

# THE PRESS HERITAGE BUILDING

# STRUCTURAL DAMAGE REPORT FOLLOWING 4/9/10 EARTHQUAKE

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October 2010

Project N°: 110117

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# A. Introduction

Following the magnitude 7.1 earthquake that occurred just west of Christchurch on the 4<sup>th</sup> September 2010 Lewis Bradford were engaged to carry out a visual inspection of structural damage to The Press Heritage Building and an initial structural evaluation and hazard assessment report dated September 2010 was completed.

At the request of our client Ganellan this report has been prepared to document the extent of the damage to the structure and to include suggested repair works for the structural damage.

The visual inspection work was carried out on during September and October 2010

# B. Background

The Press Heritage Building has been located on the north east side of Cathedral Square since 1906 and is a listed heritage building.

The building consists of four suspended concrete floors, with a concrete basement carpark and a concrete roof. Typical floor beams are a combination of steel angles and concrete with numerous iron or steel beams and cast iron columns. Thick brickwork walls wrap the perimeter of the building to the north, east and across the centre with a combination of reinforced concrete, brickwork and stonework frames to the south and west walls. A large brick and stonework turret is located in the southwest corner extending above roof level.

The original brick and stonework parapet extending above roof level was reduced in height in the 1970's, along with the installation of structural steel securing works, to the south and west wall parapets. It is thought that this is the only strengthening work undertaken to this building since it was built. No existing structural documentation has been found following extensive searching by Ganellen.

# C. Investigations Carried Out

The initial visual inspections and photographic work were undertaken by Geof Wilson of Lewis Bradford and Associates on the 10<sup>th</sup> and 14<sup>th</sup> September 2010. A further visual inspection following localised removal of claddings to specific areas of structure was completed by the undersigned, along with Michael Doig and Nick Jennings of Ganellen on the morning of the 14<sup>th</sup> September 2010.

A further inspection to view damage to the upper level brick walls was completed on the 17<sup>th</sup> September 2010 by the undersigned, Craig Lewis, Nick Jennings and Michael Doig. Further photographic work was completed on 12 October 2010 by the undersigned and Geof Wilson.

A full survey and photographic inspection of the perimeter stonework was completed by EPR Construction in early October 2010 which has been used in this report and forms the basis for the repair works to the perimeter stonework elements.



# D. Nature of Structural Damage

Refer to Appendix A for floor plans and photograph layout.

Refer to Appendix B for repair schedule for structural damage only.

Refer to Appendix C for detailed description of visible damage to the various areas at the various levels. Refer to Appendix B for repair schedule.

Refer to Appendix D for the photographs which correlate with the Appendix C notes and Appendix B repair schedule.

Refer to Appendix E for the full perimeter stonework survey undertaken by EPR Construction.

Refer to Baker Kavanagh Architects dilapidation report dated September 2010 for damage to non-structural elements.

Every effort has been made to view as much of the structural elements up the height of the building as possible. However given the presence of partitions, linings and a large number of sensitive areas, not all areas were accessible for this review.

As can be seen from the detailed description of damage and the photographs in the Appendices, significant damage has occurred to the upper level brick walls to the north and east and to the stonework to the south and west perimeter frames. This is due to the primary direction of the magnitude 7.1 earthquake being north-south with the stiff eastern walls taking a large portion of the seismic loads and the resulting twist on the building racking the north wall and the perimeter frames.

Numerous cracks were also noted to other areas of the building specifically in the ground floor to the south and the eastern brick wall at basement level. Due to the age and condition of the building a number of these cracks appear to be existing ones that have opened up following the earthquake and now require repair.

# E. Repair Recommendations

Repair work required to return the damaged areas to a similar, acceptable, standard in line with before the earthquake will be significant and disruptive for the occupants. Ideally with the existing tenants moving into a new building in the near future the repair work may be able to take place when the building is empty.

The repair schedule is detailed in Appendix B and includes recommendations for repairs to stonework, brickwork and concrete elements. It is assumed that the superficial elements such as plasterboard linings, timber framed elements, paintwork and the like are repaired, restopped and repainted as per the architect's recommendations.



# F. Conclusion

Generally the Press Heritage Building has performed surprisingly well in this earthquake considering the large floor plates, heavy construction and the age and condition of the structure. However considerable damage has occurred throughout the building which varies in type and severity up the building height.

Significant areas of damage are primarily superficial such as cracking to gib linings, paintwork and windows/partitions. This superficial damage is non-structural but will require repair work by skilled tradesman. It is understood that a full and thorough dilapidation report has been prepared by Baker Kavanagh Architects which records the earthquake damage in detail and this report shall be read in conjunction with the architectural dilapidation report.

Structural damage appears to have occurred throughout the building with significant damage occurring in three main areas: the northwest brick wall at Level 3, the northeast brick wall at Level 3 and the stonework (and minor brickwork areas) to the south and west perimeter frames. These areas require detailed specific repair work as noted in the Appendices. Further damage to various other areas of the structure and repair methods are noted in the Appendices.

## Limitation

It is important to note that this report is based on visual walkover inspections and no detailed assessment work has been completed. It is possible that there are unobserved issues that may require further remedial work, such issues should be brought to the attention of the undersigned as soon as possible.

Should you require anything further please contact the undersigned.

Kind regards,

Ashley Wilson ASSOCIATE

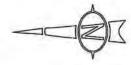
110117 Structural Damage Report Oct 2010.doc



# **APPENDIX A**

Floor Plans and Photograph Layout



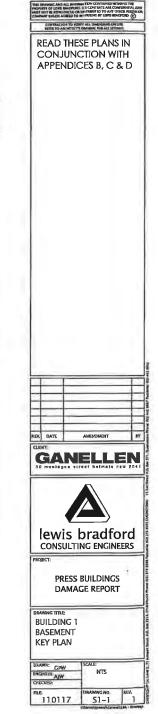


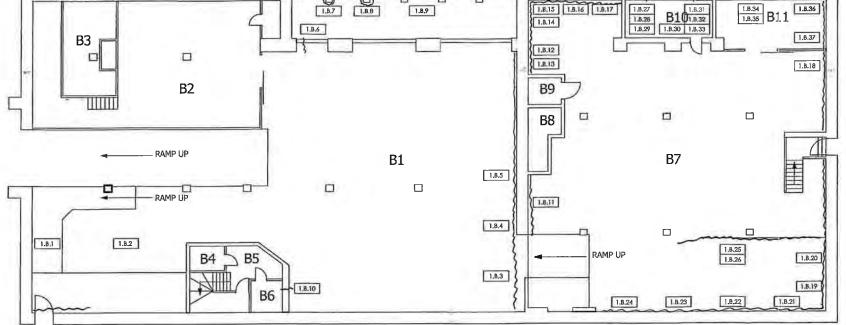
1.B.34 1.B.35 B1.1

1.8.36

APPROXIMATE EXTENT OF CRACKING SHOWN INDICATIVE. REFER APPENDICES FOR DETAILS AND REPAIRS, CONFRM EXTENT ON SITE

1,8,15 1.8.16 1.8.17



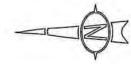


1.B.9

1,8.7

1.8.8

BUILDING 1 BASEMENT KEY PLAN
NTS

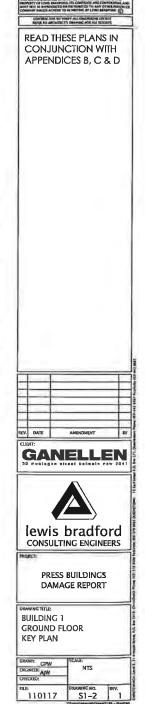


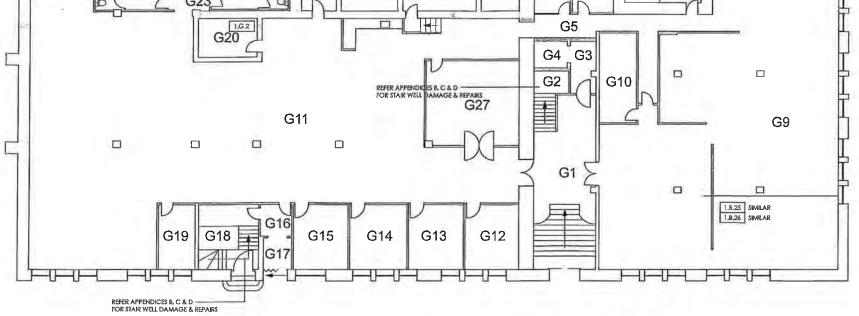
APPROXIMATE EXTENT OF CRACKING SHOWN INDICATIVE. REFER APPENDICES FOR DETAILS AND REPAIRS, CONFIRM EXTENT ON SITE

1.G.1 G8

G6

G7



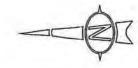


G26

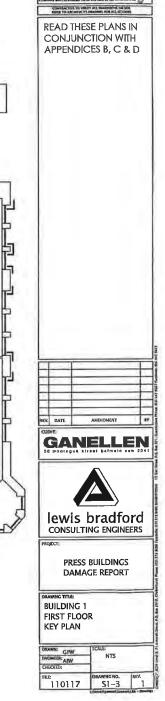
G25

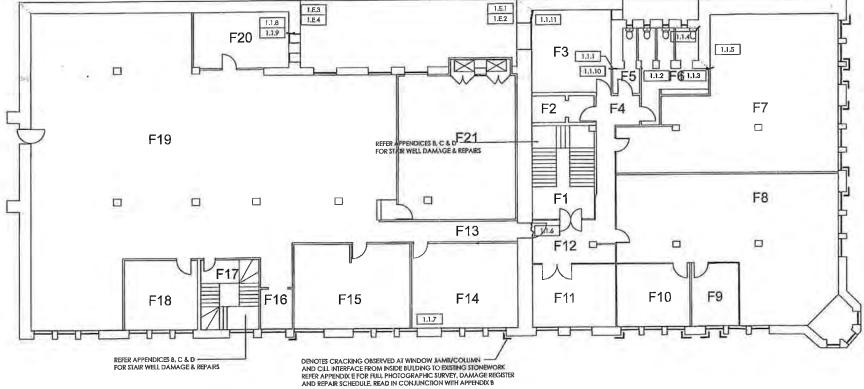
G21

BUILDING 1 GROUND FLOOR KEY PLAN

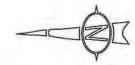


APPROXIMATE EXTENT OF CRACKING SHOWN INDICATIVE. REFER APPENDICES FOR DETAILS AND REPAIRS, CONFIRM EXTENT ON SITE



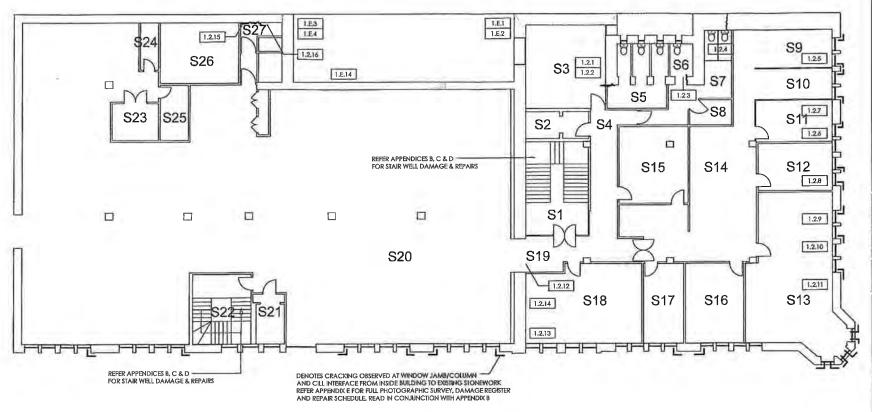


BUILDING 1 FIRST FLOOR KEY PLAN



APPROXIMATE EXTENT OF CRACKING SHOWN INDICATIVE, REFER APPENDICES FOR DETAILS AND REPAIRS, CONFIRM EXTENT ON SITE

READ THESE PLANS IN CONJUNCTION WITH APPENDICES B, C & D



BUILDING 1 SECOND FLOOR KEY PLAN



PRESS BUILDINGS
DAMAGE REPORT

BUILDING 1 SECOND FLOOR KEY PLAN

DAAMNE: CPW	NTS	
DIGNEES: AIW		
DECKED		
FILE:	DRAWING NO.	NEV.
110117	S1-4	1 1



T8

T9

T10

T11

1.3.2

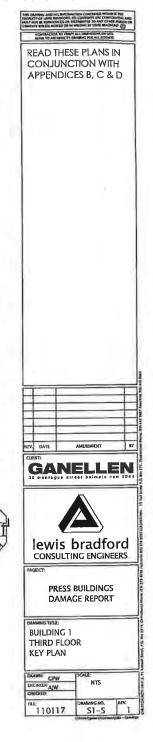
1.3.3

1.3.5

APPROXIMATE EXTENT OF CRACKING SHOWN INDICATIVE, REFER APPENDICES FOR DETAILS AND REPAIRS, CONFIRM EXTENT ON SITE

**T6** 

T12





DENOTES CRACKING OBSERVED AT WINDOW, JAMB/COLUMN AND CILL INTERFACE FROM INSIDE BUILDING TO BUSTING STONEWORK REFER APPENDIX E FOR FULL PHOTOGRAPHIC SURVEY, DAMAGE REGISTER AND REPAIR SCHEDULE, READ IN CONJUNCTION WITH APPENDIX B

1,E,1

1.E.2

1.E.5

T17

1.E.6 1.E.7

REFER APPENDICES B, C & D FOR STAIR WELL DAMAGE & REPAIRS

T18

T3 1.3.1

T2

T15

1.3.6

T14

T13

1.E.3

1.E,4

1.E.10

D

T20

1.E.8

1.E9

T16

T19

1.E.16

1.E.12

1.E.17

T30

T31

1.E.22 1.E.21 1.E.20 1.E.19

T32

T33

T34

T35

T22

1.3.11

REFER APPENDICES B, C & D =

FOR STAIR WELL DAMAGE & REPAIRS

1,E.23 1,E.24

T26

T25

T24

1 E.26

1.E.29

1.3.10

1.3.9

1.3.8

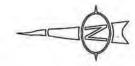
1.E.25

1.E.27

1.E,28

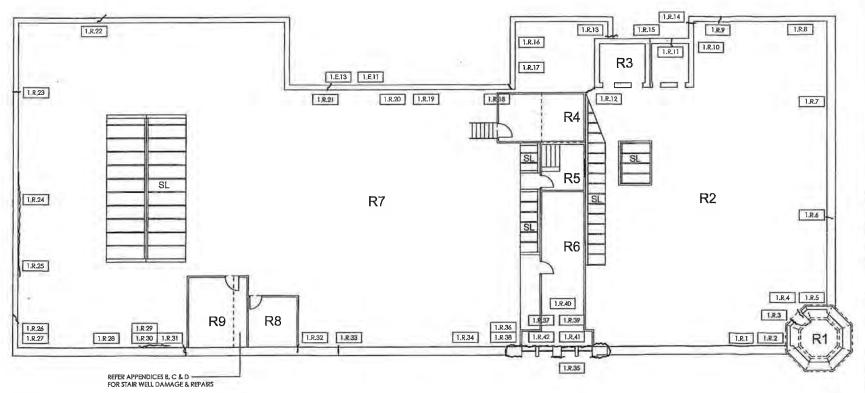
1.E.30

1.E.31



APPROXIMATE EXTENT OF CRACKING SHOWN INDICATIVE, REFER APPENDICES FOR DETAILS AND REPAIRS, CONFIRM EXTENT ON SITE





BUILDING 1 ROOF KEY PLAN



DIVINDE GPW	N12	
CHCOTO: A/W		
FILE:	DRAWING NO.	REV.

BUILDING 1 ROOF

KEY PLAN

# **APPENDIX B**

Repair Schedule



# The Press Heritage Building - Repair Schedule

This appendix details the repair work required to the existing structural elements that have been damaged by the 4/9/10 earthquake (and subsequent aftershocks). The repair schedule describes the work required to return the damaged areas to a similar, acceptable, standard in line with before the earthquake. Note this schedule includes damage to structural brickwork, stonework and insitu concrete work only. Refer to architect for damage to superficial non-structural elements.

Due to the heritage status of the building the repair works described in this report shall be carefully co-ordinated with the New Zealand Historic Places Trust to ensure the heritage status of the building is maintained.

# Repair Work

# Repair N

No repair work necessary.

# Repair A

Superficial repair work required, non-structural elements.

### **Brickwork Elements**

### Repair B1

Significant cracking to existing structural brickwork wall. Carefully prop adjacent floor, remove damaged full length of brickwork wall, clean off all loose mortar and scabble existing concrete surfaces. Replace wall with new solid brickwork wall. Wall thickness to match existing brickwork and to be constructed by experienced bricklayer.

## Repair B2

Horizontal cracking to existing brick column elements and vertical cracking to mortar at each side adjacent to windows. Prop roof beam each side of column, remove top course of brickwork, remortar and replace brick course by experienced bricklayer. Repair cracked mortar each side by removing cracked mortar and replacing.

# Repair B3

Cracking to existing brickwall element. Carefully clean out crack surface and remove all loose debris. Locally rake out existing mortar either side of crack for full brick width into wall on both sides of wall. Remove all loose bricks. Remortar all exposed joints and replace loose bricks. Point all new mortar surfaces to both sides of wall. All brickwork and repairwork to be completed by experienced bricklayer.

# Repair B4

Minor cracking to existing brickwork element. Carefully rake out existing mortar joints along crack, blow out all debris and replace mortar. Point all new mortar surfaces. All brickwork and repairwork to be completed by an experienced bricklayer.

# Repair B5

Minor cracking to plasterwork and existing brickwork. Carefully remove paint and plasterwork locally and rake out existing mortar joints around crack.



Remove all debris and replace mortar to brickwork. Point all new mortar joints, tool and leave flush. Replace plasterwork and repaint. All brickwork and repairs to brickwork to be completed by an experienced bricklayer.

# **Stonework Elements**

#### Repair S1

Cracking through existing stone block element. Carefully remove paintwork, existing mortar and existing cracked stone block. Remortar joints with selected mortar to match stone and existing mortar, install new stone block, repoint mortar and repaint. All stonework repairs to be by an experienced stonemason.

#### Repair S2

Cracking to existing mortar joints in stonework. Remove all loose mortar and paintwork. Remortar joint, point the mortar and repaint to match existing. All stonework repairs to be by an experienced stonemason.

(Note if removal of paintwork and mortar exposes previously undiscovered cracks in stonework block and/or extremely weak/weathered stonework then use repair S1 noted above to replace stonework).

# **Concretework Elements**

#### Repair C1

Significant cracking to existing concrete element. Carefully clean out existing crack and remove loose debris. Epoxy inject crack in strict accordance with Sika (or similar approved) specification and details. All epoxy grouting to be by approved contractors only. Repaint to match existing if required.

## Repair C2

Significant cracking to existing concrete element and local spalling of concrete. Carefully break out all loose concrete. Abrasive clean existing steel reinforcing and coat with Sika Monotop Primer (or similar approved) for corrosion protection. Epoxy inject the crack in strict accordance with Sika (or similar approved) specification and details. After epoxy injection is complete repair all spalled areas of concrete using Sika Monotop Structural Mortar (or similar approved) in strict accordance with manufacturer's details.

## Repair C3

Hairline cracking to existing concrete element. Carefully clean out and epoxy inject as per type C1 repair.

# Repair C4

Spalling of existing concrete from structural concrete element. Carefully remove all existing loose concrete. Apply Sika Monotop Primer bond coat and Sika Monotop Structural Mortar (or similar approved) in strict accordance with manufacturer's details.

## Roof Slab and Parapet Tanking Membrane

# Repair T1

Cracking to existing tanking membrane and paintwork. Carefully remove all cracked and loose paintwork and membrane back to solid material. Apply new tanking membrane patch repair in strict accordance with manufacturer's details. Repaint to match existing.



# **APPENDIX C**

**Damage Register** 



[X.Y.Z] references photos attached to Appendix D where "X" references the building number, "Y" refers to the floor level and "X" refers to the photo number.

[7.1.8] would refer to the 8th photo on the First Floor of Building 7.

[X.Y.Z similar] references a photo of damage very similar to the item mentioned

(Repair X) references the repair schedule in Appendix B

# **Building 1**

### Exterior

Western & Southern Elevations

Inspection of the window jambs and window column elements to the western and southern elevations was carried out by looking out the windows from the interior. Cracks were discovered at the base of jambs/columns and at the cills in numerous locations. These start at First floor and continue up to Third floor becoming more frequent and/or severe as you go up the building. Refer Key Plans for observed crack locations. Refer also to Appendix E for a full survey description, coverage of observed damage to western & southern elevations and repair methods.

### Eastern Elevation

Vertical cracking/separation of eastern brick wall from adjacent building in south-eastern corner of lightwell [1.E.1 & 1.E.2] (Repair N)

Vertical cracking/separation of brick wall from adjacent building in north-eastern corner of lightwell [1.E.3 & 1.E.4] (Repair N)

Cracking to concrete lintel beam above Third Floor in south-western corner of lightwell [1.E.5] (Repair C1)

Cracking to western brick wall in lightwell at Third Floor [1.E.6] (Repair B3)

Cracking to Third Floor concrete lintel beam to western wall of lightwell [1.E.7] (Repair C1)

Two diagonal cracks to Third Floor concrete lintel beam to western wall of lightwell [1.E.8 & 1.E.9] (Repair C2)

Cracking to Third Floor concrete lintel beam above wall to western wall of lightwell [1.E.10] (Repair C3)

Cracking to concrete lintel beam above Third Floor to western wall of lightwell [1.E.11] (Repair C1)

Cracking to Third Floor concrete lintel beam above wall to western wall of lightwell [1.E.12] (Repair C3)

Existing cracking to concrete lintel beam at roof level to western wall of lightwell has opened up [1.E.13] (Repair C1)

Cracking to Second Floor concrete lintel beam to western wall of lightwell [1.E.14] (Repair C3)

Hairline cracking to northern brick wall of lightwell adjacent to vertical pipes [1.E.15 & 1.E.16] (Repair B4)

Cracking to north-eastern brick wall [1.E.17 & 1.E.18] (Repair B1)

Cracking to north-eastern brick wall [1.E.19] (Repair B1)

Cracking to north-eastern brick wall [1.E.20] (Repair B1)

Cracking to north-eastern brick wall [1.E.21] (Repair B1)

Cracking to north-eastern brick wall [1.E.22] (Repair B1)

Cracking to north-eastern brick wall (upside down "V") [1.E.23 & 1.E.24] (Repair B1)

# Northern Elevation

Horizontal cracking to top brickwork course under concrete lintel beam in eastern corner [1.E.25] (Repair B2)

Vertical separation of brick and mortar in eastern corner [1.E.26] (Repair B2)
Horizontal cracking to top brickwork course under concrete lintel beam to two eastern
most window jambs/columns [1.E.27 & 1.E.28] (Repair B2)

Vertical separation of brick and mortar to western side of window jamb/column [1.E.29] (Repair B2)

Minor hairline cracking to top brickwork course to three western square brick window jambs/columns [1.E.30 typical] (Repair B4)

Major structural damage to north-western brick corner (refer also T25) [1.E.31] (Repair B1)

# **Basement Level**

(Repair C2)

- B1 Historic cracking to western side of northern concrete wall appears to have widened/lengthened with earthquake [1.B.1] (Repair C2)
  Historic cracking to north-western concrete floor in bike storage area no movement
  - observed [1.B.2] (Repair N)
    Historic cracking to southern concrete wall at ceiling level appears to have widened/lengthened with earthquake [1.B.3, 1.B.4 & 1.B.5] (Repair C2)
    Cracking to concrete door lintel in eastern storage area [1.B.6] (Repair C1)
    Hairline cracking to tops of two northern most brick columns on eastern wall in eastern
  - storage area [1.B.7 & 1.B.8] (Repair B4)
    Vertical historic crack in eastern wall of eastern storage area appears to have widened/lengthened with earthquake [1.B.9] (Repair C1)
- B6 Historic cracking to southern brick wall appears to have widened/lengthened with earthquake (observed from B1) [1.B.10] (Repair B3)
- B7 Numerous cracks to basement floor were observed but no movement was noted. Hairline cracking to western end of northern concrete wall at concrete ceiling level [1.B.11] (Repair C3)

Hairline cracking in northern concrete beam in eastern end of northern wall [1.B.12] (Repair C3)

Historic cracking to existing ceiling to southern side of central wall which appears to have widened/lengthened with earthquake [1.B.13] (Repair C2)

Historic cracking at north-eastern corner at concrete wall and ceiling interface appears to have widened/lengthened with earthquake [1.B. 14, 1.B.15, 1.B.16 & 1.B.17] (Repair C3) Historic cracking at eastern end of southern concrete wall and ceiling interface appears to have widened/lengthened with earthquake [1.B.18] (Repair C3)

Historic cracking at western end of southern concrete wall and ceiling interface appears to have widened/lengthened with earthquake [1.B.19 & 1.B.20] (Repair C2)
Historic cracking at southern end of western concrete wall and ceiling interface appears to have widened/lengthened with earthquake [1.B.21, 1.B.22, 1.B.23 & 1.B.24]

Historic crack in ground floor concrete slab over in south-western corner appears to have widened/lengthened with earthquake [1.B.25 & 1.B.26] (Repair C2)

- B10 Historic vertical cracking in two locations to eastern concrete wall and brick column appears to have widened/lengthened with earthquake [1.B.27 to 1.B.33] (Repair C1/B4)
- B11 Vertical crack in eastern concrete wall [1.B.34 & 1.B.35] (Repair C1)
  Historic cracking at southern concrete wall and ceiling interface appears to have widened/lengthened with earthquake [1.B.36 & 1.B.37] (Repair C2)

# **Ground Floor Level**

- G8 Historic cracking to concrete ceiling appears to have widened/lengthened with earthquake [1.G.1] (Repair C2)
  - Note: water/moisture was noted in mezzanine area (bathrooms F5 & F6 are above)
- G9 Historic cracking to concrete ceiling appears to have widened/lengthened with earthquake similar in extent to basement photos [1.B.25 & 1.B.26 similar] (Repair C2)
- G20 concrete spalling to concrete eastern door jamb/column may be historic [1.G.2] (Repair C4)

### First Floor Level

- F3 Vertical crack in southern wall at junction between concrete and timber framed walls [1.1.10] (Repair A)
  Cracking to plaster on brick in north-eastern corner [1.1.11] (Repair B5)
- F5 Crack in north-eastern corner of lobby [1.1.1] (Repair A)
- F6 Cracks in north-eastern & south-eastern brick wall corners of lobby [1.1.2 & 1.1.3]
  (Repair B5)
  Crack in south-eastern brick wall of furthermost toilet [1.1.4] (Repair B5)
- F7 Full height vertical crack in northern wall at junction between concrete and timber framed walls [1.1.5] (Repair A)
- F12 Horizontal crack to linings over door lintel through to F13 [1.1.6] (Repair A)
- F14 Vertical cracked/swollen linings to northern window column element [1.1.7] (Repair A)
- F20 Vertical crack in eastern end of southern brick wall in linings only [1.1.8 & 1.1.9] (Repair A)

# Second Floor Level

- Vertical crack central in southern brick wall at junction between concrete and timber framed walls[1.2.1 & 1.2.2] (Repair A)
- S6 Vertical crack to plaster over brick lintel above door [1.2.3] (Repair B5)
- S7 Vertical crack to plaster over brick lintel above window [1.2.4] (Repair B5)
- S9 Vertical crack to western side of central timber window jamb [1.2.5] (Repair A)
- Vertical cracks to both timber window jambs [1.2.6] (Repair A)

  Portion of wall lining removed for further structural investigation. No structural damage observed to brickwork. Refer Appendix E for stonework damage. [1.2.7] (Repair A)
- S12 Vertical crack to western side of western timber window jamb [1.2.8] (Repair A)
- Vertical crack to two timber window jambs on southern wall [1.2.9 & 1.2.10] (Repair A)
  Portion of wall lining removed for further structural investigation. No structural damage observed to brickwork. Refer Appendix E for stonework damage. [1.2.11] (Repair A)
- S18 Ceiling tiles removed to examine concrete ceiling/wall interface on northern end no apparent damage or cracking [1.2.13 & 1.2.14] (Repair N)

- S19 Cracked linings to brick wall lintel above door through to S20 [1.2.12] (Repair A)
- S26 Building Maintenance Co-ordinator George Pipe to remove lining to portion of eastern wall and advise as to whether cracking in brick is evident. (refer also to Exterior notes in north-eastern corner of building)
- S27 Cracking of paintwork/wallpaper and hairline cracking to plaster over brick wall at ceiling level of eastern wall [1.2.15 & 1.2.16] (Repair B5)

  Vertical cracking at timber framed wall in north-eastern & south-eastern corners [1.2.15 & 1.2.16] (Repair A)

### Third Floor Plan

- T3 Cracked linings to southern wall [1.3.1] (Repair A)
- T9 Portion of wall lining removed for further structural investigation. No structural damage observed to brickwork. Refer Appendix E for stonework damage [1.3.2] (Repair A)
- T10 Portion of wall lining removed for further structural investigation. No structural damage observed to brickwork. Refer Appendix E for stonework damage [1.3.3] (Repair A)
- T11 Portion of wall lining removed for further structural investigation. Cracking observed to upper section of wall. [1.3.4 & 1.3.5] (Repair B3)
- T14 Cracking to linings over brick wall at door lintel location through to T16 [1.3.6] (Repair A)
- T24 Major structural damage to northern brick wall with temporary securing steelwork in place [1.3.7, 1.3.8 & 1.3.9] (Repair B1)
- T25 Major structural damage to north-western brick corner (refer also T24) [1.3.10]
  (Repair B1)
  Cracking to concrete roof slab in south-western corner [1.3.11] (Repair C3)
- T29 Vertical crack to timber window jamb and linings in north-eastern corner [1.3.12] (Repair A)

# Stair 1 (main stair from main entrance to building)

First floor cracking in linings to northern side (refer also F12) [1.S1.1] (Repair A) Second floor cracking in linings to northern side (refer also S19) [1.S1.2 & 1.S1.3] (Repair A)

Third floor cracking to western door jamb to plaster linings over northern brick wall [1.S1.4 & 1.S1.5] (Repair B5)

Third floor cracking in plasterwork over brick wall to northern side (refer also T14) [1.S1.6 & 1.S1.7] (Repair B5)

General cracking to linings in timber framed wall at eastern end of stair

General cracking to linings in timber framed wall to southern side between Second & Third floors.

No other apparent damage elsewhere

# Stair 2 (secondary stair)

Cracking in brick or concrete wall corners on the north-western and south-western sides from roof level tapering off with damage terminating at First floor.

