

# SUBSIDENCE – WHAT TO DO IF YOU NOTICE CRACKS IN YOUR WALLS

When the ground supporting a building moves, cracks may occur. This is sometimes known as subsidence.

It is caused by the ground compressing under load, or by clay soils swelling and shrinking with changes in its moisture content.

## What amount of movement is acceptable?

It may be possible to design a footing system to accommodate all building movement without causing cracking, but it is extremely costly to do so.

So the Building code of Australia (BCA) has adopted a practical approach where the footing and slab system must be designed and constructed to perform within certain tolerance levels.

## What are the expectations for footings and slabs in the BCA?

### Walls

Hairline cracks that do not need repair and cracks that are noticeable but easily filled and are less than 5mm wide, are acceptable and consistent with expectations of the Standard. Similarly, doors and windows that stick slightly are not unusual. These issues are considered a maintenance responsibility of the owner.



Above: examples of cracking which would be deemed the maintenance responsibility of the building owner.

Cracks over 5mm wide that require whole or partial replacement of the wall, noticeably bulging walls, and windows and doors that stick and distort, do not meet the Standard.

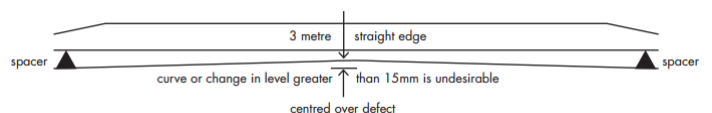
### Concrete floors

Hairline cracks less than 2mm wide meet the expectations of the Standard. Even distinct cracks where the slab has a noticeable level change might be acceptable. The way to test it is to measure the deviation from a 3m straight edge centred over the defect. If it's less than 15mm, the defect is within the acceptable limits of the Standard.



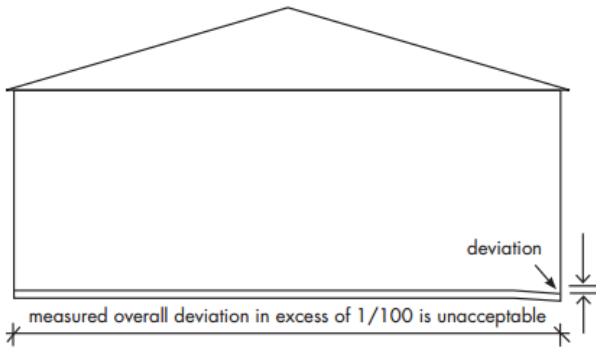
Above: examples of cracking which would be deemed the maintenance responsibility of the building owner.

Cracks wider than 2mm, or where the deviation from the straight edge is greater than 15mm are not within the Standard – repairing these defects is the responsibility of the builder or contractor responsible.



### Changes in slope

QBCC has determined that the local change of slope from horizontal or vertical in excess of 1/100 is unacceptable.



### What do I do after discovering a subsidence problem?

- Contact your builder. If your house was built within the last 6.5 years you may be covered under warranty
- If you are unhappy with the builder's response, you can lodge a claim with QBCC for your house to be assessed with a site inspection

### What will QBCC assess during a site inspection?

After a complaint about subsidence is lodged with QBCC, we will send an inspector to assess the site:

- The contractor responsible for the construction will be invited to attend the site inspection with the homeowner and a QBCC Inspector.
- The inspector looks to see if the contractor has complied with the BCA, such as any required movement joints in masonry, internal finishes, as well as movement joints in stormwater, sanitary and site drainage.
- The Inspector will also note any changes made after construction that may be contributing to the movement.
- Maintenance issues such as leaking taps, air-conditioning lines discharging next to footings, and blocked gutters and downpipes will also

be noted.

- The inspector will record the effects of the movement, including cracking, sticking windows and doors, and any visible cracked pipe work.
- A set of floor levels will be taken and recorded on a floor plan of the building for later assessment.

### What will QBCC assess after the site inspection?

The QBCC inspector will assess the information recorded on-site to determine:

- If any issues of defective work need to be rectified by the contractor.
- If any maintenance or other issues should be addressed by the building owner.
- If the building is performing within the expectations of the Standard.
- If a plumbing test is needed to check for leaking or broken pipe work.

If the movement is more than the Standard allows, and not caused by defective work or a lack of maintenance, QBCC will engage an engineer to investigate further and propose a solution.

### Need more information?

Call 139 333, visit [www.qbcc.qld.gov.au](http://www.qbcc.qld.gov.au), or go to your local QBCC office.