Office of the
State Building Surveyor

Guide to Standards and Tolerances

2026



BPC Building and Plumbing Commission

VICTORIA State Government

Tuesday 14 July 2026

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The Building and Plumbing Commission (BPC) respectfully acknowledges the Traditional Owners and custodians of the land and water upon which we rely. We pay our respects to their Elders past and present. We recognise and value the ongoing contributions of Aboriginal and Torres Strait Islander peoples and communities to Victorian life.

We embrace the spirit of reconciliation, working towards equality of outcomes and an equal voice.



Forward

The Guide to Standards and Tolerances (the Guide) has been developed by the Victorian Government for use by building owners and building professionals as a reference for domestic construction purposes. It is intended to provide technical standards and industry tolerances considered to be an acceptable standard of finished workmanship and materials.

The guide is **informative only**. All other legislative and contractual obligations take precedence over the Guide.

Acknowledgement

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Revised by the Office of the State Building Surveyor and in consultation with Dispute Resolution and Insurance divisions of the Building and Plumbing Commission Victoria.

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Part A: Background

Introduction

Every year thousands of homes are constructed or renovated in Victoria. While most building projects are completed successfully, occasionally there may be concerns or unmet expectations that result in a dispute.

Most domestic building disputes arise from a disagreement between a building owner and builder about the acceptable standards and finished workmanship. Although the minimum standards for some aspects of construction are regulated, many are not.

To help prevent disputes, parties to a building contract may agree on the standards and quality of workmanship they consider appropriate to their building project. If the legislative or contractual obligations are not clear, then the parties may use this Guide to help resolve a dispute.

Whilst the Guide may be used to assist in the identification of a defect by reference to industry accepted tolerances, the intention is to facilitate the resolution of disputes and not provide the definitive determination of whether building work is considered defective.

Authority of the Guide

Victoria has a legislated building framework that regulates compliance with building standards. This function is facilitated through an Act of parliament and subordinate legislation such as Regulations. The National Construction Code (NCC) and other Australian building standards are adopted into law in Victoria through Regulations; however, the Guide is not within this framework.

The Guide to Standards and Tolerances is only an advisory document. It is not part of the Victorian legislative framework.

The Guide is published to assist parties in determining if domestic building work is considered defective for the purpose of section 8 of the *Domestic Building Contracts Act 1995 (Vic)*.

Where there is any contradiction or difference between the Guide and an Act, Regulations, the NCC, a documented Standard, or a building contract including the project drawings and specification, legislation takes precedence. The Guide does not replace the need for compliance with any requirement under law.

Application of the Guide

The Guide is applicable to all domestic building construction projects to give guidance on appropriate tolerances for new building work and rectification work. Its intent is to address areas that may not be prescribed under legislation or a building contract, and to provide technical standards and industry tolerances considered to be an acceptable standard of finished workmanship.

Determining whether something is a building defect can often be subjective. This Guide does not provide a definitive verification of what constitutes defective building work but instead provides a

range of tolerances to assist the decision-making process. Any decision using the Guide should utilise reasonable discretion and judgement to ensure it is appropriate to the actual construction project. This version of the Guide applies to domestic building contracts entered into, or building work that commences, on or after 1 August 2026. The Guide does not apply retrospectively and continues in force until updated by a subsequent version.

Renovations, Alterations and Extensions

The Guide may apply to domestic building work including renovations, alterations, and extensions. Careful consideration should be given to the application of the Guide, given that the applicable building standards may vary between new and existing work.

Use of Recycled Materials

The Guide should be applied cautiously to construction with recycled or second-hand materials and products. Recycled or second-hand materials and products invariably come with imperfections and may have been manufactured to standards different to today's requirements. Therefore, where recycled materials have been used, careful consideration must be given to the relevance of each tolerance level in this Guide, as it may not be reasonable in all situations.

All materials and products must still be fit for purpose, suitable for their proposed use and satisfy the legislative obligations of *the Act* and Regulations.

Applicable Building Standards

Applicable building standards provide specific technical requirements to which building work needs to adhere, and are referenced through the relevant Act, Regulations, NCC or the building contract. When a building contract specifies an applicable building standard, it will not override any statutory obligations under the building legislation.

Modification to an applicable building standard may occur through an Act or Regulations. This may take the form of a regulation modifying a provision within the NCC or referenced document; however, it should be noted that a building contract may not exclude the operation of an applicable building standard unless this is expressly permitted under legislation.

Applicable building standards must be reviewed to correctly identify and assess whether any degree of tolerance is permitted. Identification of the relevant applicable building standards may be through statutory approval (e.g. a building permit), the NCC and referenced documents within, or the building contract.

Where applicable building standards are not referenced within *the Act*, Regulations, NCC or specified in the building contract, it may still be possible to use an applicable building standard, or to use this Guide, to support a tolerance assessment. In this instance, the edition published at the time building work commenced should be taken as the applicable building standard.

The selection of applicable building standards must also recognise the functionality of the NCC as a performance-based code. Building work may be inclusive of Deemed-to-Satisfy (DTS) Solutions,

Performance Solutions, or a combination of both, and therefore reliance on a particular standard may not be appropriate in all situations. For example, a performance solution for a footing or slab may remove the requirement of a DTS provision to comply with the requirements of Australian Standard *AS 2870 Residential slabs and footings*, and therefore different standards and tolerances may be relevant to the project when compared to other projects that rely solely on the DTS provisions for compliance.

Manufacturer's Installation Requirements

Fittings, materials and equipment used in buildings are often supported by manufacturer's installation instructions. Such instructions may be considered as an applicable building standard in the absence of a statutory obligation. The manufacturer's installation instructions take precedence over this Guide.

Responsibility to Rectify

The Guide's purpose is to assist in the identification of tolerances for building work. It does not consider any party's responsibility to rectify building work. It may be a useful tool to facilitate dispute resolution, but the allocation of responsibility is beyond the scope of this Guide.

Where rectification work is agreed upon or required, the provisions within this Guide apply to the rectification work.

Consequential Damage

The Guide can be used to assess consequential damage resulting from a failure to meet tolerances. If a building element does not meet the required tolerance, this may cause additional issues within the building, leading to further tolerance failures. Where a clear link is established, consequential damage can reasonably be considered part of the same building work.

When determining the extent of consequential damage, consideration should be given to whether damages were allowed to unnecessarily accumulate due to a failure to notify the relevant parties, or if they could have been avoided through reasonable efforts to mitigate the damage.

Abbreviations and Definitions

Act	An Act of Parliament in Victoria, including but not limited to, *Building Act 1993*, *Domestic Building Contracts Act 1995*, *Planning and Environment Act 1987*.
Applicable building standard	Codes and standards providing technical detail for building work, including, but not limited to, the NCC and Australian Standards.
Builder	A person who, or a partnership which: • carries out domestic building work; or • manages or arranges the carrying out of domestic building work; or • intends to carry out, or to manage or arrange the carrying out of, domestic building work.
Building contract	A contract entered into between a builder and owner, under the *Domestic Building Contracts Act 1995* (Vic), or in the event of an exemption, under common law.
Building work	Has the same meaning as it has in the *Building Act 1993* (Vic), meaning work for or in connection with the construction, demolition or removal of a building.
Completion	Has the same meaning as it has in section 42 of the *Domestic Building Contracts Act 1995* (Vic), or in any other case where not applicable, when a statutory approval is issued (e.g. occupancy permit or certificate of final inspection) or upon completion of the building work.
NCC	National Construction Code, inclusive of volumes 1, 2 and 3.
Non-critical light	Diffused light that strikes the surface and is not glancing or parallel to that surface.
Regulations	Subordinate legislation in Victoria including, but not limited to, Building Regulations 2018 and Plumbing Regulations 2018.
Tolerance	The allowable amount of variation from a specific, intended, or nominal dimension, value or parameter. A matter that is outside tolerance may be considered a defect.

Schedule of References Used in the Guide

NCC	National Construction Code
AS 1839	Swimming pools - Premoulded fibre-reinforced plastics - Installation
AS/NZS 2311	Guide to the painting of buildings
AS/NZS 2589	Gypsum linings - Application and finishing
AS 2688	Timber and composite doors
AS 2783	Use of reinforced concrete for small swimming pools
AS 2796.1	Timber - Hardwood - Sawn and milled products - Product specification
AS 2870	Residential slabs and footings
AS 3660.1	Termite management - New building work
AS 3700	Masonry structures
AS 3727.1	Pavements, Part 1: Residential
AS 3958	Installation of ceramic and stone tiles
AS 3959	Construction of buildings in bushfire-prone areas

Part B: Measurement and Inspection

Measurement of Time

Any time-period mentioned in the Guide is taken from the date of completion, as defined within the Guide or as legislated in Victoria.

The exact completion date may be subject to the extent of building work on a given project, but is likely to include one of the following scenarios:

- upon compliance with section 42 of the *Domestic Building Contracts Act 1995* (Vic);
- the issuing of a statutory approval or certificate (e.g. Occupancy Permit or Certificate of Final Inspection);
- when the building works are completed in accordance with terms of the building contract; or
- when building works are completed in accordance with the agreed scope of works between builder and owner.

Measurement of time for completion of staged works is outside the scope of this Guide and should be considered within the building contract if applicable.

Measurement of Tolerances

The Guide provides a methodology for the measurement of tolerances, which are for the purpose of the Guide only and do not alter or take precedence over any applicable building standards relevant to an Act, Regulations, NCC or building contract.

Where diagrams are provided within the Guide, the purpose is to provide support and clarity for the measurement. Diagrams only show detail relevant to the issue and are not intended to be used as general construction detail.

The tolerances in this Guide apply up to, and include the length over which, each tolerance is stated to apply. It is not intended that tolerances will be interpolated or proportioned to a subset of the actual length of the building element measured.

