

BEFORE THE INVERCARGILL CITY COUNCIL

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER an application for land use consent to demolish
the Briscoes Building at 104-106 Dee Street
Invercargill, a Category 2 Historic Place on the
New Zealand Heritage List / Rārangī Kōrero.

BY **104 Dee Street Partnership**
Applicant

BRIEF OF EVIDENCE OF: ROBERT LANE

August 31 2026

Counsel acting for Applicant:

Clare Lenihan, Barrister

80 Layard Street, Invercargill 9810

Tel: (03) 214 1674; 027 577 6823

clare.lenihan@environmentallawyer.co.nz

I, **Robert Joseph Lane**, of Lewis Bradford Consulting Engineers, Christchurch, state:

1 I am a Structural Engineer and a Director at Lewis Bradford Consulting Engineers, registered as Lewis Bradford & Associates Limited.

Qualifications and experience

2 I graduated with a Bachelor's Degree in Civil Engineering with Honours from University College Cork, Ireland in 2006.

3 I graduated with a Masters Degree in Science with Distinction in General Structural Engineering from Imperial College London, UK in 2008.

4 I graduated with a Postgraduate Certificate in Earthquake Engineering from University of Canterbury, New Zealand in 2015.

5 I have more than 19 years' continuous experience in structural engineering.

6 I am a Director at Lewis Bradford Consulting Engineers, and I have been employed by Lewis Bradford for 13 years.

7 I am a Chartered Professional Engineer (CPEng), a Chartered Member (CMEngNZ) of Engineering New Zealand and a Chartered Member (CEng) of the Institution of Structural Engineers, UK.

8 I specialise in the assessment of existing buildings, including heritage buildings and the design and construction monitoring of new buildings.

9 I have been responsible for:

- (a) the structural assessment, repair and strengthening of the Historic Place Category 1 Christchurch Boy's High School Main Block buildings.
- (b) the fire damage repair and strengthening of the Historic Place Category 1 Christchurch Boys' High School Deans Farm Buildings.
- (c) The design of temporary securing and façade retention for the Coxhead, Cambridge and Southland Times buildings along Esk Street in 2020-2021, which were integrated into the recently completed Invercargill Central Development.

(d) The design of temporary securing and façade retention for the Historic Place Category 1 Bank of New South Wales building at the corner of Dee and Tay streets which is to be integrated with the proposed new Tay Street Medical development (in design currently) in Invercargill.

10 At **Annexure A** is my curriculum vitae which sets out further details of projects I have been involved with.

11 In this evidence I will discuss the nature of the structural damage to the building located at 104-106 Dee Street, Invercargill (**'the building'**), provide an overview of the current structural condition of the building and outline short-term/temporary stabilisation options which have been considered in order to remove the Dangerous Building Notice and to provide protection to the existing heritage fabric.

12 I am familiar with the Code of Conduct for Expert Witnesses contained in Environment Court of New Zealand Practice Note 2023. I have read and agree to comply with that Code.

13 The opinions expressed in my evidence are matters within my personal knowledge and expertise. The facts, circumstances, and any assumptions on which my opinions are expressed are set out in my evidence. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express. Where I have relied on information supplied or sourced from another person, I have recorded this and identified the provider.

My Instructions and Background Context

14 I was initially engaged in August 2024 by the owner Linda Lee to provide feasibility level structural engineering advice regarding potential options for the building. My understanding at this time was that the owner was exploring the options available including repair, sale, temporary securing and demolition.

15 At the time of Lewis Bradford's engagement, the building had been categorised as a Dangerous and Insanitary Building by Invercargill City Council and the eastern portion of the building had been exposed to the elements for approximately 11 months.

16 On 9th September 2024, I completed an internal and external site walkover inspection. The internal inspection was limited to those areas safely and readily accessible. Time in the building was limited due to the widespread extent of mould and safety concerns. No intrusive investigations or destructive testing was completed at this time.

17 On 13th January 2025, I provided a Structural Review Memorandum. In this memorandum I stated general agreement with the structural damage assessment and structural conclusions of the October 2023 Kensington Consulting report. I also provided five high level options to assist the owner with determining feasible courses of action for the building, and to allow feasibility level cost estimates be obtained from an experienced quantity surveyor. These options were not specifically prepared with demolition as the intended course of action, and façade retention/propping options were not specifically prepared as short-term solutions required only to lift the Dangerous Building Notice. The five options were

- (i) Option 1 – Retain the facades on Dee Street and Spey Street and construct a new two-level structure to replace the existing building.
- (ii) Option 2 – Retain Façade Dee Street only and construct a new two-level structure to replace the existing building.
- (iii) Option 3 – Construct a new two-level structure with replica façades to Dee Street and Spey Street.
- (iv) Option 4 – Retain, temporarily secure and weather protect the Dee Street façade, and demolish the building behind façade. Leave the site clear for future development.
- (v) Option 5 – Retain, temporarily secure and weather protect the Dee Street & Spey Street facades. Retain the less damaged portions of the existing building where practical, and protect the existing structure with temporary roofing/cladding.

18 I understand that our January 2025 Memorandum was provided as part of the demolition consent application.

19 In August 2026, I was asked to consider and provide advice regarding short-term structural solutions required to provide adequate

structural stability to allow lifting of the Dangerous Building Notice. Structural considerations associated with my advice are outlined in the subsequent sections of this evidence and should be read with the drawing, sketches and photographs in **Annexure B**.

