



7 OCT 2011

CORRESPONDENCE

STRUCTURAL AND CIVIL ENGINEERING

5 October 2011

Canterbury Earthquakes Royal Commission
PO Box 14053

CHRISTCHURCH MAIL CENTRE 8544

Dear Marcus,

CANTERBURY EARTHQUAKES ROYAL COMMISSION - REQUIREMENT FOR
INFORMATION - RECEIVED 19 SEPTEMBER 2011

Please see below for the information requested in your letter dated 19th September 2011 (attached for your reference). All of the requested documents and those referred to as 'attached' are contained on the disk enclosed with this letter.

Report dated 7th September 2010

1. *Provide any written instructions that were given to you regarding the nature of the investigations you were required to undertake. Please also advise the content of any verbal instructions.*

The inspections were carried out under the short form agreement with NAI Harcourts as building owners representative covering various buildings in their portfolio (see attached). The scope of the services was: Initial earthquake inspection and securing measures as considered necessary.

2. *What inspections were carried out?*

As per the site report – walk around exterior, ground, first and fourth floors observing structural damage.

3. *Were any notes or photographs taken during or after the inspection? If so, please provide copies.*

No

4. *In relation to the statement in the report, 'Cracks to ground floor and first floor shear walls', where were these cracks located and how large were they?*

The inspecting engineer has no clear recollection of specific locations or sizes, other than general diagonal cracking to the ground and first floor shear walls.

5. *In reaching the conclusion that the building was 'okay to occupy structurally', did the report writer give any consideration to:*

Christchurch

Telephone

+64 3 366 3366

Facsimile

+64 3 379 2169

Internet Address

www.holmesgroup.com

Unit Five

295 Blenheim Road

Upper Riccarton

PO Box 6718

Christchurch 8442

New Zealand

Offices in

Auckland

Hamilton

Wellington

Queenstown

San Francisco



a. *The building's plans?*

No

b. *The construction history of the building?*

No

c. *Any previous reports or assessments by Holmes Consulting Group or any other party?*

No

d. *The impact of the September 4 earthquake and subsequent aftershocks on the structural integrity of the building and, in particular, whether the building's capacity to withstand further aftershocks was diminished as a result?*

Yes, but only in the context of a rapid visual inspection to identify any obvious signs of damage that might have resulted in significant diminished structural capacity.

e. *Information from GNS or any other source about the likelihood, location and extent of further aftershocks? If so provide details of this information.*

No

f. *Information from the Christchurch City Council relating to building standards or the inspection of buildings following the earthquake? If so provide details of this information.*

No

g. *Any information from any other party relating to building standards or the inspection of buildings following an earthquake? If so provide details of this information.*

No

6. *Was any report (written or verbal) other than the site report dated 7 September 2010 provided to any person following the inspection? If so please provide details.*

No

7. *Please provide copies of any other documents you have in your possession relating to your inspection and report.*



All documents relating to the inspections are attached.

Report dated 16th September 2010

1. *Provide any written instructions that were given to you regarding the nature of the investigations you were required to undertake. Please also advise the content of any verbal instructions.*

The inspections were carried out under the short form agreement with NAI Harcourts as building owner representatives covering various buildings in their portfolio (see attached). The scope of the services was: Initial earthquake inspection and securing measures as considered necessary.

2. *What inspections were carried out?*

Typically all key structural elements were inspected or a representative sample where initial inspections did not reveal any noteworthy damage

3. *Were any notes or photographs taken during or after the inspection? If so, please provide copies.*

Yes a series of representative photographs were taken. These are attached on the accompanying disc. Also provided is a overview document outlining location of photographs.

4. *In relation to the statement in the report, 'All cracks minor in shear walls', where were these cracks located and how large were they?*

As illustrated in the photographic record the cracking to the shear walls was predominantly on the Ground and First Floors and were generally 0.2-0.3mm. The largest of the cracks was located on the E-W shear wall at the south of the lift core (refer photographs 013-017 in the attached document) and were 0.2-0.6mm.

5. *Was any report (written or verbal) other than the site report dated 16 September 2010 provided to any person following the inspection? If so please provide details.*

No additional written or verbal reports provided.

6. *Please provide copies of any other documents you have in your possession relating to your inspection and report.*

All documents relating to the inspections are attached

Report dated 15th October 2010

1. *Provide any written instructions that were given to you regarding the nature of the investigations you were required to undertake. Please also advise the content of any verbal instructions.*



Email request to inspect ground floor window frame from Harcourts as building owner representatives and subsequently when on site we were asked to look at a second floor partition crack as noted in the site report.

2. *What inspections were carried out?*

Visual inspection of ground floor window frame, and second floor partition wall crack

3. *Were any notes or photographs taken during or after the inspection? If so, please provide copies.*

No

4. *In reaching the conclusion that the building was 'remains structurally okay to occupy', did the report writer give any consideration to:*

a. *The building's plans?*

No

b. *The construction history of the building?*

No

c. *Any previous reports or assessments by Holmes Consulting Group or any other party?*

The previous site inspection of the 7th September 2010 conducted by the inspecting engineer.

d. *The impact of the September 4 earthquake and subsequent aftershocks on the structural integrity of the building and, in particular, whether the building's capacity to withstand further aftershocks was diminished as a result?*

Yes, but only in the context of a rapid visual inspection to identify any obvious signs of damage that might have resulted in significant diminished structural capacity.

e. *Information from GNS or any other source about the likelihood, location and extent of further aftershocks? If so provide details of this information.*

No

f. *Information from the Christchurch City Council relating to building standards or the inspection of buildings following the earthquake? If so provide details of this information.*



The verbal briefing's given by the CCC/Civil Defence in regard to what they expected from level 2 structural assessments and we also received the Christchurch Earthquake rapid assessment form-Level 2 (see attached copy). NB: These briefings were not building specific.

- g. *Any information from any other party relating to building standards or the inspection of buildings following an earthquake? If so provide details of this information.*

No

5. *Was any report (written or verbal) other than the site report dated 15 October 2010 provided to any person following the inspection? If so please provide details.*

No

6. *Please provide copies of any other documents you have in your possession relating to your inspection and report.*

All documents relating to the inspections are attached

Report dated 27th January 2011

1. *Provide any written instructions that were given to you regarding the nature of the investigations you were required to undertake. Please also advise the content of any verbal instructions.*

Email request (see attached) to re-inspect level 1 walls and stairs from Harcourts NAI as building owner representative.

2. *What inspections were carried out?*

Inspection of level 1 walls.

3. *Were any notes or photographs taken during or after the inspection? If so, please provide copies.*

No

4. *In relation to the statement in the report, 'Previous cracks have enlarged', where were these cracks located and how large were they?*

No specific recollection from the inspecting engineer as to the exact locations, however as noted in the site report some larger than 0.2mm in width.

5. *In reaching the conclusion that the building was 'remains safe to occupy', did the report writer give any consideration to:*



a. *The building's plans?*

No

b. *The construction history of the building?*

No

c. *Any previous reports or assessments by Holmes Consulting Group or any other party?*

Previous site inspections of the 7th September and 15th October 2010 conducted by the inspecting engineer.

d. *The impact of the September 4 earthquake and subsequent aftershocks on the structural integrity of the building and, in particular, whether the building's capacity to withstand further aftershocks was diminished as a result?*

Yes, but only in the context of a rapid visual inspection to identify any obvious signs of damage that might have resulted in significant diminished structural capacity.

e. *Information from GNS or any other source about the likelihood, location and extent of further aftershocks? If so provide details of this information.*

No

f. *Information from the Christchurch City Council relating to building standards or the inspection of buildings following the earthquake? If so provide details of this information.*

The verbal briefing's given by the CCC/Civil Defence in regard to what they expected from level 2 structural assessments and we also received the Christchurch Earthquake rapid assessment form-Level 2 (see attached copy). NB: These briefings were not building specific.

g. *Any information from any other party relating to building standards or the inspection of buildings following an earthquake? If so provide details of this information.*

No

6. *Was any report (written or verbal) other than the site report dated 27 January 2011 provided to any person following the inspection? If so please provide details.*

No



7. *Please provide copies of any other documents you have in your possession relating to your inspection and report.*

All documents relating to the inspections are attached.

