

PRODUCER STATEMENT – PS4 – CONSTRUCTION REVIEW

ISSUED BY: Don Thomson Consulting Engineers Limited Trading as DTCE Structural Engineers
(Construction Review Firm)

TO: Wallcork Upland Ltd
(Owner/Developer)

TO BE SUPPLIED TO: Wellington City Council
(Building Consent Authority)

IN RESPECT OF: Seismic Strengthening
(Description of Building Work)

AT: 34 Upland Road, Kelburn
(Address)

Town/City: Wellington LOT 2135 DP 58 SO
(Address)

We Don Thomson Consulting Engineers Limited have been engaged by Wallcork Upland Ltd
(Construction Review Firm)

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

or ☐ other services
(Extent of Engagement)

in respect of clause(s) B1 as per attached of the Building Code for the building work described in
documents relating to Building Consent No. 549500 and those relating to AP01 B issued during the
Building Consent Amendment(s) Nos course of the works. We have sighted these Building Consents and the conditions of attached to them.

Authorised instructions/variation(s) No (copies attached)
or by the attached Schedule ☒ have been issued during the course of the works.

On the basis of ☐ this review ☒ these review(s) and information supplied by the contractor during the course of the works

and on behalf of the firm undertaking this Construction Review, I believe on reasonable grounds that
☐ All or ☒ Part only of the building works have been completed in accordance with the relevant requirements of the
Building Consent and Building Consent Amendments identified above, with respect to Clause(s) B1 as per attached
of the Building Code. I also believe on reasonable grounds that the persons who have undertaken this construction review have
the necessary competency to do so.

I, Marlo Bromley CPEng 102 1179
(Name of Construction Review Professional and CPEng #)

I am a member of: ☒ Engineering New Zealand and hold the following qualifications BE, CMEngNZ.

The Construction Review Firm issuing this statement holds a current policy of Professional Indemnity Insurance no less than
\$500,000*.

The Construction Review Firm is a member of ACE New Zealand: ☒

20 Nov 2025

SIGNED BY Marlo Bromley (Signature)
(Name of Construction Review Professional)

ON BEHALF OF Don Thomson Consulting Engineers Limited Trading as DTCE Structural Engineers
(Construction Review Firm)

*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 \$500,000*.*

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

THIS FORM AND ITS CONDITIONS ARE COPYRIGHT TO ACE NEW ZEALAND AND ENGINEERING NEW ZEALAND

ATTACHMENT TO PRODUCER STATEMENT FOUR PS4-CONSTRUCTION REVIEW

PROJECT DETAILS

CLIENT	Wallcork Upland Ltd
COMPANY	
PROJECT TYPE	Seismic Strengthening
PROJECT ADDRESS	34 Upland Road, Kelburn
BUILDING CONSENT NO.	549500

SCHEDULE OF PARTS THAT ARE INCLUDED IN THE PS4. ALL OTHER PARTS ARE EXCLUDED

BUILDING CODE CLAUSE	ITEM
B1	Grid Line A portal frame and foundations.
B1	Grid Line 3 shear wall and ground beam.
B1	Grid Line 3 soil anchor.
B1	SHS post and associated foundations.
B1	Garage diaphragm strengthening.
B1	Concrete crack repair.

Producer Statement Construction (PS3)

Council use only

SR number:

Notes for the applicant

This form is to be completed by the person who has carried out the building work.

Please note: This form is not intended as a substitute for inspections but as supporting documentation for consideration by Wellington City Council. If this document is to be used in the support of an inspection or to establish compliance with the consent, please make sure there has been written prior agreement noted on the inspection records or the approved consent record. The acceptance or reliance on this document is at the sole discretion of Wellington City Council.

General information

Owner's name: Wall Cork Upland Ltd

Engaged by: (owner/builder) Owner

Description and location of the work on the building:

Seismic strengthening work as detailed on the permit drawings

Site address: 34E Upland Road

Standard/code installed to: Building Code

System/Product used:

Scope of work covered by this statement:

Concrete and reinforcing steel installation detailed on engineering permit drawings for the above unit

- I have sighted the issued building consent # _____ and read the conditions. As the contractor/builder I can confirm that the building works described above have been undertaken in accordance with the consented plans/specifications and the New Zealand Building Code.
- I understand that Wellington City Council may rely upon this producer statement (*if accepted*), for the purposes of establishing compliance with the above building consent.

Name: Robert Paulin		Sign: Robert Paulin	Digitally signed by Robert Paulin Date: 2025.11.12 08:04:01 +13'00'	Date: 10/10/2025
Reg No. Or LBP: BP105918	N/A circle	Company: Strait Construction Ltd		
Email: rob@straitconstruction.co.nz				
Address: 7 Makaro Street Elsdon PORIRUA				

SITE VISIT REPORT

PROJECT DETAILS

Project Address:	34 Upland Road, Kelburn	Document Name:	223303-SN-002-A
Client:	Wallcork Upland Ltd	Building Consent:	549500
Engager:	Wallcork Upland Ltd	Builder:	Strait Construction

SITE VISIT DETAILS

Purpose:	CM - rev foundations post excavation	Date:	06/12/2024
Location:	34 Upland Road, Kelburn	Time:	9:30 am
Weather:	Fine	Written By:	ARW
DTCE Attendees:	ARW	Reviewed by:	MJB
External Attendees:	Steve, CJ and Josh (Strait Construction)		
Health and Safety:	Site register ☐ New hazards noted:		

SITE VISIT ASPECTS CARRIED OUT

Site Investigation:	Scoping ☐	Measure up ☐	Soil testing ☐	Other ☐	Note
Construction Monitoring:	Progress ☒	Approval ☐	Instructions ☐	Other ☐	Note
For PS4:	Yes ☒	No ☐			

SITE VISIT OVERVIEW

We went to site to review the foundations post excavation for the first-floor ground beam and the external anchor beams (2).

OBSERVATIONS, ISSUES, AND RECOMMENDATIONS

1. Structural Item 1 – First Floor Ground Beam

Description: There are 2 railway irons that support the first-floor slab from grid line E to grid line D, perpendicular to the new ground beam. At GLD, these irons were supported on the top of the concrete retaining wall however this concrete has now been removed. There is another railway iron that appears to come from underneath the external stairs that projects a small amount into the ground beam (parallel). The perpendicular railway irons will likely clash with the beam reinforcing and may be too high to allow for the correct concrete covers to be achieved. The parallel railway iron is unlikely to clash with the beam reinforcing and at this stage will be left as is.

Recommendation:

- As the concrete that was supporting the perpendicular railway irons has been removed, new support for this slab is needed. To avoid any clashes, we recommend that the railway irons are cut back to the edge of the existing slab, and starter bars (as per our detail) are installed.
- The design intention was for the ends of the ground beam to be tied into the foundations of the side walls. These existing foundations are shallow and there is insufficient concrete to tie into to transfer the beam loads into the side walls.
 - To resolve this issue, a Micropile will need to be installed at both ends of the ground beam, with 2-HD16 bars that hook into the core of the ground beam. An augured concrete pile at each end can also be installed.

2. Structural item 2 – Unable to locate the existing ground floor anchor beam

Description: The existing ground floor anchor beam needs to be located to install the tie bars between this beam and the new ground beam that supports the new ground floor SHS post.

Comment: A photo has been sent to Steve showing the beam pre-pour in 2010 which should allow for it to be located.

FOLLOW UP ACTIONS

- DTCE to return to site to review all foundation reinforcing pre-pour.
- Anchor drill logs to be supplied to DTCE for review.

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Figure 1

First-floor ground beam location.



Figure 2.

Looking towards the existing column
at GL3/GLD intersection.



Figure 3.

Looking towards the existing column
at GL1/GLD intersection.



Figure 4.

Railway iron spanning from the
concrete retaining wall to the next
concrete retaining wall that has
been partially demolished.





SITE VISIT REPORT

PROJECT DETAILS

Project Address:	34 Upland Road	Document Name:	223303-SN-003-A
Client:	Wallcork Upland Ltd	Building Consent:	549500
Engager/Architect:	Wallcork Upland Ltd	Builder:	Strait Construction

SITE VISIT DETAILS

Purpose:	CM - Review excavations and discuss foundations	Date:	10/12/2024
Location:	34 Upland Road	Time:	1pm
Weather:	Fine	Written By:	ARW
DTCE Attendees:	ARW	Reviewed by:	MJB
External Attendees:	Rob, Josh, CJ		
Health and Safety:	Site register ☐ New hazards noted:		

SITE VISIT ASPECTS CARRIED OUT

Site Investigation:	Scoping ☐	Measure up ☐	Soil testing ☐	Other ☐	Note
Construction Monitoring:	Progress ☒	Approval ☐	Instructions ☐	Other ☐	Note
For PS4:	Yes ☒	No ☐			

SITE VISIT OVERVIEW

We went to site to review discuss the location of the micropiles needed for the ground beam, the anchor location of the ground anchor on GL-H and to check the foundation hole for the ground level external SHS post.