- 20 It is important to note that the solutions outlined below are intended as short-term propping solutions only to meet the threshold requirements of s121 of the Building Act and its definition of a 'dangerous building'. The level of performance required by the Act is not explicit, only referring to performance under 'normal circumstances' excluding earthquake. There is no definition of 'normal circumstances' in the Act that I am aware of.
- 21 For the purposes of this evidence, as I have been asked to consider short-term solutions, I have assumed that normal circumstances mean a 5-year design life under the New Zealand Loading Standard NZS1170.0, with the structure categorised as Importance Level 2 (normal building). Based on these assumptions design wind speeds have been derived in accordance with NZS1170.2 – Wind Design Actions. The design site wind speeds have been determined as ranging from approximately 115 km/hr to 150 km/hr depending on the wind direction.
- 22 In addition to 'normal circumstance' wind loading on the façade, consideration must also be given to the safety of workers who will be expected to operate in and around the building to install the temporary securing. Designers and building contractors will need to meet their obligations under the Health and Safety at Work Act 2015, which requires all reasonable steps to be taken to mitigate safety hazards.
- 23 The low threshold of a 'normal' wind event may not be acceptable to a building contractor in providing for the safety of their workers under the Health and Safety at Work Act 2015. Recent façade retention schemes I have been responsible for have targeted a higher performance threshold, both for worker and public safety and for heritage fabric protection. These schemes considered both short term wind and seismic loading. However, only short-term stabilisation works have been provided for costing at this stage to demonstrate the costs associated with the lower bound threshold for works of this nature.

Lower-Impact Options

- 24 I outline below two potential approaches for consideration which are further detailed in **Annexure B**.

Option (A) – Short-Term Stabilisation and Weatherproofing.

This option is included to communicate the likely works required ‘make-safe’ the existing building such that the Dangerous Building Notice can be removed, the street frontages to the buildings be re-opened, and the heritage fabric be weather-protected and retained to the extent practical to mitigate on-going deterioration, and also to facilitate future access for inspection and maintenance activities.

Option (B) – Dee Street Façade Retention and demolition of the remaining portions of the building.

This option is included as it represents a lesser extent of retention work (and cost) while providing a degree of heritage fabric retention (east front façade) and an otherwise clear site that could be re-developed to incorporate the façade, similar to the facades recently retained and integrated into the Invercargill Central Development on Esk Street.

- 25 The level of structural ‘design’ is to a feasibility/conceptual level only, based on our experience with similar buildings, and based on a limited site walkover inspection on 9th September 2024. This level of information has been considered to provide a balance between options tested to a suitable feasibility level and the investment required by the owner in exploring options. It is not expected that further engineering input would substantially change the nature of the proposed short-term stabilisation works.

Option (A) – Short-Term Stabilisation and Weatherproofing

- 26 With reference to the sketches in **Annexure B**, Option A retains the rear smoke damaged (western) portion of the building, and assumes that the more heavily fire-damaged front (eastern) portion is to be removed from roof to ground floor level. The Dee and Spey Street facades are to be retained, temporarily braced against wind loading and

repaired only to the extent required for temporary stability and to mitigate on-going deterioration of the heritage fabric.

27

The following sequence of work is envisaged:

- a. Install initial façade securing to the Dee and Spey Street facades, propping externally to the footpaths/street, to allow for safe access into the building for workers. This is required to mitigate the hazard of brickwork collapsing internally during initial work.
- b. Assess and remove the mould hazard to the degree required to allow works to progress internally.
- c. Carefully remove fire-damaged and deteriorated elements to the more heavily fire damaged east portion of the building. This is assumed to include all heavily damaged and deteriorated internal structure and building fabric from roof to ground floor.
- d. Install a temporary façade securing system to the inside faces of the Dee and Spey Street facades, in a controlled sequence, propping back into the site, allowing removal of temporary external propping and the public street frontages to be made good and re-opened.
- e. Complete temporary repairs and weatherproofing to the retained facades to mitigate on-going deterioration.
- f. Construct a temporary lightweight metal (or similar) clad wall to close in the east edge of the retained structure behind the propped east facade. This wall will provide weatherproofing to the east end of the western portion of the building which is to be retained.
- g. Install securing brackets between the roof and floor timberwork and the façade brickwork of the western portion of the building to temporarily secure the façade.

28

As the works are temporary in nature, considering a 5-year design life, and as the building will remain in a damaged condition with only minimal repairs required for short-term stability, annual structural inspections are recommended, in addition to inspections following severe wind events or a moderate seismic event.

Inspection should include checks for on-going deterioration of the retained heritage fabric and to confirm on-going suitability and the condition of the temporary securing system.

- 29 After a 5-year period the temporary securing system should be re-assessed and potentially upgraded if needed for a longer duration.

Option (B) – Dee Street Façade Retention and Demolition of the Remaining Portions of the Building

- 30 With reference to the sketches in **Annexure B**, Option B retains only the Dee Street façade and assumes the remainder of the building is demolished and the site cleared. This would include demolition of the Spey Street façade.