South-western corner photos from top to bottom [1.S2.1 to 1.S2.8] (Repair A)

North-western corner photos from top to bottom [1.S2.9 to 1.S2.17] (Repair A)

No other apparent damage elsewhere to stairs or internal corners of stairwell

### Roof

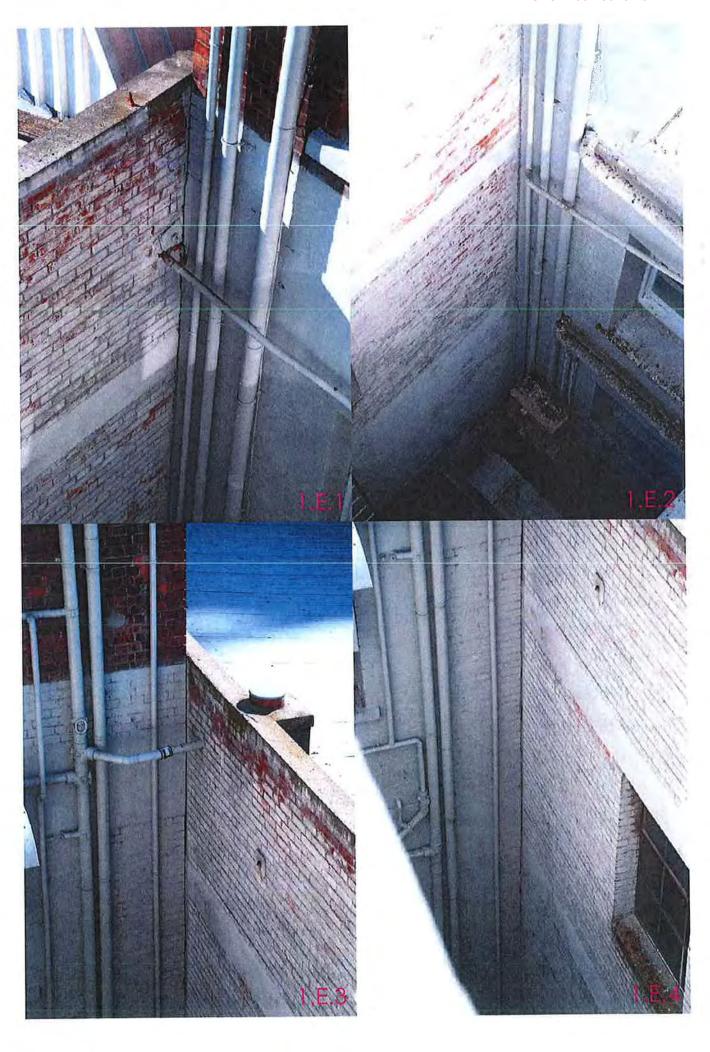
```
Membrane cracking at base of parapet [1.R.1] (Repair T1)
R2/R7
       Hairline cracking to membrane at top of parapet [1.R.2] (Repair T1)
       Cracking to brick lintel [1.R.3] (Repair B3)
       Hairline cracking to stonework capping to turret [1.R.4] (Repair S2)
       Membrane cracking to parapet [1.R.5] (Repair T1)
       Vertical membrane cracking to parapet [1.R.6] (Repair T1)
       Moss evident in cracking to top of PFC [1.R.7]
       (Repair T1 - though not caused by earthquake)
       Membrane cracking to parapet [1.R.8] (Repair T1)
       Membrane cracking to parapet [1.R.9] (Repair T1)
       Membrane cracking to parapet [1.R.10] (Repair T1)
       Membrane cracking to parapet [1.R.11] (Repair T1)
       Cracking to membrane over roof slab [1.R.12] (Repair T1)
       Cracking to brickwork parapet and membrane [1.R.13] (Repair T1 & B3)
       Cracking to parapet brickwork [1.R.14] (Repair B3)
        Brickwork condition [1.R.15] (Repair N)
       Horizontal cracking to joint in tanking membrane [1.R.16 & 1.R.17] (Repair T1)
        Membrane cracking to parapet [1.R.18] (Repair T1)
        Existing membrane cracking [1.R.19 & 1.R.20]
        (Repair T1 - though not caused by earthquake)
        Membrane cracking to parapet [1.R.21] (Repair T1)
       Cracking to brickwork parapet and membrane [1.R.22] (Repair T1 & B3)
       Cracking to brickwork parapet and membrane [1.R.23] (Repair T1 & B3)
       Horizontal cracking to joint in tanking membrane approximately 10m long [1.R.24]
        (Repair T1)
        Membrane cracking to parapet [1.R.25] (Repair T1)
       Membrane and wall cracking around corner steelwork [1.R.26 & 1.R.27]
        (Repair T1 & B3)
       Membrane cracking to parapet [1.R.28] (Repair T1)
       Horizontal and vertical membrane cracking to parapet [1.R.29 & 1.R.30] (Repair T1)
        Cracking to stonework/brickwork parapet and membrane [1.R.31] (Repair T1 & B3 & S2)
        Vertical cracking to membrane at junction with R8 [1.R.32] (Repair T1)
        Membrane cracking to parapet [1.R.33] (Repair T1)
        Cracking above steelwork [1.R.34] (Repair T1)
        Extensive cracking to capping stones [1.R.35, 1.R.36, 1.R.37, 1.R.38 & 1.R.39]
R6
        (Repair S1 & S2)
        Emergency remedial steelwork to support parapet [1.R.40]
```

Plasterwork damaged [1.R.41 & 1.R.42] (Repair A)

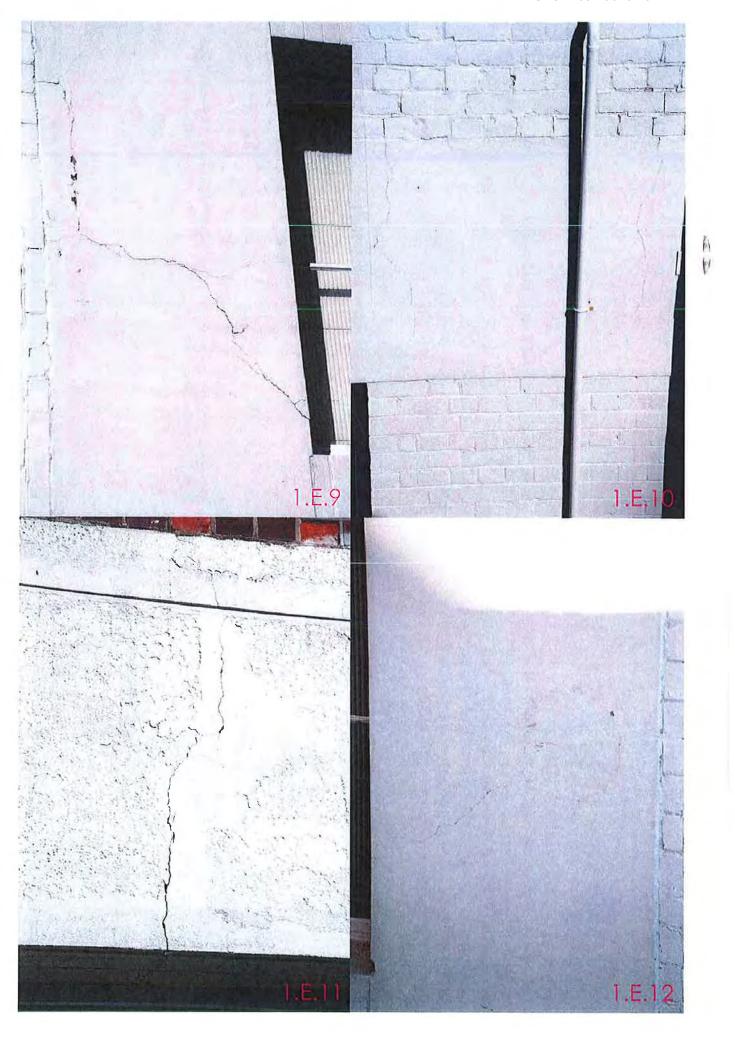
# **APPENDIX D**

**Photographs** 





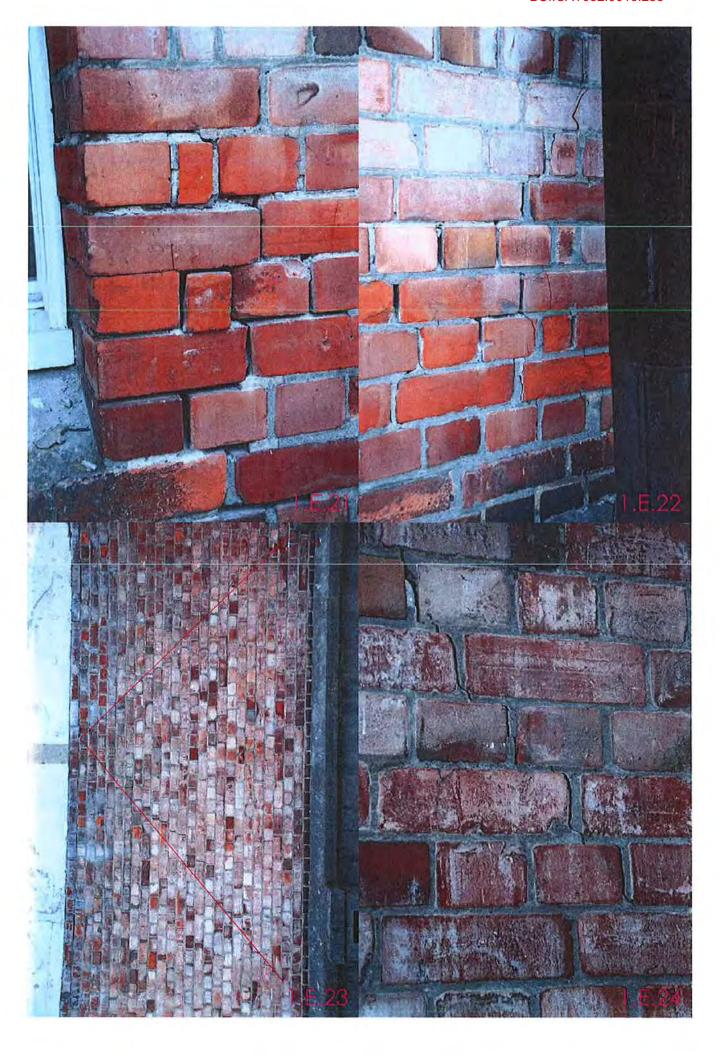




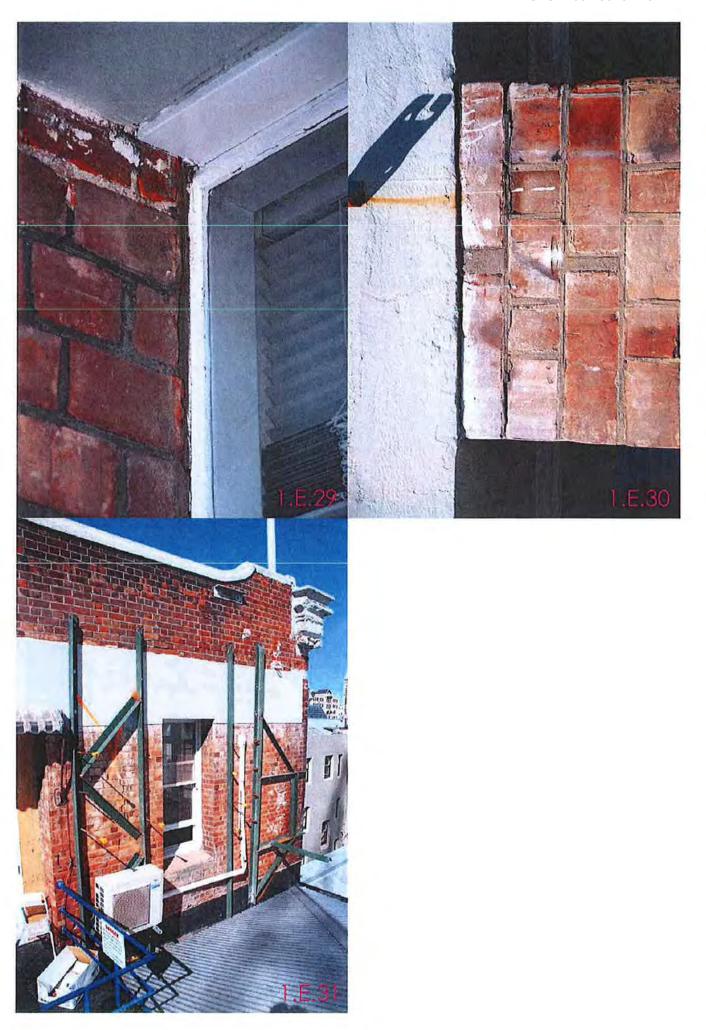








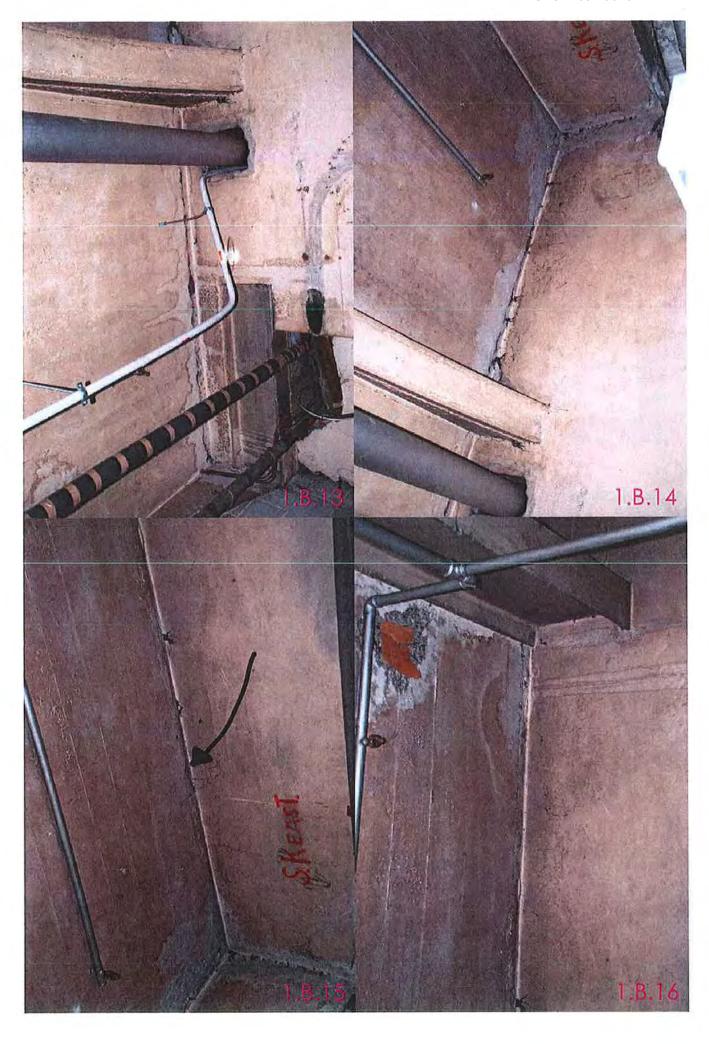


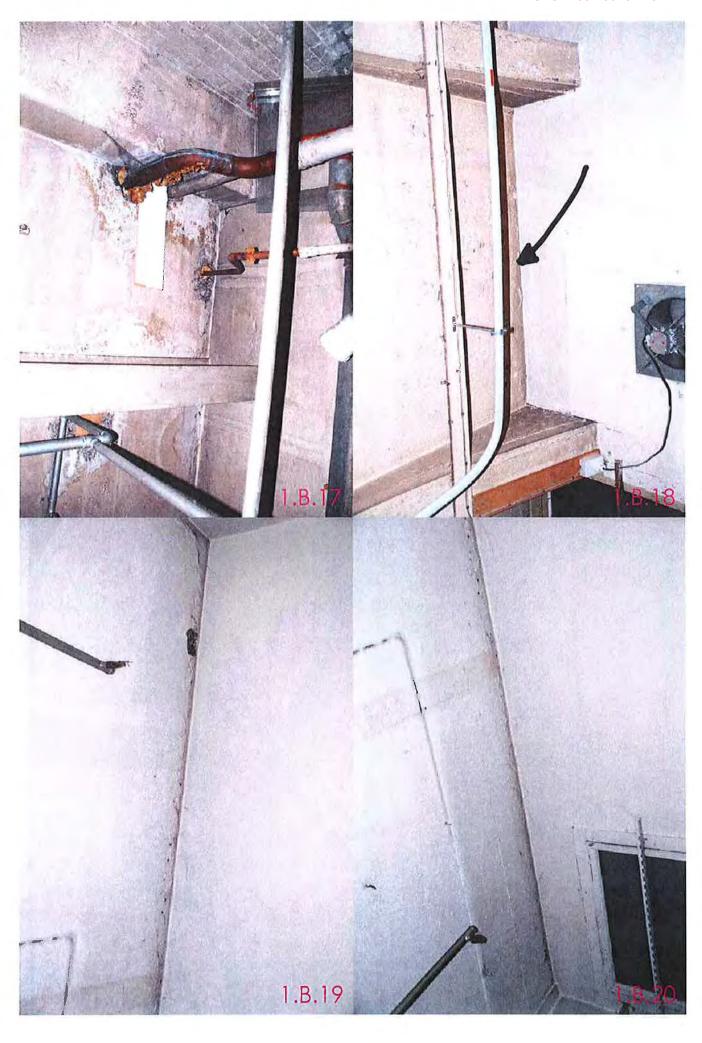














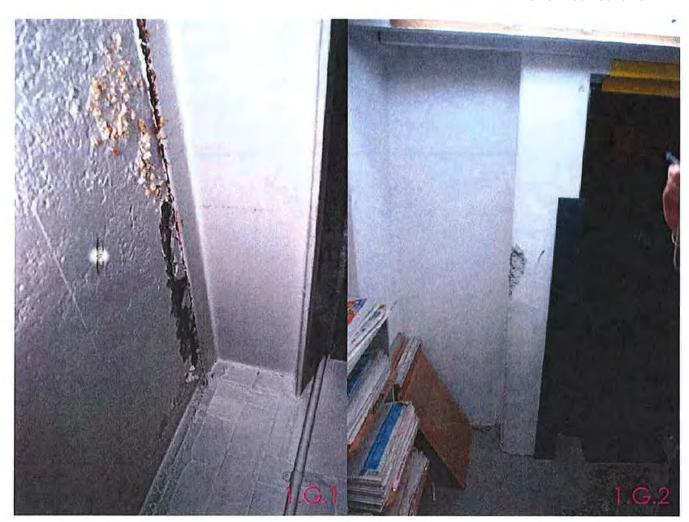


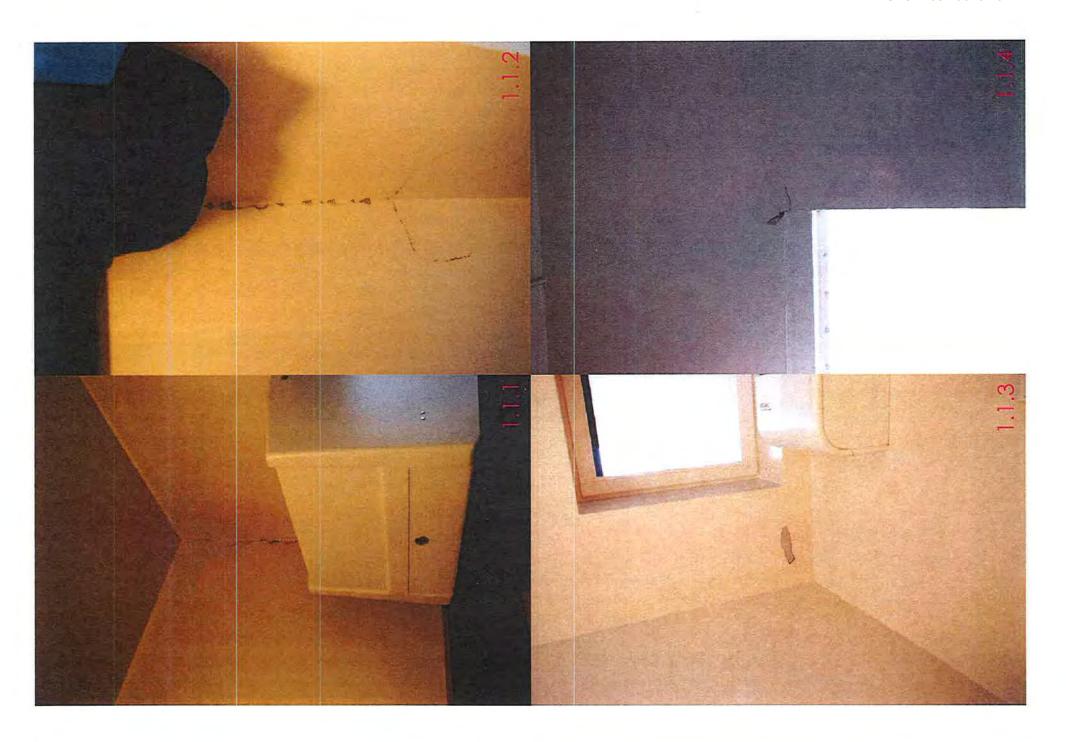




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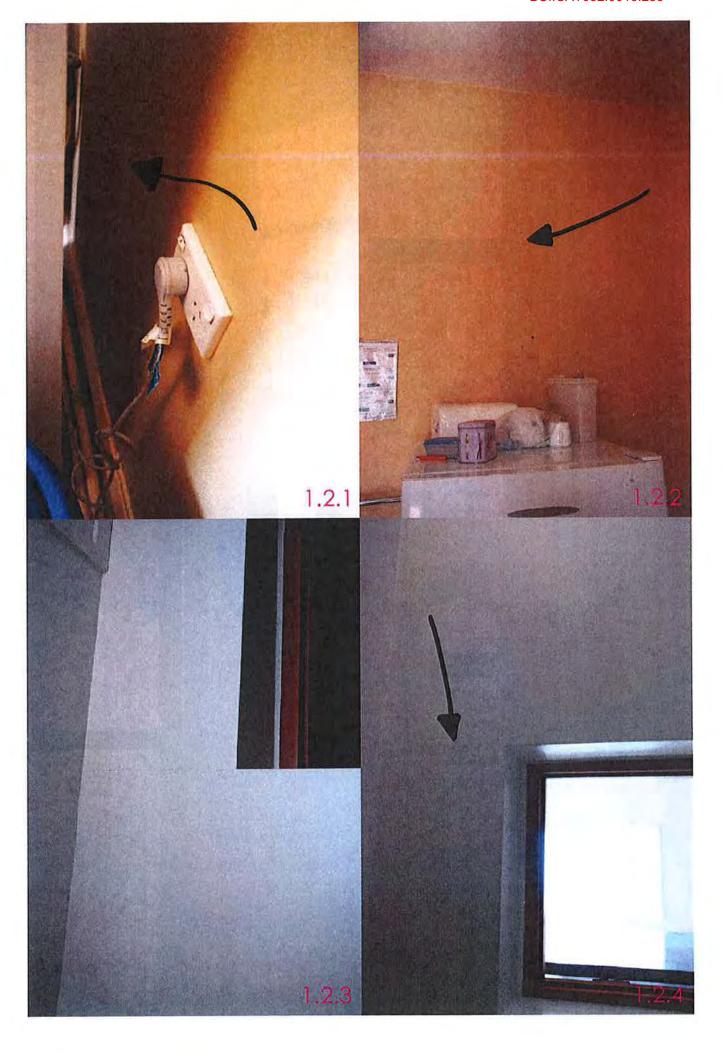






