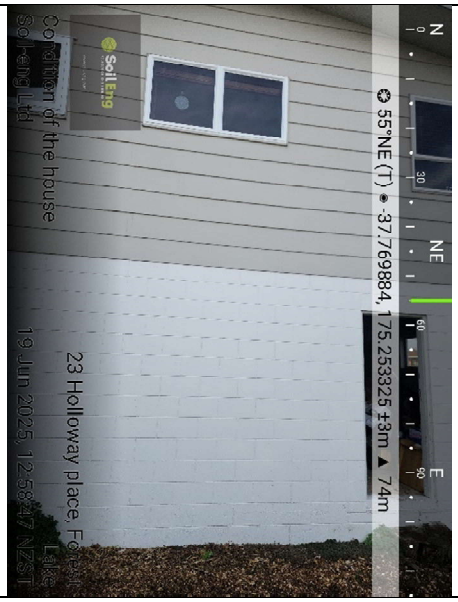
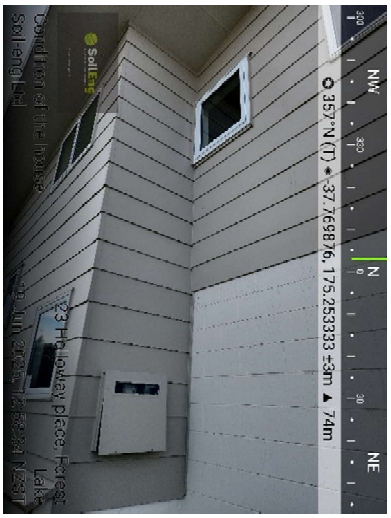
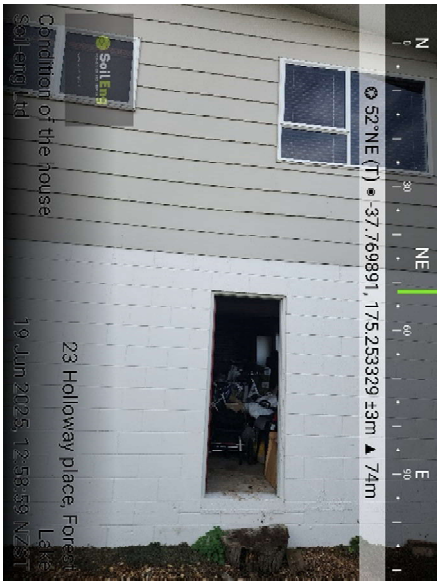
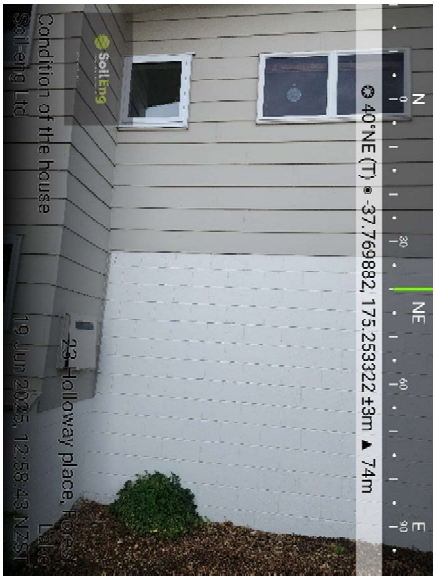
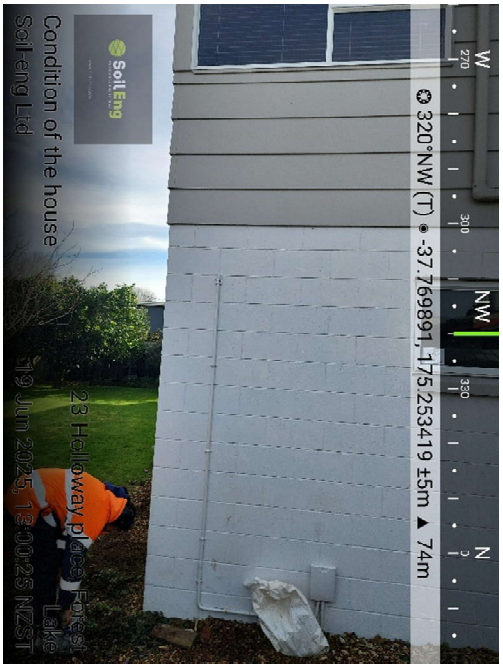
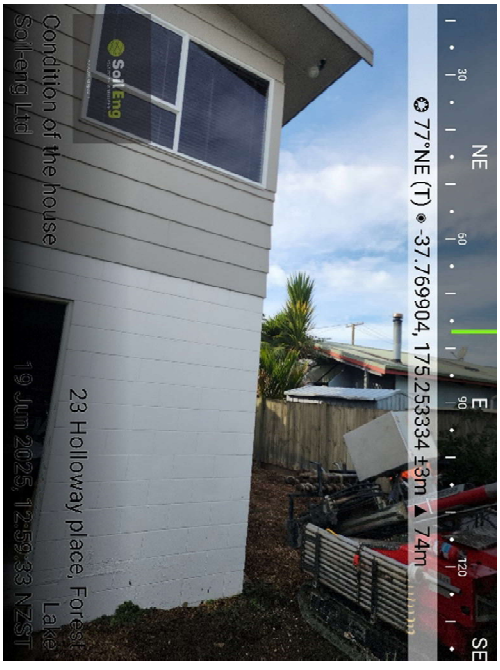

N
NE
E
55°NE (T) ◉ -37.769884, 175.253325 ±3m ▲ 74m
Soil Eng
Condition of the house
Soil-eng Ltd
23 Holloway place, Forest Lake
19 Jun 2025, 12:58:47 NZST

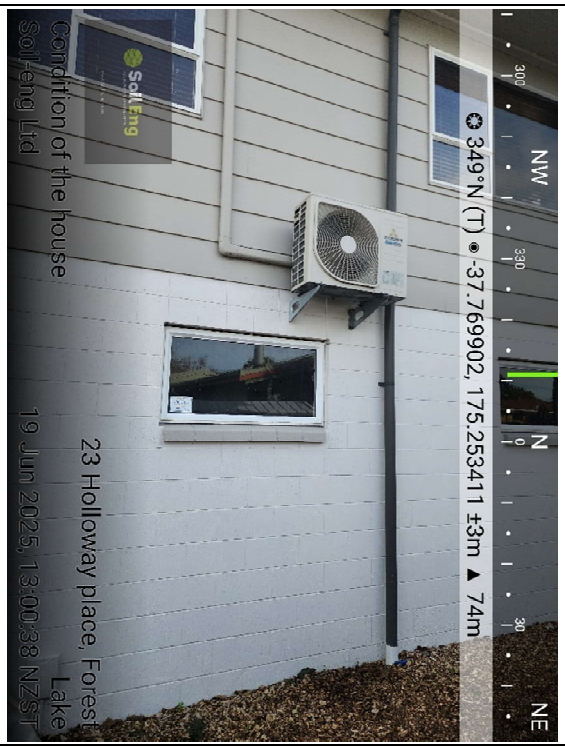

NW
NE
357°N (T) ◉ -37.769876, 175.253333 ±3m ▲ 74m
Soil Eng
Condition of the house
Soil-eng Ltd
23 Holloway place, Forest Lake
19 Jun 2025, 12:58:47 NZST

