

Freedom of Information Publication Coversheet

The following information is provided pursuant to section 28 of the *Freedom of Information Act 2016*.

FOI Reference: CMTEDDFOI 2019-262

Information to be published	Status
1. Access application	Published
2. Decision notice/Section 36 Notice	Published
3. Documents and schedule	Published
4. Additional information identified	Yes
5. Fees	Waived
6. Processing time (in working days)	25
7. Decision made by Ombudsman	N/A
8. Additional information identified by Ombudsman	N/A
9. Decision made by ACAT	N/A
10. Additional information identified by ACAT	N/A

Please find online enquiry details below. Please ensure this enquiry is responded to within fourteen working days.

Your details

All fields are optional, however an email address OR full postal address must be provided for us to process your request. An email address and telephone contact number will assist us to contact you quickly if we need to discuss your request.

Title:	
First Name:	
Last Name:	
Business/Organisation:	
Address:	
Suburb:	
Postcode:	
State/Territory:	
Phone/mobile:	
Email address:	

Request for information

(Please provide as much detail as possible, for example subject matter and relevant dates, and also provide details of documents that you are not interested in.)

Under the Freedom of Information Act 2016 I want to access the following document/s (*required field):

1. Any and all documents, file notes and correspondence relating to the collapse (Event number 170711-001210) which occurred on the Kingsborough Project, Canberra on 11 July 2017 (Collapse), including but not limited to: a. all documents relating to the investigation of the Collapse including but not limited to witness statements (including recordings), correspondence, file notes, reports and investigation findings; b. all documents prepared by, or signed by inspector, Mr Greg Mason (ID P01873) relating to the Collapse; c. all correspondence between Worksafe ACT and its employees to any company, including but not limited to Construction Control Australia and its employees, in relation to the Collapse;

I do not want to access the following documents in relation n/a to my request::

Thank you. Freedom of Information Coordinator



Our ref: CMTEDDFOI2019-262



FREEDOM OF INFORMATION DECISION NOTICE

I refer to your application under section 30 of the *Freedom of Information Act 2016* (the Act), received by the Chief Minister, Treasury and Economic Development Directorate (CMTEDD) on 14 November 2019 in which you sought access to any and all documents, file notes and correspondence relating to the collapse (Event number 170711-001210) which occurred on the Kingsborough Project, Canberra on 11 July 2017.

Authority

I am an Information Officer appointed by the Director-General of CMTEDD under section 18 of the Act to deal with access applications made under Part 5 of the Act.

Timeframes

In accordance with section 40 of the Act, CMTEDD is required to provide a decision on your access application by 6 September 2019. However, due to third party consultation, this timeframe has been extended by 15 working days pursuant to section 38(5) of the Act. The due date for this request is therefore 7 January 2020.

Third Party Consultation

In making this decision, I completed consultation with the relevant third parties in accordance with section 38 of the Act. The views of the identified third parties were taken into account in making this decision.

Decision on access

Searches were completed for relevant documents and 19 documents were identified that fall within the scope of your request. I have decided to grant full access to seven documents and partial access to 12 documents.

I have included as <u>Attachment A</u> to this decision the schedule of relevant documents. This provides a description of each document that falls within the scope of your request and the access decision for each of those documents.

My access decisions are detailed further in the following statement of reasons.

In accordance with section 54(2) of the Act a statement of reasons outlining my decisions is below.

Statement of Reasons

In reaching my access decisions, I have taken the following into account:

- the Act;
- the contentions of relevant third parties;
- the content of the documents that fall within the scope of your request; and
- the Human Rights Act 2004.

Exemption claimed

My reasons for deciding not to grant full access to the identified documents and components of these documents are as follows:

Public Interest Test (Schedule 2 of the Act)

The Act has a presumption in favour of disclosure. As a decision maker I am required to decide where, on balance, public interest lies. As part of this process I must consider factors favouring disclosure and factors favouring non-disclosure.

In *Hogan v Hinch* (2011) 243 CLR 506, [31] French CJ stated that when 'used in a statute, the term [public interest] derives its content from "the subject matter and the scope and purpose" of the enactment in which it appears'. Section 17(1) of the Act sets out the test to be applied to determine whether disclosure of information would be contrary to the public interest. The factors referred to in the test are found in subsection 17(2) and Schedule 2 of the Act.

Factors favouring disclosure (Schedule 2 section 2.1)

Taking into consideration the information contained in the documents found to be within the scope of your request, I have identified that the following public interest factor in favour of disclosure is relevant to determine if release of the information contained within these documents is within the 'public interest'.

(a) disclosure of the information could reasonably be expected to do any of the following:
 (xiii) contribute to the administration of justice generally, including procedural fairness.

Having considered the factor above, I consider that the release of these documents may contribute to the administration of justice generally by allowing you to have a record of the Worksafe ACT investigation documents regarding the Kingsborough Project collapse which occurred on 11 July 2017 as this matter directly involves you. I am satisfied that this factor favouring disclosure carries some weight. However, this factor is to be balanced against the factors favouring non-disclosure.

Factors favouring non-disclosure (Schedule 2 section 2.2)

As required in the public interest test set out in section 17 of the Act, I have also identified the following public interest factors in favour of non-disclosure that I believe are relevant to determine if release of the information contained within these documents is within the 'public interest':

 (a) disclosure of the information could reasonably be expected to do any of the following:
 (ii) prejudice the protection of an individual's right to privacy or any other right under the Human Rights Act 2004;

Taking into account the submissions put to me by the relevant third parties as part of the consultation undertaken in accordance with section 38 of the Act and having reviewed the documents, I consider that the protection of an individual's right to privacy, especially in the course of dealings with the ACT Government is a significant factor as the parties involved have provided their personal information for the purposes of working with the ACT Government, in my opinion, outweighs the benefit which may be derived from releasing the personal information of the individual's involved in this matter.

Individuals are entitled to expect that the personal information they have supplied as part of this process will be dealt with in a manner that protects their privacy. Considering the type of information to be withheld from release, I am satisfied that the factors in favour of release can still be met while protecting the personal information of the individuals involved. I therefore weight the factor for non-disclosure more highly than the factor in favour of release in this instance. As a result, I have decided that release of this information (email addresses, mobile numbers and names of individuals not employed by the ACT Public Service) could prejudice their right to privacy under the *Human Rights Act 2004*.

Noting the pro-disclosure intent of the Act, I am satisfied that redacting only the information that is not in the public interest to release, while releasing the rest of the information will ensure the intent of the Act is met and will provide you with access to the majority of information held by CMTEDD within the scope of your request.

Access to documents

Pursuant to section 38(6) of the Act, I am required to defer access to all the identified documents as an affected third party has objected to disclosure. This third party may apply for a review of my release decision within 20 working days after my decision is published in the CMTEDD disclosure log, or a longer period allowed by the Ombudsman. I will write to you to advise when access is no longer deferred.

Charges

Pursuant to *Freedom of Information (Fees) Determination 2017 (No 2)* processing charges are applicable for this request because the total number of pages to be released to you

exceeds the charging threshold of 50 pages. However, the charges have been waived in accordance with section 107(2)(b) of the Act.

Online publishing – Disclosure Log

Under section 28 of the Act, CMTEDD maintains an online record of access applications called a disclosure log. Your original access application, my decision in response to your access application will be published in the CMTEDD disclosure log 3-10 days after the date of my decision. Your personal contact details will not be published. You may view the CMTEDD disclosure log at: <u>https://www.cmtedd.act.gov.au/functions/foi/disclosure-log</u>.

Ombudsman Review

My decision on your access request is a reviewable decision as identified in Schedule 3 of the Act. You have the right to seek Ombudsman review of this outcome under section 73 of the Act within 20 working days from the day that my decision is published in CMTEDD disclosure log, or a longer period allowed by the Ombudsman.

We recommend using this form *Applying for an Ombudsman Review* to ensure you provide all of the required information. Alternatively, you may write to the Ombudsman at:

The ACT Ombudsman GPO Box 442 CANBERRA ACT 2601 Via email: <u>actfoi@ombudsman.gov.au</u>

ACT Civil and Administrative Tribunal (ACAT) Review

Under section 84 of the Act, if a decision is made by the Ombudsman under section 82(1), you may apply to the ACAT for a review of the Ombudsman decision. Further information may be obtained from the ACAT at:

ACT Civil and Administrative Tribunal Level 4, 1 Moore St GPO Box 370 Canberra City ACT 2601 Telephone: (02) 6207 1740 http://www.acat.act.gov.au/ Should you have any queries in relation to your request please contact me by telephone on 6207 7754 or by email at <u>CMTEDDFOI@act.gov.au</u>.

Yours sincerely,

N. Rock.

Philip Dachs Information Officer Information Access Team Chief Minister, Treasury and Economic Development Directorate

19 December 2019



FREEDOM OF INFORMATION REQUEST SCHEDULE

NAME WHAT ARE THE PARAMETERS OF THE REQUEST		Reference NO.
	Information relating to the collapse of a wall which occurred on the Kingsborough Project on 11	CMTEDDF0I2019-262
	July 2017.	

RefNo	Page number	Description	Date	Status	Reason for Exemption	Online Release Status
1	1-3	RE: Incident Notice 1: Kingston Construction Site incident	11 Jul 2017	Full release	N/A	No
2	4-5	RE: Structural collapse	11 Jul 2017	Full release	N/A	No
3	6-9	RE: Structural collapse	11 Jul 2017	Full release	N/A	No
4	10-11	Incident Notice 2: Kingston Construction Site incident	11 Jul 2017	Full release	N/A	No
5	12	Causeway Incident	12 Jul 2017	Full release	N/A	No
6	13-18	Workplace Visit report	12 Jul 2017	Partial release	2.2(a)(ii)	No
7	19	(no subject)	12 Jul 2017	Full release	Full release	No
8	20-23	Letter to Construction Control from ACT Geotechnical Engineers	12 Jul 2017	Partial release	2.2(a)(ii)	No
9	24-25	Kingsborough Update	13 Jul 2017	Partial release	2.2(a)(ii)	No
10	26	FW: Retaining Wall collapsed in Building Site adjacent to Cunningham Street/The Causeway - on 11th July 2017	13 Jul 2017	Partial release	2.2(a)(ii)	No
11	27-29	Non- Disturbance Notice - Block 1 Section 60 Kingston - Effective 16:15 hrs 14 July 2017	14 Jul 2017	Part al release	2.2(a)(ii)	No
12	30-38	RE: Kingsborough Update with attachments	14 Jul 2017	Partial release	2.2(a)(ii)	No
13	39-41	RE: Non- Disturbance Notice - Block 1 Section 60 Kingston - Effective 16:15 hrs 14 July 2017	14 Jul 2017	Partial release	2.2(a)(ii)	No
14	42	Soil nail wall - soil nailing - Deep Excavation	15 Jul 2017	Full release	Full release	No

15	43-44	RE: Non- Disturbance Notice - Block 1 Section 60 Kingston - Effective 16:15 hrs 14 July 2017	17 Jul 2017	Partial release	2.2(a)(ii)	No
16	45-49	Letter to Construction Control from ACT Geotechnical Engineers	19 Jul 2017	Partial release	2.2(a)(ii)	No
17	50-52	RE: Kingsborough Apartments incident remediation plan	20 Jul 2017	Partial release	2.2(a)(ii)	No
18	53-54	RE: Kingsborough Apartments incident remediation plan	20 Jul 2017	Partial release	2.2(a)(ii)	No
19	55-79	FW: Kingsborough Apartments incident remediation plan	31 Jul 2017	Partial release	2.2(a)(ii)	No
Total No of Docs						
19						

From:"Springett, Emily" <Emily.Springett@act.gov.au>
Sent:11/07/2017 1:48 PM
To:"Muir, Richard" <Richard.Muir@act.gov.au>
Cc:"Mason, Greg (ACT WorkSafe)" <Greg.Mason@act.gov.au>;"Jones, Greg" <Greg.Jones@act.gov.au>;"Kalleske,
Mark" <Mark.Kalleske@act.gov.au>;"Alford, Robert" <Robert.Alford@act.gov.au>
Subject:RE: Incident Notice 1: Kingston Construction Site incident [SEC=UNCLASSIFIED]

Thanks Richard, much appreciated as always!

Just FYI - Greg will be doing ABC Radio on it at 2:45pm. A Kingston resident sent ABC through some photos.

From: Muir, Richard
Sent: Tuesday, 11 July 2017 1:43 PM
To: Springett, Emily
Cc: Mason, Greg (ACT WorkSafe); Jones, Greg; Kalleske, Mark; Alford, Robert
Subject: RE: Incident Notice 1: Kingston Construction Site incident [SEC=UNCLASSIFIED]

Hi Emily,

Here's the latest information:

- Roads ACT's engineer has cleared the road to be reopened along the eastern side of the site (the Causeway).
- A section where 3 hour car parking is available adjacent to the site has been affected (some cracking through pavement) this area will be fenced off.
- Construction Control is engaging an independent (to those already engaged in the project) geotechnical engineer to undertake an assessment of the wall and site.
- A total of 1,001 customers suffered power loss for 42 minutes all power has now been restored.
- Prohibition notice is in place until a safe system of works to remediate the wall collapse is developed.
- Geotechnical and structural engineers for the job (up to this point) to provide engineering reports and plans for the construction of the wall.
- While still being assessed, it appears as though the matter will not be referred to the Major Investigations Unit for further investigation.

Thanks and I'll continue to pass on any information as it comes to hand!

Rick.

From: Springett, Emily
Sent: Tuesday, 11 July 2017 1:01 PM
To: Mason, Greg (ACT WorkSafe); Muir, Richard
Subject: FW: Incident Notice 1: Kingston Construction Site incident [SEC=UNCLASSIFIED]
Importance: High

FYI - please keep me in the loop re: any updates. Cheers. Emily

From: Springett, Emily Sent: Tuesday, 11 July 2017 12:51 PM Subject: Incident Notice 1: Kingston Construction Site incident [SEC=UNCLASSIFIED] Importance: High





Incident update

UPDATE 1 - KINGSTON CONSTRUCTION SITE INCIDENT 12:30PM 11/7/17

Latest information

What we know

What we don't know at this time

What we are doing

Who has been informed

Next steps

LATEST INFORMATION

- There has been a partial structural wall collapse at a construction site in Kingston.
- No one has been injured and all workers on site are accounted for.
- Site is at Block 1, Section 60, Kingston (Corner of The Causeway and Cunningham Street). Building company is Construction Control.
- A 30m long excavation and 7m high wall (which had been shot-creted) is affected –the wall having come down in part.
- An electrical sub board is impacted and gas on site has been compromised.
- Roads ACT are on the way to check on the integrity of the road.
- The road has been closed until the engineers can make an assessment.
- CFMEU are aware of the incident.
- The site is publicly visible from side streets.

WHAT WE KNOW

As above

WHAT WE DON'T KNOW AT THIS TIME

- How it occurred, it is subject to investigation.
- Road integrity this is being assessed.

WHAT WE ARE DOING

WorkSafe ACT are on site.

WHO HAS BEEN INFORMED

- Media Advisors of Minister Barr, Stephen-Smith and Ramsay Offices
- Access Canberra Executive
- CMTEDD Comms/HoS Office

NEXT STEPS

- A further update to be provided as necessary
- Follow up media spokesperson: Greg Jones, ACT Work Safety Commissioner

Emily Springett | Senior Manager, Communications, Access Canberra Phone: 6205 9093 | Mobile: 0413 169 029 Chief Minister, Treasury and Economic Development Directorate | ACT Government Level 4, Canberra Nara Centre, 1 Constitution Avenue, Canberra City | GPO Box 158 Canberra City ACT

2601 | www.act.gov.au

Access Canberra. has moved

To find all our Canberra Service Centres visit act.gov.au/accessCBR From:"Muir, Richard" <Richard.Muir@act.gov.au> Sent:11/07/2017 12:24 PM To:"Springett, Emily" <Emily.Springett@act.gov.au>;"Alford, Robert" <Robert.Alford@act.gov.au>;"Jones, Greg" <Greg.Jones@act.gov.au>;"Kalleske, Mark" <Mark.Kalleske@act.gov.au> Cc:"Mason, Greg (ACT WorkSafe)" <Greg.Mason@act.gov.au> Subject:RE: Structural collapse [SEC=UNCLASSIFIED]

Hi Emily,

- If the site/issue is publically visible:
 - 1. Yes, it is easily visible from various side streets .
- Do you know if CFMEU has been informed by anyone on the site?
 - 1. It seems as though the CFMEU has been informed, but as a matter of course (and standard practice), Greg Mason will also call them to inform them of the issue.

Cheers,

Rick.

From: Springett, Emily Sent: Tuesday, 11 July 2017 12:18 PM To: Muir, Richard; Alford, Robert; Jones, Greg; Kalleske, Mark Cc: Mason, Greg (ACT WorkSafe) Subject: RE: Structural collapse [SEC=UNCLASSIFIED]

Thanks Richard

Can you advise:

- If the site/issue is publically visible
- Do you know if CFMEU has been informed by anyone on the site?

Emily

From: Muir, Richard Sent: Tuesday, 11 July 2017 12:16 PM To: Alford, Robert; Jones, Greg; Kalleske, Mark Cc: Springett, Emily; Mason, Greg (ACT WorkSafe) Subject: RE: Structural collapse [SEC=UNCLASSIFIED]

Hi all,

I just spoke to Greg Mason who is on site – I have attached a couple of photos for reference too. He advised:

- No one injured and all workers on site are accounted for.
- The building company is Construction Control (6257 4775).
- Site is at Block 1, Section 60, Kingston (Cnr of The Causeway and Cunningham Street).
- 30m long excavation and 7m high wall (which had been shot-creted) affected principally with the wall having come down in part.
- Power (a substation has blown photo attached) and gas has been compromised.
- Roads ACT have their engineers on the way to check on the integrity of the road.
- The road has been closed to ensure it does not have any further weight going through it until the engineers can make an assessment.
- Greg Mason is on site and will collect information as required he is in constant contact with me.

The Major Investigations Unit will attend site to have a look at matters from their standpoint.

I'll provide further updates when they come to hand.

Talk soon.

Rick.

From: Alford, Robert Sent: Tuesday, 11 July 2017 11:56 AM To: Jones, Greg; Kalleske, Mark Cc: Springett, Emily; Muir, Richard Subject: Structural collapse

Greg and Mark

Greg Mason is responding to a significant wall/structural collapse on a construction site in Kingston.

Construction Control - job site is at the corner of The Causeway and Dawes Street Kingston.

No one injured.

Will update when we have further information.

Kind Regards

Bob Alford | Senior Manager - Enforcement & Compliance Phone: 02 6205 4261 | Mobile: 0434 85 11 39 | Email: <u>robert.alford@act.gov.au</u> Construction, Environment and Workplace Protection | Access Canberra | ACT Government GPO Box 158 Canberra ACT 2601 | <u>http://www.act.gov.au/accesscbr</u>



Connect with WorkSafe ACT on: <u>WorkSafe ACT</u> | <u>Twitter</u> | <u>Linkedin</u> | <u>You Tube</u> | <u>Pinterest</u> Subscribe to <u>eNEWS and Construction Newsletter</u> a free email subscription service keeping you informed on the latest health and safety issues that affect workplaces in ACT. From: "Muir, Richard" <Richard.Muir@act.gov.au>
Sent:11/07/2017 12:16 PM
To: "Alford, Robert" <Robert.Alford@act.gov.au>; "Jones, Greg" <Greg.Jones@act.gov.au>; "Kalleske, Mark"
<Mark.Kalleske@act.gov.au>
Cc: "Springett, Emily" <Emily.Springett@act.gov.au>; "Mason, Greg (ACT WorkSafe)" <Greg.Mason@act.gov.au>
Subject:RE: Structural collapse [SEC=UNCLASSIFIED]
Attachments:IMG_1256.jpg, IMG_1257.jpg, IMG_1261.jpg

Hi all,

I just spoke to Greg Mason who is on site – I have attached a couple of photos for reference too. He advised:

- No one injured and all workers on site are accounted for.
- The building company is Construction Control (6257 4775).
- Site is at Block 1, Section 60, Kingston (Cnr of The Causeway and Cunningham Street).
- 30m long excavation and 7m high wall (which had been shot-creted) affected principally with the wall having come down in part.
- Power (a substation has blown photo attached) and gas has been compromised.
- Roads ACT have their engineers on the way to check on the integrity of the road.
- The road has been closed to ensure it does not have any further weight going through it until the engineers can make an assessment.
- Greg Mason is on site and will collect information as required he is in constant contact with me.

The Major Investigations Unit will attend site to have a look at matters from their standpoint.

I'll provide further updates when they come to hand.

Talk soon.

Rick.

From: Alford, Robert Sent: Tuesday, 11 July 2017 11:56 AM To: Jones, Greg; Kalleske, Mark Cc: Springett, Emily; Muir, Richard Subject: Structural collapse

Greg and Mark

Greg Mason is responding to a significant wall/structural collapse on a construction site in Kingston.

Construction Control – job site is at the corner of The Causeway and Dawes Street Kingston.

No one injured.

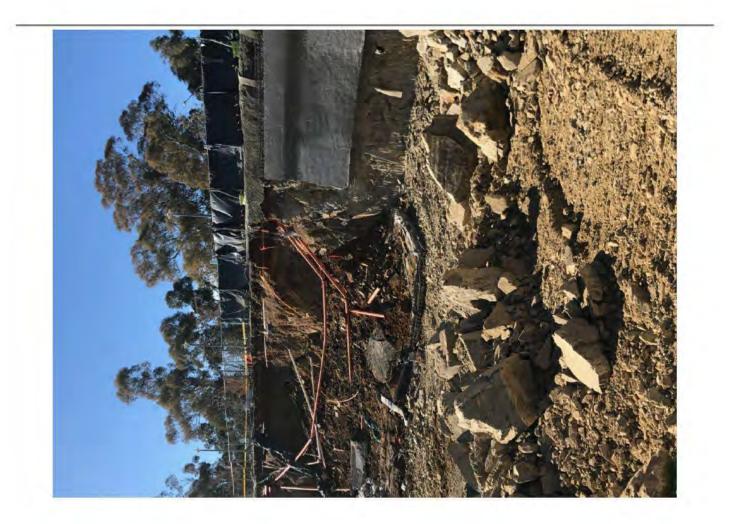
Will update when we have further information.

