

Repair and replacement of plasterboard due to flooding

QUICK GUIDE





**MINISTRY OF BUSINESS,
INNOVATION & EMPLOYMENT**
HĪKINA WHAKATUTUKI

Ministry of Business, Innovation and Employment (MBIE) Hīkina Whakatutuki – Lifting to make successful

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ISBN ONLINE: 978-1-991092-89-2

NOVEMBER 2023

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Purpose

The purpose of this quick guide is to provide council staff, building practitioners and homeowners with information on repairing and replacing damaged plasterboard due to flooding.

This guidance is intended to assist homeowners and the occupiers of buildings who have been affected by severe weather events. If you have any questions or concerns you should consult your local council, an engineer or other building professional or tradesperson.

This quick guide should be read in conjunction with any guidance from your local building consent authority and/or insurance company.

Background

In early 2023, Aotearoa New Zealand experienced extreme challenges as severe weather greatly affected the residents in the North Island. Auckland experienced a significant amount of rainfall in January while other parts of the region have witnessed rainfalls exceeding 400% than the norm. In February, tropical cyclone Gabrielle caused widespread flooding and damage to properties and structures. Addressing these damages promptly prevents detrimental effects to the structural integrity and safety of the homes and buildings.





Repair and replacement of wall linings (plasterboard) damaged by flooding

When a flooding emergency happens and your walls have been damaged, it is likely that the internal wall linings such as plasterboard will need to be partially or in some cases completely replaced.

The following information is of interest to homeowners and building professionals assessing and repairing flood damaged housing. In addition, it will be valuable to other parties involved in this work, including insurers and councils.

For more detailed information about removing and replacing wall linings, see the following guidance documents:

- › **BRANZ bulletin on restoring a home after flood damage** – branz.co.nz
- › **GIB - Assessment and Remediation of Water Damage** – gib.co.nz

BEFORE YOU START

Before you remove large areas of plasterboard or undertake any repairs or replacement, it is recommended that you consult an engineer, designer or a builder who is a Licensed Building Practitioner (LBP) so that you understand the function of the wall linings in your home. These functions may include – bracing, fire protection, moisture protection and insulation.

This is especially important for houses built or substantially renovated from 1978 onwards, as the plasterboard may be helping to brace the building against wind and earthquake loadings.

If you are unsure, it is safer to treat all plasterboard wall linings as if they are bracing elements and take appropriate precautions.

IDENTIFYING POTENTIAL DAMAGE TO PLASTERBOARD LININGS

Damage to plasterboard linings may be due directly to exposure to water or other flood -borne contaminants which could see the lining become mouldy or discoloured. The damage may also extend to elements behind the linings – such as insulation, wiring, building paper, cavities, or connections.

Damage could also occur if there has been movement of the building due to foundation settlement caused by instability of the land under or around your house. This could lead to cracking at corners or other junctions. If there are signs of this happening, it is recommended to seek guidance from an engineer.

WHY YOU SHOULD REPAIR PLASTERBOARD LININGS

Plasterboard is one of the most common wall and ceiling linings for houses in Aotearoa New Zealand and often performs multiple functions. Exposure to water or significant movement can affect the safety of the home and the health of its occupants. If flood damaged plasterboard is not removed and replaced, it may lead to:

- › health issues due to growth of mould – this may not always be visible on the exposed surface of the lining
- › reduced stability of the building due to reduced bracing against wind and earthquake loads
- › reduced support for elements of the building if rot or mould occurs to the structural framing elements or connections
- › reduced performance against the spread of fire to adjacent properties.

REMOVING AND REPLACING PLASTERBOARD

If you are unable to identify types or purposes of wall linings, it is important to consider how you approach the work before removing large sections of plasterboard. Unless the house was built before about 1978 **and** has not had any significant extensions or alterations (such as internal walls removed), it is likely that some plasterboard linings are contributing to bracing of the building.

An LBP (eg an LBP builder, architectural designer, architect or structural engineer) can check the latest consented plans for the location of bracing elements and make sure these are reinstated. If bracing is not shown on the consented plans, you may need to involve a building professional such as an engineer or LBP builder or designer to conduct a bracing review.

Alternatively, you could treat all plasterboard wall linings as bracing elements and reinstate them as such (eg using a suitable product type, installing the board with fixings at closer centres and using a back blocking technique – refer to plaster manufacturers’ guidelines for details).

Other wall linings with specific functions (such as fire resistance or soundproofing) will also need to be reinstated with comparable products and installation details.

If significant sections of wall lining, ie greater than 50% of the individual wall length, need to be, or has already been removed due to flood damage or to allow framing to dry out, you will likely need some form of temporary bracing to be installed such as timber cross-braces.

