

**Justine Fallon**

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**From:** Meirwen Pride  
**Sent:** Wednesday, 30 November 2011 10:50 a.m.  
**To:** Justine Fallon  
**Subject:** FW: 595A Colombo St  
**Attachments:** 5875-1re.dwg; 5875-1re.rar; 991057 CI F01 5 Jan 04 drj.doc; 991057 Document Transfer Register FIRE.xls; 991057 Document Transfer.xls; 991057 Fax CCC 20 Mar 01 drj.doc; 991057 FAX Property check 21 Nov 2002 gbw.dot; 991057 Fire Safety Outline Spec Issue 2.doc; 991057 Fire Safety Outline Spec.doc; 991057 Fire Summary 595A Colombo St Issue A kdi.doc; 991057 Fire Summary 595A Colombo St Issue B kdi.doc; 991057 Producer Statement Design Issue A KJS.doc; 991057 PSCR Fire.doc; 991057 PSCR Struct Issue A 23 Dec 2003 kjs.doc; 991057 Report on 595A Colombo St Issue A kjs.doc; 991057 S1 Plans - Elevations.dwg; P0000686.JPG; P0000687.JPG; P0000688.JPG; P0000689.JPG; P0000690.JPG; P0000691.JPG; P0000692.JPG; P0000693.JPG; P0000694.JPG; P0000695.JPG; P0000696.JPG; P0000697.JPG; P0000698.JPG; P0000699.JPG; P0000700.JPG; P0000701.JPG; P0000702.JPG; P0000703.JPG; P0000704.JPG; P0000705.JPG; P0000706.JPG

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**From:** Mark Zarifeh  
**Sent:** Wednesday, 23 November 2011 8:40 a.m.  
**To:** Meirwen Pride  
**Subject:** FW: 595A Colombo St

Hi Meirwen,  
 I can't seem to open this  
 Thanks,

Mark.

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**From:** EQ Liaison [mailto:luke@pfc.co.nz]  
**Sent:** Wednesday, 23 November 2011 8:15 a.m.  
**To:** Mark Zarifeh  
**Subject:** RE: 595A Colombo St

Good morning Mark.

I attach to this email all that we have on this property. I note that the files are in an editable format but that we hold the original (electronic) copies here should there be an issue with this.

Regards, Luke.

Luke Pickering  
*Engineering Manager*

Powell Fenwick Consultants Ltd  
 Cnr Bealey Ave & Churchill St  
 PO Box 25-108  
 Christchurch 8144  
 New Zealand

Phone (03) 366-1777  
 Fax (03) 379-1626  
 email [luke@pfc.co.nz](mailto:luke@pfc.co.nz)  
 web [www.pfc.co.nz](http://www.pfc.co.nz)

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**From:** Mark Zarifeh [mailto:Mark.Zarifeh@royalcommission.govt.nz]  
**Sent:** Tuesday, 22 November 2011 8:55 a.m.  
**To:** EQ Liaison  
**Subject:** RE: 595A Colombo St

Thanks.

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**From:** EQ Liaison [mailto:luke@pfc.co.nz]  
**Sent:** Monday, 21 November 2011 10:17 p.m.  
**To:** Mark Zarifeh  
**Subject:** RE: 595A Colombo St

Good evening Mark.

I've had a note from our archivist that as that was a 1999 job our paper records have been destroyed (we keep them for no more than 10 years).

There may be some electronic detail although it's unlikely to be extensive. I'm away tomorrow but will try and hunt that out for you on Wednesday.

Regards, Luke.

-----Original message-----

**To:** EQ Liaison <luke@pfc.co.nz>;  
**From:** Mark Zarifeh <Mark.Zarifeh@royalcommission.govt.nz>  
**Sent:** Mon 21-11-2011 15:02  
**Subject:** 595A Colombo St

Hi Luke,

This building was part of a row of two-storied URM buildings between St Asaph and Mollett Sts.

In 2001-03 Powell Fenwick( Kevin Simcock) carried out structural strengthening of the building for the owners, Mr and Mrs Sagagucci(Billiken Restaurant).

Could you please urgently provide copies of any assessments/ reports/drawings/photos, etc you have in relation to this work.

Also, if Powell Fenwick were engaged at any other time or after the September earthquake please provide full details of this.

This request is made pursuant to the Royal Commission's powers of investigation under s4C Commissions of Inquiry Act 1908.

Thank-you for your assistance.

Regards,

Mark Zarifeh,  
 Counsel Assisting,  
 Canterbury Earthquakes Royal Commission

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BUI.COL595A.0001.1

**E-mail Message**


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**From:** [Billiken Japanese Restaurant \[SMTP:billiken@xtra.co.nz\]](mailto:Billiken Japanese Restaurant [SMTP:billiken@xtra.co.nz])  
**To:** [CD Recovery \[EX:/O=NZGOVT/OU=CHRISTCHURCH CITY COUNCIL/CN=RECIPIENTS/CN=CDRECOVERY\]](mailto:CD Recovery [EX:/O=NZGOVT/OU=CHRISTCHURCH CITY COUNCIL/CN=RECIPIENTS/CN=CDRECOVERY])  
**Cc:**  
**Sent:** 7/05/2011 at 8:31 pm  
**Received:** 7/05/2011 at 8:32 pm  
**Subject:** RE: 595a Colombo St.

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**Attachments:** Christchurch City Council - letter 14-4-11jf.pdf

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We need you to answer this letter.  
 Hayato

-----Original Message-----

From: CD Recovery [mailto:CDRecovery@ccc.govt.nz]  
 Sent: Wednesday, May 04, 2011 3:23 PM  
 To: billiken@xtra.co.nz  
 Subject: 595a Colombo St.

Dear Mr Sakaguchi

As per your request to email the information I have told you over the phone, this is to inform you of the details of the recent risk assessment done on your property at 595a Colombo St.

The property has been assessed as posing severe risk of collapsing or part of building collapsing into itself and onto adjacent property or public space. I understand that it has undergone partial deconstruction in March 2011 for Urban Search and Rescue (USAR) purposes. The recent assessment recommends that it is needing full demolition.

Kind regards

Hannah Mirabueno  
 Building Treatment Team on behalf of  
 Canterbury Earthquake Recovery Authority (CERA)  
 027 6605972

\*\*\*\*\*  
 This electronic email and any files transmitted with it are intended solely for the use of the individual or entity to whom they are addressed.

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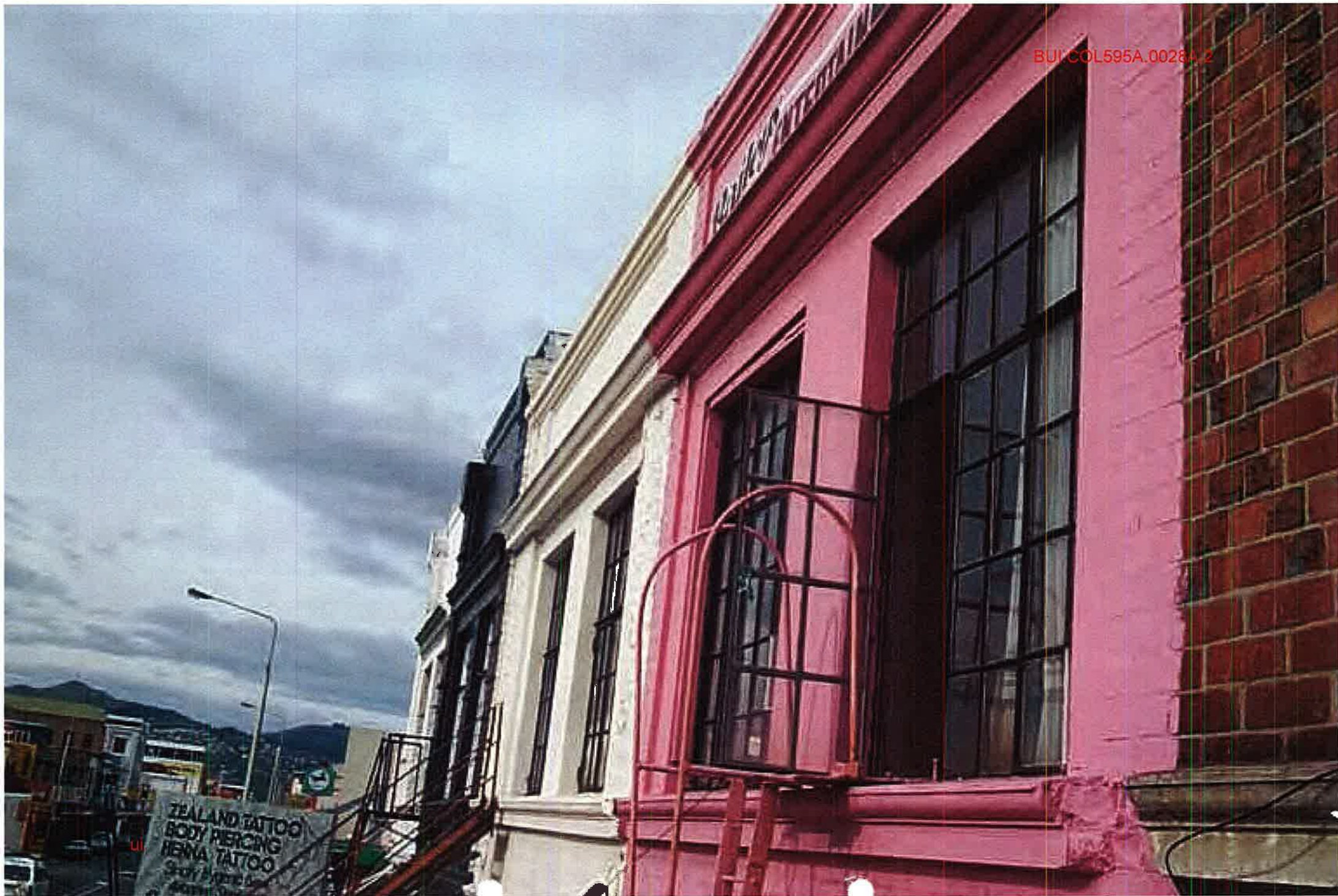
Christchurch City Council  
<http://www.ccc.govt.nz>