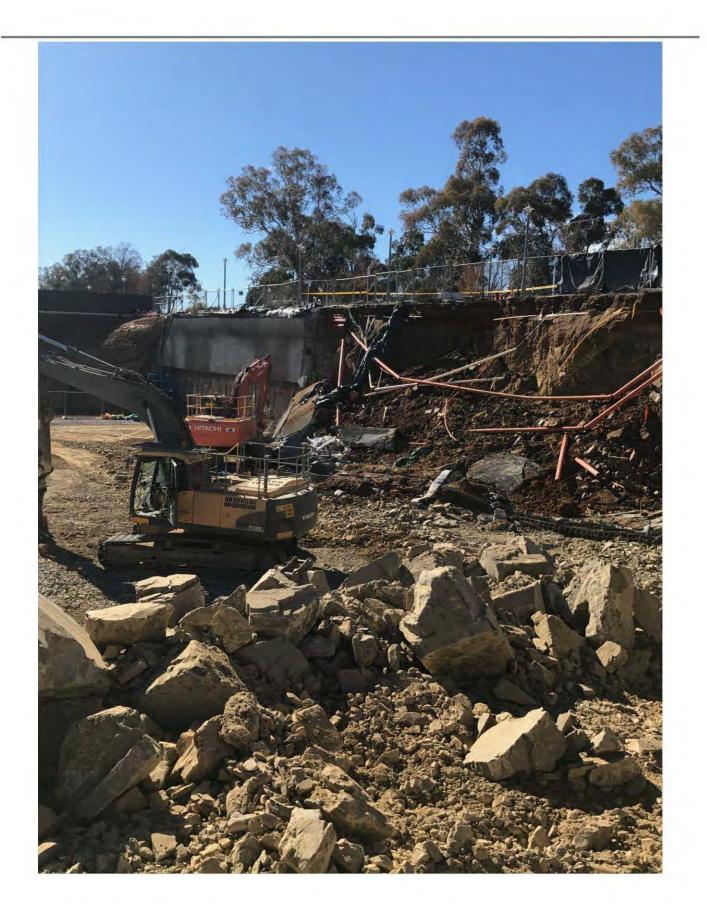
Kind Regards

Bob Alford | Senior Manager - Enforcement & Compliance Phone: 02 6205 4261 | Mobile: 0434 85 11 39 | Email: <u>robert.alford@act.gov.au</u> Construction, Environment and Workplace Protection | Access Canberra | ACT Government GPO Box 158 Canberra ACT 2601 | <u>http://www.act.gov.au/accesscbr</u>



Connect with WorkSafe ACT on: <u>WorkSafe ACT</u> | <u>Twitter</u> | <u>Linkedin</u> | <u>You Tube</u> | <u>Pinterest</u> Subscribe to <u>eNEWS and Construction Newsletter</u> a free email subscription service keeping you informed on the latest health and safety issues that affect workplaces in ACT.







From:"Springett, Emily" <Emily.Springett@act.gov.au> Sent:11/07/2017 1:58 PM Subject:Incident Notice 2: Kingston Construction Site incident [SEC=UNCLASSIFIED] Importance:High



What we are doing

Who has been informed

Next steps

LATEST INFORMATION

- Roads ACT as cleared the road to be reopened along the eastern side of the site (the Causeway).
- A section of road (where 3 hour car parking is available) adjacent to the site has been affected (some cracking through pavement) this area will be fenced off.
- The building company is engaging an independent (to those already engaged in the project) geotechnical engineer to undertake an assessment of the wall and site.
- A total of 1000 neighbouring residents had a loss to power for 42 minutes all power has now been restored.
- A Prohibition Notice has been put in place by WorkSafe ACT until a safe system of works to remediate the wall collapse is developed.
- The ABC were informed of this incident through a neighbouring resident and Work Safety Commissioner Greg Jones will do a radio interview at 2:45pm today.

WHAT WE KNOW

- A partial structural wall collapse occurred at a construction site in Kingston.
- No one was injured and all workers on site were accounted for.

- Site is at Block 1, Section 60, Kingston (Corner of The Causeway and Cunningham Street). Building company is Construction Control.
- A 30m long excavation and 7m high wall (which had been shot-creted) was affected.
- An electrical sub board was impacted and about 1000 residents lost power to houses for a short period of time.
- Gas on site was also compromised.
- CFMEU are aware of the incident.
- The site is publicly visible from side streets and a neighbouring resident informed ABC Canberra of the incident.

WHAT WE DON'T KNOW AT THIS TIME

• How it occurred, it is subject to investigation.

WHAT WE ARE DOING

WorkSafe ACT are on site.

WHO HAS BEEN INFORMED

- Media Advisors of Minister Barr, Stephen-Smith and Ramsay Offices
- Access Canberra Executive
- CMTEDD Comms/HoS Office

NEXT STEPS

- It is unlikely another update on this incident will be provided unless circumstances unexpectedly change.
- Greg Jones, ACT Work Safety Commissioner will do an interview with ABC Canberra at 2:45pm and other follow up media if necessary.

Emily Springett | Senior Manager, Communications, Access Canberra Phone: 6205 9093 | Mobile: 0413 169 029 Chief Minister, Treasury and Economic Development Directorate | ACT Government Level 4, Canberra Nara Centre, 1 Constitution Avenue, Canberra City | GPO Box 158 Canberra City ACT 2601 | www.act.gov.au

Access Canberra. has moved

To find all our Canberra Service Centres visit act.gov.au/accessCBR From:"Kelly, Gordon" <Gordon.Kelly@act.gov.au> Sent:12/07/2017 1:35 PM To:"Mason, Greg (ACT WorkSafe)" <Greg.Mason@act.gov.au> Subject:Causeway Incident [SEC=UNCLASSIFIED]

Hi Greg,

If you get a spare moment can you send me the image of the collapsed bank / with exposed cable conduits. Anything else 'electrical' would also be good – as general knowledge / information.

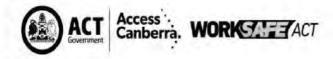
My Regards,

Gordon K

Gordon Kelly | Utilities Technical Regulation - Electrical

Phone 02 62059654 Email: <u>Gordon Kelly@act.gov.au</u> Construction, Environment and Workplace Protection Division | Access Canberra | ACT Government GPO Box 158 Canberra ACT 2601 | <u>http://www.act.gov.au</u>/accesscbr





Workplace Visit report - submission confirmation

Your submission has been successful. Please keep a copy of this receipt for your records.

ne	Form submission ID	Reference number
7 12:11:24 PM	99118220170712127132	4F5GJR
7 12:11:24 PM	99118220170712127132	4F5GJR

To save a copy of the completed form and receipt, from the File menu select "Save a copy". To print a copy use the Print icon.

Access Canberra

GPO Box 158 Canberra City ACT 2601

Telephone: (02) 6207 3000

Initial information

Inspector ID *			
P01873			
Inspection number	Event number		
WPV-P01873-S8D35N	170711-001210		
Lead inspector *			
Greg Mason			
Accompanying inspector/oth	er *		
N/A			
Date *	Time commenced *		
11 Jul 2017	11:30		
Type of WPV *		Reactive	
Purpose of WPV * Notifiable incident	Legislation * Work Health and Safety Act 2	011	
Name of individual or registe	red company *		
Other			
Name of individual or registe	red company *		
Construction Control Austra	ilia Pty Ltd		
ABN	ACN		
Business or trading name (if	different)	-	

Registered company address

Address line 1 *			
1 Torrens Street			
Address line 2			
Suburb *	State *	Postcode	e
Braddon	ACT	2612	
Contact name *			Contact number *
2.2(a)(ii)			2.2(a)(ii)
Email address			
2.2(a)(ii) accontrol.c	com.au		

Not applicable

Workers compensation

Is a compulsory Workers Compensation Policy maintained? *

Yes

O No

Details of inspection

Site/Workplace	address			
Same as registere	d address			
Address line 1 *				
Block 1				
Address line 2				
Section 60				
Suburb *	State	Postcode *		
KINGSTON	ACT	2604		
Notification of entry to	(as required by s164) *		
PCBU			Manager	
Supervisor			HSR	
Other			N/A	

Inspector notes *					
the collapse of a 6	Kingsborough Apartments metre x 30 metre face of issions/directions made fol - Geotechnical Engineer:	a basement excave lowing inspection o	ation at the site. The fol	lowina	ACT Fire and Rescue of - Constrcution Control
mesh had been co	d at 11:11am when ground nnected and shotcreted, co ind the behind the support	llapsed causing su	bstantial damage to gas		
Several worker of the incident	s were working at the base	of the 60 metre e	cavation face of which	approx 30 n	netes collapsed at the time
	he site were accounted for losed off.	following the incid	ent and the south east s	ection of the	e site which was subject to
	eased from the ACTFB to t	he Principle Contra	ictor		
5. Principle Contra 11 July 2017 proh	ctor - 2.2(a)(ii) was ad bitioning any corrective ac tems of work to be implem	vised that the incid tions at the site, in	lent area was subject to relation to the incident	until Inspect	
ACTIONS 7. Prohibition Notic	ce issued (annexed)				

Further action

Further action required? *				
• Yes		No		
Notices issued *				
• Yes		No		
Type of notices				
Improvement	Prohibition		Other	

Finalisation details

WPV for asbestos related issue *		
O Yes	No	
Industry group *		
Construction		
Follow up required *		
Yes	No	
Time finished *		
18:00		

The email address below has been derived from the name you entered. Please ensure the email address is correct.

Lead inspector email address *		
Greg.Mason@act.gov.au		
How many other email addresses would you like to send this to? st	2	
Email 1 *		
2.2(a)(ii) @ccontrol.com.au		
Email 2 *		
2.2(a) @cccontrol.com.au		

Privacy notice

The information collected for the purpose of the Work Health and Safety Act 2011 and is in accordance with the Information Privacy Act 2014. WorkSafe ACT prevents any unreasonable intrusion into person's privacy in accordance with the Privacy Act 1988 (C'With) and Information Privacy Act 2014. WorkSafe ACT provides identifiable information which can be disclosed to other law enforcement agencies and authorised organisations that have legal authority to request information under prescribed circumstances.

Prohibition Notice

This is a Prohibition Notice issued under section 195 of the Work Health and Safety Act 2011

Issued by Inspector	Inspector	ID	Notice Number	Date and time
Greg Mason	P01873		PN-P01873-S8DJ5N-1	11 Jul 2017 - 11:30
Method of service (s209)	*			
Personal		۲	Email/Fax	
Recipient *				
2.2(a)(ii)				
To whom this notice is issu	ued *			
Company		0	Individual	
Name of registered compa	any *	ACN		
Construction Control				
Business or trading name	(if different):			
Registered company ac	ddress			
Address line 1				
1 Torrens Street				
Address line 2				
Suburb	State	Postcode		
Braddon	ACT	2612		
Site/Workplace addres	s			

Address line 2			
Section 60			
Suburb *	State	Postcode *	
KINGSTON	ACT	2604	
au are prohibited from ear	nuing on the fel	lowing activity or the carrying on	of the activity in a specified way: *
		wer basement area of the constru	
inspector reasonably believe workplace that involves, or imminent exposure to a haz the health or safety of a per	es that grounds will involve, a s ard; or (b) an rson emanating	s for the issue of this notice exist (serious risk to the health or safety	e risk have been remedied. (s195(2)) The s195(1)), ie: (a) an activity is occurring at a of a person emanating from an immediate or that, if it occurs, will involve a serious risk to exposure to a hazard.
Basis for that belief (s196(1		oution cite at 11,11am on 11 July	2017 when ground anchors tied back to the
excavation face on which 2	layers of 100x	100x8mm mesh had been connec	ted and shotcreted, failed, causing substantial sehind the supported excavation face.
Briefly, the activity that the	inspector believ	ves involves or will involve the ris	k, and the matters that give or will give rise to
			d safety until the provision and maintenance
The incident site is not with of safe systems of work to The provision that the in	make the incid	rkers and other persons health ar lent site safe have been implemer	d safety until the provision and maintenance
The incident site is not with of safe systems of work to The provision that the in	make the incid	rkers and other persons health ar lent site safe have been implemer	nd safety until the provision and maintenance ited.
The incident site is not with of safe systems of work to The provision that the in (c)): Work Health and Safe 2011	make the incid	rkers and other persons health ar lent site safe have been implemer wes is being, or is likely to be Work Health and Safety	nd safety until the provision and maintenance nted. , contravened by the activity (s196(1)
The incident site is not with of safe systems of work to The provision that the in (c)): Work Health and Safe 2011	make the incid	rkers and other persons health ar lent site safe have been implemer wes is being, or is likely to be Work Health and Safety	nd safety until the provision and maintenance nted. , contravened by the activity (s196(1)
The incident site is not with of safe systems of work to The provision that the in (c)): Work Health and Safe 2011 Section/s 19 This Notice may include dire contravention, or matters or	make the incid spector belie ety Act	rkers and other persons health an lent site safe have been implemen wes is being, or is likely to be Work Health and Safety Regulation 2011	nd safety until the provision and maintenance nted. , contravened by the activity (s196(1)
The incident site is not with of safe systems of work to The provision that the in (c)): Work Health and Safe 2011 Section/s 19 This Notice may include dire contravention, or matters or nspector directs you to;	make the incid spector belie ety Act ctions concern r activities caus ed this notice t	rkers and other persons health ar lent site safe have been implemen wes is being, or is likely to be Work Health and Safety Regulation 2011	ad safety until the provision and maintenance nted. , contravened by the activity (s196(1) Dangerous Substances Act 2004 emedy the contravention or prevent the likley

Prohibition Notice - Further Information

If you have any questions you may contact the inspector who issued this notice.

Display of Notices A person to whom a notice is issued must, as soon as possible, display a copy of the notice in a prominent place at or near the workplace, or part of the workplace, at which work is being carried out that is affected by the notice (s 210(1)). A person must not intentionally remove, destroy, damage or deface a notice displayed under s 210(1) while the notice is in force (s 210(2)). The maximum penalty for failing to comply with these provisions is \$5,000 for an individual or \$25,000 for a corporation.

Compliance with direction or notice The person to whom a direction is given under section 195(2) or a prohibition notice is issued must comply with the direction or notice (s197). The maximum penalty for failing to comply with this requirement is \$100,000 for an individual or \$500,000 for a corporation.

Regulator may carry out action If a person to whom a prohibition notice is issued fails to take reasonable steps to comply with the notice, and after giving written notice of its intentions and the person's liability for the costs, the regulator (WorkSafe ACT) may take any remedial action it believes reasonable to make the workplace or situation safe (s 211). The regulator may then recover the reasonable costs of taking this remedial action (s213).

Contents of Notice This Notice may state one or more of the following: (a) a workplace, or part of a workplace, at which the activity is not to be carried out; (b) anything that is not to be used in connection with the activity; (c) any procedure that is not to be followed in connection with the activity (s196(3)).

Directions and recommendations A direction may refer to a code of practice and may offer the person a choice of ways in which to remedy the contravention (s 204). A prohibition notice may include recommendations. It is not an offence to fail to comply with recommendations in a notice (s205).

Changes to notice by inspector An inspector may make minor changes to a notice for clarification, to correct errors or references, or to reflect changes of address or other circumstances (s206).

Review of this Notice The person to whom the Notice was issued, the person with management or control of the workplace, plant or substance, a person conducting a business or undertaking whose interests are affected by the decision, a worker whose interests are affected by the decision, a health and safety representative who represents a worker whose interests are affected by the decision or health and safety representative who gave a direct under s85 to cease work, that is relevant to the Prohibition Notice may seek to have an internal review. A review may be sought in relation to the issuing of the Prohibition Notice. A review may be sought within 14 days of the notice being issued. Please ensure you include the Notice number in your application for a review and the reason you are seeking the review. An application for a review can be made by writing, to: The Regulator, WorkSafe ACT. GPO Box 158 Canberra City ACT 2601 or by email worksafe@act.gov.au

PRIVACY NOTICE The personal information collected about you is being collected for the purpose of securing the safety of people at work by the authority of the Work Health and Safety Act 2011. The information can be disclosed, in accordance with the Work Health and Safety Act 2011, to other law enforcement agencies including the Australian Federal Police, ACT Planning & Land Authority and the Office for Children, Youth & Family Support.

WorkSafe ACT Contact Details PO Box 158, Canberra, ACT 2601 Email: worksafe@act.gov.au Phone:(02) 6207 3000 Fax: (02) 6205 0336.

TRANSLATING AND INTERPRETING SERVICE - 131 450.

From: "Mason, Greg (ACT WorkSafe)" <Greg.Mason@act.gov.au> Sent:12/07/2017 7:43 AM To: "Mason, Greg (ACT WorkSafe)" <Greg.Mason@act.gov.au>

Attendance at construction site on advice from ACT Fire and Rescue of the collapse of a 6 metre x 30 metre face of a basement excavation at the site. The following observations/discussions/directions made following inspection of the incident site with 2.2(a)(ii) - Construction Control and 2.2(a)(ii) - Geotechnical Engineer:

1. Incident occured at 11:11am when ground anchors tied back to the excavation face on which 2 layers of 100x100x8mm mesh had been connected and shotcreted, collapsed causing sunstantial damage to gas lines, fibre optic cables and high voltage cables behind the behind the supported excavation face.

2. Workers were working close to the part of the 60 metre face of which approx 30 metes collapsed at the time of thge incident

3. All workers on the site were accounted for following the incident and the south east section of the site which was subject to the collapse was closed off.

4. The site was released from the ACTFB to the Principle Contractor

5. Principle Contractor - 2.2(a)(ii) was advised that the incident area was subject to a prohibition notice effective 13:30 hrs (attached)

ACTIONS

6.



ACT Geotechnical Engineers Pty Ltd

ACN 063 673 530

5/9 Beaconsfield St, Fyshwick, ACT, 2609 PO Box 9225, Deakin, ACT, 2600 Ph: (02) 6285 1547 Fax: (02) 6285 1861

12 July 2017 Our ref: JM/C7677

Construction Control PO Box 750 CANBERRA ACT 2601

Attention: 2.2(a)(ii)

KINGSBOROUGH APARTMENTS - BLOCKS B & C - BLOCK 1, SECTION 60, KINGSTON GEOTECHNICAL ASSESSMENT OF BATTER FAILURE - 12 JULY 2017

1 Introduction

At the request of Construction Control, ACT Geotechnical Engineers Pty Ltd are pleased to provide a geotechnical assessment of a failed section of batter, as part of the construction of the above development in Kingston, ACT.

The development comprises the construction of a multi-storey apartment development, with a two-level basement for carparking. A section of the cut batter along the eastern boundary of the site has failed, causing ~100m³ of soil to fall from the batter face. The purpose of the assessment is to assess the cause of the failure. ACT Geotechnical Engineers have been providing continuing advice to Construction Control during the construction process, including advising on stabilisation of the batters using rock-bolted reinforced shotcrete.

2 Subsurface Conditions

The excavation along the eastern boundary of the site has exposed a subsurface profile of loose, uncontrolled fill of sandy clay, silty clay, clayey sand, and clayey silty sand to $\sim 2m$ depth, over very stiff sandy clay residual soils to $\sim 2m/3m$ depth, underlain by weak to strong, highly weathered (HW), moderately weathered (MW), and slightly weathered (SW) siltstone bedrock to the base of the excavation at a maximum of $\sim 7.5m$ depth.

The loose uncontrolled fill in the upper ~2m of the profile is a backfilled shared services trench. This fill is poorly compacted or uncompacted, and was found to be ~3.6m wide (although was previously indicated to be ~1.5m wide on the LDA design drawings). The soils at the base of this trench were wet, indicating that water had been sitting in the trench backfill despite the current dry conditions.

3 Batter Stabilisation

The basement excavation abutted the boundary of the site, meaning that the space restrictions prevented the excavation from being benched or battered back to a stable angle. Given the depth of the excavation, it was deemed that some form of batter stabilisation would be required to maintain safety.

ACT Geotech conducted a geotechnical investigation for the site in September 2015, which included four (4) auger boreholes along the eastern side of the site (boreholes 10A to 13A). These boreholes were drilled using a large backhoe with a 300mm diameter auger, and found weak to medium strong bedrock at 0.4m/0.7m depth, with auger refusal occurring at 0.8m/2.3m depth on strong bedrock. Given the strong rock present, Construction Control arranged for a 80 tonne piling rig to drill some further test holes along this side of the site. These boreholes were drilled in November 2015 (boreholes #1 to #3), with drilling penetration rates found to be extremely slow due to the very strong to extremely strong rock present. Point load testing was conducted on rock samples from these holes, which found the bedrock to have unconfined compressive strengths of up to 204MPa (about 10 times stronger than structural concrete).

It was therefore deemed that the drilling of soldier pier holes would be difficult, slow, and impractical due to the extremely strong rock present. For these reasons, and given the perceived good rock conditions (conducive to stability), Construction Control pursued an option of reinforced shotcrete stabilisation, as opposed to soldier pile wall for the temporary excavation support system. This form of stabilisation was considered to be adequate, given that the subsurface profile primary comprised good-quality, very strong rock, rather than potentially unstable soll.

Therefore, the excavation batter had been progressively stabilised using reinforced shotcrete, held to the face with two rows of rock bolts, however, a failure of the central section of the batter still occurred. The reinforced shotcrete stabilisation comprised 200mm thick shotcreted concrete with two layers of slab mesh reinforcement. The shotcrete was pinned to the face along the top edge with ~2m long reo bars, and two rows of 100mm diameter, 2m long rock bolts (N32 reinforcement bar, grouted into a 100mm diameter hole). The rock bolts were spaced at ~1.5m along the batter face. Construction Control indicated a preference for more and shorter rock bolts rather than fewer and longer rock bolts.



