

Structural Design Advice

To Dean Dyson c/- Dean Dyson Architects
Project 2 Garden Street, Geelong
Job No. 25-457
Report Date 18th November 2025

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Engagement & Introduction

- This office has been engaged by Dean Dyson to prepare a written statement which outlines the methodology by which a single level basement is partially constructed beneath an existing heritage structure. The scope of the proposed works intend to retain and temporarily support the existing heritage fabric during construction, and then permanently support the building from the new structure following completion of the basement and ground floor construction.
- The advice and methodology provided in this report and attached appendix is general in nature to satisfy feasibility requirements in the town planning process. A full and detailed design would be required to expand on the advice provided in this report. The information contained in this report and the attached appendix are for information purposes only and are not for construction of pricing purposes.

Propping and Demolition Sequence

Refer to Appendix A for supporting sketch layouts of the below propping and demolition sequence.

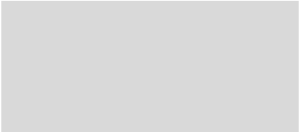
1. Full demolition and propping design to be completed suitable to achieve building permit.
2. Strip building to cold shell (i.e. remove all plaster from walls and ceilings) and engineer to undertake full detailed inspection of all structural elements and their condition
3. Provide temporary 10kN vertical acrow props at nominal 1200mm cts and 90x90 KDHW horizontal props beneath all roof structure to remain. Use 450x450mm timber spreader plates.
4. Backprop brickwork walls to remain with 2 No. 20kN push-pull props to a temporary concrete blinding pad at 2500mm nominal cts.
5. Underpin brickwork walls to remain with continuous mass concrete underpins installed in a 1-2-3 sequence.
6. Demolish the rear walls, internal walls, and first floor framing per the architectural demolition layout plans. Leave return walls where nominated on sketch plan until additional propping measures are in place.
7. Install sacrificial piles 'FP1' within the footprint of the building as close to the existing wall as possible. Use a casing (i.e. Formatube) to extend piles out of the ground. Sacrificial piles to found a minimum of 2.0m below BEL.
8. Install boundary retention piles 'RP1' and capping beam along northern boundary.

9. Pocket holes in the external masonry wall to suit PB1 (250UC) depth and width. Penetrations in wall should be such that the PB1's bottom flange are approximately 500mm above the proposed GF slab finished level.
10. Slot PB1 propping beams through penetrations in the external wall and secure to the northern capping beam and the sacrificial piles.
11. Fix WP1 (250PFC) to top flange of PB1 and to both internal and external skins of masonry so that it is full supported on the steel propping structure.
12. Install sacrificial piles 'FP2' within the footprint of the building, use a casing (i.e. Formatube) to extend piles out of the ground. Sacrificial piles to found a minimum of 2.0m below BEL.
13. Install remainder of retention piles and capping beam around the perimeter of the site and within the footprint of the building
14. Construct temporary steel frame (PB2) 500mm above ground level finished floor level. Re-prop roof structure and wall back-props down to PB2 steel frame.
15. Bulk excavate basement demolishing the footing system and small amount of brickwork wall beneath the PB1's and WP1's.
16. Prepare and spray shotcrete walls to basement perimeter.
17. Prepare and pour basement vertical footings, slab and vertical structure to support ground level suspended slab.
18. Prepare and pour ground level suspended slab
19. Re-brick beneath propped brickwork wall on the north elevation down to ground level suspended slab.
20. Remove PB1's and WP1's and make good wall penetrations
21. Construct first floor structure and re-support existing roof and the external walls
22. Remove temporary PB2 frame, all vertical props supporting the existing roof and all back props supporting external walls.
23. Jack hammer out sacrificial piles FP1 and FP2 and make good basement and ground floor slabs