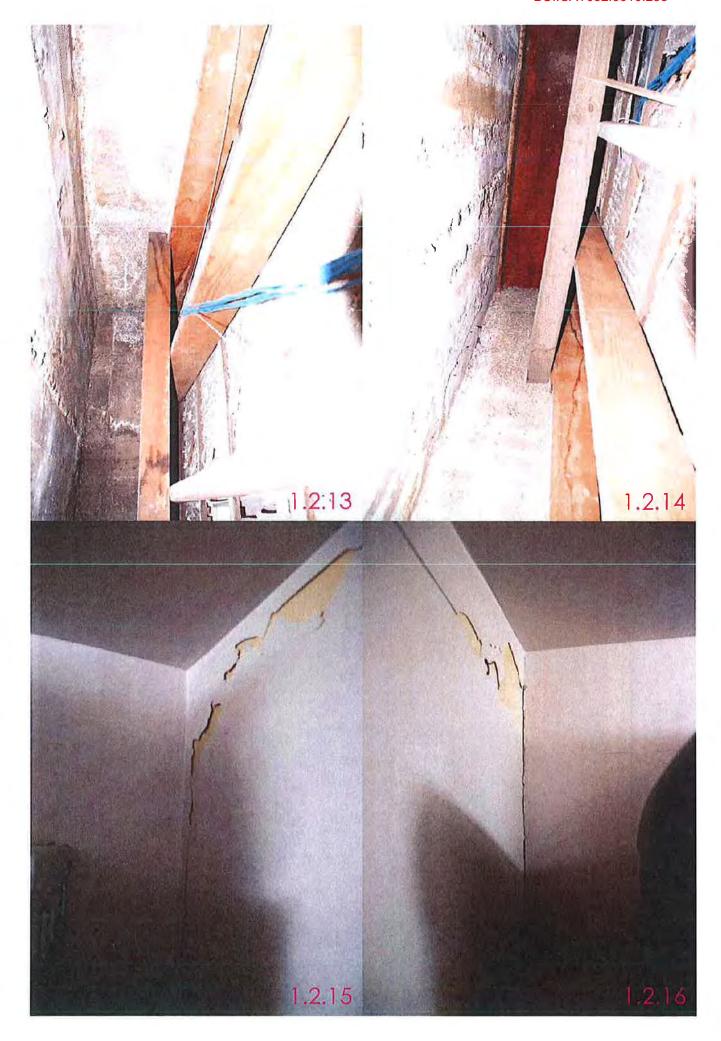


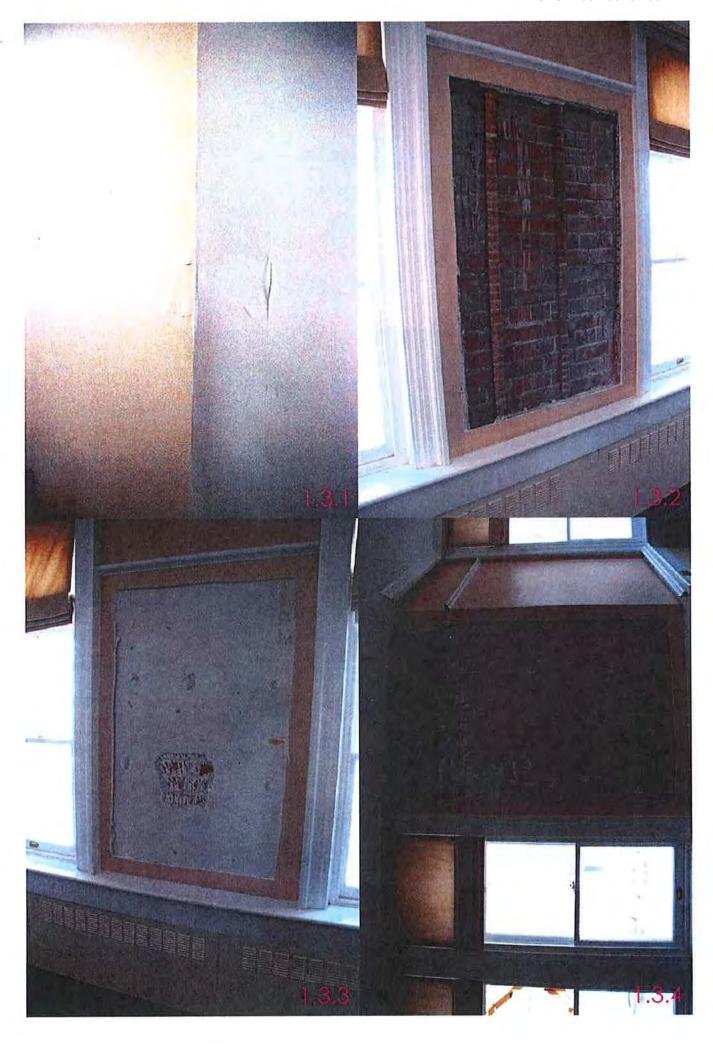






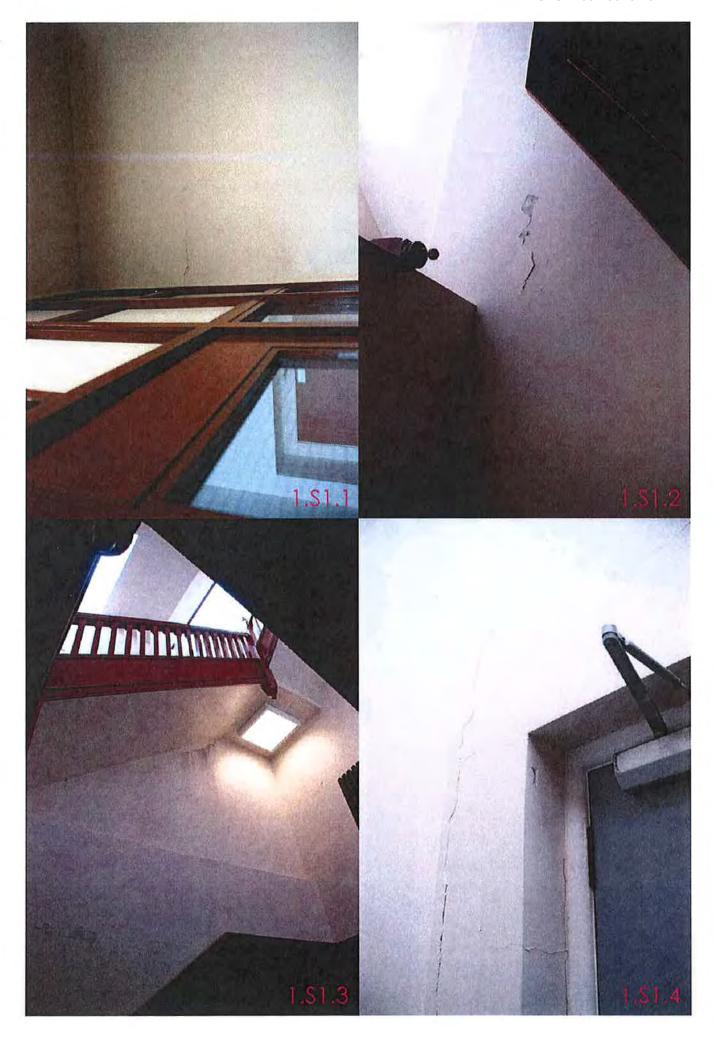






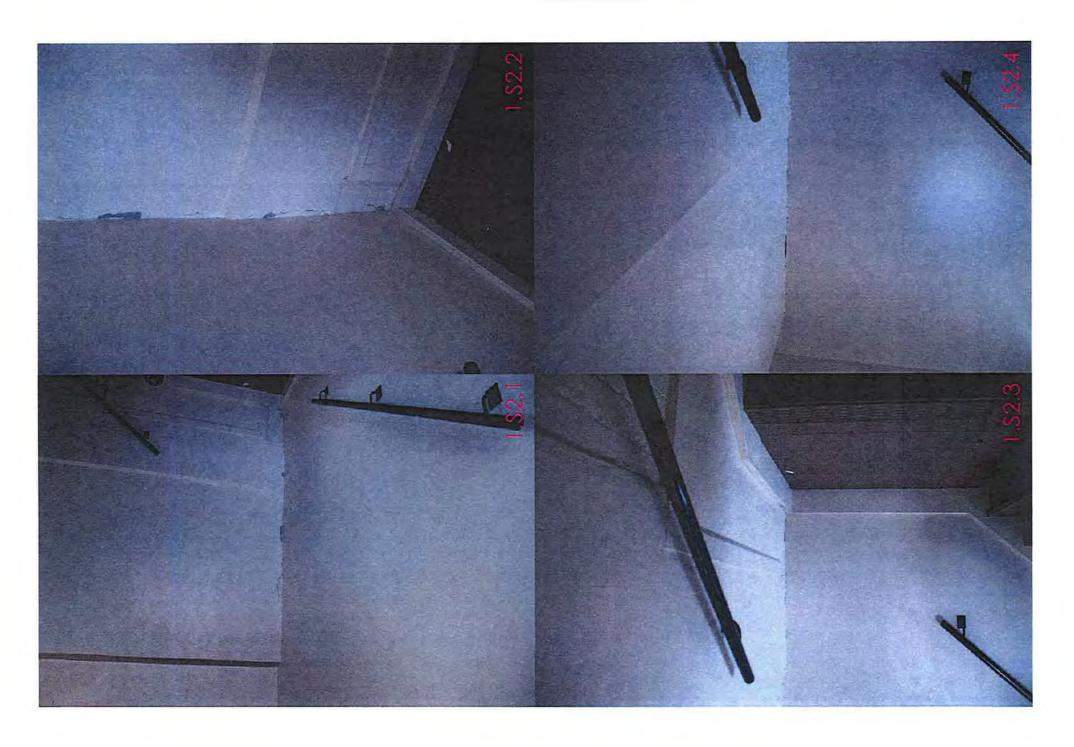


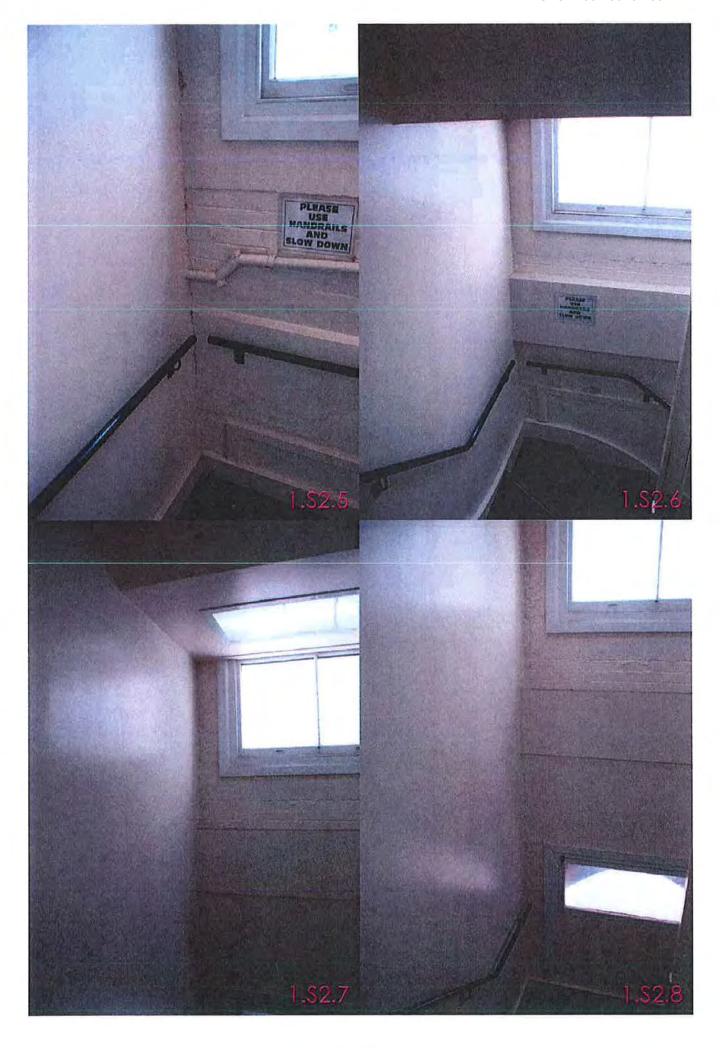


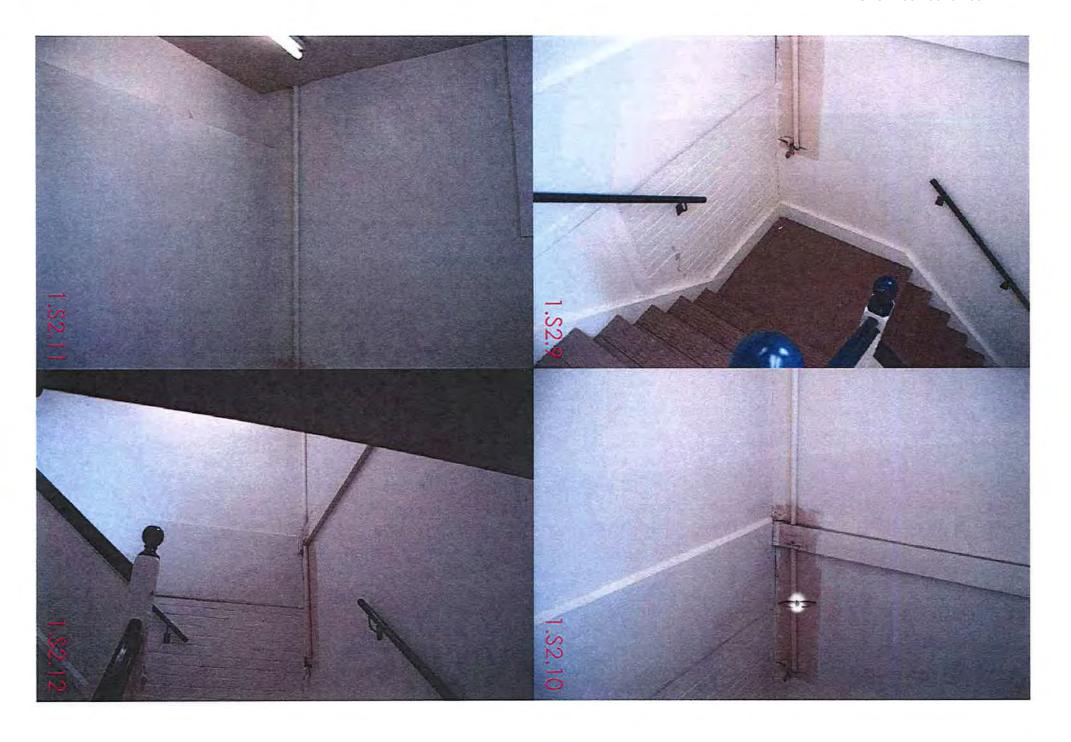


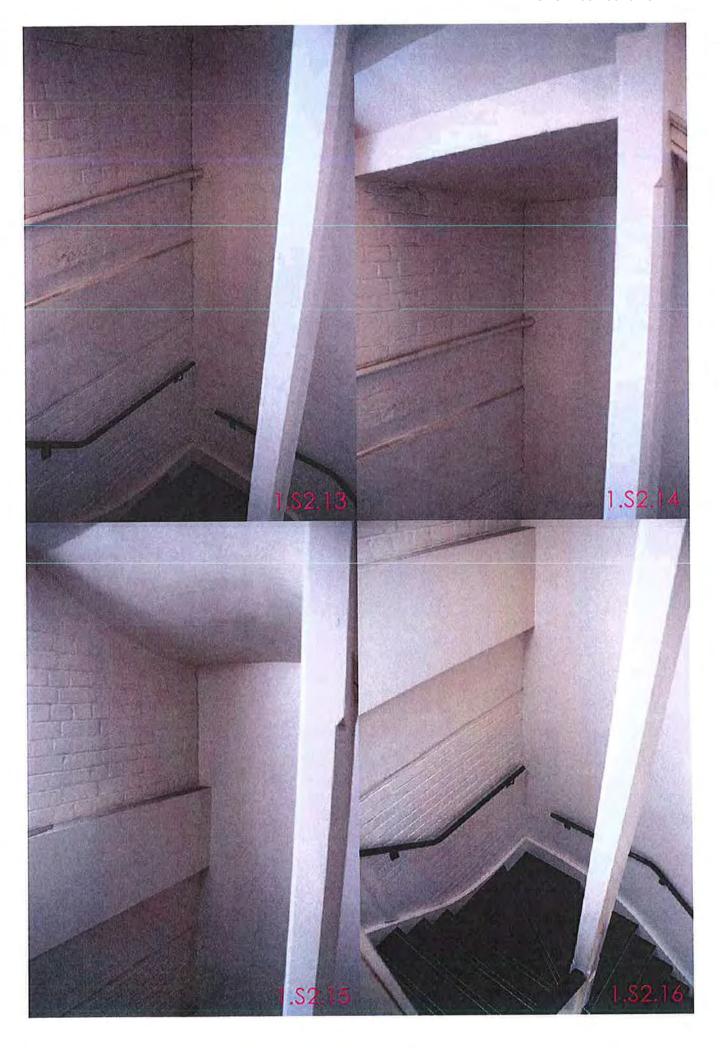


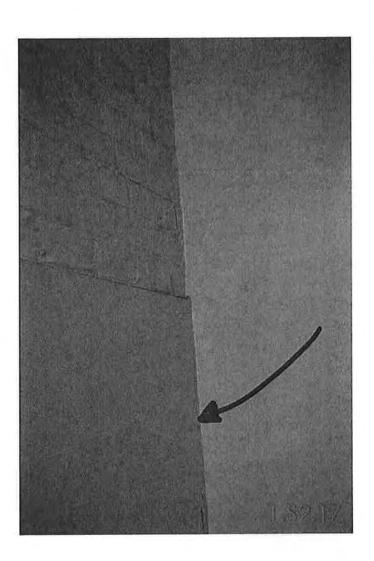
1.\$1.7



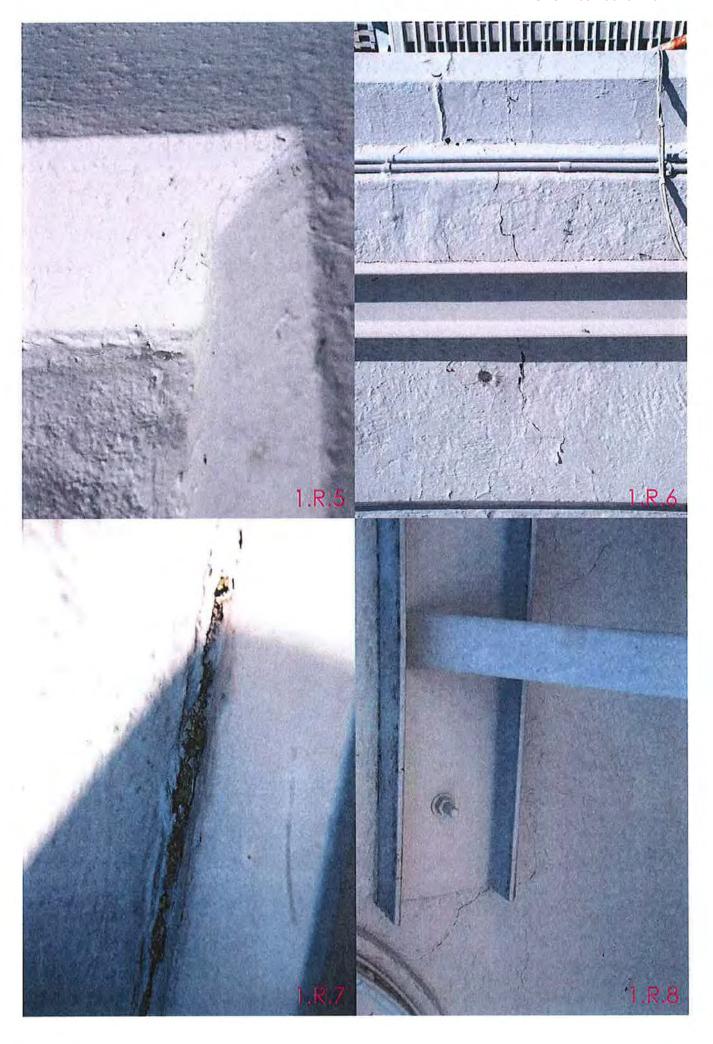


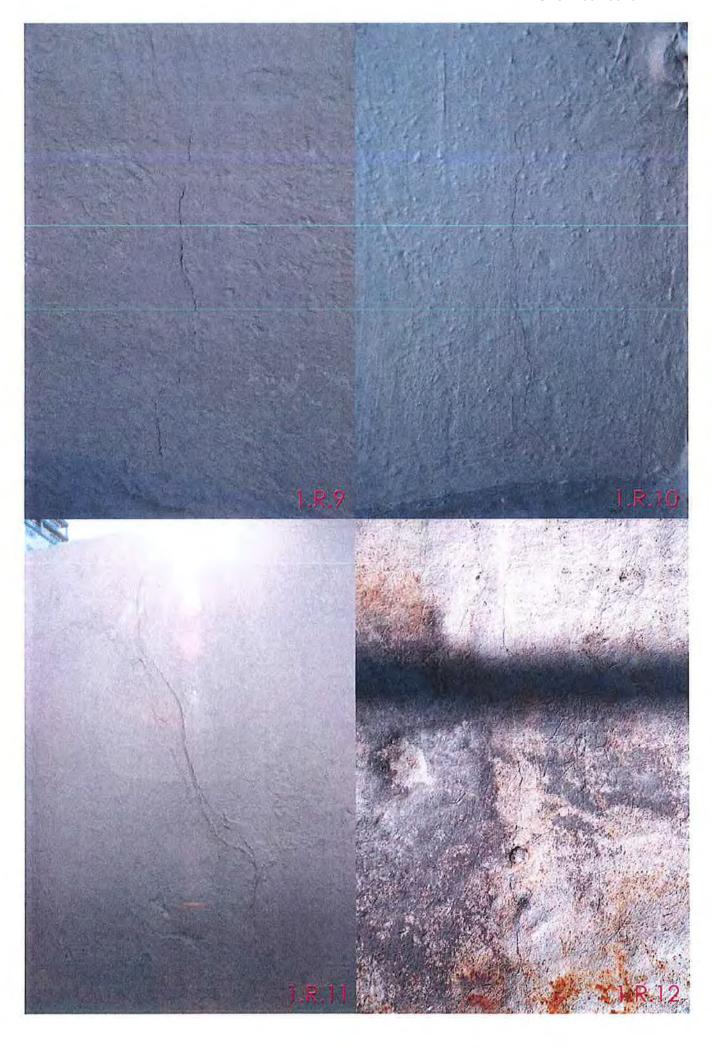


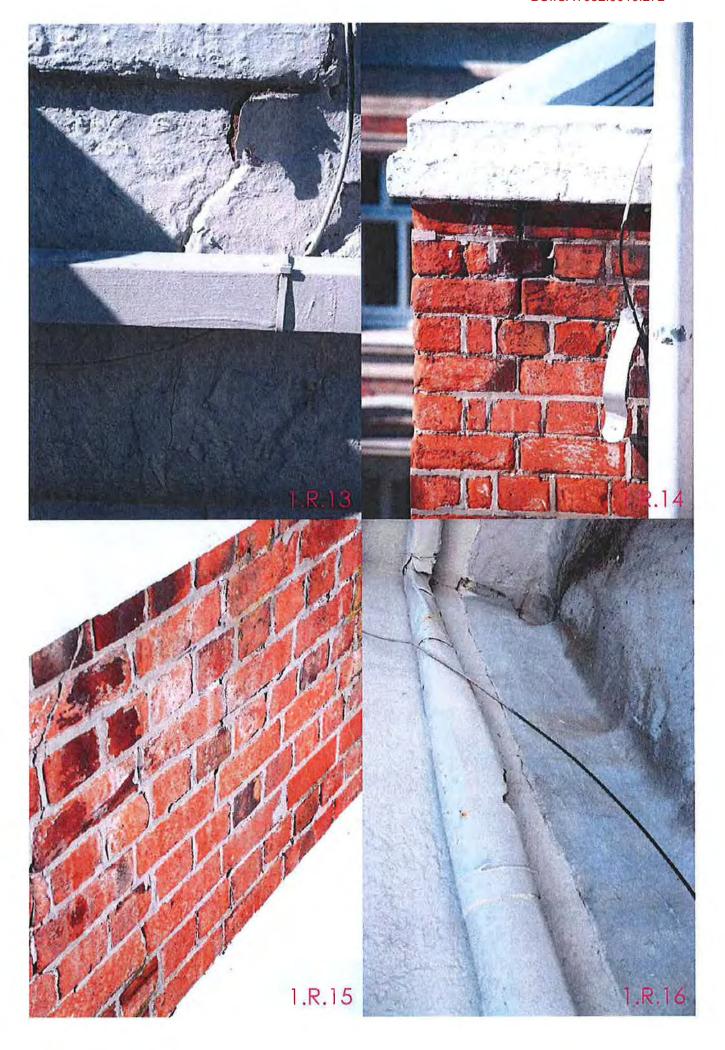




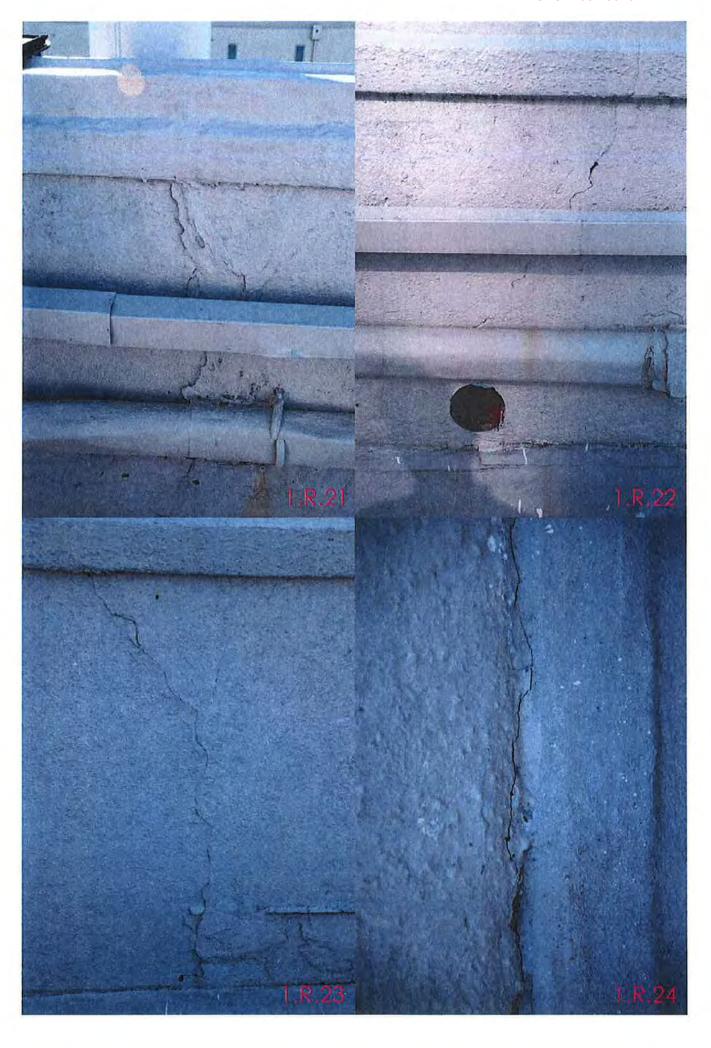






















## **APPENDIX E**

South and West Wall Stonework Survey



## The Press Heritage Building – South and West Wall Stonework Survey

This appendix includes the full photographic survey and review of the existing stonework to the south and west walls. The work was undertaken by EPR Construction during early October 2010.

Included in this Appendix are the full photographic records, elevations showing photograph locations and the notes taken during the survey.

The repair work required for the damage to the stonework is typically (Repair S2). However due to cracks through existing stone blocks (Repair S1) is required in a number of locations which are marked up on the photographs. Refer to Appendix B for repair schedule.

Should any further cracking be discovered during the course of repairs please notify the undersigned to allow inspection. Also allow to coordinate with the architect and New Zealand Historic Places Trust as required.



- 1 carpark side gap between sand stone + brick top conner
- 2- Sand stone joints in columns movement-chippent crock Top & Btm & column
- 3 Cracks sand stone colow culumns both outer sides at bush
- 4 Columns Moved Still Solid 3 stones high right Side
  of centre column

  cracks Sandstone window columns both outer sides at base
  Flaking point around columns

Flaking Paint around window a cracked window panes

5- Crack window column btm Left side Crack window column Lower Aight side Centre column crack/chips right side cracks in stone joints window columns 6- Crack window column btm left side

7- Centre column moved somm gap sobel -1 5 tore Cracks window columns btm both out side

8- Crack bem centre left window column

1 cracked window

9- crack/chip left column

old gaps/new cracks base flower consel

Loose pointing left window arch

3 window columns/arch cracked

cracks bitm outer side window columns both

1 Broken window I cracked window

10 - erach window arch left side - Flaking Paint right side cracks outside window columns by both sides. Crack ropight side column under window

Broken window

11- crocks top 2 outside archs
crocks/chips 3 column/arch so...Ts
chipped/crocked window column hight side BTm
12- crock pointing top window left side

13. open Joint right side window open Brick Joint xz

14 - Cracks window column bitms x3

15- Eracks window column 5Tm x2

B cracked windon

16 - Crack in column

17 - open brick Joint

18 - crack window column btm Left

19 - crack window column btn Lett

gap in soint between stone column (painted) a unpainted brick

1 cracked undow

20 Crack window columns outside both sides bin

21 gap between stone column & brick 2 shots we dust. Crock window culumns outside both sides both

- 22- Crack top corner

  Crack left outside column

  crack ledge below rectangle window

  crack Left side window column bin
- 23- crack window columns bitm outside both crack left side ledge at column. Crack Left side window arch at top
- 24 Cracks Top window arch both outside window
  Left side large Right side small

  cracks btm outside wandow columns

  cracke left side window ledge at column
  - 25 cracket chip Btm right window column.
- 26 crack Bin right window column,
- 27- crack btm right window column
- 28 crack test centre left side window celymn From window sill to Top of lower window

29- Window anch Laft side crack/ mortar missing cracks boths sides of door in fill '30- window anch Life side crack/ mortar missing

31- centre window arch crack/pointing missing
crack in window sill left window right side.
crack left side old door sill to window arch below

32 - crack window arch left side window left side Window left side Window left side Window left side From expose.

## I broken window

33 - Crack centre column between windows at flower crack Right window s.ll down to ledge & window below

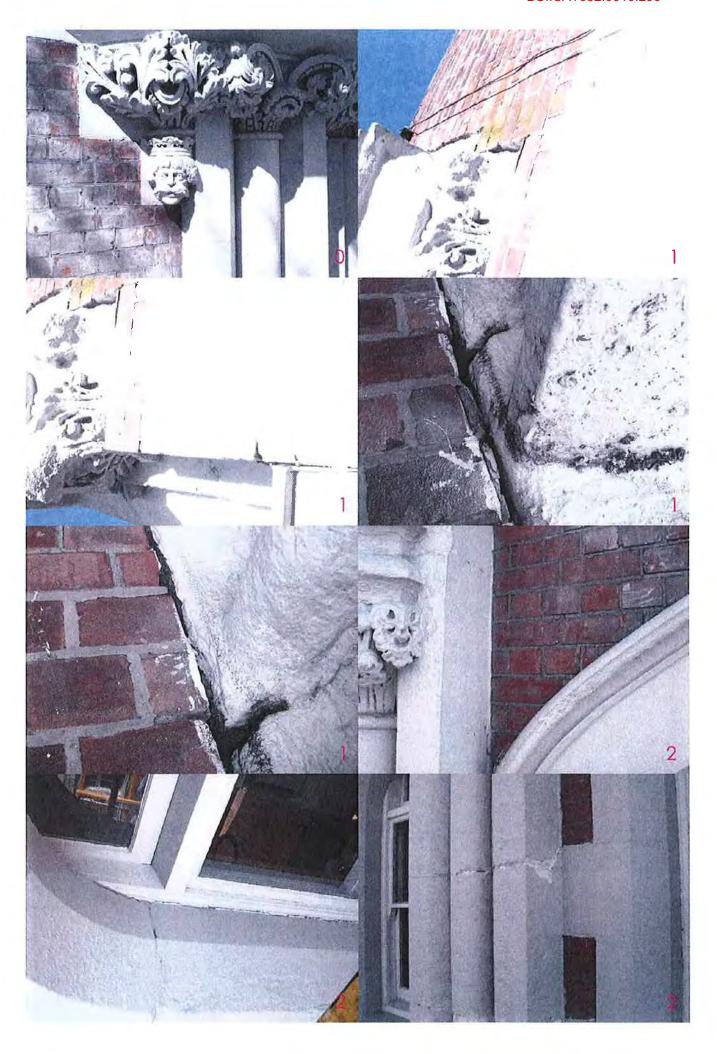
34- crocks window arch 2 left the side windows
crack window right side around Sill
35- crack centre window column right side Top

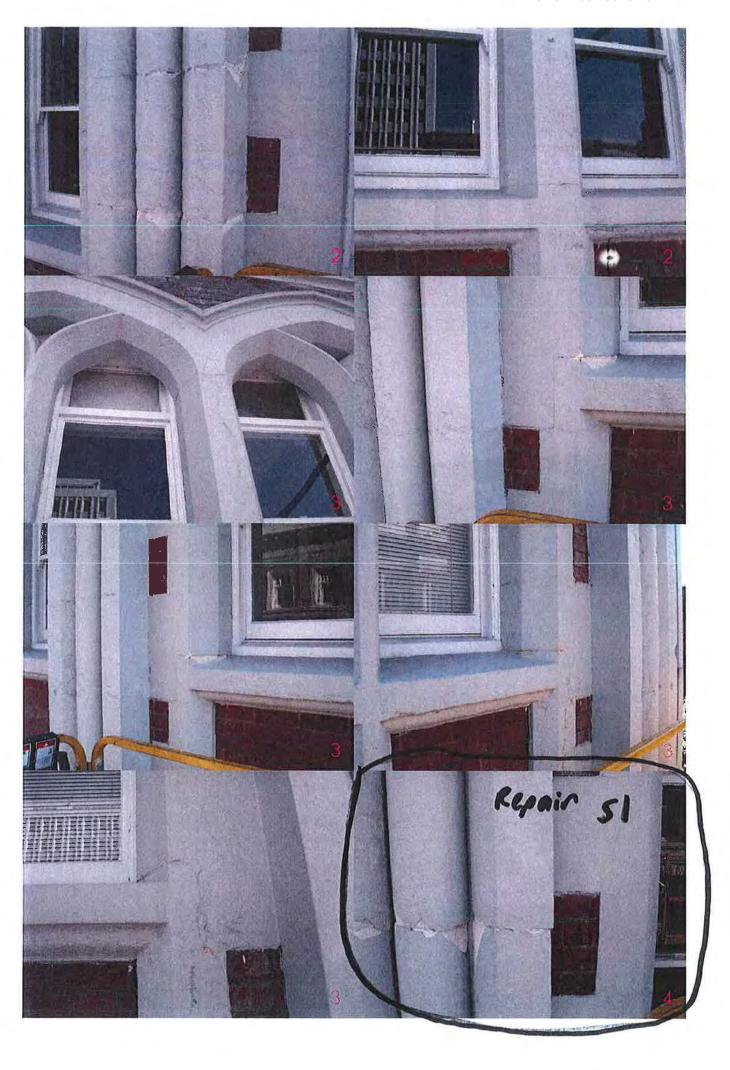
36 - Crock window right stesside head to Top of ledge about

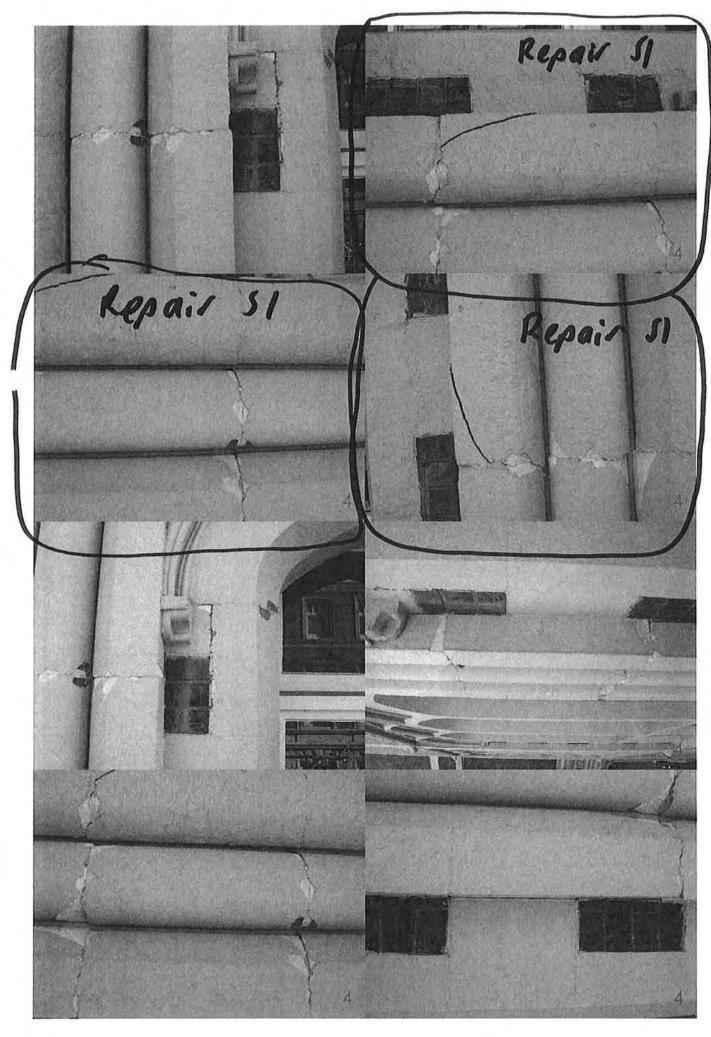
3 th 4 & cracked window

37. End colymn 15 mm at arch height crack
through to window column is
crack top centre window column is
crack top Right window arch.
crack end column through to window
crack right side window to window
track right side window to column.
Flaking Paint end column at ledge height
38 - Left window arch Flaking paint

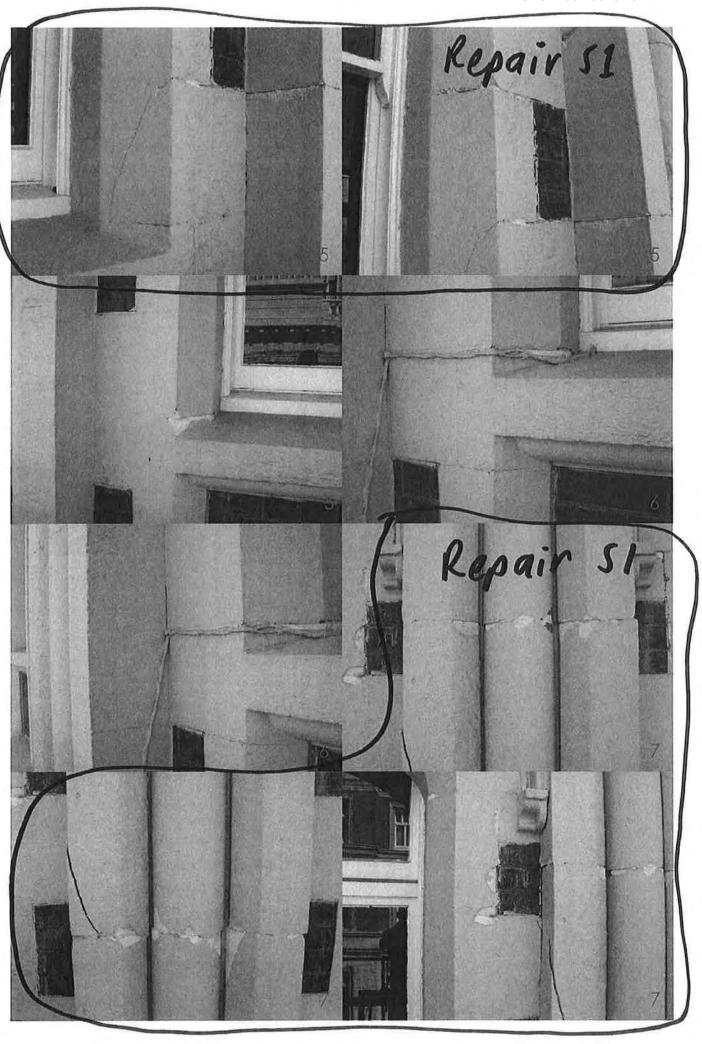
Flaking Paint (Sand Stone crumbing) on surface)



