



340-354 SYDNEY ROAD, BRUNSWICK, VIC, 3058

E&G ALTAI Consulting Engineers | Job Number: J000615 | Report Date: 13/07/2026

BACKGROUND

E&G Altai Consulting Engineers has been contacted by Mr Fabio Sella of 2Scale Design Pty Ltd to provide a preliminary design for construction methodology for the proposed works at this heritage building.

The documentation below is attached to this package:

- Proposed Raised Floor Plan (Appendix A)

PROPOSED CONSTRUCTION METHODOLOGY

The proposed works have been developed with the primary objective of preserving the existing heritage fabric while minimising intervention to the original church structure. The proposed raised floor system has been designed to utilise the existing structural load paths wherever practical, avoid excavation adjacent to the heritage building, and minimise disturbance to original building elements.

The proposed methodology is summarised as follows:

- A new raised floor structure will be constructed over the existing floor framing to achieve the required finished floor levels without significant alteration to the existing structure.
- Where sufficient clearance exists between the existing and proposed finished floor levels, new raised floor joists will span over dwarf timber supporting wall frames. These wall frames will be positioned directly above the supported ends of the existing floor joists so that loads are transferred through the existing bluestone subfloor walls and footings.
- In areas where the proposed finished floor level is only marginally above the existing floor level, graded timber battens will be installed over the existing floor to achieve the required floor level while minimising the overall build-up.
- Any additional loading introduced to the existing floor system will be mitigated through the installation of proposed SB1 secondary support beams beneath the existing joists. These members will provide intermediate support approximately at the mid-span of the existing joists, substantially reducing their effective span and the resulting bending and deflection demands.
- The proposed SB1 beams will be suspended from new SB2 primary support beams via steel droppers. The SB2 beams will be installed between the existing floor joists at

approximately 2.5–3.0 m centres and will bear directly onto existing bearer plates located over the bluestone subfloor walls and footings, thereby transferring loads into the original primary support locations.

- This arrangement will reduce the structural demands on the existing floor framing by shortening the effective spans of the original joists while simultaneously supporting the additional dead and live loads associated with the proposed raised floor construction.
- Where required, PB1 beams will be incorporated as trimmer beams within the proposed raised floor system. These beams will be supported on columns bearing onto the existing floor framing, with structural solid timber packing installed directly beneath to ensure loads are transferred through existing structural members onto the underlying bluestone subfloor walls and footings.
- The proposed methodology does not require new footings or excavation works beneath the existing church building, thereby avoiding disturbance to existing foundations and archaeological fabric.
- The proposed system significantly reduces the need to remove existing floorboards, thereby minimising the risk of damage to original heritage timber flooring during construction and subsequent reinstatement.
- The proposed structural support system will remain largely concealed within the existing subfloor and floor build-up, maintaining the heritage character and appearance of the church interior.
- The proposed external store and toilet additions will be structurally independent of the existing church wherever practical. These structures will be supported on bored pier or pad footings offset from the external walls, with suspended floor framing supported on adjustable steel stumps and cantilevered floor members spanning towards the building. This approach avoids imposing additional foundation loads onto the existing heritage structure while maintaining a physical separation between the new and existing construction.
- Similarly, the proposed southern landing/verandah will be supported on offset bored piers carrying a cantilevered reinforced concrete slab, limiting excavation immediately adjacent to the existing bluestone footings and reducing potential impacts on the heritage fabric.

Overall, the proposed construction methodology has been developed to minimise intervention to the original building fabric, utilise existing structural load paths wherever practical, avoid unnecessary removal of heritage materials, eliminate the need for new foundations beneath the church, and provide a largely reversible structural solution consistent with accepted heritage conservation principles.

Kind Regards



Ersin Genc

Civil Engineer, MIEAust, PE0000409

APPENDIX A – Proposed Raised Floor Plan