- 31 The following sequence of work is envisaged:

- a. Install initial façade securing to the Dee Street facade, propping externally to the footpath, to allow for safe access into the building for workers i.e. mitigate the hazard of brickwork collapsing internally during initial work.
- b. Assess and remove the mould hazard to the degree required to allow demolition works to progress.
- c. Demolish the building except for the Dee Street façade.
- d. Install the temporary façade securing system to the inside face of the Dee Street facade in a controlled sequence, propping back into the site. The propping sequence may need to be coordinated with the demolition sequence to provide a suitable level of protection to the façade during demolition works.
- e. Complete temporary repairs and weatherproofing to the retained Dee Street facade to mitigate on-going deterioration.
- f. Fence the remainder of the site

- 32 As the works are temporary in nature, considering a 5-year design life, and as the building will remain in a damaged condition with only minimal repairs required for short-term stability, annual structural inspections are recommended, in addition to inspections following severe wind events or a moderate seismic event.

- 33 Inspection should include checks for on-going deterioration of the retained heritage fabric and to confirm on-going suitability and the condition of the temporary securing system.
- 34 After a 5-year period the temporary securing system should be re-assessed and potentially upgraded if needed for a longer duration.

Origin Peer Review Report

- 35 In preparing the options above I have considered the comments outlined in the Origin Consultants Peer Review report dated 5 June 2026. I also make specific comments below.

Fire Damage to Masonry Facades

- 36 With specific reference to Section 6, page 8 of the Origin Consultants Peer Review which notes that '*visual damage to the masonry is largely cosmetic*'. I disagree that the masonry damage is cosmetic only. While I agree that individual masonry units are unlikely to have suffered a significant reduction in strength, it is likely that the original lime mortar has experienced a reduction in strength where exposed to high temperatures in the fire. The mortar is visibly degraded where viewed on a number of internal facades. Lime mortar deterioration over time is also not uncommon in unreinforced masonry construction, and this will likely have been exacerbated through the fire. In addition, burned out/damaged timber ledgers which are built into the brickwork will have locally weakened portions of the facades. The fire has also removed support for the facade at roof level making the facade significantly less stable under gravity and lateral loads.
- 37 While I agree that the facades can be repaired, a detailed investigation upon the completion of the temporary securing work is required to determine the exact repair scope. In terms of 'make safe' works, I would expect this to include an inspection by an experienced brickworker familiar with lime mortar construction, careful repointing where required, and replacing of damaged or deteriorated masonry units. Damaged timber ledgers need to be removed, and the façade locally repaired with new infill masonry.

Origins 'Questions for the Structural Engineer'

38 The following are questions posed in the Origin report along with my responses:

39 Q: What is the minimal propping or bracing that would be appropriate against high wind?

A: Option (A) and (B) above outline short-term propping schemes for wind loading only in accordance with NZS1170.2 for a design life of 5 years. Propping consists of industry standard temporary props, or small dimension structural steelwork box sections, clamped through the façade and attached to concrete ballast blocks at ground level. This is the common approach to temporarily bracing unreinforced masonry walls. A series of reference images are located in **Annexure B** to convey the general intent. The information is conceptual as noted previously and further details would be required prior to work commencing onsite.

40 Q: What conclusions can be made from the fact that that the existing facades survived some of the strongest recorded wins to hit Invercargill, in October last year?

A: Past performance of structures over a long period of time can be useful in determining potential future performance, particularly if no changes to the support conditions have occurred. However, even if demonstrated for a long period of time (e.g. over 10-20 years), I do not believe this would be sufficient to satisfy the Building Act's structural performance requirements in terms of life-safety, without design checks and verification to the relevant New Zealand loading and material standards. In the case of these façades, I do not believe it is appropriate to rely on performance over a short time period. The building is in a damaged and deteriorating condition, with a high variability in the condition of the brickwork masonry. This makes quantification of a reliable level of risk difficult and uncertain.

New Zealand's wind loading standards are based on a probabilistic framework that takes into account annual probability of exceedance and the design life of the structure. Anecdotal past performance alone is not an adequate basis under the Building Code or Building Act to demonstrate compliance.

Conclusions

- 41 The existing building located at 104-106 Dee Street has sustained significant fire, moisture and mould related damage to its eastern portion and smoke and moisture related damage to its western portion.
- 42 The eastern portion of the building has been exposed to the weather since September 2023 and is continuing to deteriorate.
- 43 The unreinforced masonry brickwork facades along Dee Street and partially along Spey Street have sustained structural fire related damage including mortar degradation and burning out of timber ledgers that were built into the brickwork. In addition, the roof timberwork which is required to restrain and connect the facades to the building is either no longer in place or is no longer reliable given the extent of damage.
- 44 The combination of damage and the lack of restraint to the building means the life-safety hazard posed by facades is significant. The hazard to the public along Dee Street façade has been temporarily addressed using shipping containers and the hazard along Spey Street has been temporarily addressed by cordoning off the area below the facades.
- 45 Short-term stabilisation options have been outlined in this evidence with the aim of addressing the Dangerous Building Notice only i.e. prop the buildings facades against a 'normal' wind event.
- 46 Careful work sequencing including consideration of worker safety needs to be included in the short-term stabilisation options. The low threshold of a 'normal' wind event may not be acceptable to a building contractor in providing for the safety of their workers under the Health and Safety at Work Act 2015. Recent façade retention schemes I have been responsible for have targeted a higher performance threshold (considering both wind and earthquake loading), both for worker and public safety and for heritage fabric protection. However, only short-term stabilisation works have been provided for costing at this stage to demonstrate the potential scope of work and costs associated with the lower bound threshold for works of this nature.

