

# Packing House Piles

## Repairing (re-levelling) your timber floor foundation

### 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 International 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 foundations

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.

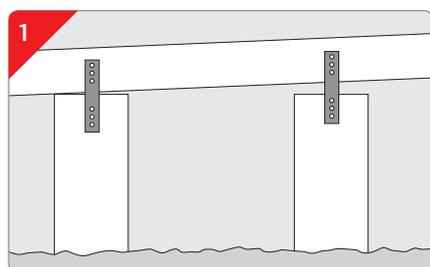
The Ministry of Business Innovation and Employment (MBIE) has determined what technical category (TC) of land your property is and we know a lot about the different ways TC1, TC2 and TC3 land are likely to behave in another earthquake. The repair and re-levelling methods used for foundations are based on the nature and extent of the damage 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.

Timber floors are typically supported on piles and a concrete perimeter foundation. As a result of the earthquakes, often these foundations settle into the ground and require re-levelling. These foundations can be mechanically re-levelled (which is referred to as a 'jack and pack').

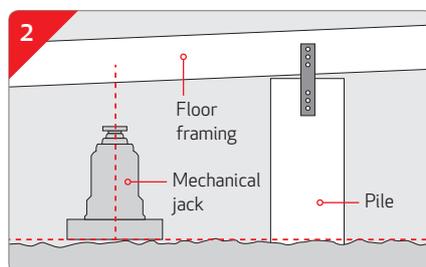


# PACKING HOUSE PILES

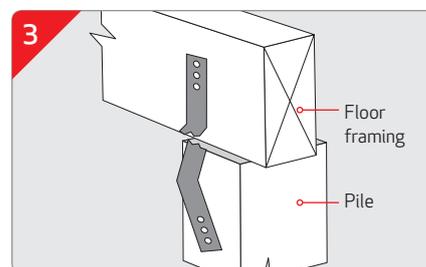
## THE METHOD



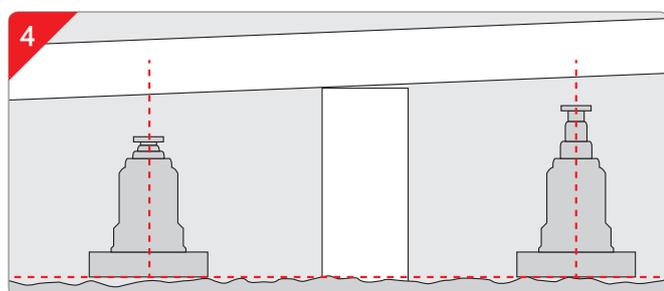
1. If your timber floor foundation looks like this post earthquake then your floor frame may need to be re-levelled. The dwelling will need to be mechanically lifted to bring the floor back to level.



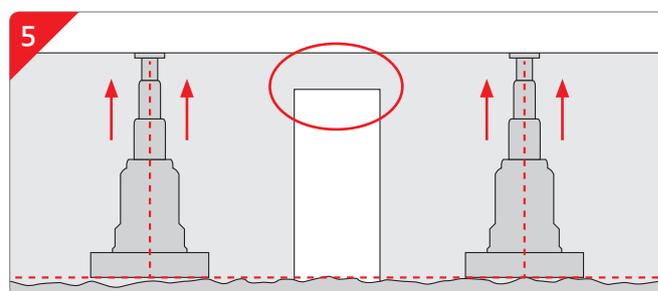
2. Jacks are placed at specified locations under the floor.



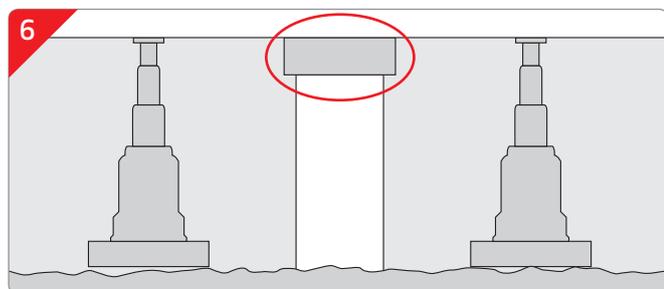
3. The fixings between the piles and the floor framing are disconnected.



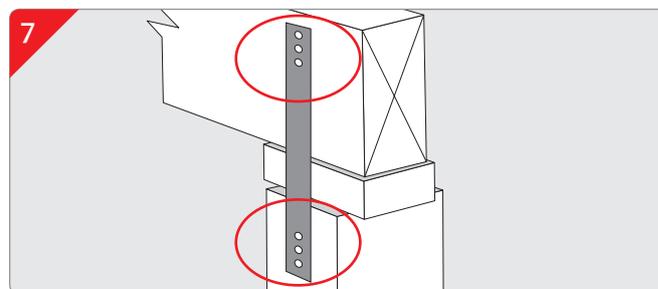
4. The jacks are raised bit by bit, until the floor is level.



5. Once the floor is level, it will leave a gap between the pile and the floor framing, this is highlighted by the red circle.



6. Treated timber is cut to fit the gap and a layer of damp proof course (DPC) is placed underneath the packing. DPC is typically placed under the packing and is required to overhang the pile by at least 6mm.



7. Galvanised or stainless steel fixings reconnect the pile to the floor framing. Mechanical jacks are removed and the floor is level.

### Industry information

Methods for assessing and repairing and re-levelling foundations have been published by the MBIE. For further information on the MBIE guide you can visit their website:

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

### Find out more

MBIE has also produced videos for builders on packing piles, which you may also want to watch to understand more:

[www.dbh.govt.nz/packing-house-piles-video](http://www.dbh.govt.nz/packing-house-piles-video)

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

**Disclaimer:** The information and related material is intended as a guide only, and does not constitute legal advice, nor should it be used for actual construction. The content does not represent complete information, and is intended as supplementary information only.

Although we have made every effort to ensure that the information and any related material was correct at the time of printing, due to the nature of the content it may be necessary to change, update or correct at any time and without notice.