

Flood Resilient Design Framework

February 2023

Resilient design activities for the
resilient homes program

nsw.gov.au/resilienthomesprogram



Overview

The Resilient Design Framework (this Framework) helps homeowners under the Resilient Homes Program understand how their homes may be improved to achieve greater flood resilience under the Home Retrofit and/or the Home Raising streams.

This Framework provides examples of flood resilient design approaches to inform homeowners and contractors of potentially eligible activities under the Resilient Homes Program.

This Framework shows examples of different resilient design approaches, for different house types, and also provides helpful design checklists.

A scope of works will be developed for each eligible home following Home Assessment under the Resilient Homes Program.

Eligible homeowners will be assigned a Case Manager who will provide guidance through the assessment and raising/retrofitting works processes.

All resilient design works will be undertaken in accordance with relevant local planning requirements and building codes and standards.



Examples of resilient retrofit interior and exterior work.

Resilient Homes Fund



Resilient Homes Program

The Resilient Homes Fund, delivered by the NRRC, has been designed to support recovery and to build resilience in the Ballina, Byron, Clarence Valley, Kyogle, Lismore, Richmond Valley and Tweed Local Government Areas (LGAs).

The Resilient Homes Fund will provide \$800 million in flood recovery support to eligible homeowners to buy-back, raise or retrofit impacted residences delivered through two complementary programs:

1. the \$700 million Resilient Homes Program co-funded by the Australian and NSW governments, and
2. the \$100 million Resilient Land Program funded by the NSW Government.

The Resilient Homes Program is centred around providing financial assistance to homeowners to improve the flood-resilience of residential properties in the Northern Rivers.

This Framework provides examples of flood resilient design works that may be suggested to be undertaken for homes eligible under the Resilient Homes Program and provided to homeowners as part of an offer for Home Raising or Home Retrofit streams. For further details on the Resilient Homes Program and to refer to the Resilient Homes Program Guidelines, please visit nsw.gov.au/regional-nsw/northern-rivers-reconstruction-corporation.

Eligibility will be considered on a case-by-case basis, which will be specific to the level of flood damage, future flood risk, property type of the home and individual circumstances of the homeowner.



Home Retrofit Stream

Subject to eligibility, up to \$50,000 is available towards the cost of retrofit and/or repair works to incorporate flood resilient design and materials into liveable areas and to move services essential to liveability. Funding is available for both insured and uninsured homeowners. Funding does not cover gardens, driveways, other ancillary structures or any common property areas.



Home Raising Stream

Subject to eligibility, up to \$100,000 is available towards the cost of elevating liveable floor levels and associated retrofitting or relocating a home within or outside of the property boundary. Homes will be raised or moved to meet or exceed the Flood Hazard Levels. Funding is available for both insured and uninsured homeowners. Funding does not cover gardens, other ancillary structures or any common property areas.



Home Buy-Back Stream

Refer to the Resilient Homes Program Guidelines for details on the Home Buy-back stream available at nsw.gov.au/regional-nsw/northern-rivers-reconstruction-corporation.

What is Flood Resilient Design?

Flood resilient design is the use of materials, construction systems and house design types that can withstand substantial and multiple inundations by actively mitigating the effects of and decreasing the consequences of flooding impacts.

Flood resilient design enables homeowners to safely remove and store belongings prior to a flood event and easily clean, repair and quickly resume normal life after the flood waters recede, with minimal long-term disruption to family and finances.

The Resilient Homes Program seeks to reduce risk to life and to make homes more disaster resilient through a series of measures, including:

1. elimination – reducing homes in severe-risk flooding areas,
2. minimisation – raising homes up to minimise the frequency of potential flood related damage, and
3. fortification – using design techniques, and materials selection in construction and repair to assist homes to better withstand flooding. This aims to reduce the extent of flood related damage and clean-up required after a flood.

The Home Buy-back stream applies the measures of elimination to reduce homes in severe-risk flooding areas.

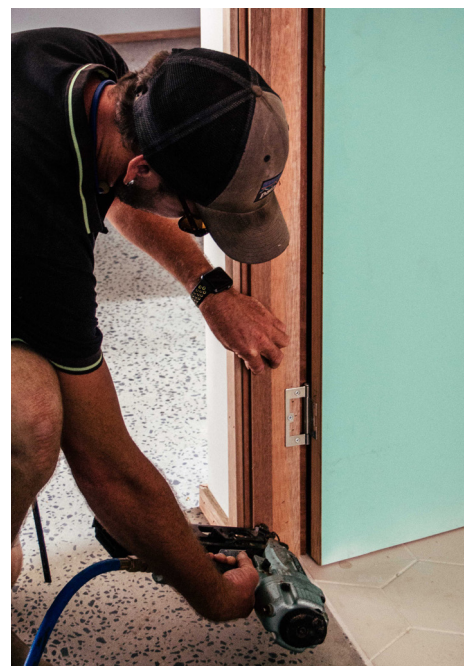
The Home Raising stream minimises the frequency of potential flood water home inundation.