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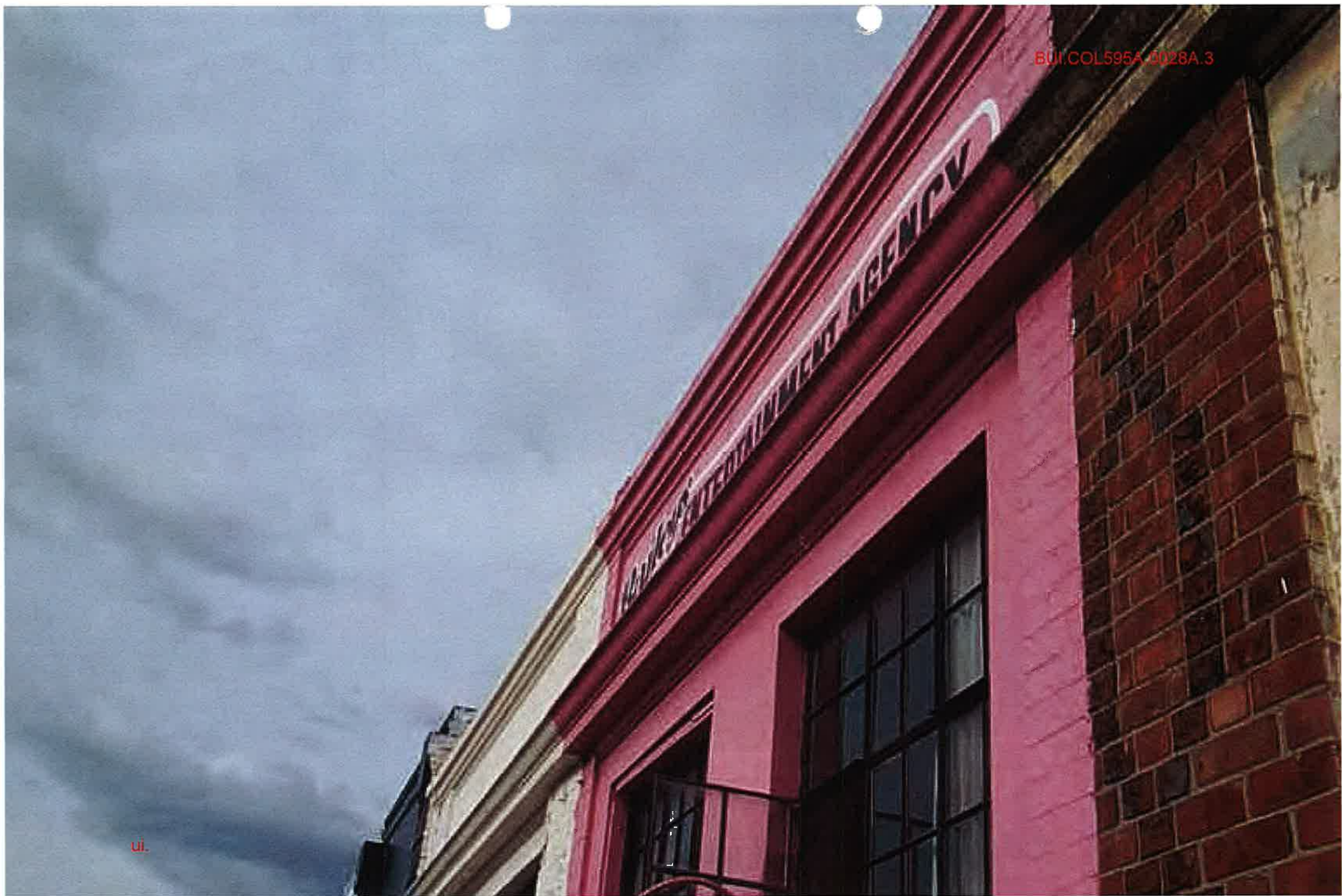