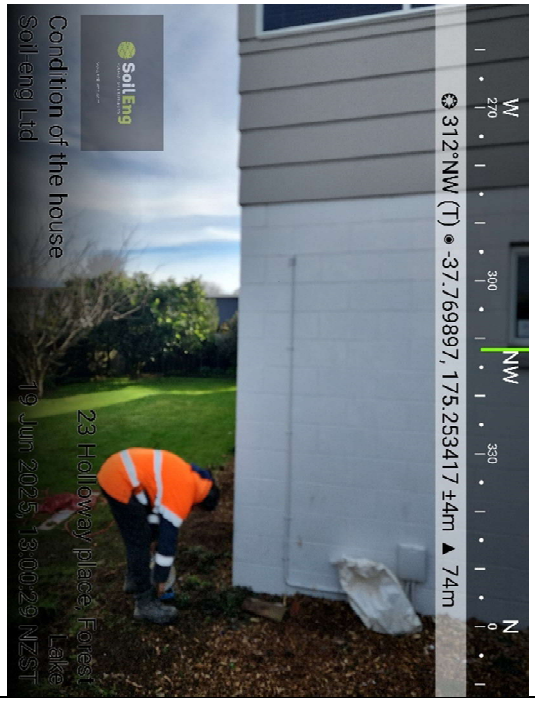

N
NE
E
52°NE (T) ◉ -37.769891, 175.253329 ±3m ▲ 74m
Soil Eng
Condition of the house
Soil-eng Ltd
23 Holloway place, Forest Lake
19 Jun 2025, 12:58:59 NZST

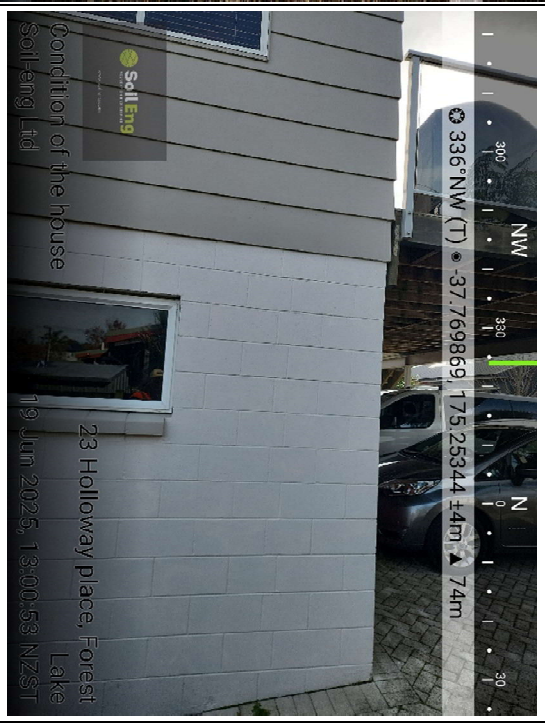

N
NE
E
40°NE (T) ◉ -37.769882, 175.253322 ±3m ▲ 74m
Soil Eng
Condition of the house
Soil-eng Ltd
23 Holloway place, Forest Lake
19 Jun 2025, 12:58:43 NZST

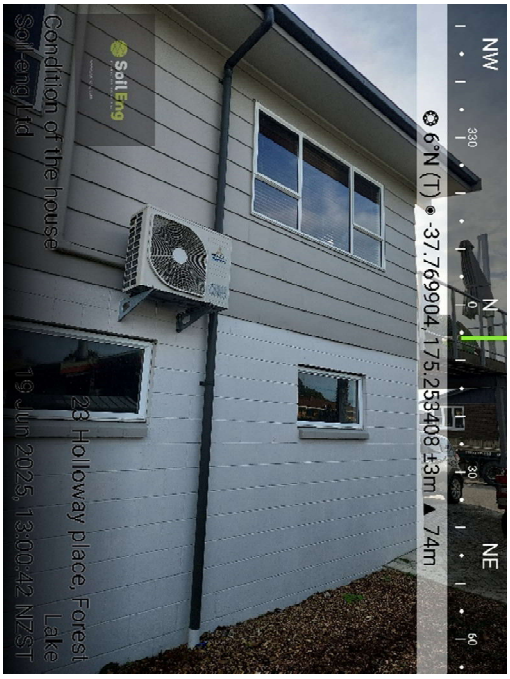

W
NW
N
320°NW (T) ◉ -37.769891, 175.253419 ±5m ▲ 74m
Soil Eng
Condition of the house
Soil-eng Ltd
23 Holloway place, Forest Lake
19 Jun 2025, 13:00:25 NZST

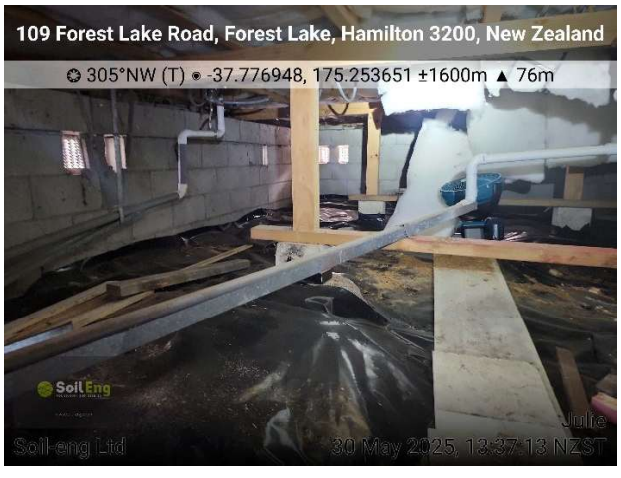

NE
E
SE
77°NE (T) ◉ -37.769904, 175.253334 ±3m ▲ 74m
Soil Eng
Condition of the house
Soil-eng Ltd
23 Holloway place, Forest Lake
19 Jun 2025, 12:59:33 NZST


