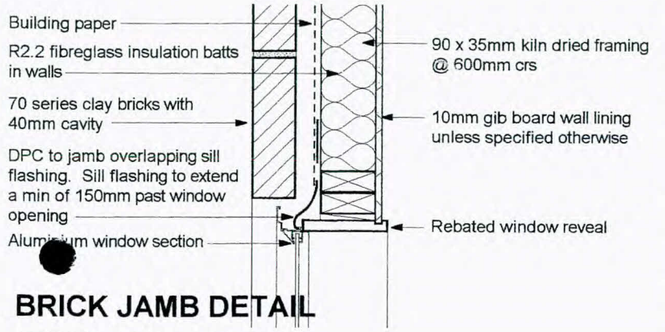
Revision

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV



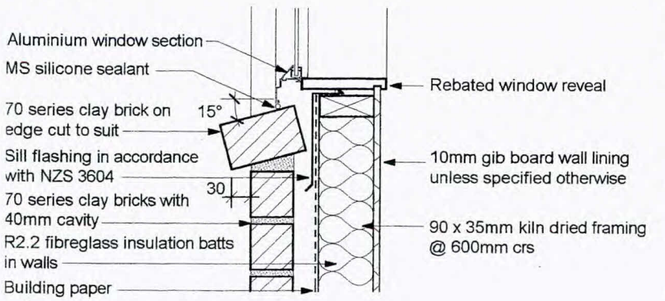
BRICK HEAD DETAIL

Scale 1:10



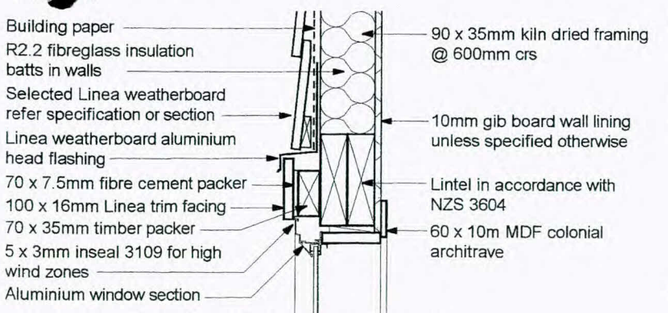
BRICK JAMB DETAIL

Scale 1:10



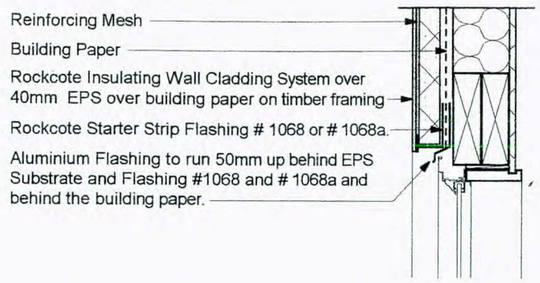
BRICK SILL DETAIL

Scale 1:10



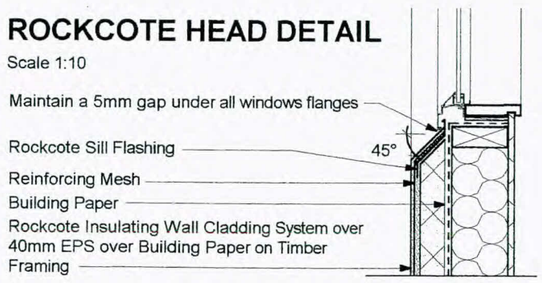
LINEA WINDOW HEAD DETAIL with facing board

Scale 1:10



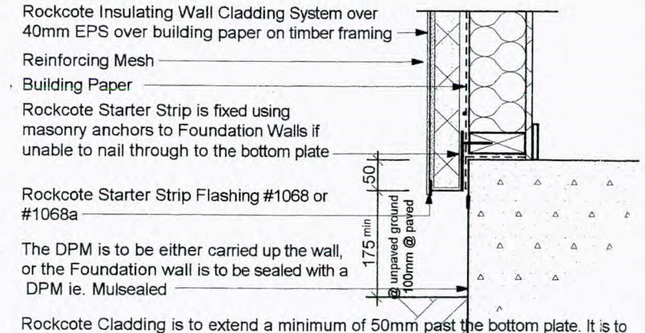
ROCKCOTE HEAD DETAIL

Scale 1:10



ROCKCOTE SILL DETAIL

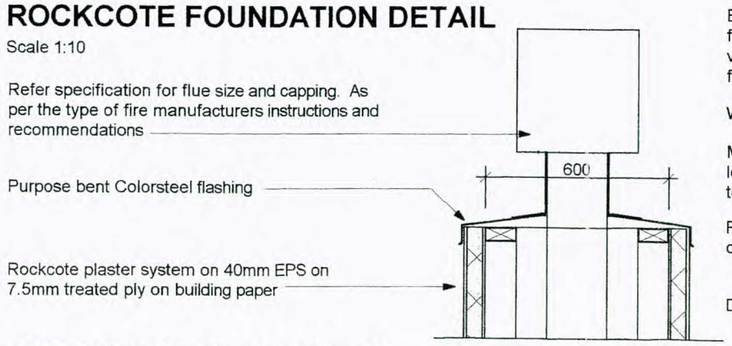
Scale 1:10



Rockcote Cladding is to extend a minimum of 50mm past the bottom plate. It is to be 6mm clear off the Foundation Wall. Refer to NZS 3604:1999 Fig 7.10.
The distance from the top of the floor slab to cleared ground is to be a minimum of 225mm, to a paved surface this shall be a minimum of 150mm. Refer to NZBC E2/AS1 Paragraph 4.2.5 or NZS 3604:1999 Fig 7.10.

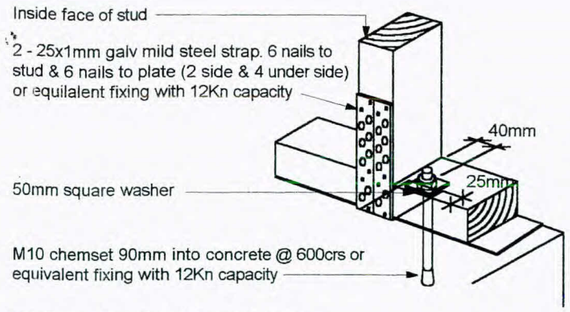
ROCKCOTE FOUNDATION DETAIL

Scale 1:10

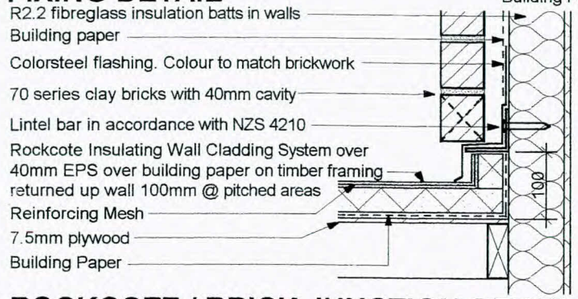


CHIMNEY CAPPING DETAIL

Scale 1:20

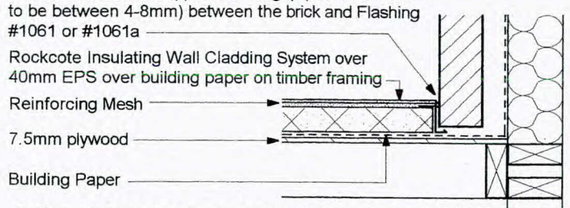


STUD FIXING DETAIL



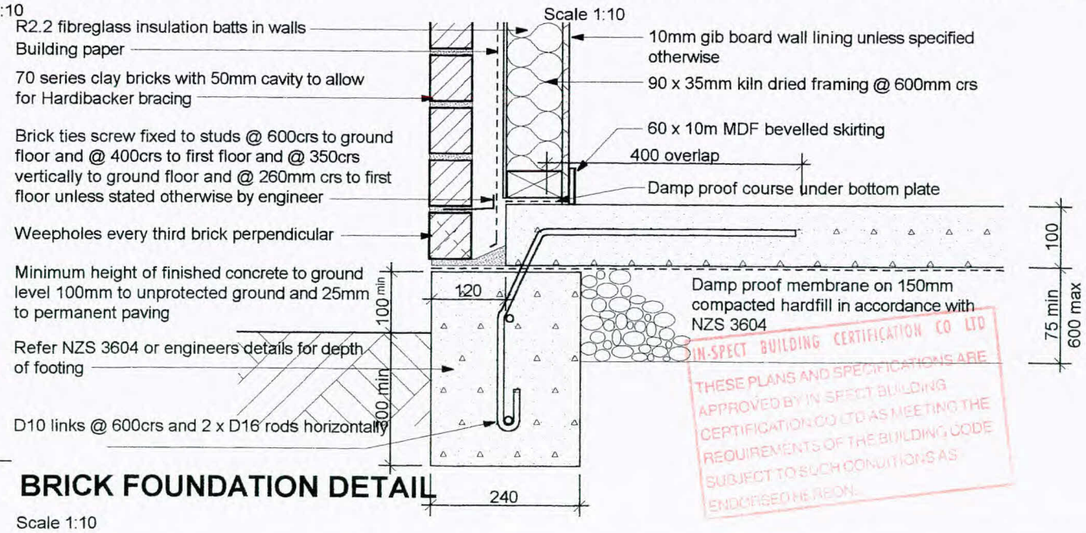
ROCKCOTE / BRICK JUNCTION DETAIL @ sloped areas of chimney

Scale 1:10



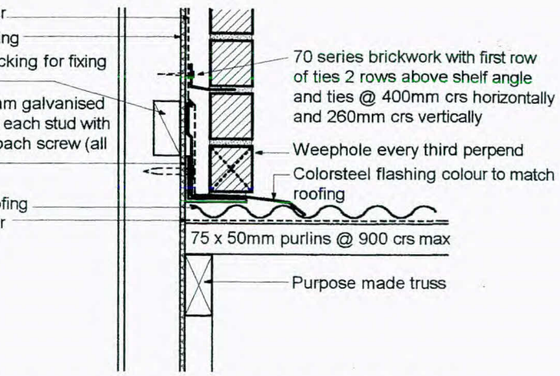
ROCKCOTE / BRICK JUNCTION DETAIL @ chimney internal corner

Scale 1:10



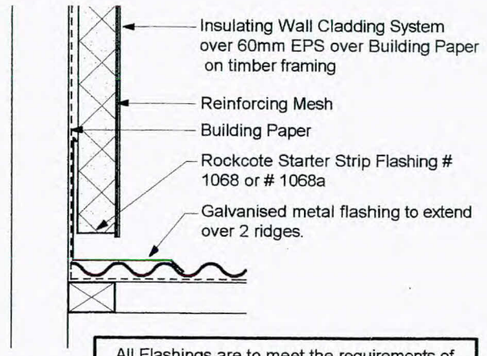
BRICK FOUNDATION DETAIL

Scale 1:10



BRICK ROOF FLASHING DETAIL

Scale 1:10



All Flashings are to meet the requirements of Section 4 of NZS 3604:1999

ROCKCOTE ROOF FLASHING DETAIL

IN-SPECT BUILDING CERTIFICATION CO LTD
THESE PLANS AND SPECIFICATIONS ARE APPROVED BY IN SPECT BUILDING CERTIFICATION CO LTD AS MEETING THE REQUIREMENTS OF THE BUILDING CODE SUBJECT TO SUCH CONDITIONS AS ENDORSED HEREON.

Peter Ray Homes
213 Blenheim Road, Christchurch. P O 8184 Riccarton, Christchurch
Telephone – 03 348 1994 Fax – 03 343 2026

NOTE

1. All work shall comply with NZS 3604:1999
2. All windows and doors to comply with NZS 4211:1985
3. Glazing to comply with NZS 4223:1985 & Pt 3 1993
4. Contractor must verify all dimensions on site prior to commencing any work
5. The copyright of this drawing is vested with Peter Ray Homes Ltd and cannot legally be used, copied or in any form reproduced without written authority

Rev No.	Date	Amendment

Drawn: J Stadnyk
Date: December 02
Scale: 1:10, 1:20

Job Name & Location: PETER RAY HOMES LIMITED

Sheet Title: Standard Details for Single Storey Homes

Sheet No.

Revision

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

BUILDING CONSENT CONDITIONS

As at : 22 December 2003

PROJECT NO.: **10041003**

DESCRIPTION OF CONSENT: **DWELLING WITH GARAGE**

SITE ADDRESS: **16 HEMINGWAY PLACE**

The Building Consent is subject to the following conditions, which must be satisfied before the Code Compliance Certificate can be issued:

- The manufacturer's approved applicator of the exterior cladding system is to supply a certificate to the Christchurch City Council stating that the cladding has been installed to the manufacturer's specification.
- Roof truss design and layout plan complying with New Zealand Standard 3604:1999, Clause 10.2.2 and C.8.6.1.4. being supplied to the Team Leader Building Inspections, Christchurch City Council for approval prior to erection.
- Registered Engineer's Producer Statement Design for beams and supports shall be supplied to the Christchurch City Council prior to construction commencing.

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

Roof truss Design needed?

exterior cladding

Harry

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

CHRISTCHURCH
CITY COUNCIL · ENVIRONMENT

CHRISTCHURCH CITY COUNCIL
BUILDING ACT 1991

BUILDING CONSENT

FORM: BA4

PROJECT NO.
10041003

PROJECT LOCATION AND DESCRIPTION

Street Address: 16 HEMINGWAY PLACE, SPENCERVILLE, CHRISTCHURC

Description of Work: DWELLING WITH ATTACHED GARAGE

Legal Description: LOT 35 DP 319911

Valuation Roll : 21852 83700

FILE

OWNER/APPLICANT

Name: WENN, RUSSELL MARTIN

Mailing Address: C/O IN-SPECT BUILDING CERTIFICATION
35 MACES ROAD
CHRISTCHURCH 8006

Contact: KELVIN NEWMAN

PROJECT DETAILS

Type description:
New Construction

Application Received: 27/11/2003

Intended life:
Indefinite, but not less than 50 years

Intended uses(s):
Dwelling

Estimated value (inclusive of GST): $ 160000.00

COPY

This Building Consent is a consent under the Building Act 1991 to undertake building work in accordance with the attached plans and specifications so as to comply with the provisions of the building code. It does not affect any duty nor permit any breach of any other Act.

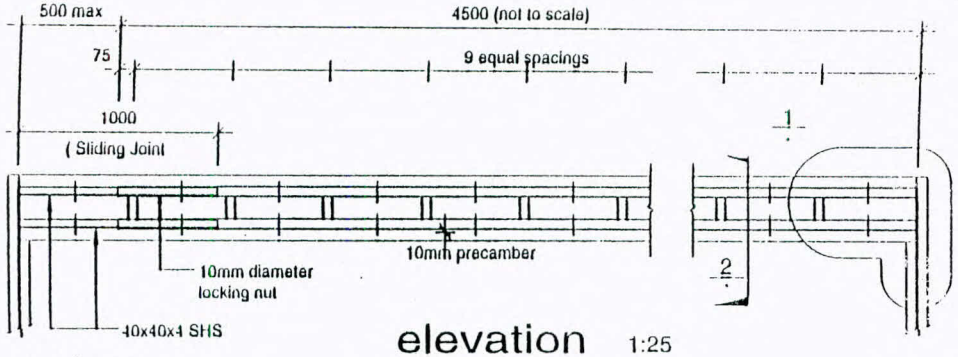
Please note that your Building Consent will lapse if work has not commenced within six months of its date of issue or if reasonable progress has not been made within twelve months after work has commenced, unless an extension of time has been approved by the Council.

This Building Consent is issued subject to the conditions specified in the attached pages (if any) headed 'Conditions of Project No.: 10041003'

Signed for and on behalf of the Council:

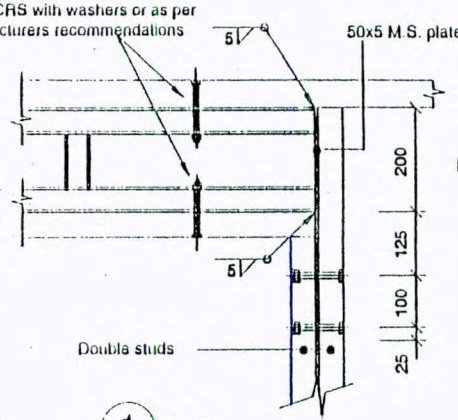
Name: .....

Position: K. THOMPSON Consent Officer ..... Date: 22/12/2003

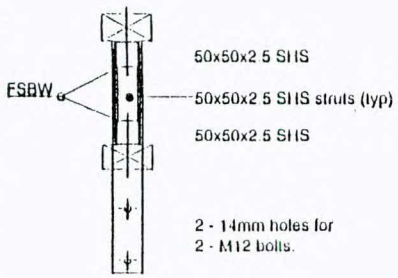


elevation 1:25

M10 bolts @ 500 crs
through timber plates
or 65x3.7mm min dia power nails
@ 250CRS with washers or as per
manufacturers recommendations



1 (1:10)



2 (1:10)

NOTES :

All materials and work to be in accordance with NZS 3404 : 1992
Beam to be fabricated from grade C450 LO steel.

This beam is suitable for the following :-

1. Snow and wind loadings as defined on producer statement dated 28.6.99
2. Light roof, ie maximum weight 0.45 kPa including ceiling lining.
3. Where used as door lintel, roof framing to be in accordance with drawing number 1816/10/EB3

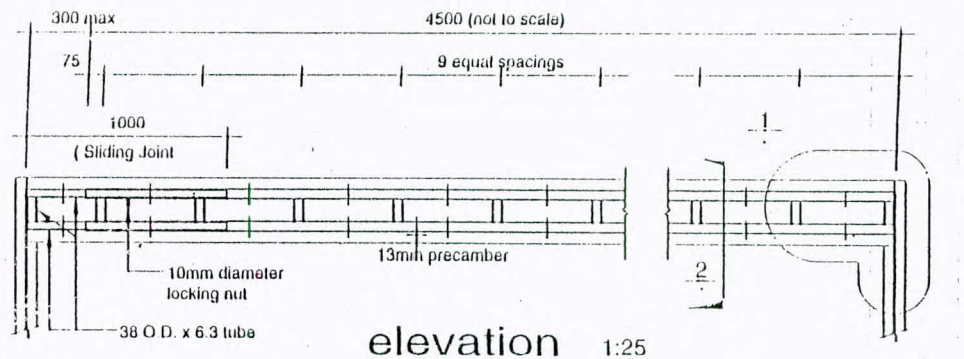
EasyBeam (Light Duty)

Manufactured by McCALLUM ENGINEERING

O'Loughlin Taylor Spence Ltd
CONSULTING ENGINEERS
Level 4
St Elmo Courts
47 Hereford Street
Christchurch 1
P O Box 2373
Fax: 379 1642
Telephone: 379 2734
E-mail: consultants@ots.co.nz

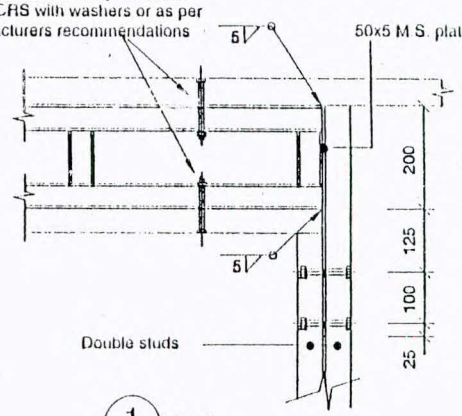
scales as shown
date 28 Jun 99
drn Wade
file

sheet EB1 rev.

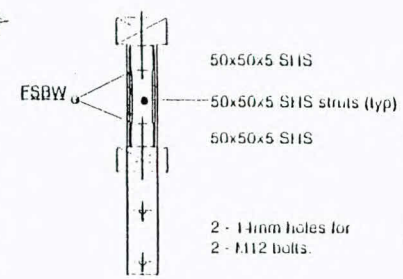


elevation 1:25

M10 bolts @ 500 crs
through timber plates
or 65x3.7mm min dia power nails
@ 250CRS with washers or as per
manufacturers recommendations



1 (1:10)



2 (1:10)

NOTES :

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Beam to be fabricated from grade C450 LO steel.

This beam is suitable for the following :-

1. Snow and wind loadings as defined on producer statement dated 28.6.99
2. Light roof, ie maximum weight 0.45 kPa including ceiling lining.
3. Where used as door lintel, roof framing to be in accordance with drawing number 1816/10/EB3

EasyBeam (Heavy Duty)

Manufactured by McCALLUM ENGINEERING

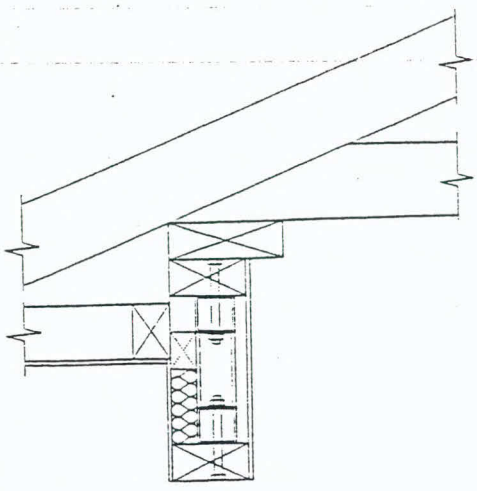
O'Loughlin Taylor Spence Ltd
CONSULTING ENGINEERS
Level 4
St Elmo Courts
47 Hereford Street
Christchurch 1
P O Box 2373
Fax: 379 1642
Telephone: 379 2734
E-mail: consultants@ots.co.nz

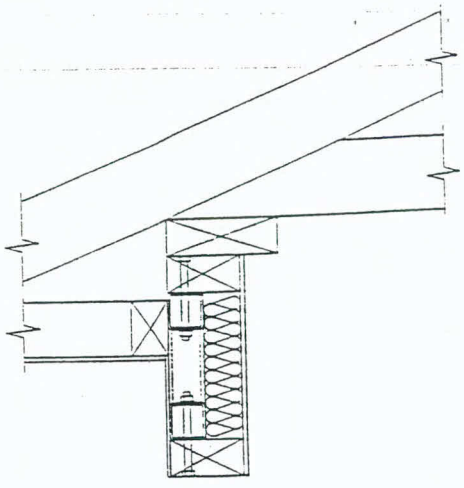
scales as shown
date 28 Jun 99
drn Wade
file

sheet EB2 rev.

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Suggested Easybeam Construction details.

1:10

O'Loughlin Taylor Spence Ltd
CONSULTING ENGINEERS
Level 4
St Elmo Courts
47 Hereford Stree
Christchurch 1
P.O. Box 2373
Fax: 379 1642
Telephone: 379 2734
E-mail: consultants@ots.co.nz

scales	as shown	sheet	rev.
date	22 Dec 99	EB4	
drn	John	file	

Proudly Distributed by:

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Know how. Can do.

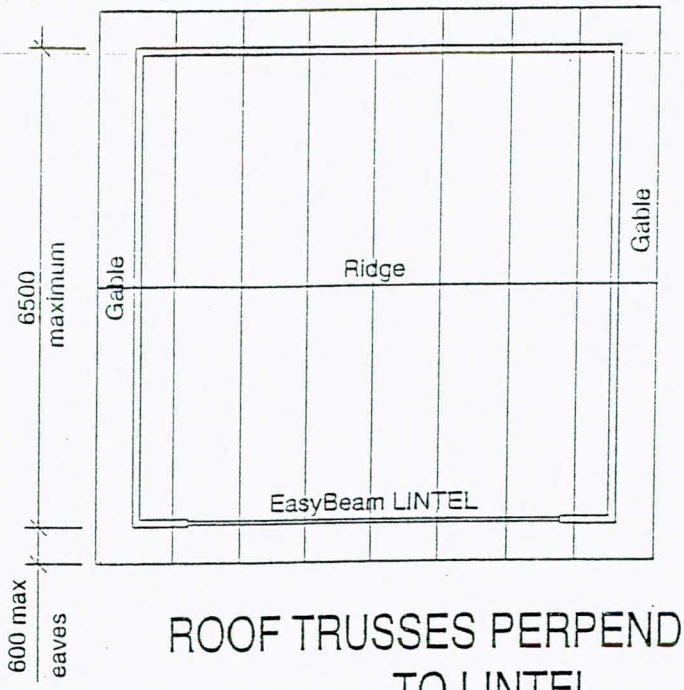
For special designs please contact the supplier above.

EasyBeam

Manufactured by McCALLUM ENGINEERING

FLETCHER EASYSTEEL

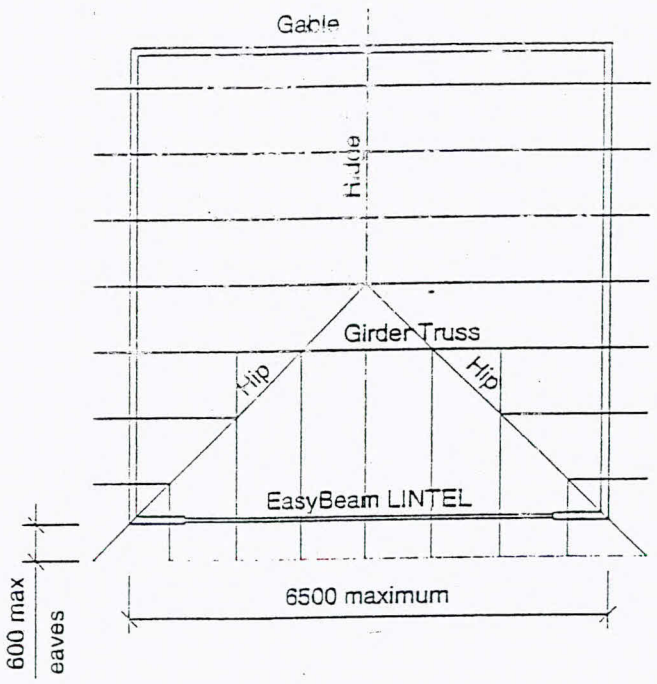
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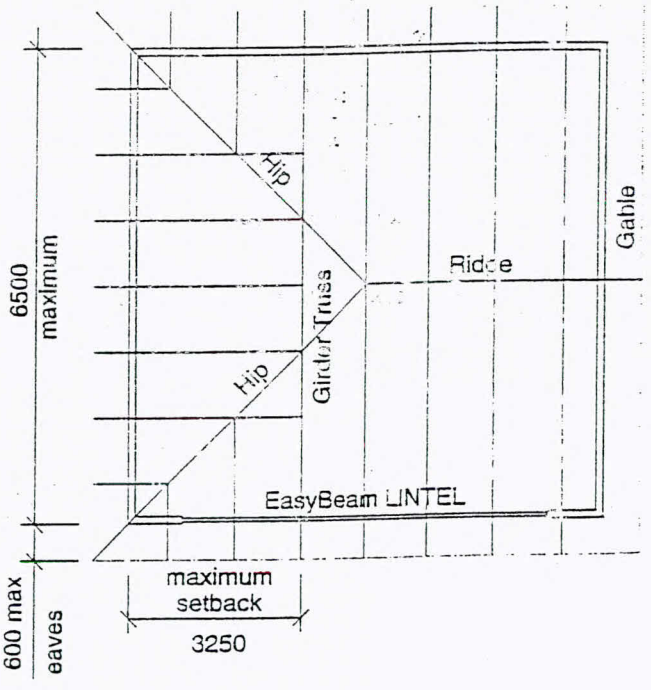


NOTES :

1. This drawing is to be read in conjunction with drawings numbers 1816/10/EB1 and EB2 Producer Statement dated 28.6.99

ROOF TRUSSES PERPENDICULAR TO LINTEL





ROOF TRUSSES FOR HIP ROOFS

ROOF FRAMING FOR EasyBeam LINTELS

O'Loughlin Taylor Spence Ltd
CONSULTING ENGINEERS
Level 4
St Elmo Courts
47 Hereford Street
Christchurch 1
P.O. Box 2373
Fax: 379 1642
Telephone: 379 2734
E-mail: consultants@ots.co.nz

scales	1:100	sheet	rev.
date	28 Jun 99	EB3	
drn	Wade	file	

O'Loughlin Taylor Spence Ltd
CONSULTING ENGINEERS

St Elmo Courts
47 Hereford Street
Christchurch 1
P.O. Box 2373
Telephone 379-2734
Fax 379-1642
Email: consultants@ots.co.nz

J.S. O'Loughlin BSc BE (Hons) MIPENZ
J.S. Spence BE (Hons) MIPENZ

MEMBERS OF THE ASSOCIATION OF CONSULTING ENGINEERS NEW ZEALAND

PRODUCER STATEMENT
STRUCTURAL DESIGN
EASY BEAM – HEAVY DUTY AND LIGHT DUTY

Issued by John Stanley Spence in respect of "Easy Beam", manufactured by McCallum Engineering.

The beam is as shown on O'Loughlin Taylor Spence Ltd drawings numbers EB1, EB2 and EB3, file 1816/10, wi additional requirements and limitations as detailed below:-

O'Loughlin Taylor Spence Ltd has been engaged to carry out the structural design in respect of the requirements of Clau B1 - Structure, of the Building Regulations 1992.

The design has been carried out in accordance with the standards listed in Section B1/VM1 of the approved documer issued by the Building Industry Authority.

The beam has been designed for the loads set out in NZS 4203: 1992 for the following situations:-

1. Maximum altitude

Snow Zone 1	500m
Snow Zone 2	400m
Snow Zone 3	350m
Snow Zone 4	100m
Snow Zone 5	150m

2. Basic non-direcitonal wind speed 48m/sec.
3. Terrain Categoy - 3.
4. Shielding Multiplier - 1.0
5. Hill Shape Multiplier - 1.0
6. Structure Risk Multiplier - 1.0.

CHRISTCHURCH CITY COUNCIL
P.I.M. APPLICATION
Rec'd 27 NOV 2003
Linwood Service Centre
PROJECT ID 10041003

As an independent design professional covered by a current policy of Professional Indemnity Insurance to the value $200,000:00, I believe on reasonable grounds that structural design of the beam complies with the relevant provisions the building code.

This consulting practice has not been engaged for supervision of the manufacture or installation of the beams.

Signed _____ Date 31 December 1999

ERB No. 7406

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

Fulton Hogan Canterbury Laboratory
PO Box 16-064, Hornby, Christchurch. 325 Pound Rd, Yaldhurst, Christchurch.
Telephone: 03 349 9142 - Fax: 03 349 9143 - Manager's Mobile: 025 377 318

Laboratory Reference: 2002/1517/35

DYNAMIC CONE PENETROMETER TEST REPORT

ATTENTION:	**Dean Gregory – Davie Lovell-Smith Ltd**
CLIENT:	Davie Lovell-Smith Ltd
TEST SITE:	Lot 35– Seafield Park Subdivision, Spencerville
SITE SELECTION METHOD USED:	As Directed by Site Engineer
TEST METHODS USED:	NZS 4402:1988 Test 6.5.2 (modified – kPa) NZS 3604:1999 Section 3 *
TESTED BY:	M Clay on 1/8/02

RESULTS:

This residential lot was tested in accordance with NZS 3604:1999 Section 3 using the test procedure detailed in NZS 4402:1988 Test 6.5.2.

A single site was tested to a depth of 1.2m below the finished ground surface level as per the client's instructions. This was positioned in the centre of the lot (refer to the site diagram on page 3). A bore log was taken adjacent to the test site.

Please refer to page 2 for a graphical plot of the inferred kPa / depth results. Bearing capacity has been inferred from M.J Stockwell's charts.

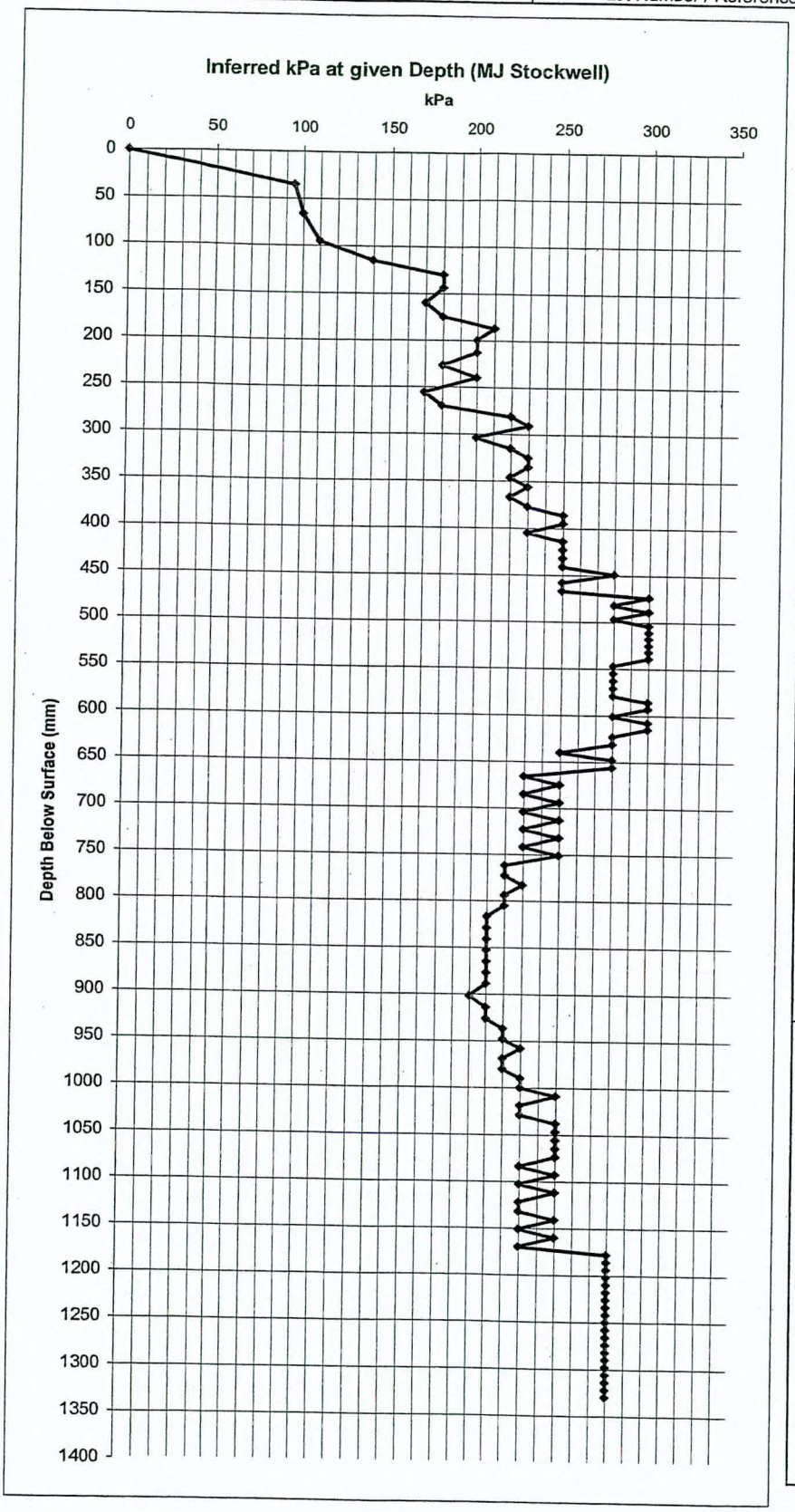
Report Issued By: Blair Trousselot on 6/8/02

Report Checked By: _____ Approved Signatory: _____
Laboratory Manager

This Laboratory is accredited by International Accreditation New Zealand. The tests reported herein (unless otherwise indicated by an *) have been performed in accordance with the laboratory's certificate to the schedule of accreditation. This report may not be reproduced except in full. The results given in this report apply only to the specific sites as tested by the laboratory.

SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV

Seafield Subdivision			Lab Reference:	2002/1517/35	Page 2 of 3
Date Tested:	1/08/02	Tested By:	MC	Lot Number / Reference:	Lot No 35



Bore Log

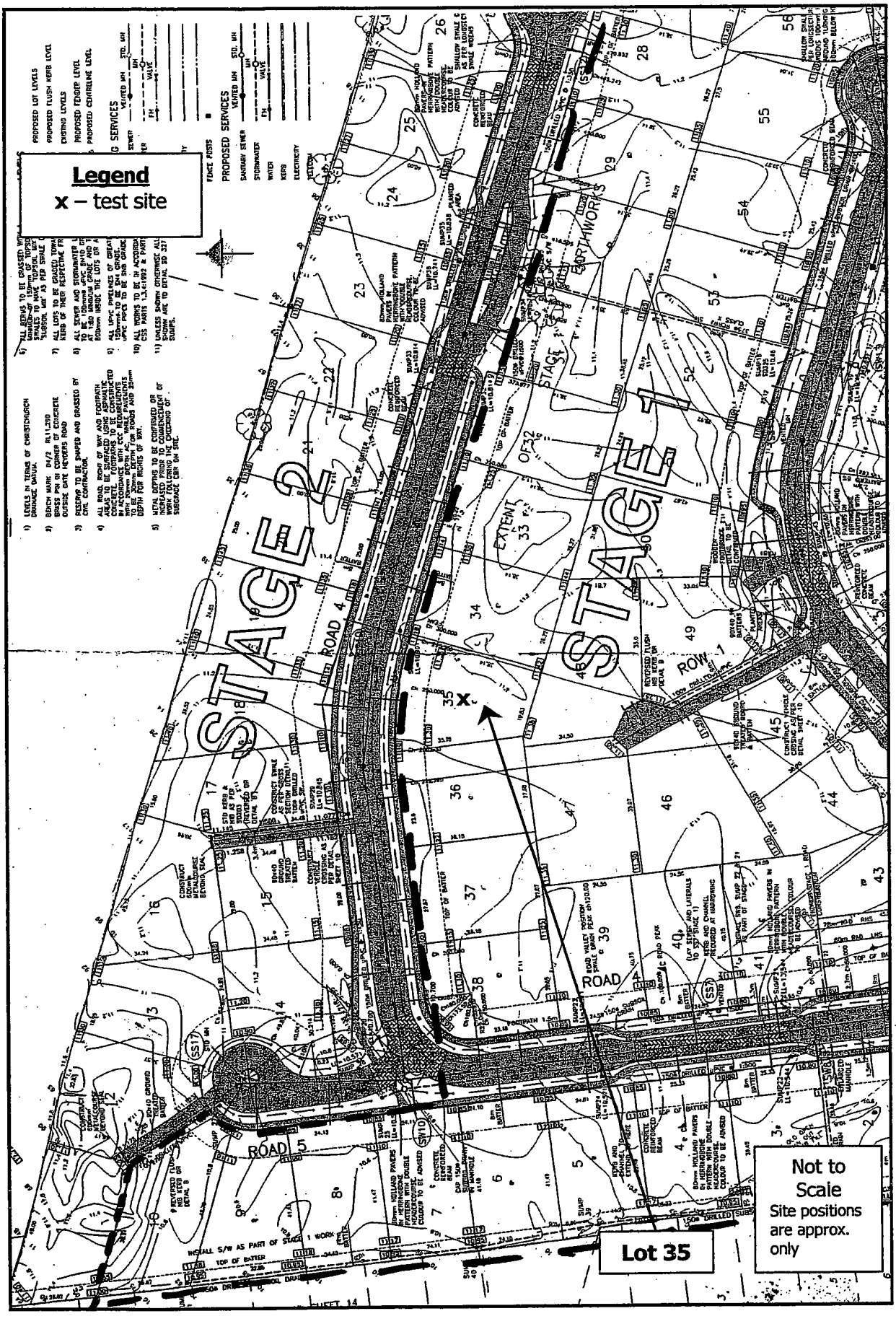
Dark Fine Sand with organics

Light Grey Fine Sand

Water Table

Notes:

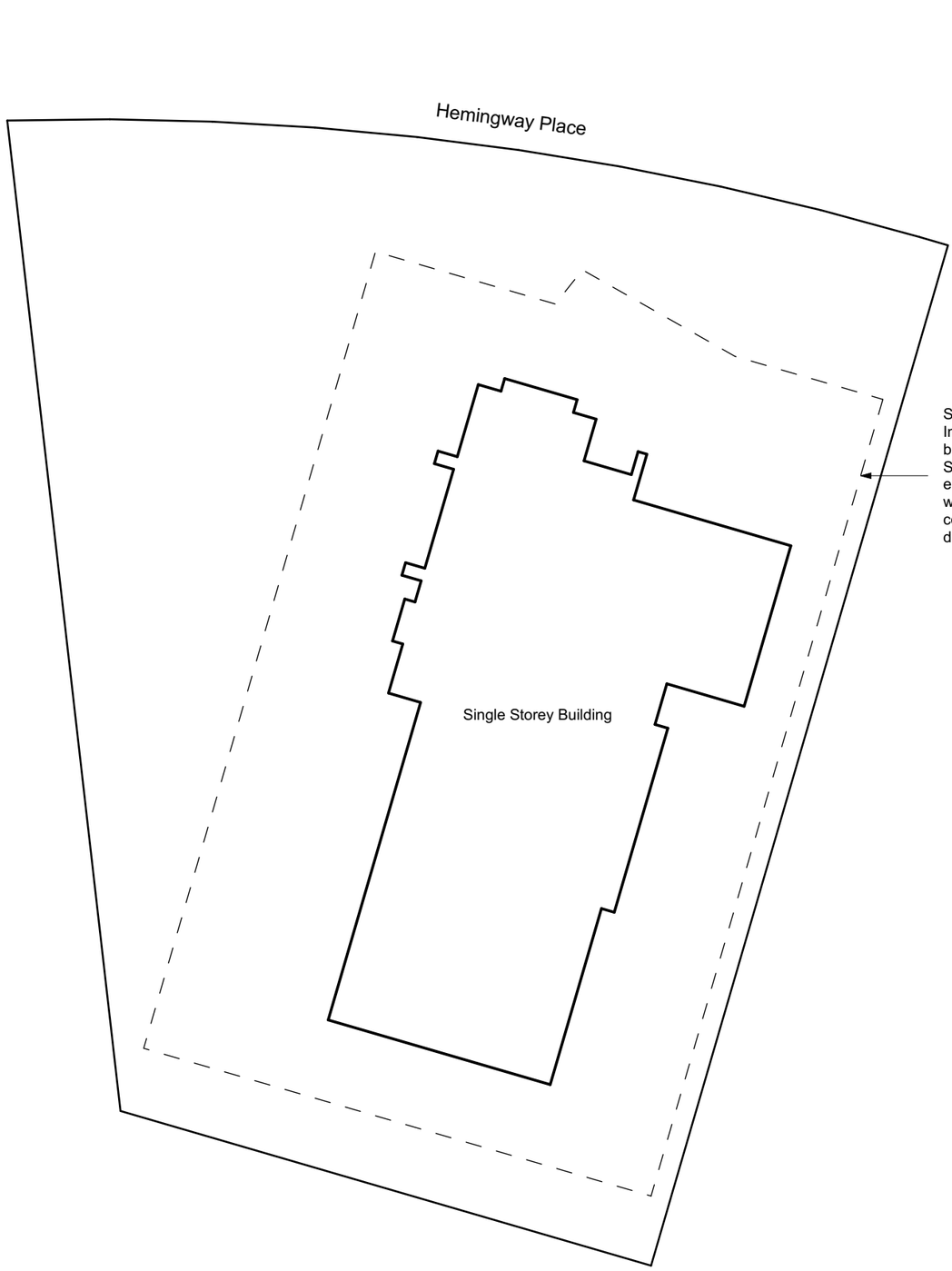
SCANNED: 1/04/2014 1:16:07 p.m. BOX: 1161 BATCH: 36592 DOC: CCCAHSFV



A member of the Fulton Hogan Ltd. Group

SITE DESCRIPTION:

Legal Description:	Lot 35 DP 319911
Address:	16 Hemingway Place, Spencerville
Earthquake Zone:	Zone 2
Exposure Zone:	Zone C
Climate Zone:	Zone 3
Wind Region:	A
Lee Zone:	
Rainfall Intensity:	30 - 40
Wind Zone:	High
Land status:	Green Zone, Technical Category 3, blue
Geotechnical Report:	Kirk Roberts Consulting Engineers Ltd.
Project Number:	121195
Date:	04/06/2012



Site Plan/Sediment Control Plan

SCALE 1:200

Note:
If any asbestos is discovered during the proposed building work, the following steps are required to be taken. Prior to removal, please contact the Department of Labour, telephone 0800 209020 for information on appropriate methods of handling asbestos.

FRONTIER ENGINEERS
CIVIL, STRUCTURAL & REMEDIAL

PO Box 79183 Avonhead
Christchurch 8446

Unit 1, 35 Sheffield Crescent, Burnside 8053

Phone: 03 359 9192
Free Call: 0508 FRONTIER (0508 376 684)

Email: admin@frontierengineers.co.nz

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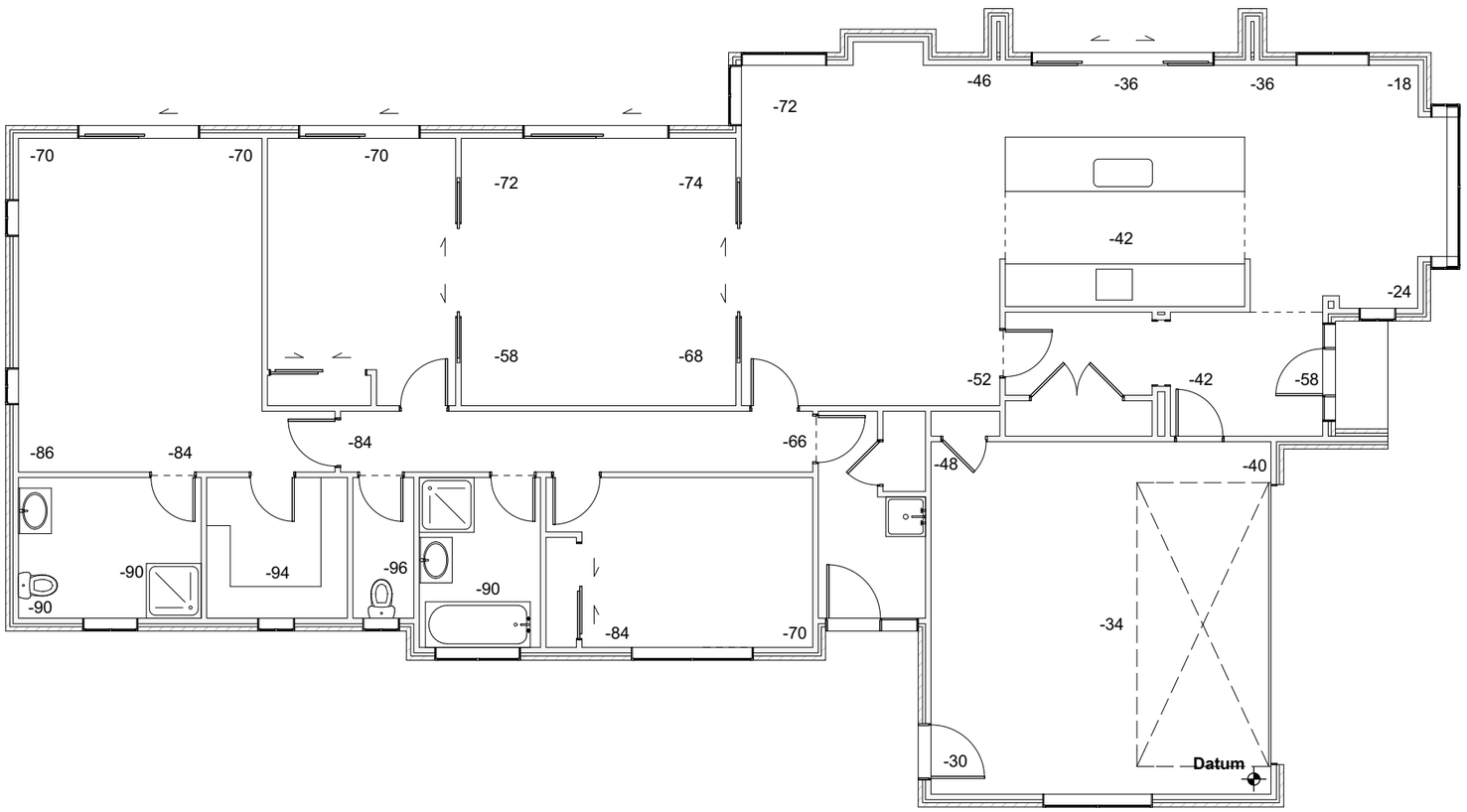
Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3	1:200
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved	
Date	

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Project Number: 170057
Sheet: S01
Rev ID: 00

Drawing Title: Site Plan/Sediment Control Plan
Project Status: Consent Issue



Ground Floor Pre-Level Survey

SCALE 1:100

Legend:

±X Indicates floor level above or below datum

- - - - - - - Indicates change in floor type

Notes:

1. Following relevelling the floor at each unit shall have
   i. maximum differential height of 50mm overall
   ii. 10mm within any room.
   iii. have a maximum slope of 1:200 (0.5%) between any to points more than 2m apart.
2. All levels shown on this plan are relative to the indicated datum.
3. All floor levels locations and slopes approximate

FRONTIER ENGINEERS
CIVIL, STRUCTURAL & REMEDIAL

PO Box 79183 Avonhead
Christchurch 8446

Unit 1, 35 Sheffield Crescent, Burnside 8053

Phone: 03 359 9192
Free Call: 0508 FRONTIER (0508 376 684)

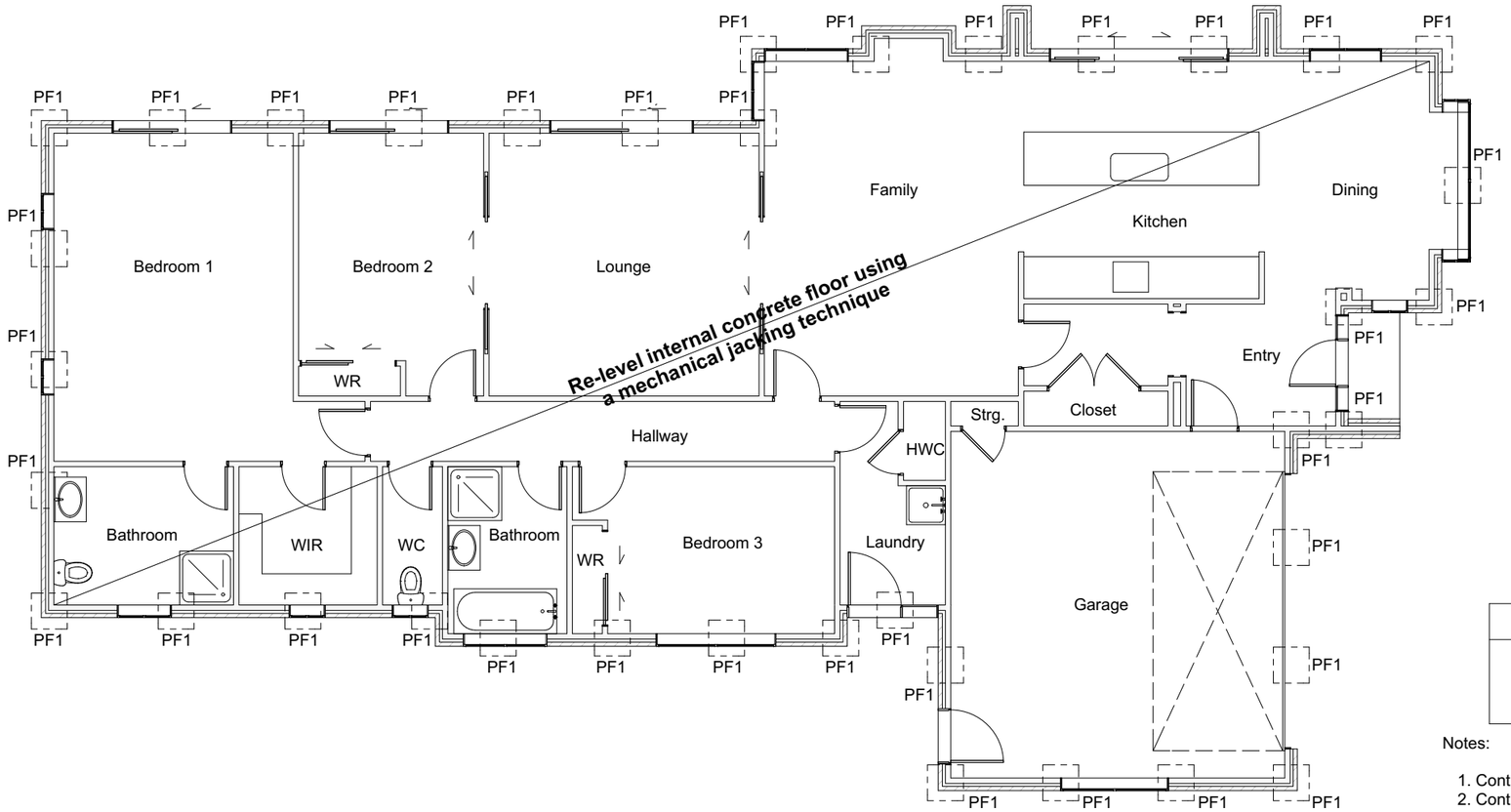
Email: admin@frontierengineers.co.nz

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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3	1:100
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved	
Date	

Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Ground Floor Pre-Level Floor Survey
Project Number	170057
Sheet	S02
Rev ID	00
Project Status	Consent Issue



Jack Pad Approximate Locations

SCALE 1:100

Schedule	
PF1	600x600sq. concrete pad footing at 2.0m crs*

Notes:

1. Contractor is to confirm all dimensions on site before commencing work
2. Contractor is to confirm floor levels at each pile or bearer support location to be packed.
3. Pad target depth is 0.5m min. below ground level.
4. Disconnect and reconnect services as required.
5. Ensure guttering falls to downpipes after relevelling.
6. Ensure all doors open and close properly.
7. All work to be carried out in accordance with NZS3604-2011.
8. Contractor to make all walls plumb.
9. Cracks in all concrete structures are to be repaired using proprietary product crack bond 'LR321G' supplied by adhesives technology corporation or approved equivalent.
   Cracks to be repaired up to a maximum of 5mm and any cracks of more than 5mm are to be repaired by using Helibar or any approved equivalent.
   Product to be installed strictly in accordance with manufacturers instructions

* Please note, positions of concrete pads are an approximate location setting

FRONTIER ENGINEERS
CIVIL, STRUCTURAL & REMEDIAL

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Christchurch 8446

Unit 1, 35 Sheffield Crescent, Burnside 8053

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Free Call: 0508 FRONTIER (0508 376 684)

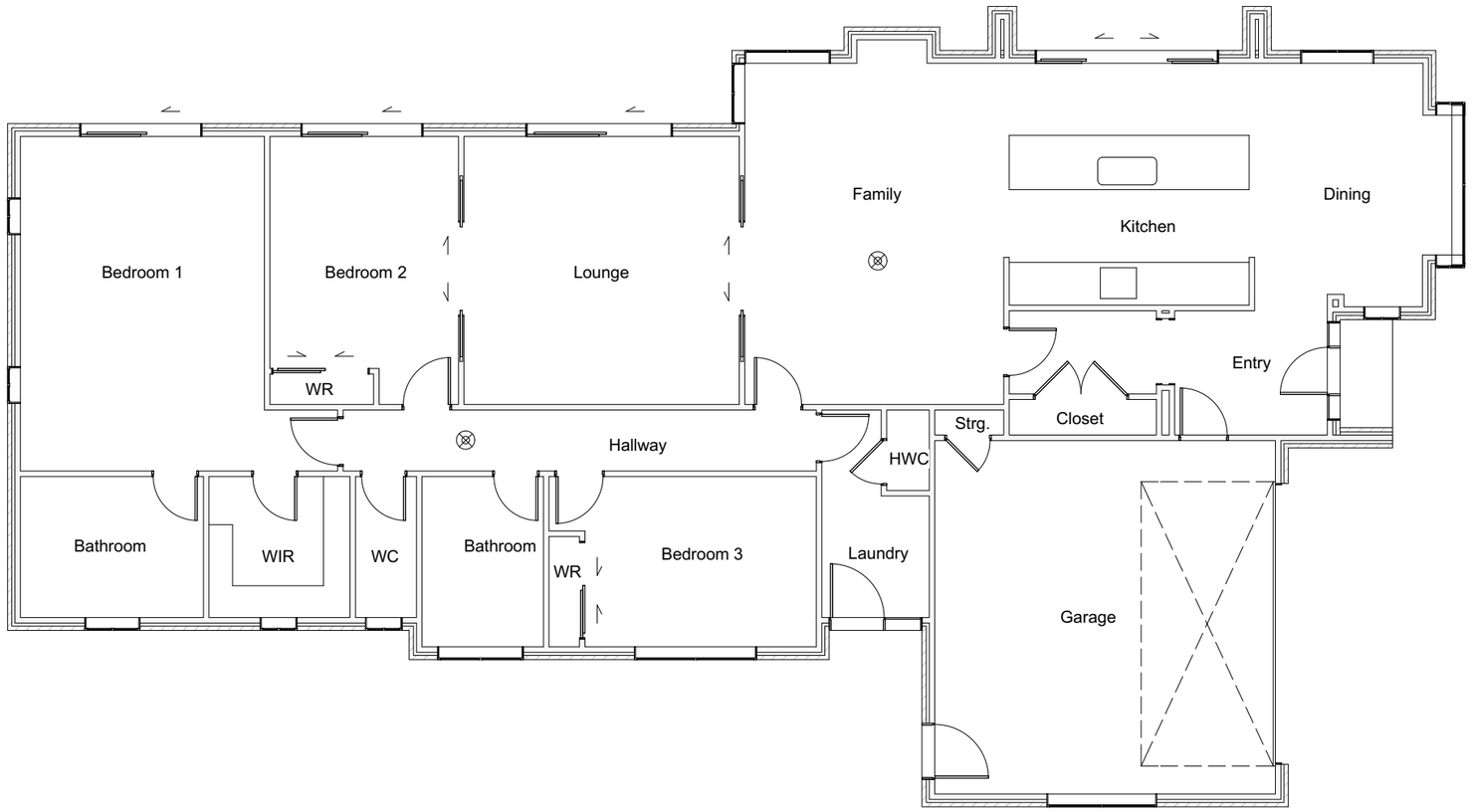
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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3	1:100
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved Date	

Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Ground Floor Jack Pad Approximate Locations
Project Number	170057
Sheet	S03
Rev ID	00
Project Status	Consent Issue



Smoke Detector Location

SCALE 1:100

Schedule	
⊗	Smoke Detector

Note:
All smoke detectors will be checked for complience with F7/AS1, and if non-compliant will be moved and/or installed to meet compliance as per drawing.

