

Nine in Six Investigative Works – Summary

1. Investigative Works Undertaken

NIS undertook a period of investigative and exploratory works across the existing heritage buildings, supported by several specialist contractors and consultants engaged to inspect specific building elements, assess the required scope of works and provide specialist advice and pricing.

The investigations included:

- Selective lifting and removal of floor coverings (utilised previously created openings and access hatches – no destructive works that were not already existing) to inspect existing floor and subfloor construction.
- Removal of existing window coverings and inspection of the period windows, including specialist window-contractor assessment to establish the required repair and servicing scope. Protective covering has been replaced
- Inspection of existing timber floor framing, including member sizes, spacing and general layouts.
- Inspection of subfloor clearance, ventilation, damp conditions and areas where timber framing is close to ground level;
- Inspection of previous alterations to floorboards and floor structures associated with hydronic heating, electrical, communications and mechanical services;
- Inspection of modified floor construction within Building 1, including retrofitted concrete slabs, sheet flooring and previous service channels;
- Inspection of slate flooring and previous lifting/reinstatement associated with service installations in Building 2;
- Inspection of roof areas, gutters, downpipes and locations affected by water ingress;
- Access to upper-level and attic areas that had previously been difficult to inspect;
- Identification and photographic recording of existing conditions and concealed construction;
- Preparation of preliminary floor-framing markups for coordination with the structural engineer;
- Location of existing site services, including the grease trap; and
- Coordination of specialist investigations relating to damp, water ingress, mould, dilapidation and HAZMAT.

A substantial photographic record was also compiled during the investigations to assist with ongoing design, heritage and structural coordination.

2. Specialist Contractors and Consultants Engaged for Investigation

As part of the investigative works, NIS coordinated several specialist contractors and consultants to attend site, inspect the existing buildings and assist with establishing the condition, required scope of works and preliminary pricing.

The following specialists attended or were engaged:

- **BSS Group** – engaged to assess the condition of the existing roofs, water ingress and damp-related issues. BSS is preparing a roof condition and water-ingress report, together with a full existing-condition dilapidation report covering all three buildings. These reports are currently in progress and are expected shortly.
- **Melbourne Window Services** – inspected the existing period windows to assess their condition, operation and the extent of repair and servicing required. Their assessment has informed the proposed window conservation and repair scope.
- **RDM Air Conditioning** – attended site to investigate the existing mechanical systems and assess the extent of mechanical works required for the proposed development.

- **CQ Plumbing and All Out Plumbing** – attended site to investigate the existing plumbing and drainage conditions, assess the proposed plumbing scope and assist with identifying servicing requirements.
- **Woodson Demolition** – a demolition contractor experienced in heritage demolition, engaged to inspect the buildings and assess the extent, methodology and likely scope of demolition and strip-out works.
- **Summit Electrical** – attended site to investigate the existing electrical infrastructure and assess the electrical works required as part of the proposed development.
- **Identifibre** – engaged to undertake hazardous-material investigations, including a division 5 hazardous building materials assessment, to identify hazardous substances that may affect the demolition, remediation and construction works.
- **Roof Service Company** – a specialist slate roofing contractor who attended site to inspect the existing slate roofs and assess the likely scope of repair and restoration works. The contractor has previous experience working on other heritage school buildings in the surrounding area, including buildings with similar slate roofing. Their site assessment has assisted NIS in understanding the existing roof condition, likely repair methodology and the extent of works that may be required to provide a suitable long-term roofing outcome.

The outcomes of these inspections are being incorporated into the developing project scope, with specialist reports and quotations to further confirm the extent of required rectification, demolition and building-services works.

3. Key Findings

The investigations identified several existing conditions that will directly influence the scope and methodology of the proposed works.

Existing Floors and Previous Alterations

Building 1 was found to contain a significantly modified ground-floor construction, including retrofitted concrete slabs in Victoria's Bar & Restaurant area, timber floors, sheet flooring and previous service channels. In all areas inspected, the original floor construction has been substantially altered, and a consistent original floor system no longer remains.

Buildings 2 and 3 retain more original floor fabric; however, significant previous removal and reinstatement has occurred as part of hydronic heating and other service installations. This includes alterations associated with electrical, communications and mechanical services.

At the upper level of Building 2, NIS identified similar conditions with the slate flooring having previously been lifted and reinstated during the hydronic heating works, with associated disturbance to the underlying timber floor construction. This is likely to not be limited to these works and further disturbance will likely be found.

Subfloor Conditions

Investigations identified areas of poor or effectively no subfloor clearance, together with inadequate ventilation and localised damp conditions. Poor subfloor clearance was specifically identified as a regulatory issue.

Substantial access to the ground floors will therefore be required to properly inspect and rectify these conditions. In some areas, this may require excavation of approximately 100–300 mm of soil to improve clearance and ventilation.

Despite these conditions, the timber framing inspected to date was generally found to remain in serviceable condition. Significant deterioration appears to be relatively localised and more closely associated with areas of substantial water ingress from above.

Roof and Rainwater Management

The investigations identified rainwater management as a significant contributor to deterioration within the buildings.

Poorly configured gutters, downpipes and internal drainage points have resulted in repeated water ingress at vulnerable locations. Areas of more significant timber deterioration generally correspond with locations affected by ongoing leaks from gutters or downpipes.

NIS also identified previous alterations to brickwork associated with downpipe installation and areas where the existing gutter-to-brickwork arrangement provides a poor waterproofing detail.