For example, where the Guide specifies a 4 mm maximum deviation measured over a 2 m length of wall surface, the Guide means that the same 4 mm deviation is to be applied over 2 m, 1 m or 500 mm section of wall surface. The tolerance cannot be interpolated to mean a 2 mm deviation over a 1 m wall surface or 1 mm deviation over a 500 mm wall surface.

Horizontal, vertical, and diagonal surface tolerances are to be interpreted in the same way.

Horizontal surfaces

Deviations over a horizontal surface are to be measured from a datum nominated in the building contract or inferred if none are nominated. The maximum deviation from that datum is not to exceed the deviation stated in the Guide.

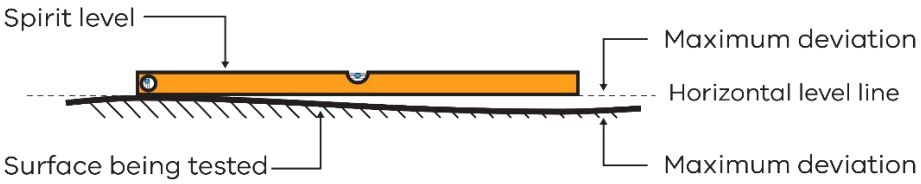
Where no datum is nominated and a datum cannot be inferred, the datum level is to be taken to be at the highest or lowest points in the building element, room or area being measured.

The measurement of horizontal levels is not limited in the use of equipment, such as a spirit level. A digital or laser level may be used as appropriate for any measurement.

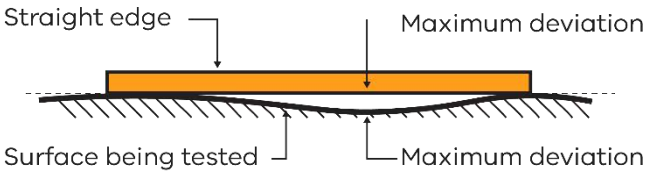
Refer to Diagram B1 for the method of measurement.

Diagram B1: Measurement of horizontal tolerances

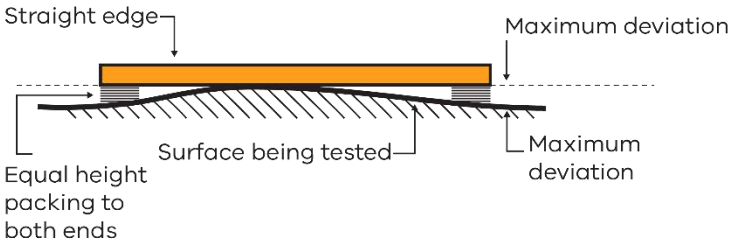
i) Measurement of deviation from horizontal/level



ii) Measurement of bow



iii) Measurement of bow (horizontal flatness)



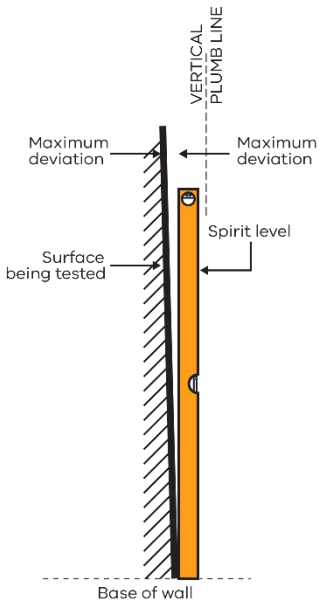
Vertical surfaces

Deviations of a vertical surface from a true vertical plane are to be measured from a plumb line through a plan position or reference point nominated in the building contract or inferred if none is nominated. The maximum deviation of a vertical surface from that plumb line should not exceed the deviation stated in the Guide.

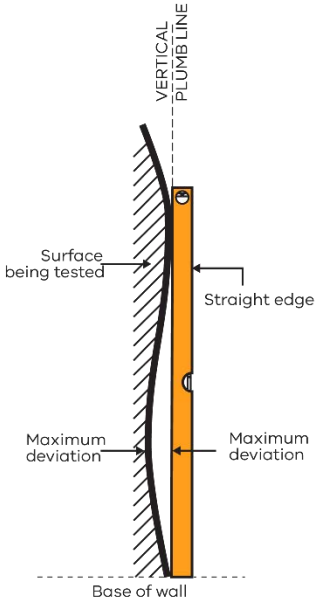
The measurement of vertical plumbness is not limited in the use of equipment, such as a spirit level. A digital or laser level may be used as appropriate for any measurement.

Refer to Diagram B2 for the method of measurement.

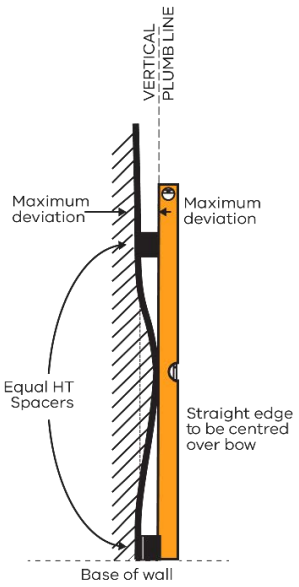
Diagram B2: Measurement of vertical tolerances



iv) Measurement of deviation from vertical/plumb



v) Measurement of bow (surface flatness)



vi) Measurement of bow (surface flatness)

Inspecting Surfaces from a Normal Viewing Position

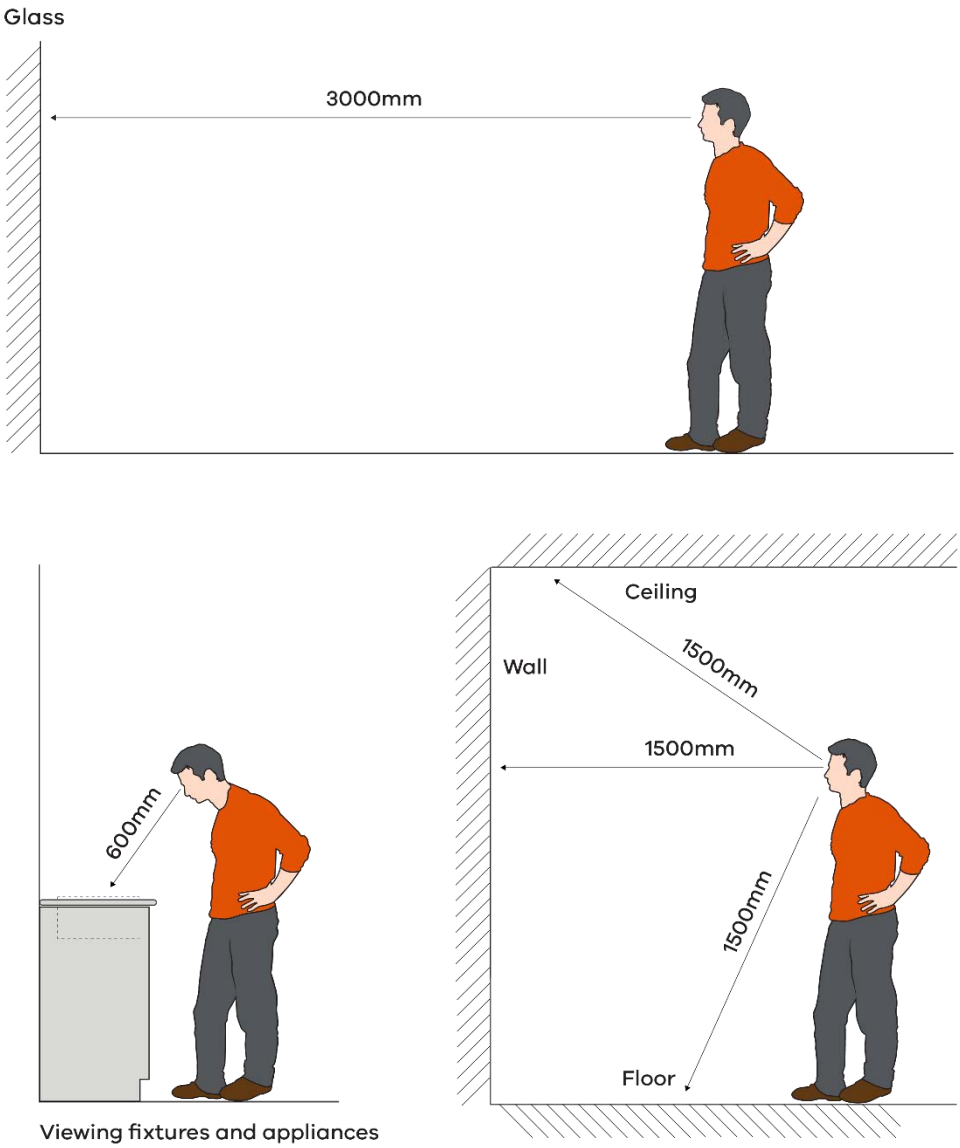
Variations in the surface colour, texture and finish of walls, ceilings, floors and roofs and similar transparent materials are to be viewed where possible from a normal viewing position.

A normal viewing position is looking at a distance of 1.5 m or greater (or 600 mm for appliances and fixtures, and 3 m for glass) with the surface or material being illuminated by non-critical light, as depicted in Diagram B3. Non-critical light means the light that strikes the surface is diffused and is not glancing or parallel to that surface.

Variations in the colour and finish of materials are typically within tolerance when not apparent from a normal viewing position, subject to any specific provisions within Part C.

The intention of a 'Normal viewing position' is to view the work from a reasonable distance in normal lighting conditions, as would occur during normal use of the building. It does not include viewing from very close distances, from unusual angles, or under strong or artificial lighting that highlights minor surface variations.

