

# Property Flood Resilience (PFR)

May 2024

---

Property Flood Resilience (PFR) has been identified as the most viable option to reduce flood risk to properties in your area as part of the Erringden Hillside Flood Alleviation Scheme (FAS). We appreciate that you may be unfamiliar with PFR, so this document should help to explain what it involves for those interested in applying. Whilst PFR can bring important benefits to a property, we also want to raise awareness of the level of time and input needed from the applicant and organisations implementing it.

---

## What does this mean for me?

We can never eliminate the risk of flooding, but we can reduce the risk of water getting into homes or businesses and reduce its impact if it does get in. The techniques can be referred to by different names, including Property Level Protection (PLP), Property Level Resilience (PLR) and Property Flood Resilience (PFR).

Introducing effective flood resilience for homes and business premises that are at risk of flooding involves surveying at a property, understanding its needs, and bringing together all the appropriate parts of a solution that together will help protect a building by limiting the impact of a flood.

---

When it comes to flood protection it is not just a case of buying products off the shelf – there is no one-size-fits-all solution.

---

Improving property resilience to flooding can take multiple forms. There are measures which can help prevent water from entering a property, commonly referred to as **resistance** measures. Examples of such measures include:

- Flood barriers
- Air brick covers
- Non-return valves
- Waterproof sealant to external walls
- Pointing and sealing mortar

Measures homeowners and residents can take before flood water reaches their property to limit the impact of flooding fall under **preparedness**. Measures which limit the damage caused by internal flooding and speed up the time it will take for residents to be able to return to a property post-flooding are known as **recoverability** measures.

Under the Erringden Hillside Flood Alleviation Scheme, we are offering a free survey to eligible properties. The survey will identify the suitability of the building for PFR and recommend a list of measures bespoke to that property. For those who wish to proceed with the recommendations, we are offering a grant to install **resistance** measures to the property. These measures aim to mitigate flood risk and damage but like any measure cannot remove the risk of flooding entirely.

To further improve residents' **preparedness** to flooding, there is information available on [eyeoncalderdale.com](http://eyeoncalderdale.com) about how to be prepared.

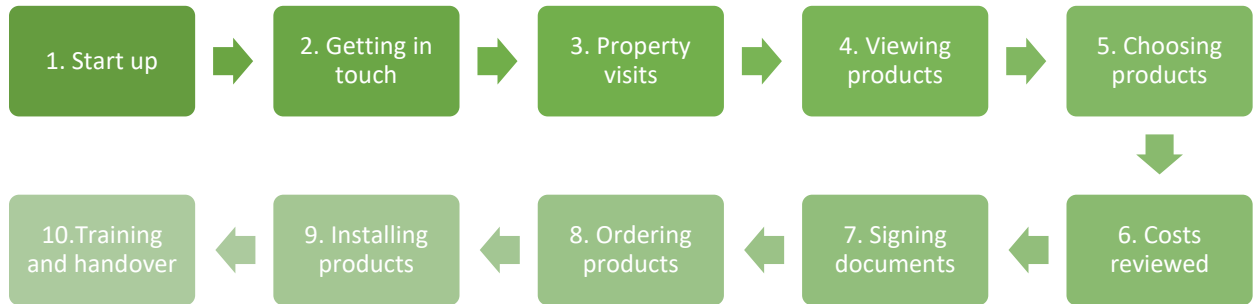
## Criteria that we must meet

For us to provide PFR to a property there are criterion that we as an organisation must meet. These criteria are non-negotiable and are as follows:

- The property must meet the eligibility criteria listed in Step 1 of the PFR Scheme process (see next section).
- All flooding sources and routes need to be considered for a complete package of effective protection measures: partial measures may be by-passed by flood water and the investment wasted.
- The provision, specification and use of pumps is a vital element of property protection and resilience systems. This is recognised as an essential component to help manage seepage, groundwater, and sub-floor flooding. No PFR measures can be installed without a pump also being installed if we have identified that a pump is required.
- The height of measures and the impact on floodwater loading and pressure must be considered in relation to property construction, threshold levels and floor levels.
- In addition, all products used should conform to the relevant Kitemark standards. The BSI Kitemark™ is a quality mark owned and operated by British Standards Institute.
- The property must undergo and pass a Post Installation Audit, demonstrating the property has been better protected by the works conducted.