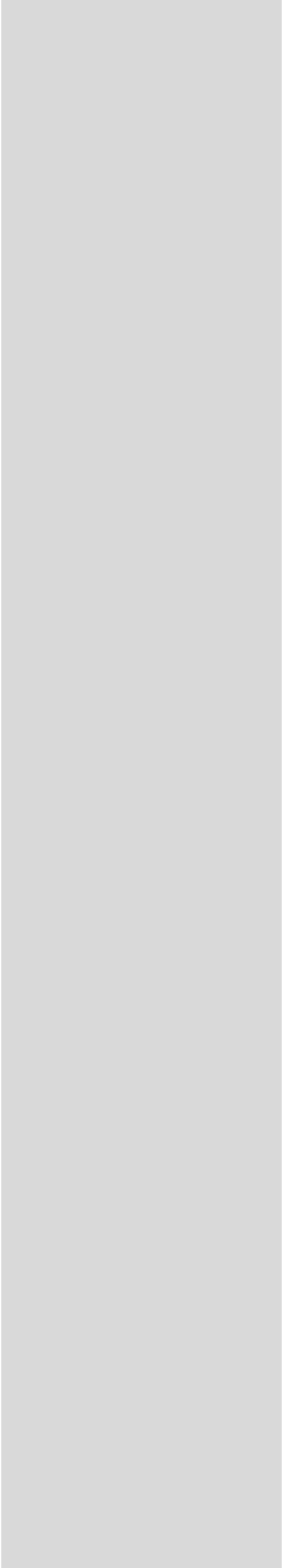
Please don't hesitate to contact this office should you have any further questions.

Registered Professional Engineer []
B. Eng [Civil] [Hons] MIEAust NER RPEV RPEQ

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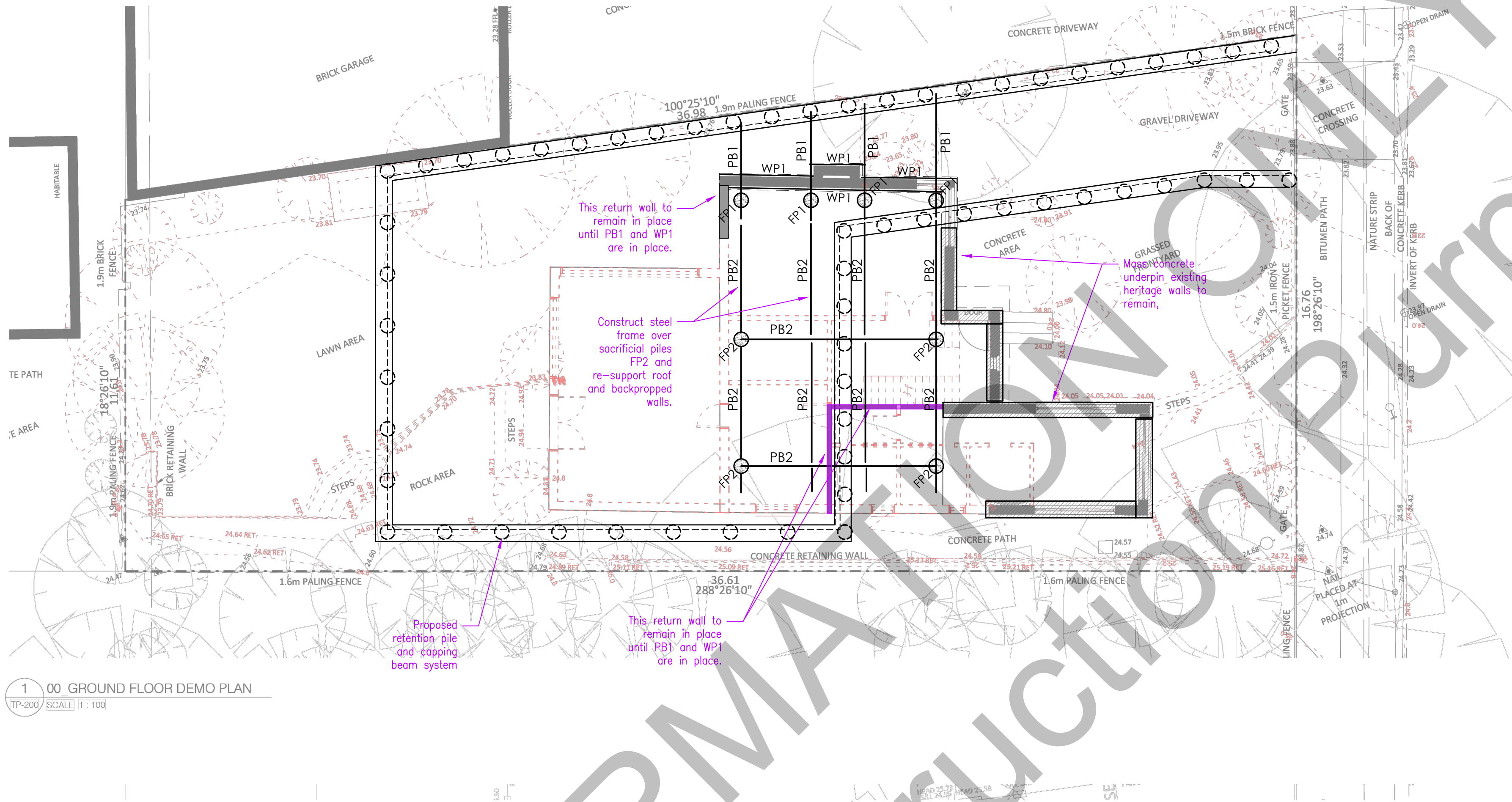
Appendix A