The Home Retrofit stream helps to fortify homes to minimise the damage to services such as air conditioning, hot water units and electrical meter boards as well as using materials that are more-water resistant to make post-flood clean-up less intensive.

The benefits of a flood resilient home

A flood resilient home may help:

- Minimise the chance of flood damage to your property.
- Minimise the costs and inconveniences of getting your life back to normal after flood events.
- Save you in the long-term from having to pay for repetitive repairs to your home following flood events.
- Prepare your home for changing flood conditions in the future, particularly from climate changes.





Resilient Homes Program



The following sections illustrate a range of flood-resilient activities covered by the Home Raising and/or Home Retrofit streams.

The application of Home Retrofit eligible activities to improve flood resilience are illustrated for four common house types. Though not a comprehensive list of house types, the flood resilient activities shown are common for many types of buildings and can help reduce the impact of flooding on homes.

The home and eligible activity illustrations included were provided by the Queensland Government from their Design Guidance for Flood Resilient Homes (August 2022) and are applicable to the NRRC Resilient Homes Program.

Home Assessments

The Resilient Homes Program provides support to homeowners who experienced damage from the Northern Rivers February and March 2022 Severe Weather Flooding event. Assessment for funding under Home Raising and/or Home Retrofit streams includes a Home Assessment where the NRRC expert assessors will review and confirm the severity of flood impact, the risk to safety and the risk of future flooding.

The Home Assessment will provide a list of all possible resilient design approaches and recommend an eligible scope of works for the resilient design works of each eligible home based on what is most suited to the home type. The structural condition of the home, property levels, building code compliance and planning scheme requirements will be considered in developing the proposed scope of works.

A Resilient Homes Program Case Manager will collect information on the homeowner including any individual circumstances that may be taken into consideration in recommending which stream a homeowner should qualify for.

For further details on the Resilient Homes Program and to refer to the Resilient Homes Program Guidelines, please visit nsw.gov.au/regional-nsw/northern-rivers-reconstruction-corporation.

Home Retrofit Stream



Detailed information on homeowner eligibility for the Home Retrofit stream can be found in the Resilient Homes Program Guidelines at nsw.gov.au/resilienthomesprogram.

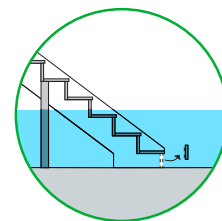
Eligible Activities

The Home Retrofit program helps homeowners with a wide range of flood resilient retrofitting activities to suit a customer’s property. Throughout this guideline, activities that may be covered by the fund are circled green, while others are provided for educational purposes only.

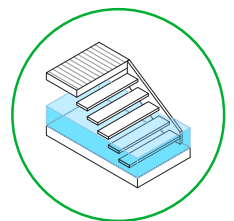
Under the Home Retrofit program, funding is available for covered activities (as shown on this page) in rooms or areas of the home assessed as being affected by flooding. The illustrations of house types on the following pages show all the activities covered by the Resilient Homes Fund, along with other activities that may be suitable for your home but are not covered by the funding program covered by the program.



Stairs

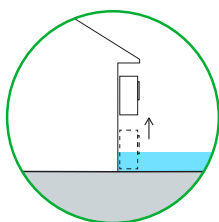


Make the bottom riser of stairs removable for easy cleaning and drying out

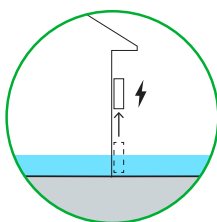


Replace closed riser stairs with open riser stairs made from flood resilient materials

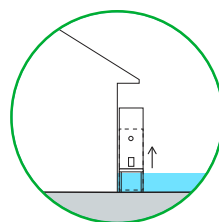
Services



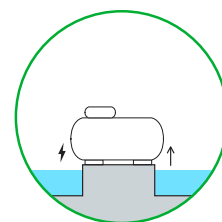
Raise air conditioning condenser units



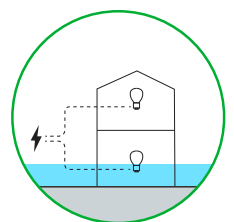
Raise the electrical switchboard



Raise storage hot water unit or replace with a raised instantaneous gas hot water unit

