

Bayswater Maritime Precinct Height Analysis



Prepared for Bayswater Marina Holdings Limited
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SCOPE

Detailed analysis has been undertaken to verify that the designed levels of the streets, parks and mews around the terraced units are coordinated with the floor levels for terraced units and the requirements of Design Manual.

METHODOLOGY

1. Height analysis is based on the Airey Consultants 'Proposed Contours' drawings, all dated 19 February 2021, Drawings 201-204 inclusive, all Revision A. These drawings identify the lowest floor level for the terraced units (identified as FBL) and also a FFL 2.7m above that and show the finished contours around the perimeter of each unit.
2. These minimum floor to floor heights address structure, nominally a 2.4m ceiling height plus 300mm structure. If deeper beams with lower soffits are required, then a 'coffered' ceiling approach could be taken with exposed beams. A concrete slab structure might be designed to be 200-250mm thick.
3. Diagrams have been prepared (see below) which show how terraced houses in each situation can relate to finished ground levels at the street (or park) edge in accordance with the rules in the Design Manual.
4. Analysis is based on compliance with rules R2.4 and R2.5. R2.4 is ensure suitable internal floor to floor height and internal amenity. R2.5 is to ensure privacy for the lowest occupied floors of terraced units fronting to the street while at the same time that building frontages address the street and a high blank basement wall is avoided.

FINDINGS

5. Analysis demonstrates the proposed contours in the public spaces (streets, parks and mews) are coordinated with the lowest floor levels of the terraced units and the rules in the Design Manual to allow functionally feasible, high amenity interiors and good quality urban design outcomes.
6. The analysis demonstrates that a viable design solution is possible utilising a simple design approach as diagrammed. This simple analysis does not include the various other solutions that might also be explored for any unit. For example, designers may choose to combine lower garage height and split level to optimise the design of any unit. That is, R2.4 and R2.5 allow flexibility, providing for high amenity outcomes to be achieved in a range of different ways.

RELEVANT RULES FROM THE DESIGN MANUAL

R2.4 Minimum floor to floor height

2.7 metres finished floor level to finished floor level for habitable floor levels. The garage floor to floor height may be lower but only where the reduced height space accommodates service functions and/or storage.