Dated this 31st day of August 2026

A handwritten signature in blue ink, consisting of a stylized 'R' followed by a long, sweeping horizontal stroke.

Robert Joseph Lane

ANNEXURE A



lewis bradford
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Robert Lane

**Director
Christchurch Office**

BEng (Hons),
University College Cork, Ireland
MSc (Advanced Structural Engineering)
Imperial College London
PGCertEng (Earthquake)
University of Canterbury
CMEngNZ CPEng MStructE

Publications:

Practical examples of using qualitative assessment methods to assess the earthquake risk of historic structures in the Christchurch area - 2014 - New Zealand Society for Earthquake Engineering



Professional Experience and Affiliations

Director

Lewis Bradford, Christchurch Office (2026-present)

Associate and Shareholder

Lewis Bradford, Christchurch Office (2018-2026)

Associate

Lewis Bradford, Christchurch Office (2017-2018)

Senior Structural Engineer

Lewis Bradford, Christchurch Office (2013-2017)

Structural Design Engineer,

URS New Zealand, Christchurch Office (2012-2013)

Structural Design Engineer

Alan Baxter and Associates LLP, London, UK (2008-2012)

Structural Design Engineer

RPS Group, Dublin, Ireland (2006-2007)

Areas of Specialist Expertise

- Alterations and upgrade to historic structures
- Seismic assessment and strengthening of existing buildings
- Design management and delivery of structural design projects

Major Project Experience

Christchurch Boys' High School – Main Block

Seismic assessment and strengthening design for existing 1926 heritage listed Main Block including strategic advice to the Ministry of Education around building upgrade options.

Timaru Theatre Royal and Heritage Facility

Large and complex project involving structural strengthening and refurbishment of historic Theatre Royal building, and design of new 2400m2 Heritage facility/museum building. Design completed in March 2024 for Building Consent.

Christchurch Boys' High School – Deans Farm Buildings

Seismic assessment and repair to historic 1880's farm buildings including conversion to a school museum and uniform store.

92 Lichfield Street

Structural assessment and strengthening works design for historic three storey unreinforced masonry commercial building in central Christchurch

Invercargill Central Development – Heritage Facades

Heritage façade retention and seismic strengthening works for three unreinforced masonry buildings integrated with a new city centre retail development.





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Major Project Experience (continued)

Southland District Council – Office Redevelopment

Seismic strengthening, extension and refurbishment of existing three storey building into new head office for district council. Features energy dissipating DMax braces.

Courier Post Freight Forwarding Facility, Dakota Park, Christchurch

Lead structural engineer for new 12,000m² freight forwarding facility at Christchurch Airport.

The Youth Hub

New +\$25m city central youth orientated mixed use development. Includes multi-unit residential buildings, co-working office spaces and an events building.

Christchurch Girls' High School

Seismic assessment, repair and strengthening to various school buildings on site with challenging ground conditions including comprehensive seismic upgrading to existing four storey main teaching block.

Christchurch Boys' High School - Assembly Hall

Lead structural engineer for new 1,300 seat architecturally designed Assembly Hall and performance space.

Otakaro Orchard and Information Centre

Lead structural engineer for new part steel framed, part adobe brickwork building including a green roof located in central Christchurch.

Canterbury Linen Service Facility, Dakota Park, Christchurch

Lead structural engineer for new 6,500m² commercial linen/laundry facility including detailed tenant liaison and fit out co-ordination with multiple stakeholders and suppliers.

Twizel Area School

Lead structural engineer for new area school featuring teaching spaces, multi-purpose hall, technology spaces and administration spaces.

Lincoln High School

Structural engineering design and documentation for new science and administration buildings.

South New Brighton School

Structural engineering design and documentation for new teaching block and new hall and library buildings.





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Major Project Experience (continued)

Wakatipu High School Extension

New teaching block extensions to existing school.

Youth Learning Centre – Kiribati

Lead structural engineer for new community and youth educational development with ChildFund NZ located in Beito, Kiribati featuring an engineered timber frame.

Oxford Area School

Structural engineering design and documentation for new Administration and Technology buildings.