NW
N
NE
349°N (T) ◉ -37.769902, 175.253411 ±3m ▲ 74m
Soil Eng
Condition of the house
Soil-eng Ltd
23 Holloway place, Forest Lake
19 Jun 2025, 13:00:38 NZST


W
NW
N
312°NW (T) ◉ -37.769897, 175.253417 ±4m ▲ 74m
Soil Eng
Condition of the house
Soil-eng Ltd
23 Holloway place, Forest Lake
19 Jun 2025, 13:00:29 NZST


NW
N
336°NW (T) ◉ -37.769869, 175.25344 ±4m ▲ 74m
Soil Eng
Condition of the house
Soil-eng Ltd
23 Holloway place, Forest Lake
19 Jun 2025, 13:00:53 NZST

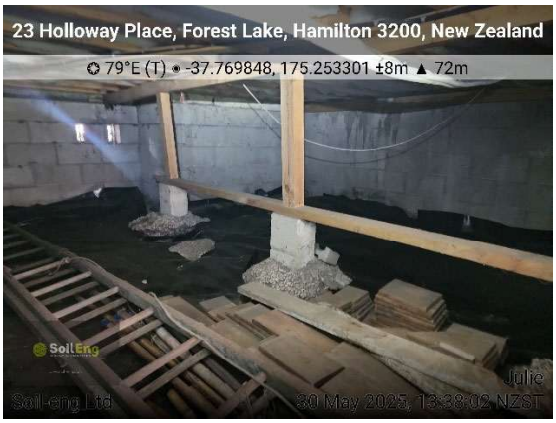

NW
N
NE
6°N (T) ◉ -37.769904, 175.253408 ±3m ▲ 74m
Soil Eng
Condition of the house
Soil-eng Ltd
23 Holloway place, Forest Lake
19 Jun 2025, 13:00:42 NZST

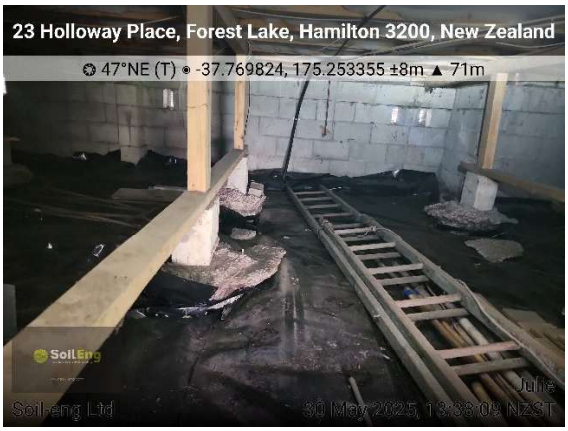

109 Forest Lake Road, Forest Lake, Hamilton 3200, New Zealand
305°NW (T) ◉ -37.776948, 175.253651 ±1600m ▲ 76m
Soil Eng
Julie
Soil-eng Ltd
30 May 2025, 13:37:13 NZST


85A Forest Lake Road, Forest Lake, Hamilton 3200, New Zealand
340°NW (T) ◉ -37.769819, 175.253481 ±1600m ▲ 76m
Soil Eng
Julie
Soil-eng Ltd
30 May 2025, 13:37:02 NZST


13 Seifert Street, Forest Lake, Hamilton 3200, New Zealand
43°NE (T) -37.769773, 175.253147 ±9m ▲ 64m
Julie
Soil-eng Ltd
30 May 2025, 13:37:19 NZST


23 Holloway Place, Forest Lake, Hamilton 3200, New Zealand
262°W (T) -37.769883, 175.25323 ±18m ▲ 65m
Julie
Soil-eng Ltd
30 May 2025, 13:37:28 NZST


23 Holloway Place, Forest Lake, Hamilton 3200, New Zealand
79°E (T) -37.769848, 175.253301 ±8m ▲ 72m
Julie
Soil-eng Ltd


23 Holloway Place, Forest Lake, Hamilton 3200, New Zealand
47°NE (T) -37.769824, 175.253355 ±8m ▲ 71m
Julie
Soil-eng Ltd


23 Holloway Place, Forest Lake, Hamilton 3200, New Zealand
304°NW (T) -37.769839, 175.253291 ±13m ▲ 68m
Julie
Soil-eng Ltd
30 May 2025, 13:39:06 NZST


23 Holloway Place, Forest Lake, Hamilton 3200, New Zealand
5°N (T) -37.769927, 175.253306 ±12m ▲ 68m
Julie
Soil-eng Ltd
30 May 2025, 13:39:12 NZST


23 Holloway Place, Forest Lake, Hamilton 3200, New Zealand
303°W (T) -37.769828, 175.25333 ±13m ▲ 68m
Julie
Soil-eng Ltd


244°SW (T) -37.769866, 175.25342 ±26m ▲ 68m
Julie
Soil-eng Ltd


204°S (T) • -37.769815, 175.253554 ±17m ▲ 68m
Julie
Soil-eng Ltd
30 May 2025, 13:41:01 NZST


262°W (T) • -37.769933, 175.253492 ±23m ▲ 68m
Julie
Soil-eng Ltd
30 May 2025, 13:41:28 NZST

APPENDIX A: NZGD HAND AUGER PROFILES

TITUS
CONSULTING ENGINEERS

Log:

BH5

Address: 26B Kingsway Crescent
Date: 30/09/2020
Testers: TG

Project №: 11492

Water Table:	Depth (mm):	Graphic Log:	Material Description:	Blows /100mm: 5 10 15	Shear Strength (kPa): Undrained:	Remoulded:	Sensitivity:
	200		Topsoil	0			
	400		Dark brownish black, moist to saturated, organics	0			
▼	600			0			
	800			0			
	1000			0			
	1200			0			
	1400			0			
	1600			0			
	1800			0			
	2000			0			
	2200			0			
	2400			0			
	2600			0			
	2800			0			
	3000			0			
	3200			0			
	3400			0			
	3600			0			
	3800			0			
	4000			0			
	4200			0			
	4400			0			
	4600			0			
	4800		Silty fine SAND, greyish white, well graded, saturated, very loose to dense	0			
	5000			8			
	5200		*Borehole terminated due to non-retrieval @5000mm*	9 6 6 7 5 6 6 8			
	5400						
	5600						
	5800						