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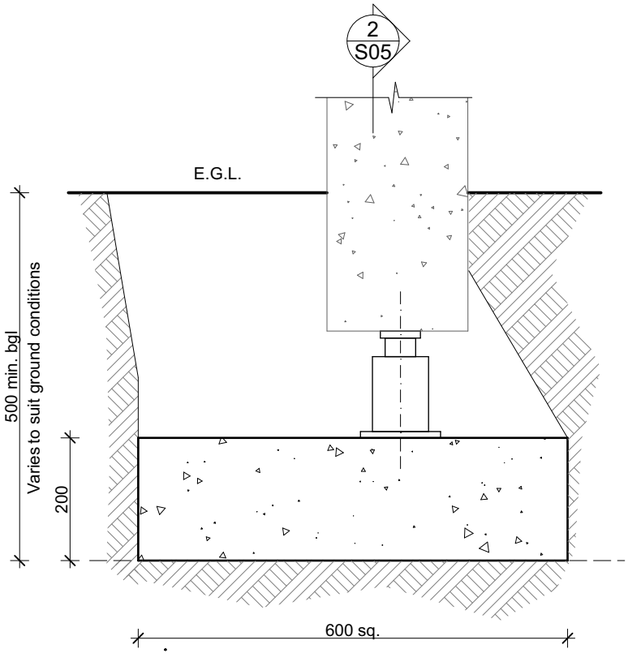
Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3: 1:100
Date: 16/03/2017
Design by: DC
Drawn by: DC
Approved
Date

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

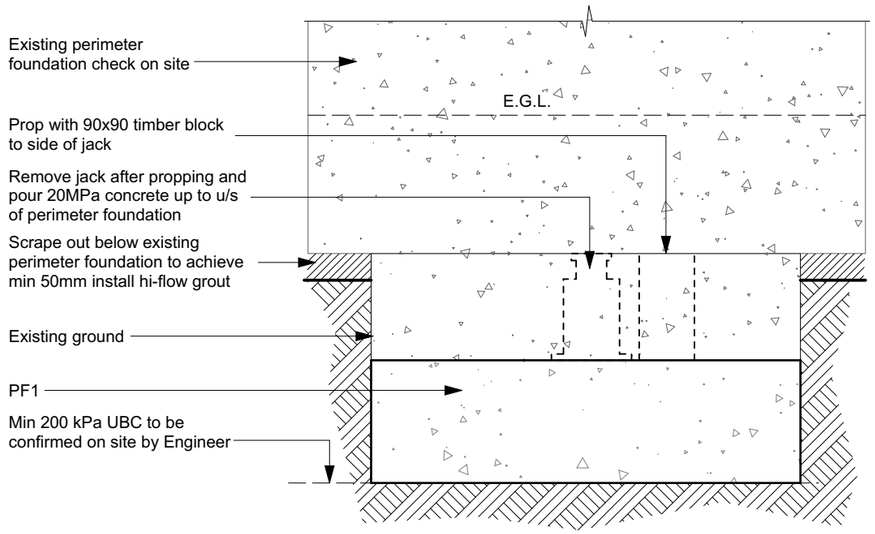
Project Number: 170057
Sheet: S04
Rev ID: 00

Drawing Title: Smoke Detector Location
Project Status: Consent Issue



1 - Re-levelling Pad Detail

SCALE 1:10



2 - Section

SCALE 1:10

Schedule	
PF1	600x600sq. concrete pad footing at 2.0m crs.

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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3	1:10
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved Date	

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Project Number: 170057

Drawing Title: Details

Sheet: S05

Rev ID: 00

Project Status: Consent Issue

GENERAL

G1. Read these drawings in conjunction with all architectural and other working drawings, specifications and with such other written instructions as may be issued during the course of the contract.
G2. Provide all workmanship and materials in accordance with the requirements of the current editions of the NZ Building Act, the NZ Building Code, the New Zealand Standards and the by-laws and ordinances of the relevant building consent authority.
G3. Comply as the builder, with requirements of the workplace health & safety act.
G4. Refer any conflict between these notes, the specification, the drawings or any other relevant documents to the engineer for decision prior to proceeding with the work.
G5. Do not obtain dimensions by scaling the drawings. For setting out dimensions and levels refer to the architectural drawings.
G6. The builder is responsible for the provision of all shoring to maintain the stability and integrity of excavations and adjacent structures. Provide details, for review by the Engineer, of any necessary temporary works, including shoring, prior to commencing construction.
G7. During construction it is the builder's responsibility to maintain the structure in a stable condition and to ensure no part is overstressed.
G8. The design and drawings are copyright and may not be used or reproduced in whole or in part without the written permission of the Engineer.
G9. Fire-resistance levels (FRL's) required for the various structural elements must be confirmed by the Building Surveyor or Architect.

LOADINGS

L1. Superimposed floor loads are generally in accordance with AS/NZS 1170.1 and specifically:

	1.5 kPa	Generally
	2.0 kPa	Balconies
	2.5kPa	Stairs

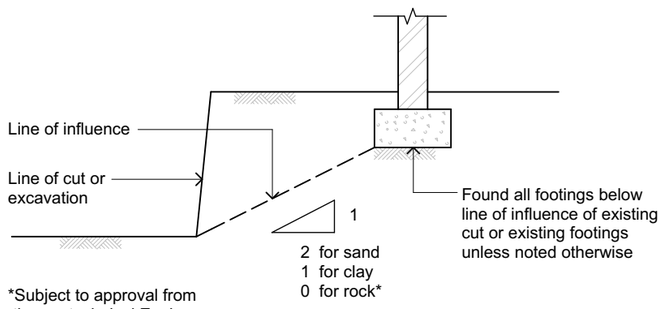
L2. Wind loads are in accordance with AS/NZS1170.2 for:

Terrain category:	2.5	Region: A7
Topographical multiplier of:	1.0	
Shielding multiplier of	1.0	

L2.2 Snow loads are in accordance with AS/NZS 1170.3 0.9kPa
L2.3 Earthquake loads are in accordance with NZS 1170.5

FOUNDATIONS

F1. The minimum safe ultimate bearing capacity of foundation material shall be:
Slabs & Footings: 200 kPa in natural substrate unless noted otherwise (U.N.O.)
F2. Foundation material shall be approved by the engineer prior to placing concrete.
F3. The bases of footing excavations shall be finished clean and horizontal and be embedded 300 into naturally occurring material.
F4. Founding levels where shown are for tender purposes only.
F5. Any proposed footing excavation near boundaries, other structures or services shall be approved by the Engineer.
F6. Subgrade shall be approved material compacted to 98% standard dry density determined by testing to the relevant part of NZS 4402:1986 U.N.O.
F7. Locate all new footings relative to line of cut/excavation including excavations as shown below:



*Subject to approval from the geotechnical Engineer

REINFORCED CONCRETE

C1. Provide all workmanship and materials in accordance with NZS 3101.1:2006, NZS 3109:1997 and NZS 3605:2011, their referenced documents, the drawings and the specification.
C2. Provide concrete grade and minimum clear concrete cover to reinforcement in accordance with NZS 3101:2006 & NZS 3604:2011 U.N.O.

CONCRETE GRADE	ELEMENT LOCATION U.N.O	MINIMUM CONCRETE COVER (mm)
20 MPa	Pad Footings Steps & Landings Paths & Driveways	25 against ground with DPM 75 against ground with no DPM 30 interior protected areas 50 exposed areas
25 MPa	Slabs & Foundations Suspended Stairs	25 against ground with DPM 75 against ground with no DPM 25 interior protected areas 50 exposed areas
30 MPa	Where Noted	20 against ground with DPM 45 against ground with no DPM 20 interior protected areas 50 exposed areas

C3. Support all reinforcement at 1 metre maximum centres both ways on mild steel plastic tipped chairs, plastic chairs or concrete chairs. Use only plastic chairs for externally exposed soffits.
C4. Provide all concrete with 80mm maximum slump and 20mm maximum aggregate unless approved by the Engineer.
C5. Sizes of concrete elements are net, exclusive of applied finishes. Beam depths are written first and include slab thickness.
C6. Properly form construction joints and use only where shown or approved by the Engineer.
C7. Reinforcement is represented diagrammatically and is not necessarily shown in true projection.
C8. Weld or splice reinforcement only in positions approved by the Engineer.
C9. Provide the minimum clear spacing between conduits, cables, pipes and bars as required by NZS 3109 but not less than three bar diameters. Do not place conduits in slabs above top reinforcement or below bottom reinforcement.
C10.

D	Denotes hot rolled deformed bars grade 300E.
HD, H	Denotes hot rolled deformed bars grade 500E.
R	Denotes hot rolled plain round bars grade 300E.
SE,RE	Denotes hard drawn wire fabric grade 500E.

C11. Notify the Engineer a minimum of 24 hours before reinforcement has been completed.
C12. Allow 2 hours after the completion of the reinforcement for the Engineer's inspection.
C13. Do not order concrete until reinforcement has been approved by the Engineer.
C14. Cure concrete in accordance with NZS 3109. Commence curing within two hours of finishing operations and continue for a minimum of seven days by using an approved proprietary compound or by keeping continuously wet.
C15. Tie all unsupported bars in transverse direction to D12-300, lapped 500 U.N.O.
C16. Lap fabric in accordance with clause 8.7.6 of NZS 3109.
C17. Provide hooks, laps and bends in accordance with NZS 3101 & NZS 3109 U.N.O.
C18. Provide chamfers, drip grooves etc. in accordance with the Architect's details.
C19. Design, construct and strip formwork in accordance with NZS 3109.
C20. Pre camber formwork upwards by 1/500 of the clear span U.N.O. where supported beams and slabs span greater than 5m.
C21. The concrete elements detailed have a F.R.L. of 60/60/60 U.N.O.

TIMBER

T1. Ensure all workmanship and materials are in accordance with NZS 3603:1993 and NZS 3604:2011, their referenced documents and the specification.
T2. Provide all interior timber as SG6 (dry) U.N.O.
T3. Provide all external timber as SG8 (dry) U.N.O.
T4. Where the use of treated timber for durability is noted on the structural drawings, ensure it complies with the parameters: Exposure Zone C in accordance with NZS 3604.
T5. Install proprietary timber connectors in accordance with the manufacturers written instructions.
T6. Retighten bolted connections in unseasoned timber prior to the fixing of cladding.
T7. Timber elements or timber framing have not been designed unless noted.
T8. All trusses to be pre-cambered upward 1/240 span.

STEELWORK

S1. Ensure materials, fabrication and erection are in accordance with NZS 3404, it's referenced documents and the specification.
S2. Shop drawings are to be approved by the Engineer prior to fabrication.
S3. Provide all welds as 6mm continuous fillet from E41xx electrodes, all bolts as M16-4.6/S and all cleats and gussets as 10mm plate U.N.O.
S4. For bolts, the following notation is used:
4/M16-4.6/s denotes 4 x M16 commercial grade bolts snug tight.
6/M20-8.8/tf denotes 6 x M20 high strength structural bolts fully tensioned in a no slip joint.
8/M24-8.8/tb denotes 8 x M24 high strength structural bolts fully tensioned in a bearing joint.
S5. Leave mating surfaces of 'tf' connections unpainted and free of mill scale and rust.
S6. Tighten bolts in 'tf' and 'tb' connections using the part turn method or load indicating washers. Do not use calibrated torque wrenches. Use a hardened washer under the bolt head or nut, whichever is rotated. The re-use of fully tensioned bolts is prohibited.
S7. Provide all cleats and drill all holes necessary for fixing steel to steel or timber.
S8. Fabricate steel beams and trusses spanning greater than 5m with an upward pre camber of 1/500 span U.N.O.
S9. Prepare structural steelwork to class 2 and paint with zinc phosphate primer to a thickness of 70 micrometres U.N.O.
S10. Hot dip galvanise all exposed external steelwork and all steelwork built into an external masonry skin, in accordance with grade HDG600 to AS/NZS 2312.
S11. Within 100m from the non-surf coast or 1 km from the surf coast, hot dip galvanise above in accordance with grade HDG900 to AS/NZS 2312.
S12. Provide fire protection to all steelwork as required.
S13. Ensure all cold formed sections conform to AS/NZS 4600 and are roll-formed from steel strip, minimum yield stress 450 MPa, 300 g/m² minimum zinc coating mass U.N.O.

MASONRY

M1. Ensure all workmanship and materials are in accordance with NZS 4230, the drawings & project specifications.
M2. Where masonry supports concrete slabs or beams, lay the top course with frogs down and covered with 2 layers of approved slip joint material.
M3. Walls shown shaded on plan are load bearing. Separate non-load bearing walls under slabs from the slab by 15mm of approved compressible material. Where masonry abuts slab downturns, form a 15mm gap between brickwork and side of downturn.
M4. Do not erect masonry supported by concrete slabs or beams until all formwork and props under have been removed.
M5. Provide all bricks of ultimate compressive strength $f'uc$ = 20 MPa U.N.O.
M6. Provide all hollow concrete masonry of ultimate compressive strength $f'uc$ = 15 MPa U.N.O.
M7. Provide classification M3 masonry mortar U.N.O. Note that within 100m from non-surf coast, or 1km from surf coast, provide classification M4 masonry mortar.
M8. Cut no chases into loadbearing masonry without the approval of the Engineer.
M9. Provide movement control joints vertically for full height of wall as follows:
For general masonry, at 8m maximum centres & 4m maximum from corners.
For articulated masonry, at 6m maximum centres & 4m maximum from corners.
Provide 15mm minimum joints with an approved compressible filler, tied together every 4th course with a MET 3.3 masonry sliding tie or approved equivalent.
M10. Construct hollow walls to full height or maximum 3m before filling cores. Provide cleanout openings at the base of all cores to be filled.
M11. Core fill $f'uc$ = 20 MPa concrete with 10mm aggregate, 180 slump U.N.O.
M12. Construct hollow masonry retaining walls using "double U blocks".
M13. Unreinforced masonry walls have not been designed unless noted.

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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3 1:1
Date 16/03/2017
Design by DC
Drawn by DC
Approved
Date

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Project Number: 170057
Sheet: S06
Rev ID: 00
Drawing Title: General Notes
Project Status: Consent Issue

Building Code Clause(s)…B1 ……

PRODUCER STATEMENT – PS1 – DESIGN

(Guidance notes on the use of this form are printed on page 2)

ISSUED BY: Frontier Engineers Ltd.....
(Design Firm)

TO: Liam Brewer
(Owner/Developer)

TO BE SUPPLIED TO: Christchurch City Council……
(Building Consent Authority)

IN RESPECT OF: Re-level of existing dwelling only.
(Description of Building Work)

AT: 16 Hemingway Place, Spencerville, Christchurch 8083
(Address)

…… **LOT** 35…… **DP** 319911 **SO** …….

We have been engaged by the owner/developer referred to above to provide …Structural Design of specific building elements and Supervision……..… services in respect of the requirements of
(Extent of Engagement)
Clause(s) B1/VM1 ..of the Building Code for
All ☐ or Part only ☒ (as specified in the attachment to this statement), of the proposed building work.

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

☒ Compliance Documents issued by the Ministry of Business, Innovation & Employment…B1/VM1 … …….or
(verification method / acceptable solution)

☐ Alternative solution as per the attached schedule … …

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

…Earthquake Repairs, 16 Hemingway Place, Spencerville, Christchurch 8083 and numbered 170057 S00-S06……;
together with the specification, and other documents set out in the schedule attached to this statement.
On behalf of the Design Firm, and subject to:
(i) Site verification of the following design assumptions ground as per Kirk Roberts Consulting Engineers report dated 4 June 2012…
(ii) All proprietary products meeting their performance specification requirements;

I **believe on reasonable grounds** that a) the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached schedule, will comply with the relevant provisions of the Building Code and that b), the persons who have undertaken the design have the necessary competency to do so. I also recommend the following level of construction monitoring/observation:
☐CM1 ☐CM2 ☐CM3 ☐CM4 ☐CM5 (Engineering Categories) or ☒ as per agreement with owner/developer (Architectural)

I, Alan Pearson … am: ☒CPEng 1024104 #
(Name of Design Professional)
☐Reg Arch …… .#

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

SIGNED BY …Alan Pearson…… ON BEHALF OF Frontier Engineers
(Design Firm)

Date …16/03/2017… (signature)……

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

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

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

Form 2A

Memorandum from licensed building practitioner: Certificate of design work

Section 45 and Section 30C, Building Act 2004

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

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

THE BUILDING

Street address: 16 Hemingway Place	
Suburb: Spencerville	
Town/City: Christchurch	Postcode: 8083

THE OWNER

Name(s):	
Mailing address:	
Suburb:	PO Box/Private Bag:
Town/City:	Postcode:
Phone number:	Email address:

BASIS FOR PROVIDING THIS MEMORANDUM

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

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

I, Alan Pearson carried out / ~~supervised~~ the following design work that is restricted building work

PRIMARY STRUCTURE: B1

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

PRIMARY STRUCTURE: B1

All RBW Design work relating to B1 (x)		( ) Carried out ( ) Supervised	
Foundations and subfloor framing (✓)	*Re-level of existing foundation only*	(x) Carried out (✓) Supervised	Refer drawing set from Frontier Engineers 170057
Walls (x)		( ) Carried out ( ) Supervised	
Roof (x)		( ) Carried out ( ) Supervised	
Columns and beams (x)		( ) Carried out ( ) Supervised	
Columns and beams (x)		( ) Carried out ( ) Supervised	
Other (x)		( ) Carried out ( ) Supervised	

EXTERNAL MOISTURE MANAGEMENT SYSTEMS: E2

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

		( ) Supervised	
Other (x)		( ) Carried out ( ) Supervised	

FIRE SAFETY SYSTEMS: C1 – C6

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

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

Note: continue on another page if necessary.

WAIVERS AND MODIFICATIONS

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

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

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

Note: continue on another page if necessary.

ISSUED BY

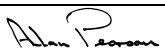
Name: Alan Pearson	LBP or Registration number: 1024104
The practitioner is a: (x) Design LBP (x) Registered architect (✓) Chartered professional engineer	
Design Entity or Company (optional): Frontier Engineers Ltd.	
Mailing address (if different from below): PO Box 79183, Avonhead, Christchurch, 8446	
Street address / Registered office: 1/35 Sheffield Crescent	
Suburb: Burnside	Town/City: Christchurch
PO Box/Private Bag:	Postcode: 8053
Phone number:	Mobile: 027 923 7888
After Hours:	Fax:
Email address: admin@frontierengineers.co.nz	Website: www.frontierengineers.co.nz

DECLARATION

I, Alan Pearson , CP Eng 1024104,

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

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

Signature: 

Date: 16 Mar 2017

CONSTRUCTION MONITORING SCHEDULE
JOB LOCATION: 16 Hemingway Place, Spencerville, Christchurch 8083
FILE NUMBER: 170057

Construction monitoring site visits relating to compliance with the building consent documentation and for verification of design assumptions are required as follows:

	TIME	NUMBER OF VISITS
1	Base of excavation pads	1-2
2	Post floor level survey	1-2

A site inspection report will be sent within 24hrs after inspection to the Client. A Producer Statement 4, Construction Review, could be issued once the above monitoring site visits have been completed. It is the Clients responsibility to notify the Engineer to enable the above site visits to be completed.

D. Chernushkin

Dmitry Chernushkin
Frontier Engineers Ltd.

Design Feature Report

Re-level of Existing Residential Building

Location 16 Hemingway Place, Spencerville, Christchurch 8083
Client Liam Brewer

Job No: 170057
Issue Date: 16-Mar-17
Revision: 00

FRONTIER ENGINEERS Ltd
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Document Quality Assurance Record

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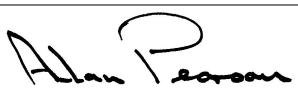
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Document Transmittal

Rev	Date	Revision Details/Status	Author	Approver
00	16 March 2017	Issue to Client	Dmitry Chernushkin	Alan Pearson

Author Signature:		**Approver Signature:**	
Name:	Dmitry Chernushkin	**Name:**	Alan Pearson
Title	Engineer	**Title**	Director CPEng 1024104

Introduction:

The existing Residential Building was damaged in the Canterbury Earthquake Sequence (CES) including differential settlement. The structural integrity of the dwelling is satisfactory; however, re-levelling is required to amend floor slopes that exceed slopes of 1:200.

Scope of work:

Frontier Engineers has been engaged by Liam Brewer to prepare technical documentation and certification for the re-level of the existing Residential only:

- Technical drawings of the proposed repairs
- Producer Statement 1
- Memorandum of Works
- Construction Monitoring Schedule
- Site inspection reports
- Producer Statement 4

Exclusions:

- All repair works other than re-levelling or direct repairs to the foundation system
- Strengthening of the Residential Building in anyway
- Future proofing of the Residential Building in anyway
- Any work above foundation level
- The works are assumed to be carried out under a Consent Exemption, and on this basis we refer to the Guidance for Building Work that Does Not Require a Building Consent (Building Act 2004) issued by the MBIE regarding section 42A of the Building Act,

  (a) the building work complies with the building code to the extent required by this Act:
  (b) after the building work is completed, the building:
  (i) if it complied with the building code immediately before the building work began, continues to comply with the building code; or
  (ii) if it did not comply with the building code immediately before the building work began, continues to comply at least to the same extent as it did then comply.

I.e. where specific parts of the building are modified our intention is to ensure that the building will function structurally to at least the same extent as it did prior to repairs, but may not necessarily be brought up to the current building code requirements.

Reference:

- Geotechnical report by Kirk Roberts Consulting Engineers Ltd Project No. 121195, dated 4 June 2012.
- NZS3101 Concrete Structures
- MBIE Guidance

Building Summary:

Foundation Type:	C – Concrete slab on grade
Structural Framing:	Timber framing
No. of Storeys:	1
Wall Cladding Weight:	Heavy – clay brick veneer
Roof Cladding Weight:	Light – pressed steel
Technical Category:	TC3
200kPa Bearing:	@ 0.5mbgl
Target Pad Depth:	0.5mbgl
Minimum Pad Size:	600mm x 600mm
Typical Pad Spacing:	2.0m
Max Pad Spacing:	2.5m

Design Philosophy:

Re-levelling

Mechanical jacking of the concrete structures using portable jacks and excavations at the lifting locations. The lifting locations are considered temporary until the dwelling is reinstated to its pre-earthquake condition. Any additional material or concrete works that remain on site are not considered to decrease any future performance, nor is it to be relied on as betterment or considered to increase performance during future earthquake events.

It is common for further cracking to occur as a result of re-levelling processes, which may require additional repairs, and needs to be completed prior to completion of works.

The concrete foundations have been assessed based on minimum steel design, but an additional design check has been made to consider the consequences of no reinforcement, and the concrete required to span using the flexure tensile capacity only.

As part of this assessment we have not considered the permanent lateral stretch of the building, or any other complications that may arise from re-levelling the building. Additionally, we do not know the condition of the dwelling prior to re-levelling, or the differential settlement of the foundations prior to the earthquake events. For this reason, it may not be practical to re-level the foundations where historical or long term settlement has previously occurred.

As the loading on the re-levelling pads is temporary, we have considered a safety factor of 2 for the ultimate bearing capacity.

APPENDIX – Design calculations

- Foundation Loading
- Re-levelling pads
- Concrete beam span
- Relevant Geotechnical

STANDARD CALCULATION TEMPLATE

JOB NAME: 16 Hemingway Place
JOB NO.: 170057
ENGINEER: DC
DATE: 09.03.2017

JOB DESCRIPTION:

Re-level of existing residential dwelling using a mechanical jacking technique

- Type C2 foundation
- Single storey dwelling
- Brick veneer wall cladding
- Light pressed steel roof cladding

STANDARD NOTATION AND DEFINITIONS

ACRONYMS

Foundations		Floor	
SF1	Strip Footing	FB1	Floor Bearer
PF1	Pad Footing	FJ1	Floor Joist
EB1	Edge Beam	SP1	Stringer Plate
IB1	Internal Beam	FP1	Pile
IR1	Internal Rib	VCJ	Vertical Control Joint
WP	Weld Plate		
SCJ	Saw Cut Joint		
CJ1	Control Joint		
CKJ	Connolly Key Joint		

Wall		Roof	
EW1	External Wall	R1	Rafter
IW1	Internal Wall	P1	Purlins
FW1	Fire Wall	VB	Veranda Beam
L1	Lintel	RB1	Roof Bracing
C1	Column	B1	Beam (steel or timber)
		B1	Ridge Beam

Other

TC#	Technical Category according to CERA for liquefaction risk
NZS	New Zealand Standard
MBIE	Ministry of Building, Innovation and Employment

DEFINITIONS

Along	Along the ridge line (Longitudinal)
Across	Across the ridge line (Transverse)

NZS 1170.0 - DESIGN ACTIONS - PART 0: GENERAL PRINCIPALS

REF

3.3 IMPORTANCE LEVEL

T 3.1 Structure designed for importance level **2**

T3.1 Consequence of failure ORDINARY

T3.1 Description: Medium consequence for loss of human life, or considerable economic, social or environmental consequences

T3.1 Comment: Normal structures and structures not falling into other levels

T3.2 Importance level desciption: Normal structures and structures not in other importance levels

3.4 ANNUAL PROBABLITY OF EXCEEDENCE

T3.3 Design working life **< 6 months**

Design annual probability of exceedence

Wind	ULS	1/100
Snow	ULS	1/50
Earthquake	ULS	1/100
SLS1	Service	1/25
SLS2	Service	-

3.4.2 *SLS1 — the structure and the non-structural components do not require repair after the*

3.4.2 *SLS1 earthquake, snow or wind event*

SLS2—the structure maintains operational continuity after the SLS2 earthquake (Importance L4 only)

NZS 1170.1 - PART 1: PERMANENT, IMPOSED AND OTHER LOADS

REF

4.2 COMBINATION FACTORS

G	Dead Loads (Permanent)
Q	Live Loads (Imposed)
ψ	load factor

4.2.2 Design Combinations for Strength

1.35G	Dominate Permernate Action
1.2G + 1.5Q	Permanent and Imposed Action
$1.2G + W_u$ (Down) + $\psi_c Q$	Permanent , Wind and Imposed Action
$0.9G + W_u$ (Up)	Permanent , Wind Reversal
$1.2G + S_u + \psi_c Q$	Permanent, Snow and Imposed
$1.0G + E_u + \psi_c Q$	Earthquake ULS

T4.1

ψ_c =	0.4 for roofs
	0.6 storage
S_u =	0.9kPa Minimum for Christchurch

4.3 Design Combinations for Servicabiltiy

$G + \psi_c Q$	Permanent and Imposed Action
E_s	Earthuquake SLS1

S5 METHOD OF ANALYSIS

STATIC

ELASTIC

NZS 1170.1 - PART 1: PERMANENT, IMPOSED AND OTHER LOADS
NZS 3604 - TIMBER FRAMED BUILDINGS - DESIGN LOADING

REF

3604 **Live Loading (Q)**

T1.2	Dwelling Floor Live Load	1.5	kPa	A1
	Dwelling Balconies/Decks	2.0	kPa	A1
	Dwelling Bathrooms	2.0	kPa	A2
	Communal Kitchens	3.0	kPa	A2
	Offices and Work Areas	3.0	kPa	B
	Dwelling Roof Load	0.25	kPa	

Dead Loading (G) - including timber framing

Branz	Light Roof	0.40	kPa		
3604	Heavy Roof	0.85	kPa		
	Light Wall	1.20	kN/m	H=	2.4
	Medium Wall	2.80	kN/m	H=	2.4
	Heavy Wall	6.40	kN/m	H=	2.4
	190 Block Wall	8.40	kN/m	H=	2.4
	190 Block Wall	11.40	kN/m	H=	2.4
	Timber Subfloor	0.40	kPa		
	Suspended Timber Floor	0.40	kPa		

Material Densities

$\mu_{Concrete}$	25.0	kN/m^3
μ_{Timber}	6.0	kN/m^3
μ_{Steel}	72.5	kN/m^3

NZS 3604 - TIMBER FRAMED BUILDINGS - DURABILITY

REF

3604 **Exposure Zone for Chrisrchurch** C

F4.2



NOTE – Zone D includes all offshore islands, the area within 500 m of the coastline of New Zealand, and those areas shown in white. The map shall be read in conjunction with 4.2.2.

T4.1

ZONES B AND C	Treated timber pile connections more than 600 mm from the ground and all subfloor connections	Subfloors vented 7000 mm² or less	SHELTERED[4]	Hot-dipped galvanized steel[2]
		Subfloors vented more than 7000 mm²	EXPOSED	Type 304 stainless steel[5]
	Treated timber pile connections within 600 mm of the ground	SHELTERED[4] AND EXPOSED		Type 304 stainless steel[5]
	All other structural fixings, except fabricated brackets[3]	SHELTERED[4]		Hot-dipped galvanized steel[2]
		EXPOSED		Type 304 stainless steel[5]
ZONE D	All structural fixings	SHELTERED[4] AND EXPOSED		Type 304 stainless steel[5]

SPECIFIC ENGINEERING DESIGN - RE-LEVELLING PAD
MBIE - Mechanical Re-levelling of Concrete Perimeter Beam (Type B1/B2)

Roof Load width	**6.5**	m	
First Floor Load Width	**0.0**	m	
` Ground Floor Load With	**4.5**	m	(Worst Case)

Dead Loads		**Mass**	**Load**
Roof	**Light**	0.40	2.60
First Floor Wall	**Nil**	0.00	0.00
First Floor	**Nil**	0.00	0.00
Ground Floor Wall	**Heavy**	2.20	5.28
Ground Floor	**Heavy**	2.50	11.25
Foundation	**Heavy**	-	4.50
		Total	**23.63**
Live Load			
Roof	**Ped Traffic**	0.25	1.63
First Floor	**Nil**	0.00	0.00
Ground Floor	**Residential**	1.50	6.75
		Total	**8.38**
Load Case	G + 0.3Q		**26.14**

Max Spacing of Jack Points	2.00	m	
Design Lift Load	52.29	kN	
Min Pad Size	**0.6 x 0.6**	m	
Min Pad Area	0.36	m^2	
Max Bearing Load	145.24	kPa	
Min Soil UBC	**200**	kPa	
Design Soil SBC	100	kPa	L.o.S = 2
Capacity Ratio	**0.7**		

NAME: 16 Hemingway Place **SHEET No.** 8
DATE: 09.03.2017 **REF: 170057**

SPECIFIC ENGINEERING DESIGN - RE-LEVELLING PAD
MBIE - Mechanical Re-levelling of Conc Edge Beam (Type C1/C2)

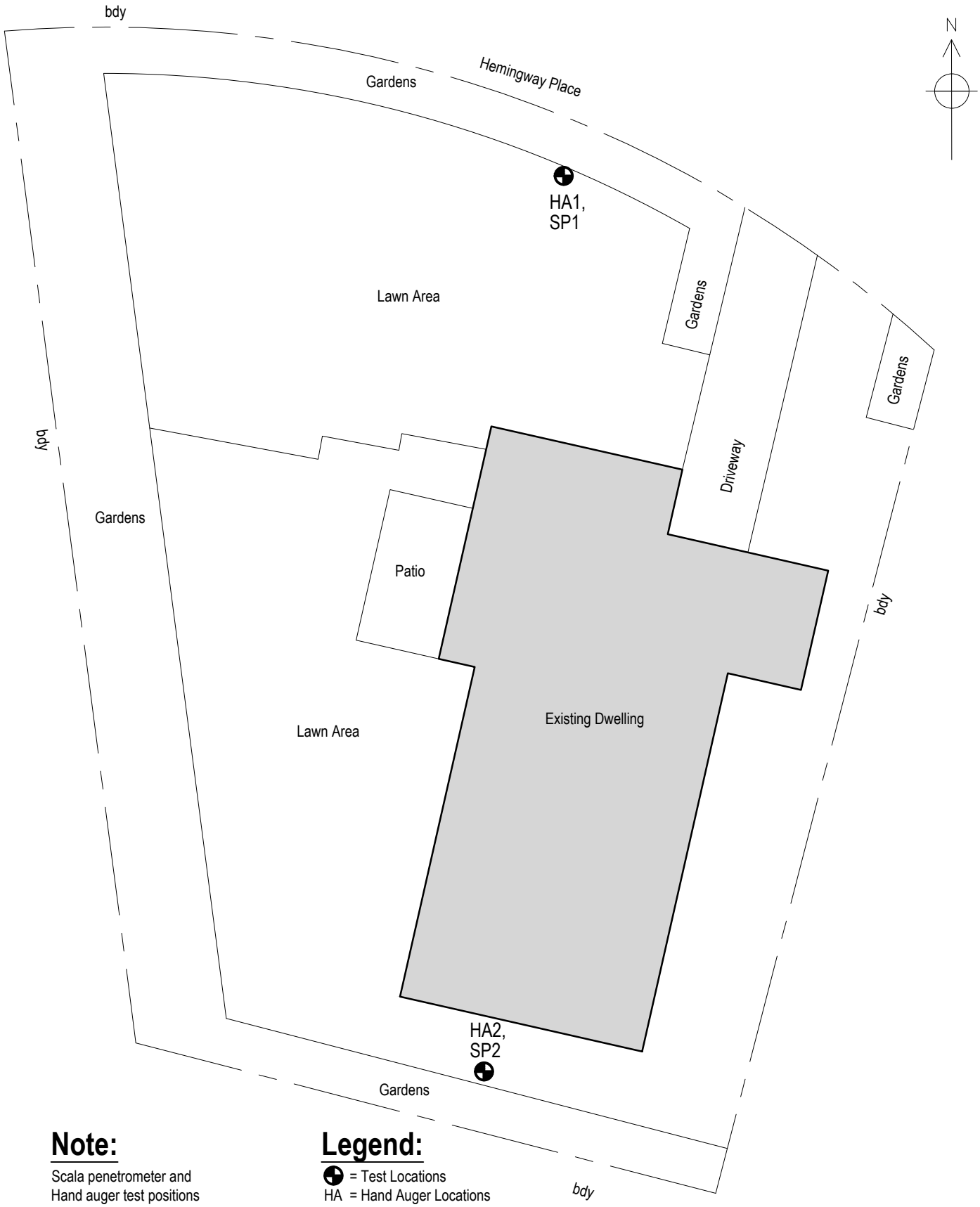
Beam Type	**Slab Edge Thickening**			
Assumed Size	450Dx250W			
Assumed No. Reo Bars	**2**			
Assumed Size of Reo Bars	**D16**		402.1	mm^2
Assumed grade of Reo	**300**			
Assumed concrete strength	**17.5**			

For conservative design assumed simply supported conditions

Design Load	26.14	kN/m	
Design Span	2.00	m	
Design Moment	13.07	kN.m	$wL^2/8$
Design Shear	52.3	kN	wL
Beam Check 1 - Moment	35.63	kN.m	$\phi Mb = \phi As\ fy\ (d-a/2)$
Capacity Ratio	**2.7**		
Beam Check 2 - Shear	33.1	kN	$0.08\sqrt{f_c'}$ ..
Capacity Ratio	**0.6**		NZS 3101 EQ 9-5

NAME: 16 Hemingway Place **SHEET No.**
DATE: 09.03.2017 **REF: 170057**

KIRK | ROBERTS
CONSULTING ENGINEERS LTD



Note:

Scala penetrometer and Hand auger test positions and boundaries are indicative only

Legend:

= Test Locations
HA = Hand Auger Locations
SP = Scala Penetrometer Locations
Bdy = Boundary Locations

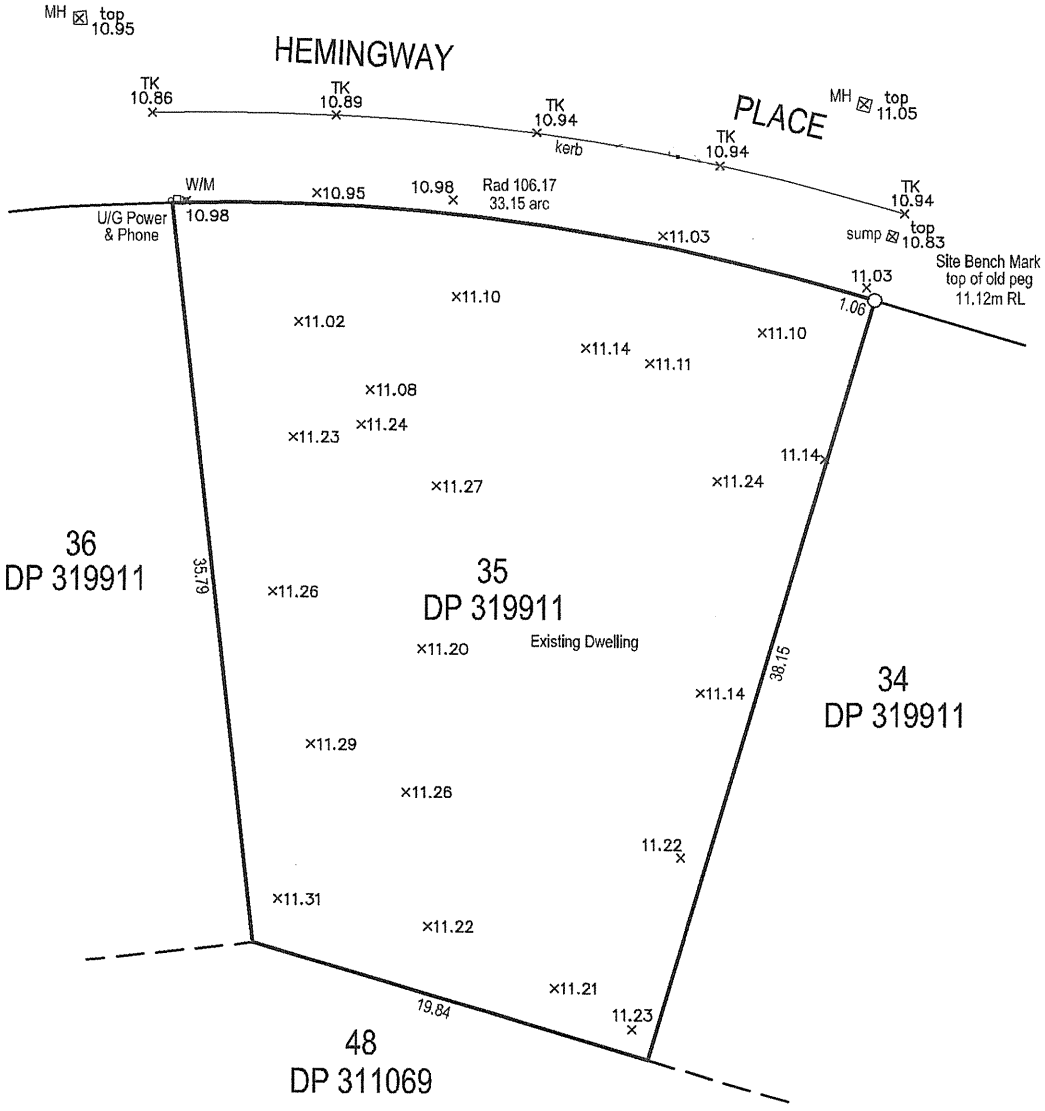
DO NOT SCALE - IF IN DOUBT, ASK
ORIGINAL SIZE A4
CAD REF :

SCALES :	1:200
	DATE
DESIGNED	
DRAWN	05.07.12 - GJT
CHECKED	
APPROVED	

RUSSEL WENN AND JULIE COLLIER
16 HEMINGWAY PLACE

SOIL TEST LOCATIONS

Job No.	Sheet No.	Rev.
121195	SK1	1



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F 03 352 5527
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AMBERLEY 03 314 9200
ASHBURTON 03 307 7021
DARFIELD 03 318 8151

Levels at No.16 Hemingway Place, Spencerville

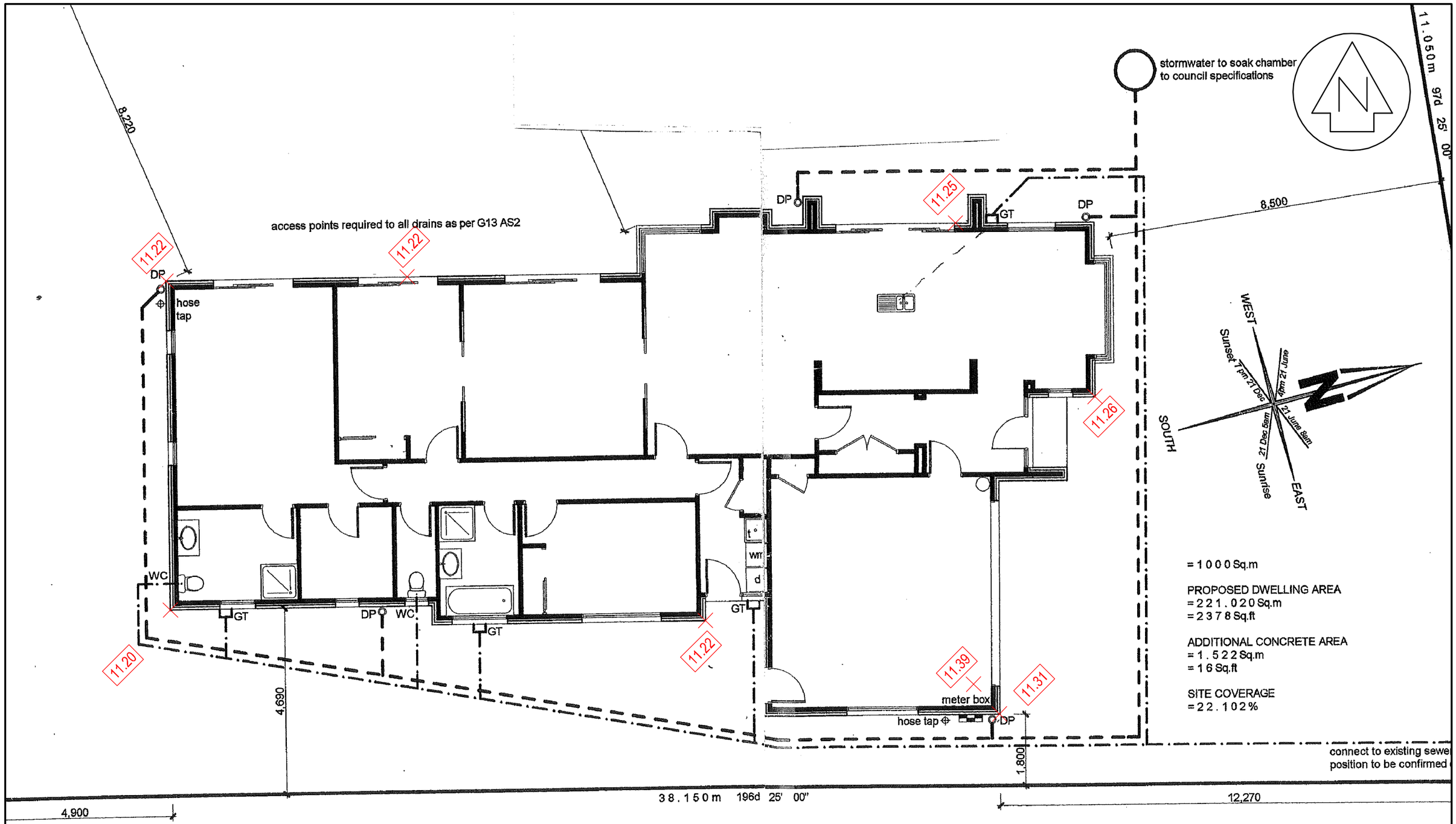
Russell Wenn & Julie Collier

Rev	Date	By	Amendments
A	03/08/12	SRS	Levels

Note:
Levels are in terms of CCC Datum
BM EHDB 11.31m RL

DATE	SHEET	REV
August 2012	1 of 1	A
SCALES	JOB REF	
1 : 250 (A3)	10791	

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Peter Ray Homes

NOTE

1. All work shall comply with NZS 3604:1999
2. All windows and doors to comply with NZS 4211:1985
3. Glazing to comply with NZS 4223:1985 & Pt 3 1993
4. Contractor must verify all dimensions on site prior to

Rev No.	Date	Amendment
A	03.11.03	remove gas fire, move gas bottles, change bay window

Drawn: A. Fahey
Date: 28.10.03
Scale:

Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title

Sheet No. 4

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Foundation Levels

16 Hemingway Place, Spencerville — Russell Wenn & Julie Collier

Rev	Date	By	Amendments
A	03/08/12	SRS	Levels

Note:
Levels are in terms of CCC Datum
BM EHDB 11.31m RL

DATE	SHEET	REV
August 2012	1 of 1	A
SCALES: Proportional	JOB REF: 10791	

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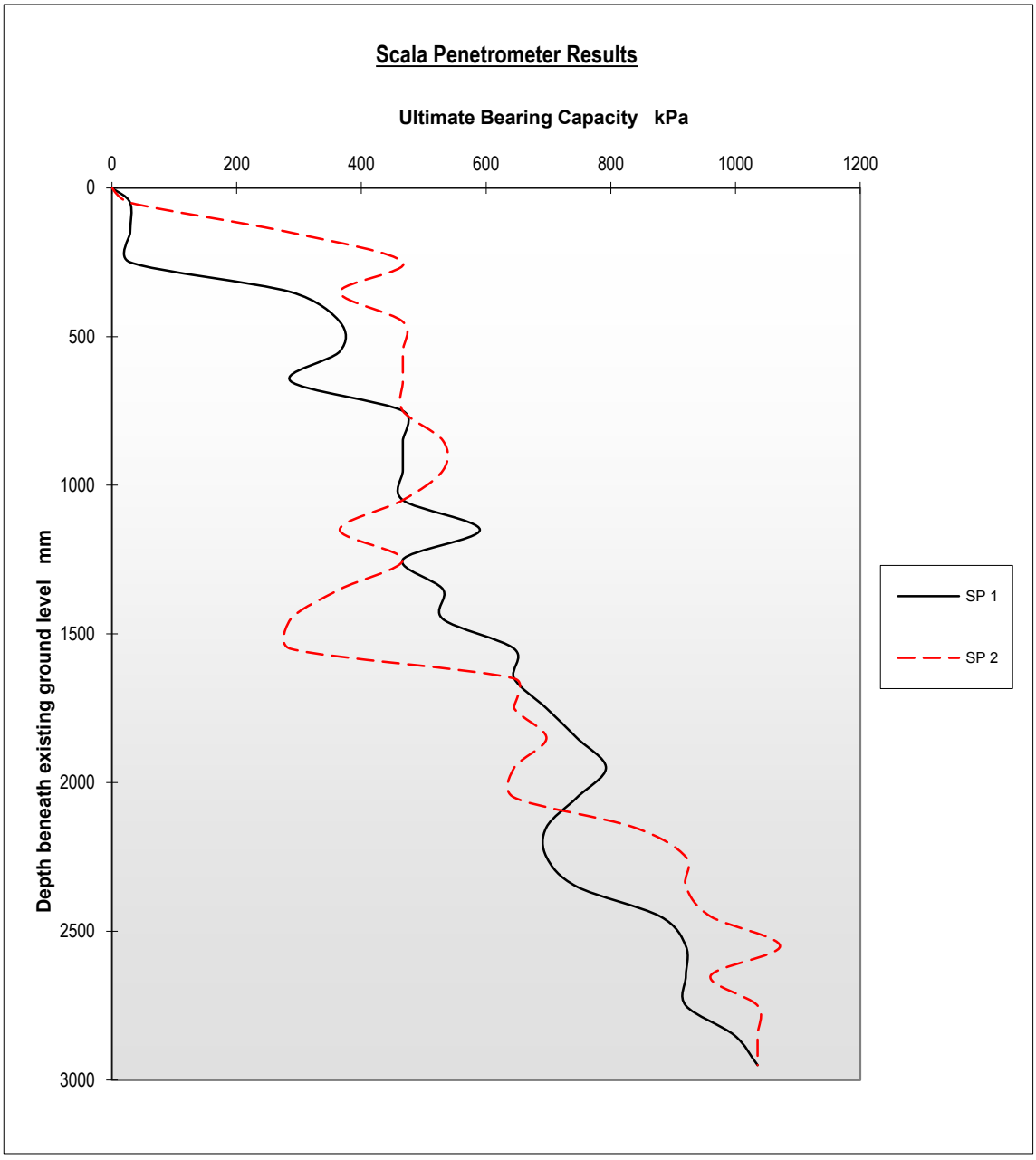
Location:				16 Hemingway Place_CPTU001
Date:				4/03/2013
Core %	Method	Moisture	Depth	Soil Description:
				Soil Type, minor components, plasticity or particle size, colour Rock Description: SUBSTANCE: Rock Type, particle size, colour, minor components DEFECTS: Type, inclination, thickness, roughness, filling.
			0m	
	CPTU		15m	CPTU001 to 15m
			END	

Location:				16 Hemingway Place_CPTU002
Date:				4/03/2013
Core %	Method	Moisture	Depth	Soil Description:
				Soil Type, minor components, plasticity or particle size, colour Rock Description: SUBSTANCE: Rock Type, particle size, colour, minor components DEFECTS: Type, inclination, thickness, roughness, filling.
			0m	
	CPTU		15m	CPTU002 to 15m
			END	

SCALA PENETROMETER RESULTS - COMBINED

JOB NUMBER 121195

Job Name:	Russell Wenn and Julie Collier
Site Address:	16 Hemingway Place
Town/City	Brooklands
Date:	4-Jun-12
Weather:	Wet
Operator:	HAV



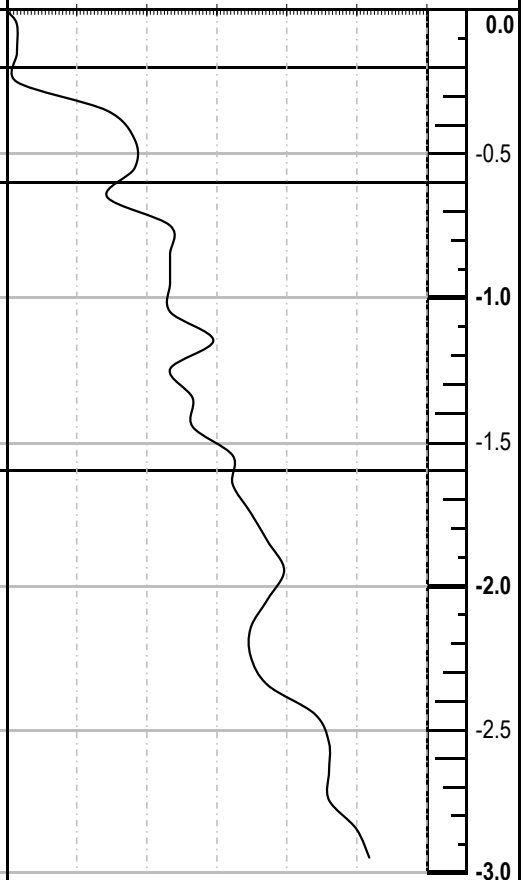
THIS REPORT IS PREPARED SOLEY FOR THE CLIENT WHO COMMISSIONED IT AND KIRK ROBERTS LTD WILL NOT ACCEPT ANY LIABILITY OF ANY KIND FOR THE USE OF ITS CONTENTS BY ANY OTHER PERSON.
BORE LOGS AND SCALA PENETROMETER TESTS ARE DISCRETE TESTS OF THE GROUND AT THE LOCATION OF THE TESTS ONLY. WHILE THEY ARE REPRESENTATIVE OF TYPICAL CONDITIONS, THEY DO NOT IDENTIFY VARIATIONS IN THE GROUND IN LOCATIONS AWAY FROM THE TEST AREAS.

