

Guideline for Queensland
Development Code MP 4.5

Livable dwellings



Guideline to support interpretation and implementation

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Scope

This guideline explains how to apply the livable housing provisions of Queensland Development Code Mandatory Part 4.5 – Livable dwellings and grading to floor wastes (QDC 4.5).

QDC 4.5 forms part of Queensland's building assessment provisions and includes requirements for livable housing design.

This guideline focuses primarily on the livable housing design provisions in QDC MP 4.5, including Queensland-specific compliance pathways and variations.

Purpose of these guidelines

This guideline assists practitioners and homeowners with understanding and applying QDC 4.5. It explains Queensland's livable housing design provisions, available compliance pathways and Queensland-specific variations.

Legal status of these guidelines

This document is a statutory guideline made under section 258 of the *Building Act 1975* (BA) to assist with compliance with the Act and the application of QDC 4.5. Building certifiers are required under section 133A of the BA to have regard to guidelines made under section 258 when performing a function under the Act.

This document is intended to assist practitioners and homeowners to understand and apply QDC 4.5. It does not replace, vary or add to any requirement of the BA, the Building Regulation 2021 or QDC 4.5.

Where there is any inconsistency between this document and a legislative requirement, the legislative requirement prevails.

Queensland's approach

Queensland supports homes that are livable, practical and able to meet the changing needs of occupants over time.

QDC 4.5 includes Queensland-specific variations to the Livable Housing Design Standard and additional compliance pathways that support the practical delivery of accessible and adaptable homes. These provisions maintain accessible housing outcomes while providing practical and cost-effective options for industry and new homeowners.

The Queensland Government has provided this guidance to improve clarity, support consistent decision-making and make the requirements easier to apply.

The guidance reflects technical improvements to the Modern Homes Standards that:

- provide greater clarity
- improve compliance efficiency
- support productivity
- promote practical and cost-effective construction outcomes
- maintain accessibility and adaptability outcomes.

Key benefits of Queensland's approach are that it:

- supports homes that are easier to access and use
- helps Queenslanders remain in their homes as their needs change
- provides practical compliance pathways for industry
- recognises site constraints and construction realities
- reduces unnecessary compliance burden

- supports housing choice and affordability
- improves certainty for designers, builders and certifiers
- maintains accessibility and adaptability outcomes, which promote inclusive communities.

Background

The Livable Housing Design Standard (LHDS) supports the delivery of homes that are more accessible and adaptable throughout different stages of life.

The LHDS was introduced to make everyday living easier for a broader range of Queenslanders, including families with young children, older people, people recovering from injury, and people with disability.

The LHDS has been incorporated into the NCC, and QDC 4.5 has been updated to address Queensland-specific requirements. The Modern Homes Standards introduce minimum accessibility features for new homes to support safer, more inclusive and more adaptable housing.

QDC 4.5 has been updated to:

- introduce a ramp-ready compliance option
- provide solutions that integrate step-free access requirements with termite management and water prevention requirements
- provide additional threshold ramp options for step-free entry
- provide greater flexibility for the design of accessible bathrooms
- reduce unnecessary complexity for designers, builders and certifiers.

These changes maintain the accessibility objectives of the Modern Homes Standards while providing additional compliance options.

Exemptions for houses on narrow lots

Queensland continues to recognise the unique design challenges associated with narrow residential lots.

To support housing delivery on these sites, the exemption from the LHDS for affected lots has been extended until 30 September 2029.

The exemption applies to the lawful carrying out of building work, and the assessment of building development applications, for a house (class 1a building) located on an affected lot.

The exemption applies to a lot with any frontage of 12.5 metres or less in width that was:

- created before 1 October 2023; or
- created on or after 1 October 2023 and on or before 30 September 2029, but only if:
 - a properly made application for a development permit for reconfiguring a lot to create the lot was made before 1 October 2023; or
 - the lot was identified in a disclosure plan under the Land Sales Act 1984 before 1 October 2023.

Measuring frontage for affected lots

For the narrow lot exemption, measurement of the frontage should be taken along the relevant boundary of the lot that adjoins the road. Where a lot has more than one road frontage, such as a corner lot, each road frontage should be considered. If any frontage is 12.5 metres or less in width, the frontage element of the affected lot definition is satisfied, provided the remaining requirements of the definition are also met.

For irregular lots, curved frontages or segmented frontage boundaries, the frontage should be assessed by reference to the boundary or boundaries of the lot that adjoin the road, as shown on the registered plan or other relevant title or survey information. Where the road frontage is made

up of more than one connected segment, the relevant frontage width should be determined from the lot boundary adjoining the road rather than from the width of the dwelling, garage, driveway crossover or building envelope.

Where a lot adjoins both a road and a lane, practitioners should first consider whether the lane is an adjoining road for the purposes of the frontage definition. If it is, the boundary with that lane may also be a frontage. The affected lot exemption can apply where any frontage is 12.5 metres or less, provided all other elements of the affected lot definition are met.

If the frontage is unclear from the building application material, the applicant may need to provide the registered survey plan, disclosure plan or other relevant plan showing the lot boundaries and road frontages relied on for the exemption.

Renovations to existing homes

Most renovations to existing homes will be exempt from, or only minimally affected by QDC 4.5. Queensland's approach recognises the practical realities of renovating existing homes and includes exemptions, concessions and building certifier discretion to avoid unreasonable outcomes.

Minor works will generally not trigger the requirements, such as:

- kitchen refurbishments
- bathroom repairs and maintenance (see QDC 4.5 A1 and A2)
- replacing cupboards and vanities
- replacing floor coverings
- routine repairs and maintenance

For larger renovations, QDC 4.5 will generally apply to the new building work. In some cases, sections 61 and 81 of the Building Act 1975 may also affect how alterations to the existing home are assessed, including whether earlier building assessment provisions may be used or whether conditions may be imposed requiring all or part of the existing building to comply with current building assessment provisions as if it were new. For more details on how these provisions may apply to a home renovation, refer to the [Guideline for Modern Homes Standards – Home Renovations](#).

Transitional arrangements

When building assessment provisions change, such as those in a QDC, a building certifier may apply the previous building assessment provisions in force immediately before the change. This is permitted under section 37 of the *Building Act 1975*.

For more details on how transitional arrangements apply to building applications, refer to the [Guideline for applying transitional arrangements when building requirements change](#).

Requirements for sanitary compartments

QDC 4.5 requires class 1a and class 2 buildings to include a sanitary compartment that facilitates independent access and use.

The sanitary compartment provisions help support more adaptable homes by ensuring at least one toilet can be more easily accessed and used by occupants and visitors with varying mobility needs.

Queensland has introduced targeted modifications to some sanitary compartment requirements to address common design and construction challenges identified by industry while maintaining the intended accessibility outcomes.

If there is no sanitary compartment on the ground or entry level, the compliant sanitary compartment may be located on the lowest level containing a habitable room. However, where a sanitary compartment is provided on the ground or entry level, regardless of whether there are any habitable rooms, it must comply with the LHDS.

Table 2 of QDC 4.5 provides that P3 applies to a class 1a building and to each sole-occupancy unit located on the ground or entry level of a class 2 building. The provisions in A3(4) to A3(10) relating to wall reinforcement, toilet pan offset and sanitary-compartment circulation space also apply to each sole-occupancy unit located on the ground or entry level of a class 2 building where P3 applies.

Rear wall reinforcement behind toilet pan

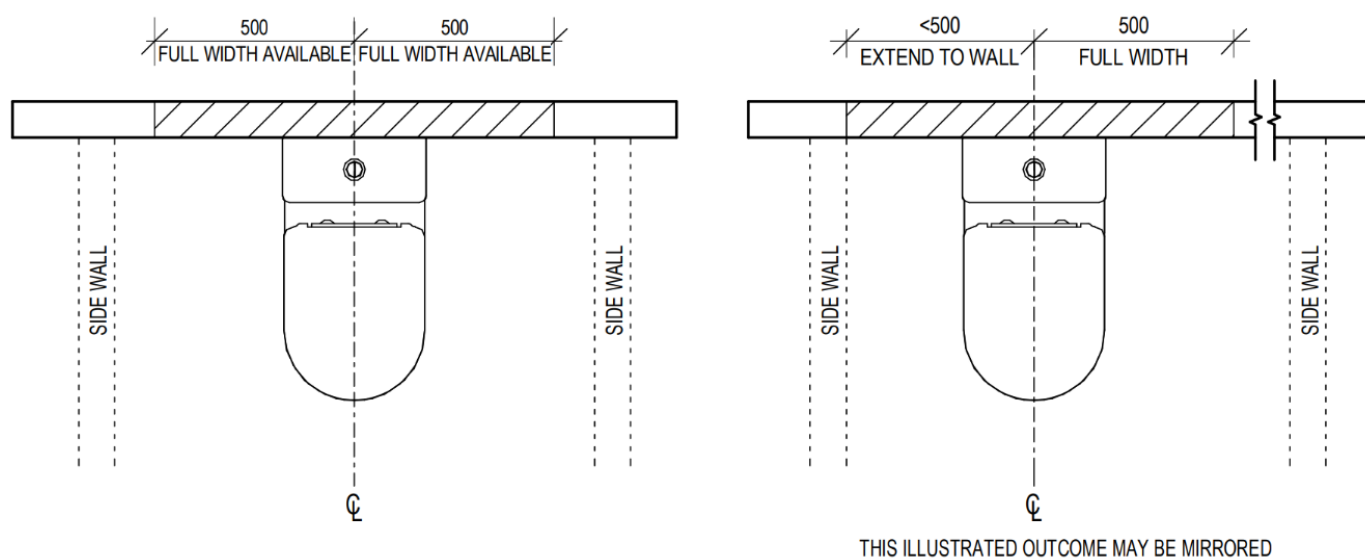
The LHDS requires reinforcement to bathroom and sanitary compartment walls to allow future installation of grabrails. QDC 4.5 A3(4) modifies the required horizontal extent of rear wall reinforcement in limited circumstances.

Where an adjoining side wall is within 500 mm of the toilet pan centreline, the reinforcement need only extend, on that side, from the toilet pan centreline to the adjoining side wall.

For example, if the toilet pan centreline is 450 mm from an adjoining side wall, the reinforcement need only extend 450 mm from the centreline to that wall. The usual reinforcement extent continues to apply on the other side if at least 500 mm is available.

This modification affects only the horizontal extent of reinforcement required under Figure 6.2f or Figure 6.2g. It does not alter the required height, strength, fixing, material or purpose of the reinforcement, or any other requirement of Figure 6.2f or Figure 6.2g of the LHDS.

Figures 1a and 1b – Wall reinforcement behind toilet with limited space



Toilet pan offset from circulation space

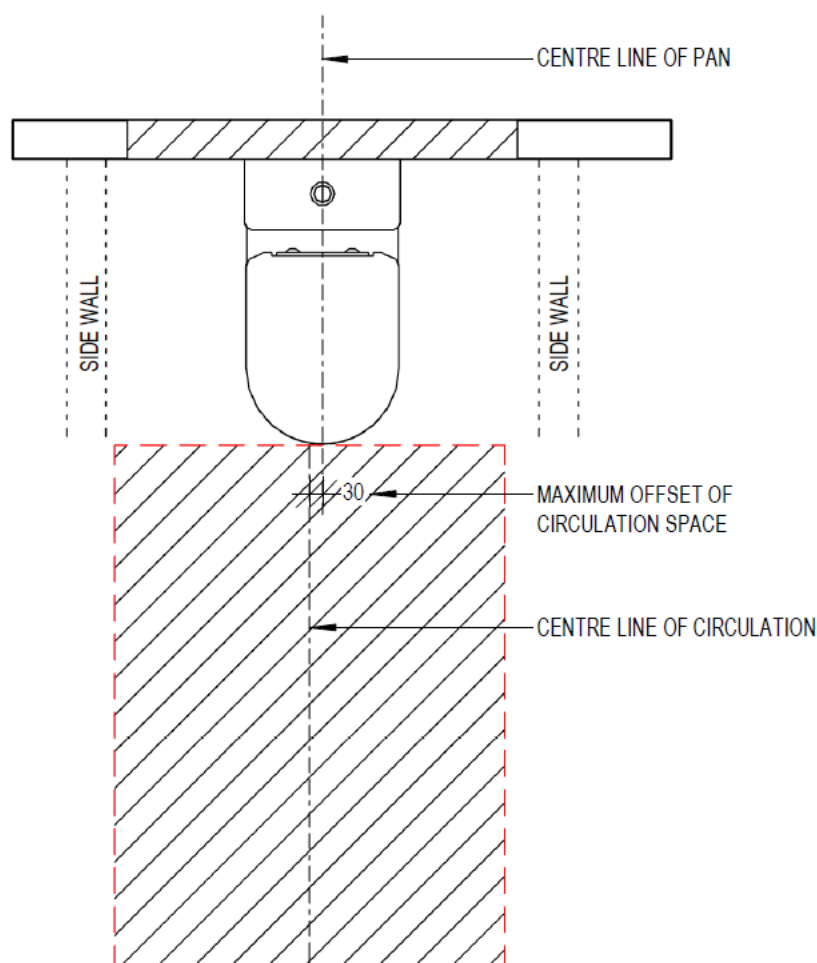
Clause 4.2 of the LHDS requires a 1200 mm by 900 mm circulation space to be provided in front of a toilet pan.

Where the opposing side walls of a sanitary compartment are 900 mm apart, clause 4.2 and figure 4.2 could be read as requiring the toilet pan and circulation space to align exactly with the centreline between those walls. This would allow no tolerance for minor variations in the set-out and installation of the toilet pan.

QDC 4.5 A3(6) and (7) address this issue by allowing limited set-out flexibility. The toilet pan need not be centred between the opposing side walls, and the centreline of the required circulation space may be offset from the toilet pan centreline by not more than 30 mm to either side.

The required circulation-space dimensions and all other requirements of clause 4.2 of the LHDS continue to apply.

Figure 2 – Toilet pan circulation allowable offset



THIS ILLUSTRATED OUTCOME MAY BE MIRRORED

Alternative compliance for sanitary compartment circulation space

QDC 4.5 A3(9) provides an alternative compliance pathway for sanitary compartment circulation space. For a sanitary compartment required by A3(1), the requirements of Part 4.2 of the LHDS are taken to be satisfied if the sanitary compartment complies with either:

- Part 4.2 of the LHDS, as modified by A3(6) to A3(8); or
- The provisions in AS 1428.1:2021 – *Design for access and mobility* (AS 1428.1), clause 12.2.8.1, Circulation space — General.

Where the sanitary compartment forms part of a combined sanitary facility, circulation spaces may overlap under the AS 1428.1 pathway only as permitted by AS 1428.1, clause 12.6, Combined sanitary facilities.

Where AS 1428.1 is used as the compliance pathway for sanitary compartment circulation space, this should be clearly identified on the approved plans and associated approval documents.

Where compliance is based on AS 1428.1, it should be applied as a complete circulation-space pathway for the sanitary facility. The design should not combine LHDS and AS 1428.1 requirements. Any overlap of circulation spaces must comply with clause 12.6 of AS 1428.1.

Openings through walls and corridor requirements

QDC MP 4.5 A8 clarifies the application of the LHDS corridor requirements to short openings through walls.

For the purposes of clause 3.3 of the LHDS, an opening through a wall is not required to be treated as a corridor where it:

- extends no more than 450 mm measured along the path of travel; and
- provides a clear opening width required by clause 3.1 of the LHDS.

Accordingly, a short wall opening, nib wall opening or doorway-style passage is not required to satisfy the corridor width requirements of clause 3.3 of the LHDS merely because it forms part of a path of travel between spaces. The opening must, however, provide the required clear opening width in accordance with clause 3.1 of the LHDS.

Site constraints and step-free access paths

H8D2 of the NCC provides limited concessions from complying with clause 1.1 of the LHDS. These concessions apply only to the continuous and step-free access-path requirements. Other applicable livable housing design requirements continue to apply.

Where the NCC concessions do not apply, QDC MP 4.5 provides additional compliance options for class 1a buildings. These include using AS 1428.1 for the step-free access path or using the ramp-ready acceptable solution for a building that is not a slab-on-ground building, provided the requirements in Schedule 1 are met.

Allowing use of AS 1428.1 provides allow greater flexibility where a dwelling is being designed to meet more stringent access requirements, including dwellings intended for Specialist Disability Accommodation (SDA).

Ramp-ready

Ramp-ready means identifying a nominated area on the plans that shows a compliant ramp and landings could be installed in the future to provide a step-free access path in accordance with QDC MP 4.5 for a building that is not a slab-on-ground building.

The ramp-ready design is assessed at the building approval stage using the plans and accompanying documents, including any required Form 15, *Compliance certificate for building design or specification*.

At the final inspection, the nominated area should be inspected to confirm that the approved ramp-ready design has been maintained and that the future installation of the continuous and step-free path has not been prevented.

Documentation of ramp-ready

The plans and approval documents accompanying the building development application must identify a nominated area for the future installation of a ramp. The nominated area must be sufficient to allow the future installation of a ramp that complies with the LHDS or AS 1428.1.