General

1. *Are you aware of any inspection being carried out by any other person?*

No

2. *If so please provide details*

Not applicable.

Yours sincerely,


BRUCE BLACK
MANAGING DIRECTOR

PP John Hare
DIRECTOR



Canterbury Earthquakes Royal Commission

Komihana a te Karauna hei Tiro tiro i ngā Whare i Horo i ngā Rūwhenua o Waitaha

19 September 2011

Holmes Consulting Group Limited
PO Box 6718
Upper Riccarton
CHRISTCHURCH 8442

FOR: John Hare

PRIVATE AND CONFIDENTIAL

Dear Mr Hare,

Royal Commission of Inquiry into Building Failures Caused by the Canterbury Earthquakes: Requirement for Information

The Royal Commission's Terms of Reference require the Commission to inquire into the nature and effectiveness of any assessment carried out on the PGC Building at 233 Cambridge Terrace after the 4 September 2010 earthquake and 26 December aftershock.

We have received copies of site reports from Holmes Consulting Group relating to the PGC building dated 7 September 2010, 16 September 2010, 15 October 2010 and 27 January 2011.

Please provide the following information and documentation to the Commission:

Report dated 7 September 2010

1. Provide any written instructions that were given to you regarding the nature of the investigations you were required to undertake. Please also advise the content of any verbal instructions.
2. What inspections were carried out?
3. Were any notes or photographs taken during or after the inspection? If so, please provide copies.
4. In relation to the statement in the report, 'Cracks to ground floor and first floor shear walls,' where were these cracks located and how large were they?
5. In reaching the conclusion that the building was 'okay to occupy structurally', did the report writer give any consideration to:
 - a. The building's plans?
 - b. The construction history of the building?

- c. Any previous reports or assessments by Holmes Consulting Group or any other party?
 - d. The impact of the September 4 earthquake and subsequent aftershocks on the structural integrity of the building and, in particular, whether the building's capacity to withstand further aftershocks was diminished as a result?
 - e. Information from GNS or any other source about the likelihood, location and extent of further aftershocks? If so, provide details of this information.
 - f. Information from the Christchurch City Council relating to building standards or the inspection of buildings following an earthquake? If so, provide details of this information.
 - g. Any information from any other party relating to building standards or the inspection of buildings following an earthquake? If so, provide details of this information.
6. Was any report (written or verbal) other than the site report dated 7 September 2010 provided to any person following the inspection? If so please provide details.
 7. Please provide copies of any other documents you have in your possession relating to your inspection and report.

Report dated 16 September 2010

1. Provide any written instructions that were given to you regarding the nature of the investigations you were required to undertake. Please also advise the content of any verbal instructions.
2. What inspections were carried out?
3. Were any notes or photographs taken during or after the inspection? If so, please provide copies.
4. In relation to the statement in the report, 'All cracks minor in shear walls,' where were these cracks located and how large were they?
5. Was any report (written or verbal) other than the site report dated 16 September 2010 provided to any person following the inspection? If so please provide details.
6. Please provide copies of any other documents you have in your possession relating to your inspection and report.

Report dated 15 October 2010

1. Provide any written instructions that were given to you regarding the nature of the investigations you were required to undertake. Please also advise the content of any verbal instructions.
2. What inspections were carried out?
3. Were any notes or photographs taken during or after the inspection? If so, please provide copies.
4. In reaching the conclusion that the building 'remains structurally okay to occupy', did the report writer give any consideration to:

- a. The building's plans?
 - b. The construction history of the building?
 - c. Any previous reports or assessments by Holmes Consulting Group or any other party?
 - d. The impact of the September 4 earthquake and subsequent aftershocks on the structural integrity of the building and, in particular, whether the building's capacity to withstand further aftershocks was diminished as a result?
 - e. Information from GNS or any other source about the likelihood, location and extent of further aftershocks? If so, provide details of this information.
 - f. Information from the Christchurch City Council relating to building standards or the inspection of buildings following an earthquake? If so, provide details of this information.
 - g. Any information from any other party relating to building standards or the inspection of buildings following an earthquake? If so, provide details of this information.
5. Was any report (written or verbal) other than the site report dated 15 October 2010 provided to any person following the inspection? If so please provide details.
 6. Please provide copies of any other documents you have in your possession relating to your inspection and report.

Report dated 27 January 2011

1. Provide any written instructions that were given to you regarding the nature of the investigations you were required to undertake. Please also advise the content of any verbal instructions.
2. What inspections were carried out?
3. Were any notes or photographs taken during or after the inspection? If so, please provide copies.
4. In relation to the statement in the report, 'Previous cracks have enlarged, where were these cracks located and how large were they?
5. In reaching the conclusion that the building 'remains safe to occupy,' did the report writer give any consideration to:
 - a. The building's plans?
 - b. The construction history of the building?
 - c. Any previous reports or assessments by Holmes Consulting Group or any other party?
 - d. The impact of the September 4 earthquake and subsequent aftershocks on the structural integrity of the building and, in particular, whether the building's capacity to withstand further aftershocks was diminished as a result?
 - e. Information from GNS or any other source about the likelihood, location and extent of further aftershocks? If so, provide details of this information.
 - f. Information from the Christchurch City Council relating to building standards or the inspection of buildings following an earthquake? If so, provide details of this information.

- g. Any information from any other party relating to building standards or the inspection of buildings following an earthquake? If so, provide details of this information.
6. Was any report (written or verbal) other than the site report dated 27 January 2011 provided to any person following the inspection? If so please provide details.
7. Please provide copies of any other documents you have in your possession relating to your inspection and report.

General

1. Are you aware of any inspection being carried out by any other person?
2. If so, please provide details.

This information and documentation is required pursuant to the Royal Commission's powers of investigation set out in section 4C of the Commissions of Inquiry Act 1908.

Please provide the information and documentation by 7 October 2011.

Yours faithfully,



Marcus Elliott
Counsel Assisting
Canterbury Earthquakes Royal Commission



Project Name PGG Buildings
253 Cambridge

Project No:

S.R. No: 1

Date: 7 September 2010

Reviewed By: Mark Whiteside

SITE REPORT

 Work Reviewed:

Rapid Structural Assessment.

Walk around exterior, ground, first, fourth floors.

 Observations & Comments:

An initial earthquake inspection was carried out on PGG Buildings.

The inspection showed:

- Insitu concrete construction building with concrete shear wall core to south side.
- Cracks to ground floor and first floor level shear walls.
- Fourth floor ceiling grid bracing has failed, ceiling tiles have been removed, electrical and air conditioning services are exposed.

Confirming 'green placard' building okay to occupy [structurally].

Report Prepared By:

Mark Whiteside
PROJECT ENGINEER

Christchurch

Telephone

64 3 366 3366

Facsimile

64 3 379 2169

Internet

www.holmesgroup.cor

Level 5

123 Victoria Street

PO Box 25355

Christchurch 8144

New Zealand

Offices in

Auckland

Hamilton

Wellington

Queenstown

San Francisco

Copies to:

Cc:



Project Name PGCBuilding, 233
Cambridge Terrace

Project No: 105315

S.R. No:

SITE REPORT

Date: 16 September 2010

Reviewed By: Alistair Boys

Work Reviewed:

Re-visit to inspect new/growing cracks.
RC frame around lift core.