Diagram B3: Normal viewing positions



Viewing fixtures and appliances

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Part C: Building and Plumbing

1. General

1.1 Compliance with legislative framework and building contract

Building work is non-compliant where it does not satisfy legislative requirements, including a statutory approval (e.g. the building permit or planning permit), a statutory obligation under an Act, Regulations, or the NCC. There are also legal obligations contained within the building contract.

Tolerances within Part C may not be appropriate where there is specific need for compliance within an applicable building standard (e.g. *AS 3959 for buildings in bushfire-prone areas*). All legislative and contractual obligations, inconsistent with this Guide take precedence over this Guide.

1.2 Assessment against tolerances

Any assessment using this Guide needs to consider the applicable building standard the building was designed and constructed to, the specific site conditions, as well as the performance against any relevant tolerances.

Exceedance of any tolerances nominated in the Guide should prompt an assessment to understand the underlying cause of the issue, to assist with any intended resolution or rectification work. It is recommended that this assessment be undertaken in consultation with a suitably registered building practitioner.

2. Setting Out

2.1 Setting out the site

A building set-out is not within tolerance if a building or part of a building encroaches over an allotment boundary unless permitted under Regulations. This may include a part of a footing, gutter, or any other part of the building that encroaches over an allotment boundary.

2.2 External building dimensions

External dimensions of habitable structures are outside tolerance if deviation from the agreed or documented dimension L, exceeds L/200 or 10 mm, whichever is the greater.

External non-habitable structures such as garages, carports, verandahs, decks, and patios, are not within tolerance if deviation from the agreed or documented dimension L, exceeds L/100 or 10 mm, whichever is the greater.

2.3 Internal building dimensions

Internal dimensions of habitable rooms such as bedrooms, lounge, study, dining, family or living rooms, halls, entries and stairways are not within tolerance if deviating from the agreed or documented dimension L, exceeds L/100 or 10 mm, whichever is the greater.

Internal dimensions of service rooms such as bathrooms, toilets, laundries and kitchens are not within tolerance if deviating from the agreed or documented dimension L, exceeds L/200 or 10 mm, whichever is the greater.

Measurement of internal building dimensions is to the structure or frame and does not include finishes such as plasterboard, render, skirtings or the like.

> Internal building dimensions are also subject to the 'Livable Dousing Design' provisions of the NCC, which takes precedence over the Guide. This may include specific measurements to internal finishes to maintain minimum widths for paths of travel.

2.4 Finished floor levels

Finished floor levels (FFL) are not within tolerance where:

- deviation from the specified or agreed FFL exceeds 40 mm; or
- floors are constructed on different planes, when specified or agreed to be on the same plane.

Where the building work is an extension or addition to an existing building, the new FFL may exceed the above tolerances in order to match the existing floor levels. Any deviation to tolerances should not adversely affect the reasonable and safe use or amenity of the building.

3. Footings and Slabs

> This Guide only considers tolerances within simple, in-situ slab-on-ground systems. Complex engineering systems (including suspended slabs, pre and post tensioned slabs, or pre-cast systems) should not be assessed under this Guide. Instead, expert engineering guidance should be sought.

3.1 Foundation movement

Footing and slab systems are designed and constructed to suit the foundation material (i.e. soil), and to accommodate an amount of foundation movement. Foundation movement may result in minor distress to the building, including cracking to ceilings, floors, or walls. The presence of distress may not equate to being outside tolerance.

There are many factors that contribute to foundation movement and subsequent building distress. An example is movement due to abnormal moisture conditions which may be the result of contributing factors such as:

- the type and location of trees;
- excessive and localised watering;
- site surface drainage;
- water leaks (gutters, pipes and appliances); or
- adverse effects from adjoining properties.

3.2 Footings and slabs generally

Footings and slabs are not considered to be within tolerance where failure results from foundation movement caused by poor site management by the builder, including inadequate site drainage during construction.

Footings and slabs can be subject to foundation movements caused by the management of site conditions during construction and post occupancy. The effects of inadequate site drainage, including the effect of trees in close proximity, need to be considered when assessing against a tolerance within this Guide.

3.3 Concrete floor levels

A concrete slab-on-ground is not within tolerance if within the first 24 months of completion, it differs in level by more than:

- 10 mm in any room or area;
- 4 mm in any 2 m length; or
- 20 mm between any two points across the entire building footprint.

3.4 Cracks in concrete slabs-on-ground

Cracks in slab-on-ground systems may be considered outside tolerance if they are equal or greater than 2 mm in width. Cracking less than 2 mm in width is not considered outside tolerance but should be monitored closely for a period of 12 months once identified, to ascertain if the crack has stabilised or continues to move. A further 12 months may be required if continued movement is observed or if progression equal to or greater than 2 mm in width occurs.

It is recommended that assessment of cracking outside tolerance is undertaken in consultation with a registered building practitioner such as a building surveyor, building inspector, or structural engineer to assist in understanding the cause of the cracking.

The assessment should consider possible causes of movement, such as soil conditions, drainage, trees, plumbing leaks, site works, or abnormal moisture conditions.

Supporting guidance on classification of damage due to foundation movement can be found within Appendix C of AS2870 Residential slabs and footings.

3.5 Finish to concrete slabs

Finish to a concrete slab surface, including set downs, are not within tolerance if unsuitable for the application of the final finish specified or agreed. Applied finishes may include tiles, polished concrete, carpet or sheet flooring.

Trowelled finishes where the finished concrete is intended to remain exposed (e.g. garages, patios or porticos) are to have a consistent finish free of significant trowel marks, gouges, mechanical damage, stains, or other blemishes in the surface.

Where the edge of a slab is intended to remain exposed, the concrete is to be finished smooth and plumb. A slab edge intended to be exposed is not within tolerance if it deviates from plane (horizontal or vertical bow) by more than 10 mm in any 2 m length.

3.6 Repairs to concrete slabs

The repair of an exposed concrete slab is not within tolerance if the repair work does not match the existing slab in appearance, colour and texture as closely as practicable. Minor variations in finish are not considered outside tolerance.

3.7 Falls in external concrete floors as built

Concrete floors in outdoor areas, such as an alfresco, patio or verandah, are outside tolerance if stormwater does not drain to the outer edge of the slab or to a stormwater drainage system.

4. Restumping

4.1 Factors affecting restumping

When considering tolerances for restumping an existing building, there are many factors that should be taken into account. These include:

- the pre-existing structural conditions, including the extent of any previous movement;
- the interaction between new and existing building work;
- existing service installations such as plumbing or electrical;
- any likelihood of consequential damage to the existing building; and
- any other factor that may restrict the re-levelling process.

4.2 Building damage due to restumping

Building damage caused by restumping works is outside tolerance when the extent of damage exceeds the agreed or specified parameters. Given the nature of the building work and likelihood of damage, the parameters should be specified and agreed upon prior to the commencement of work.

4.3 Floor levels after restumping

Re-levelled floors are not within tolerance if within the first 24 months from completion of the work, they differ in level by more than 15 mm in any room or area, or more than 8 mm in any 2 m length.

5. Masonry

5.1 Masonry construction

Masonry construction needs to consider the relevant tolerances within the applicable building standard the building was designed and constructed to. It is recommended that any assessment of masonry construction is undertaken in consultation with a suitably registered building practitioner. This Guide may provide assistance with tolerances on matters such as wall cracking, or vertical and horizontal alignment, which may aid in determining whether to engage an industry expert.

Diagram 5.1 provides examples of tolerances for the standard of workmanship in masonry construction.

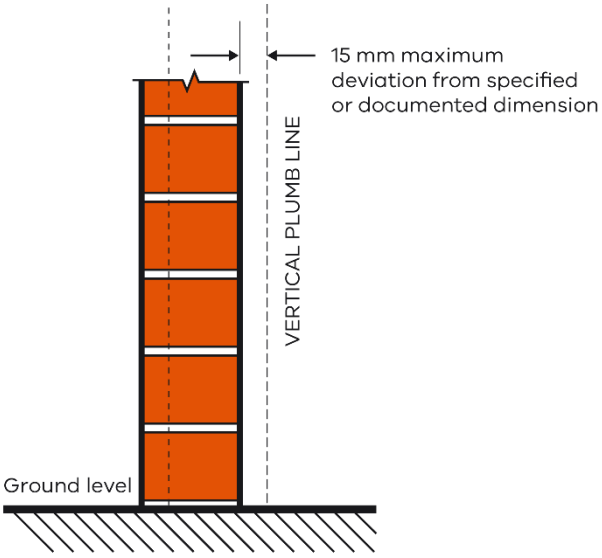
For this Section of the Guide, masonry includes clay or concrete brick or block construction. The tolerances may not be appropriate for some types of masonry construction such as prefabricated masonry panels, aerated concrete blocks, irregular cut stone, or rustic finish masonry with irregular edges and appearance.

Further information on tolerances in masonry is contained within Part 12.5 of AS3700 Masonry Structures.

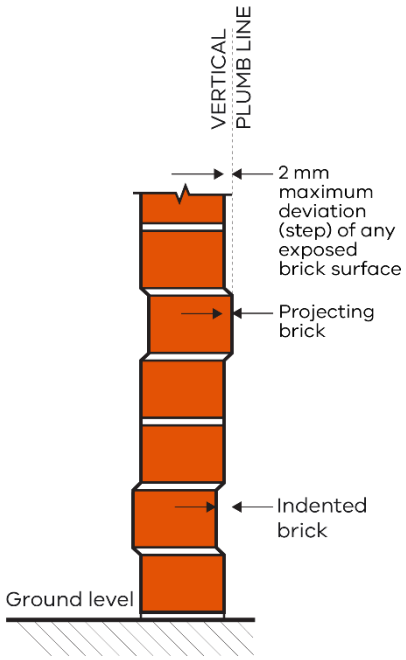
> This Guide utilises numerous tolerances found with AS3700 Masonry Structures, as referenced within the NCC. In some instances, masonry being outside tolerance may constitute a non-compliance with the *Building Act 1993* (Vic).

