

BUDDLE FINDLAY

To
 Canterbury Earthquakes Royal
 Commission
 PO Box 14053
 Christchurch Mail Centre
 Christchurch 8544

For
 Stephen Mills QC
 Counsel Assisting

From
 Willie Palmer
 Kelly Paterson

By
 Post & Email:
sara.jamieson@royalcommission.govt.nz

Date
 24 February 2012

Dear Sir

Royal Commission of Inquiry into building failure caused by the Canterbury Earthquakes – CTV Building: 249 Madras Street

1. We refer to your letter dated 1 February 2012. We respond adopting your paragraph numbering where appropriate.

LAWYERS

CHRISTCHURCH
 245 St Asaph Street
 PO Box 322
 Christchurch 8140
 New Zealand
 DX WP20307
 Tel 64-3-379 1747
 Fax 64-3-379 5659

Paragraph 1

2. Our client has already provided all file and explanatory notes that it considered to be relevant to either the Department of Building and Housing ("DBH") or the Royal Commission as requested. We continue to assume that you have received all documents that have been provided by our client to the DBH, including Dr Hyland.

AUCKLAND
 PricewaterhouseCoopers Tower
 188 Quay Street
 PO Box 1433
 Auckland 1140
 New Zealand
 DX CP24024
 Tel 64-9-358 2555
 Fax 64-9-358 2055

3. Another search of our client's records in response to your further request for any other documentation regarding the CTV building relevant to the Commission's inquiry has identified a handful of additional documents, not previously requested by or provided to the DBH or the Commission. These documents have been located amongst records relevant to the work carried out in 1991 in response to the Holmes Consulting Group report into the building. None of the documents appear to be of much significance to any technical investigation but as requested they are **enclosed**.

WELLINGTON
 State Insurance Tower
 1 Willis Street
 PO Box 2694
 Wellington 6140
 New Zealand
 DX SP20201
 Tel 64-4-499 4242
 Fax 64-4-499 4141

Paragraphs 2 and 3

4. As you have noted the letter from Lane Neave (and other correspondence between ARCL and Lane Neave) is subject to legal professional privilege. ARCL is not prepared to waive privilege in this correspondence.

Paragraphs 4 to 10 – Response to G Tapper

5. ARCL is unable to say how Mr Tapper's concern about shear core were met.
6. In response to the two questions posed in paragraph 9:
 - (a) ARCL notes the drawings show some connections between the floor and shear core but not all (for example, see S15 – southern wall and S16 – grids C and C/D). The calculations you refer to do not show the connections, however we do not know what information (calculations, drawings or otherwise) were produced to the Council at this time regarding connections.
 - (b) The handwritten calculations you have referred to do not appear to be the calculations referred to in the Document Transfer Form, which specifically refers to calculations relating to 'Bordek structure after fire' (pages G78 and 79). Our assumption is that a set of calculations were provided to Council earlier, as reflected in the notation "*rec'd a day or two after letter sent*" which has been written (presumably by Mr Tapper) in the left hand margin next to the request for calculations in the letter dated 27 August 1986.
7. ARCL understands the calculations held by it have been provided. The statement that the calculations are not necessarily the complete set of calculations for the design was intended to convey that ARCL cannot rule out the possibility that other calculations were provided to Council by Mr Harding. As you know, ARCL does not have its complete files in relation to the design..
8. ARCL is unable to offer any further information in relation to how or whether Mr Tapper's concerns were met. As previously stated, we can only observe that it was not at all uncommon at the time for engineers and Council staff to meet informally or speak on the phone. We refer you, for example, to the **enclosed** letter dated 19 August 1987 from ARCL to Williams Construction Ltd. ARCL obtained this letter from the Council pursuant to a request made under the Local Government Official Information and Meetings Act 1987. The fourth paragraph of the letter refers to detailed discussions between ARCL and the Council at the time of Building Permit Application. Any questions about the content of those discussions will need to be directed to Mr Harding. We note that you intended to send your letter to Mr Harding once the DBH report had been released and assume that you have now done so.