Proposed Demolition & Propping Methodology

AT: 2 GARDEN STREET, GEELONG
FOR: C/- DEAN DYSON ARCHITECTURE

STRUCTURAL DRAWINGS

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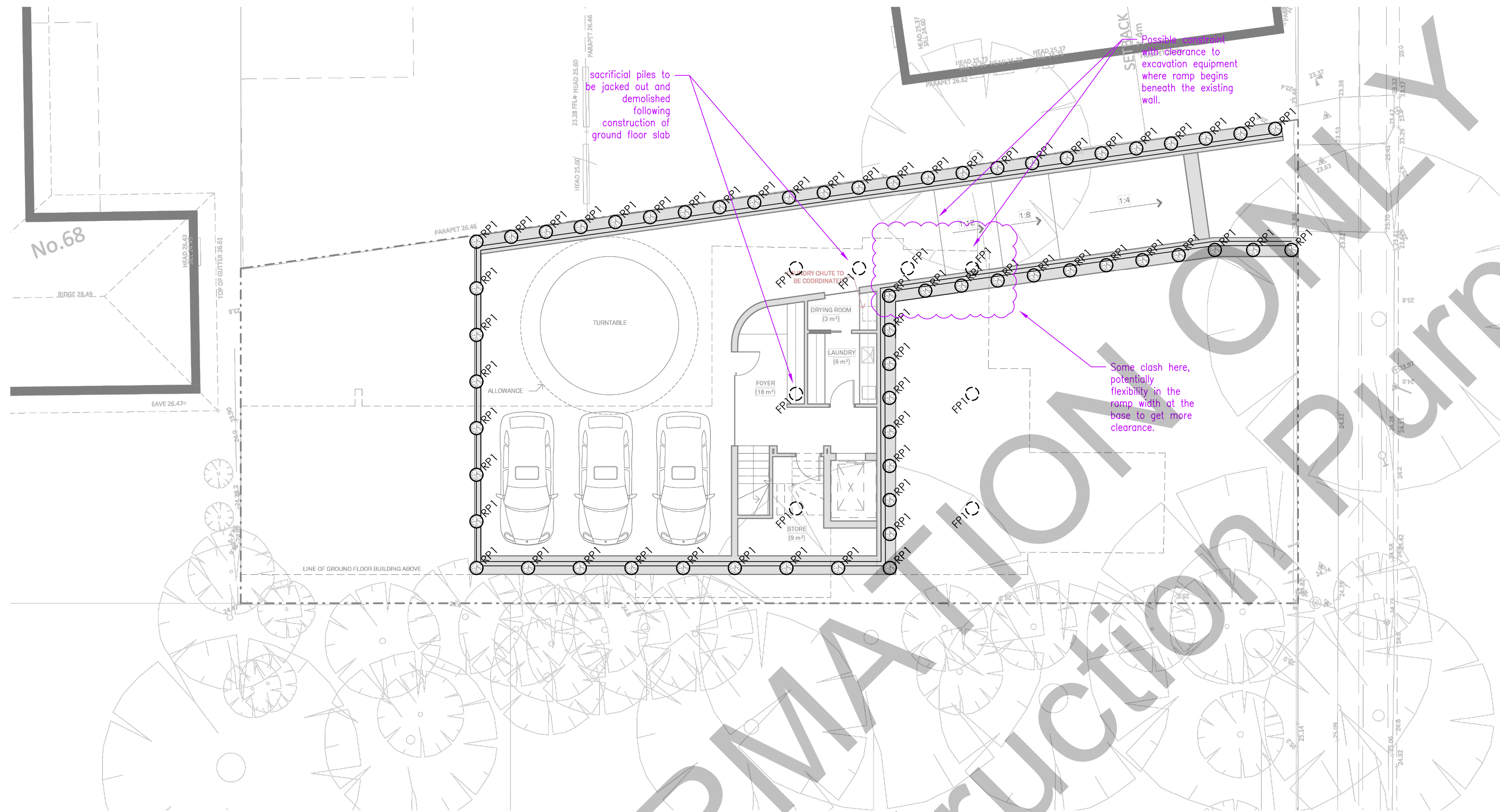