Queenstown

Telephone

+64 3 441 3055

Observations & Comments:

Facsimile

+64 3 441 3011

holmesgroup.com

- All cracks observed minor in shear walls - typically <0.5mm.
- One single crack 0.6mm and minor spalling initiated at intersection approximately 100x100mmx10mm max depth.
- Spalling in spandrel beams (outside) initiated by reinforcing corrosion - not significant.
- Inspected parapet above carparks on boundary. All cracks evident are old (moss in cracks) and wall is stable and has not moved.
- Okay to park below.

Level 2

41 Ballarat Street

PO Box 1266

Queenstown

New Zealand

Report Prepared By:

Alistair Boys
PROJECT ENGINEER

Offices in

Auckland

Hamilton

Wellington

Christchurch

San Francisco

Copies to:

Christchurch Eq RAPID Assessment Form - LEVEL 2

Inspector Initials Territorial Authority	<div style="border: 1px solid black; padding: 2px; display: inline-block;">ALB</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">Christchurch City</div>	Date Time	<div style="border: 1px solid black; padding: 2px; display: inline-block;">16/9/10</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">9:30 am.</div>	Final Posting (e.g. UNSAFE)	<div style="border: 1px solid black; padding: 2px; display: inline-block; font-size: 1.2em;">GREEN</div>
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Building Name	PGC Building			Type of Construction	
Short Name				<input type="checkbox"/> Timber frame	<input checked="" type="checkbox"/> Concrete shear wall (1ft core)
Address	233 Cambridge Ter			<input type="checkbox"/> Steel frame	<input type="checkbox"/> Unreinforced masonry
GPS Co-ordinates	S°	E°		<input type="checkbox"/> Tilt-up concrete	<input type="checkbox"/> Reinforced masonry
Contact Name				<input checked="" type="checkbox"/> Concrete frame	<input type="checkbox"/> Confined masonry
Contact Phone				<input type="checkbox"/> RC frame with masonry infill	<input type="checkbox"/> Other:
Stores at and above ground level	7	Below ground level	0	Primary Occupancy	
Total gross floor area (m ²)	-1500	Year built	-	<input type="checkbox"/> Dwelling	<input type="checkbox"/> Commercial/ Offices
No of residential Units	-			<input type="checkbox"/> Other residential	<input type="checkbox"/> Industrial
Photo Taken	Yes	No		<input type="checkbox"/> Public assembly	<input type="checkbox"/> Government
				<input type="checkbox"/> School	<input type="checkbox"/> Heritage Listed
				<input type="checkbox"/> Religious	<input type="checkbox"/> Other

Investigate the building for the conditions listed on page 1 and 2, and check the appropriate column. A sketch may be added on page 3

Overall Hazards / Damage	Minor/None	Moderate	Severe	Comments
Collapse, partial collapse, off foundation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	reinspect cracks in shear walls ← 0.5m ✓ ok ✓
Building or storey leaning	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wall or other structural damage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	inspect adjacent parapet ⇒ NO FALL HAZARD.
Overhead falling hazard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ground movement, settlement, slips	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Neighbouring building hazard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Electrical, gas, sewerage, water, hazmats	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Record any existing placard on this building:

Existing Placard Type
(e.g. UNSAFE)

GREEN.

Choose a new posting based on the new evaluation and team judgement. Severe conditions affecting the whole building are grounds for an UNSAFE posting. Localised Severe and overall Moderate conditions may require a RESTRICTED USE. Place INSPECTED placard at main entrance. Post all other placards at every significant entrance. Transfer the chosen posting to the top of this page.

INSPECTED

GREEN

G1

G2

RESTRICTED USE

YELLOW

Y1

Y2

UNSAFE

RED

R1

R2

R3

Record any restriction on use or entry:

Further Action Recommended:

Tick the boxes below only if further actions are recommended

Barricades are needed (state location):

Detailed engineering evaluation recommended

Structural

Geotechnical

Other:

Other recommendations:

Estimated Overall Building Damage (Exclude Contents)

None	<input type="checkbox"/>			
0-1 %	<input checked="" type="checkbox"/>	31-60 %	<input type="checkbox"/>	
2-10 %	<input type="checkbox"/>	61-99 %	<input type="checkbox"/>	
11-30 %	<input type="checkbox"/>	100 %	<input type="checkbox"/>	

Sign here on completion

AS

Date & Time
ID

9:30 16/9/10

Inspection ID: _____ (Office Use Only)

Structural Hazards/ Damage	Minor/None	Moderate	Severe	Comments
Foundations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Roofs, floors (vertical load)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Columns, pilasters, corbels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Diaphragms, horizontal bracing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pre-cast connections	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Beam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Non-structural Hazards / Damage				
Parapets, ornamentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cladding, glazing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cellings, light fixtures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Interior walls, partitions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Elevators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Stairs/ Exits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Utilities (eg. gas, electricity, water)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Geotechnical Hazards / Damage				
Slope failure, debris	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ground movement, fissures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Soil bulging, liquefaction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
General Comment				

Usability Category

Damage Intensity	Posting	Usability Category	Remarks
Light damage <i>Low risk</i>	Inspected (Green)	G1. Occupiable, no immediate further investigation required	
		G2. Occupiable, repairs required	
Medium damage <i>Medium risk</i>	Restricted Use (Yellow)	Y1. Short term entry	
		Y2. No entry to parts until repaired or demolished	
Heavy damage <i>High risk</i>	Unsafe (Red)	R1. Significant damage: repairs, strengthening possible	
		R2. Severe damage: demolition likely	
		R3. At risk from adjacent premises or from ground failure	



Project Name PGC Building 233
Cambridge St

Project No: 105380.37

S.R. No: 3

Date: 15 October 2010

Reviewed By: MRW

SITE REPORT

Work Reviewed:

PGC Building – Re-inspection of ground floor window frame gap and second floor partition crack.

Christchurch

Telephone

64 3 366 3366

Facsimile

64 3 379 2169

Internet

www.holmesgroup.com

Observations & Comments:

Ground floor – Window frames span from floor to floor. Aluminium mullions have moved internal cabinetry creating a gap (or enlarging).

No structural issues. Gap should be addressed for weather proofing.

Level 5

Second Floor – Partition crack at concrete interface

No structural issues.

123 Victoria Street

PO Box 25355

Building remains structurally okay to occupy on above observations.

Christchurch 8144

Report Prepared By:

New Zealand

Mark Whiteside
PROJECT ENGINEER

Offices in

Auckland

Hamilton

Wellington

Queenstown

San Francisco

105380.37SR1510.003.doc

Copies to:

Colin Hair (colin.hair@pgc.co.nz), Anne-Cherie (ac.manawatu-tera@harcourts.co.nz).



Project Name PGC Building 233
Cambridge St

Project No: 105380.37

S.R. No: 4

Date: 27 January 2011

Reviewed By: MRW

SITE REPORT

Work Reviewed:

- Re-inspection of previously observed damage level 1 and new cracks.

Christchurch

Telephone

Observations & Comments:

64 3 366 3366

- Previous cracks have enlarged. Cracks to level 1 stationary wall now >.2mm, minor spalling also evident. General diagonal cracking to all shear walls.
- New cracks to stair connection at level 1 – spalled plaster. Hairline cracks to most landings (stairs appear tied to all floors).
- Building remains safe to occupy.
- Cracks to shear walls greater than .2mm will require epoxy injection repairs.
- Cracks to stairs should be repaired also where greater than .2mm.

Facsimile

64 3 379 2169

Internet

www.holmesgroup.com

Level 5

123 Victoria Street

PO Box 25355

Christchurch 8144

New Zealand

Offices in

Auckland

Hamilton

Wellington

Queenstown

San Francisco

Report Prepared By:

Mark Whiteside
PROJECT ENGINEER

105380.37SR2701.004.doc

Copies to:

ac.manawatu-tera@naiharcourts.co.nz NOTE: Perpetual Trust requested a copy of this report.