OBSERVATIONS, ISSUES, AND RECOMMENDATIONS

1. Structural Item 1 – Ground beam micro piles

We discussed the location of the micropiles, which will be centred at both ends of the ground beam. The micropiles can be offset slightly to avoid clashes with existing structure. Refer to our updated drawing set (223303_DR_SET_CM1_11-12-24) and the attached detailed below.

Note the existing column reinforcing is a bit corroded. We recommend treating the steel with a gold galvanise paint before re-pouring the concrete.

2. Structural item 2 – Ground floor Titan Anchor location

The proposed location of the ground floor titan anchor is intended as shown on DR-501. The existing foundation wall of the building extends deeper than shown in Detail 2a/501, meaning the concrete wall will need to be core drilled at the angle of the anchor to enable drilling.

3. Structural item 3 – Ground floor SHS post foundation

We prodded the foundation hole for the SHS post and confirmed firm bearing has been achieved.

The loose soil will be removed before installing the reinforcing cage.

The pile is ~1500mm deep and at least 400mm diameter.

FOLLOW UP ACTIONS

- DTCE will return to site to review the reinforcing pre-pour for the ground beam and SHS foundation pile and beams.
- Anchor drill logs to be provided to DTCE.

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Figure 1

Ground beam at GL1/GLD.



Figure 2.

Ground beam at GL2/GLD.



Figure 3.

Anchor location.

Approximately 600mm below the
internal floor level.



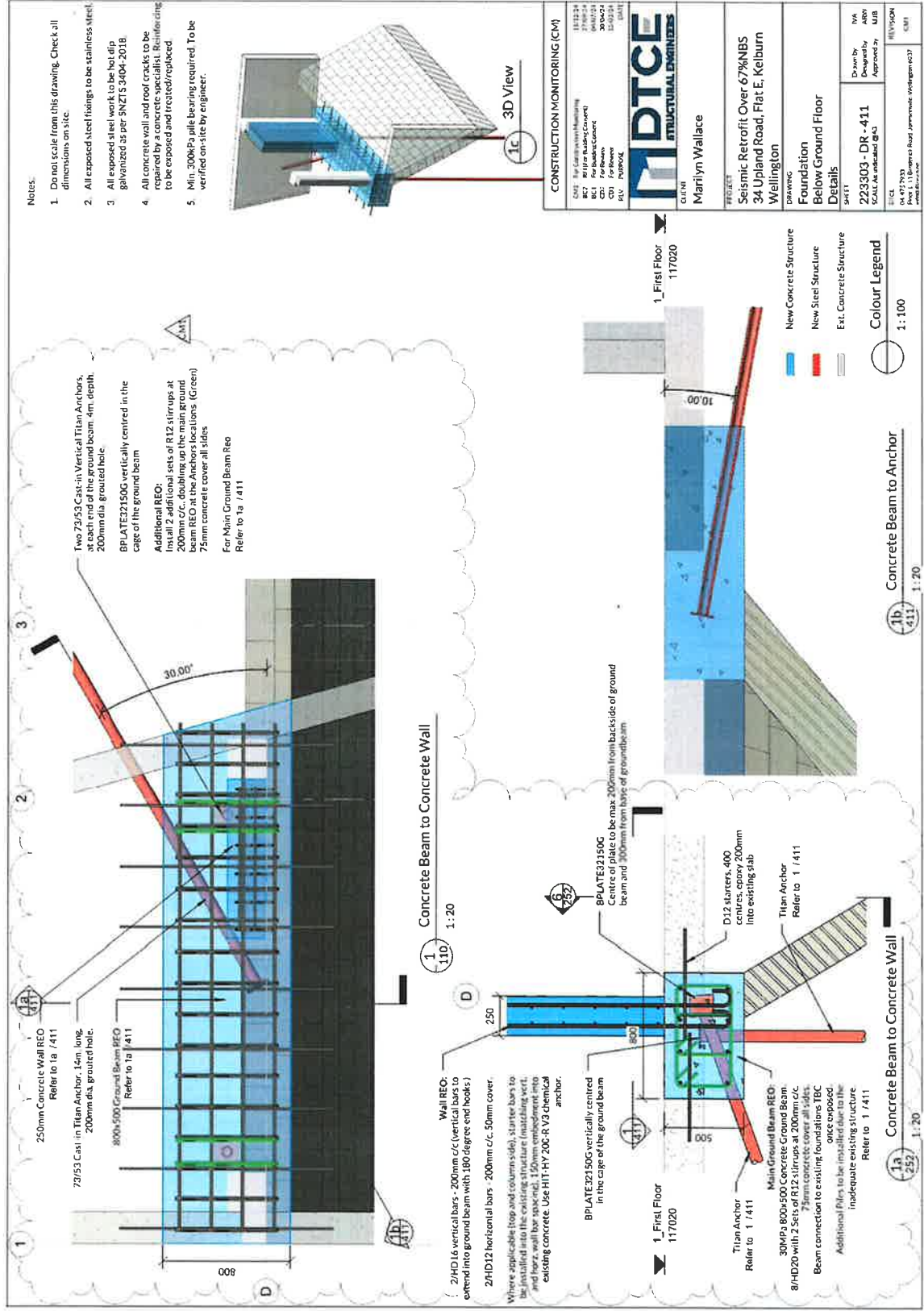
Figure 4.

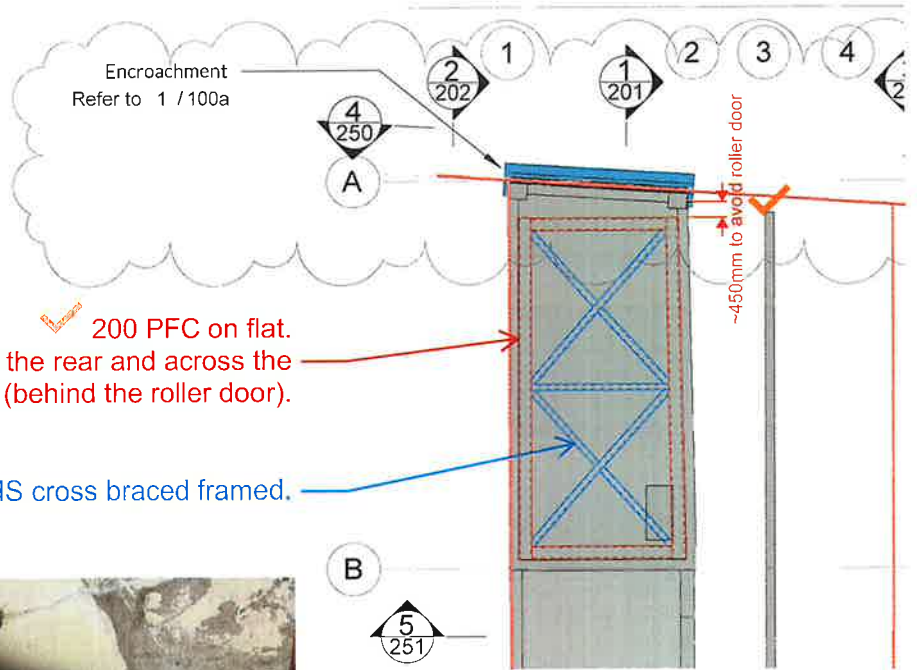
SHS post foundation hole.