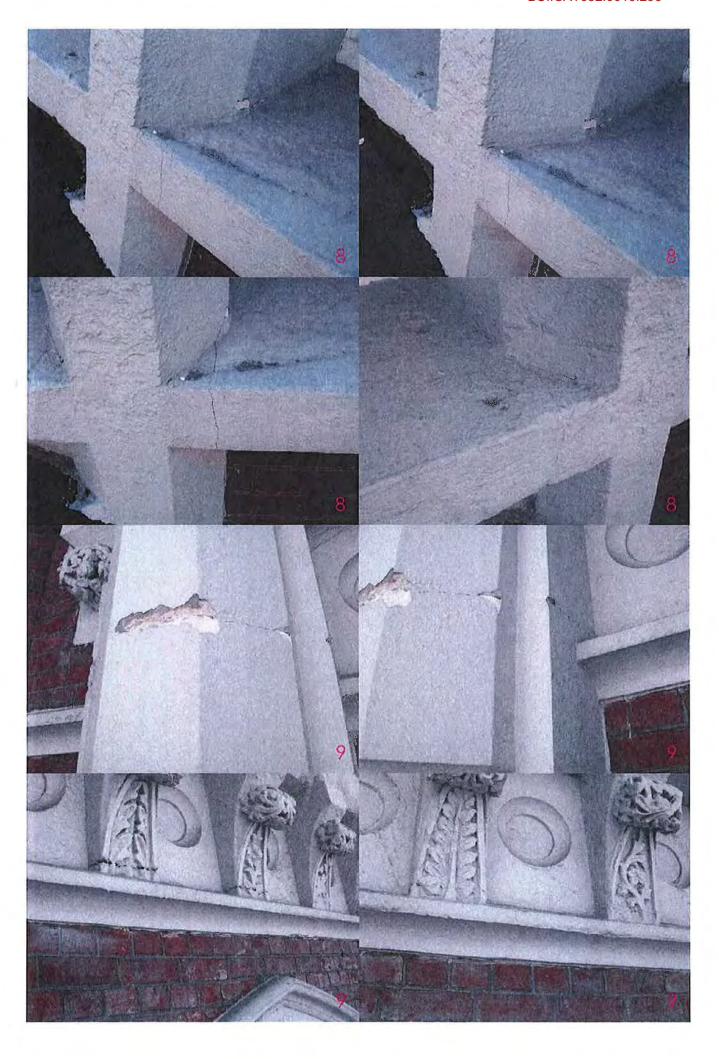


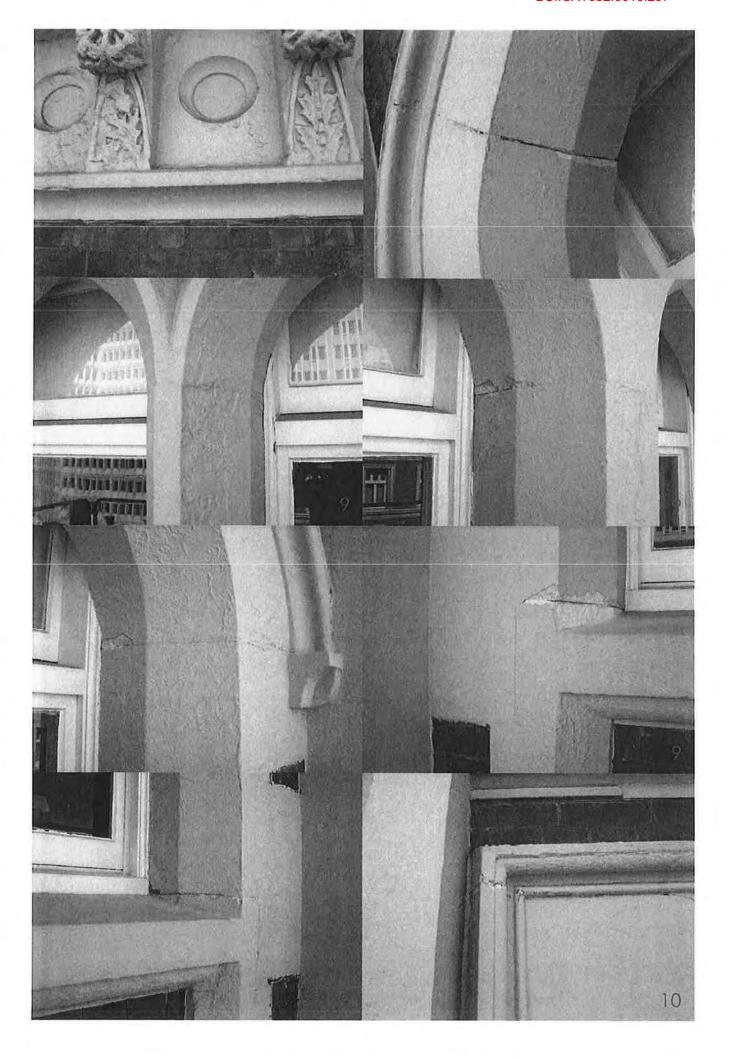


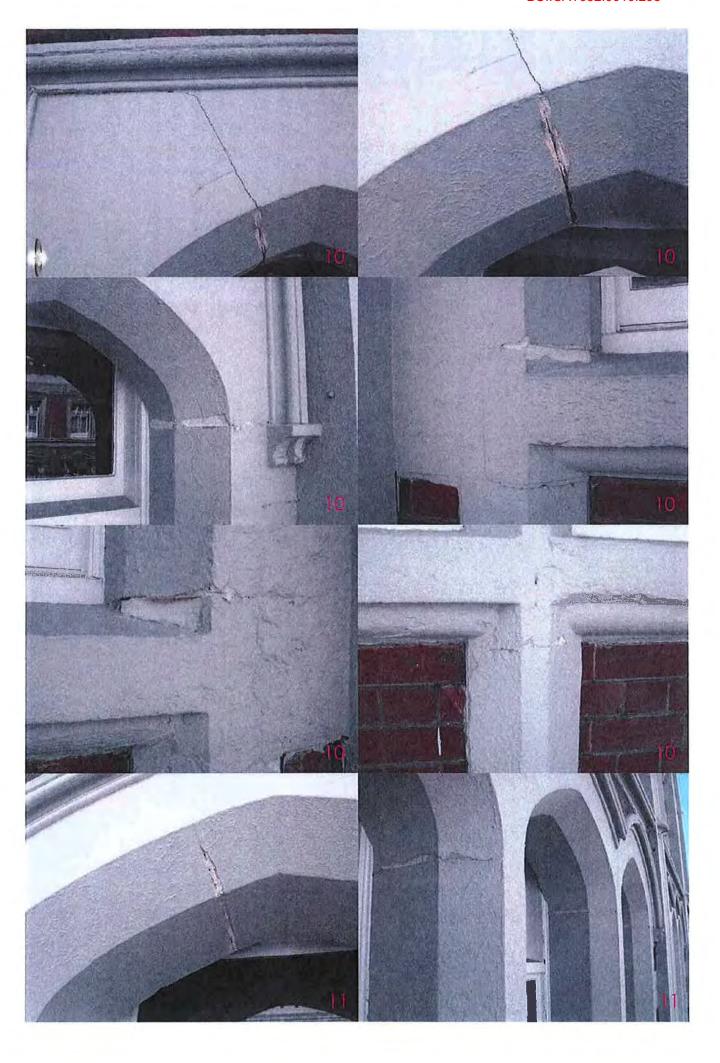




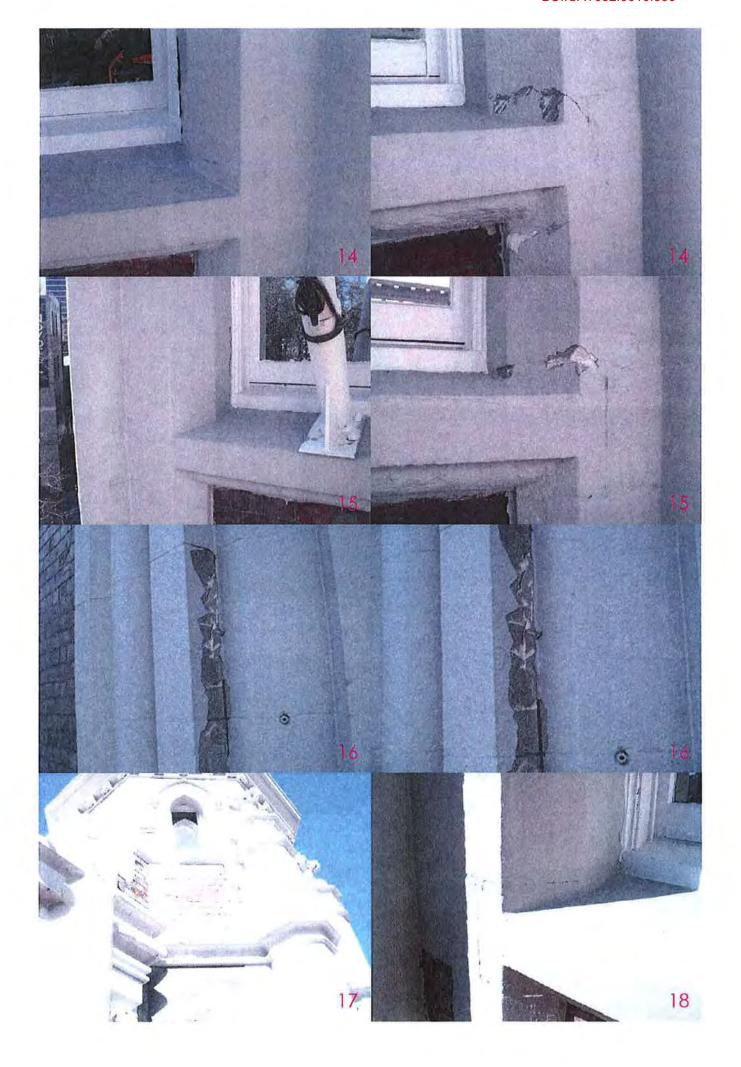




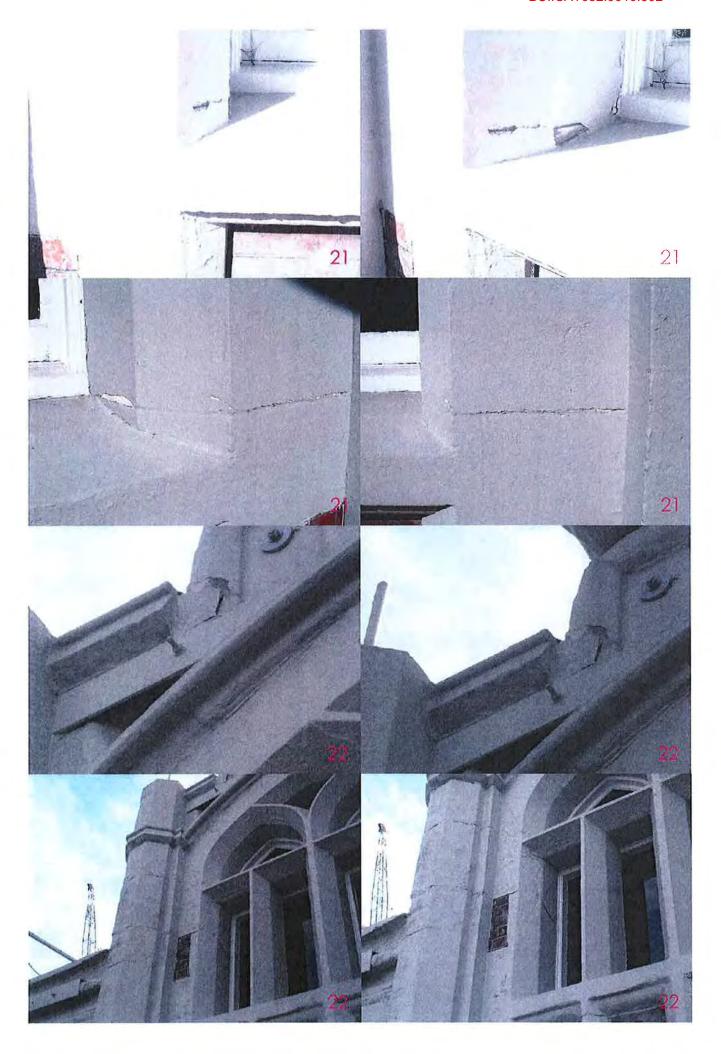


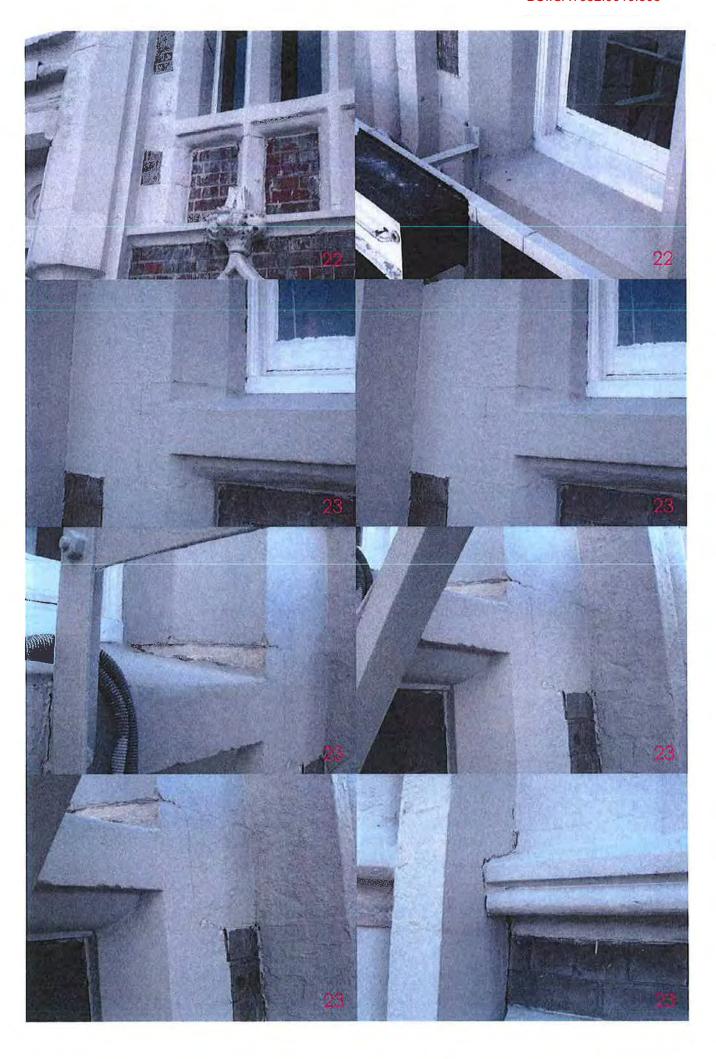


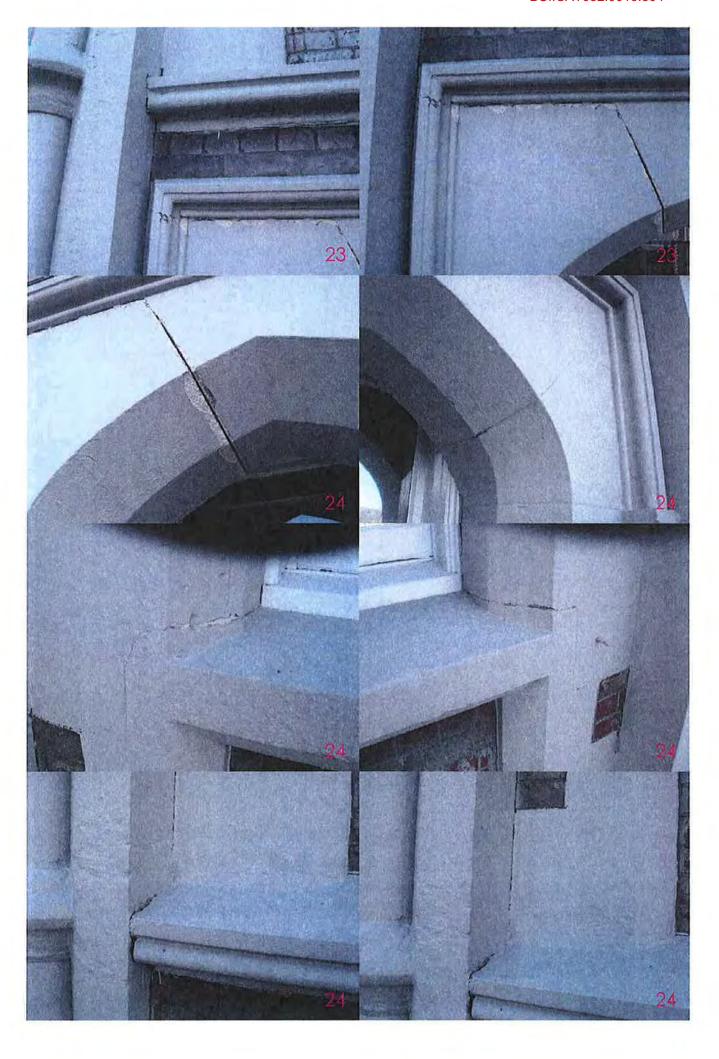


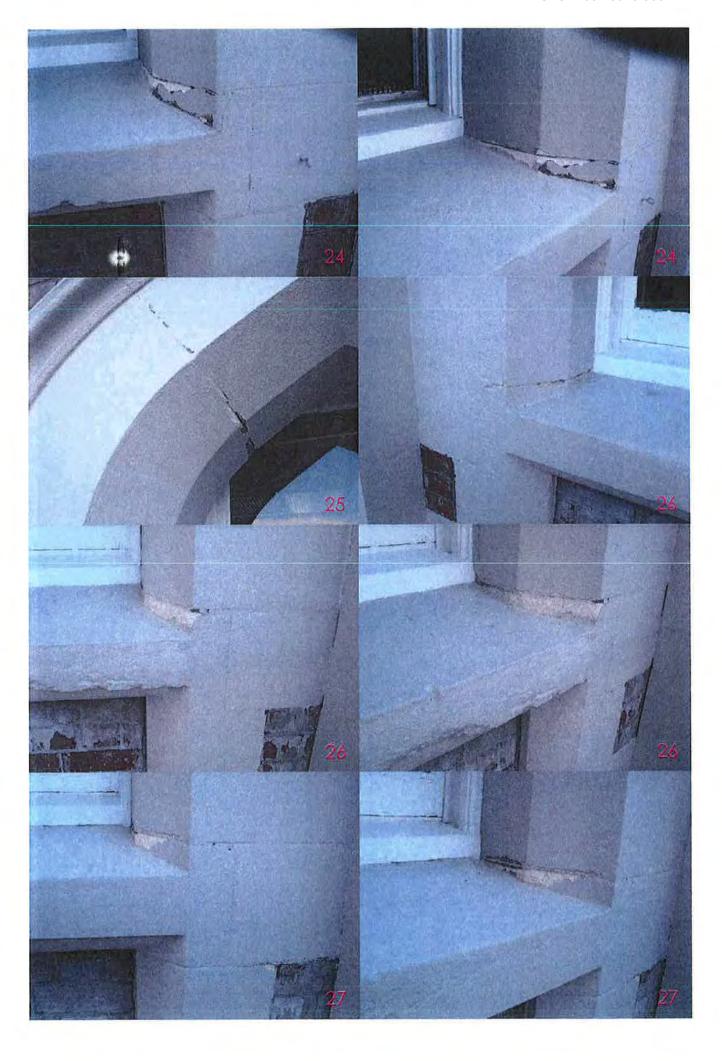


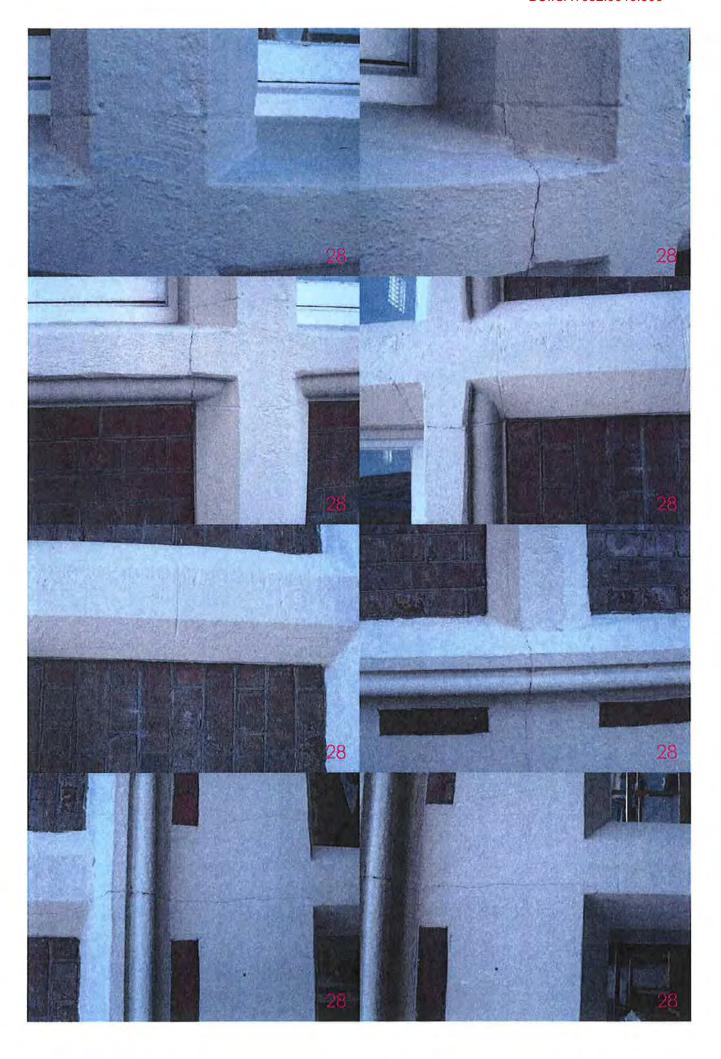


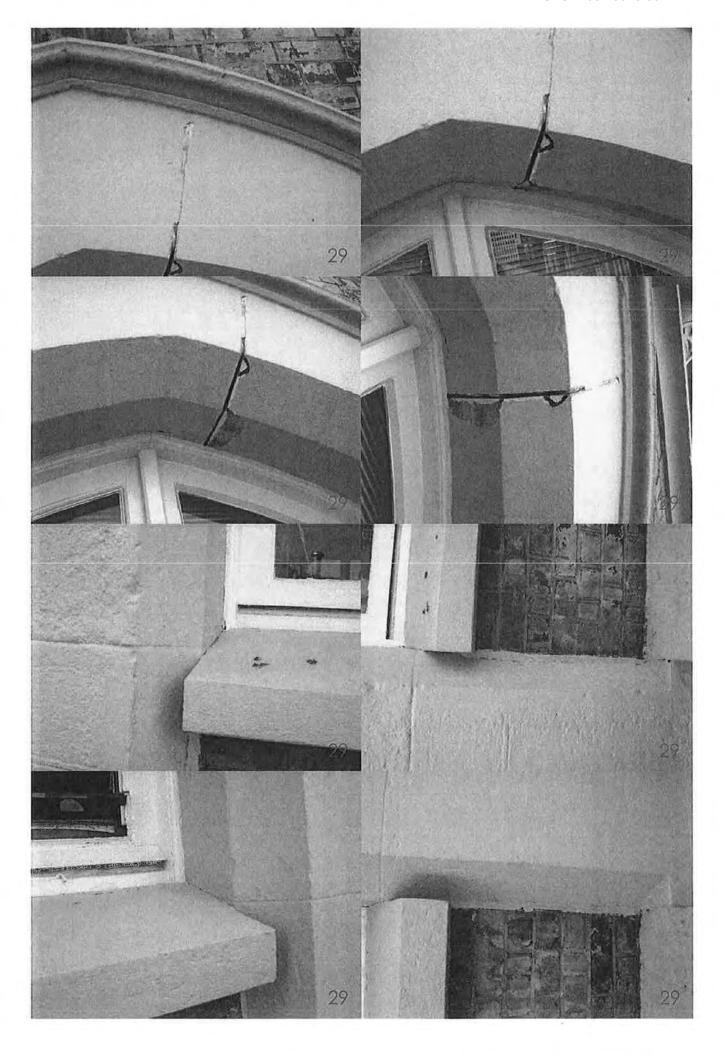




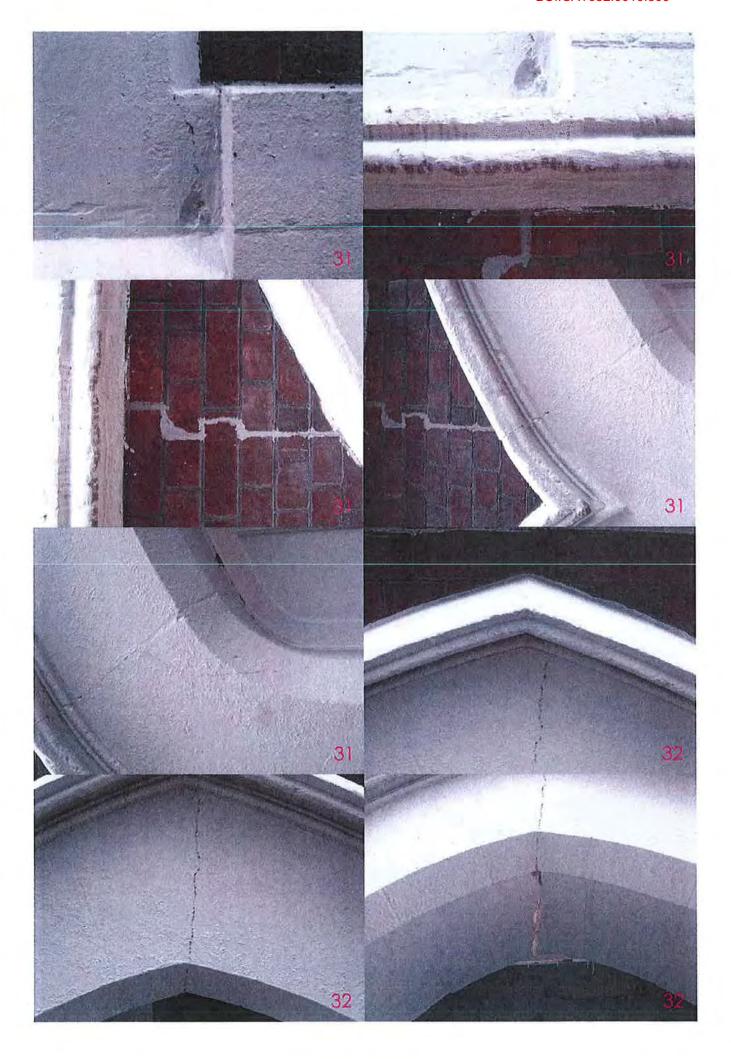




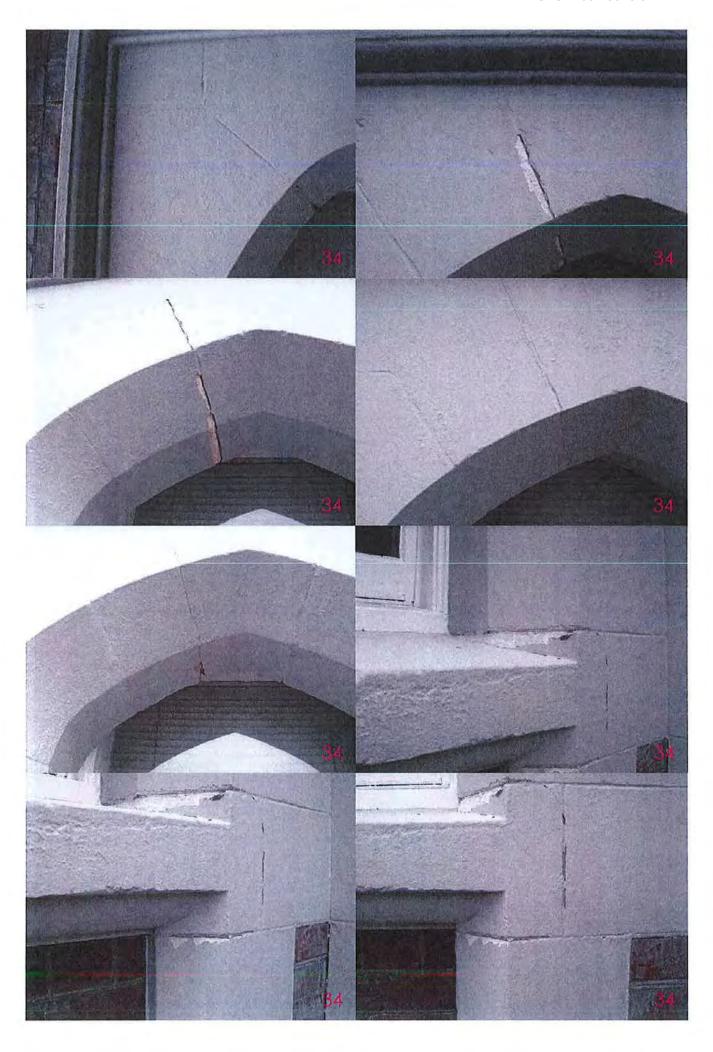


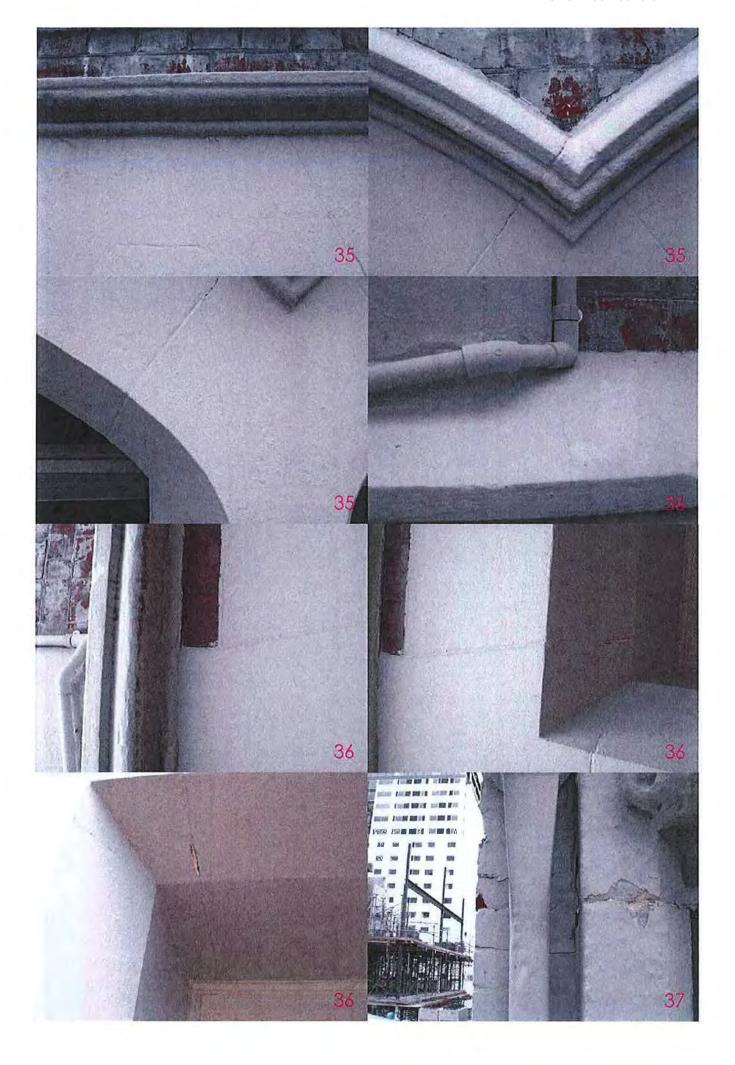


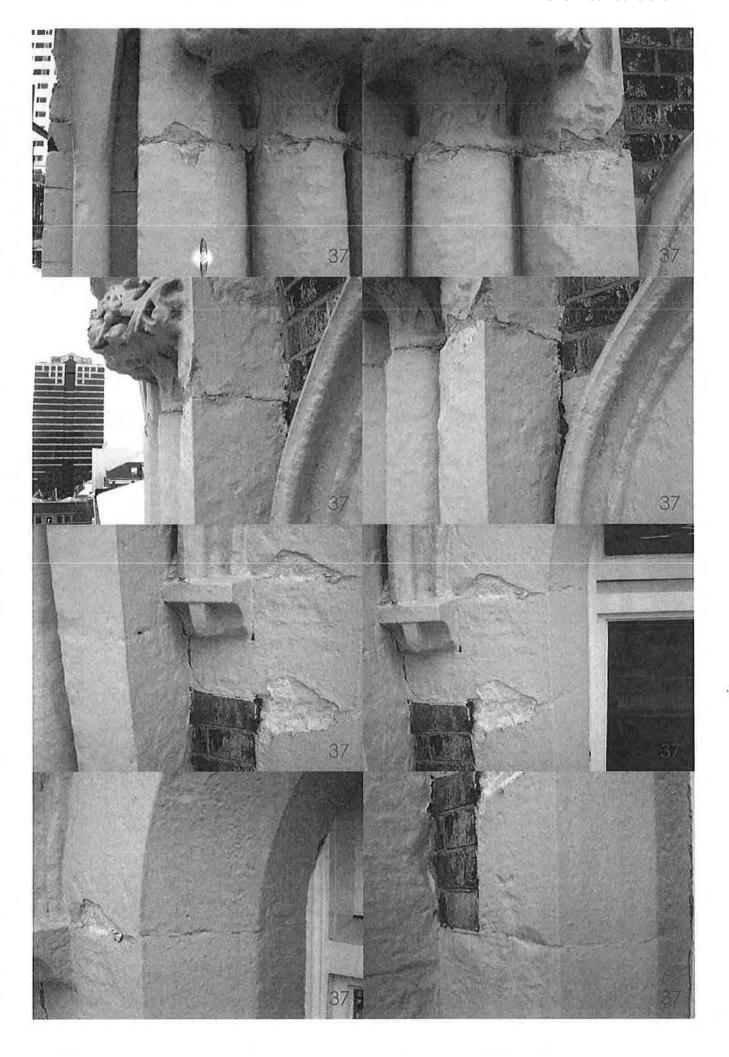




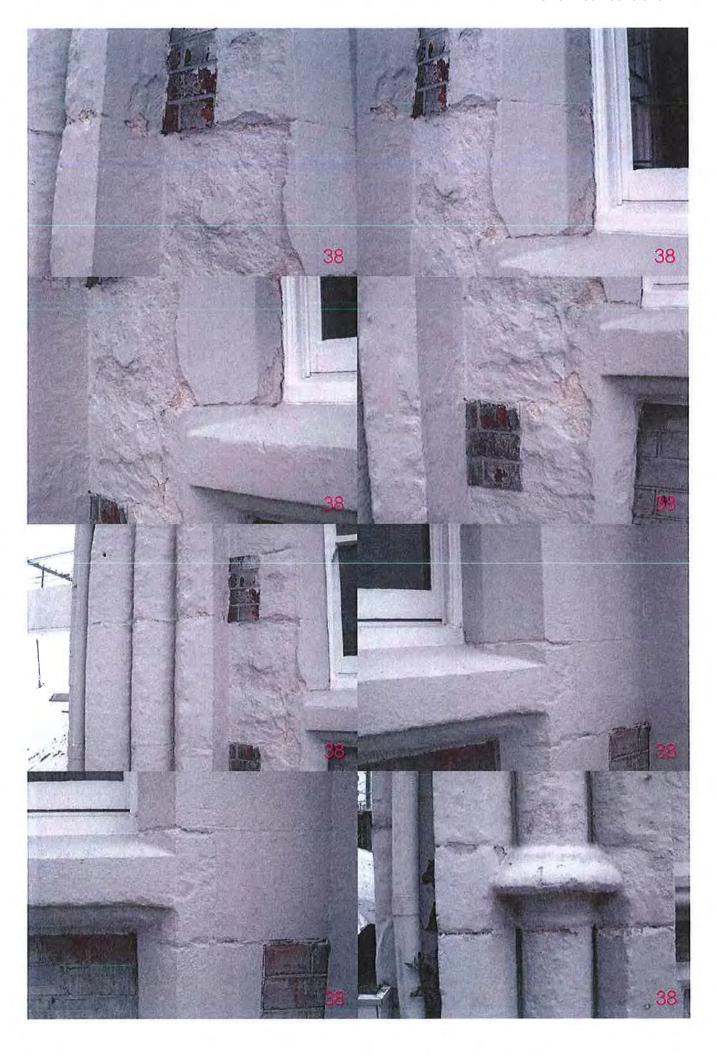


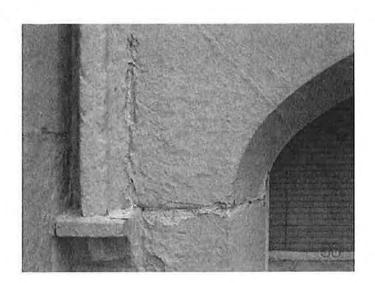


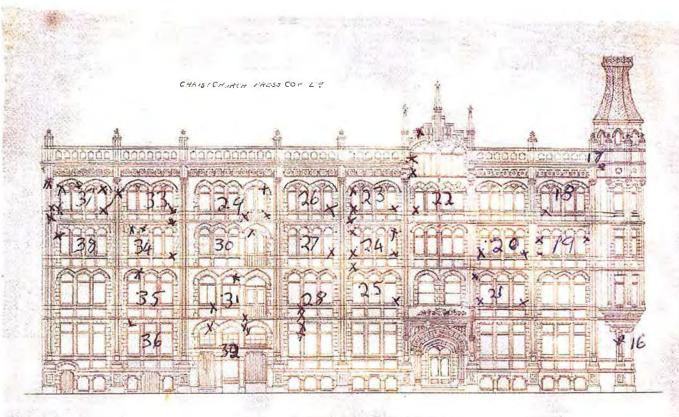




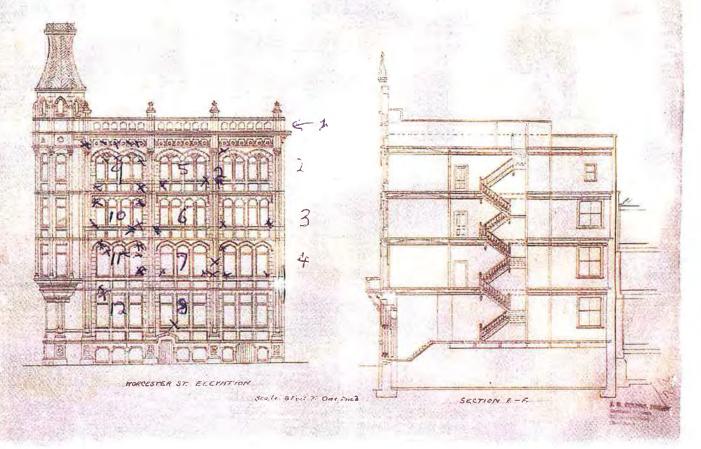


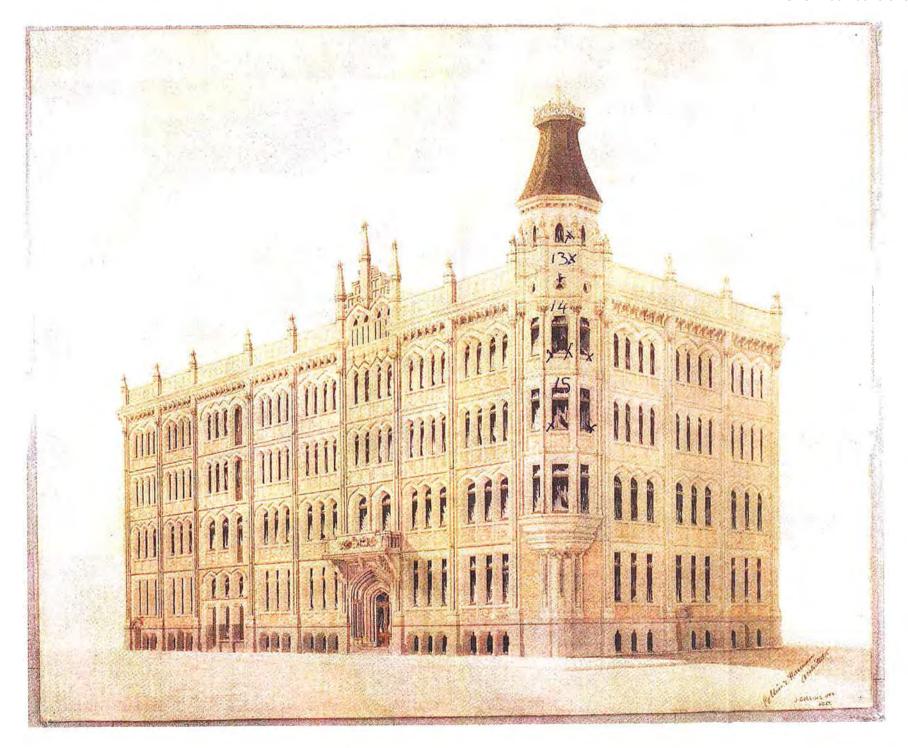






CHTHEDREL SQUARE ELETATION





STRUCTURAL AND

CIVIL ENGINEERS

MATERIAL TESTING BRIEF

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64 3 379 2169

www.holmesgroup.com

To:

Michael Doig

Company:

Ganellen

Project No:

105849

From: Date:

Subject:

Alistair Boys

22 December 2010

Pages:

Press Building 32 Cathedral Square, Christchurch

#### PROJECT DESCRIPTION

The project involves the seismic strengthening of the Press Building at 32 Cathedral Square, Christchurch.

Holmes Consulting Group will be performing a nonlinear time history analysis to establish the current seismic performance of the proposed building modifications. This will also be used to determine the required strengthening to satisfy current statutory requirements.

#### SCOPE OF WORK

To build the computer model that will be used for the analysis, the composition and shear strength of the existing unreinforced masonry walls and the thickness, strength and reinforcing of the in-situ floor slabs are required. These shall be established via testing with the preferred locations illustrated on the attached floor plans. Alternative locations along each wall line or floor level may be may be used in order to minimise the impact of the tests.

The following investigations and testing are to be conducted:

#### FLOOR SLAB INVESTIGATION 1.

Investigation of the in-situ concrete floor slab shall include a Ferroscan in at least three locations at each level to determine the typical spacing of the reinforcing bars. Significant variation (greater than 100mm) of reinforcing spacing will require an additional three tests minimum.

A minimum of three core samples shall be taken at reinforcing locations to determine the reinforcing bar diameter.

Christchurch 8144

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Wellington

Queenstown

San Francisco



# CONCRETE STRENGTH TESTING

A minimum of three concrete core tests are to be performed at each level in order to determine the thickness and material strength of the in-situ floor slabs.

# MASONRY SHEAR TESTING

Masonry testing is to be performed at the locations indicated on the attached plans and is to be carried out as per methodology illustrated in Figure 6.2 in "Draft Guidelines for Assessing and Strengthening Earthquake Risk Buildings" (1995)

# FAÇADE CAVITY TESTING

Cavity testing of the west and south facades to determine the possible existence of a cavity between the façade stonework and the internal masonry wythes. A minimum of three tests shall be performed at the pier locations by coring into the façade wall from the internal face to within 100mm of the exterior face. Care is to be taken to ensure no externally damage results.

Your report should include the following:

- Description of the test methodology.
- Description of the equipment used.
- Location of each test.
- Plans indicating the slab thickness and reinforcing bar diameter and spacing for each floor slab.
- Concrete Material Strength test results for each location.
- Masonry Shear test results for each location including:
  - applied load;
  - mode of failure;
  - the condition of the brick;
  - mortar composition and condition; and
  - comment on the composition of the wall (brick depth, number of wythes, presence of a cavity, etc.).



- Photographs of the wall surface both prior to Masonry Shear testing and on completion of the test.
- Shear strength in terms of the "Assessment and Improvement of the Structural Performance of Buildings in Earthquakes", NZSEE (June 2006).

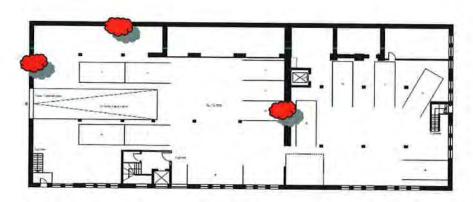
If you have any questions or require more information please call.

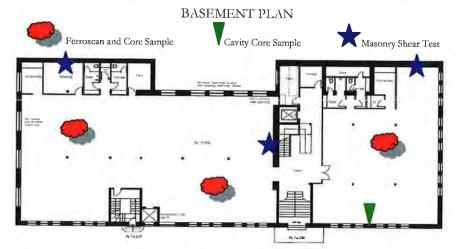
Prepared by:

Reviewed by:

Alistair Boys STRUCTURAL ENGINEER John Hare DIRECTOR











FIRST FLOOR PLAN

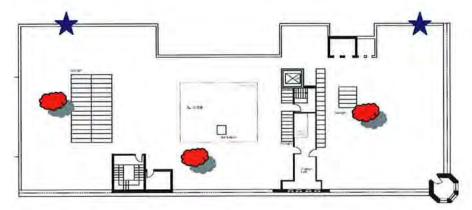




SECOND FLOOR PLAN



THIRD FLOOR PLAN



ROOF FLOOR PLAN

STRUCTURAL AND CIVIL ENGINEERS

Press Building

Preliminary Seismic Assessment Report

PREPARED FOR

Ganellen

22 December 2010

**Executive Summary** 

The Press Building is a 100 year old category 1 heritage structure that has undergone minor remedial works in the 1970's. These included the removal of the upper portion and bracing of the retained parapets, and steel bracing of the tower in the south-west corner.

Introduction

Holmes Consulting Group have been engaged by Ganellen to undertake a seismic assessment of, and provide a retrofit solution for the Press Building located at 32 Cathedral Square Christchurch.

Scope of Work

The scope of work for this preliminary report included the following:

- 1. Review existing documentation of the Building held by the Christchurch City Council.
- 2. Walkdown the building to familiarise our engineers with the structures, visually assess their condition, observe important structural and seismic characteristics, and note obvious deficiencies.
- 3. Assess the likely seismic performance of the buildings, based on Non-linear Time History Analysis modelling of the structure.
- 4. Brief material testing consultant on non-destructive in-situ testing on the existing masonry walls and concrete walls, beams and floors.
- 5. Provide conceptual plans of recommended seismic strengthening.
- 6. Report on our findings and recommendations.

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Christchurch

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San Francisco



#### Limitations

Findings presented as a part of this project are for the sole use of the *client* in its evaluation of the subject properties. The findings are not intended for use by other parties, and may not contain sufficient information for the purposes of other parties or other uses. Our professional services are performed using a degree of care and skill normally exercised, under similar circumstances, by reputable consultants practicing in this field at this time. No other warranty, expressed or implied, is made as to the professional advice presented in this report.

## **Building Description**

The Press Building consists of four levels above a partially submerged basement. The floors are constructed of in-situ concrete with unknown quantities of steel reinforcing. The floors are supported internally on secondary concrete 'arch' beams, spanning between primary steel beams which are supported by cast iron columns. The floors have perimeter beams which appear to tie the floor diaphragm to the vertical support structure of the perimeter walls.

The North and East walls are constructed of unreinforced masonry (URM) which reduces in thickness up the height of the structure. The façade walls on the West and South faces of the building are a mixture of URM and stonework.

The southeast corner of the building has a partially protruding tower that rises approximately 8m above the adjacent roof parapet. The parapet and tower roof have undergone previous strengthening during the 1970's.

The Lateral load resisting system is provided primarily by the east, north and central east-west masonry/concrete walls. The façade walls on the west and south faces of the structure do not contribute significantly to the lateral resistance but have a moderate level of ductility during seismic events.

# **Building Performance**

Our evaluation of the building has been based on existing drawings, the seismic actions developed in accordance with NZS1170.5:2004 Structural Design Actions, and the Initial Evaluation Procedure in accordance with the "Assessment and Improvement of the Structural Performance of Buildings in Earthquakes", NZSEE (2006). This document limits the allowable strength of masonry to a lower bound value that may be increased with material testing, which is likely to improve the assessed performance of the building.

The performance of the proposed reinstatement of the original configuration has significant implications for the retrofit of the northern masonry wall. As can be see from the left figure below illustrating the northern wall, the panels between the



windows from the ground floor to the second floor sustain significant damage (shown in red) at an earthquake level corresponding to 33% of current National Building Standard (NBS). The right figure below illustrates the damage sustained by the north wall in the current configuration at an earthquake corresponding to 50% of current NBS.

Associated with the damage to the northern wall under the proposed configuration is an increase in damage to the remainder of the structure. However if the integrity of the wall is maintained via an appropriate retrofit solution the performance of the Press Building in the current configuration is such that collapse is unlikely during a seismic event corresponding to 50% current NBS.

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NORTH WALL (proposed configuration) 33% NBS

NORTH WALL (current configuration) 50% NBS

Remedial strengthening of the north wall will be necessary and are also likely to be required in other locations in order to bring the building up to the target strength of 67% NBS. These will be more readily identified when the actual material strengths are known and will depend on the redistribution of loads associated with the integrated remedial solution. A summary of the required and likely proposed remedial details is provided in the following section.



# Remedial Strengthening Solutions

Outlined below are indicative remedial solutions for likely failure modes and locations:

1. Shear Failure of Wall Panels

FRP sheets bonded to the interior face of the masonry wall will be required.

Rocking of Masonry Piers

Unidirectional FRP strips bonded to the interior face of the critical piers extending over the full height of the potential failure region.

Toppling of the Tower in the south-west corner

Additional steel truss members and hold-down ties to connect the roof structure to the masonry below.

4. Toppling of the rooftop parapets

Increase the capacity of the existing steel members with supplementary bracing or replace the existing members.

If you have any questions or require more information please call.

Prepared by:

Reviewed by:

Alistair Boys STRUCTURAL ENGINEER John Hare DIRECTOR

STRUCTURAL

AND

CIVIL

ENGINEERS

Christchurch

Telephone

64 3 366 3366

64 3 379 2169

Facsimile

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Level 5

123 Victoria Street

PO Box 25355

Christchurch 8144

New Zealand

Offices in

Auckland

Hamilton

Wellington

Queenstown

San Francisco

To:

Michael Doig

Company:

Ganellen

From:

John Hare

Project No: mktg

Date:

4 November 2010

Subject:

Press Co Building - Soem Notes on Non-linear analysis

Hi Michael

The following notes are a very quick summary, although by no means comprehensive. I would of course be happy to go through this again with any of your other people, and you can also reference our website, www.holmesgroup.com for some further information and case studies.

I have tried to give here a view of both conventional and non-linear approaches as we discussed but this may or may not cover all of it. But I am available to answer questions if you need me to do so.

Please note in particular that this process is specifically developed for analysis of existing structures, ETABS and other linear packages are for design of new structures, where we can make the building conform to the mode of behaviour we want - not the other way around. This is the basis of advanced analysis in seismic zones, and conforms to best practice in particular in the US and NZ.

Addressing the complexity issue, a standard truism in analysis and codes is that the rewards come to those who apply greater time. In other words, the quicker methods will always offer a more conservative solution. This is not a matter of safety. In the evaluation of an existing structure, a greater understanding will give a better ability to predict performance.

#### TRADITIONAL APPROACH

The traditional approach to the evaluation and strengthening of existing buildings for earthquake loads has been to calculate the strength of the building, check this strength against code requirements and, if the strength is less than code, add a new structural system.

This method does not fully use the strength of the existing structure and so the strengthening may be more expensive and intrusive than is necessary. Also, it does not consider appropriate risk levels and the strengthening may not be compatible with the existing structure.



