

MEMORANDUM

Author: Peter Duncan CPEng 144221– APEC Services
Subject: Ford Road Repair Strategy.
Date: August 2025
Project Reference: 250302

Background/Engagement

APEC Services/Skipstone Consulting have been engaged by the owners to review the building and provide a repair strategy

This memorandum has been reformatted to align with the IPENZ Engineering assessment format.

Property Address

Address	59 Ford Road Opawa
Real Property Description	LOT 4 DP 19846
Owner	Urban Cocoon Ltd
Engineer (Review)	APEC Services P Duncan CPEng 144221
Engineer Foundations	N/A
Geotechnical	N/A
Site Area	744 m ²
Building Area	240m ²
Council	Christchurch City Council
Description of property and site	The building is recorded as three flats, formerly a stables Residential Converted Flats 1914-1929 3 Units
Foundation Type	Ring Beam brick exterior (Double brick) and internal timber floor with piles/ part concrete slab
Building description	Brick Mass brick walls - Metal Sheet roof

General Condition

The building was a brick stable and was converted into living accommodation in 1959. The LIM indicated that the building was used as three flats.

Based on the wall layouts the largest flat appears to have 3 bedrooms, the middle flat and the rear flat have a bedroom, kitchen and laundry bath facilities.

The building was tenanted until purchased by Urban Cocoon Ltd in 2022 when tenancies were terminated because the flats did not meet healthy home standards.

Damage and Defects

There are some cracks in the external brick wall which were possibly the result of the earthquakes. The crack in the front wall is "significant" (more than 2mm wide) the remaining cracks are hairline.

There is no structural damage to the internal wall framing and the bracing is internal diagonal timber. There is no reliance on GIB bracing in the structure. It is possible to add additional cross bracing to existing walls should this be required.

Recommended repair

General Recommendation: The building could be returned to the original flat plan (Layouts) and completing any minor repairs to the existing walls. Install new kitchens and bathrooms, add insulation between the ground floor and first floor. Re-line walls with plaster board and reinstate fire walls with fire Gib to complete fire separation. The wall linings have been uninstalled (stripped out) which allows complete rewire and plumb to bring the services up to modern standards including internal insulation. The existing double skin external brick construction meets energy efficiency requirements. As far as possible all work should be completed as maintenance on the existing structural bones.

Specific Repair (Street Frontage wall)

Open floor and remove soil to bottom of foundations and inspect for damage in one isolated area that being the central internal double skin 2.5 meters from the street facing external wall (We note that there is no evidence in the walls of structural failure other than the cracked brickwork specific to this location which may or may not be earthquake damage.)

Clean the inside and outside at the location of the significant cracks in the brick
Grind out the bed joints centered on the crack
Install 7mm carbon fibre rods Allow 5 each side of the wall (5 inside, 5 outside)
Allow to repair the lintel in the rear flat internal brick wall.

Repair to Brick work cracks (other than Street Frontage)

There are patches of brick work mortar that have cracking, these can be raked out and regouted with mortar. It is likely these are more age related than an event triggered damage and pose no threat to the integrity of the structure.

Inspect cracks and determine repair – rake out and repoint external brick line.

Internal Columns

There are two internal columns which support the top floor – these could be inspected for damage. (Noting that nothing is visible at time of writing)

Internal Wall Linings

We recommend replacement of wall lining with fire plasterboard and/or Hardies FC Sheet at critical locations to reinstate fire separation.

Bracing to be reviewed in overall strategy plan – some additional strap bracing may be added.

Balustrades and Railings

Balustrades and railings are to be reinstated – comply with current code where new are installed. Temporary compliant railings and balustrades may be used (out of building character) to ensure safety for a time.

Preparation for Building Approval

Building and Flat Layout plans matching the original including fire wall locations to be completed.

Updated connected smoke alarms to be noted as installed in compliant locations on the existing drawing set

Work Improvements Requiring Building Consent.

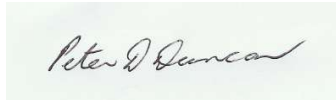
Stage 2 of the project subject to fire engineering review, there is a possibility that an external compliant external stair is required from the first floor level of the front unit to the ground. Currently there are metal escape ladders. The stairs would require consent to the current code. We recommend seeking consent only after all internal works are complete.

RECOMMENDATIONS/CONCLUSION

We have concluded that the maintenance /repair work should be completed first before any changes or variations to the existing walls. Existing building is compliant with the code at the time of construction. It is essentially a brick open plan structure.

Internal bracing check is expected to confirm compliance with the current earthquake code requirements. Structural elements compliant with the Building Code on the basis that the building is returned to the existing level of design as at the time of construction.

SKIPSTONE CONSULTING
DUNCAN MANAGEMENT GROUP
Consulting Engineers & Project Managers

A handwritten signature in black ink on a light green rectangular background. The signature reads "Peter D Duncan" in a cursive script.

Peter D Duncan CPEng 144221