Given that the rock face is stable against a deep-seated, circular slip failure, the intent of this form of stabilisation is to stabilise the rock face, and prevent any rock from falling to the face (rather than acting as a retaining wall). The stabilisation works by the load of the lateral pressure of the soil/rock (and self-weight of the shotcrete) being resisted by the rock bolts (the resisting force is the friction between the sides of the rock bolts and the rock itself). Calculations were conducted to ensure that the total frictional resistance forces were five times greater than the lateral pressure of the soil/rock.

ACT Geotech carried out regular inspections of the rock face to check for any signs of instability, as well as the rock bolt holes (after drilling, but before grouting) to ensure that the assumed rock friction was present, and to check that they were installed in accordance with our advice. All stabilisation work (rock bolting and shotcreting) was carried out correctly and in accordance with recommendations.

These inspections noted the potential instability of the backfill in the upper $\sim 2m$ (although this was indicated to be $\sim 1m$ wide, however, was actually about 3.6m wide). The exposed rock below $\sim 2m$ depth was generally weak and highly weathered (HW), quickly becoming medium strong to strong and moderately weathered (MW) and slightly weathered (SW) below about 3m/4m depth. An assessment of the joint orientations was carried out (through logging of this exposed batter face, as well as the exposed batter faces on the other three sides of the basement excavation). This assessment found a predominant joint set to be dipping steeply in a northerly direction into the basement excavation. This would make the southern side of the excavation potentially unstable, however, it makes the eastern batter face inherently stable. This unfavourable joint set orientation forced the southern side of the basement excavation to be battered back at $\sim 50^{\circ}$. It also forced the southern side of the tank excavation to be battered back at $\sim 50^{\circ}$. These geological features were consistent over the large site, and there were no signs of potential unstable geology in the exposed eastern batter face prior to the failure.

4 Batter Failure Assessment

It is assessed that the following issues have contributed to the failure of the batters:

- The poorly compacted fill in the upper ~2m of the soil profile (the very loose backfill of the shared services trench) has completely lost all shear strength, and a slip failure has initiated. The failure plane is the interface between the natural soil and the edge of the backfilled trench.
- It appears that there is a zone/bed of weak rock behind the batter face (hidden behind the face and not seen during inspection of the exposed rock face). This zone/bed was orientated to be dipping steeply into the excavation, and it appears that the plane of this zone coincided with the failure plane in the backfilled trench above.
- There was water ponded at the base of the backfilled services trench, and this perched water would have infiltrated into the weak rock zone, causing a decrease in friction and a loss of shear strength on that rock plane. The confluence of the two failure planes, combined with perched water infiltration is the primary cause of the failure. Given the recent cold snap with overnight temperatures as low as -8°, there is potential for the perched water within the rock joints or weak zone to have frozen and expanded, causing the rock to separate from the face.
- In the failed sections, the reinforced shotcrete has not been able to stabilise the batter sufficiently due to inadequate "hold" on the batter faces. This appears to be due to the fact that the rock bolts that are supposed to hold the shotcrete to the face are not long enough. The rock bolts were 2m long, and the failure plane is up to 3.6m back from the batter face. There appeared to be no reason for the rock bolts to be longer than 2m given that (1) there were no geological reason as there appeared to be no unfavourable joint sets on this batter face, and (2) the backfilled trench was indicated to be ~1m wide, so 2m long rock bolts would extend past this zone. If the rock bolts were longer, and extended past the failure plane, then it is less likely that the failure would have occurred.
- This was a localised failure, due to the localised weak zone/bed in the rock. The other sections of reinforced shotcrete stabilisation have worked well and performed as they were designed to do. The unknown, localised weak zone of the rock has caused the localised failure.
- Based on witness statements, it appears that the reinforced shotcrete facing fell vertically, rather than pulling laterally off the face. Therefore, the lack of supporting rock material could have contributed to the failure.
- Figure 1 is a sketch showing the likely failure mechanism is the localised failed section.

Construction Control had engaged ACT Geotech as a geotechnical consultant to provide them with advice on the stability of the batters. They were being proactive and following advice as required, and were aware of the potential instability of the basement excavation batters, which is why they took reasonable actions to prevent failures by stabilising the batter faces with rock-bolted reinforced shotcrete. Unfortunately, in this instance, the shotcrete stabilisation did not perform satisfactorily in one localised section due to the unknown (hidden weak zone in the rock behind the batter face) and adverse soil/rock conditions.

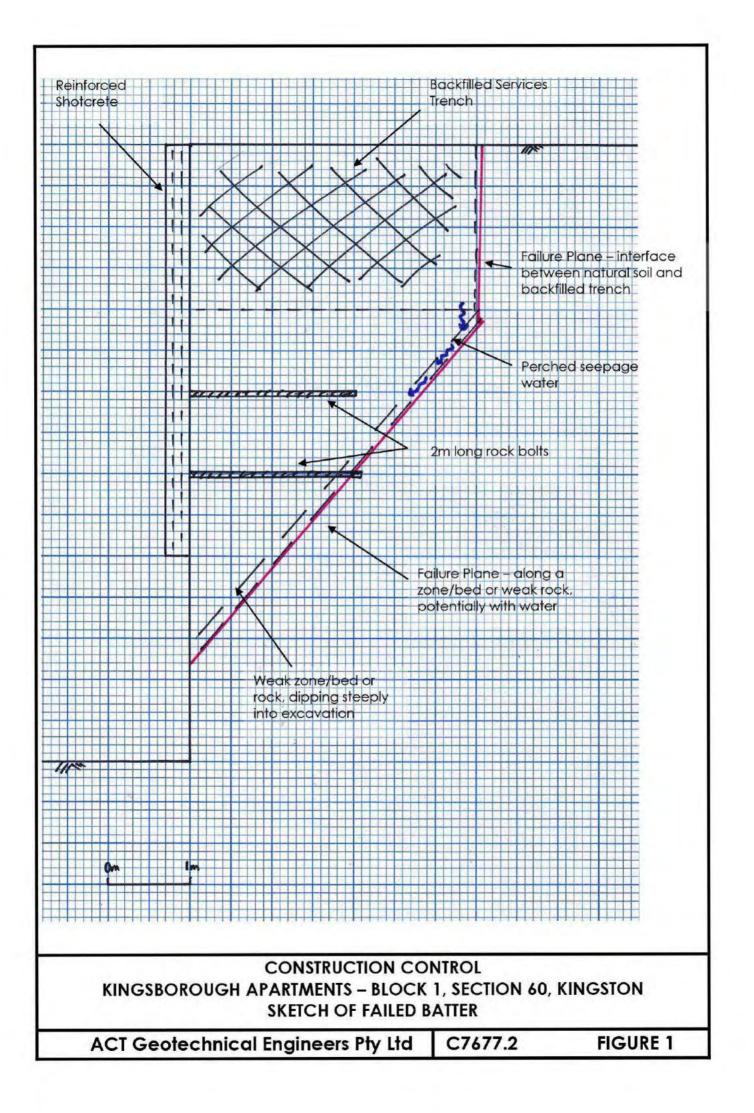


5 Avoidance of Batter Failure

Given the likely cause(s) of the batter failure, it is assessed that the below steps may have prevented the failure:

- The use of soldier piles as the temporary excavation support system, rather than reinforced shotcrete stabilisation. It should be noted that even with this methodology, local failures could still have occurred between the soldier piles, especially in the very loose backfill zone in the upper ~2m. Also, as stated in Section 3, the bedrock was assessed as being too strong to be able to dill soldier pile holes, so this method was not suitable for this site.
- If still using the reinforced shotcrete stabilisation, the rock bolts could have been longer to extend past the failure plane (say 6m long).
- Excavaling the rock material of the 3rd lift in alternate stages to provide more support below the reinforced shotcrete.





From: ^{2.2(a)(ii)} @ccontrol.com.au> Sent:12/07/2017 11:49 PM To: "Mason, Greg (ACT WorkSafe)" <Greg.Mason@act.gov.au> Cc: ^{2.2(a)(ii)} @ccontrol.com.au> Subject:Kingsborough Update Attachments:Exclusion Zone 20170712.pdf

Greg,

Please find attached site layout identifying exclusion zone delineating the area under the prohibition notice for the Kingsborough site. The ATF for this area will be delivered to site this morning.

As per our discussions on site on Wednesday 12 July 2017, the non-disturbance notice has been rescinded, allowing the following activities to proceed:

- 1. Work on the site outside of the exclusion zone subject to the prohibition notice
- 2. Minor works within the excluded area to allow safe access for the geotechnical and/or structural engineers. This will include using an excavator to push the ATF fencing into a safe position, minor battering works at the top of the excavation, and potentially removal of exposed services to reduce the risk of falling objects.
- 3. Provide access to the excluded area for investigative works by the geotechnical and/or structural engineers in order to develop plans to a) make the area safe, and b) develop a remediation plan

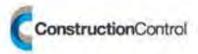
The documents requested at yesterday's meeting were compiled on a USB stick and delivered to Rod Carnall late yesterday. Please advise if you require any further details.

If you have any questions please let me know.

Thanks,

2.2(a)(ii)

Construction Control Cooyong Centre | 1 Torrens Street, Braddon ACT 2612 PO Box 750 Canberra ACT 2601 Mobile 2.2(a)(ii) Phone 02 6257 4775 | Fax 02 6248 9094 www.ccontrol.com.au

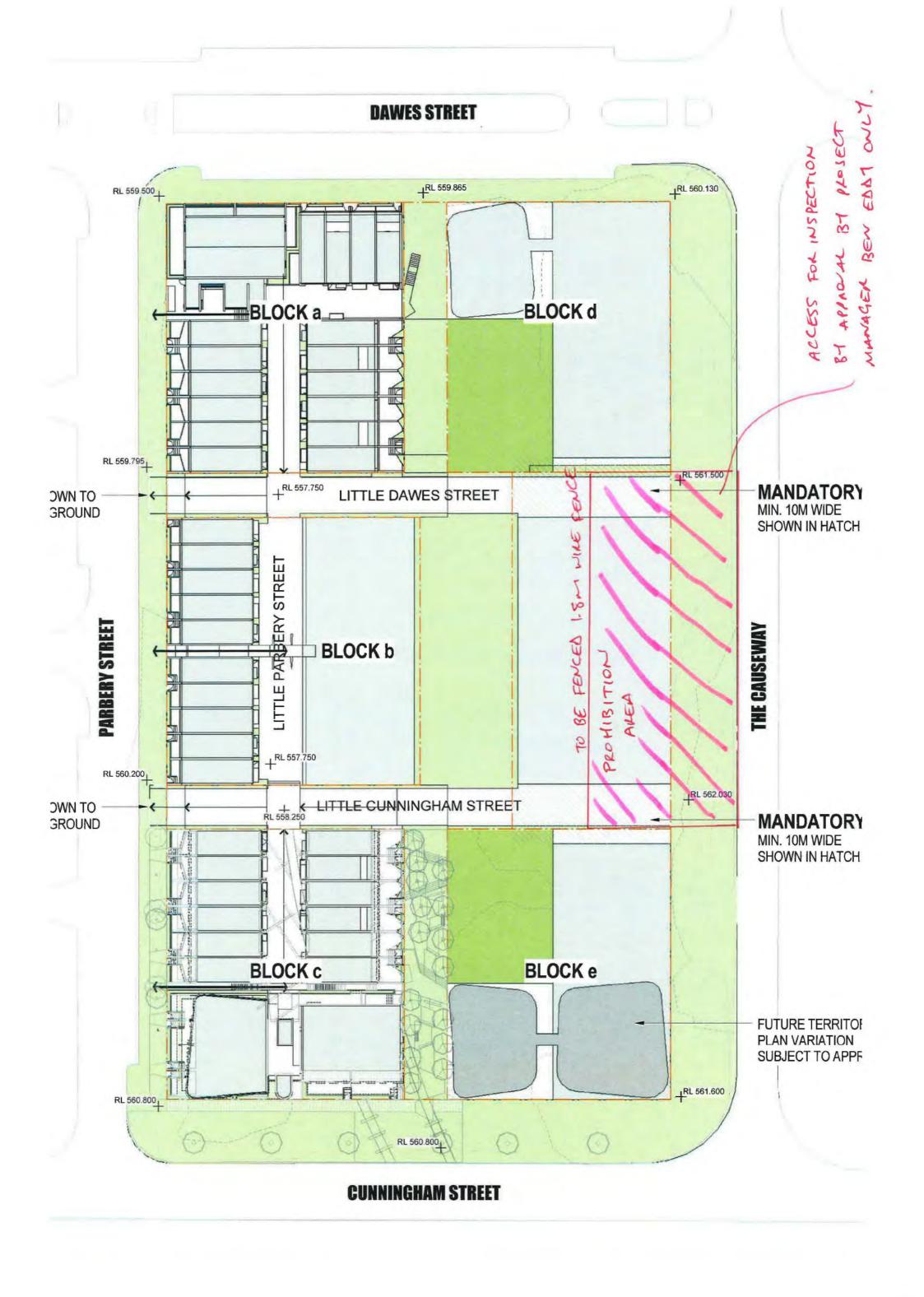


Commitment to excellence

MASTER BUILDERS ASSOCIATION PROJECT OF THE YEAR AWARD WINNERS



This e-mail and any attachments may contain privileged and confidential information intended only for the use of the addressee named above. If you are not the intended recipient of this message you are hereby notified that any use, dissemination, distribution or reproduction of this message is prohibited. If you have received this message in error please notify the sender immediately and destroy any copies you may have.



the second second second second

From:"Schofield, Ross" <Ross.Schofield@act.gov.au> Sent:13/07/2017 2:28 PM To:"Mason, Greg (ACT WorkSafe)" <Greg.Mason@act.gov.au> Subject:FW: Retaining Wall collapsed in Building Site adjacent to Cunningham Street/The Causeway - on 11th July 2017 [SEC=UNCLASSIFIED]

FYI

From: Sent: Wednesday, 12 July 2017 4:10 PM To: 2.2(a)(ii) Chowdhury, Mynul Cc: Baker, Stephen; 2.2(a)(ii)

Subject: Retaining Wall collapsed in Building Site adjacent to Cunningham Street/The Causeway - on 11th July 2017

@smec.com]

Hi 2.2(

As requested I attended the development site on the corner of Cunningham Street and The Causeway in Kingston,

where a retaining wall had collapsed above an approximately 7.5m deep excavation, Tuesday, 11th July 2017, 12.30pm. I inspected the building site from a safe distance and noted that centre part of the retaining wall had collapsed over a length of approximately 20 m. We were informed by site personnel the excavation depth at the location of the failure was 7.5m. The collapsed section of retaining wall is immediately adjacent to the 10m wide parking bays with footpath on The Causeway. The Causeway footpath was barricaded with tapes. Cracks were observed on footpath pavers which were located 2m away from the collapsed wall. The surrounding area was inspected and neither cracks, deformation of pavers or settlement were identified.

As discussed on site we have recommended to Roads ACT that it extend the barricaded area to prevent vehicle and pedestrian access to a 10m wide area adjacent to the collapsed until such time as the builder's geotechnical engineer has certified the excavation to have been remediated and stable.

We would also recommend following for further precaution.

- Regular monitoring of the collapsed area. If damage appears to be propagating close The Causeway then the exclusion zone may need to be extended.
- 2. Check whether any stormwater pipes were damaged or are leaking into the surrounding area.

Please feel free to contact me if you have any queries

Best Regards, 2.2(a)(ii) 2.2(a)(ii) 2.2(a)(ii)

Local People, Global Experience

SMEC (Member of the Surbana Jurong Group)

Suite 2, Level 1, 243 Northbourne Avenue, Lyneham, ACT, 2602, Australia

www.smec.com Linkedin

Disclaimer. The information contained in this e-mail and any attached file is confidential. It is intended solely for the addressee, and may not be used, reproduced, disclosed or distributed without SMECs permission. SMEC accepts no liability for loss or damage (whether caused by negligence or not) resulting from the use of any attached files.

From: "Mason, Greg (ACT WorkSafe)" Sent:14/07/2017 6:38 AM To: ¹2.2(a) @ccontrol.com.au''' 2.2(a) @ccontrol.com.au> Cc: ¹2.2(a)(ii) @ccontrol.com.au''' 2.2(a)(ii) @ccontrol.com.au>; ¹2.2(a)(ii) @ccontrol.com.au''' 2.2(a)(ii) @ccontrol.com.au>; "Alford, Robert" <Robert.Alford@act.gov.au> Subject:Non- Disturbance Notice - Block 1 Section 60 Kingston - Effective 16:15 hrs 14 July 2017 Attachments:Non-Disturbance - Construction Control - Kingston - 14 July 2017.docx

Hi^{2.2(a)}

New non-disturbance notice for the batter failure incident of 12 July 2017as discussed

Greg Mason | Work Safe Inspector Phone: 02 6205 8307 |Email: greg.mason@act.gov.au WorkSafe ACT | Access Canberra | ACT Government GPO Box 158 Canberra City ACT 2601 | www.act.gov.au



Connect with WorkSafe ACT on: WorkSafe ACT | Twitter | Linkedin | You Tube | Pinterest

Subscribe to <u>eNEWS and Construction Newsletter</u> a free email subscription service keeping you informed on the latest health and safety issues that affect workplaces in ACT.





Non-Disturbance Notice Page 1 of 2

Notice No: N S8DJ5N-ND2

			Inspector ID numbe								
Greg M	ason		P01873	16:15pm 14/07/2017							
Recipier	-			Method of Service (s 209)							
2.2(a)(ii)		Personal	Other 🛛 Email							
The per	son being	g given the direction ar	nd/or this notice	Company 🖂 individual 🗌							
Vame of	Individua	I or Registered Compan	y.	ACN (if company):							
Constru	iction Co	ntrol Australia Pty Ltd	le								
Busines	s or tradin	g name (if different)		ABN (if any):							
Address											
1 Torrer	ns Street	Braddon ACT 2601									
🛛 (a)	Prese Brief o On ² on w	rve the site at which a no lescription of incident 11 July 2017 at the Kir hich 2 layers of 100x1	e of these alternatives applies) otifiable incident has occurred; ngsborough constrcution site, ground a 00x8mm mesh had been connected au	nd shotcreted, failed, causing							
		tantial damage to gas orted excavation face.	lines, fibre optic cables and high voltage	ge cables benind the benind the							
_		Prevent the disturbance of a particular site (including the operation of plant) in other circumstances. Those circumstances are:									
(d) []	Those	circumstances are	articular site (including the operation of pla	nt) in other circumstances.							
The site WB: a re South e	Those	circumstances are this notice relates to a site includes any pla of lower basement are	articular site (including the operation of pla nt, substance, structure or thing associated ea on the Construction Control Kingsbo	l with the site)							
The site (NB: a re South e Section	Those to which the eference the ast side 60, King	circumstances are this notice relates: o a site includes any pla of lower basement are oston	nt, substance, structure or thing associated	l with the site)							
The site <i>NB: a re</i> South e Section The mea 1 Exist	Those to which the eference to ast side 60, King asures to ting temp	circumstances are this notice relates: to a site includes any pla of lower basement are ston be taken to preserve a s porary construction fer	nt, substance, structure or thing associated ea on the Construction Control Kingsbo	with the site) prough construction site, Block 1,							
The site <i>NB: a re</i> South e Section The mea 1 Exist	Those to which the eference the ast side 60, King asures to tring temp porkers o	circumstances are this notice relates: to a site includes any pla of lower basement are ston be taken to preserve a s porary construction fer	nt, substance, structure or thing associated ea on the Construction Control Kingsbo ite or prevent disturbance of a site: noing around the incident site to be sec	a with the site) prough construction site, Block 1, cured nes in place							
The site NB: a re South e Section The mea L Exist 2. All w Date of i	Those to which the eference the ast side 60, King asures to ting temp forkers of ssue:	circumstances are this notice relates. o a site includes any pla of lower basement are oston be taken to preserve a s borary construction fer n the site to be advise	nt, substance, structure or thing associated ea on the Construction Control Kingsbo ite or prevent disturbance of a site: noing around the incident site to be sed ed of the exclusion/non-disturbance zor	a with the site) prough construction site, Block 1, cured nes in place							
The site NB: a re South e Section The mea Exist All w Date of i mportar	Those to which is eference to ast side 60, King asures to ting temp forkers o ssue: asue: asue: asue:	this notice relates: o a site includes any plat of lower basement are porary construction fer in the site to be advise 14 July 2017 tion about this notice re does not prevent any a	nt, substance, structure or thing associated ea on the Construction Control Kingsbo ite or prevent disturbance of a site: noing around the incident site to be sec ed of the exclusion/non-disturbance zor The specified period (of not more tha for which this notice applies (s199(2) action (s 199(4)):	a with the site) prough construction site, Block 1, cured nes in place							
he site NB: a re South e Section The mea Exist 2. All w Date of i	Those to which is eference it ast side 60, King asures to ting temp forkers of ssue: at informa This notic (a) t	this notice relates: o a site includes any plat of lower basement are gston be taken to preserve a st corary construction fer in the site to be advise 14 July 2017 tion about this notice re does not prevent any a o assist an injured perso	nt, substance, structure or thing associated ea on the Construction Control Kingsbo ite or prevent disturbance of a site: noing around the incident site to be sec ad of the exclusion/non-disturbance zor The specified period (of not more that for which this notice applies (s199(2) action (s 199(4)): on; or	a with the site) brough construction site, Block 1, cured nes in place							
The site NB: a re South e Section The mea Dete of i Date of i	Those to which the eference it ast side 60, King asures to ting temp forkers of ssue: the informa This notice (a) t (b) t	this notice relates: o a site includes any plat of lower basement are ston be taken to preserve a site porary construction fer n the site to be advise 14 July 2017 tion about this notice re does not prevent any a o assist an injured perso o remove a deceased person	nt, substance, structure or thing associated ea on the Construction Control Kingsbo ite or prevent disturbance of a site: noing around the incident site to be sec ad of the exclusion/non-disturbance zor The specified period (of not more that for which this notice applies (s199(2) action (s 199(4)): on; or erson; or	a with the site) brough construction site, Block 1, sured hes in place an 7 days) 19 July 2017							
The site NB: a re South e Section The mea 1 Exist 2 All w Date of i mportar	Those to which i eference t ast side 60, King sures to ting temp forkers o ssue: this notic (a) t (b) t (c) t	this notice relates: o a site includes any plat of lower basement are oston be taken to preserve a st porary construction fer in the site to be advise 14 July 2017 tion about this notice te does not prevent any a to assist an injured person o remove a deceased per hat is essential to make	nt, substance, structure or thing associated ea on the Construction Control Kingsbo ite or prevent disturbance of a site: noing around the incident site to be sec ed of the exclusion/non-disturbance zor The specified period (of not more that for which this notice applies (s199(2) action (s 199(4)): on; or erson; or the site safe or to prevent a further inciden	a with the site) brough construction site, Block 1, sured hes in place an 7 days) 19 July 2017							
The site NB: a re South e Section The mea I Exis 2 All w Date of I	Those to which is beference to ast side 60, King asures to ting temp forkers o ssue: this notice (a) t (b) t (c) t (d) t	this notice relates: o a site includes any plat of lower basement are porary construction fer in the site to be advise 14 July 2017 tion about this notice te does not prevent any a coassist an injured person o remove a deceased per hat is associated with a	nt, substance, structure or thing associated ea on the Construction Control Kingsbo ite or prevent disturbance of a site: noing around the incident site to be sec ed of the exclusion/non-disturbance zor The specified period (of not more tha for which this notice applies (s199(2) action (s 199(4)): on; or erson; or the site safe or to prevent a further inciden police investigation; or	a with the site) brough construction site, Block 1, sured hes in place an 7 days) 19 July 2017							
The site NB: a re South e Section The mea 1 Exis 2 All w Date of i mportar	Those to which is eference to ast side 60, King asures to ting temp forkers o ssue: asue: asue: this notic (a) to (b) to (c) to	this notice relates: o a site includes any plat of lower basement are aston be taken to preserve a site porary construction fer in the site to be advise 14 July 2017 tion about this notice is does not prevent any a to assist an injured perso o remove a deceased per hat is essential to make hat is essential to make hat is associated with a or which an inspector has an obligation to comply	nt, substance, structure or thing associated ea on the Construction Control Kingsbo ite or prevent disturbance of a site: noing around the incident site to be sec ed of the exclusion/non-disturbance zor The specified period (of not more tha for which this notice applies (s199(2) action (s 199(4)): on; or erson; or the site safe or to prevent a further inciden police investigation; or	a with the site) brough construction site, Block 1, bured hes in place an 7 days) 19 July 2017);							