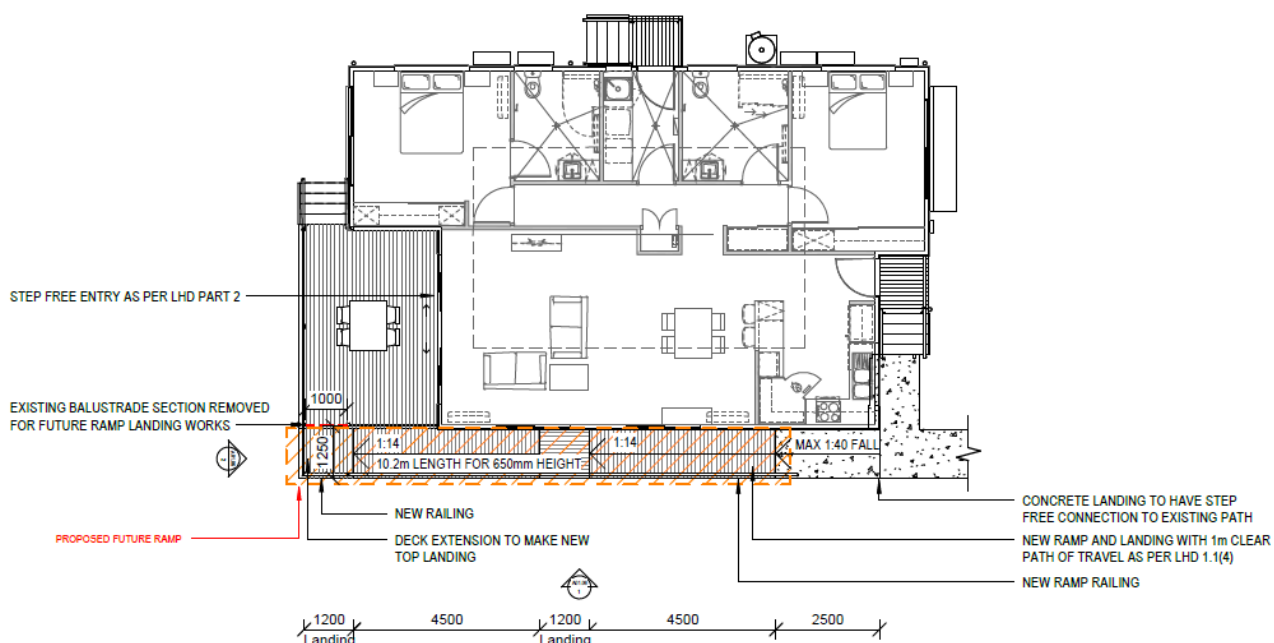
The plans must include information necessary to assess compliance, including—

- (a) the alignment, width, start point and end point of the nominated area; and
- (b) the location and dimensions of any ramps, landings and changes in direction; and

- (c) existing and proposed levels relevant to the nominated area, including the finished floor level, threshold level and landing levels; and
- (d) the structural design of any ramp, and landings including their footings, evidenced by a Form 15 - Compliance certificate for building design or specification.

An example of ramp-ready design is included in this guideline as **Appendix 1**.

Figure 3 – Indicative ramp on building plan



Ramp-ready and mixed foundation systems

The ramp-ready pathway is available only for a building that is not a *slab-on-ground building*. A *slab-on-ground building* is defined as a building founded on a concrete slab cast directly on prepared ground, where the slab serves as the ground floor and transfers loads to the supporting foundation material.

A dwelling may include more than one footing or floor construction system. For example, part of a dwelling may be founded on a concrete slab cast directly on prepared ground, while another part may be suspended, elevated, supported on posts or bearers and joists, or otherwise constructed above ground.

Note: A continuous step-free access path provided under clause 1.1 of the LHDS may include suspended construction, such as a deck or boardwalk-style pathway.

Where a dwelling has mixed foundation systems, the foundation and floor construction relevant to the dwelling entrance and future step-free access path should be considered. A dwelling is not excluded from the ramp-ready pathway merely because another part of the dwelling includes slab-on-ground construction, provided the part of the dwelling relevant to the future access path is not constructed as slab-on-ground.

However, where the dwelling entrance and associated ground floor are constructed on a concrete slab cast directly on prepared ground, the ramp-ready pathway is not available.

Using AS 1428.1 for threshold and step-free access path

QDC MP 4.5 allows builders and designers to use relevant provisions of AS 1428.1 as an alternative pathway for the continuous and step-free access path to a dwelling entrance, instead of relying only on clause 1.1 of the Livable Housing Design Standard. This provides a recognised and more detailed access-design pathway for matters such as path continuity, clear width, gradients, ramps, landings and changes in direction.

This pathway is particularly useful for dwellings designed to higher accessibility outcomes, including specialist disability accommodation, NDIS-related housing, adaptable housing and ageing-in-place designs. Where a dwelling is already being designed around AS 1428.1 principles, QDC MP 4.5 avoids unnecessary redesign against a separate standard while maintaining the intended step-free access outcome.

QDC MP 4.5 also adopts AS 1428.1 through its threshold ramp provisions. A threshold ramp is defined by reference to AS 1428.1 clause 7.5, and Queensland has adapted this concept through the modified threshold ramp, which keeps the approximate 1:8 ramp geometry while allowing a greater rise and length. This helps designers coordinate step-free access with slab set-downs, surface-water protection and termite management at the entrance.

AS 1428.1 is also recognised in the ramp-ready pathway. For eligible buildings, the nominated future ramp area may be designed to allow a future continuous and step-free path that complies with either the LHDS or the relevant AS 1428.1 provisions. This protects the future access outcome without requiring the ramp to be constructed upfront.

Together, these measures give industry greater flexibility and certainty while supporting more accessible and adaptable housing. QDC MP 4.5 does not replace the LHDS with AS 1428.1; it selectively adopts AS 1428.1 where it provides a robust and familiar pathway for achieving equal or higher access outcomes.

Integration of step-free entrance with termite management and water prevention requirements

Requirements for surface-water drainage, water prevention and termite management need to be carefully considered when also providing a level and step-free entrance. In particular, reducing or removing the usual height difference at an external doorway may—

- reduce the vertical separation available to prevent surface water entering the building;
- make it more difficult to grade external surfaces away from the building;
- affect the visibility or continuity of a termite inspection zone; and
- create junctions between the dwelling, landing and threshold that require careful detailing.

Clause 2.2 and Clause 2.4 of the LHDS includes measures for thresholds and weatherproofing external step-free entrances and provides recognised pathways for managing surface water at the entrance threshold. However, practical challenges in coordinating accessibility, water prevention and termite-management requirements can remain.

In response to these challenges, QDC MP 4.5 identifies additional integrated solutions, including threshold-ramp and modified threshold-ramp pathways, that coordinate accessibility, surface water protection and termite-management requirements. These integrated solutions combine:

- a step-free entrance treatment;
- an appropriate water prevention measure; and

- a compliant termite-management measure.

The solutions in Table A6 provide recognised ways of coordinating these requirements. They are not exhaustive, and another combination of acceptable solutions may be used if it satisfies the relevant requirements.

Designers and builders should ensure the nominated step-free entry:

- provides an appropriate termite management system
- avoids concealing or bridging the termite inspection zone
- manages surface water at the threshold and landing interface
- provides positive drainage away from the building
- does not compromise other applicable NCC or QDC requirements.

Reliance on guidance

This guideline includes diagrams and examples to assist in understanding how step-free entrance requirements may be coordinated with water prevention and termite-management requirements.

The diagrams illustrate:

- examples of compliant step-free entrance arrangements that rely on the weatherproofing measures in clause 2.4 of the LHDS; and
- examples of integrated solutions identified by Table A6, including threshold-ramp and modified threshold-ramp pathways.

A building certifier may be satisfied that a dwelling entrance complies with the pathway illustrated by the applicable example where the design is consistent with that example and satisfies all dimensions, conditions and referenced requirements identified in the example.

Other combinations of acceptable solutions may also be used where they satisfy each of the applicable requirements.

Integrated solutions

Table A6 of QDC MP 4.5 identifies combinations of acceptable solutions that may be used to coordinate the requirements for step-free entrance, water prevention and termite management. The table does not otherwise modify the relevant Deemed-to-Satisfy requirements, except for the targeted allowances for threshold ramps in A6(3) and A6(4).

Table A6 - Integrated solutions for step-free entrance with water and termite management

Integrated solution	Step-free entrance options	Water prevention options	Termite management options
1. Slab on ground	<i>Threshold ramp</i>	Clause 2.4 of the <i>LHDS</i>	Part 3.4 Termite risk management, of the Queensland variation to <i>ABCB</i> Housing Provisions Standard
	<i>Modified threshold ramp</i>	Clause 2.4 of the <i>LHDS</i> ; or Clause 3.3.3 of the <i>ABCB</i> Housing Provisions Standard	
2. Raised permeable surface	<i>Threshold ramp</i>	Clause 2.4(b) of the <i>LHDS</i> ; and	

Integrated solution	Step-free entrance options	Water prevention options	Termite management options
	<i>Modified threshold ramp</i>	Clause 3.3.3(c) of the <i>ABCB Housing Provisions Standard</i>	

A6(3) modifies the application of clause 2.3 of the LHDS by allowing a threshold ramp identified in Table A6 to be located between the entrance door and the required landing area. The landing area may adjoin the lower end of the threshold ramp rather than the entrance door. However, the landing area must still be provided and must otherwise comply with clause 2.3 of the LHDS.

A6(4) provides a limited concession from clause 3.3.3(b)(ii) of the *ABCB Housing Provisions Standard* for a modified threshold ramp identified in Table A6. The modified threshold ramp is taken to comply with that clause if its highest point is at least 50 mm above the adjoining impermeable paved or concrete area.

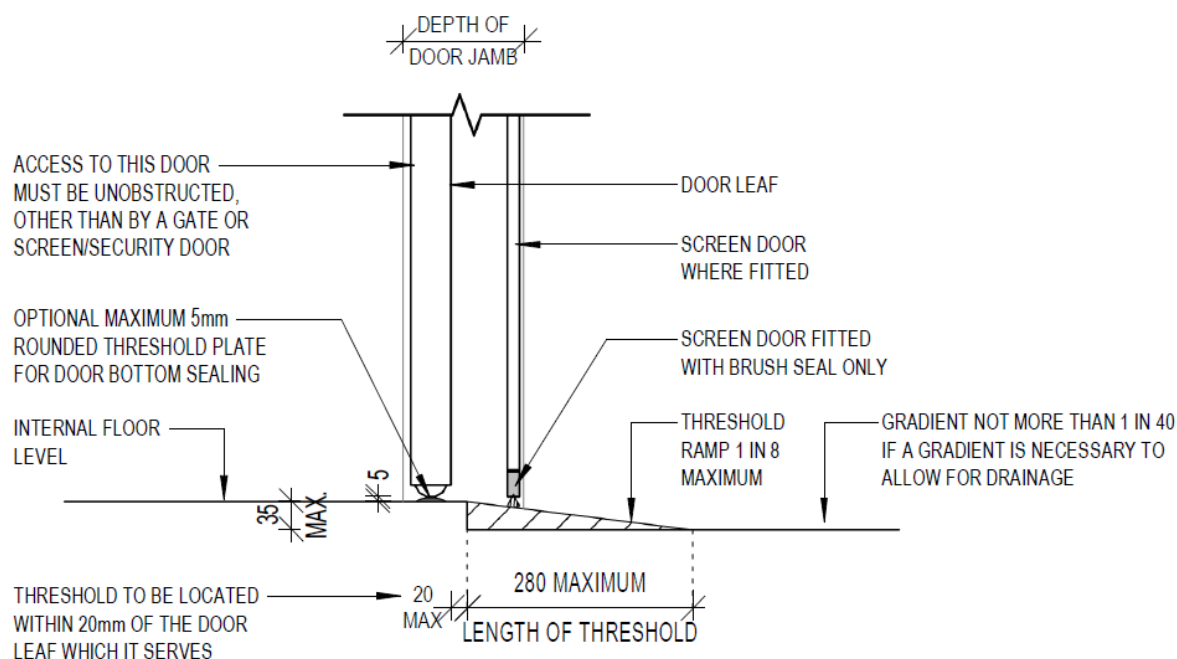
Except for these targeted allowances, the applicable requirements for step-free entrance, landing areas, water prevention and termite management continue to apply. Table A6 is not exhaustive, and another combination of acceptable solutions may be used to comply with P6(2) of QDC 4.5.

The following sections explain the threshold-ramp allowances and the other elements of the integrated solutions, supported by illustrative examples.

Threshold ramp (AS 1428.1:2021)

The QDC defines a threshold ramp as a ramp at an entrance door complying with clause 7.5 of AS 1428.1. Dimensions include:

- a maximum rise of 35 mm;
- a maximum length of 280 mm; and
- a maximum gradient of 1:8.

Figure 4 – Threshold ramp**Modified threshold ramp**

QDC MP 4.5 defines a modified threshold ramp as a threshold ramp complying with AS 1428.1 clause 7.5, except that:

- the maximum rise is increased to 56 mm; and
- the maximum length is increased to 450 mm.

The modification substantially preserves the threshold-ramp geometry:

- conventional maximum: 35 mm over 280 mm, approximately 1:8;
- modified maximum: 56 mm over 450 mm, also approximately 1:8.

The modified threshold ramp is not materially steeper. Its additional length allows it to accommodate a greater level difference while maintaining a maximum gradient of 1:8

Feature	Threshold ramp	Modified threshold ramp
Maximum rise	35 mm	56 mm
Maximum length	280 mm	450 mm
Maximum gradient	1:8	1:8
Main effect	Negotiates a small threshold	Negotiates a larger floor-to-landing separation

Threshold ramp splayed edges and landing width

Where a threshold ramp is installed between a doorway and the required landing area in accordance with A6(3), the threshold ramp does not reduce the minimum landing area dimensions required under clause 2.3 of the LHDS. A clear and level landing area of at least 1200 mm × 1200 mm must be provided beyond the threshold ramp.

A threshold ramp must have splayed edges at 45 degrees on each exposed side adjoining the circulation area. The landing area must have sufficient width to accommodate the full width of the threshold ramp, including any required splayed edges.

Where a threshold ramp has the maximum permitted length of 450 mm, each 45-degree splayed edge extends 450 mm beyond the doorway width. Accordingly, for a doorway with a width of 820 mm and an exposed side on each side of the ramp, the landing area width required to accommodate the threshold ramp and its splayed edges is 1720 mm, comprising:

- 820 mm for the doorway width; and
- 450 mm for each splayed edge.

Figures later in this guideline illustrate the configuration of the threshold ramp, splayed edges and landing area.

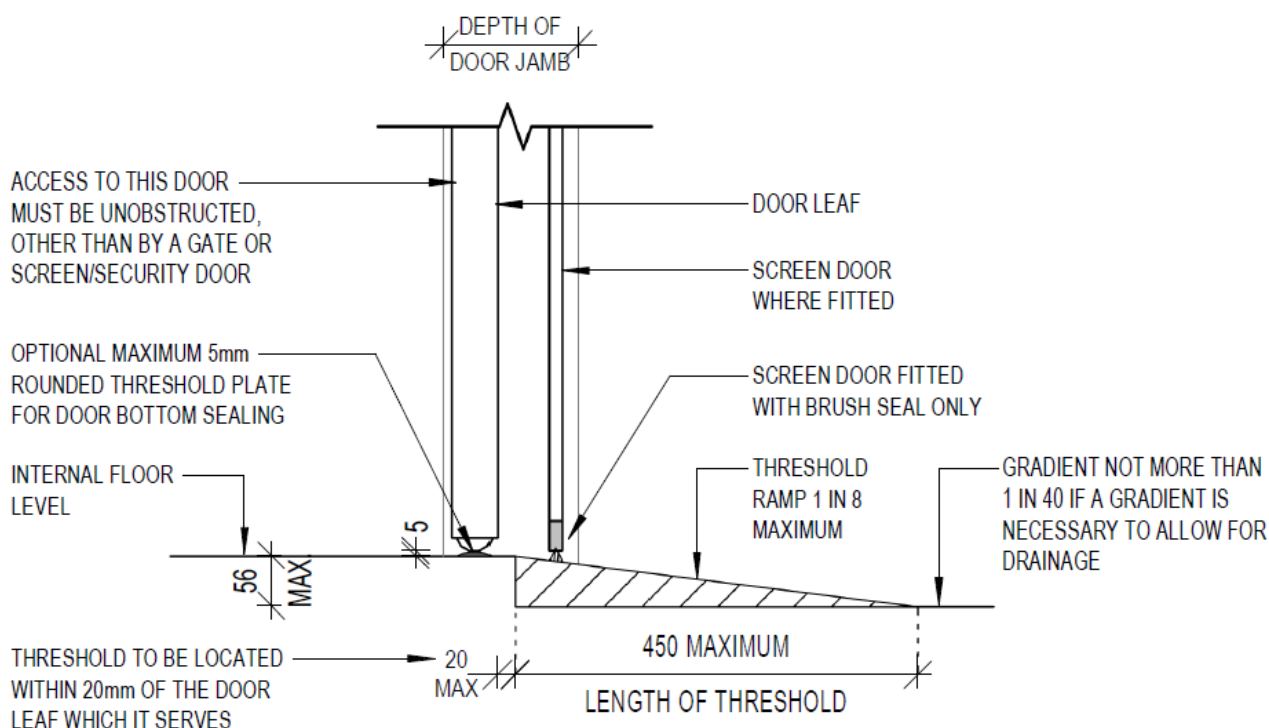
How the modified threshold ramp provides surface water protection

The key benefit of the modified threshold ramp is additional vertical separation without reintroducing an abrupt step.

The modified threshold ramp permits the finished floor to be up to 56 mm above the external landing, while the user crosses that difference on an inclined surface no steeper than 1:8.

This assists because:

- water must rise further before it can cross the doorway;
- the building can retain the slab-height separation contemplated by Housing Provisions clause 3.3.3(b)(ii);
- external paving or concrete can still fall away from the dwelling;
- the lower external landing provides space for runoff to remain outside;
- there is more tolerance for minor ponding, construction tolerances and temporary drainage surcharge; and
- accessibility is retained because the increased rise is achieved by increasing ramp length, rather than creating a vertical step.

Figure 5 – Modified threshold ramp

Interaction between threshold ramps and water prevention and termite management requirements

The threshold ramp and modified threshold ramp options discussed above do not operate independently. Table A6 integrates those options with separate requirements for water prevention and termite management. The following sections explain the provisions referenced in the remaining columns of Table A6 and how they interact with the threshold-ramp options.

LHDS clause 2.4: Weatherproofing for external step-free entrance

Clause 2.4 provides the LHDS mechanisms for addressing surface water at the step-free entrance, including drainage and surface arrangements associated with the landing area.