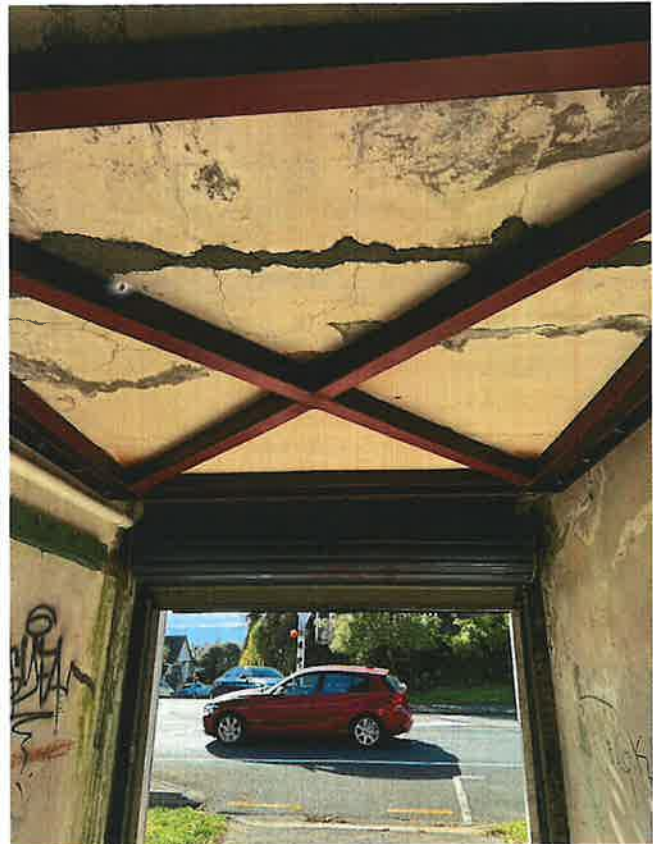
Figure 5.

SHS post tie beam excavation.





Photos of installed steel frame received and approved on 6/11/2025.
Garage strengthening now complete.



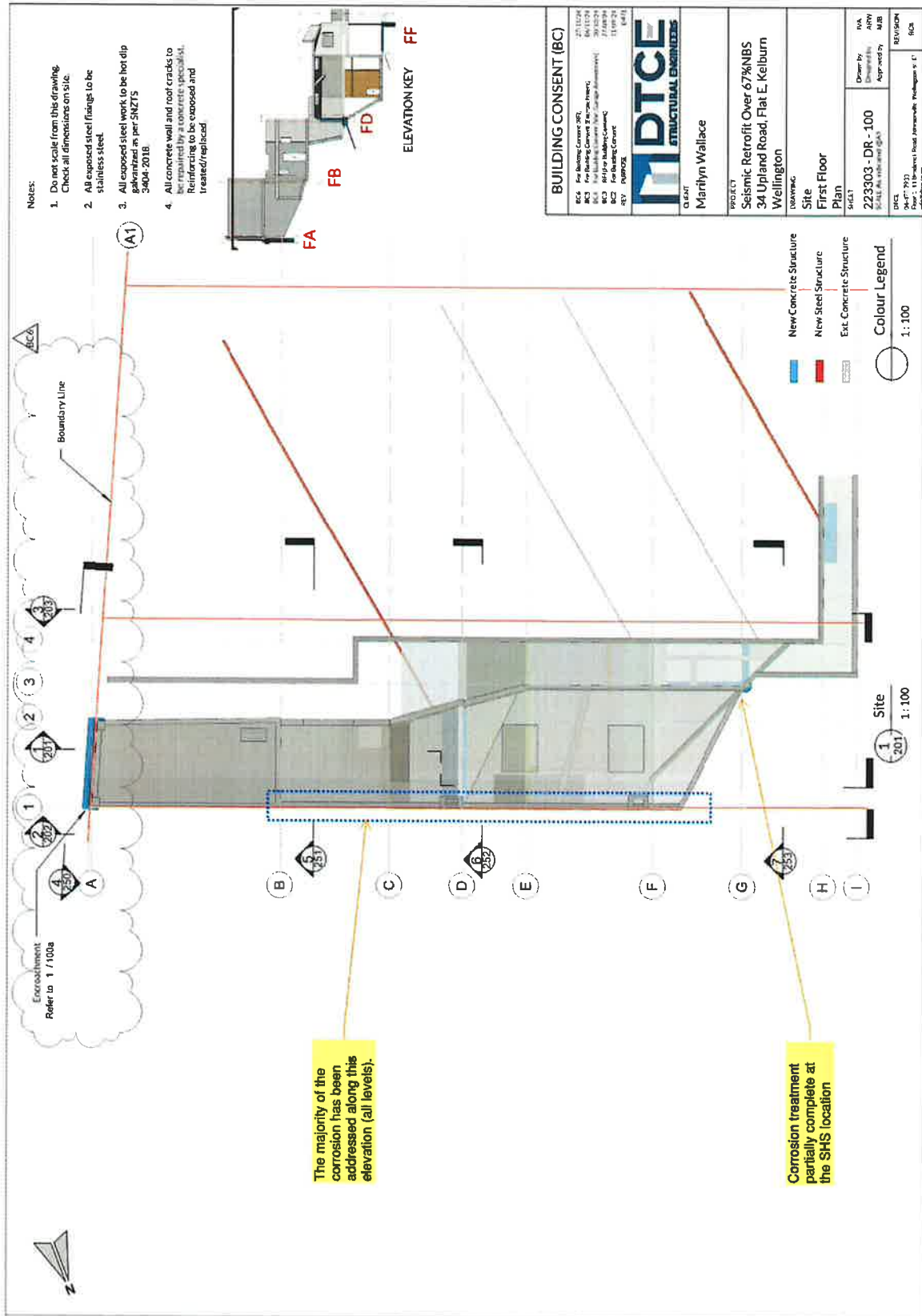




Figure 5.

Corrosion has been wire brushed and treated (darker colour).

Towards the left-hand side, there was no corrosion.



Figure 6.

Ground level SHS post and location of cast in I-Beam corrosion repair.



Figure 3.

Example of reinforcing that has been treated.



Figure 4.

Ground level SHS post and location of cast in I-Beam corrosion repair.

Further exposing to be done.

Extent of historical repair.



Figure 1

Overview of the northern elevation corrosion repair work.



Figure 2.

Examples of where corroded wire has been cut back and treated – ready for mortar to be placed.

3. Structural item 3 – Garage Roof (update)

Description: Rob has sent the proposed steel support structure scheme away for pricing and will decide with the client about the next steps once this has been received.

Comments:

- If the steel frame scheme is adopted, the garage ceiling won't require any further structural repair. We recommend that the reinforcing that has been exposed is treated and that a layer of plaster is installed to help protect the reinforcing and to provide a more visually appealing finish.

FOLLOW UP ACTIONS

- Photos to be provided of the remaining corrosion repair work for approval for covering.
- DTCE to return to site to review the garage ceiling repair (either full scale concrete repair or new steel support structure).

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SITE VISIT REPORT

PROJECT DETAILS

Project Address:	34 Upland Road	Document Name:	223303-SN-009-A
Client:	Wallcork Upland Ltd	Building Consent:	549500
Engager/Architect:	Wallcork Upland Ltd	Builder:	Strait Construction

SITE VISIT DETAILS

Purpose:	CM - Review corrosion repair	Date:	08/04/2025
Location:	34 Upland Road	Time:	12pm
Weather:	Fine	Written By:	ARW
DTCE Attendees:	ARW	Reviewed by:	MJB
External Attendees:	Jono		
Health and Safety:	Site register ☐	New hazards noted:	

SITE VISIT ASPECTS CARRIED OUT

Site Investigation:	Scoping ☐	Measure up ☐	Soil testing ☐	Other ☐	Note
Construction Monitoring:	Progress ☒	Approval ☒	Instructions ☐	Other ☐	Note
For PS4:	Yes ☒	No ☐			

SITE VISIT OVERVIEW

We went to site to review the corrosion repair on the northern elevation and on the ground level of the building.

OBSERVATIONS, ISSUES, AND RECOMMENDATIONS

1. Structural Item 1 – Northern Elevation

Description: The bulk of the corrosion remedial work on the northern elevation has been completed.

Comments:

- The corroded wires have been cut back and treated as specified. These areas are ready for the repair mortar to be installed.
- The majority of the exposed reinforcing has been wire brushed and treated. There are some locations that have not yet been addressed.
 - Photos to be sent of the remaining areas for approval.
 - Corrosion that has been addressed is ready for the structural mortar repair.

2. Structural item 2 – Ground Floor Beam (@ SHS location)

Description: The cracked concrete has been broken out and the underside of the cast in I-beam partially exposed. The corrosion to one side of the SHS has been treated however that other side has not been exposed as the concrete was not cracked.

Recommendation: We have instructed the contractor to break out more of the concrete above the SHS post as there is still visible corrosion. The concrete will be broken out until the corrosion stops, or once the historic repair has been fully removed – we want to avoid breaking out undamaged original concrete. If corrosion is still observed at the end of the historical repair, contact DTCE for further instruction.