Diagram 5.1: Diagrams for tolerance in masonry construction

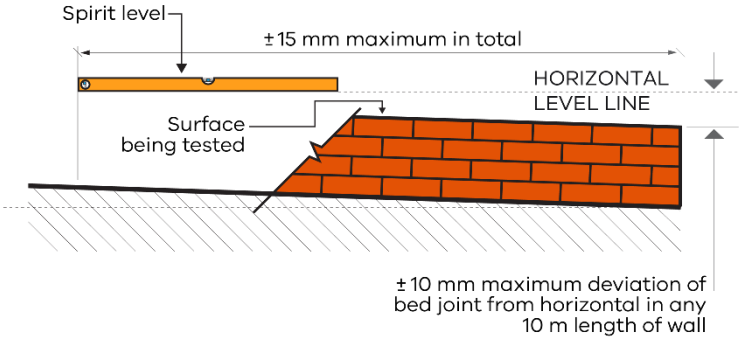
a. Horizontal position of masonry at its base or at each storey



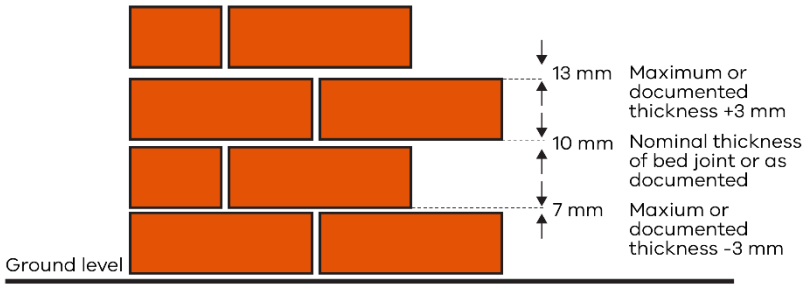
b. Deviation (step) of exposed surface



c. Deviation of bed joint from horizontal

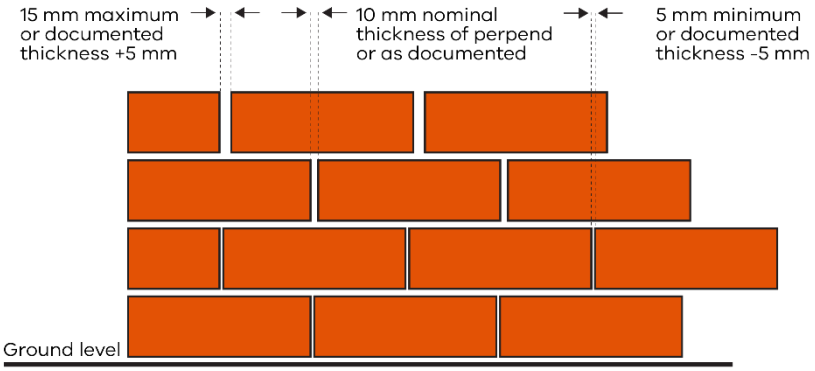


d. Deviation from specified thickness of bed joint

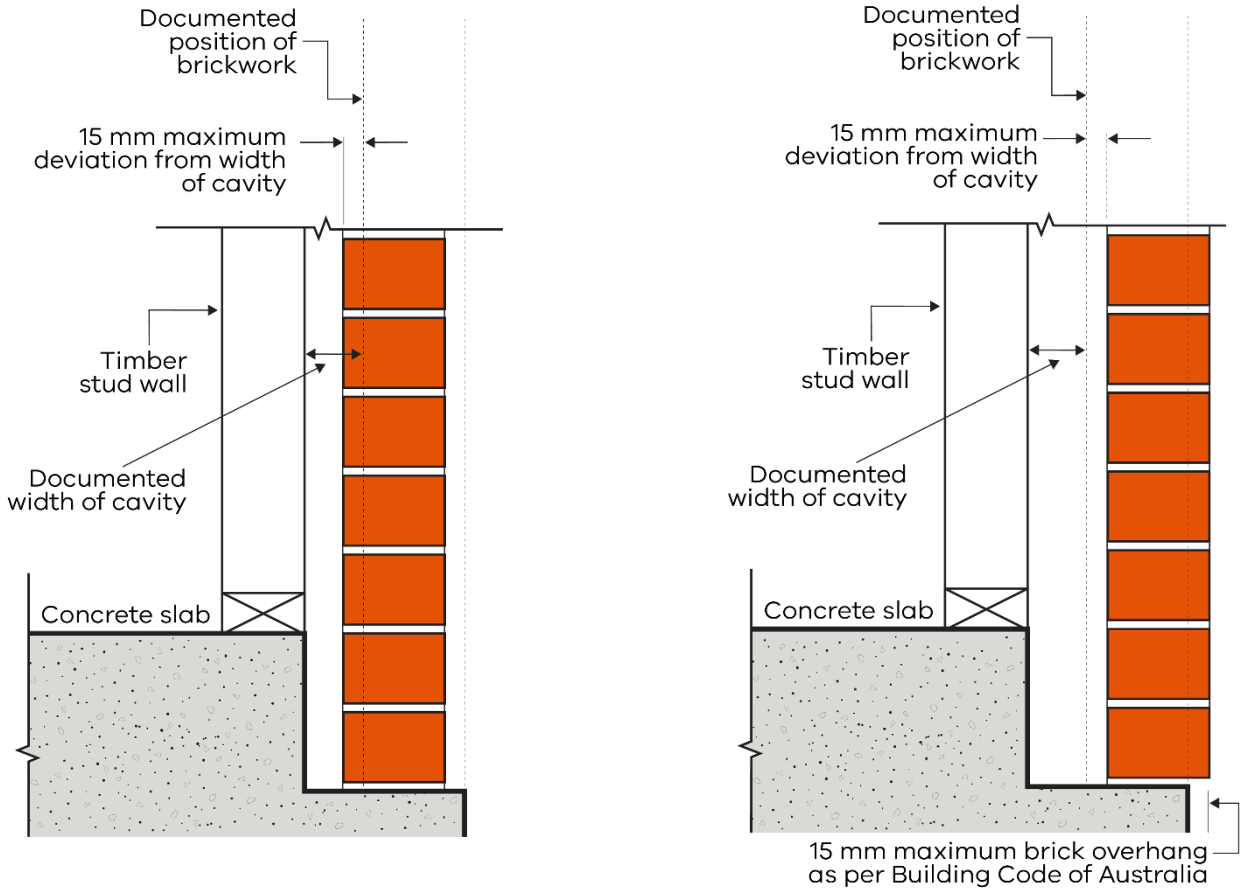


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e. Deviation from specified thickness of perpend



f. Deviation from specified width of cavity



Note: Refer to the Building Code of Australia for the minimum cavity width.

5.2 Damage to masonry walls

Masonry construction needs to consider the applicable building standard the building was designed and constructed to, the specific site conditions, as well as the performance against any relevant tolerances. There may be a number of factors leading to damage to masonry walls which require careful consideration.

It is recommended that any assessment is undertaken in consultation with a suitably registered building practitioner to help understand the underlying cause. This Guide provides tolerances which may aid in determining whether to engage an industry expert.

Cracks in masonry walls are considered outside tolerance if they are equal or greater than 5 mm in width.

Cracking less than 5 mm in width is within tolerance but should be monitored closely for a period of 12 months from identification, to ascertain if the crack has stabilised or continues to move. A further 12 months of observation may be required if continued movement is observed, or if progression to equal or greater than 5 mm in width occurs, as the cracking is outside tolerance.

Supporting guidance on classification of damage due to foundation movement can be found within Appendix C of AS2870 Residential slabs and footings.

5.3 Articulation and control joints in masonry walls

Articulation and control joints are not within tolerance if they do not extend through the full thickness of masonry skin or are not sealed.

5.4 Masonry facing

Masonry faces are not within tolerance if they are not laid true, with the finish face outwards. Masonry faces are not within tolerance if they are not cleaned and free of excess mortar or stains when viewed from a normal viewing position.

For single skin masonry (e.g. a garage wall), the masonry facing should be viewed externally only for finished facing. The internal finish is outside tolerance if it is not clean and free of excess mortar.

5.5 Blending and matching of masonry: new work

Masonry construction that varies significantly in colour, texture or pattern is not within tolerance if the units are not mixed and distributed evenly through an area of building work in accordance with the manufacturer's installation instructions. Display panels are typically representative of the expected range of variation and may guide tolerance identification.

Where masonry units are obtained from different batches, they are to be blended where practicable, to minimise the variations in colour, texture and pattern expected between batches.

5.6 Blending and matching of masonry: repair work

The tolerance threshold for repair work is greater than that of new work, as matching of masonry may not be reasonable or practical for all alterations, extensions, or repair work. Some variation of masonry features such as colour, texture and pattern is to be expected.

Where possible, a physical joint, door or window opening, downpipe or other similar separating feature is to be incorporated to break or reduce the visual impact.

5.7 Cracked masonry units

A masonry unit is not within tolerance if it is damaged, cracked or otherwise visually inconsistent with the overall characteristics of the masonry units.

5.8 Recycled and reclaimed bricks

Recycled and reclaimed bricks may not be uniform in shape, with variations in dimension and squareness. Tolerances in this Guide may not be appropriate for construction with recycled and reclaimed bricks.

5.9 Mortar for masonry

Mortar is not within tolerance if it has significant inconsistency in the colour tone, joint finishing method (e.g. raked, flush, over grouted joints), or thickness when viewed from a normal viewing position. Some colour variations may be acceptable between batches of mortar mixed onsite.