Table A6 permits:

- a threshold ramp on a slab-on-ground entrance where clause 2.4 is used;
- a modified threshold ramp on a slab-on-ground entrance where clause 2.4 is used, if the height difference to be addressed is less than 50 mm; and
- either threshold ramp on a raised permeable surface, provided the specified LHDS and Housing Provisions requirements are both met.

ABCB Housing Provisions clause 3.3.3: Surface-water drainage (modified threshold-ramp concession)

Table A6 permits the use of a modified threshold ramp in conjunction with clause 3.3.3 of the ABCB Housing Provisions Standard. For this pathway, QDC 4.5 A6(4) provides a concession in relation to clause 3.3.3(b)(ii), which requires the internal slab level to be at least 50 mm above the adjoining impermeable paved or concrete area. This pathway applies where the height difference to be accommodated is between 50 mm and 56 mm.

Clause 3.3.3 requires surface water to be diverted away from a Class 1 building. For slab-on-ground construction, it deals with:

- falls in external surfaces away from the building;
- the vertical height of the dwelling slab above surrounding external finished surfaces; and
- prevention of surface water ponding under suspended floors.

Part 3.4 Termite risk management: Queensland variation to the ABCB Housing Provisions Standard

The Queensland variation to Part 3.4 of the ABCB Housing provisions provides recognised termite-management systems and construction details for Class 1 buildings. Depending on the footing and slab arrangement, these may include exposed slab edges for inspection, physical termite barriers and compliant chemical systems.

Table A6 does not alter the applicable termite-management requirements. Accordingly, a threshold-ramp or modified threshold-ramp solution must not conceal an exposed slab edge required for termite inspection, bridge a termite barrier, or obstruct access needed for the installation, maintenance, replenishment, replacement or inspection of the termite-management system.

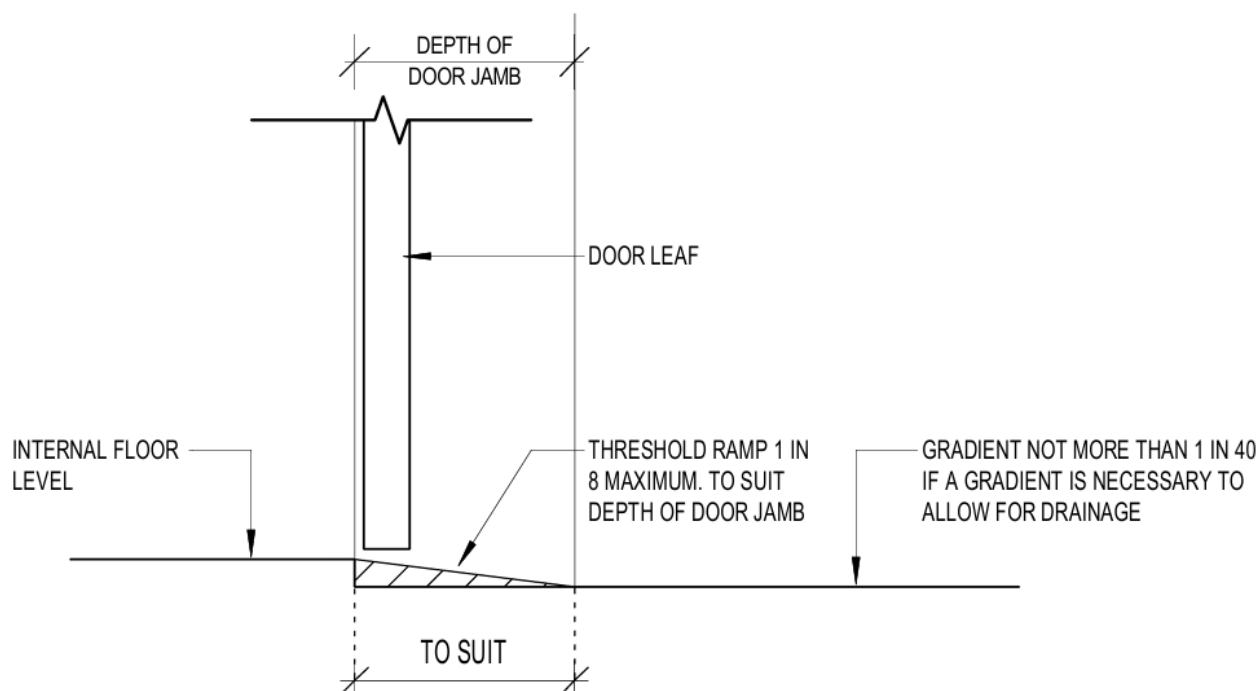
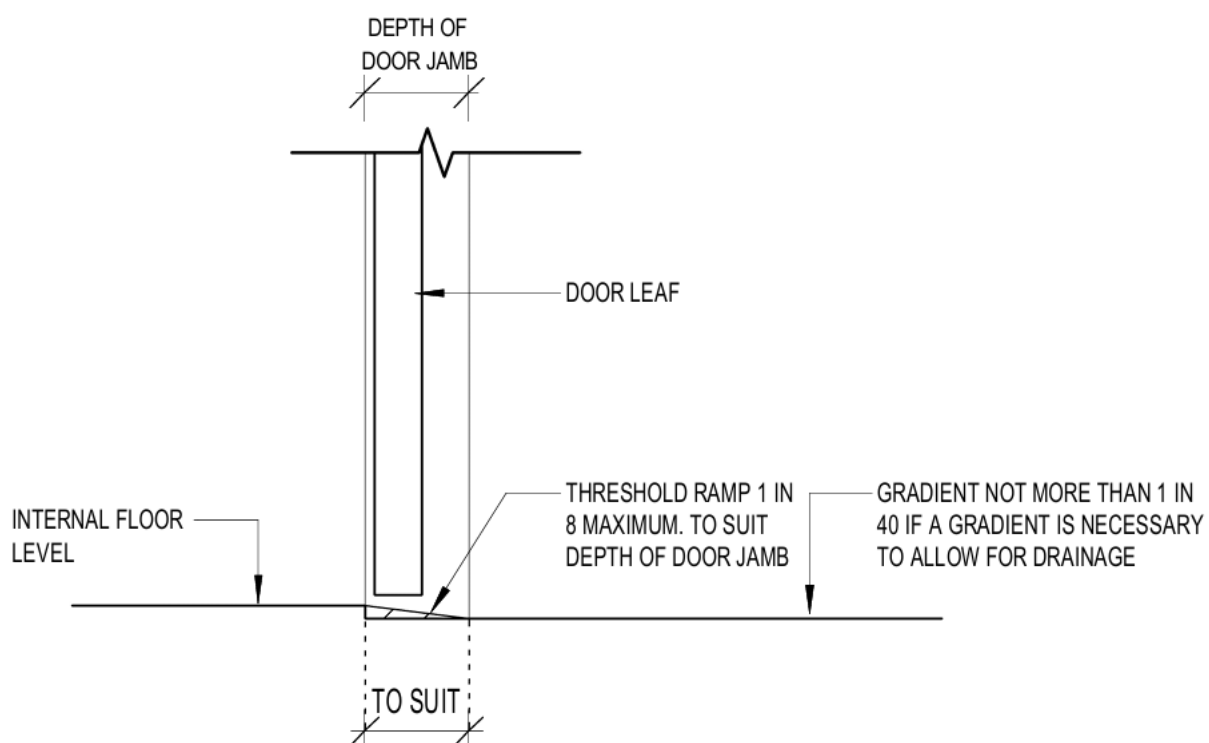
Examples of compliant integrated solutions

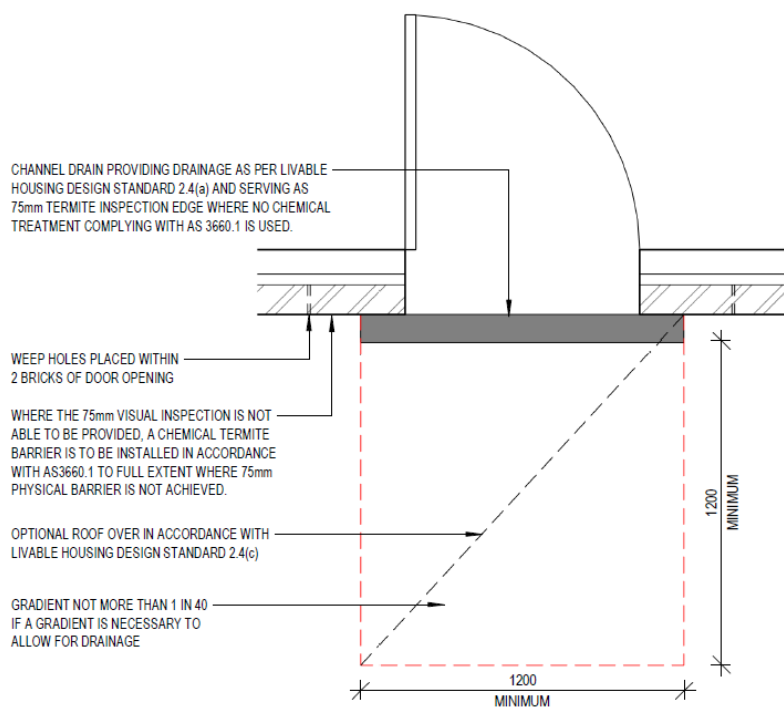
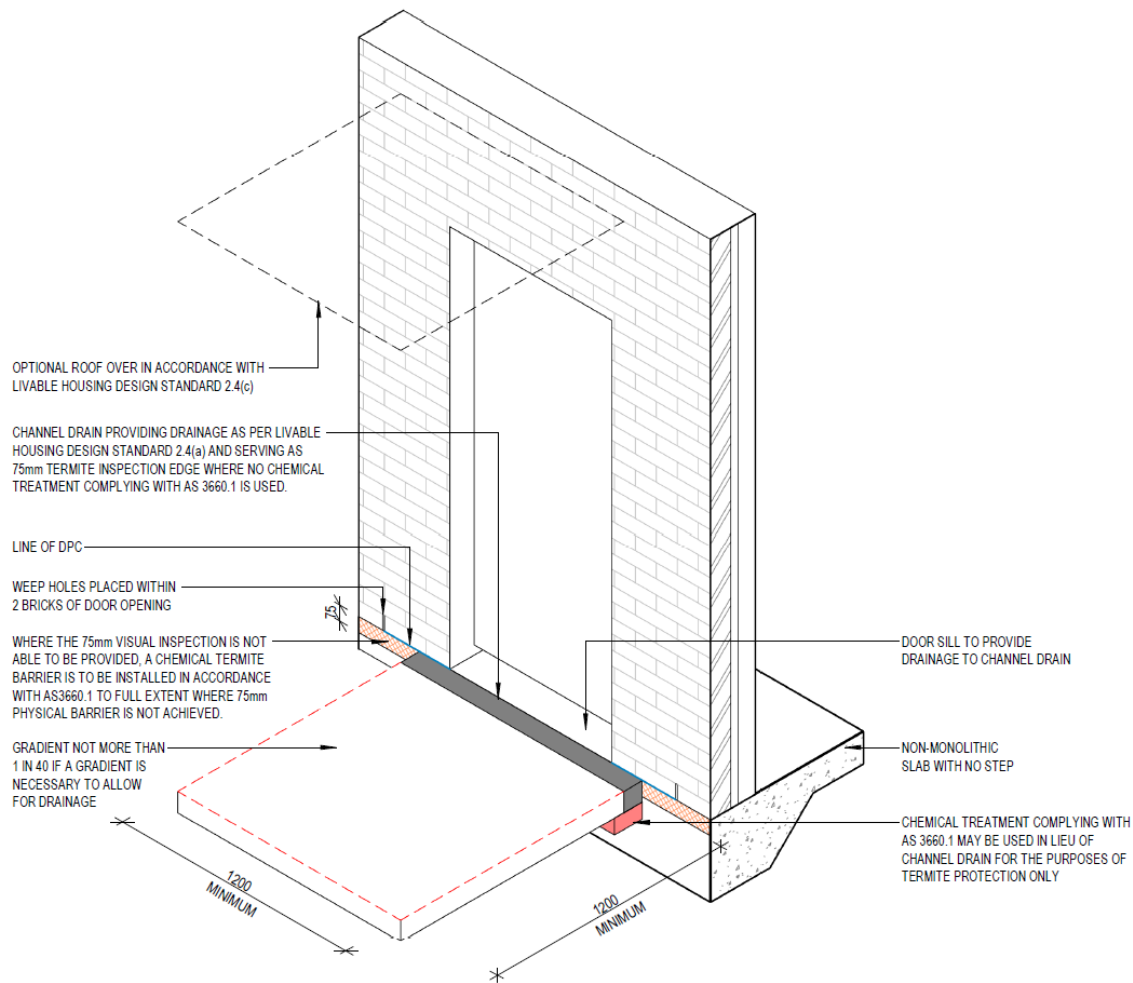
LHDS Entry door, threshold, landing and weatherproofing

A compliant status quo step-free entrance under the current Livable Housing Design Standard (LHDS) may be achieved where at least one entrance door on the required step-free path has a minimum clear opening width of 820 mm, a compliant threshold under clause 2.2, and a landing area of at least 1200 mm x 1200 mm under clause 2.3. For an external entrance on an impermeable surface, weatherproofing may be provided under Clause 2.4 by either a channel drain across the width of the entrance or a roof over the landing area. A drawing showing a level entry with a strip drain at the door and/or a roof cover therefore reflects a compliant current LHDS pathway.

Slab on Ground non-monolithic

Step-free entrance	• Clause 2.2 Threshold, of the LHDS
Water prevention	• Clause 2.4 (a) and/or (c) Weatherproofing for external step-free entrance, of the LHDS
Termite management	• Part 3.4 Termite risk management, of the Queensland variation to <i>ABCB Housing Provisions</i>

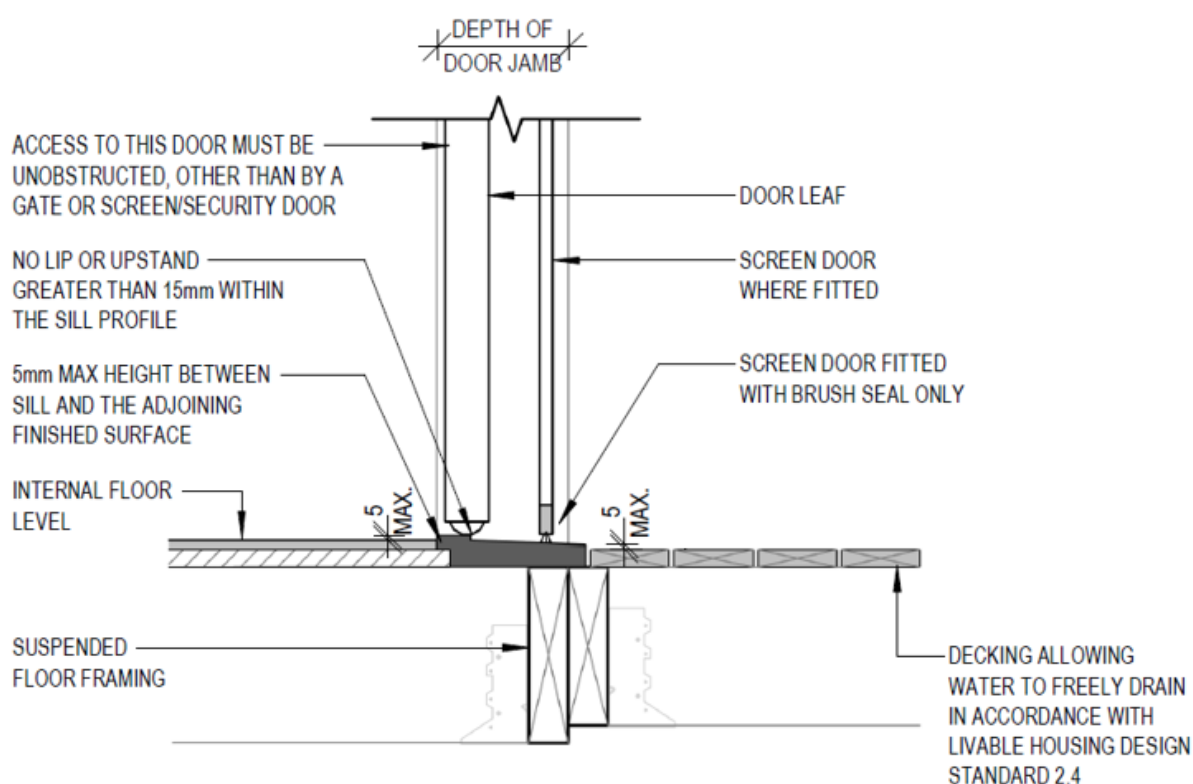
Figures 6(a)-(d) – Slab-on-ground non-monolithic



Raised Permeable surface

Step-free entrance	• Clause 2.2 Threshold, of the LHDS
Water prevention	• Clause 2.4 (b) Weatherproofing for external step-free entrance, of LHDS and • Clause 3.3.3(c) of the <i>ABCB</i> Housing Provisions Standard
Termite management	• Part 3.4 Termite risk management, of the Queensland variation to <i>ABCB</i> Housing Provisions