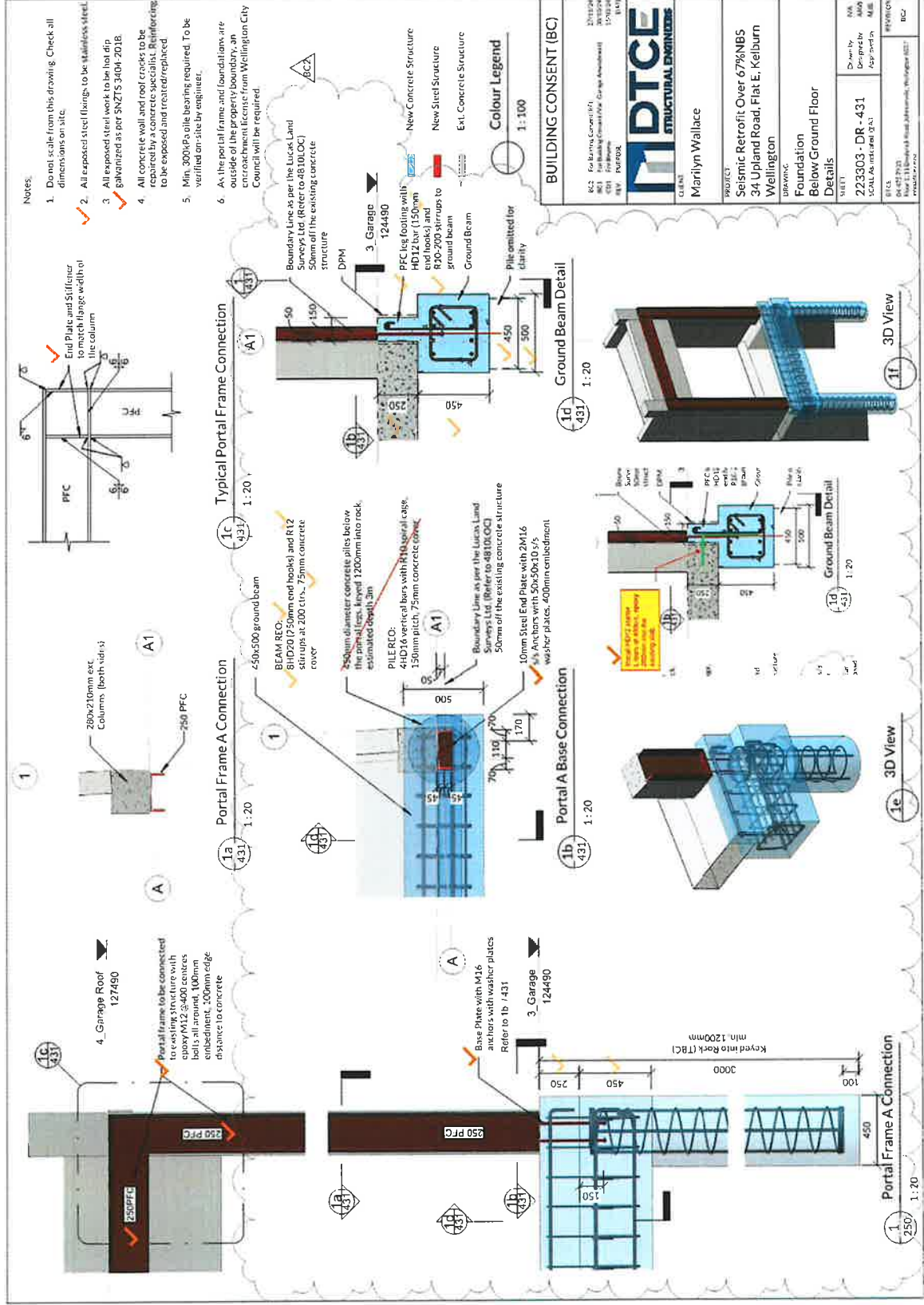




Figure 5.

Example of exposed reinforcing on the northern elevation that requires repair.

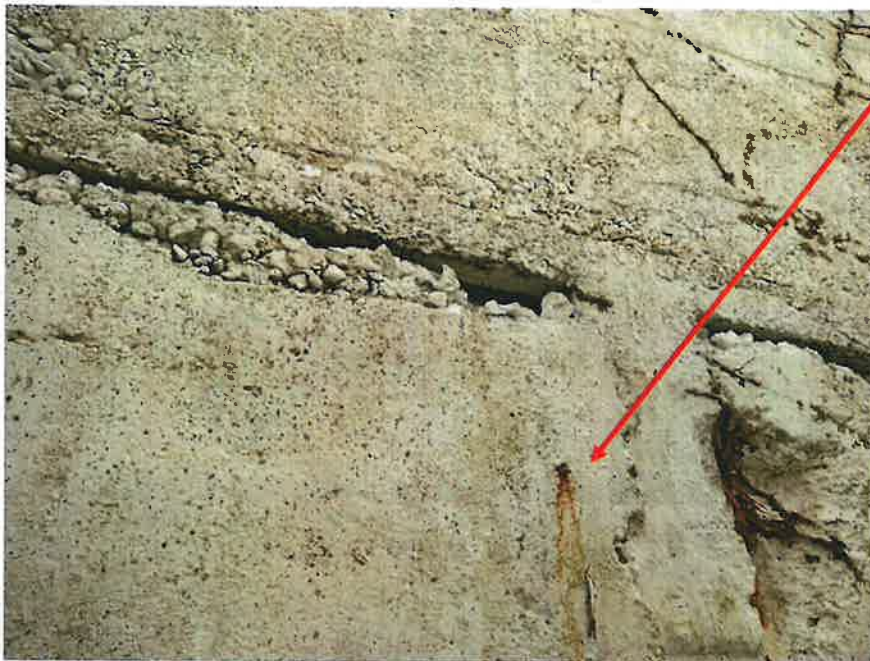


Figure 6.

Example of exposed wire that doesn't require a full structure repair.



Figure 3.

Ground floor SHS post.



Figure 4.

Typical exposed garage ceiling
reinforcing.

Cracks along the line of the
reinforcing bar.



Figure 1

Garage Portal Frame.



Figure 2.

Ground floor SHS post.

reinforcing is also heavily corroded. We recommend further investigating the condition of the roof slab to help determine if it is economical to repair the slab or if other options should be explored.

Option 2: Install a steel gravity support and bracing structure below the existing slab. This will provide gravity support to the slab should it fail and will provide a sufficient diaphragm to support the external walls. This option reduces the risk of the concrete slab being a life- safety risk however it will continue to deteriorate.

Note: Post-site visit we have confirmed that the timber replacement roof option discussed on-site is not structurally viable.

4. Structural item 4 – Northern Elevation External Crack Repairs

Description: There are two types of corroded steel on the northern elevation; reinforcing steel and small diameter wire. As the wire is not serving a structural purpose, we recommend that these pieces of wire are cut back, rust treated and plastered. The repair efforts on the northern elevation should be focused on the main reinforcing bars that are exposed and the spalling sections of concrete.

Recommendation:

- i. Address the corroded reinforcing/spalled concrete (Structural repairs) as previously discussed. Alternate products to the Sika Monotop product previously suggested can be used, including Ardex BR 345 and Ardex BR 340. If there are other suitable products found, discuss with DTCE before proceeding.
Note: A curing compound such as Sika Antisol A Curing Compound can be used to protect the fresh mortar, in place of covering the concrete with polythene etc.
- ii. At locations where voids in the concrete are being filled (due to poor placement of the original concrete), a mortar such as Cemix Quick Patch or Gorilla Powercrete 7min Cure Mortar Repair can be used.
- iii. As an alternate option to sand blasting, all exposed corroded reinforcing can be wire brushed and treated with a rust convertor. The concrete repair methodology previously discussed can then be implemented.

FOLLOW UP ACTIONS

The only remaining structural item is the concrete crack repair. DTCE to return to site to review the treated reinforcing prior to the concrete being repaired.

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SITE VISIT REPORT

PROJECT DETAILS

Project Address:	34E Upland Road	Document Name:	223303-SN-008-A
Client:	Wallcork Upland Ltd	Building Consent:	549500
Engager/Architect:	Wallcork Upland Ltd	Builder:	Strait Construction

SITE VISIT DETAILS

Purpose:	CM - Review steelwork and disc crack repair	Date:	25/03/2025
Location:	34E Upland Road	Time:	1pm
Weather:	Overcast	Written By:	ARW
DTCE Attendees:	ARW	Reviewed by:	MJB
External Attendees:	Rob + Steve		
Health and Safety:	Site register ☐	New hazards noted:	

SITE VISIT ASPECTS CARRIED OUT

Site Investigation:	Scoping ☐	Measure up ☐	Soil testing ☐	Other ☐	Note
Construction Monitoring:	Progress ☐	Approval ☐	Instructions ☐	Other ☐	Note
For PS4:	Yes ☐	No ☐			

SITE VISIT OVERVIEW

We went to site to review the installed structural steelwork and to discuss the concrete crack repairs in the garage and on the northern elevation.