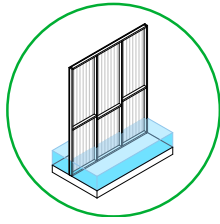


Raise the water tank pump and electrical systems

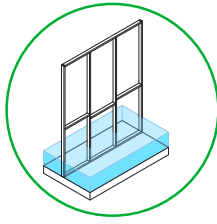


Install separate circuits (with breakers) on the lower and upper levels

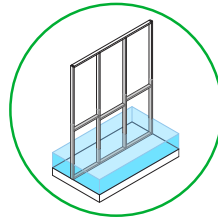
Walls



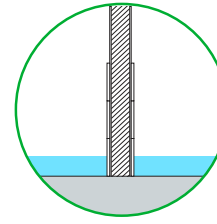
Where possible, replace cavity walls with non-cavity walls to minimise the chance of mould



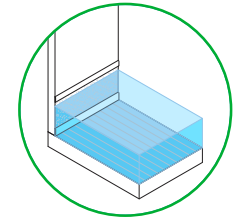
Use flood resilient wall framing to minimise the chance of mould or damage



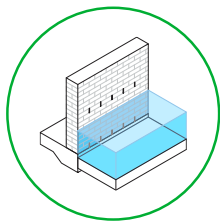
Paint existing pine frame cavity walls to assist in future cleaning and prevent mould growth



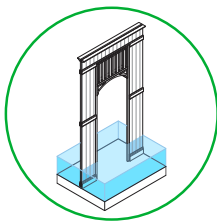
Replace loose-fill insulation with rigid cell insulation in cavity walls



Replace wall linings with flood resilient wall linings

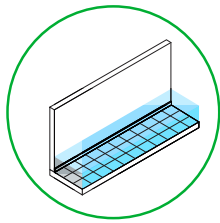


Add additional weep holes to help dry out the wall cavity or sub-floor

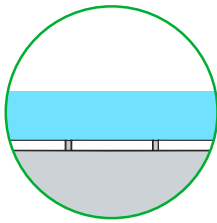


Replace non-resilient mouldings and skirtings with water impervious mouldings

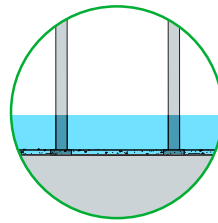
Floors



Replace non-resilient flooring and skirting with flood resilient flooring and skirting

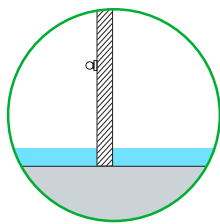


Use flood resilient grout and apply flood resilient sealant when tiling or re-tiling wet areas

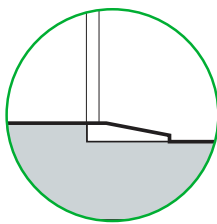


Surface control on sub-floor ground to increase resilience

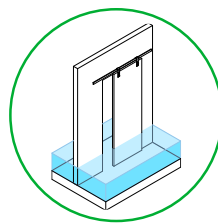
Openings



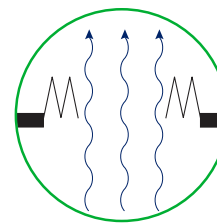
Replace hollow core doors with solid core doors



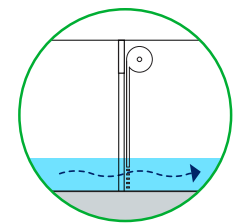
Install flush door sills to ensure easy cleaning after a flood event



Replace cavity sliding doors with a swing or face-of-wall sliding doors

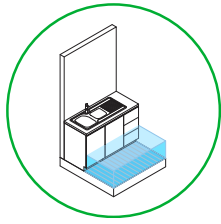


Door changes to maximise the existing opening

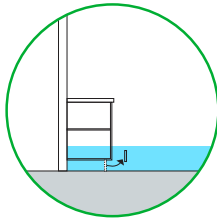


Retrofit garage doors with permeable doors to allow water to flow through

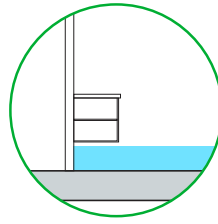
Cabinetry, Bathrooms and Laundry



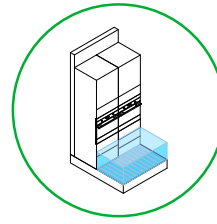
Replace non-resilient cabinetry with flood resilient cabinetry



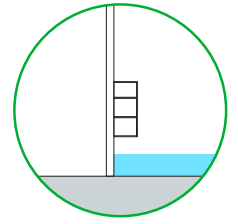
Allow cabinetry kickboards to be removable