Figure 7 – Raised permeable surface



QDC 4.5 Integrated solutions

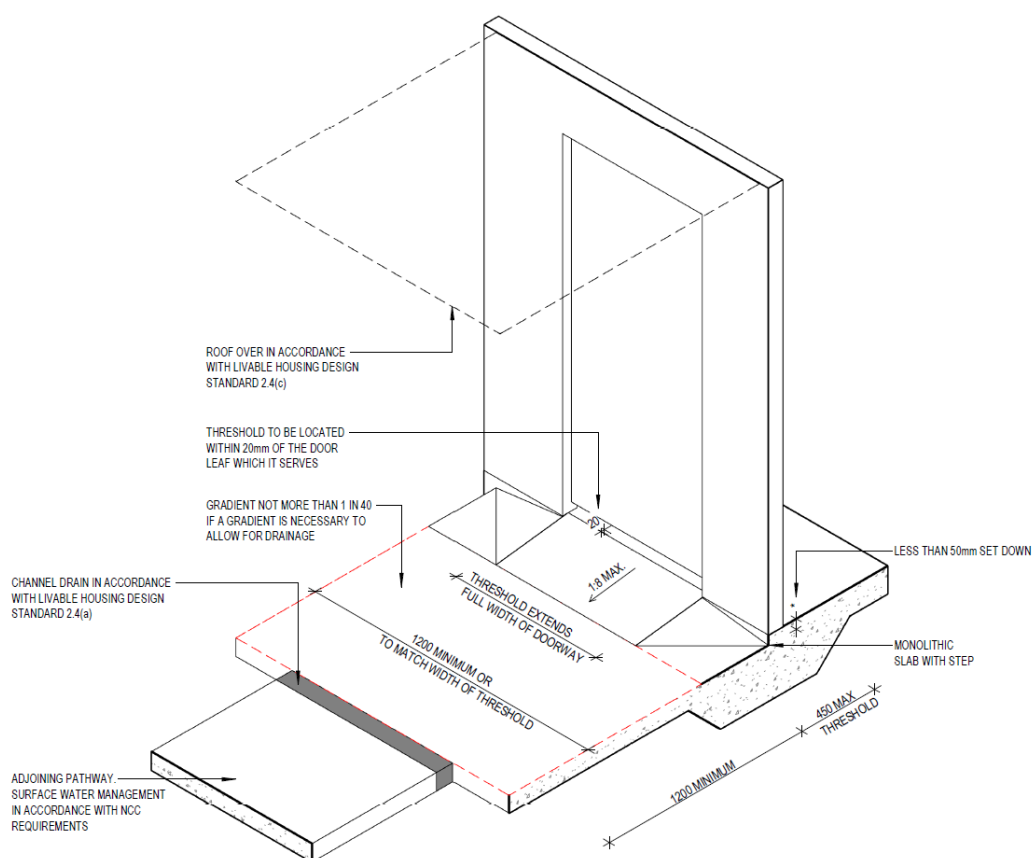
A compliant step-free entrance under QDC 4.5 may be achieved using threshold ramps in accordance with Table A6. The following examples illustrate integrated solutions incorporating threshold ramps with a maximum height of 56 mm, together with weatherproofing measures under clause 2.4 of the LHDS and termite management provisions under Part 3.4 of the Queensland variation to the *ABCB* Housing Provisions. The examples are grouped according to whether the threshold ramp is less than 50 mm high or between 50 mm and 56 mm high. This distinction reflects the different surface-water protection requirements that apply to each group. The illustrated combinations demonstrate compliant pathways for achieving a step-free entrance while managing surface water and termite risks.

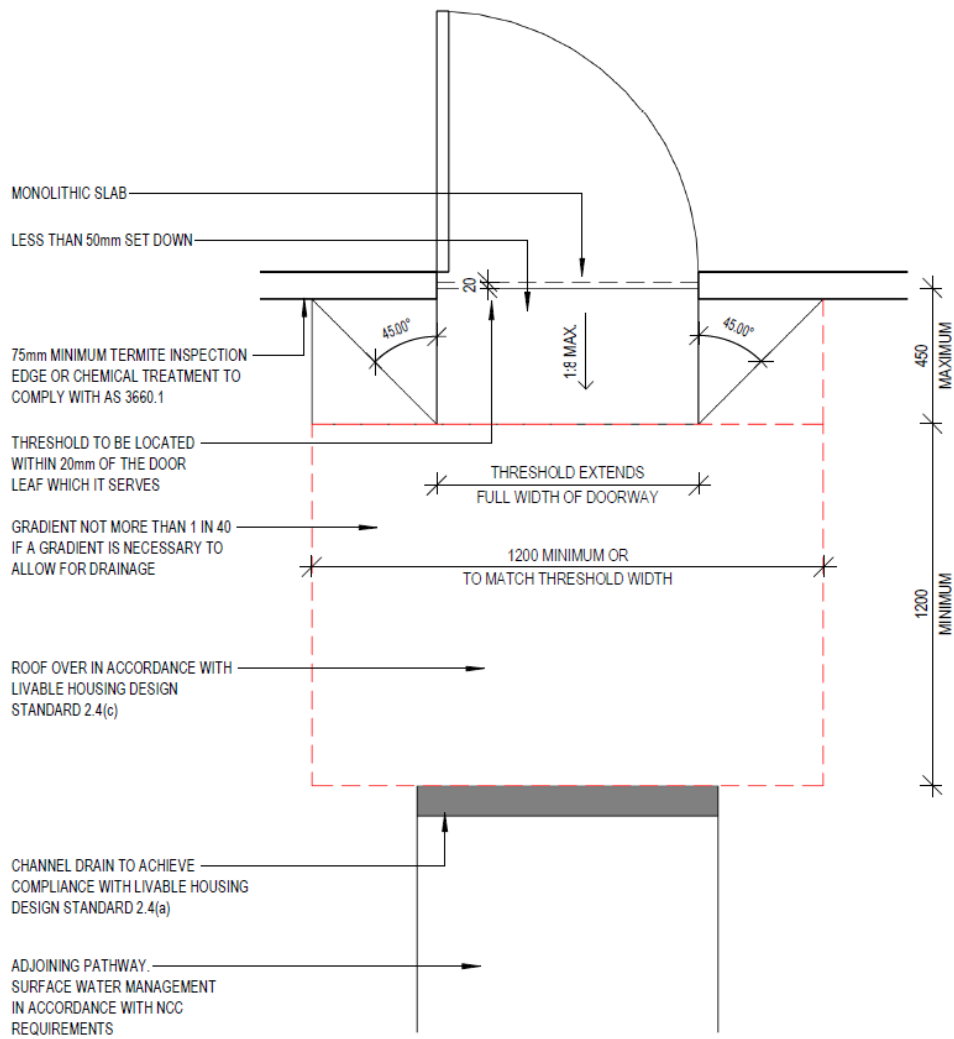
Threshold ramp height <50mm

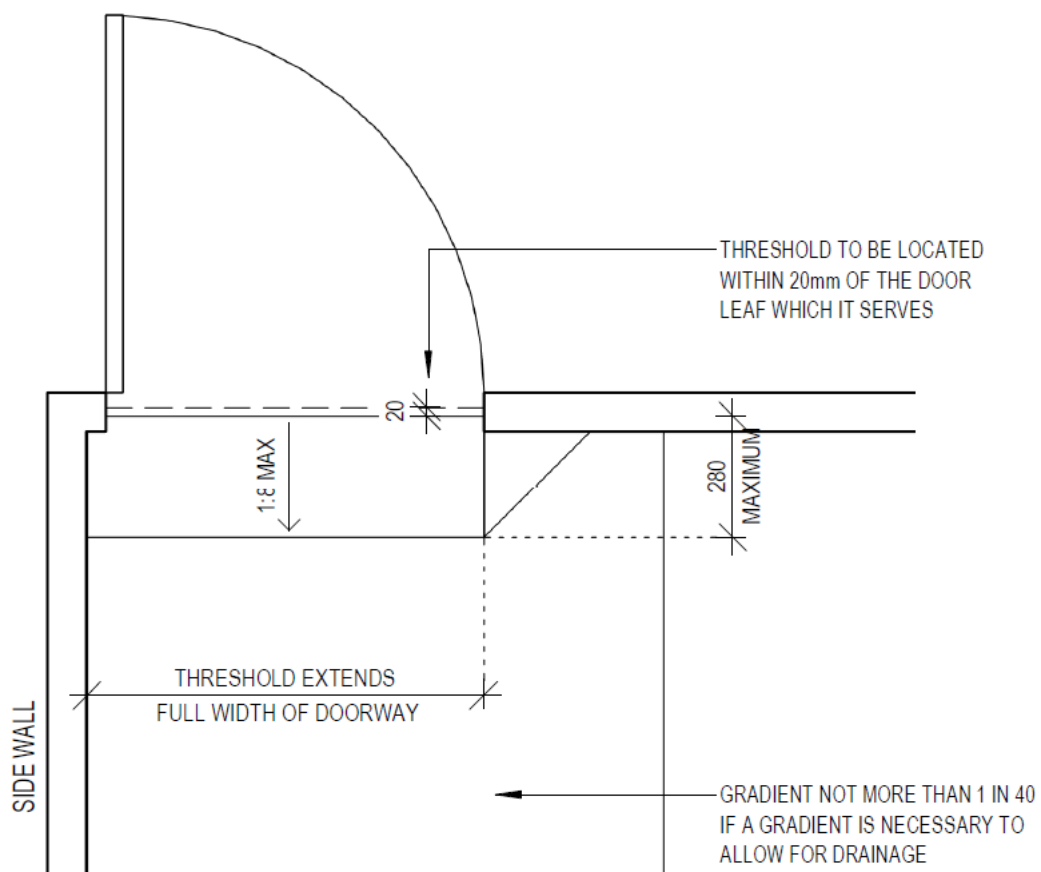
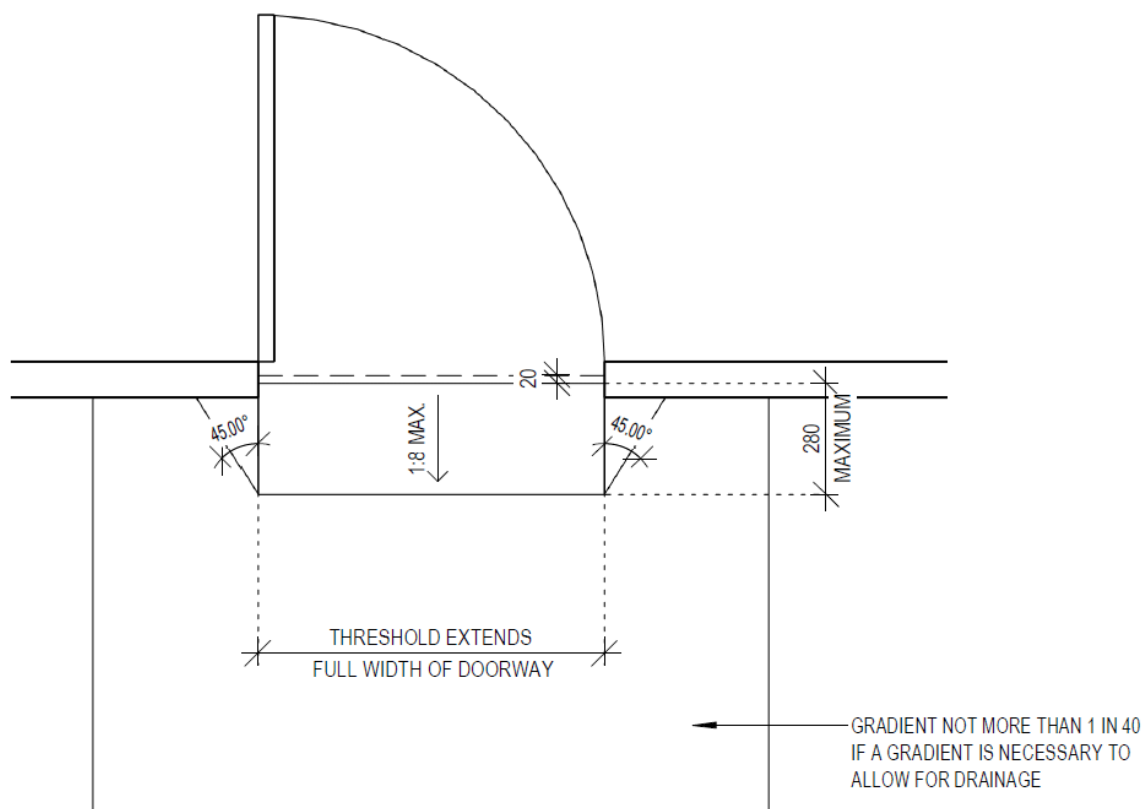
Slab on ground monolithic

Step-free entrance	- Threshold ramp or - Modified threshold ramp <50mm step up
Water prevention	Clause 2.4 (a) and/or (c) Weatherproofing for external step-free entrance, of the LHDS
Termite management	Part 3.4 Termite risk management, of the Queensland variation to ABCB Housing Provisions

Figures 8(a) and (b) – Slab-on-ground monolithic, Modified threshold ramp height <50mm