WorkSafe ACT, PO Box 158 Canberra ACT 2601 | Email: worksafe@act.gov.au | Phone: (02) 6207 3000 | Fax: (02) 6205 0336





Non-Disturbance Notice

Non-Disturbance Notice – Further Information

If you have any questions you may contact the inspector who issued this notice.

Display of Notices

A person to whom a notice is issued must, as soon as possible, display a copy of the notice in a prominent place at or near the workplace, or part of the workplace, at which work is being carried out that is affected by the notice (s 210(1)).

A person must not intentionally remove, destroy, damage or deface a notice displayed under s 210(1) while the notice is in force (s 210(2)).

The maximum penalty for failing to comply with these provisions is \$5,000 for an individual or \$25,000 for a corporation .

Issue of subsequent notices by inspector

If an inspector considers it necessary to do so, he or she may issue 1 or more subsequent non-disturbance notices to a person, whether before or after the expiry of the previous notice, each of which must comply with section 199 (s201).

Changes to notice by inspector

An inspector may make minor changes to a notice for clarification, to correct errors or references, or to reflect changes of address or other circumstances (s206).

Review of this Notice

A person may apply to the ACT Civil and Administrative Tribunal (ACAT) for review of the decision to issue this notice. Information about how to make that application can be obtained from ACAT by telephoning 6207 1740 or at www.acat.act.gov.au. The application must be made within 28 days of the issue of the notice. A person who may seek review of issue of this notice may also apply in writing for a statement of reasons under s 22B of the ACAT Act 2008 within 28 days of the notice being given.

The decision to issue this notice is also reviewable under the Administrative Decisions (Judicial Review) Act 1989 on application to the Supreme Court of the ACT. Information about the procedure for making that application can be obtained by calling the Supreme Court Registry on 6207 1786.

Further, a person who has a complaint about the issue of this notice can complain to the Commonwealth Ombudsman by calling 1300 362 072.

PRIVACY NOTICE: The personal information collected about you is being collected for the purpose of securing the safety of people at work by the authority of the Work Health and Safety Act 2011. The information can be disclosed, in accordance with the Work Health and Safety Act 2011, to other law enforcement agencies including the Australian Federal Police, ACT Planning & Land Authority and the Office for Children, Youth & Family Support

WorkSafe ACT Contact Details

PO Box 158, Canberra, ACT 2601

email: worksafe@act.gov.au

Phone: (02) 6207 3000

Fax: (02) 6205 0336

ENGLISH	lf you need interpreting help, telephone: إذا إحتجت للمساعدة بالترجية الشغوية إتصل، بالهاتف	ITALIAN MALTESE	Se avete bisogno di un interprete, telefonate al numero Jekk ghand ek bżonn I-ghajnuna t'interpretu, cempel
CHINESE	如果您需要口译员帮助,请拨电话	PERSIAN	اگر به ترجمه شفاهی احتیاج دارید به این شماره تلفن کنید
CROATIAN	Ako trebate pomoć tumača telefonirajte	RUSSIAN	Если вам нужна помощь переводчика, звоните по телефону
DARI GREEK	اگر به کمک تر جمه شقاهی ضرورت دارید. به این شماره تیلفون کلبد محمد محمدقدید بعده احد مقدمی مدیر	SPANISH	Si necessita la asistencia de un intérprete, llame al
GREEN	Αν χρειάζεστε διερμηνέα τηλεφωνήσετε στο	VIETNAMESE	Nế ubạ n cầ n mộ t ngư ở ithông ngôn hãy gọ i

điệ n thoa i

TRANSLATING AND INTERPRETING SERVICE

131 450

WorkSafe ACT, PO Box 158 Canberra ACT 2601 | Email: worksafe@act.gov.au | Phone: (02) 6207 3000 | Fax: (02) 6205 0336 www.worksafe.act.gov.au

Last Updated Jan 2012

From: ^{2.2(a)(II)}	@ccontrol.com.au>	
Sent:14/07/2017 5:4	1AM	
To:"Mason, Greg (Ad	CT WorkSafe)" <greg.mason@act.gov.au></greg.mason@act.gov.au>	>
Cc:'2.2(a)(ii)	@ccontrol.com.au>;2.2(a)(ii)	@ccontrol.com.au>; ^{2.2(a)(i}
2.2(a)(ii)		@ccontrol.com.au>;2.2(a)(ii)
2.2(a)(ii)	@ccontrol.	

@ccontrol.com.au>

Subject:RE: Kingsborough Update

Attachments: C7677-3 - Blocks B & C - Kingsborough Apartments - Block 1 Section 60 Ki....pdf, 159347-[001]-AWT Letter General-14.07.17.pdf

Greg,

Following Wednesday's discussions our Geotechnical Engineer and Structural Engineer have conducted their investigations and we attach these reports for you review and record.

As mentioned in 2.2(a) prior email below we have now identified the prohibition zone by way of temporary fencing and have opened the remainder of the site for the recommencement of works.

We have commenced discussions on proposed remediation with our design team.

Moving forward and over the next week, with the input of our engineers, we will look to document comprehensive and detailed procedures for-

- Firstly, the disconnection of damaged and redundant services and stabilisation of the area,
- And secondly, the method for completing the basement shoring wall. .

Construction Control will employ the services of an independent engineer who will then provide a secondary review of these procedures for safety.

When these measures have been satisfied we will again write to ACT Worksafe and request the removal of the prohibition notice and for works to commence as per the documented procedures.

If you require any further information in the interim we are obviously happy to assist.

Regards,

2.2(a)(ii)

Construction Control PO Box 750 Canberra ACT 2601 Mobile 2.2(a)(ii) www.ccontrol.com.au



Commitment to excellence

MASTER BUILDERS ASSOCIATION PROJECT OF THE YEAR AWARD WINNERS



From: 2.2(a)(ii) Sent: 13 July, 2017 9:49 AM To: greg.mason@act.gov.au Cc: 2.2(a)(ii) @ccontrol.com.au> Subject: Kingsborough Update

Greg,

Please find attached site layout identifying exclusion zone delineating the area under the prohibition notice for the Kingsborough site. The ATF for this area will be delivered to site this morning.

As per our discussions on site on Wednesday 12 July 2017, the non-disturbance notice has been rescinded, allowing the following activities to proceed:

- 1. Work on the site outside of the exclusion zone subject to the prohibition notice
- 2. Minor works within the excluded area to allow safe access for the geotechnical and/or structural engineers. This will include using an excavator to push the ATF fencing into a safe position, minor battering works at the top of the excavation, and potentially removal of exposed services to reduce the risk of falling objects.
- 3. Provide access to the excluded area for investigative works by the geotechnical and/or structural engineers in order to develop plans to a) make the area safe, and b) develop a remediation plan

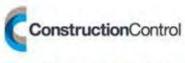
The documents requested at yesterday's meeting were compiled on a USB stick and delivered to Rod Carnall late yesterday. Please advise if you require any further details.

If you have any questions please let me know.

Thanks,

2.2(a)(ii)

Construction Control Cooyong Centre | 1 Torrens Street, Braddon ACT 2612 PO Box 750 Canberra ACT 2601 Mobile 2.2(a)(ii) Phone 02 6257 4775 | Fax 02 6248 9094 www.ccontrol.com.au



Commitment to excellence

MASTER BUILDERS ASSOCIATION PROJECT OF THE YEAR AWARD WINNERS



This e-mail and any attachments may contain privileged and confidential information intended only for the use of the addressee named above. If you are not the intended recipient of this message you are hereby notified that any use, dissemination, distribution or reproduction of this message is prohibited. If you have received this message in error please notify the sender immediately and destroy any copies you may have.



ACT Geotechnical Engineers Pty Ltd

ACN 063 673 530

5/9 Beaconsfield St, Fyshwick, ACT, 2609 PO Box 9225, Deakin, ACT, 2600 Ph: (02) 6285 1547 Fax: (02) 6285 1861

12 July 2017 Our ref: JM/C7677

Construction Control PO Box 750 CANBERRA ACT 2601

Attention: 2.2(a)(ii)

KINGSBOROUGH APARTMENTS - BLOCKS B & C - BLOCK 1, SECTION 60, KINGSTON GEOTECHNICAL ASSESSMENT OF BATTER FAILURE - 12 JULY 2017

1 Introduction

At the request of Construction Control, ACT Geotechnical Engineers Pty Ltd are pleased to provide a geotechnical assessment of a failed section of batter, as part of the construction of the above development in Kingston, ACT.

The development comprises the construction of a multi-storey apartment development, with a two-level basement for carparking. A section of the cut batter along the eastern boundary of the site has failed, causing ~100m³ of soil to fall from the batter face. The purpose of the assessment is to assess the cause of the failure. ACT Geotechnical Engineers have been providing continuing advice to Construction Control during the construction process, including advising on stabilisation of the batters using rock-bolted reinforced shotcrete.

2 Subsurface Conditions

The excavation along the eastern boundary of the site has exposed a subsurface profile of loose, uncontrolled fill of sandy clay, silty clay, clayey sand, and clayey silty sand to $\sim 2m$ depth, over very stiff sandy clay residual soils to $\sim 2m/3m$ depth, underlain by weak to strong, highly weathered (HW), moderately weathered (MW), and slightly weathered (SW) siltstone bedrock to the base of the excavation at a maximum of $\sim 7.5m$ depth.

The loose uncontrolled fill in the upper ~2m of the profile is a backfilled shared services trench. This fill is poorly compacted or uncompacted, and was found to be ~3.6m wide (although was previously indicated to be ~1.5m wide on the LDA design drawings). The soils at the base of this trench were wet, indicating that water had been sitting in the trench backfill despite the current dry conditions.

3 Batter Stabilisation

The basement excavation abutted the boundary of the site, meaning that the space restrictions prevented the excavation from being benched or battered back to a stable angle. Given the depth of the excavation, it was deemed that some form of batter stabilisation would be required to maintain safety.

ACT Geotech conducted a geotechnical investigation for the site in September 2015, which included four (4) auger boreholes along the eastern side of the site (boreholes 10A to 13A). These boreholes were drilled using a large backhoe with a 300mm diameter auger, and found weak to medium strong bedrock at 0.4m/0.7m depth, with auger refusal occurring at 0.8m/2.3m depth on strong bedrock. Given the strong rock present, Construction Control arranged for a 80 tonne piling rig to drill some further test holes along this side of the site. These boreholes were drilled in November 2015 (boreholes #1 to #3), with drilling penetration rates found to be extremely slow due to the very strong to extremely strong rock present. Point load testing was conducted on rock samples from these holes, which found the bedrock to have unconfined compressive strengths of up to 204MPa (about 10 times stronger than structural concrete).

It was therefore deemed that the drilling of soldier pier holes would be difficult, slow, and impractical due to the extremely strong rock present. For these reasons, and given the perceived good rock conditions (conducive to stability), Construction Control pursued an option of reinforced shotcrete stabilisation, as opposed to soldier pile wall for the temporary excavation support system. This form of stabilisation was considered to be adequate, given that the subsurface profile primary comprised good-quality, very strong rock, rather than potentially unstable soll.

Therefore, the excavation batter had been progressively stabilised using reinforced shotcrete, held to the face with two rows of rock bolts, however, a failure of the central section of the batter still occurred. The reinforced shotcrete stabilisation comprised 200mm thick shotcreted concrete with two layers of slab mesh reinforcement. The shotcrete was pinned to the face along the top edge with ~2m long reo bars, and two rows of 100mm diameter, 2m long rock bolts (N32 reinforcement bar, grouted into a 100mm diameter hole). The rock bolts were spaced at ~1.5m along the batter face. Construction Control indicated a preference for more and shorter rock bolts rather than fewer and longer rock bolts.



Given that the rock face is stable against a deep-seated, circular slip failure, the intent of this form of stabilisation is to stabilise the rock face, and prevent any rock from falling to the face (rather than acting as a retaining wall). The stabilisation works by the load of the lateral pressure of the soil/rock (and self-weight of the shotcrete) being resisted by the rock bolts (the resisting force is the friction between the sides of the rock bolts and the rock itself). Calculations were conducted to ensure that the total frictional resistance forces were five times greater than the lateral pressure of the soil/rock.

ACT Geotech carried out regular inspections of the rock face to check for any signs of instability, as well as the rock bolt holes (after drilling, but before grouting) to ensure that the assumed rock friction was present, and to check that they were installed in accordance with our advice. All stabilisation work (rock bolting and shotcreting) was carried out correctly and in accordance with recommendations.

These inspections noted the potential instability of the backfill in the upper $\sim 2m$ (although this was indicated to be $\sim 1m$ wide, however, was actually about 3.6m wide). The exposed rock below $\sim 2m$ depth was generally weak and highly weathered (HW), quickly becoming medium strong to strong and moderately weathered (MW) and slightly weathered (SW) below about 3m/4m depth. An assessment of the joint orientations was carried out (through logging of this exposed batter face, as well as the exposed batter faces on the other three sides of the basement excavation). This assessment found a predominant joint set to be dipping steeply in a northerly direction into the basement excavation. This would make the southern side of the excavation potentially unstable, however, it makes the eastern batter face inherently stable. This unfavourable joint set orientation forced the southern side of the basement excavation to be battered back at $\sim 50^{\circ}$. It also forced the southern side of the tank excavation to be battered back at $\sim 50^{\circ}$. These geological features were consistent over the large site, and there were no signs of potential unstable geology in the exposed eastern batter face prior to the failure.

4 Batter Failure Assessment

It is assessed that the following issues have contributed to the failure of the batters:

- The poorly compacted fill in the upper ~2m of the soil profile (the very loose backfill of the shared services trench) has completely lost all shear strength, and a slip failure has initiated. The failure plane is the interface between the natural soil and the edge of the backfilled trench.
- It appears that there is a zone/bed of weak rock behind the batter face (hidden behind the face and not seen during inspection of the exposed rock face). This zone/bed was orientated to be dipping steeply into the excavation, and it appears that the plane of this zone coincided with the failure plane in the backfilled trench above.
- There was water ponded at the base of the backfilled services trench, and this perched water would have infiltrated into the weak rock zone, causing a decrease in friction and a loss of shear strength on that rock plane. The confluence of the two failure planes, combined with perched water infiltration is the primary cause of the failure. Given the recent cold snap with overnight temperatures as low as -8°, there is potential for the perched water within the rock joints or weak zone to have frozen and expanded, causing the rock to separate from the face.
- In the failed sections, the reinforced shotcrete has not been able to stabilise the batter sufficiently due to inadequate "hold" on the batter faces. This appears to be due to the fact that the rock bolts that are supposed to hold the shotcrete to the face are not long enough. The rock bolts were 2m long, and the failure plane is up to 3.6m back from the batter face. There appeared to be no reason for the rock bolts to be longer than 2m given that (1) there were no geological reason as there appeared to be no unfavourable joint sets on this batter face, and (2) the backfilled trench was indicated to be ~1m wide, so 2m long rock bolts would extend past this zone. If the rock bolts were longer, and extended past the failure plane, then it is less likely that the failure would have occurred.
- This was a localised failure, due to the localised weak zone/bed in the rock. The other sections of reinforced shotcrete stabilisation have worked well and performed as they were designed to do. The unknown, localised weak zone of the rock has caused the localised failure.
- Based on witness statements, it appears that the reinforced shotcrete facing fell vertically, rather than pulling laterally off the face. Therefore, the lack of supporting rock material could have contributed to the failure.
- Figure 1 is a sketch showing the likely failure mechanism is the localised failed section.

Construction Control had engaged ACT Geotech as a geotechnical consultant to provide them with advice on the stability of the batters. They were being proactive and following advice as required, and were aware of the potential instability of the basement excavation batters, which is why they took reasonable actions to prevent failures by stabilising the batter faces with rock-bolted reinforced shotcrete. Unfortunately, in this instance, the shotcrete stabilisation did not perform satisfactorily in one localised section due to the unknown (hidden weak zone in the rock behind the batter face) and adverse soil/rock conditions.



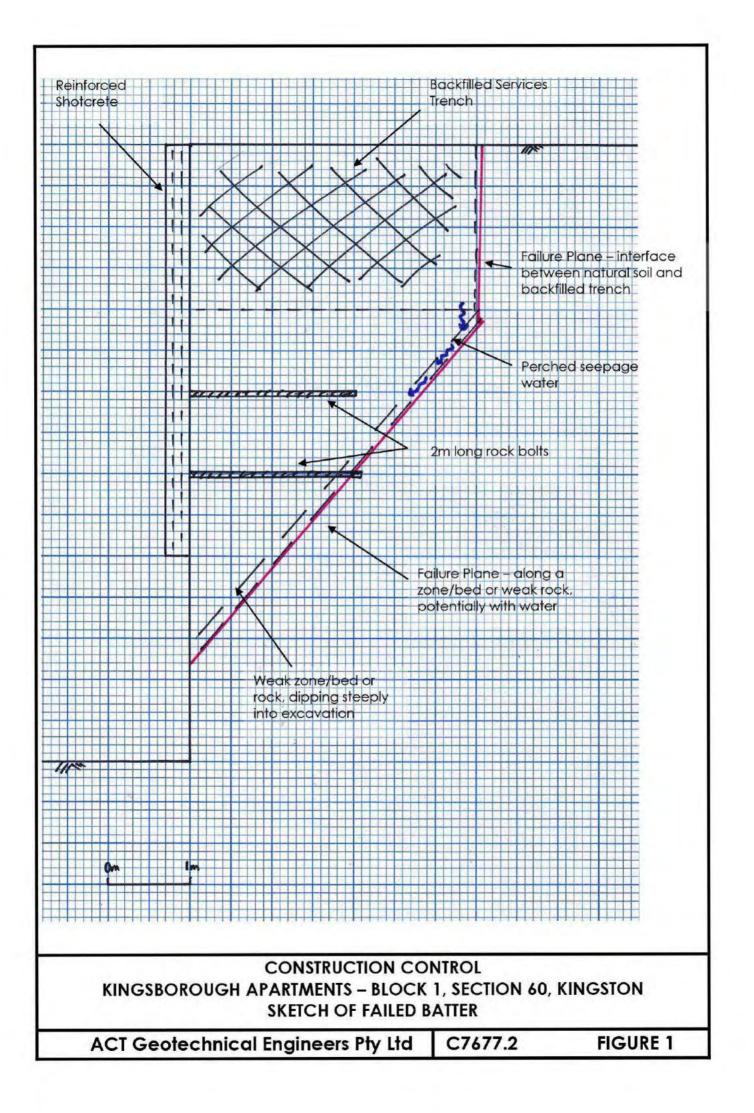
5 Avoidance of Batter Failure

Given the likely cause(s) of the batter failure, it is assessed that the below steps may have prevented the failure:

- The use of soldier piles as the temporary excavation support system, rather than reinforced shotcrete stabilisation. It should be noted that even with this methodology, local failures could still have occurred between the soldier piles, especially in the very loose backfill zone in the upper ~2m. Also, as stated in Section 3, the bedrock was assessed as being too strong to be able to dill soldier pile holes, so this method was not suitable for this site.
- If still using the reinforced shotcrete stabilisation, the rock bolts could have been longer to extend past the failure plane (say 6m long).
- Excavaling the rock material of the 3rd lift in alternate stages to provide more support below the reinforced shotcrete.

