

Briefing for the Public Petitions Committee

Petition Number: [PE01720](#)

Main Petitioner: Les Wallace

Subject: Natural Flood Alleviation Strategy for Scotland

Calls on the Scottish Parliament to urge the Scottish Government to develop a natural flood alleviation strategy under the Flood Risk Management (Scotland) Act 2009.

BACKGROUND

What is natural flood management?

According to the [SEPA's Natural flood management handbook](#) –

“Natural flood management (NFM) involves techniques that aim to work with natural hydrological and morphological processes, features and characteristics to manage the sources and pathways of flood waters. These techniques include the restoration, enhancement and alteration of natural features and characteristics, but exclude traditional flood defence engineering that works against or disrupts these natural processes.”

SEPA sets out on its website [who is responsible](#) for which aspects of flood policy and management in Scotland.

Scottish Government, SEPA and the James Hutton Institute have worked together to develop the [natural flood management network](#). This was launched in 2018 to share knowledge and best practice amongst those working with this approach. With just under 100 NFM actions identified in Scotland's Local Flood Risk Management Plans, there is widespread consideration of NFM work across Scotland.

Flood Risk Management (Scotland) Act 2008

The [Flood Risk Management \(Scotland\) Act 2008](#) introduced a co-ordinated and partnership approach to tackling flood risk in Scotland in a sustainable manner. All sources of flooding and whole river catchments are considered when making flood risk management decisions.

[SEPA states](#) that “As part of this approach SEPA is required to consider whether techniques that restore, enhance or alter natural features and

characteristics can contribute to managing flood risk. These techniques are referred to as natural flood management (NFM). The production of NFM maps, a requirement of section 20 in the Flood Risk Management Act, presents the first national source of information on opportunity areas for NFM across Scotland. They are part of a suite of tools which will be used in the Flood Risk Management Planning Process to help us to produce Scotland's first set of nationally co-ordinated plans to manage flooding."

Section 20 of the Flood Risk Management Act is about an assessment of the possible contribution of natural flood management. It states -

(1) SEPA must, by 22nd December 2013 or such other date as the Scottish Ministers may direct, assess whether alteration (including enhancement) or restoration of natural features and characteristics of any river basin or coastal area in a flood risk management district could contribute to the management of flood risk for the district.

(2) For the purposes of this Act, natural features and characteristics include such features and characteristics which can assist in the retention of flood water, whether on a permanent or temporary basis, (such as flood plains, woodlands and wetlands) or in slowing the flow of such water (such as woodlands and other vegetation), those which contribute to the transporting and depositing of sediment, and the shape of rivers and coastal areas.

...

(4) Each assessment ... must —

(a) take into account the flood risk assessment, any flood hazard maps and flood risk maps and any flood risk management plan for the time being applicable to the flood risk management district, and

(b) refer to a map showing where alteration (including enhancement) or restoration of natural features and characteristics of any river basin or coastal area in the district could contribute to management of flood risk in the district.

Scottish Environment Protection Agency

[SEPA](#) is Scotland's national flood forecasting, flood warning and strategic flood risk management authority. Its website shares information on the flooding work that SEPA is responsible for and contributes to.

[Flood Risk Management Strategies](#) coordinate efforts to tackle flooding in Scotland. They set the national direction of future flood risk management, helping to target investment and coordinate actions across public bodies. The strategies explain what causes flooding in high risk areas as well as the impacts when flooding does occur. This information is used as a basis for better decision-making across flood risk management organisations.

BEAVERS

The petition talks about beavers and the role they might play in flood risk management. Eurasian beavers (*Castor fiber*) are a species of beaver living in small colonies of multiple family groups, with each group containing a pair of breeding adults. Each breeding pair produces between one and six offspring, or kits, per year.

The Scottish Government has introduced [Regulations](#) that provide beavers in Scotland with European Protected Species status. These regulations have been passed by the Scottish Parliament. This is the culmination of a 10-year process since beavers were released as part of a trial reintroduction in 2009.

Beavers act as ‘ecosystem engineers’, building dams which create pools and wetlands and enhance biodiversity, and which can also slow water flow, assisting with downstream flood management. However, there are also concerns about potential negative impacts on land uses such as farming, via damage to drainage systems or flood banks which protect crops.

SPICe has written 2 blogs on beavers in Scotland –

- [Beavers set to become a protected species in Scotland \(or are they?\)](#) – March 2019
- [The Legal Protection of Beavers in Scotland](#) – July 2018

As part of the ongoing work on beaver reintroduction, SNH are developing a [Beaver Mitigation Scheme](#) which amongst other things is supposed to trial innovative solutions to management problems.