#### **HCG PROCEDURE**

The HCG Nonlinear Dynamic Procedure (NDP) overcomes these drawbacks. The procedure models the existing structure accurately, evaluates the strength of the structure using actual earthquake records and adds strengthening elements to the model of the existing structure.

The NDP process that we use is more correctly termed a "three dimensional non-linear time history analysis". We assemble a detailed computer model with input material properties and strengths that closely match the existing building. This model is then subjected to actual earthquake records that have been scaled to a level that reflects the likely form of shaking at this site. As structural elements are loaded, the model adjusts their stiffness accordingly, allowing load to redistribute. As elements yield or even fail, the model can take this into account. This is the non-linear aspect of the model.

A non-linear model is a much more realistic representation of a building's performance than conventional linear analysis. Linear analysis simply assigns a single stiffness to elements but then allocates load as if they have infinite strength, following which the engineer must determine from the output if the element fails. It cannot address the consequence of failure and nor can it reassign load easily to members with reserve capacity. This usually results in an underestimate of the building capacity, and/or a greater requirement for strengthening than non-linear analysis.

The non-linear model is also much more useful for testing strengthening alternatives as it allows the development of sympathetic solutions, by trial.

The only real downside of the non-linear analysis is the additional modelling and analysis time, however this time repays itself many times over in reduced intrusion and reduced cost of strengthening. The capability to perform this analysis is unique in Christchurch to Holmes Consulting Group.



Computer Model of Building - Harthern Elevation



Computer Madel of Building — South Western Elevation



The figures above are extracted from the model of the Engineering extensions at the Arts Centre. As can be seen, the model is a realistic version of the buildings, and must include all elements that can contribute to the behaviour of the building. The modelling of materials may begin with representative values based on historic data, and may be built up as hot-spots are determined and material testing is completed, leading to increased accuracy.

# WHAT THE HCG PROCEDURE ACHIEVES

This procedure provides a complete picture of the response of the building and clearly identifies any deficiencies in the structural system. By using earthquakes of increasing magnitude, the extent of the damage versus the likelihood of the earthquake can be mapped. The damage is categorised according to its effect on the function of the building:



Immediate Occupancy – damage less than this threshold will not effect the continued occupancy of the building during and post-earthquake.

Life Safety – damage less than this level may be such that the building may need to be closed for repairs but will not be such as to endanger occupants.

Collapse Prevention – the maximum damage permitted, beyond which the building may be in danger of collapse.

On being provided with information on what return period earthquake will cause each of these levels of damage, the owner can make an informed decision as to the costs/benefits of applying various strengthening strategies to the building.

The identification of vulnerable elements which fall into the higher categories of damage ensures that any strengthening measures are targeted to provide the maximum benefits.

#### WHY ISN'T IT USED ALL THE TIME?

The advances in computer hardware have made this procedure possible. In 1985 the analysis of a medium height building for a single earthquake took 30 hours on a \$250,000 super-minicomputer. In 1998, the same analysis took 7 minutes on a \$4,000 desktop computer. Now, the same model runs in seconds, and the increased computing power available allows to develop more accurate models and added elements. HCG has invested in the development of computer software able to take advantage of this increase in computer speed and have trained staff to use this software.

# **COSTS**

Typical costs for the evaluation of a medium size building are generally in the order of \$20-40,000 plus GST. Much of this cost is in the development of the three dimensional computer model and verification checking. Once this is completed, the incremental cost to assess various what-if strategies is small. The model building procedure is such that changes can be made simply and efficiently. This is especially valuable where buildings are being redeveloped or subjected to changes in use — as parts of the structure are moved or added, or openings made in walls, the procedure allows a rapid evaluation of the effect on the performance of the building.

## PROJECTS USING THIS PROCEDURE

The HCG procedure was initially developed for unreinforced masonry buildings, the most earthquake prone of our building stock. It is most commonly applied to



any existing buildings, although in certain circumstances, it may be applied to new buildings, particularly in cases where base isolation or other damping systems are being used.

Local (NZ) examples of use of this process include:

- The Christchurch Cathedral
- Princess Margaret Hospital
- The National Library
- The Cranmer Centre
- The BNZ tower in Wellington
- · At least five blocks at the Arts Centre
- · The old Civic offices
- The Invercargill City administration building
- The Wellington Railway station.

The procedure has been used on both sides of the Pacific, using both NZSEE guidelines and the US FEMA guides, now ASCE41. Our knowledge and experience of current practice in both countries informs the process in either, and helps us remain abreast of new research and movements.

John Hare DIRECTOR

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Christchurch

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Offices in

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Wellington

Queenstown

San Francisco

23 June 2010

Michael Doig Ganellen 150 Gloucester Street PO Box 13574 CHRISTCHURCH 8013

Dear Michael

# PRESS COMPANY STRUCTURAL ASSESSMENT AND STRENGTHENING DESIGN

We are pleased to provide you with a proposal for the structural engineering services associated with this project.

The old Press Company office building on the Square is on of the most instantly recognisable buildings in central Christchurch, and on that we have had a long association with. It is a great pleasure to be able to renew our association with the building and at the same time, to work with a new company. I am sure that we will provide you with a great outcome, and look forward to a long working relationship

As we understand it, the current plan for the building is to retain the existing commercial use, but to 'clean out' the floors, removing partitions etc and restoring or exposing key heritage elements, in order to lease the space. The intention is that the floors should be leased to single tenants, but the flexibility to split the floors must be maintained. A single lift will be maintained. The rooflight over the north wing will be repaired and reinstated.

## THE PROCESS

The non-linear analysis process that we have recommended for this building involves much more than simply the running of a computer model. There is a necessary process of familiarisation and information gathering. This will be to a degree iterative, particularly given the quality of information that exists, and the timeframe over which the work must be completed — we do not have the luxury of a long time over which to collect comprehensive information prior to starting work, but that need not impact the outcome provided we are well organised.

There are several phases that we will break the work into

 A full review of what information exists (including a full walk-through), to determine the minimum measure and testing requirements prior to starting work.



With the information seen to date, it appears that our main requirement is a dimensional survey of key elements, in order to verify the accuracy of the architectural plans, and to add some key structural information.

2. A benchmark analysis of the building in its current 'original' configuration.

With the required dimensional information, we can commence modelling and complete an analysis of the building in its existing configuration, using representative properties and assumptions. This will allow us both to make an initial evaluation of the building strength, and to highlight information hotspots, where will need to conduct material testing, exposure of hidden structure, or additional measure-up.

This process maybe iterative depending on our findings, but can be conducted in parallel to the other work that may be ongoing.

This phase should allow us to firstly to calibrate the model, to a degree, to the observed damage; and secondly, to benchmark the existing capacity of the building against the CCC Earthquake Prone Building (EPB) criteria. We are able to run actual earthquake traces from the Darfield earthquake that have been recorded at nearby sites, so should expect to see a reasonable approximation of the damage that has occurred.

3. Materials testing and existing conditions must be investigated.

Our preliminary work will have assumed conservative material properties, but as we refine our modelling, we need to use measured values to optimise our solution. Subject to suitable access, we will probably need some exposure and testing to be completed. This may include:

- a. Brick shear testing. Where we are reliant on masonry for lateral load resistance, this will be required to provide confidence in outcomes. This is a straightforward process, and can be initiated at any time.
- b. Concrete strength testing. Ideally, this would require some core samples to be taken, which may then be used to calibrate a Schmidt hammer test that can then be used to obtain comparative values throughout the building (if required).
- c. Limited destructive testing of concrete involving breaking our small areas of concrete to expose the reinforcement, allowing us to check cover ,take material samples and calibrate a cover-meter to enable other concrete elements to be scanned.

- d. Exposing of key details. Where ceilings, linings or floor coverings conceal key areas such as floor connections or framing, we may require small areas to be exposed, allowing us to verify assumptions about structure
- 4. Strengthening options need to be investigated.

Subject to our findings in the benchmark analysis, we will investigate strengthening alternatives as follows:

- a. If the building fails to meet the EPB criteria (33% of current code loading), we will develop 2 alternatives: The first, to simply achieve compliance at the basic 33% level (understanding that there is likely to be a challenge to the CCC policy). The second, to achieve full compliance with the policy and heritage recommendations, to achieve 67% (or as near as is practically possible) of current code loading.
- b. If the building exceeds the 33% EPB threshold we will develop a solution to achieve as nearly as is practically possible the 67% heritage target.

In both cases, we may consider more than one option for the 67% solution. Our preference will be to develop solutions which maximise use of the existing structure, with the minimum of new structure, minimising expense and intrusion. Our main goal will be an optimum strengthening solution which gives the most benefit, rather than a dogmatic adherence to a load level.

### 5. Initial Documentation.

Subject to the outcome of the above, we will prepare a report outlining:

- a. Our findings for the building as-is (assuming repairs as necessary to restore it to its current state, and including such heritage reinstatement as is immediately intended. This will be expressed as a summary of the damage and status, potentially at several different load levels, according to the building's predicted ability to survive increasingly severe shaking. This will allow an assessment to be made of the building's existing EPB status.
- b. Our recommendations for strengthening as outlined above, including a summary for each option (if applicable) of the building's enhanced performance, as above.



 Conceptual plans of the proposed strengthening, in sufficient detail for a cost estimate to be prepared, and an assessment of the heritage impact.

# 6. Following phases.

Clearly the work that follows will be dependent on the outcomes of the earlier reporting phases. Assuming that some structural strengthening work will be required, once you have made a decision on the form of the strengthening, we will be able to embark on detailed design for Consent application and construction. We will be able to advise on cost and timing for this on completion of the reporting phases, but have given a representative estimate below, assuming that a moderate level of work will be required.

Construction monitoring will likewise proceed according to our programme, but we note that there is no way to estimate a scope of work for that at this point, so we propose invoicing this on a time and materials basis, although we may be able to fix a fee as the scope becomes defined.