ANNEXURE B



1	31-08-26	ISSUED WITH BRIEF OF EVIDENCE	RJL
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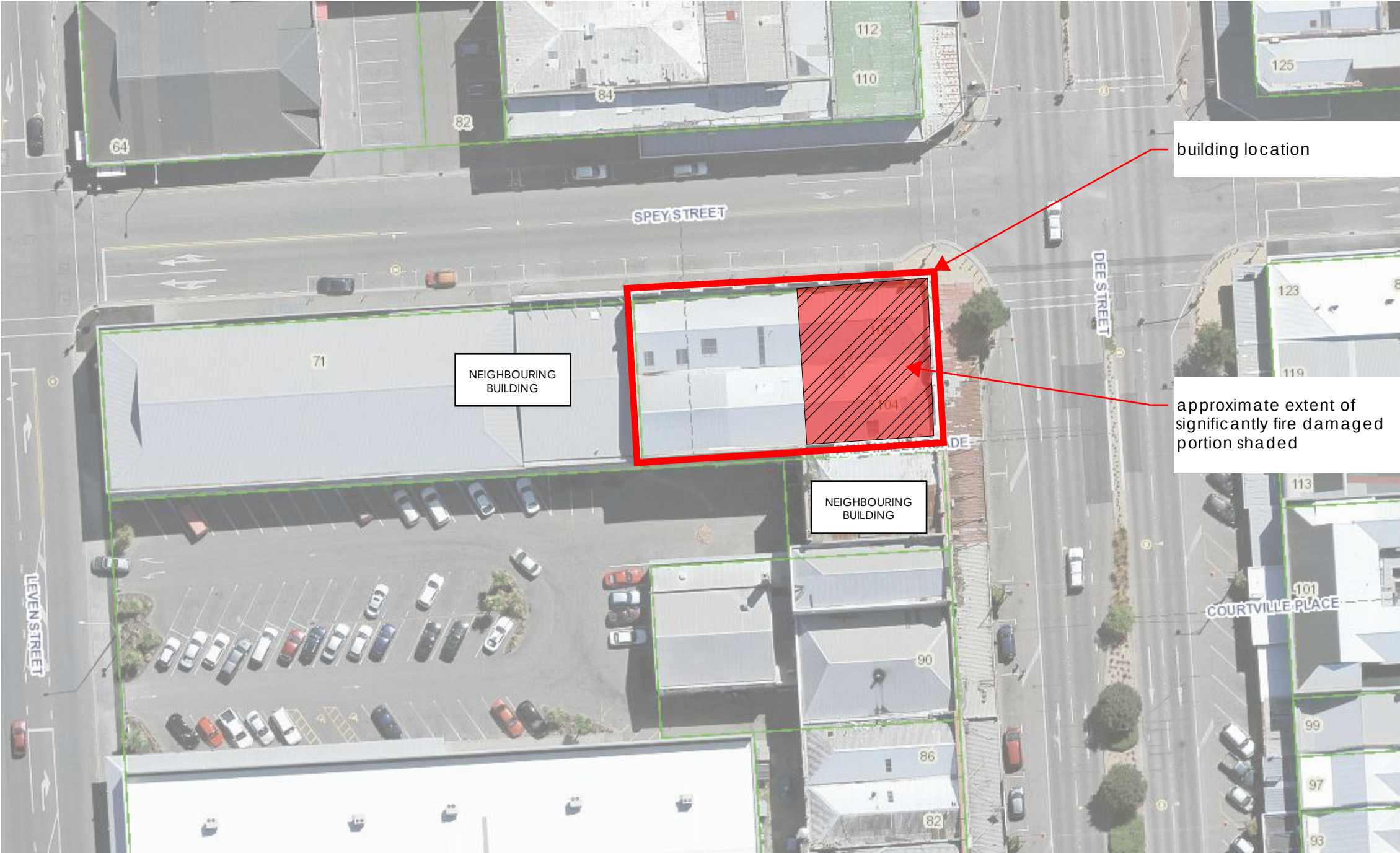
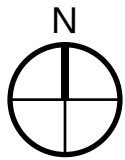
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PROJECT:	BRISCOES AND CO BUILDING INVERCARGILL
DRAWING STATUS:	FOR INFORMATION

DRAWING TITLE:	
PHOTOGRAPH OF BUILDING	

FILE: 124059	
DESIGN: RJL	SCALE: NA
DRAWN: RJL	
CHECKED: JWT	
DRAWING NO. S0-0	REV. 1



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REV	DATE	AMENDMENT	BY



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BRISCOES AND CO BUILDING
INVERCARGILL

DRAWING STATUS:

FOR INFORMATION

DRAWING TITLE:

BUILDING LOCATION AND AERIAL VIEW

FILE:

124059

DESIGN:

RJL

SCALE:

NA

DRAWN:

RJL

CHECKED:

JWT

DRAWING NO.

S0-1

REV.

1



retain existing portion of the
building full height where practical

remove existing fire and water damaged structure full height
temporarily prop existing facades (internally or external - tbc)
construct lightweight temporary over roof and/or cladding weather protection
to facades and portions of building to remain

- temporary propping with mass concrete deadmen//foundations

- existing Dee Street facade retained, propped and weather protected

DEE STREET

A

??.

NEIGHBOURING BUILDING

NEIGHBOURING BUILDING

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INVERCARGILL

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FOR INFORMATION

DRAWING TITLE:

OPTION A - PLAN VIEW

BUILDING RETAINED AND FACADES TEMPORARILY SECURED

FILE:

124059

DESIGN: RJL

SCALE:

DRAWN: RJL
CHECKED: JWT

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retain existing portion of the building full height where practical

remove existing mould, fire and water damaged structure full height
temporarily prop existing
construct lightweight temporary over roof and/or cladding weather protection to facades and portions of building to remain

Spey Street facade retained beyond

Spey Street propping frames dashed

walers full length of facade attached through windows where practical

temporary facade retention system (e.g. superlim soldiers or structural steelwork (100-125 SHS) frames at approx. 3-4m crs)

limited repointing/repair of fire damage brickwork as required for temporary stability only

