

# Repairing your concrete floor

## Internal slab cut out and replacement

### The team

- Southern Response**  
 The government-owned company responsible for settling claims by AMI policyholders for Canterbury earthquake damage which occurred before 5 April 2012 (the date AMI was sold to IAG)
- Arrow International**  
 The project management company responsible for the building programme for Southern Response customers. Arrow will engage and manage the engineer, designer and contractor for your repair
- The Engineer**  
 Responsible for determining the structural repair strategy
- The Designer**  
 Documents the repair for compliance and quality purposes
- The Contractor**  
 The prequalified contractor who will be conducting your repair

### Repairing your concrete floor

House foundations are the base on which your house is built and are one of the factors in a strong, safe home.

All of the different parts of your house, from the framing to the cladding to the foundations, played a part in how well your house performed in the earthquakes.

The Ministry of Business Innovation and Employment (MBIE) has determined what technical category (TC) of land your property is and we know a lot about the different ways TC1, TC2 and TC3 land are likely to behave in another earthquake.

The repair and re-levelling methods used for foundations are based on the nature and extent of the damaged caused by the earthquakes, as well as the type of foundation your house has. The decisions on what methods to use are based on an individual assessment of your house by an independent engineer and a designer, facilitated by Arrow International.

MBIE have provided guidelines for the repair methods and materials for cracks in your concrete floor, caused by the Canterbury earthquakes. Repairs to your concrete floor foundation will be in accordance with any other structural repairs that are being carried out.

Cracks in your concrete floor slab are measured by using a steel rule. The size of the crack will indicate which repair method and materials should be used.

For cracks larger than 20mm, the repair method that MBIE suggest to use is one where the concrete around the crack is cut out of the concrete slab and removed. For slabs with existing reinforcing, steel rods are placed in the gap. New concrete is poured to fill the gap reinstating the floor.

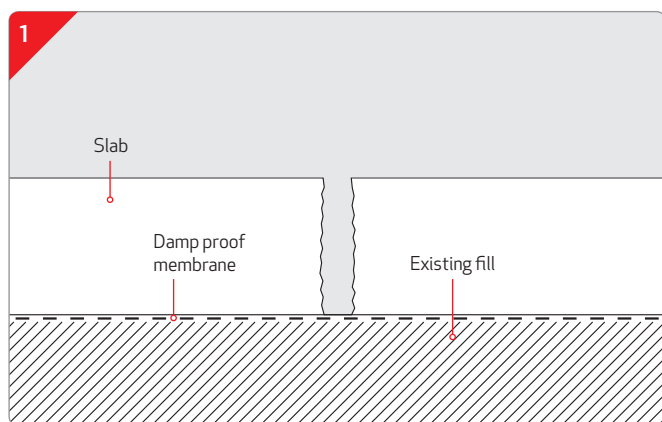
Underneath the concrete is a Damp-Proof Membrane (DPM) which acts as a barrier to stop moisture from passing up from the ground. The contractor will ensure that this is intact before the new concrete is poured otherwise any part that is damaged will be replaced.

Any concrete slab repairs undertaken must comply with the New Zealand Building Code and the contractors carrying out this work must be suitably qualified.

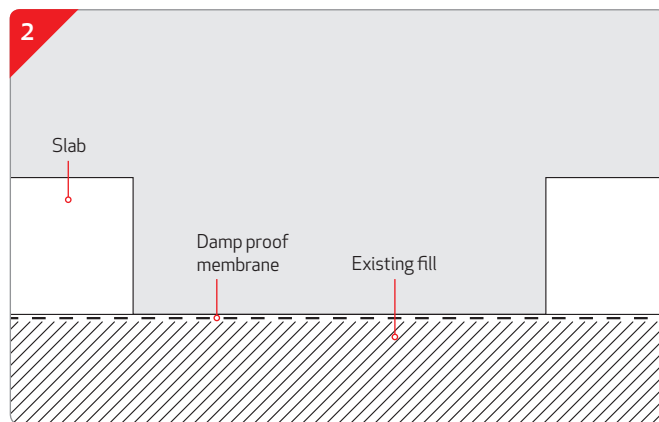


# INTERNAL SLAB CUT OUT AND REPLACEMENT

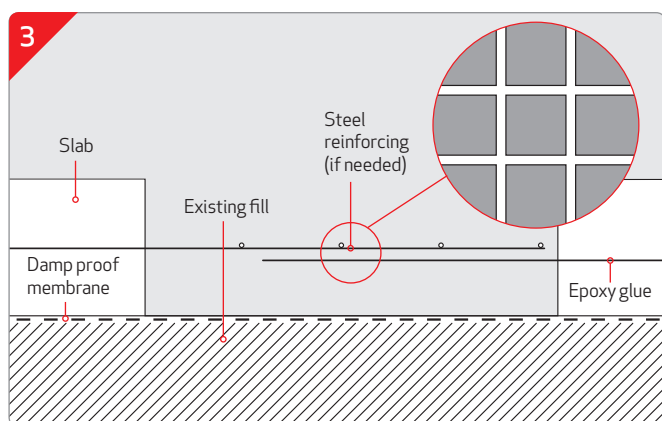
THE METHOD



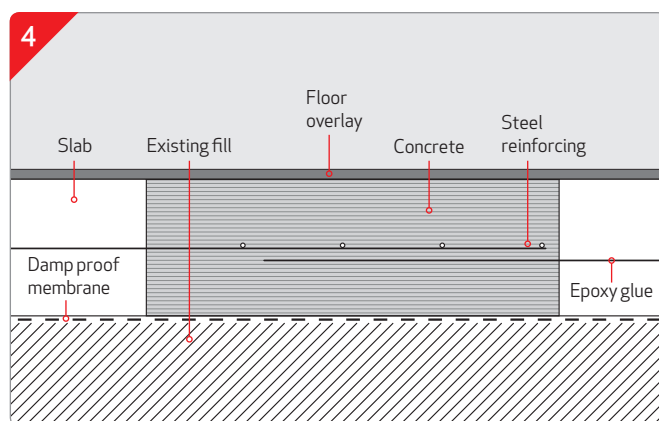
1. The cause and the extent of the crack (length, width and depth) is established.



2. A section of the concrete floor is cut out using a saw down the length of the crack (no wider than 1m). The DPM is replaced (if necessary).



3. Steel rods are then used to reinforce the concrete slab; the rods are connected to the concrete with epoxy.



4. New concrete is poured where the slab has been cut out and floor overlay, such as carpets are re-laid.

## Find out more

For any technical information you can refer to the MBIE guide this can be found online at:

[www.dbh.govt.nz/guidance-on-repairs-after-earthquake](http://www.dbh.govt.nz/guidance-on-repairs-after-earthquake)

For any other information visit: [www.southernresponse.co.nz](http://www.southernresponse.co.nz)

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