Mortar repairs are not within tolerance if they do not match the existing mortar as closely as practicable. An identical colour match may not be possible or reasonable, and the differences may diminish over time.

5.10 Voids and holes in mortar

Voids and holes in mortar are considered outside tolerance if they are visible from a normal viewing position and exceed 5 mm in diameter.

Weepholes, vents and the like are not considered outside tolerance when installed to comply with an applicable building standard.

5.11 Cleaning, mortar smears and stains

Stains, mortar smears, and damage caused by cleaning are outside tolerance if visible from a normal viewing position. Mortar surfaces that have significantly eroded due to the cleaning process or a weak mortar mix are not within tolerance.

5.12 Masonry with non-face finish or under applied finishes

Tolerances for finishing and cleaning masonry in this Guide, do not apply to walls (or the face of a wall) that are not visible upon completion, or under applied finishes.

5.13 Vertical alignment of perpend

A line of masonry perpends is not within tolerance if its deviation from vertical alignment exceeds 20 mm per 2 m height of wall, measured from centre to centre of perpend joints.

5.14 Horizontal alignment of bed joints

Bed joints in walls including adjacent isolated piers and either side of openings and control joints are not within tolerance if the deviation from the horizontal plane exceeds +/- 10 mm in any 10 m length, or +/- 15 mm in total.

5.15 Base bed joint and base row of masonry

Base bed joints located above the finished ground level are not within tolerance if they exceed 20 mm in thickness.

Non-faced base row of masonry, including units that are split or on edge, are not within tolerance if visible from a normal viewing position and not finished in a consistent manner to the remaining wall.

Base bed joints may exceed 10 mm in thickness when appropriately designed for structural performance under the NCC (e.g. a design complying with AS3700 Masonry Structures). The intent of this Guide is to address the visual appearance of the base bed joint, not the structural adequacy.

5.16 Damp proof courses and flashings

Damp proof courses are not within tolerance if they do not extend through the entire masonry leaf. Any projections need to be cut off flush with the face or turned down.

5.17 Raking of joints

Raked mortar joints are not within tolerance if the raking exceeds 10 mm in depth, or if the depth of joints do not appear consistent when viewed from a normal viewing position.

5.18 Efflorescence

Efflorescence may be an indicator of a potential moisture control problem in masonry. Any assessment needs to consider the applicable building standards, and potential failures in flashings, damp proof courses, or the like.

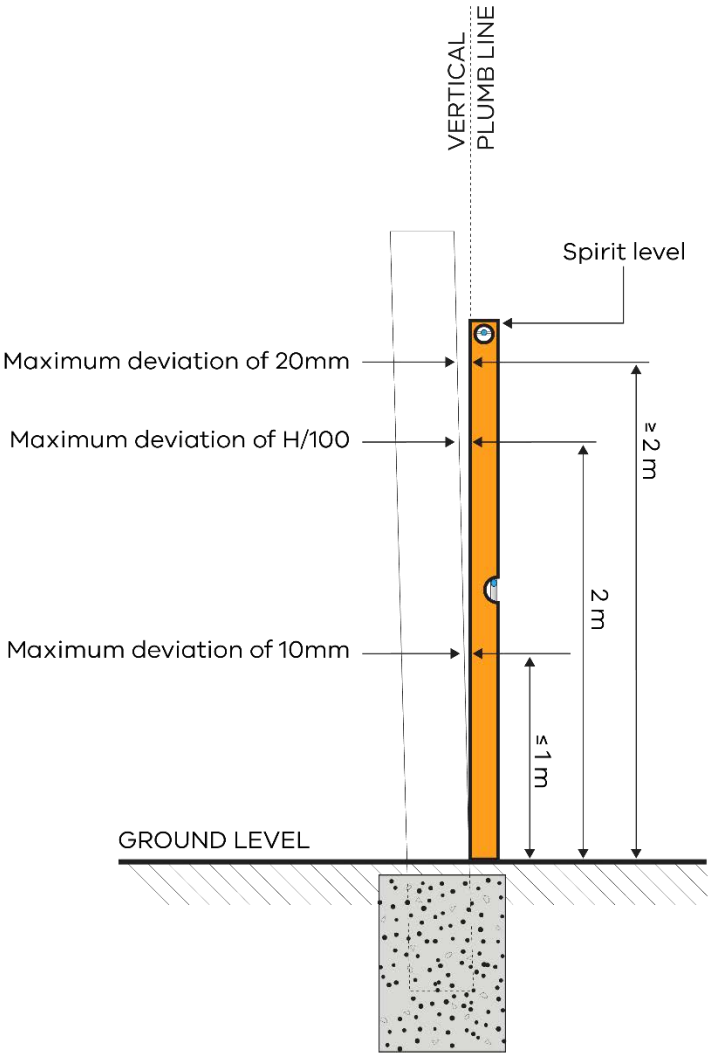
6. Framing

6.1 Plumbness of timber stumps

Stumps or posts are not within tolerance if they deviate from vertical by more than:

- 10 mm for stumps or posts up to 1 m in height;
- height L/100 for stumps or posts up to 2 m in height; or
- 20 mm for stumps or posts 2 m or taller.

Diagram 6.1: Plumbness of stumps



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6.2 Plumbness of timber frames and exposed posts, and light steel frames

Timber wall frames and posts are not within tolerance if they deviate from vertical by more than 5 mm over a 2 m height.

Light steel frames are not within tolerance if they deviate from vertical by more than height/600 or 3 mm, whichever is the greater.

6.3 Straightness of timber and light steel frame surfaces

Timber frame surfaces are not within tolerance if they deviate by more than 5 mm from a 2 m straight edge.

Light steel frame surfaces are not within tolerance if they deviate by more than 5 mm from a 3 m straight edge.

Some finishes may require tighter substrate tolerances than others.

6.4 Packing under framing members

Packing is not within tolerance if a material that is not corrosion-resistant and incompressible is used and adequate support is not provided.

Timber is not within tolerance if the nominal dimension has shrunk more than 10% for unseasoned timber, or 3% for seasoned timber.

6.5 Framing fixed to concrete slabs

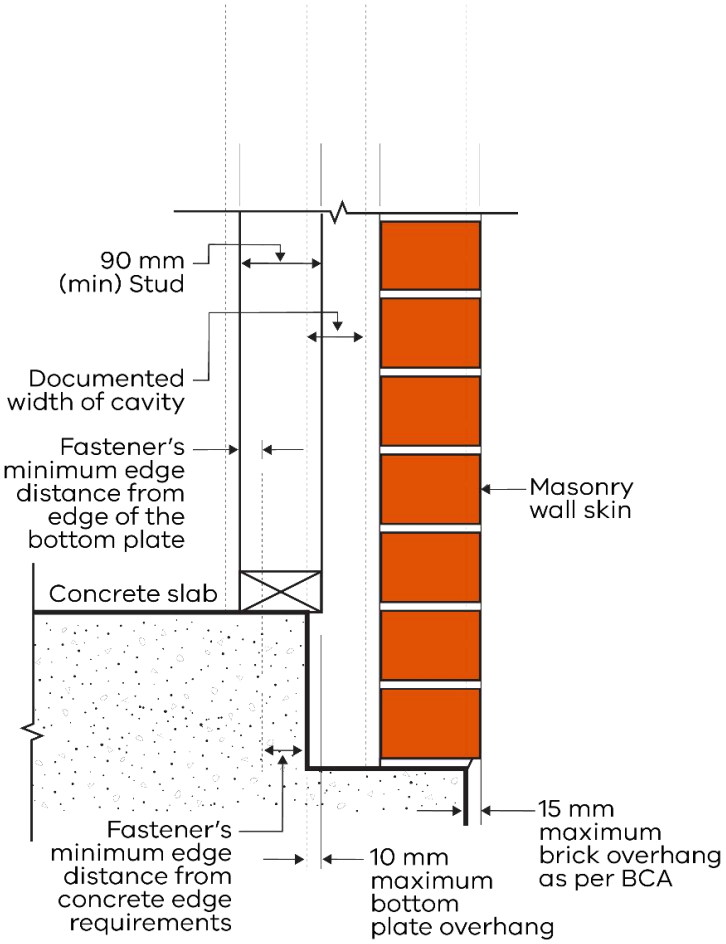
Framing connections of bottom plates to concrete slabs are not within tolerance if proprietary fasteners are not installed in accordance with the manufacturer's instructions.

6.6 Timber bottom plates that overhang concrete slabs

Bottom plates are not within tolerance in the following situations:

- bottom plates less than 90 mm wide overhang the concrete slab;
- bottom plates 90 mm or wider overhang the concrete slab by more than 10 mm; or
- the bottom plate and wall frame encroaches the minimum required cavity width.

Diagram 6.6: Bottom plates that overhang concrete slabs



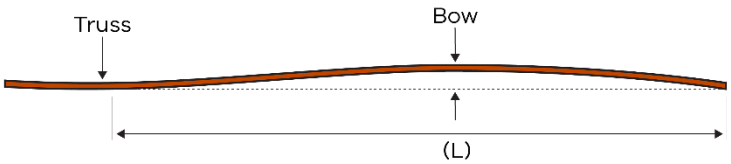
6.7 Roof truss bow

Timber trusses are not within tolerance if they bow more than the lesser of L/200 and 50 mm.

Light steel trusses are not within tolerance if they bow more than L/500.

L is the length of the truss or distance between supports.