Away from areas affected by rainwater ingress, the roof structure and existing timber generally appeared to remain in decent condition.

Suspended Floor Infill

NIS identified an unusual cementitious material within portions of the suspended timber floors, approximately 70 mm deep in some locations.

Its original purpose and composition have not yet been confirmed. It may have formed part of an acoustic treatment; however, this remains an unverified assumption. Further investigation is required before determining whether the material can remain or requires removal.

4. Works Identified from the Investigations

Based on the findings to date, the following works are considered required or likely to be required as the project develops:

- Complete lifting or removal of ground-floor finishes and linings to provide access to concealed construction;
- Retention and servicing of the existing period windows, including sash adjustments, draught sealing, replacement of damaged glazing, re-weighting and replacement of sash cords where required.
- Excavation below existing floors where required to provide suitable subfloor clearances for services installation;
- Improvement of subfloor ventilation, including mechanical ventilation where adequate passive ventilation cannot be achieved;
- Retention and repair of existing timber framing where practicable;
- Replacement or repair of floor fabric damaged by previous service installations;
- Consideration of alternative floor reinstatement methods, including concrete slabs in selected areas of Building 1;
- Reinstatement of Building 2 hallway slate on an appropriate base;
- Rectification of existing gutters, downpipes and associated rainwater detailing;
- Provision of additional or relocated downpipes where required to improve roof drainage;
- Broader roof restoration and weatherproofing measures required to provide an appropriate long-term outcome for residential use;

- Localised repair of timber affected by ongoing water ingress that is observed in several areas throughout all of the building but significantly in Building 2;
- Installation of new services through accessible floor and subfloor zones where possible to reduce further impact on heritage fabric;
- Compliant construction of new wet areas while minimising unnecessary cutting of existing floor joists;
- Further structural and materials testing of timber, masonry and concrete to confirm condition and residual design life as discussed with TTW Engineers; and
- Implementation of any remediation requirements arising from the HAZMAT, damp, water-ingress and structural investigations.

The investigations indicate that the existing flooring may need to be removed across substantial areas, and potentially in full, to provide the access required for subfloor rectification, structural assessment and installation of new services.

Where flooring is removed, NIS intends to carefully salvage and retain all material that remains in suitable condition. Existing floorboards and other significant flooring materials will be set aside for reuse and reinstatement wherever practicable. Replacement will be limited to material that is damaged, deteriorated, previously altered beyond reasonable repair, or otherwise unsuitable for reuse.

5. Change of Use Requirements

General Requirements:

Demonstrate that the building can be made weathertight and adequately protected against damp and moisture ingress.

To achieve this, and to allow the completed works to be appropriately warranted, the following works are anticipated:

- Relay or replace roof coverings as required, including the installation of suitable roof sarking.
- Repair or replace damaged, deteriorated or poorly performing flashings, valleys and associated roof junctions.
- Assess existing gutters for condition, capacity and adequate fall, and repair, regrade or replace where required.
- Review downpipe locations and roof water discharge, with additional downpipes or improved discharge arrangements provided where necessary.
- Suggest removal of any internal downpipes including through eaves

Damp Management:

- Install a retrofit chemical or equivalent damp-proof course to external masonry, and internally where required in areas affected by damp.
- Reduce built-up ground levels adjacent to the building, particularly along the southern side or Tram Road, to improve clearance from existing wall construction.
- Have all external surfaces fall away from the buildings
- Remove existing open-cut drainage where required.
- Regrade Tram Road and surrounding external areas to improve surface falls and provide more effective stormwater management away from the building.
- Carefully remove and store existing tiles, reprepare the subgrade as required on the verandah's, then relay the tiles and make good.

Ventilation and Subfloor Clearance:

- Allow for additional high level ventilation provisions through walls to areas associated with bathrooms, laundries and kitchen exhaust, as required.
- Increase subfloor clearance where practicable to remove access dirt and improve airflow and access beneath the building.

- Remove internal infill slabs where required and assess appropriate method of reinstatement, potentially including a raft slab or subfloor solution.
- Form openings through internal subfloor walls to improve cross-ventilation beneath the building.
- Review and consider the addition of additional sub floor external perimeter brick vents to increase natural ventilation flow – with recommendations of type/design to suit heritage requirements
- Provide mechanically enhanced ventilation to the subfloor where natural ventilation alone is insufficient.

6. Summary

The NIS investigative works have established that a substantial amount of the existing building fabric remains capable of retention; however, the works have also identified several conditions that require intervention as part of the proposed residential conversion and associated change of use requirements.

The main issues identified are:

- Extensive previous alteration of floor fabric, particularly from hydronic heating and other service installations;
- Heavily modified floor construction within Building 1;
- Inadequate subfloor clearance and ventilation;
- Localised damp and moisture-related conditions;
- Water ingress associated with existing rainwater goods; and
- The need for further structural and materials assessment before the final extent of remediation can be confirmed.

The investigations indicate that substantial access to the existing floors will be required to address these conditions and allow the buildings to be appropriately serviced. This access will also provide the opportunity to confirm the condition of concealed structural elements and retain existing material where it remains suitable.

The findings to date support a rectification approach focused on addressing the underlying causes of deterioration, retaining serviceable existing fabric where practicable, rectifying previous inappropriate alterations and completing further consultant investigations before the final scope of structural, compliance and change of use-related works is confirmed. This will include measures required to demonstrate appropriate weatherproofing, damp management, ventilation and subfloor performance for the proposed residential use.