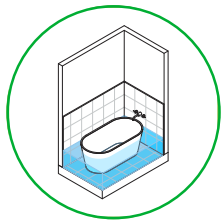
Install raised cabinetry



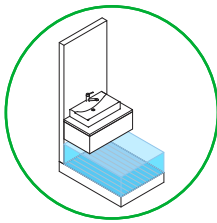
Raise kitchen appliances



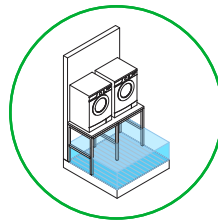
Raise storage shelves



Install a removable panel or replace the built-in bathtub with a freestanding bathtub or a shower

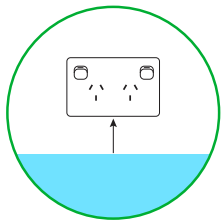


Install wall hung cabinetry, or install wall hung vanity bench with no cabinetry

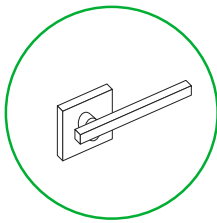


Raise the washing machine and dryer

Fixtures



Raise data and electrical points



Install corrosion-resistant door and window hardware

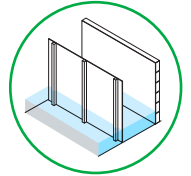
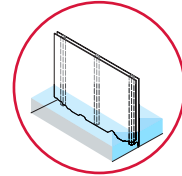
Flood Resilient Design Checklist

In the Home (may be covered by Resilient Homes Fund)



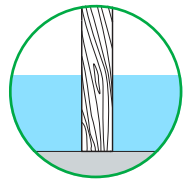
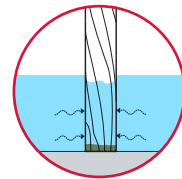
Use single-skin walls rather than cavity walls

Walls with cavities such as brick veneer and typical plasterboard stud walls are prone to trapping water within the wall linings, damaging the framing and forming mould. When replacing or building new walls, the use of single-skin walls is highly recommended.



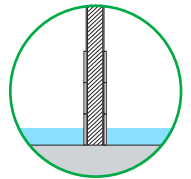
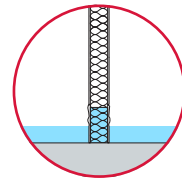
Use water-resistant framing

When building framed walls, it is not recommended to use softwoods such as pine as it is prone to rot and mould after inundation and can decay quickly. It is recommended to build with higher performance water-resistant wall framing materials such as hardwoods or steel. If pine framing is impractical to replace, paint existing frames to assist in future cleaning and prevent mould growth.



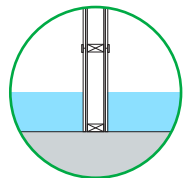
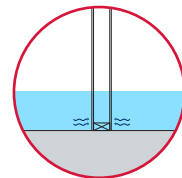
Replace loose-fill insulation with rigid insulation

Loose-fill insulation such as batt insulation is commonly found in wall cavities, however they absorb a great deal of moisture and must be replaced after a flood to avoid mould. Replace loose-fill insulation with rigid or closed-cell insulation such as extruded polystyrene insulation which are water-resistant.



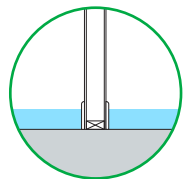
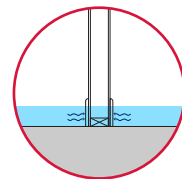
Replace non flood resilient wall linings with flood resilient wall linings

Replace non flood resilient wall linings such as plasterboard with flood resilient wall linings such as fibre cement in order to minimise the chance of flood damage. When installing new flood resilient wall linings, apply waterproofing membrane onto a flood resilient substrate such as fibre cement sheet underneath internal wall linings to further minimise the chance of flood damage.



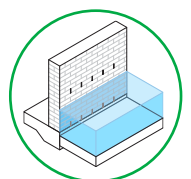
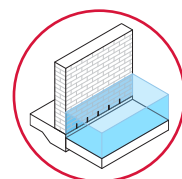
Replace non flood resilient mouldings with flood resilient mouldings

Replace non flood resilient mouldings such as pine with flood resilient mouldings such as hardwood timber to minimise the chance of flood damage. Pine and other softwood moulding is prone to buckling after becoming wet. Replace these with flood resilient mouldings, such as composite or hardwood to ensure resilience.



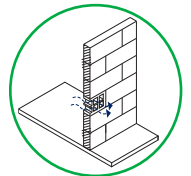
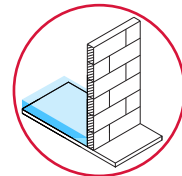
Add additional weep holes to double brick and brick veneer walls

Installing additional weep holes will help to quickly dry out the cavity of a double brick or brick veneer wall. It is important to clean out any existing weep holes to prevent water getting trapped in the wall cavity.