Consult with your council or a building professional before reoccupying a house if significant sections of wall lining will or have been removed. Before starting any removal and repair work, consider the safety risks to yourself and others. Make sure you and anyone working on your behalf have the correct equipment and resources. Also consider shutting off electricity and gas to the house while the work is being carried out.

Risks may include but are not limited to:

- › dust, mould, debris, and other potential contaminants
- › slips trip and falls
- › services inside wall or ceiling spaces
- › loss of support to building elements
- › exposed services such as exposed wiring and the back of electrical outlets. Measures should be taken to protect access to these, especially from children, if you are reoccupying your home.

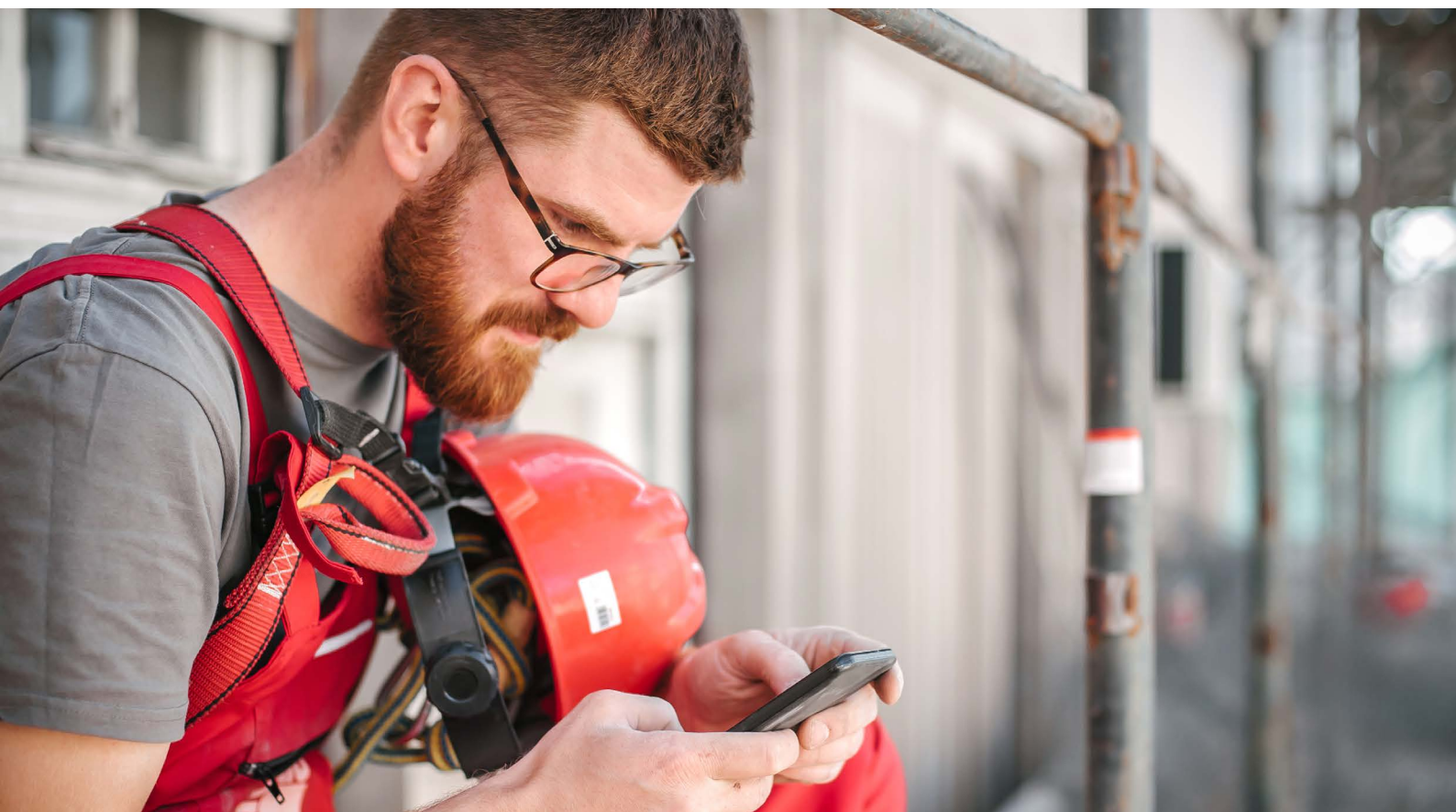
Before starting the repairs, it is also important that any cavity spaces, such as between cladding and building wrap where silt and other contaminants may have collected, have been cleared out, and that all timber framing is dry and in good condition before being enclosed.