ZEALAND TATTOO  
BODY PIERCING  
HENA TATTOO  
Sally Hurrell

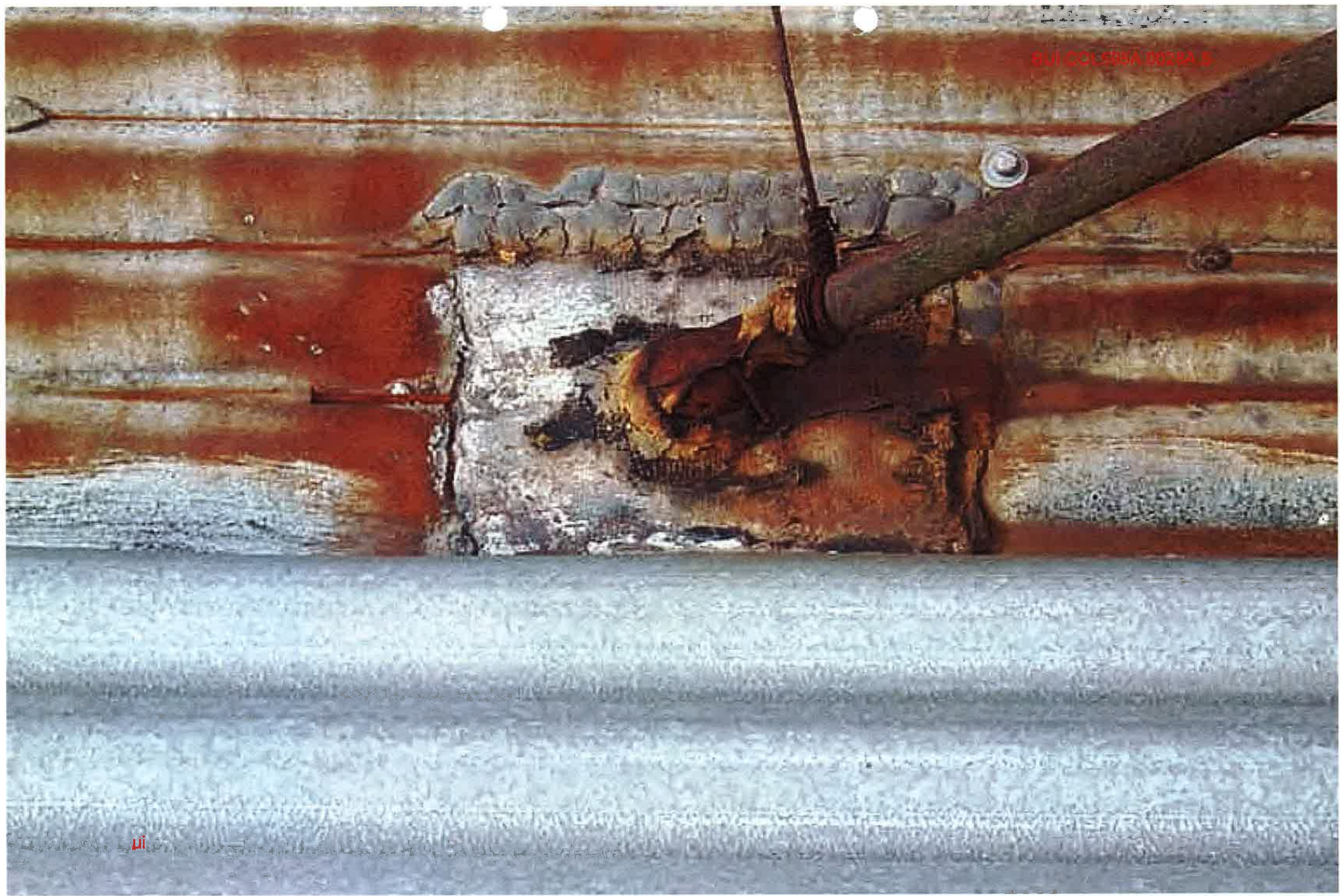














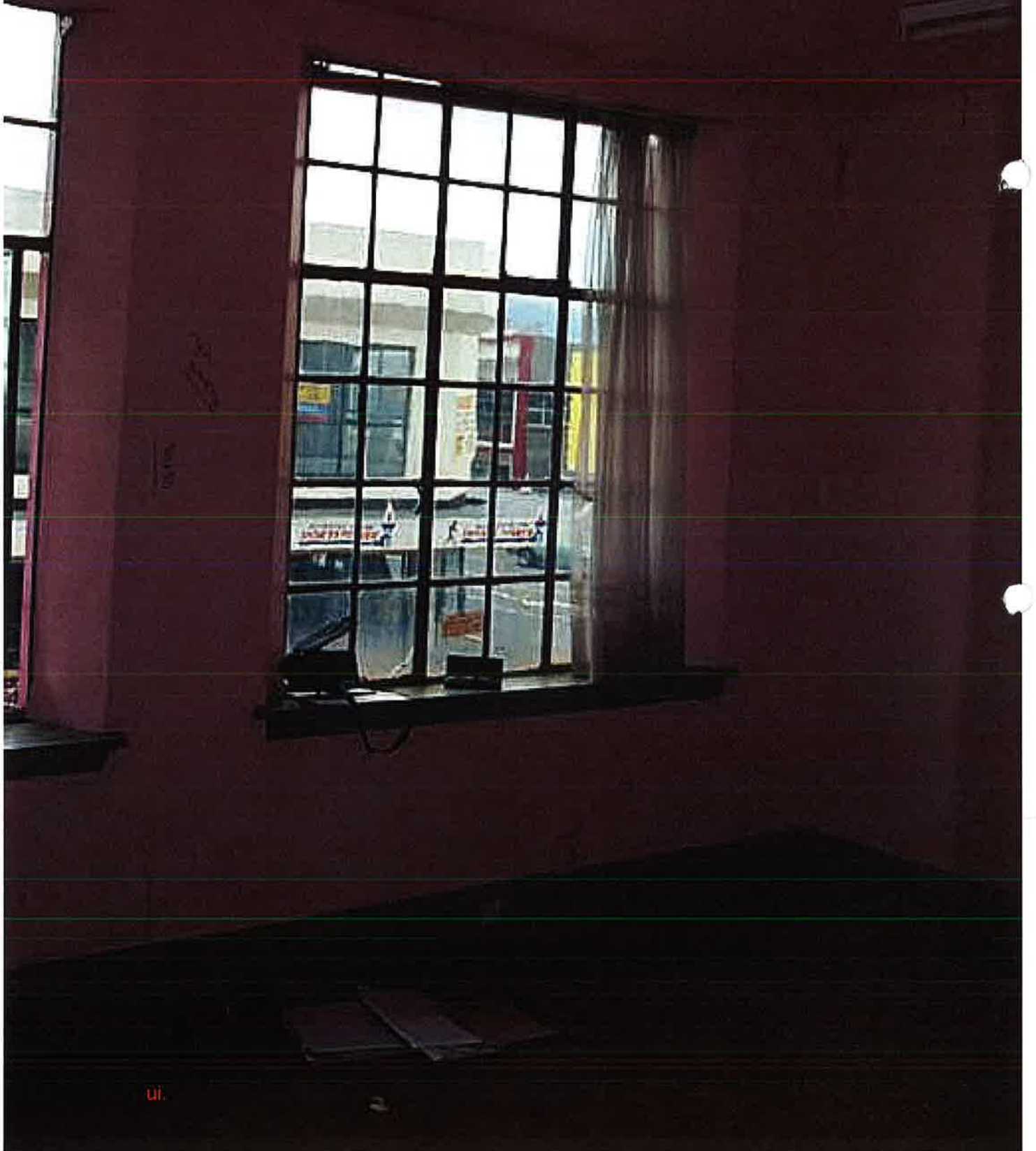




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BUI COL595A.00247

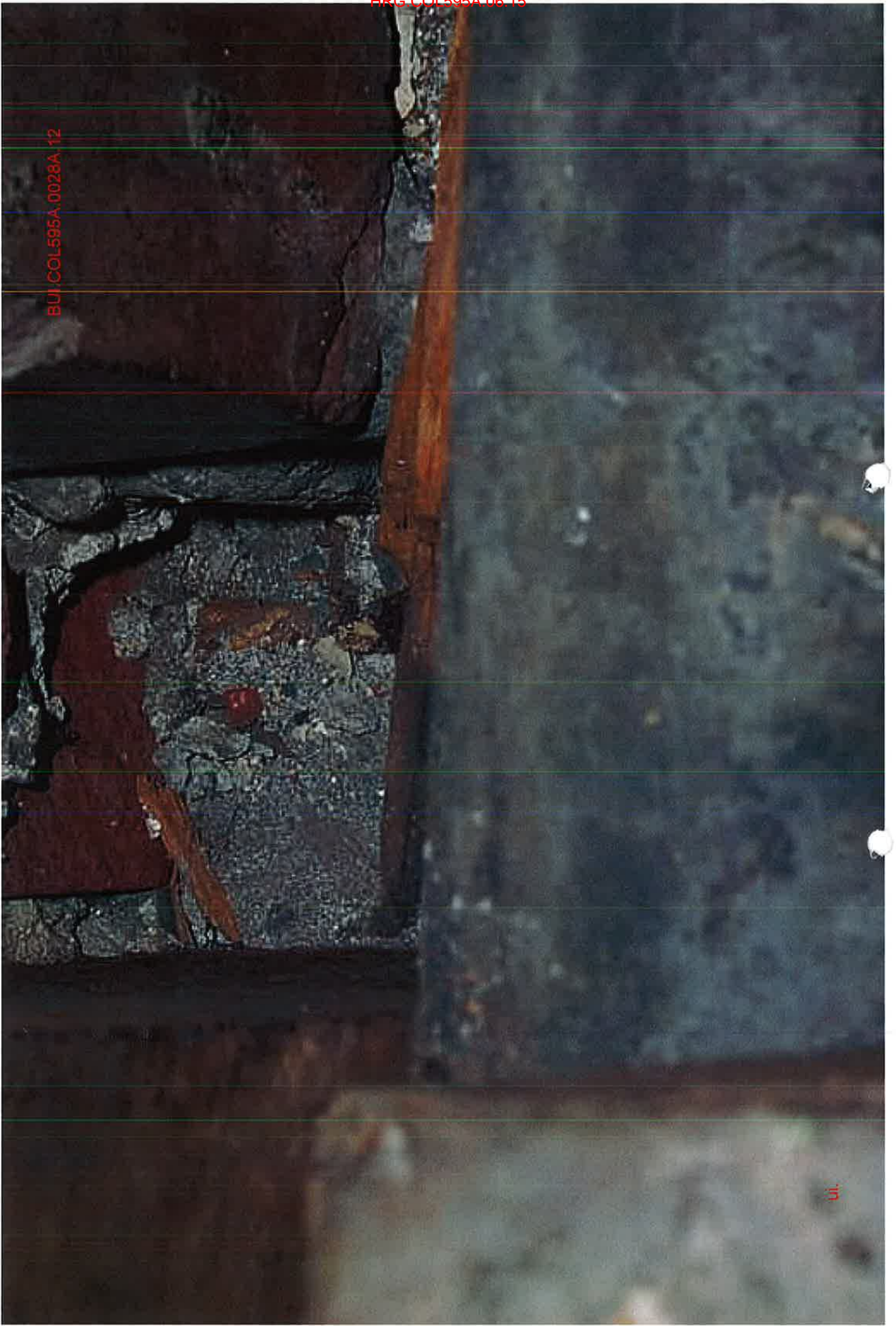


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BUJ, COL595A.0028A.12



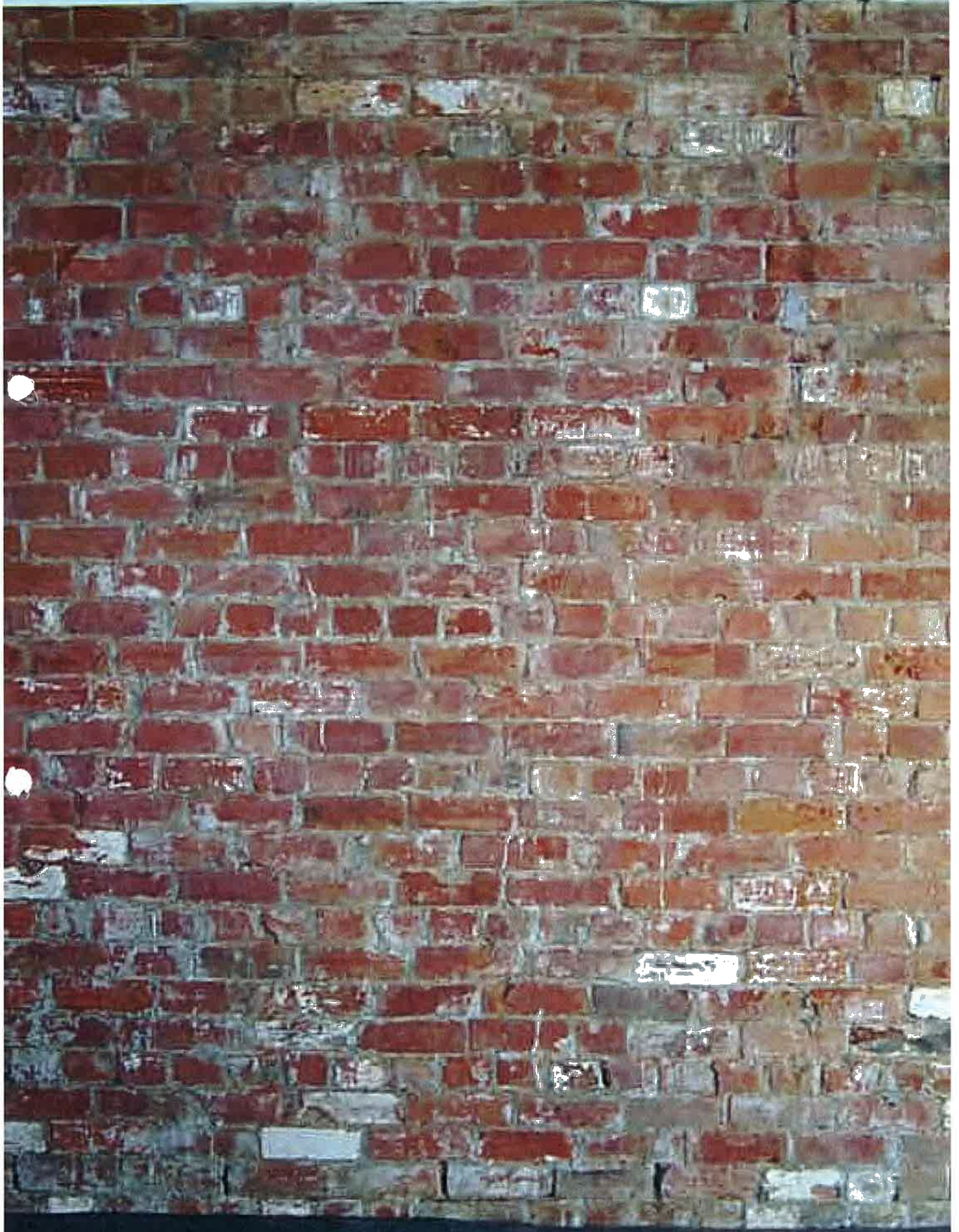








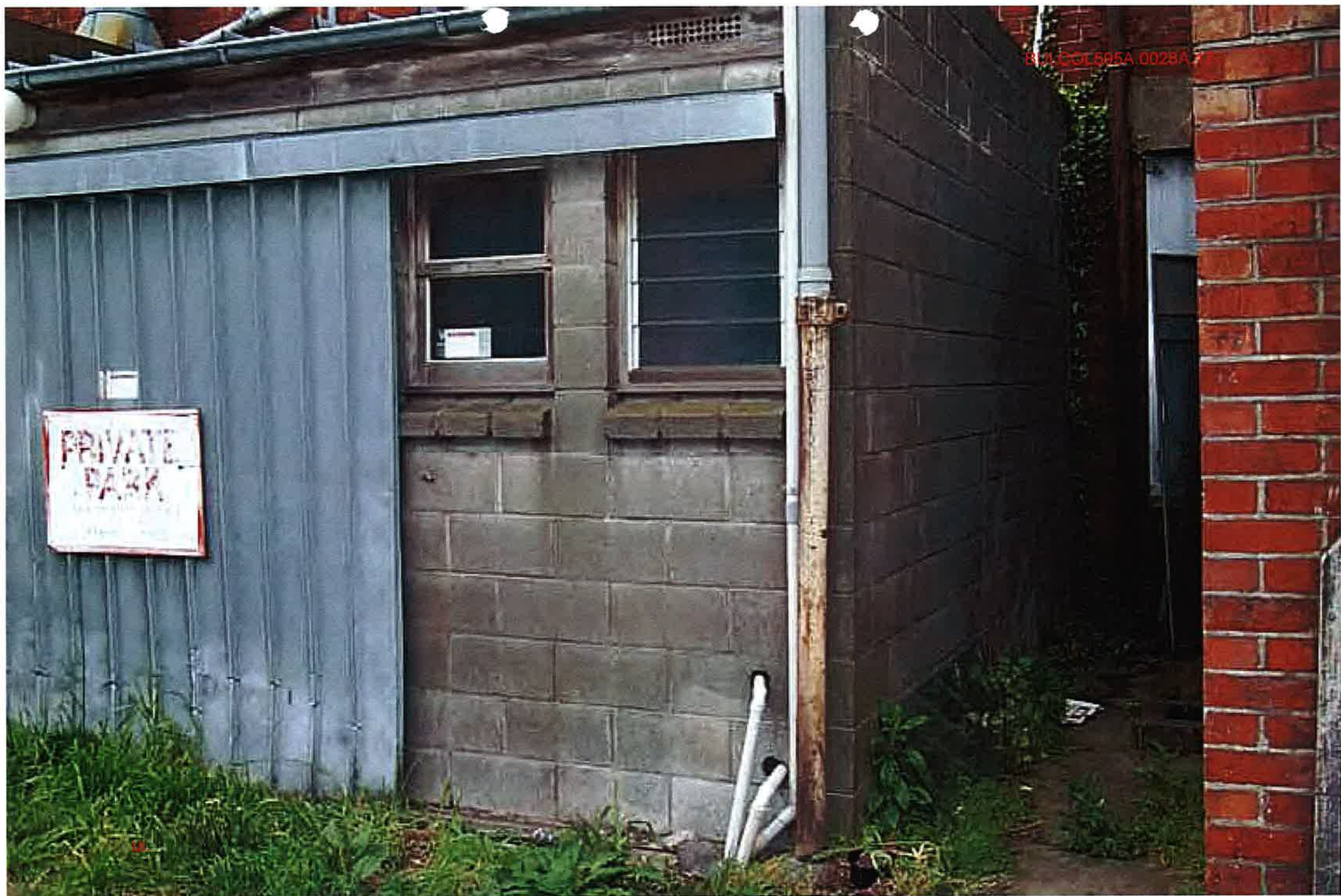










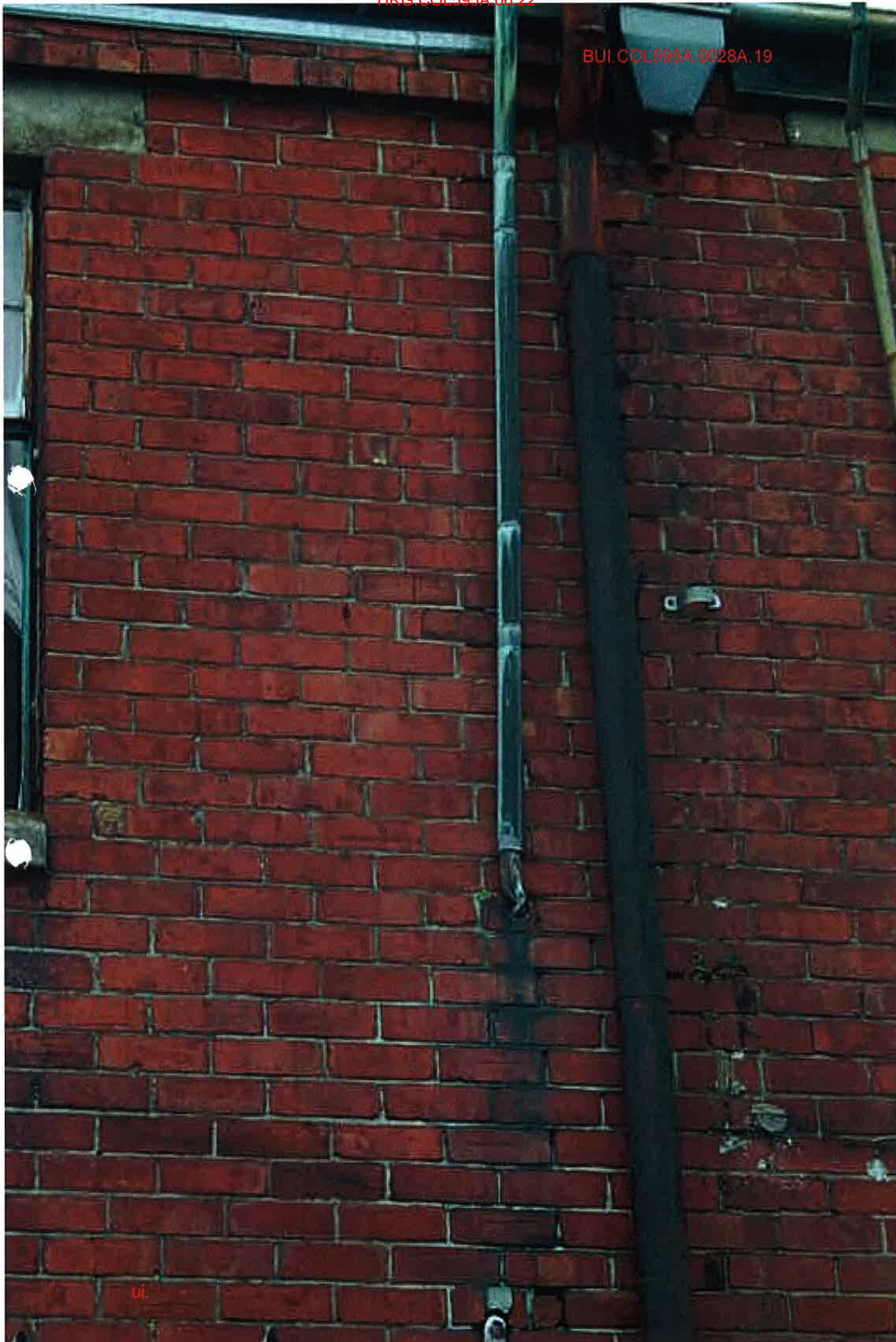






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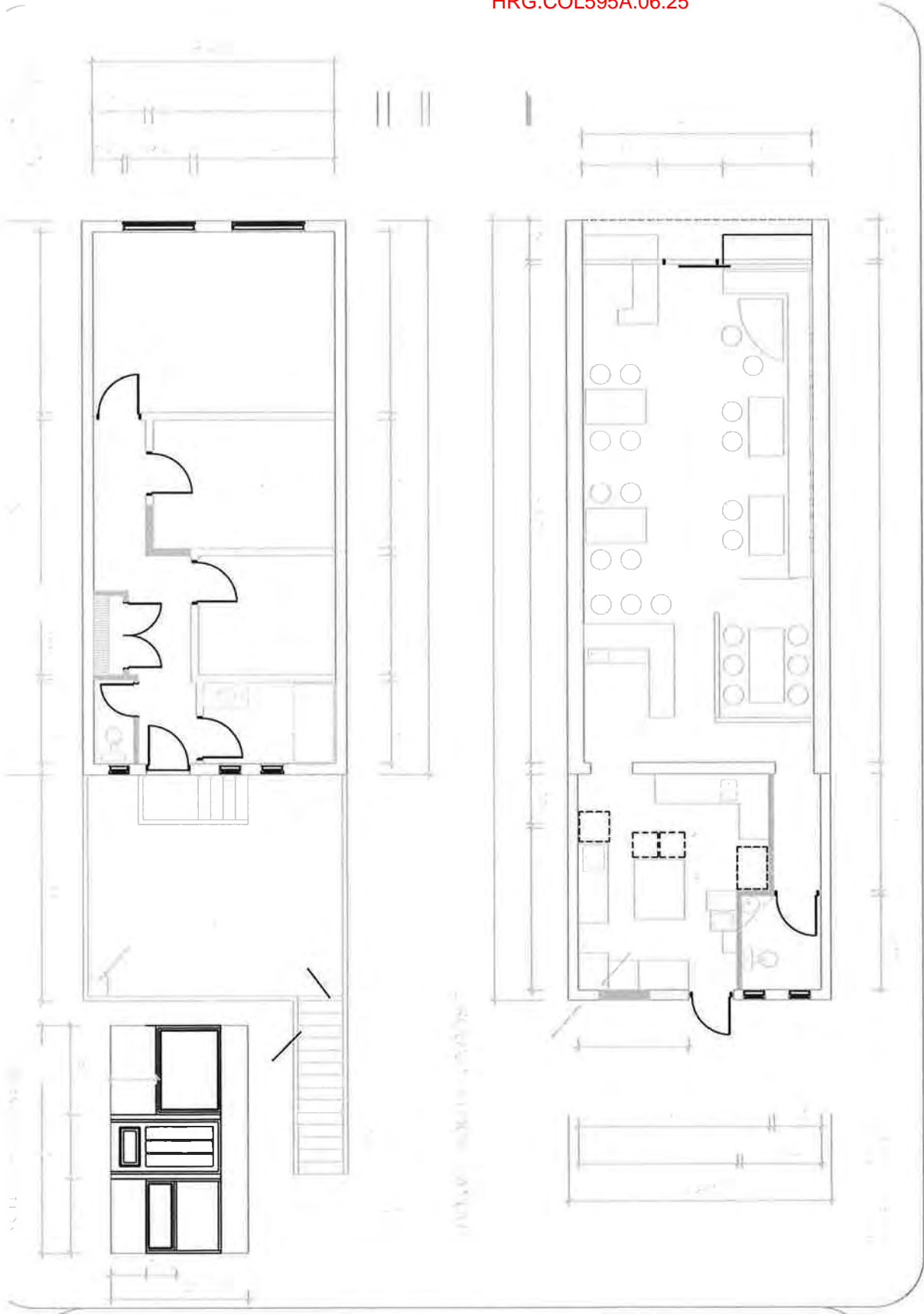












CADwin design.	5875	1 revised
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Property Check  
P O Box 18 841  
Christchurch  
Alan Millar  
595A Colombo Street  
991057/F/1  
30 November 2011  
CIF01

### **FIRE SAFETY FEATURES**

After a site inspection on 23/12/03, the following items require completion: -

- 1) Forward a Producer Statement Construction Review for the fire alarm onto Powell Fenwick Consultants Limited.
- 2) Forward the FPIS Certificate for the fire alarm system on to Powell Fenwick Consultants Limited.
- 3) Confirm that the fire alarm system is completely operational.
- 4) The fire door suppliers are to confirm that the door into the toilet and the external door to the carpark are both fire doors with at least a -/30/30 FRR. Certification labels are yet to be fitted. Provide green stickers with white lettering stating "Fire Door – Please Keep Closed". The doors are to be fitted with door closers. Ease and adjust the doors so that they close and latch completely.
- 5) Remove the plastic covers from the smoke detectors on 1<sup>st</sup> floor.
- 6) Confirm that the lights switches etc in the fire walls include steel flush boxes and intumescent blocks.