Add air vents to enclosed sub-floor spaces and garages

Installing air vents to enclosed sub-floor areas and garages will help to quickly dry out the area after a flood event.



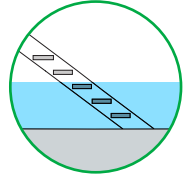
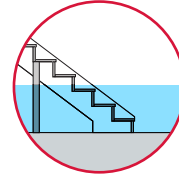
Flood Resilient Design Checklist

In the Home (may be covered by Resilient Homes Fund)



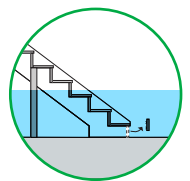
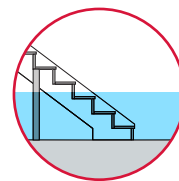
Remove cavities or voids under stairs

To enable an easy post-flood clean-out, stairs should be designed to limit inaccessible areas such as cavities or voids below them. Stairs with open risers (not closed in) made with flood resilient materials will quickly dry out after a flood. Alternatively, stairs up to the possible flood line can be made from solid concrete with no cavity underneath.



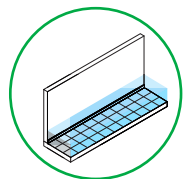
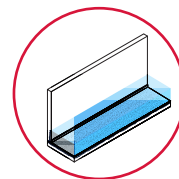
Make the bottom riser of the stairs removable

If an existing cavity stair is at risk of flooding and you cannot replace it with open riser, water-resistant stairs, adjust the bottom riser so that it is removable. This will allow for easy cleaning and drying out after a flood event.



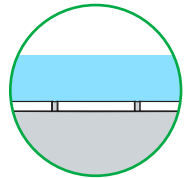
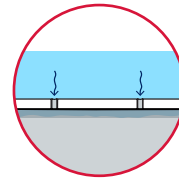
Replace non flood resilient flooring with flood resilient flooring

Replace non flood resilient flooring with flood resilient flooring to minimise the chance of damage and allow for easy cleaning and drying out after a flood event. When replacing flooring, ensure non-resilient substrates (subsurface materials) are replaced with flood resilient substrates. This will minimise warping, rot and damage to the flooring and below the floor.



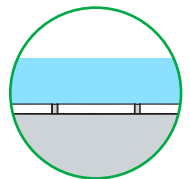
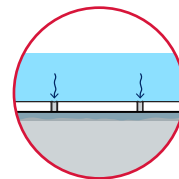
Apply a grout sealant to an existing tiled floor with non flood resilient grout

Adding a grout sealant will help to increase the water resistance of the grout, which will minimise the chance of mould and flood water damage to the tiles after a flood event.



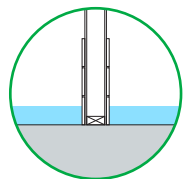
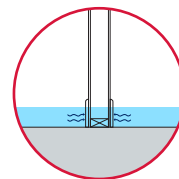
Use flood resilient grout when tiling or re-tiling wet areas

When tiling or re-tiling wet areas, ensure flood resilient grout is used. Otherwise referred to as 'semi-epoxy' this grout is less porous and ensures that the wall lining beneath tiles is protected and minimises the chance of mould.



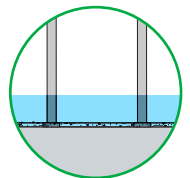
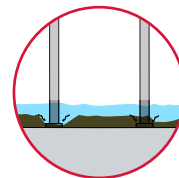
Replace non flood resilient skirtings with flood resilient skirtings

Replace non flood resilient skirtings such as pine with flood resilient skirtings such as hardwood timber or tiles to minimise the chance of flood damage. Non flood resilient skirtings such as pine and other softwoods are prone damage such as warping and rot after becoming wet. Flood resilient skirtings also allow for easy wash out after a flood event.



Add ground surface control to the undercroft of the house

For houses suspended on posts, in some cases, the ground under a house may be causing dirt and mud to interfere with the structure of the house. Ground surface control (e.g. a concrete blinding layer) can help seal the underlying material, protecting the posts and making it easier to clean.



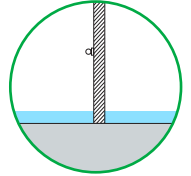
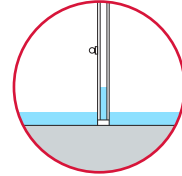
Flood Resilient Design Checklist

In the Home (may be covered by Resilient Homes Fund)



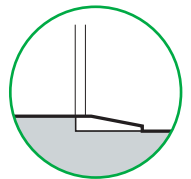
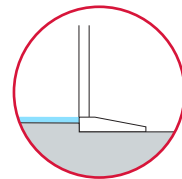
Use solid core doors instead of hollow core doors

Replace hollow core doors with solid core doors to minimise the chance of delamination, warping and rot. As an alternative, use solid timber, aluminium or glass doors.



