

Framework for delivering property flood resilience in Scotland

November 2018

Flood Resilient Properties Advisory Group

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Executive summary

Property protection measures are an essential part of a sustainable and proactive approach to flood risk management. A study carried out by JBA Consulting in 2014 for the Scottish Government found that Property Flood Resilience measures (PFR) are a cost effective¹ way to reduce the damage caused by floods and make the clean-up quicker and easier, mitigating risks such as overtopping. However the study also found that these measures are not being widely taken up in Scotland despite the benefits they have been shown to provide.

The current estimate of properties at risk from flooding in Scotland, from the first National Flood Risk Assessment published in 2011, is 108,000². This figure will increase with climate change and as we gain a better understanding of surface water flooding impacts. Despite best efforts, flood protection schemes are not always able to protect all at risk properties from flooding. Currently the [Flood Re](#) scheme provides affordable insurance for those at the greatest flood risk in the UK but this scheme will end in 2039. Thus it is crucial that action is taken now to make more properties resilient against flooding and to reduce the physical, financial and emotional impact of flooding on properties and their owners.

A Property Flood Resilience Delivery Group (PFRDG) will be set up in Scotland in 2019. Members will work with multi-sector specialists and key stakeholders to identify and deliver actions that need to be taken to engage the public and the construction and insurance industries with PFR. The aim being to mainstream PFR and help property owners take action to make their properties more resilient against the impacts of flooding. The Group will be overseen by a Chair from the insurance industry and led by a dedicated Project Manager.

Purpose of the Framework

The purpose of this Framework is to outline the role and remit of the Property Flood Resilience Delivery Group (PFRDG) for Scotland. It outlines why a PFRDG is needed and the overall scope of this Group.

The Framework has been written by the Property Flood Resilience Advisory Group (PFRAG) made up of representatives from Scottish Government, SEPA, the insurance and construction industries and the research and voluntary sectors. A full list of members can be found under Annex A.

What is Property Flood Resilience (PFR)?

Property Flood Resilience (PFR) measures are designed to make people and their property more resilient to the physical and emotional impacts of flooding. Properties will usually require a package of measures, some of which prevent water entering the property (resistance measures) and others that minimise the impact should water enter the house (resilience measures), speeding up the recovery process. In this Framework, PFR is considered to cover both types of measure. Examples include:

- flood doors,

¹ *Assessing the Flood Risk Management Benefits of Property Level Protection, Evidence Summary, Final Report*, JBA Consulting, November 2014

² *National Flood Risk Assessment*, SEPA, 2011

- flood barriers,
- air brick covers,
- pointing or waterproofing brickwork,
- installing non-return valves, and
- moving vulnerable features, such as sockets, above floor level.

In some circumstances it is better to let water in. For floods over 60cm depth, or of prolonged duration, attempting to keep the water out can cause serious structural damage because of the different water pressures either side of the walls. It is important property owners understand both the benefits and limitations of PFR. More information is available on the [Scottish Flood Forum website](#).

Why does Scotland need a Framework for delivering property flood resilience?

In Scotland the responsibility for protecting a property from flooding rests with the owner. While formal community level flood protection schemes are important, they cannot prevent all flooding and owners and residents also need to know how to protect their homes and businesses to limit physical damage to the buildings and the longer term emotional impacts of being flooded.

The 2015/16 floods were a reminder of how devastating flooding can be. The impact of this flooding was substantial with around 1,000 properties flooded, widespread and prolonged disruption and significant cost involved in repair. Findings from a long term study in Aberdeenshire, commissioned by CREW for the Scottish Government, show that people were left out of their homes, and businesses were closed, often for many months.³

There is a need to establish PFR measures as the norm in Scotland and now is the time to do this, before the [Flood Re](#) scheme comes to an end in 2039. Flood Re currently provides affordable insurance for homes exposed to the highest flood risk in the UK, but when the scheme ends premiums will once again be subject to market forces. The desire is to reach a point where PFR measures can be taken into account by insurance companies when considering risk, setting premiums and agreeing schedules of works after a flood incident, thereby helping to make more properties flood resilient and reduce the monetary, emotional and time cost of future flood events.