OBSERVATIONS, ISSUES, AND RECOMMENDATIONS

1. Structural Item 1 – Garage Portal

Description: The garage portal frame has been installed as per DTCE detail. The ~60mm gap between the back face of the portal beam and the existing structure has not been packed out as the contractor would like to know which product to use.

Recommendation: SikaGrout -215, SikaGrout -212 HP, SikaGrout -HES, Rockbond Dry-Pack Grout RB1.03 and Powerpac – GP Grout are all suitable products for this.

2. Structural item 2 – Ground Floor SHS Post

Description: The SHS post has been installed as per DTCE detail.

Recommendation: The crack repair in this area still needs to be carried out. We understand that there is a structural steel member within the concrete. The concrete should be broken out/the crack chased within this area, and the steelwork treated as needed. If severe corrosion of this beam is found, contact DTCE.

3. Structural item 3 – Garage Roof Cracking

Description: The worst cracks in the ceiling of the garage have been broken out. Heavily corroded reinforcing has been found. The cracks left untouched line up with the location of the steelwork, suggesting that the entire slab is corroded.

Recommendation:

Option 1: Remove the entire bottom layer of plaster, treat/replace reinforcing and reinstate a minimum 35mm thick layer of concrete. This will address the observable damage to this slab, however given the condition of the internal face of the slab, it is probable that the top layer of





Figure 5.

Penetrations in the concrete wall that are not of structural concern.



Figure 6.

Cracking in a concrete beam of the main building.

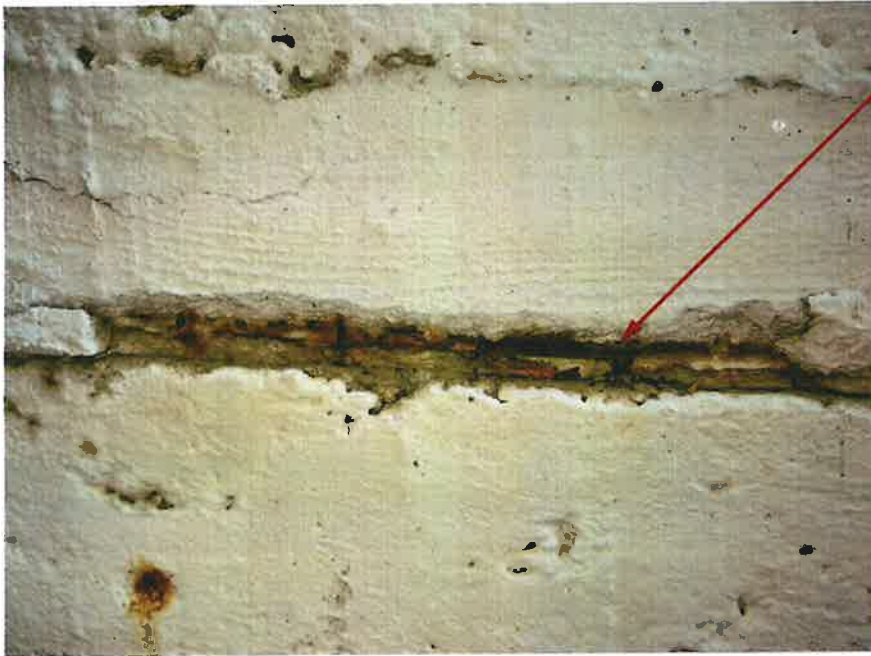


Figure 3.

Example crack with corroded reinforcing where the reinforcing needs to be exposed, treated/replaced and the concrete repaired.



Figure 4.

Significant cracking (internally) throughout the garage, with reinforcing already exposed in some locations.



Figure 1

Garage lintel is ~60mm recessed from the front face of the columns.

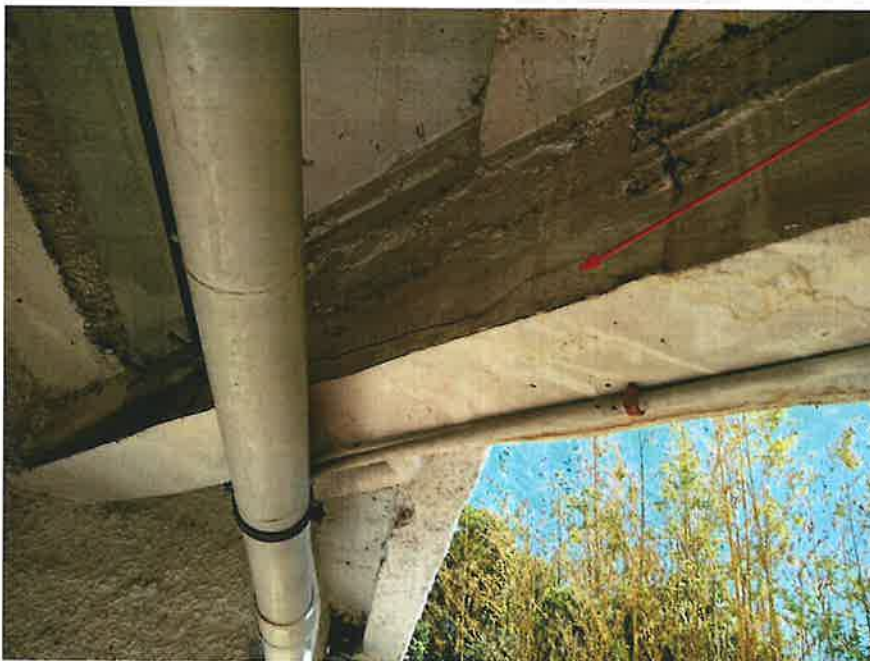


Figure 2.

Example crack where the reinforcing needs to be exposed, treated and the concrete repaired.

3. Structural item 3 – Penetrations in the FPR wrap

Description: There are some bolts and nails installed by former tenants in the external concrete on Grid Line F on the ground floor. There is concern that these fixings have been installed through FRP from the previous strengthening, compromising the structural integrity.

Comments: We have reviewed the previous strengthening documentation and have confirmed that FRP was not specified or installed at this location. Our photos from 2013 also show that the bolts were present then, with only the nails being new.

We recommend that the nails and bolts are removed/cut off and the holes sealed to prevent water ingress which may lead to corrosion issues in the future.

4. Structural item 4 – Cracking in the main building

Description: Following an earthquake in late 2024, Marilyn noticed some new cracks in the previously strengthened building. These cracks were primarily internal and have since been repaired. We also noted cracking to one of the beams that supports the balcony above. This crack couldn't be measured due to the height of the beam but appears to be significant and should be further investigated.

Recommendation:

DTCE to review the internal cracks with Marilyn during our next site visit.

Further investigation of the external beam crack should be carried out and repairs should be made. Likely exposing and treating the reinforcing, then epoxy injecting the crack.

FOLLOW UP ACTIONS

DTCE to return to site to review the installed steel work and complete a review of the new cracks in the main building.

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The cracking in the ground floor beam (at the location of the new SHS post) also needs to be addressed.

- We have not completed an extensive review of the entire building, and it is probable that there are more cracks that require addressing. The contractor should thoroughly review all concrete walls to ensure all cracks are dealt with.
- DTCE may need to return to site to provide further advice on the crack/reinforcing repair once the concrete is broken out and the reinforcing exposed.
- Once repaired, we recommend that the northern elevation of the building is painted with a waterproof paint as the rest of the building has been adequately prevent moisture getting into the concrete and causing further degradation in the future.
- Below is our recommended crack repair strategy:

1. Surface & Reinforcement Preparation

- Remove all loose, weak, or deteriorated concrete until sound material is exposed.
- Expose reinforcement bars and remove all rust and contaminants using abrasive blasting or high-pressure water-blasting to achieve Sa 2 standard (ISO 8501-1). Replace bars if required – discuss with engineer for specific details.

2. Bonding & Corrosion Protection

- Apply Sika MonoTop-910 N to cleaned reinforcement as a bonding primer and corrosion protection.
 - Mix according to the product data sheet and apply a 1 mm thick layer to the prepared reinforcement.
 - While the primer is still wet, proceed with the application of the repair mortar.