TITUS
CONSULTING ENGINEERS

Log: 1 of 1

BH1

Address: 5 Holloway Place
Date: 04/05/2021
Testers: LiamV, LeeM

Project №: 12201

Water Table:	Depth (mm):	Graphic Log:	Material Description:	Blows /100mm: 5 10 15	Shear Strength (kPa): Undrained:	Remoulded:	Sensitivity:
Not Found	200		Topsoil	0			
	400		Black, saturated, organics	0			
	600			0			
	800			0			
	1000			0			
	1200			0			
	1400			0			
	1600			0			
	1800			0			
	2000			0			
	2200			0			
	2400			0			
	2600			0			
	2800			0			
	3000			0			
	3200			0			
	3400			5			
	3600			4			
	3800			3			
	4000			3			
	4200			3			
	4400			3			
	4600		Silty fine to medium SAND, grey, well graded, saturated, loose	2			
	4800		*End of Borehole @4700mm*	3			
				4			
				3			
				3			
				4			
				5			
				4			
				3			
				3			

TITUS
CONSULTING ENGINEERS

Log: 1 of 1

HA13

Address: 80 & 82 Storey Ave
Date: 01/11/2022
Testers: ToyG, RicardoG, MalikR

Project №: 14113

Water Table:	Depth (mm):	Geology:	Graphic Log:	Material Description:	Blows /100mm:	Shear Strength (kPa): Undrained:	Remoulded:	Sensitivity:
Not Found	200	Undefined		Topsoil	0			
	400				0			
	600			Clayey SILT, brownish orange mottled brown, low plasticity, moist, very stiff	0	169	58	2.9
	800				0			
	1000			Clayey SILT, greyish brown mottled grey, low plasticity, moist, stiff	0	115	56	2.1
	1200				0			
	1400				0			
	1600	Walton Subgroup		CLAY, dark grey, high plasticity, wet	1			
	1800				0.5			
	2000				0.5			
	2200				0.5			
	2400				1			
	2600				1			
	2800				2			
	3000				2			
	3200				3			
	3400				2			
	3600				3			
	3800				1			
	4000			*End of Borehole @4000mm*	2			
	4200				2			
	4400				3			
	4600				2			
	4800				3			
					2			
					2			
					2			
					3			
					2			
					2			
					3			
					3			
					4			
					5			
					6			
					6			
					7			
					6			
					8			

Soil Description

Log Identification: HA02

R.L.
NZVD2016: 40m

Coordinates (NZTM):
E: 1798591.4, N: 5817286.6

Investigation method	Depth (meters)	Field Description	Geological Unit
Hand Auger (50mm diameter)	0.0	**TOPSOIL**; dark brown. Moist.	TS
	0.5	**SILT**, trace sand; brown. Very stiff to hard, moist, slightly plastic, sensitive. - At 0.4m, some charcoal inclusions present.	Hamilton Ash
	1.0	- At 0.7m, with some clay. - At 0.8m, becoming moderately plastic.	
	1.5	**SILT,** some clay, trace sand; orange brown, mottled light grey. Very stiff to hard, moist, moderately plastic, modeterately sensitive. - At 1.3m, mottles becoming absent. - At 1.5m, becoming very sticky	Walton Subgroup
	2.0	- At 2.2m, becoming a clayey silt.	
	2.5		
	3.0	**End of Hand Auger at 3.0m** - Target Depth	
	3.5		
	4.0		
	4.5		
	5.0		
	5.5	Groundwater not encountered during testing	

Field Test Data

Depth (meters)	Peak Vane Shear Strength (kPa)	Residual Vane Shear Strength (kPa)	Sensitivity
0.5	139	29	4.7
	216+		
1.0			
	216+		
1.5			
	154	49	3.1
2.0	193	65	3.0
2.5	182	49	3.7
	216+		
3.0			
3.5			
4.0			
4.5			
5.0			
5.5			

Scala Penetrometer (blows per 100mm drop)

Blow count

Plot of Scala results: Very loose | Loose | Medium Dense | Dense (0 1 2 3 4 5 6 7 8 9 10)

Groundwater Level

Notes:
1. The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
2. OB refers to hand auger over bored. HW refers to scala falling under the weight of the hammer. TS refers to topsoil.
3. Soils have been described in general accordance with NZ Geomechanics Society "Guideline for the Field Classification and Description of Soil and Rock for Engineering Purposes", December 2005
4. Vane shear strengths (where reported) have been corrected in general accordance with NZ Geotech Society Inc. "Guideline for Hand Held Shear Vane Test", August 2001.
5. Scala Penetrometer testing (where reported) has been carried out in general accordance with NZS 4402 Test 6.5.2.
6. Coordinates (where reported) are presented in NZTM2000 to an accuracy of ±5m.
7. Shear vane results are multiplied by factor A and plus factor B where applicable