#### COMPUTER MODEL

The computer analysis process that we use is correctly termed a "three dimensional non-linear time history analysis". We assemble a detailed computer model with input material properties and strengths that closely match the existing building. This model is then subjected to actual earthquake records that have been scaled to a level that reflects the likely form of shaking at this site. As structural elements are loaded, the model adjusts their stiffness accordingly, allowing load to redistribute. As elements yield or even fail, the model can take this into account. This is the non-linear aspect of the model.

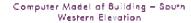
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The non-linear model is also much more useful for testing strengthening alternatives as it allows the development of sympathetic solutions, by trial.

The downside of the non-linear analysis is the additional modelling and analysis time, however it is strongly our view that this time repays itself many times over in reduced intrusion and reduced cost of strengthening. The capability to perform this analysis is unique to Holmes Consulting Group in Christchurch.



Computer Model of Building - Northern Elevation







The figures above are extracted from a model of a building at the Arts Centre. These models allow ready comparisons with the existing building, and an easily understood visual representation of the damage that may occur during an earthquake.

## WHY YOU WILL BE GLAD YOU CHOSE HOLMES CONSULTING GROUP

- We don't look for ways to cut our costs at the expense of yours. Instead we
  develop unique solutions for projects that meet your specific needs.
- With 90 people in 5 offices, we are the largest dedicated structural engineering consultancy in the country, so we have the resources to meet your deadlines.
- We are solely focused on structural engineering. So we don't compromise our work in order to go easy on multi-disciplinary colleagues. Instead we are able to bring our experience in working with many other consultants to the table in order to get the best result from the team, not for the team.
- We have a wealth of experience to draw on in projects that are similar to yours, so we can anticipate problems and solutions efficiently and effectively. In fact, we have worked on many of the major heritage building projects in New Zealand, particularly here in Christchurch. As well as the Arts Centre, we have done significant work at the Provincial Buildings, the Theatre Royal, both Cathedrals, the Old Government Buildings, and many others.
- As we have already shown above, we take the time to understand your project early, identify potential issues and then develop solutions that work. We have already started thinking about your project.
- Not only do we win awards for our innovative thinking, but our clients' projects win awards. At the 2009 Property Council awards we were proud that six of our



projects won awards for our clients. More recently at the 2010 Property Council awards, we added to that list

#### PROPOSAL BASIS

Our proposal is based on our meetings of November 2 and 10 and the documentation provided.

We understand that the timetable for work is based on the delivery of the new building currently underway, btu it is expected that the Press will relocate out of the existing building in early to mid-March, and you wish to have consents in place for this work prior to that.

As I noted, this is achievable, depending on the outcomes of our study and the extent of strengthening work requiring to be detailed and consented. The need to achieve the quality objectives may dictate a slightly longer timeframe, but we will keep you informed as to our interim conclusions as work proceeds, to assist your planning processes.

All going well, we would expect to have a preliminary report prior to Christmas, allowing us to proceed with the documentation from mid-January, assuming a quick turnaround of your decision-making process, and allowing our staff some time for a well-earned break!

#### SCOPE OF WORK

We have allowed for the following scope of work:

- Investigate alternative solutions during the preliminary design phase which satisfy the brief to arrive at an economical solution that meets the architectural and building services requirements.
- Prepare sufficient drawings and support material to get a Resource Consent for the project (assuming the architect assumes primary responsibility for this).
- Prepare calculations, drawings and specification in sufficient detail to gain a Building Consent and for estimating purposes.
- Provide construction drawings and specification in sufficient detail to ensure smooth and timely completion of the construction phase.
- Attend design co-ordination and project control group meetings.
- Liaise with the project Architect and other consultants throughout the project duration on all aspects of our service.



- Advise on aspects of trade tenders and suitability of proprietary components offered as relevant to our role in the project.
- Carry out construction monitoring to CM3 level as per the ACENZ "Guideline on the Briefing and Engagement of Consulting Engineering Services" dated January 2004.
- Respond to and resolve any queries relating to our services that arise during the project construction.
- Provide a Producer Statement Design (PS1).
- Provide a Producer Statement Construction Review (PS4).

#### **FEES**

Because of the nature of the project and the lack of clarity of possible scope or outcomes, we do not feel it can be fair on either Ganellen or HCG to attempt to strike a completely fixed fee at this point.

Unlike new buildings, there is generally no correlation between the value of the construction work, and the structural engineering work that is required. In fact we feel it is counterproductive to attempt to link the two. Our philosophy of seismic strengthening work is that the most successful project is that where we can demonstrate that the required performance is achieved with the least intervention. That frequently means that the most significant part of our work is spent in preparing comprehensive analysis models and material testing that result in no work. So there is no incentive for either party in artificially attempting to keep assessment costs low.

The estimates that follow are just that, although the fee for the first stage is fixed. Until a formal scope of work can be agreed based on the agreed strengthening scheme, we cannot fix a fee for the remaining phases for the reasons noted above. However, the estimates supplied below are our best (reasonably conservative) guess for the anticipated scope.

We are happy however to fix the fee for individual stages as we proceed, and should have sufficient certainty on completion of the reporting phase to fix a fee for the following design phases.

Our fixed fee for the reporting phase as outlined above will be: \$27,500

For the following phases we can estimate a range, based on assumptions from basic reinstatement to moderate strengthening

Documentation phase (estimate)
Construction Monitoring (estimate)

\$12,000 -\$25,000 \$5,000- \$15,000



#### Conditions of our Offer

- All fees and hourly rates are GST exclusive.
- We have allowed to provide up to 6 sets of the documentation at each of the major issue stages. Additional sets beyond this number will be charged for at \$4.00 per A1 copy.
- Our Professional Indemnity and Public Liability insurances are both for NZ\$2.0 million respectively and we limit our liability to these amounts and work we document.
- This offer is valid until November 30 beyond which we may wish to re-negotiate this offer.
- Waterproofing, site survey, structure associated with landscaping and geotechnical work are not included as part of our offer of services, but we would be pleased to assist in the briefing and engagement of these disciplines if required.
- Hourly rates applicable to changes in scope of services:

Project Director	\$250/hr
Senior Project Engineer	\$175/hr
Project Engineer	\$150/hr
Design Engineer	\$125/hr
Project Draughtsperson	\$125/hr

- Our preference would be to negotiate mini lump sums to carry out any alterations to our scope of services.
- Our general conditions of engagement shall be in accordance with the standard ACENZ/IPENZ/ALGENZ/TRANSIT "Conditions of Contract for Consultancy Services", August 2009 version. If you are not familiar with these conditions of contract they can be viewed on the ACENZ website (www.acenz.org.nz) or contact this office and we will send you a copy of them.
- We wish to agree a monthly invoicing schedule for our work for the duration of the project.



 A Producer Statement – Construction Review (PS4) will be supplied where required as a condition of the Building Consent, and we have been engaged to carry out construction monitoring, provided that the Contractor has supplied a full Producer Statement – Construction (PS3). You or your representative is responsible for notifying us when work commences on site.

We trust that this proposal meets with your approval. Please sign below and return fax to 03 379 2169 or email to johnh@holmesgroup.com as acceptance of this proposal.

Yours sincerely Accepted:

### Accepted:

John Hare

DIRECTOR Date:

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From: Mario Evangelo

Sent: Thursday, 9 September 2010 10:27 p.m.

To: Sarah Hard (Fairfax)

Cc: Phil Marshall Lee; craigl@lewisbradford.com; ashleyw@lewisbradford.com; Christian Tonnius;

Peter Maneas; Michael Doig; Dennis Sanders

Subject: The Press building

Dear Sarah,

Both peter and I were sad to be woken up last Saturday with the catastrophe in Christchurch. Thankfully there has been no loss of life. We want you to know that we are committed to assisting in the "return to normal business" process expeditiously and with minimal further disruption to both the Construction of your New Press Head Quarters and your Existing Premises. Peter has experience in disaster reconstruction teams and we have discussed the process going forward. Let me outline our action plan to date and the way forward as we see it:

## **Action Plan to Date**

- 1. I flew in from Australia today with our Architect to meet with all the relevant stakeholders.
- 2. I have met with the Insurance Broker on site to inspect the damage and loss to Construction of your New Press Head Quarters and your Existing Premises. I have copied this email to the Insurance Broker.
- 3. I have spoken at length with Independent Engineers who are assessing the damage. They have met with our NZ staff on several occasions and conducted 3 inspections to date. I have copied this email to the Engineers.
- Our Australian Architect will be carrying out a photographic survey of the damage to date for the purpose of understanding a datum associated with a Dilapidation Report
- Our NZ Staff have received a price from a Land Surveyor familiar with the Building to understand if there are any alignment issues. We will conduct that Survey when our Engineers believe most of the follow on tremors have subsided.
- 6. The Engineers have advised that they need to complete a thorough damage and Building Status Report of the New Press Head Quarters under construction and your Existing Premises. They have advised this Inspection will not occur before Tuesday next week due to the number of aftershocks that have occurred in recent days.
- 7. We will act on the Engineers advice to repair whatever is required as soon as those Instructions are provided; we have already removed by crane a loose railing to the steeple of the Old Press Building.

# **New Press Building under Construction Status**

- 1. Production has all but stopped.
- 2. We have undertaken any temporary restraining work where possible for the purpose of making the Building safe.
- 3. We believe that safe areas of work will open up progressively following rectification and repair. We envisage loosing some time on our programme. Please understand that the portion of the structure that is closed off and complete seems fine on cursory inspections as this building is designed under the earthquake codes. The areas of concern are the incomplete parts of the structure i.e areas not poured and panels only temporarily braced. At worst these areas can be removed or demolished and replaced.

# Your Current Premises, the Old Press Building Status

1. The Press staff moved back in to the Building following the first earthquake. Several

heavy aftershocks resulted in but were not limited to loose ceiling tiles etc falling and risking head injuries. I am advised that the Staff and management were concerned about further possibility of Injury and for occupational health and safety reasons decided to move out of the Building.

- 2. I am advised that the Engineers under their Civil Defence hat in fact recommended that the Building be vacated during the immediate period after the first few aftershocks.
- 3. The engineers have advised that there is an area within the Building that requires the construction of a new shear wall. We have been advised that this area is uninhabitable until the completion of such works. We are waiting on the details associated with carrying out this work.

#### Recommendations

We believe that a crisis management committee be formed immediately to expedite the "return to normal business" process. We suggest that this be headed up by our Architect and chaired by our Mr Michael Doig from our NZ office. We would suggest that Fairfax has a senior manager on the management committee. We will call it the Press Reinstatement Committee(PRC). The Purpose of said committee is to:

- Make Both Buildings safe ASAP
- Take action, plan and implement reports and works associated with the reinstatement of the Old Press Building, to ensure the safe and convenient return to work of the press staff
- Take action, plan and implement reports and works associated with the reinstatement of the New Press Building under construction
- Keep all stakeholder Executives (Fairfax, Ganellen, Council, Insurer, other) informed of the process going forward.

Our experience in Disaster response and reconstruction suggests that we mobilise our management team immediately to avoid the lengthy delays that can occur down the line in a town with limited reconstruction resources. Sarah, we respectfully request you urgently nominate a senior Fairfax executive that we can liaise with as part of the PRC.

Mario Evangelo DIRECTOR



30 Montague Street Balmain, NSW 2041

tel: +61 2 9555 2444 fax: +61 2 9555 5666 p.maneas@ganellen.com



From: Sarah Hard (Fairfax) [Sarah.Hard@fairfaxmedia.co.nz]

Sent: Friday, 10 September 2010 1:09 p.m.

To: Marlo Evangelo

Cc: Phil Marshall-Lee (CPL); cralgl@lewlsbradford.com; ashleyw@lewlsbradford.com; Christian Tonnius; Peter Maneas; Michael Doig; Dennis

Sanders

Subject: RE: The Press building

Follow Up Flag: Follow up Flag Status: Red

Thank you for your message Mario. We are all sorry that you as owners have been faced with this extraordinary situation - but like you, we are amazed and thankful that there has been no loss of life. I need to correct the section of your email headed "Your Current Premises, the Old Press Building Status", which says:

- The Press staff moved back in to the Building following the first earthquake. Several heavy
  aftershocks resulted in but were not limited to loose ceiling tiles etc falling and risking head injuries.
  I am advised that the Staff and management were concerned about further possibility of Injury and
  for occupational health and safety reasons decided to move out of the Building.
- I am advised that the Engineers under their Civil Defence hat in fact recommended that the Building be vacated during the immediate period after the first few aftershocks.
- The engineers have advised that there is an area within the Building that requires the construction of a new shear wall. We have been advised that this area is uninhabitable until the completion of such works. We are waiting on the details associated with carrying out this work.

Civil Defence Inspected the building with management on Sunday morning (5 Sept). They cleared the building then as fit to occupy and said they would inspect again later in the week. The next day (Monday), Ash Wilson (for Ganellen) inspected the building and requested that the payroll corner of the building be strengthened as soon as possible. That work took place on Monday night.

We occupied the site on that basis - that it had been cleared by CD and had also been surveyed by Ganellen, with the required work completed on Monday. There was no recommendation by the engineers that we vacate the building at that time.

On Wednesday (8 Sept), we vacated the Cathedral Square building AT 7.50a.m. because of concerns for staff safety. The catalyst for that move was an unusually sharp aftershock, although there had been many shocks to that point which we were concerned may have caused additional damage since the initial inspections.

Ganellen's engineers inspected again on Thursday (9 Sept) and identified some deterioration. They will undertake a further and more comprehensive survey, and in the meantime we will not be resuming occupation. We understand you agree that it is appropriate that we stay out of the building until at least that survey is completed. Michael Doig informed us on Thursday that he considered it wise for us to vacate as a safety precaution.

We agree that a representative from Fairfax be involved in the PRC. Phil Marshall-Lee is the obvious choice for us, but this will depend on how much time he needs to commit to it. I appreciate that at this time it is difficult for you to know that, so if Phil needs to bring in an additional resource or we need to change the representative, I hope that can be accommodated.

Kind regards Sarah

Sarah Hard Legal Counsel, Fairfax Media

Fairfax New Zealand Limited P O Box 2595 Wellington New Zealand

phone (+64 4) 4969820 fax (+64 4) 4969823 cell (+64 27) 2913035 sarah.hard@fairlaxmedia.co.nz

From: Mario Evangelo [mailto:m.evangelo@ganellen.com]

Sent: Thursday, 9 September 2010 10:27 p.m.

To: Sarah Hard (Fairfax)

Cc: Phil Marshall-Lee (CPL); craigl@lewlsbradford.com; ashleyw@lewlsbradford.com; Christian Tonnius;

Peter Maneas; Michael Dolg; Dennis Sanders

Subject: The Press building

#### Dear Sarah,

Both peter and I were sad to be woken up last Saturday with the catastrophe in Christchurch. Thankfully there has been no loss of life. We want you to know that we are committed to assisting in the "return to normal business" process expeditiously and with minimal further disruption to both the Construction of your New Press Head Quarters and your Existing Premises. Peter has experience in disaster reconstruction teams and we have discussed the process going forward. Let me outline our action plan to date and the way forward as we see it: **Action Plan to Date** 

- 1. I flew in from Australia today with our Architect to meet with all the relevant stakeholders.
- 2. I have met with the Insurance Broker on site to Inspect the damage and loss to Construction of your New Press Head Quarters and your Existing Premises. I have copied this email to the Insurance Broker.
- 3. I have spoken at length with Independent Engineers who are assessing the damage. They have met with our NZ staff on several occasions and conducted 3 inspections to date. I have copied this email to the Engineers.
- 4. Our Australian Architect will be carrying out a photographic survey of the damage to date for the purpose of understanding a datum associated with a Dilapidation Report
- 5. Our NZ Staff have received a price from a Land Surveyor familiar with the Building to understand if there are any alignment issues. We will conduct that Survey when our Engineers believe most of the follow on tremors have subsided.
- 6. The Engineers have advised that they need to complete a thorough damage and Building Status Report of the New Press Head Quarters under construction and your Existing Premises. They have advised this Inspection will not occur before Tuesday next week due to the number of aftershocks that have occurred in recent days.
- We will act on the Engineers advice to repair whatever is required as soon as those Instructions are provided; we have already removed by crane a loose ralling to the steeple of the Old Press Building.

  New Press Building under Construction Status

- 1. Production has all but stopped.
- We have undertaken any temporary restraining work where possible for the purpose of making the Building safe.
- 3. We believe that safe areas of work will open up progressively following rectification and repair. We envisage loosing some time on our programme. Please understand that the portion of the structure that is closed off and complete seems fine on cursory inspections as this building is designed under the earthquake codes. The areas of concern are the incomplete parts of the structure i.e areas not poured and panels only temporarily braced. At worst these areas can be removed or demolished and replaced.

  Your Current Premises, the Oid Press Building Status

- The Press staff moved back in to the Building following the first earthquake. Several heavy aftershocks resulted in but were not limited to loose ceiling tiles etc falling and risking head injuries. I am advised that the Staff and management were concerned about further possibility of injury and for occupational health and safety reasons decided to move out of the Building.
- 2. I am advised that the Engineers under their Civil Defence hat in fact recommended that the Building be vacated during the immediate period after the first few aftershocks.
- The engineers have advised that there is an area within the Building that requires the construction of a new shear wall. We have been advised that this area is uninhabitable until the completion of such works. We are waiting on the details associated with carrying out this work.

#### Recommendations

We believe that a crisis management committee be formed immediately to expedite the "return to normal business" process. We suggest that this be headed up by our Architect and chaired by our Mr Michael Doig from our NZ office. We would suggest that Fairlax has a senior manager on the management committee. We will call it the Press Reinstatement Committee (PRC). The Purpose of said committee is to:

- Make Both Buildings safe ASAP
- Take action, plan and implement reports and works associated with the reinstatement of the Old Press Building, to ensure the safe and convenient return to work of the press staff
- Take action, plan and implement reports and works associated with the reinstatement of the New Press Building under
- Keep all stakeholder Executives (Fairfax, Ganellen, Council, Insurer, other) informed of the process going forward.

Our experience in Disaster response and reconstruction suggests that we mobilise our management team immediately to avoid the lengthy delays that can occur down the line in a town with limited reconstruction resources. Sarah, we respectfully request you urgently nominate a senior Fairfax executive that we can liaise with as part of the PRC.

Mario Evangelo DIRECTOR

GANELLEN

30 Montague Street Balmain, NSW 2041 tel: +61 2 9555 2444 fax: +61 2 9555 5666 p.maneas@ganellen.com



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From: LBA - Ashley Wilson [ashleyw@lewisbradford.com]

Sent: Monday, 13 September 2010 2:32 p.m.

To: Nick Jennings

Cc: Mitchell Blunden; Michael Doig

Subject: Existing Press Building - Existing Covered Areas to be Opened Up

Attachments: 110117 Existing Press Building.pdf

Nick,

Talking with Mitch today I understand that you already have staff on site opening up areas of linings.

I thought that I'd send through some existing plans marked up showing areas that I need to view circled in order to save time tomorrow.

Please find plans attached.

Could you ensure that these areas are opened up locally to allow me to view brick walls (cracks), brick wall/concrete floor joints (wall and floor cracks, movement), brick frames (cracking, loose bricks, movement).

These don't need to be fully stripped but exposed enough to allow me to assess the strength of the elements and any associated issues. Floor coverings will need to be removed locally next to walls to see if the joints have moved, or remove ceiling tiles to allow viewing from below. Brick veneer will need to be clearly visible to see cracks etc etc.

The extent of the openings may increase depending on what is exposed obviously.....

I would like to drop into site and conduct a walkover inspection from 8am (Geof and Christian will be going through much more thoroughly at the some time)

Any queries give me a call.

Ashley Wilson
Lewis Bradford Consulting Engineers
Level 2, 71 Armagh Street
PO Box 2919, Christchurch
Phone 03 379 9096 | Facsimile 03 379 9095
www.lewisbradford.com

Job Name: Job Number:

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From: Phil Marshall-Lee (CPL) [Phil.Marshall-Lee@press.co.nz]

Sent: Wednesday, 15 September 2010 3:10 p.m.

To: Michael Doig

Cc: Barry Appleby (CPL)

Subject: Cosmetic Review & General

Hi Mike,

Thanks for your time today.

Barry and I are now both feeling pretty confident about the overall state of the building following the 2nd structural engineer review and our subsequent meeting with you this afternoon. When do you expect to receive a written report from Ash Wilson? It would be good to have a copy of this if possible, as well as a copy of the dilapidation report that Christian was working on pulling together? You and I also agreed earlier today that you/Ganellen would provide us with a letter confirming the overall safety and state of the building and the areas that you will cordon off etc before we move our people back in. All this material will help us to communicate more effectively with our own people to reassure them that it will be safe to move back into the building, hopefully by early next week.

Once you have put arrangements in place for a) your insurance assessor, and b) your tradesmen to repair the cosmetic damage please let us know your estimated timelines for this work to be completed? At this stage we'll work on the basis that all this work will be completed by next Wednesday, unless we hear otherwise from you.

It might be a good idea to stay in touch daily as I'm sure timelines may move, dependent on availability etc.

Also, as discussed earlier today I'd like to introduce you to Alistair Storm tomorrow. Alistair will be project managing the complete move back into The Press building when we are ready to do so.

# Regards, Phil

Phil Marshall-Lee

**Regional Business Manager** 

Fairfax Media - South Island

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From: LBA - Ashley Wilson [ashleyw@lewisbradford.com]

Sent: Wednesday, 15 September 2010 5:34 p.m.

To: Michael Doig

Cc: Nick Jennings; Mario Evangelo; Peter Maneas

Subject: RE: Remedial Works to Stone Parapet

Mike,

Apologies, I am halfway through a letter outlining my verbal discussions and inspections over the last few days which I am aiming to get to you as soon as I can (and the urgent calls stop coming in).

However I mentioned to Nick that due to the superficial cracking at the base of the exterior stonework I wanted to get a man up in a cherry-picker to tap the stones.

This is to check that the stonework is still secured by the existing mortar and isn't just held in by the paintwork!

This is primarily a public safety issue and will need to be completed ASAP.

Technically it would does not stop building occupation but poses issues at the main entry area and I am still noting it as one of three items in my letter.

The other two items are the stone parapet securing (now completed) and the insitu shear wall infills (completed in the next 2-3 weeks).

Regards

Ashley Wilson
Lewis Bradford Consulting Engineers
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Job Name: Job Number:

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**From:** Michael Doig [mailto:m.doig@ganellen.com] **Sent:** Wednesday, 15 September 2010 4:51 p.m.

To: LBA - Ashley Wilson

Cc: Nick Jennings; Mario Evangelo; Peter Maneas Subject: Remedial Works to Stone Parapet Hi Ash,

Nick has informed me the remedial works to the stone parapet above the main entrance to 32 Cathedral Square has now been completed as per your instructions.

We confirm the building is now tenantable and there is no reason why The Press could not move back into the premises tomorrow.

Kind Regards,

Michael

Michael Doig DEVELOPMENT AND BUSINESS DIRECTOR NEW ZEALAND



150 Gloucester Street PO Box 13574 Christchurch, New Zealand 8013 tel: +64 (0)3 377 3373 fax: +64 (0)3 377 6450 mob: +64 (0)21 458 661

m.doig@ganellen.com www.ganellen.com



Phil Marshall-Lee (CPL) [Phil.Marshall-Lee@press.co.nz] From:

Sent: Thursday, 16 September 2010 4:36 p.m.

Michael Doig To:

Barry Appleby (CPL); Andrew Boyle (CPL) Cc:

Subject: FW: Structural assessment

Follow Up Flag: Follow up Flag Status: Green Attachments: 100771.pdf

Mike, upon reading the engineer's report in more detail it looks as though the Avenues corner can't be occupied just yet so we will have to think about where they go temporarily, but it may be best if your team effectively cordons off 3 areas being: L3 Payroll office (lockable), L3 Avenues office (lockable) and Business Team on L2 (7 workstations to be cordoned off). We already have plans to relocate Payroll and Business temporarily and once we have worked out where Avenues will go temporarily we'll update you.

Please treat this info with confidence until we have communicated with our staff, likely to be tomorrow now.

As agreed with you earlier we appreciate your commitment to complete (as much as possible) of the cosmetic work by Monday morning and I look forward to receiving your letter tomorrow morning (and hopefully the report from Ash?) that we plan to distribute to all staff as part of our wider communication plan.

#### Cheers, Phil

From: Andrew Boyle (CPL)

Sent: Thursday, 16 September 2010 4:06 p.m.

To: Barry Appleby (CPL)

Cc: Alistair Storm (Fairfax); Mark Ross (CPL); Phil Marshall-Lee (CPL)

Subject: RE: Structural assessment

### Thanks Barry

The report suggests that the northeast corner is unable to be occupied until further assessment is undertaken. Therefore Avenues team needs a new space until that is completed.

Mark/Alistalr need to factor this into the plan.

Regards

From: Barry Appleby (CPL)

Sent: Thursday, 16 September 2010 3:57 p.m.

To: Andrew Boyle (CPL)

Subject: FW: Structural assessment

Hi Andrew

As requested

Cheers

Deputy General Manager - Southern Region Fairfax Media

P: (03) 943 2860 ■ F (03) 364 8496 ■ M 0274 367 363■ E: <u>barry.appleby@press.co.nz</u> ■ Cathedral Square, Private Bag 4722 Christchurch, New Zealand

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From: Andrew Thompson [mailto:A.Thompson@harrisongrierson.com]

Sent: Thursday, 16 September 2010 3:01 p.m.

To: Barry Appleby (CPL) Subject: Structural assessment Barry,

Report as discussed.

Regards

**Andrew Thompson** 

W www.harrisongrierson.com

Principal/Manager - Structural Engineering
Harrison Grierson Consultants Limited
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From: Phil Marshall-Lee (CPL) [Phil.Marshall-Lee@press.co.nz]

Sent: Thursday, 16 September 2010 12:41 p.m.

To: Michael Doig

Cc: Peter Maneas; Mario Evangelo; Barry Appleby (CPL)

Subject: RE: Press Reinstatement Meeting Minutes

Thanks for the minutes Mike,

For the record, I'd just like to add a few more comments as much for Peter/Mario's general understanding, as well as for our own:

- My understanding is the structural works required (at the engineer's request prior to reoccupation of the building) to the parapet on the roof were completed by close of play yesterday, Tuesday 15 Sept. We look forward to clearance in writing from the structural engineers that this work has met the required standard and is therefore safe to re-occupy.
- 2. Prior to Fairfax employees moving back into the building (from a health and safety perspective) we require evidence in writing from the structural engineers to confirm that the building is safe to re-occupy. Whilst we acknowledge verbally this is looking very positive we await the full report from Ash Wilson to confirm this as well as a 2nd report from Harrison Grierson, an independent structural engineering firm that we appointed for the same purpose. We have engaged a 2nd firm for peace of mind to ensure we have taken all reasonable steps prior to requesting our staff re-occupy the Press buildings 1 & 2. We expect both these reports to be made available to us either today or tomorrow. Subject to the recommendations made in these independent reports, we reserve the right to make a fully Informed decision as to whether the building is safe, partially safe, or not safe at all to re-occupy. We will discuss our position with you asap once we have received and fully understood both independent reports.
- 3. Following the cosmetic review of damage meeting held yesterday with you, Barry and me; we believe you have noted the worst and most obvious visual damage throughout the building internally that will require repairs (mostly plaster to fill obvious cracks, as well as re-positioning the ceiling tiles which George will happily assist with, and repairing a few broken windows etc).
- 4. The management team from The Press request this cosmetic work to be completed prior to any re-occupation of the building. Whilst we acknowledge that this damage is not structural, it is nonetheless very visible and we do not want to put our people under any more unreasonable concern/stress as to the safety and presnetation of the building, before we ask them to move back into the building. As such, we believe the major cosmetic repairs must be fixed prior to re-occupation for the safety and concern of our people. We understand this will likely take approx 2 days for your tradesmen to complete and that you will try and secure these people as quickly as possible. We are hopeful that this work can be completed by early next week so that, subject to both independent structural engineer's written clearance above, we can plan to move our people back into the building as soon as practicable early next week.
- 5. You advised Mike that you would need to have your own insurance assessors and potentially heritage building representatives walk through the building to complete their assessments of the building before we can move back in. We understand this work will happen either today and/or tomorrow. We look forward to confirmation from you when this work has been completed.
- At this stage, we have agreed tentatively that subject to timing and satisfactory confirmation of all of the above, we will aim to be back in the main Press buildings 1 & 2 by next Wednesday 22 Sept, 2010, or earlier as mutually agreed by both parties.

Peter/Mario, please understand that we need to be very careful (from a health and safety requirement) to ensure that all reasonable steps have been taken before we can request our people to move back into the Press buildings 1 & 2. We had another 2 decent shakes last night and the tremors still continue today so you need to understand that many of our people will naturally still be reluctant to move back in, especially as other buildings nearby (e.g. Manchester St) continue to be pulled down.

I'm happy to discuss any of these points, as required.

#### Cheers, Phil

From: Michael Dolg [mallto:m.doig@ganellen.com]
Sent: Thursday, 16 September 2010 10:57 a.m.
To: Phil Marshall-Lee (CPL)

Cc: Peter Maneas; Mario Evangelo

Subject: Press Reinstatement Meeting Minutes

Hi Phil.

Please see attached minutes from yesterday morning's reinstatement meeting.

I will contact you this afternoon prior to your management meeting to let you know how I get on with Council and Heritage experts.

Kind Regards,

Mike

Michael Dolg

DEVELOPMENT AND BUSINESS DIFFECTOR NEW ZEALAND



150 Gloucestor Street PO Box 13574 Chriskhurich, New Zoeland 8013 tel: +64 (0)3 377 3373 fax: +64 (0)3 377 6450 mob: +84 (0)21 458 661 m.dolo⊕psoelten.com



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From: LBA - Ashley Wilson [ashleyw@lewisbradford.com]

Sent: Thursday, 16 September 2010 5:58 p.m.

To: Michael Dolg

Cc: Nick Jennings; Marlo Evangelo; Peter Maneas; 'LBA - Craig Lewls'

Attachments: 110117 Heritage Press Building Seismic Evaluation.pdf

Mike,

Attached the reworded letter altering the immediacy of the checking of the stonework to suit the cranage requirements.

This work still needs to be completed as soon as possible.

Regards

Ashley Wilson
Lewis Bradford Consulting Engineers
Level 2, 71 Armagh Street
PO Box 2919, Christchurch
Phone 03 379 9096 | Facsimile 03 379 9095
www.lewisbradford.com

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16 September 2010

Ganellen 150 Gloucester Street PO Box 13574 CHRISTCHURCH

Attention: Mario Evangelo

Dear Mario.

## STRUCTURAL EVALUATION OF THE HISTORIC PRESS BUILDING FOLLOWING 4 SEPTEMBER 2010 EARTHQUAKE

A magnitude 7.1 earthquake struck Christchurch early in the morning on 4<sup>th</sup> September 2010. The Historic Press Building was assessed by Civil Defence engineers and given a green placard during the weekend (full occupation).

The undersigned was inspecting the New Press Building site on 6 September 2010 to assess any damage and was called across to specifically inspect the payroll area at Ganellen's request. The area was at third floor level on the northwestern corner of the building and consisted of brick wall elements with significant cracks through them. Temporary structural steel securing was instructed immediately to secure this corner and the local floor area was cordoned off at all three levels of the building. Press Lane was also partially cordoned off until the steelwork was completed. The ironworks to the turret were also instructed to be removed immediately, due to the public safety hazard, and to safeguard this important heritage element during the ongoing aftershocks.