The moisture content of timber framing must be below 20 per cent before you replace any plasterboard (some manufacturers may recommend 18 per cent or less). Your local council may need to verify this. This requirement is to reduce future risks of mould growth, timber decay and damage to fasteners and fixings (ie to ensure the future health and longevity of the building).

For more information refer to the **BRANZ bulletin on restoring a home after flood damage** and **GIB - Assessment and Remediation of Water Damage**.

Consider treating timber that has exposed to flood waters with an anti-fungal treatment before enclosing to reduce the risk of future mould or fungal growth.

Find out more about removal of silt deposited during flooding.



Different types and purposes of plasterboard

Plasterboard that lines the walls and ceilings in your home may be doing more than you may think. It helps provide structural support, resists mould growth in wet areas, reduces noise levels and helps prevent the spread of fire.

It can be difficult to identify the type or purpose of plasterboard without expert knowledge or information. The building consent plans will typically show where the different types of plasterboard are located. These plans, if available, can be obtained from your council.

To further help identify the type of plasterboard, you can take photos of the fixings and any information on the back of the board if you remove it. Its location in the house may also provide some clues. If you are unsure, consult a designer, engineer or a builder who is an LBP.

PLASTERBOARD THAT CONTRIBUTES TO BRACING OF A BUILDING

Timber framed walls are required to be braced so that the building can withstand the effects of wind and earthquakes.

In many houses, plasterboard contributes towards bracing the building and will have specific requirements in the way that it is manufactured, fixed and located. This is generally the case for houses built or significantly altered from 1978 onwards; that is, *since New Zealand Standard NZS 3604: Timber-framed buildings* has been in force. Note that older houses tend to have their wall bracing provided by flush or solid timber braces.

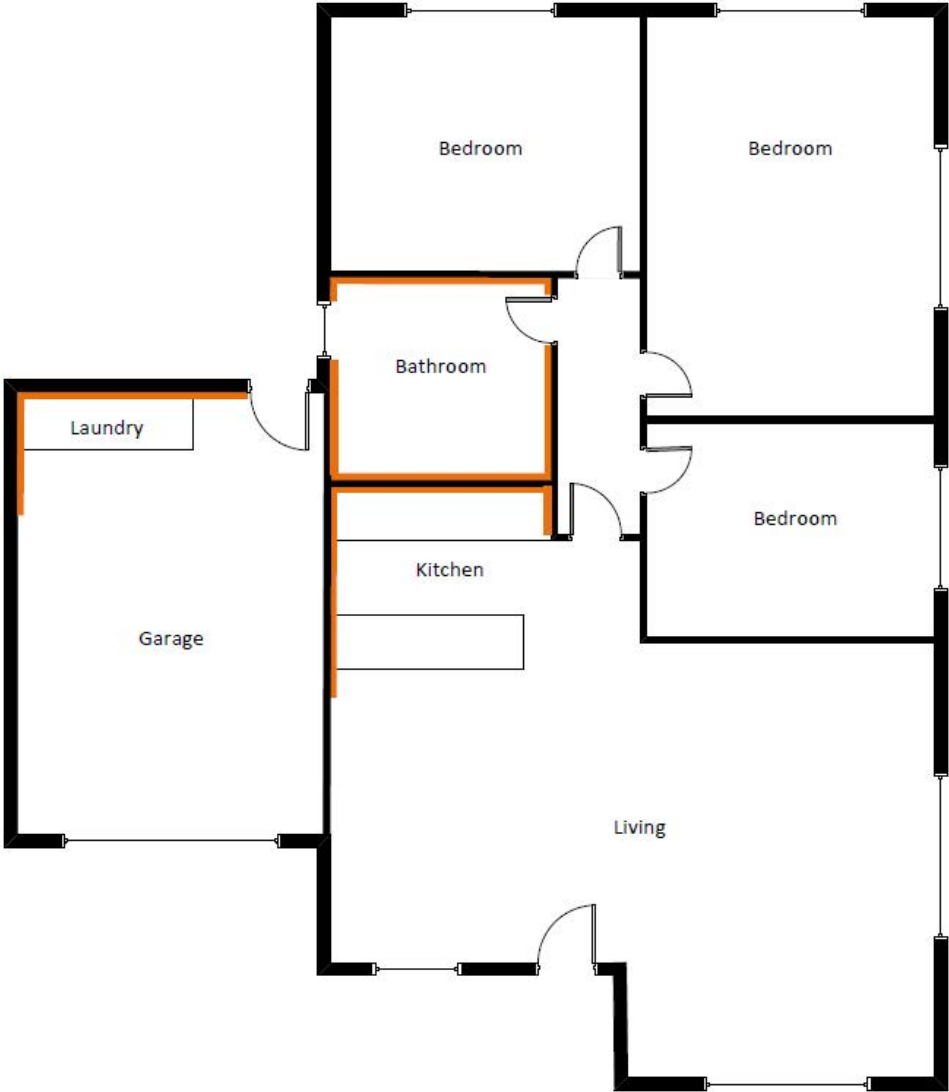
It may not be immediately obvious which walls are providing bracing for the building.