BCD GROUP

Job Number: 25-0230
Client: Gribbons Group Residential

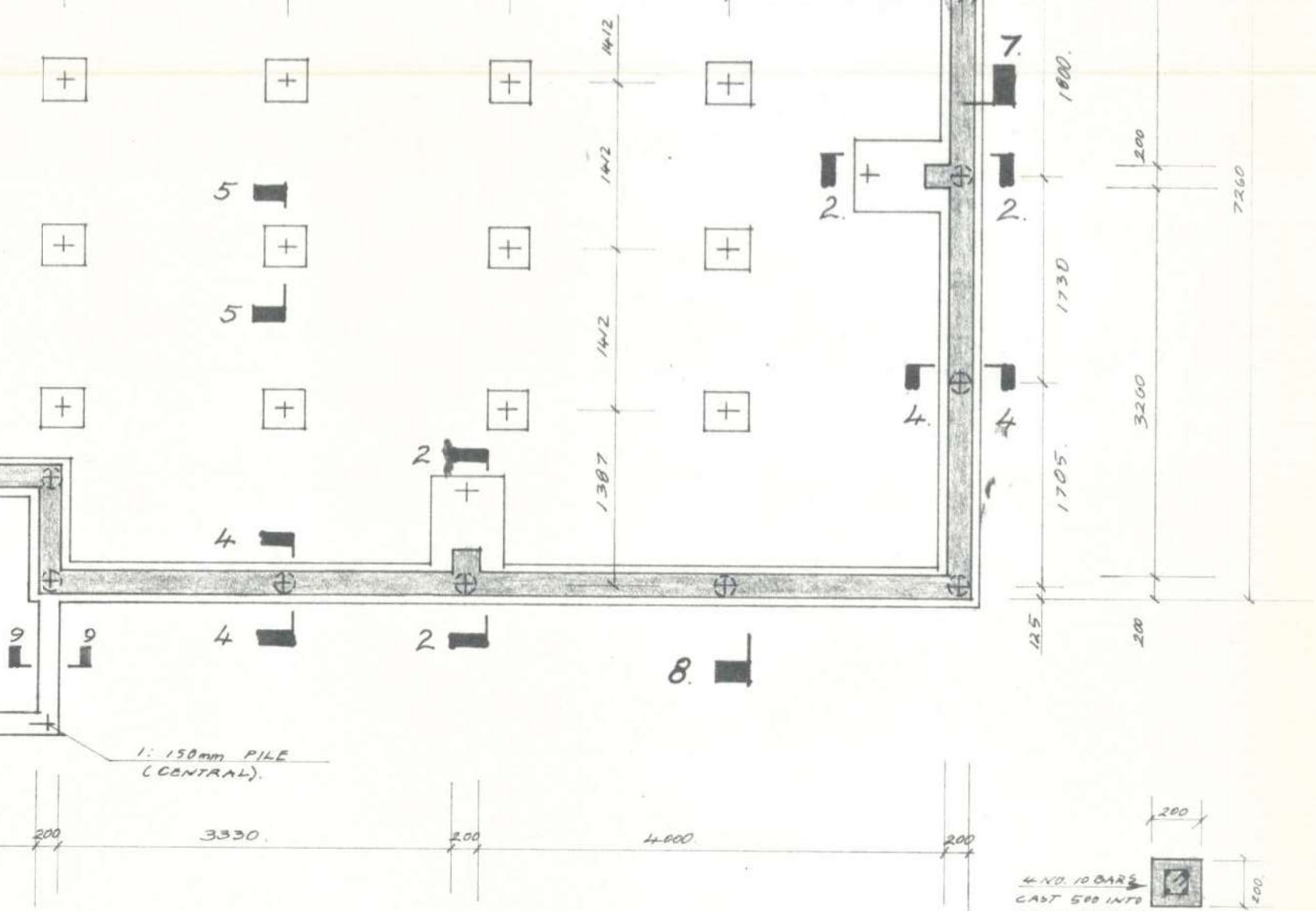
Shear Vane ID:3294
Calibration Expiry Date: 12/08/2025
Shear Vane Factors: A: 1.54

Location: 68 Storey Ave, Hamilton

Date Of Investigation: 8/05/2025

Logged By: SL **Checked By: RV**

APPENDIX B: 1975 ORIGINAL PLANS FOR THE HOUSE



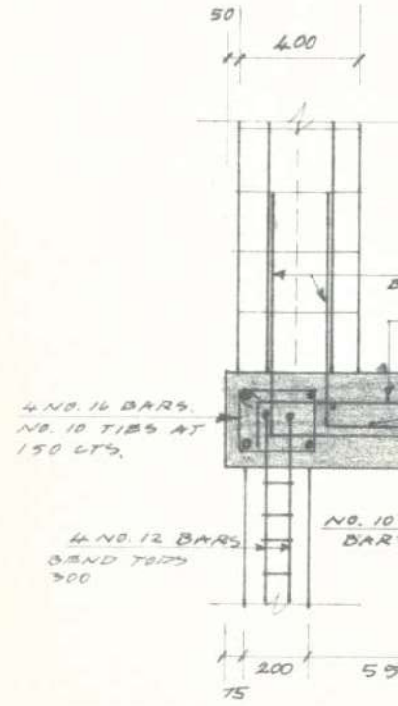
ON PLAN.

1: 50.

9.9.

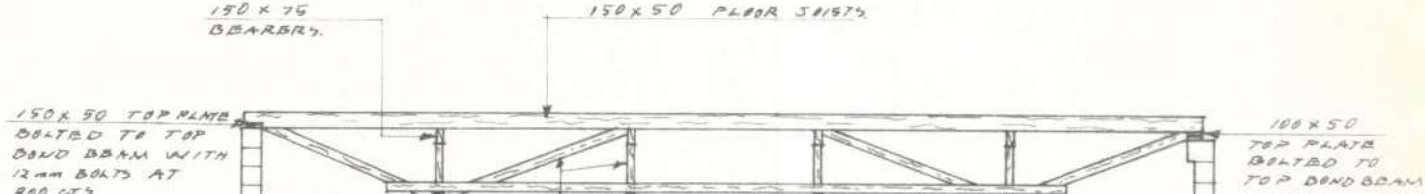
1.

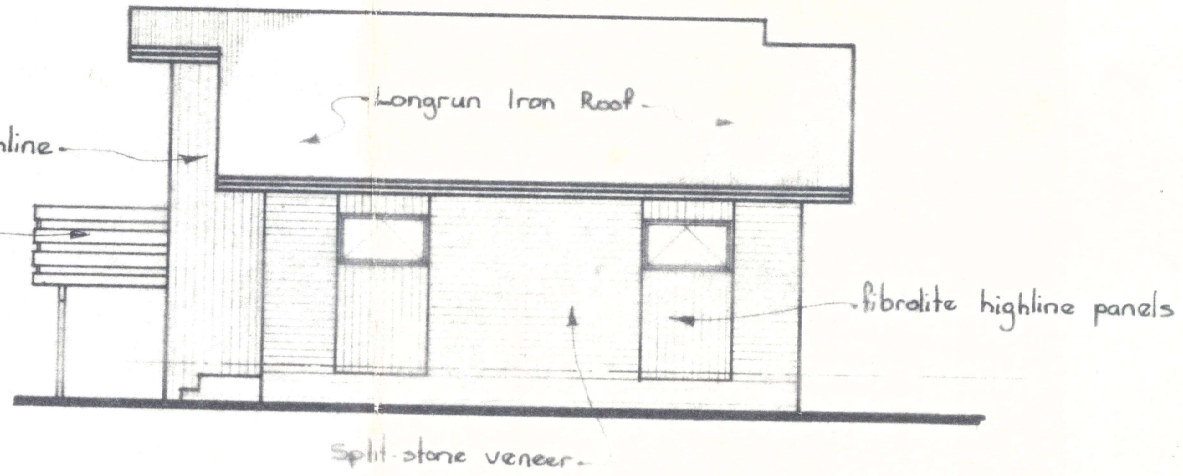
1A.