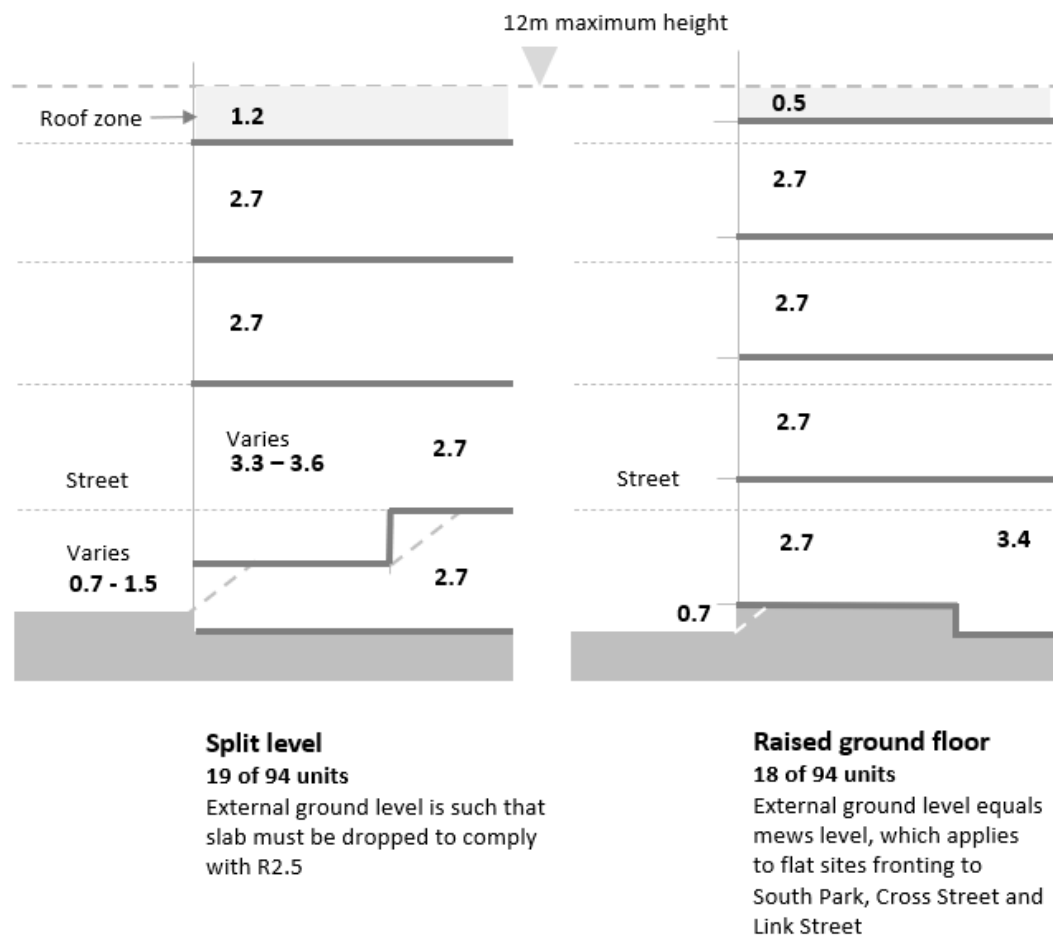
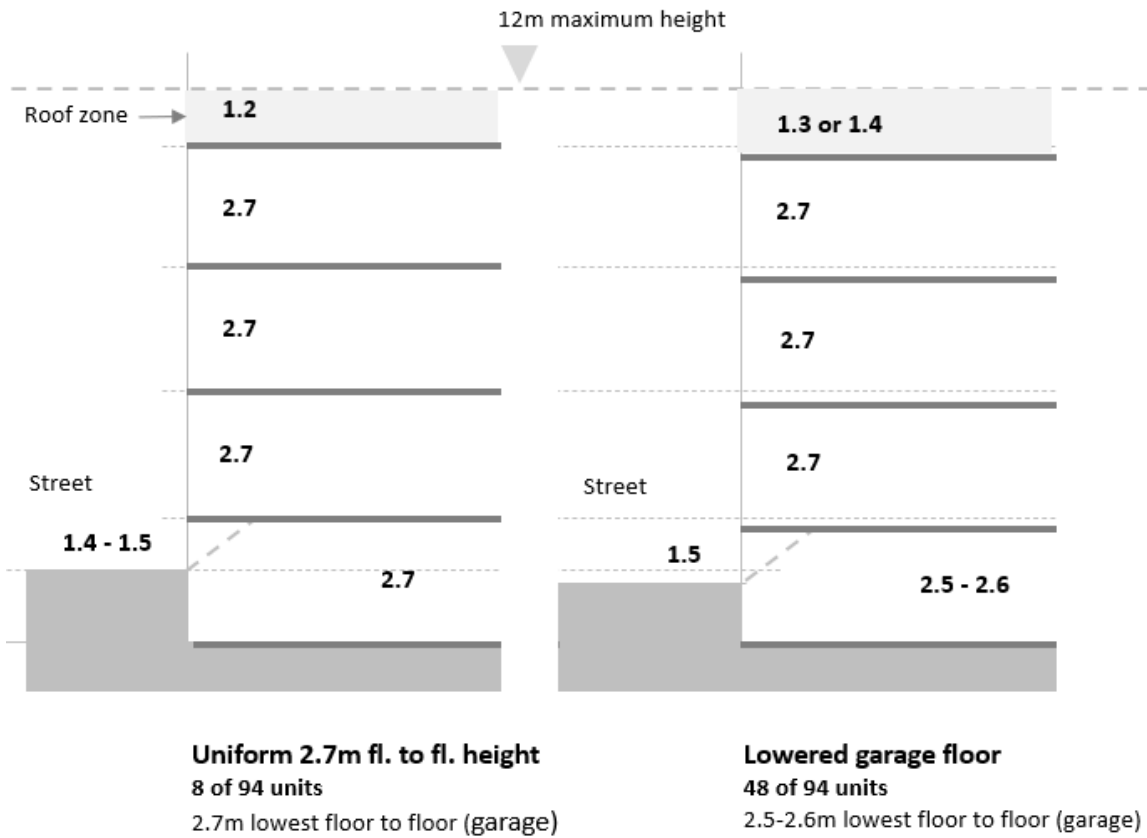
R2.5 Height of ground floor level relative to ground level at the street