**FAX**

TO CCC

ATTENTION WAYNE

FAX auto

No OF PAGES 1

FROM DAVID

DATE 20 March 2001

JOB No 991057/F/1

CC

RE 595A COLOMBO ST - PROJ 1001 1018

BUI.COL595A.0028F



**POWELL  
FENWICK  
CONSULTANTS LTD**

**Consulting Engineers,  
Structural, Civil, Acoustic,  
Fire, Electrical, Mechanical,  
Heating and Ventilation**

Unit 3, Amuri Park  
Cnr Bealey Avenue and Churchill Street  
P.O. Box 25-108  
Phone (03) 366-1777, Fax (03) 379-1626  
Email: engineering@pfc.co.nz  
Christchurch, New Zealand

Wayne,

In reply to your fax dated 19<sup>th</sup> March:

Clause 4.4.6 provides protection to the stair from a fire from below.

The stair is, in fact, no closer than 2m from a wall with unprotected area.

The western wall of ground floor is completely fire rated except for the toilet windows. Rather than fire rate the windows, we have separated the toilet from the rest of the ground floor with a fire door and fire wall. Thus, a ground floor fire cannot spread into the toilet and therefore cannot spread out the western toilet windows. A fire in the toilet itself is very unlikely.

The external door from the kitchen to outside is fire rated.

The roof of the kitchen is fire rated.

Thus, the upper escape stair is completely protected from a ground floor fire, and Clause 4.4.6 is met.

Regards

David

**DIRECTORS**

R.B Ramsay, M.Sc. (London), D.I.C., B.E. (Hons), F.I.P.E.N.Z., K.J. Simcock, B.E. (Hons), M.E., M.I.P.E.N.Z., M.P. Gray, B.E. (Hons), M.I.P.E.N.Z.,  
D.R. James, B.E. (Hons), M.I.P.E.N.Z.

03/11/1/C/RBR



**FAX****TO KAZUKO SAGAGUCHI****ATTENTION****FAX 377 8686****No OF PAGES****FROM GARY WHITESIDE****DATE 21 November 02 JOB No 991057****CC****RE YOUR FAX 2 NOVEMBER 02**

BUI.COL595A.0028G.1

**POWELL  
FENWICK  
CONSULTANTS LTD****Consulting Engineers,  
Structural, Civil, Acoustic,  
Fire, Electrical, Mechanical,  
Heating and Ventilation**Unit 3, Amuri Park  
Cnr Bealey Avenue and Churchill Street  
P.O. Box 25-108  
Phone (03) 366-1777, Fax (03) 379-1626  
Email: engineering@pfc.co.nz  
Christchurch, New Zealand**MRS KAZUKO**

I have spoken to Kevin Simcock who has advised the following:

The producer statement for the job noted that engineering inspections were to be carried out. This is a Christchurch City Council requirement and a condition that the building permit was issued.

There were two inspections done, one for the structure and the other inspection was for fire. These inspections were done in March and May of this year.

I hope that this clarified this for you and If you require any further information please contact the writer direct, or your cheque by return mail would be appreciated.

Regards

Gary Whiteside

**DIRECTORS**R.B Ramsay, M.Sc. (London), D.I.C., B.E. (Hons), F.I.P.E.N.Z., K.J. Simcock, B.E. (Hons), M.E., M.I.P.E.N.Z., M.P. Gray, B.E. (Hons), M.I.P.E.N.Z.,  
D.R. James, B.E. (Hons), M.I.P.E.N.Z., B.S. Davidson, N.Z.C.E. (Elec), T.M.I.P.E.N.Z

03/11/1D/RBR

**FIRE SAFETY OUTLINE SPECIFICATION FOR**  
**RESTAURANT AND APARTMENT AT**  
**595A COLOMBO STREET, CHRISTCHURCH**

991057/F/1  
Issue 2  
22 February 2001

This Outline Specification is to be read together with drawing S1.

**Alarms:**

Provide a new Type 3e automatic heat detector system throughout the ground floor. The system is to include manual call points, sounders and an indicator panel with building zoning. The sounders and manual call points are to be provided throughout both floor levels.

As part of this system provide smoke detectors in the bedrooms and the hallway on the first floor.

The entire system is to comply with NZS 4512:1997, especially in regard to sound levels in the bedrooms. The sounders are to produce a signal that conforms to AS 2220.1 clause 2.5.3.1(b) or (c).

The facing surface of the alarm control panel is to be used for the indicator panel. The location of the indicator panel is to be approved by the NZ Fire Service.

Provide a power supply to the new alarm panel.

The system need not be Brigade connected.

The Contractor is to co-ordinate the location of all detector heads, call points, and sounders with all other service trades and Architectural and Structural details.

All cabling is to be run concealed.

FPIS are to inspect and approve the system at the completion of the job.



**Exit Signs:**

Provide a new painted exit sign in the location shown on drawing F1.

**Egress Doors:**

Provide egress doors as shown on the drawings. These doors are to have minimum width as shown.

All egress doors are to include hardware that allows a keyless egress from inside at all times. Modify existing doors as necessary.

**Walls:**

**Type A:** FRR 60/60/60

This wall type refers to both new and existing walls. The windows shown in these walls on drawing S1 can remain unprotected.

**Existing Walls:**

These walls are concrete block and brick, which extend to the roofing. These walls are to remain as is. Specific work is required in certain areas as follows.

**Colombo Street wall:**

Remove the glazing directly above the canopy and replace with timber framing lined on the inside with 12.5mm fyreline and on the outside with 6.0mm Hardiflex according to the James Hardie fire rated systems.

Remove the timber facing on the outside of the existing steel beam and line with 6.0mm Hardiflex. Line the inside face of the steel beam with 16mm fyreline.

**Restaurant/Kitchen wall:**

The window in this wall is to be removed. Provide timber framing and line the inside with 12.5mm fyreline and the outside with 6.0mm Hardiflex according to the James Hardie fire rated systems. Flash around the Hardiflex on the external face to provide waterproofing.

The associated door into the lobby is to be a -/60/60 FRR fire door, complete with a closer.

**Kitchen wall:**

The associated door is to be replaced with a -/60/60 FRR door, complete with a closer.

**New Wall**

This timber framed wall is to be lined both sides with 12.5mm fyreline and is to extend to the roofing. Stop all joins.

Any light switches, power sockets etc in this wall are to include steel flush boxes and intumescent blocks.

Any cables, pipes, and ducts penetrating this wall are to include fire mastic, fire collars, and/or fire dampers, etc. to maintain the 60/60/60 FRR

**Floor:** FRR 30/30/30

The first floor is currently timber supported on timber floor joists spanning North-South.

A new 12.5mm fyreline ceiling lining is to be direct fixed to the underside of the floor. All joints are to be stopped. All light fittings are to be surface mounted or if recessed the light fittings are to be fire rated to 30/30/30. This ceiling lining includes the portion below the first floor above the recessed entrance to the ground floor. Line over the fyreline where external with Hardiflex.

Paint the exposed steel seating angles that support the floor joists with intumescent paint to provide a 30/-/- FRR. The Contractor is to certify, at the completion of the project, that the thickness of intumescent paint provided to the steel connections is sufficient to achieve a 30 minute fire rating.

Any penetrations, including ducts, cables and pipes are to be fire stopped including fire dampers, fire collars and/or fire rated mastic to maintain the fire rating of the floor lining.

The penetration remaining from the removal of the internal stair is to be filled with timber joists with a chipboard floor. The new ceiling lining is to be provided as above. Stop all joints.

**Roofs:** FRR 60/60/60

The underside of the kitchen roof is to be lined with one layer of 16mm fyreline and one layer of 12.5mm fyreline. Stop all joints of the exposed layer. All light fittings are to be surface mounted.

Fire stop the gaps between the roofing and the fyreline linings where the kitchen exhaust is to penetrate. This is to be achieved by providing solid blocking and lining over with 16mm fyreline. Stop all joints.



**FIRE SAFETY OUTLINE SPECIFICATION FOR**  
**RESTAURANT AND APARTMENT AT**  
**595A COLOMBO STREET, CHRISTCHURCH**

991057/F/1  
Issue 1  
2 November 1999

This Outline Specification is to be read together with drawing F1.

**Alarms:**

Provide a Type 3e automatic heat detector system throughout the ground floor. The system is to include manual call points, sounders and an indicator panel with building zoning. The sounders are to be provided throughout both floor levels.

Although not required by Code it is recommended that smoke detectors in the bedrooms and hallway on first floor also be provided.

The entire system is to comply with NZS 4512:1997 especially in regard to sound levels in the bedrooms.

The system need not be Brigade connected.

The location of the indicator panel is to be approved by the Fire Service.

FPIS or other approved independent inspection company are to inspect and approve the system at the end of the job.

**Exit Signs:**

Provide a new painted exit sign in the location shown on drawing F1.

**Egress Doors:**

Provide egress doors as shown on the drawings. These doors are to have minimum width as shown.

All egress doors are to include hardware that allows a keyless egress from inside at all times. Modify existing doors as necessary.

**Fire Doors:**

Provide a new 1 hour certified fire door to outside from the kitchen, complete with door closer.

**Walls:**

Type A: FRR 60/60/60

Remove the glazing directly above the canopy and replace with timber framing lined on the inside with 12.5mm fyreline and on the outside with 6.0mm Hardiflex according to the James Hardie fire rated systems. Refer attached.

Remove the timber facing on the outside of the existing steel beam and line with 6.0mm Hardiflex. Line the inside and bottom faces of the steel beam with 16mm fyreline.

Type B: FRR 60/60/60

The window in this wall is to be removed. Provide timber framing. Line the inside with 12.5mm fyreline and the outside with 6.0mm Hardiflex according to the James Hardie fire rated systems. Refer attached.

Flash around the Hardiflex on the external face to provide waterproofing.

**Floor:** FRR 30/30/30

The first floor is currently timber supported on timber floor joists spanning North-South.

A new 12.5mm fyreline ceiling lining is to be direct fixed to the underside of the floor. All joins are to be stopped. All light fittings are to be surface mounted or if recessed the light fittings are to be fire rated to 30/30/30. This ceiling lining includes the portion below the first floor above the recessed entrance door to the ground floor.

Paint any new steel support beams and any steel connections with intumescent paint to provide a 30/-/- FRR.

Any penetrations, including ducts, cables and pipes are to be fire stopped including fire dampers, fire collars and/or fire rated mastic to maintain the fire rating of the floor lining.