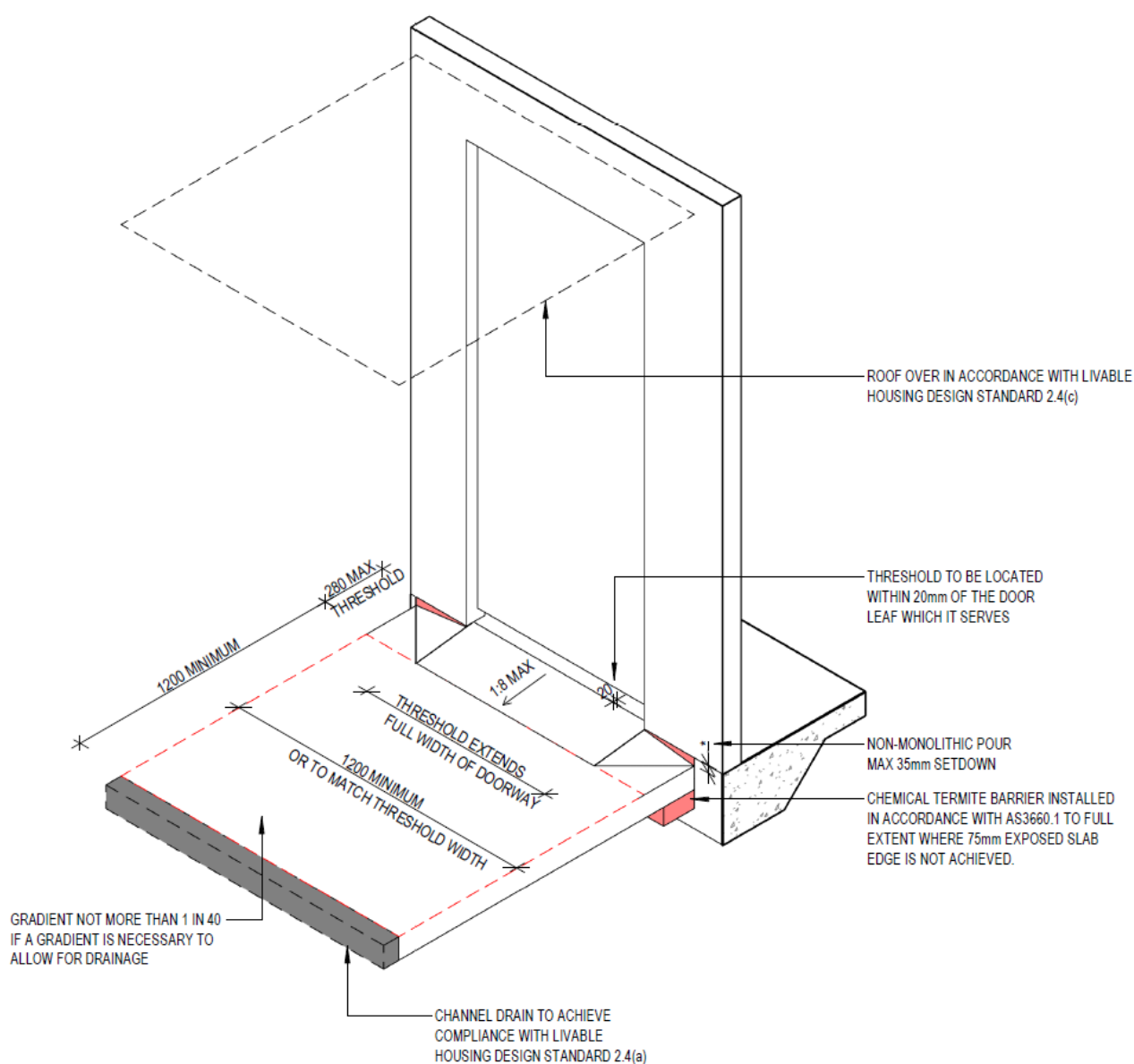


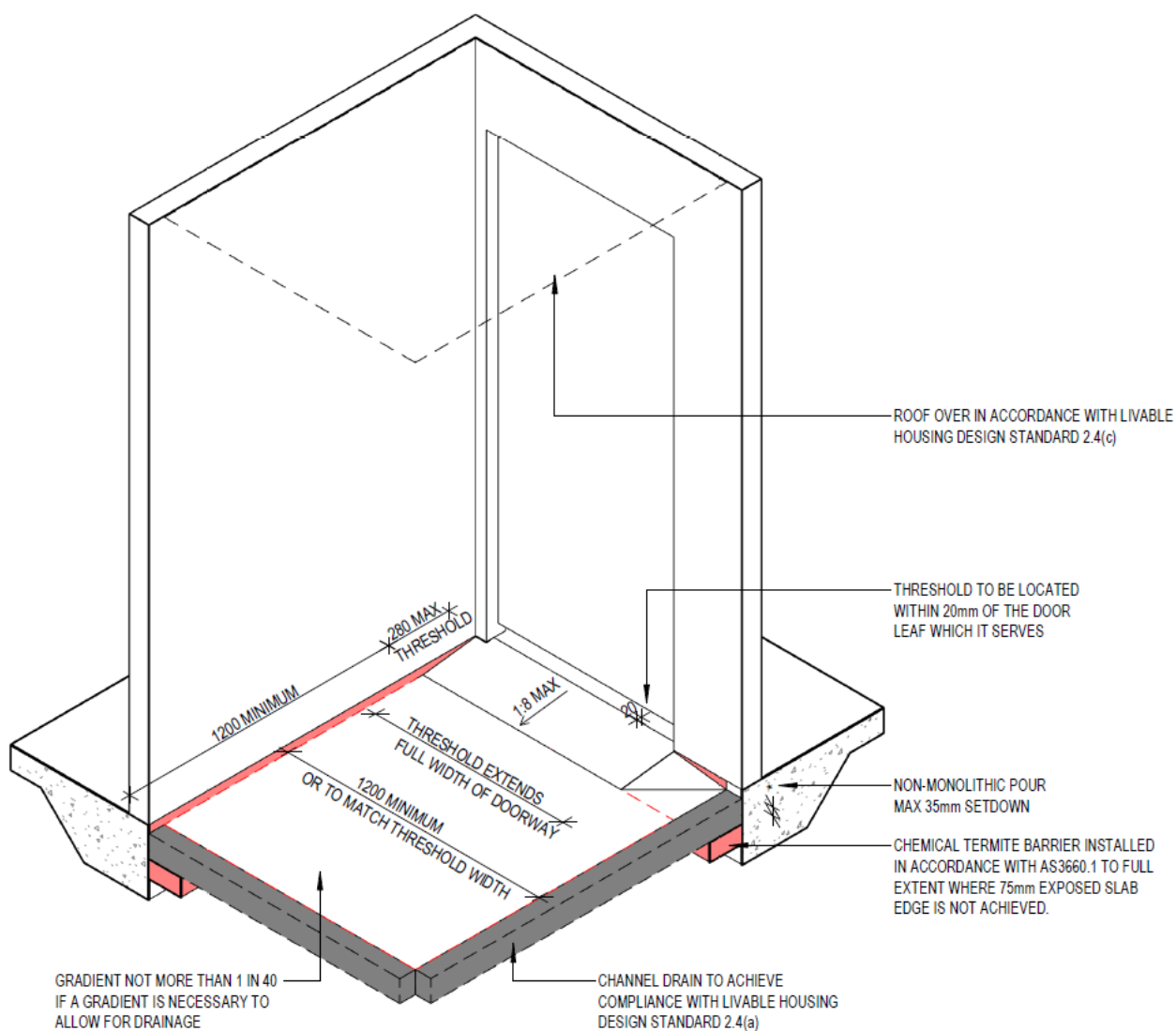


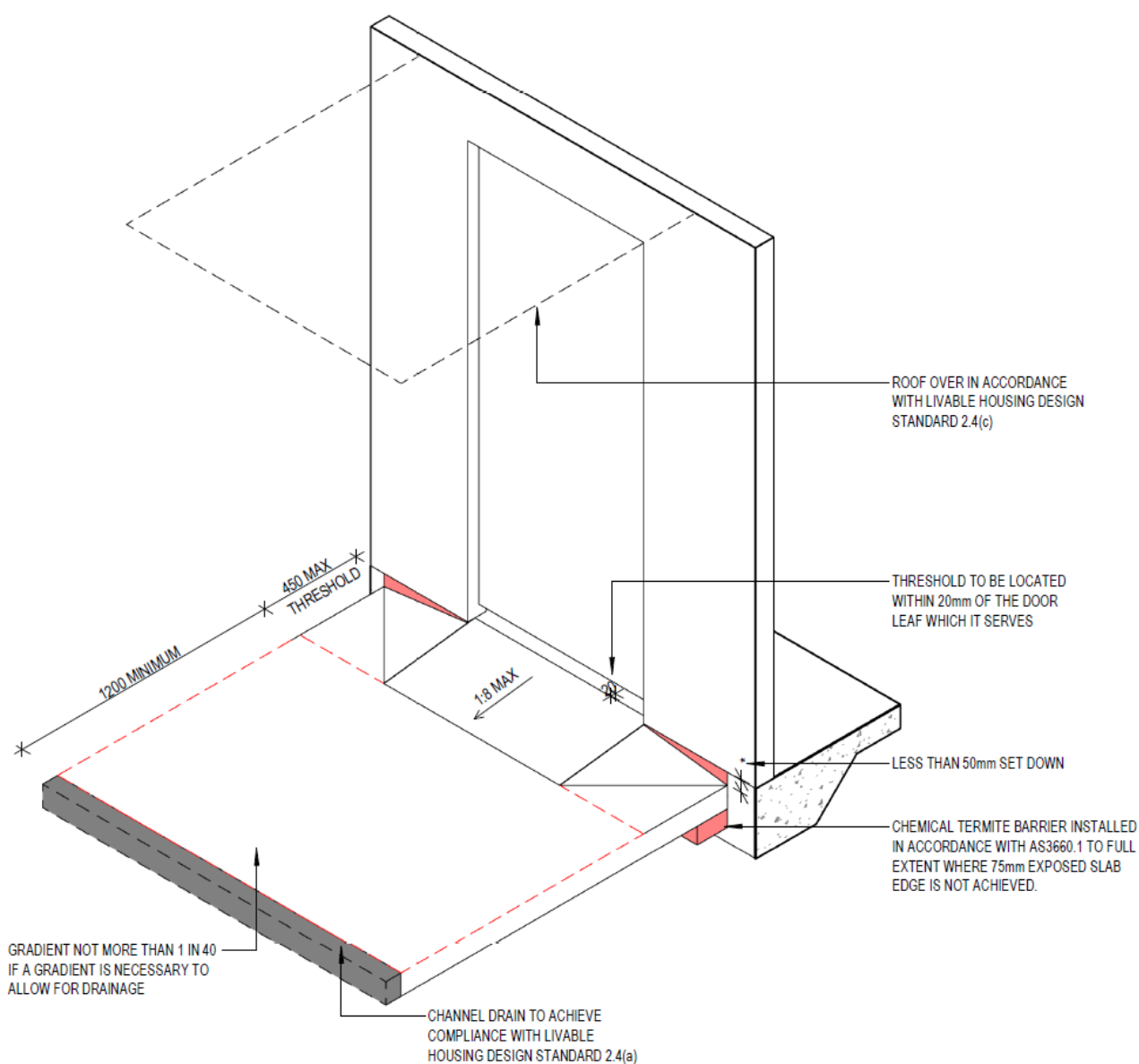
Figures 8(c) and (d) – Slab-on-ground monolithic, Threshold ramp height <50mm

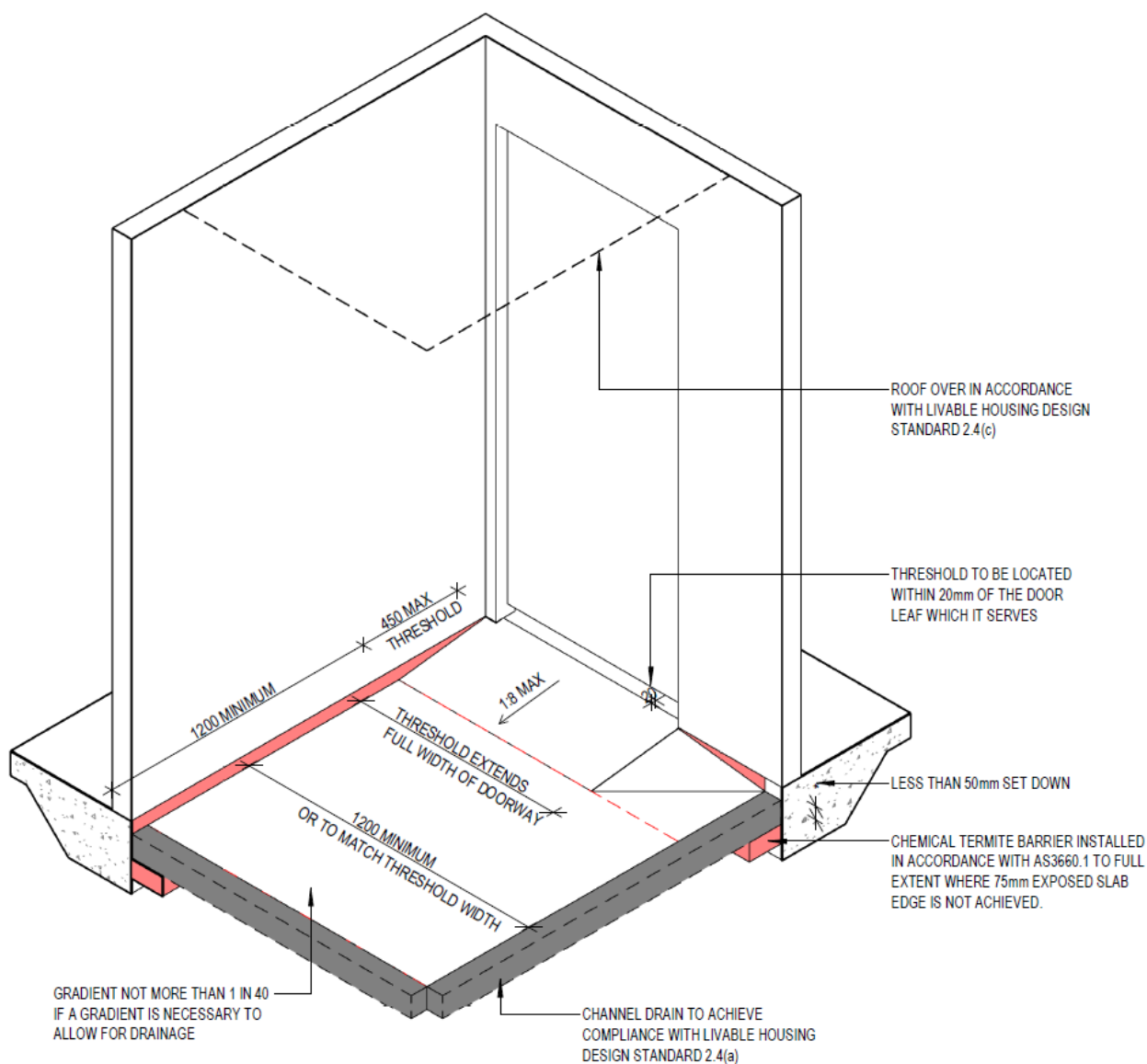
Slab on ground non-monolithic

Step-free entrance	- Threshold ramp - Modified threshold ramp <50mm high
Water prevention	Clause 2.4 (a) and/or (c) Weatherproofing for external step-free entrance, of the LHDS
Termite management	Part 3.4 Termite risk management, of the Queensland variation to ABCB Housing Provisions

Figures 9(a)-(b) – Slab-on-ground non-monolithic, threshold ramp height 35mm



Figures 9(c) and (d) - Modified threshold ramp, <50mm set down



Raised permeable

Step-free entrance	• Threshold ramp • Modified threshold ramp <50mm high
Water prevention	• Clause 2.4 (b) Weatherproofing for external step-free entrance, of LHDS and • Clause 3.3.3(c) of the <i>ABCB</i> Housing Provisions Standard
Termite management	• Part 3.4 Termite risk management, of the Queensland variation to <i>ABCB</i> Housing Provisions

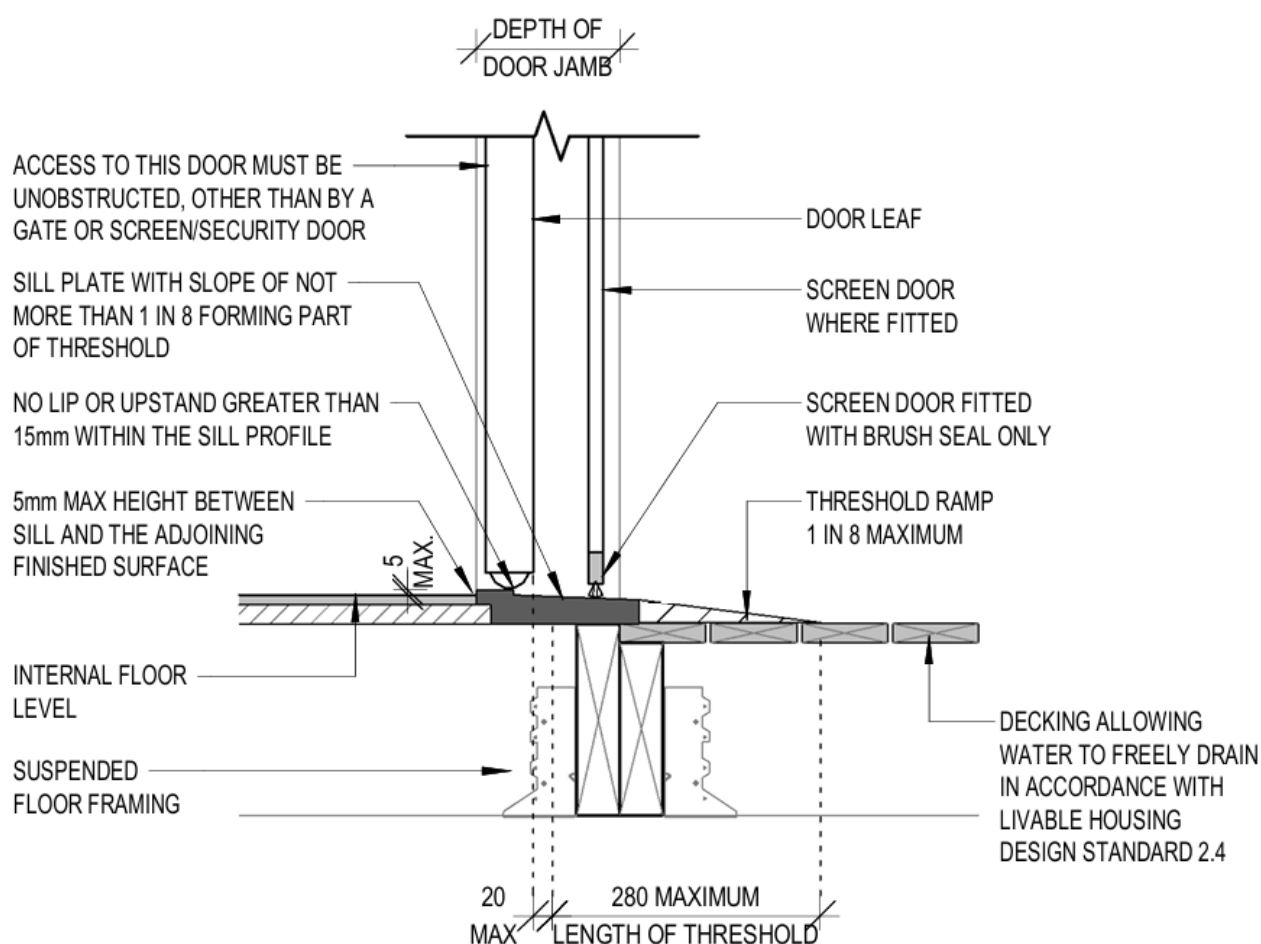
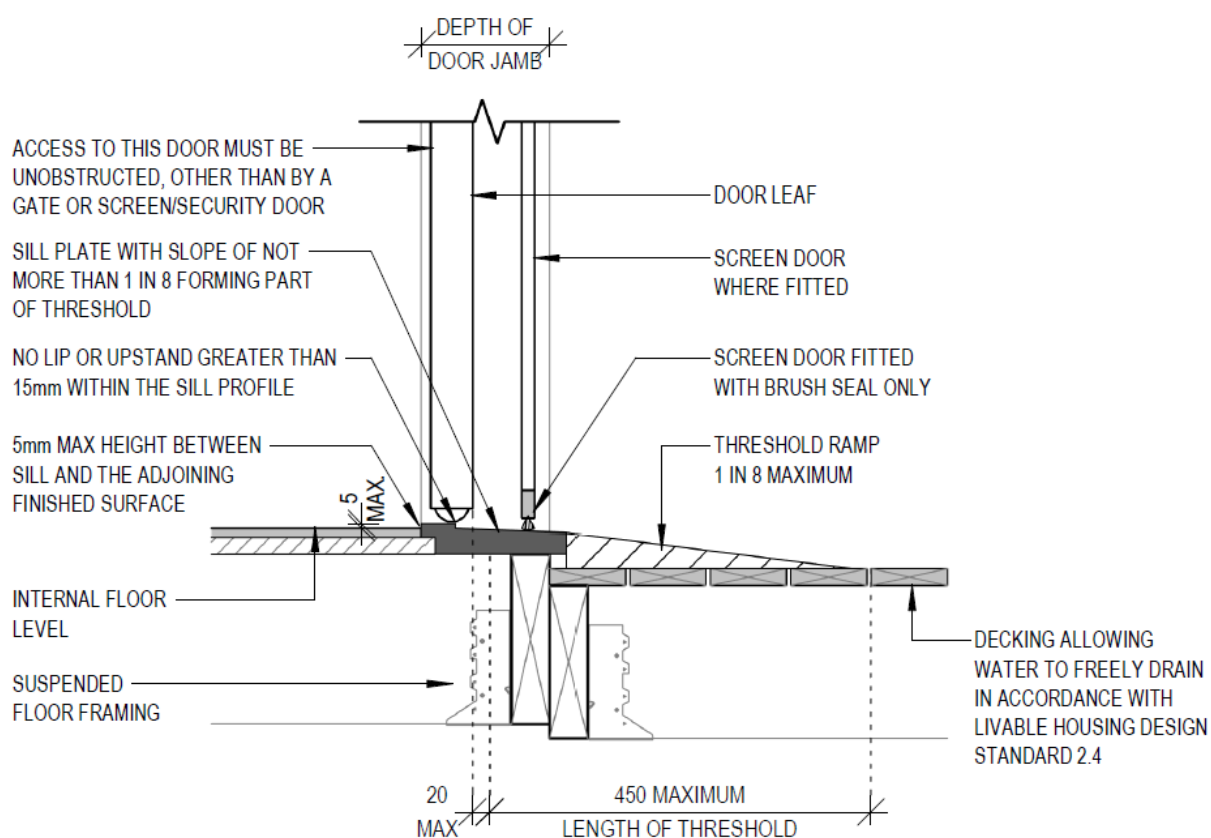
Figure 10(b) – Raised permeable surface with threshold ramp