Yours faithfully ACT Geotechnical Engineers Pty Ltd





AWT Consulting Engineers Pty Ltd ABN 35 093 828 794

CONSULTING ENGINEERS

Suite 301, 100 Mount St North Sydney NSW 2060 P: (02) 9922 2466 F: (02) 9922 3705 2.2(@awtce.net.au GPO Box 436 Gungahlin ACT 2912 P: (02) 6257 2614 F: (02) 6257 1723 @awtce.net.au

159347

Construction Control Australia Pty Ltd 1 Torrens Street BRADDON ACT 2612

Attention:

14/07/17

2.2(a)(ii)

RE: Kingsborough Development - Shoring

AWT was engaged by Construction Control Australia (CCA) to provide structural services in September 2015.

ACT Geotech provided a Geotechnical Report C7677 on 4th September 2015.

AWT undertook a preliminary design of shoring using bored piers and shotcrete based on the geotechnical advice.

A request for an alternative solution was sought by CCA and ACT Geotech provided advice regarding a vertical excavation with temporary anchors system which has been used on a number of projects successfully in the past but usually requires more detailed assessment by the geotechnical engineer.

The walls of the excavation were required to support vertical structure loads so AWT provided minimum concrete thickness, concrete strength and reinforcement details for the shotcrete to support these loads.

Stage 1 was completed without any issue using this methodology.

AWT carried out inspections of the reinforcement to the wall prior to shotcrete being placed.

During Stage 2 on 11.07.17 a section of this temporary excavated face failed.

2.2(a)(ii) inspected the failed section in the afternoon and observed that sections of shotcrete either side of the failed wall were still intact and holding well despite the section that failed being connected to them and having sheared off during the failure.

Anther observation was that the material exposed in the collapsed section looked to be a combination of fill and fractured rock.

Survey taken at the time indicated the failure plane extended some 3.6m from the face of the shotcrete which AWT understands was beyond the zone of engagement of rock bolts. The sections of shotcrete remaining either side of the failed had moved less than 10mm. This, to us, indicated that the excavated face had failed as a wedge and not due to isolated failure of sections of the wall. Observation on site confirmed this, saying the wall moved from the base first.

Discussion on site the next morning with CCA and ACT Geotech confirmed this to be the most likely cause and that a zone of unfavourable rock joints combined with a backfilled trench somehow initiated the failure behind the zone of effectiveness of the rock bolts.

ACT Geotech has inspected all the remaining vertical cuts and advised these are stable.

AWT is providing a methodology of how to construct a precast wall in lieu of shotcrete for the failed section.

AWT Consulting Engineers Pty Ltd

2.2(a)(II)		
2.2(a)(ii)	_	

Y:\Engine:Jobfiles\2015\1593\159347G-Kingsborough Development - Shoring AWT Letters\159347-[001]-AWT Letter General-14.07.17.doc

From:"Alford, Robert" <Robert.Alford@act.gov.au> Sent:14/07/2017 4:56 PM To:"Mason, Greg (ACT WorkSafe)" <Greg.Mason@act.gov.au> Cc:"Cummins, Bradley" <Bradley.Cummins@act.gov.au>;"Muir, Richard" <Richard.Muir@act.gov.au> Subject:RE: Non- Disturbance Notice - Block 1 Section 60 Kingston - Effective 16:15 hrs 14 July 2017

Hi Greg

Thanks for the update.

Kind Regards

Bob Alford | Senior Manager - Enforcement & Compliance Phone: 02 6205 4261 | Mobile: 0434 85 11 39 | Email: <u>robert.alford@act.gov.au</u> Construction, Environment and Workplace Protection | Access Canberra | ACT Government GPO Box 158 Canberra ACT 2601 | <u>http://www.act.gov.au/accesscbr</u>



Connect with WorkSafe ACT on: <u>WorkSafe ACT</u> | <u>Twitter</u> | <u>Linkedin</u> | <u>You Tube</u> | <u>Pinterest</u> Subscribe to <u>eNEWS and Construction Newsletter</u> a free email subscription service keeping you informed on the latest health and safety issues that affect workplaces in ACT.

From: Mason, Greg (ACT WorkSafe) Sent: Friday, 14 July 2017 4:38 PM To:^{2.2(a)} @ccontrol.com.au Cc:^{2.2(a)}(ii) @ccontrol.com.au; ^{2.2(a)}(ii) @ccontrol.com.au; Alford, Robert Subject: Non- Disturbance Notice - Block 1 Section 60 Kingston - Effective 16:15 hrs 14 July 2017

Hi 2.2(a)

New non-disturbance notice for the batter failure incident of 12 July 2017as discussed

Greg Mason | Work Safe Inspector Phone: 02 6205 8307 |Email: greg.mason@act.gov.au WorkSafe ACT | Access Canberra | ACT Government GPO Box 158 Canberra City ACT 2601 | www.act.gov.au



Connect with WorkSafe ACT on: <u>WorkSafe ACT</u> | <u>Twitter</u> | <u>Linkedin</u> | <u>You Tube</u> | <u>Pinterest</u> Subscribe to <u>eNEWS and Construction Newsletter</u> a free email subscription service keeping you informed on the latest health and safety issues that affect workplaces in ACT.





Non-Disturbance Notice Page 1 of 2

Notice No: N S8DJ5N-ND2

	inspecto		Inspector ID numbe		Additional and the second data and the second se					
Greg Ma	ison		P01873							
Recipient	5		Method of Service (Method of Service (s 209)						
2.2(a)(ii)	5		Personal	Other 🛛	Email					
		given the direction ar			npany 🖾 individual 🗌					
		or Registered Compan		ACN (if co	mpany):					
Construc	ction Cor	trol Australia Pty Ltd								
Business	or trading	name (if different):		ABN (if an	y):					
				1.1.						
Address:										
1 Torren:	s Street	Braddon ACT 2601								
🔄 (a)	Brief de On 1 [°] on wh substa	escription of incident 1 July 2017 at the Kir ich 2 layers of 100x1	otifiable incident has occurred; ngsborough constrcution site, ground a 00x8mm mesh had been connected ar lines, fibre optic cables and high voltag	nd shotcrete	ed, failed, causing					
🗆 (b)			articular site (including the operation of plar	at) in other ci	rcumstances					
	Those of	circumstances are:								
(NB: a ref South ea	a which th	iis notice relates: a site includes any pla if lower basement are	nt, substance, structure or thing associated ea on the Construction Control Kingsbo	with the site	»)					
(NB: a ref South ea Section (o which the ference to ast side c 50, Kings	iis notice relates: a s <i>ite include</i> s any pla if lower basement are ston	ea on the Construction Control Kingsbo	with the site	»)					
(NB: a ref South ea Section (The meas	o which th ference to ast side c 60, Kings sures to b	is notice relates: a s <i>ite include</i> s any pla of lower basement are ston e taken to preserve a si	ea on the Construction Control Kingsbo ite or prevent disturbance of a site:	with the site prough cons	»)					
(NB: a ref South ea Section (The meas 1 Existi	o which the ference to ast side of 60, Kings sures to be ng tempo	is notice relates: a s <i>ite includes any pla</i> f lower basement are ston e taken to preserve a s prary construction fer	ea on the Construction Control Kingsbo	with the site prough cons	e) struction site, Block 1,					
(NB: a ref South ea Section (The meas 1 Existi	o which the ference to ast side of 60, Kings sures to be ng tempo prkers on	is notice relates: a s <i>ite includes any pla</i> f lower basement are ston e taken to preserve a s prary construction fer	ea on the Construction Control Kingsbo ite or prevent disturbance of a site: noing around the incident site to be sec	with the site prough cons ured es in place n 7 days)	e) struction site, Block 1,					
(NB: a ref South ea Section (The meas 1. Existi 2. All wo Date of is	o which the ference to ast side of 60, Kings sures to be ng tempo prkers on sue:	is notice relates: a <i>site includes any pla</i> of lower basement are ston e taken to preserve a si prary construction fer the site to be advise 14 July 2017	ea on the Construction Control Kingsbo ite or prevent disturbance of a site: noing around the incident site to be sec d of the exclusion/non-disturbance zon The specified period (of not more tha	with the site prough cons ured es in place n 7 days)	e) struction site, Block 1,					
WB: a ref South ea Section (The meas 1 Existi 2 All wo Date of is	o which the ference to ast side of 60, Kings sures to be ng tempo prkers on sue:	is notice relates: a <i>site includes any pla</i> f lower basement are ston e taken to preserve a si prary construction fer the site to be advise	ea on the Construction Control Kingsbo ite or prevent disturbance of a site: noing around the incident site to be sec id of the exclusion/non-disturbance zon The specified period (of not more tha for which this notice applies (s199(2))	with the site prough cons ured es in place n 7 days)	e) struction site, Block 1,					
NB: a ref South ea Section (The meas 1 Existi 2 All wo Date of is mportant	o which the ference to ast side c 60, Kings sures to be ng tempo orkers on sue: sue:	is notice relates: a <i>site includes any pla</i> of lower basement are ston e taken to preserve a si prary construction fer the site to be advise 14 July 2017 on about this notice	ea on the Construction Control Kingsbo ite or prevent disturbance of a site: noing around the incident site to be sec d of the exclusion/non-disturbance zon The specified period (of not more tha for which this notice applies (s199(2)) action (s 199(4)):	with the site prough cons ured es in place n 7 days)	e) struction site, Block 1,					
WB: a ref South ea Section (Fhe meas 1 Existi 2 All wo Date of is mportant (a (t	o which the ference to ast side co 60, Kings sures to be ng tempo orkers on sue: tinformation his notice a) to b) to	is notice relates: a site includes any pla of lower basement are ston the taken to preserve a si prary construction fer the site to be advise 14 July 2017 on about this notice does not prevent any a assist an injured perso remove a deceased pe	ea on the Construction Control Kingsbo ite or prevent disturbance of a site: noing around the incident site to be sec d of the exclusion/non-disturbance zon The specified period (of not more tha for which this notice applies (s199(2)) action (s 199(4)): on; or erson; or	with the site prough cons ured es in place n 7 days)	e) struction site, Block 1,					
(NB: a ref South ea Section (The meas 1 Existi 2 All wo Date of is Important (a (t	o which the ference to ast side co 60, Kings sures to be ng tempo prkers on sue: informati his notice a) to b) to c) th	is notice relates: a site includes any pla of lower basement are ston e taken to preserve a si prary construction fer the site to be advise 14 July 2017 on about this notice does not prevent any a assist an injured perso remove a deceased per at is essential to make	ea on the Construction Control Kingsbo ite or prevent disturbance of a site: noing around the incident site to be sec d of the exclusion/non-disturbance zon The specified period (of not more tha for which this notice applies (s199(2)) action (s 199(4)): on; or erson; or the site safe or to prevent a further incident	with the site prough cons ured es in place n 7 days)	e) struction site, Block 1,					
(NB: a ref South ea Section (The meas 1 Existi 2 All wo Date of is Important (a (t (c)	o which the ference to ast side c 60, Kings sures to be ng tempo orkers on sue: informati his notice a) to c) th d) th	is notice relates: a <i>site includes any pla</i> of lower basement are ston e taken to preserve a si prary construction fer the site to be advise 14 July 2017 on about this notice does not prevent any a assist an injured perso remove a deceased per at is essential to make at is associated with a	ea on the Construction Control Kingsbo ite or prevent disturbance of a site: noing around the incident site to be sec id of the exclusion/non-disturbance zon The specified period (of not more tha for which this notice applies (s199(2)) action (s 199(4)): on; or erson; or the site safe or to prevent a further incident police investigation; or	with the site prough cons ured es in place n 7 days)	e) struction site, Block 1,					
(NB: a ref South ea Section (The meas 1 Existi 2 All wo Date of is Important (a (t (c) (c)	o which the ference to ast side c 60, Kings sures to be ng tempo orkers on sue: informati his notice a) to c) the d) the e) fo	is notice relates: a site includes any pla of lower basement are ston e taken to preserve a si prary construction fer the site to be advise 14 July 2017 on about this notice does not prevent any a assist an injured perso remove a deceased per at is essential to make at is associated with a r which an inspector ha	ea on the Construction Control Kingsbo ite or prevent disturbance of a site: noing around the incident site to be sec d of the exclusion/non-disturbance zon The specified period (of not more tha for which this notice applies (s199(2)) action (s 199(4)): on; or erson; or the site safe or to prevent a further incident police investigation; or as given permission.	with the site prough cons ured es in place n 7 days)	e) struction site, Block 1, 19 July 2017					
(NB: a ref South ea Section (The meas 1 Existi 2 All wo Date of is Important (a (t (c (c (c	o which the ference to ast side c 60, Kings sures to be ng tempo orkers on sue: informati his notice a) to c) the d) the e) fo 'ou have a	is notice relates: a site includes any pla of lower basement are ston e taken to preserve a si prary construction fer the site to be advise 14 July 2017 on about this notice does not prevent any a assist an injured perso remove a deceased per at is essential to make at is associated with a or which an inspector has an obligation to comply	ea on the Construction Control Kingsbo ite or prevent disturbance of a site: noing around the incident site to be sec id of the exclusion/non-disturbance zon The specified period (of not more tha for which this notice applies (s199(2)) action (s 199(4)): on; or erson; or the site safe or to prevent a further incident police investigation; or	with the site prough cons ured es in place n 7 days)	e) struction site, Block 1, 19 July 2017					

WorkSafe ACT, PO Box 158 Canberra ACT 2601 | Email: worksafe@act.gov.au | Phone: (02) 6207 3000 | Fax: (02) 6205 0336





Non-Disturbance Notice

Non-Disturbance Notice – Further Information

If you have any questions you may contact the inspector who issued this notice.

Display of Notices

A person to whom a notice is issued must, as soon as possible, display a copy of the notice in a prominent place at or near the workplace, or part of the workplace, at which work is being carried out that is affected by the notice (s 210(1)).

A person must not intentionally remove, destroy, damage or deface a notice displayed under s 210(1) while the notice is in force (s 210(2)).

The maximum penalty for failing to comply with these provisions is \$5,000 for an individual or \$25,000 for a corporation .

Issue of subsequent notices by inspector

If an inspector considers it necessary to do so, he or she may issue 1 or more subsequent non-disturbance notices to a person, whether before or after the expiry of the previous notice, each of which must comply with section 199 (s201).

Changes to notice by inspector

An inspector may make minor changes to a notice for clarification, to correct errors or references, or to reflect changes of address or other circumstances (s206).

Review of this Notice

A person may apply to the ACT Civil and Administrative Tribunal (ACAT) for review of the decision to issue this notice. Information about how to make that application can be obtained from ACAT by telephoning 6207 1740 or at www.acat.act.gov.au. The application must be made within 28 days of the issue of the notice. A person who may seek review of issue of this notice may also apply in writing for a statement of reasons under s 22B of the ACAT Act 2008 within 28 days of the notice being given.

The decision to issue this notice is also reviewable under the Administrative Decisions (Judicial Review) Act 1989 on application to the Supreme Court of the ACT. Information about the procedure for making that application can be obtained by calling the Supreme Court Registry on 6207 1786.

Further, a person who has a complaint about the issue of this notice can complain to the Commonwealth Ombudsman by calling 1300 362 072.

PRIVACY NOTICE: The personal information collected about you is being collected for the purpose of securing the safety of people at work by the authority of the Work Health and Safety Act 2011. The information can be disclosed, in accordance with the Work Health and Safety Act 2011, to other law enforcement agencies including the Australian Federal Police, ACT Planning & Land Authority and the Office for Children, Youth & Family Support

WorkSafe ACT Contact Details

PO Box 158, Canberra, ACT 2601

email: worksafe@act.gov.au

Phone: (02) 6207 3000

Fax: (02) 6205 0336

ENGLISH	lf you need interpreting help, telephone: إذا إحتجت للمساعدة بالترجية الشغوية إتصل، بالهاتف	ITALIAN MALTESE	Se avete bisogno di un interprete, telefonate al numero Jekk ghand ek bżonn I-ghajnuna t'interpretu, cempel
CHINESE	如果您需要口译员帮助,请拨电话	PERSIAN	اگر به ترجمه شفاهی احتیاج دارید به این شماره تلفن کنید
CROATIAN	Ako trebate pomoć tumača telefonirajte	RUSSIAN	Если вам нужна помощь переводчика, звоните по телефону
DARI GREEK	اگر به کمک تر جمه شقاهی ضرورت دارید. به این شماره تیلفون کلبد محمد محمدقدید بعده احد مقدمی مدیر	SPANISH	Si necessita la asistencia de un intérprete, llame al
GREEN	Αν χρειάζεστε διερμηνέα τηλεφωνήσετε στο	VIETNAMESE	Nế ubạ n cầ n mộ t ngư ở ithông ngôn hãy gọ i

điệ n thoa i

TRANSLATING AND INTERPRETING SERVICE

131 450

WorkSafe ACT, PO Box 158 Canberra ACT 2601 | Email: worksafe@act.gov.au | Phone: (02) 6207 3000 | Fax: (02) 6205 0336 www.worksafe.act.gov.au

Last Updated Jan 2012

From:Greg.Mason@act.gov.au Sent:15/07/2017 3:30 PM To:"Mason, Greg (ACT WorkSafe)" <Greg.Mason@act.gov.au> Bcc:"Mason, Greg (ACT WorkSafe)" <Greg.Mason@act.gov.au> Subject:Soil nail wall - soil nailing - Deep Excavation

http://www.deepexcavation.com/en/soil-nail-wall

Greg Mason | WorkSafe Inspector Phone: <u>02 6205 8307</u> |Email: greg.mason@act.gov.au WorkSafe ACT | Access Canberra | ACT Government GPO Box 158 Canberra City ACT 2601 | www.act.gov.au

Working Remotely & On The Go

From:"Mason, Greg (ACT WorkSafe)" <Greg.Mason@act.gov.au> Sent:17/07/2017 12:24 AM

To:2.2(a) @ccontrol.com.au^{2.2}(a)(ii)@ccontrol.com.au>

_Cc: 2.2(a)(ii) @ccontrol.com.au"2.2(a)(ii) @ccontrol.com.au>;2.2(a)(ii) @ccontrol.com.au"

 2.2(a)(ii)
 @ccontrol.com.au>;"Alford, Robert" <Robert.Alford@act.gov.au>; 2.2(a)(ii)
 @actgeoeng.com.au'''

 2.2(a)(ii)
 @actgeoeng.com.au>

Subject:RE: Non- Disturbance Notice - Block 1 Section 60 Kingston - Effective 16:15 hrs 14 July 2017

Hi^{2.2(a)}

Following meeting with 2.2(a)(ii) — Geotechnical Engineers this morning regarding his assessment of batter failure report dated 12 July 2017, I can advise the circumstances of issuing the Non-Disturbance Notice - Block 1 Section 60 Kingston - Effective 16:15 hrs 14 July 2017, have changed, and as such, that notice is no longer in effect as of 10:00am Monday 17 July 2018.

Regards

Greg Mason | Work Safe Inspector Phone: 02 6205 8307 |Email: greg.mason@act.gov.au WorkSafe ACT | Access Canberra | ACT Government GPO Box 158 Canberra City ACT 2601 | www.act.gov.au



Connect with WorkSafe ACT on: <u>WorkSafe ACT</u> | <u>Twitter</u> | <u>Linkedin</u> | <u>You Tube</u> | <u>Pinterest</u> Subscribe to <u>eNEWS and Construction Newsletter</u> a free email subscription service keeping you informed on the latest health and safety issues that affect workplaces in ACT.

From: Mason, Greg (ACT WorkSafe) Sent: Friday, 14 July 2017 4:38 PM To: 2.2(a) @ccontrol.com.au' Cc2.2(a)(ii) @ccontrol.com.au'; 2.2(a)(ii) @ccontrol.com.au'; Alford, Robert Subject: Non- Disturbance Notice - Block 1 Section 60 Kingston - Effective 16:15 hrs 14 July 2017

Hi^{2.2(a)}

New non-disturbance notice for the batter failure incident of 12 July 2017as discussed

Greg Mason | Work Safe Inspector Phone: 02 6205 8307 |Email: greg.mason@act.gov.au WorkSafe ACT | Access Canberra | ACT Government GPO Box 158 Canberra City ACT 2601 | www.act.gov.au



Connect with WorkSafe ACT on: <u>WorkSafe ACT</u> | <u>Twitter</u> | <u>Linkedin</u> | <u>You Tube</u> | <u>Pinterest</u> Subscribe to <u>eNEWS and Construction Newsletter</u> a free email subscription service keeping you informed on the latest health and safety issues that affect workplaces in ACT.

This email, and any attachments, may be confidential and also privileged. If you are not the intended recipient, please notify the sender and delete all copies of this transmission along with any attachments immediately. You should not copy or use it for any purpose, nor disclose its contents to any other person.



ACT Geotechnical Engineers Pty Ltd

ACN 063 673 530

5/9 Beaconsfield St, Fyshwick, ACT, 2609 PO Box 9225, Deakin, ACT, 2600 Ph: (02) 6285 1547 Fax: (02) 6285 1861

19 July 2017 Our ref: JM/C7677

Construction Control PO Box 750 CANBERRA ACT 2601

Attention: 2.2(a)(ii)

KINGSBOROUGH APARTMENTS - BLOCKS B & C - BLOCK 1, SECTION 60, KINGSTON GEOTECHNICAL ADVICE FOR RECTIFICATION OF BATTER FAILURE - 19 JULY 2017

1 Introduction

At the request of Construction Control, ACT Geotechnical Engineers Pty Ltd are pleased to provide geotechnical advice for the rectification of a failed section of batter, as part of the construction of the above development in Kingston, ACT.