The significance of this Framework and its outputs is highlighted by its inclusion in the [Programme for Government in Scotland 2018-19](#) and by the several Scottish Government strategic objectives and national outcomes it will help to achieve, in particular the outcome; **‘We live in communities that are inclusive, empowered, resilient and safe’**.

The Framework will support the Scottish Government’s [Resilient Communities Strategic Framework and Delivery Plan for 2017 – 2021](#). The Resilient Communities Plan aims to create the conditions in which ‘Communities, individuals and organisations harnessing resources and expertise to help themselves assess and understand risk, take appropriate measures to prevent, prepare for, respond

³ Philip, L., Currie, M., Dowds, G., and McKee, A. (2018) *Impacts of winter 2015/16 flooding in and around Ballater and in the Garioch: overview of findings from Project Year 1*. Available online crew.ac.uk/publications

to and recover from emergencies, in a way that complements the work of the emergency responders.’

Additionally, the Framework will be relevant to the outcomes being developed for the second **Scottish Climate Change Adaptation Programme**, due to be published in 2019 and it embraces the Scottish Government’s [Circular Economic Strategy](#), encouraging the efficient use and recycling of materials and building methods to reduce waste.

Implementing the Framework for delivering property flood resilience in Scotland

A Delivery Group (the PFRDG) will be set up to implement the Framework, overseen by the Group’s Chair. A dedicated Project Manager will work with and support the PFRDG to identify key work streams and actions, preparing an action plan, to increase the uptake of PFR in Scotland, by 30th June 2019.

Membership of the PFRDG will consist of representatives from Scottish Government, SEPA, the construction and building industries, local authorities, the research and voluntary sectors and other relevant organisations. All members must agree to the PFRDG Terms of Reference.

In 2016, the Department for Environment and Rural Affairs (Defra) invited a range of specialists from different areas to take part in a Roundtable to find innovative ways to address the lack of engagement with PFR amongst property owners and the insurance and construction industries across England and Wales. Six work streams were identified to focus on areas the Roundtable felt had most scope to bring about real change.⁴

These Task Groups, which are made up of multi-sector specialists from across the UK, are:

1. Immediate Action – action to assist flood victims to access advice and funding.
2. Embedding resilience – embedding resilience in small businesses.
3. One stop shop – providing flood guidance and advice on how to prepare against flooding in the future.
4. Standards, certification and skills – creating consistent standards and training relating to property flood protection.
5. Communications and behaviour change - engaging and empowering individuals/communities to make their properties more resilient.
6. Data – identifying and sharing data to inform policy.

The PFRDG will link to and, where appropriate, identify members to participate in the Defra Task Groups. These members will monitor the work of the Task Groups to avoid duplication and where applicable, ensure that key messages and actions are reported back to the PFRDG and delivered in Scotland.

The PFRDG will initially concentrate on ‘Immediate Action’ and ‘Communications and Behaviour Change’ outcomes, as defined above. To this end, a dedicated working group, with appropriate communications expertise, will be set up to produce a detailed Communications Plan, to help raise awareness of PFR and change behaviours across the insurance and construction industries and the

⁴ *Bonfield Report: The Property Flood Resilience Action Plan*, Dr Peter Bonfield OBE FREng, September 2016

general public towards flood protection measures. The plan should identify the best parties to effectively communicate with communities, individuals and small businesses on an on-going basis and how they might support these parties.

Other recommended actions for the PFRDG include:

- A review of work that has already been carried out in the area of PFR in Scotland and possible incentives to increase uptake by property owners, including the recent Scottish flood grants.
- Raising awareness at a national level, of the findings of the Defra Task Groups.