Diagram 6.7: Bow in roof trusses

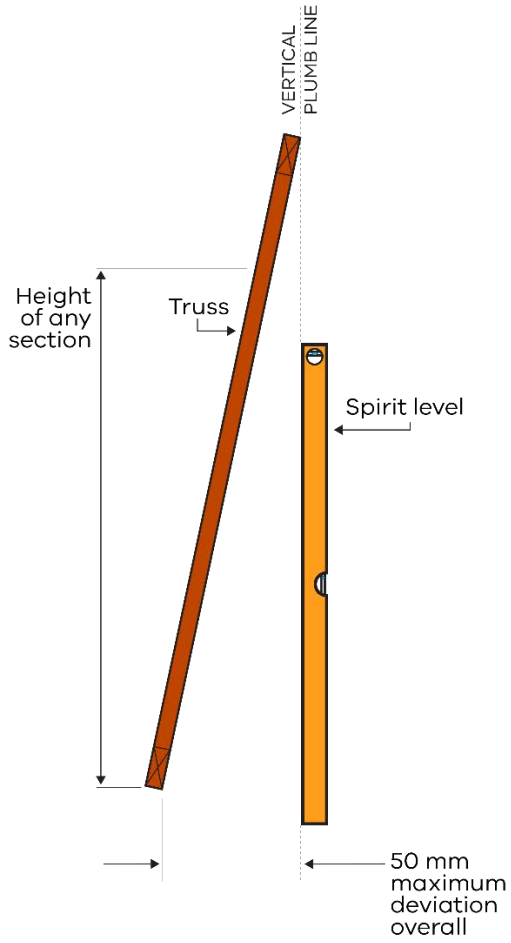


6.8 Plumbness of trusses

Timber trusses are not within tolerance if they are erected with any part out of plumb by more than the lesser of height/50 or 50 mm.

Light steel trusses are not within tolerance if they are erected with any part out of plumb by more than the lesser of height/100 and 20 mm.

Diagram 6.8: Verticality or plumbness of trusses



7. Wall Cladding

7.1 General

Wall cladding is not within tolerance if staining, folds, splits, dents, open joints between panels, cracking and other distortions are visible from a normal viewing position at ground level or an upper floor level.

Deterioration of wall cladding, including metal corrosion, is outside tolerance if the wall cladding is exposed to normal environmental conditions and does not achieve the service life specified by the manufacturer.

7.2 Leaks in wall cladding

Wall cladding and accessories are not within tolerance if unintended dampness or deterioration of building elements occurs due to leaks under normal environmental conditions.

7.3 External timber trims

External timber trims on eaves, infills and wind moulds surrounding windows, doors and eaves are not within tolerance if they become loose within 12 months from completion.

8. Roofing

8.1 Leaks in roofing, flashings and accessories

Roof cladding, flashings and accessories are not within tolerance if unintended dampness or deterioration of building elements occurs due to leaking under normal environmental conditions.

8.2 Roof cladding and flashing

Roof cladding and flashing is not within tolerance if folds, splits, dents, open joints between panels, cracking and other distortions are visible from a normal viewing position at ground level or an upper floor level.

Deterioration of roof cladding or flashing, including metal corrosion, is outside tolerance if the roof cladding is exposed to normal environmental conditions and does not achieve the service life specified by the manufacturer.

8.3 Roof tiles

Roof tiles are not within tolerance if they are cracked or broken, or significant irregularities in tile appearance are visible from a normal viewing position at ground or an upper floor level.

Where roof tiles are obtained from different batches, they are to be blended where practicable, to minimise variations in colour, texture, and pattern. Manufacturer's installation instructions and display panels may guide with tolerance identification.

Minor surface marks or blemishes arising from the tile manufacturing process are within tolerance.

8.4 Roof tile pointing

Roof tile pointing is not within tolerance if it is not uniform in colour, texture and trowelled off to provide a neat appearance. Rectification of pointing needs to match the existing colour and texture as close as practicable.

Minor cracking of pointing is not considered outside tolerance unless it becomes dislodged or washed out.

8.5 Roofing overhang

Tiled roofing is not within tolerance if tiles overhang the inside face of a gutter by less than 35 mm or extend more than 65 mm.

Sheet roofing is not within tolerance if it overhangs the inside face of a gutter by less than 50 mm or more than 65 mm, when measured in plane with the roof sheeting, on a roof pitch equal or less than 25 degrees.

8.6 Cutting of roof tiles and sheet roofing

Tiled roofing is not within tolerance if not finished neatly to present a reasonable straight line at ridges, hips, verges, and valleys.

Sheet roofing is not within tolerance if the exposed edge of the sheets in gutters, valleys or the likes deviates by more than 10 mm from a 2 m straight edge, where visible from a normal viewing position at ground level or an upper floor level.

8.7 Undulating tiled roof lines

Undulations in the line of a tiled roof are outside tolerance if deviation exceeds 20 mm from a 4 m straight edge along the plane of the roof.

9. Roof Plumbing

9.1 Installation of gutters

Installation of gutters is not within tolerance if the fascia is visible above the gutter or is not concealed by flashing finished to match the gutter, when viewed from a normal viewing position at ground level or an upper floor level.

9.2 Water retention in gutters

Gutters are not within tolerance if they permanently retain water more than 10 mm in depth when clean and do not clear of all debris that restricts the flow of water.

9.3 Joints in gutters

Gutters are not within tolerance if joints are lapped less than 25 mm, the laps are not in the direction of flow to the outlet, or the joints leak.

9.4 Fixing of gutters and downpipes

Gutters and downpipes are not within tolerance if they are not securely fixed.

9.5 Flashings

Wall and step flashings, and sloping flashings cut into walls are not within tolerance if they do not incorporate weathering folds, anti-capillary breaks and sealing, or do not enter the masonry walls by at least 15 mm.

Pressure flashings are not within tolerance if they are not fixed on appropriate surfaces.

9.6 Parapet flashings/cappings

Parapet flashings and cappings are not within tolerance if a minimum fall of 5 degrees is not provided across the width of the flashing to divert water runoff.

> NCC Volume 2 and NCC Volume 3 specify minimum falls for parapet cappings, with requirements ranging from 3 degrees to 5 degrees. In most situations, compliance with both volumes is necessary. To ensure full compliance, a minimum fall of 5 degrees should be provided for parapet cappings.

9.7 UV protection for exposed PVC and PE pipes

PVC and PE pipes and fittings not protected/shielded from direct sunlight or provided with UV protection are not within tolerance.

10. Plumbing

10.1 Water hammer

Water hammer is outside tolerance if present in a new installation.

10.2 Pipe penetrations through external walls and inside cupboards

Plumbing pipe penetration holes are not within tolerance if they are not:

- properly filled or covered/grouted where appropriate;
- sized to be tight fitting around the pipe circumference; or
- fitted with the smallest size cover plates or collars practicable.

10.3 Water supply fixtures

Water supply fixtures are not within tolerance if they leak or drip from the fixture within 3 months from completion or are not located to fully/clearly discharge into sanitary fixtures such as baths, basins, and sinks.

10.4 Water drainage from sanitary fixtures

Sanitary fixtures such as baths, basins, sinks, showers and troughs are not within tolerance if they retain water, other than water retention due to surface tension, after they are drained.

11. Windows and Doors

11.1 Installation of external windows and doors

Windows, doors and jambs are not within tolerance if they deviate from level and plumb by more than 5 mm over 1800 mm.

11.2 Weather-tightness of windows, doors, and window and door frames

Window frame and door frame installations are not within tolerance if they leak or cause deterioration of building elements under normal environmental conditions.

When closed, windows and doors are not within tolerance if they are not appropriately sealed to prevent the entry of water under normal environmental conditions. This does not apply to vehicle access doors or the like where it is not intended to prevent water entry.

11.3 Door furniture

Door furniture including handles, locks and latches is not within tolerance if they do not operate as intended 3 months after completion.

11.4 Internal door clearances

The installation of internal doors is not within tolerance if, within 3 months of completion:

- clearances between door leaves and frames, and between adjacent door leaves are not uniform;
- clearances between door leaves, or between a door leaf and the frame, is less than 2 mm or greater than 5 mm; or
- clearances between the door and floor finish are greater than 20 mm after installation of the floor coverings.

11.5 Distortion of doors

At completion, doors are not within tolerance if distortions exceed the tolerances nominated in Table 11.5. Doors are not within tolerance if, within 3 months of completion, the extent of twisting or bending affects the operation of the door.

Table 11.5: Maximum allowable distortion of doors

Property	Limit
Squareness (difference between the lengths of diagonals of a door)	3 mm
Twist (doors up to 2400 mm x 920 mm)	5 mm
Bowing along height of door (height ≤ 2150 mm)	4 mm
Bowing along height of door (2150 mm < height ≤ 2400 mm	6 mm
Bowing across width of door (width ≤ 1020 mm)	3 mm

Refer to AS 2688 Timber and Composite doors for more information.

11.6 Sealing of door edges

Door leaves are not within tolerance if they do not have all sides, top and bottom edges sealed or painted.

11.7 Operation of windows and doors

The installation of doors and windows is not within tolerance if, within 3 months of completion, they bind or jam, or do not operate as intended by the manufacturer.

11.8 Bowed window frames

Window frames are not within tolerance if they are distorted to the extent that the function of the window is adversely affected.

11.9 Glazing

Scratches, chips or surface blemishes on glazing and mirrors are outside tolerance if they are present at completion and can be seen from a 3 m normal viewing position.

Minor scratches, chips or other blemishes that are not more than 10 mm long and not more than three blemishes per pane, are not considered outside tolerance.

11.10 Condensation

Condensation may be present within a building even if the applicable building standards were complied with. Condensation may be minimised by occupant management, through maintaining adequate natural or mechanical ventilation (openable windows, exhaust fans, or other means).

12. Plastering and Rendering

12.1 Plumbness and straightness of internal and external wall surfaces

12.1.1 Internal and external wall surface finishes

Wall surface finishes are not within tolerance if they deviate from plane (e.g. a bow) by more than 5 mm from a 1.8 m straight edge, or they are not consistent in finish, colour and texture.