The development comprises the construction of a multi-storey apartment development, with a two-level basement for carparking. A section of the cut batter along the eastern boundary of the site has failed, causing ~100m³ of soil to fall from the batter face. The purpose of the assessment is toprovide advice for the rectification of the failed section, as well as for the sections that haven't failed. ACT Geotechnical Engineers have been providing continuing advice to Construction Control during the construction process, including advising on stabilisation of the batters using rock-bolted reinforced shotcrete. ACT Geotech provided an assessment to Construction Control on 12 July 2017 regarding the likely cause(s) of the batter failure, which included a description of the stabilisation works that had been carried out.

2 Batter Remediation Recommendations

2.1 Non-Failed Sections

It is recommended that the non-tailed sections of shotcrete, either side of the failed section, be secured as the first step in the rectification works. The reinforced shotcrete stabilised sections of batter on either side of the failed section appear to still be in good condition, and performing as per the design intent. However, for safety reasons the following is recommended:

- 1. Ground anchors holes should then be drilled through the shotcrete face, and extend at least 10m back from the face. The anchor holes can then have a bolt installed into the hole, the annulus filled with grout, and anchor plate put on the face, and the anchor fensioned. This work will require a soil buttress to be constructed at the foe of the batter. This soil buttress will support beneath the shotcrete to ensure that it cannot fail, and will also provide a working platform for the anchoring rig to operate from. The rig is weighs about 18 tonnes, and will require the fill platform/buttress to be compacted such that is has an allowable bearing capacity of 100kPa.
- 2. The soil buttress can be constructed using excavated soil/rock from the basement excavation. This must be placed in ~500mm thick layers, and compacted using a pad toot roller of at least 9 tonnes (operated in static mode to prevent vibrations damaging the wall). The buttress will need to be 4m high, and extend from the batter face to ~7m out from the wall. The buttress will need to be a flat working platform at the top, and battered back at 1(H):1(V) at the sides and end. Locally, 2m high buttresses can then be built up from the top of the platform, in between the new anchor locations.
- 3. Steel whalers be attached to the ground anchors on the face of the shotcrete.
- 4. The soil buttress can then be removed, and the final lift of the reinforced shotcrete can then be constructed, which will have a strip footing at the toe. This will allow the weight of the reinforced shotcrete to be transferred into the footing.
- 5. All stages of the work must be supervised by a geotechnical engineer.
- 6. The attached sketches show the methodology.



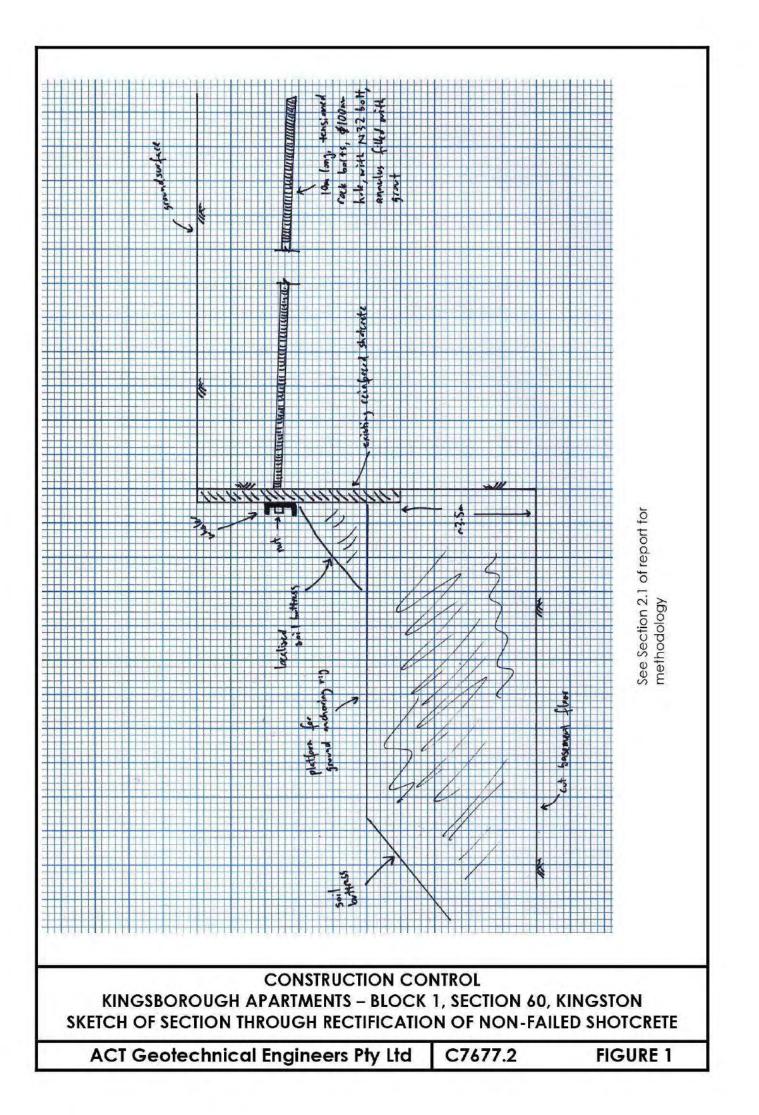
2.2 Failed Section

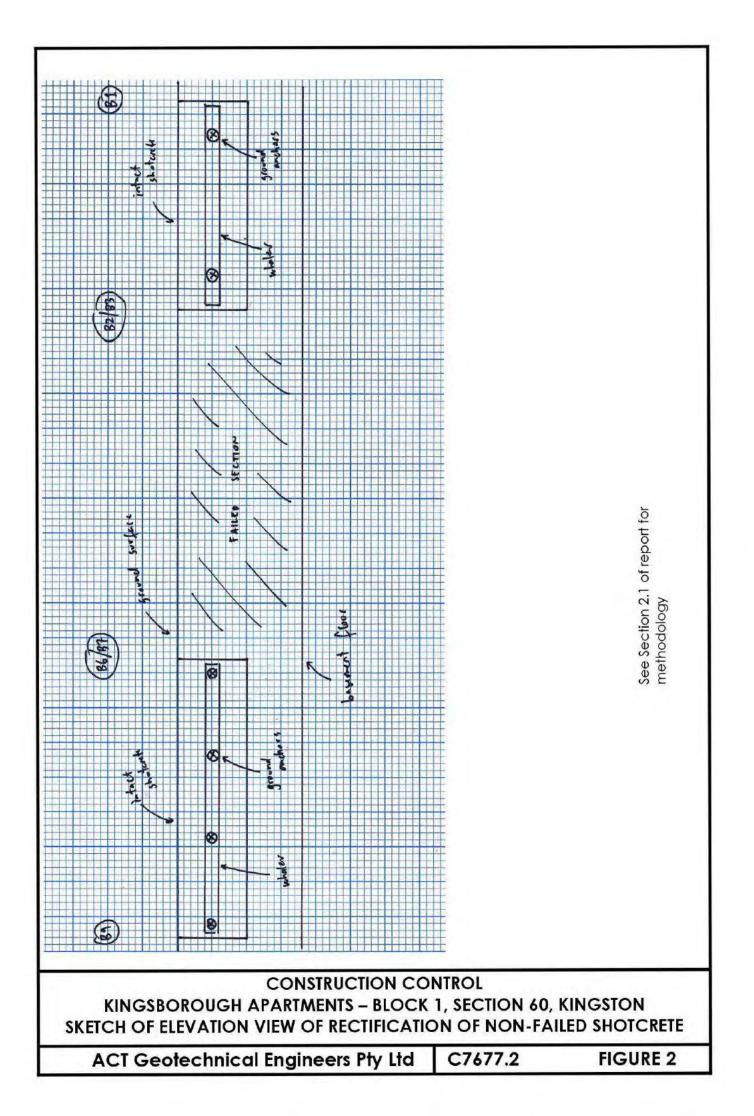
The following recommendations must be followed to remediate the batters to make them stable, and to make the area at the toe of the batters safe for workers:

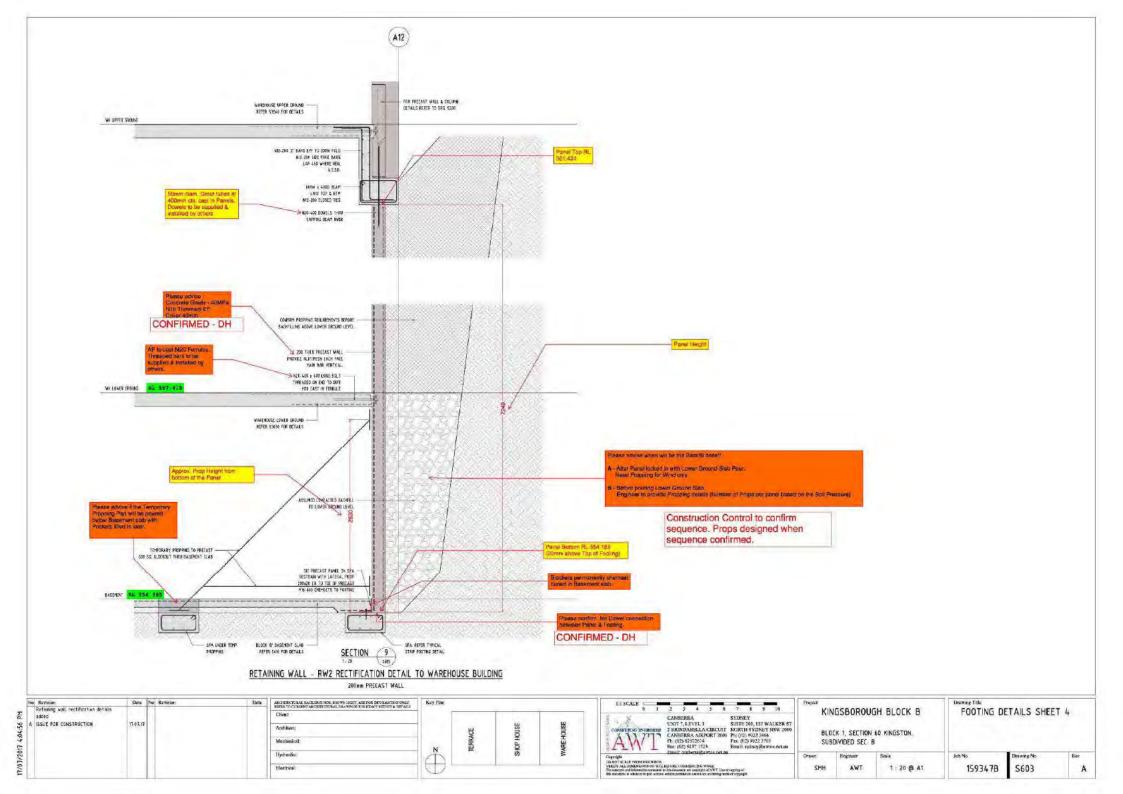
- 1) The existing exposed services conduits be disconnected, the fence at the top of the failed section of batter moved back, and light poles removed at the top removed. This must be done with works in a boom lift, with the boom lift operating from the basement floor, and set back at least 8m from the batter face.
- 2) Remove all failed material, including failed shotcrete, from the toe of the batters. This must be done using a large excavator, set back as far as possible from the batter face.
- 3) The area at the top edges of the batters should be re-contoured so that future surface water drains away from the batter face, rather than over the batter face. This can be done with bunds and/or black plastic.
- 4) Clean/trim all loose material from the batter faces. The batter face should be trimmed by at least ~100mm to expose hard clayey soil. Where possible, and space permits, it is recommended that the soil zone in the upper ~2m of the batter is shaved back to 70° or 80°. This should be done carefully, so as to not cause further instability. It is recommended that a larger machine is used (~20 tonne excavator) and set back as far as possible from the batter face, and that all personnel remain inside the machine while excavating soil from the face. A geotechnical engineer must supervise this work to ensure that it is done safely and does not cause further instability.
- 5) Although not expected, if the batter face is still unstable, the failed sections of batters must be re-stabilised using reinforced shotcrete. This would have to be done from the top down, and would require a soil/rack buttress to be constructed in front of the batter so that the shotcrete can be applied in several lifts down the face. Further methodology can be provided if this stabilisation is required.
- 6) A new retaining wall can then be constructed. Construction Control has indicated that their preference is for a pre-cast concrete retaining wall be used. This would require a strip footing to be constructed at the toe (the excavation and construction of this strip footing must be supervised by a geotechnical engineer), with the precast panel then stood on top of the strip footing. The strip footing can be dug by an excavator, with the reinforcement cage lowered into the footing excavation, and then concrete poured from a boom pump.
- 7) The panels would then be propped to a pad/strip footing in the basement floor, and the space between the back of the retaining wall and the cut batter be progressively backfilled. A subsoil drain must be installed along the back of the pre-cast wall, and the backfill preferably comprising free-draining gravel (such as 20mm aggregate), as this will allow groundwater to flow into the subsoil drains and does not require compaction.
- 8) No remediation work should be carried out during rainfall, and work can only resume after direction from a geotechnical engineer. All remediation work should be supervised by a geotechnical engineer, to ensure the work is carried out safely and in accordance with our recommendations.
- 9) All stages of the work must be supervised by a geotechnical engineer.
- The attached structural detail from WSP/AWI shows the proposed pre-cast panel retaining wall.











From:"Alford, Robert" <Robert.Alford@act.gov.au> Sent:20/07/2017 2:08 PM

To:"Carnall, Rodney" <Rodney.Carnall@act.gov.au>

Cc:"Chipperfield, Alan" <Alan.Chipperfield@act.gov.au>;"Cummins, Bradley" <Bradley.Cummins@act.gov.au>;"Muir, Richard" <Richard.Muir@act.gov.au>;"Mason, Greg (ACT WorkSafe)" <Greg.Mason@act.gov.au> **Subject:**RE: Kingsborough Apartments incident remediation plan [SEC=UNCLASSIFIED]

Rodney

I am satisfied with your recommendations to allow the PCBU to commence works to complete full remediation of the site as directed via the engineering and geo technical expert advice provided to Capital Construction. I note that Brian Connors of the Construction Audit team has been consulted and has made contact with the certifier for the building project. Brian has ensured that the certifier is aware of the process to make application for amendments to the construction plans for the retaining walls.

You have approval to lift both the Non Disturbance and Prohibition Notice to allow the PCBU to recommence remediation works.

Kind Regards

Bob Alford | Senior Manager - Enforcement & Compliance Phone: 02 6205 4261 | Mobile: 0434 85 11 39 | Email: robert.alford@act.gov.au Construction, Environment and Workplace Protection | Access Canberra | ACT Government GPO Box 158 Canberra ACT 2601 | http://www.act.gov.au/accesscbr



Connect with WorkSafe ACT on: WorkSafe ACT | Twitter | Linkedin | You Tube | Pinterest Subscribe to eNEWS and Construction Newsletter a free email subscription service keeping you informed on the latest health and safety issues that affect workplaces in ACT.

From: Carnall, Rodney Sent: Thursday, 20 July 2017 9:41 AM To: Chipperfield, Alan; Alford, Robert; Cummins, Bradley; Muir, Richard Subject: FW: Kingsborough Apartments incident remediation plan [SEC=UNCLASSIFIED]

This is the rectification plan from the wall collapse. Thoughts please

Best Regards,

Rodney Carnall | Investigator Phone: 02 6205 2283 | Mobile: 0402 975 850 |Email: rodney.carnall@act.gov.au WorkSafe ACT | Access Canberra | ACT Government GPO Box 158 Canberra City ACT 2601 | www.act.gov.au



Connect with WorkSafe ACT on: WorkSafe ACT | Twitter | Linkedin | You Tube | Pinterest Subscribe to eNEWS and Construction Newsletter a free email subscription service keeping you informed on the latest health and safety issues that affect workplaces in ACT.

From:2.2(a)(ii) @ccontrol.com.au]
Sent: Wednesday, 19 July 2017 4:46 PM
To: Carnall, Rodney
Cc: 2.2(a)(ii)
Subject: Kingsborough Apartments incident remediation plan

Hi Rod,

Please see the attached Geotech report and risk assessments pertaining to the shotcrete retaining wall incident at Kingsborough Apartments in Kingston on 11/7/17.

The Geotech report outlines the process of making safe and remediating the site, and the risk assessments outline how this process will be managed safely.

Obviously, with the prohibition notice in place we won't be commencing any of the work, but we would like to move forward and look forward to your response. Please don't hesitate to get in touch if you would like to discuss anything, or require any further information.

Regards,

2.2(a)(ii)

Construction Control Cooyong Centre | 1 Torrens Street, Braddon ACT 2612 PO Box 750 Canberra ACT 2601 Mobile 2.2(a)(ii) Fax 02 6248 9094 www.ccontrol.com.au



Commitment to excellence

MASTER BUILDERS ASSOCIATION PROJECT OF THE YEAR AWARD WINNERS



This e-mail and any attachments may contain privileged and confidential information intended only for the use of the addressee named above. If you are not the intended recipient of this message you are hereby

notified that any use, dissemination, distribution or reproduction of this message is prohibited. If you have received this message in error please notify the sender immediately and destroy any copies you may have.

From:"Carnall, Rodney" <Rodney.Carnall@act.gov.au> Sent:20/07/2017 4:25 PM

To: 2.2(a)(ii) @ccontrol.com.au>; 2.2(a) @ccontrol.com.au" 2.2(a) @ccontrol.com.au>;"Mason, Greg (ACT WorkSafe)" <Greg.Mason@act.gov.au>

Cc:"Muir, Richard" <Richard.Muir@act.gov.au>;"Alford, Robert" <Robert.Alford@act.gov.au>

Subject:RE: Kingsborough Apartments incident remediation plan [SEC=UNCLASSIFIED]

Dear 2.2(a)(ii) Thank you for providing your Rectification report and Risk Assessments. I am happy to inform you in writing that the prohibition notice PN-P01873-S8DJ5N-1 and the non disturbance notice N S8DJ5N-ND2 that were in place are now lifted. This will enable you to conduct the rehabilitation as per your Engineer and Geotech's instructions.

Please ensure amendments to the retaining wall plans are submitted for approval by your certifier as part of the remediation.

Should you require any further assistance or advice please don't hesitate to contact me on the below email or contact numbers.

Best Regards,

Rodney Carnall | Investigator Phone: 02 6205 2283 | Mobile: 0402 975 850 |Email: rodney.carnall@act.gov.au WorkSafe ACT | Access Canberra | ACT Government GPO Box 158 Canberra City ACT 2601 | www.act.gov.au



Connect with WorkSafe ACT on: WorkSafe ACT | Twitter | Linkedin | You Tube | Pinterest Subscribe to eNEWS and Construction Newsletter a free email subscription service keeping you informed on the latest health and safety issues that affect workplaces in ACT.

From:^{2.2(a)(ii)} @ccontrol.com.au] Sent: Wednesday, 19 July 2017 4:46 PM To: Carnall. Rodney Cc:^{2.2(a)(i)}

Subject: Kingsborough Apartments incident remediation plan

Hi Rod,

Please see the attached Geotech report and risk assessments pertaining to the shotcrete retaining wall incident at Kingsborough Apartments in Kingston on 11/7/17.

The Geotech report outlines the process of making safe and remediating the site, and the risk assessments outline how this process will be managed safely.

Obviously, with the prohibition notice in place we won't be commencing any of the work, but we would like to move forward and look forward to your response. Please don't hesitate to get in touch if you would like to discuss anything, or require any further information.

Regards,

2.2(a)(ii)

Construction Control

Cooyong Centre | 1 Torrens Street, Braddon ACT 2612 PO Box 750 Canberra ACT 2601 Mobile 2.2(a)(ii) | Fax 02 6248 9094 www.ccontrol.com.au



Commitment to excellence

MASTER BUILDERS ASSOCIATION PROJECT OF THE YEAR AWARD WINNERS



This e-mail and any attachments may contain privileged and confidential information intended only for the use of the addressee named above. If you are not the intended recipient of this message you are hereby notified that any use, dissemination, distribution or reproduction of this message is prohibited. If you have received this message in error please notify the sender immediately and destroy any copies you may have.

From:"Carnall, Rodney" <Rodney.Carnall@act.gov.au> Sent:31/07/2017 8:57 AM To:"Mason, Greg (ACT WorkSafe)" <Greg.Mason@act.gov.au> Subject:FW: Kingsborough Apartments incident remediation plan [SEC=UNCLASSIFIED] Attachments:C7677-3 - Blocks B & C - Kingsborough Apartments - Block 1 Section 60 Kingston - Batter Rectification Advice - 19 July 2017.pdf, Stabilise existing shotcrete Risk Assessment 17-7-17.rtf, Remove damaged services and remediation Risk Assessment 17-7-17.rtf

Best Regards,

Rodney Carnall | Investigator Phone: 02 6205 2283 | Mobile: 0402 975 850 |Email: <u>rodney.carnall@act.gov.au</u> WorkSafe ACT | Access Canberra | ACT Government GPO Box 158 Canberra City ACT 2601 | <u>www.act.gov.au</u>



Connect with WorkSafe ACT on: <u>WorkSafe ACT</u> | <u>Twitter</u> | <u>Linkedin</u> | <u>You Tube</u> | <u>Pinterest</u> Subscribe to <u>eNEWS and Construction Newsletter</u> a free email subscription service keeping you informed on the latest health and safety issues that affect workplaces in ACT.

From:^{2.2(a)(ii)} @ccontrol.com.au] Sent: Wednesday, 19 July 2017 4:46 PM To: Carnall, Rodney Cc:^{2.2(a)(ii)}

Subject: Kingsborough Apartments incident remediation plan

Hi Rod,

Please see the attached Geotech report and risk assessments pertaining to the shotcrete retaining wall incident at Kingsborough Apartments in Kingston on 11/7/17.

The Geotech report outlines the process of making safe and remediating the site, and the risk assessments outline how this process will be managed safely.