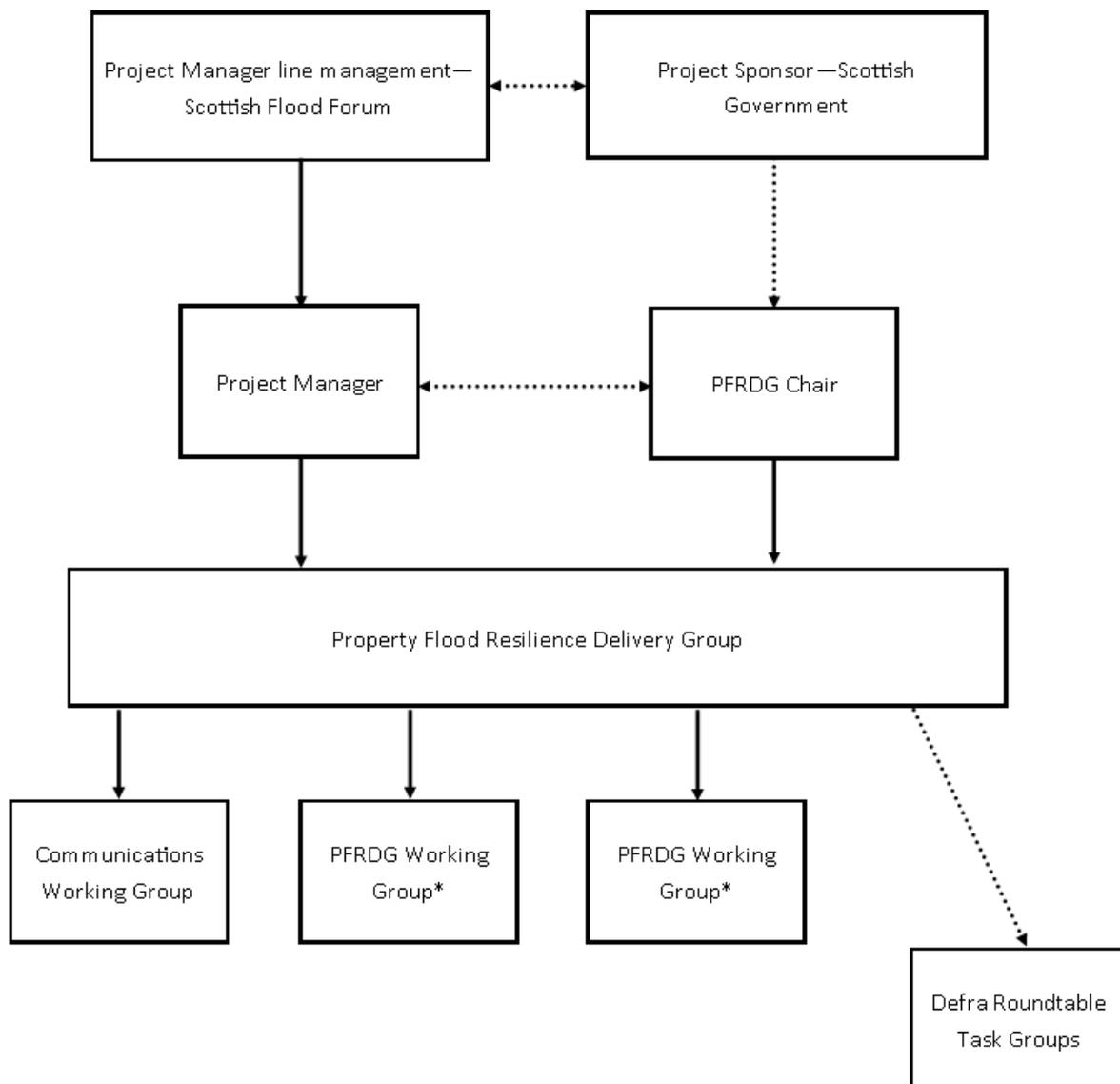
Appendix A

Property Flood Resilience Advisory Group (PFRAG) Members

Name	Organisation
Lauren Addis	Scottish Borders Council
Clyde Ashby	Building Standards Agency
Ian Chalmers	Scottish Borders Council
David Faichney	SEPA
Leigh Fraser	SEPA
Debi Garft	Scottish Government
David Gibbon	Royal Institute of Chartered Surveyors
Graeme Hannah	BRE
Dermot Kehoe	FloodRe
Anne Marte Bergseng	Edinburgh Centre for Carbon Innovation/ClimateXChange
Kirsty MacRae	Scottish Flood Forum
Alastair Ross	Association of British Insurers
Kayleigh Scott	National Centre for Resilience
Ralph Throp	Scottish Government

Appendix B

Property Flood Resilience Delivery Group (PFRDG) Structure



*Undetermined number

Appendix C

Assumptions

	Assumptions
1.	An experienced Project Manager will be employed.
2.	Appropriate membership will be found to represent stakeholder interests on the PFRDG.
3.	The PFRDG members will have the correct skills to deliver the requirements.
4.	The PFRDG members will commit to the project.
5.	The Defra Task Groups will achieve their aims.
6.	The FTE for delivery of activities will be covered by the associated organisation.
7.	Funding will be secured for a project manager.
8.	The commercial companies providing PFR measures will continue to operate.
9.	Deliverables will be possible with the resources readily available.

Appendix D

Glossary

<i>ABI</i>	Association of British Insurers
<i>DEFRA</i>	Department for Environment, Food and Rural Affairs
<i>ECCI</i>	Edinburgh Centre for Carbon Innovation
<i>FLOOD</i>	In the terms of the Flood Risk Management Act, 'flood' means a temporary covering by water, from any source, of land not normally covered by water. This does not include a flood solely from a sewerage system, as a result of normal weather or infrastructure drainage. A flood can cause significant adverse impacts on people, property and the environment.
<i>FLOOD DOOR</i>	A watertight door to prevent water entering a building.