SHORT FORM AGREEMENT FOR
CONSULTANT ENGAGEMENT
{COMMERCIAL}

BETWEEN:

N.A. Harcourt
(Client)

AND:

HOLMES CONSULTING GROUP LTD
(Consultant)

PROJECT:

Various buildings in Portfolios
(Description of Building Work)

LOCATION:

As list
(Address)

SCOPE AND NATURE OF SERVICES:

- Initial earthquake inspection ✓
- Securing measures as considered necessary ✓
-
-

PROGRAMME FOR THE SERVICES:

FEES & TIMING OF PAYMENTS

All work will be conducted on a time basis.

All fees and rates are exclusive of GST.

INFORMATION OR SERVICES TO BE PROVIDED BY THE CLIENT

The Client engages the Consultant to provide the services described above and the Consultant agrees to perform the services for the remuneration provided above. Both Parties agree to be bound by the provision of the Short Form Model Conditions of Engagement (overleaf), including clauses 1, 8 and 9, and any variations noted below. Once signed, this agreement, together with the conditions overleaf and any attachments, will replace all or any oral agreement previously reached between the Parties.

VARIATIONS TO THE SHORT FORM MODEL CONDITIONS OF ENGAGEMENT (OVERLEAF)

CLIENT AUTHORISED SIGNATORY (IES):

[Signature]
(Print Name) *Howard Buchanan*
(Date) *5/9/10*

CONSULTANTS AUTHORISED SIGNATORY (IES):

[Signature]
(Print Name) *Richard Seville*
(Date) *5/9/10*



SHORT FORM CONDITIONS OF ENGAGEMENT (COMMERCIAL)

1. The Consultant shall perform the Services as described in the attached documents. The Client and the Consultant agree and the Services are acquired for the purposes of a business and that the provisions of the Consumer Guarantees Act 1993 are excluded in relation to the Services.
2. In providing the Services the Consultant shall exercise the degree of skill, care and diligence normally expected of a competent professional.
3. The Client shall provide to the Consultant, free of cost, as soon as practicable following any request for information, all information in his or her power to obtain which may relate to the services. The Consultant shall not, without the Client's prior consent, use information provided by the Client for purposes unrelated to the Services. In providing the information to the Consultant, the Client shall ensure compliance with the Copyright Act 1994 and its amendments and shall identify any proprietary rights that any other person may have in any information provided.
4. The Client may order variations to the Services in writing or may request the Consultant to submit proposals for variations to the Services.
5. The Client shall pay the Consultant for the Services the amount of fees and expenses at the times and in the manner set out in the attached documents. Where this Agreement has been entered by an Agent (or person purporting to act as Agent) on behalf of the Client, the Agent and Client shall be jointly and severally liable for payment of all fees and expenses due to the Consultant under this Agreement.
6. All amounts payable by the Client shall be paid within twenty (20) working days of the relevant invoice being mailed to the Client. Late payment shall constitute a default, and the client shall pay default interest on overdue amounts from the date payment falls due to the date of payment at the rate of the Consultant's overdraft rate plus 2% and in addition the costs of any actions taken by the Consultant to recover the debt.
7. Where services are carried out on a time charge basis, the consultant may purchase such incidental goods and/or Services as are reasonably required for the consultant to perform the Services. The cost of obtaining such incidental goods and/or Services shall be payable by the Client. The Consultant shall maintain records which clearly identify time and expenses incurred.
8. The liability of the Consultant to the Client in respect of his or her Services for the project, whether in contract, tort or otherwise, shall be limited to the lesser of five times the value of the fees (exclusive GST and disbursements), or the sum of NZ\$250,000. The consultant shall only be liable to the Client for direct loss or damage suffered by the Client as the result of a breach by the Consultants of his or her obligations under this Agreement and shall not be liable for any loss of profits.
9. The Consultant acknowledges that the Consultant currently holds a policy of Professional Indemnity insurance for the lesser of NZ\$250,000 or five times the value of the fees (exclusive GST and disbursements). The Consultant undertakes to use all reasonable endeavours to maintain a similar policy of insurance for six years after the completion of the Services.
10. Neither the Client nor the Consultant shall be considered liable for any loss or damage resulting from any occurrence unless a claim is formally made on him or her within six years from completion of the Services.
11. If either Party is found liable to the other (whether in contract, tort or otherwise), and the claiming Party and/or a Third Party has contributed to the loss or damage, the liable Party shall only be liable to the proportional extent of its own contribution.
12. The Consultant shall retain intellectual property/copyright in all drawings, specifications and other documents prepared by the Consultant. The Client shall be entitled to use them or copy them only for the works and the purpose for which they are intended. The ownership of data and factual information collected by the Consultant and paid for by the Client shall, after payment by the Client, lie with the Client. The Client may reproduce drawings, specifications and other documents in which the consultant has copyright, as reasonably required in connection with the project but not otherwise. The client shall have no right to use any of these documents where any or all of the fees and expenses remain payable to the Consultant.
13. The consultant has not and will not assume any obligation as the Client's Agent or otherwise which may be imposed upon the Client from time to time pursuant to the Health and Safety in Employment Act 1992 (the "Act") arising out of this engagement. The Consultant and the Client agree that, in terms of the Act, the Consultant will not be the person who controls the place of work.
14. The Client may suspend all or part of the Services by notice to the Consultant who shall immediately make arrangements to stop the Services and minimise further expenditure. The Client and the Consultant may (in the event the other Party is in material default) terminate the Agreement by notice to the other Party. Suspension or termination shall not prejudice or affect the accrued rights or claims and liabilities of the Parties.
15. The Parties shall attempt in good faith to settle any dispute by mediation.
16. This Agreement is governed by the New Zealand law, the New Zealand courts have jurisdiction in respect of the Agreement, and all amounts are payable in New Zealand dollars.

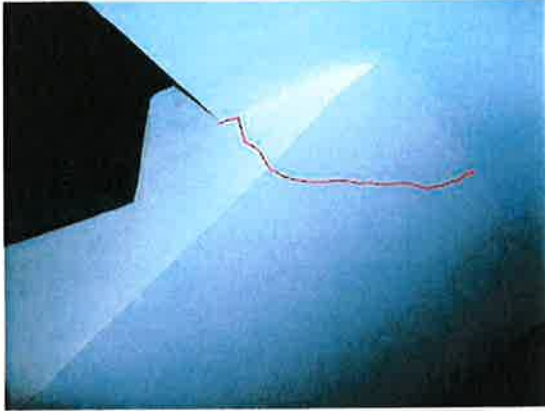


PGC BUILDING – 233 CAMBRIDGE TCE – CHRISTCHURCH

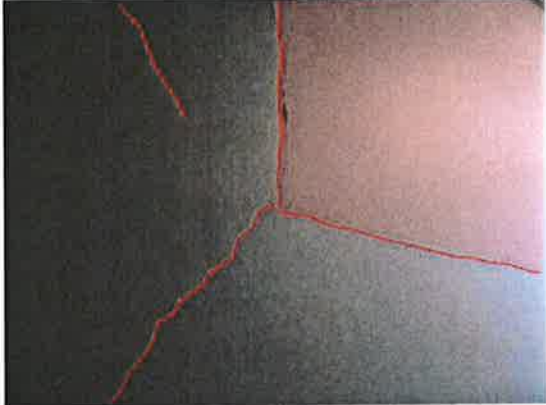

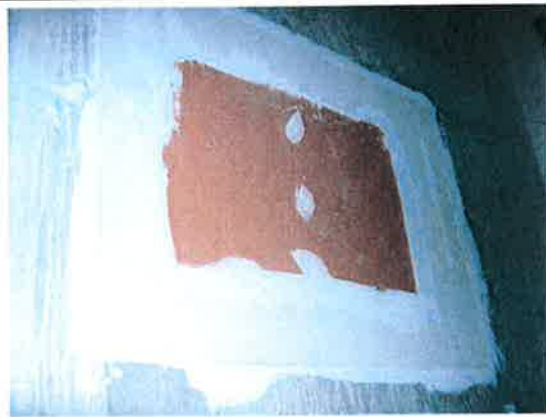

The following photographic survey relates cracking in concrete wall and stair elements to observations made in site reports and gives general building location for these photographs. Crack patterns have been highlighted in red. Original base photographs have been supplied separately.