Paragraphs 11 and 12 – Drag Bar retrofit

9. We note the content of a letter dated 2 February 1990 (copy **enclosed**) which records that loads reduce and therefore when reviewed the loads may have reduced on lower floors meaning additional restraint was not needed on those floors.
10. ARCL's calculations relevant to the 1991 works have been provided to the DBH, and we assume you have a copy.

11. Our client is unable to offer any further information in relation to this matter. Our client is unaware of the discussions that may have taken place between Holmes Consulting Group and Mr Banks at the time. Mr Banks may be able to assist and, like with Mr Harding, we note that you intended to send your letter to him after the DBH report had been released and assume this has occurred.

Paragraphs 13 and 14 – Compliance with interstorey drift limits

12. The intent of ARCL's response to the draft reports appears to have been misunderstood. We note the following points:
- The building had a drift limit of 0.83% set by the Code.
 - Under a design level earthquake, the building drift had to be less than this drift limit. The Hyland report confirmed this was achieved.
 - If the columns remained elastic under the design level earthquake (not the drift limit), they could be detailed on the assumption of elastic behaviour.
13. The final Hyland report was amended to agree with the intent of ARCL's comments in this respect.
14. ARCL relied on the drift analysis in the Hyland report in making its comments to the DBH. Your question about drift analysis should therefore be directed to Dr Hyland.

Paragraph 15 – Concrete tests

15. The identity of the concrete supplier is not known to ARCL.
16. ARCL expects that the test results would have been received by the building contractor.
17. ARCL does not hold copies of any concrete test results.

Yours faithfully
BUDDLE FINDLAY



Willie Palmer
Partner

Direct dial: +64-3-371 3502
Email: willie.palmer@buddlefindlay.com



Consulting Engineers
Advancement Society Inc

No	300E
Date	23.9.92
AMR	
GNB	

Claim Reference Number J.G. 990

CONFIDENTIAL

TO: ALAN REAY CONSULTANTS LTD
P.O. Box 25028
CHRISTCHURCH

Date: 27 FEB 1992

ANNUAL REPORT ON STATUS OF CLAIM

RE: CLAIM FROM PRIMEBEST CORPORATION (IN RECEIVERSHIP)

Please complete this form, sign and return it as soon as possible to:

ADAM & ADAM LIMITED
P.O. BOX 2517
WELLINGTON

1. I/We consider (delete whichever statement is inapplicable)

- a) That the file on the above claim may be closed.
- b) That the file on the above claim should be kept open. Our estimate of the likely claim is as follows:

i)	Cost of restoration, repairs etc.	\$ 4483.50 + GST
ii)	Other damages likely to be claimed	\$
iii)	Legal costs incurred by this firm	\$
iv)	Other costs (please specify)	\$

TOTAL \$

2. General Comments (if any)

Refer to letter attached.

SIGNED.....

DATE... 4.03.92.....



Consulting Engineers
Advancement Society Inc

FILE	3608
DATE	25.2.91
AMR	

CONFIDENTIAL

TO: ALAN REAY CONSULTANTS
P.O. BOX 23028
CHRISTCHURCH

Claim Reference Number... 16990

DATE: 19 FEB 1991

ANNUAL REPORT ON STATUS OF CLAIM

RE: CLAIM FROM PRIMEWEST CORP. (IN RECEIVERSHIP)

Please complete this form, sign and return it as soon as possible to:

ADAM & ADAM LTD
PO BOX 2517
WELLINGTON

1. I/We consider: (delete whichever statement is inapplicable)

~~(a) That the file on the above claim may be closed.~~


(b) That the file on the above claim should be kept open. Our estimate of the likely claim is as follows:

- (i) Cost of restoration, repairs, etc \$10,000
- (ii) Other damages likely to be claimed \$ Unknown
- (iii) Legal costs incurred by this firm \$
- (iv) Other costs (please specify) \$

TOTAL \$

2. General Comments (if any)

Building has been re-sold. Seeking legal advice as to possible obligations to new owners. (as instructed by I & G).