Obviously, with the prohibition notice in place we won't be commencing any of the work, but we would like to move forward and look forward to your response. Please don't hesitate to get in touch if you would like to discuss anything, or require any further information.

Regards,

2.2(a)(ii)

Construction Control Cooyong Centre | 1 Torrens Street, Braddon ACT 2612 PO Box 750 Canberra ACT 2601 Mobile 2.2(a)(ii) | Fax 02 6248 9094 www.ccontrol.com.au



Commitment to excellence

MASTER BUILDERS ASSOCIATION PROJECT OF THE YEAR AWARD WINNERS



This e-mail and any attachments may contain privileged and confidential information intended only for the use of the addressee named above. If you are not the intended recipient of this message you are hereby notified that any use, dissemination, distribution or reproduction of this message is prohibited. If you have received this message in error please notify the sender immediately and destroy any copies you may have.



ACT Geotechnical Engineers Pty Ltd

ACN 063 673 530

5/9 Beaconsfield St, Fyshwick, ACT, 2609 PO Box 9225, Deakin, ACT, 2600 Ph: (02) 6285 1547 Fax: (02) 6285 1861

19 July 2017 Our ref: JM/C7677

Construction Control PO Box 750 CANBERRA ACT 2601

Attention:2.2(a)(ii)

KINGSBOROUGH APARTMENTS - BLOCKS B & C - BLOCK 1, SECTION 60, KINGSTON GEOTECHNICAL ADVICE FOR RECTIFICATION OF BATTER FAILURE - 19 JULY 2017

1 Introduction

At the request of Construction Control, ACT Geotechnical Engineers Pty Ltd are pleased to provide geotechnical advice for the rectification of a failed section of batter, as part of the construction of the above development in Kingston, ACT.

The development comprises the construction of a multi-storey apartment development, with a two-level basement for carparking. A section of the cut batter along the eastern boundary of the site has failed, causing ~100m³ of soil to fall from the batter face. The purpose of the assessment is toprovide advice for the rectification of the failed section, as well as for the sections that haven't failed. ACT Geotechnical Engineers have been providing continuing advice to Construction Control during the construction process, including advising on stabilisation of the batters using rock-botted reinforced shotcrete. ACT Geotech provided an assessment to Construction Control on 12 July 2017 regarding the likely cause(s) of the batter failure, which included a description of the stabilisation works that had been carried out.

2 Batter Remediation Recommendations

2.1 Non-Failed Sections

It is recommended that the non-tailed sections of shotcrete, either side of the failed section, be secured as the first step in the rectification works. The reinforced shotcrete stabilised sections of batter on either side of the failed section appear to still be in good condition, and performing as per the design intent. However, for safety reasons the following is recommended:

- 1. Ground anchors holes should then be drilled through the shotcrete face, and extend at least 10m back from the face. The anchor holes can then have a bolt installed into the hole, the annulus filled with grout, and anchor plate put on the face, and the anchor fensioned. This work will require a soil buttress to be constructed at the loe of the batter. This soil buttress will support beneath the shotcrete to ensure that it cannot fail, and will also provide a working platform for the anchoring rig to operate from. The rig is weighs about 18 tonnes, and will require the fill platform/buttress to be compacted such that is has an allowable bearing capacity of 100kPa.
- 2. The soil buttress can be constructed using excavated soil/rock from the basement excavation. This must be placed in ~500mm thick layers, and compacted using a pad toot roller of at least 9 tonnes (operated in static mode to prevent vibrations damaging the wall). The buttress will need to be 4m high, and extend from the batter face to ~7m out from the wall. The buttress will need to be a flat working platform at the top, and battered back at 1(H):1(V) at the sides and end. Locally, 2m high buttresses can then be built up from the top of the platform, in between the new anchor locations.
- 3. Steel whalers be attached to the ground anchors on the face of the shotcrete.
- 4. The soil buttress can then be removed, and the final lift of the reinforced shotcrete can then be constructed, which will have a strip footing at the toe. This will allow the weight of the reinforced shotcrete to be transferred into the footing.
- 5. All stages of the work must be supervised by a geotechnical engineer.
- 6. The attached sketches show the methodology.



2.2 Failed Section

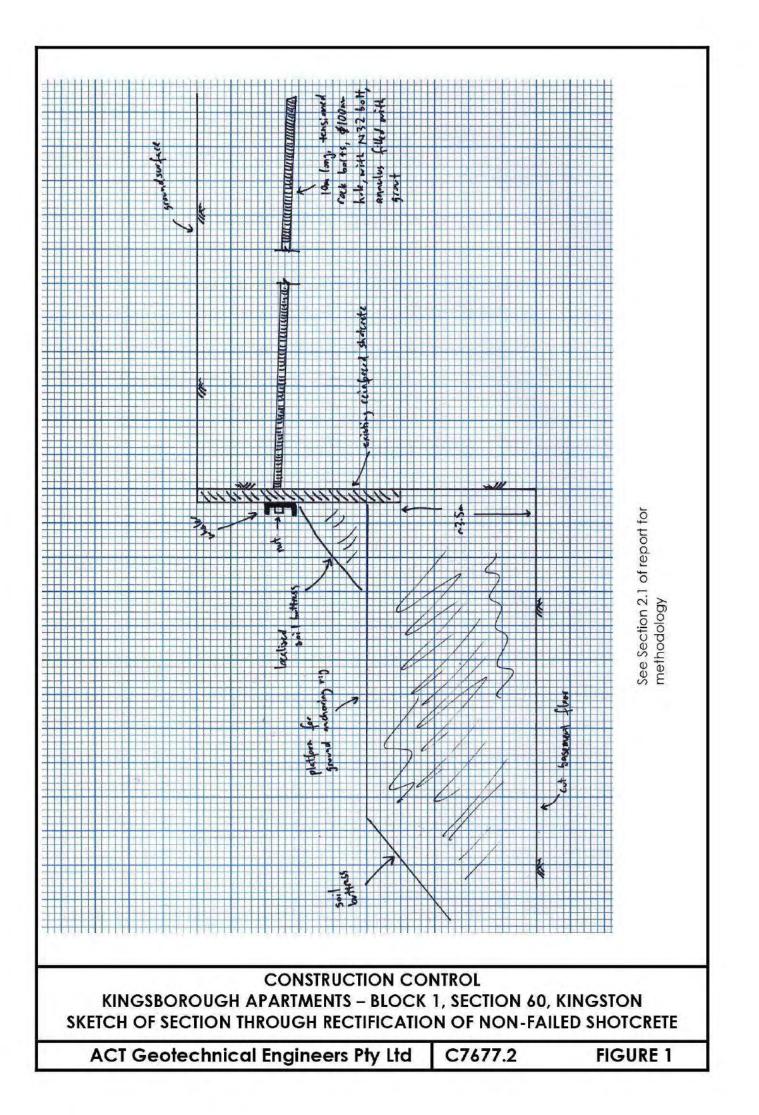
The following recommendations must be followed to remediate the batters to make them stable, and to make the area at the toe of the batters safe for workers:

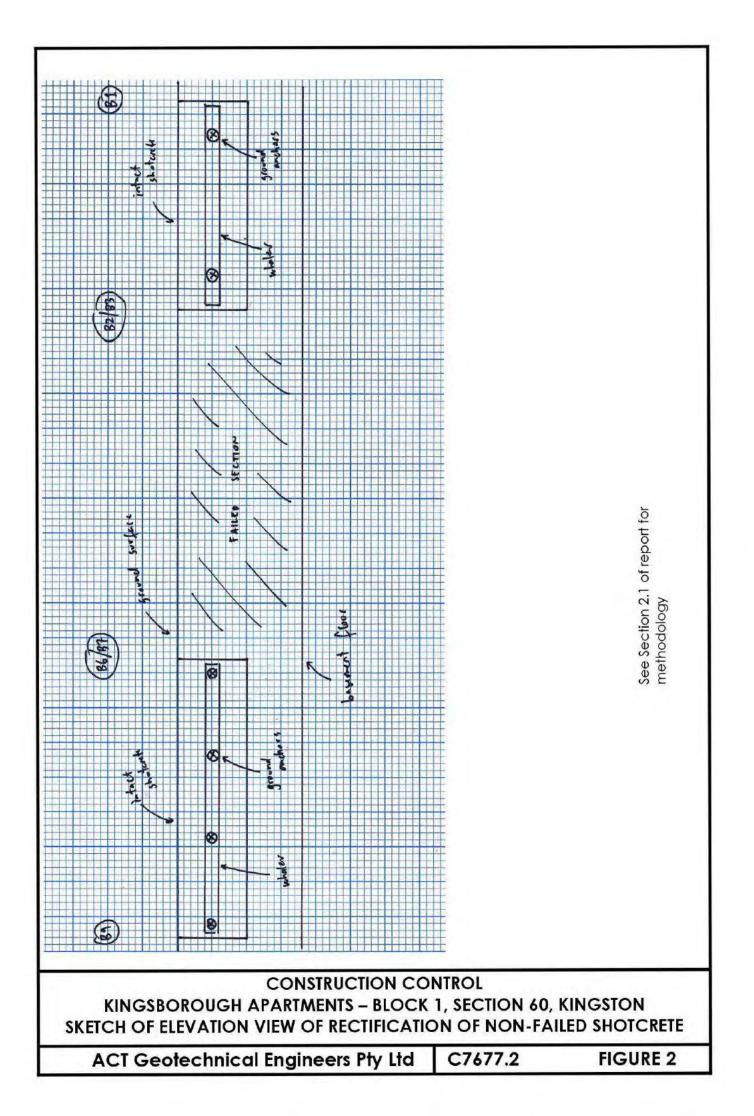
- 1) The existing exposed services conduits be disconnected, the fence at the top of the failed section of batter moved back, and light poles removed at the top removed. This must be done with works in a boom lift, with the boom lift operating from the basement floor, and set back at least 8m from the batter face.
- 2) Remove all failed material, including failed shotcrete, from the toe of the batters. This must be done using a large excavator, set back as far as possible from the batter face.
- 3) The area at the top edges of the batters should be re-contoured so that future surface water drains away from the batter face, rather than over the batter face. This can be done with bunds and/or black plastic.
- 4) Clean/trim all loose material from the batter faces. The batter face should be trimmed by at least ~100mm to expose hard clayey soil. Where possible, and space permits, it is recommended that the soil zone in the upper ~2m of the batter is shaved back to 70° or 80°. This should be done carefully, so as to not cause further instability. It is recommended that a larger machine is used (~20 tonne excavator) and set back as far as possible from the batter face, and that all personnel remain inside the machine while excavating soil from the face. A geotechnical engineer must supervise this work to ensure that it is done safely and does not cause further instability.
- 5) Although not expected, if the batter face is still unstable, the failed sections of batters must be re-stabilised using reinforced shotcrete. This would have to be done from the top down, and would require a soil/rack buttress to be constructed in front of the batter so that the shotcrete can be applied in several lifts down the face. Further methodology can be provided if this stabilisation is required.
- 6) A new retaining wall can then be constructed. Construction Control has indicated that their preference is for a pre-cast concrete retaining wall be used. This would require a strip footing to be constructed at the toe (the excavation and construction of this strip footing must be supervised by a geotechnical engineer), with the precast panel then stood on top of the strip footing. The strip footing can be dug by an excavator, with the reinforcement cage lowered into the footing excavation, and then concrete poured from a boom pump.
- 7) The panels would then be propped to a pad/strip footing in the basement floor, and the space between the back of the retaining wall and the cut batter be progressively backfilled. A subsoil drain must be installed along the back of the pre-cast wall, and the backfill preferably comprising free-draining gravel (such as 20mm aggregate), as this will allow groundwater to flow into the subsoil drains and does not require compaction.
- 8) No remediation work should be carried out during rainfall, and work can only resume after direction from a geotechnical engineer. All remediation work should be supervised by a geotechnical engineer, to ensure the work is carried out safely and in accordance with our recommendations.
- 9) All stages of the work must be supervised by a geotechnical engineer.
- The attached structural detail from WSP/AWI shows the proposed pre-cast panel retaining wall.

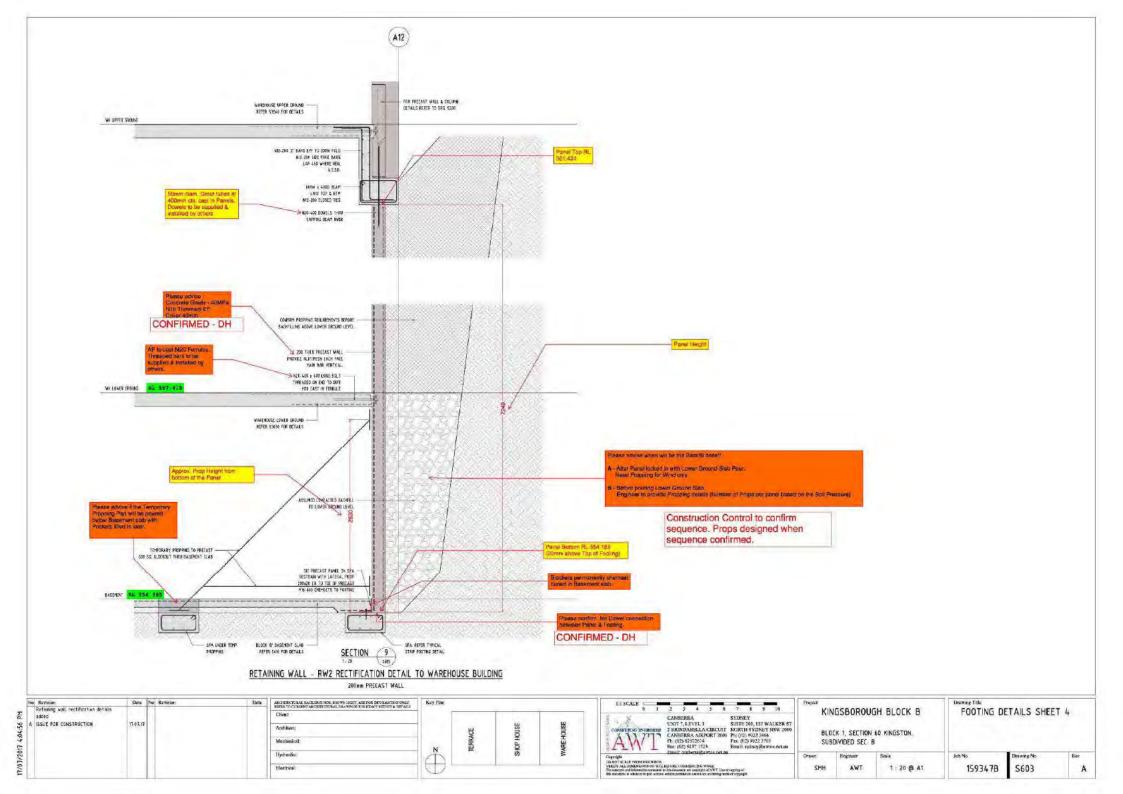












Q030106 RISK ASSESSMENT



Project: Kir	ngsborough Apartmer	nts	Task / Activity: Post incident remediation – Stabilise existing shotcrete wall					Approved By:2.2(a)(ii)							
Prepared B	y 2.2(a)(ii)		Superv	isor: <mark>2.2(a)(ii)</mark>	Date / Signature:										
Competence WP operate	raining, Qualifications sies: or – WP HRWL olbox talks daily	s and	Required Equipment, PPE and Warning Signs: Standard site PPE Hat, Vis, Boots Task Specific PPE					E Legislation, Standards & Codes of Practice: WH&S Reg 2011, Section 60 ACT Manual Tasks Code of Practice ACT Work Environment Code of Practice, Section 2.1 WSACT GN 0005 Site Housekeeping							
Engineering Details / Certification: Geotechnical Engineer required			Hazardous / Dangerous Products used: Nil					CC and Industry Alerts, Incidents and Other available information considered in the assessment of hazards, risks and control measures:							
	engineer detailed requ anchor points	urements for	Permits or Approvals Required: Worksafe permit to commence works Plant Operation Permits Hot-works Permit					CC Shotcrete Slip incident 11/7/2017							
	Qualitative Scale	Quantitetive Scale		Magnitude Scale	Probability Scale		Likely	Possible	Unlikely	Very Rare		Score	Ranking		
Extreme	Fatality, significant disability,	\$50,0000	Like	Monthly in the	Good chance	Extreme	16	14	-11	7		14 - 18	Step Work Action		

		Qualitative	Scale	Quantitetive Scale			Magniti Scale	ıde	Probability Scale			Likely	Possible	Unlikely	Very Rare		Score	Ranking
-			nificant disability, property damage	\$50,000		Likely	Monthly industry		Good chance		Extreme	16	14	11	7		14 - 18	Step Work Action Immediately
	High	Minor amputation, minor permanent disability, moderate property damage		\$15,000 = \$50,00	B	Possib	vearly in the industry	the Even chance	Even chance	C	High	15	12	8	3	D	11-13	Stop Wark Action with 12 hrs
			resulting in an Loss Time dically Treated Injury	\$1,000 0\$15,000		Unlikel	/ Every 10 the indus) years in stry	Low chance		Medium	13	9	5	¥.		7 - 10	Action within 24hrs
	Low	First Aid Tre	atment with no lost time.	\$00\$1,000		Very Rarely	y Once in a lifetime Practically no chance			Low	10	- 6 -				- 1990		
		Hazard / Aspec	ct Risk	/ Impac	T	nitial Risk core	Control Measure / Risk Treatment					Hierarchy of Controls		sidual k Score	Responsibility			
		Emergency safet		ware of ety uirements		2H 2H	Daily prestart toolbox talk shall be conducted prior to works. Toolbox talk shall be in consultation with the Geotechnical Engineer (GE), site supervisors and workers conducting					A	ľ	4L 4L		Site Supervisor GE		

Q030106 Risk Assessment Jan 2015

Q030106 RISK ASSESSMENT



		unaware of emergency procedures		 The toolbox shall cover restricted areas, emergency controls, roles and responsibilities and hazards and controls for the tasks undertaken on that day.
Backfill under and around remaining shotcrete with existing bulk excavation material to prevent downward vertical movement and install buttresses to prevent shotcrete tipping away from wall	Shotcrete slippage/collapse Mobile plant	Crush injury fatality Debris impact Plant impact	14S 14S 14S	 All works shall take place under the direct supervision and instruction of a GE, no works shall take place unless the GE is in direct contact and is able to assess the status of the work area and ongoing tasks at all times GE shall be in direct communication via radio with persons completing tasks to advise of any changes to the structural integrity of the work area An 8 metre exclusion zone shall be put in place around the work area. No person except plant operators, shall be permitted to enter the exclusion zone unless directed to do so by the attending GE. A toolbox talk shall be held each morning prior to work starting, to ensure any changes to the exclusion zone, the nature of the task or associated controls are communicated to personnel involved with the implementation of the remediation Using heavy plant (excavator and/or dozer) existing bulk excavation material shall be placed against the wall under the existing shotcrete. This material shall be levelled at the base of the shotcrete to provide a work surface

Q030106 Risk Assessment Jan 2015

				 for the positioning of the directional drill. In addition to the levelled work surface, buttresses shall be built against the existing shotcrete to remove the potential for the shotcrete to tip away from the wall. Dimensions and requirements for buttressing are detailed in attached diagram Hazards associated with the safe operation plant and excavation are controlled in the attached Hewatt SWMS/Risk Assessment 			
Core holes in existing shotcrete from a boorn-lift to allow a path for drilling anchor holes	Boom-lift operation	Plant failure Operator competence	12H 12H	 Complete Construction Controls plant operations permit requirements Hazards associated with the safe operation of a boom-lift are controlled in the attached Construction Control boom-lift SW/MS A competent WP operator shall operate the boom-lift while another worker conducts tasks. The WP operator shall be responsible for spotting for the worker and following the instruction of the GE. The WP operator shall be in direct radio contact with the GE 	A P En	4L 4L	Site Supervisor GE Tablelands workers
	Core drill operation	Operator injury associated with core drill operation	12H	 Hazards associated with the safe operation of a Core Drill are controlled in the attached Uppercut Concrete Coring and Drilling SWMS/Risk Assessment 	A P	4L	Site Supervisor GE Tablelands

ConstructionContext



			-			-	1	workers
Drill Anchor holes using directional drilling rig to a depth of 10 metres	Shotcrete slippage/collapse	Crush Injury	155	*	Controls implemented in step 2 have mitigated the risk of further collapse	En El	4L	Site Supervisor GE
Install anchors and grout	Directional drill operation	Operator injury associated with directional drill operation	12H		Hazards associated with the safe operation of a direction drill are controlled in the attached Tablelands directional drilling SWMS/Risk Assessment	En P A	4L	Site Supervisor GE Tablelands workers
	Grout pump operation	Operator injury associated with grout pump operation	12H	•	Hazards associated with the safe operation of a grout pump are controlled in the Tablelands directional drilling SWMS/Risk Assessment	En P A	4L	Site Supervisor GE Tablelands workers
Install whaler using crane and tension anchors against whaler	Crane operation	Crane failure	15S	•	Hazards associated with the safe operation of a mobile crane are controlled in the RAR Site Lifts SVVMS Prior to works commencing CC shall implement a toolbox talk in consultation with the GE and the workers involved with the task. This toolbox talk shall identify the hazards associated with the task, exclusion zones, emergency procedures and any associated hazards/controls.	En I P A	8M	Site Supervisor GE Tablelands workers RAR Operator/Dog man
	Tensioning	Manual	9M	6	Hazards associated with the safe installation and tensioning of anchors	A	2L	Site

	anchors	Handling Structural failure	158	 are controlled in the Tablelands directional drilling SWMS/Risk Assessment Workers shall use a torque wrench to tension the anchor bolts holding the whaler to the tension specified by the engineer. The crane shall support the weight of the steel whaler until the GE is satisfied with the tension and the crane is cleared to release the weight of the load. HOLD POINT - At this point no further works shall proceed until the area has been inspected and certified by both the GE and the structural engineer. Once approval to proceed has been documented, work shall progress to the next step. 		4L	Supervisor GE Tablelands workers
Remove backfilled material	Plant operation	Crush/plant impact Plant failure	12H 15S	 Using detail excavation processes, the back fill material shall be removed as per attached Hewatt SWMS Ensure Construction Controls Plant Permit requirements are completed 	En A P	4L 4L	Site Supervisor GE Plant operators
Install Reinforcing mesh	Manual handling Plant operation Hot-works	Muscle strain/sprain Plant failure Burn injury	12H 12H 12H	 Install double layers of 100mm mesh, secured as per structural engineers and GE revised design Hazards associated with the safe operation of a Scissor-lift are controlled in the attached Construction Control Scissor-lift SWMS/Risk Assessment Hot-works and manual handling as per R&K SWMS and Construction Controls Hot-works permit requirements 	En A P	4L 4L 4L	Site Supervisor GE R&K Workers

ConstructionConles



Complete conventional	Concrete pump	Plant failure	15S	•	Complete CCs plant permit process if required.	En	4L	Site Supervisor
shotcrete to stabilise wall		Manual handling	12H		Hazards associated with the application of shotcrete are controlled	1	4L	GE
		Hazardous substance	9M		in the attached La Pompa Shotcrete SWMS/Risk Assessment	A	2L	La Pompa Workers

In signing this Risk Assessment Record, I acknowledge that I:

- been consulted in the development of this Risk Assessment
- have read and been trained in this Risk Assessment
- will comply with the requirements set out in this Risk Assessment; and
- will not create or ignore a dangerous situation.