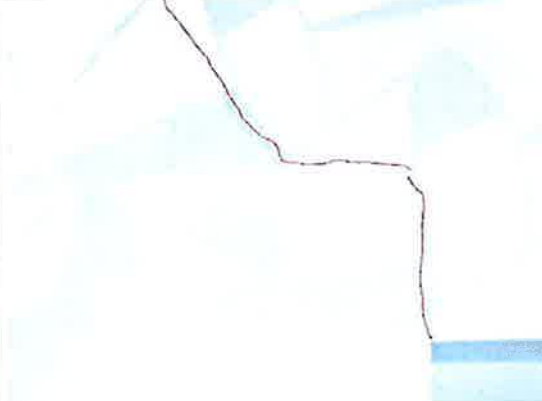
Photos were taken on 16 September 2010. The summary table below has been prepared during April/May 2011 from recollection of crack locations and damage observed on 16 September 2010.

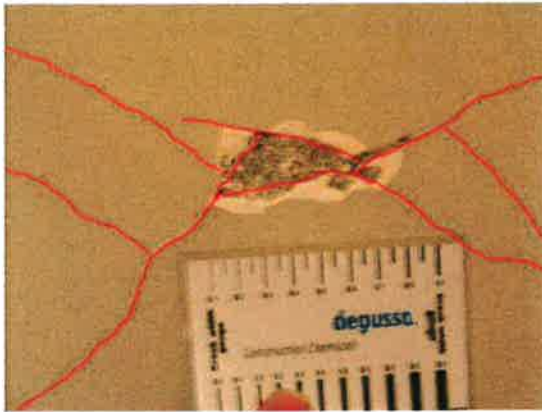
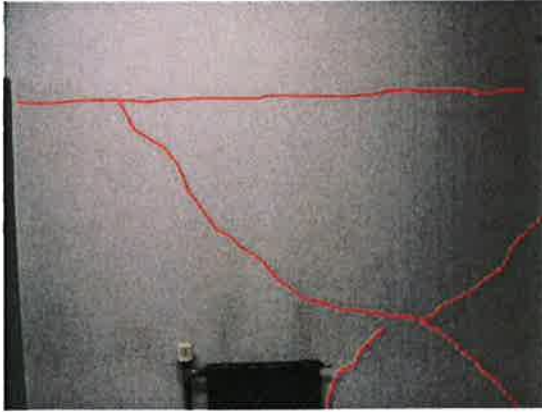

Note - red lines added electronically post photographing for added clarity.




Photographic Summary of Primary Damage Observed – 16 Sept 2010


Damaged Item	Example
<p>Photo 001</p> <p>Minor cracking to underside stairs to L1 Typically $\leq 0.2\text{mm}$</p>	
<p>Photo 002</p> <p>Cracking to G floor shear wall Typically $\leq 0.2\text{mm}$</p>	
<p>Photo 003</p> <p>Cracking to G floor shear wall Typically $\leq 0.2\text{mm}$</p>	

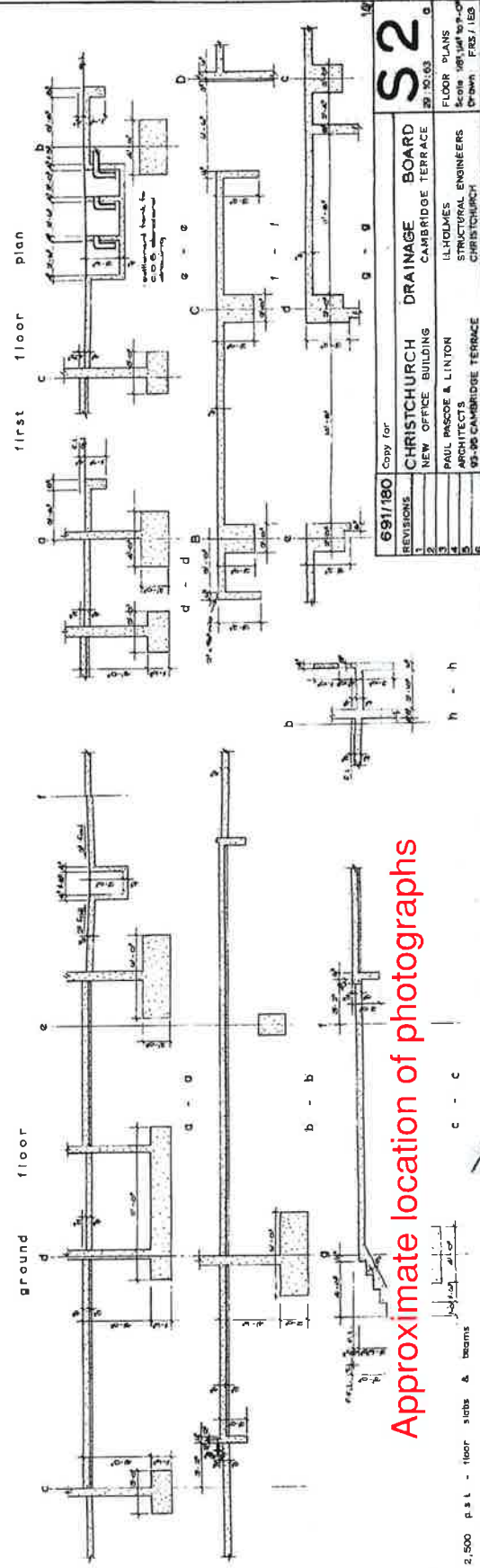
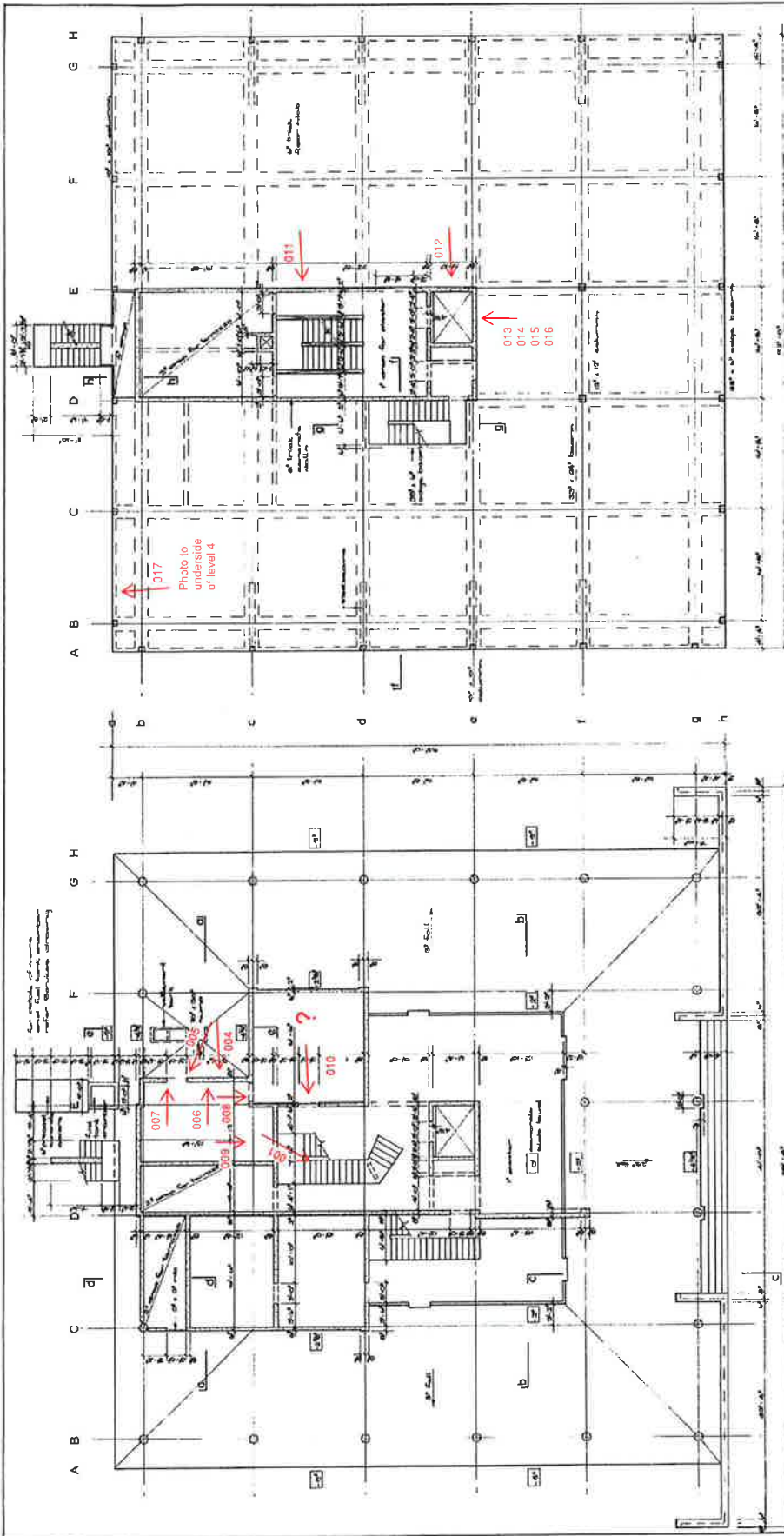
Damaged Item	Example
<p>Photo 004</p> <p>Cracking to G floor shear wall Typically $\leq 0.2\text{mm}$ Shaded area is Gib infill</p>	
<p>Photo 005</p> <p>Cracking to G floor shear wall Typically $\leq 0.2\text{mm}$ Shaded area is Gib infill</p>	
<p>Photo 006</p> <p>Rear of shear wall showing Gib infill Plantroom</p>	
<p>Photo 007</p> <p>Cracking to G floor shear wall Typically $\leq 0.2\text{mm}$ Plant room</p>	