Minimum 0.7 metres, maximum 1.5 metres. This does not apply to:

- a. the terrace end facade of any unit at a corner where that terrace end facade faces the street or a park; and
- b. the lowest floor level on the parking mews façade.

Ground level at the street will be the average of the levels at the Street frontage (or Park frontage depending on unit location). These are at points A and B as described in Appendix 1, figure 2.1A and Table 1 Building Heights.

HEIGHT ANALYSIS DIAGRAMS



TERRACED UNIT DESIGN SCENARIOS

1. Uniform 2.7 floor to floor height:

- Assuming a 2.7m floor to floor from garage to the first occupied floor, the external levels are such that a height difference of between 1.4m and 1.5m is achieved from the street to the lowest habitable floor at the frontage.

2. Lowered garage height

- Lowering the lowest level floor-to-floor to variously 2.5-2.6m allows a height difference of between 1.4m and 1.5m to be achieved. That floor to floor height for the lowest (garage) level is sufficient for a large SUV while allowing for an overhead door with automatic door opener.

3. Split level

- The finished ground level on the street side of 19 of 94 units is such that the floor slab closest to the street must be lowered to satisfy R2.5. That then necessitates a split-level solution which provides for garaging on the mews side of the site, and storage or other service functions under the lowered floor slab (to satisfy R2.4).
- This option delivers excellent internal amenity with a high-volume space at the seaward edge, and the potential for the lower height space further back from the street edge to look out through that space to the harbour.

4. Raised ground floor

- This solution, lifting the ground floor 0.7m above the street is necessary where the garage and mews floor levels are the same and will be required for units fronting to South Park, and to Cross and Link streets.
- This allows for excellent street edge conditions. It also provides for up to four levels of occupied space facing out to the park or street.
- Units 14-20 are 6m wide so can retain a double garage facing the mews and a 6.0m wide occupied space facing out over South Park directly to the harbour. Only one carpark would be possible under each of the 4.5m wide terraces that front to Cross Street.
- Assuming a minimum 2.7 floor to floor for the four levels above, 0.5m remains within the AUP permitted envelope for roof structure, with further potential for roof projections above that.

5. Other scenarios are readily achievable

The scenarios described above are deliberately simple, based on the minimum 2.7m floor to floor height, and do not describe the wide range of other cross-sectional options that would be possible:

- The diagrams show a 'roof zone' of 1.2m-1.4m for most units. To that may be added the 300mm for the structural slab diagrammed above the topmost floor. It is therefore readily conceivable that 300mm could be claimed back for each of the three levels (for 3.0m floor to floor) or say 400mm for the two middle levels (for 3.1m floor to floor) with a skillion roof at the top. The rooftop protrusion allowance provides further options for enhancing internal volume on part of the topmost floor.
- In the garage space, the assumption is that if a developer wants to minimise height they will (and can) design the structure to achieve this.
- It is also unlikely that all units will be developed to their full height. For example, many developers may choose to build no more than three levels over all or most of their footprint. That reduced height outcome is most likely on any double width lot where a full four-level dwelling would have a very large floor area.