The penetration remaining from the removal of the internal stair is to be filled with timber joists with a chipboard floor. The new ceiling lining is to be provided as above. Stop all joins.



**Roofs:** FRR 60/60/60

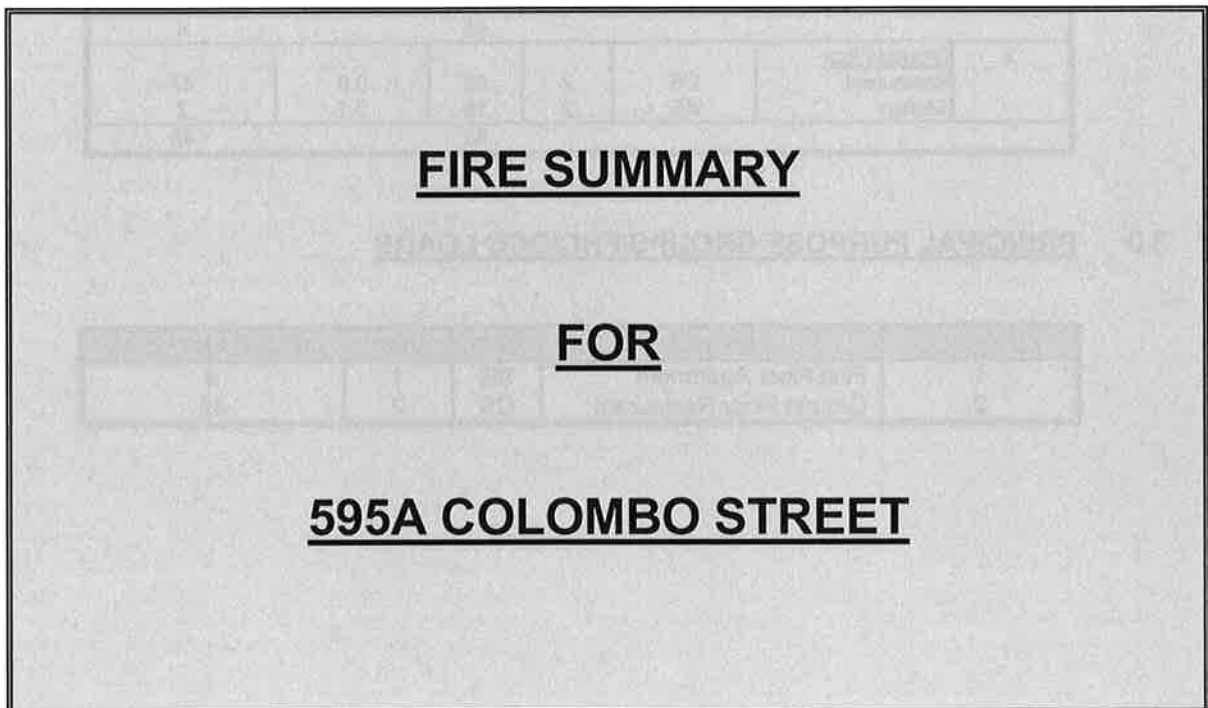
The underside of the kitchen roof is to be lined with one layer of 16mm fyreline and one layer of 12.5mm fyreline. Stop all joins of the exposed layer. All light fittings are to be surface mounted.

**Stair and Walkway from 1<sup>st</sup> Floor:**

The stair and walkway from 1<sup>st</sup> floor is to be 850mm wide with 1 handrail.

Barriers are to be provided that comply with F4/AS1.

991057/F/1



ISSUE A  
K. D. IRWIN



## 1.0 PHILOSOPHY

This is an existing 2-storey building presently used for retail on the Ground Floor and vacant office space on the 1<sup>st</sup> Floor.

This project involves converting the retail space on the Ground Floor into a Restaurant, and the vacant offices into a residential Apartment.

As part of this project, the existing internal stair is to be removed and a new exit provided to the Apartment. The new exit is to be via the roof of the kitchen below and a new external stair to the carpark area.

## 2.0 PURPOSE GROUPS, FHC, OCCUPANT LOADS

FIRECELL	ACTIVITY	PURPOSE GROUP	FHC	AREA m <sup>2</sup>	OCC DENSITY	OCC LOAD
1	First Floor Apartment	SR	1	50	4 beds	4
				50		4
2	Ground Floor Restaurant	CS	2	52	0.9	47
	Kitchen	WL	2	16	0.1	2
				68		49

## 3.0 PRINCIPAL PURPOSE GROUPS/FHC/OCC LOADS

FIRECELL	SPACE	PPG	FHC	OCCUPANT LOAD
1	First Floor Apartment	SR	1	4
2	Ground Floor Restaurant	CS	2	49

#### 4.0 **F RATINGS AND ALARM TYPES**

##### 4.1 **SR**

OL = 4

F30 Alarm Type 1

CI B2.7.1 Allows the F rating to be F0 for a top floor.

##### 4.2 **CS**

OL = 49

As per Clause B2.5.2:

Determine the F-rating by assuming the occupant load occurs on the first floor.

⇒ F15

Determine other precautions by considering a single floor building.

⇒ Nil

However, CI B2.4.2 states that no matter what purpose group is below an SR occupancy, the floor is to have heat or smoke detectors that activate alerting devices in all sleeping areas in the building. This implies a Type 3e system is required.

##### 4.2 **Summary**

F15 Alarm Type 3e on the Ground Floor with sounders throughout.

F0 Alarm Type 2e on the First Floor

Note that Alarm Type 1 has been changed to Alarm Type 2 under the draft June 1999 Amendment to the Acceptable Solution.

Note that this building does not require to have an approved evacuation scheme as there are not 100 or more persons present at the same time and there is only one household unit provided.

Although not required by Code it is recommended that smoke detectors in the bedrooms and hallway on first floor be provided.



## 5.0 UNPROTECTED AREAS IN EXTERNAL WALLS

### 5.1 North And South Walls

These walls are on the boundary and are required to have no unprotected areas. They are double brick for the 2-storey portion and concrete block for the single-storey section.

The brick walls are party walls and are provided after fire support by the adjoining buildings.

Both types of walls have no openings and are thus satisfactory.

### 5.2 West Wall

#### 5.2.1 Ground Floor

The window in the Restaurant is to be filled in and a new 1 hour fire door is to be provided to the car park. The entire wall is therefore protected and boundary issues are satisfied.

#### 5.2.2 First Floor

Consider the brickwork to be protected. Windows are unprotected.

$$\begin{aligned} \text{Percentage Openings} &= \frac{2 \times 0.5 \times 1.5}{3 \times 6} \\ &= 8\% \text{ (use 20\%)} \end{aligned}$$

Require 1.0m to the relevant boundary.

Actually have 9m to the relevant boundary, therefore OK.

#### Protection to the South Boundary

Angle = 90°  
Db = 0.5m

Windows are set back 1m from the boundary therefore OK.

#### Protection to the North Boundary

Angle = 90°  
Db = 0.5m

Windows are set back 1m from the boundary therefore OK.

## 6.0 MEANS OF ESCAPE

### 6.1 Number

C2 Table 1 requires two means of escape from all areas:

First Floor Apartment	1 available	NG
Ground Floor Restaurant	2 available	OK
Ground Floor Kitchen	1 available	NG

A single exit is acceptable from the first floor as the requirements of Clauses C2 5.4.3 and 5.1 are satisfied, and the escape route from the Unit is external. A single escape route from the Restaurant and kitchen is acceptable as long as the dead end travel distances comply.

### 6.2 Lengths

A 15% increase in allowable lengths is permitted because of the heat detectors.

	ACTUAL (m)	ALLOWABLE (m)	
SE corner of Apartment to ground (Dead End)	23	24 x 1.15 = 28	OK
SW corner of Restaurant to Street (Dead End)	13	18 x 1.15 = 21	OK
SW corner of Kitchen to Street (Dead End)	21	18 x 1.15 = 21	OK

### 6.3 Widths

Where the occupant load being served is less than 50 persons, the minimum required exit width reduces to 700mm for horizontal travel and 850mm for vertical travel.

	BASED ON ACTIVITY (mm)	BASED ON OCCUPANT LOAD (mm)	ACTUAL	
Door out of Apartment	700	4 x 7 = 28	-	NEW
Stair to roof and stair to ground	850	4 x 9 = 36	-	NEW
Walkway across roof	700	4 x 7 = 28	-	NEW
Exit door from Restaurant	700	49 x 7 = 343	800	OK
Door from kitchen to Restaurant	700	2 x 7 = 14	800	OK



#### 6.4 **Handrails**

C2 Cl 2.3.8 Requires a single handrail to the stairs.

Note that the stairs being external will require barriers that comply with F4/AS1.

#### 6.5 **Doors**

C2 Cl 7.2.2 Requires the exit doors to have a keyless exit.

The door from the Restaurant has a deadlock. This will need to be modified so that a key is not required to unlock the door from the inside.

C2 Cl 7.2.3 Requires the following doors to open out:

Door to outside from restaurant Yes (OL=49)

The door does open out, therefore OK.

#### 6.6 **External Escape Route**

C2 Cl 4.4.2 The roof of the kitchen is to be fire rated where it is within 2m of the pathway to be provided across the top of the roof for the Apartment occupants.

The whole of the roof will be provided protection as described in Section 11.0 of this report.

C2 Cl 4.4.4 The external wall of the Apartment need not be protected within 2m of the external escape route because the direction of escape is directly away from this wall. Therefore the positioning of the windows is acceptable.

C2 Cl 4.4.6 The roof of the kitchen is to comply with C3 Cl 4.8.3.

Barriers of the stairs and escape route across the roof are to comply with F4/AS1.

C3 Cl 4.8.3 The roof of the kitchen within 3m of the exitway and all supporting elements are to have an FRR of 30/30/30.

The roof however needs a 60/60/60 FRR as detailed in Section 11.0 of this report.

## 7.0 **SIGNS**

The SR Apartment need not have any signs.

Provide a painted 'EXIT' sign above the door from the kitchen to the Restaurant.

It is not considered necessary to supply a sign above the exit door from the Restaurant as this door provides the only access to the Restaurant and therefore people in the Restaurant will be familiar with it.

## 8.0 **FLOORS**

C3 Cl 2.2.1 Requires the floor and its support structure to have a 15/15/15 FRR. However, C2 Cl 5.3.1 and C3 Cl 2.10 requires a 30/30/30 FRR.

The first floor is currently timber supported on timber floor joists spanning North-South.