DEE STREET

mass concrete ballast blocks / deadmen

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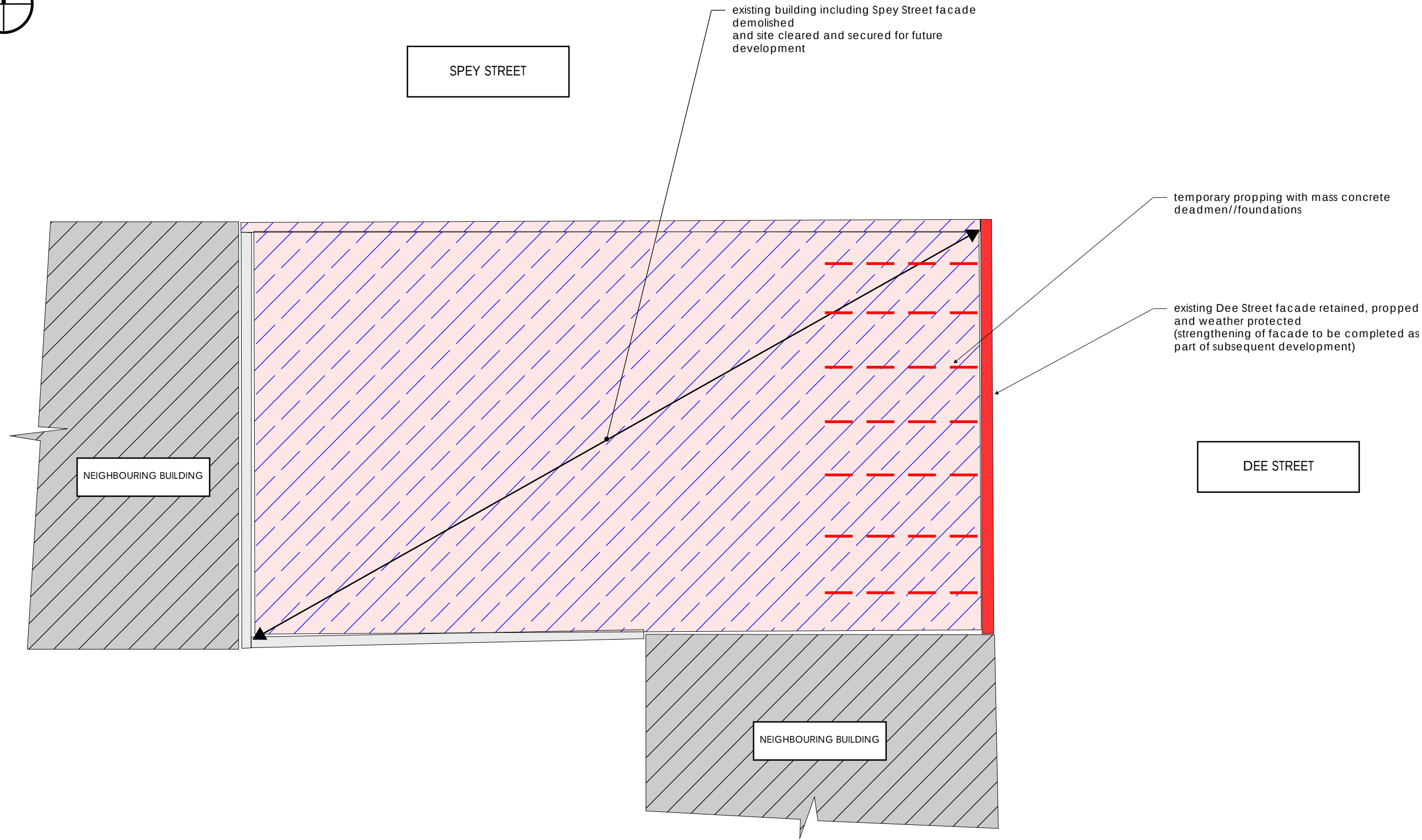
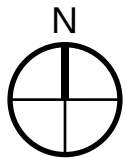
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PROJECT:
BRISCOES AND CO BUILDING
INVERCARGILL

DRAWING STATUS:
FOR INFORMATION

DRAWING TITLE:
OPTION A - CROSS SECTION VIEW
BUILDING RETAINED AND FACADES TEMPORARILY
SECURED

FILE:	124059
DESIGN:	RJL
SCALE:	NA
DRAWN:	RJL
CHECKED:	JWT
DRAWING NO.	S1-2
REV.	1



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DRAWING STATUS: FOR INFORMATION

DRAWING TITLE: OPTION B - PLAN VIEW BUILDING DEMOLISHED AND DEE STREET FACADE ONLY TEMPORARILY SECURED
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FILE: 124059	
DESIGN: RJL	SCALE: NA
DRAWN: RJL	
CHECKED: JWT	
DRAWING NO. S2-1	REV. 1



EASTERN PORTION OF THE BUILDING
- FIRE & SMOKE DAMAGED



EASTERN PORTION OF THE BUILDING
- FIRE & SMOKE DAMAGED

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PROJECT:
BRISCOES AND CO BUILDING
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DRAWING TITLE:
SEPTEMBER 2024 SITE VISIT PHOTOGRAPHS
SHEET 1