2. 2

Ø BARS
UTO TOP OF
BARS TO BE
VER BOTTOM
ATE & STAPLER





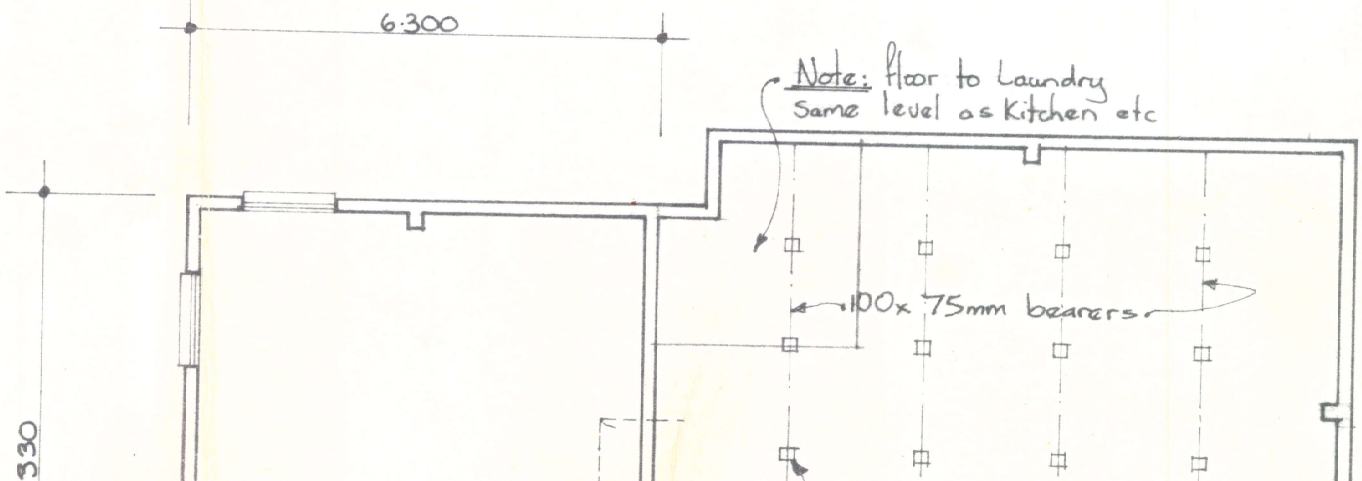
1:100 END ELEVATION

Compacted fill

NOTE:
For foundations & piles
See Engineers drawings

200x
on

1:100 CROSS-SECT



25.12

100mmφ G.E. drains

APPENDIX C: DESIGNER PLANS FOR WOODEN DECK

dbcon
Consulting Engineers

Producer Statement
Engineering Design
Engineering Design- Steel Beam, Support Posts & Foundation

Job Reference :	140547
Date:	7 May 2015
Prepared By:	Daven Nair Engineer
Reviewed by:	Barry Smith Engineering Manager
Peer Reviewed by:	Derek Booth Chartered Professional Engineer
Client :	Greg Marshall

dbcon
Consulting Engineers

7/05/2015 Job No. 140547.02

STRUCTURAL SPECIFICATION

1. Durability is certified to the extent required as part of the specific design of the structural elements.

2. This specification covers the following structural elements in relation to the proposed alterations at 23 Holloway Place, Hamilton

* Steel Beam & Support Posts

* Post Foundation

3. All new foundations including timber piles for the lower stair landing shall be founded past the peat layer, 4m below ground level.

Note:

- *This statement applies to the members specified and no other part of the structure.*
- *If any problems arise during the construction of these members, we should be consulted.*
- *This report has been prepared solely for the benefit of our client with respect to the brief. The reliance by other parties on the information or opinions contained in the report shall, without our prior review and agreement in writing, be at such parties' sole risk.*

IPENZ ENGINEERS NEW ZEALAND | NEW ZEALAND INSTITUTE OF ARCHITECTS INCORPORATED | ACENZ | dbcon Consulting Engineers

Building Code Clause(s) .....B1/VM1 & B2/VM1.....

PRODUCER STATEMENT – PS1 – DESIGN

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

ISSUED BY:..... Derek Booth Consultancy Limited t/a DBCON 0800 23 22 66
(Design Firm)

TO:..... Greg Marshall .....
(Owner/Developer)

TO BE SUPPLIED TO: .Hamilton City Council .....
(Building Consent Authority)

IN RESPECT OF: ..Engineering Design- Steel Beam, Support Posts & Foundation .....
(Description of Building Work)

AT: .....23 Holloway Place - Hamilton .....
(Address)

..... LOT 12..... DP ..8449 ..... SO .....

We have been engaged by the owner/developer referred to above to provide .....
....Engineering Design- Steel Beam, Support Posts & Foundation..... services in respect of the requirements of
(Extent of Engagement)

Clause(s) ..... B1/VM1 B2/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 B2/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 .....

...as per attached.....and numbered .....140547.02 .....
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 .....100 kPa (working) soils.....

(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, ...Derek Booth..... am: CPEng .....15472.....#
(Name of Design Professional)

Reg Arch ..... .#

I am a Member of : IPENZ NZIA and hold the following qualifications:.....B.S.c Hons Engineering.....

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 .....Derek Booth.....ON BEHALF OF .....DBCon Ltd.....
(Design Firm)

Date..... 7/05/2015 .... (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.

Form 2A

Memorandum from licensed building practitioner: Certificate of design work

Section 30C or section 45, Building Act 2004

The building

Street address of building:

23 Holloway Place - Hamilton

The owner

Name:	Greg Marshall
Address:	23 Holloway Place - Hamilton
Telephone number:	
Email address:	

Identification of design work that is restricted building work

I carried out or supervised the following design work that is restricted building work:

Design work that is restricted building work	**Description**	**Carried out/ supervised**	**Reference to plans and specifications**
[Tick]	*[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			
Foundations and subfloor framing (x)	*Post Foundation*	( ) Carried out (x) Supervised	please refer to specification no.140547.02
Walls ( )		( ) Carried out ( ) Supervised	
Roof ( )		( ) Carried out ( ) Supervised	
Columns and beams (x)	*Steel Beam & Support Post*	( ) Carried out (x) Supervised	please refer to specification no.140547.02
Bracing ( )		( ) Carried out ( ) Supervised	
Other ( )		( ) Carried out ( ) Supervised	

External moisture management systems			
Damp proofing ( )		( ) Carried out ( ) Supervised	
Roof cladding or roof cladding system ( )		( ) Carried out ( ) Supervised	
Ventilation system (for example, subfloor or cavity) ( )		( ) Carried out ( ) Supervised	
Wall cladding or wall cladding system ( )		( ) Carried out ( ) Supervised	
Waterproofing ( )		( ) Carried out ( ) Supervised	
Other ( )		( ) Carried out ( ) Supervised	
Fire safety systems			
( ) Emergency warning systems, evacuation and fire service operation systems, suppression or control systems, or other		( ) 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.