SCALA PENETROMETER & HAND AUGER RESULTS

KIRK ROBERTS CONSULTING ENGINEERS LTD

		Scala Penetrometer:	**SP1**
		Hand Auger:	**HA1**
		Project No.:	**121195**
Client:	Russell Wenn and Julie Collier	**Date:**	04/06/12
Site Address:	16 Hemingway Place	**Weather:**	Wet
Town/City:	Brooklands	**Operator:**	HAV

Geological Formation:	Depth (m)	Sample Description:	Graphic:	USCS	Water Table	Undrained Shear Strength Su (kPa)
	0.0	**TOPSOIL** Brown organic silt, soft, wet.		OL		
	-0.5	**silty SAND** Light brown silty sand, fine to medium sand medium dense, wet.		SM		
	-1.0	**SAND** Brown fine sand, medium dense, wet. Becoming dark brown-grey, medium dense, saturated.		S	04/06/12 ▼	
	-1.5	Sand becoming dense.				
	-2.0	EOH at 1.6 m depth in dense saturated collapsing sand.				
	-2.5					
	-3.0					
	-3.5					
	-4.0					
	-4.5					



Scala Penetrometer and Test Bore log tests give an indication of the ground condition at the location of the tests only. While they are representative of typical conditions across the site, they do not identify variations in the ground away from the test locations.

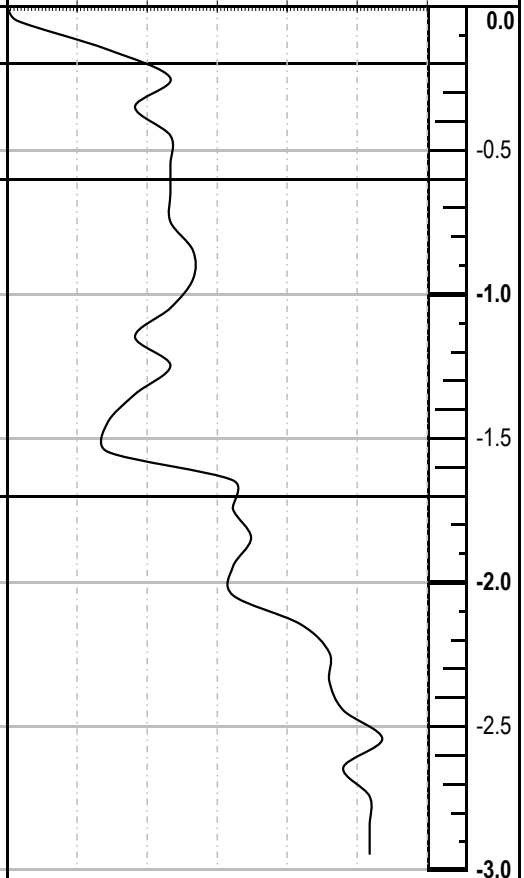
SCALA PENETROMETER & HAND AUGER RESULTS

KIRK ROBERTS CONSULTING ENGINEERS LTD

		Scala Penetrometer:	**SP2**
		Hand Auger:	**HA2**
		Project No.:	**121195**
Client:	Russell Wenn and Julie Collier	**Date:**	4 June 2012
Site Address:	16 Hemingway Place	**Weather:**	Wet
Town/City:	Brooklands	**Operator:**	HAV

Geological Formation:	Depth (m)	Sample Description:	Graphic:	USCS	Water Table	Undrained Shear Strength Su (kPa)
	0.0	**TOPSOIL** Brown organic silt, soft, wet.		OL		
	-0.5	**silty SAND** Light brown silty sand, fine to medium sand medium dense, wet		SM		
	-1.0	**SAND** Brown fine sand, medium dense, wet. Becoming dark brown-grey, medium dense, saturated.		S	04/06/12 ▼	
	-1.5	Sand becoming dense.				
	-2.0	EOH at 1.7 m depth in dense saturated collapsing sand.				
	-2.5					
	-3.0					
	-3.5					
	-4.0					
	-4.5					

Ultimate Bearing Capacity (kPa)



Scala Penetrometer and Test Bore log tests give an indication of the ground condition at the location of the tests only. While they are representative of typical conditions across the site, they do not identify variations in the ground away from the test locations.

APPENDIX B

- Project Orbit: Canterbury Geotechnical Database
    - Geological Section location plan



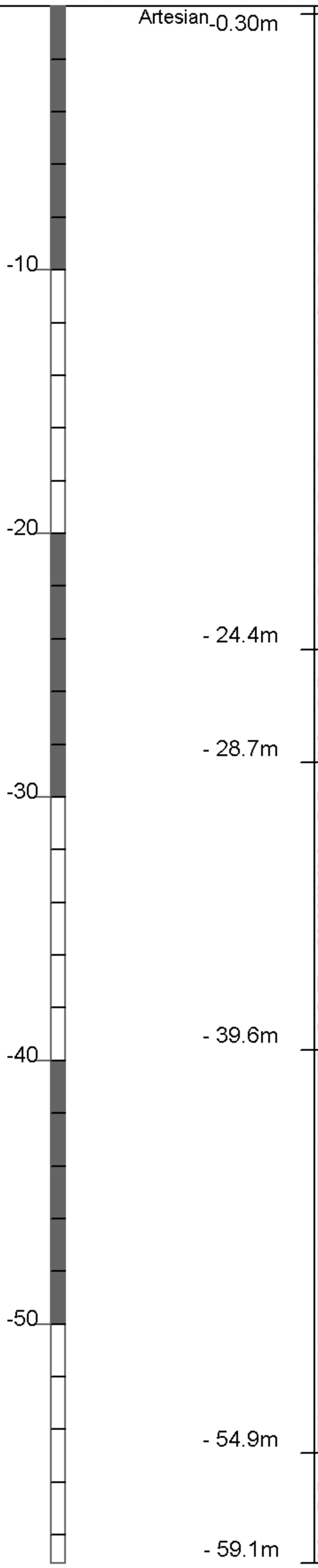
Figure 1: Geological Section location plan.

- Tonkin & Taylor Limited Geological Cross Sections
    - XS-SPE-02
    - XS-SPE-06

Borelog for well M35/1338

Gridref: M35:8527-5332 Accuracy : 3 (1=high, 5=low)
Ground Level Altitude : 2.8 +MSD
Driller : not known
Drill Method : Driven Pipe
Drill Depth : -59.09m Drill Date :

Environment Canterbury Regional Council



Scale(m)	Water Level	Depth(m)	Full Drillers Description	Formation Code
	Artesian	0.30m	Topsoil	ch
			Blue sand	
		- 24.4m	Blue shingle	ch
		- 28.7m	Brown shingle. Water level rises o.6m	ri
		- 39.6m	Yellow clay, Blue sand, peat	ri
		- 54.9m	Brown shingle. Water level rises 1.8m	br
		- 59.1m		li-1

Borelog for well M35/5965

Gridref: M35:8559-5274 Accuracy : 4 (1=high, 5=low)
Ground Level Altitude : 2 +MSD
Driller : Stevens J O
Drill Method : Cable Tool
Drill Depth : -34m Drill Date : 1/06/1988

Environment Canterbury Regional Council

Scale(m)	Water Level	Depth(m)	Full Drillers Description	Formation Code
	-1.7CalcMin		Coarse sand	
-5				
-10				
		- 12.2m	Fine Blue sand	ch
-15				
-20				
-25				
		- 25.6m	Fine gravel,shells & sand	ch
		- 28.1m		ch
		- 28.7m	Peat & pug	ch
-30			Sandy Blue gravel ,no water movement	
		- 31.6m		ri
		- 32.0m	Mixed Blue & Brown gravel.good water	ri
			Brown gravel.good water	
		- 34.0m		ri

APPENDIX C

- Liquefaction analysis results for:
  - 25 year earthquake event (PGA = 0.13)
  - 500 year earthquake event (PGA = 0.35)

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Geotechnical Engineers
221 Barbadoes Street
www.kirkroberts.co.nz

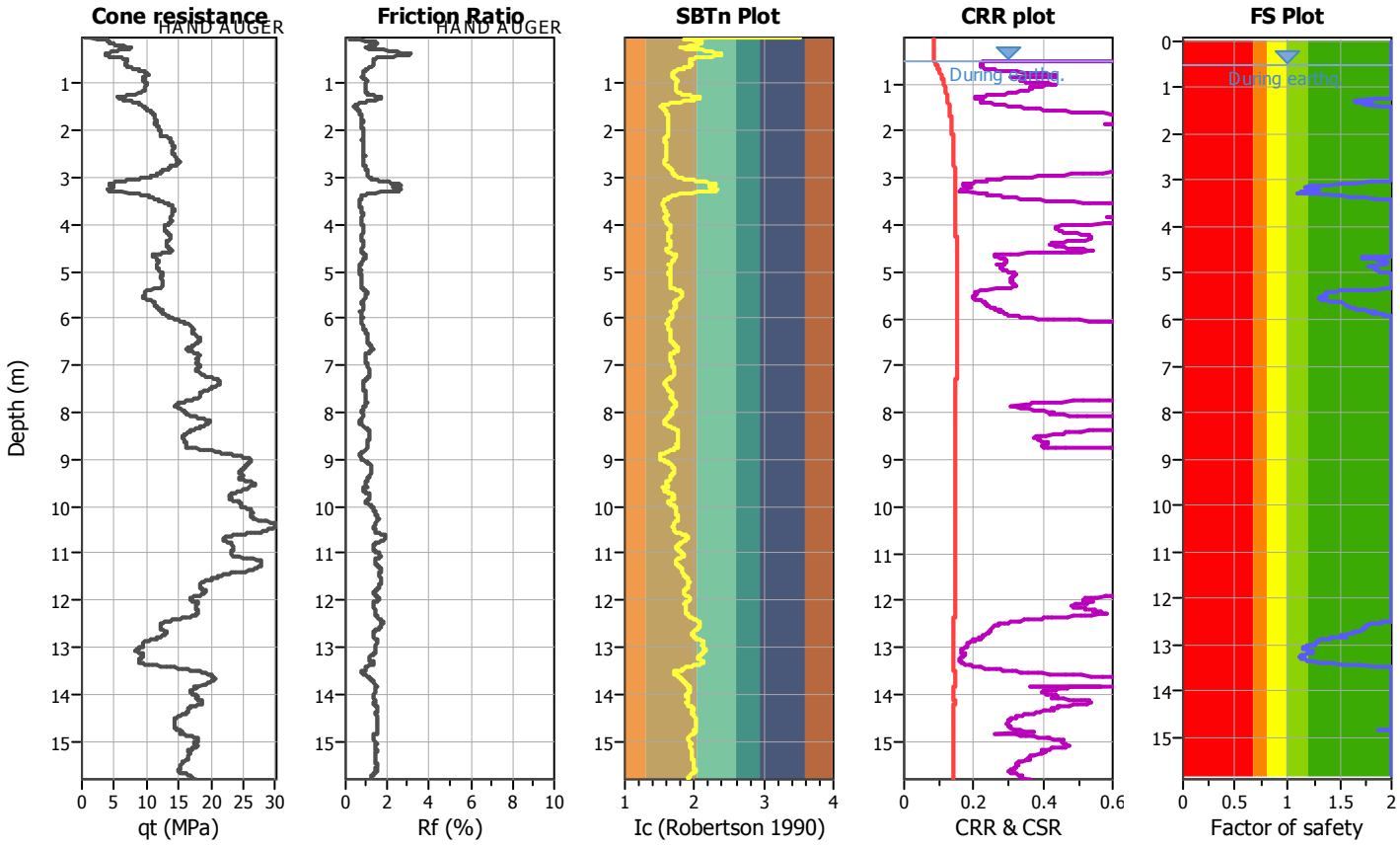
LIQUEFACTION ANALYSIS REPORT

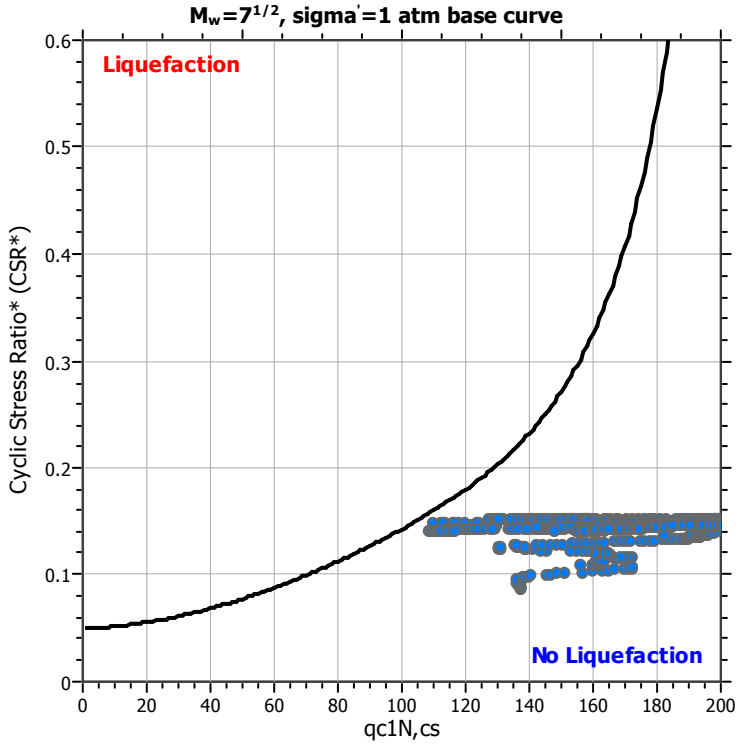
Project title : **Location :**

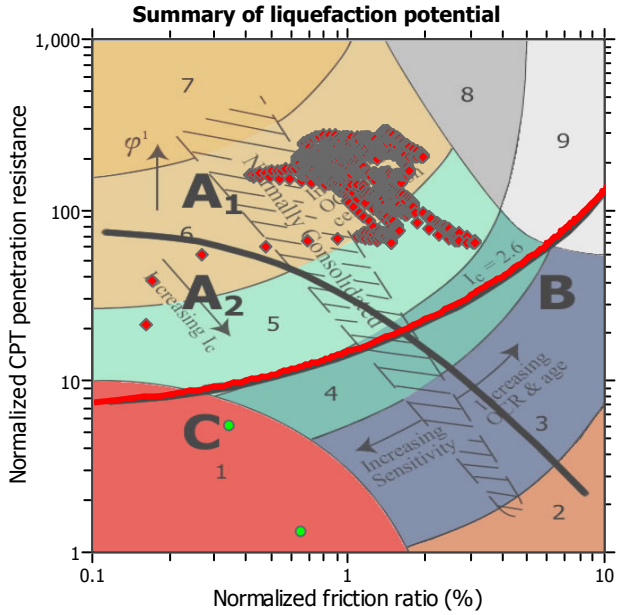
CPT file : CPTU001 SLS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

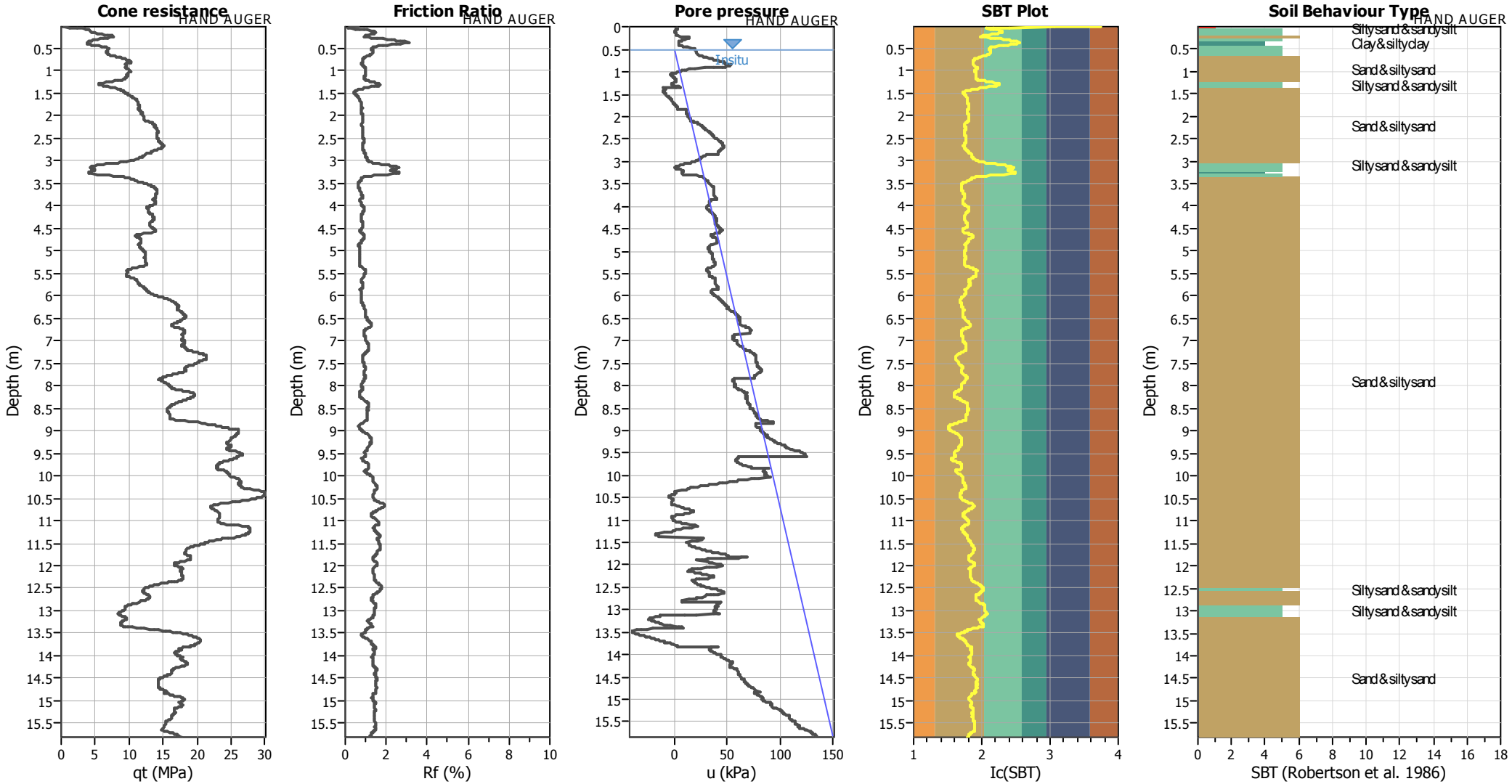






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



Input parameters and analysis data

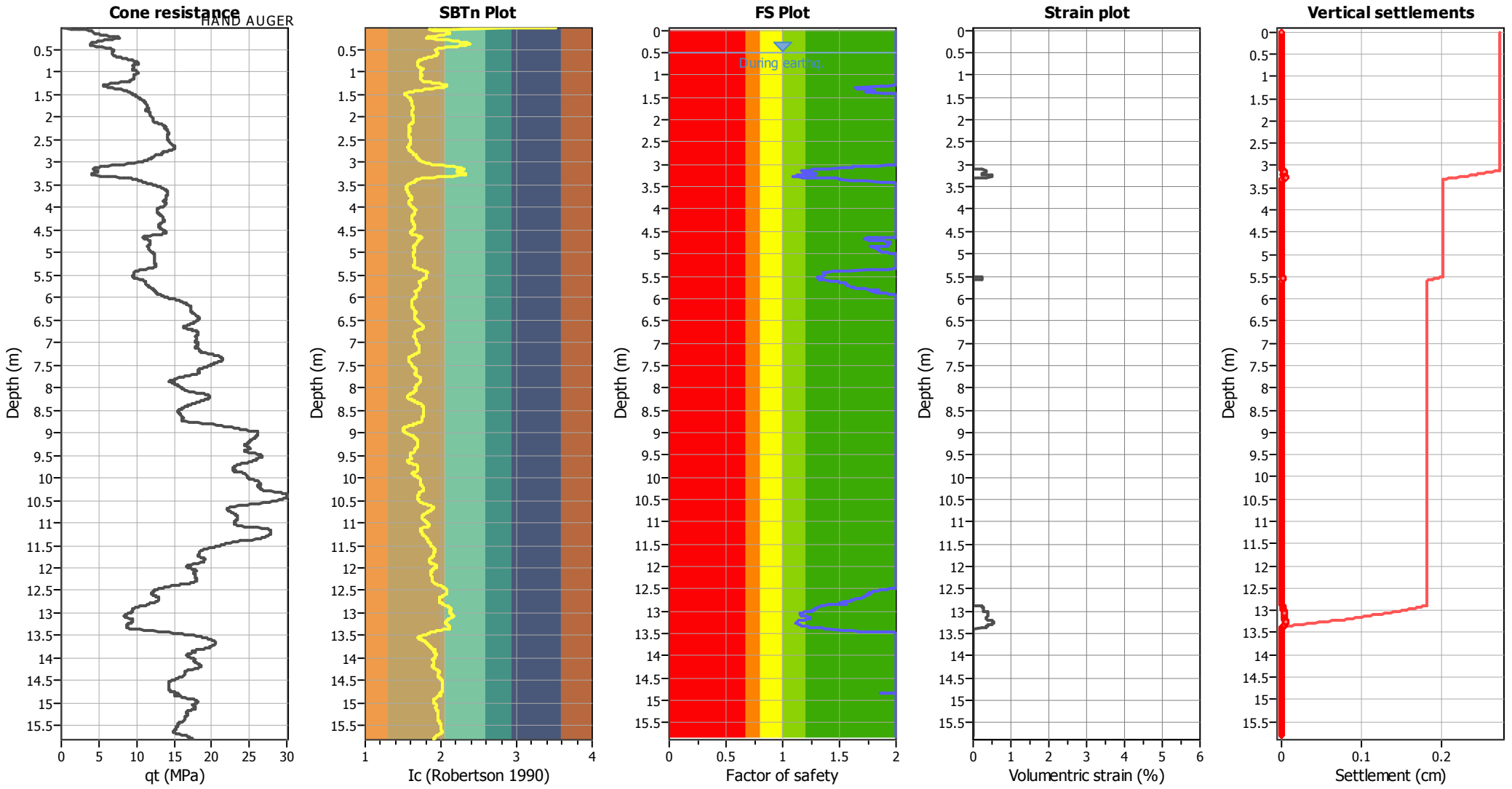
Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.13	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

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Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

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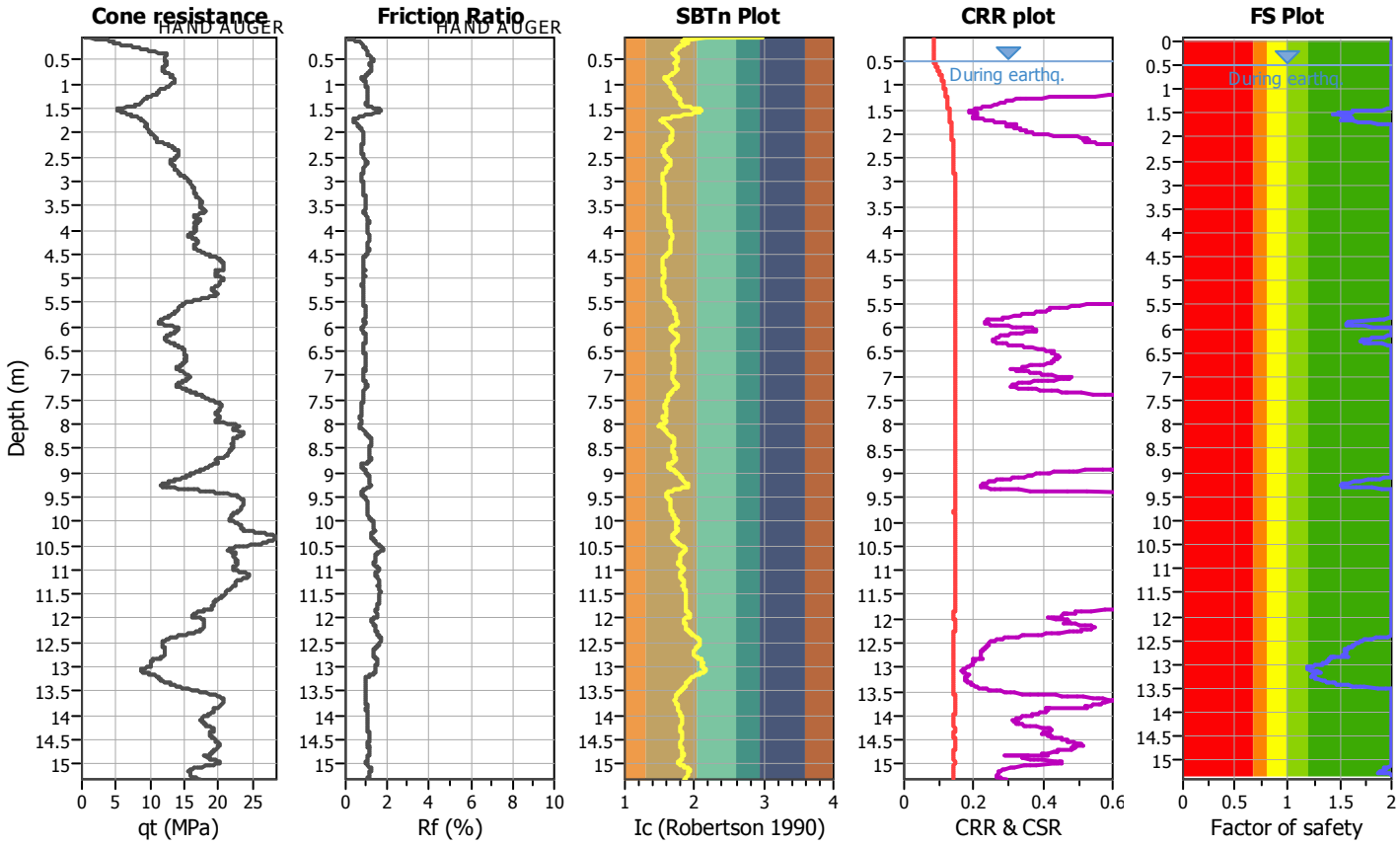
LIQUEFACTION ANALYSIS REPORT

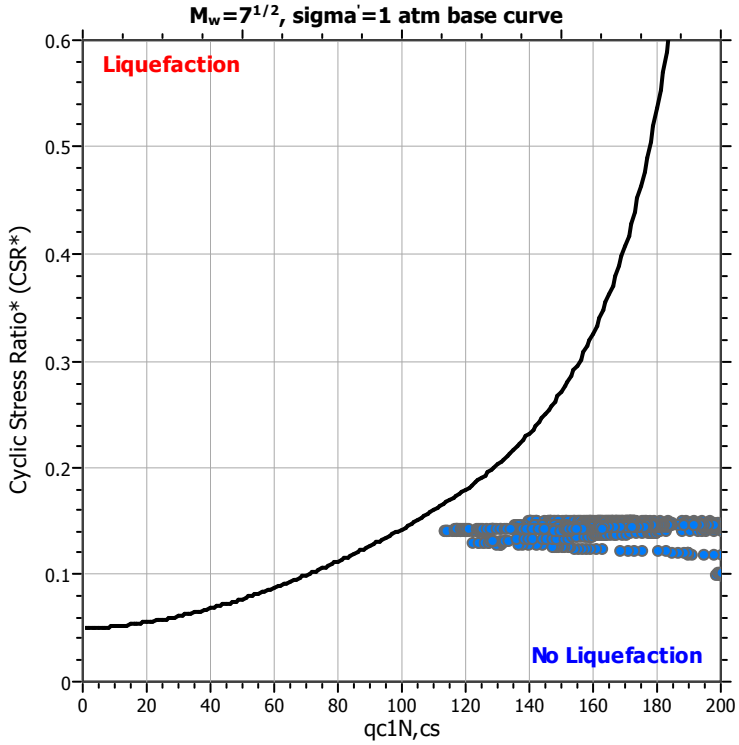
Project title : **Location :**

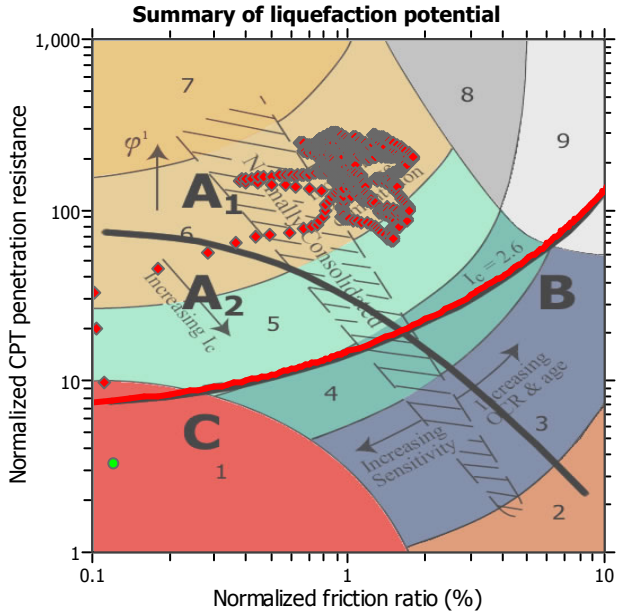
CPT file : CPTU002 SLS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

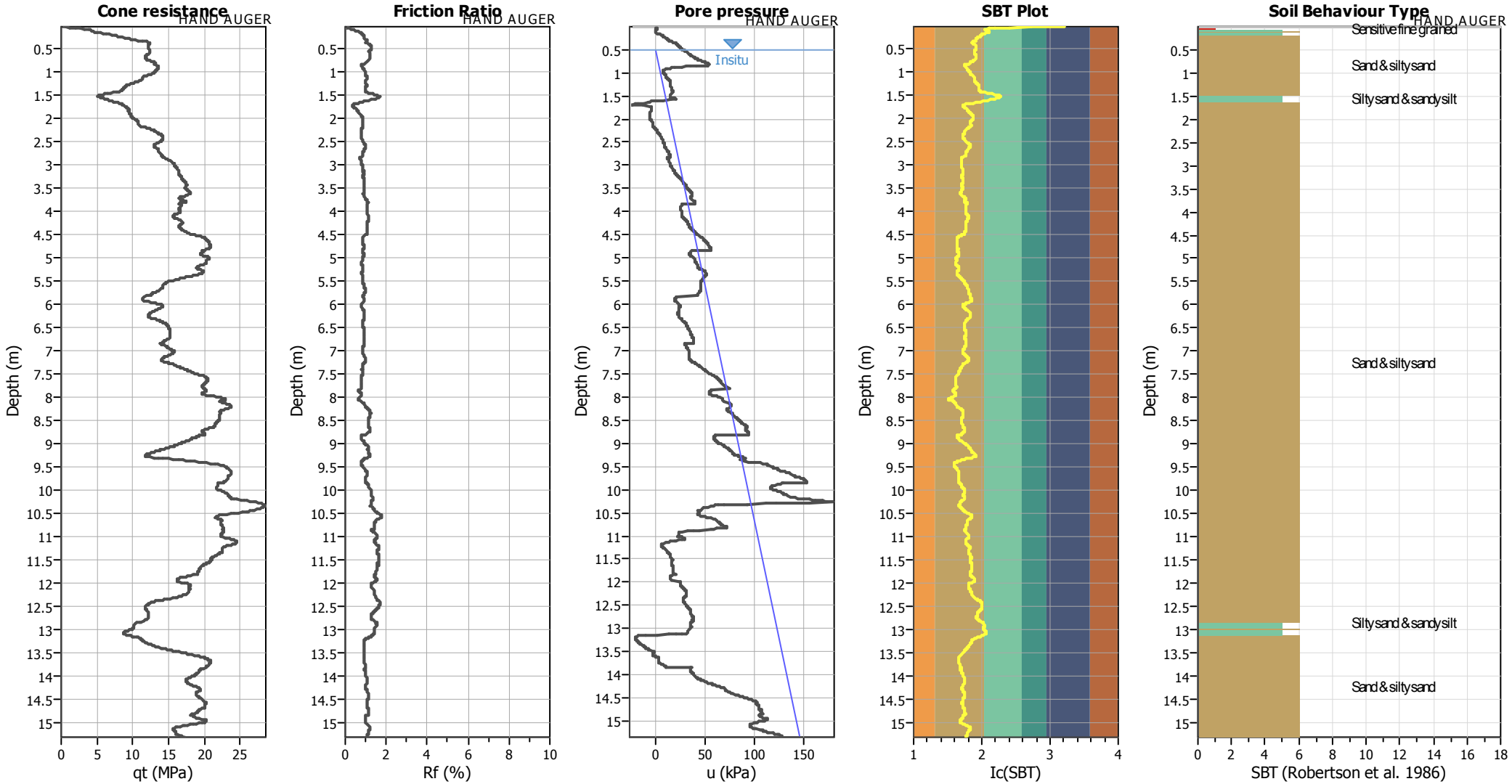






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



Input parameters and analysis data

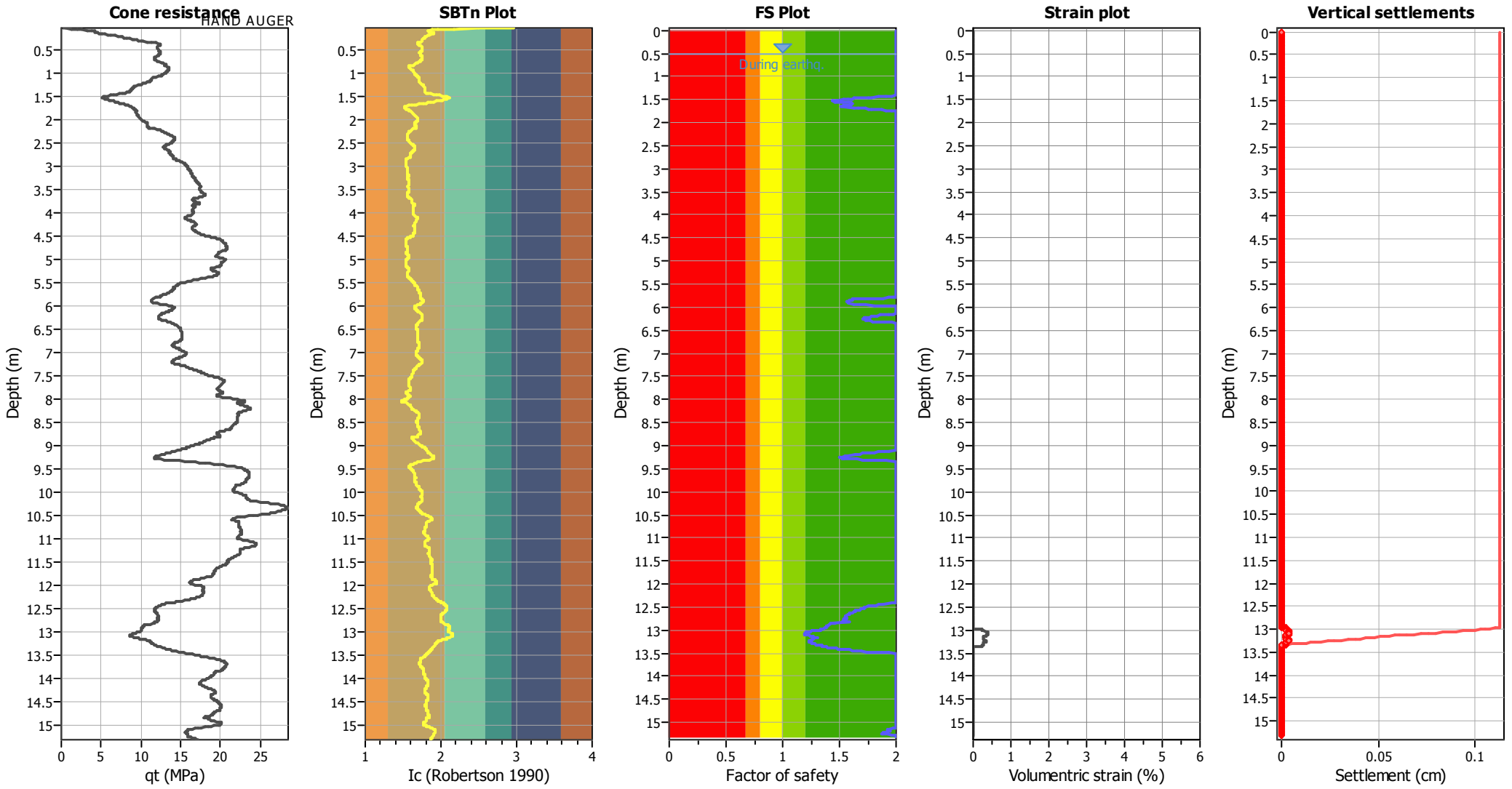
Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.13	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

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Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

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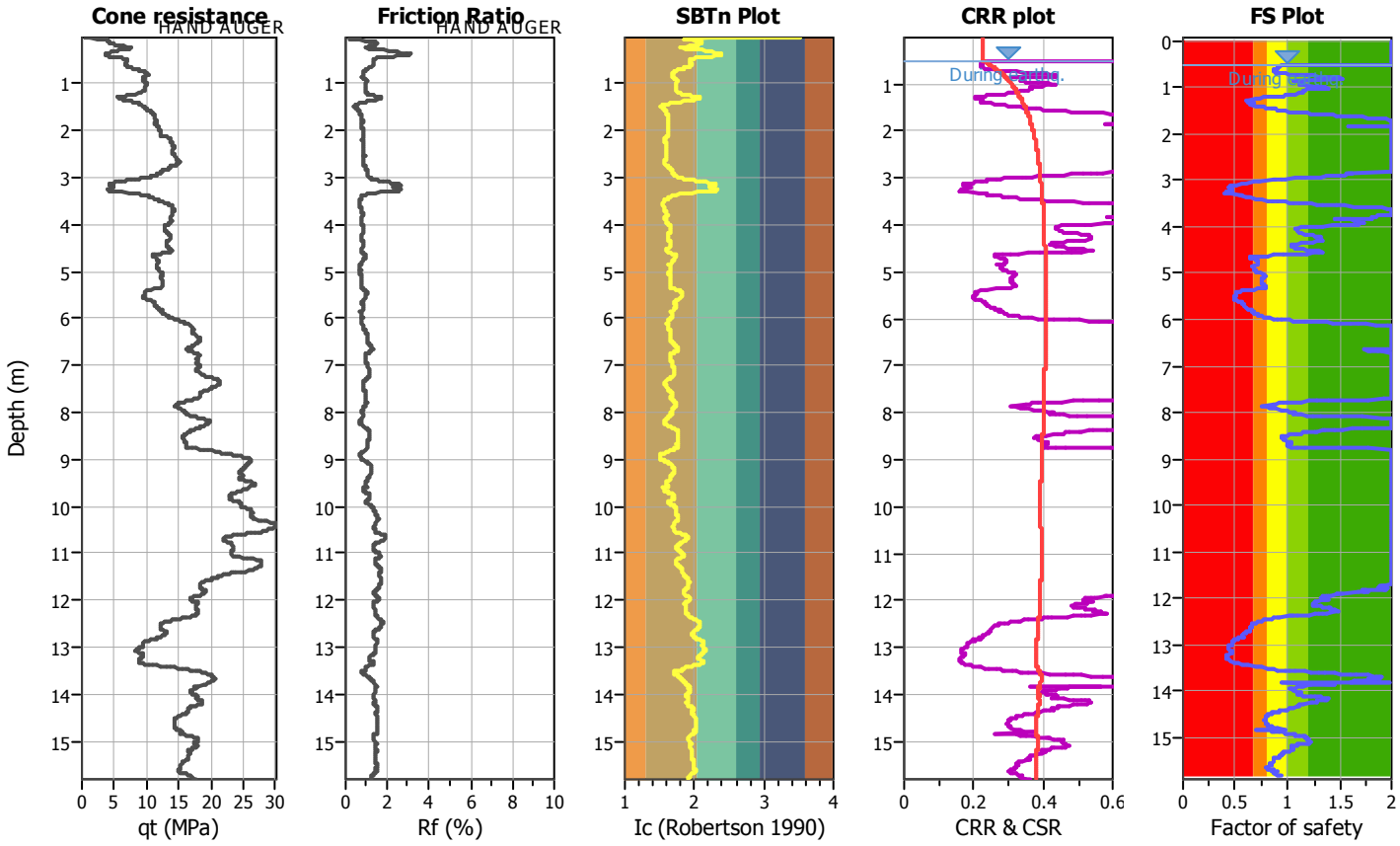
LIQUEFACTION ANALYSIS REPORT

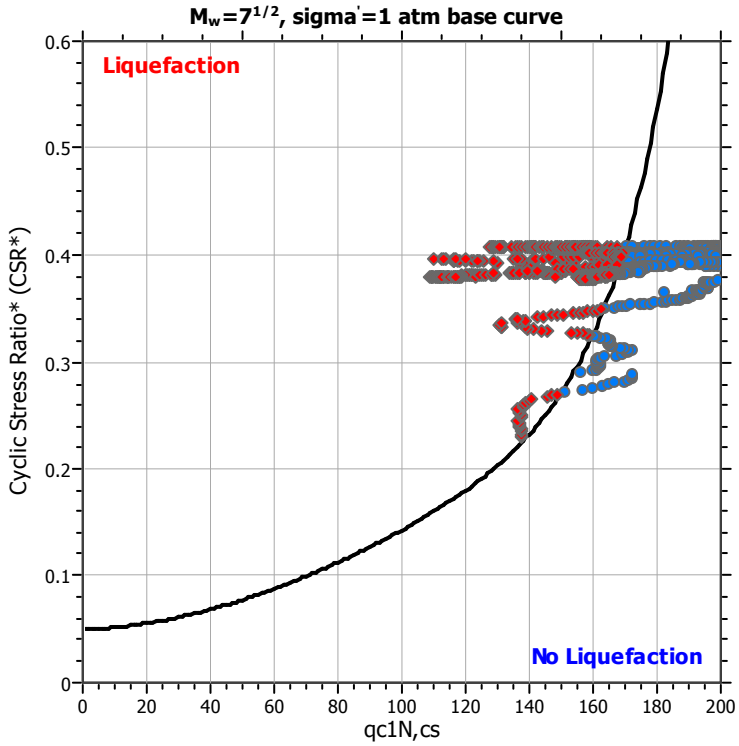
Project title : **Location :**

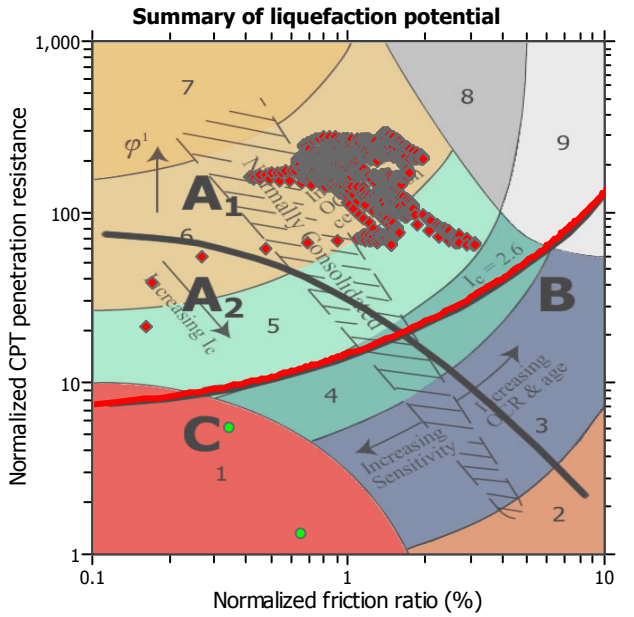
CPT file : CPTU001 ULS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.35	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		



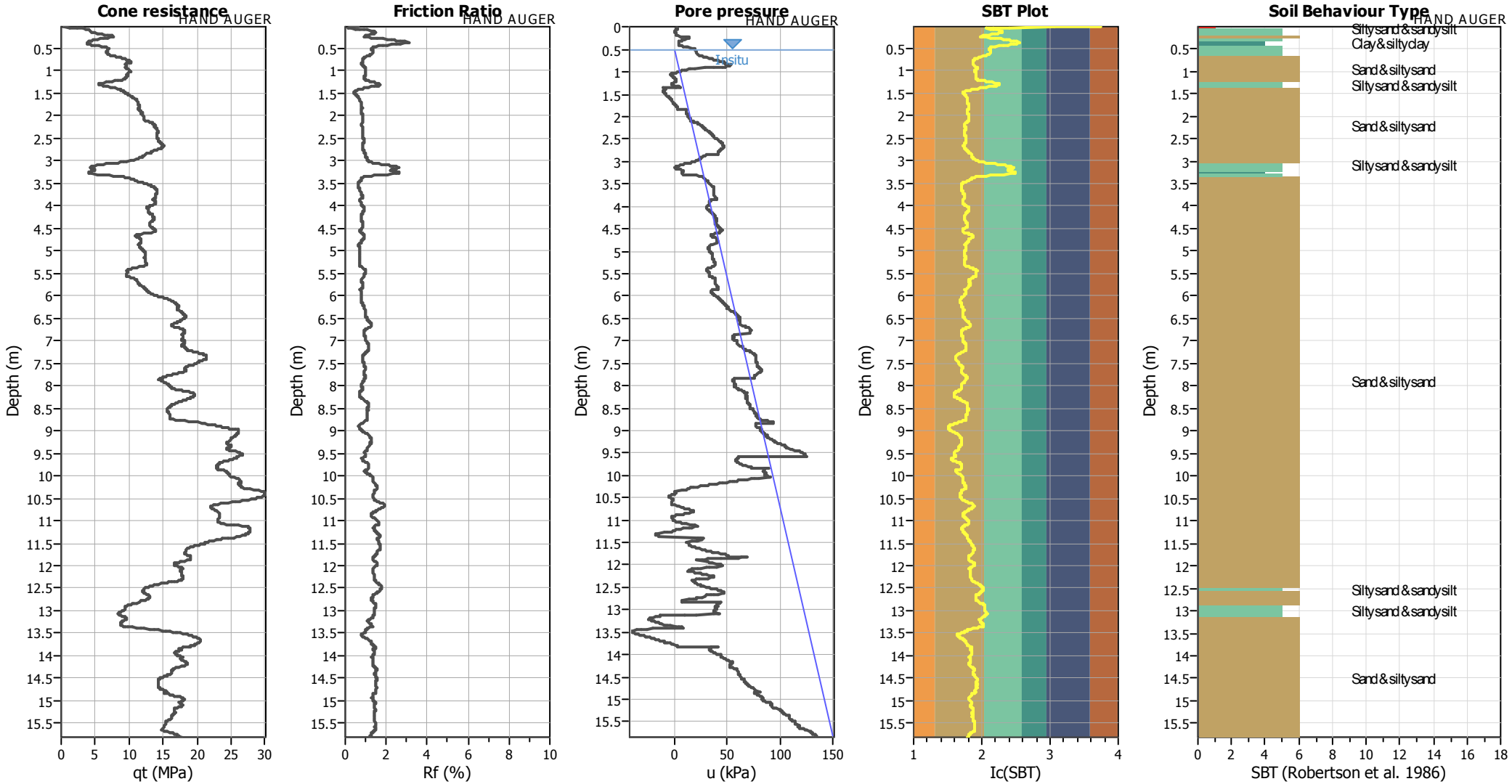




Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

Christchurch City Council I Exemption from building consent I BCN/2017/1885 I 22/03/2017 I Page 45 of 62

CPT basic interpretation plots



Input parameters and analysis data

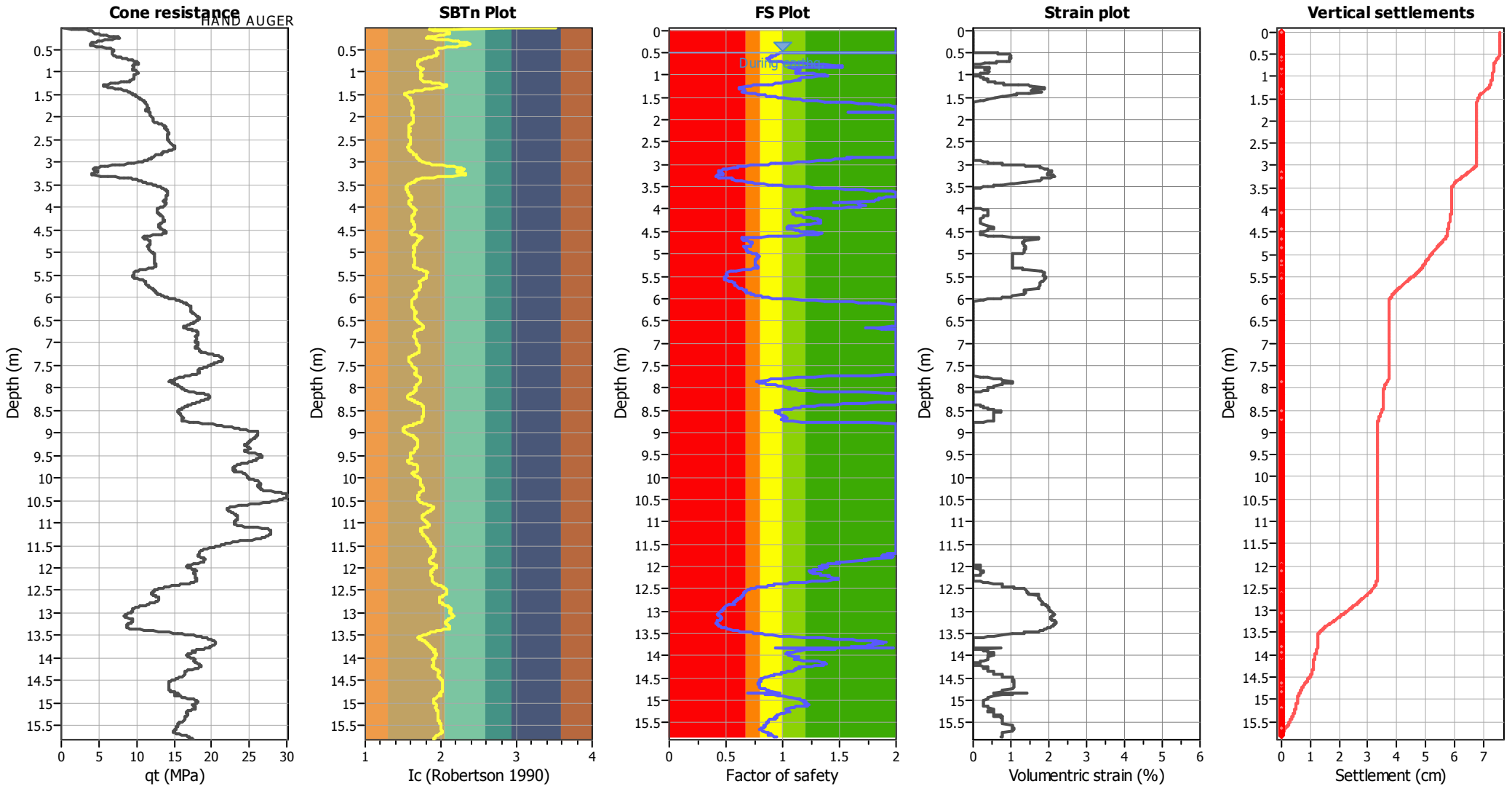
Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.35	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Christchurch City Council I Exemption from building consent I BCN/2017/1885 I 22/03/2017 I Page 46 of 62