<i>FLOOD PROTECTION SCHEME (FPS)</i>	A flood protection scheme, as defined by the Flood Risk Management Act 2009, is a scheme by a local authority for the management of flood risk within the authority area. This includes defence measures formerly promoted under the Flood Prevention (Scotland) Act 1961.
<i>FLOOD RESISTANCE MEASURES</i>	Flood resistance measures reduce the amount of water that gets inside a property.
<i>FLOOD RISK</i>	A measure of the combination of the likelihood of flooding occurring and the associated impacts on people, the economy and the environment.
<i>NCR</i>	National Centre for Resilience
<i>NATIONAL FLOOD RISK ASSESSMENT (NFRA)</i>	A national analysis of flood risk from all sources of flooding which also considers climate change impacts. Completed in December 2011 this provides the information required to undertake a strategic approach to flood management that identifies areas at flood risk that require further appraisal. The NFRA will be reviewed and updated for the second cycle of FRM Planning by December 2018.
<i>OVERTOPPING</i>	The rising of water over the top of a barrier.
<i>PROPERTY FLOOD RESILIENCE (PFR)</i>	Property Level Resilience (PLR) aims to make people and their property less vulnerable to the physical and mental impacts of flooding. Actions that can be taken to make people and their property less vulnerable to the physical and mental impacts of flooding. Actions include installing flood doors, flood barriers, air brick covers, pointing or waterproofing brickwork, installing non-

	return valves, and moving vulnerable features such as sockets above floor level.
<i>RESILIENT REPAIRS</i>	Resilient repairs work to limit the damage done when water enters a building.
<i>SEPA</i>	Scottish Environment Protection Agency
<i>SFF</i>	Scottish Flood Forum
<i>SURFACE WATER FLOODING</i>	This is when the volume of rainwater falling does not drain away through the existing drainage systems or soak into the ground, but lies on or flows over the ground instead.