BUILDING REPORT

Address withheld for privacy

Prepared for a private client

Report ref	BR-2026-004
Inspection	27 may 26
Inspector	Hubert Auld — Tillow Built | Licence 393831C | ABN 27 978 810 378
Status	Preliminary building report — indicative cost only, NOT a quote

1. SUMMARY

The structural steel beam supporting the second-storey balcony at [redacted] is severely corroded along its full length. The corrosion is the direct result of ongoing waterproofing failure on the balcony above — water is tracking through the failed membrane, down onto the beam, and into the living room ceiling below. Mould is now active in the living room ceiling, and adjacent timber framing and insulation are wet and contaminated.

This is not a cosmetic issue. The damage is structural and progressive. Continued exposure will result in further loss of beam section, ongoing mould growth in occupied living space, and increasing remediation cost the longer it is left.

Tillow Built recommends engaging a structural engineer within seven days, commissioning an asbestos pre-demolition survey, and committing to a full remediation programme. An indicative cost range is provided in Section 7. A formal quotation will be issued once the engineer has confirmed the structural scope and the asbestos survey is complete.

2. SCOPE OF INSPECTION

This report is based on a visual inspection of the following areas:

- Living room ceiling below the second-storey balcony — affected zone with mould and staining
- Second-storey balcony / tiled deck — visual condition of waterproofing and drainage
- Cavity around the supporting steel beam — accessed via inspection openings already cut into the ceiling
- Beam embedment at wall pockets — both ends where the beam bears into the masonry
- Adjacent timber framing — joist ends, blocking, and wall plate around the beam

Inspection openings were made in the living room ceiling to allow visual access to the cavity and the beam underside. No destructive testing of the beam itself, no thickness measurement, and no asbestos sampling has been carried out at the time of this report. These are recommended as next steps (see Section 6).

3. FINDINGS

3.1 Structural steel beam — full-length corrosion

The painted steel beam (red oxide finish, likely original to the build) is corroded along its ENTIRE LENGTH. This is not a localised spot of damage — every accessible section of the beam shows active rust, scale build-up, paint failure, or moisture staining. Severity:

- Bottom flange: heavy scale and probable section loss (cannot be confirmed without ultrasonic thickness testing)
- Web (vertical sides): rust streaking, paint blistering, surface pitting
- Top surface: ongoing water exposure with mineral residue and salt efflorescence
- Beam embedment (wall pockets, both ends): visible corrosion at the bearing detail and efflorescence in adjacent masonry — water is tracking through the wall pocket
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Photo 1 — Beam side view: rust scale along bottom flange and pitting on web

Photo 2 — Underside of beam: heavy scale and probable section loss

Photo 3 — Different angle of full length showing rust spread is not isolated

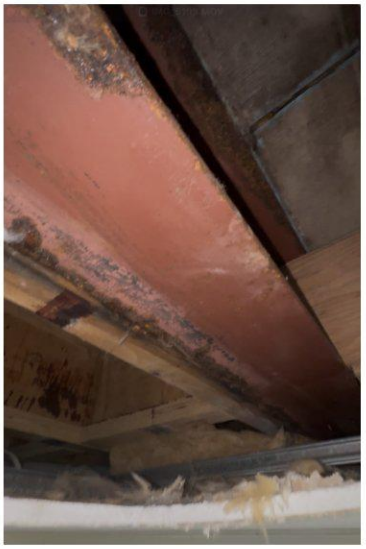

Photo 4 — Beam at wall junction: rust + adjacent timber moisture damage

Photo 5 — Beam embedment at wall pocket: severe corrosion of bearing detail

Photo 6 — Efflorescence visible in masonry adjacent to beam pocket

3.2 Second-storey balcony — waterproofing failure

The failure of the balcony waterproofing membrane above is the root cause. Water is leaking the full length of the beam, meaning the membrane failure is not at one point but is systemic — the membrane has reached the end of its service life and is no longer continuous. Likely failure modes include:

- Liquid membrane embrittlement and cracking with age
- Failed termination at wall-to-deck junctions (no compliant upturn or counter-flashing)
- Failed sub-sill detail at door threshold onto the balcony
- Inadequate or blocked drainage with no overflow outlet
- Tile bedding bonded directly to membrane with no slip layer, causing membrane shear failure

The full balcony build-up — tiles, bedding, screed, membrane — must be stripped and rebuilt. Spot repair of the membrane is NOT viable given the extent of leakage and the condition of the structural steel beneath.

3.3 Living room ceiling — mould and water damage

Visible mould growth and staining is present in the living room ceiling directly below the affected beam. This is consistent with IICRC S520 Condition 3 — visible growth on porous materials with active moisture source. Health-significant in an occupied dwelling.