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

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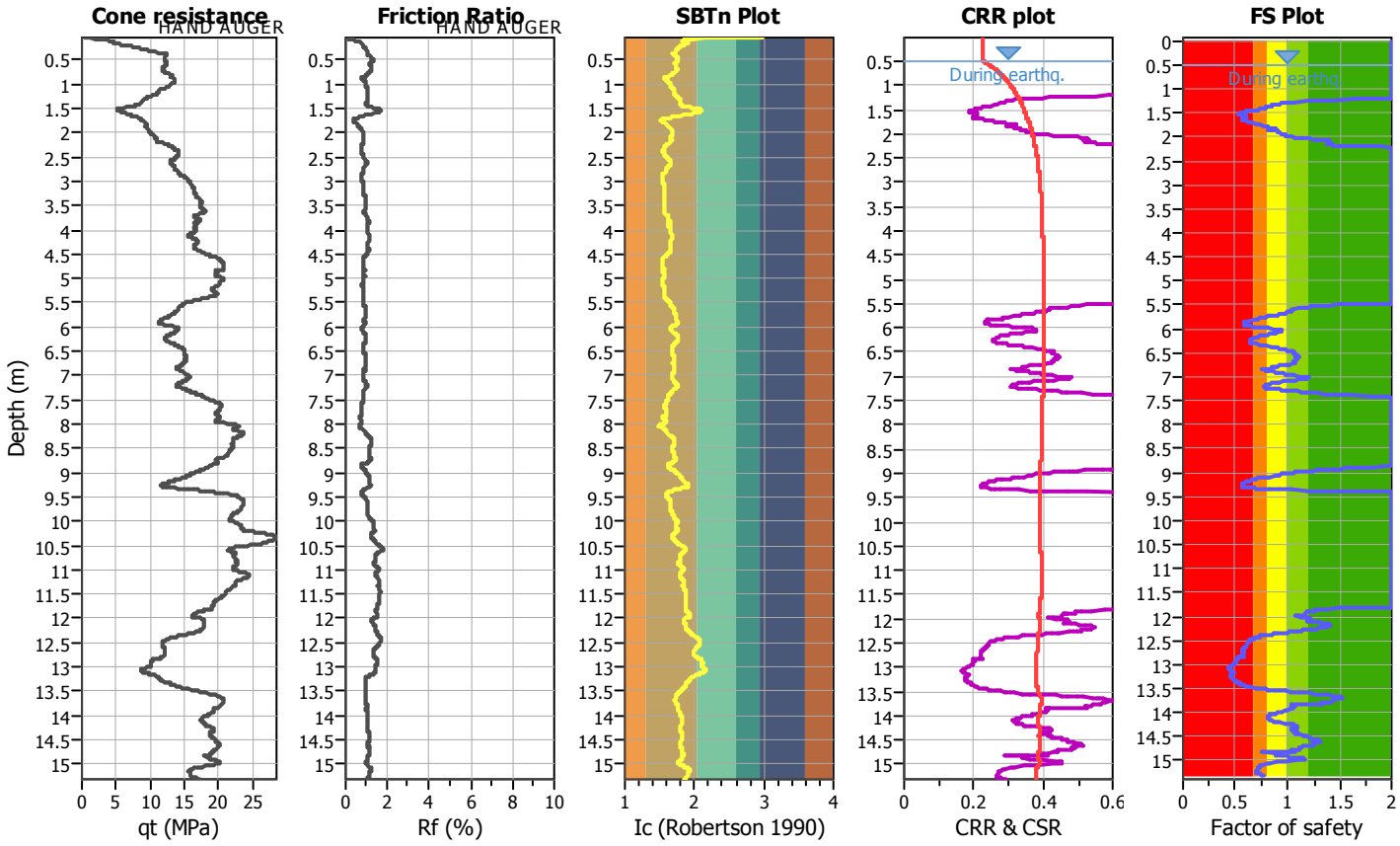
LIQUEFACTION ANALYSIS REPORT

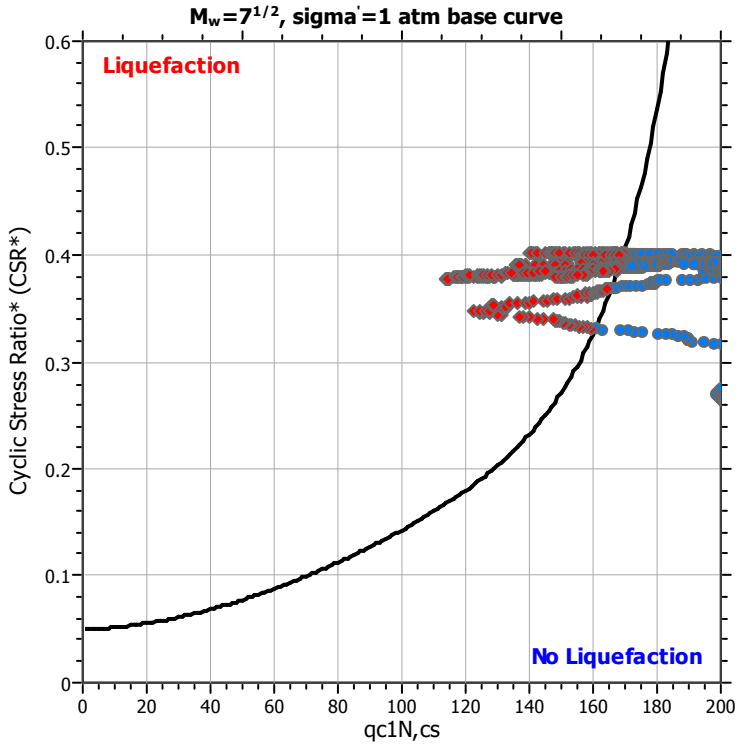
Project title : **Location :**

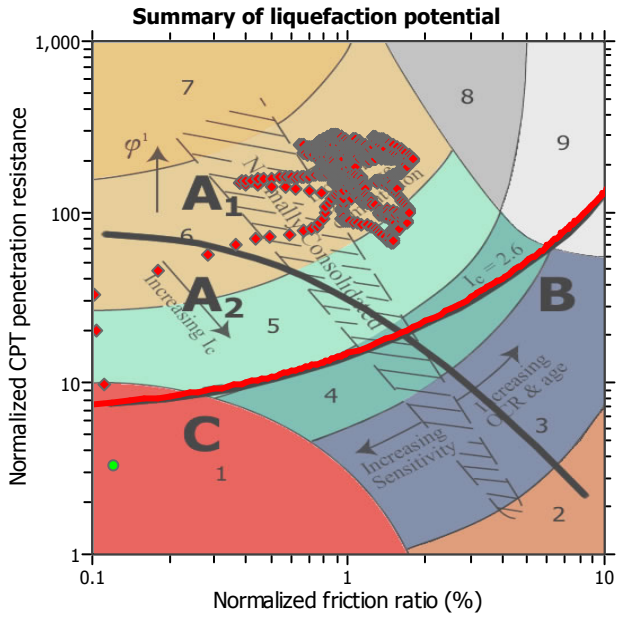
CPT file : CPTU002 ULS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.35	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		



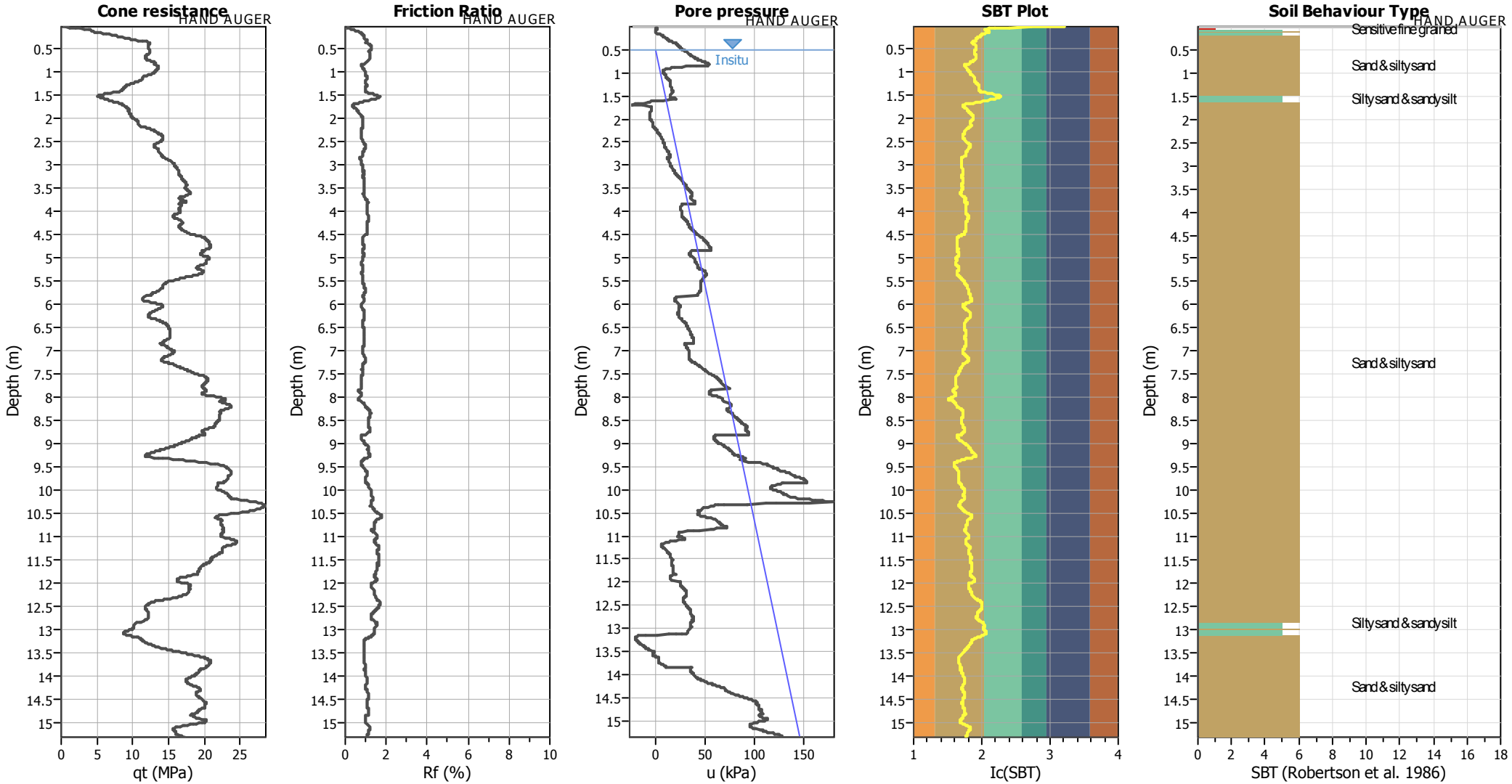




Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

Christchurch City Council I Exemption from building consent I BCN/2017/1885 I 22/03/2017 I Page 48 of 62

CPT basic interpretation plots



Input parameters and analysis data

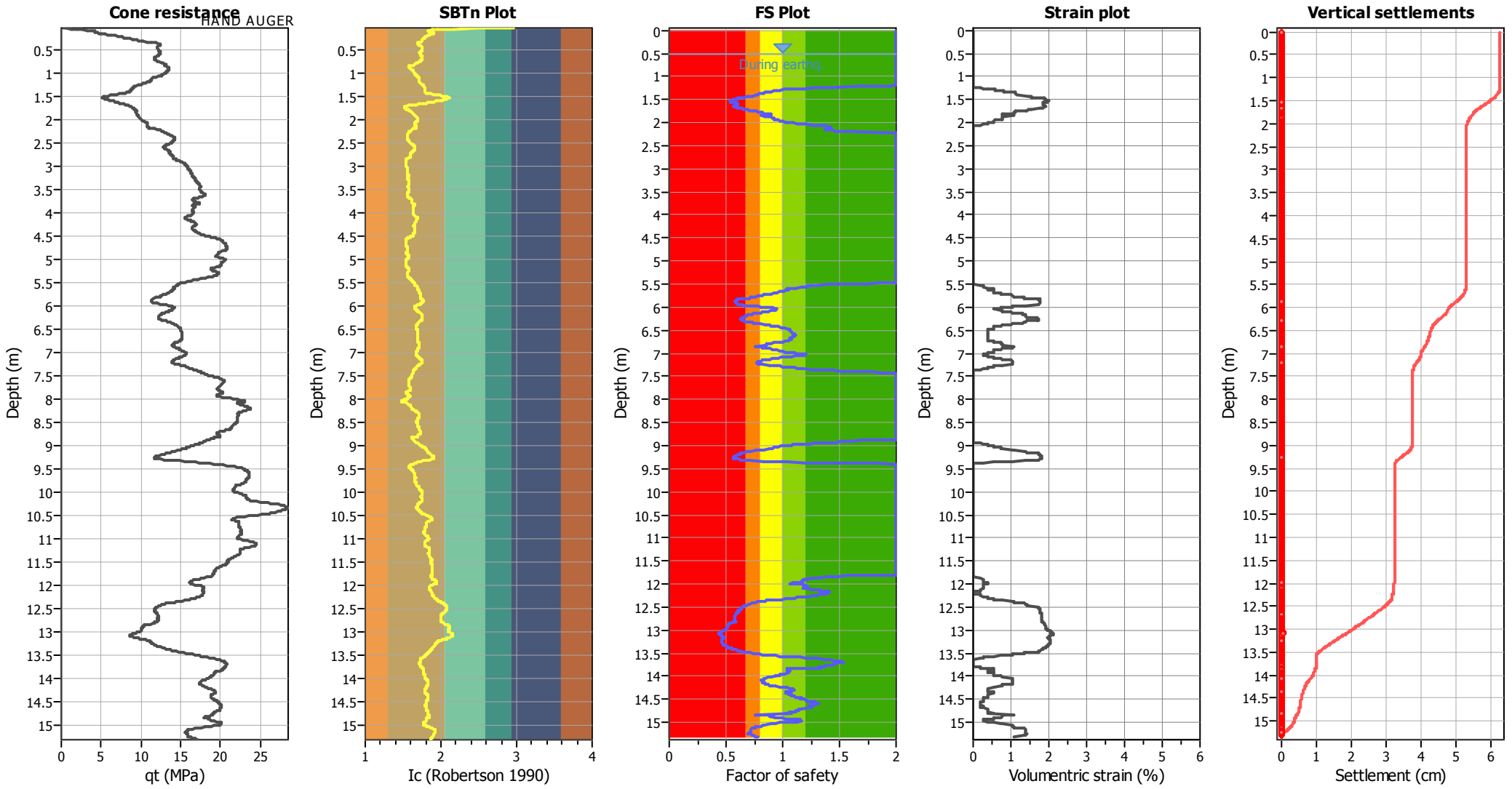
Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.35	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

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Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

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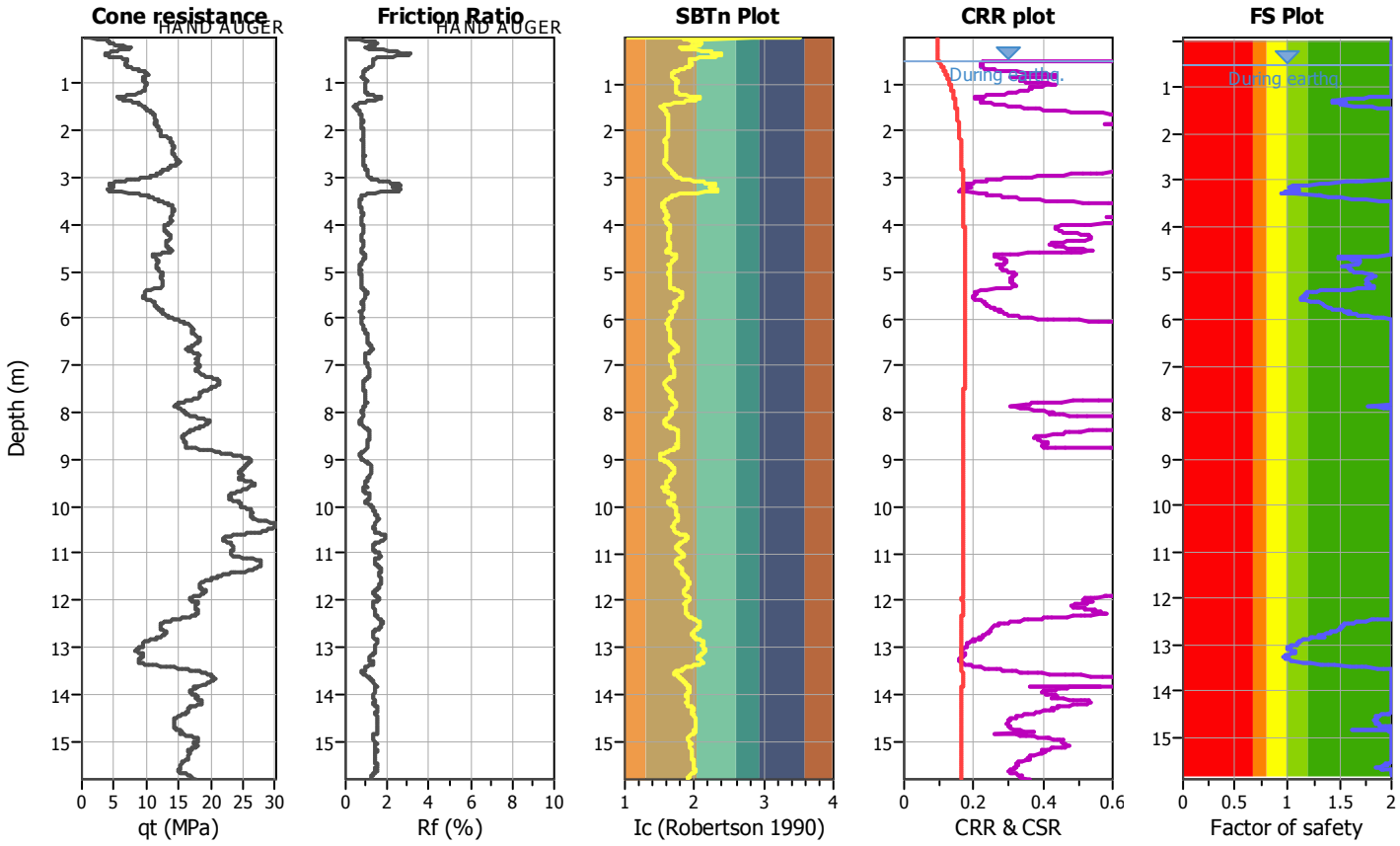
LIQUEFACTION ANALYSIS REPORT

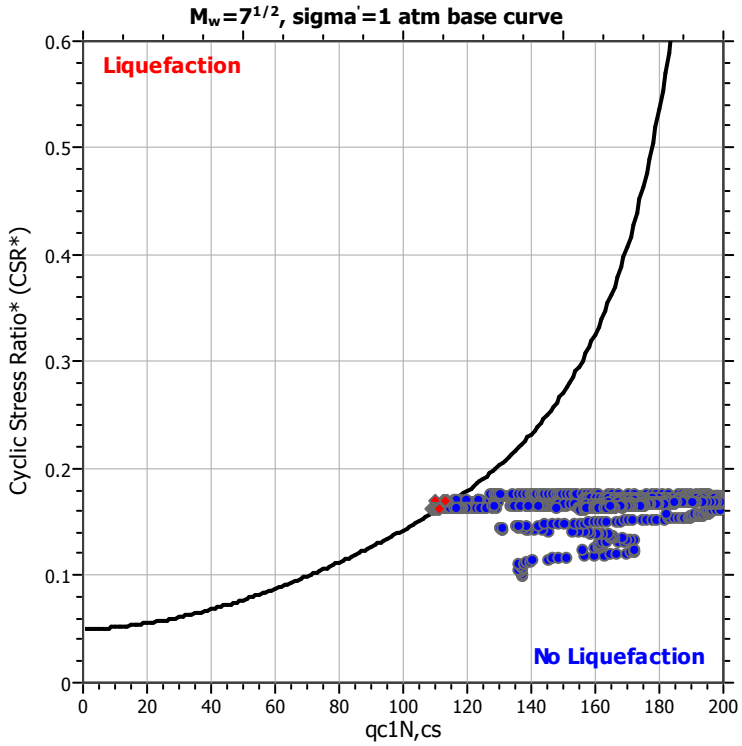
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

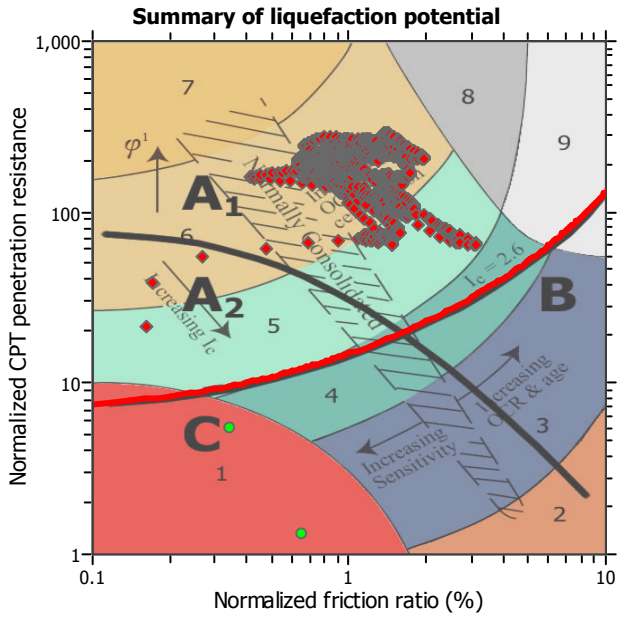
CPT file : CPTU001 SLS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_o applied:	Yes		

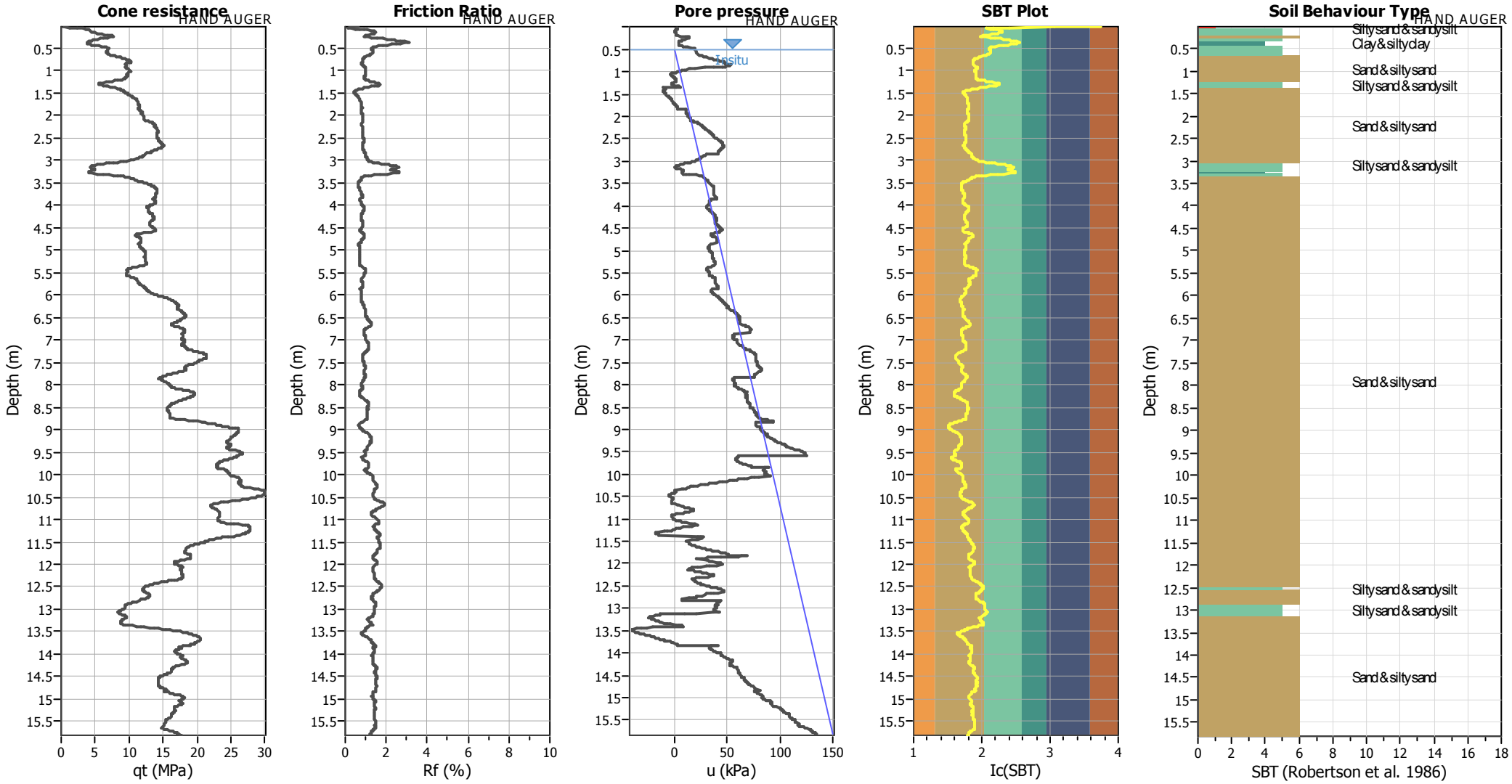






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



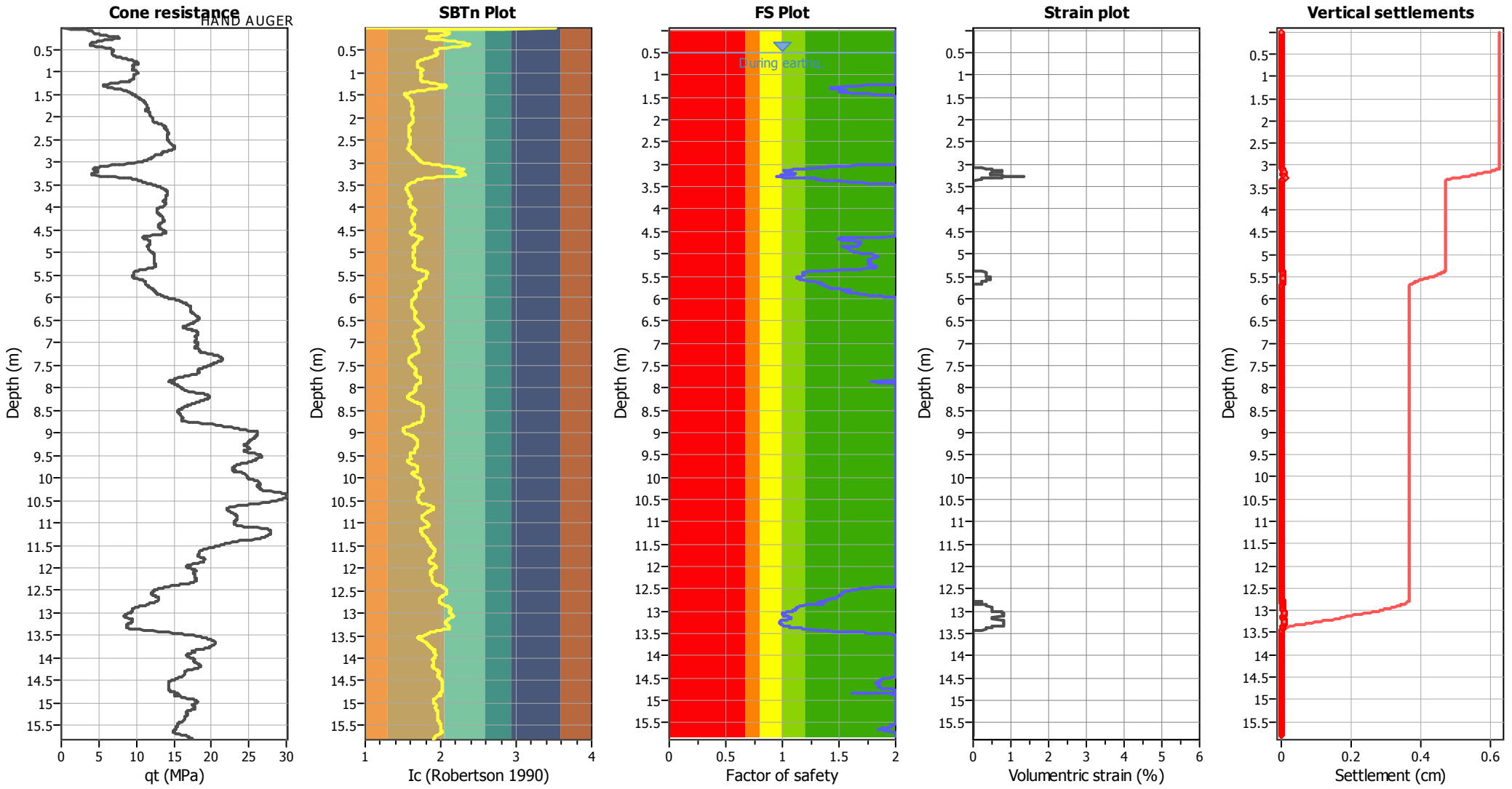
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
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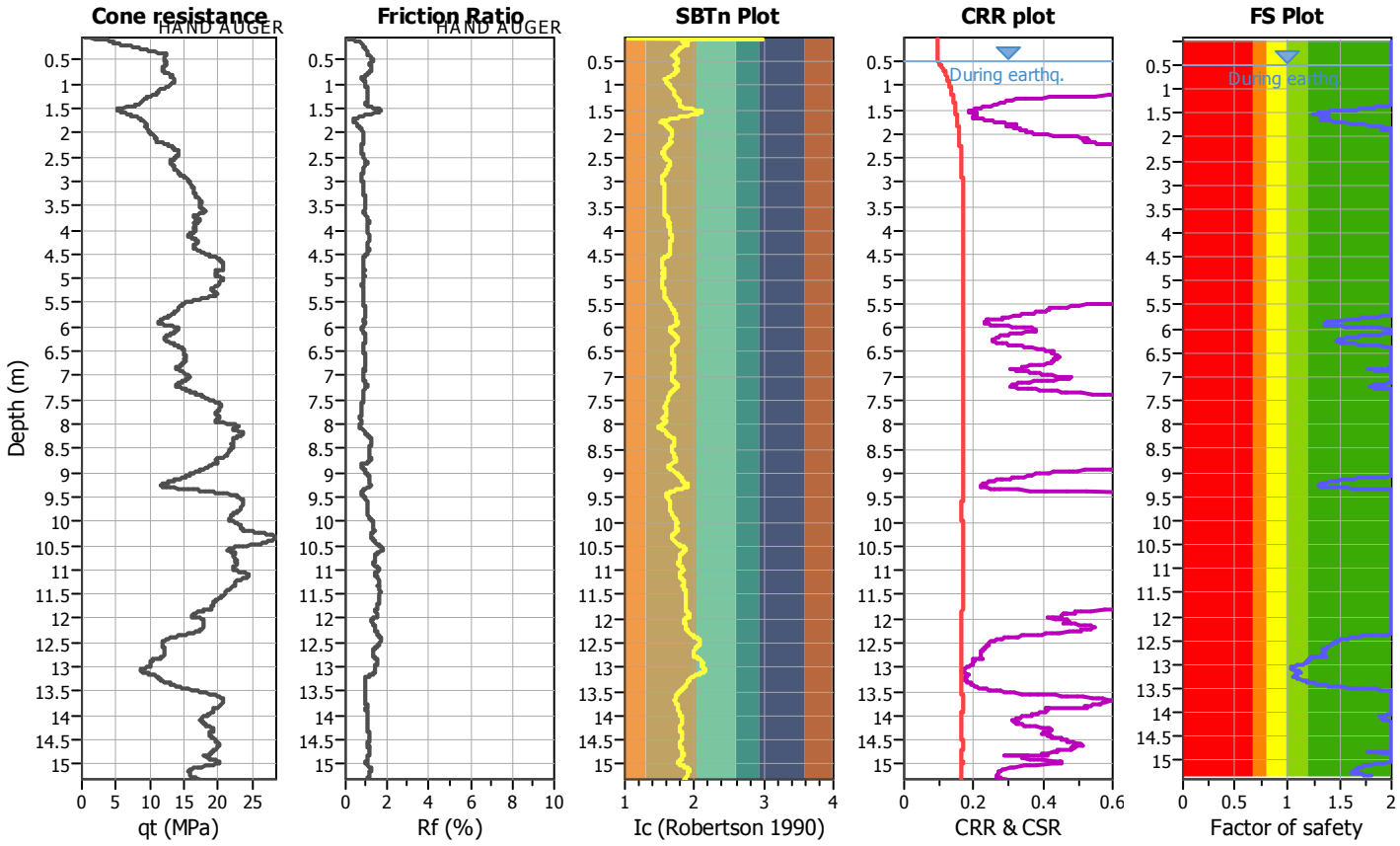
LIQUEFACTION ANALYSIS REPORT

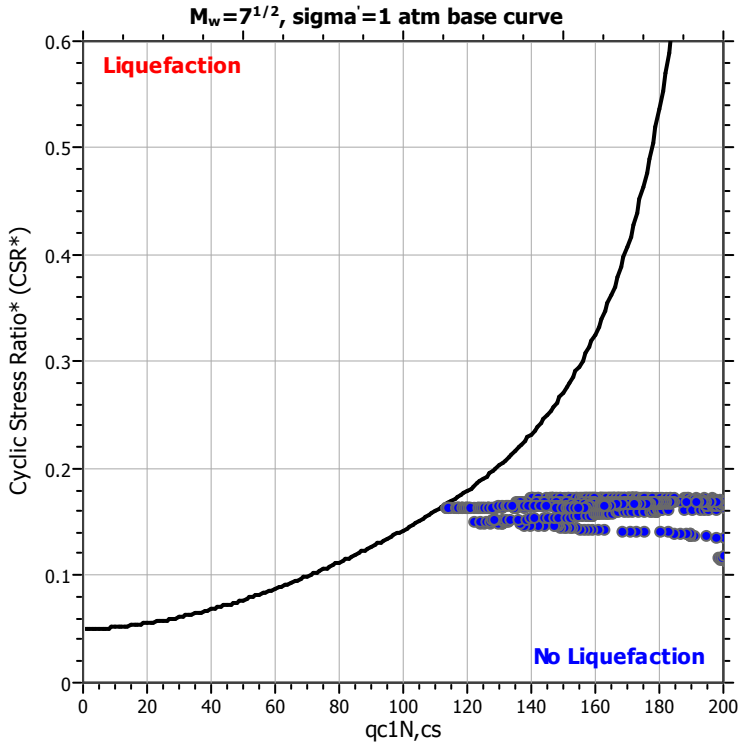
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

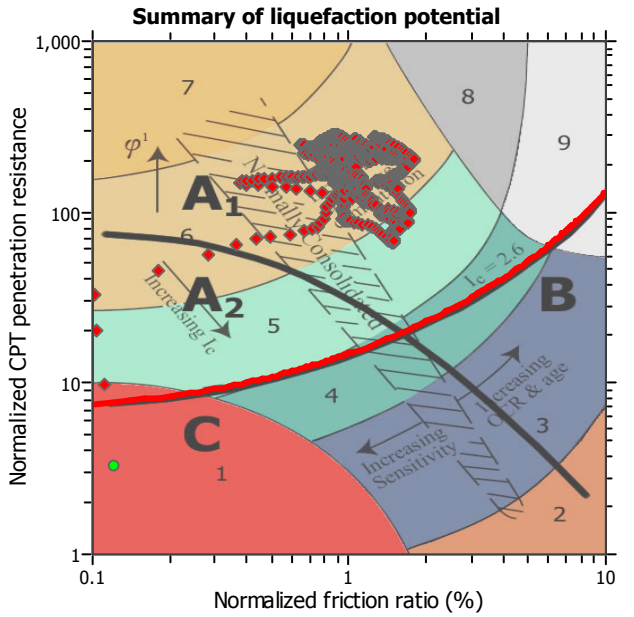
CPT file : CPTU002 SLS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_o applied:	Yes		

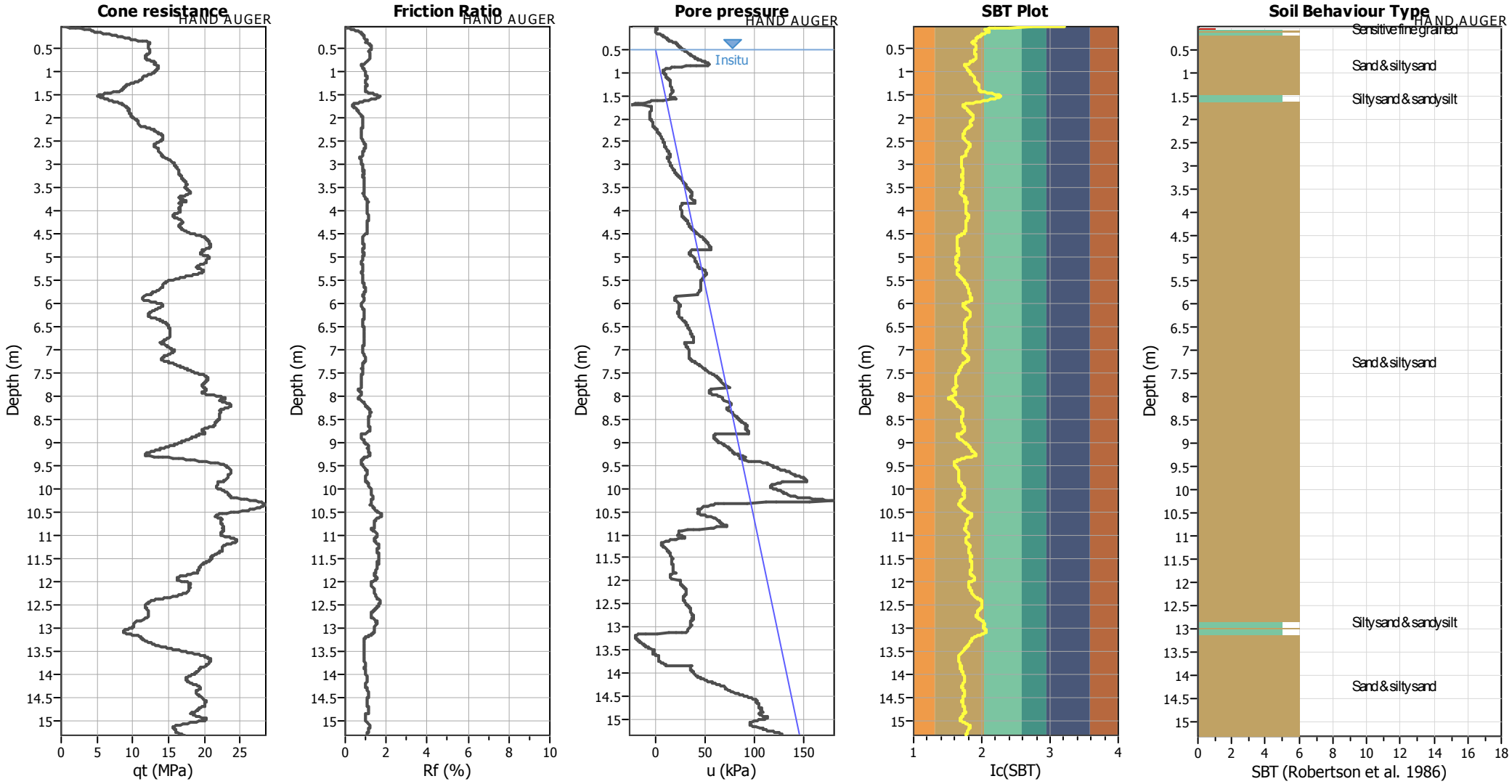






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
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CPT basic interpretation plots



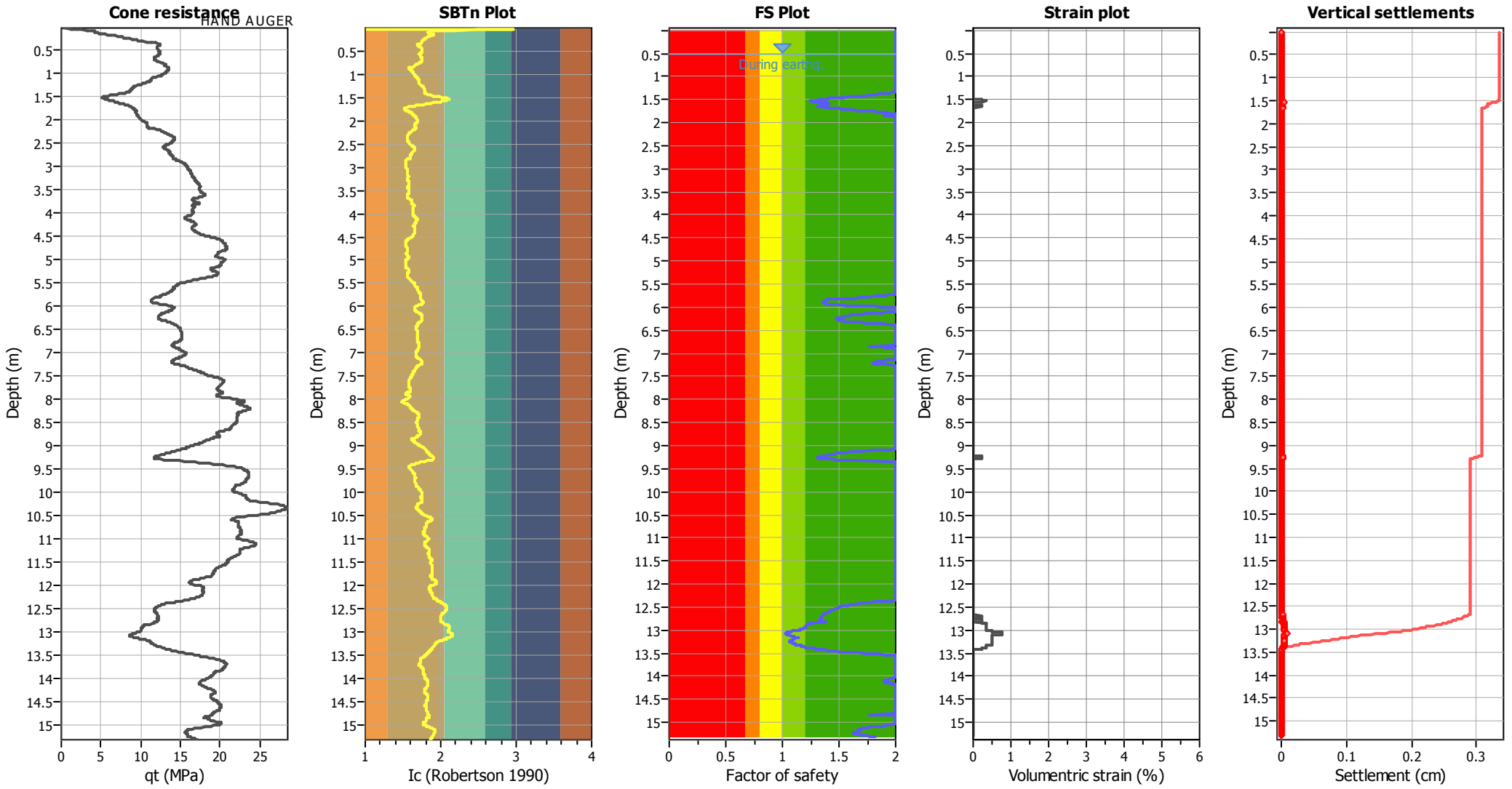
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

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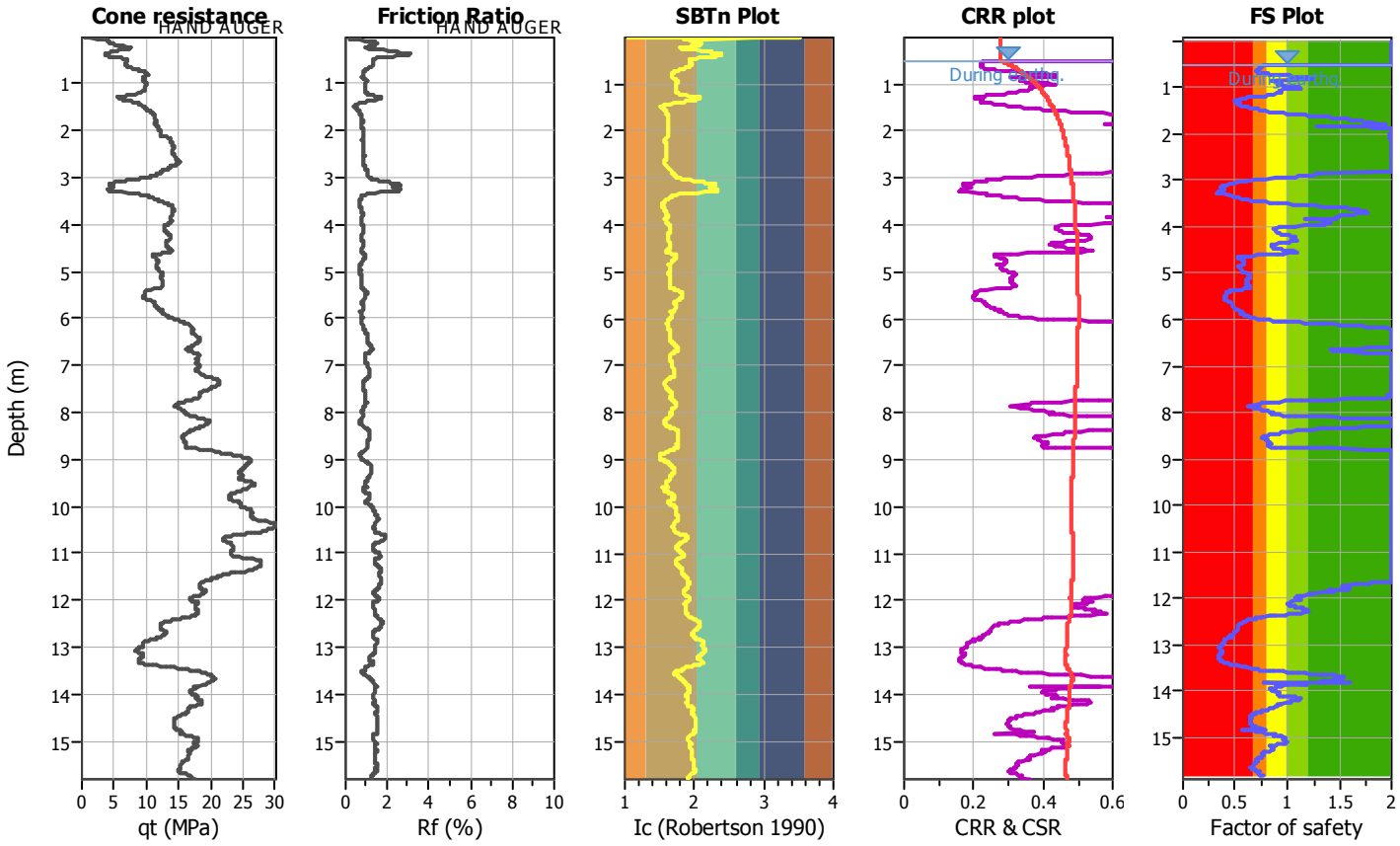
LIQUEFACTION ANALYSIS REPORT

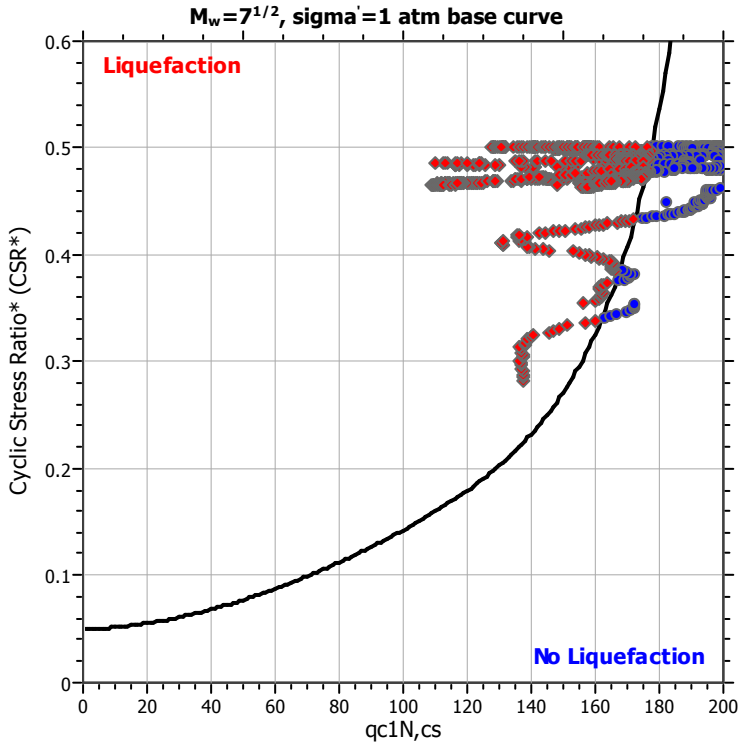
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

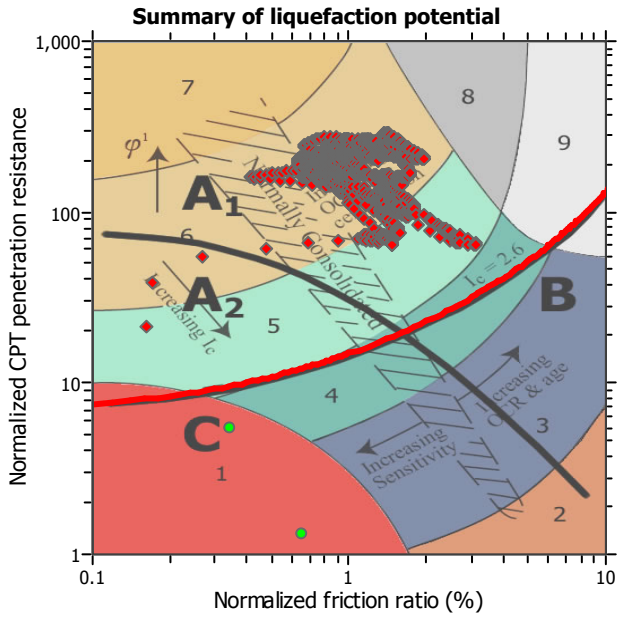
CPT file : CPTU001 ULS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.43	Unit weight calculation:	Based on SBT	K_o applied:	Yes		