Damaged Item	Example
<p>Photo 008</p> <p>Horizontal cracking to G floor shear wall Typically $\leq 0.3\text{mm}$ Plant room</p>	 A photograph of a light-colored concrete wall in a plant room. A horizontal crack is visible, extending across the width of the wall. The crack is highlighted with a red line. A metal pipe is visible at the top of the wall, and a wooden beam is leaning against the wall below the crack.
<p>Photo 009</p> <p>Horizontal cracking to G floor shear wall Typically $\leq 0.3\text{mm}$ Plant room</p>	 A photograph of a concrete wall in a plant room. A horizontal crack is visible, extending across the wall. The crack is highlighted with a red line. A large, dark-colored pipe is visible on the left side of the wall, and a red fire hose reel is visible on the right side.
<p>Photo 010</p> <p>Shear crack to G floor shear wall Typically $\leq 0.2\text{mm}$</p>	 A close-up photograph of a concrete wall. A diagonal shear crack is visible, extending from the top left towards the bottom right. The crack is highlighted with a red line.

Damaged Item	Example
<p>Photo 011</p> <p>Cracking to L1 shear wall Typically $\leq 0.2\text{mm}$</p>	 A photograph of a light-colored wall with several red lines drawn over it to indicate cracks. A ruler is visible in the foreground for scale.
<p>Photo 012</p> <p>Cracking to L1 shear wall Typically $\leq 0.2\text{mm}$</p>	 A photograph of a wall with several red lines drawn over it to indicate cracks.
<p>Photo 013</p> <p>Cracking to L1 shear wall in storeroom Crackwidths between 0.2mm – 0.6mm At Lift Core Wall</p>	 A photograph of a wall in a storeroom with several red lines drawn over it to indicate cracks. The wall is adjacent to a lift core wall.

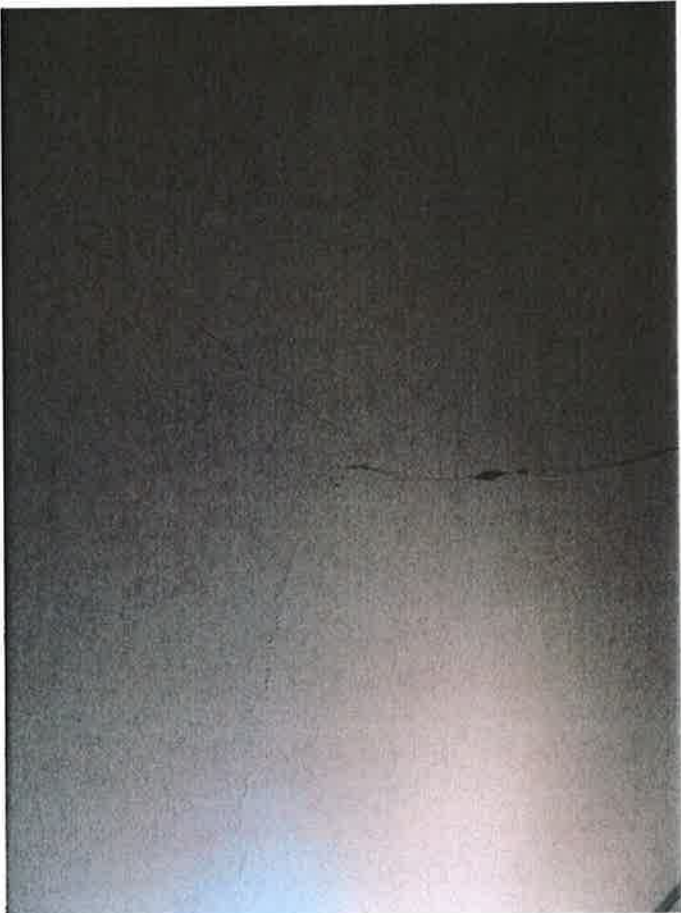
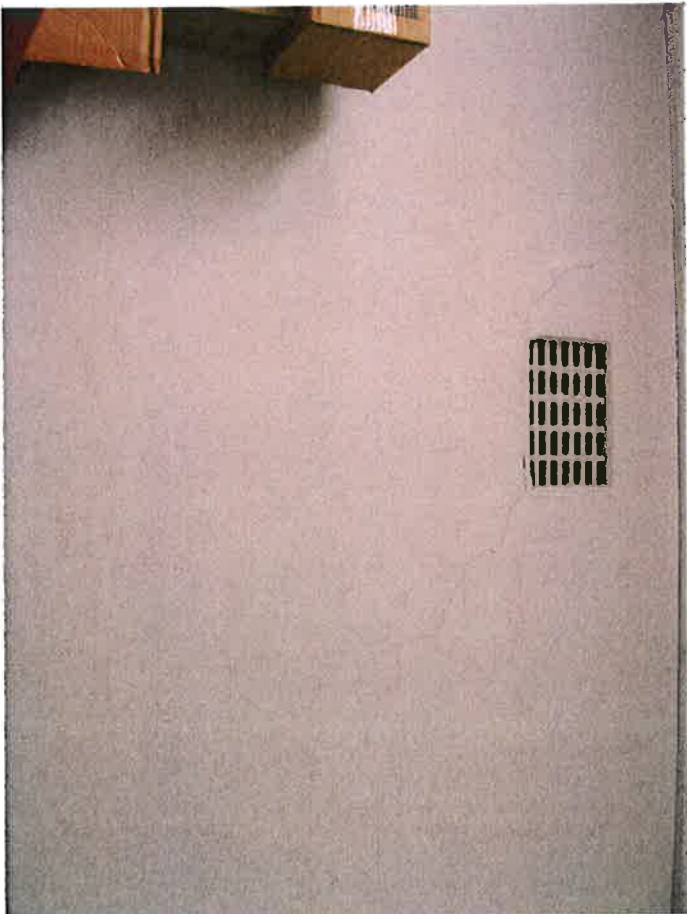
Damaged Item	Example
<p data-bbox="231 293 352 322">Photo 014</p> <p data-bbox="231 376 679 488">Cracking to L1 shear wall in storeroom Crackwidths between 0.2mm – 0.6mm At Lift Core Wall</p>	
<p data-bbox="231 1041 352 1070">Photo 015</p> <p data-bbox="231 1124 679 1236">Cracking to L1 shear wall in storeroom Crackwidths between 0.2mm – 0.6mm At Lift Core Wall</p>	
<p data-bbox="231 1473 352 1503">Photo 016</p> <p data-bbox="231 1556 679 1668">Cracking to L1 shear wall in storeroom Crackwidths between 0.2mm – 0.6mm At Lift Core Wall</p>	