At Ganellen's request the undersigned completed a brief walkover of the main visible areas of the building on 7 September 2010. A number of minor cracks and superficial damage (claddings, paintwork etc) was noted. The temporary securing at L3 was also inspected and minor amendments were instructed. Following this brief walkover the building was deemed suitable for occupation.

A large aftershock struck Christchurch on the morning of 8<sup>th</sup> September 2010 which caused a number of areas of ceiling tiles to come down in the Press Building and for health and safety reasons the building was vacated.

The undersigned and Craig Lewis visited the building on the morning of 9<sup>th</sup> September 2010 to review any new hazards preventing occupation arising from the subsequent aftershocks. A number of areas of superficial damage were again noted along with some minor cracking to structural elements and due to the lack of access to view some critical structural elements (and time constraints of the engineers) the building was not deemed fit to occupy until further investigation could be completed.

A set of marked up plans showing areas for investigation were sent to Ganellen on 13 September 2010. These areas were stripped to expose primary structural elements and the undersigned visited site on 14 September 2010 to inspect these elements. Following a visual inspection of these elements (namely perimeter brick and insitu frames, brick and insitu shear

walls and the brick and concrete walls below the temporary securing) and some areas previously inaccessible there were three further areas of securing work required.

- Temporary steelwork was instructed to secure the existing stone parapet above the main entry area to be installed immediately. This steelwork was inspected today and it has adequately secured the stonework.
- 2. A full inspection and review of all existing stone to perimeter frames is to be completed as soon as possible to ensure there are no loose stones affecting long term public safety. This will require an experienced builder carefully checking each stone using a crane or cherry picker or similar.
- A new insitu shear wall is required to provide a more long term and durable solution to the northwestern corner area (This area is to be cordoned off to the second and third floors locally using hoarding to allow walls to be constructed) in next two-three weeks.

### CONCLUSION

Now that item 1 has been completed, the building is deemed fit to occupy. Item 2 shall be completed as soon as possible to ensure the ongoing public safety. Item 3 is intended to be completed in the next two-three weeks and the area is currently structurally secure but a more durable solution is recommended for the short term due to weatherproofing and aesthetic issues.

Note this inspection work has been of a general nature and is an initial structural evaluation to ensure this building is fit to occupy. No detailed seismic assessment work has been undertaken. If any further concerns come to light following further aftershocks these should be brought to the attention of the undersigned immediately, or if anything untoward is discovered by the tenants.

Please contact the undersigned if anything further is required.

Yours sincerely

Ashley Wilson ASSOCIATE

110117 Le100914 Existing Press Building

My White

From: Phil Marshall-Lee (CPL) [Phil.Marshall-Lee@press.co.nz]

Sent: Friday, 17 September 2010 2:51 p.m.

To: Mario Evangelo; Peter Maneas

Cc: Sarah Hard (Fairfax); Barry Appleby (CPL); Andrew Boyle (CPL); Michael Doig; Nick Jennings

Subject: Return to The Press I

Hello Peter & Mario,

Just to confirm that the Management Team have today decided that we will move our people back into The Press buildings 1 & 2, with effect from Monday next week. The various teams and departments will be moved back over in stages during the weekend to ensure minimal disruption.

Now that we have sighted various Independent structural engineering reports today we are comfortable that the building is safe for our people to move back in to re-occupy. The only exceptions as we have already discussed with Mike locally are: the L3 Payroll office and L2 Editorial Business team (directly below Payroll office) and the L3 Avenues corner office (we expect to know more from your team once this has been checked further by your engineers for stability etc). Also, the goods lift may require some further independent structural clearance which I have alerted to Mike already. We understand and agree that these areas will be kept clear of people for health and safety reasons until all the repairs and remedial action recommended by the structural engineers have been completed over the coming weeks by your team and/or contractors.

On a personal note and on behalf of the local senior team, I would like to pay thanks to Mike, Nick and the wider local Ganelien team who have worked closely with us and co-operated well since the big 7.1 quake on Sept 4. It's fair to say that it's been a roller coaster ride (literally!) and we are thankful that your team reacted swiftly after the first quake to temporarily repair the Payroll office and remove the crown off the turret, both of which may well have sufferred more damage after the 2nd big quake on Wed 8 Sept had this swift action not been taken. In addition, the strengthening repair work made to the parapet on the roof above the main reception area was also a good precautionary step which we appreciate. Finally, the re-assuring letter we received from Mike today has been well received by our people and we appreciate the speedy response to get the worst of the cosmetic repair work done this coming weekend to bring the general state and appearance of the building back to as close to normal as possible, before our people move back in next week.

We look forward to getting everyone back together again and hopefully back to "business as usual" mode next week with fewer tremors!

When the dust settles I would like to discuss and agree the rental adjustments separately with you.

Regards, Phil

Phil Marshall-Lee Regional Business Manager Fairfax Media - South Island

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- M 027-271-4876 E: phil.marshall-lee@press.co.nz
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From: LBA - Ashley Wilson [ashleyw@lewisbradford.com]

Sent: Saturday, 18 September 2010 11:50 a.m.

To: Michael Doig
Cc: Nick Jennings

Subject: Heritage Press Building - North East Wall

Attachments: 110117 North East Wall Letter 100920.pdf

Michael,

As discussed please find attached a letter following our inspection this morning.

Note this is dated for the first working day of next week (Monday 20th).

Regards

Ashley Wilson
Lewis Bradford Consulting Engineers
Level 2, 71 Armagh Street
PO Box 2919, Christchurch
Phone 03 379 9096 | Facsimile 03 379 9095
www.lewisbradford.com

Job Name: Job Number:

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20 September 2010

Ganellen 150 Gloucester Street PO Box 13574 CHRISTCHURCH

Attention: Mario Evangelo

Dear Mario,

# STRUCTURAL EVALUATION OF THE HISTORIC PRESS BUILDING FOLLOWING 4 SEPTEMBER 2010 EARTHQUAKE – NORTH EAST CORNER WALL

Further to our letter dated 16<sup>th</sup> September 2010, and at the request of our client Ganellen the north east wall at level 3 was stripped of it's internal linings and inspected on the morning of the 18th September 2010 by the undersigned along with Nick Jennings and Michael Doig from Ganellen and Craig Lewis.

The existing cracking visible to the exterior appears on the interior of the wall but is no larger than the exterior and it appears that no further movement has occurred since first inspected on the 9<sup>th</sup> September 2010. The wall at this location is bounded by an existing concrete roof diaphragm and a concrete floor diaphragm at level 3 which provide adequate support to this element. Monitoring points have been created to the exterior cracks in several locations and shall be monitored daily by Ganellen.

### CONCLUSION

We believe that the building is fit for occupation. However we recommend that monitoring readings are taken daily and recorded. Notify the undersigned immediately should any further movement occur.

Note this inspection work has been of a general nature and is an initial structural evaluation to ensure this building is fit to occupy. No detailed seismic assessment work has been undertaken. If any further concerns come to light following further aftershocks these should be brought to the attention of the undersigned immediately, or if anything untoward is discovered by the tenants.

Please contact the undersigned if anything further is required.

Ashley Wilson ASSOCIATE

110117 Le100920 Existing Press Building.doc

From: Phil Marshall-Lee (CPL) [Phil.Marshall-Lee@press.co.nz]

Sent: Monday, 20 September 2010 8:59 a.m.

To: Michael Doig Cc: Nick Jennings

Subject: RE: Heritage Press Building - North East Wall

That's good news, thanks Mikel

Nick, please advise once it's ready today.

### Cheers, Phil

From: Michael Dolg [mailto:m.dolg@ganellen.com] Sent: Monday, 20 September 2010 8:42 a.m.

To: Phil Marshall-Lee (CPL) Cc: Nick Jenninas

Subject: FW: Heritage Press Building - North East Wall

Morning Phil.

I hope you had a good weekend.

We met with Lewis Bradford on Saturday and inspected the interior and exterior of the north-eastern wall (Avenues office). Whilst there is visible cracking they have deemed the structural Integrity to be intact and have created various monitoring points to check for further deterioration.

Nick will be relining the wall and putting the pinboards back up today, as soon as this is completed there is nothing to prevent the Avenues team moving back into that office.

If you have any questions please don't hesitate to give me a call.

Cheers,

Mike

From: LBA - Ashley Wilson [mailto:ashleyw@lewisbradford.com] Sent: Saturday, 18 September 2010 9:50 AM

To: Michael Doig Cc: Nick Jennings

Subject: Heritage Press Building - North East Wall

As discussed please find attached a letter following our inspection this morning.

Note this is dated for the first working day of next week (Monday 20th).

Regards

Ashley Wilson Lewis Bradford Consulting Engineers Level 2, 71 Armagh Street PO Box 2919, Christchurch Phone 03 379 9096 | Facsimile 03 379 9095 www.lewisbradford.com

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From: Nick Jennings

Sent: Thursday, 7 October 2010 5:05 p.m.

To: LBA - Ashley Wilson

Cc: Mitchell Blunden; Mario Evangelo; Michael Doig; Peter Maneas; Nick Kodos; LBA - Craig Lewis

Subject: Earthquake Report

HI Ash,

As per the our conversation, please provide a detailed report which includes the following items for all Ganellen buildings:

1. Structural defects – all cracks to masonry/concrete/stonework but not limited to.

2. Specification – remedial actions to rectify these works.

3. Individual photos of all cracks/ defects.(This must include a drawing reference linking the photos to the building)

Note: In summary we require a comprehensive package to tender with.

As you are aware the building is fully occupied and certain works may need to be completed outside of working hours. i.e floors and ceilings.

As discussed the building 1 report will be fully completed by COB Wednesday 13.10.2010, please coordinate with myself to determine the best time to inspect the building.

We understand that you have already completed a structural report including remediation works for the New Press Building however this will need to be included in the report.

Regards,
Nick Jennings
SITE MANAGER



150 Gloucester Street

PO Box 13574 Christchurch, New Zealand 8013

tel: +64 3 377 3373 fax: +64 3 377 6450 n.jennings@ganellen.com



From: LBA - Geof Wilson [geofw@lewisbradford.com]

**Sent:** Friday, 22 October 2010 9:54 a.m.

To: Michael Doig

Subject: Press Buildings 2, 3 & 7 Report

Attachments: 5 Press Buildings 2 3 7 - Appendix D.pdf; 1 Press Buildings 2 3 7 - Report.pdf; 2 Press

Buildings 2 3 7 - Appendix A.pdf; 3 Press Buildings 2 3 7 - Appendix B.pdf; 4 Press Buildings

237 - Appendix C.pdf

Hi Mike

Please find attached a PDF copy of our Structural Damage Report for The Press Buildings 2, 3 & 7.

2 x hardcopies will be on their way to you shortly.

Cheers

Kind Regards,

Geof Wilson

### **Lewis Bradford Consulting Engineers**

Level 2, 71 Armagh Street PO Box 2919, Christchurch Phone 03 379 9096 | Facsimile 03 379 9095 www.lewisbradford.com

Job Name: Historic Press Building

Job Number: 110117

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From: John Hare [JohnH@holmesgroup.com]

Sent: Thursday, 4 November 2010 7:06 p.m.

To: Michael Doig

Subject: RE: The Press Building
Attachments: 111111ME0411.013.pdf

Thanks Michael

I have attached a very quick version of what I wanted to send through, but if you need more, call my mobile, 021 663 313. I am out of town most of tonnorrow, but otherwise available.

Cheers

John

From: Michael Doig [mailto:m.doig@ganellen.com]
Sent: Thursday, 4 November 2010 3:31 p.m.

To: John Hare

Subject: The Press Building

Hi John,

Thanks for your presentation this week, I found it hugely informative.

You indicated you were going to put together a proposal further detailing the NLTH method and benefits in relation to our building.

For your information we are looking to instruct an engineer early next week thus it would be helpful if you could send this to me asap.

Kind Regards,

Michael

**Michael Doig** 

**DEVELOPMENT AND BUSINESS DIRECTOR** 

**NEW ZEALAND** 

### GANELLEN BUILL ON EXPENIENCE

150 Gloucester Street

PO Box 13574

Christchurch, New Zealand 8013

tel: +64 (0)3 377 3373 fax: +64 (0)3 377 6450 mob: +64 (0)21 458 661 m.doig@ganellen.com

www.ganellen.com



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From:

LBA - Craig Lewis [craigl@lewisbradford.com]

Sent:

Monday, 8 November 2010 1:02 p.m.

To:

Michael Doig

Subject:

RE: Analysis Proposal

Follow Up Flag: Follow up

Flag Status:

Red

**Attachments:** 

20101108125301355.pdf

Morning Mike,

Hope you had a good weekend.

Please find attached our proposal as requested. Original in tonights post. Let me know if you need anything further or wish to discuss any aspects in greater detail.

Look forward to hearing from you.

Regards,

Craig

### **Lewis Bradford Consulting Engineers**

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From: Michael Doig [mailto:m.doig@ganellen.com]

Sent: Friday, 5 November 2010 1:07 p.m.
To: LBA - Craig Lewis; 'LBA - Ashley Wilson'

Subject: RE: Analysis Proposal

That's fine Craig, please do make it Monday morning as I really want to start moving on this.

Cheers, Mike

From: LBA - Craig Lewis [mailto:craigl@lewisbradford.com]

**Sent:** Friday, 5 November 2010 12:44 p.m. **To:** Michael Doig; 'LBA - Ashley Wilson'

Subject: RE: Analysis Proposal

Hi Mike,

Sorry but Ash and I haven't managed to get to this.

I will do it over the weekend and get to you Monday morning if that is OK.

Regards,

Craig

**Lewis Bradford Consulting Engineers** 

Level 2, 71 Armagh Street PO Box 2919, Christchurch Phone 03 379 9096 Facsimile 03 379 9095 www.lewisbradford.com

Job Name: Job Number:

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From: Michael Doig [mailto:m.doig@ganellen.com]
Sent: Thursday, 4 November 2010 11:04 a.m.
To: LBA - Ashley Wilson; LBA - Craig Lewis

Subject: Analysis Proposal

Morning Gents,

During our Monday meeting you indicated you would put down your proposal for analysis to understand the structure of the Press Building, exisiting position in relation to Code, and recommendations to achieve the 67% Council target level.

Any chance I could receive this by tomorrow? We want to instruct this next week.

Feel free to call me if there are any problems with this.

Thanks, Mike

Michael Doig DEVELOPMENT AND BUSINESS DIRECTOR NEW ZEALAND



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fax: +64 (0)3 377 6450
mob: +64 (0)21 458 661
m.dolg@ganellen.com
www.ganellen.com
www.pressprecinct.com



Peter Maneas From: Tuesday, 9 November 2010 5:04 p.m. Sent: Michael Doig To: Mario Evangelo; Nick Kodos; Nick Jennings; Mitchell Blunden; Christian Tonnius; Cc: Christopher Ahern Re: Ganellen Earthquake Claim Subject: Tell Holmes to proceed. We can talk on the rest when I get back Sent from my iPhone On 08/11/2010, at 9:06 PM, "Michael Doig" <m.doig@ganellen.com> wrote: > Pete, > I tried to speak to you on your mobile this morning to get final direction on this structural analysis. All the engineers have now come back with their recommendations (attached) and I am keen to proceed on this. > In summary the proposals for analysis and workable solution appear to be as follows: \$20,000 - \$40,000 > Homes Consulting > A rather broad range at this point but will be tightened into fixed > costs for analysis and modelling phase upon request. This provided the > best evidence for being able to accurately predict the performance of > the building and providing a targeted low cost structural solution > should we wish/ be required to take it up to 67%. This price provides > for survey/testing, computer modelling and analysis and a workable > concept drawing that can be used as basis for construction > documentation \$20,000 - \$30,000 Survey/Testing - Modelling, \$35,000 > Lewis Bradford - \$40,000 Design Documentation. > Appears on par cost wise with Holmes, despite being a somewhat older form of analysis technology. Great faith in their pitch is being put on their experience and involvement with senior members of their organisation. AUD23,200 Survey/Testing (NZD30,000); AUD38,945 Analysis/ Recommendations (NZD50,000); Excludes Design / Documentation > Significantly more expensive for method proposed. Work is not recognised in NZ thus any recommendations would need to be peer reviewed here at additional cost before being used for Council. Inherent issues with working with an international consultant that can not readily access site. > Recommendations > I understand we are keen to get two opinions on this to be sure that we are not being required to strengthen beyond what is required. Holmes appear to possess the most suitable IP for our structure that consistently demonstrates cost savings against ETABS and static analysis models. Their analysis requires more detailed assessment of the building fabric therefore I advise that we commission them to commence work on survey/testing and then have Lewis Bradford access the results and peer review. Lewis Bradford know the building well by now and despite having comparatively outmoded tools their experience with the structure and location will work in our favour for a more aggressive solution in line with our objectives. > Are you happy for me to commission Holmes and Lewis Bradford? Alternatively you may want to run with Holmes first and see what their analysis throws forth before proceeding with LB to save c \$20,000. > Let me know how you wish to proceed. > Cheers, > MD

```
>
> From: Peter Maneas
> Sent: Tuesday, 9 November 2010 11:29 a.m.
> To: Michael Doig
> Cc: Mario Evangelo; Nick Kodos; Nick Jennings
> Subject: Re: Ganellen Earthquake Claim
> Ripper!
> Sent from my iPad
> On 09/11/2010, at 8:17 AM, "Michael Doig"
<m.doig@ganellen.com<mailto:m.doig@ganellen.com>> wrote:
> Hi Pete/ Mario,
> The first portion of our progress payment for earthquake works has come through, we
have now covered our costs incurred to date.
> Cheers.
> Michael
> From: Leon Briggs [mailto:LBriggs@cl-nz.com]
> Sent: Monday, 8 November 2010 5:51 p.m.
> To: Michael Doig
> Cc: denis.sanders@fmrrisk.co.nz<mailto:denis.sanders@fmrrisk.co.nz>
> Subject: Re: RE: Ganellen Earthquake Claim
> Hi
> The policy is co-insured... 70% is with Chartis (the trading name of American Home
Assurance), 15% is with Allianz, and 15% is with NZI. The $100,625 will be $125,000
plus GST at 15%, times 70%. The other two 15% amounts will come through separately,
presumably shortly.
> Thanks
> Leon Briggs
> Executive General Adjuster
> Cunningham Lindsey
> mob: +64 21 879 788 | fax: +64 4 471 0638 |
> postal: PO Box 13 836, Wellington 6440
> physical: 120 Johnsonville Road, Johnsonville, Wellington
> email: lbriggs@cl-nz.com<mailto:lbriggs@cl-nz.com> | web:
> www.cunninghamlindsey.com P Please consider the environment before
> printing this e-mail GAB Robins International has amalgamated with the Cunningham
Lindsey Group to create the world's largest loss adjusting group.
> We are trading under the Cunningham Lindsey banner. Please ask us if you would like
to know anything more about this change.
> Along with this change of name our email addresses have changed. Please update your
contact details.
> <graycol.gif>Created: 08/11/2010 03:11 p.m.
>
>
> <image001.png>
> <image002.png>
> Created: 08/11/2010 03:11 p.m.
> Sent by: Michael Doig
> <m.doig@ganellen.com<mailto:m.doig@ganellen.com>> on 08/11/2010
> To: Leon Briggs <LBriggs@cl-nz.com<mailto:LBriggs@cl-nz.com>>
> cc: "denis.sanders@fmrrisk.co.nz<mailto:denis.sanders@fmrrisk.co.nz>"
> <denis.sanders@fmrrisk.co.nz<mailto:denis.sanders@fmrrisk.co.nz>>
```

```
> bcc:
> Subject: RE: Ganellen Earthquake Claim ClaimFlow Attachments:
> <image002.png>
 <image002.png>
>
 Contact with:
>
 Insured
>
 Email to the Insured will not update actions
> Hi Leon,
> I have observed the following deposit into our cheque account:
> 04 Nov 2010 AMERICAN HOME 166200 EARTHQUAKE EARTHQUAKE C $100,625.00
> I note that the this transfer is less than the $125,000 that was discussed
previously, however I assume that American Home is in fact a Chartis vehicle and they
have revised the progress payment amount?
> Kind Regards,
> Michael
> From: Leon Briggs [mailto:LBriggs@cl-nz.com]
> Sent: Thursday, 4 November 2010 9:16 p.m.
> To: Michael Doig
> Subject: Re: Ganellen Earthquake Claim
> Yes I collected it this afternoon, and have the email file downloaded. Thanks for
the update on the rents, glad it is resolved.
> I will go through the documents and email file and come back to you...
> Regards,
> Leon Briggs
> Executive General Adjuster
> Cunningham Lindsey
> mob: +64 21 879 788 | fax: +64 4 471 0638 |
> postal: PO Box 13 836, Wellington 6440
> physical: 120 Johnsonville Road, Johnsonville, Wellington
> email: lbriggs@cl-nz.com<mailto:lbriggs@cl-nz.com> | web:
> www.cunninghamlindsey.com P Please consider the environment before
> printing this e-mail GAB Robins International has amalgamated with the Cunningham
Lindsey Group to create the world's largest loss adjusting group.
> We are trading under the Cunningham Lindsey banner. Please ask us if you would like
to know anything more about this change.
> Along with this change of name our email addresses have changed. Please update your
contact details.
> [/mail2.box/0/d212327eb979301bcc2577d5001a7226/$FILE/STG60322/STG60322.gif?
OpenElement]Created: 04/11/2010 03:13 p.m.
> <image003.jpg>
> <image004.jpg>
> Created: 04/11/2010 03:13 p.m.
> Sent by: Michael Doig
> <m.doig@ganellen.com<mailto:m.doig@ganellen.com>> on 04/11/2010
> To: Leon Briggs <LBriggs@cl-nz.com<mailto:LBriggs@cl-nz.com>>
```

```
> CC:
> bcc:
> Subject: Ganellen Earthquake Claim
> ClaimFlow Attachments:
> <image004.jpg>
> <image004.jpg>
> Contact with:
> Insured
> Email to the Insured will not update actions
> Hi Leon,
> We have now received the architectural damage report for the
> construction site 156-158 Gloucester Street, unfortunately I was
> unable to put this onto your CD prior to your picking up the pack (I
> assume you popped in and grabbed it?) but will send it to you via
> mailbigfile.com<http://mailbigfile.com>
> Further good news I have agreed the rental abatement with Fairfax as per our
discussion and will exchange emails confirming that they will indemnify us against any
further claim until they move out of the building in March.
> Kind Regards,
> Michael
> Michael Doig
> DEVELOPMENT AND BUSINESS DIRECTOR
> NEW ZEALAND
> [/mail2.box/0/112137201379b0d5cc2577d1002cc8a1/$FILE/STG52670/STG52670
> .gif?OpenElement]
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> m.doig@ganellen.com<mailto:a.roberts@ganellen.com>
> www.ganellen.com<http://www.ganellen.com/>
> www.pressprecinct.com<http://www.pressprecinct.com/>
> [/mail2.box/0/112137201379b0d5cc2577d1002cc8a1/$FILE/STG35717/STG35717
> .gif?OpenElement]<http://www.ganellen.com/>
> <20101108125301355.pdf>
> <1111111ME0411.013.pdf>
> <E4334-0-Q01.pdf>
```

From:

John Hare [JohnH@holmesgroup.com]

Sent:

Thursday, 11 November 2010 12:08 p.m.

To:

Michael Doig

Subject:

**HCG Proposal** 

Attachments: Press CoFECOL1110.001.pdf

Hi Michael

I have spoken to Christian, who tells me that they have updated their drawings to a level that sounds like it will be good enough for us to work from with a few check dimensions that we can run on site.

I have prepared a proposal (attached), based on that assumption, and with some complete guesswork on the range of work that may ensue - note that this is something that we can firm up when we know what is to be done, so is really only a placeholder, but we are happy to fix the fee for the analysis phase.

Get back to me with any questions, otherwise, have a great Show weekend and I will talk next week. I am out of town today, but on mobile, 021 663 313

Cheers

John

From: Michael Doig [mailto:m.doig@ganellen.com] Sent: Wednesday, 10 November 2010 3:01 p.m.

To: John Hare Subject:

Also speak to John Kavanagh

Michael Doig

DEVELOPMENT AND BUSINESS DIRECTOR

NEW ZEALAND



150 Gloucester Street PO Box 13574 Christchurch, New Zealand 8013

tel: +64 (0)3 377 3373 fax: +64 (0)3 377 6450 mob: +64 (0)21 458 661 m.doig@ganellen.com

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From: Nick Jennings

Sent: Monday, 15 November 2010 12:26 p.m.

To: Mitchell Blunden; Michael Dolg

Subject: FW:

Attachments: 20101115123139821.pdf



----Original Message----

From: Peter Robertshaw [mailto:peterepr@xtra.co.nz]

Sent: Monday, 15 November 2010 12:22 p.m.

To: Nick Jennings Subject: Fw:

Peter Robertshaw Managing Director 0274357100 EPR Construction Ltd. Ph 03 3892280 Fax 03 3892282 Po Box 32096 Christchurch 8147

---- Original Message ---From: <copier@xtra.co.nz>

To: "peter" <peterepr@xtra.co.nz>

Sent: Monday, November 15, 2010 1:31 PM

> This E-mail was sent from "RNP912B37" (Aficio 2228C).

>

> Scan Date: 15.11.2010 12:31:39 (+1200)

> Queries to: copier@xtra.co.nz

From:

Michael Doig

Sent:

Thursday, 23 December 2010 1:08 p.m.

To:

Peter Maneas; Mario Evangelo

Cc:

Nick Jennings; Nick Jennings; Mitchell Blunden

Subject:

FW: Press Company Interim report

Attachments: 105849MT2212.001.pdf; 105849RS2212.001.pdf

Gents,

Initial findings from Holmes Consulting attached.

Cheers, MD

From: John Hare [mailto:JohnH@holmesgroup.com] Sent: Thursday, 23 December 2010 12:39 p.m.

To: Michael Doig

Cc: Christian Tonnius; matt@planitassociates.co.nz

Subject: Press Company Interim report

Hi Michael

Attached is out interim report, and a testing brief.

The report has now picked up the additional runs we did overnight, with a few changes. Essentially, the building as currently configured (ie without north wall window reinstatements) is good for 50% code. With the windows fully reinstated, the strength drops, to around 33%. ie the building is not currently earthquake prone, but would be close with the proposed changes, even if they do reinstate heritage. Given the current rules on alterations, you would have no choice as a minimum but to add back the strength that you have removed.

The better news is that the fix to get to 67% is not too different either way. So going into the cost numbers I looked at yesterday - I figured about \$160 on current rates (from recent work at the Arts Centre) for the FRP fix to the shear reinforcing to the north wall brickwork, maybe a little more with rocking enhancement added per our report.

The building is otherwise, so far, looking good apart from some minor details, including tying in of the tower/oriel window at the southwest corner.

For Matt's benefit: the frp overlay solution ,assuming we go that way, is a relatively unintrusive retrofit, The material is in the order of 1-2mm thick per layer, so the main implication is that we will have to plaster the inside of the north wall, where we will apply it, assuming we go that way. Otherwise there will be minimal impact form the structural works which will be primarily repair in kind.

Regarding overall cost of strengthening (excluding repairs), the total I mentioned of \$500 to 750k for retrofit looks comfortable, given the otherwise minimal extent of upgrade, on the basis of the material property assumptions to date.

The testing spec is for your general information. We can get that underway early next year on your behalf.

Merry Xmas

Regards,

John Hare DIRECTOR Holmes Consulting Group PO Box 25355 | Christchurch 8144

Phone: +643 366 3366 | Fax: +643 379 2169

Email: johnh@holmesgroup.com

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From: Marlo Evangelo

Sent: Sunday, 26 December 2010 1:12 p.m.

To: 'johnh@holmesgroup.com'

Cc: Nick Jennings; Peter Maneas; Michael Doig

Subject: ecent Quake

John,

I trust you are well after the recent earthquake..

Once you receive this email could you please call our Site Manager Nick Jennings on his mobile (555 3099) as we have sustained some damage to The Press and surrounding buildings and dearly need an engineer to walk through to ascertain the extent of structural damage.

My mobile number is +61 414 861505. You can call me at anytime. **Regards**,

Mario Evangelo
CONTRACTS DIRECTOR

30 montague street balmain nsw 2041 tel +61 2 9555 2444 fax +61 2 9555 5600 m.evangelo@ganellen.com www.ganellen.com

## CSR #91224426

Inspection ID ONLY (Office Use Only)

# Mission #6.

Territorial Authority	Christch	urch City	Date of Inspect Time	3:45 pm	Exterior Only Exterior and Interior
Building Name	The	bees.			
Short Name	0		Тур	e of Construction	
Address	52 Ca	thedra	USa 0	Timber frame	Concrete shear wall
			V	Steet frame	Unreinforced masonry
GPS Co-ordinates	So	E°		Tilt-up concrete	Reinforced masonry
Contact Name				Concrete frame	Confined masonry
Contact Phone				RC frame with masonry infill	Other:
Storeys at and above		Below ground	Prin	nary Occupancy	
ground level	4-	level		Dwelling	Commercial/ Offices
Total gross floor area (m²)	1000/	Year built	1907	Other residential	☐ Industrial
No of residential Unit	s			Public assembly	Government
		4		School	Heritage Listed
Photo Taken	(Yes	No		Religious	Other
estigate the building	for the condition	ons listed below:			
erall Hazards / Dai		Minor/None	Moderate	Severe	Comments
apse, partial collapse	-	П	IV	П	Comments
ding or storey leaning		<u> </u>		☐ Geve	al buck cereding, with sa
or other structural d		<u>~</u> 1	<u>г</u>	1 10	as mer ceracising, well say
	amaye				rade any
rhead falling hazard			L	V Verglooms	pavoyet an east side - risk .
und movement, settle		Ø			ar fress.
phbouring building ha	zard	<b>o</b>			
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29 December 2010

32 Cathedral Square Limited c/- Ganellen Pty Limited 30 Montague Street Balmain Sydney N S W 2041 Australia

Dear Sir/Madam

Notices under the Building Act 2004 not to use or occupy your building and to repair your building 32 Cathedral Square

The earthquake that struck Christchurch and the subsequent aftershocks have damaged many buildings in the City, including your property. We recognise that this is an extremely difficult time for you and we want to work with you to create a safe city.

Christchurch City Council staff are working hard to assess the buildings throughout the city to determine whether or not they are dangerous buildings.

Your building has been identified as one that was damaged by the earthquake and is considered dangerous. You need to be aware of the special government legislation that relates to your property.

### Special legislation for Council to use for dangerous buildings

To assist the Council with its efforts following the earthquake special legislation has been enacted, which has enhanced Council powers under the Building Act 2004 to deal with dangerous buildings.

The primary aim of those powers is to keep people safe.

Steps the Council can take to achieve this aim include issuing notices to prevent people from using or occupying a building or to allow restricted entry to a building. A notice can also require that repairs must be carried out on a dangerous building within a certain time. This is extremely important if a building is to be made safe, and to minimise the impact on other businesses close to the affected property.

### The Dangerous Building Notice issued for your building

The Council considers that your building is a dangerous building as defined in the Building Act, and that it is necessary for notices to be issued to:

- Prevent use or occupation of your building (a section 124(1)(b) notice)
- Require you to reduce and remedy the danger to your building (a section 124(1)(c) notice)

These notices are enclosed and have also been placed on your building to warn of the danger, as required by the Building Act. Please do not remove these notices as it is important the public and building users know about the danger to help safeguard them.