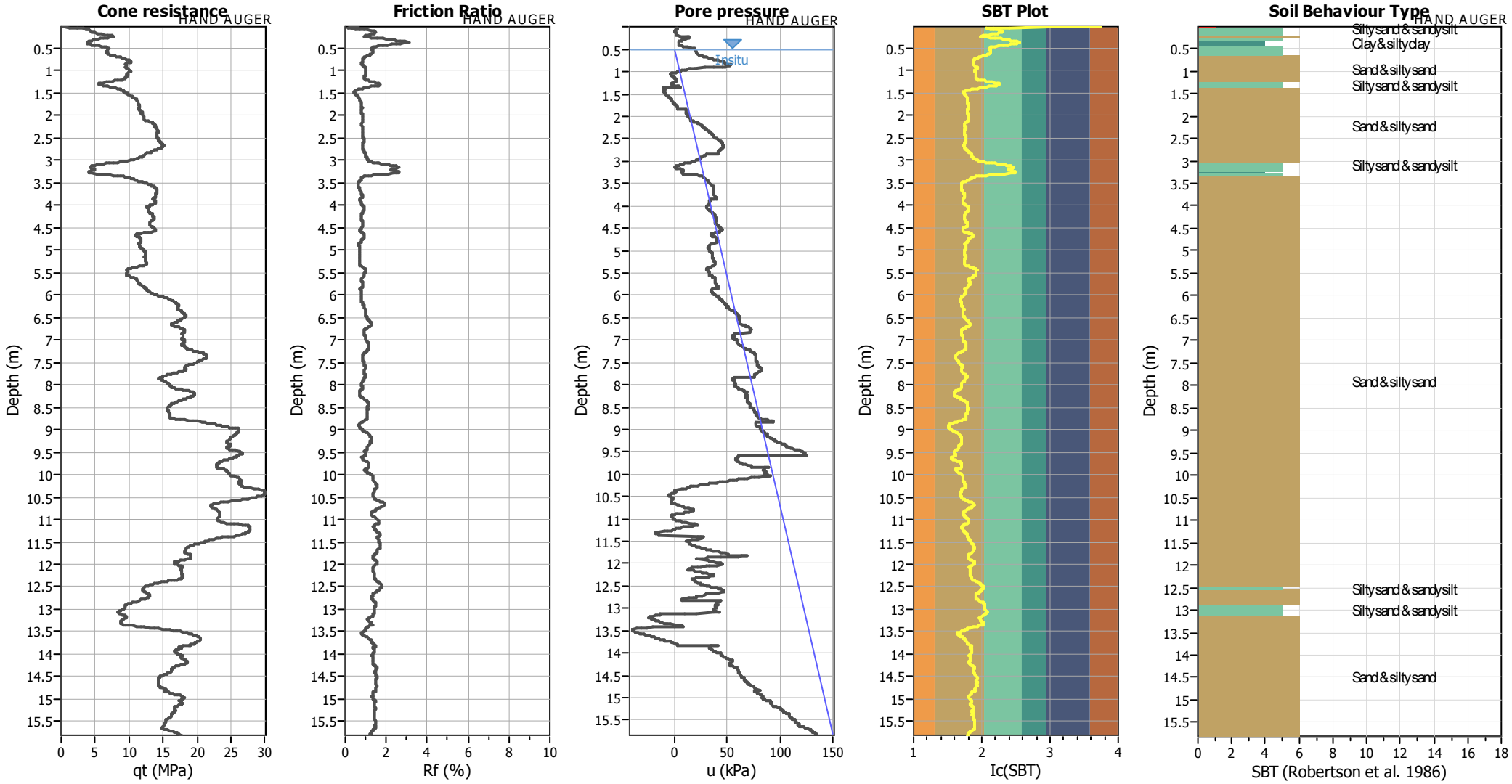






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



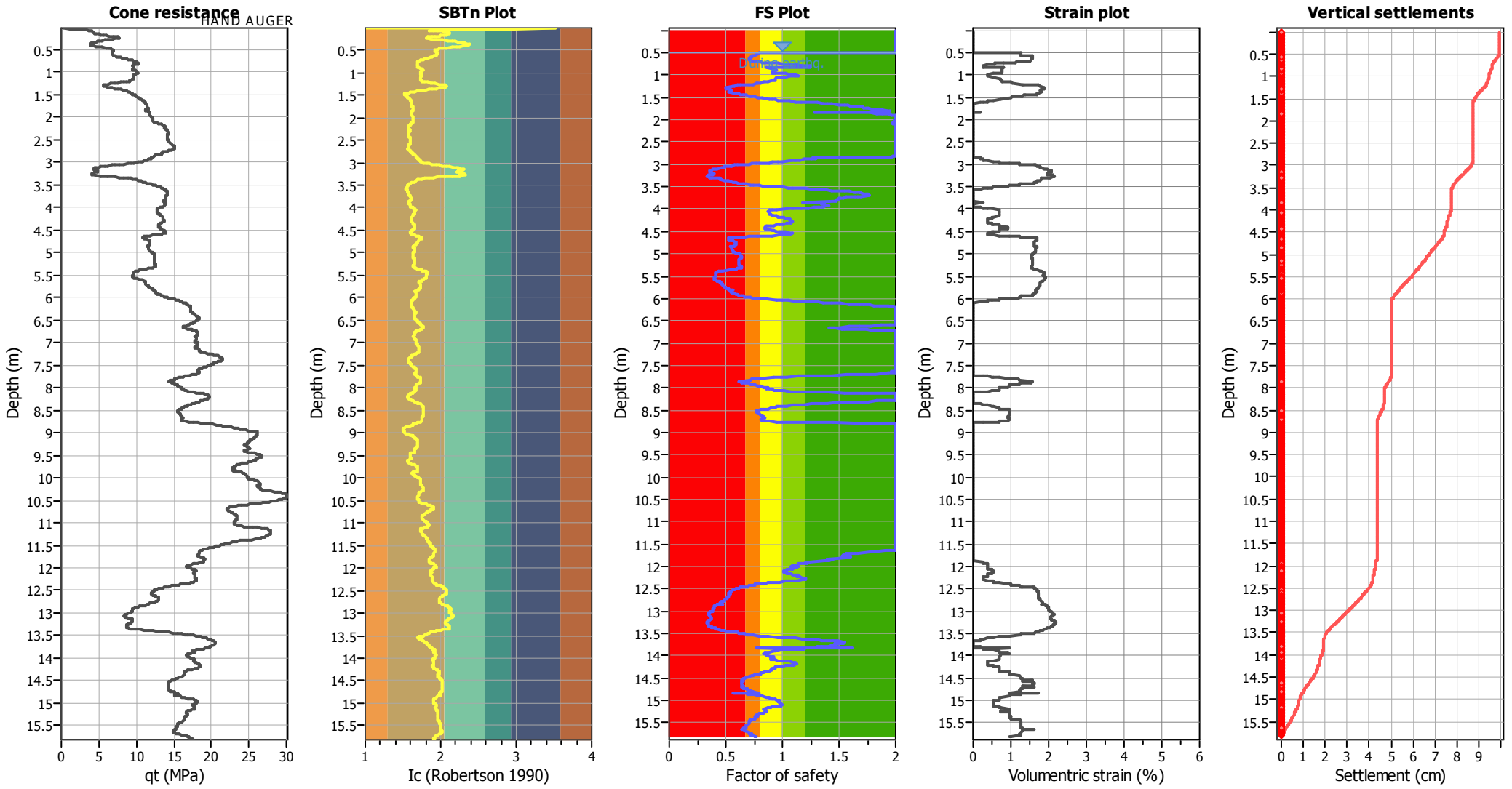
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.43	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

Kirk Roberts Consulting Engineers
Geotechnical Engineers
221 Barbadoes Street
www.kirkroberts.co.nz

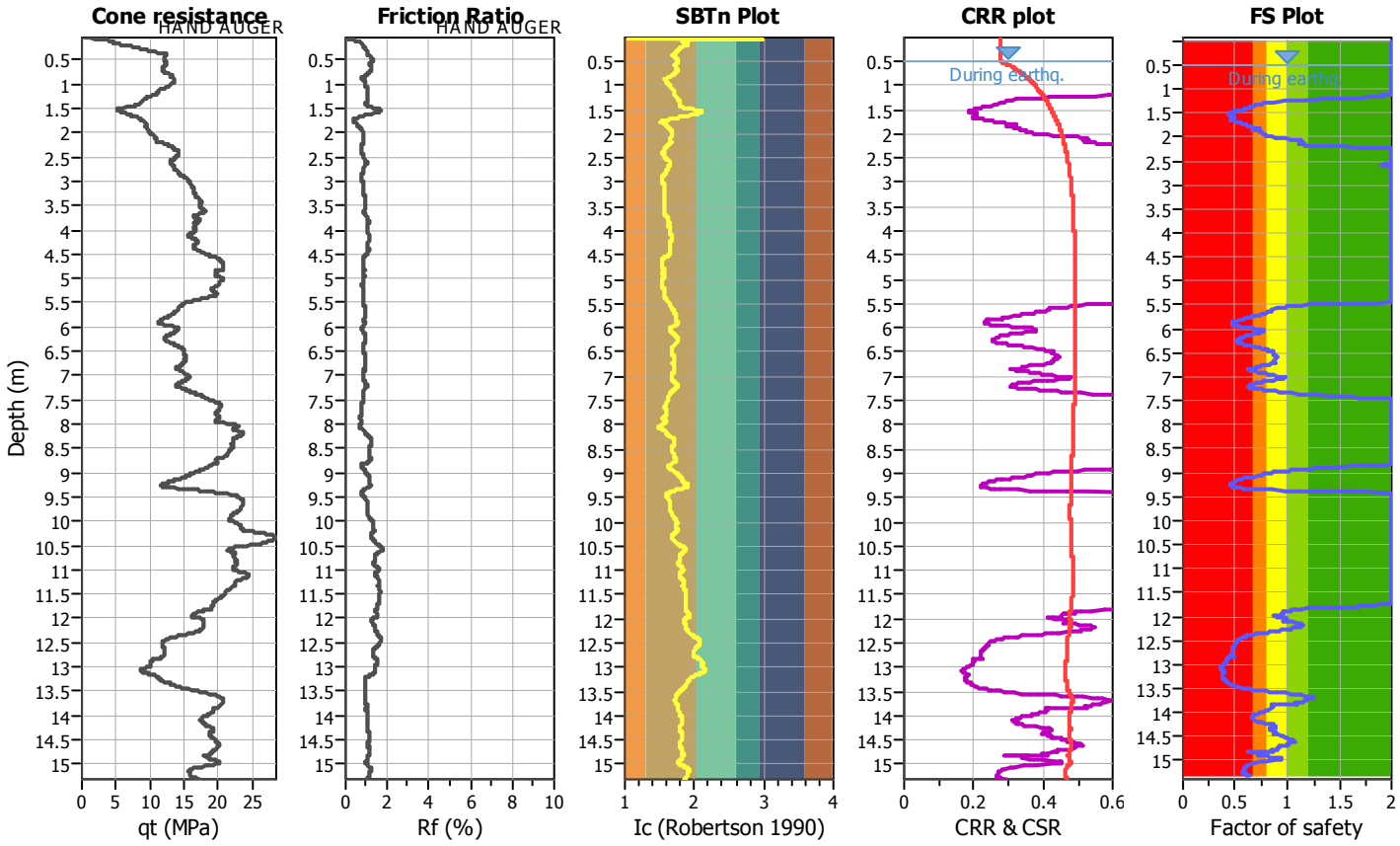
LIQUEFACTION ANALYSIS REPORT

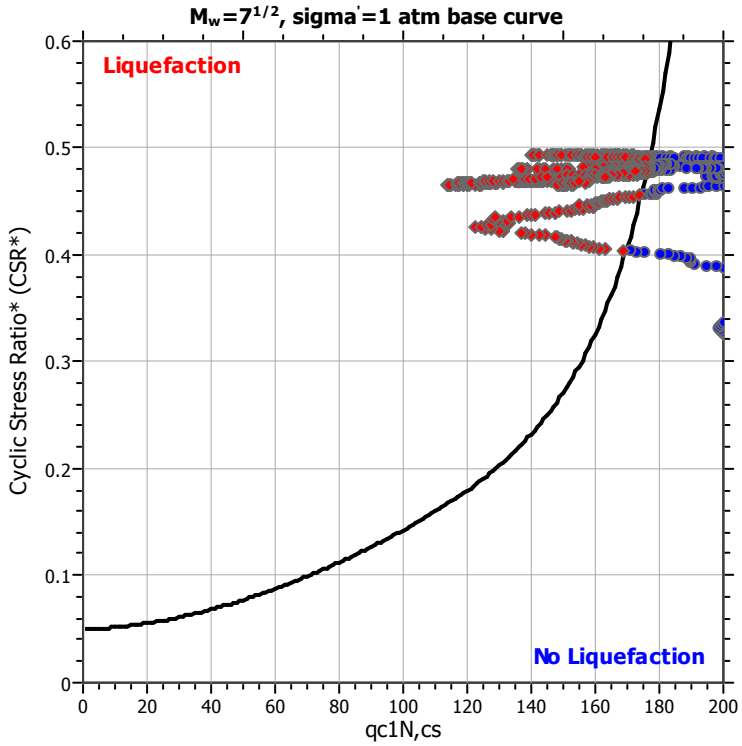
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

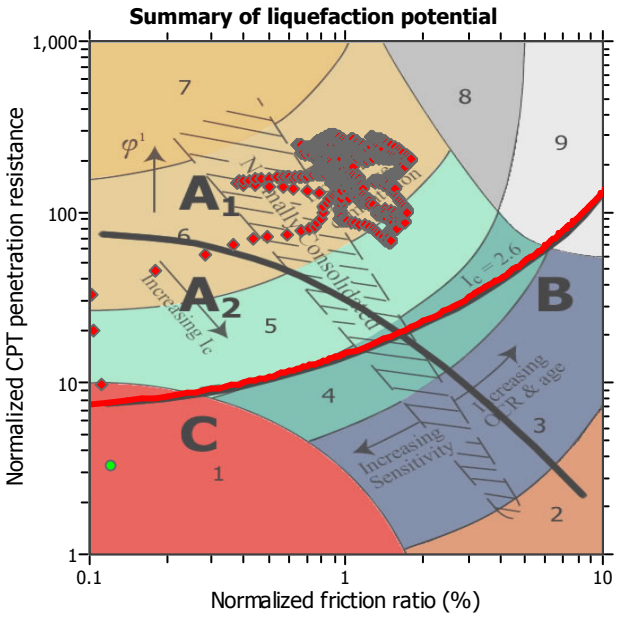
CPT file : CPTU002 ULS

Input parameters and analysis data

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Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.43	Unit weight calculation:	Based on SBT	K_o applied:	Yes		

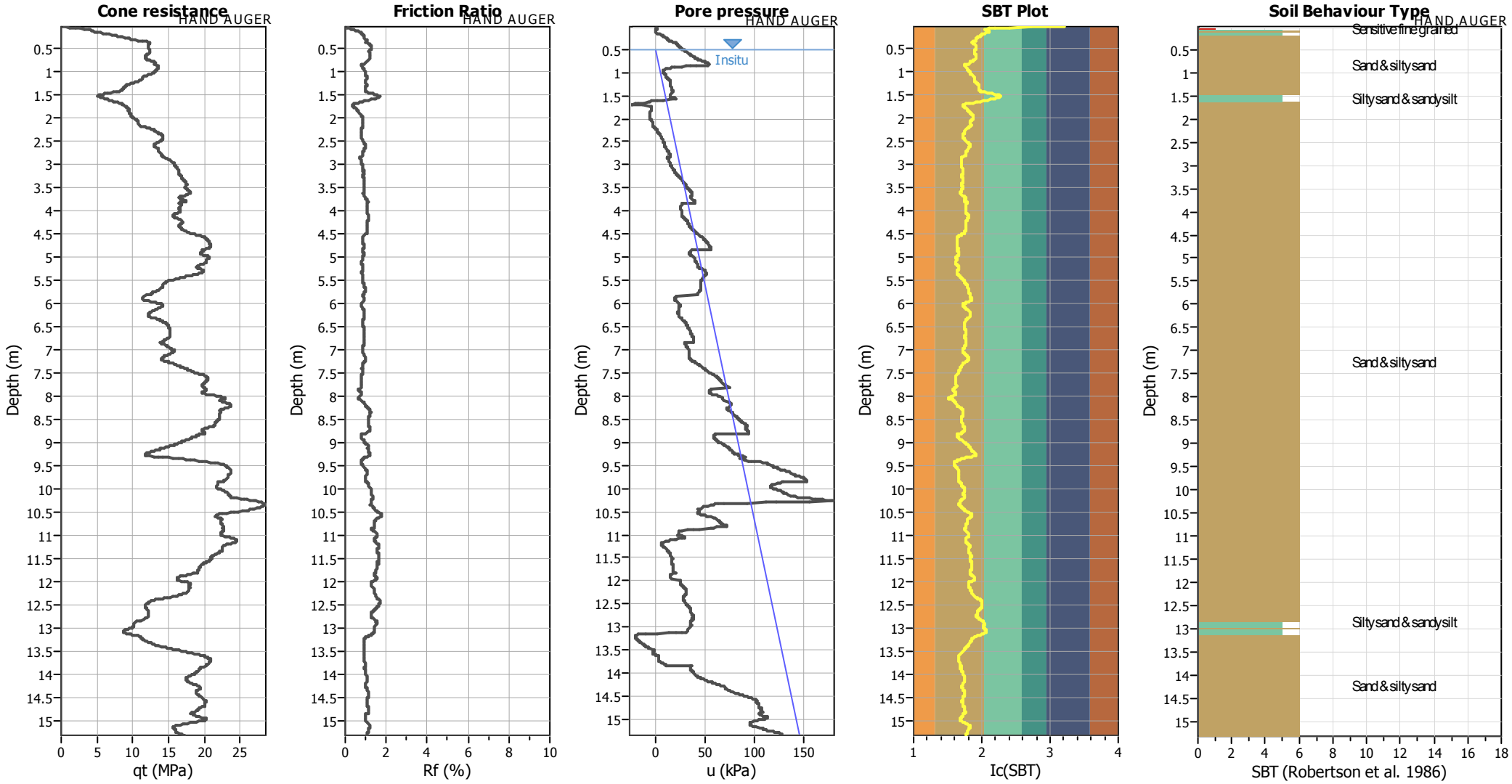






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CPT basic interpretation plots



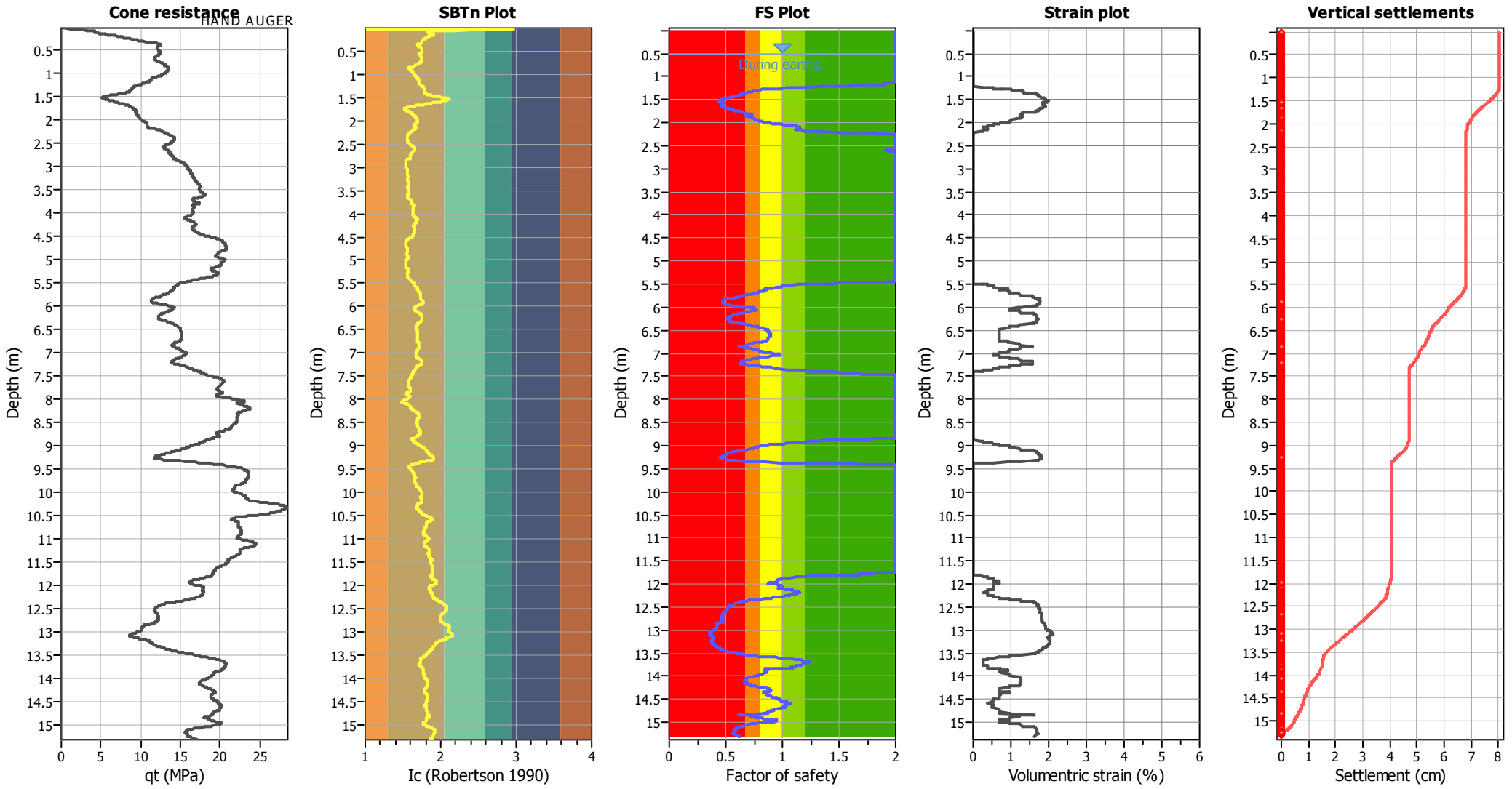
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
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SBT legend

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9. Very stiff fine grained

Estimation of post-earthquake settlements

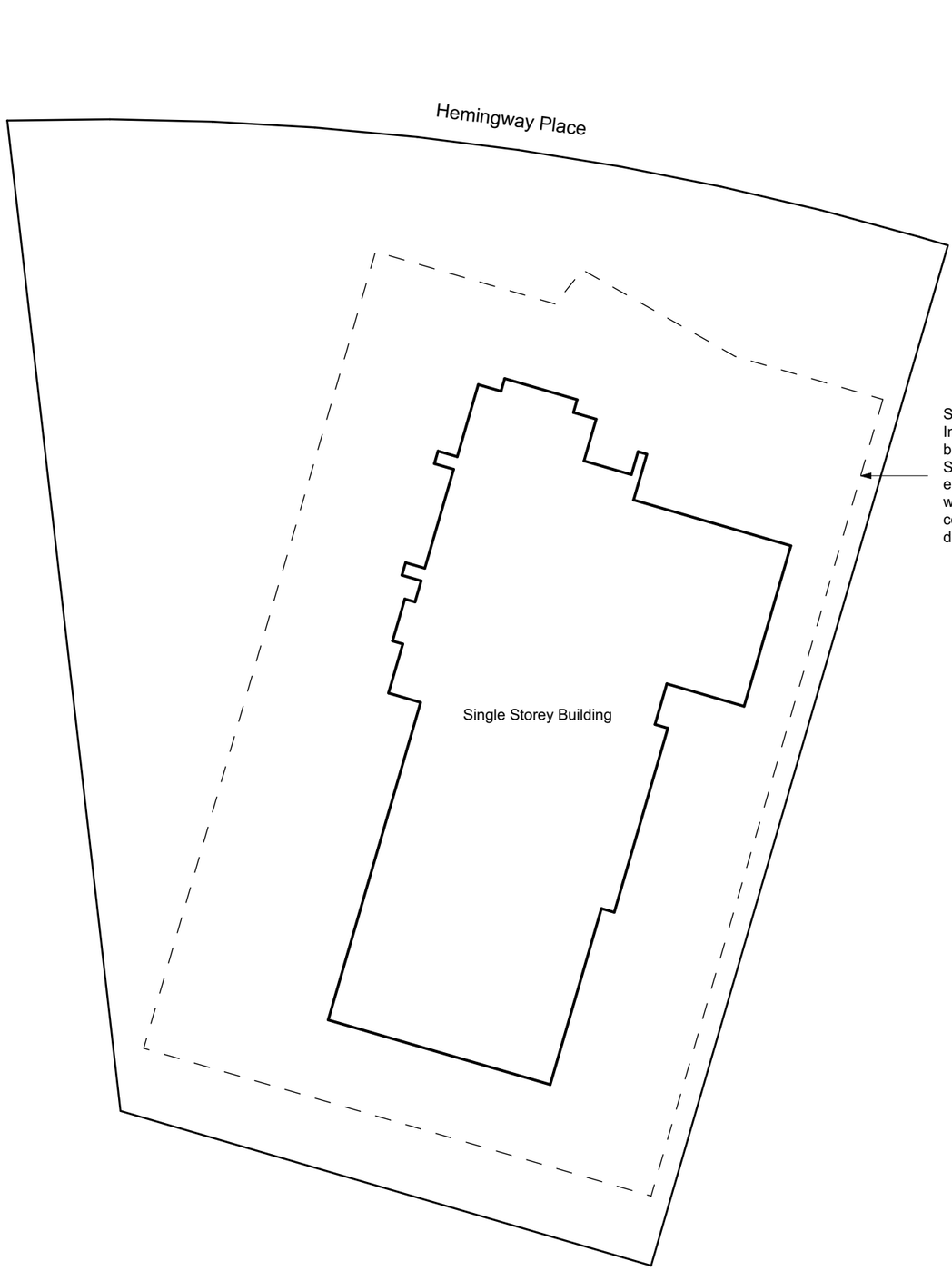


Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

SITE DESCRIPTION:

Legal Description:	Lot 35 DP 319911
Address:	16 Hemingway Place, Spencerville
Earthquake Zone:	Zone 2
Exposure Zone:	Zone C
Climate Zone:	Zone 3
Wind Region:	A
Lee Zone:	
Rainfall Intensity:	30 - 40
Wind Zone:	High
Land status:	Green Zone, Technical Category 3, blue
Geotechnical Report:	Kirk Roberts Consulting Engineers Ltd.
Project Number:	121195
Date:	04/06/2012



Site Plan/Sediment Control Plan

SCALE 1:200

Note:
If any asbestos is discovered during the proposed building work, the following steps are required to be taken. Prior to removal, please contact the Department of Labour, telephone 0800 209020 for information on appropriate methods of handling asbestos.

FRONTIER ENGINEERS
CIVIL, STRUCTURAL & REMEDIAL

PO Box 79183 Avonhead
Christchurch 8446

Unit 1, 35 Sheffield Crescent, Burnside 8053

Phone: 03 359 9192
Free Call: 0508 FRONTIER (0508 376 684)

Email: admin@frontierengineers.co.nz

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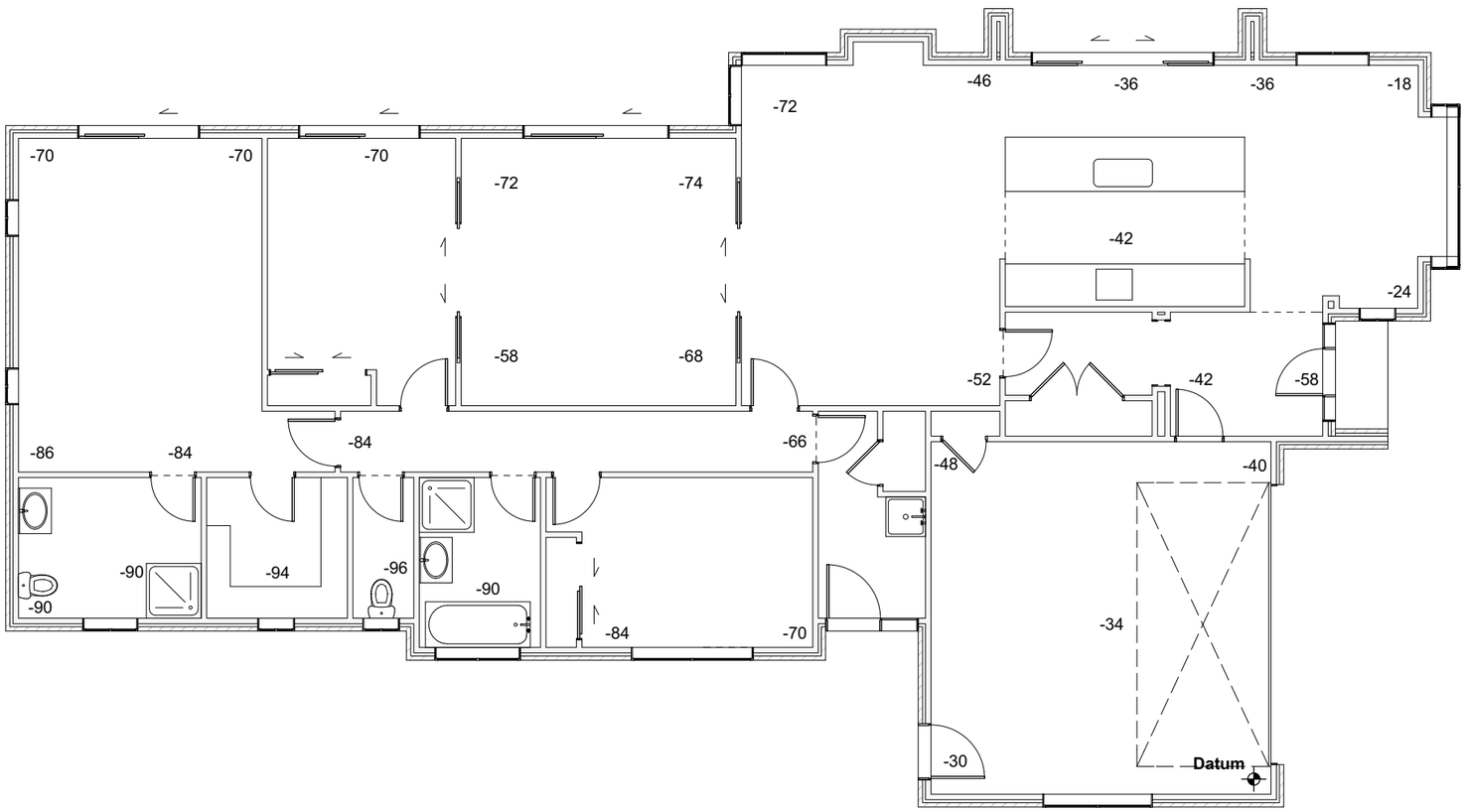
Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3	1:200
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved	
Date	

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Project Number: 170057
Sheet: S01
Rev ID: 00

Drawing Title: Site Plan/Sediment Control Plan
Project Status: Consent Issue



Ground Floor Pre-Level Survey

SCALE 1:100

Legend:

±X Indicates floor level above or below datum

- - - - - - - Indicates change in floor type

Notes:

1. Following relevelling the floor at each unit shall have
   i. maximum differential height of 50mm overall
   ii. 10mm within any room.
   iii. have a maximum slope of 1:200 (0.5%) between any to points more than 2m apart.
2. All levels shown on this plan are relative to the indicated datum.
3. All floor levels locations and slopes approximate

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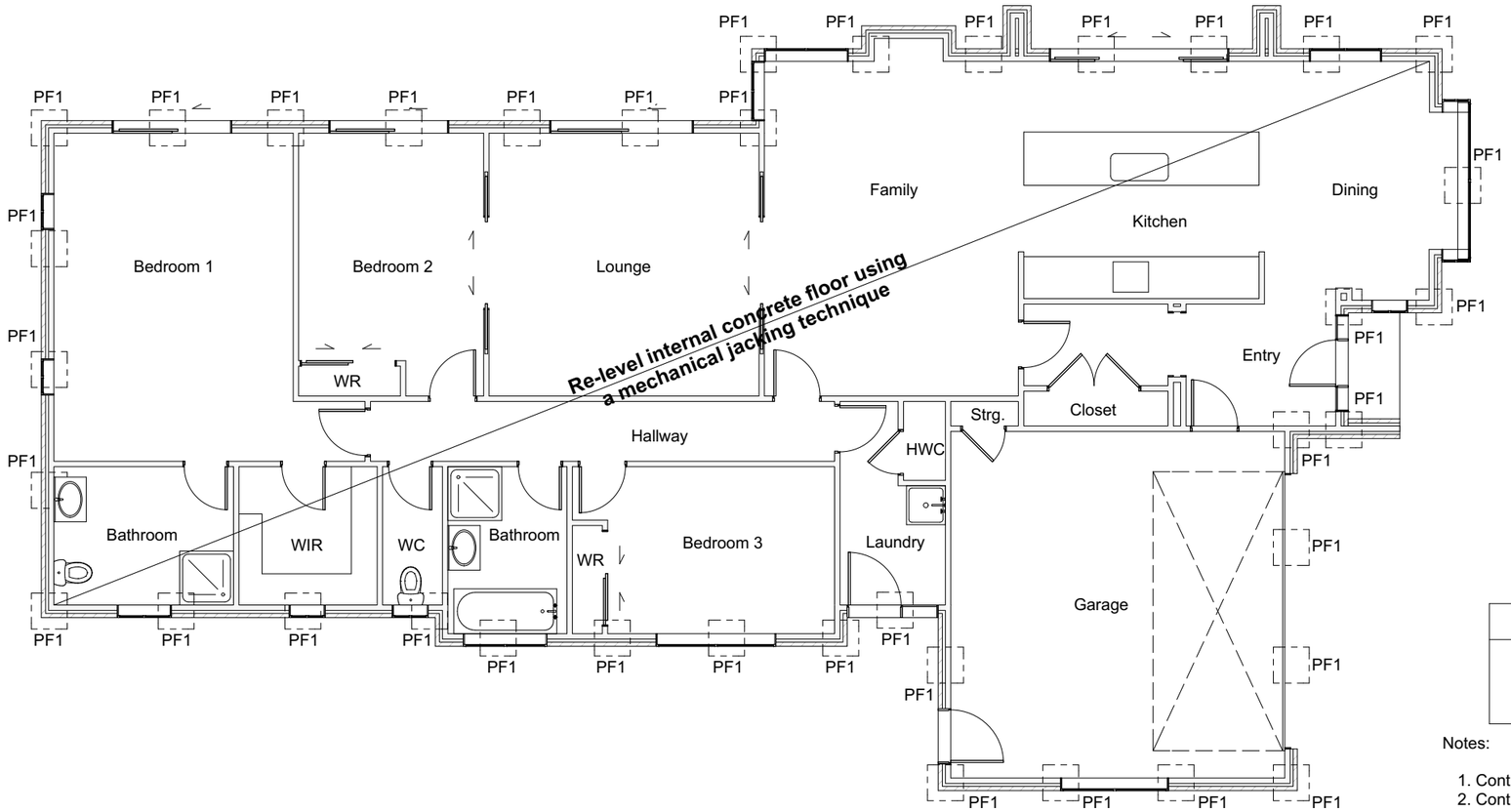
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00	Issued for Consent	16/03/2017

Scale at A3	1:100
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved	
Date	

Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Ground Floor Pre-Level Floor Survey
Project Number	170057
Sheet	S02
Rev ID	00
Project Status	Consent Issue



Jack Pad Approximate Locations

SCALE 1:100

Schedule	
PF1	600x600sq. concrete pad footing at 2.0m crs*

Notes:

1. Contractor is to confirm all dimensions on site before commencing work
2. Contractor is to confirm floor levels at each pile or bearer support location to be packed.
3. Pad target depth is 0.5m min. below ground level.
4. Disconnect and reconnect services as required.
5. Ensure guttering falls to downpipes after relevelling.
6. Ensure all doors open and close properly.
7. All work to be carried out in accordance with NZS3604-2011.
8. Contractor to make all walls plumb.
9. Cracks in all concrete structures are to be repaired using proprietary product crack bond 'LR321G' supplied by adhesives technology corporation or approved equivalent.
   Cracks to be repaired up to a maximum of 5mm and any cracks of more than 5mm are to be repaired by using Helibar or any approved equivalent.
   Product to be installed strictly in accordance with manufacturers instructions

* Please note, positions of concrete pads are an approximate location setting

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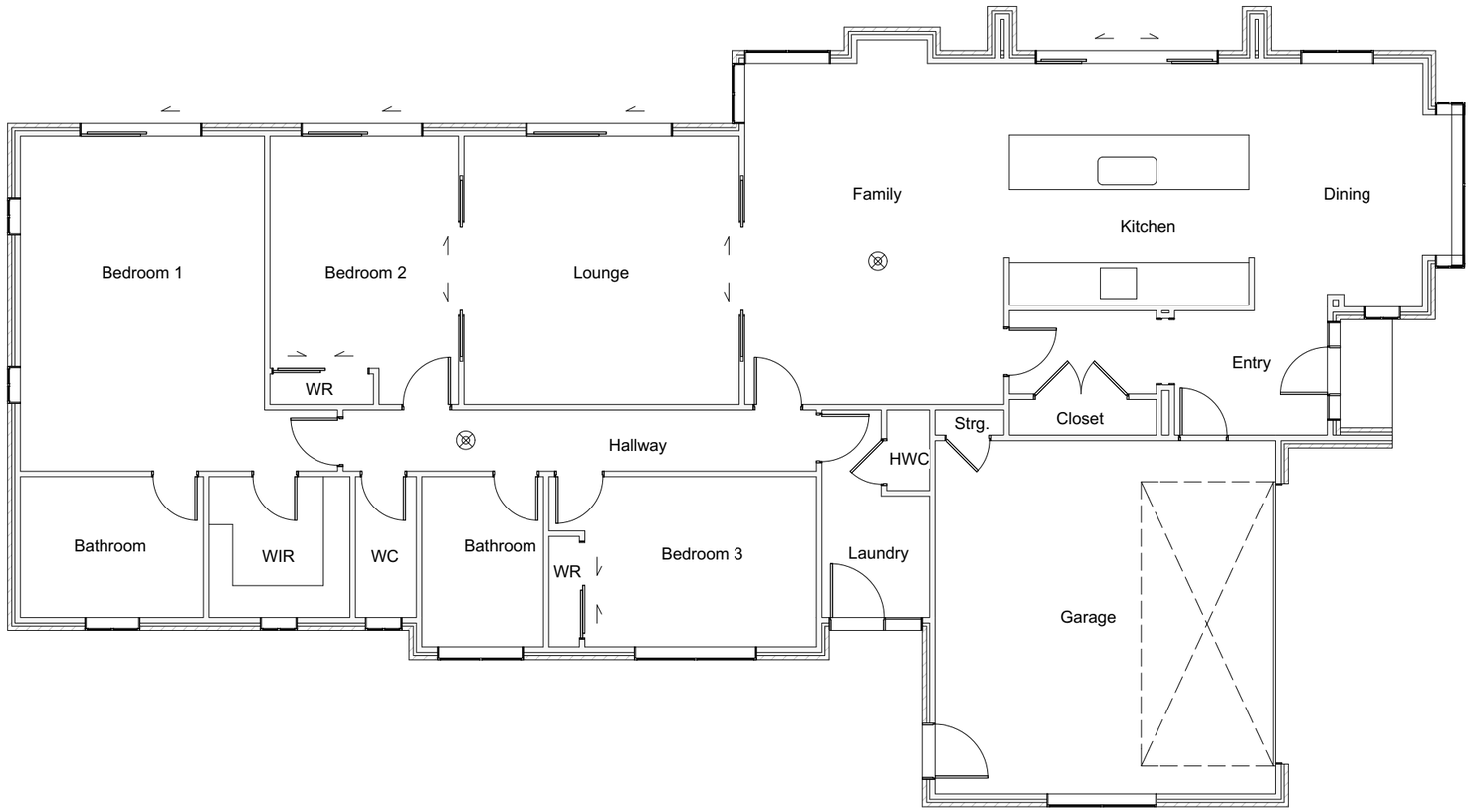
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00	Issued for Consent	16/03/2017

Scale at A3	1:100
Date	16/03/2017
Design by	DC
Drawn by	DC
Approved Date	

Project	Earthquake Repairs
Address	16 Hemingway Place, Spencerville
Client	Liam Brewer
Drawing Title	Ground Floor Jack Pad Approximate Locations
Project Number	170057
Sheet	S03
Rev ID	00
Project Status	Consent Issue



Smoke Detector Location

SCALE 1:100

Schedule	
⊗	Smoke Detector

Note:
All smoke detectors will be checked for complience with F7/AS1, and if non-compliant will be moved and/or installed to meet compliance as per drawing.

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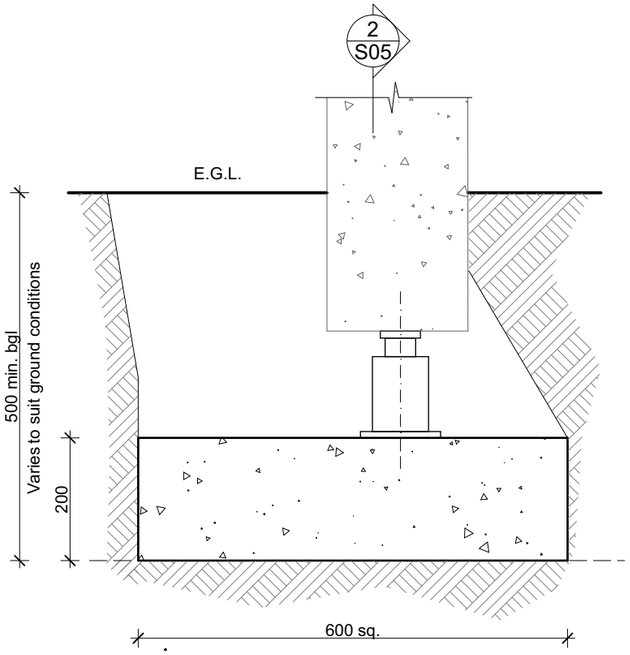
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Design by: DC
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Approved
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Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

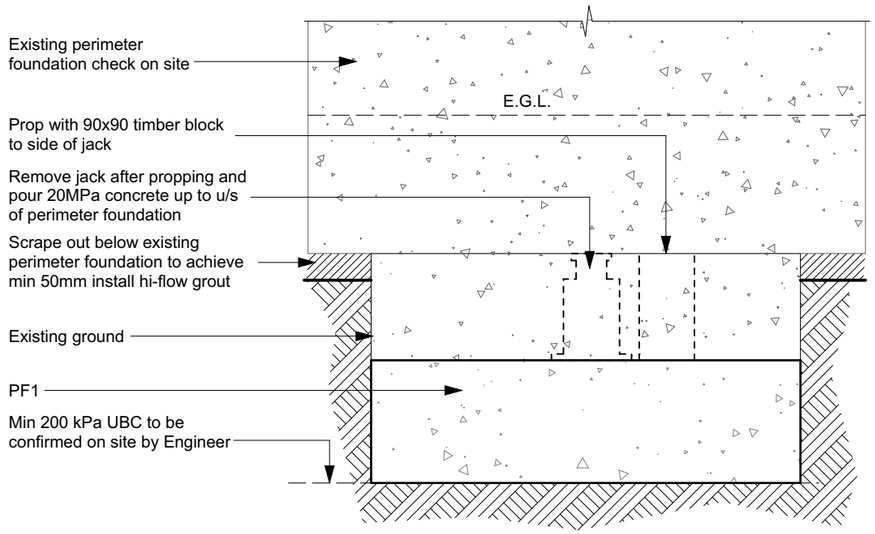
Project Number: 170057
Sheet: S04
Rev ID: 00

Drawing Title: Smoke Detector Location
Project Status: Consent Issue



1 - Re-levelling Pad Detail

SCALE 1:10



2 - Section

SCALE 1:10

Schedule	
PF1	600x600sq. concrete pad footing at 2.0m crs.

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Approved Date	

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Project Number: 170057

Drawing Title: Details

Sheet: S05

Rev ID: 00

Project Status: Consent Issue

GENERAL

G1. Read these drawings in conjunction with all architectural and other working drawings, specifications and with such other written instructions as may be issued during the course of the contract.
G2. Provide all workmanship and materials in accordance with the requirements of the current editions of the NZ Building Act, the NZ Building Code, the New Zealand Standards and the by-laws and ordinances of the relevant building consent authority.
G3. Comply as the builder, with requirements of the workplace health & safety act.
G4. Refer any conflict between these notes, the specification, the drawings or any other relevant documents to the engineer for decision prior to proceeding with the work.
G5. Do not obtain dimensions by scaling the drawings. For setting out dimensions and levels refer to the architectural drawings.
G6. The builder is responsible for the provision of all shoring to maintain the stability and integrity of excavations and adjacent structures. Provide details, for review by the Engineer, of any necessary temporary works, including shoring, prior to commencing construction.
G7. During construction it is the builder's responsibility to maintain the structure in a stable condition and to ensure no part is overstressed.
G8. The design and drawings are copyright and may not be used or reproduced in whole or in part without the written permission of the Engineer.
G9. Fire-resistance levels (FRL's) required for the various structural elements must be confirmed by the Building Surveyor or Architect.

LOADINGS

L1. Superimposed floor loads are generally in accordance with AS/NZS 1170.1 and specifically:

	1.5 kPa	Generally
	2.0 kPa	Balconies
	2.5kPa	Stairs

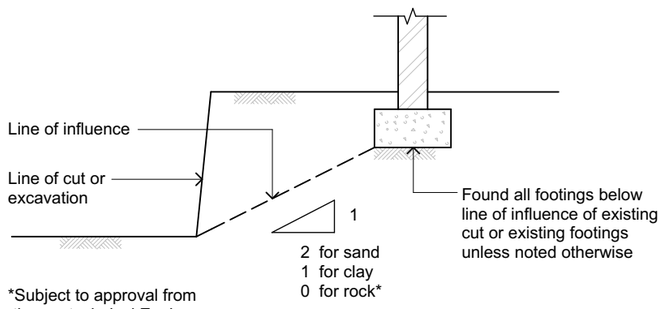
L2. Wind loads are in accordance with AS/NZS1170.2 for:

Terrain category:	2.5	Region: A7
Topographical multiplier of:	1.0	
Shielding multiplier of	1.0	

L2.2 Snow loads are in accordance with AS/NZS 1170.3 0.9kPa
L2.3 Earthquake loads are in accordance with NZS 1170.5

FOUNDATIONS

F1. The minimum safe ultimate bearing capacity of foundation material shall be:
Slabs & Footings: 200 kPa in natural substrate unless noted otherwise (U.N.O.)
F2. Foundation material shall be approved by the engineer prior to placing concrete.
F3. The bases of footing excavations shall be finished clean and horizontal and be embedded 300 into naturally occurring material.
F4. Founding levels where shown are for tender purposes only.
F5. Any proposed footing excavation near boundaries, other structures or services shall be approved by the Engineer.
F6. Subgrade shall be approved material compacted to 98% standard dry density determined by testing to the relevant part of NZS 4402:1986 U.N.O.
F7. Locate all new footings relative to line of cut/excavation including excavations as shown below:



*Subject to approval from the geotechnical Engineer

REINFORCED CONCRETE

C1. Provide all workmanship and materials in accordance with NZS 3101.1:2006, NZS 3109:1997 and NZS 3605:2011, their referenced documents, the drawings and the specification.
C2. Provide concrete grade and minimum clear concrete cover to reinforcement in accordance with NZS 3101:2006 & NZS 3604:2011 U.N.O.

CONCRETE GRADE	ELEMENT LOCATION U.N.O	MINIMUM CONCRETE COVER (mm)
20 MPa	Pad Footings Steps & Landings Paths & Driveways	25 against ground with DPM 75 against ground with no DPM 30 interior protected areas 50 exposed areas
25 MPa	Slabs & Foundations Suspended Stairs	25 against ground with DPM 75 against ground with no DPM 25 interior protected areas 50 exposed areas
30 MPa	Where Noted	20 against ground with DPM 45 against ground with no DPM 20 interior protected areas 50 exposed areas

C3. Support all reinforcement at 1 metre maximum centres both ways on mild steel plastic tipped chairs, plastic chairs or concrete chairs. Use only plastic chairs for externally exposed soffits.
C4. Provide all concrete with 80mm maximum slump and 20mm maximum aggregate unless approved by the Engineer.
C5. Sizes of concrete elements are net, exclusive of applied finishes. Beam depths are written first and include slab thickness.
C6. Properly form construction joints and use only where shown or approved by the Engineer.
C7. Reinforcement is represented diagrammatically and is not necessarily shown in true projection.
C8. Weld or splice reinforcement only in positions approved by the Engineer.
C9. Provide the minimum clear spacing between conduits, cables, pipes and bars as required by NZS 3109 but not less than three bar diameters. Do not place conduits in slabs above top reinforcement or below bottom reinforcement.
C10.

D	Denotes hot rolled deformed bars grade 300E.
HD, H	Denotes hot rolled deformed bars grade 500E.
R	Denotes hot rolled plain round bars grade 300E.
SE,RE	Denotes hard drawn wire fabric grade 500E.

C11. Notify the Engineer a minimum of 24 hours before reinforcement has been completed.
C12. Allow 2 hours after the completion of the reinforcement for the Engineer's inspection.
C13. Do not order concrete until reinforcement has been approved by the Engineer.
C14. Cure concrete in accordance with NZS 3109. Commence curing within two hours of finishing operations and continue for a minimum of seven days by using an approved proprietary compound or by keeping continuously wet.
C15. Tie all unsupported bars in transverse direction to D12-300, lapped 500 U.N.O.
C16. Lap fabric in accordance with clause 8.7.6 of NZS 3109.
C17. Provide hooks, laps and bends in accordance with NZS 3101 & NZS 3109 U.N.O.
C18. Provide chamfers, drip grooves etc. in accordance with the Architect's details.
C19. Design, construct and strip formwork in accordance with NZS 3109.
C20. Pre camber formwork upwards by 1/500 of the clear span U.N.O. where supported beams and slabs span greater than 5m.
C21. The concrete elements detailed have a F.R.L. of 60/60/60 U.N.O.

TIMBER

T1. Ensure all workmanship and materials are in accordance with NZS 3603:1993 and NZS 3604:2011, their referenced documents and the specification.
T2. Provide all interior timber as SG6 (dry) U.N.O.
T3. Provide all external timber as SG8 (dry) U.N.O.
T4. Where the use of treated timber for durability is noted on the structural drawings, ensure it complies with the parameters: Exposure Zone C in accordance with NZS 3604.
T5. Install proprietary timber connectors in accordance with the manufacturers written instructions.
T6. Retighten bolted connections in unseasoned timber prior to the fixing of cladding.
T7. Timber elements or timber framing have not been designed unless noted.
T8. All trusses to be pre-cambered upward 1/240 span.

STEELWORK

S1. Ensure materials, fabrication and erection are in accordance with NZS 3404, it's referenced documents and the specification.
S2. Shop drawings are to be approved by the Engineer prior to fabrication.
S3. Provide all welds as 6mm continuous fillet from E41xx electrodes, all bolts as M16-4.6/S and all cleats and gussets as 10mm plate U.N.O.
S4. For bolts, the following notation is used:
4/M16-4.6/s denotes 4 x M16 commercial grade bolts snug tight.
6/M20-8.8/tf denotes 6 x M20 high strength structural bolts fully tensioned in a no slip joint.
8/M24-8.8/tb denotes 8 x M24 high strength structural bolts fully tensioned in a bearing joint.
S5. Leave mating surfaces of 'tf' connections unpainted and free of mill scale and rust.
S6. Tighten bolts in 'tf' and 'tb' connections using the part turn method or load indicating washers. Do not use calibrated torque wrenches. Use a hardened washer under the bolt head or nut, whichever is rotated. The re-use of fully tensioned bolts is prohibited.
S7. Provide all cleats and drill all holes necessary for fixing steel to steel or timber.
S8. Fabricate steel beams and trusses spanning greater than 5m with an upward pre camber of 1/500 span U.N.O.
S9. Prepare structural steelwork to class 2 and paint with zinc phosphate primer to a thickness of 70 micrometres U.N.O.
S10. Hot dip galvanise all exposed external steelwork and all steelwork built into an external masonry skin, in accordance with grade HDG600 to AS/NZS 2312.
S11. Within 100m from the non-surf coast or 1 km from the surf coast, hot dip galvanise above in accordance with grade HDG900 to AS/NZS 2312.
S12. Provide fire protection to all steelwork as required.
S13. Ensure all cold formed sections conform to AS/NZS 4600 and are roll-formed from steel strip, minimum yield stress 450 MPa, 300 g/m² minimum zinc coating mass U.N.O.

MASONRY

M1. Ensure all workmanship and materials are in accordance with NZS 4230, the drawings & project specifications.
M2. Where masonry supports concrete slabs or beams, lay the top course with frogs down and covered with 2 layers of approved slip joint material.
M3. Walls shown shaded on plan are load bearing. Separate non-load bearing walls under slabs from the slab by 15mm of approved compressible material. Where masonry abuts slab downturns, form a 15mm gap between brickwork and side of downturn.
M4. Do not erect masonry supported by concrete slabs or beams until all formwork and props under have been removed.
M5. Provide all bricks of ultimate compressive strength $f'uc$ = 20 MPa U.N.O.
M6. Provide all hollow concrete masonry of ultimate compressive strength $f'uc$ = 15 MPa U.N.O.
M7. Provide classification M3 masonry mortar U.N.O. Note that within 100m from non-surf coast, or 1km from surf coast, provide classification M4 masonry mortar.
M8. Cut no chases into loadbearing masonry without the approval of the Engineer.
M9. Provide movement control joints vertically for full height of wall as follows:
For general masonry, at 8m maximum centres & 4m maximum from corners.
For articulated masonry, at 6m maximum centres & 4m maximum from corners.
Provide 15mm minimum joints with an approved compressible filler, tied together every 4th course with a MET 3.3 masonry sliding tie or approved equivalent.
M10. Construct hollow walls to full height or maximum 3m before filling cores. Provide cleanout openings at the base of all cores to be filled.
M11. Core fill $f'uc$ = 20 MPa concrete with 10mm aggregate, 180 slump U.N.O.
M12. Construct hollow masonry retaining walls using "double U blocks".
M13. Unreinforced masonry walls have not been designed unless noted.

FRONTIER ENGINEERS
CIVIL, STRUCTURAL & REMEDIAL

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Christchurch 8446

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Rev ID	Description	Date
00	Issued for Consent	16/03/2017

Scale at A3 1:1
Date 16/03/2017
Design by DC
Drawn by DC
Approved
Date

Project: Earthquake Repairs
Address: 16 Hemingway Place, Spencerville
Client: Liam Brewer

Project Number: 170057
Sheet: S06
Rev ID: 00
Drawing Title: General Notes
Project Status: Consent Issue

Building Code Clause(s)…B1 ……

PRODUCER STATEMENT – PS1 – DESIGN

(Guidance notes on the use of this form are printed on page 2)

ISSUED BY: Frontier Engineers Ltd.....
(Design Firm)

TO: Liam Brewer
(Owner/Developer)

TO BE SUPPLIED TO: Christchurch City Council……
(Building Consent Authority)

IN RESPECT OF: Re-level of existing dwelling only.
(Description of Building Work)

AT: 16 Hemingway Place, Spencerville, Christchurch 8083
(Address)

…… **LOT** 35…… **DP** 319911 **SO** …….

We have been engaged by the owner/developer referred to above to provide …Structural Design of specific building elements and Supervision……..… services in respect of the requirements of
(Extent of Engagement)
Clause(s) B1/VM1 ..of the Building Code for
All ☐ or Part only ☒ (as specified in the attachment to this statement), of the proposed building work.

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

☒ Compliance Documents issued by the Ministry of Business, Innovation & Employment…B1/VM1 … …….or
(verification method / acceptable solution)

☐ Alternative solution as per the attached schedule … …

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

…Earthquake Repairs, 16 Hemingway Place, Spencerville, Christchurch 8083 and numbered 170057 S00-S06……;
together with the specification, and other documents set out in the schedule attached to this statement.
On behalf of the Design Firm, and subject to:
(i) Site verification of the following design assumptions ground as per Kirk Roberts Consulting Engineers report dated 4 June 2012…
(ii) All proprietary products meeting their performance specification requirements;

I **believe on reasonable grounds** that a) the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached schedule, will comply with the relevant provisions of the Building Code and that b), the persons who have undertaken the design have the necessary competency to do so. I also recommend the following level of construction monitoring/observation:
☐CM1 ☐CM2 ☐CM3 ☐CM4 ☐CM5 (Engineering Categories) or ☒ as per agreement with owner/developer (Architectural)

I, Alan Pearson … am: ☒CPEng 1024104 #
(Name of Design Professional)
☐Reg Arch …… .#

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

SIGNED BY …Alan Pearson…… ON BEHALF OF Frontier Engineers
(Design Firm)

Date …16/03/2017… (signature)……

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

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

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

Form 2A

Memorandum from licensed building practitioner: Certificate of design work

Section 45 and Section 30C, Building Act 2004

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

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

THE BUILDING

Street address: 16 Hemingway Place	
Suburb: Spencerville	
Town/City: Christchurch	Postcode: 8083

THE OWNER

Name(s):	
Mailing address:	
Suburb:	PO Box/Private Bag:
Town/City:	Postcode:
Phone number:	Email address:

BASIS FOR PROVIDING THIS MEMORANDUM

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

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

I, Alan Pearson carried out / ~~supervised~~ the following design work that is restricted building work

PRIMARY STRUCTURE: B1

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

PRIMARY STRUCTURE: B1

All RBW Design work relating to B1 (x)		( ) Carried out ( ) Supervised	
Foundations and subfloor framing (✓)	*Re-level of existing foundation only*	(x) Carried out (✓) Supervised	Refer drawing set from Frontier Engineers 170057
Walls (x)		( ) Carried out ( ) Supervised	
Roof (x)		( ) Carried out ( ) Supervised	
Columns and beams (x)		( ) Carried out ( ) Supervised	
Columns and beams (x)		( ) Carried out ( ) Supervised	
Other (x)		( ) Carried out ( ) Supervised	

EXTERNAL MOISTURE MANAGEMENT SYSTEMS: E2

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

		( ) Supervised	
Other (x)		( ) Carried out ( ) Supervised	

FIRE SAFETY SYSTEMS: C1 – C6

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

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

Note: continue on another page if necessary.