Damaged Item	Example
<p data-bbox="231 291 359 324">Photo 017</p> <p data-bbox="231 369 686 481">Corrosion induced cracking/spalling of spandrel panels Typical panel damage shown</p>	



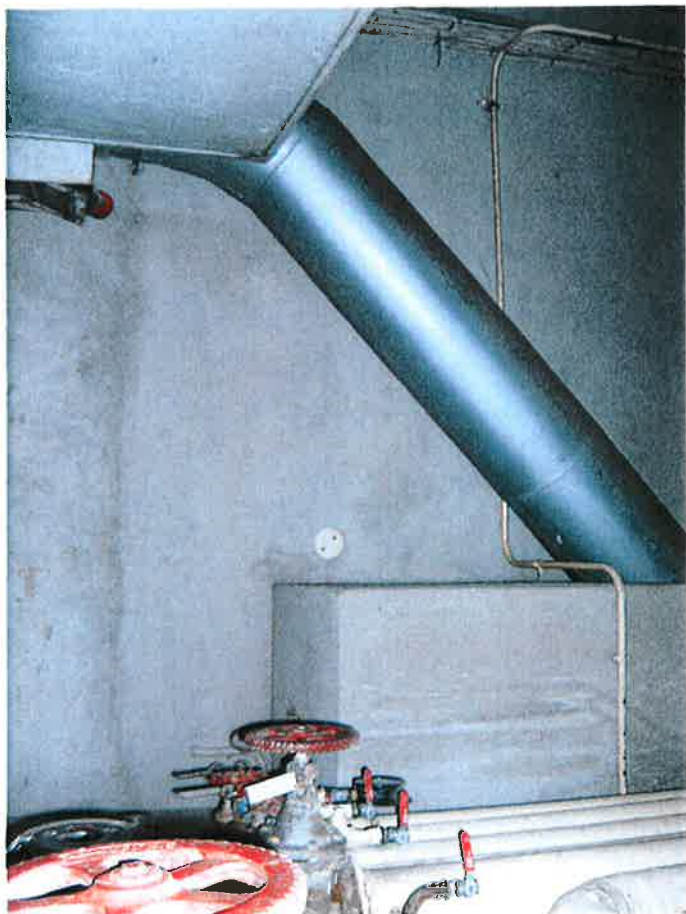
Approximate location of photographs

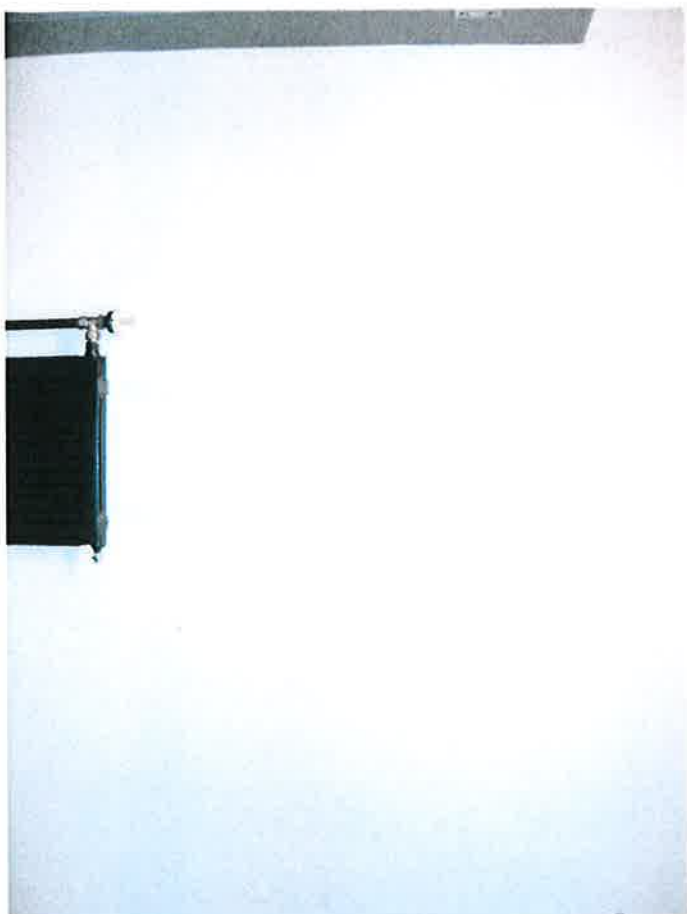
691/180 Copy for		S2	
CHRISTCHURCH DRAINAGE BOARD		FLOOR PLANS	
NEW OFFICE BUILDING		Scale 1/8" = 1'-0"	
PAUL PASCOE & LINTON		29.10.03	
ARCHITECTS		STRUCTURAL ENGINEERS	
93-95 CAMBRIDGE TERRACE		CHRISTCHURCH	