12.2 Plasterboard and other sheeting

12.2.1 Sheeting systems

Installation and jointing of sheeting systems, including fibre cement, timber, or composite sheeting products, is not within tolerance if it does not have a consistent finish when viewed from a normal viewing position, or does not conform to the manufacturer's installation instructions.

12.2.2 Plasterboard sheeting

Installation and jointing of plasterboard sheeting is not within tolerance if it does not conform to AS/NZS 2589 Gypsum linings - Application and finishing, or the manufacturer's installation instructions.

12.2.3 Level of finish for plasterboard

Plasterboard finish is not within tolerance if it is not completed to a Level 4 finish in accordance with AS/NZS 2589 Gypsum linings - Application and finishing. Some surface imperfections may still be visible in a Level 4 finish.

12.2.4 Cracks in plasterboard, hard plaster and other plaster elements

Cracks in walls, ceilings, joints, and bulkheads are outside tolerance if they exist at completion or exceed 1 mm in width within the first 24 months of completion and can be seen from a normal viewing position.

12.2.5 Cracks in cornices

Cracks in cornice joints, including butt joints, internal and external mitre joints, and at junctions with walls and ceilings, are outside tolerance if they exist at completion or exceed 1 mm in width within the first 24 months of completion and can be seen from a normal viewing position.

12.2.6 Cracking at junctions of dissimilar materials

Cracking at junctions between dissimilar materials is outside tolerance if it exists at completion or exceeds 1 mm in width within the first 12 months of completion and can be seen from a normal viewing position.

12.2.7 Straightness and alignment of plaster cornices

Plaster cornices are not within tolerance if they deviate by more than 4 mm from a 2 m straight edge and are visible from a normal viewing position.

12.2.8 Flush joints in plasterboard

Plaster peaking or jointing is outside tolerance if visible from a normal viewing position.

12.2.9 Nail popping or screws showing in surfaces

Nail popping or screws heads showing in sheeting are outside tolerance if they exist at completion or occur within the first 24 months of completion and can be seen from a normal viewing position.

12.2.10 Straightness of plasterboard ceilings

Plasterboard ceilings are not within tolerance if they deviate by more than 4 mm from a 2 m straight edge or a significant visual deviation from the ceiling plane is visible from a normal viewing position within 24 months of completion.

12.3 Rendered surfaces

12.3.1 Matching and repairing existing rendered surfaces

The tolerance for repair work is greater than that of new work, as it may not be reasonable or practical to match the original finish. Assessment of tolerances needs to consider the consistency of the finish, extent of any cracking, and the appearance, from a normal viewing position.

Where possible, a physical joint, door or window opening, downpipe or other similar separating feature should be incorporated to break or reduce the visual impact. Some variation of features such as colour, texture and pattern is to be expected between batches.

12.3.2 Cracks and other blemishes in rendered or hard plastered surfaces on a masonry substrate

Marks or blemishes are outside tolerance if visible from a normal viewing position.

Cracks are outside tolerance if they exist at completion, cause debonding of the render from the substrate or exceed 1 mm in width within the first 24 months of completion and can be seen from a

normal viewing position. Cracking after the first 24 months is to be assessed in accordance with clause 5.2 Damage to masonry walls.

12.3.3 Cracks in applied finishes over lightweight substrate

Cracks or open joints in finishes applied to lightweight substrates are outside tolerance if they exist at completion, cause debonding of the render from the substrate, allow the ingress of water in normal environmental conditions or exceed 1 mm in width within the first 24 months from completion, and can be seen from a normal viewing position.

12.3.4 Repairs to applied finishes

Repairs to surfaces that have been rendered are not within tolerance if they do not match the colour and texture of the remaining wall or adjacent area as closely as practicable.

12.3.5 Control joints and damp-proof courses

Cracks in rendered surfaces are outside tolerance if recommended control joints have not been installed. Cracks that appear along a control joint are not considered outside tolerance.

Applied finishes are not within tolerance if they impede the performance of any control joint, damp-proof course or sub-floor ventilation.

Flexible mastic or sealant is not within tolerance if it does not match the colour of the adjacent surface as closely as practicable and has not been applied in accordance with the manufacturer's installation instructions.

Mouldings and inflexible covering strips are not within tolerance if they are installed across control joints and are fixed in a way that prevents the control joint from working as intended.

12.3.6 Cracks in external mouldings

Cracks in mouldings or other architectural features, including joints between those features and adjacent surfaces, are outside tolerance if they exist at completion or exceed 1 mm in width within the first 24 months from completion, and can be seen from a normal viewing position.

13. Internal Fixing

13.1 Gaps in internal fixing

Gaps between mouldings or between mouldings and other fixtures, at mitre or butt joints, or at junctions with a wall or other surfaces, are outside tolerance if they exist at completion, or exceed 1 mm in width within the first 12 months of completion and are visible from a normal viewing position.

After the first 12 months from completion, gaps are outside tolerance if they exceed 2 mm in width and are visible from a normal viewing position.

Gaps between skirting and flooring are outside tolerance if they exceed 2 mm within the first 24 months from completion and are visible from a normal viewing position.

13.2 Joints in fixing of internal mouldings

Faces of architraves and skirtings are not within tolerance if they are not aligned and flush at mitres and butt joints, and the misalignment can be seen from a normal viewing position.

13.3 Architrave quirks

The width of an architrave quirk (setback of the architrave from the reveal edge) of each length of an architrave is not within tolerance if it is not consistent when viewed from a normal viewing position.

13.4 Benchtops, cabinet doors and drawer fronts

Cabinet door and drawer fronts are not within tolerance if they are not aligned, or do not have consistent gaps between them when seen from a normal viewing position.

The time limit for identification of outside tolerances in benchtops, cabinet doors, drawer fronts and similar joinery is 6 months from completion.

13.5 Natural materials

Cracking, displacement, pitting, staining or similar blemishes in surfaces of natural material such as stone or marble are outside tolerance if caused during construction and can be seen from a normal viewing position at completion. Natural materials may exhibit natural characteristics such as blemishes and variations in pattern and colour and are not considered outside tolerance unless caused by the construction process and evident at completion.

13.6 Manufactured materials

Cracking, displacement, pitting or similar blemishes in surfaces of manufactured materials are outside tolerance if they can be seen from a normal viewing position at completion.

Materials are not within tolerance if they are not installed in accordance with the manufacturer's requirements.

13.7 Repair or alteration to natural or manufactured materials

The repair or alteration of natural or manufactured materials is not within tolerance if the repair work does not match the existing work in appearance, colour and texture as closely as practicable. Minor variations in finish are not considered outside tolerance.

13.8 Joints in timber, stone and laminated benchtops

Benchtops of timber, laminate, natural stone or similar materials are not within tolerance if within 6 months of completion, the joints are not uniform, close-fitted, aligned and in the same plane. The requirements also apply to vertical surfaces of similar material and finish.

Joints are not within tolerance if they are not sealed or flush-filled with a suitable flexible sealant of matching colour at the time of completion.

13.9 Sealing around benches and items installed in benches

Junctions between benchtops and adjoining surfaces are not within tolerance if they are not sealed with a suitable flexible sealant of matching colour.

Seals around items such as sinks, hand basins or the like are not within tolerance if the joint leaks within 6 months of completion or is not installed in accordance with the manufacturer's installation requirements.

Caulking is not within tolerance if the surface is not finished smooth and consistent or has lumps, dust or other irregularities, or does not adhere to the surface within 6 months of completion. Caulking is to appear generally consistent in dimension when viewed from a normal viewing position.

13.10 Sealing of benchtop cut edges

Benchtops, including timber and other porous materials, are not within tolerance if cut edges are not adequately sealed to prevent the ingress of moisture. Cut edges may also include cut outs required for sinks, pipes, dishwasher alcoves and the like.

14. Floor and Wall Tiling

14.1 Wet areas and facilities

Floor and wall tiling (including a shower niche or ledge) in wet areas is not within tolerance if water is retained after the area has been drained (with the exception of residual water remaining due to surface tension). Tiles with textured surfaces that can readily hold water via surface tension are not considered outside tolerance.

Scratches, cracks or leaks in shower bases, screens and glass are outside tolerance if they are visible from a normal viewing position at completion. Leaks from shower screens, such as semi frameless or frameless shower screens, which are not intended to prevent the escape of water from the shower enclosure are not considered outside tolerance.

14.2 Floor and wall tiling

Tiling work and materials are not within tolerance if they do not conform to AS 3958 Installation of ceramic and stone tiles.

The repair or alteration of floor and wall tiles is not within tolerance if the repair work does not match the existing work in appearance, colour, and texture as closely as practicable. Minor variations in finish are not considered outside tolerance.

Where non-matching tiles have to be used, consideration is to be given to the method of separation of the different tiles, such as, the aluminium channel of a shower screen, a separating doorway, an intersecting wall, a change in wall direction or similar.

14.3 Cracked, pitted, chipped, scratched or loose tiles

Tiles are not within tolerance if they are cracked, pitted, chipped, scratched or loose at completion.

14.4 Grouting and joints

Joints are not within tolerance if the final alignment is not within ±4 mm in 2 m from the specified joint alignment or they are not, as far as is practicable, of consistent width when viewed from a normal viewing position.

Finished grout is not within tolerance if it is not consistent, smooth and evenly finished without voids, pinholes or low spots, or becomes loose within 24 months of completion.

Flexible or waterproof junction sealants are not within tolerance if they are not installed in accordance with the manufacturer's installation requirements, or contain lumps, voids, debris or other surface imperfections in the finish which are visible from a normal viewing position at completion.

14.5 Uneven tiling

Tiling is not within tolerance if the finished surface is not flat and true to within a tolerance of ±3 mm in 2 m from the required plane, when measured with a straight edge.