Are waivers or modifications of the building code required? ( ) Yes (X) 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:		Derek Booth				
LBP or registration number:		15472				
The practitioner is a:	( )	Design LBP	( )	Registered architect	(X)	Chartered professional engineer
Mailing address:		PO Box 1123				
Street address :		Derek Booth Chartered Engineers, 70A Rotokawa St. Taupo 3351				
Phone number: Landline:		0800 23 22 66		Mobile:		0274 947 016
Daytime:		0800 23 22 66		After hours:		0274 947 016
Fax number:		07 378 2800				
Email address:		derek@dbcon.co.nz				
Website:		www.dbcon.co.nz				

Declaration

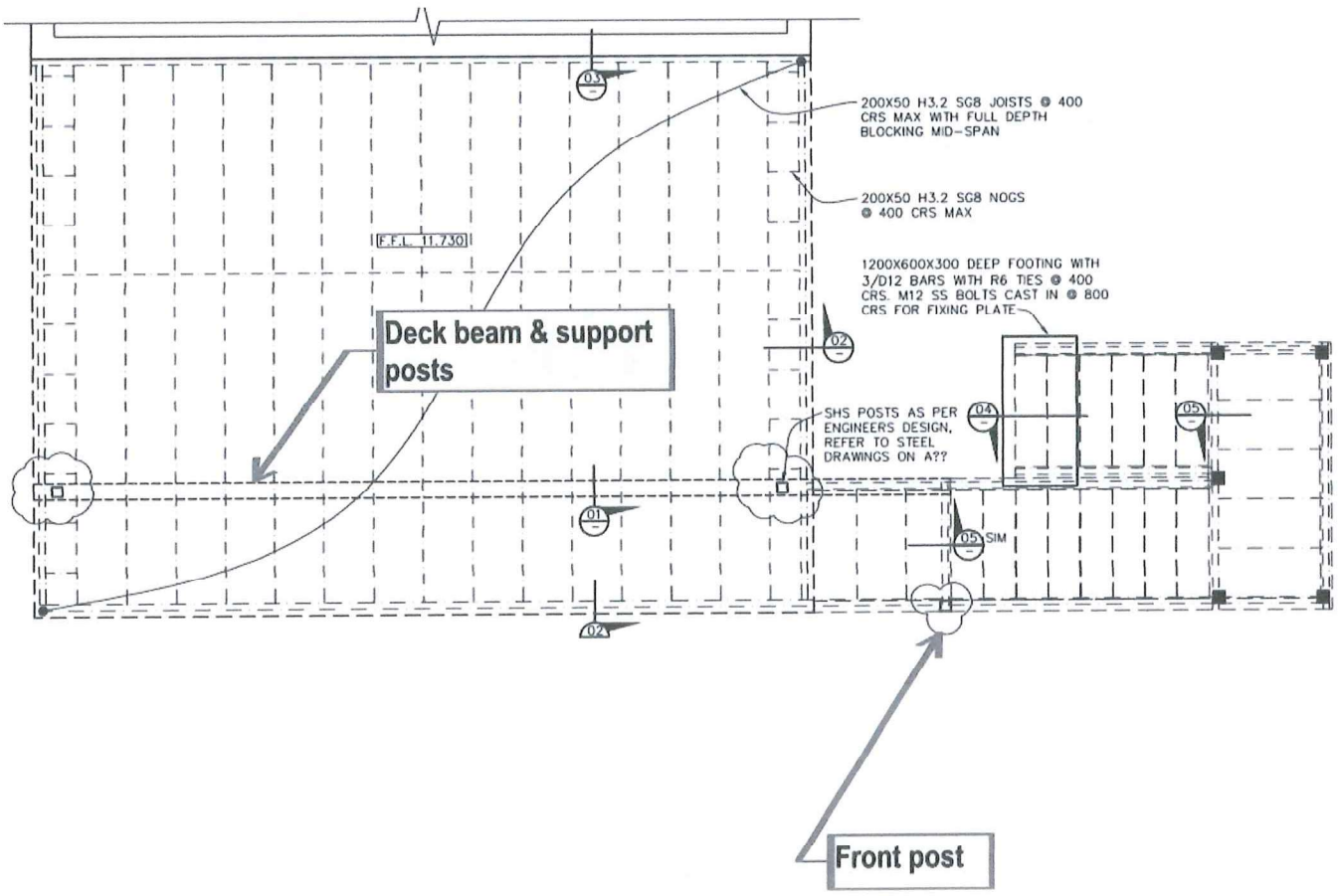
I **Derek Booth** [*name of practitioner*]

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

(a) complies with the building code clauses identified on this form

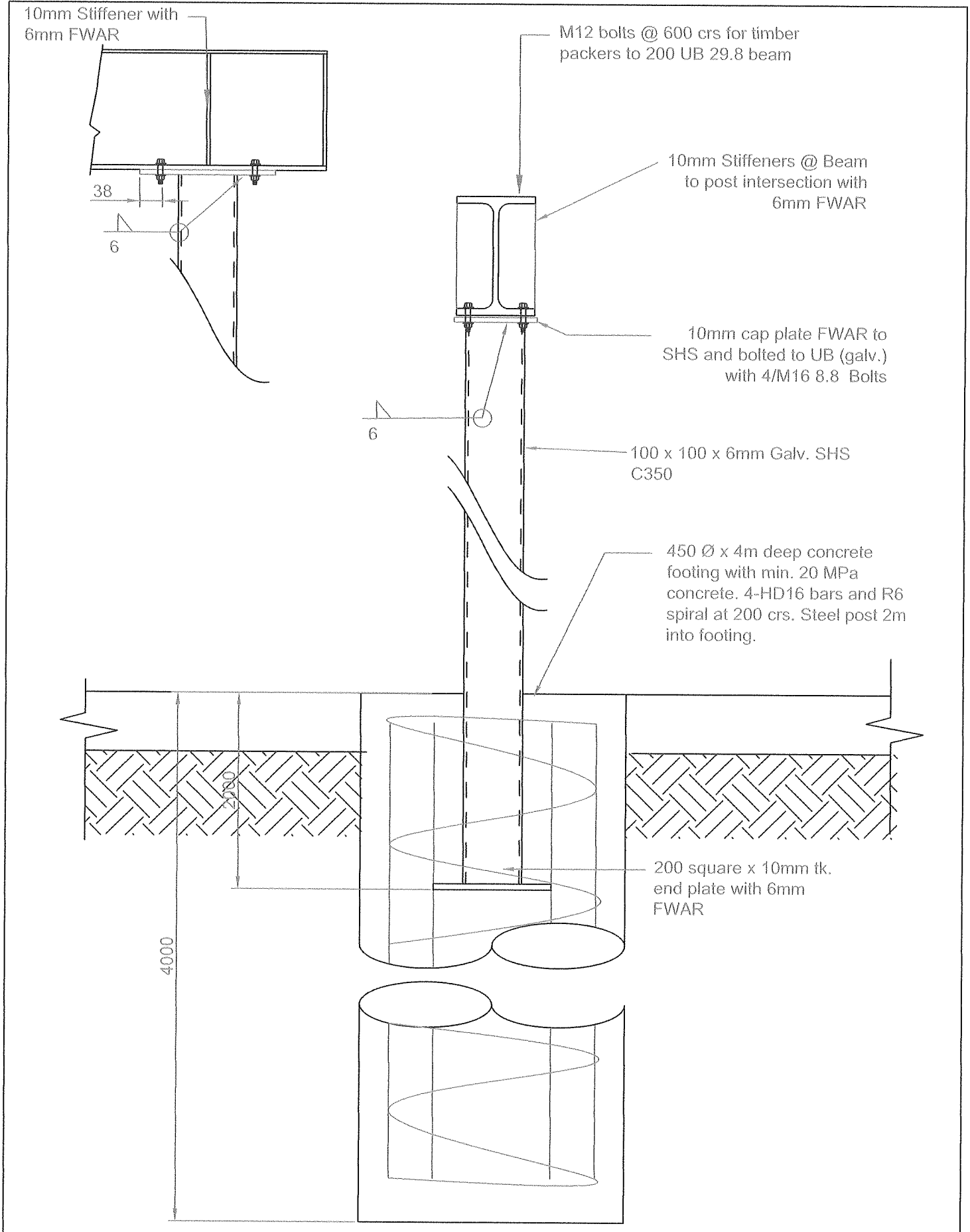
(b) complies with the building code subject to any waiver or modification of the building code recorded on this form.