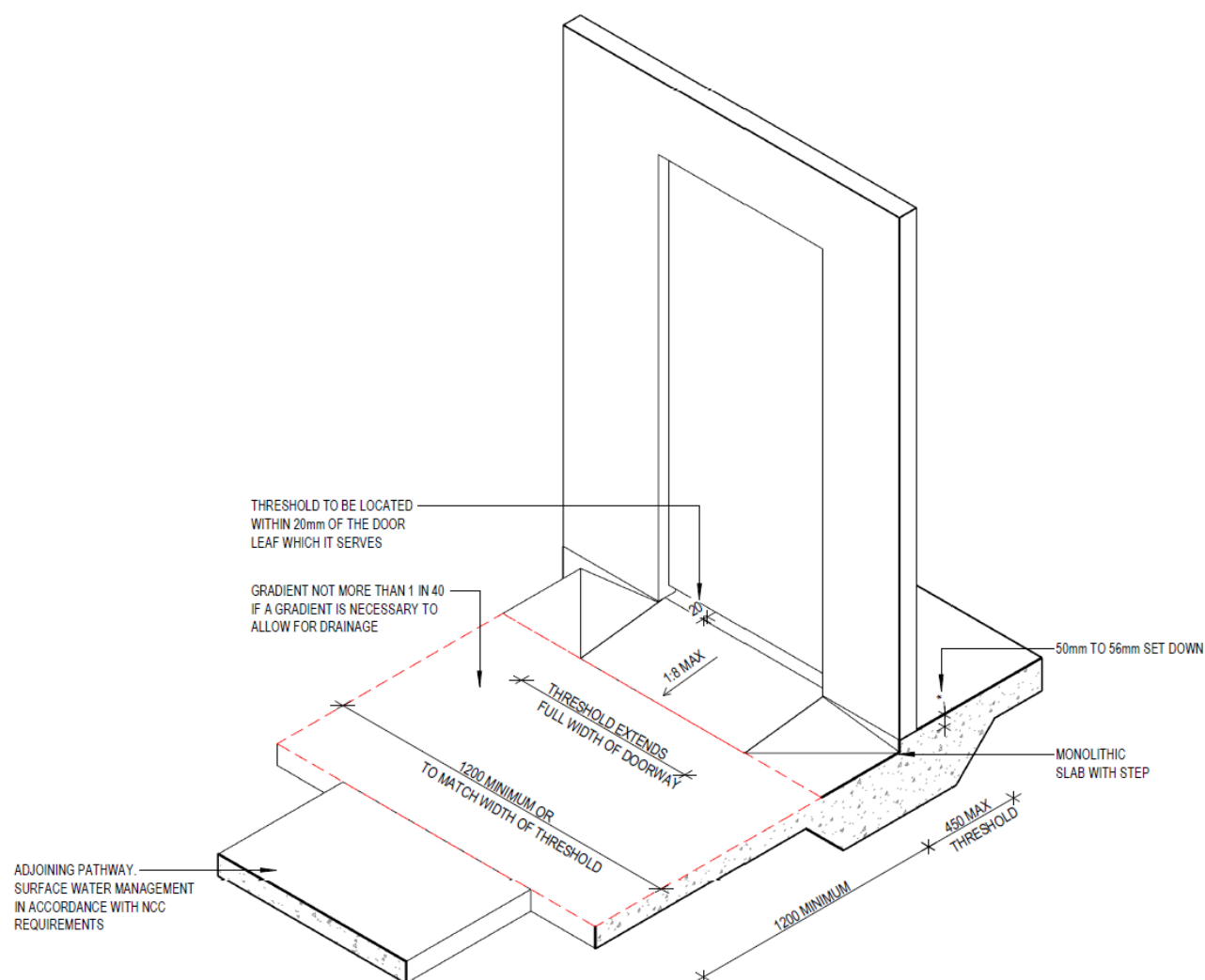
Figure 10(b) – Raised permeable surface with modified threshold ramp

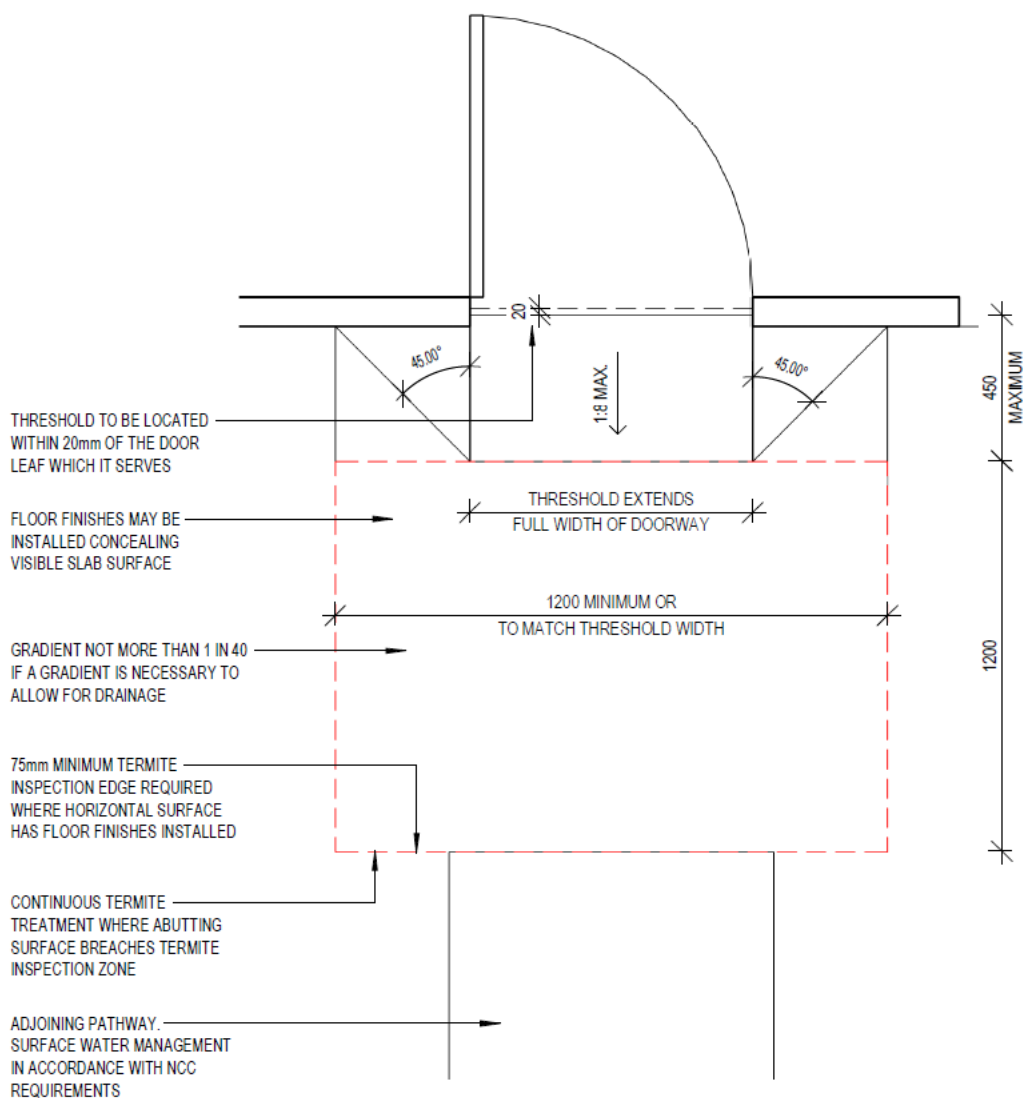
Threshold ramp height 50-56mm

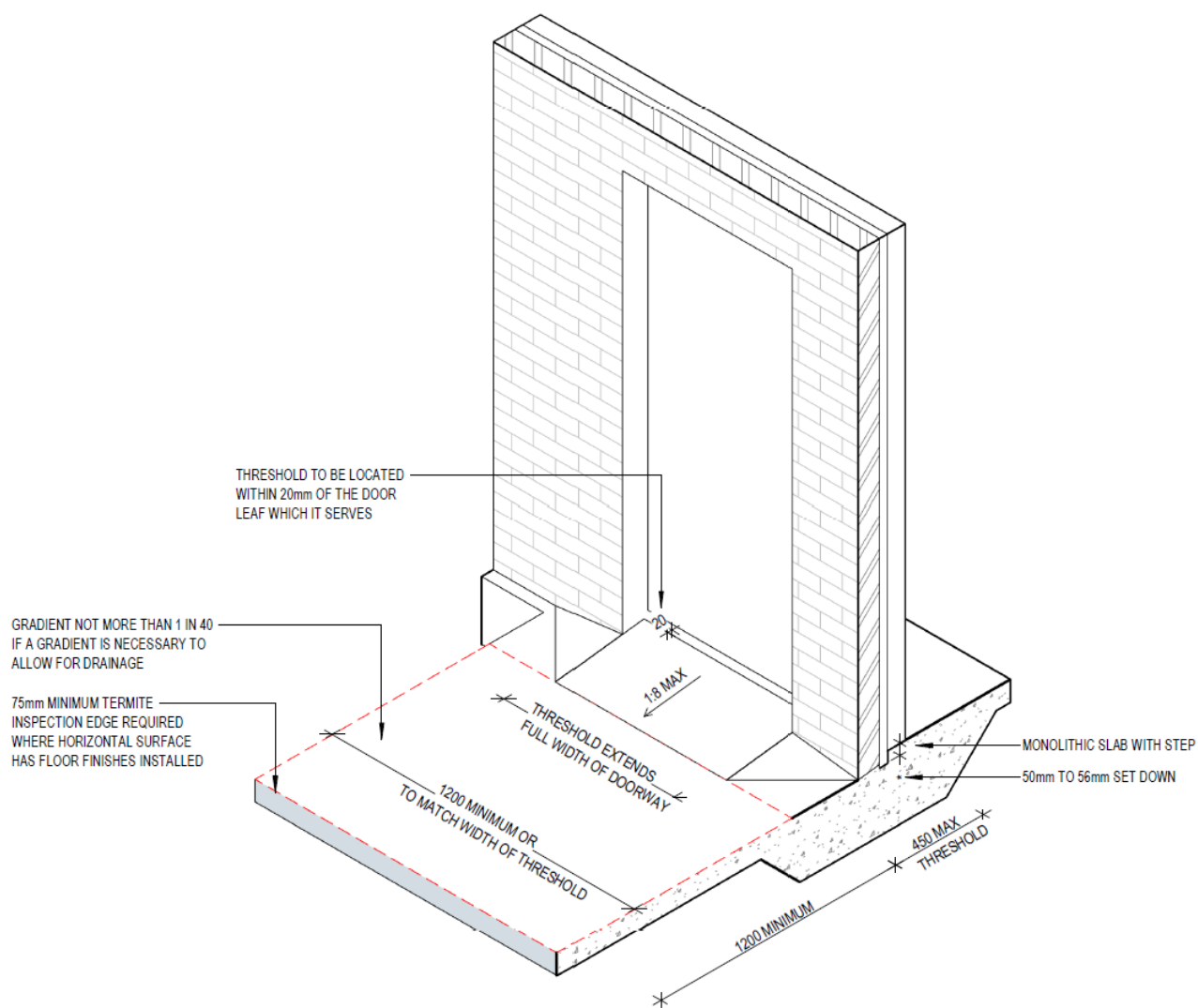
Slab on ground monolithic

Step-free entrance	Modified threshold ramp 50-56mm high
Water prevention	Clause 3.3.3 of the <i>ABCB Housing Provisions Standard</i> as modified by A6(4) of QDC 4.5
Termite management	Part 3.4 Termite risk management, of the Queensland variation to <i>ABCB Housing Provisions</i>