It is not considered outside tolerance when tiles are required to fall and drain to a floor outlet.

14.6 Lippage (stepping) between tiles

Tiling is not within tolerance if the lippage between two adjacent tiles exceeds the tolerances in Table 14.6.

Table 14.6: Tile lippage tolerances

Tile surface profile	Joint width	Allowable lippage
Flat and polished/honed	1.5 mm to 2.9 mm	1.0 mm
Flat and polished/honed	3.0 mm to 6.0 mm	1.5 mm
Flat and polished/honed	> 6.0 mm	2.0 mm
Smooth with regular edge finish	Any	2.0 mm
Highly profiled but consistent surface	Any	2.0 mm
Refer to Part 5 of AS3958 Installation of ceramic and stone tiles for more information		

14.7 Movement joints

Tiled floors are not within tolerance if movement joints have not been installed immediately above structural movement joints and locations where stress might be expected.

15. Floor Coverings

15.1 Timber flooring

Flooring, including tongue and groove strip flooring, structural plywood and particleboard sheet flooring, are not within tolerance if not installed in accordance with the NCC or manufacturer's installation requirements.

Sawn and milled hardwood timber used in flooring is not within tolerance if it does not conform to AS 2796.1 Timber - Hardwood - Sawn and milled products - Product specification.

Cracking, displacement, pitting, staining or similar blemishes in timber flooring are outside tolerance if caused by building work and can be seen from a normal viewing position at completion. Some materials may exhibit natural characteristics such as blemishes and variations in pattern and colour and are not considered outside tolerance unless caused during construction.

Ghosting, where blemishes appear beneath the finish coat, are outside tolerance when visible from a normal viewing position at completion.

15.2 Lippage

Lippage greater than 0.5 mm between adjacent floorboards is outside tolerance if present at completion.

15.3 Gaps in exposed solid timber flooring

Timber flooring is outside tolerance if it has gaps of more than 2 mm between adjacent boards that extend for more than 1 m, or more than 5 mm in total of three gaps between four consecutive boards, except where affected by exposure to sunlight, cooling, heating or other heat generating appliances.

Timber flooring will shrink or swell according to its internal moisture content, the timber species used and the installation environment.

Localised shrinkage resulting from heat generating appliances or similar cannot be allowed for at the time of construction and is not considered outside tolerance.

15.4 Joint swelling in solid timber, plywood and particleboard flooring

Joints in solid timber, plywood and particleboard floors are not within tolerance if they can be detected through floor coverings.

Swelling in tongue and groove strip timber flooring is outside tolerance if it causes tenting, buckling or crowning of the boards and can be seen from a normal viewing position at completion.

Cupping in boards of more than 1 mm per 100 mm is outside tolerance.

15.5 Nail popping in timber, plywood and particleboard floors

Nail heads that can be detected through floor coverings or nail popping that is clearly visible in exposed flooring are outside tolerance if they exist within 24 months from completion.

15.6 Squeaking floors

Floors, including stairs, in trafficable areas that consistently squeak when a person walks across the area are not within tolerance if the squeaking occurs within 24 months of completion.

15.7 Springy floors

Floors that bounce in a way that can be detected by a person walking normally across the area are not within tolerance.

15.8 Levelness of timber floor

New floors are not within tolerance if within 24 months of completion, they differ in level by more than 10 mm in any room or area, or more than 4 mm in any 2 m length.

The overall deviation of floor level to the entire building footprint is not to exceed 20 mm within 24 months of completion.

15.9 Carpet, vinyl flooring and floating floor

Carpet and vinyl flooring is not within tolerance if not installed in accordance with the manufacturer's installation instructions.

Joins in carpet and vinyl flooring are not within tolerance if they peak, fray or misalign and are visible from a normal viewing position within 12 months from completion.

Floating floors, which rest on the structural floor are not within tolerance if not installed in accordance with the manufacturer's installation requirements. Movement noises are an inherent characteristic of this type of flooring and are within tolerance.

16. Painting

16.1 Standard of painting

Painting is not within tolerance if it does not conform with the manufacturer instructions or the recommendations of AS/NZS 2311 Guide to the painting of buildings. Coatings are to have suitable durability for the relevant conditions and expected level of wear and tear.

16.2 Surface finish of paintwork

Paintwork is not within tolerance if the application has blemishes such as paint runs, paint sags, wrinkling, dust, bare or starved painted areas, colour variations, surface cracks, irregular and coarse brush marks, sanding marks, blistering, non-uniformity of gloss level and other irregularities in the surface that are visible from a normal viewing position.

Paintwork is not within tolerance if the application results in excessive over-painting of fittings, trims, skirtings, architraves, glazing and other finished edges that is visible from a normal viewing position.

16.3 Nail and screw fixings

Fixings or unfilled depressions caused by fixings are outside tolerance in painted or stained surfaces if they can be seen from a normal viewing position.

16.4 Natural characteristics and mechanical imperfections/damage

Natural characteristics such as gum pockets, surface splits or sap bleeding are outside tolerance if they can be seen from a normal viewing position.

Mechanical imperfections, damage, holes or any other unfilled depressions are outside tolerance if they can be seen from a normal viewing position.

16.5 Paint durability

Coatings are not within tolerance if they fail by lifting, blistering, flaking, fading, or similar, within the minimum period specified in Table 16.5 from completion.

Table 16.5: Minimum durability of coated finishes

Coating	Minimum durability
Exterior acrylic	36 months
Exterior enamel	24 months
Exterior semitransparent stains	12 months
Exterior clear finishes	Not recommended
Interior – all finishes	36 months

17. Decks and Balconies

17.1 Leaks in waterproof decks and balconies

Waterproof decks and balconies are not within tolerance if they leak under normal environmental conditions.

17.2 Decks and balcony resistance to wind driven water

Decks and balconies are not within tolerance if wind driven water enters the building under normal environmental conditions.

17.3 Ponding on waterproof decks and balconies

Waterproof decks and balconies are not within tolerance if water ponds (with the exception of residual water remaining due to surface tension) or does not drain to the outer edge or a stormwater inlet.

Decks and balconies that are required to be waterproof are not within tolerance if they are not provided with adequate drainage and provision for overflow.

17.4 Calcification and efflorescence associated with decks and balconies

Calcification or efflorescence caused by water coming from a deck or balcony are outside tolerance if it occurs on the adjacent walls below or beside or in the mortar joints of the deck or balcony tiling.

17.5 Durability of exposed timberwork

External timbers are not within tolerance if the timber splits, bows or cups within the first 3 months of completion when exposed to normal environmental conditions.

17.6 Eave and external ceiling linings

Plaster and light-weight sheeting in external applications on eaves, verandas or the like is not within tolerance if it becomes loose in the first 12 months from completion, or is not installed to the manufacturer's installation instructions.

17.7 Splitting of timber decking

Splits in timber decking that extend to the end or side edge of the timber are not within tolerance if they result from the fixing method.

18. Siteworks (including Landscaping)

18.1 Concrete pavement

Cracking in concrete pavement (including verandahs, carports, patios, driveways, etc.) is outside tolerance where the cracking or subsidence exceeds 1.5 mm within the first 12 months from completion of the work. AS3727 Guide to residential pavements may be used to assist in the determination of tolerances.

Any assessment against a tolerance should consider the underlying cause of the cracking, such as moisture changes from watering, drainage or trees, damage from heavy vehicle use, or the design and construct process.

18.2 Finish to external concrete paving

Concrete paving finish is not within tolerance if it is not consistent in colour, texture and general appearance when viewed from a normal viewing position.

18.3 Surface water drainage

Surface water drainage is not within tolerance if water is not directed away from the building, or water ponds near or against the building.

18.4 Water tanks

Rainwater tanks are not within tolerance if leaking is present, or the rainwater tank is not placed on firm base material as specified by the manufacturer at completion. Movement that can be identified from a normal viewing position, or any overflow washout of the base is not within tolerance.

19. Electrical

Electrical work is not within tolerance if a product or any fixture or fitting appears out of level or inconsistent with similar installations when viewed from a normal viewing position.

20. Pools and Spas

20.1 Concrete pools

Concrete pools are not within tolerance if not constructed to AS 2783 Use of reinforced concrete for small swimming pools.

20.2 Premoulded fibre-reinforced plastic pools and spas

Premoulded pools and spas are not within tolerance if not installed to AS 1839 Swimming pools - Premoulded fibre-reinforced plastics - Installation, or the manufacturer's installation specifications.

20.3 Dimension variations in pools and spas

Pools and spas are not within tolerance if deviation from the agreed or specified dimension L, exceeds L/100 or 5 mm, whichever is the greater.

20.4 Finished height of pools and spas

Pools and spas are not within tolerance if the final height departs from the agreed or specified datum height by more than ±40 mm.

21. General

21.1 Appliances and fittings

Appliances and fittings are not within tolerance if they are cracked, chipped, or scratched when viewed from a normal viewing position at completion or are loose or not fully operational within 3-months of completion.

21.2 Lyctus borers

Timber is not within tolerance if it is used during construction with evidence of lyctus borer attack.

21.3 Termite damage

Damage caused by termites is outside tolerance if the building is located in an area designated as a termite risk area by the council, and the termite management system was not installed in accordance with AS 3660.1 Termite management - New building work.

21.4 Cleaning

Building works including windows, floors, sanitary fixtures and joinery are outside tolerance if not clean and ready for use at the time of completion.

Building debris is outside tolerance if it remains onsite at the time of completion.

21.5 Building maintenance

Building maintenance is an ongoing requirement for all buildings to ensure the building continues to perform as intended post completion. Any assessment against tolerances needs to consider the impact reasonable maintenance has, and whether the matter relates to the builder's workmanship or general building use.

Want to know more?

If you have any questions about this information, please contact the Building and Plumbing Commission.

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