SIGNED 

DATE 25/02/91

3608

4/02/90

② Peter Smith, CEAS.

- noted aware of sale of funds
- what are our obligations (if any) to notify anyone re status of review to date?
- prelim advice from insurance pt of view is no further action

P.S. to consider & advise.

CS

P.S. ② pm - contact Mark Forbes

or Sam Mating Lane Neave for opinion

CEAS to pay



Consulting Engineers
Advancement Society Inc

FILE	3508
DATE	01/04
AMR	
GB	✓

CONFIDENTIAL

TO: Alan Reay Consultants Ltd.
Po Box 25-028
Christchurch 1

Claim Reference Number..... 19990

DATE: 28-3-90

ANNUAL REPORT ON STATUS OF CLAIM

RE: CLAIM FROM Receivers of Primewest Corp

Please complete this form, sign and return it as soon as possible to:

ADAM & ADAM LTD
PO BOX 2517
WELLINGTON

1. I/We consider: (delete whichever statement is inapplicable)

~~(a) That the file on the above claim may be closed.~~

(b) That the file on the above claim should be kept open. Our estimate of the ^{possible} likely claim is as follows:

- (i) Cost of restoration, repairs, etc \$ 10,000
- (ii) Other damages likely to be claimed \$ unknown
- (iii) Legal costs incurred by this firm \$
- (iv) Other costs (please specify) \$

TOTAL \$ _____

2. General Comments (if any)

We are still investigating whether there is a deficiency, and also, details of remedial work.

SIGNED _____

DATE 9/04/90



Indemnity & General

INSURANCE COMPANY LIMITED

FILE	3008
DATE	14/2
AMR	

12 February 1990

Alan Reay Consultants Ltd
P O Box 25 028
CHRISTCHURCH

Attention Mr G Banks

Dear Geoff

I & G 990 ALAN REAY CONSULTANTS LTD -
CRIME WEST CORPORATION LTD

Further to our telephone discussion of the 1st February and receipt of your letter of same, we confirm our approval for you to agree with Holmes Consulting Ltd the precise scope of the work they consider to be inadequate, the level of load for which the floor to wall connection should be designed and the design of the remedial work.

The above should be undertaken on a without prejudice basis, with no admission of liability.

We understand that you will also pursue the possibility that adequate reinforcing was placed and that no remedial work may in fact be required.

The need for prompt action to prevent sequential loss is appreciated.

No commitment or financial undertaking should be entered into without the approval of claims committee and would you please keep claims committee fully informed of developments and include the I & G claim number I & G 990 on all correspondence relating to the claim.

Yours faithfully,


P C Smith

Claims Committee Member

From the Office of
P.C. Smith
Claims Director

P.O. Box 588, Wellington, Telephone (04) 722-261, Fax (04) 712-372

BLAKE BROS CONT* FAX 064-03-525943

PAGE 01

BLAKE BROS. CONTRACTING LTD

P.O. BOX 5147

PAPANUI

INTERNAL DEMOLITION • CONCRETE CUTTING • DIAMOND DRILLING

WALL SAWING • SURFACE GRINDING

FAX 525 943

522 716

OFFICE: ~~80 VALUERS ROAD~~ ~~25 BRASSLEY PLACE~~, CHRISTCHURCH, 5

TELEPHONE 525 943

Date: 5 12 190

Client: ALAN REAY CONSULTANTS LTD

Address: P.O. Box 25028

11891

CHRISTCHURCH

FAX 793 981

Telephone: 660 434

Job Description MADRAS STREET STRENGTHENING

TO CORE DRILL 6 HOLES 110 Ø 750 mm DEPT \$75.00 each


DITTO BUT TO DRY DRILL SAME \$60.00 each

TO CORE DRILL 6 HOLES 80 Ø 450 mm DEPT \$55.00 each

DITTO BUT DRY DRILL \$35.00 each

RATES EXCLUDE G.S.T.