Comments

a children in		
		14



Signoff

Name:	Sign:	Date:	Name:	Sign:	Date:
		2.0			
_					
				and the second second	
		-			
			4		



-					
Name:	Sign:	Date:	Name:	Sign:	Date:
				1.1	
-		1	1	1	1





Pro	ject: Kir	ngsborou	gh Apartments	5						ident reme ces, concre			Appro	oved By	2.2(a)(ii)	-		
Pre	pared B	y:2.2(a)(ii)				Supervisor: ^{2.2(a)(ii)}					Date / Signature:								
Col WP LE	Required Training, Qualifications and Competencies: VP operator – WP HRWL .E plant operator competence Prestart toolbox talks daily Engineering Details / Certification: Geotechnical Engineer required Structural engineer detailed requirements for					Required Equipment, PPE and Warning Signs:							Legislation, Standards & Codes of Practice: WH&S Reg 2011, Section 60 ACT Manual Tasks Code of Practice ACT Work Environment Code of Practice, Section 2.1 WSACT GN 0005 Site Housekeeping CC and Industry Alerts, Incidents and Other available information considered in the assessment of hazards, risks and control measures:						:e:
Ge					ts for	NH													
		anchor p				1.55				equired: nmence wo	orks								
T		Qualitative -	Scale		ntitative cale			Magnitu Scale	de	Probability Scale			Likely	Possible	Unlikely	Very Rare		Score	Ranking
	Extreme		ficant disability, property damage	\$50,000	00		Likely	aly Monthly in the industry Meaduring the	in the Good chance	Good chance	Extreme	16	14	11	7		14 - 16	Stop Work Action Immisurately	
Ą	High		tion, minor permanent lerate property damage	\$15,000	01(\$50,000	B	Possible			High	15	12	8 1 D 1	11 - 13	Stop Work Action w 12 hrs				
	Medium	Minor injury re Injury or Medi	asulting in an Loss Time cally Treated Injury	\$1,000	□\$15,000		Unlikely	Every 10 the indus		Low chance		Medium	13	9	1.4			7-10	Action within 24hrs
	Low	First Aid Treat	tment with no lost time.	\$00\$1,	,000		Very Rarely	Once in a in the ind		Practically no chance		Low	10	1					
Wo	rk Activit	y / Task	Hazard / Asp	pect	Risk /	Impac		tial Risk ore	Cont	trol Measure	e / Ris	k Treatm	nent			rarchy Controls	1 1 1 5 5	idual « Score	Responsibility
	e-planning Communication Worked unawa Emergency safety planning require				*		10												
Pre		are of	re of 12H conduct 12H shall be			Daily presta conducted shall be in Geotechnic supervisors	prior t consu cal En	to works Iltation v gineer (s. Tooll with the (GE), s	oox talk ite	A		4L 4L		Site Supervisor GE				

		Workers unaware of emergency procedures		 the tasks. The toolbox shall cover restricted areas, emergency controls, roles and responsibilities and hazards and controls for the tasks undertaken on that day.
Remove damaged services using a boomlift	Coordination	Damage to assets	12H	 Liaise with asset owners and coordinate disconnection and removal of damaged services. TPG - Data Zinfra - Gas Transact - Telecommunication ActewAGL - Power CC shall supply a boom-lift and an operator and coordinate with asset owners to access damaged services. Where asset owners have specific procedures or requirements, these shall be reviewed prior to works commencing to coordinate appropriate system amalgamation.
	Boom-lift operation	Plant failure Operator competence	12H 12H	 Hazards associated with the safe operation of a boom-lift are controlled in the attached Construction Control boom-lift SWMS A competent WP operator shall operate the boom-lift while another worker conducts tasks. The WP operator shall be responsible for spotting for the worker and following the instruction of the GE. The WP operator shall be in direct

ConstructionControl



	1			radio contact with the GE at all times			
Secure fence panels at top of remediation site	Falling material	Personal injury Damage to plant	15S 12H	 Push existing fence back using excavator Push panels back in increments to ensure panels do not fall into the excavation Once area is safely battered panels can be removed 		8M 4L	Site Supervisor GE Plant operator
Stabilise and excavate batters using excavator	Falling material	Personal injury Damage to plant	15S 12H	 Complete Construction Control excavation permit requirements Working from the top down, the excavator shall remove all loose material and batter the affected area to prevent any chance of further collapse. All works shall be supervised by the GE with special care and coordination undertaken in areas at close proximity to existing shotcrete Hazards associated with the safe operation of plant and excavation are controlled in the attached Hewatt SWMS/Risk Assessment 	En 1 A P	4L 4L	Site Supervisor GE Plant operator
Remove spoil	Plant operation	Vehicle impact Plant failure Crush injury	9M 12H 15S	Once batter is stabilised spoil shall be removed using conventional excavation techniques	En I A P	2L 4L 4L	Site Supervisor GE Plant operator

Dig strip footing	Plant operation	Vehicle impact Plant failure Crush injury	12H 12H 15S	 Strip footing shall be excavated as per design requirements Complete Construction Control excavation permit requirements Hazards associated with the safe operation of plant and excavation are controlled in the attached Hewatt SWMS/Risk Assessment 	En A I P	4L 4L 4L	Site Supervisor GE Plant operator
Install steel reinforcement	Manual handling	Muscle strain/sprain	12H	 Steel reinforcement shall be installed as per design requirements Hazards associated with the safe installation of steel reinforcement are controlled in the attached Citysteel SWMS/Risk Assessment 	En I A P	4L	Site Supervisor GE Steel Fixer
Pour concrete footing	Manual handling Plant operation	Muscle strain/sprain Vehicle impact Plant failure Crush injury	12H 12H 12H 12H 15S	 Complete Construction Controls pre- pour checklist Hazards associated with the safe placement of concrete footings are controlled in the attached CPS Concreting SW/MS/Risk Assessment 	En I A P	4L 4L 4L 4L	Site Supervisor GE Construction Worker
Stand precast panels	Precast installation	Plant failure Crush injury Panel failure	12H 15S 15S	 Precast panel shall be installed and braced as per design requirements Complete Construction Controls Precast Panel Installation Checklist, It is noted that this is a high risk work activity and as such shall be controlled by the safety management system responsible for the installation, Advanced Precast. SWMS and associated documentation attached. 	En I A P	4L 7M 7M	Site Supervisor GE Plant operator Precast Installer



	Crane operation	Plant failure Crush injury	12H 15S	 Hazards associated with the safe operation of cranes and general lifting are controlled in the attached RAR SWMS/Risk Assessment 	En I A P	4L 7M	Site Supervisor Plant operator
Backfill behind panel to first lift	Plant operation	Vehicle impact Plant failure Crush injury	12H 12H 15S	 Once panes are braced as required, an excavator shall back fill behind the panels using 20mm aggregate. Backfill to the suspended slab level at basement level 1, to assist with the stabilisation of the batter and the precast panels 	En I A P	4L 4L 4L	Site Supervisor GE Plant operator
Shotcrete 800mm gap between precast and shotcrete from basement ground to basement 1	Manual handling Plant operation	Muscle strain/sprain Vehicle impact Plant failure Crush injury	12H 12H 12H 12H 15S	 As per engineers design, spray shotcrete between existing shotcrete and precast panel to further secure the base of the precast and existing shotcrete Hazards associated with the safe application of shotcrete are controlled in the attached La Pompa shotcrete SWMS SWMS/Risk Assessment 	En I A P	4L 4L 4L 4L	Site Supervisor GE Shotcrete Contractor
Continue building works to first suspended slab	Formwork Manual handling Plant operation	Structural failure Muscle strain/sprain Vehicle impact Plant failure Crush injury	15S 12H 12H 12H 12H 15S	 Build suspended slab at level B1, locking precast panels securely in place Conventional construction is managed using construction Controls business management system and associated procedures 	En I A P	4L 4L 4L 4L 4L	Site Team Construction Trades



Prop the high section of the precast off completed suspended slab	Plant operation Manual handling	Muscle strain/sprain Vehicle impact Plant failure Crush injury	12H 12H 12H 15S	•	Prop the top of the extruding panels to the finished floor level of the basement 1 slab to prevent pressure impacting on the precast during the following steps	En I A P	4L 4L 4L 4L	Site Supervisor Precast Contractor
Backfill behind precast to ground level	Plant Operation	Vehicle impact Plant failure Crush injury	12H 12H 15S		Backfill from Basement 1, to ground level, securing precast.	En I A P	4L 4L 4L	Site Supervisor GE Plant operator
Shotcrete 800mm gap between precast and existing shotcrete from basement 1 to ground level	Plant Operation Manual Handling.	Muscle strain/sprain Vehicle impact Plant failure Crush injury	12H 12H 12H 12H 15S		As per engineers design, spray shotcrete between existing shotcrete and precast panel to completely the precast and existing shotcrete. Hazards associated with the safe application of shotcrete are controlled in the attached La Pompa shotcrete SWMS SWMS/Risk Assessment	En I A P	4L 4L 4L 4L	Site Supervisor Shotcrete Contractor

ConstructionControl

In signing this Risk Assessment Record, I acknowledge that I:

- been consulted in the development of this Risk Assessment
- have read and been trained in this Risk Assessment
- will comply with the requirements set out in this Risk Assessment; and
- will not create or ignore a dangerous situation.

Comments

Signoff

	the second se	
4 41 1		



lame:	Sign:	Date:	Name:	Sign:	Date:
unie.		Dute.			Duic.
		-			
					1
			1		
	1		1	- 1	
					0
					-
		and the second sec			
	1				





Our ref: CMTEDDFOI2019-262



FREEDOM OF INFORMATION REQUEST – SECTION 36 DECISION

I refer to your application under section 30 of the *Freedom of Information Act 2016* (the Act), received by the Chief Minister, Treasury and Economic Development Directorate (CMTEDD) on 14 November 2019 (Initial Request), in which you sought access to any and all documents, file notes and correspondence relating to the collapse (Event number 170711-001210) which occurred on the Kingsborough Project, Canberra on 11 July 2017 under the *Freedom of Information Act 2016* (the Act).

On 19 December 2019, I made a decision in respect of the initial request that there were 19 documents identified that fell within the scope of your request and I decided to grant you full access to seven documents and partial access to 12 documents.

On 12 February, you contacted this office enquiring about some additional documents that you believe may exist. You stated *"We have been advised that some of the workers present at the incident provided a statement to Safework ACT following the incident. Can you please confirm that you do not hold a copy of those statements or a Safework investigation report...".*

Authority

I am an authorised Information Officer appointed by the Director-General of CMTEDD under section 18 of the Act to deal with access applications made under Part 5 of the Act. This decision is made pursuant to section 36 of the Act.

Decision on access

A subsequent document search was conducted following your email to this office which located 2 additional emails, twelve drone footage recordings and 1 taped record of interview being found within the scope of your request. I have decided to grant full access to the 2 emails and drone footage and partial access to the taped record of interview. Along with a document schedule the documents released to you are provided as **Attachments A, B and C** to this letter. In accordance with section 54(2) of the Act a statement of reasons outlining my decision is below.

Material considered

In reaching my access decision, I have taken the following into account:

- the Act;
- the content of the documents that fall within the scope of your request;
- the views of the relevant third parties;
- the Human Rights Act 2004.

Exemption claimed

My reasons for deciding not to grant access to the identified documents and components of these documents are as follows:

Public Interest

The Act has a presumption in favour of disclosure. As a decision maker I am required to decide where, on balance, public interests lies. As part of this process I must consider factors favouring disclosure and non-disclosure.

In *Hogan v Hinch* (2011) 243 CLR 506, [31] French CJ stated that when 'used in a statute, the term [public interest] derives its content from "the subject matter and the scope and purpose" of the enactment in which it appears'. Section 17(1) of the Act sets out the test, to be applied to determine whether disclosure of information would be contrary to the public interest. These factors are found in subsection 17(2) and Schedule 2 of the Act.

Taking into consideration the information contained in the documents found to be within the scope of your request, I have identified that the following public interest factors are relevant to determine if release of the information contained within these documents is within the 'public interest'.

Factors favouring disclosure in the public interest:

(a) disclosure of the information could reasonably be expected to do any of the following:

(*xiii*) contribute to the administration of justice generally, including procedural fairness

Factors favouring non-disclosure in the public interest:

(a) disclosure of the information could reasonably be expected to do any of the following:

(ii) prejudice the protection of an individual's right to privacy or any other right under the Human Rights Act 2004

Having considered the factors identified as relevant in this matter, I consider that release of the information contained in the document may contribute to procedural fairness by allowing you to have a copy of the documents that fall within the scope of your request.

However, when considering this finding against the factors favouring non-disclosure, I am satisfied that the protection of an individual's right to privacy, especially in relation to

assisting in an investigation, is a significant factor as the party involved has provided their personal information (including name, qualifications, private residential address, date of birth) for the purposes of information gathering in the course of the investigation. This, in my opinion, outweighs the benefit which may be derived from releasing the personal information of these individuals. These individuals are entitled to expect that the personal information they have supplied as part of this process will be dealt with in a manner that protects their privacy.

Having applied the test outlined in section 17 of the Act and deciding that release of personal information contained in the documents is not in the public interest to release, I have chosen to redact this specific information in accordance with section 50(2). Noting the pro-disclosure intent of the Act, I am satisfied that redacting only the information that I believe is not in the public interest to release will ensure that the intent of the Act is met and will provide you with access to the majority of the information held by CMTEDD within the scope of your request.

Charges

Processing charges are not applicable for this request because the number of pages to be released to you is below the charging threshold of 50 pages.

Online publishing – Disclosure Log

Under section 28 of the Act, CMTEDD maintains an online record of access applications called a disclosure log. Your original access application and my decision in response to your access application will be published in the CMTEDD disclosure log 3 days after the date of my decision. Your personal contact details will not be published. You may view the CMTEDD disclosure log at: <u>https://www.cmtedd.act.gov.au/functions/foi/disclosure-log</u>.

Ombudsman Review

My decision on your access request is a reviewable decision as identified in Schedule 3 of the Act. You have the right to seek a review by the Ombudsman of this outcome under section 73 of the Act within 20 working days from the day that my decision is published in the CMTEDD disclosure log, or a longer period allowed by the Ombudsman.

If you wish to request a review of my decision you may write to the Ombudsman at:

The ACT Ombudsman GPO Box 442 CANBERRA ACT 2601

Via email: actfoi@ombudsman.gov.au

ACT Civil and Administrative Tribunal (ACAT) Review

Under section 84 of the Act, if a decision is made under section 82(1) by the Ombudsman, you may apply to the ACAT for a review of the Ombudsman decision. Further information may be obtained from the ACAT at:

ACT Civil and Administrative Tribunal

Level 4, 1 Moore St GPO Box 370 Canberra City ACT 2601 Telephone: (02) 6207 1740 <u>http://www.acat.act.gov.au/</u>

Should you have any queries in relation to your request please contact me by telephone on 6207 7754 or by email at <u>CMTEDDFOI@act.gov.au</u>.

Yours sincerely,

Port.

Philip Dachs Information Officer Information Access Team Chief Minister, Treasury and Economic Development Directorate

13 February 2020



FREEDOM OF INFORMATION Section 36 - REQUEST SCHEDULE

NAME	WHAT ARE THE PARAMETERS OF THE REQUEST	Reference NO.
	Additional documents - Information relating to the collapse of a wall which occurred on the	CMTEDDF0I2019-262
	Kingsborough Project on 11 July 2017.	

RefNo	Page number	Description	Date	Status	Reason for Exemption	Online Release Status
1	1	Dot Points Kingsborough Apartments (A)	20 Jul 2017	Full release	N/A	Yes
2	2	Kingsborough Apartments incident remediation plan (A)	20 Jul 2017	Full release	N/A	Yes
3	3	Drone footage (x12) (B)	Undated	Full release	N/A	Yes
4	4	Interview recording (C)	13 Jul 2017	Partial release	2.2(a)(ii)	Yes
Total No of Docs						
4						

- 1. Collapse of 6 meter face of basement excavation at Kingsborough Apartments Construction site on 11 July 2017
- 2. Obtained site plans and drawings in relation to the basement walls from Construction Control
- 3. Site was processed by investigators and a number of photographs and drone footage obtained. Inspector Mason placed Prohibition notice PN-P01873-S8DJ5N
- 4. Inspectors Mason and Carnall met with Jeremy Murray of Geotechnical Engineers who provided insight into the wall collapse being that there was a fracture in the rock wall about 3.6 meters back from the wall face. He stated that the wall had been erected according to his instructions however as the fracture had never been picked up in any of the Geotech surveys and that the pins used to support the wall that had been drilled into the wall to a distance of 2 meters. Given the fracture was 3.6 meters back the wall pins did not hold and came away with the rest of the debris.
- 5. Non disturbance notice placed on the site allowing access for Engineer and Geotech to assess the area and complete a remediation plan.
- 6.18/07/2017 4:46pm remediation plan sent to Worksafe.
- 7. WorkSafe consults with Access Canberra Construction Audit Team in relation to remediation Plan
- 8. Brian Connors (Construction Audit Team)contacts the Certifier for the Kingston site to ensure the appropriate plans and approvals are submitted. This process is expected to take about 2 weeks to be finalised.

Again I submit that I am of the belief that Construction Control were building to provided plans and instructions given by the engineers and the geotechs. No geotechnical data obtained in pre testing showed the presence of the fracture. The use of supporting pins greater than 2 meters in length possibly 5 or 6 meters may have prevented the collapse however the geotech provided instructions on the evidence he had at hand at the time. The only error found in the application of instructions was the failure to weld an attaching bracket from the bar to the reinforcing mesh. I am told by the Geotech that this did not contribute in any way to the collapse.

Best Regards,

Rodney Carnall | Investigator Phone: 02 6205 2283 | Mobile: 0402 975 850 |Email: rodney.carnall@act.gov.au WorkSafe ACT | Access Canberra | ACT Government GPO Box 158 Canberra City ACT 2601 | www.act.gov.au



Connect with WorkSafe ACT on: <u>WorkSafe ACT</u> | <u>Twitter</u> | <u>Linkedin</u> | <u>You Tube</u> | <u>Pinterest</u> Subscribe to <u>eNEWS and Construction Newsletter</u> a free email subscription service keeping you informed on the latest health and safety issues that affect workplaces in ACT. From:"Carnall, Rodney" Sent:20/07/2017 3:32 AM To:"Connors, Brian" <Brian.Connors@act.gov.au>;"CAT" <CAT@act.gov.au> Subject:RE: Kingsborough Apartments incident remediation plan [SEC=UNCLASSIFIED]

Thanks Brian, Much appreciated. So lifting our Non Disturbance notice allowing persons to do the prep work etc should be incidental to the approval process and shouldn't be an issue?

Best Regards,

Rodney Carnall | Investigator Phone: 02 6205 2283 | Mobile: 0402 975 850 |Email: <u>rodney.carnall@act.gov.au</u> WorkSafe ACT | Access Canberra | ACT Government GPO Box 158 Canberra City ACT 2601 | <u>www.act.gov.au</u>



Connect with WorkSafe ACT on: <u>WorkSafe ACT</u> | <u>Twitter</u> | <u>Linkedin</u> | <u>You Tube</u> | <u>Pinterest</u> Subscribe to <u>eNEWS and Construction Newsletter</u> a free email subscription service keeping you informed on the latest health and safety issues that affect workplaces in ACT.

From: CAT Sent: Thursday, 20 July 2017 1:18 PM To: Carnall, Rodney Subject: FW: Kingsborough Apartments incident remediation plan [SEC=UNCLASSIFIED]

Hi Rod

I spoke to the Certifier for the Kingston site and he has advised me that he is currently assessing the amended structural plans for the retaining wall rectification.

Once he has approved the plans, the builder will then need to lodge those plans with TAMS to get Design Acceptance Certificate.

I predict that this process may take a couple of weeks to finalise, so no work should take place until these approvals are finalised.

I'll advise you when this has occurred.

Cheers

Brian Connors | Lead Auditor | Construction Audit Team Construction, Environment and Workplace Protection Access Canberra | ACT Government Phone: 02 6207 5644 Level 2 Dame Pattie Menzies House | GPO Box 158 Canberra ACT 2601| www.act.gov.au/accesscbr

Access Canberra. is moving

To find all our Canberra Service Centres visit act.gov.au/accessCBR