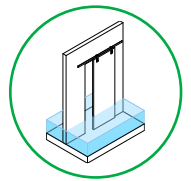
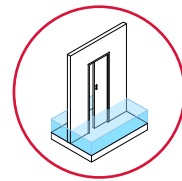
Install flush sills in doorways

Small steps and sills are often the cause of a small layer of water remaining inside of a house, complicating the clean up process after a flood event. Limit the sills which obstruct the drainage and discharge of flood waters from the interior and install flush sills recessed into a concrete floor.



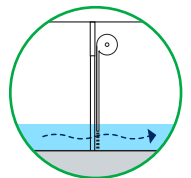
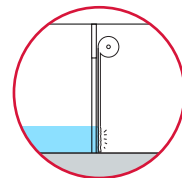
Replace cavity sliding doors with swing or face of wall sliding doors

Replace cavity sliding doors with swing or face of wall sliding doors to minimise the chance of flood water ingress into your cavity wall. Ensure when you replace the door that you also seal off the existing cavity.



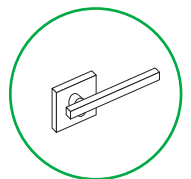
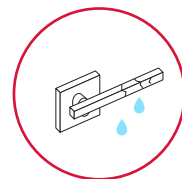
Install a permeable garage door if garage is attached to house

If your garage is attached to your house, permeable garage doors can help in maintaining existing flow paths to reduce adverse impacts to your home and neighbouring properties. Make garage doors permeable so that they do not block the natural flow of water. This should be used in conjunction with other wet-proofing strategies.



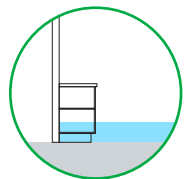
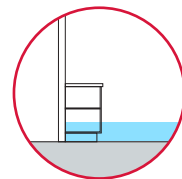
Install corrosion resistant door and window hardware

Install corrosion resistant door and window hardware so these do not need to be repaired or replaced following a flood event.



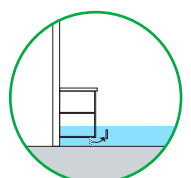
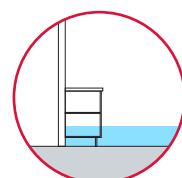
Install flood resilient cabinetry

Cabinetry is often the most expensive element in a house to replace after a flood event. The chance of flood damage can be minimised by using water-resistant materials for all cabinetry including the bench-top, doors, outer panels and the carcass (internal cabinetry frame).



Allow the kickboard to be removable

Adjust the kickboard on the cabinetry units so that they are removable. This will allow for easy cleaning and drying out after a flood event.



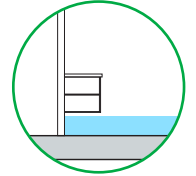
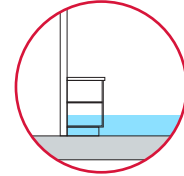
Flood Resilient Design Checklist

In the Home (may be covered by Resilient Homes Fund)



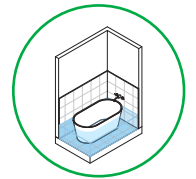
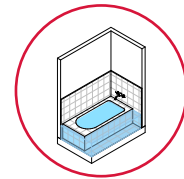
Install raised cabinetry

Where possible, install cabinetry so that it is raised. For example, consider installing wall hung kitchen cabinetry or installing a wall hung vanity basin in the bathroom instead of a built-in cabinetry unit.



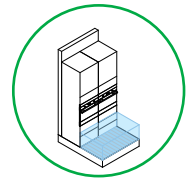
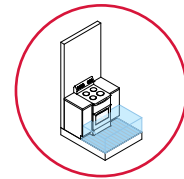
Install a removable panel or replace cavity bathtubs with freestanding bathtubs or showers

Built-in baths with cavities, often built into cabinetry or in tiled areas, are prone to trapping water, damaging the framing and forming mould. A removable panel, freestanding bathtub or shower eliminates gaps where water can be trapped and enables easy access for cleaning around the entire tub.



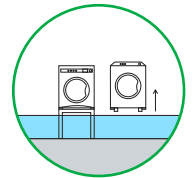
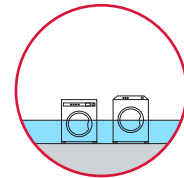
Raise kitchen appliances if possible

Raise fridges, dishwashers, ovens and all other appliances to keep your houses kitchen functioning and prevent failure. This is useful for low levels of flooding.