3. Concrete Repair Mortar

- Use Sika MonoTop-412 N, a one-component, fibre-reinforced, low-shrinkage repair mortar suitable for hand or machine application.
 - Apply the mortar directly onto the wet bonding primer, ensuring full compaction around the reinforcement.
 - Build up layers from bottom to top, with a maximum layer thickness of 50 mm per application.

4. Finishing & Curing

- Smooth the surface as needed using a trowel or float.
- Protect the fresh repair from drying for at least 3 days using curing compounds, moist geotextile, or polythene sheeting to ensure proper hydration and strength development.

Refer to Sika's specifications or contact them directly for specific product information.

SITE VISIT REPORT

PROJECT DETAILS

Project Address:	34 Upland Road	Document Name:	223303-SN-007-A
Client:	Wallcork Upland Ltd	Building Consent:	549500
Engager/Architect:	Wallcork Upland Ltd	Builder:	Strait Construction

SITE VISIT DETAILS

Purpose:	CM - Discuss crack repairs	Date:	24/02/2025
Location:	34 Upland Road	Time:	1 pm
Weather:	Fine	Written By:	ARW
DTCE Attendees:	ARW	Reviewed by:	MJB
External Attendees:	Rob + Steve (Strait Construction), Marilyn + Bruce		
Health and Safety:	Site register ☐	New hazards noted:	

SITE VISIT ASPECTS CARRIED OUT

Site Investigation:	Scoping ☐	Measure up ☐	Soil testing ☐	Other ☐	Note
Construction Monitoring:	Progress ☐	Approval ☐	Instructions ☐	Other ☐	Note
For PS4:	Yes ☐	No ☐			

SITE VISIT OVERVIEW

We went to site to review locations that require crack repair and discuss the detailing for the garage portal beam. Whilst on-site, we also reviewed an area where nails and bolts have been installed through a section of previous FRP strengthening and to review some cracks in the main building following an earthquake late last year.

OBSERVATIONS, ISSUES, AND RECOMMENDATIONS

1. Structural Item 1 – Garage Portal Beam

Description: The concrete lintel above the garage opening is ~60mm back from face of the columns. This means our portal frame cannot simply be bolted to the front face of the garage.

Recommendation: As the primary purpose of the portal beam is to connect the legs (not support the concrete lintel) this connection is not critical to achieve the required strengthening.

We recommend that the beam bolts are increased from M12 to M16 to account for the additional length and the beam packed out to close the gap between the face of the concrete and the backside of the PFC. The gap can be packed out with a RHS (200x50 (or larger)) welded to the PFC and dry packed or the entire gap can be filled with mortar.

2. Structural item 2 – Crack Repair

- In general, to achieve the level of desired strengthening we require all cracks in the concrete to be repaired.
- For some cracks (hairline), this will be simply sealing the crack with a suitable flexible sealant to prevent water ingress.
- For cracks where the reinforcing is exposed or there is spalled/spalling concrete, the concrete needs to be broken out, the reinforcing exposed, cleaned and treated 50mm past the last point of corrosion (if the condition allows) or the bar needs to be removed and replaced.
- The main areas of repair are the garage roof and walls (internally) and the northern face of the building. The northern elevation show be cleaned first to remove loose debris and the old ivy roots.







Figure 5.

Shear wall reinforcing and connections to the existing structure.



Figure 6.

Shear wall vertical bars hooked into ground beam.



Figure 3.

GL-D ground beam – Starters and additional stirrups installed.



Figure 4.

GL-D ground beam – vertical bars for the shear wall and additional stirrups installed.



Figure 1

Garage beam reinforcing.

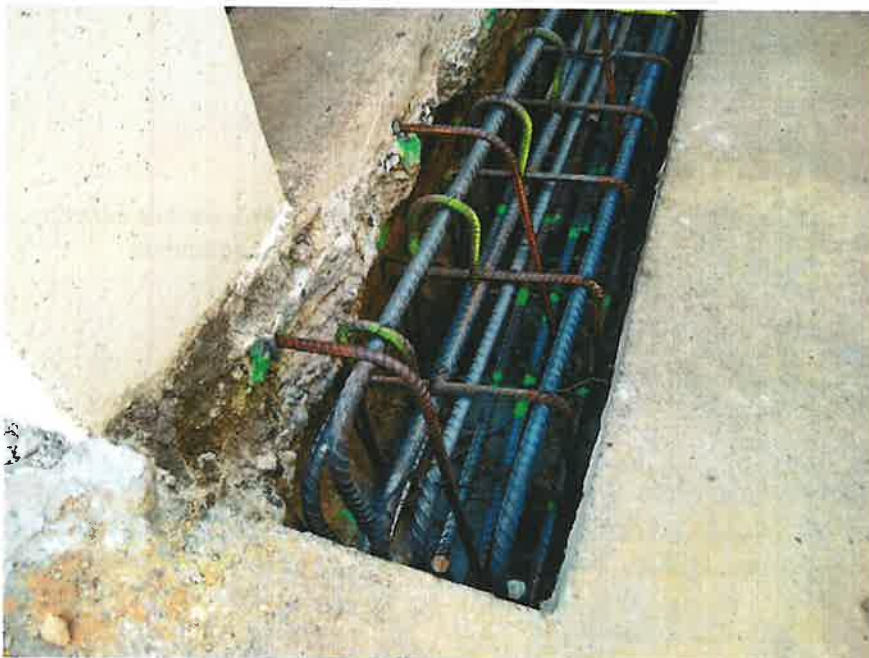


Figure 2.

Garage beam upstand and
connection to existing concrete.

SITE VISIT REPORT

PROJECT DETAILS

Project Address:	34 Upland Road	Document Name:	223303-SN-002-A
Client:	Wallcork Upland Ltd	Building Consent:	549500
Engager/Architect:	Wallcork Upland Ltd	Builder:	Strait Construction

SITE VISIT DETAILS

Purpose:	CM - check foundation reinforcing pre-pour	Date:	12/02/2025
Location:	34 Upland Road,	Time:	2 pm
Weather:	Fine	Written By:	ARW
DTCE Attendees:	ARW	Reviewed by:	GUH
External Attendees:	Steve		
Health and Safety:	Site register ☐	New hazards noted:	

SITE VISIT ASPECTS CARRIED OUT

Site Investigation:	Scoping ☐	Measure up ☐	Soil testing ☐	Other ☐	Note
Construction Monitoring:	Progress ☐	Approval ☐	Instructions ☐	Other ☐	Note
For PS4:	Yes ☒	No ☐			

SITE VISIT OVERVIEW

We went to site to review the completed reinforcing for the garage foundation (GL-A) and the ground beam and shear wall on GL-D.

OBSERVATIONS, ISSUES, AND RECOMMENDATIONS

1. Structural Item 1 – Garage Foundation (along Grid Line A)

- The reinforcing for the ground beam has been installed as per DTCE detail.
- Starter bars into the existing structure have been installed as per our site instruction (SN-005-A).

2. Structural item 2 – Ground Beam and Shear Wall (along Grid Line D)

- The reinforcing for the ground beam has been completed as per DTCE detail and the site instructions issued previously (SN-005-A).
- Starter bars into the existing concrete foundations was only possible at the GL-1 end as there is no concrete to connect to at the foundation level at the GL-2 end. The purpose of this connection is to tie the new and existing structure together, which is achieved with the shear wall starter bars into the existing concrete column.
- The shear wall will not be poured as part of this pour however the reinforcing is as per DTCE design and can be poured during the next pour.
 - Ensure a minimum of 35mm cover is achieved.

SUMMARY

Okay to pour the foundations.