FILE:
124059

DESIGN: RJL

SCALE: NA

DRAWN: RJL

CHECKED: JWT

DRAWING NO.
S3-1

REV.
1



EASTERN PORTION OF THE BUILDING
- FIRE & SMOKE DAMAGED



EASTERN PORTION OF THE BUILDING
- FIRE & SMOKE DAMAGED

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FOR INFORMATION

DRAWING TITLE:
SEPTEMBER 2024 SITE VISIT PHOTOGRAPHS
SHEET 2

FILE:
124059

DESIGN: RJL

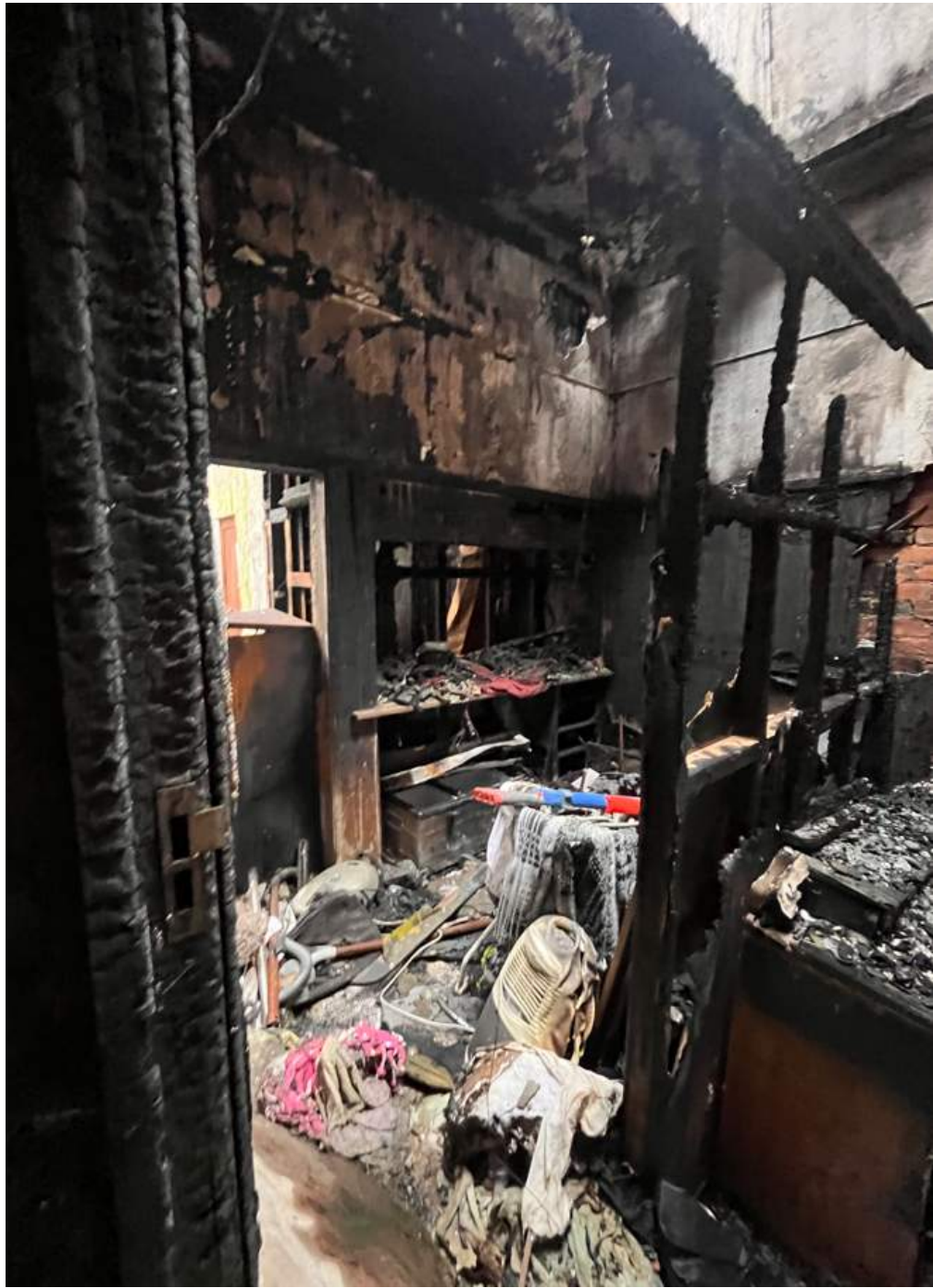
SCALE: NA

DRAWN: RJL

CHECKED: JWT

DRAWING NO.
S3-2

REV.
1



UPPER FLOOR EAST
PORTION - EXTENSIVE
DAMAGE



GROUND
FLOOR MOULD

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CLIENT:
LINDA LEE

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REFER TO ARCHITECT'S DRAWING FOR ALL SETOUTS

PROJECT:
BRISCOES AND CO BUILDING
INVERCARGILL

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REV. 1



EASTERN PORTION OF THE
BUILDING - FIRE & SMOKE DAMAGED



WESTERN PORTION OF THE BUILDING
- SMOKE DAMAGED

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SHEET 4

FILE:
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SCALE: NA

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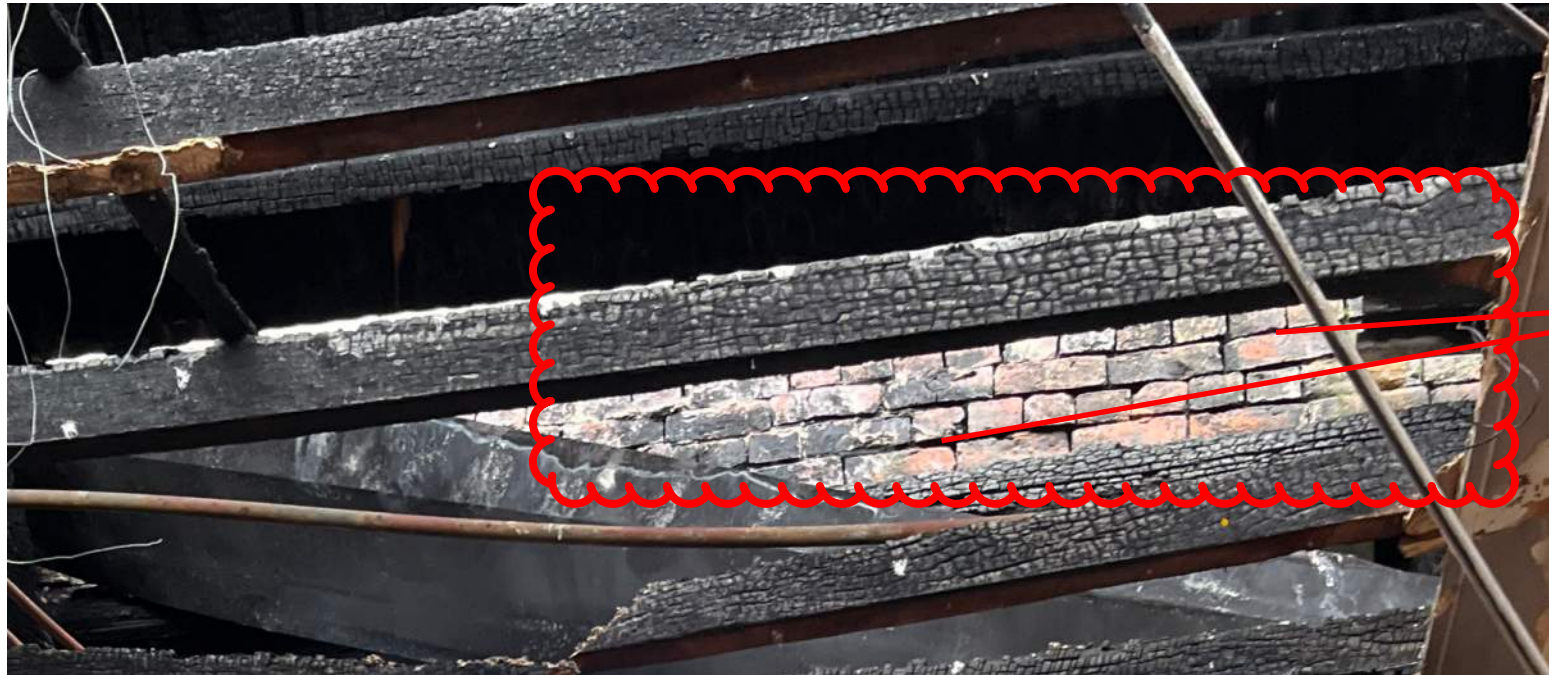
CHECKED: JWT

DRAWING NO.
S3-4

REV.
1



DAMAGED AND POORER QUALITY
MASONRY AND DAMAGED
TIMBER LEDGERS



DAMAGED AND POORER QUALITY
MASONRY

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SEPTEMBER 2024 SITE VISIT PHOTOGRAPHS
SHEET 5

FILE:
124059

DESIGN: RJL

SCALE: NA