WAIVERS AND MODIFICATIONS

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

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

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

Note: continue on another page if necessary.

ISSUED BY

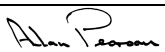
Name: Alan Pearson	LBP or Registration number: 1024104
The practitioner is a: (x) Design LBP (x) Registered architect (✓) Chartered professional engineer	
Design Entity or Company (optional): Frontier Engineers Ltd.	
Mailing address (if different from below): PO Box 79183, Avonhead, Christchurch, 8446	
Street address / Registered office: 1/35 Sheffield Crescent	
Suburb: Burnside	Town/City: Christchurch
PO Box/Private Bag:	Postcode: 8053
Phone number:	Mobile: 027 923 7888
After Hours:	Fax:
Email address: admin@frontierengineers.co.nz	Website: www.frontierengineers.co.nz

DECLARATION

I, Alan Pearson , CP Eng 1024104,

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

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

Signature: 

Date: 16 Mar 2017

CONSTRUCTION MONITORING SCHEDULE
JOB LOCATION: 16 Hemingway Place, Spencerville, Christchurch 8083
FILE NUMBER: 170057

Construction monitoring site visits relating to compliance with the building consent documentation and for verification of design assumptions are required as follows:

	TIME	NUMBER OF VISITS
1	Base of excavation pads	1-2
2	Post floor level survey	1-2

A site inspection report will be sent within 24hrs after inspection to the Client. A Producer Statement 4, Construction Review, could be issued once the above monitoring site visits have been completed. It is the Clients responsibility to notify the Engineer to enable the above site visits to be completed.

D. Chernushkin

Dmitry Chernushkin
Frontier Engineers Ltd.

Design Feature Report

Re-level of Existing Residential Building

Location 16 Hemingway Place, Spencerville, Christchurch 8083
Client Liam Brewer

Job No: 170057
Issue Date: 16-Mar-17
Revision: 00

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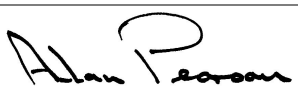
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Document Transmittal

Rev	Date	Revision Details/Status	Author	Approver
00	16 March 2017	Issue to Client	Dmitry Chernushkin	Alan Pearson

Author Signature:		**Approver Signature:**	
Name:	Dmitry Chernushkin	**Name:**	Alan Pearson
Title	Engineer	**Title**	Director CPEng 1024104

Introduction:

The existing Residential Building was damaged in the Canterbury Earthquake Sequence (CES) including differential settlement. The structural integrity of the dwelling is satisfactory; however, re-levelling is required to amend floor slopes that exceed slopes of 1:200.

Scope of work:

Frontier Engineers has been engaged by Liam Brewer to prepare technical documentation and certification for the re-level of the existing Residential only:

- Technical drawings of the proposed repairs
- Producer Statement 1
- Memorandum of Works
- Construction Monitoring Schedule
- Site inspection reports
- Producer Statement 4

Exclusions:

- All repair works other than re-levelling or direct repairs to the foundation system
- Strengthening of the Residential Building in anyway
- Future proofing of the Residential Building in anyway
- Any work above foundation level
- The works are assumed to be carried out under a Consent Exemption, and on this basis we refer to the Guidance for Building Work that Does Not Require a Building Consent (Building Act 2004) issued by the MBIE regarding section 42A of the Building Act,

  (a) the building work complies with the building code to the extent required by this Act:
  (b) after the building work is completed, the building:
  (i) if it complied with the building code immediately before the building work began, continues to comply with the building code; or
  (ii) if it did not comply with the building code immediately before the building work began, continues to comply at least to the same extent as it did then comply.

I.e. where specific parts of the building are modified our intention is to ensure that the building will function structurally to at least the same extent as it did prior to repairs, but may not necessarily be brought up to the current building code requirements.

Reference:

- Geotechnical report by Kirk Roberts Consulting Engineers Ltd Project No. 121195, dated 4 June 2012.
- NZS3101 Concrete Structures
- MBIE Guidance

Building Summary:

Foundation Type:	C – Concrete slab on grade
Structural Framing:	Timber framing
No. of Storeys:	1
Wall Cladding Weight:	Heavy – clay brick veneer
Roof Cladding Weight:	Light – pressed steel
Technical Category:	TC3
200kPa Bearing:	@ 0.5mbgl
Target Pad Depth:	0.5mbgl
Minimum Pad Size:	600mm x 600mm
Typical Pad Spacing:	2.0m
Max Pad Spacing:	2.5m

Design Philosophy:

Re-levelling

Mechanical jacking of the concrete structures using portable jacks and excavations at the lifting locations. The lifting locations are considered temporary until the dwelling is reinstated to its pre-earthquake condition. Any additional material or concrete works that remain on site are not considered to decrease any future performance, nor is it to be relied on as betterment or considered to increase performance during future earthquake events.

It is common for further cracking to occur as a result of re-levelling processes, which may require additional repairs, and needs to be completed prior to completion of works.

The concrete foundations have been assessed based on minimum steel design, but an additional design check has been made to consider the consequences of no reinforcement, and the concrete required to span using the flexure tensile capacity only.

As part of this assessment we have not considered the permanent lateral stretch of the building, or any other complications that may arise from re-levelling the building. Additionally, we do not know the condition of the dwelling prior to re-levelling, or the differential settlement of the foundations prior to the earthquake events. For this reason, it may not be practical to re-level the foundations where historical or long term settlement has previously occurred.

As the loading on the re-levelling pads is temporary, we have considered a safety factor of 2 for the ultimate bearing capacity.

APPENDIX – Design calculations

- Foundation Loading
- Re-levelling pads
- Concrete beam span
- Relevant Geotechnical

STANDARD CALCULATION TEMPLATE

JOB NAME: 16 Hemingway Place
JOB NO.: 170057
ENGINEER: DC
DATE: 09.03.2017

JOB DESCRIPTION:

Re-level of existing residential dwelling using a mechanical jacking technique

- Type C2 foundation
- Single storey dwelling
- Brick veneer wall cladding
- Light pressed steel roof cladding

STANDARD NOTATION AND DEFINITIONS

ACRONYMS

Foundations		Floor	
SF1	Strip Footing	FB1	Floor Bearer
PF1	Pad Footing	FJ1	Floor Joist
EB1	Edge Beam	SP1	Stringer Plate
IB1	Internal Beam	FP1	Pile
IR1	Internal Rib	VCJ	Vertical Control Joint
WP	Weld Plate		
SCJ	Saw Cut Joint		
CJ1	Control Joint		
CKJ	Connolly Key Joint		

Wall		Roof	
EW1	External Wall	R1	Rafter
IW1	Internal Wall	P1	Purlins
FW1	Fire Wall	VB	Veranda Beam
L1	Lintel	RB1	Roof Bracing
C1	Column	B1	Beam (steel or timber)
		B1	Ridge Beam

Other

TC#	Technical Category according to CERA for liquefaction risk
NZS	New Zealand Standard
MBIE	Ministry of Building, Innovation and Employment

DEFINITIONS

Along	Along the ridge line (Longitudinal)
Across	Across the ridge line (Transverse)

NZS 1170.0 - DESIGN ACTIONS - PART 0: GENERAL PRINCIPALS

REF

3.3 IMPORTANCE LEVEL

T 3.1 Structure designed for importance level **2**

T3.1 Consequence of failure ORDINARY

T3.1 Description: Medium consequence for loss of human life, or considerable economic, social or environmental consequences

T3.1 Comment: Normal structures and structures not falling into other levels

T3.2 Importance level desciption: Normal structures and structures not in other importance levels

3.4 ANNUAL PROBABLITY OF EXCEEDENCE

T3.3 Design working life **< 6 months**

Design annual probability of exceedence

Wind	ULS	1/100
Snow	ULS	1/50
Earthquake	ULS	1/100
SLS1	Service	1/25
SLS2	Service	-

3.4.2 *SLS1 — the structure and the non-structural components do not require repair after the*

3.4.2 *SLS1 earthquake, snow or wind event*

SLS2—the structure maintains operational continuity after the SLS2 earthquake (Importance L4 only)

NZS 1170.1 - PART 1: PERMANENT, IMPOSED AND OTHER LOADS

REF

4.2 COMBINATION FACTORS

G	Dead Loads (Permanent)
Q	Live Loads (Imposed)
ψ	load factor

4.2.2 Design Combinations for Strength

1.35G	Dominate Permernate Action
1.2G + 1.5Q	Permanent and Imposed Action
$1.2G + W_u$ (Down) + $\psi_c Q$	Permanent , Wind and Imposed Action
$0.9G + W_u$ (Up)	Permanent , Wind Reversal
$1.2G + S_u + \psi_c Q$	Permanent, Snow and Imposed
$1.0G + E_u + \psi_c Q$	Earthquake ULS

T4.1

ψ_c =	0.4 for roofs
	0.6 storage
S_u =	0.9kPa Minimum for Christchurch

4.3 Design Combinations for Servicabiltiy

$G + \psi_c Q$	Permanent and Imposed Action
E_s	Earthuquake SLS1

S5 METHOD OF ANALYSIS

STATIC

ELASTIC

NZS 1170.1 - PART 1: PERMANENT, IMPOSED AND OTHER LOADS
NZS 3604 - TIMBER FRAMED BUILDINGS - DESIGN LOADING

REF

3604 **Live Loading (Q)**

T1.2	Dwelling Floor Live Load	1.5	kPa	A1
	Dwelling Balconies/Decks	2.0	kPa	A1
	Dwelling Bathrooms	2.0	kPa	A2
	Communal Kitchens	3.0	kPa	A2
	Offices and Work Areas	3.0	kPa	B
	Dwelling Roof Load	0.25	kPa	

Dead Loading (G) - including timber framing

Branz	Light Roof	0.40	kPa		
3604	Heavy Roof	0.85	kPa		
	Light Wall	1.20	kN/m	H=	2.4
	Medium Wall	2.80	kN/m	H=	2.4
	Heavy Wall	6.40	kN/m	H=	2.4
	190 Block Wall	8.40	kN/m	H=	2.4
	190 Block Wall	11.40	kN/m	H=	2.4
	Timber Subfloor	0.40	kPa		
	Suspended Timber Floor	0.40	kPa		

Material Densities

$\mu_{Concrete}$	25.0	kN/m^3
μ_{Timber}	6.0	kN/m^3
μ_{Steel}	72.5	kN/m^3

NZS 3604 - TIMBER FRAMED BUILDINGS - DURABILITY

REF

3604 **Exposure Zone for Chrisrchurch** C

F4.2



NOTE – Zone D includes all offshore islands, the area within 500 m of the coastline of New Zealand, and those areas shown in white. The map shall be read in conjunction with 4.2.2.

T4.1

ZONES B AND C	Treated timber pile connections more than 600 mm from the ground and all subfloor connections	Subfloors vented 7000 mm² or less	SHELTERED[4]	Hot-dipped galvanized steel[2]
		Subfloors vented more than 7000 mm²	EXPOSED	Type 304 stainless steel[5]
	Treated timber pile connections within 600 mm of the ground	SHELTERED[4] AND EXPOSED		Type 304 stainless steel[5]
	All other structural fixings, except fabricated brackets[3]	SHELTERED[4]		Hot-dipped galvanized steel[2]
		EXPOSED		Type 304 stainless steel[5]
ZONE D	All structural fixings	SHELTERED[4] AND EXPOSED		Type 304 stainless steel[5]

SPECIFIC ENGINEERING DESIGN - RE-LEVELLING PAD
MBIE - Mechanical Re-levelling of Concrete Perimeter Beam (Type B1/B2)

Roof Load width	**6.5**	m	
First Floor Load Width	**0.0**	m	
` Ground Floor Load With	**4.5**	m	(Worst Case)

Dead Loads		**Mass**	**Load**
Roof	**Light**	0.40	2.60
First Floor Wall	**Nil**	0.00	0.00
First Floor	**Nil**	0.00	0.00
Ground Floor Wall	**Heavy**	2.20	5.28
Ground Floor	**Heavy**	2.50	11.25
Foundation	**Heavy**	-	4.50
		Total	**23.63**
Live Load			
Roof	**Ped Traffic**	0.25	1.63
First Floor	**Nil**	0.00	0.00
Ground Floor	**Residential**	1.50	6.75
		Total	**8.38**
Load Case	G + 0.3Q		**26.14**

Max Spacing of Jack Points	2.00	m	
Design Lift Load	52.29	kN	
Min Pad Size	**0.6 x 0.6**	m	
Min Pad Area	0.36	m^2	
Max Bearing Load	145.24	kPa	
Min Soil UBC	**200**	kPa	
Design Soil SBC	100	kPa	L.o.S = 2
Capacity Ratio	**0.7**		

NAME: 16 Hemingway Place **SHEET No.** 8
DATE: 09.03.2017 **REF: 170057**

SPECIFIC ENGINEERING DESIGN - RE-LEVELLING PAD
MBIE - Mechanical Re-levelling of Conc Edge Beam (Type C1/C2)

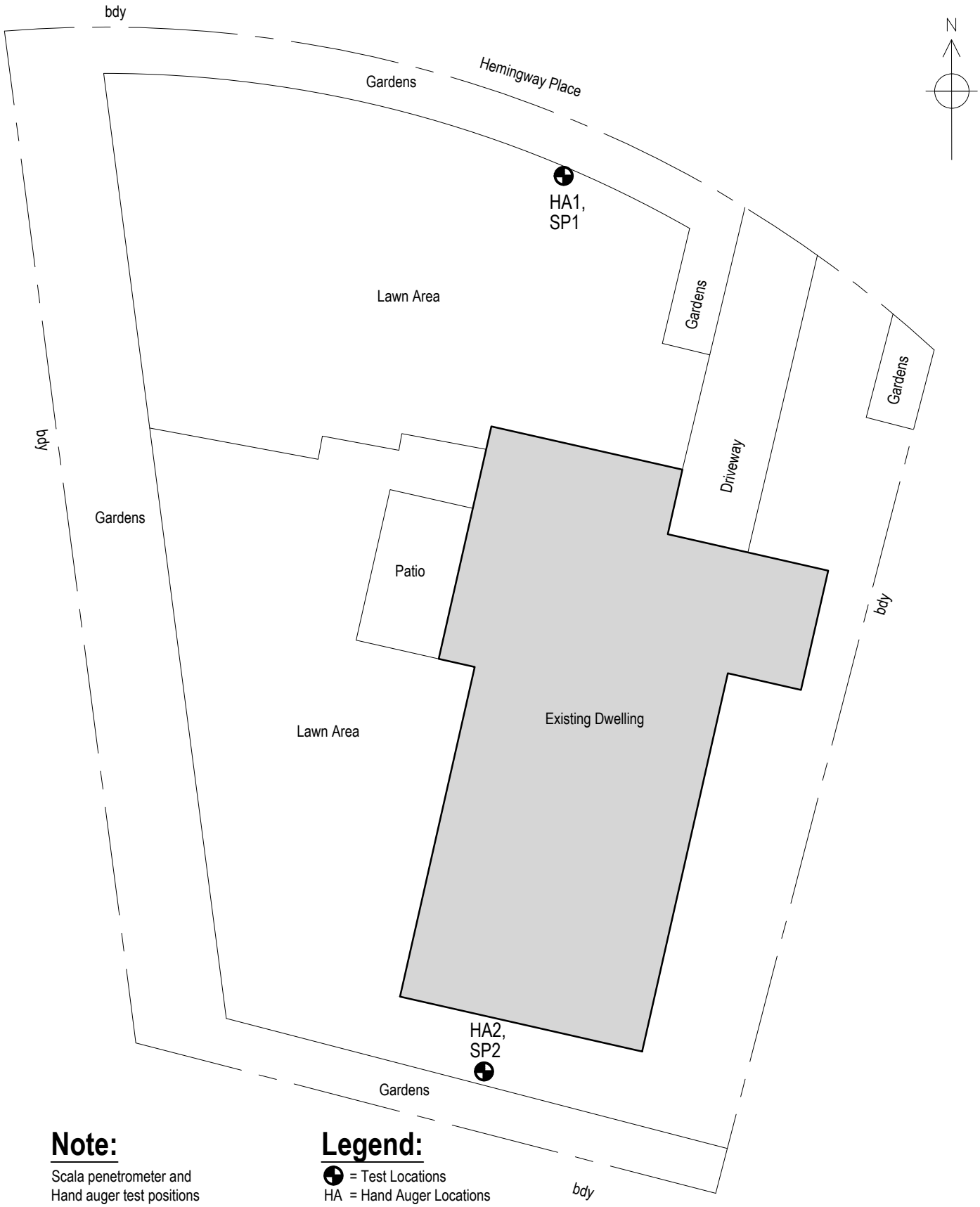
Beam Type	**Slab Edge Thickening**		
Assumed Size	450Dx250W		
Assumed No. Reo Bars	**2**		
Assumed Size of Reo Bars	**D16**	402.1	mm^2
Assumed grade of Reo	**300**		
Assumed concrete strength	**17.5**		

For conservative design assumed simply supported conditions

Design Load	26.14	kN/m	
Design Span	2.00	m	
Design Moment	13.07	kN.m	$wL^2/8$
Design Shear	52.3	kN	wL
Beam Check 1 - Moment	35.63	kN.m	$\phi Mb = \phi As\ fy\ (d-a/2)$
Capacity Ratio	**2.7**		
Beam Check 2 - Shear	33.1	kN	$0.08\sqrt{f_c'}$ ..
Capacity Ratio	**0.6**		NZS 3101 EQ 9-5

NAME: 16 Hemingway Place **SHEET No.**
DATE: 09.03.2017 **REF: 170057**

KIRK | ROBERTS
CONSULTING ENGINEERS LTD



Note:

Scala penetrometer and Hand auger test positions and boundaries are indicative only

Legend:

= Test Locations
HA = Hand Auger Locations
SP = Scala Penetrometer Locations
Bdy = Boundary Locations

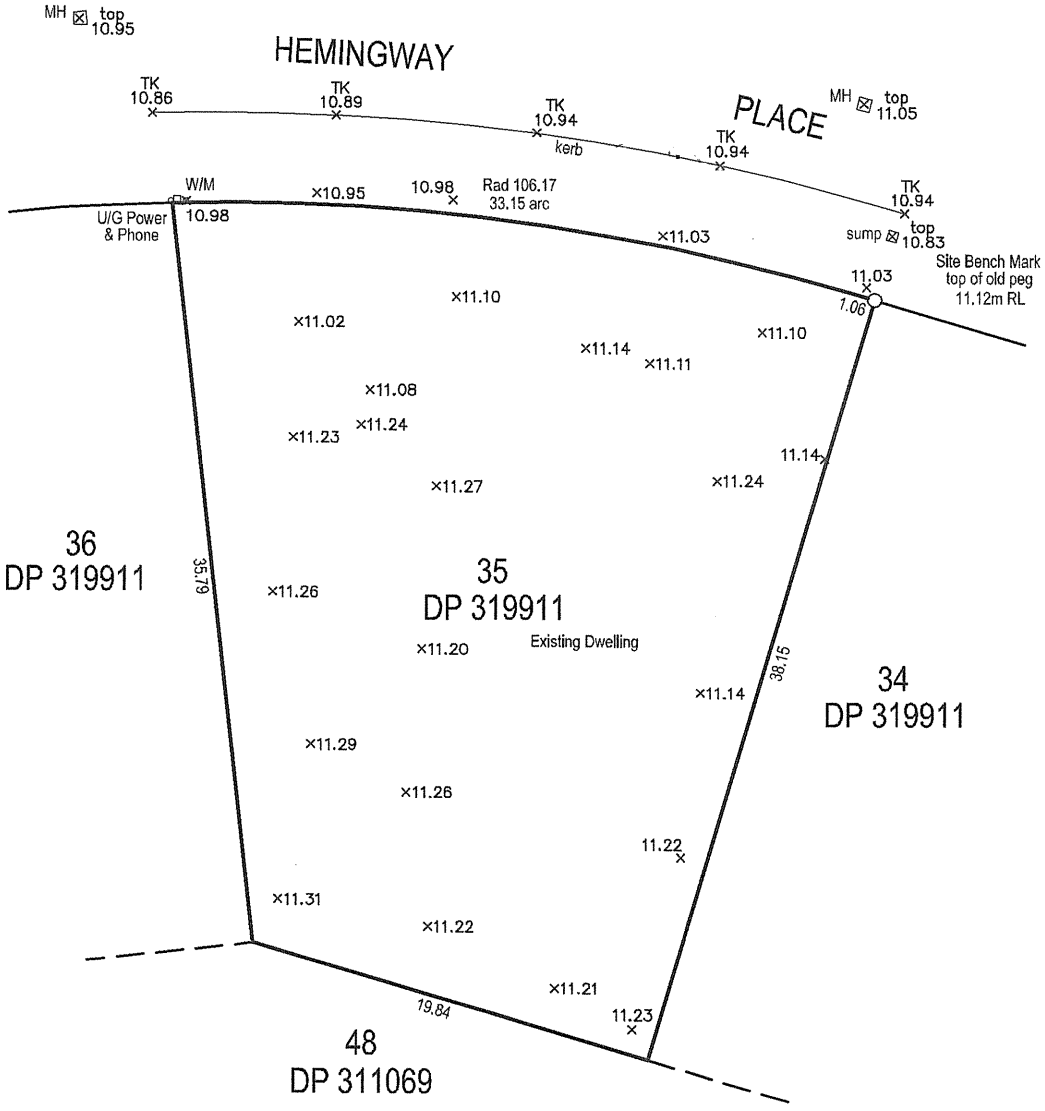
DO NOT SCALE - IF IN DOUBT, ASK
ORIGINAL SIZE A4
CAD REF :

SCALES :	1:200
	DATE
DESIGNED	
DRAWN	05.07.12 - GJT
CHECKED	
APPROVED	

RUSSEL WENN AND JULIE COLLIER
16 HEMINGWAY PLACE

SOIL TEST LOCATIONS

Job No.	Sheet No.	Rev.
121195	SK1	1



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ASHBURTON 03 307 7021
DARFIELD 03 318 8151

Levels at No.16 Hemingway Place, Spencerville

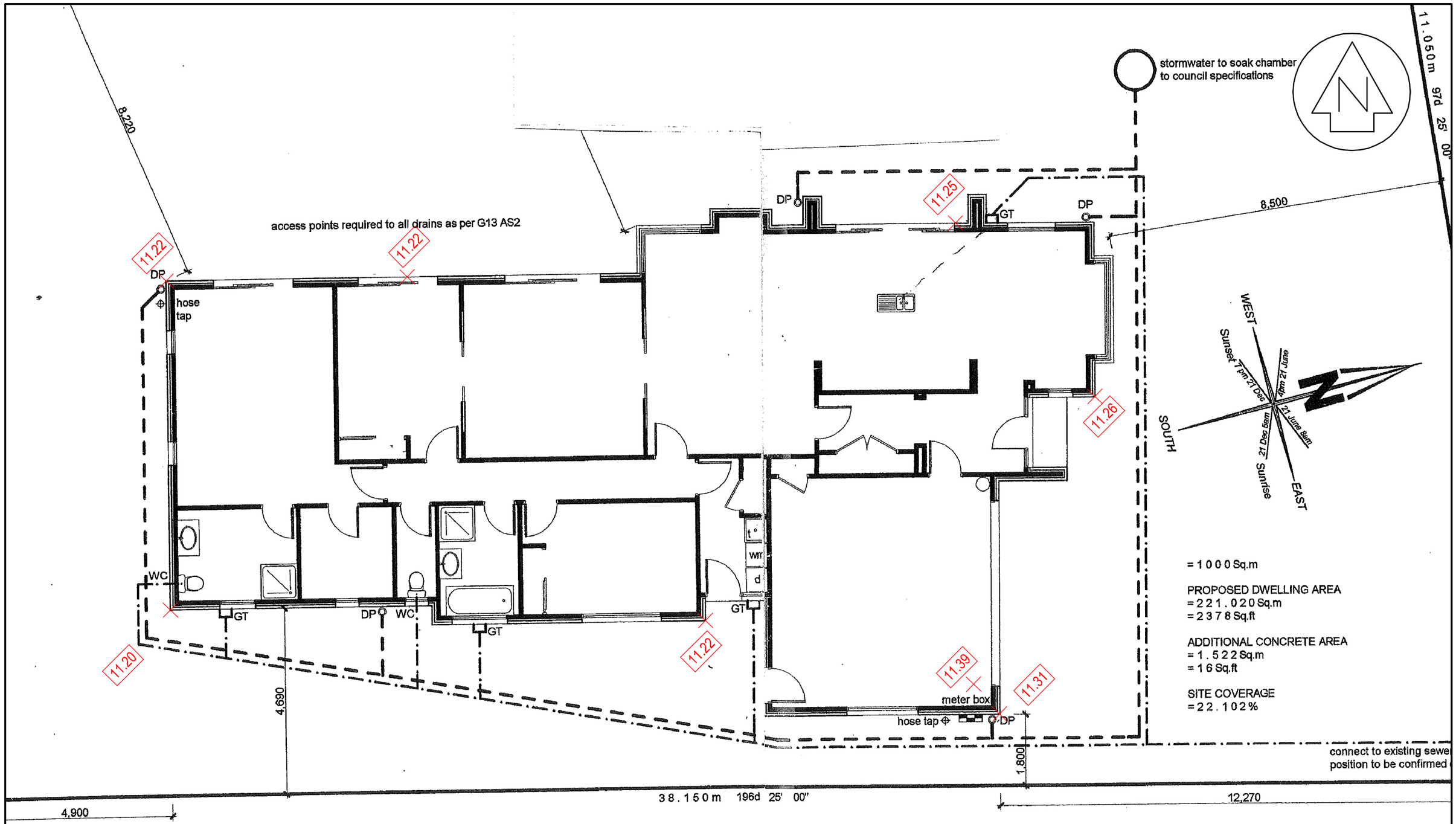
Russell Wenn & Julie Collier

Rev	Date	By	Amendments
A	03/08/12	SRS	Levels

Note:
Levels are in terms of CCC Datum
BM EHDB 11.31m RL

DATE	SHEET	REV
August 2012	1 of 1	A
SCALES	JOB REF	
1 : 250 (A3)	10791	

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Peter Ray Homes

NOTE

1. All work shall comply with NZS 3604:1999
2. All windows and doors to comply with NZS 4211:1985
3. Glazing to comply with NZS 4223:1985 & Pt 3 1993
4. Contractor must verify all dimensions on site prior to

Rev No.	Date	Amendment
A	03.11.03	remove gas fire, move gas bottles, change bay window

Drawn: A. Fahey
Date: 28.10.03
Scale:

Job Name & Location: Russell Wenn & Julie Collier
Lot 35 Hemingway Place, Seafield Park

Sheet Title

Sheet No. 4

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F 03 352 5527 ASHBURTON 03 307 7021
TOLL FREE 0508 787 887 DARFIELD 03 318 8151

Foundation Levels

16 Hemingway Place, Spencerville — Russell Wenn & Julie Collier

Rev	Date	By	Amendments
A	03/08/12	SRS	Levels

Note:
Levels are in terms of CCC Datum
BM EHDB 11.31m RL

DATE	SHEET	REV
August 2012	1 of 1	A
SCALES: Proportional	JOB REF: 10791	

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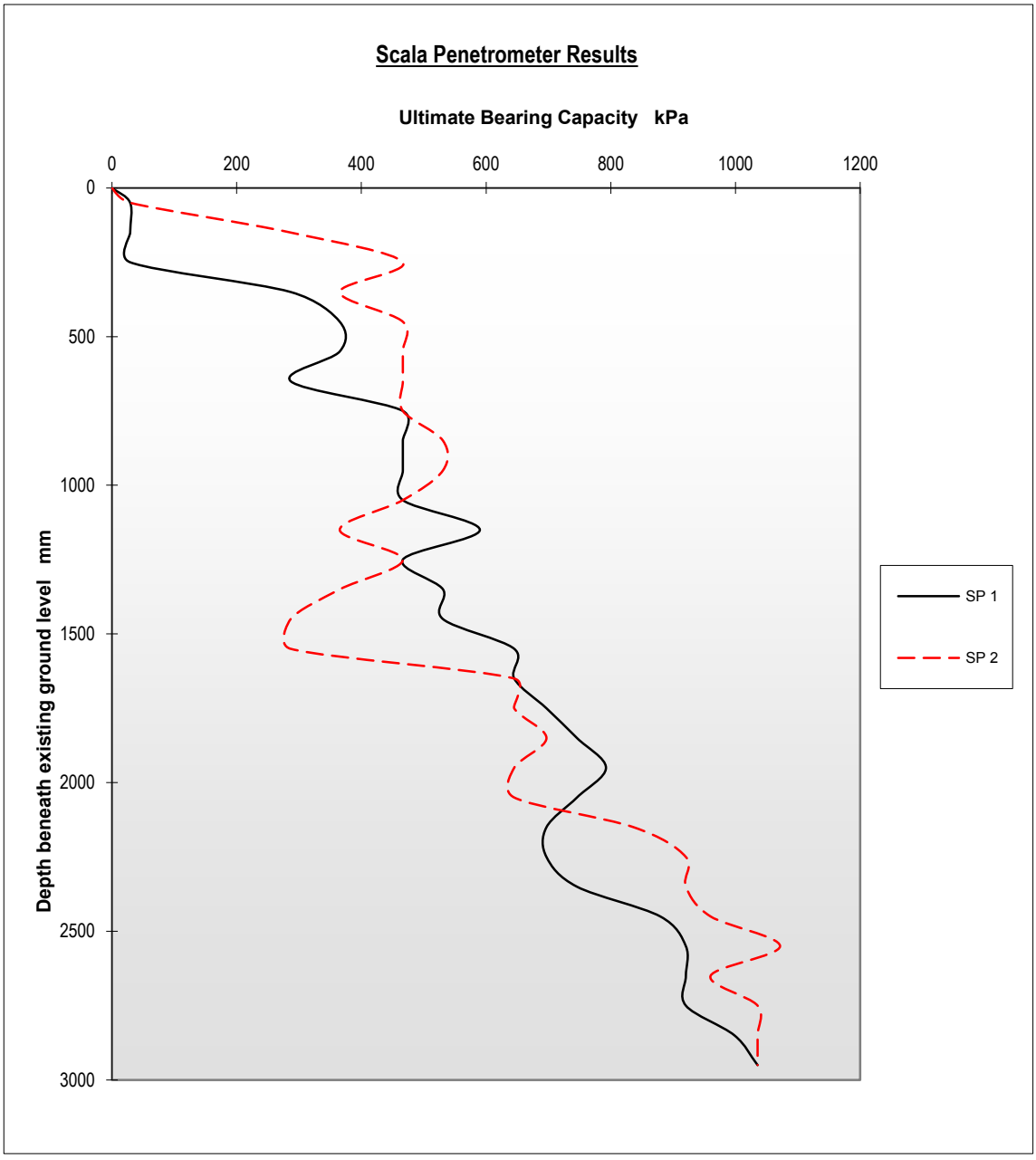
Location:				16 Hemingway Place_CPTU001
Date:				4/03/2013
Core %	Method	Moisture	Depth	Soil Description:
				Soil Type, minor components, plasticity or particle size, colour Rock Description: SUBSTANCE: Rock Type, particle size, colour, minor components DEFECTS: Type, inclination, thickness, roughness, filling.
			0m	
	CPTU		15m	CPTU001 to 15m
			END	

Location:				16 Hemingway Place_CPTU002
Date:				4/03/2013
Core %	Method	Moisture	Depth	Soil Description:
				Soil Type, minor components, plasticity or particle size, colour Rock Description: SUBSTANCE: Rock Type, particle size, colour, minor components DEFECTS: Type, inclination, thickness, roughness, filling.
			0m	
	CPTU		15m	CPTU002 to 15m
			END	

SCALA PENETROMETER RESULTS - COMBINED

JOB NUMBER 121195

Job Name:	Russell Wenn and Julie Collier
Site Address:	16 Hemingway Place
Town/City	Brooklands
Date:	4-Jun-12
Weather:	Wet
Operator:	HAV



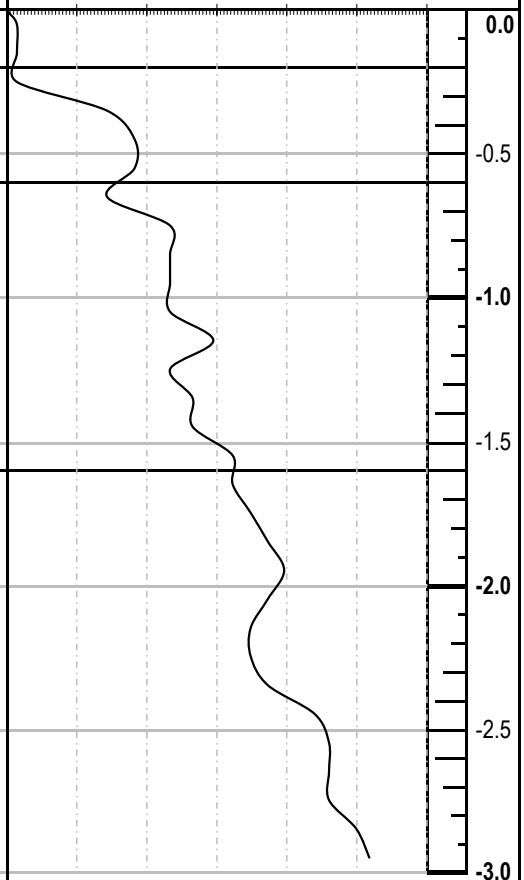
THIS REPORT IS PREPARED SOLEY FOR THE CLIENT WHO COMMISSIONED IT AND KIRK ROBERTS LTD WILL NOT ACCEPT ANY LIABILITY OF ANY KIND FOR THE USE OF ITS CONTENTS BY ANY OTHER PERSON.
BORE LOGS AND SCALA PENETROMETER TESTS ARE DISCRETE TESTS OF THE GROUND AT THE LOCATION OF THE TESTS ONLY. WHILE THEY ARE REPRESENTATIVE OF TYPICAL CONDITIONS, THEY DO NOT IDENTIFY VARIATIONS IN THE GROUND IN LOCATIONS AWAY FROM THE TEST AREAS.

SCALA PENETROMETER & HAND AUGER RESULTS

KIRK ROBERTS CONSULTING ENGINEERS LTD

		Scala Penetrometer:	**SP1**
		Hand Auger:	**HA1**
		Project No.:	**121195**
Client:	Russell Wenn and Julie Collier	**Date:**	04/06/12
Site Address:	16 Hemingway Place	**Weather:**	Wet
Town/City:	Brooklands	**Operator:**	HAV

Geological Formation:	Depth (m)	Sample Description:	Graphic:	USCS	Water Table	Undrained Shear Strength Su (kPa)
	0.0	**TOPSOIL** Brown organic silt, soft, wet.		OL		
	-0.5	**silty SAND** Light brown silty sand, fine to medium sand medium dense, wet.		SM		
	-1.0	**SAND** Brown fine sand, medium dense, wet. Becoming dark brown-grey, medium dense, saturated.		S	04/06/12 ▼	
	-1.5	Sand becoming dense.				
	-2.0	EOH at 1.6 m depth in dense saturated collapsing sand.				
	-2.5					
	-3.0					
	-3.5					
	-4.0					
	-4.5					



Scala Penetrometer and Test Bore log tests give an indication of the ground condition at the location of the tests only. While they are representative of typical conditions across the site, they do not identify variations in the ground away from the test locations.

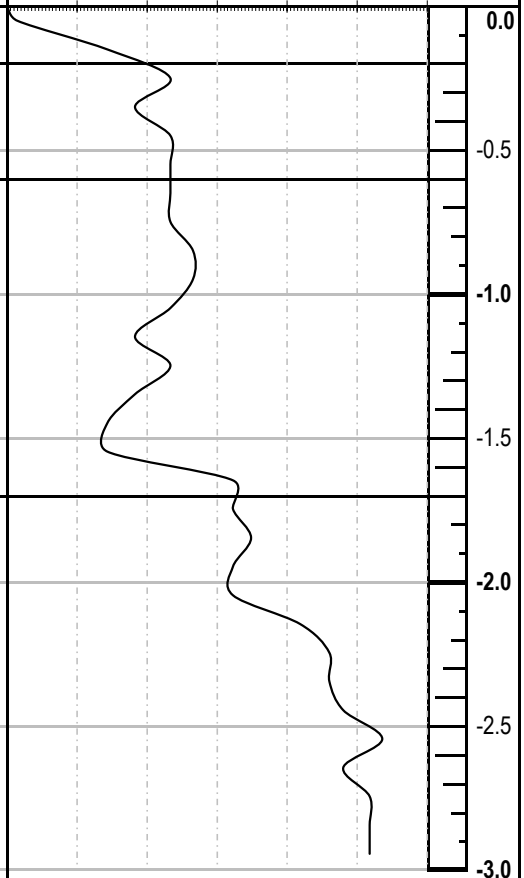
SCALA PENETROMETER & HAND AUGER RESULTS

KIRK ROBERTS CONSULTING ENGINEERS LTD

		Scala Penetrometer:	**SP2**
		Hand Auger:	**HA2**
		Project No.:	**121195**
Client:	Russell Wenn and Julie Collier	**Date:**	4 June 2012
Site Address:	16 Hemingway Place	**Weather:**	Wet
Town/City:	Brooklands	**Operator:**	HAV

Geological Formation:	Depth (m)	Sample Description:	Graphic:	USCS	Water Table	Undrained Shear Strength Su (kPa)
	0.0	**TOPSOIL** Brown organic silt, soft, wet.		OL		
	-0.5	**silty SAND** Light brown silty sand, fine to medium sand medium dense, wet		SM		
	-1.0	**SAND** Brown fine sand, medium dense, wet. Becoming dark brown-grey, medium dense, saturated.		S	04/06/12 ▼	
	-1.5	Sand becoming dense.				
	-2.0	EOH at 1.7 m depth in dense saturated collapsing sand.				
	-2.5					
	-3.0					
	-3.5					
	-4.0					
	-4.5					

Ultimate Bearing Capacity (kPa)



Scala Penetrometer and Test Bore log tests give an indication of the ground condition at the location of the tests only. While they are representative of typical conditions across the site, they do not identify variations in the ground away from the test locations.

APPENDIX B

- Project Orbit: Canterbury Geotechnical Database
    - Geological Section location plan



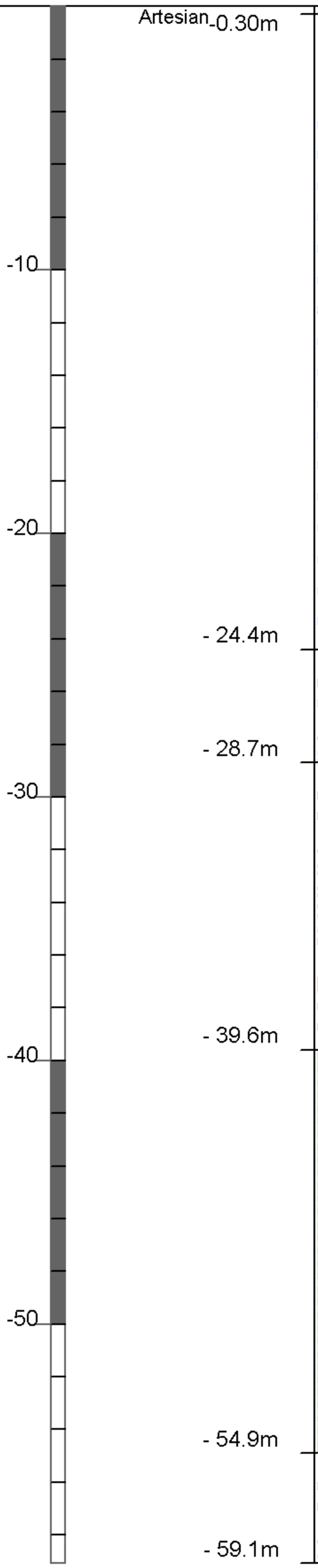
Figure 1: Geological Section location plan.

- Tonkin & Taylor Limited Geological Cross Sections
    - XS-SPE-02
    - XS-SPE-06

Borelog for well M35/1338

Gridref: M35:8527-5332 Accuracy : 3 (1=high, 5=low)
Ground Level Altitude : 2.8 +MSD
Driller : not known
Drill Method : Driven Pipe
Drill Depth : -59.09m Drill Date :

Environment Canterbury Regional Council



Scale(m)	Water Level	Depth(m)	Full Drillers Description	Formation Code
	Artesian	0.30m	Topsoil	ch
			Blue sand	
		- 24.4m	Blue shingle	ch
		- 28.7m	Brown shingle. Water level rises o.6m	ri
		- 39.6m	Yellow clay, Blue sand, peat	ri
		- 54.9m	Brown shingle. Water level rises 1.8m	br
		- 59.1m		li-1

Borelog for well M35/5965

Gridref: M35:8559-5274 Accuracy : 4 (1=high, 5=low)
Ground Level Altitude : 2 +MSD
Driller : Stevens J O
Drill Method : Cable Tool
Drill Depth : -34m Drill Date : 1/06/1988

Environment Canterbury Regional Council

Scale(m)	Water Level	Depth(m)	Full Drillers Description	Formation Code
	-1.7CalcMin		Coarse sand	
-5				
-10				
		- 12.2m	Fine Blue sand	ch
-15				
-20				
-25				
		- 25.6m	Fine gravel,shells & sand	ch
		- 28.1m		ch
		- 28.7m	Peat & pug	ch
-30			Sandy Blue gravel ,no water movement	
		- 31.6m		ri
		- 32.0m	Mixed Blue & Brown gravel.good water	ri
			Brown gravel.good water	
		- 34.0m		ri

APPENDIX C

- Liquefaction analysis results for:
  - 25 year earthquake event (PGA = 0.13)
  - 500 year earthquake event (PGA = 0.35)

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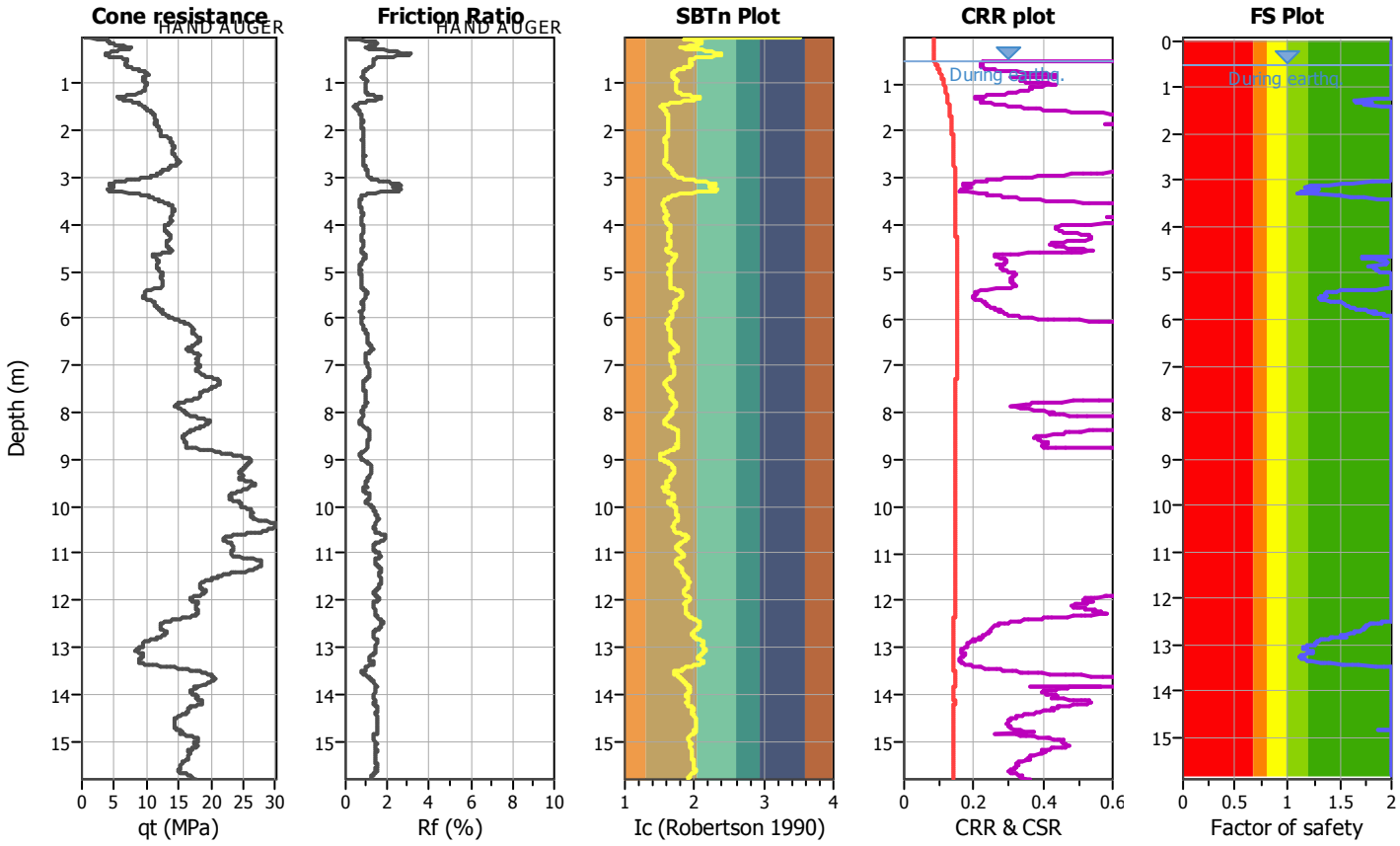
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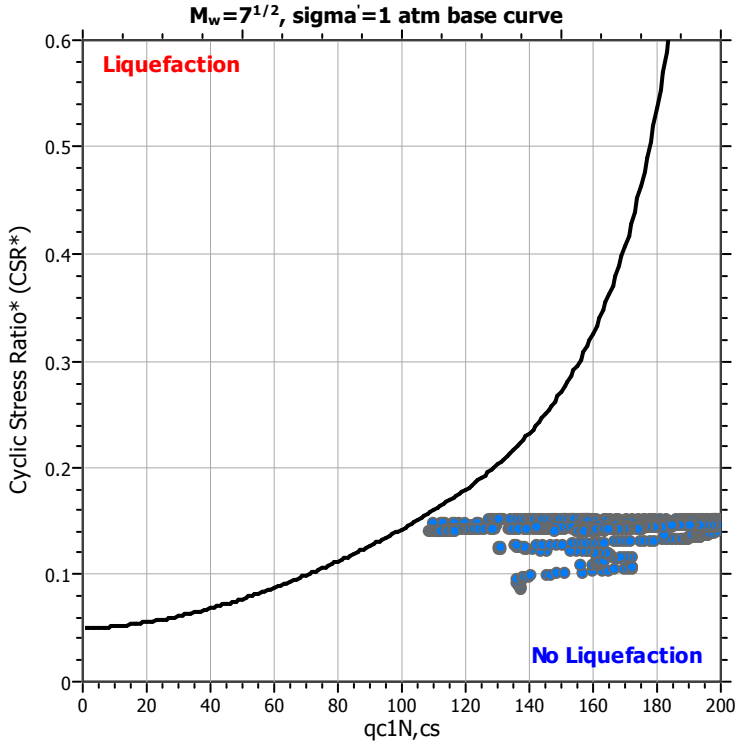
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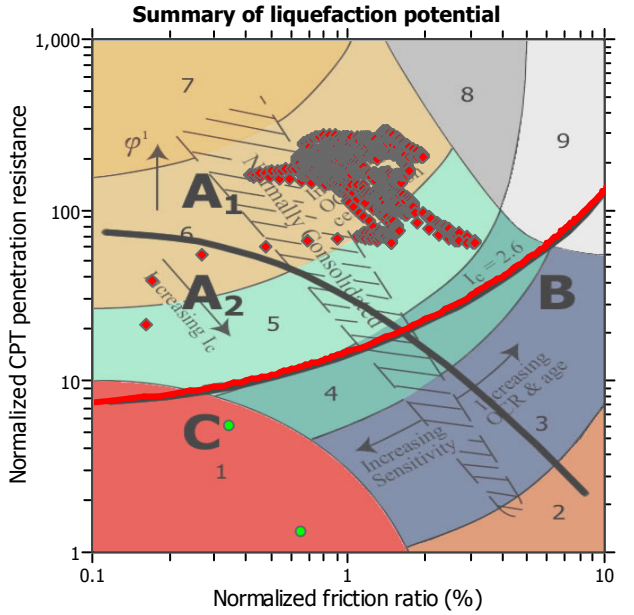
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Input parameters and analysis data

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Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

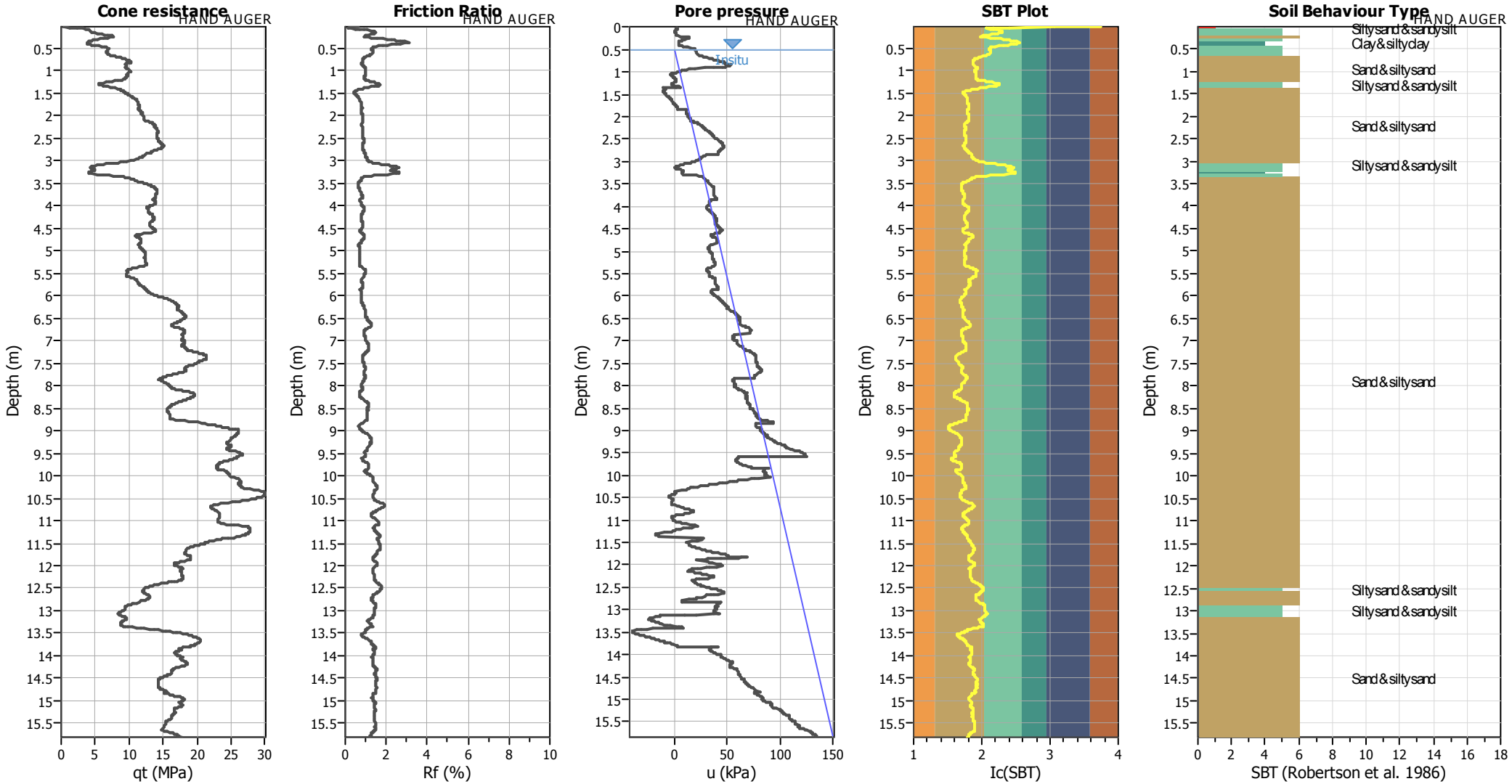






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



Input parameters and analysis data

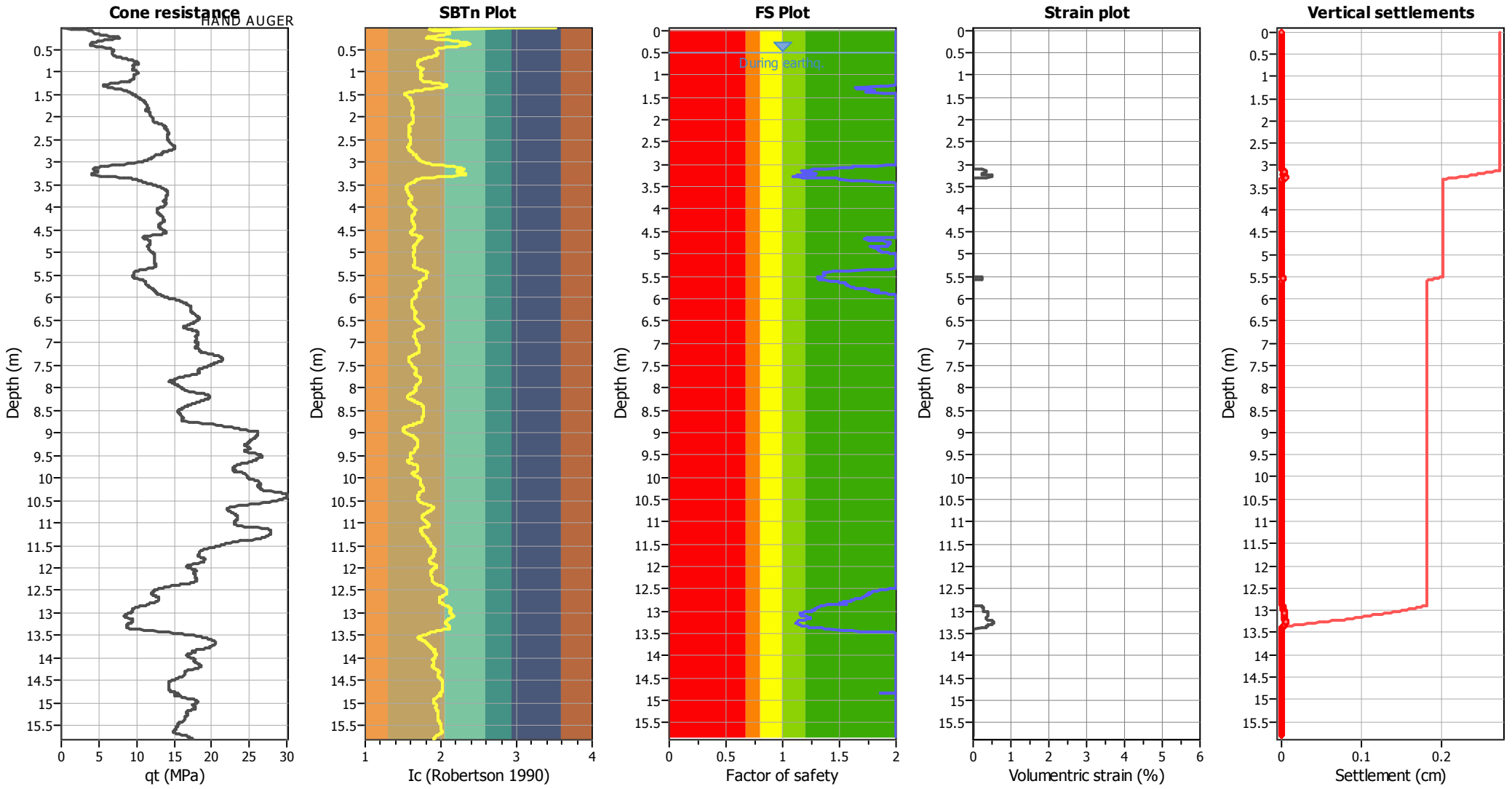
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Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.13	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