FOLLOW UP ACTIONS

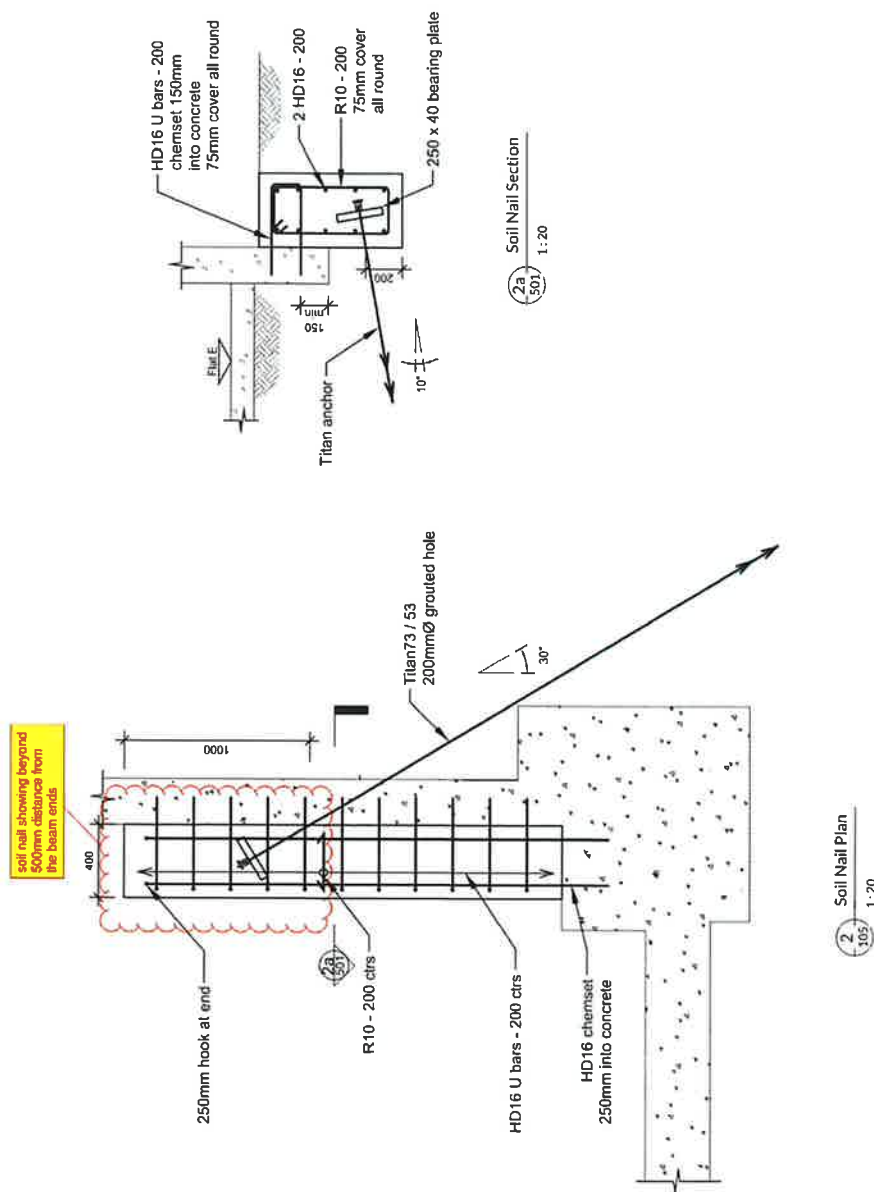
DTCE to return to site to review the structural steelwork when complete.





Notes:

1. Do not scale from this drawing. Check all dimensions on site.
2. All exposed steel fixings to be stainless steel.
3. All exposed steel work to be hot dip galvanized as per SNTS 3404-2018.



CONSTRUCTION MONITORING (CM)	111-1224 1/19/24 6/1/24 CM 11 To Construction Monitoring 111-1224 1/19/24 6/1/24 111-1224 1/19/24 6/1/24
111-1224 1/19/24 6/1/24 111-1224 1/19/24 6/1/24 111-1224 1/19/24 6/1/24	111-1224 1/19/24 6/1/24 111-1224 1/19/24 6/1/24 111-1224 1/19/24 6/1/24



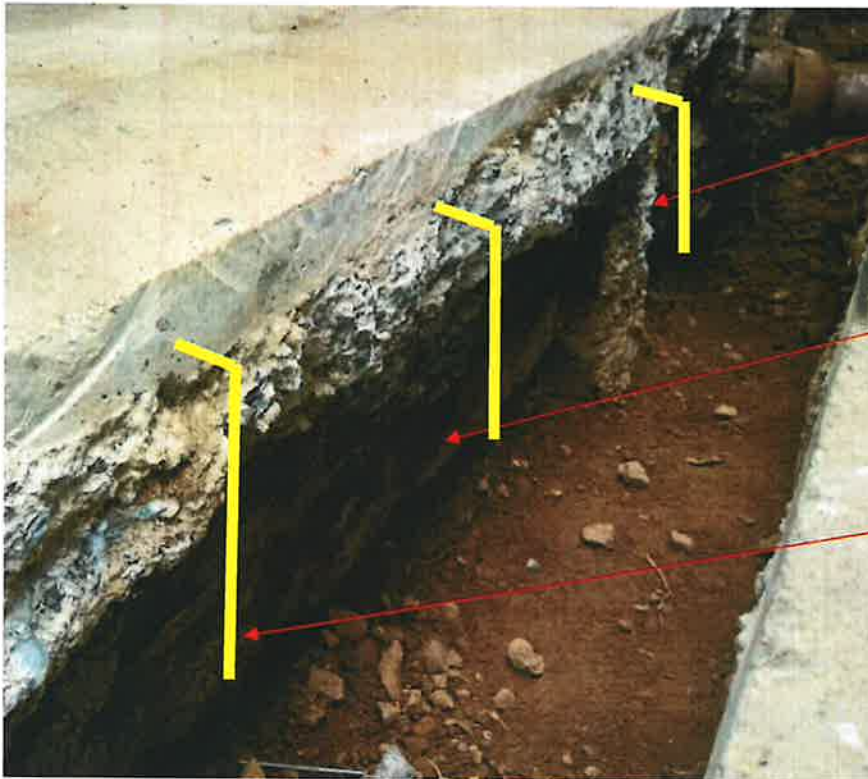


Figure 7. Garage foundation at grid A

Buttress found after excavation

Existing retaining wall found after excavation

Install HD12 starter L-bars, 400 centres, epoxy 200mm into existing slab and retaining wall/buttress at ends.



Figure 6. Concrete beam at grid D

Install starter bars to the existing portal frame / wall foundation (apply to the other beam end)



Figure 6. Concrete beam at grid G

Pile reinforcement and HD12 bars epoxied into the existing concrete,



Figure 4. Concrete beam at grid D

Showing around 600mm beam depth.

Shift the anchor plate to be vertically centred in the cage.



Figure 5. Concrete beam at grid D

Only ten (10) legs of R12 stirrups are present. The required number of legs is sixteen (16).

Install additional three (3) sets of R12 near the anchor



Figure 2. Concrete beam at grid H

Around 900mm beam depth



Figure 3. Concrete beam at grid D

Showing around 1000mm beam width.

Only ten (10) legs of R12 stirrups are present. The required number of legs is sixteen (16).

Install additional two (2) sets of R12 near the anchor

Install a set of R12 stirrups

SUMMARY ACTIONS

1. Proceed with the Grid A garage ground beam without piles.
2. Ok to pour concrete for the grid H ground beam.
3. Grid D ground beam:
 - Shift the vertical anchor plates to be vertically centred in the cage.
 - Add additional stirrups around the vertical anchors.
 - Install the concrete wall starter bars.
4. DTCE will return to site to review the reinforcing pre-pour for Grid A garage beam and Grid D concrete beam with vertical soil anchors.
5. Anchor drill logs to be provided to DTCE.

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Figure 1. Concrete beam at grid H

Approximately 400mm beam width

Soil anchor near the beam ends

SITE VISIT REPORT

PROJECT DETAILS

Project Address:	34 Upland Road	Document Name:	223303-SN-005-A
Client:	Wallcork Upland Ltd	Building Consent:	549500
Engager/Architect:	Wallcork Upland Ltd	Builder:	Strait Construction

SITE VISIT DETAILS

Purpose:	CM - Review excavations and discuss foundations	Date:	05/02/2025
Location:	34 Upland Road	Time:	
Weather:	Fine	Written By:	LMM
DTCE Attendees:	ARW	Reviewed by:	MJB, ARW
External Attendees:	Rob, Jono		
Health and Safety:	Site register ☐ New hazards noted:		

SITE VISIT ASPECTS CARRIED OUT

Site Investigation:	Scoping ☐	Measure up ☐	Soil testing ☐	Other ☐	Note
Construction Monitoring:	Progress ☒	Approval ☐	Instructions ☐	Other ☐	Note
For PS4:	Yes ☒	No ☐			

SITE VISIT OVERVIEW

OBSERVATIONS, ISSUES, AND RECOMMENDATIONS

1. Structural Item 1 – Garage foundation (at grid A)

After excavating for the new ground beam and piles below the garage portal frame, it was found that there is an existing concrete retaining wall and piles/buttress in this location. Therefore, we don't need new piles here. The ground beam will be installed as detailed (minor adjustments to suit the existing concrete) along with HD12 starter bars chemset into the existing concrete (refer to the marked up detail below).