Quote/Estimate \$



Signature

1990-02-05

14:27

PAGE = 01

1987-08-19 11:55

03 793 981

ALAN REAY CONSULTANTS

011 P

ALAN M. REAY CONSULTING ENGINEER

ALAN M. REAY
B.E. (Hons.), Ph.D.
M.N.Z.I.E.
Registered Engineer
Structural Consultant

147 KILMORE STREET
BOX 25 028, VICTORIA ST.
CHRISTCHURCH, 1.

Telephone: 60-434

File 2503

19th August, 1987.

The Manager,
Williams Construction Ltd.,
P.O. Box 538,
CHRISTCHURCH.

Dear Sir,

RE: OFFICE BUILDING - 249 MADRAS STREET

Further to our recent discussion, we have received a copy of the City Council letter by Mr. B. Bluck, dated 17th August, which was recently sent to you.

We consider the use of end caps or "stop off plates" as described by Mr. Bluck to be standard practice, and in this case they were in our opinion supplied and fixed as detailed in the manufacturer's written instructions.

In this situation the floor slab does not depend on axial restraint to provide a Fire rating to the exposed steel floor, and therefore the integrity of the Hi-Bond is not affected by the use of end plates.

The question of restraint was discussed in detail with Council officers at the time of Building Permit Applications and at that time it was agreed that the Fire rating for the floor would be achieved by including additional "Fire Emergency" reinforcement in the floor slab, which would support the floor without assistance from the Hi-Bond. Calculations in support of this proposal were submitted to the Council and were subsequently approved.

We can confirm that from site inspections carried out by this office, we consider that the floor slabs and their reinforcement were constructed in conformity with our drawings and specifications.

I have had a recent meeting with Mr. Tapper of the City Council, and can confirm also that the Council hold copies of our drawings and calculations.

On the basis of the above information we believe that the as-built floor slabs have a fire rating of at least 1½ hours without the application of any fire rating material.

Yours faithfully,



D. Harding

ALAN REAY CONSULTANTS LIMITED

ALAN M. REAY
B.E.(Hons.), Ph.D.
M.N.Z.I.E.
Registered Engineer
Structural Consultant

147 KILMORE STREET
BOX 25-028, VICTORIA ST
CHRISTCHURCH 1
Telephone: 660-434
Fax No: (03) 793-981

File 3608

2 February 1990

Mr Grant Wilkinson
Holmes Consulting Group
PO Box 701
CHRISTCHURCH

Dear Sir

RE: 249 MADRAS STREET

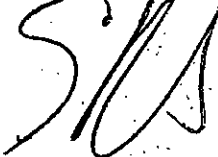
Further to our discussions by telephone this morning, we confirm that the scope of the possible non-compliance referred to in your report on the building is the connections between the walls on gridlines D and D/E, as shown on the attached sketch SK1 from levels 2 to 6 inclusive (Level 1 being the ground floor carpark).

The proposed remedial work, if required, would consist of a total of two ties per floor, tying the walls to the floor diaphragm.

The agreed maximum tie load is 300 kN per tie. We understand that this load would be reduced on lower floors in accordance with the "Parts and Portions" section of NZS 4203:1984.

Please contact this office today if your understanding of the situation is not as outlined above.

Yours faithfully



G.N. Banks

SKETCH 3608/SK1

2/02/90

(C)

3.750

1.000

300

300

300

300

300

300

300

300

300

300

300

Precast beam

19-H12 @ 200 CRST

10-D12 @ 400 CR

Reinforce with 1-lay 664 mesh, Top thro

Hi bond spans this direction

9-D12 @ 400 CR

120 120

120 120

120 120

120 120

120 120

120 120

120 120

120 120

120 120

120 120

120 120

120 120

120 120

H12 Stair Well

All weld plates Type 5.

H12

H12

H12

H12

H12

H12

H12

H12

H12

H12

H12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D12

3-D