Figures 10(a)-(c) – Slab-on-ground monolithic, threshold ramp height 50-56mm

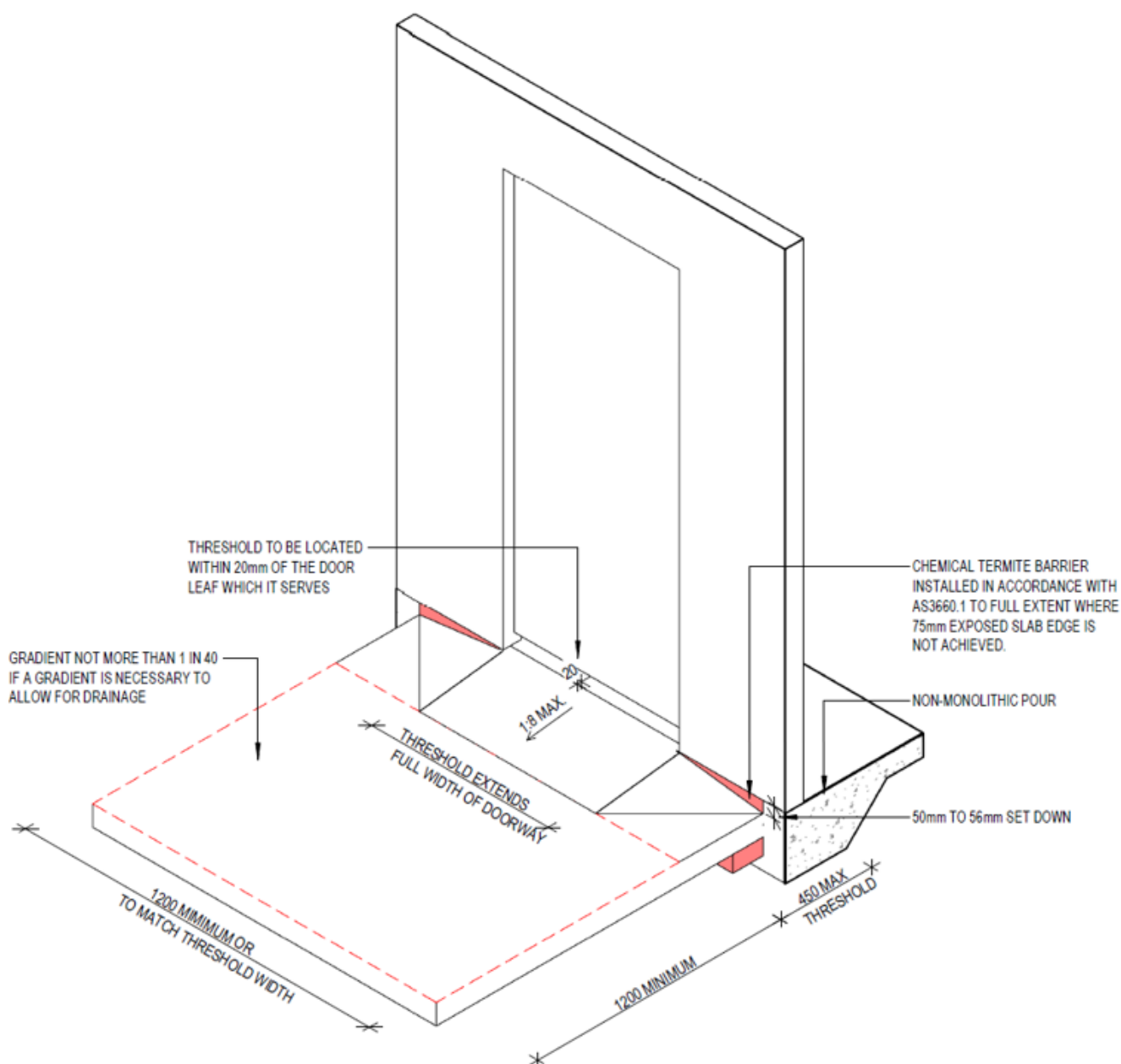


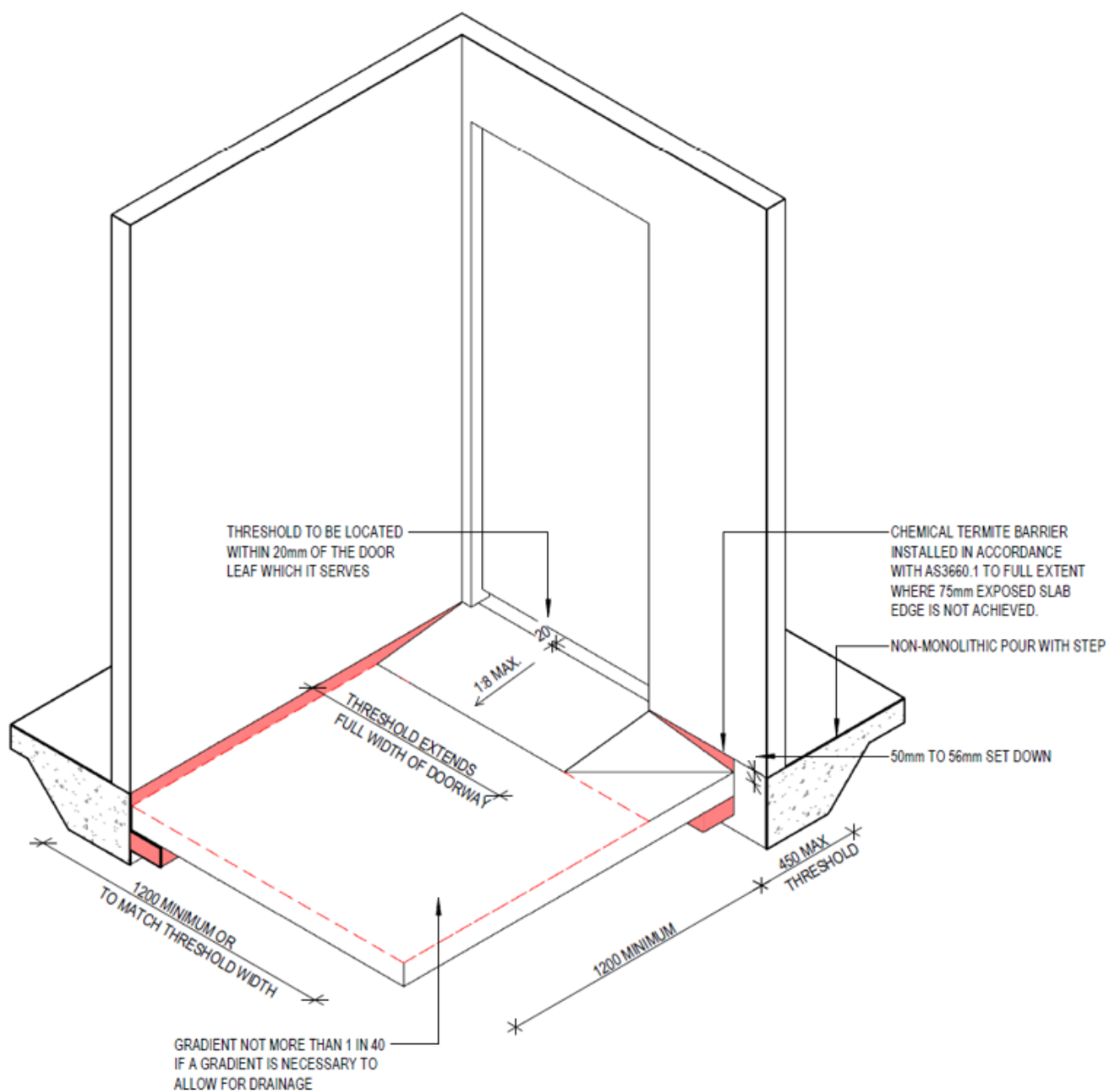


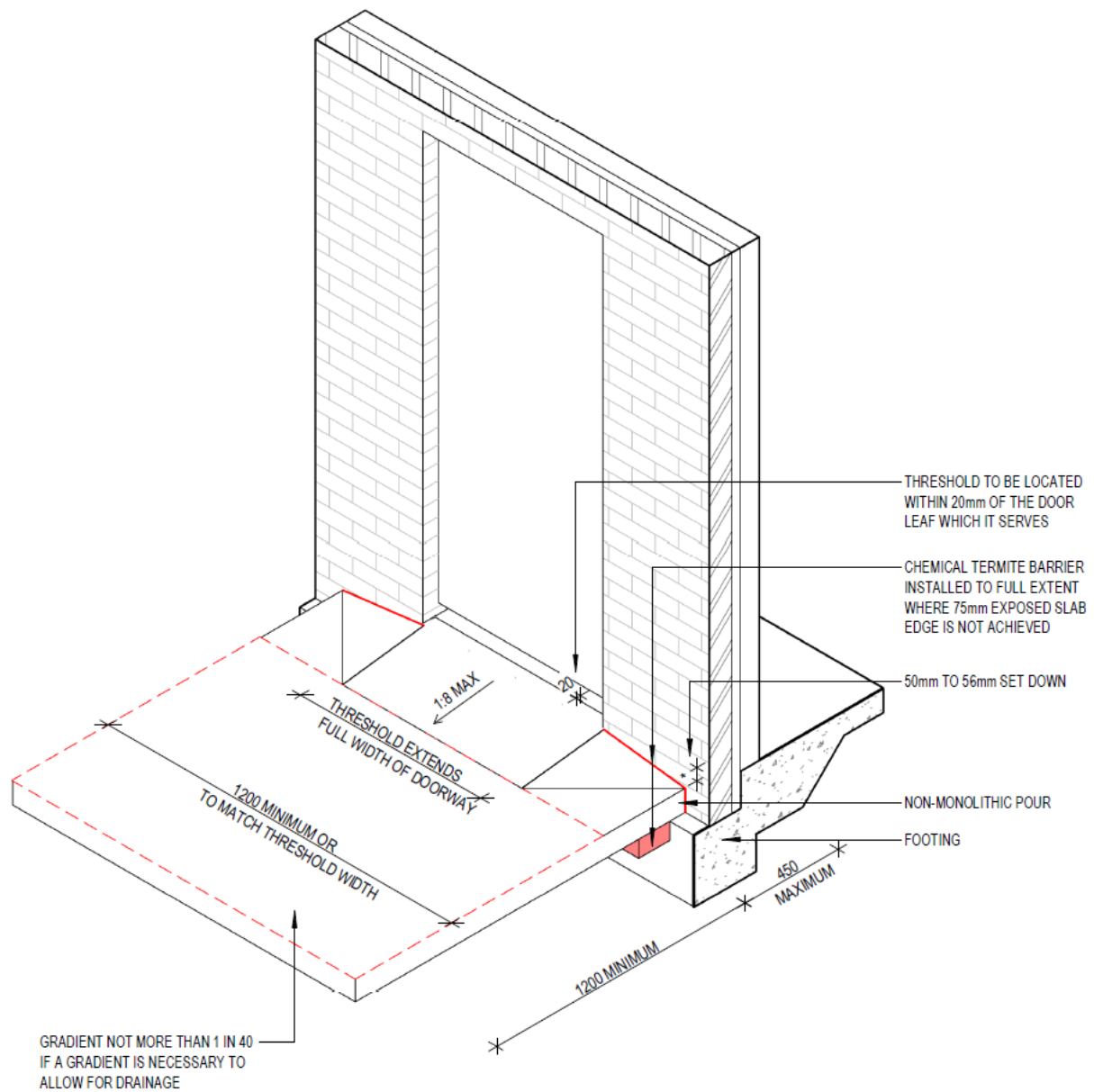


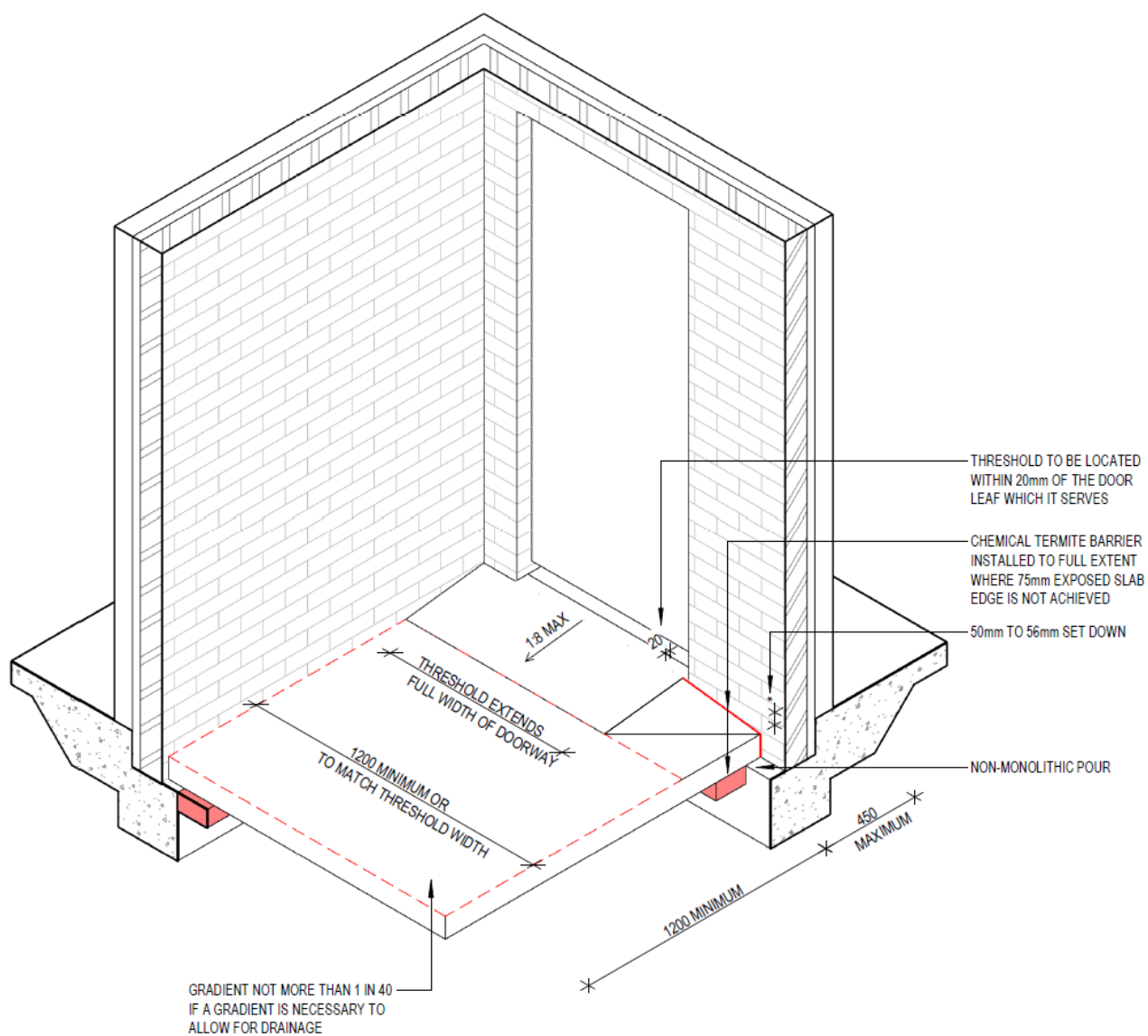
Slab on ground non-monolithic

Step-free entrance	Modified threshold ramp 50-56mm high
Water prevention	Clause 3.3.3 of the <i>ABCB</i> Housing Provisions Standard as modified by A6(4) of QDC 4.5
Termite management	Part 3.4 Termite risk management, of the Queensland variation to <i>ABCB</i> Housing Provisions

Figures 11(a)-(d) - Slab on ground non-monolithic, modified threshold ramp 50-56mm high



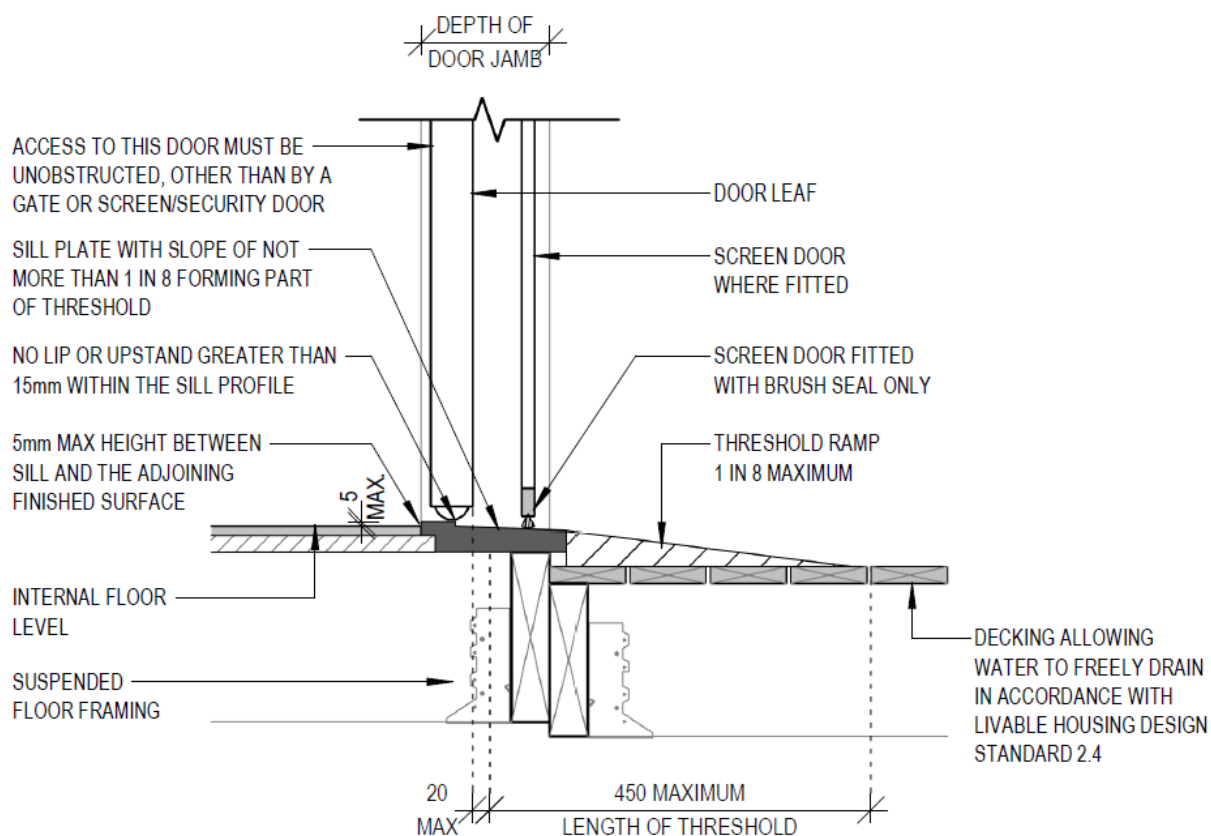




Raised permeable

Step-free entrance	Modified threshold ramp 50-56mm high
Water prevention	- Clause 2.4 (b) Weatherproofing for external step-free entrance, of LHDS and - Clause 3.3.3(c) of the <i>ABCB</i> Housing Provisions Standard
Termite management	Part 3.4 Termite risk management, of the Queensland variation to <i>ABCB</i> Housing Provisions

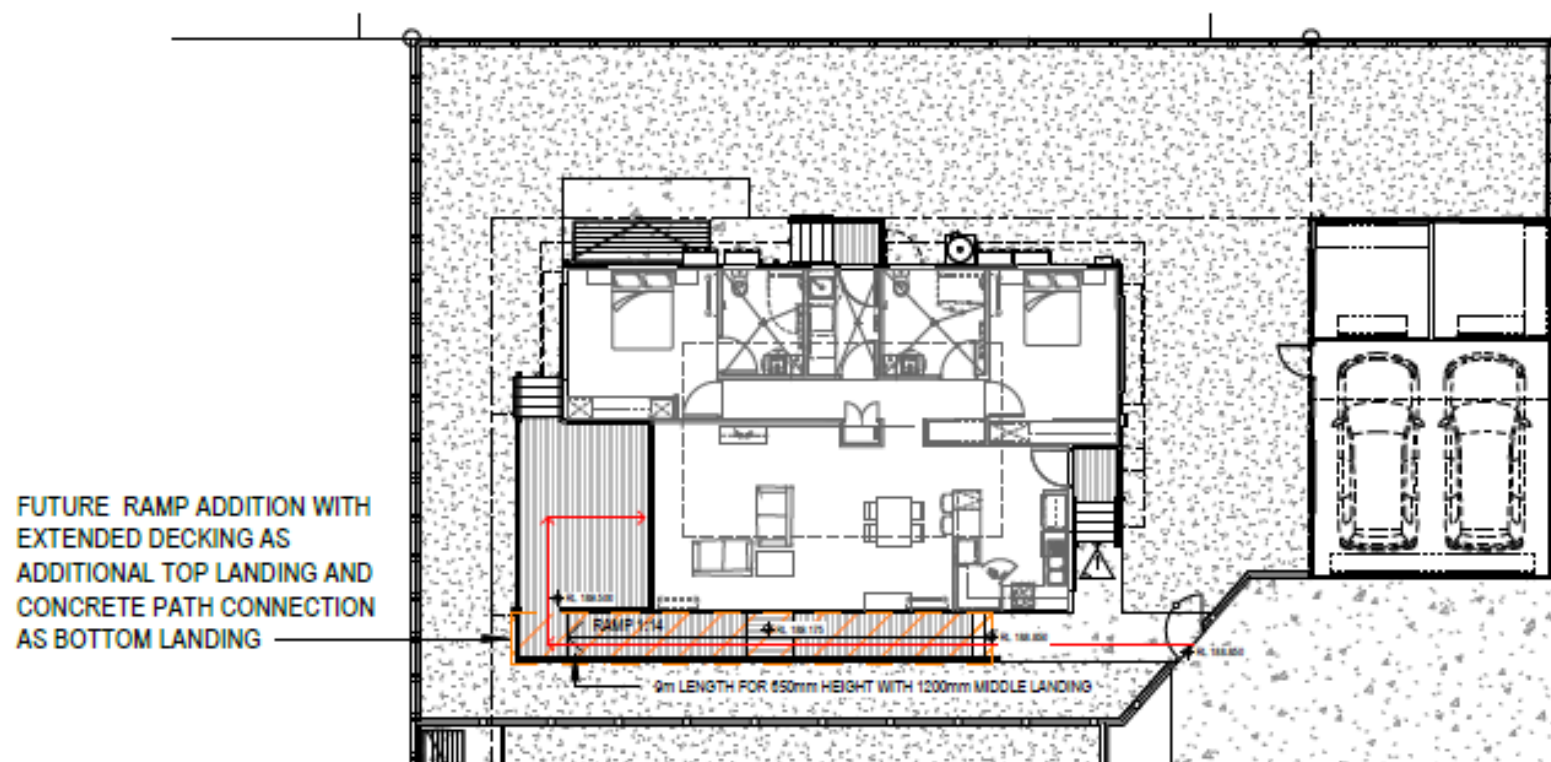
Figure 12 – Raised permeable surface with modified threshold ramp