# The Erringden Hillside PFR Flood Alleviation Scheme Process

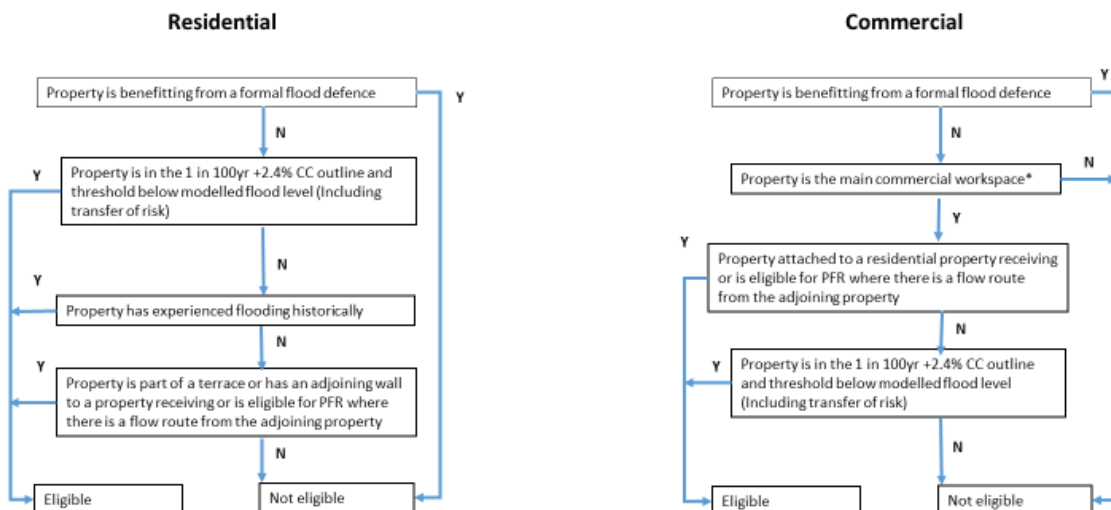
The PFR Process from start to finish can be broken down into ten steps as follows:



## Step 1: Start up - PFR determined as the most appropriate solution.

We conduct technical and economic appraisals to determine viable options for each area to determine where PFR is the most appropriate solution. We then apply the principles of the following flow charts to determine eligibility of individual properties to receive a free PFR survey which will determine what measures should be recommended.

### Eligibility for PFR



\*Measures will be funded up to a cap of £7,500 to protect the main workspace. If measures exceed this cap the property owner will need to contribute the remaining costs to ensure the building is fully protected, we will not be able to fund part measures.

## Step 2: Getting in touch - Community engagement and eligible homeowners contacted.

Having determined PFR as the most appropriate solution for a property, we will engage with the property owner to inform them of the decision and the next steps. If required, we will hold a community event to present our decision and allow the community to ask questions. For individual homeowners considered at flood risk we will be in touch directly via postal service to inform them of this and ask them to complete a pre-survey questionnaire. It is the homeowner's responsibility to complete the questionnaire and confirm via email or post that they would like to sign up to our PFR scheme.

## Step 3: Property surveys conducted, and draft recommendations issued to homeowners.

Should the homeowner be eligible and wish to proceed, our contractor will conduct a property survey to determine the suitability of the property for PFR and the most appropriate products for the property. They will then share the recommended products with the Environment Agency and the homeowner.

## Step 4: Viewing products.

Homeowners will be able to view a selection of the available products being recommended for their property. There will be opportunity to view products during the property visit or upon request.

## Step 5: Choosing products.

Further meetings and discussions can be arranged as required to ensure that recommendations have been agreed and homeowners have seen the available products to enable informed decisions to be made.

## Step 6: Costs reviewed.

Resistance measures up to a cap determined by the project will be provided to homeowners under the PFR scheme. If the measures exceed this cap or homeowners request upgraded measures, for example flood doors, we will require homeowners to contribute towards the additional measures.

## Step 7: Signing documentation.

Once we have agreed the measures and costs with the homeowner, we will issue legal agreements to the homeowner for them to sign and return.

### Step 8: Ordering products.

Once we have received the signed legal agreements from the homeowner, we will place the orders for the required products. There will be a wait time whilst products are manufactured to the specific property measurements.

### Step 9: Installing products.

Once products are ready, we will agree a suitable installation date with each homeowner. Installations typically take 1 to 2 days, dependent on the measures required.