1 00. GROUND FLOOR DEMO PLAN
TP-200 / SCALE 1:100

PROPPING SEQUENCE

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- Underpin brickwork walls to remain with continuous mass concrete underpins installed in a 1-2-3 sequence.
- Demolish the rear walls, internal walls, and first floor framing per the architectural demolition layout plans. Leave return walls where nominated on sketch plan until additional propping measures are in place.
- Install sacrificial piles 'FP1' within the footprint of the building as close to the existing wall as possible. Use a casing (i.e. formatube) to extend piles out of the ground. Sacrificial piles to found a minimum of 2.0m below BEL.
- Install boundary retention piles 'RP1' and capping beam along northern boundary.
- Pocket holes in the external masonry wall to suit PB1 (250UC) depth and width. Penetrations in wall should be such that the PB1's bottom flange are approximately 500mm above the proposed GF slab finished level.
- Slot PB1 propping beams through penetrations in the external wall and secure to the northern capping beam and the sacrificial piles.
- Fix WP1 (250PFC) to top flange of PB1 and to both internal and external skins of masonry so that it is full supported on the steel propping structure.
- Install sacrificial piles 'FP2' within the footprint of the building, use a casing (i.e. formatube) to extend piles out of the ground. Sacrificial piles to found a minimum of 2.0m below BEL.
- Install remainder of retention piles and capping beam around the perimeter of the site and within the footprint of the building.
- Construct temporary steel frame (PB2) 500mm above ground level finished floor level. Re-prop roof structure and wall backprops down to PB2 steel frame.
- Bulk excavate basement demolishing the footing system and small amount of brickwork wall beneath the PB1's and WP1's.
- Prepare and spray shotcrete walls to basement perimeter.
- Prepare and pour basement vertical footings, slab and vertical structure.
- Prepare and pour ground level suspended slab.
- Re-brick beneath propped brickwork wall down to ground level suspended slab.
- Remove PB1's and WP1's and make good wall penetrations.
- Construct first floor structure and re-support existing roof and the external walls.
- Remove temporary PB2 frame, all vertical props supporting the existing roof and all back props supporting external walls.
- Jack hammer out sacrificial piles FP1 and FP2 and make good basement and ground floor slabs.

Rev	Description	Date	Rev	Description	Date	Client	Address	Project	Date	Designed	Drawing Title	
P1	Issued for Information	18.11.2025				C/- Dean Dyson Architecture	2 Garden Street, Geelong	Proposed Alterations And Additions	Nov 2025	JG	DEMOLITION AND PROPPING METHODOLOGY - EXISTING GROUND LEVEL	
							R.I.BROWN R. I. Brown Pty Ltd 72 Lincoln Road, Essendon Victoria 3040 (03) 9374 2877 info@ribrown.com.au			Scale @ A1 1:100 North	Drawn JG Checked MF	Project No. 25-457 Drawing No. SK001 Rev P1



PROPPING SEQUENCE

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P1	Issued for Information	18.11.2025				C/- Dean Dyson Architecture	2 Garden Street, Geelong	Proposed Alterations And Additions	Nov 2025	JG	DEMOLITION AND PROPPING PROPOSAL - PROPOSED BASEMENT LEVEL
									Scale @ A1	Drawn	
									1:100	JG	
									North	Checked	Project No.
										MF	25-457
											Drawing No.
											SK002
											Rev
											P1

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