A new 12.5mm fyreline ceiling lining is to be direct fixed to the underside of the floor. All joins are to be stopped. All light fittings are to be surface mounted or if recessed the light fittings are to be fire rated to 30/30/30.

New steel support beams and any steel connections are to be painted with intumescent paint to provide a 30/-/- FRR.

Any penetrations, including ducts, cables and pipes are to be fire stopped including fire dampers, fire collars and/or fire rated mastic to maintain the fire rating of the floor lining.

## 9.0 **SR**

C3 Cl 2.10 Requires a 30/30/30 separation to other household units, or firecells.

The works described under Section 8.0 above will satisfactorily separate the apartment and restaurant firecells.

## 10.0 **S-RATING**

An S-rating is required because some of the external walls and the kitchen roof need protection.



10.1 Consider Ground Floor

$$H = 2.5\text{m}$$

$$\frac{A_v}{A_f} = \frac{2.4 \times 4.5}{58} = 0.18$$

$$\frac{A_h}{A_f} = \text{Nil}$$

$$\text{FLED} = 800\text{MJ/m}^2$$

$$k_b = 0.055$$

$$t_e = 48 \text{ mins}$$

$$k = 1.0 \text{ (unsprinklered)}$$

S48 , use **S60**.

The double brick and concrete block walls are considered able to achieve this S-rating.

10.2 Consider First Floor Apartment

$$H = 2.5\text{m}$$

$$\frac{A_v}{A_f} = \frac{1.5 \times 3.0 + 2 \times 1.5 \times 0.5}{50} = 0.12$$

$$\frac{A_h}{A_f} = \text{Nil}$$

$$\text{FLED} = 400 \text{ MJ/m}^2$$

$$k_b = 0.055$$

$$t_e = 34$$

$$k = 1.0 \text{ (unsprinklered)}$$

S34, use **S60**

The double brick and concrete block walls will provide this.

## 11.0 VERTICAL FIRESPREAD

- C3 Cl 4.4.3 The roof of the kitchen is to have an FRR of 60/60/60 (this being the S-rating) due to the SR purpose group occurring on the 1<sup>st</sup> floor.

The underside of the kitchen roof is to be lined with one layer of 16mm fyrelime and one layer of 12.5mm fyrelime. All joins of the exposed layer are to be stopped. All light fittings are to be surface mounted.

- C3 Cl 4.4.6 Unprotected areas in external walls are to be separated by 2.5m due to the SR purpose group occurring on the 1<sup>st</sup> floor.

A spandrel of 2.1m is to be created by removing the glazing directly above the existing canopy and replacing with timber framing and lining the inside with 12.5mm fyrelime and the outside with Hardiflex. The timber facing on the outside of the steel beam below the canopy is to be removed and replaced with hardiflex and the inside and bottom of the beam is to be lined with 16mm fryeline.

A Spandrel of 2.1m is considered acceptable in this instance due to the canopy. This canopy, even though combustible, will for a period of time deflect flames protruding from a restaurant fire away from the wall face thus decreasing the time for vertical fire spread.

## 12.0 HORIZONTAL FIRESPREAD

Refer to Section 5.0.

Parapets are not required because the FHC = 2 and 1.



991057/F/1

**FIRE SUMMARY**

**FOR**

**595A COLOMBO STREET**

ISSUE B  
K. D. IRWIN

## 1.0 PHILOSOPHY

This is an existing 2-storey building presently used for retail on the Ground Floor and vacant office space on the 1<sup>st</sup> Floor.

This project involves converting the retail space on the Ground Floor into a Restaurant, and the vacant offices into a residential Apartment.

As part of this project, the existing internal stair is to be removed and a new exit provided to the Apartment. The new exit is to be via the new deck being constructed above the roof of the kitchen and a new external stair to the carpark area.

## 2.0 PURPOSE GROUPS, FHC, OCCUPANT LOADS

FIRECELL	ACTIVITY	PURPOSE GROUP	FHC	AREA m <sup>2</sup>	OCC DENSITY	OCC LOAD
1	First Floor	SR	1	50	4 beds	4
	Apartment			50		4
2	Ground Floor	CS	2	52	0.9	47
	Restaurant			16	0.1	2
	Kitchen		68		49	

## 3.0 PRINCIPAL PURPOSE GROUPS/FHC/OCC LOADS

FIRECELL	SPACE	PPG	FHC	OCCUPANT LOAD
1	First Floor Apartment	SR	1	4
2	Ground Floor Restaurant	CS	2	49



#### 4.0 **F RATINGS AND ALARM TYPES**

##### 4.1 **SR**

OL = 4

F30 Alarm Type 1

CI B2.7.1 Allows the F rating to be F0 for a top floor.

##### 4.2 **CS**

OL = 49

As per Clause B2.5.2:

Determine the F-rating by assuming the occupant load occurs on the first floor.

⇒ F15

Determine other precautions by considering a single floor building.

⇒ Nil

However, CI B2.4.2 states that no matter what purpose group is below an SR occupancy, the floor is to have heat or smoke detectors that activate alerting devices in all sleeping areas in the building. This implies a Type 3e system is required.

##### 4.2 **Summary**

F15 Alarm Type 3e on the Ground Floor with sounders throughout.

F0 Alarm Type 1 on the First Floor

Note that this building does not require to have an approved evacuation scheme as there are not 100 or more persons present at the same time and there is only one household unit provided.

Although not required by Code it is recommended that smoke detectors in the bedrooms and hallway on first floor be provided.

## 5.0 UNPROTECTED AREAS IN EXTERNAL WALLS

### 5.1 North And South Walls

These walls are on the boundary and are required to have no unprotected areas. They are double brick for the 2-storey portion and concrete block for the single-storey section.

The brick walls are party walls and are provided after fire support by the adjoining buildings.

Both types of walls have no openings and are thus satisfactory.

### 5.2 West Wall

#### 5.2.1 Ground Floor

The window in the Restaurant is to be filled in and a new 1 hour fire door is to be provided to the car park. The only unprotected area is the toilet windows. These toilets are to be fire separated from the remainder of the building, therefore boundary issues are satisfied.

#### 5.2.2 First Floor

Consider the brickwork to be protected. Windows and door are unprotected.

$$\begin{aligned} \text{Percentage Openings} &= \frac{0.8 \times 2.1 \quad (\text{door})}{3 \times 6} + \frac{0.8 \times 0.5 + 1.5 \times 0.5}{3 \times 6} \quad (\text{windows}) \\ &= 16\% \quad (\text{use } 20\%) \end{aligned}$$

Require 1.0m to the relevant boundary.

#### Protection to the West Boundary:

Have 9m from the 1<sup>st</sup> floor external wall to the West boundary, therefore OK.

#### Protection to the North and South Boundaries

Angle = 90°  
Db = 0.5m

The closest window to the North boundary is 1.2m away and the closest window to the South boundary is 0.5m away, therefore OK.

## 6.0 MEANS OF ESCAPE

### 6.1 Number



C2 Table 1 requires two means of escape from all areas:

First Floor Apartment	1 available	NG
Ground Floor Restaurant	2 available	OK
Ground Floor Kitchen	2 available	OK

A single exit is acceptable from the first floor as the requirements of Clauses C2 5.4.3 and 5.1 are satisfied, and the escape route from the Unit is external. However, check dead end travel distances.

## 6.2 Lengths

A 15% increase in allowable lengths is permitted on ground floor because of the heat detectors.

	ACTUAL (m)	ALLOWABLE (m)	
SE corner of Apartment to ground (Dead End)	25	24	OK
SW corner of Restaurant to Street (Dead End)	13	$18 \times 1.15 = 21$	OK
SW corner of Kitchen to Street (Dead End)	18	$24 \times 1.15 = 28$	OK

## 6.3 Widths

Where the occupant load being served is less than 50 persons, the minimum required exit width reduces to 700mm for horizontal travel and 850mm for vertical travel. New doors are to be at least 700mm wide and the new stair is to be at least 850mm wide.

## 6.4 Handrails

C2 Cl 2.3.8 Requires a single handrail to the stairs.

Note that the stairs being external will require barriers that comply with F4/AS1.

## 6.5 Doors

C2 Cl 7.2.2 Requires the exit doors to have a keyless exit.

C2 Cl 7.2.3 Requires the following doors to open out:

Door to outside from restaurant Yes (OL=49)

The new restaurant door is to open out.

## 6.6 External Escape Route

C2 CI 4.4.2 The roof of the kitchen is to be fire rated where it is within 2m of the pathway to be provided across the top of the roof for the Apartment occupants.

The whole of the roof will be provided protection as described in Section 11.0 of this report.

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The roof however needs a 60/60/60 FRR as detailed in Section 11.0 of this report.

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Provide a painted 'EXIT' sign above the door from the kitchen to the Restaurant.

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$$k_b = 0.055$$

$$t_e = 48 \text{ mins}$$

$$k = 1.0 \text{ (unsprinklered)}$$

S48, use **S60**.

The double brick and concrete block walls are considered able to achieve this S-rating.

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$$H = 2.5\text{m}$$

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$$\frac{A_h}{A_f} = \text{Nil}$$



Af

FLED = 400 MJ/m<sup>2</sup>

kb = 0.055

te = 34

k = 1.0 (unsprinklered)

S34, use **S30**

The double brick and concrete block walls will provide this.

## 11.0 VERTICAL FIRESREAD

C3 Cl 4.4.3 The roof of the kitchen is to have an FRR of 60/60/60 (this being the S-rating) due to the SR purpose group occurring on the 1<sup>st</sup> floor.

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## 12.0 HORIZONTAL FIRESREAD

Refer to Section 5.0.

Parapets are not required because the FHC = 2 and 1.

**PRODUCER STATEMENT - DESIGN**ISSUED BY: **POWELL FENWICK CONSULTANTS LIMITED**

991057/S/1

DESIGN ENGINEER: **Kevin John Simcock**TO: **Property Check**IN RESPECT OF: **Proposed alterations, building strengthening to remove earthquake prone classification, timber deck.**AT: **595A Colombo Street, Christchurch.**

LOT: 6 DP: 6296 CT: 349/2

**POWELL FENWICK CONSULTANTS LIMITED** has been engaged by **Property Check** to provide **Structural Engineering Design** services in respect of the requirements of Clause **B1** of the Building Regulations 1992 for

All  Part only as specified

of the building work. The design has been prepared in accordance with **B1/VM1 and B1/VM4** of the approved documents issued by the Building Industry Authority and the work is described on **Powell Fenwick Consultants Limited** drawings titled **Plans, Elevations and Details** and numbered **S1** according to which the building is proposed to be constructed.