### Step 10: Training and handover

The supplier will provide training to ensure the homeowner understands how to use and maintain the products installed. The supplier will provide written and verbal instruction on the operation, storage, and maintenance of products.

A community test exercise usually forms part of the handover, to ensure residents can deploy their products correctly and that community support is available to those who may need assistance.

We will also issue a post installation Flood Risk Report, detailing the available information on levels of flood risk and the measures that have been provided for the property. Homeowners can share this report with their insurance company who may be able to take account of the measures and adjust insurance premiums accordingly.

*Continued...*

## Frequently Asked Questions

### How much will I have to pay?

Where the homeowner agrees, resistance measures and pumps will be available under the scheme up to a set value. Where more costly measures are needed or a more premium product is desired by the homeowner, a contribution will be required by the homeowner.

### What measures are included in the scheme?

Standard measures to meet the minimum level of protection (not limited to):

- Flood barriers or uPVC doors (as long as one exit is a barrier. See 'Can I have flood doors instead of barriers?' below)
- NRV (non-return valves)
- Automatic airbricks
- Toilet bung
- Automatic Weep holes
- Waterproofing / repointing
- Sump pump (typically needed in properties with suspended timber floors)
- Puddle pump
- Sealing of entry points e.g. pipes and cables
- Raising of ventilation for combustible heat sources

### How big will my barriers be?

Standard height of barriers is 600mm. The height of PFR resistance measures at your property will be proportionate to the flood risk to your property. For example, properties at lower flood risk may only need 300mm high barriers.

### How high can PFR measures protect to?

PFR resistance measures can be offered up to 600mm as per standard building regulations. Properties should only be surveyed up to 600mm, unless the modelled flood level and property threshold level show that flood risk exceeds 600mm.

Resistance measures above 600mm may compromise the structural integrity of the building and if recommended resistance measures exceed 600mm, the suitability of these resistance measures should be confirmed by a structural engineer and will be provided at the owner's risk. If the flood risk at a property is higher than 600mm, we will inform the homeowner, and our suppliers will survey the property up to the required flood risk height. If the homeowner then chooses to have measures fitted in excess of 600mm from the ground, they must accept responsibility and sign a legal waiver to that effect.

### Will I get any training in how to use my products?

Once installed, our suppliers will give full training in how to operate or fit your resistance measures correctly. Following this, written instructions will be provided in the homeowner pack.

### How will I know when to put my barriers in and out?

It is also important that residents have a flood action plan to make sure that everyone knows what to do in the event of a flood.

### Can I have PFR resistance measures on my garage?

The protection of gardens, garages and outbuildings is excluded from the scheme unless there are direct implications for the main building. For example, an adjoined garage may have an internal door to the property, or resistance measures may need to be applied to the garage to protect the property. In this instance, we will make the homeowner aware of their responsibility for any resistance measures to the garage, and they will have to sign a legal waiver.

### Can I have a flood gate?

Flood gates are normally excluded as our scheme is designed to protect the main building only.

### Can I have flood doors instead of barriers?

At least one main entry or exit point from the property must be protected by a flood barrier as opposed to a flood door. This is to allow emergency entry and exit to the property in times of flood without compromising the integrity of the protection.

### Can I have a composite door instead of an uPVC one?

Composite doors are a specialist product and are only available for openings between 869mm and 997mm. Narrower or wider doors are available in uPVC. Composite doors are also more expensive and would be considered as an upgrade, and as such, the difference in cost would need to be covered by the homeowner.

### Up to what point can I change my mind or leave the scheme?

The scheme is purely voluntary, and you are not obliged to receive any PFR measures. Should you wish to proceed, and agree with our recommendations, we

will require that you sign a legal agreement. This allows us to conduct work on your property. At this point you will enter into an agreement to receive the measures.

### Will the products have British Standards Institution certification/Kitemarks?

Where possible all products will have the relevant BSI certification/Kitemark. Non-Kitemarked alternatives will only be offered where no comparable Kitemarked products are available.

### Who will pay for any maintenance once my products have been installed?

Where applicable, the products will come with a manufacturer's warranty which is usually 12 months. Once a warranty has expired, any maintenance costs will be at the discretion of the homeowner. Recommended maintenance activities and schedules will be detailed within your homeowner's pack.