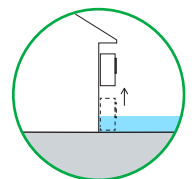
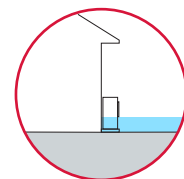
Elevate appliances

Stand-alone appliances such as front-loading washing machines and dryers can be easily raised onto stainless steel benches or wall brackets to minimise the chance of flood damage.



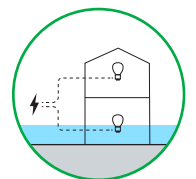
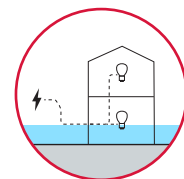
Elevate external services such as air conditioning condenser units, hot water units, rainwater tank pumps and electrical meter boards

Ensure the above external services are raised to keep utilities functioning during a flood event and minimise the chance of flood damage. Hot water units may be replaced by raised instantaneous gas hot water units in some cases. Pool tank pumps are not covered by Resilient Homes Fund.



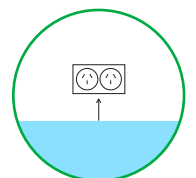
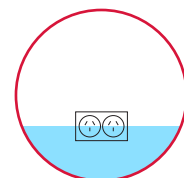
Install separate circuits on the lower and upper levels

Installing separate circuits to each storey allows electricity to run on the upper level if the lower level circuit cuts off due to a flood event.



Elevate powerpoints

Ensure the power-points, data points and all other electrical services are raised to minimise the chance of power outages and faults and allow provision for safety cut-off switches.

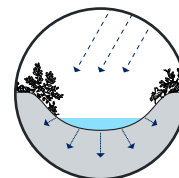


Flood Resilient Design Checklist

In the Yard *(not covered by Resilient Homes Fund)*

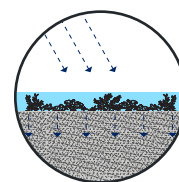
Create a swale

Swales (or bioswales) are a landscape feature and can be used to redirect flood water away from a dwelling. Planted swales are relatively inexpensive and can be aesthetically pleasing. The design and location of swales should complement and support existing stormwater drainage plans for the site. Note: consult a landscape architect.



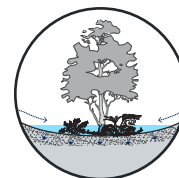
Create a rain garden system

Similarly to swales, rain gardens collect water and are vegetated with water plants and help slow, filter and collect flood water. Note: consult a landscape architect.



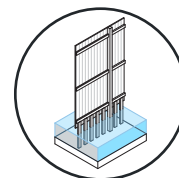
Increase garden absorption area with deep friable topsoil/mulch

Increase the garden areas of your property with plants to filter and slow flood waters. Shaping lawn areas so they have a minimum fall of 1:50 towards gardens and swales help with directing water away from the dwelling. Deep friable top soils are recommended for a greater collection of water and healthy growth of plants and collection. Note: consult a landscape architect.



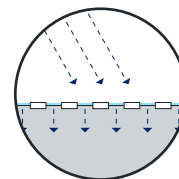
Replace solid fences and screening with permeable fencing components

Reduce flood damage to fences by ensuring the fence is water permeable and made of a resilient material. If privacy or noise is a concern, fences should be permeable up to a height that allows water to flow with ease, and then solid above that point. Some suggested screening materials include: aluminium, composite timber, hardwood timber, and recycled plastic palings.



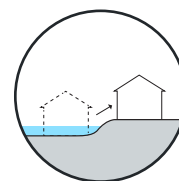
Increase permeable surface areas

Use permeable paving materials and/or remove any unnecessary hard surfaces to allow the ground to absorb water. Some options include: gravel, decomposed granite, permeable pavers, permeable concrete. It is recommended to reduce the width of large paved areas. Note: Consult a Queensland Registered Professional engineer if there are expansive soils and/or if surfaces are close to house.



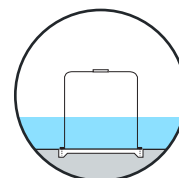
Relocate or replace garden structures that block natural flow paths

Strategically place garden structures to help maintain existing flow paths to reduce adverse impacts on neighbouring properties. Make garden structures permeable so that they do not block the natural flow of water and limit the use of retaining walls that could act as barriers.





Anchor external structures, such as rainwater tanks and sheds

Floods have the ability to uplift structures such as rain water tanks and sweep them downstream toward other properties potentially causing serious damage. Fixing them onto concrete slabs keeps them in place during heavy floods.



Flood Resilient Materials

Identify which of the following non-resilient materials are present in your home and where possible, replace with flood resilient materials.