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Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

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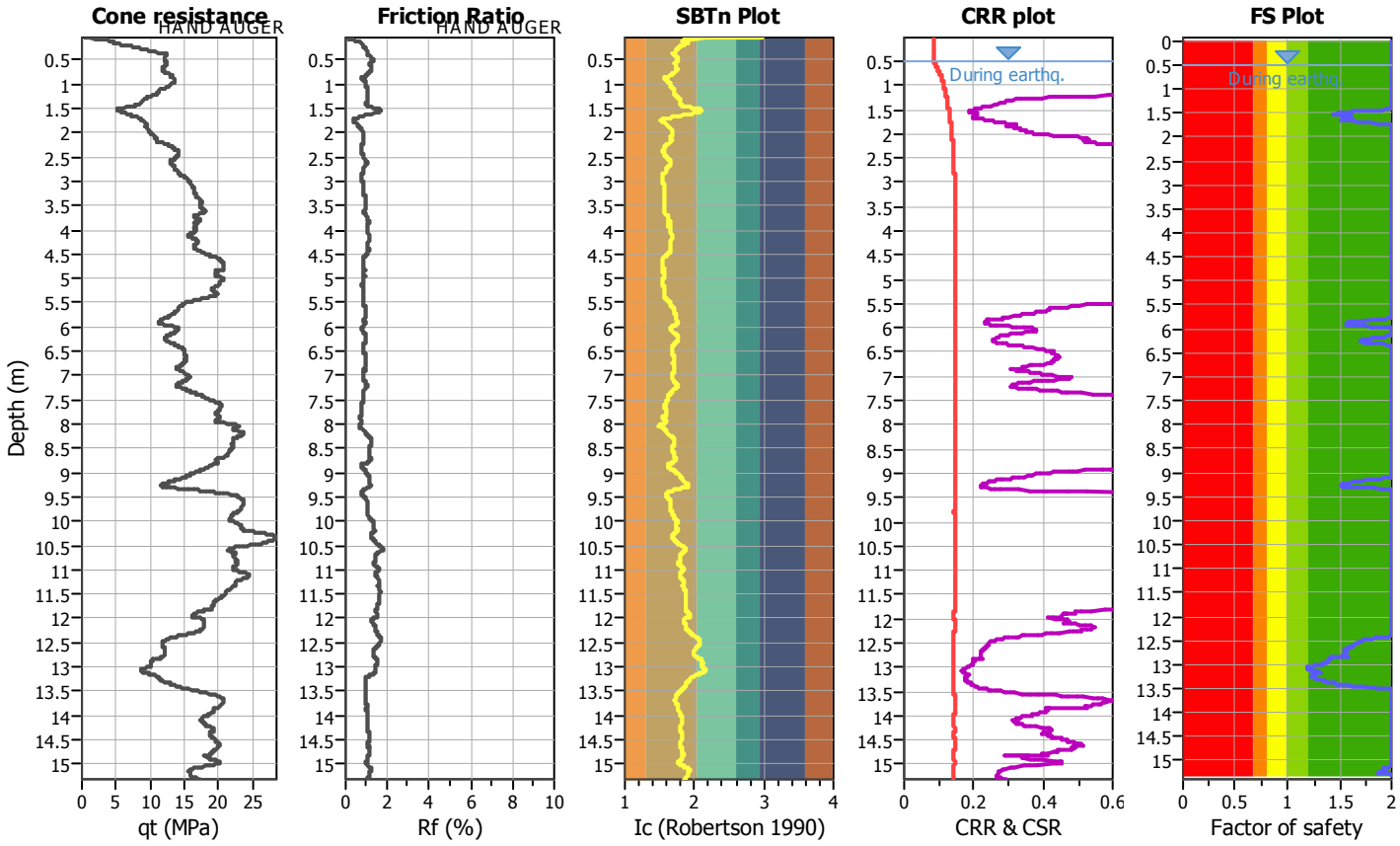
LIQUEFACTION ANALYSIS REPORT

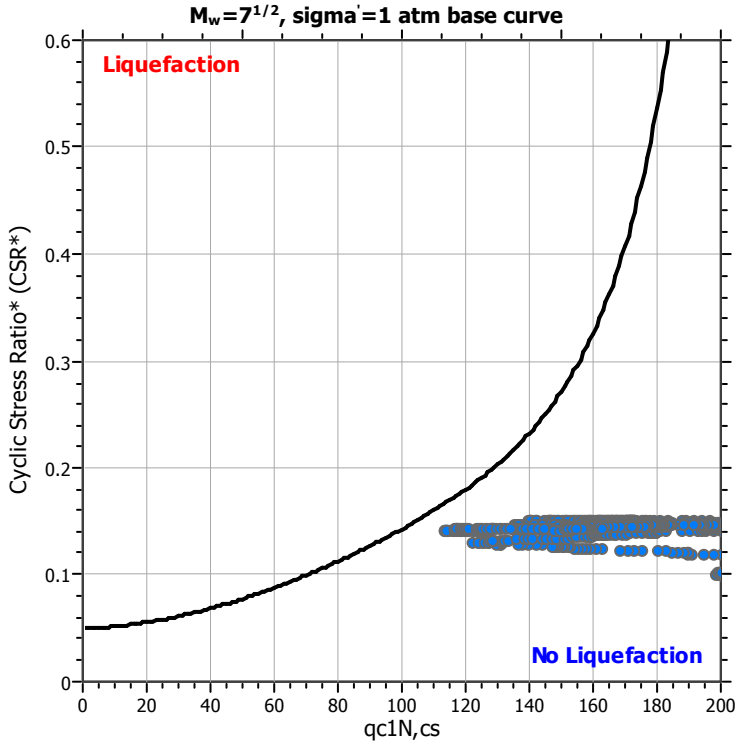
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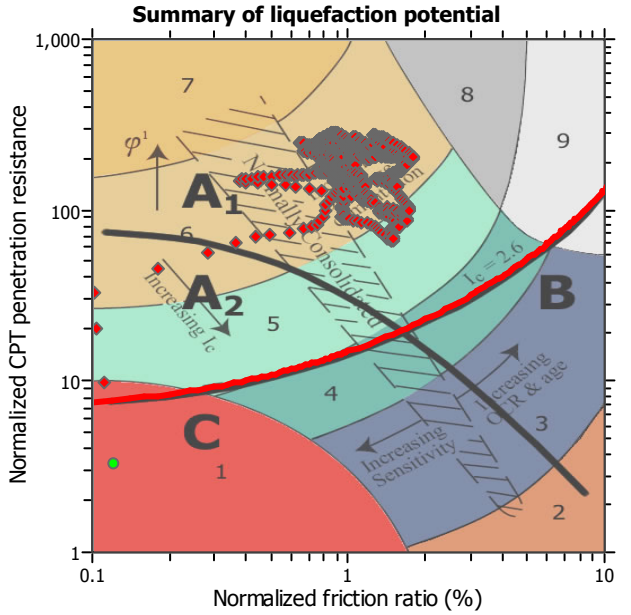
CPT file : CPTU002 SLS

Input parameters and analysis data

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Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.13	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

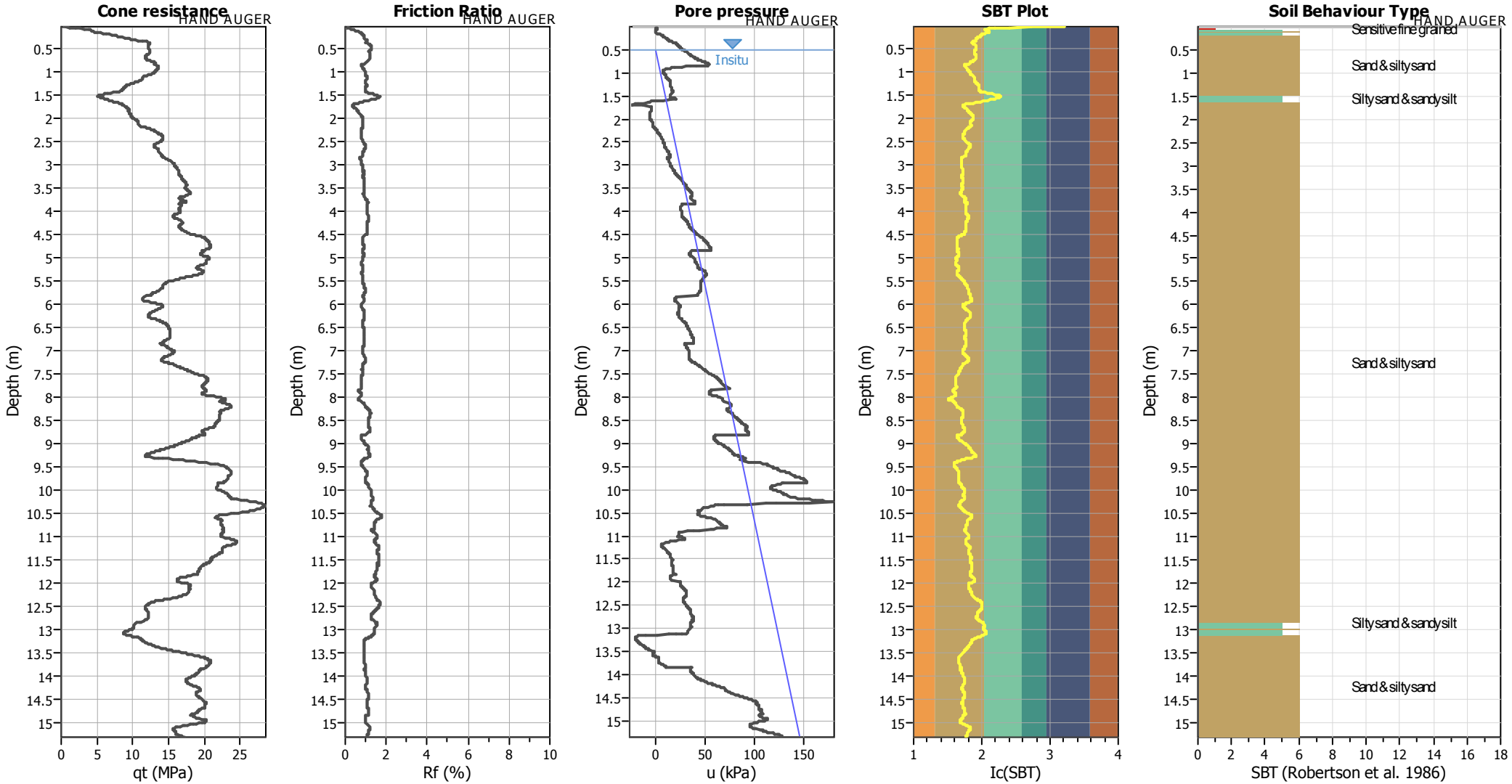






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



Input parameters and analysis data

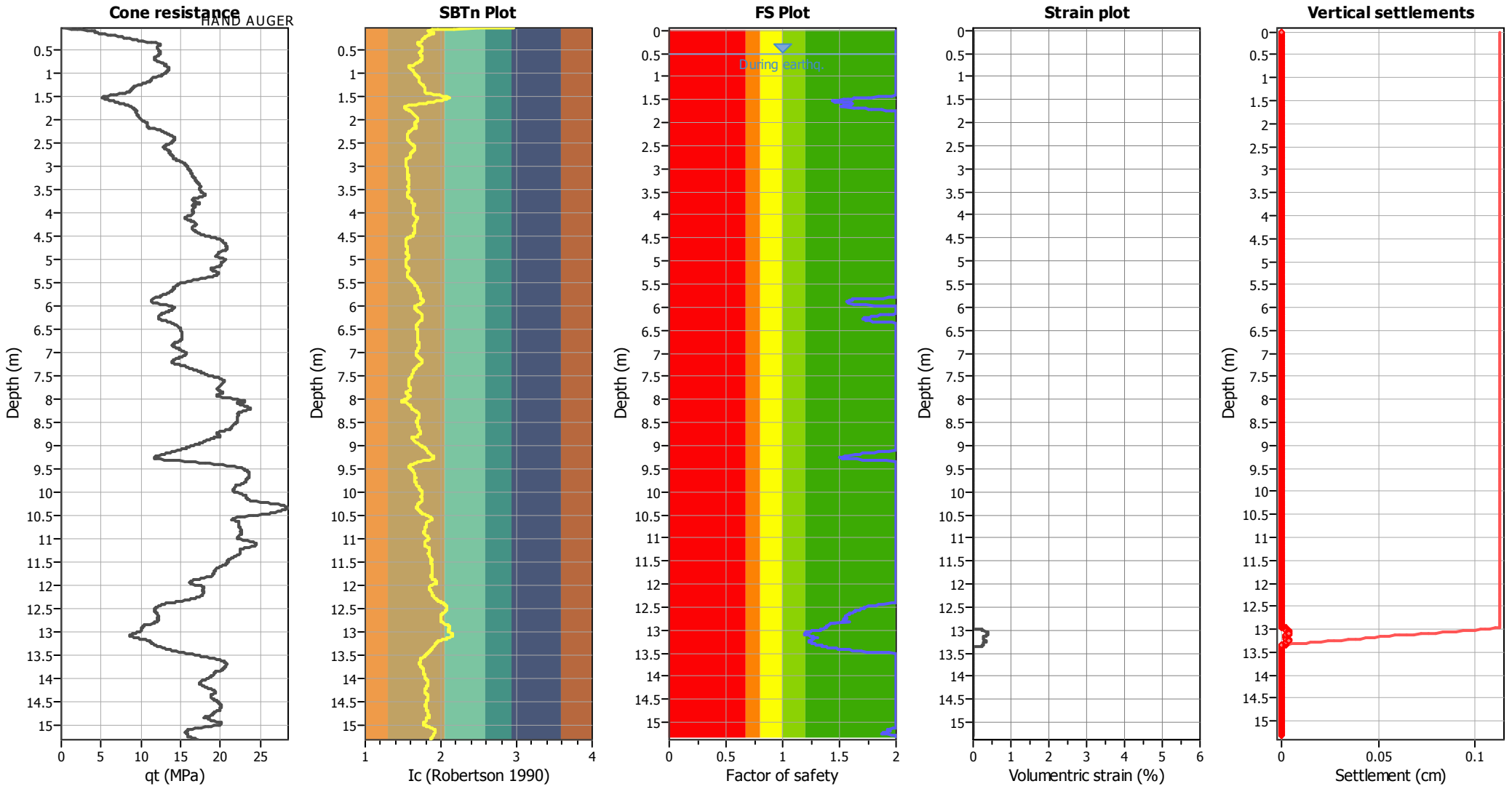
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Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.13	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

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Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

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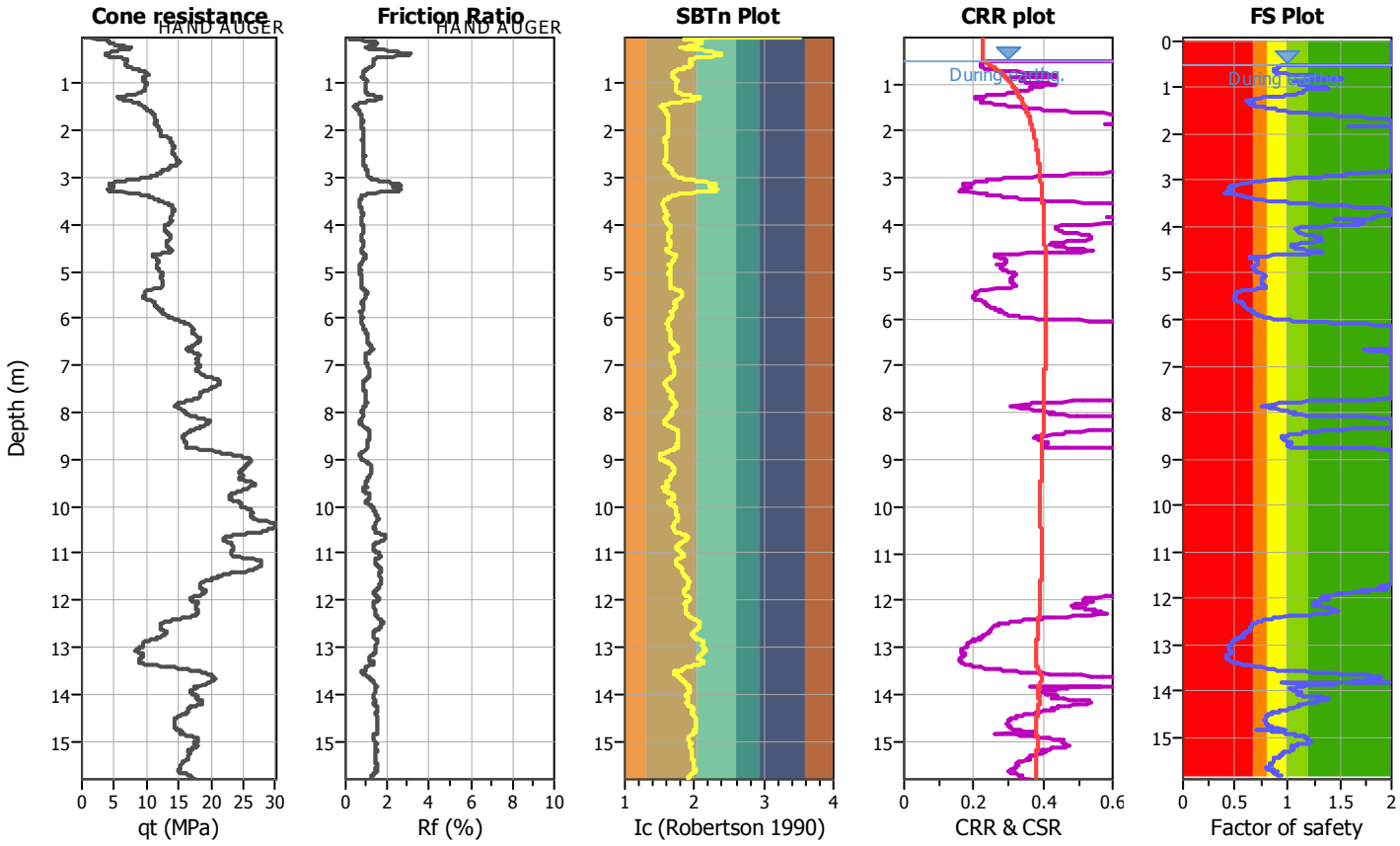
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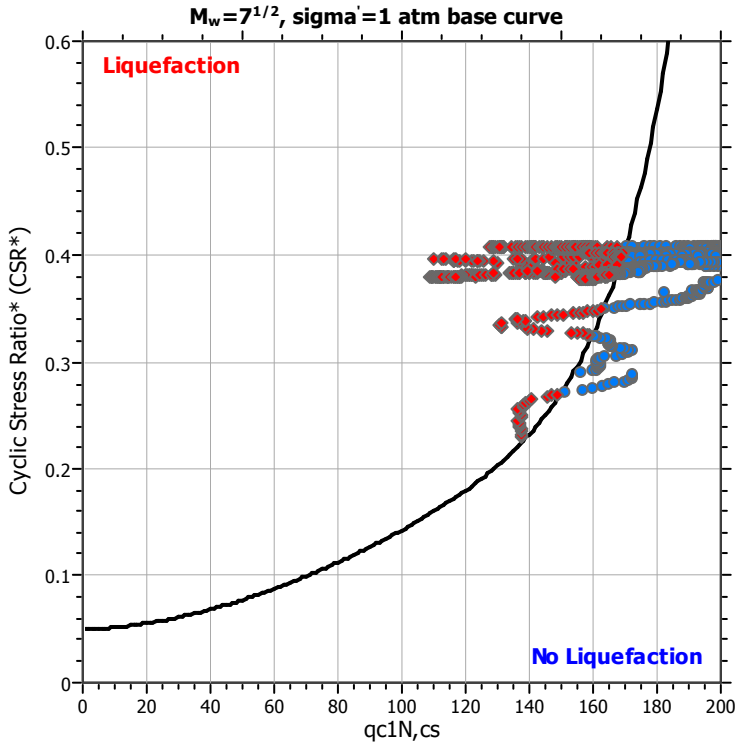
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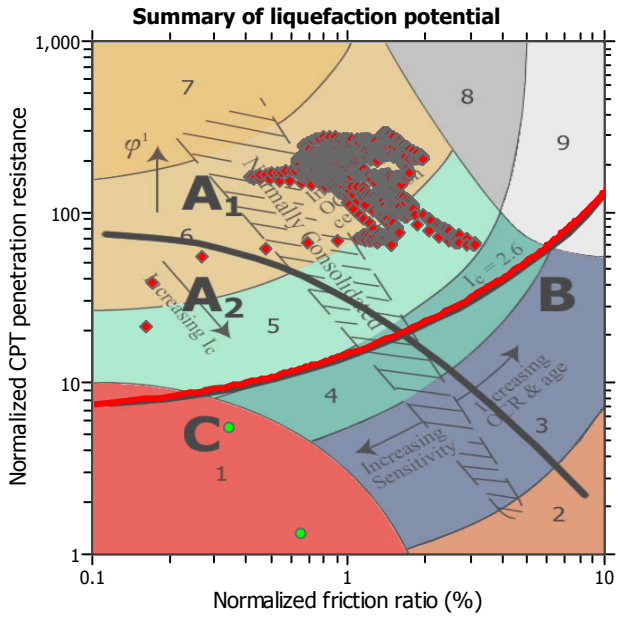
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Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.35	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		



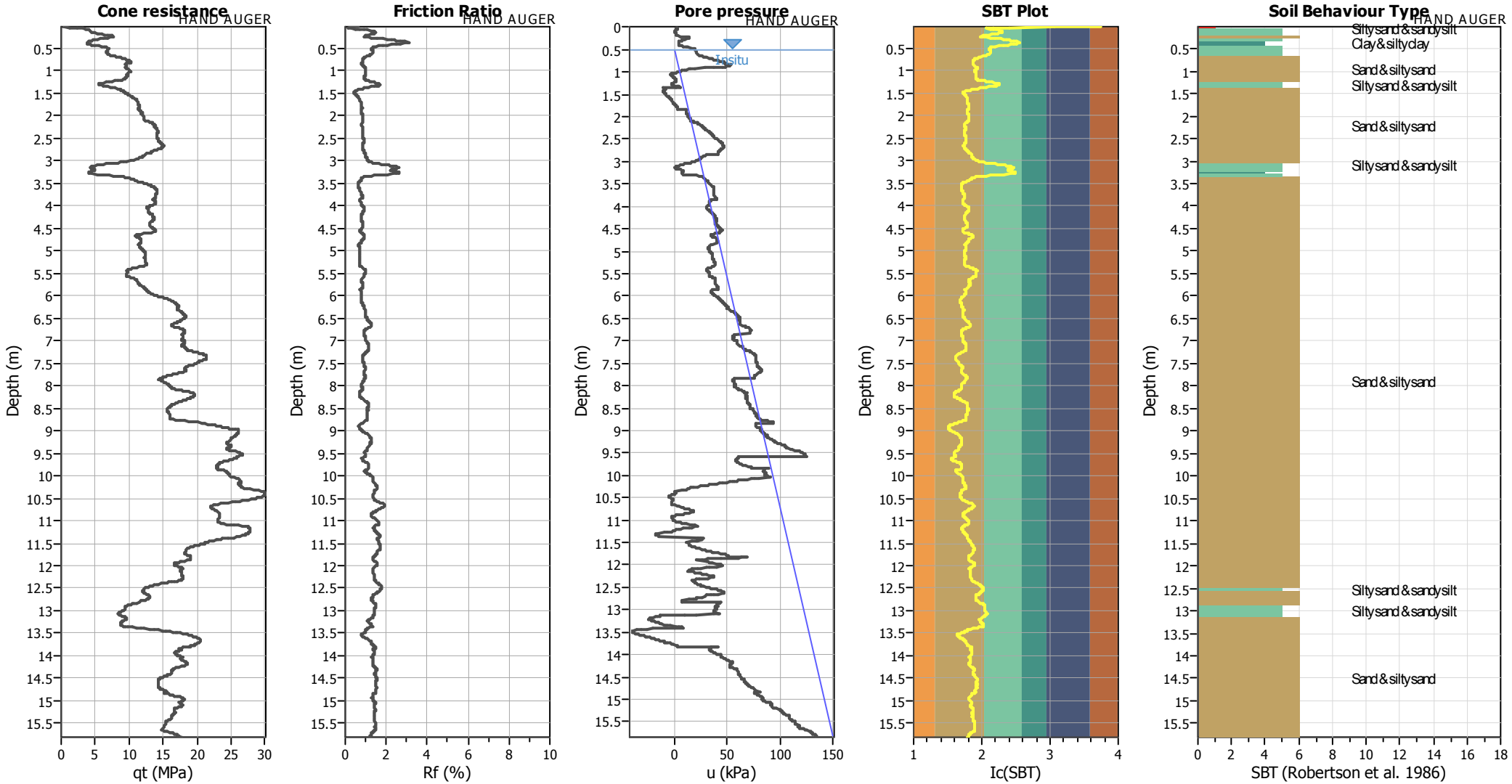




Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

Christchurch City Council I Exemption from building consent I BCN/2017/1885 I 22/03/2017 I Page 45 of 62

CPT basic interpretation plots



Input parameters and analysis data

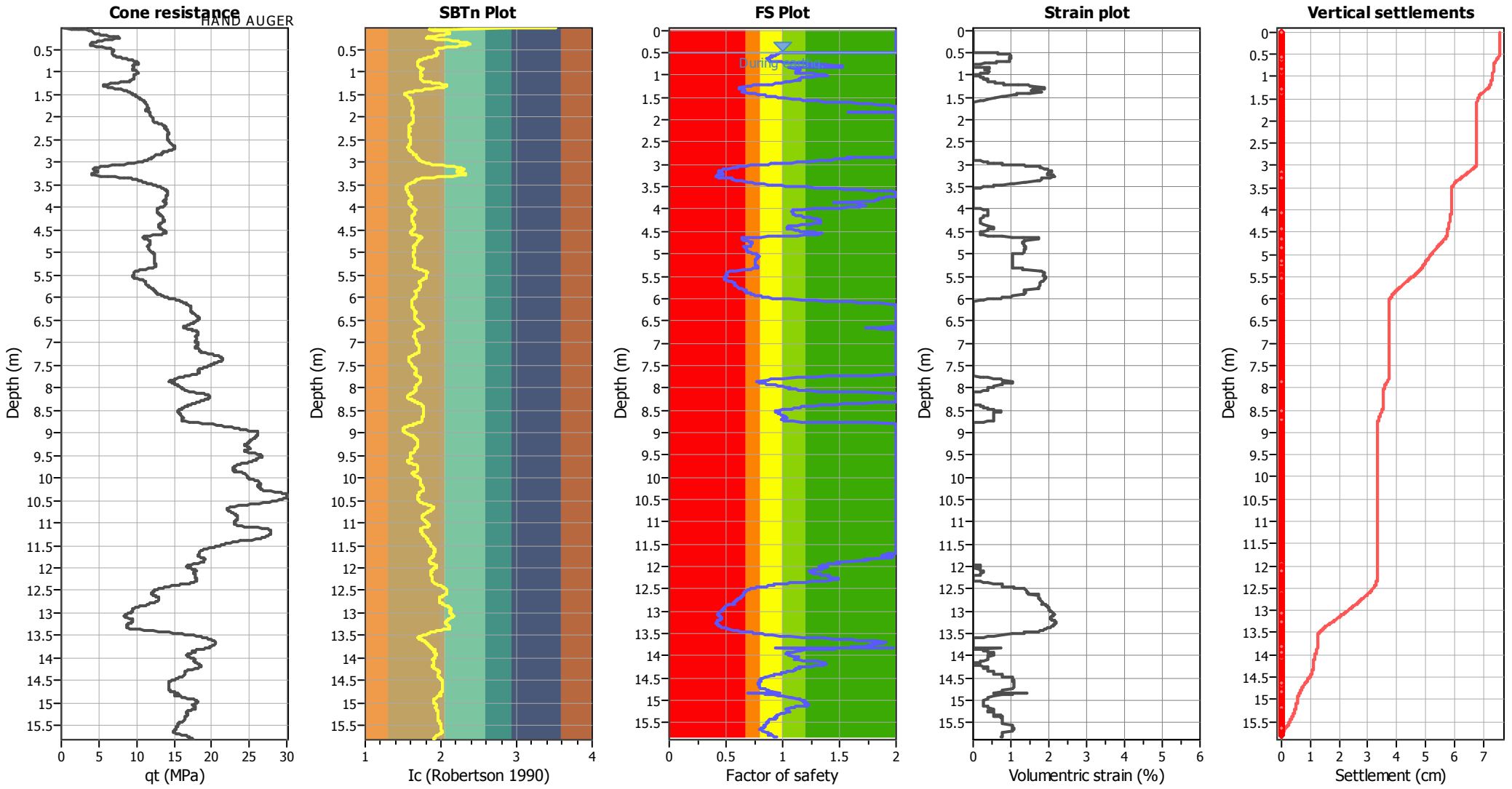
Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.35	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

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Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

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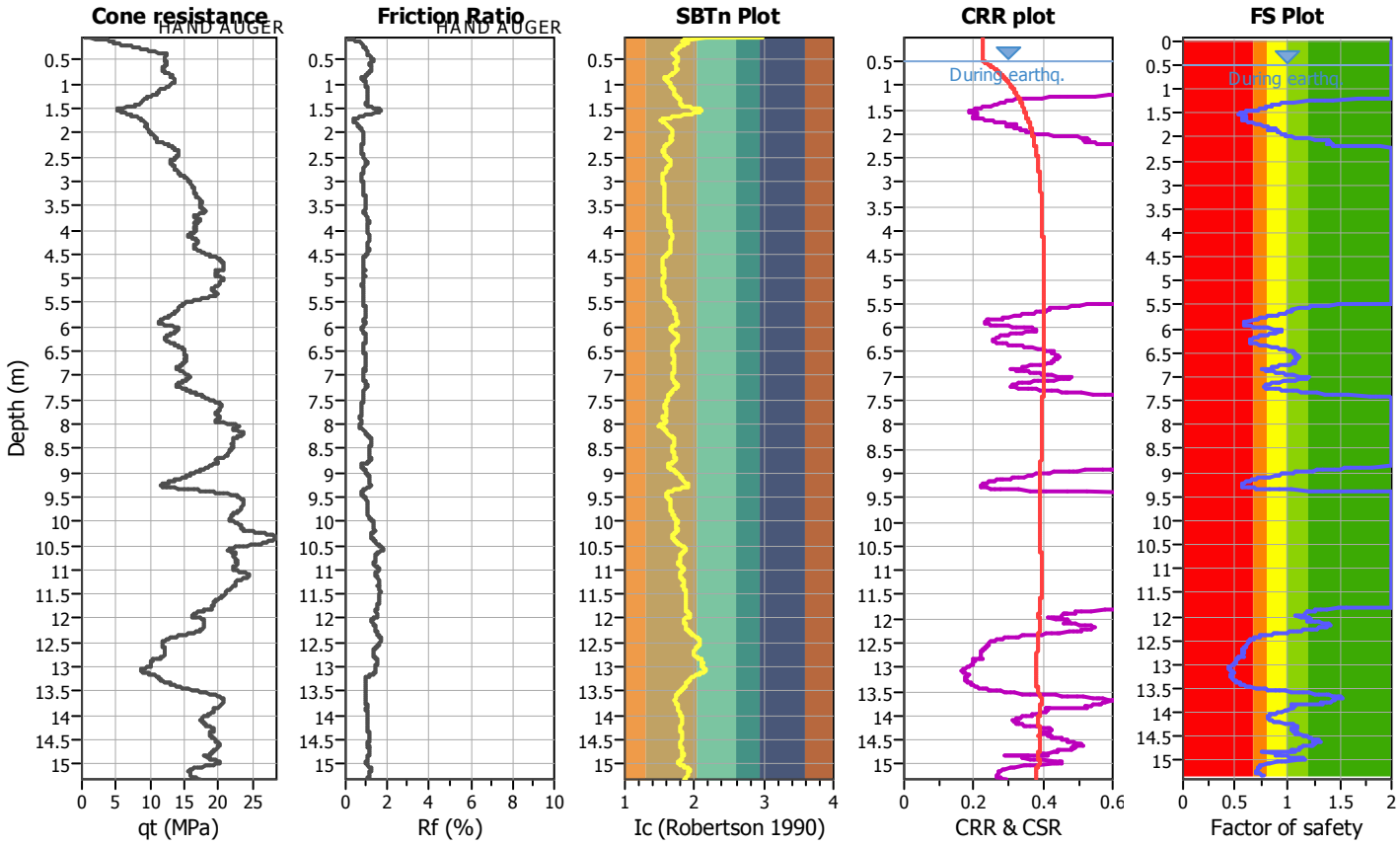
LIQUEFACTION ANALYSIS REPORT

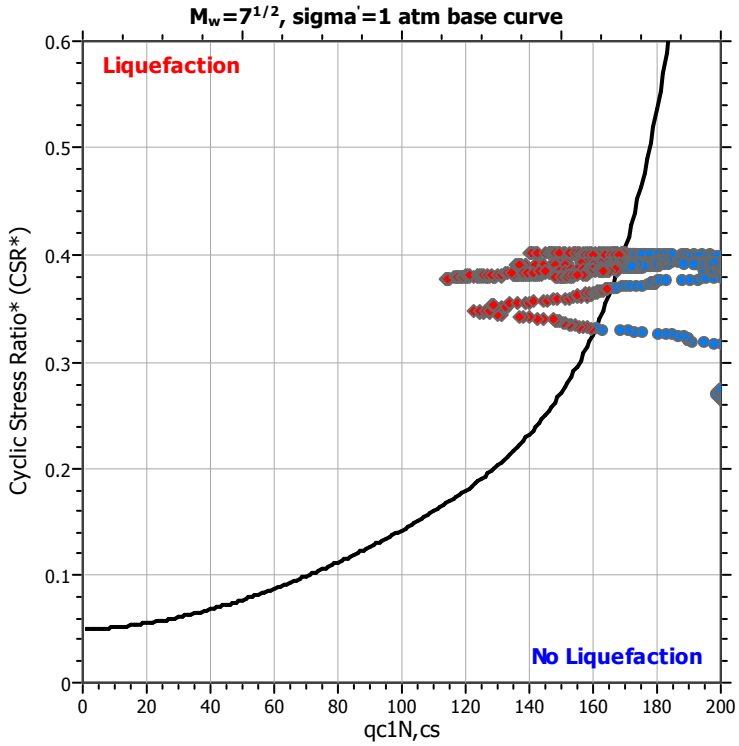
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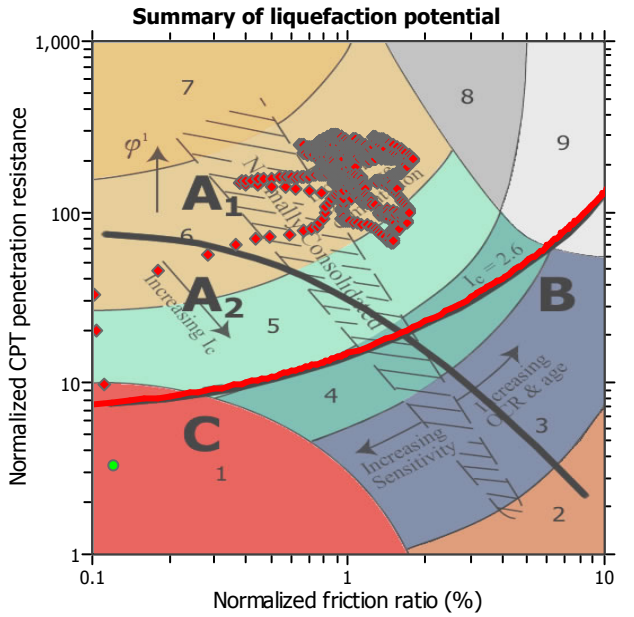
CPT file : CPTU002 ULS

Input parameters and analysis data

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Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.35	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		



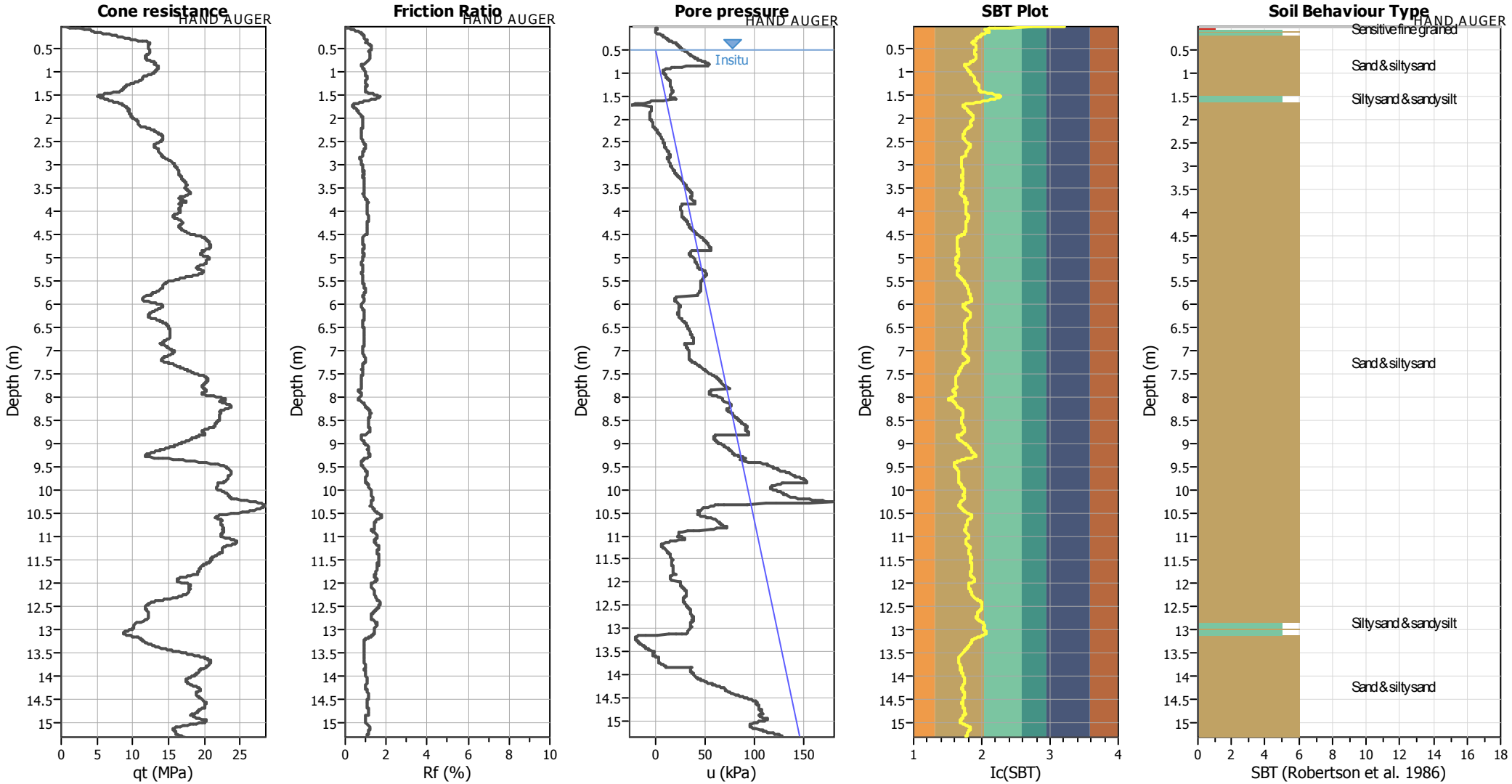




Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

Christchurch City Council I Exemption from building consent I BCN/2017/1885 I 22/03/2017 I Page 48 of 62

CPT basic interpretation plots



Input parameters and analysis data

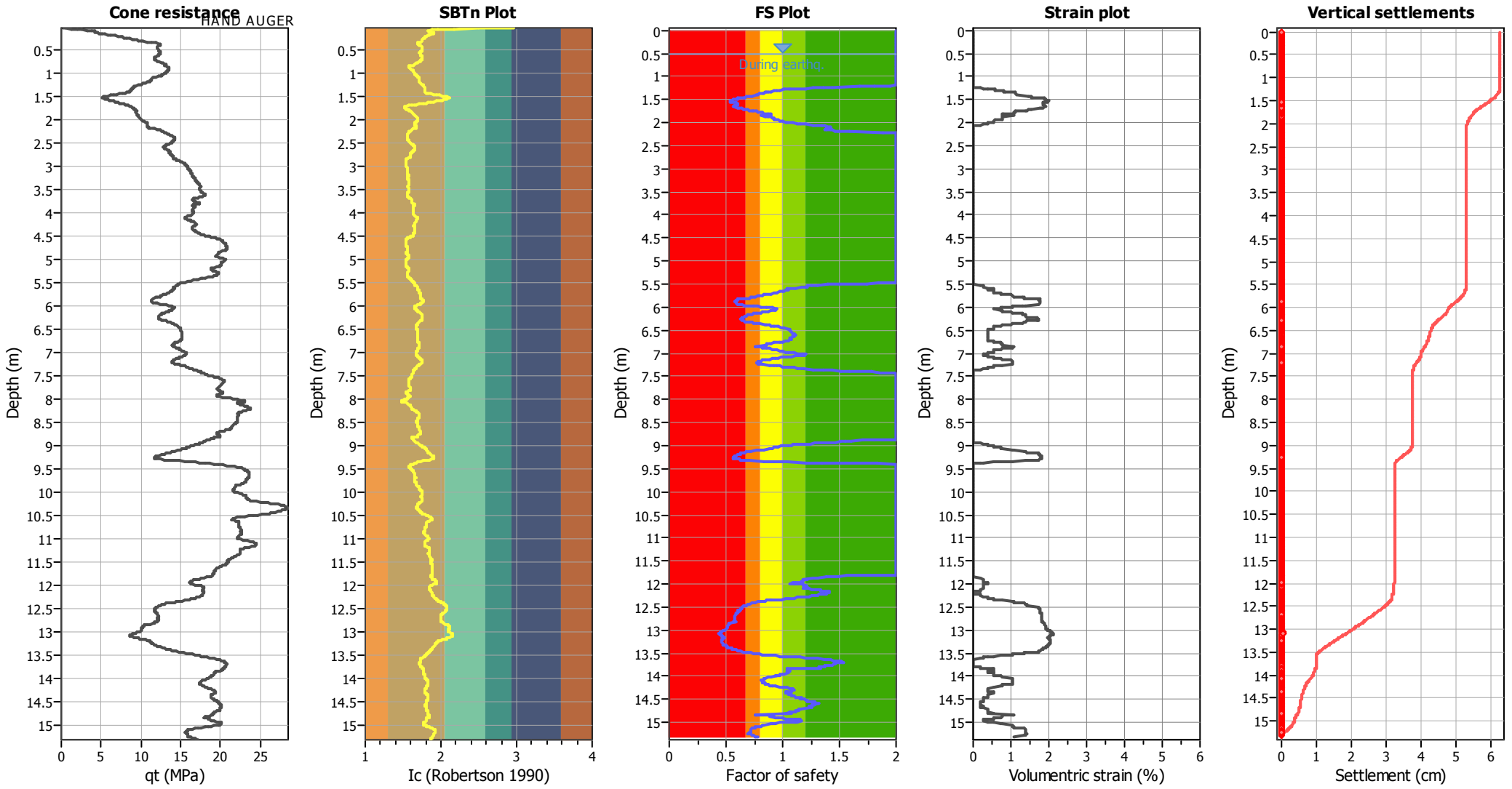
Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.35	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Christchurch City Council I Exemption from building consent I BCN/2017/1885 I 22/03/2017 I Page 49 of 62

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
FS:	Calculated Factor of Safety against liquefaction
Volumentric strain:	Post-liquefaction volumentric strain

Christchurch City Council I Exemption from building consent I BCN/2017/1885 I 22/03/2017 I Page 50 of 62

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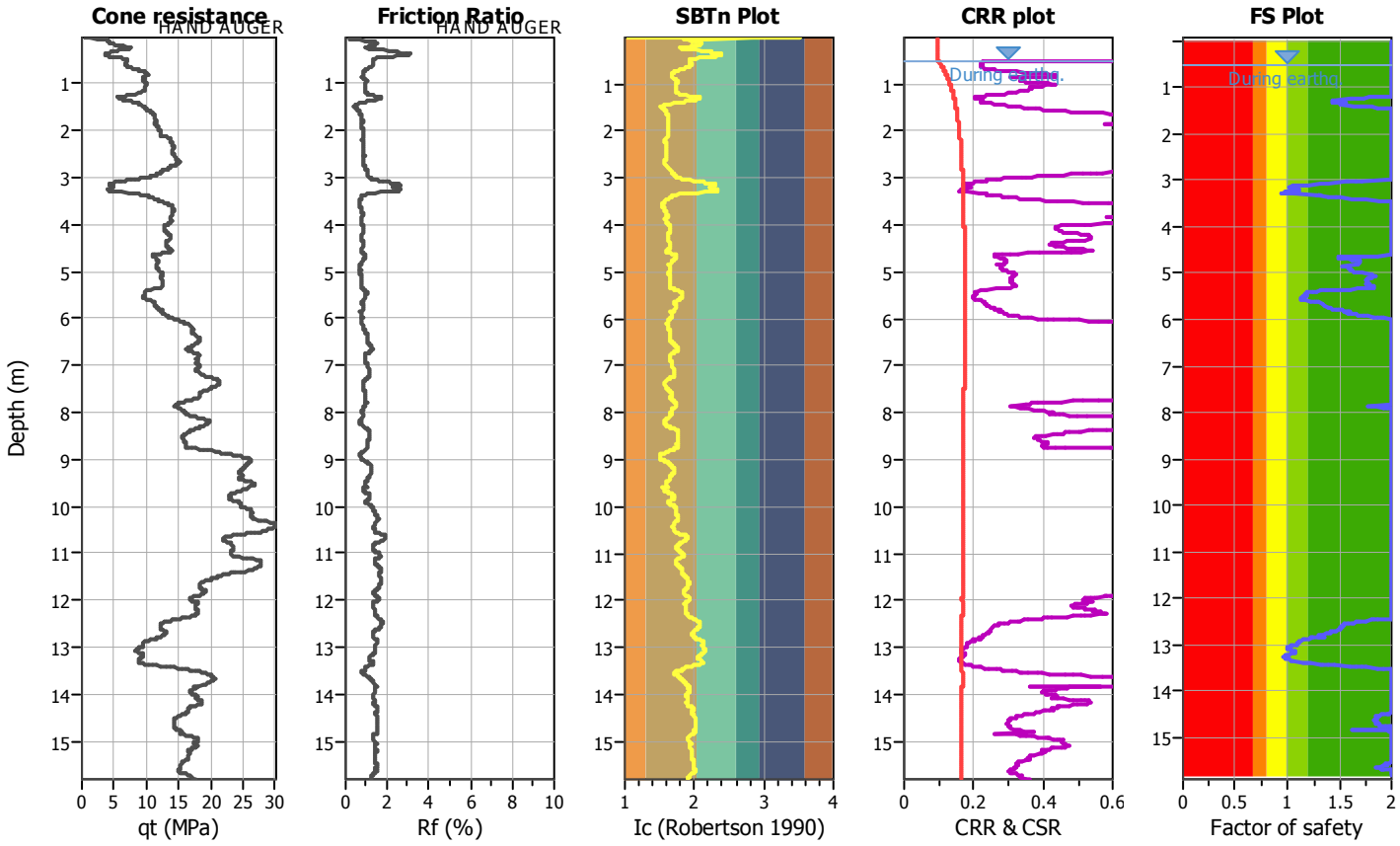
LIQUEFACTION ANALYSIS REPORT

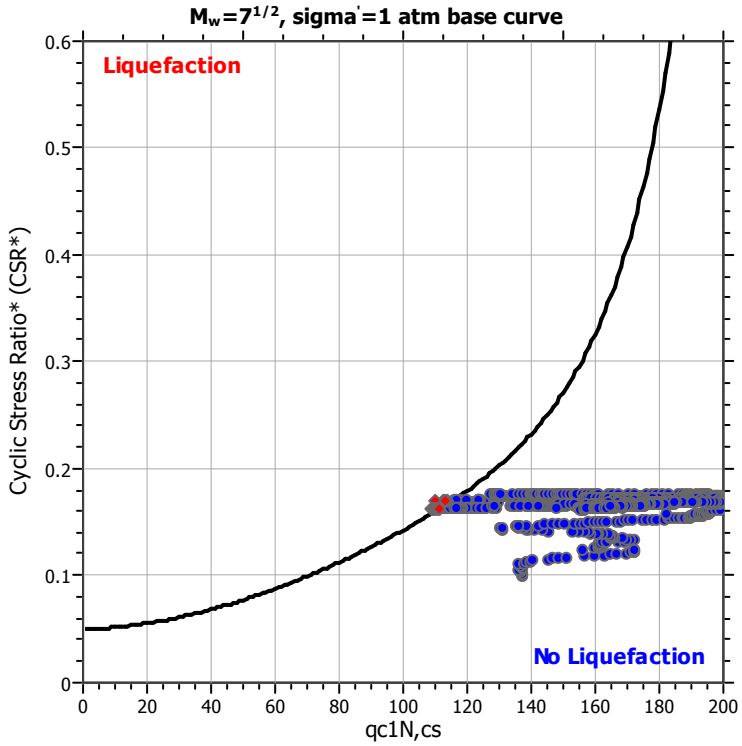
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

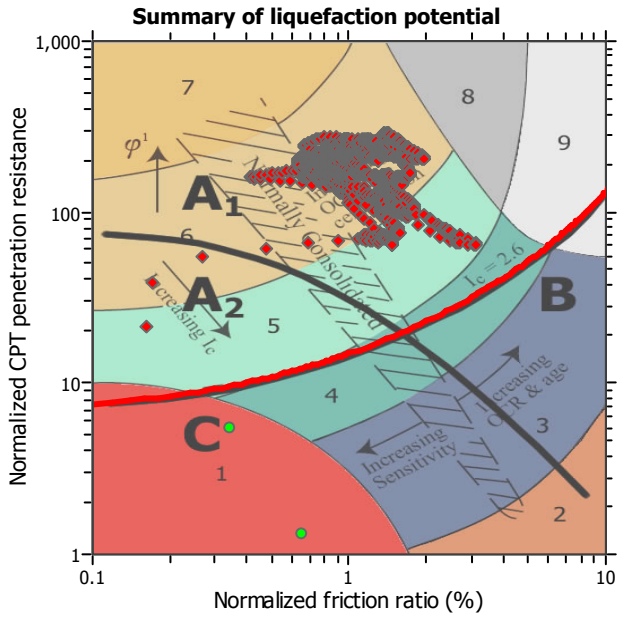
CPT file : CPTU001 SLS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_o applied:	Yes		