DRAWN: RJL

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DRAWING NO. S3-5

REV. 1



WEB IMAGE OF TEMPORARY FACADE
SECURING SYSTEM FOR REFERENCE



WEB IMAGE OF TEMPORARY FACADE
SECURING SYSTEM FOR REFERENCE

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FOR INFORMATION

DRAWING TITLE:
REFERENCE IMAGES - TEMPORARY SECURING AND
PROPPING SYSTEMS

SHEET 1

FILE:
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S4-1

SCALE:
NA

REV.
1



WEB IMAGE OF TEMPORARY FACADE
SECURING SYSTEM FOR REFERENCE

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PROPPING SYSTEMS

SHEET 2

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DRAWING NO. S4-2

REV. 1



COXHEAD BUILDING FACADE
RETENTION IN INVERCARGILL
2022



SOUTHLAND TIMES BUILDING
FACADE RETENTION IN INVERCARGILL
2022

NOTE - THE ABOVE TWO FACADE RETENTION SYSTEMS WERE
DESIGNED TO FULL BUILDING CODE LOADING FOR A 5-YEAR TIME
FRAME FOR BOTH WIND AND SEISMIC ACTIONS

THIS IS IN EXCESS OF THE DESIGN LOADING REQUIRED UNDER s121
OF THE BUILDING ACT FOR DANGEROUS BUILDINGS

THE INTENDED SHORT-TERM SECURING SYSTEM FOR 104-106 DEE
STREET WOULD BE SIMILAR IN NATURE HOWEVER REDUCED IN
SCOPE FOR THE REDUCED DESIGN LOADING BEING CONSIDERED

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DRAWING NO.
S4-3

REV.
1



CANTERBURY MUSEUM FACADE
RETENTION IN CHRISTCHURCH
2026

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SCALE:
NA

DRAWING NO.
S4-4

REV.
1