Remember, if in doubt it is safer to treat all plasterboard wall linings as if they are bracing elements.

PLASTERBOARD IN AREAS SPLASHED BY WATER

Walls that are likely to be splashed by water or subject to internal moisture, such as those in bathrooms or kitchens and laundries, are likely to have a specific type of plasterboard which is moisture resistant and helps to prevent the growth of mould. The moisture resistant plasterboard may be installed on walls and ceilings.

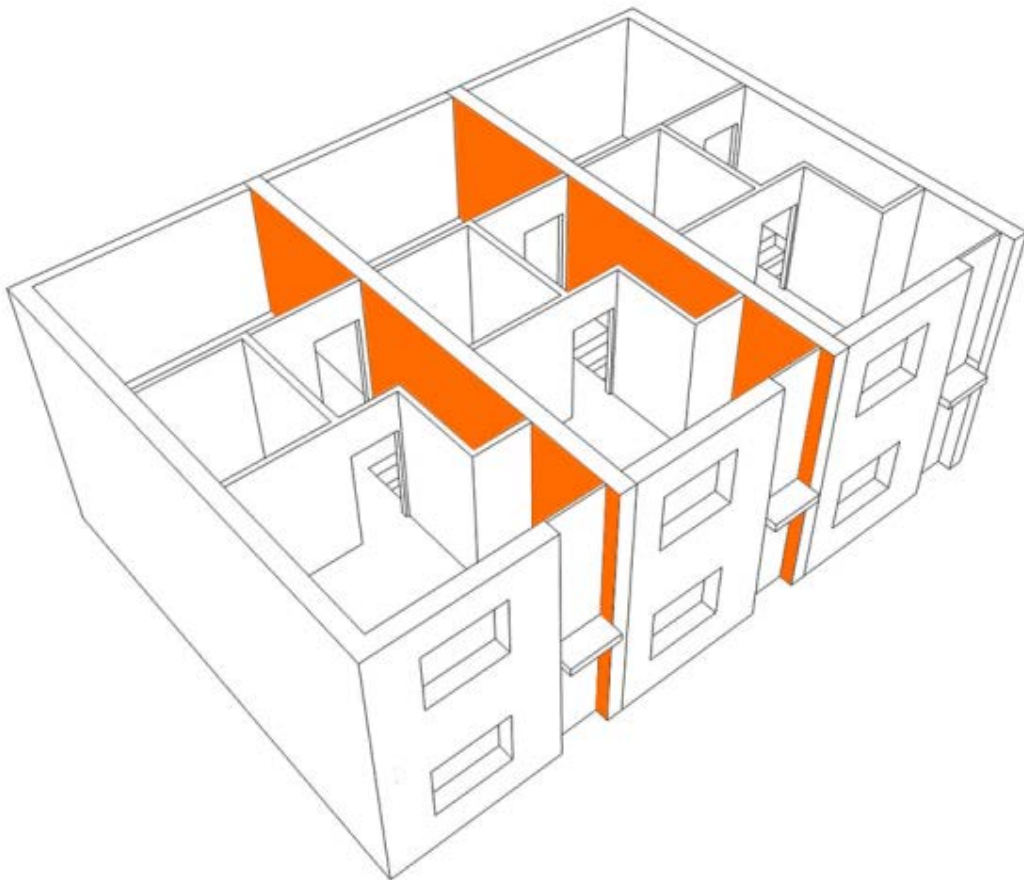
The walls highlighted in the kitchen and bathroom of this house layout are likely to have moisture resistant plasterboard.