2. Structural item 2 – Concrete beam with soil anchor (at grid H)

The reinforcement was checked, and all the number of the longitudinal and transverse bars were found to be in full compliance with the structural drawings. It was observed that the soil anchor is located closer to the end of the concrete beam than indicated in the drawings, however the direction of loading means the as-built location is ok.

3. Structural item 3 – Concrete beam with vertical soil anchors (at grid D)

The dimension of the concrete beam and the number of longitudinal bars conform to the structural drawings. The stirrups are spaced appropriately and has two more extra legs than the required number. However, there are only 10 stirrup legs present near the soil anchors, which is insufficient. Additional sets of R12 stirrups must be installed around the vertical soil anchors – three (3) sets for the anchor near grid 1 and two (2) sets for the anchor near grid 2, as shown by the green extra stirrups on the drawings.

Starter bars for the new concrete shear wall and into the existing concrete / wall foundation have not yet been installed – DTCE to review the starter bars and additional stirrups during the next site visit before concrete pouring.

4. Structural item 4 – Concrete pile (at grid G)

The reinforcement placement in the adjacent beams and the concrete pile is consistent with the structural drawings.







Figure 3.

Ground beam with vertical Titan
Anchor

- Anchor drill logs to be provided to DTCE.

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Figure 1

Excavation photo encountering an existing soil anchor.

Existing soil anchor



Figure 2.

Ground beam with vertical Titan Anchor

CONSTRUCTION MONITORING REPORT

PROJECT DETAILS

Project Address:	34 Upland Road	Document Name:	223303-SN-004-A
Client:	Wallcork Upland Ltd	Building Consent:	549500
Engager/Architect:	Wallcork Upland Ltd	Builder:	Strait Construction

CM DETAILS

Purpose:	CM - Review excavations and discuss foundations	Date:	04/02/2025
Location:	34 Upland Road (have not actually gone to site)	Time:	
Weather:		Written By:	LMM
DTCE Attendees:		Reviewed by:	MJB
External Attendees:			
Health and Safety:	Site register ☐	New hazards noted:	

CM ASPECTS CARRIED OUT

Site Investigation:	Scoping ☐	Measure up ☐	Soil testing ☐	Other ☐	Note
Construction Monitoring:	Progress ☒	Approval ☐	Instructions ☐	Other ☐	Note
For PS4:	Yes ☒	No ☐			

OVERVIEW

The following observations, issues, and recommendations are based on the telephone and email discussions with the builder, as well as their on-site photos. We have not been to site.

OBSERVATIONS, ISSUES, AND RECOMMENDATIONS

1. Structural Item 1 – Titan Anchor length variation (embedment reduced from 14-m to 9.5-m)

The embedment length of the Titan Anchor supporting the concrete beam below the ground floor was reduced from 14-m to 9.5-m due to encountering an existing Titan Anchor during the excavation. The parameters used in the calculations were rechecked with the 9.5-meter embedment length, and it was confirmed that it is sufficient to meet the 67% seismic strengthening requirement because:

- Meeting the existing Anchor cause the drill head to deflect all around, forming a bulb at the end of the anchor which was then filled with Grout
- The critical demand on the anchor which dictated the length was a static case with a high safety of factor,

2. Structural item 2 – Vertical Titan Anchors length variation (embedment increase from 4-m to 6-m)

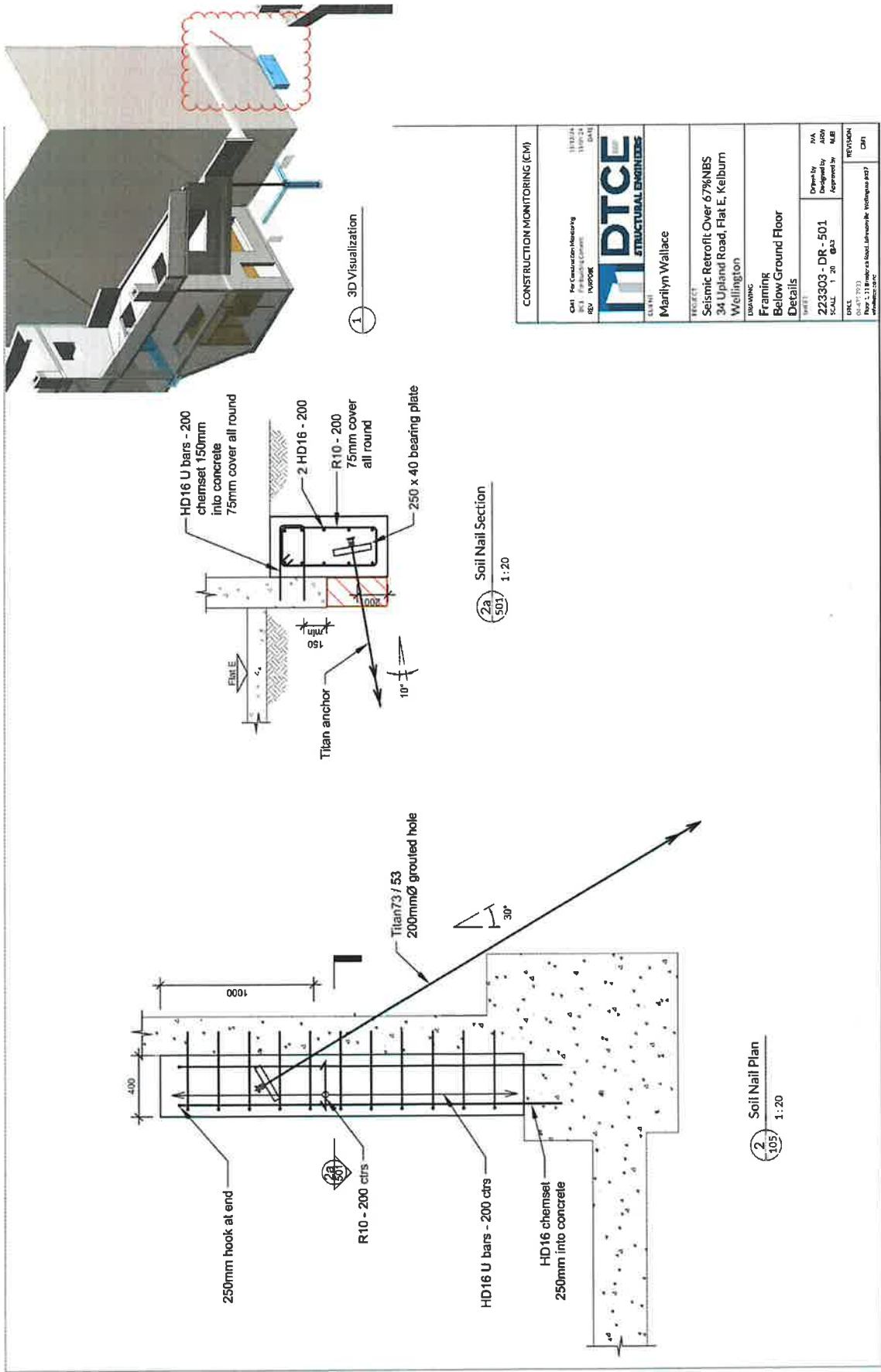
The vertical Titan Anchors supporting the concrete beam below the ground floor was increase from 4-m to 6-m due to the discovery of loose crumble rock on-site at 4-m depth. On-site verification confirmed that the soil at a depth of 6 meters is of good quality and reliable.

3. Structural item 3 – Ground floor SHS post concrete pile

The 450mm diameter concrete pile supporting the on-grid A-1 was relocated beyond the opposite face of the existing column. The builder stated that it is impossible to excavate beneath the existing column and needed the concrete pile to be shifted by approximately 300mm.

FOLLOW UP ACTIONS

- On-site photos of excavations and site conditions to be provided to DTCE.



CONSTRUCTION MONITORING (CM)	
CM1 For Construction Monitoring	11/03/24
REV 1 For Review & Comments	13/07/24
REV 2 FOR CM	04/08/24
DTCE STRUCTURAL ENGINEERS	
CLIENT: Martlyn Wallace	
PROJECT: Seismic Retrofit Over 67%NBS 34 Upland Road, Flat E, Kelburn Wellington	
DRAWING: Framing Below Ground Floor Details	
SHEET: 223303 - DR - 501	DESIGNED BY: JWA
SCALE: 1:20 @ A3	APPROVED BY: MJB
DATE: 04/07/2023	REVISION:
Drawn by: JWA Checked by: MJB Reviewed by: MJB	





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