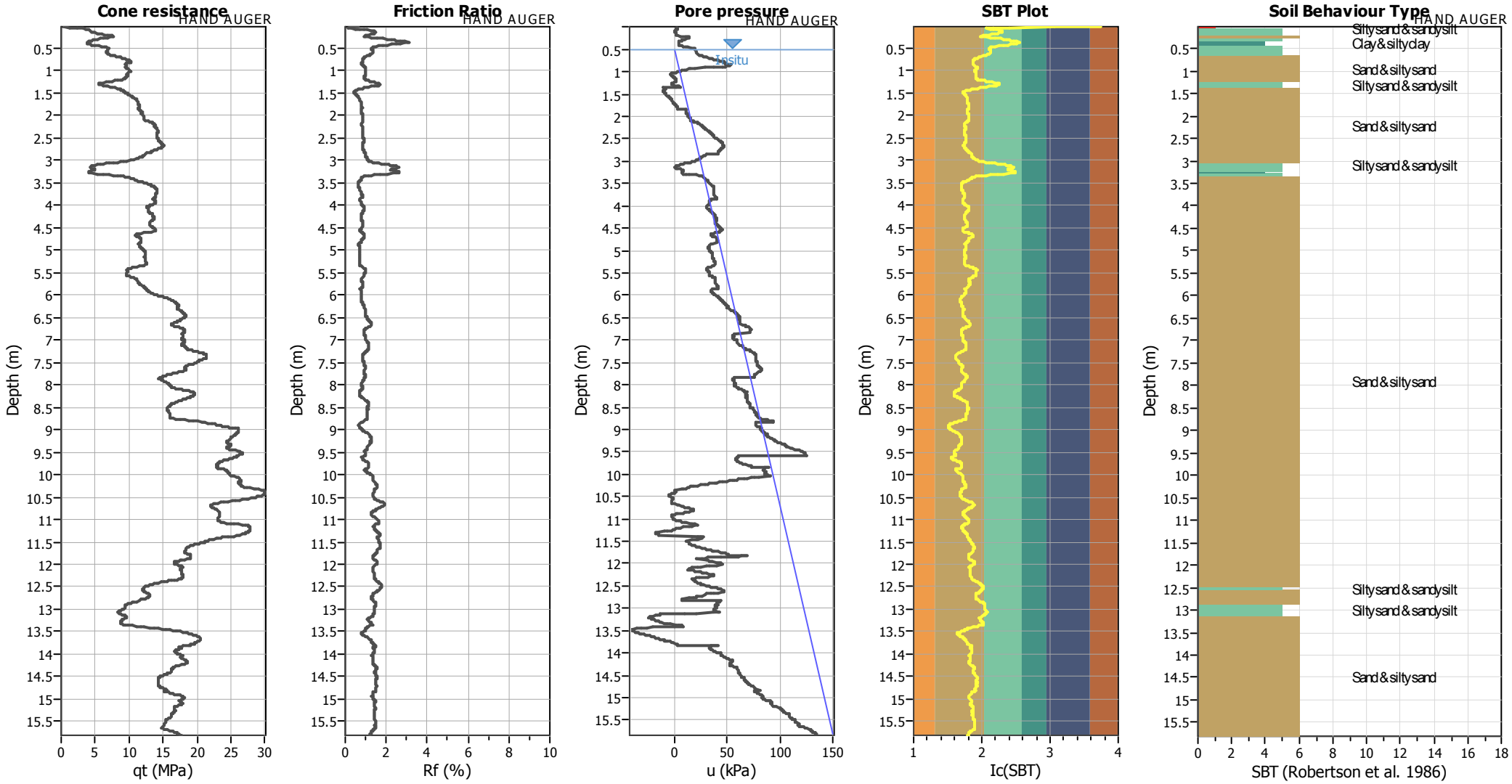






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



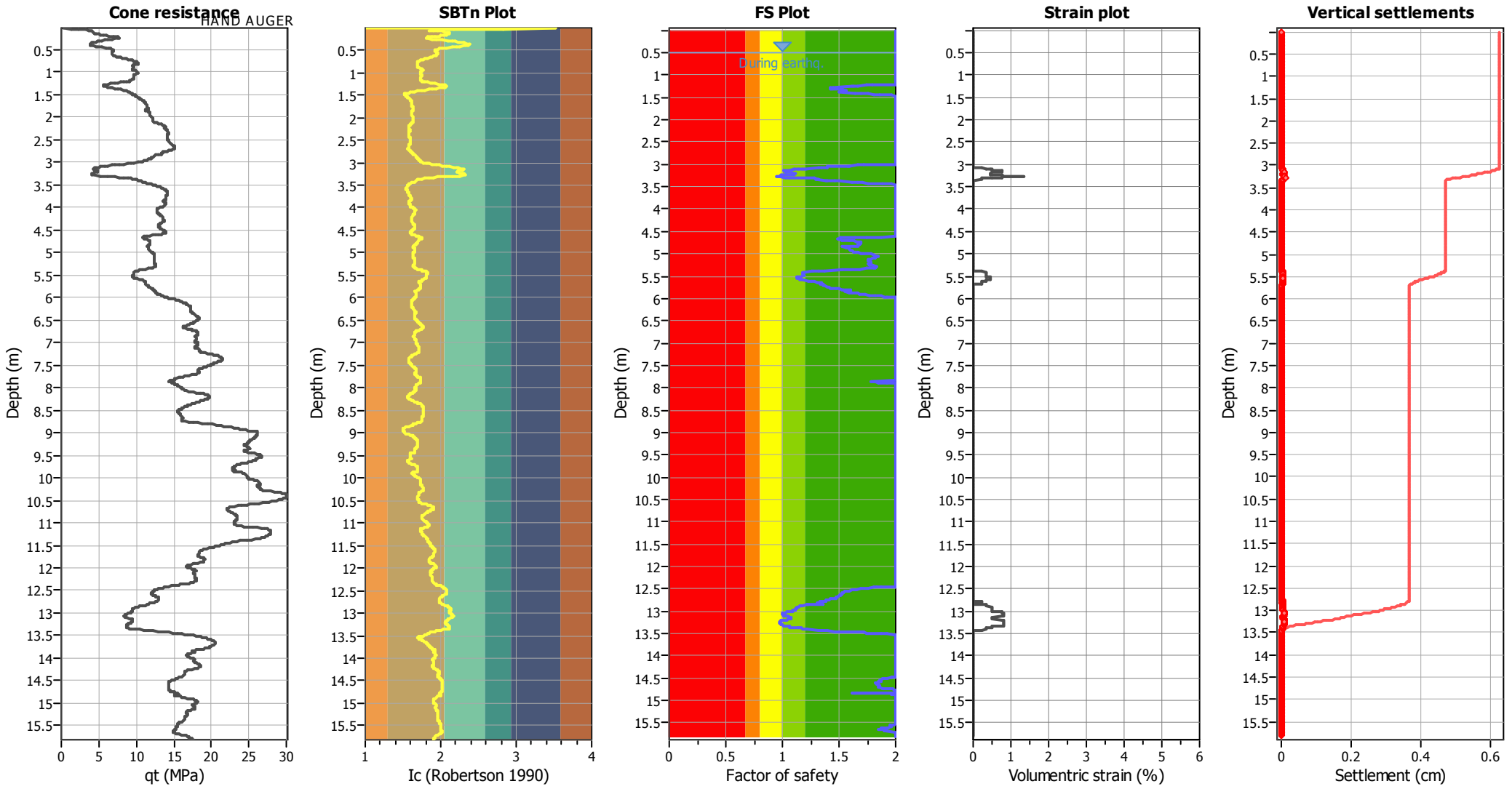
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
I_c:	Soil Behaviour Type Index
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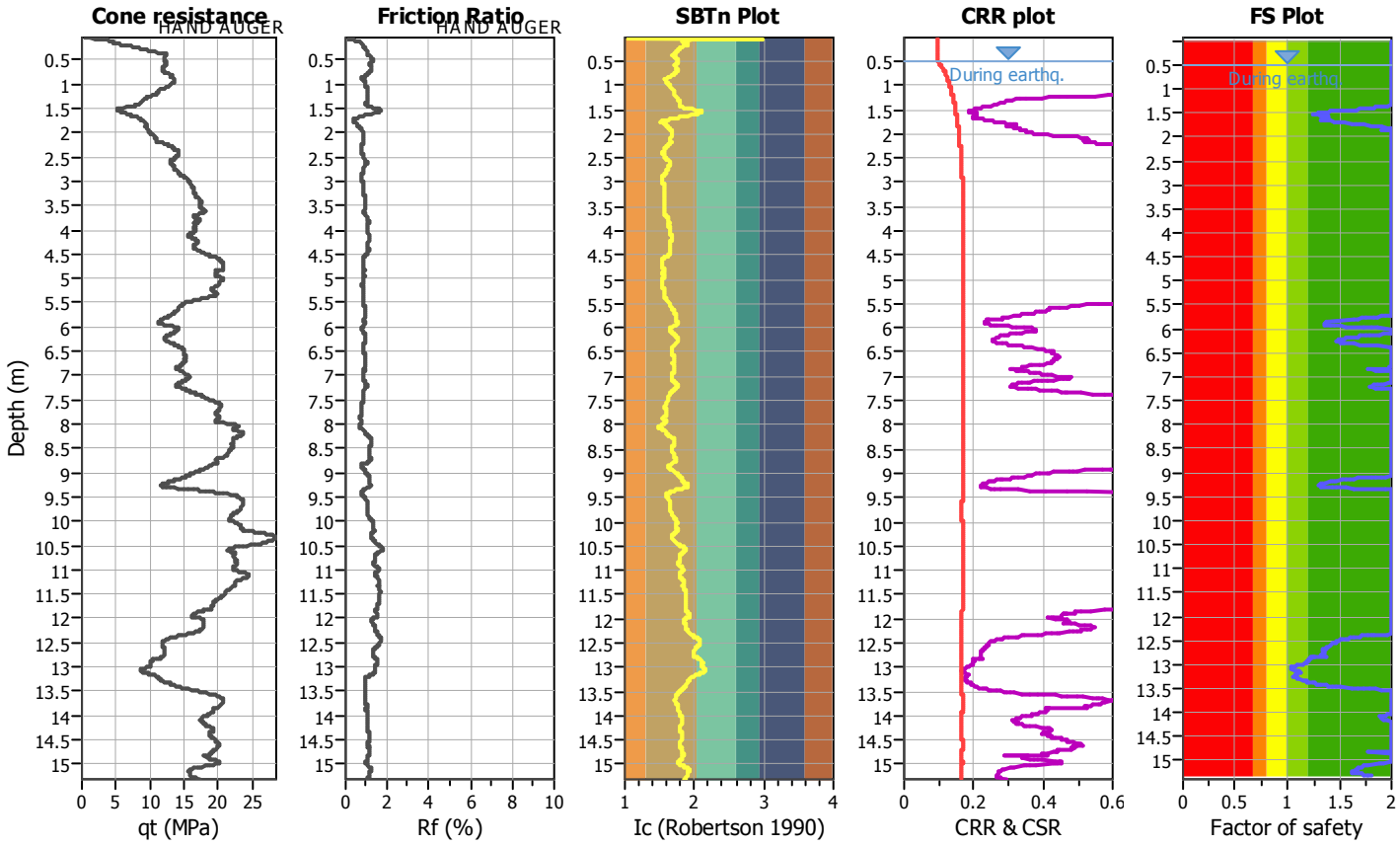
LIQUEFACTION ANALYSIS REPORT

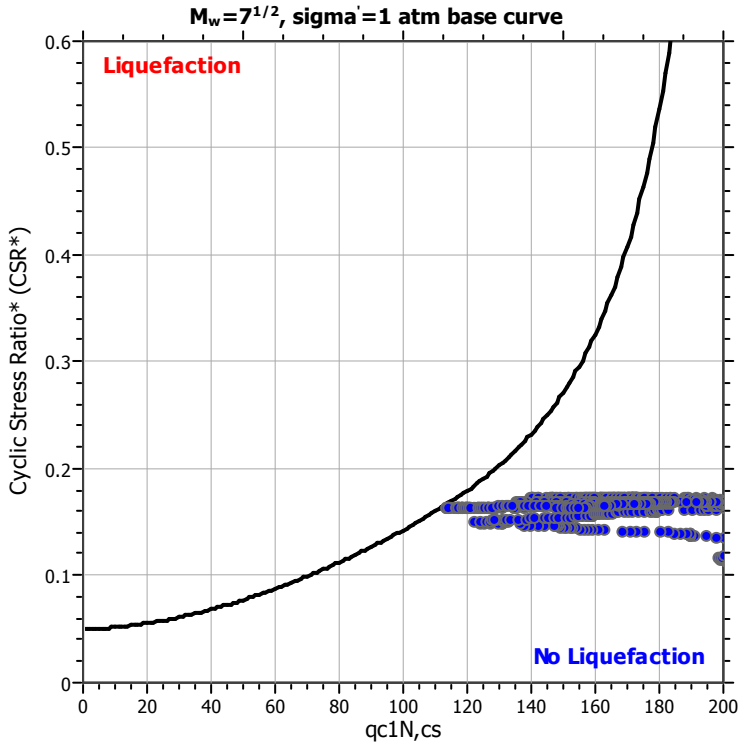
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

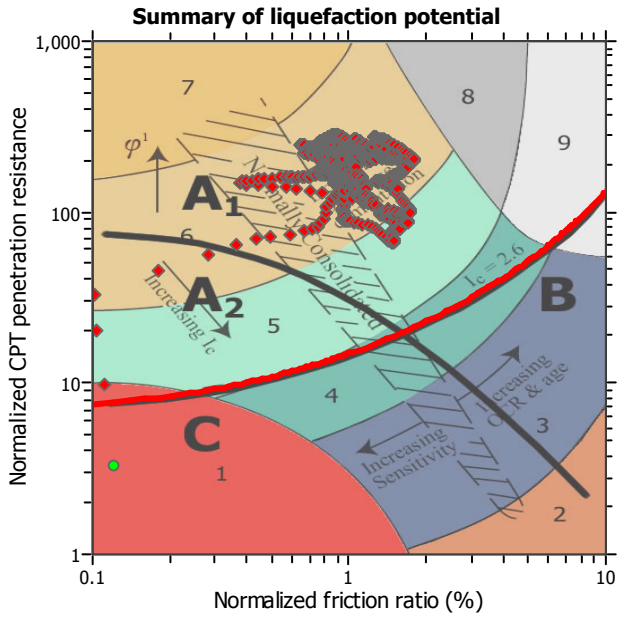
CPT file : CPTU002 SLS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.15	Unit weight calculation:	Based on SBT	K_o applied:	Yes		

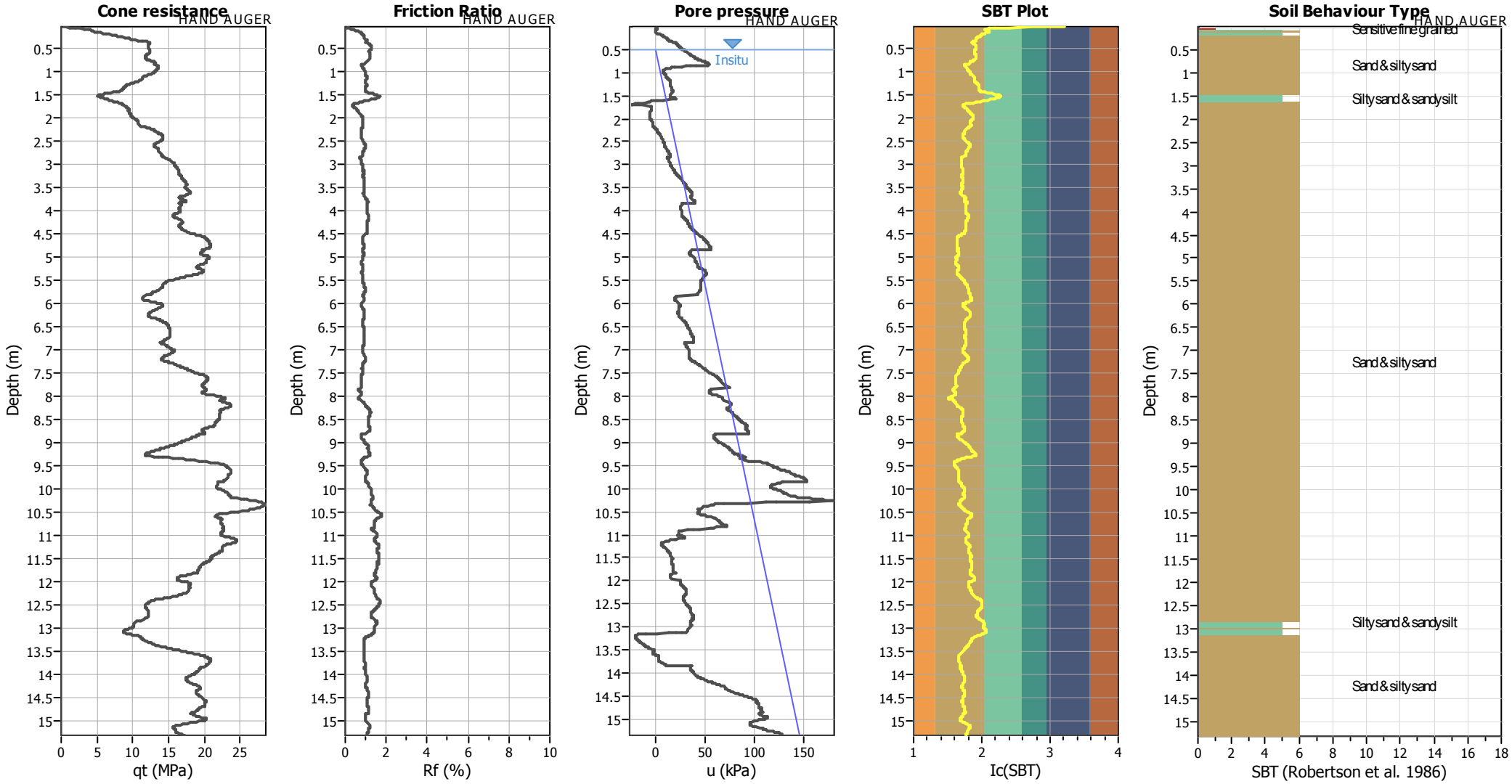






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
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CPT basic interpretation plots



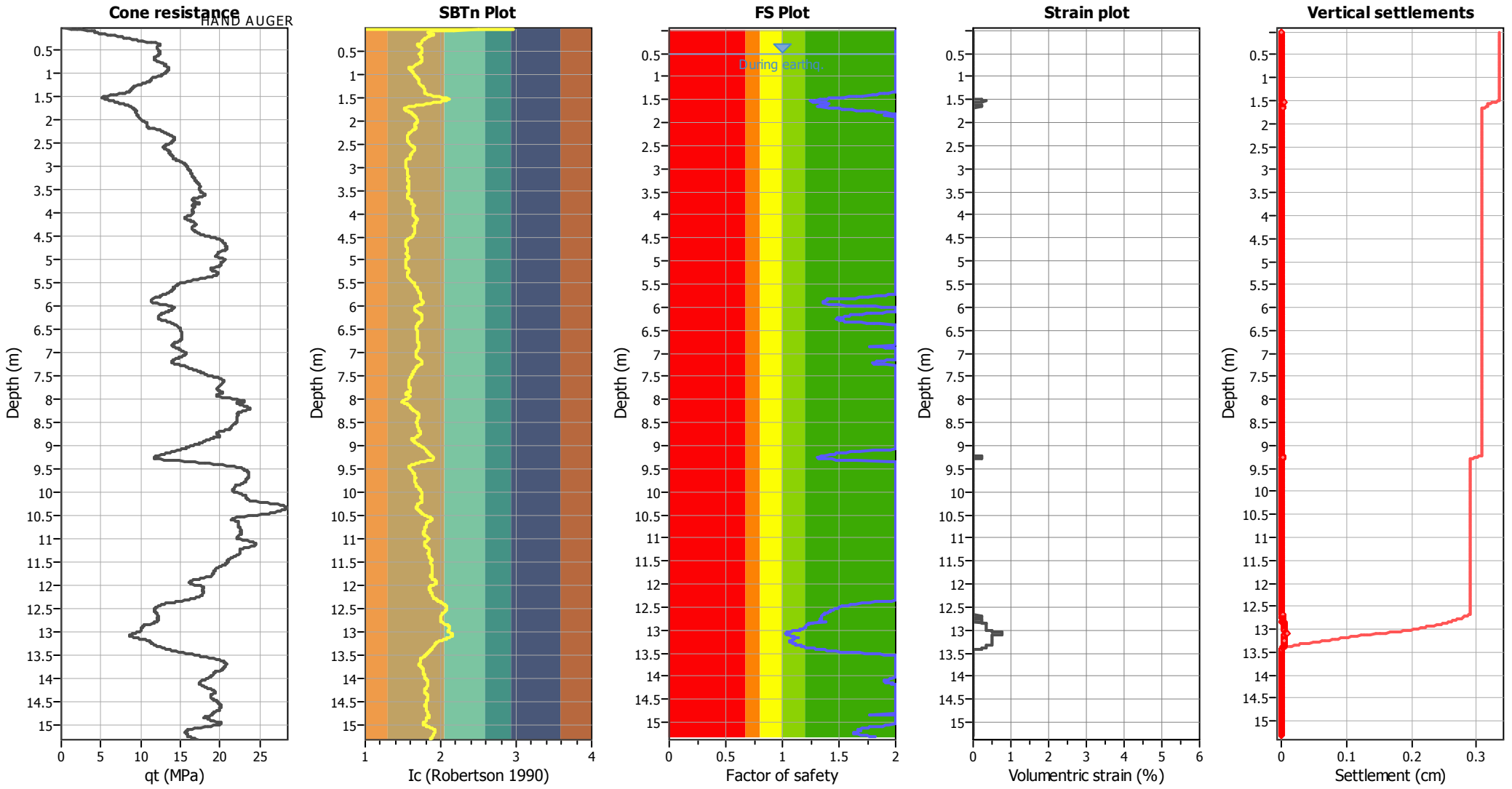
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.15	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
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4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Estimation of post-earthquake settlements



Abbreviations

q_t:	Total cone resistance (cone resistance q_c corrected for pore water effects)
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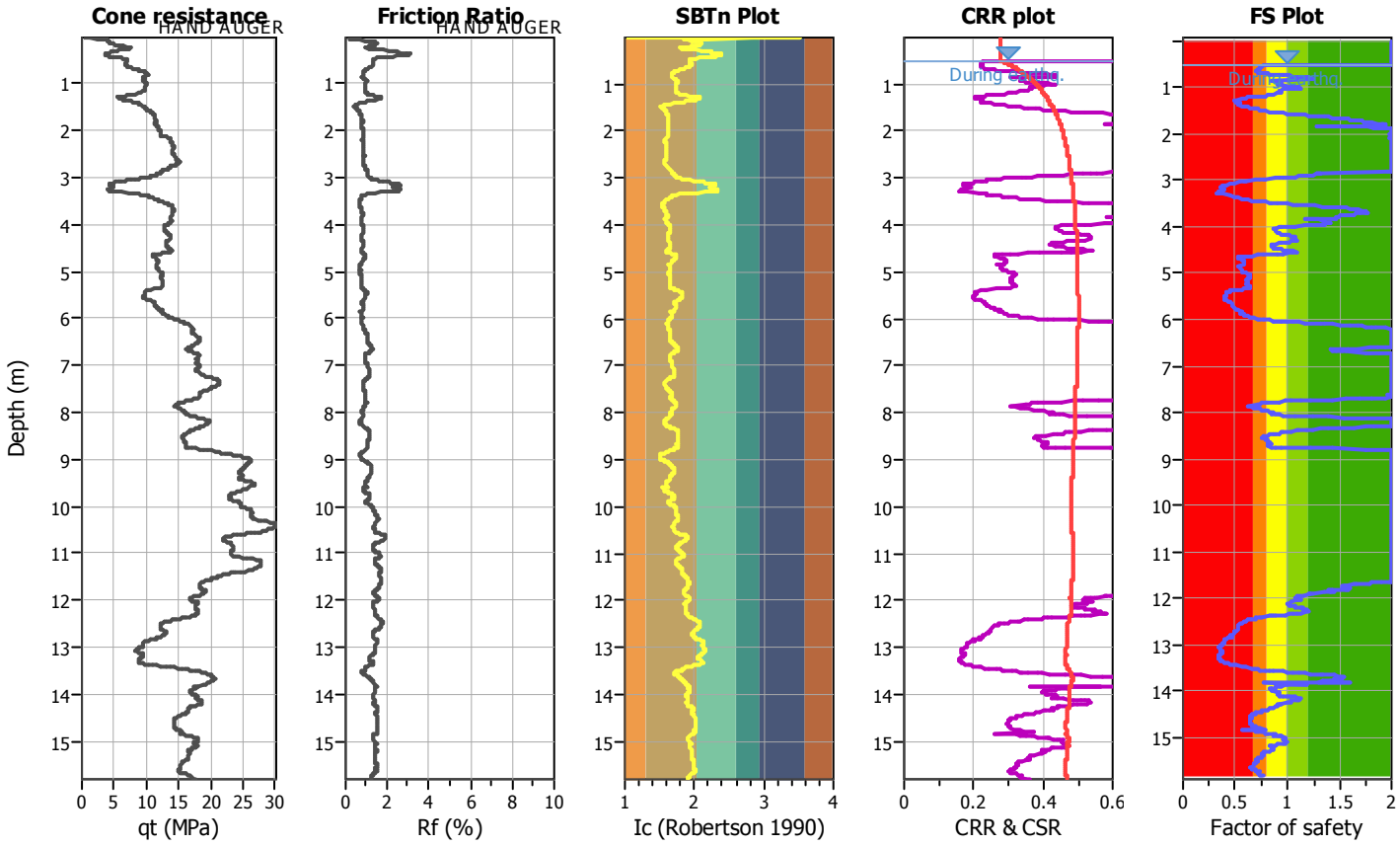
LIQUEFACTION ANALYSIS REPORT

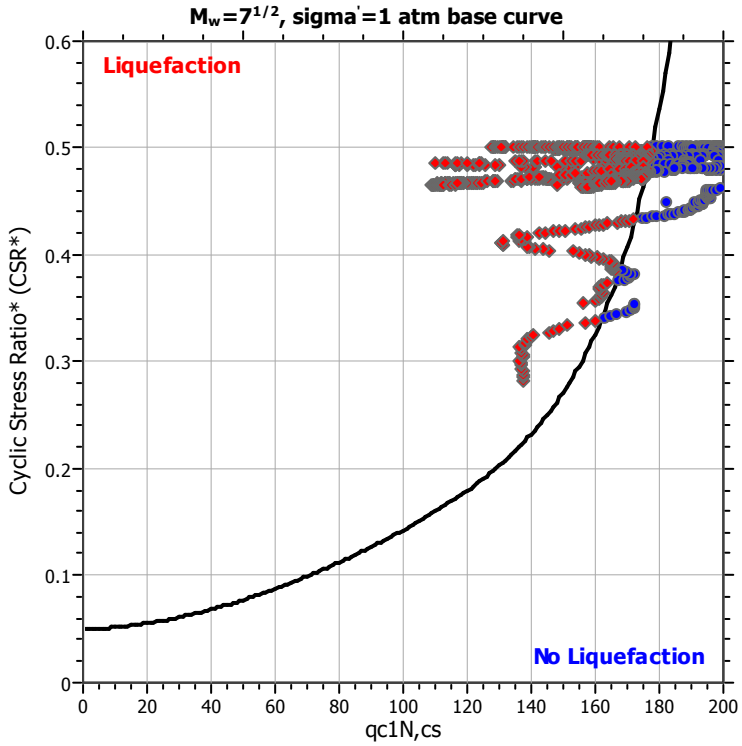
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

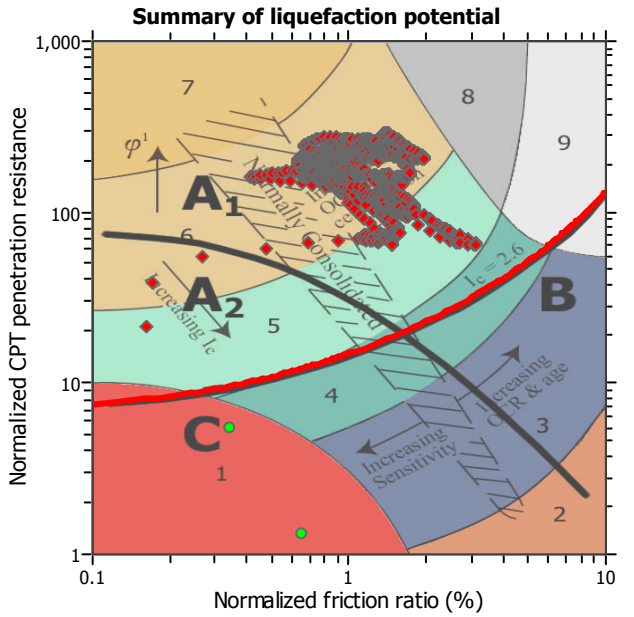
CPT file : CPTU001 ULS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.43	Unit weight calculation:	Based on SBT	K_o applied:	Yes		

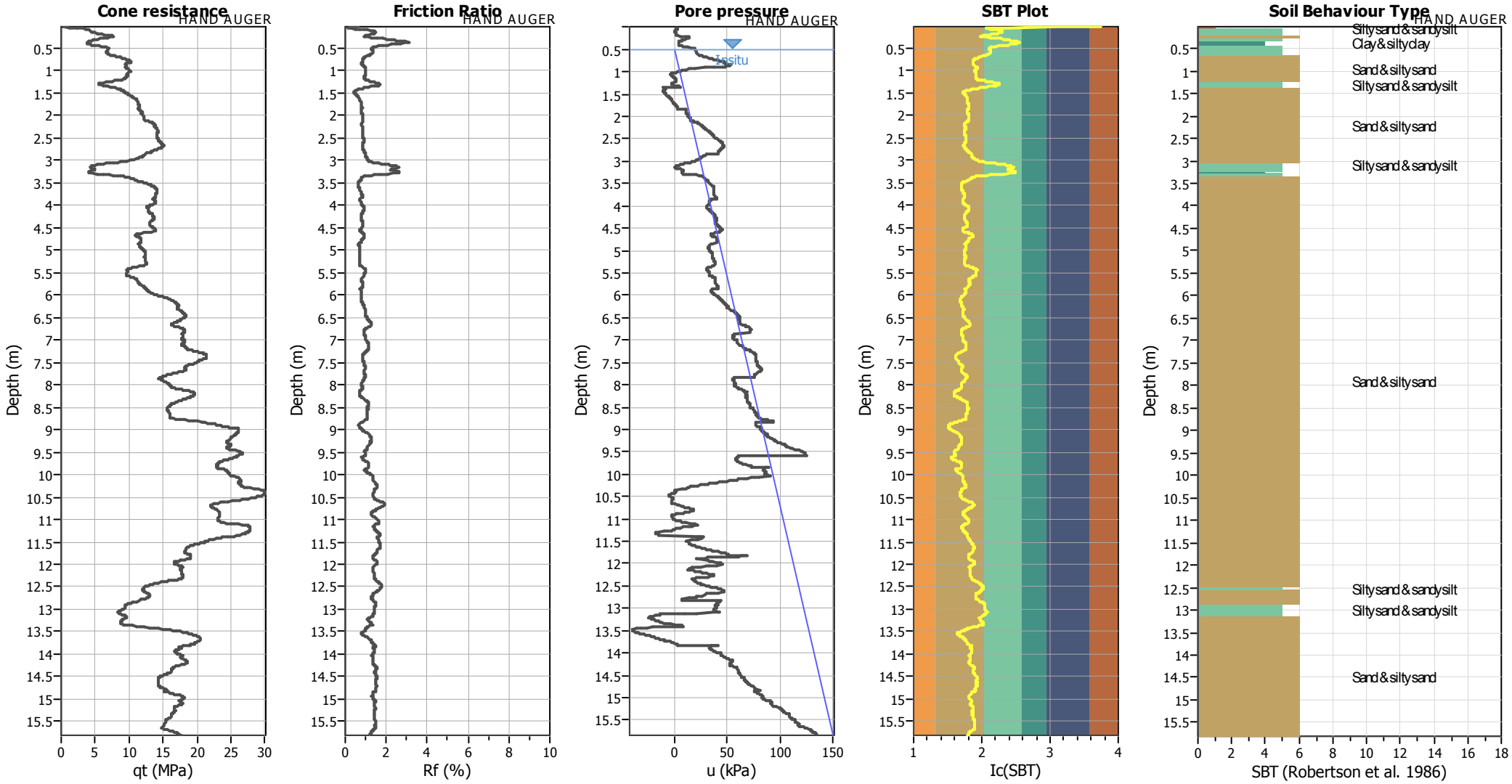






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
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CPT basic interpretation plots



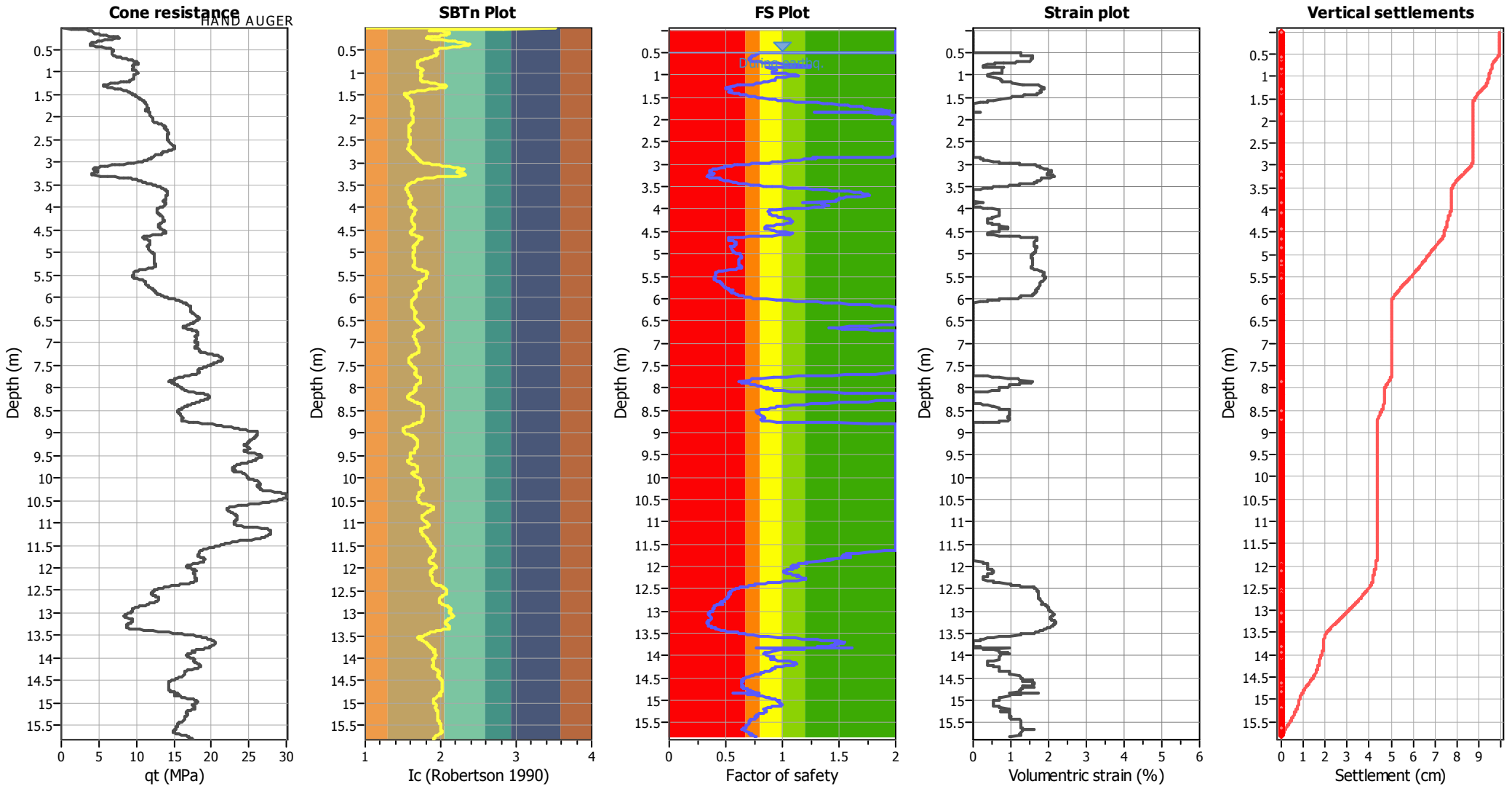
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.43	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
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Estimation of post-earthquake settlements



Abbreviations

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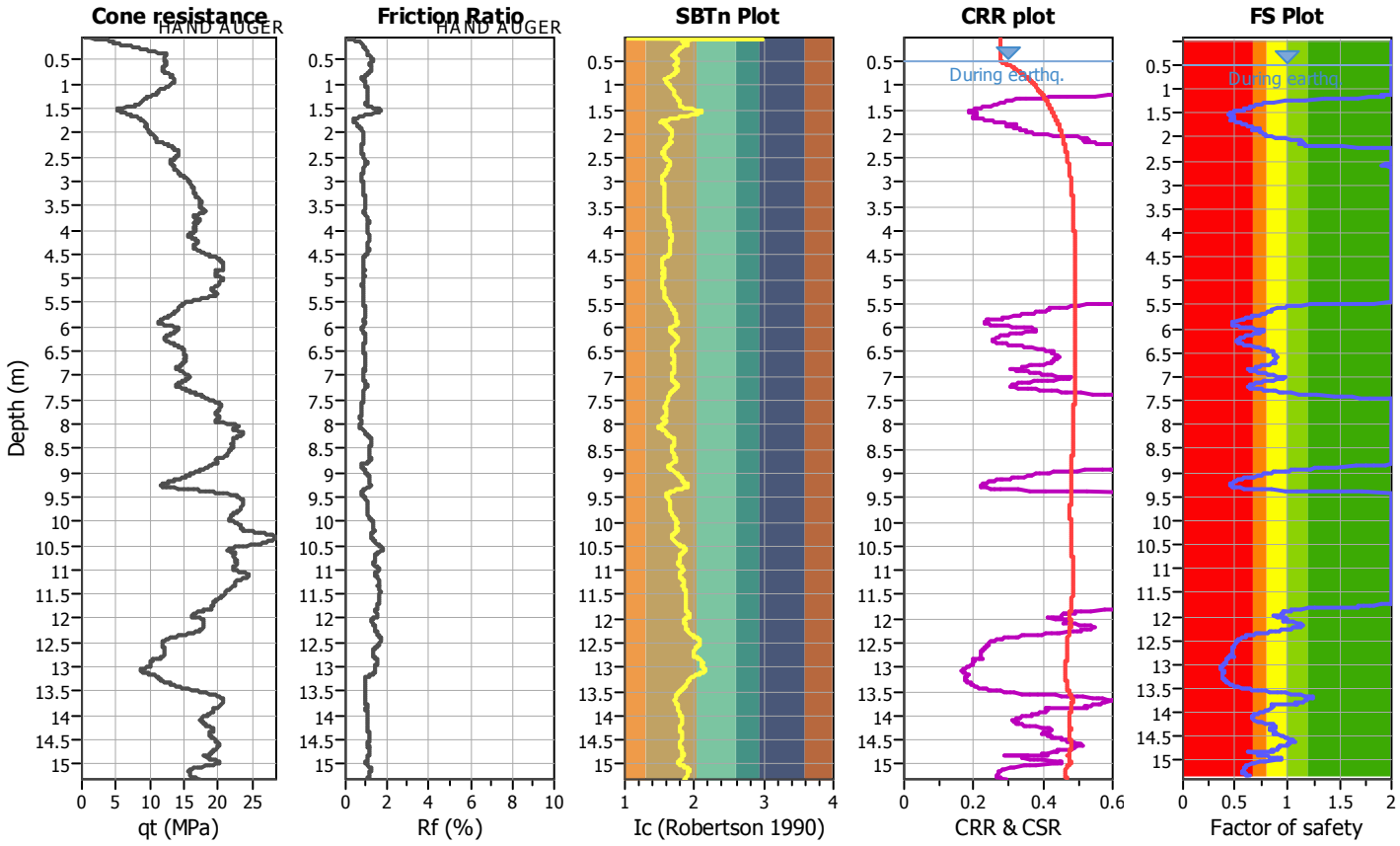
LIQUEFACTION ANALYSIS REPORT

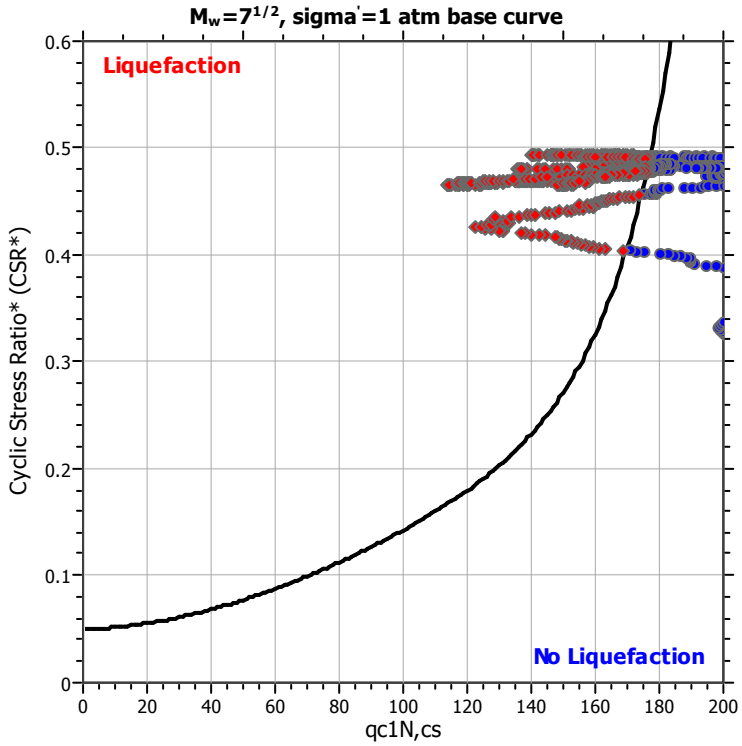
Project title : GNS PGA values (0.15g / 0.43g) **Location : 16 Hemingway Place**

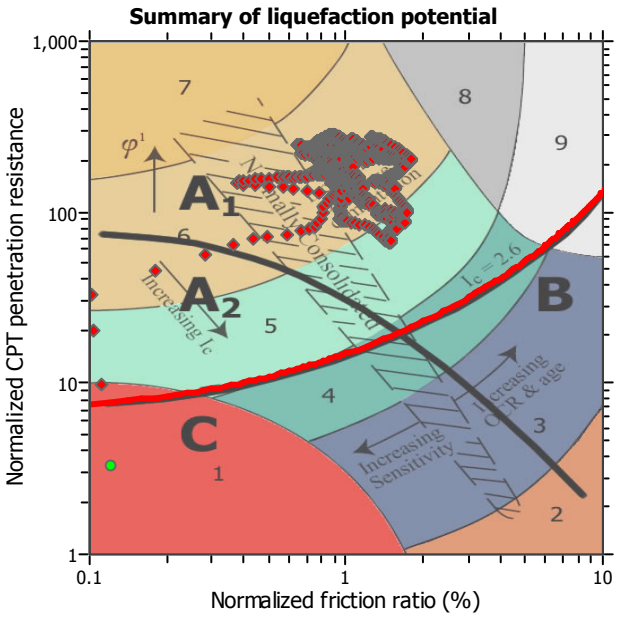
CPT file : CPTU002 ULS

Input parameters and analysis data

Analysis method:	I&B (2008)	G.W.T. (in-situ):	0.50 m	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	R&W (1998)	G.W.T. (earthq.):	0.50 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.50	Ic cut-off value:	2.60	Trans. detect. applied:	No		
Peak ground acceleration:	0.43	Unit weight calculation:	Based on SBT	K_o applied:	Yes		

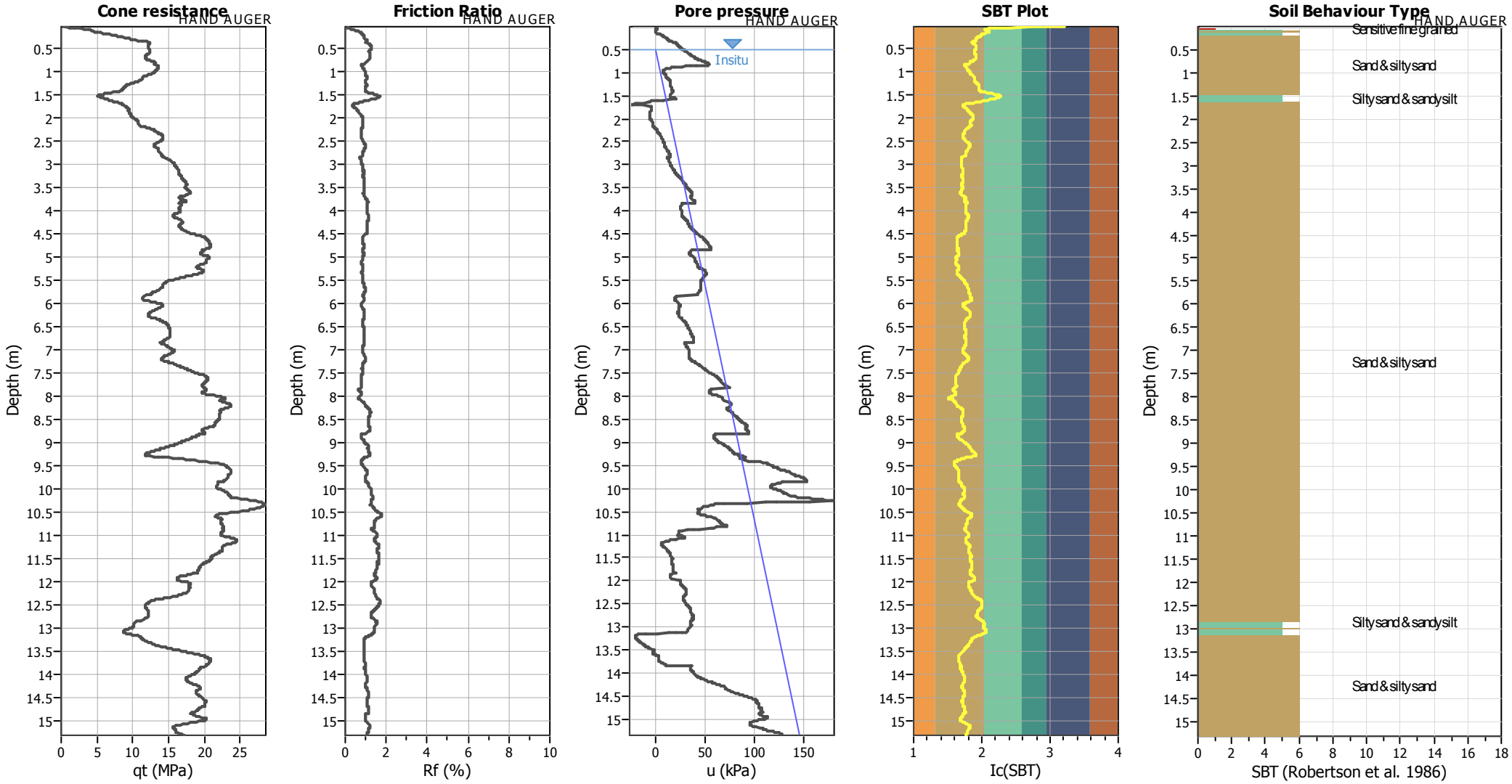






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
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CPT basic interpretation plots



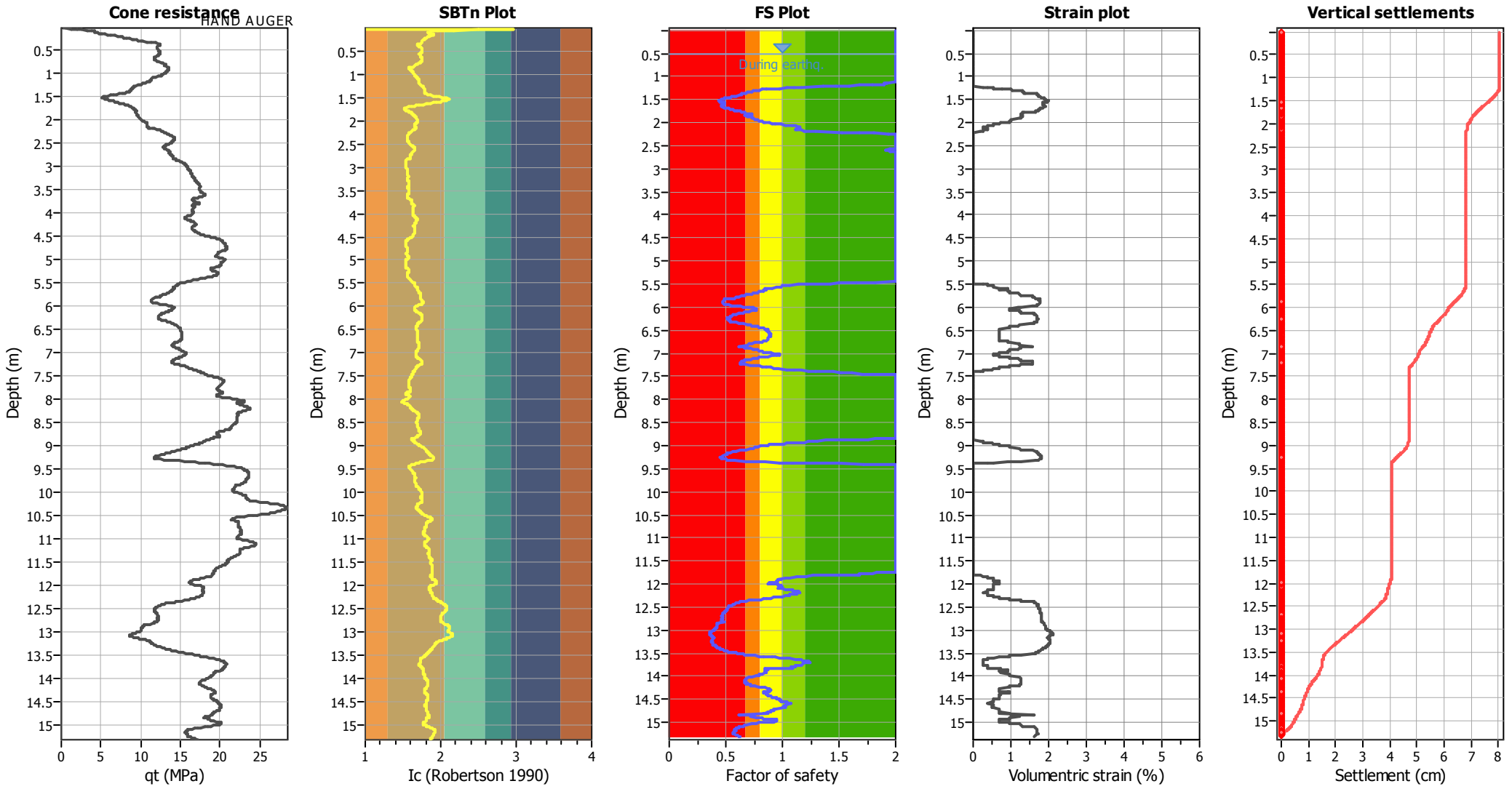
Input parameters and analysis data

Analysis method:	I&B (2008)	Depth to GWT (erthq.):	0.50 m	Fill weight:	N/A
Fines correction method:	R&W (1998)	Average results interval:	3	Transition detect. applied:	Sands only
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	.
Peak ground acceleration:	0.43	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	0.50 m	Fill height:	N/A	Limit depth:	N/A

SBT legend

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Estimation of post-earthquake settlements



Abbreviations

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Anne Edwards
Building Administration Officer
CCBC Residential Building Administration Team
Phone: 941 5262
Email: anne.edwards@ccc.govt.nz

Tax Invoice

GST number 53-198-554

L P Brewer
16 Hemingway Place
Christchurch 8083

Invoice number **91427**
Invoice date 20 March 2017
Customer number 4041200

Application number	BCN/2017/1885
Property address	16 Hemingway Place Spencerville
Owner	L P Brewer and L R Brewer
Invoiced to date	$0.00

Description	**GST**	**Amount (GST incl.)**
Exemption from building consent	$70.43	$540.00
	$70.43	**$540.00**

Balance to be paid **$540.00**
(GST inclusive)

These fees are due within 30 days from the date of this invoice. Please ensure payment is made by the due date.
Where the Council has issued an invoice for the payment of any fee or charge under this section and the amount invoiced has not been paid by the stated due date, the Council may commence debt recovery action. The Council reserves the right to charge interest, payable from the date the debt became due, and recover costs incurred in pursuing recovery of the debt on a solicitor / client basis as outlined in the Fees and Charges Schedule of the Council's Long Term Plan.

To pay by Internet banking, use the following details:
Account **02 0800 0044765 03**
Particulars **91427**
Code **10-76430**
Reference **1191576**
Send remittance advice to revenue@ccc.govt.nz.

Civic Offices, 53 Hereford Street, Christchurch 8011
PO Box 73013, Christchurch 8154
Phone: (03) 941-8999, Fax: (03) 941-8792
www.ccc.govt.nz



Anne Edwards
Building Administration Officer
CCBC Residential Building Administration Team
Phone: 941 5262
Email: anne.edwards@ccc.govt.nz

Tax Invoice

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L P Brewer
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Description	**GST**	**Amount (GST incl.)**
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