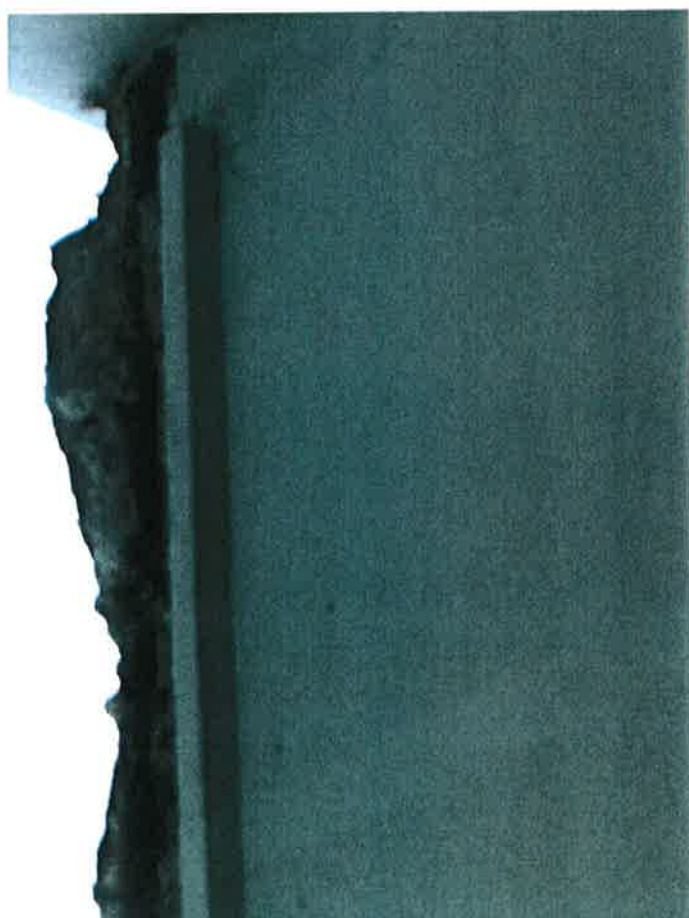
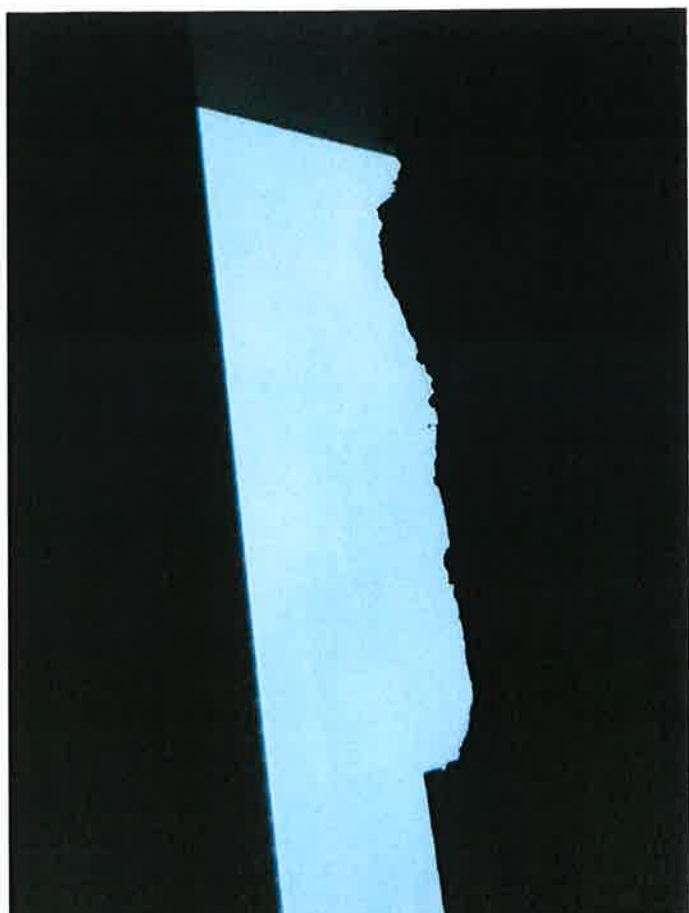












Richard Seville

From: Ann-Cherie Manawatu-Te Ra [ac.manawatu-tera@naiharcourts.co.nz]
Sent: Thursday, 14 October 2010 10:31 a.m.
To: Richard Seville
Subject: FW: Earthquake Issues
File Status: Not Filed
Job Number: General

Hello Richard

Re: PGC Building – 233 Cambridge Terrace, Christchurch

We have another property that needs to be checked, would you please arrange for a structural engineer to inspect the PGC premises as a matter of urgency, the tenant has concerns about the building structure after the 5 magnitude earthquake yesterday.

Onsite Contact: Helen Golding – Pyne Gould Tenancy – Ground Floor
Phone: 924 3192

If you require any further details please contact me.

Kind Regards
Ann-Cherie

Ann-Cherie Manawatu-Te Ra
Commercial Property Manager

Grenadier Real Estate Ltd, MREINZ, Licensed Agent REAA 2008
271 Madras Street, PO Box 1625, Christchurch 8140, New Zealand
P +64 3 371 9126 M +64 27 218 5135 F +64 3 371 9189
E ac.manawatu-tera@naiharcourts.co.nz www.naiharcourts.co.nz



From: Golding, Helen [mailto:Helen.Golding@pgc.co.nz]
Sent: Thursday, 14 October 2010 9:43 a.m.
To: Louise.Sutherland
Subject: Earthquake Issues

Hi Louise

I have had a request from our Company Secretary for an engineer to come and check our building once again please. We need to check the ground floor around the edges where the windows are as some of our wall cladding appears to have moved from the wall. Can we go on the list for a check up please.

Kind Regards,

Helen Golding**Pyne Gould Corporation**

(DDI 03 924 3192 | 7 Fax 03 379 8616

: Web www.pgc.co.nz | Email helen.golding@pgc.co.nz

* Post PO Box 167, Christchurch, New Zealand

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Thank you.

Richard Seville

From: Louise.Sutherland [Louise.Sutherland@naiharcourts.co.nz]
Sent: Thursday, 20 January 2011 2:03 p.m.
To: Richard Seville
Subject: RE: 233 Cambridge Tce
File Status: Filed
Job Number: General

Great, thanks Richard
 Much appreciated
 Louise

Louise Sutherland

Commercial Property Manager

Grenadier Real Estate Ltd, MREINZ, Licensed Agent REAA 2008
 271 Madras Street, PO Box 1625, Christchurch 8140, New Zealand
 P +64 3 371 9126 M +64 21 220 0599 F +64 3 371 9189
 E louise.sutherland@naiharcourts.co.nz www.naiharcourts.co.nz



From: Richard Seville [mailto:RichardS@holmesgroup.com]
Sent: Thursday, 20 January 2011 1:52 p.m.
To: Louise.Sutherland
Cc: Ann-Cherie Manawatu-Te Ra; Mark Whiteside
Subject: RE: 233 Cambridge Tce

Hi Louise,

Mark Whiteside did the earlier inspections on this - hes booked up today with re-inspections but can get to this tomorrow.

Regards,
 Richard

From: Louise.Sutherland [mailto:Louise.Sutherland@naiharcourts.co.nz]
Sent: Thursday, 20 January 2011 11:50 a.m.
To: Richard Seville
Cc: Ann-Cherie Manawatu-Te Ra
Subject: 233 Cambridge Tce

Hi Richard

PGC Building – 233 Cambridge Tce

With today's shocks tenants are concerned about a new large crack that has appeared in a wall and damage sustained to the stairs (concrete come loose).

Can this please be checked out so that I can assure tenants that building is sound.

Please see Gwen from Perpetual Trust – Level one. I will advise her I have given you her details.

Order 2011-072

Thanks

Louise

Louise Sutherland
Commercial Property Manager

Grenadier Real Estate Ltd, MREINZ, Licensed Agent REAA 2008
271 Madras Street, PO Box 1625, Christchurch 8140, New Zealand
P +64 3 371 9126 M +64 21 220 0599 F +64 3 371 9189
E louise.sutherland@naiharcourts.co.nz www.naiharcourts.co.nz



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Richard Seville

From: Ann-Cherie Manawatu-Te Ra [ac.manawatu-tera@naiharcourts.co.nz]
Sent: Tuesday, 25 January 2011 12:12 p.m.
To: Richard Seville
Cc: Louise.Sutherland
Subject: FW: 233 Cambridge Tce
File Status: Filed
Job Number: General

Hi Richard

Can you please forward the current engineers report for 233 Cambridge Terrace as we are getting requests from the tenants.

Thank you.
Ann-Cherie

Ann-Cherie Manawatu-Te Ra
Commercial Property Manager

Grenadier Real Estate Ltd, MREINZ, Licensed Agent REAA 2008
271 Madras Street, PO Box 1625, Christchurch 8140, New Zealand
P +64 3 371 9126 M +64 27 218 5135 F +64 3 371 9189
E ac.manawatu-tera@naiharcourts.co.nz www.naiharcourts.co.nz



From: Louise.Sutherland
Sent: Thursday, 20 January 2011 2:03 p.m.
To: Ann-Cherie Manawatu-Te Ra
Subject: FW: 233 Cambridge Tce

fyi

Louise Sutherland
Commercial Property Manager

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Subject: RE: 233 Cambridge Tce

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Richard

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Cc: Ann-Cherie Manawatu-Te Ra
Subject: 233 Cambridge Tce
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Louise

Louise Sutherland
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