PLASTERBOARD ON WALLS SEPARATING HOUSES (INTERTENANCY WALLS)

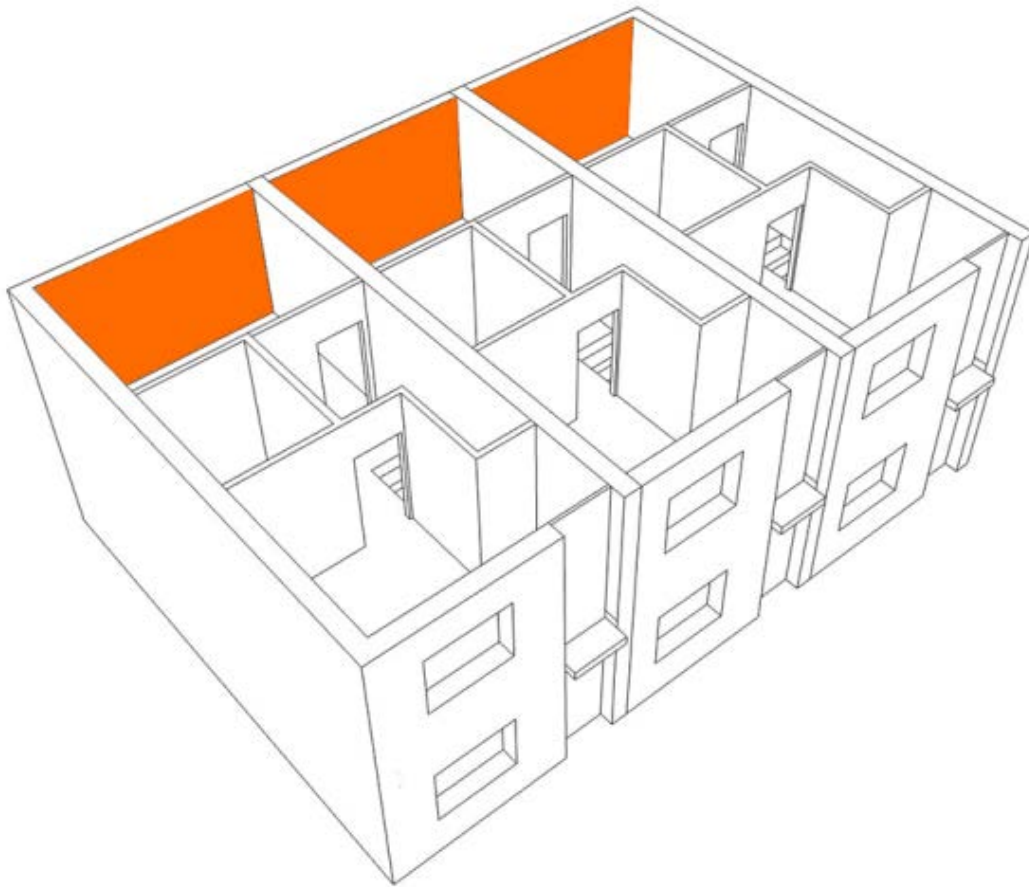
Townhouses or houses that are joined together with a shared wall (intertenancy wall) may have plasterboard that contributes to preventing the spread of fire from one house to another. Plasterboard on intertenancy walls also contributes to the soundproofing between the two homes.

The walls highlighted in these townhouses are intertenancy walls which have plasterboard contributing to the fire-resistant rating and soundproofing between homes.



PLASTERBOARD ON WALLS CLOSE TO BOUNDARIES

If the building is close to a property boundary, the external walls facing that boundary could also have a type of plasterboard or system installed that is contributing to the fire-resistant rating of that external wall. Repair and reinstatement of these walls need careful consideration and will require a building consent.



Regulations relating to the repair and replacement of plasterboard

Depending on the degree of flood damage to your home, it may be possible that some work may be exempt from the need to obtain building consent. This exemption allows you to replace or alter any or all the linings and finishes of walls, ceilings, or floors of an existing dwelling (whether single or multi-unit). This work should be done in consultation with a building professional and there may be other factors to consider such as concealed silt within the exterior cladding cavity.

Your local council will be able to advise if a building consent is required or if there is the possibility of a discretionary exemption for a flood damaged house, and what is needed for such an exemption to apply. Further guidance on exempt building work can be found in the link below.

When you decide to carry out work under an exemption, it is advisable to have a building professional outline the scope of the work. In addition, it is recommended that the information on the completed work is submitted to the council to be included on the property file.

If you are in doubt about the risk associated with the repair work, we recommend preparing a scope of work with a building professional and consulting with your local council to check if a building consent is required.

However, regardless of whether a building consent is required, all work must be carried out in accordance with the requirements of the Building Code and should not result in a reduction of the building's performance compared to its condition before the flooding.

These requirements also apply to related areas of work such as installing insulation, work to structural framing and work to services located in the wall or ceiling space.

Find out more about the legal requirements

Find out more about building work that does not require a building consent

USING A DIFFERENT PLASTERBOARD BRAND

You may not be able to source the same brand of plasterboard as the original, so you may need to replace the plasterboard with a different brand.

Find out more about substituting plasterboard.



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New Zealand Government

BRM 10438