Photo 7 — Inspection opening in living room ceiling — wet framing visible

Photo 8 — Second inspection opening — extent of cavity damage

3.4 Adjacent timber framing — moisture damage

The timber joists, blocking, and wall plate adjacent to the beam show clear signs of moisture exposure. Some members will require splicing or replacement during remediation. Termite pest inspection is recommended — wet timber in Sydney inner suburbs is a high-risk termite environment.

Photo 9 — Joists and framing in cavity around beam

Photo 10 — Further framing detail showing moisture-affected timber

3.5 Insulation — wet and contaminated

Cavity insulation visible in inspection openings is wet and contaminated. It cannot be dried and re-used — it must be removed under controlled conditions and replaced. Closed-cell insulation around the steel beam will be specified during reinstatement (standard batts will re-wet if any future moisture intrusion occurs).

Photo 11 — Wet insulation and joist-to-beam junction

Photo 12 — Cavity view showing contaminated insulation and damp framing

3.6 Membrane–steel interface evidence

Where accessible, the interface between the failed membrane / deck substrate and the top of the steel beam shows heavy mineral residue, salt deposits, and rust streaking — visual confirmation that water has been ponding and tracking at this junction for an extended period.

Photo 13 — Beam top surface with mineral residue and corrosion

Photo 14 — Membrane substrate / beam junction with salt deposits

4. CAUSE

The primary cause is failure of the second-storey balcony waterproofing membrane. Water is passing through the failed membrane, bypassing inadequate drainage, and reaching the structural steel beam supporting the balcony. The water then tracks along the full length of the beam (the lowest point in the cavity) and discharges into the living room ceiling cavity, where it is absorbed by insulation and timber framing and eventually appears as ceiling staining and mould.

Contributing factors include the original detailing of the balcony (no compliant upturn, no overflow drain, sub-sill detail at door threshold), the age of the membrane (likely past service life), and the lack of routine maintenance access to inspect the membrane condition.

5. RISKS IF NOT ADDRESSED

The damage is progressive. Each of the following will worsen without intervention:

- Structural: continued section loss of the beam will eventually compromise its load capacity. Engineer assessment is needed urgently to confirm current capacity and remaining service life.
- Health: active mould growth in an occupied living space is a Condition 3 case under IICRC S520 and requires controlled remediation.

- Property: ongoing water damage will progressively destroy ceiling finishes, electrics in the cavity (downlight wiring is exposed to moisture), and timber framing.
- Insurance and saleability: a known unrepaired water-damage and structural-corrosion issue affects future home insurance renewal and disclosure obligations on any future sale.
- Cost: every month the job is deferred increases the remediation cost. Beam replacement (a separate variation, see Section 7) becomes more likely the longer the corrosion progresses.

6. RECOMMENDED IMMEDIATE ACTIONS

Within 7 days	Engage a structural engineer to inspect and provide preliminary remediation design. Tillow Built can arrange this on your behalf.
Within 14 days	Commission a licensed asbestos assessor (Div 6) to carry out a pre-demolition Refurbishment Survey. Sydney terrace builds of this era frequently contain asbestos in ceiling lining, deck substrate sheeting, and bituminous membrane backing.
Within 21 days	Confirm scope of works with engineer's design + asbestos survey results. Tillow Built will then issue a formal quotation reconciling the indicative range below.
Interim	Where possible, temporarily cover the balcony to limit further water ingress. Place a dehumidifier in the cavity if accessible. Do NOT disturb suspected asbestos materials (vermiculite ceiling, substrate sheeting, membrane backing).

7. INDICATIVE REMEDIATION COST

Indicative remediation pricing has been removed from this public sample report. Full Tillow Built reports include two fully-costed remediation options (interim stabilisation and full rectification) with line items, subtotal and GST.

(Section 7 continued — indicative pricing removed from this public sample.)

8. ASSUMPTIONS & EXCLUSIONS

- Boundary clearance from the supporting beam is assumed greater than 1.5 m. If less, intumescent fire-protection coating may be required by the certifier (carried as a written variation).
- Asbestos status is unknown until pre-demolition survey is completed. All references to removal are indicative only.
- Beam section loss is assumed to be repairable by sister-plate engineered repair under Option B. Full replacement is treated as a written variation if engineer condemns at Hold Point 4.
- No allowance carried for landscaping, garden, or external paving reinstatement.
- No allowance carried for re-routing of services if discovered in the cavity.
- Tile selection is allowed for as a PC sum — final selection at client preference.

9. NEXT STEPS

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If you would like Tillow Built to proceed, please confirm in writing and we will:

- Engage the structural engineer on your behalf within 7 days
- Commission the licensed asbestos pre-demolition survey within 14 days
- Issue a formal fixed-price quotation within 21 days, reconciling the indicative cost above against the engineer's confirmed scope and the survey results

Any questions on this report, please contact:

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