As an independent design professional covered by a current policy of Professional Indemnity Insurance to a minimum value of \$200,000, I believe on reasonable grounds that subject to:-

- (i) the verification of the following design assumptions:- **Allowable foundation bearing pressure to be a minimum 100kPa.**
  - (ii) **Unless specifically noted, compliance of the drawings to Non Specific codes such as NZS 3604 and NZS 4229 have not been checked by this practice.**
  - (iii) **This certificate does not cover stability or suitability of the site.**
  - (iv) **this Producer Statement - Design is valid for 1 year only from the date of issue.**
- and (v) all proprietary products meeting the performance specification requirements, the drawings, according to which the building is proposed to be constructed comply with the relevant provisions of the building code.

**K.J. SIMCOCK****B.E., (Hons) M.E., M.I.P.E.N.Z****ON BEHALF OF POWELL FENWICK CONSULTANTS LIMITED****P O BOX, 25 108, CHRISTCHURCH**Date **25 January 2001**ERB/Reg No **8532**Member ACENZ IPENZ 

Original To:- Property Check  
P O Box 18 841  
Christchurch  
Attention: Allan Miller (3 copies)

***Inspections required are shown on the reverse.***

**Our Ref. 991057/S/1**

**RE: SCHEDULE OF INSPECTIONS**

Engineering inspections relating to compliance with the appropriate NZS Materials Standards and for verification of design assumptions are required as follows:-

	TIME	NO. OF INSPECTIONS
1	Foundations	1
2	Prelining	1

We confirm that records of our inspections will be left on site.

A Producer Statement, Construction Observation, could be issued once the above inspections have been completed.

It is the owners responsibility to notify the Engineer to enable the above inspections to be completed.

**POWELL FENWICK CONSULTANTS LIMITED**



## PRODUCER STATEMENT - CONSTRUCTION REVIEW

Job No: 991057/F/1

ISSUED BY: **POWELL FENWICK CONSULTANTS LIMITED**

DESIGN ENGINEER: **Kevin D. Irwin**

TO: **Property Check**

IN RESPECT OF: **Fire protection systems, fire walls and doors, egress doors, fire rated ceiling,  
fire rated floor.**

AT: **595A Colombo Street, Christchurch.**

LOT: 6          DP: 6296          CT: 349/2

**POWELL FENWICK CONSULTANTS LIMITED** has been engaged by **Property Check** to provide Fire Engineering Observation services in respect of the requirements of Clauses **C2-C4, F7 and F8** of the Building Regulations 1992 and the work as described in the **Fire Safety Outline Specification and Fire drawings** prepared by **Powell Fenwick Consultants Ltd.**

As an independent design professional covered by a current policy of Professional Indemnity Insurance to a minimum value of \$200,000, I or personnel under my control have carried out periodic reviews of the work appropriate to the engagement and based upon these reviews and information supplied by the Contractor during the course of the works **I BELIEVE ON REASONABLE GROUNDS THAT**

All       Part only, as specified in the above documents

of the building work has been completed to the extent required by the building consent and in accordance with the intent of our design.

**D.R. JAMES**  
**BE, (Hons) M.I.P.E.N.Z**  
**ON BEHALF POWELL FENWICK CONSULTANTS LIMITED**  
**P O BOX, 25 108, CHRISTCHURCH**

Date **23<sup>rd</sup> December 2003**  
ERB/Reg No **10033**

Member IPENZ

Original To:- Property Check  
P O Box 18841  
Christchurch  
Attention: Alan Millar (1 copy)

cc: Christchurch City Council  
PO Box 237  
Christchurch  
Attention: Tracy Quinton (1 copy)  
Attention: Kerry Walsh

**PRODUCER STATEMENT -  
CONSTRUCTION REVIEW**

BUI.COL595A.0028N.1

Job No.: **991057/S/1**

ISSUED BY: **POWELL FENWICK CONSULTANTS LIMITED**  
 DESIGN ENGINEER: **Kevin John Simcock**  
 TO: **Property Check**  
 IN RESPECT OF: **Inspection to check existing when building was opened up.**  
 AT: **595A Colombo Street, Christchurch.**  
 LOT: **6** DP: **6296** CT: **349/2**

**POWELL FENWICK CONSULTANTS LIMITED** has been engaged by **Property Check** to provide observation as defined in the Producer Statement Design with the exception of **Pre Lining** services in respect of the requirements of Clause **B1/VM1** and **B1/VM4** of the Building Regulations 1992 for the building work described by the drawings and Specifications prepared by **Powell Fenwick Consultants Limited** titled and numbered **S1**.  
 Variation(s) No; **None Issued**.

As an independent design professional covered by a current policy of Professional Indemnity Insurance to a minimum value of \$200,000, I or personnel under my control have carried out periodic reviews of the work appropriate to the engagement and based upon these reviews and information supplied by the Contractor during the course of the works **I BELIEVE ON REASONABLE GROUNDS THAT**

All  Part only as specified in our producer statement design

of the building work, has been completed in accordance with the intent of our design.

**K.J. Simcock**  
**BE., (Hons) M.E., M.I.P.E.N.Z**  
**ON BEHALF OF POWELL FENWICK CONSULTANTS LIMITED**  
**P O BOX, 25 108, CHRISTCHURCH**

Date  
 ERB/Reg No **8532**

Member ACENZ   
 IPENZ

Original To:- **Property Check**  
**P O Box 18841**  
**Christchurch**  
**Attention: Allan Millar**

Copy To:- **Christchurch City Council**  
**Kerry Walsh**  
**Fax: 941 8920**

**Mrs. Kazuko Sagagucci**





991057/S/1

**REPORT ON**  
**BUILDING**  
**AT**  
**595A COLOMBO STREET**  
**CHRISTCHURCH**

## **1.0 INTRODUCTION**

It is proposed to convert the existing retail (florist shop) premises at 595A Colombo Street into a Ground Floor restaurant, with sleeping accommodation for the restaurant owners above.

At the request of Property Check Limited, Powell Fenwick Consultants Limited have carried out a structural assessment of the building to determine the minimum requirements to enable the conversion to proceed. This assessment has included inspecting the building, researching the minimum statutory requirements, and preliminary calculations.

## **2.0 DESCRIPTION OF THE BUILDING**

The existing building is one unit of a group of 10. This group, shares party wall separations and the Colombo Street façade. Each building in the group is on its own separate title, with independent ownership.

The buildings are constructed of solid brick walls. The street front wall is essentially all opening at the ground floor level, with approximately 50% piercing by windows above the first floor level. The side walls are solid brick, approximately 330mm thick at ground floor level, and 220mm thick above first floor level. The rear wall to the original building is solid brick, with 30-40% piercing at both levels. A single storey blockwork lean to addition has been constructed beyond this rear wall, at the ground floor level.

Internally, there are existing block walls at ground floor level. These walls have been constructed as partition walls reaching only as high as a timber framed suspended ceiling that has been hung about 1m below the original ground floor ceiling. The walls on the internal side of the existing stairway are timber framed, as are the partition walls for the first floor. (See the attached free hand sketch)

The original ground floor has been replaced with a pored concrete floor. The first floor is constructed of timber floor joists spanning the building's width. The joists sit into the brick walls at least 75mm in the one location measured.

## **3.0 THE COMPLIANCE REGULATIONS**

The Building Act requires that when a building undergoes a "change of use", it is upgraded structurally to comply "as nearly as is reasonably practicable", with the requirements of the building code for a new building.

The proposed change for this building, from a retail/office use to a restaurant/sleeping occupation is interpreted as a "change of use" for compliance with the Building Act.

The Act also requires that the building comply with the requirements for facilities for access and use both those with disabilities as for a new building.

#### **4.0 WHAT IS REQUIRED TO MAKE THIS BUILDING COMPLY**

Because this building is one of a group of 10, strongly linked structurally, there is an argument that strengthening one is unlikely to benefit the group much, and could well attract significant load to this one unit. However, the usual interpretation by the Christchurch City Council is that the strengthening process must start somewhere, and that as the opportunity arises, each unit will be required to complete their proportion of the structural upgrade.

For this building the minimum work that will be required above first floor level is to verify the tying of the existing first floor walls into the brick walls, first floor ceiling, and the first floor itself. This will require the removal of the linings to one side of these walls, adjacent to the party walls. It is likely that chemset anchors will need to be drilled through the wall end studs into the brick party walls. These anchors will be required at about 600mm centres up the height of the stud. It is expected that the existing ceiling and floor connections will be sufficient, but this must be verified before final approval is given.

The first floor joists will require tying to the existing supporting and end brick walls. This is most easily achieved by providing 150x150x8 steel angles running around the perimeter of the first floor at skirting level. Alternatively the angles could be fixed below the floor similar to a ceiling scotia. The angles are fixed into the timber joists, with coachscrews, and into the brick walls with M12 chemsets at say 600 centres. (These sizes and spacings are for pricing purposes only, and have not been sized as a complete design).

The block work walls inside the building at ground floor level may be removed. The existing false ceiling is to be removed, and the underside of the original first floor relined with a stiff diaphragm material such as plywood, or brackline gib.

A new steel portal frame is to be installed below the first floor adjacent to the Colombo Street façade. Allow for a 360UB45 portal frame at this stage. It is to be connected into the existing side brick walls (with M16 chemsets), and is to be rigidly attached to the perimeter steel angle to the floor above. It is assumed at this stage that additional foundations will not be required to this portal frame.

The existing rear blockwork section of the building will not requiring strengthening at this stage.



To comply with the disabled provisions, the new restaurant will require a disabled toilet to be provided. The existing ramp access to the ground floor must be maintained, and the route between the restaurant tables and the toilet must have the minimum clearances required by the Code.

## **5.0 SUMMARY**

Because the proposed alterations to the building are interpreted as a "change of use", the building requires structural upgrading to comply with the requirements of the Building Code.

An outline of the upgrade work required has been provided above.

A disabled toilet, with complying access is also required for this conversion.

**K. J. SIMCOCK B.E., (Hons) M.E., M.I.P.E.N.Z**  
**POWELL FENWICK CONSULTANTS LIMITED**

This report has been prepared solely for the benefit of our client. No liability is accepted by this firm or by any principal, or director, or any servant or agent of this firm, in respect of its use by any other person. Any other person who relies upon any matter contained in this report does so entirely at their own risk.