Signature:	
Date:	7/05/2015



Deck beam - 200 UB 29.8
Support posts - 100 x 100 x 6 SHS
Front post - 100 x 100 x 6 SHS

dbcon Consulting Engineers 0800 23 22 66	Job Title: Marshall Residence 23 Holloway Place, Hamilton	Scale: nts	
		Date: May 15	
	Drg. Title: Layout Plan	Design by: DN	Job No.: 140547 / Drg. No: 01
		Drawn by: DN	



dbcon Consulting Engineers
0800 23 22 66

Job Title: Marshall Residence, 23 Holloway Place, Hamilton	Scale: nts		
	Date: May 15		
Drg. Title: Beam to Post Connection Detail	Design by: DN	Job No.: 140547	Drg. No.: 02
	Drawn by: DN		

dbcon Consulting Engineers

Project	Job ref.
Marshall Residence 23 Holloway Place.	140547.02
Calculations by DN	Element
Date 5-5-15	P1

Design deck beam and support post

Dead load:

200 x 50 joist @ 400 c/c : 10.9 kg/m²

20 thick deck : 11.6

22.5 kg/m²

Consider DL as 0.3kpa (30 kg/m²)

Beam support width = $\frac{3.5}{2} + \frac{1.05}{2}$

= 2.275m

over a distance of 6.25m

and 0.525m over a distance of 1.15m

DL

0.3kpa x 2.275m = 0.683 kN/m

0.3kpa x 1.15m = 0.345 kN/m

LL

2kpa x 2.275m = 4.55 kN/m

2kpa x 1.15m = 2.3 kN/m

dbcon Consulting Engineers

Project	Job ref.
Calculations by	Element
Date	P2

Beam is cantilevered, point load will be acting due to load from stairs.

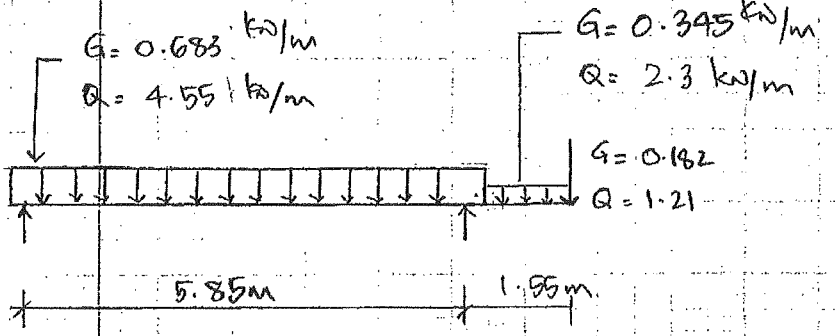
Supporting area : $= \frac{1.1}{2} \times \frac{2.2}{2} = 0.605\,m^2$

DL

$0.3kpa \times 0.605\,m^2 = 0.182\,kN \downarrow$

LL

$2kpa \times 0.605\,m^2 = 1.21\,kN \downarrow$

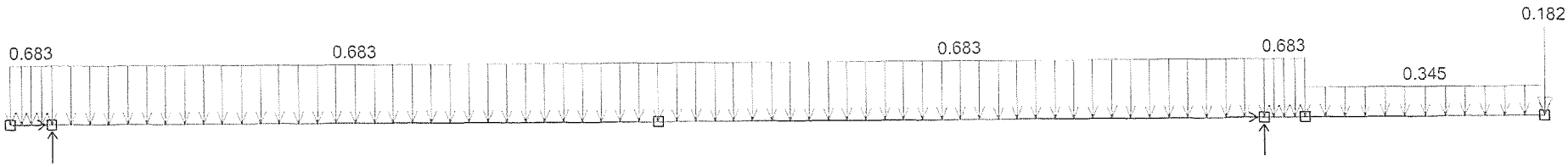


Try 200 UB 29.8.

Refer attached microstran results.

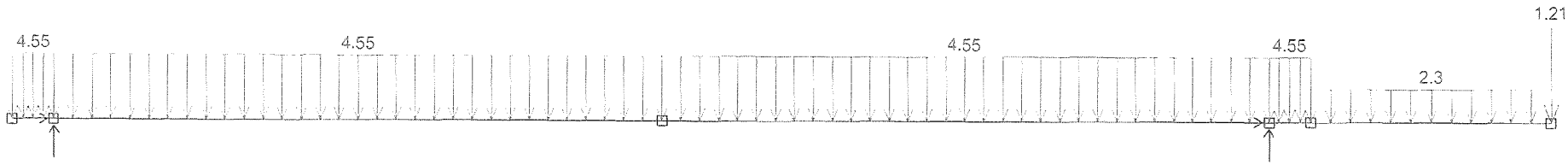
Job: Beam
140547.02
23 Holloway Place, Hamilton

5 May 2015
09:57 a.m.



Y
Z X
theta: 270 phi: 0

Dead Load - G



Y
Z X
theta: 270 phi: 0

Live Load - Q