Building element	 Non flood resilient materials/design	 Flood resilient materials
External ground cover	<ul style="list-style-type: none"> • Large areas of impervious concrete surfaces 	<ul style="list-style-type: none"> • Grass • Mulch, deep crumbly soil • Permeable concrete • Permeable paving • Gravel, stones
Fencing	<ul style="list-style-type: none"> • Pine and other softwoods 	<ul style="list-style-type: none"> • Hardwood timber fencing • Composite timber fencing • PVC fencing • Metal fencing
Wall construction	<ul style="list-style-type: none"> • Wall with cavities 	<ul style="list-style-type: none"> • Single skin hardwood stud walls • Single skin brick walls • Single skin concrete block walls • Off-form concrete walls • Autoclaved aerated concrete walls with waterproofing membrane
Wall framing	<ul style="list-style-type: none"> • Pine 	<ul style="list-style-type: none"> • Hardwood • Steel
Internal wall linings	<ul style="list-style-type: none"> • Plasterboard • Panelling made from pine or other softwoods • Medium-density fibreboard (MDF) panels 	<ul style="list-style-type: none"> • FC (fibre cement sheeting) • Tiles • Hardwood panelling • Metal • Polycarbonate / translucent sheeting • Marine grade plywood
Internal flooring	<ul style="list-style-type: none"> • Carpet • Floating timber floors • Vinyl on a non-resilient substrate • Cork 	<ul style="list-style-type: none"> • Polished concrete • Tiles with epoxy grout and water-resistant adhesive • Hardwood flooring on a suspended hardwood sub-floor that is ventilated. • Rubber / vinyl on a flood resilient substrate with chemical set adhesive

Flood Resilient Materials (continued.)

Building element	 Non flood resilient materials/design	 Flood resilient materials
Internal floor substrate	<ul style="list-style-type: none"> • Medium-density fibreboard (MDF) panels • Particle board (yellow tongue sheet flooring) • Low grade, non-marine plywood 	<ul style="list-style-type: none"> • FC (fibre cement sheeting)
Insulation	<ul style="list-style-type: none"> • Wool and fibre cement batts • Other spray products 	<ul style="list-style-type: none"> • XPS (rigid) insulation • Closed cell flexible sheet insulation • Sprayed polyurethane foam
Doors and windows	<ul style="list-style-type: none"> • Hollow core doors 	<ul style="list-style-type: none"> • Solid core doors (wet proofing) • Aluminium doors and windows • Flood doors (dry proofing) • Hardwood architraves
Mouldings (skirtings, dado rails, architraves, cornices)	<ul style="list-style-type: none"> • Pine mouldings 	<ul style="list-style-type: none"> • Hardwood mouldings • Tile skirting
Cabinetry	<ul style="list-style-type: none"> • Particle board • Medium-density fibreboard (MDF) panels 	<ul style="list-style-type: none"> • Compact laminate • Acrylic solid surface • Marine grade plywood • Composite timber panels • Stainless steel frame (open) • 316 grade stainless steel
Cabinetry benchtops	<ul style="list-style-type: none"> • Laminate • Particle board • Medium-density fibreboard (MDF) panels 	<ul style="list-style-type: none"> • Acrylic solid surface • Marine grade plywood • Stone • Composite stone • 316 grade stainless steel
Grout	<ul style="list-style-type: none"> • Cement based grout 	<ul style="list-style-type: none"> • Semi-epoxy grout • Epoxy grout • Polymer resin grout

Further Information

For more information about the Resilient Homes Program, including frequently asked questions are available at nsw.gov.au/resilienthomesprogram.

If you wish to speak to someone about this Framework or the Resilient Homes Program, please email the Northern Rivers Reconstruction Corporation at resilienthomesprogram@nrrc.nsw.gov.au.

For public flood risk information specific to your property you can visit your local council's website.

For further information on all flood recovery measures please visit the NSW Government's floods information and support services website at nsw.gov.au/floods.

How Do I Access The Resilient Homes Program?

You must be registered with the Resilient Homes Program to have your eligibility considered for the program.

You can register by either:

- register online via the Resilient Homes Program webpage at nsw.gov.au/regional-nsw/northern-rivers-reconstruction-corporation; or
- if you are already engaged in the Flood Property Assessment Program (**FPAP**) or the Disaster Relief Structural Grant (**DRG**) program in the Northern Rivers LGAs you will be automatically registered for the Resilient Homes Program and do not need to register via the online form mentioned above.

Acknowledgement

This document was produced with information from the Queensland Government's Design guidance for flood resilient homes – a collaboration between the Queensland Department of Energy and Public Works, the Queensland Reconstruction Authority, Local Government, the Office of the Queensland Government Architect and JDA Co, to support the Australian and Queensland Government funded Resilient Homes Fund.

Northern Rivers Reconstruction Corporation

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W nsw.gov.au/resilienthomesprogram