Appendix 1 – Ramp-ready documentation example

LEGEND

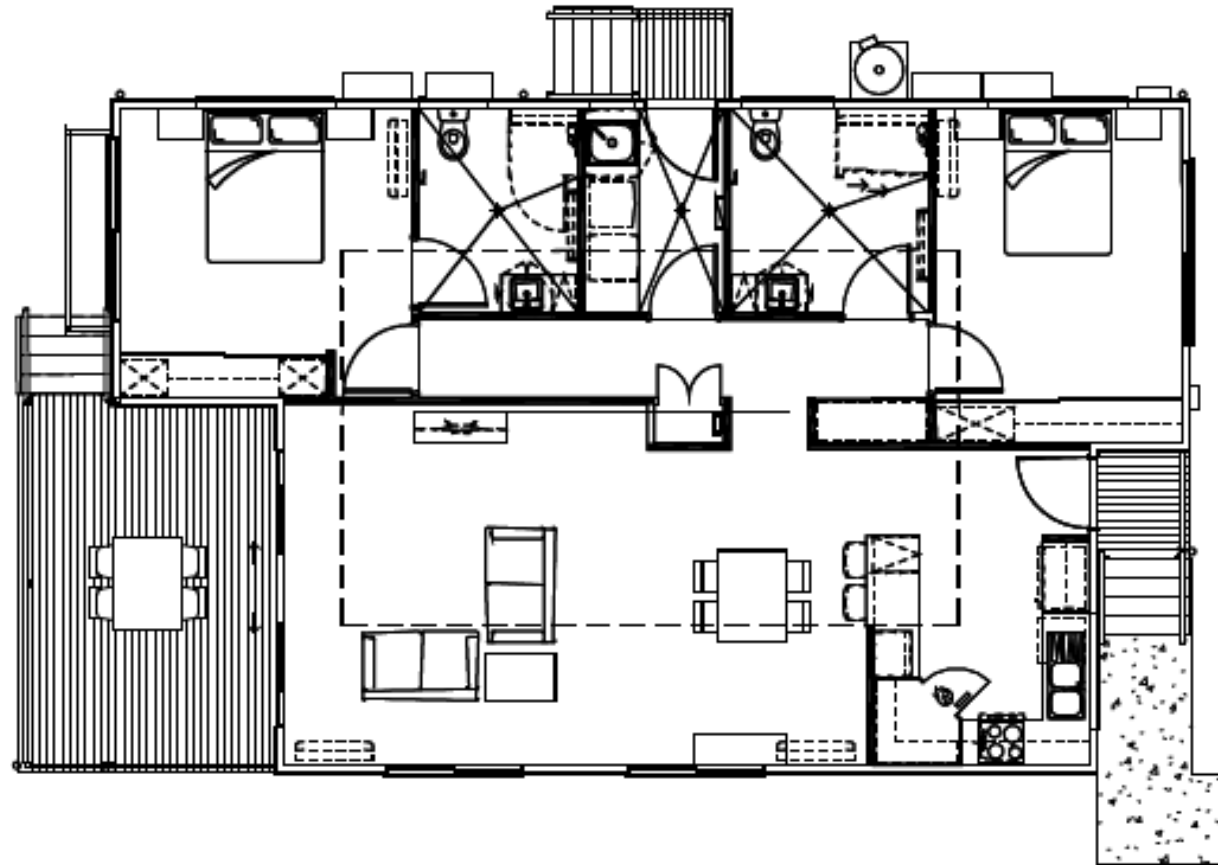
→ STEP FREE PATH OF TRAVEL
FROM SITE BOUNDARY TO STEP
FREE ENTRY



Site Plan SCALE 1:200

Source: QBuild

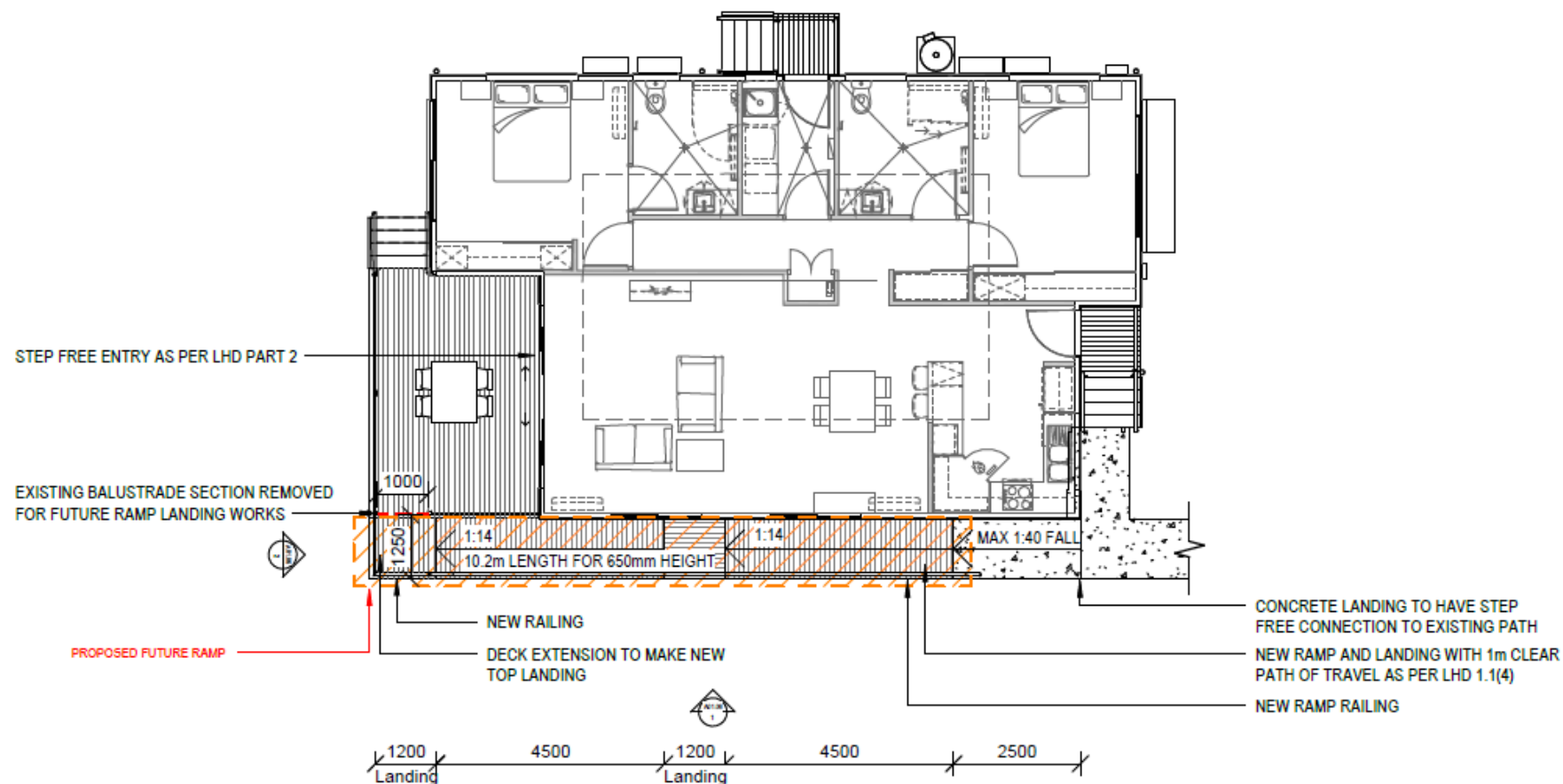
CONTRACTOR TO CHECK AND CONFIRM ALL DIMENSIONS AND LOCATION OF SERVICES ON SITE,
ADJUST DIMENSION OF RAMP ACCORDING TO BUILDING HEIGHT ABOVE GROUND LEVEL



Proposed New House Plan – Ramp ready SCALE 1:100

Source: QBuild

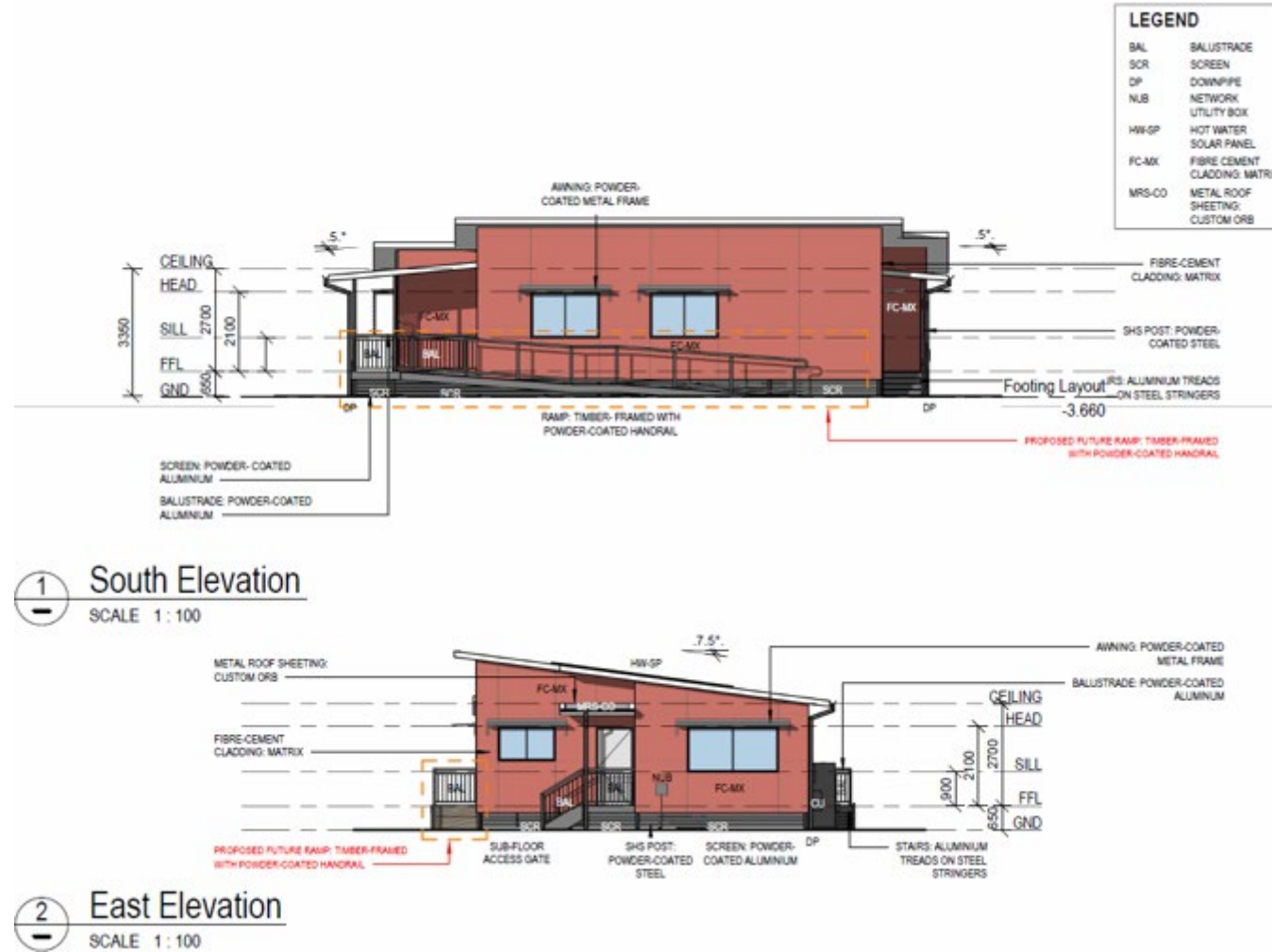
CONTRACTOR TO CHECK AND CONFIRM ALL DIMENSIONS AND LOCATION OF SERVICES ON SITE,
ADJUST DIMENSION OF RAMP ACCORDING TO BUILDING HEIGHT ABOVE GROUND LEVEL



Future Ramp Additional Works SCALE 1:100

Source: QBuild

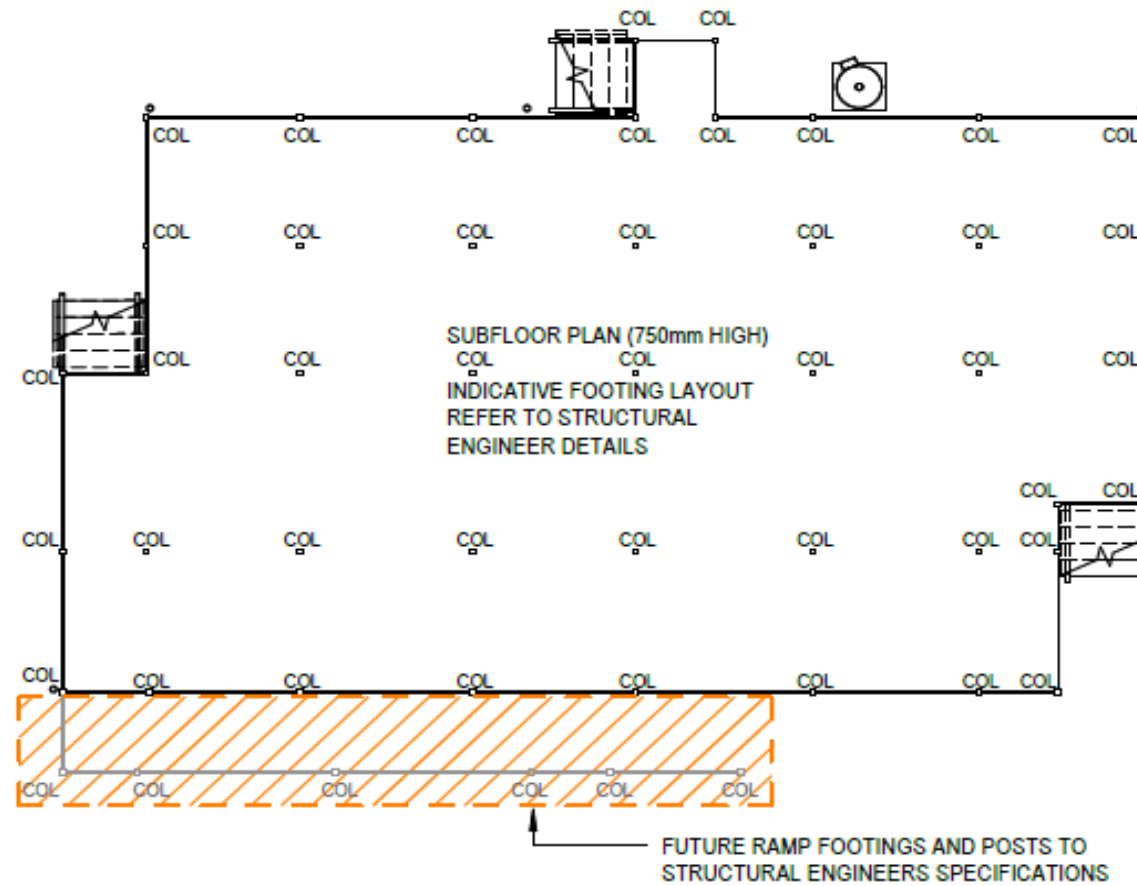
CONTRACTOR TO CHECK AND CONFIRM ALL DIMENSIONS AND LOCATION OF SERVICES ON SITE,
ADJUST DIMENSION OF RAMP ACCORDING TO BUILDING HEIGHT ABOVE GROUND LEVEL



Elevations SCALE 1:100

Source: QBuild

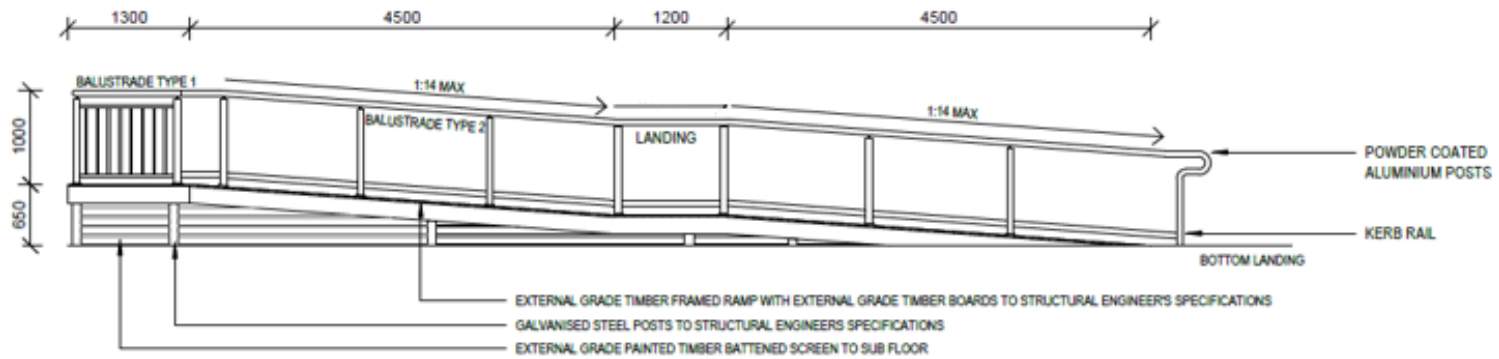
CONTRACTOR TO CHECK AND CONFIRM ALL DIMENSIONS AND LOCATION OF SERVICES ON SITE,
ADJUST DIMENSION OF RAMP ACCORDING TO BUILDING HEIGHT ABOVE GROUND LEVEL



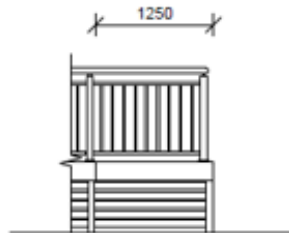
Footings Layout SCALE 1:100

Source: QBuild

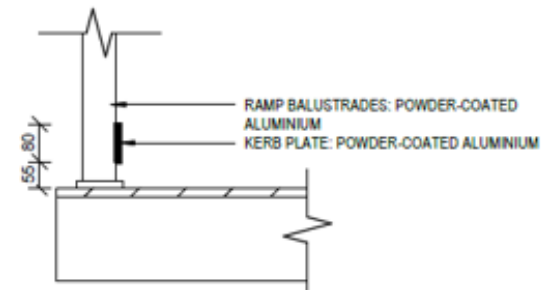
CONTRACTOR TO CHECK AND CONFIRM ALL DIMENSIONS AND LOCATION OF SERVICES ON SITE,
ADJUST DIMENSION OF RAMP ACCORDING TO BUILDING HEIGHT ABOVE GROUND LEVEL



1 Ramp Detail 1
SCALE 1:50



2 Ramp Detail 2
SCALE 1:50



3 Ramp Detail 3
SCALE 1:10

Ramp Detail SCALE 1:100 Source: QBuild

CONTRACTOR TO CHECK AND CONFIRM ALL DIMENSIONS AND LOCATION OF SERVICES ON SITE,
ADJUST DIMENSION OF RAMP ACCORDING TO BUILDING HEIGHT ABOVE GROUND LEVEL

PHOTO BY MURRAY RIX