### The Council's Building Recovery Office can help you

We recommend that you contact the Christchurch City Council Building Recovery Office (details below) to discuss your building assessment or if the particulars on the notices need clarification.

2

We also recommend that you talk to the Building Recovery Office before taking any steps to remedy the danger, and to discuss any building consents or resource consents that may be required for the work.

We realise the timeframes specified in the section 124(1)(c) notice may not be long enough to carry out the repair work, and we are keen to work with you to identify if a longer period is required.

If you have not already done so, we recommend that you contact your insurers. You should also seek structural engineering advice from a qualified structural engineer on how to remove the danger.

We appreciate your understanding in this matter.

### CONTACT:

CCC Building Recovery Office Ground floor Civic Offices 53 Hereford Street Tel: 03 941 8999

Email: Buildingrecoveryoffice@ccc.govt.nz

11 Clock

Yours faithfully

James Clark

Team Leader Enforcement Inspections and Enforcement Unit

Encl



# CHRISTCHURCH CITY COUNCIL NOTICE

UNDER SECTION 124(1)(c), BUILDING ACT 2004 (as modified by the Canterbury Earthquake (Building Act) Order 2010)

#### TO:

32 CATHEDRAL SQUARE LIMITED

c/- GANELLEN PTY LIMITED

30 MONTAGUE STREET

BALMAIN

SYDNEY N S W 2041

**AUSTRALIA** 

### THE BUILDING

Street Address: 32 CATHEDRAL SQUARE

Legal Description: SEC 698 TOWN CHRISTCHURCH

### **PARTICULARS**

In accordance with s121(1)(a) or (c) of the Building Act 2004, this building is dangerous as a result of an earthquake which occurred at the property on Saturday 4th September 2010, or as a result of aftershocks following that earthquake.

- 1. The building has been damaged, and there are structural defects to the building.
- Councils records show General brick cracking, including south façade. Neighbours parapet on east side risk of falling on Press.

### TO REDUCE OR REMOVE THE DANGER YOU MUST:

- A. Comply with any notice attached to the building prohibiting the use or occupation of the building, or restricting entry to the building.
- B. Keep persons away from the danger/risk in the building.
- C. Carry out work on the building to remove the danger.
- D. You must obtain a building consent to carry out any demolition, repairs or other work to remove the danger. Please contact the Christchurch City Council Building Recovery Office by telephone on 941-8999, or by email at buildingrecoveryoffice@ccc.govt.nz, or in person at the Ground Floor, Civic Offices, 53 Hereford Street, before making your building consent application.
- E. If urgent building work is necessary to save or protect life or health or prevent serious damage to property then you may be able to carry out that work without a building consent (see s41(1)(c) of the Building Act 2004). If, in reliance on s41(1)(c), building work is carried out without a building consent having been obtained, the owner must, as soon as practicable after completion of the building work, apply for a certificate of acceptance under s96 of the Building Act 2004.
- F. If the building is a listed heritage building then council approval must be obtained for the work, whether or not a building consent is required.

11 Clock

Work required by this notice must be carried out by 31 JANUARY 2011. If you believe you are unable to carry out the work by that date please contact the Council's Building Recovery Office who will work with you on a solution that may include agreeing on a new timeframe.

If the work is NOT carried out before 31 January 2011, or such other date agreed by the Council in writing, the Council may carry out the work required and you will be liable for the costs of the work unless you apply within 5 days of the work being carried out to a District Court for relief from this obligation.

Signed for & on behalf of the Christchurch City Council:

Name:

James Clark

Position:

Team Leader Enforcement

Date of issue: 29 December 2010

From: John Hare [JohnH@holmesgroup.com]
Sent: Sunday, 26 December 2010 10:31 p.m.

To: Mario Evangelo

Cc: Nick Jennings; Peter Maneas; Michael Doig

Subject: Re: ecent Quake

Hi Nick

To confirm this afternoon's discussion:

- the damage to the building is different from previously. There was apparently more of an east-west action this time and the shaking appeared to be quite different in nature. I am guessing more short-period response, certainly how the shocks felt.
- the adjacent buildings appear to have had a significant effect the new damage is primarily at or above level three, above the level of Worcester Tower to the east and the adjacent Press building to the north. There appears to be some pounding damage.
- the worst movement is at the east- west acting elements at level three, comprising the north wall (10mm additional movement at the west side and new cracks at the east); the north wall of the central stair (significant plaster damage with possible bed joint sliding of the brickwork); and the south wall (further sliding and rocking of the piers at level three as well as lower down, most at one)
- severe damage to adjacent Worcester Tower parapet at lightwell, threatening low level structure and services. Fire Service were going to lower parapet but called off as not life safety hazard.

Building safety requires confirmation prior to full reoccupation. North wall east side should be shored, recommend slim-shors in door openings adjacent cracked piers. This area curently unoccupied at 2&3, so ok in any case.

South wall, please expose masonry behind lining to allow assessment- it appears Oamaru stone outer column element may have moved independently and therefore may need pinning but if brickwork ok, piers are safe. Stair should be ok, but loose plaster needs to be removed first.

New cracking to the tower is of concern long-term but not an immediate issue. A more thorough external inspection will be required but needs either a cherry picker or swinging platform. In meantime this area should remain cordoned.

Call me when the interior of the piers is available for inspection.

Press have until Tuesday for decision to be made.

Provided there is no further significant activity over next 48 hours, expect no problems with reoccupancy of space.

Any questions, call or text

Regards

John

Sent from my phone

On 26/12/2010, at 1:07 PM, "Mario Evangelo" < m.evangelo@ganellen.com > wrote:

John,

I trust you are well after the recent earthquake..

Once you receive this email could you please call our Site Manager Nick Jennings on his mobile (555 3099) as we have sustained some damage to The Press and surrounding buildings and dearly need an engineer to walk through to ascertain the extent of structural damage.

My mobile number is +61 414 861505. You can call me at anytime.

### Regards,

Mario Evangelo CONTRACTS DIRECTOR

30 montague street balmain nsw 2041

tel +61 2 9555 2444 fax +61 2 9555 5600 m.evangelo@ganellen.com

www.ganellen.com

From:

Michael Doig

Sent:

Monday, 27 December 2010 5:44 p.m.

To:

Andrew Boyle (CPL)

Cc:

Mario Evangelo; Peter Maneas; 'Phil Marshall-Lee (CPL)'; Barry Appleby (CPL); Nick

Jennings; John Hare

Subject:

Boxing Day Earthquake Damage

Attachments: Boxing Day Earthquake Structural inspection.pdf

Hi Andrew,

As requested I have summarised below the damage sustained to the various building's tenanted by The Press, as well as remediation steps to be undertaken prior to re-occupation.

### 32 Cathedral Square, The Press Building

Upon the request of our structural engineer, John Hare of Holmes Consulting, Ganellen have removed wall linings in key areas to allow a more detailed inspection to be undertaken.

Damage has been recorded as follows:

- 1. Structural Damage to three brick piers on the South Wall.
- 2. Structural damage to two piers on the eastern end of the North Wall.
- 3. Diagonal shear failure of the central shear wall at level 3, compressing the fire escape door.
- 4. Moderate Cracking to the south-western tower above the roof level.
- 5. A portion of the brick parapet from the neighbouring property (Worcester Towers) has fallen into the eastern lightwell and punched through the roof section, causing damage to mechanical and hydraulic services.

Propping and shoring will be required for the damaged piers, unfortunately this will mean the neighbouring windows will have to be removed to allow strapping and timber supports to be put in place. The building will then need to be made weather-tight prior to The Press returning. We are endeavouring to obtain a scissor lift to access the exterior walls, and these works will be completed as soon as possible. Loose plaster will need to be removed from the central shear wall and we will need to make the fire door functional again, however we have been informed that this area has settled and does not require structural work to enable re-occupation. Similarly, the cracking to the tower will continue to be monitored however no structural work is to be undertaken at this point in time.

This building has been red stickered by Council this afternoon restricting any further access to the building until the above works have been undertaken. We were informed by Council that the Worcester Towers / Britten owned building next door on Worcester Street has been also been issued with a red sticker and must remove/fix their parapet asap to prevent any further damage to The Press Building and to make the area below safe to repair damage to our roof section.

We believe these works will be completed prior to the 5<sup>th</sup> of January and the building fit for use from that point. As you can appreciate obtaining labour, equipment and materials during this period can be difficult, and we will keep you posted should we require an extension to complete these works. A copy of the structural inspection notes from Holmes are attached for your reference.

### Newspaper Sales Building – Building 7

The Parapet from the neighbouring building (Coachman's) has fallen through the roof and into the stairwell. Whilst damage is localised to that area, at least one roof truss has been destroyed and there is further unstable rubble in the roof area. The remaining parapet will need to be removed before work can be undertaken safely in that area. It would appear that there may be asbestos in the roof, if this is

the case we may be forced to remove the whole roof and replace with non-caustic material. We are seeking further clarification however at this point this building should not be occupied.

### Building 2 - Old Lithograph Building

There is presence of further cosmetic cracking but we have found no major damage that would prevent immediate occupation on the ground, mezzanine and first floor. The top floor can not be used until the restriction is lifted from The Press Building and access is returned for fire egress.

### **New Press Building**

The earthquake has broken a significant number of glass panels that were shortly to be installed. We should be in a position to advise of any delays to our delivery programme once all our trades return on the 5<sup>th</sup> of January.

Rest assured the team at Ganellen are doing all we can to ensure your safe return to the respective buildings. If you have any further questions please don't hesitate to contact me.

Kind Regards,

Michael Doig DEVELOPMENT AND BUSINESS DIRECTOR NEW ZEALAND



150 Gloucester Street PO Box 13574 Christchurch, New Zealand 8013 tel: +64 (0)3 377 3373 fax: +64 (0)3 377 6450 mob: +64 (0)21 458 661

m.doig@ganellen.com www.ganellen.com



From: John Hare [JohnH@holmesgroup.com]
Sent: Wednesday, 29 December 2010 11:10 p.m.

To: Michael Doig

Subject: Re: Boxing Day Earthquake Damage

Hi Michael

I will call tomorrow, but things are more complicated than I realized when we spoke last. The red placard is a section 124 notice and basically applies to the full site, not just the affected building or part of building. I have tried to rationalize this with eee but so far, no dies. So we need to look at what work is being done and when, in order to get the notice lifted. I will call tomorrow, sorry out of town today

Regards

John

Sent from my phone

On 29/12/2010, at 4:24 PM, "Michael Doig" <m.doig@gancllen.com> wrote:

Hi John,

Sorry to bother you (again!)

Please see the mail below from Andrew Boyle GM of The Press. My reason for initially not allowing them to occupy the top level of the old photolitho building (the structure that adjoins The Press Building on the northern face) was that it utilises the northern stairs of The Press Building as a fire egress point.

You indicated previously in our discussions on site that you felt it would be safe to access the northern portion of the building, however I am at conflict with implications of the red sticker we have recently been given by Council. In your opinion is it both safe and legal for The Press to occupy the second floor of the building on Press Lane as long as they use that structure for primary access, and only as a last resort go into The Press Building for emergency egress?

You may want to read my initial email below for background...

Thanks.

Michael

From: Andrew Boyle (CPL) [mailto:Andrew.Boyle@press.co.nz] Sent: Wednesday, 29 December 2010 12:59 p.m.

To: Michael Doig Cc: Nick Jennings

Subject: RE: Boxing Day Earthquake Damage

Michael

Can you call me to discuss this please?

I need to understand more clearly why we can't use the 2nd floor of the old photolitho building when we can use the ground floor and the first floor. This would be immensely helpful space to us if we are delayed beyond 5 January (otherwise we will need to move into the Novotel) and occupying that space doesn't present any hazard from the Britten building parapet.

I also need to understand the progress that is being made on the Britten building and their plan. There is SFA going on there at the moment.

Regards

Andrew

From: Michael Doig [mailto:m.doig@ganellen.com]
Sent: Monday, 27 December 2010 5:44 p.m.
To: Andrew Boyle (CPL)

Cc: Mario Evangelo; Peter Maneas; Phil Marshall-Lee (CPL); Barry Appleby (CPL); Nick Jennings; John Hare

Subject: Boxing Day Earthquake Damage

Hi Andrew,

As requested I have summarised below the damage sustained to the various building's tenanted by The Press, as well as remediation steps to be undertaken prior to re-occupation.

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Rest assured the team at Ganellen are doing all we can to ensure your safe return to the respective buildings. If you have any further questions please don't hesitate to contact me.

Kind Regards,

Michael Doig DEVELOPMENT AND BUSINESS DIRECTOR NEW ZEALAND

<image001.jpg>

150 Gloucester Street PO Box 13574 Christehurch, New Zealand 8013

tel: +64 (0)3 377 3373 fax: +64 (0)3 377 6450 mob: +64 (0)21 458 661 m.doig@ganellen.com

www.ganellen.com

www.pressprecinct.com

<image002.jpg>

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From:

**Nick Jennings** 

Sent:

Friday, 7 January 2011 1:53 p.m.

To:

Andrew Boyle (CPL)

Cc:

Michael Doig

Subject:

FW: Press Co. Inspection 06-01-11\_Site Report

Attachments: 110106\_105849\_Press Co. Site Report.pdf

Andrew,

Please see below and the attachment FYI.

Cheers

Nick J

From: Ben Dare [mailto:BenD@holmesgroup.com]

Sent: Friday, 7 January 2011 1:41 p.m.

To: Nick Jennings

Cc: Mitchell Blunden; John Hare

Subject: Press Co. Inspection 06-01-11\_Site Report

Hi Nick,

Please find attached my site report covering the inspection completed yesterday.

If the additional securing works have been completed the immediate threat to the tenants of the building will have been removed and it should be safe to occupy on Monday.

Regards,

Ben



Project Name:	Press Co.	
Project No:	105849	
ropa : ter	· ·	

S.R. No: 07/01/11

Date: SRA

SITE REPORT

Vark Reviewed:
- Follow up assessment of securing works following the 26/12/10 & subsequent after shocks.
following the 26/12/10 & subsequent after.
shorts
observations & Comments:
- Securing works to south wall have been completed as per HTH site report.
completed as per HTH site rego-t.
corner as per HIH site report.
corner as per HTH site report.
- Stairwell loose plaster has been removed as
Now WIH with report
per tion of
- bollopsed parapeted into central atrium to adjacent building. Remaining loose sections of parapet to be removed down to roof level & temporary waterproofing installed. Notify building owner of aurits required to be completed. Also noted that the concrete listel beam
to the the Read for section a
adjucent and day to the form
powapet to be toward down to the
a temporary waterprooting installed.
building owner of aurks required to be compa
Also noted that the concrete listel beam
of moderate sixed cracks & should be
of moderate sixed cracks & should be
inspected toother.
- Once the above works have been completed
building will be safe to occupy We how
been intermed by Nick Tennings of Ganoli
that this has been done (07/01/11)
end or hely

From:

Mario Evangelo

Sent:

Tuesday, 11 January 2011 1:33 p.m.

To:

Nick Jennings

Cc:

Michael Doig; Peter Maneas

Subject:

Council Earthquake Notice

Attachments: 201101111111850519.pdf

Nick,

Correspondence for your information and action.

Regards, Mario Evangelo CHIEF OPERATING OFFICER

GANELLEN BUILT ON EXPERIENCE

30 montague street balmain nsw 2041 tel +61 2 9555 2444 fax +61 2 9555 5600 m.evangelo@ganellen.com





29 December 2010

32 Cathedral Square Limited c/- Ganellen Pty Limited 30 Montague Street Balmain Sydney N S W 2041 Australia

Dear Sir/Madam

Notices under the Building Act 2004 not to use or occupy your building and to repair your building 32 Cathedral Square

The earthquake that struck Christchurch and the subsequent aftershocks have damaged many buildings in the City, including your property. We recognise that this is an extremely difficult time for you and we want to work with you to create a safe city.

Christchurch City Council staff are working hard to assess the buildings throughout the city to determine whether or not they are dangerous buildings.

Your building has been identified as one that was damaged by the earthquake and is considered dangerous. You need to be aware of the special government legislation that relates to your property.

## Special legislation for Council to use for dangerous buildings

To assist the Council with its efforts following the earthquake special legislation has been enacted, which has enhanced Council powers under the Building Act 2004 to deal with dangerous buildings.

The primary aim of those powers is to keep people safe.

Steps the Council can take to achieve this aim include issuing notices to prevent people from using or occupying a building or to allow restricted entry to a building. A notice can also require that repairs must be carried out on a dangerous building within a certain time. This is extremely important if a building is to be made safe, and to minimise the impact on other businesses close to the affected property.

## The Dangerous Building Notice issued for your building

1 C JAN 2011

The Council considers that your building is a dangerous building as defined in the Building Act, and that it is necessary for notices to be issued to:

- Prevent use or occupation of your building (a section 124(1)(b) notice)
- Require you to reduce and remedy the danger to your building (a section 124(1)(c) notice)

These notices are enclosed and have also been placed on your building to warn of the danger, as required by the Building Act. Please do not remove these notices as it is important the public and building users know about the danger to help safeguard them.

## The Council's Building Recovery Office can help you

We recommend that you contact the Christchurch City Council Building Recovery Office (details below) to discuss your building assessment or if the particulars on the notices need clarification.

www.ccc.govt.nz

We also recommend that you talk to the Building Recovery Office before taking any steps to remedy the danger, and to discuss any building consents or resource consents that may be required for the work.

We realise the timeframes specified in the section 124(1)(c) notice may not be long enough to carry out the repair work, and we are keen to work with you to identify if a longer period is required.

If you have not already done so, we recommend that you contact your insurers. You should also seek structural engineering advice from a qualified structural engineer on how to remove the danger.

We appreciate your understanding in this matter.

**CONTACT:** 

CCC Building Recovery Office Ground floor Civic Offices 53 Hereford Street Tel: 03 941 8999

Email: Bulldingrecoveryoffice@ccc.govt.nz

Yours faithfully

MI Clinh

**James Clark** 

Team Leader Enforcement Inspections and Enforcement Unit

Encl



# CHRISTCHURCH CITY COUNCIL NOTICE

UNDER SECTION 124(1)(c), BUILDING ACT 2004 (as modified by the Canterbury Earthquake (Building Act) Order 2010)

#### TO:

32 CATHEDRAL SQUARE LIMITED c/- GANELLEN PTY LIMITED 30 MONTAGUE STREET BALMAIN SYDNEY N S W 2041 **AUSTRALIA** 

#### THE BUILDING

Street Address: 32 CATHEDRAL SQUARE

Legal Description: SEC 698 TOWN CHRISTCHURCH

## **PARTICULARS**

In accordance with s121(1)(a) or (c) of the Building Act 2004, this building is dangerous as a result of an earthquake which occurred at the property on Saturday 4th September 2010, or as a result of aftershocks following that earthquake.

- 1. The building has been damaged, and there are structural defects to the building.
- 2. Councils records show General brick cracking, including south façade. Neighbours parapet on east side risk of falling on Press.

#### TO REDUCE OR REMOVE THE DANGER YOU MUST:

- A. Comply with any notice attached to the building prohibiting the use or occupation of the building, or restricting entry to the building.
- B. Keep persons away from the danger/risk in the building.
- C. Carry out work on the building to remove the danger.
- D. You must obtain a building consent to carry out any demolition, repairs or other work to remove the danger. Please contact the Christchurch City Council Building Recovery Office by telephone on 941-8999, or by email at buildingrecoveryoffice@ccc.govt.nz, or in person at the Ground Floor, Civic Offices, 53 Hereford Street, before making your building consent application.
- E. If urgent building work is necessary to save or protect life or health or prevent serious damage to property then you may be able to carry out that work without a building consent (see s41(1)(c) of the Building Act 2004). If, in reliance on s41(1)(c), bullding work is carried out without a building consent having been obtained, the owner must, as soon as practicable after completion of the building work, apply for a certificate of acceptance under s96 of the Building Act 2004.
- F. If the building is a listed heritage building then council approval must be obtained for the work, whether or not a building consent is regulred.

Work required by this notice must be carried out by 31 JANUARY 2011. If you believe you are unable to carry out the work by that date please contact the Council's Building Recovery Office who will work with you on a solution that may include agreeing on a new timeframe.

If the work is NOT carried out before 31 January 2011, or such other date agreed by the Council in writing, the Council may carry out the work required and you will be liable for the costs of the work unless you apply within 5 days of the work being carried out to a District Court for relief from this obligation. Mach

Signed for & on behalf of the Christchurch City Council:

Name:

James Clark

Position:

Team Leader Enforcement

Date of issue: 29 December 2010

From:

**Nick Jennings** 

Sent:

Wednesday, 12 January 2011 9:05 a.m.

To:

Michael Doig

Subject:

FW: Press Co. Site Inspections - Holmes Consulting Group Reports

Attachments: 105849\_SR\_1\_27Dec10.pdf; 105849\_SR\_2\_7Jan11.pdf

fyi

From: Heather Devlin [mailto:HeatherD@holmesgroup.com]

Sent: Wednesday, 12 January 2011 9:00 a.m.

To: Nick Jennings

Subject: Press Co. Site Inspections - Holmes Consulting Group Reports

Hi there Nick.

As promised, please find attached our two typed up site reports following our recent inspections of the Press building.

Regards,

Heather Devlin ADMINISTRATION MANAGER

**Holmes Consulting Group** 

PO Box 25355 | Christchurch 8144

Phone: +643 366 3366 | DDI: +643 363 2163 | Fax: +643 379 2169 | Mobile: +6427 473 1838

Email: HeatherD@Holmesgroup.com

Web: www.holmesgroup.com

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SITE REPORT

Project Name Press Co.

Project No: 105849

S.R. No: 1

Date: 27 December 2010

Reviewed By: John Hare

Christchurch

STRUCTURAL AND CIVIL ENGINEERS

Telephone

64 3 366 3366

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

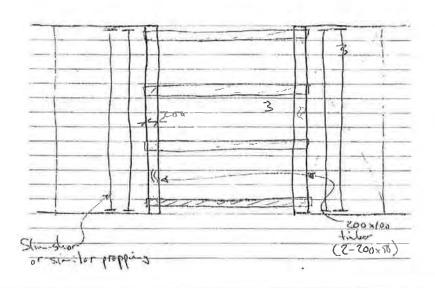
Work Reviewed:

Post EQ inspection.

Observations & Comments

- 1. Major damage at:-
  - > South wall, mostly at levels 2 and 3. Diagonal shear failures in brick piers.
  - ➤ Central stairwell at level 3. Diagonal shear failure, compressing fire escape door running across to sliding shear at approximately 400mm below level 3.
  - North wall, piers cracked at east end and piers at west end have moved another 10mm on previous cracks.
- 2. Moderate cracking to tower above roof level and in walls below.
- 3. Propping and shoring required to south wall. Remove windows adjacent to piers and profile cut timber packing to shape of stone. Tie around piers with 4-2.5 t straps. Prop adjacent from spandrel below to spandrel above. (Refer below detail).

For two central piers of south wall and east end pier of the north wall.





Page 2

- 4. Similar shoring required to north wall at east end.
- 5. Neighbour (Worcester Tower) to be advised to lower parapets at light well.
- 6. At stairwell, ease door to enable access and remove loose plaster on wall.

Report Prepared By:

p.p.

John Hare DIRECTOR

105849SR1101.001.doc



Project Name Press Co.

Project No: 105849

\$.R. No: 2

SITE REPORT

Date: 7 January 2011

Reviewed By: Ben Dare

CIVIL ENGINEERS

STRUCTURAL AND

### Work Reviewed:

Follow up assessment of securing works following the 26th December 2010 and subsequent aftershocks.

Christchurch

Telephone

Facsimile

64 3 366 3366

64 3 379 2169

#### Observations & Comments:

Securing works to south wall have been completed as per John Hare's site report of 27th December 2010.

Internet

North wall strengthening to pillar and building corner as per John Hare's site report.

www.halmesgroup.com

> Stairwell loose plaster has been removed as per John Hare's site report.

Level 5

Collapsed parapet into central atrium from adjacent building. Remaining loose sections of parapet to be removed down to roof level and temporary waterproofing installed. Notify building owner of works required to be completed. Also noted that the concrete lintel beam at the window head has sustained a series of moderate sized cracks and should be inspected further.

123 Victoria Street

Once the above works have been completed, the building will be safe to occupy. We have been informed by Nick Jennings of Ganellen that this has been done (7th Jan 2011).

PO Box 25355

Christchurch 8144

New Zealand

## Report Prepared By:

Offices in

Auckland

Hamilton

Wellington

Queenstown

San Francisco

PROJECT ENGINEER

105849SR1101.002.doc

Ben Dare

Copies to:

Nick Jennings, Ganellen (n.jennings@ganellen.com)



Project Name

Press Co.

Project No:

105849

S.R. No:

4

SITE REPORT

Date:

20 January 2011

Reviewed By:

John Hare

Christchurch

Telephone

STRUCTURAL AND CIVIL ENGINEERS

64 3 366 3366

Facsimile

64 3 379 2169

Internet

www.holmesgroup.cor

Further damage inspection post 20 January RM 5.1 event.

Work Reviewed:

Observations & Comments:

- 1. Piers at north end of lightwell and north wall third floor have moved further. Up to 15mm movement estimated for northeast corner and north end of lightwell adjacent to toilet.
- 2. For north wall of lightwell, ties are required 20mm galvanised threaded rod with 100x100x10 end plate washers required. Sketch to follow today. 3 off per peir. Also on northeast corner pier 4 off.

Report Prepared By:

John Hare DIRECTOR

105849SR2001.004.doc

Level 5

123 Victoria Street

PO Box 25355

Christchurch 8144

New Zealand

Offices in

Auckland

Hamilton

Wellington

Queenslown

San Francisco

From: Ben Dare [BenD@holmesgroup.com]

Sent: Wednesday, 12 January 2011 9:44 a.m.

**To:** 'Buildingrecoveryoffice@ccc.govt.nz'

Cc: Nick Jennings; Richard Seville

Subject: Press Building - 32 Cathedral Square: EQ Occupation Certificate

Attachments: 110112\_105849\_Press Co. EQ Occupation certificate.pdf

Attention: James Clark

Hi James,

Following the aftershock of 26/12/10 Holmes Consulting Group have completed a detailed assessment of the Press Building at 32 Cathedral Square. We have identified all potentially dangerous features and have instructed that they either be secured or removed to ensure that the structural integrity and performance of the building has been restored to at least the condition that existed prior to the earthquake of 26 December 2010. The specified works have subsequently been completed by Ganellen Property Ltd.

Please find attached a copy of our Earthquake Occupation Certificate.

Based on this we believe that the building is now secure and safe to re-occupy and that the existing red safety notice can be removed.

I will call shortly to discuss.

Regards,

Ben Dare PROJECT ENGINEER

Holmes Consulting Group PO Box 1266 I Queenstown

Phone: +643 441 3055 | Fax: +644 471 2336| Mobile: +64 21 2742077

Email: HYPERLINK "blocked::mailto:bend@holmesgroup.com"bend@holmesgroup.com

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From: Ben Dare [BenD@holmesgroup.com]
Sent: Wednesday, 12 January 2011 2:40 p.m.

To: Nick Jennings
Cc: Richard Seville

Subject: FW: Press Building - Dynamic IP detected

Hi Nick,

Please refer the email below from CCC regarding the removal of the S124 notice.

Regards,

Ben Dare PROJECT ENGINEER

Holmes Consulting Group PO Box 1266 | Queenstown

Phone: +643 441 3055 | Fax: +644 471 2336 | Mobile: +64 21 2742077

Email: bend@holmesgroup.com

----Original Message----

From: Bronner, Laura [mailto:Laura.Bronner@ccc.govt.nz]

Sent: Wednesday, 12 January 2011 2:37 p.m.

To: CDRescue Cc: Ben Dare

Subject: Press Building

Hi Ben,

Thank you for sending in the report for 32 Cathedral Square. Please be advised that the building is now safe for occupancy. Any placards can be removed and business can resume. Please advise the owner.

Kind Regards,

Laura Bronner
Building Recovery
Christchurch City Council
53 Hereford Street, Christchurch 8011
PO Box 73014, Christchurch 8154
Phone: (03) 941 5481
E-mail: Laura.Bronner@ccc.govt.nz

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immediately and erase all copies of the message and attachments.

From:

Michael Doig

Sent:

Friday, 21 January 2011 9:05 p.m.

To:

Nick Jennings

Subject:

Fwd: Remedial work to piers

Attachments: SK\_2101\_1.pdf; ATT00001..htm; SK\_2101\_2.pdf; ATT00002..htm

Hi mate,

Some more detail from John regarding emergency works required.

Cheers, md

Sent from my iPad

Begin forwarded message:

From: John Hare <<u>JohnH@holmesgroup.com</u>>
Date: 21 January 2011 5:35:56 PM AEDT
To: Michael Doig <<u>m.doig@ganellen.com</u>>

Subject: Remedial work to piers

Hi Michael

As discussed, here are a couple of sketches of the piers.

I need to follow up with a specification for the grout, which I will do Monday

### Regards,

John Hare DIRECTOR

Holmes Consulting Group PO Box 25355 I Christchurch 8144

Phone: +643 366 3366 | Fax: +643 379 2169

Email: johnh@holmesgroup.com

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HclmesConsultingGroup



Project Name: ..... Press Co

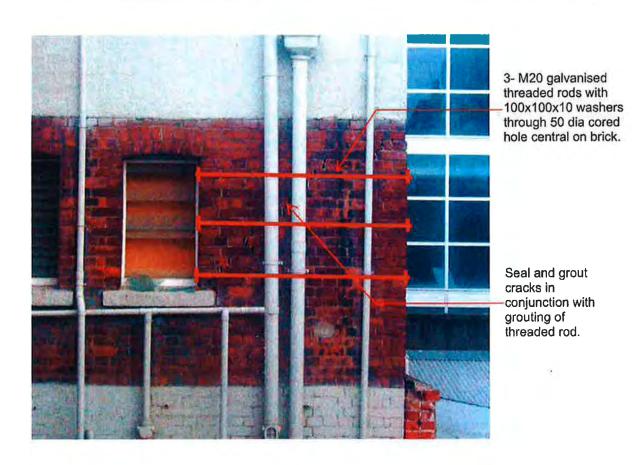
Project No: ......... 105849

Calcs By: ..... HJH

Date: ...... 21/01/2011

Sketch No: .......... Sk-2101/1

SKETCH



Remedial work to north wall of lightwell at level 3



Project Name: ..... Press Co

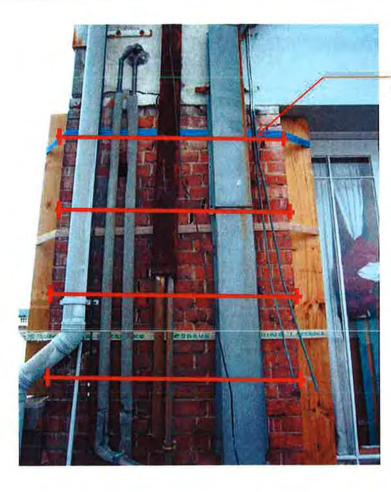
Project No: ...... 105849

Calcs By: ......HJH

Date: ..... 21/01/2011

Sketch No: .......... Sk-2101/2

SKETCH



4-M20 galv threaded rods as north wall of lightwell

Remedial work to north-east corner pier at level 3

Similar to Sk-2101/1 unless noted otherwise