SCOTTISH GOVERNMENT ACTION

Natural flood management is discussed in the Scottish Government’s [Climate Change Plan: third report on proposals and policies 2018-2032 \(RPP3\)](#). For example, it states –

“...the woodland/forestry/carbon sequestration proposal could significantly increase the implementation of natural flood management and the creation or enhancement of new habitats through woodland creation and peatland restoration.”

The [Scottish Government](#) sets out on its website that they are reducing flood risk in Scotland by “supporting work to pilot and develop natural flood management approaches, such as the [Eddleston Water project](#) and the [EU Interreg Building with Nature project](#).”

The Scottish Government [consultation](#) on a revised Scottish climate change adaptation programme for 2019-2024 closed in April. It included reference to natural flood management –“Scottish Government is also involved in the EU Interreg Building with Nature project and leads a work stream looking at how

catchment-based building with nature (natural flood management) can help manage fluvial flood risk.”

In March 2019 the [Committee on Climate Change](#) published its assessment of the first Scottish Climate Change Adaptation Programme. It makes a number of points about flooding and flood risk management. It states that -

“There also remain key data and evidence gaps that make it difficult to assess progress for a number of priorities. Although mapping flood risk has improved, the extent of housing and other infrastructure development in flood risk areas and the uptake of sustainable drainage systems is still unknown.” (p6)

SCOTTISH PARLIAMENT ACTION

[Implementation of the Flood Risk Management \(Scotland\) Act 2009](#) was laid in the Scottish Parliament in February 2019. Section 2.4 relates to natural flood management. It states (page 8) –

“SEPA’s NFM opportunity maps have been used to identify over 100 actions with an NFM component in the 2015 FRM [flood risk management] Strategies and 2016-22 Local FRM Plans. This includes proposals for four NFM schemes and a further 10 engineered schemes that will include an NFM element. In addition local authorities will carry out 23 studies with a sole focus on NFM and a further 69 engineered scheme studies that will include options for NFM during this period.”

A number of relevant parliamentary questions have been asked -

[Question S5O-02764: Alexander Burnett, Aberdeenshire West, Scottish Conservative and Unionist Party, Date Lodged: 09/01/2019](#)

To ask the Scottish Government whether it will provide an update on the status of the communities that are due to be listed as potentially vulnerable areas.

Answered by Roseanna Cunningham (16/01/2019):

Members should be aware this question is about flood management. Scottish Ministers approved the revised set of Potentially Vulnerable Areas submitted by SEPA in September 2018 and these were published on SEPA's website on 22 December 2018.

Working closely with partners, SEPA will draft Flood Risk Management Strategies for the period 2022-2027. These strategies will identify objectives and actions to help protect communities in potentially vulnerable areas, and they will be published following a full public consultation.

[Question S5W-08682: Mark Ruskell, Mid Scotland and Fife, Scottish Green Party, Date Lodged: 05/04/2017](#)

To ask the Scottish Government what its position is on the role of natural flood management measures in flood risk reduction, and how the potential associated benefits of these measures, such as enhanced biodiversity, are considered as part of decisions and action taken under the Flood Risk Management (Scotland) Act 2009.

Answered by Roseanna Cunningham (25/04/2017):

Managing flood risk at the catchment level through a portfolio of measures is key to achieving sustainable flood risk management and a statutory requirement set out in the Flood Risk Management (Scotland) Act 2009. Scottish Government guidance on Sustainable Flood Risk Management (<http://www.gov.scot/Publications/2011/06/15150211/0>) and SEPA's Natural Flood Management Handbook (<https://www.sepa.org.uk/media/163560/sepa-natural-flood-management-handbook1.pdf>), further reinforce the importance of working across catchments and coastlines to reduce flood risk.

The Scottish Government's guidance on options appraisal for flood risk management (<http://www.gov.scot/Resource/0050/00500974.pdf>) describes how the associated benefits of natural flood management are considered as part of decision making in selecting measures. SEPA and the responsible authorities considered both the positive and negative effects of any action, including effects on biodiversity. Where natural flood management actions were identified, more detailed assessments of opportunity (carried out in the natural flood management studies) will consider where additional benefits may be accrued, such as river restoration that benefits both Water Framework Directive status and flood risk.

[Question S5W-08684: Mark Ruskell, Mid Scotland and Fife, Scottish Green Party, Date Lodged: 05/04/2017](#)

To ask the Scottish Government what natural flood management measures are being progressed with funding allocated as part of its 10-year flood funding strategy with COSLA.

Answered by Roseanna Cunningham (25/04/2017):

The 14 Flood Risk Management Strategies and Local Plans include 104 actions with a natural flood management element; most of these actions are flood studies. Nearly all of the flood studies will be funded through this budget. Where local authorities subsequently decide to implement natural flood management measures, this budget will also be the main source of funds for works on the ground.

**Wendy Kenyon
Senior Researcher
10 June 2019**

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