### How will I store my removable products, such as barriers?

We recommend that barriers are stored in a safe and dry place away from direct sunlight and that the rubber seals are not resting against anything to prevent deformation.

### How long before I can expect to receive my PFR measures?

On average it can take around 9 months from property survey to completion, however, this process is new to us, and our experience suggests that there are many factors which can influence the time it takes to complete. We are doing our best to speed up the process and ask that homeowners support our efforts by being available to engage with us and our suppliers throughout the process.

### I live in a conservation area / my property is a listed building. Can I still have PFR?

Yes, properties within the conservation area and those with listed building status can receive PFR measures. Extra considerations and consents are needed which can add to the overall timeframe.

### My neighbour has said they do not want PFR, but I do. Can I still have it?

Yes, however, if you are part of an adjoining property, whereby your neighbour chooses not to have PFR and there is a direct flow route via that property, then this may render your measures less effective.

### Post Installation Audit and Flood Risk Report

Once the Environment Agency and appointed installer confirm that all recommended works have been installed our appointed assessor will return to conduct a Post Installation Audit of the flood products provided to your property. This will allow us to verify the products that have been installed and confirm that you are satisfied with the installation and products provided. Following this visit, we will be able to produce a Post Installation Flood Risk report which will detail the works completed.

This Post Installation Flood Risk report remains confidential to you, but you may wish to share or refer to your report when talking to insurers.

### Will having PFR resistance measures affect my home insurance?

Your insurance company will already have access to flood risk maps and be aware of whether your property is at flood risk, so installing PFR measures should not increase your home insurance. Following installation, we will provide you with a Post Installation Flood Risk Report, detailing the available information on levels of flood risk and the measures that have been provided for the property. You can share this report with your insurance company who may be able to take account of the measures and adjust insurance premiums accordingly.

The 'Flood Re' reinsurance scheme, as agreed between the Government and insurance companies, was launched in April 2016. Flood Re is designed to provide homeowners at risk of flooding with access to affordable flood protection cover. Further information is available at <http://www.floodre.co.uk/>.

### What do I do with my resistance measures after a flood?

Once the flood risk has receded you will be able to remove your deployed measures. Your homeowner pack will detail what, if any, cleaning or maintenance is required for each of your measures before returning them to storage.

### When do I receive my homeowner pack?

After installation you will receive both training and a homeowner pack provided by the installation contractor.

### Who can I ask if I need any help with my flood resistance products?

For general maintenance, storage and replacement parts please speak to the installation contractors.

### Community flood plan

As part of the PFR project, it is recommended that a community flood plan is created. This plan should consider:

- Include a list of all properties that have PFR measures installed and those residents who may require assistance in deploying any mitigation measures.
- Encourage the use of a "buddy system", whereby a local resident or neighbour can deploy any mitigation measures should a property owner not be present or may require assistance.
- Identify the local need for official Flood Wardens to support the local community and engage with the emergency services.
- Determine the suitability of training for Flood Wardens and "buddies" to ensure PFR measures are installed correctly.
- Encourage the annual testing of the community emergency plan and test installation of PFR measures.

### Individual flood plan

Residents are also encouraged to develop or review their own individual Personal Flood Plan which will help to identify a list of actions which can be quickly put in place during a flood event to minimise the disruption caused. The Environment Agency has prepared a template for individual flood plans, which is available by visiting: <https://www.gov.uk/prepare-for-flooding/future-flooding>. This individual flood plan should link in with the Community Flood Action Plan.

## Where can I find out more about PFR?

You can find out more information about PFR on the National Flood Forum website which has a directory, the Blue Pages, of property flood products and services to advise and inform you of what is available to help reduce the risk of flooding to your home.

- National Flood Forum: <https://nationalfloodforum.org.uk/about-flooding/reducing-your-risk/protecting-your-property/>
- Blue Pages: <http://bluepages.org.uk/>

These links provide a great opportunity to learn more about PFR from an independent source. To view existing examples of PFR, please see the Property Flood Resilience document put together by the Environment Agency and partners at <http://edition.pagesuite-professional.co.uk/html5/reader/production/default.aspx?pubname=&edid=659cb024-a5d5-4004-acbf-1d9236228817>.

## Contact

If you have any questions not covered by this document, please get in touch with the team by emailing us at [HebdenBridgeFAS@environment-agency.gov.uk](mailto:HebdenBridgeFAS@environment-agency.gov.uk).