

PE2118/G: Review and restructure Scotland's flood risk management approach and operations

SEPA written submission, 3 November 2025

Thank you for your correspondence dated 2nd October 2025 regarding Petition PE2118.

We appreciate the opportunity to provide a written response to the matters raised by the petitioner in Petition PE2118, which was considered at the Citizen Participation and Public Petitions Committee on 24th September 2025.

The suggestions included but were not limited to:

1. Flood maps produced by SEPA being inaccurate.
2. SEPA not involving communities in assessments and decisions and being reluctant to meet with local communities.
3. The lack of instructions from SEPA on flood prevention schemes and the absence of SEPA's remit to design, build and assist communities in building flood defences.
4. SEPA hindering communities from doing flood prevention work.
5. SEPA's role in approving the removal of sediment and gravel out of rivers.
6. The accuracy of the cost of flooding.
7. Concerns over the experience of responsible authorities.

1. Accuracy of SEPA flood maps

Concerns raised: Flood maps produced by SEPA are very inaccurate and have no community input. Some maps show areas at risk of flooding when they have not flooded for 200 years and do not enable specific properties at risk of flooding to be identified. Calculations are done centrally using maps and past river-level records.

We have set out information below around SEPA's role, flood maps, river maps, their purpose, and our evidence led approach to provide the best guidance we can on future flood risk in Scotland.

SEPA are required by Scottish Ministers to provide flood maps that set out future flood risk for Scotland and we have developed our maps to provide insights on the areas that are at the greatest risk of future flooding. SEPA's flood maps are a national strategic level tool that provide indications of current and longer-term future flood risk across Scotland and at the present time this does not report at specific property level. SEPA have a dedicated flood map website which also provides information on interpretation and terms of use.

The Scottish Government's update reports on adaptation to climate change highlight that for 2014-2023 the average annual rainfall was about 10% wetter than the 1961-1990 average and with winter rainfall approximately 29% higher. As a result, we are aware that more of our communities are experiencing flooding now, more communities will be likely to flood in the future, and this has the potential to worsen over time. As a result of this and based on our extensive evidence base, SEPA's flood maps will identify future flood risk for communities that have not yet experienced flooding.

We recognise that this can be concerning for communities who have not yet experienced flooding or who may not have experienced flooding for a long time. Our role in SEPA is to raise the awareness of future flood risk so that communities can be supported to prepare and become resilient to future flood risk because flooding, when it happens, can have a severe impact.

The river maps have been developed using a nationally consistent approach for Scotland, they use a combination of national and regional level assessments and are designed for strategic use to support local authorities and associated bodies with flood risk management and to inform local communities. A nationally consistent methodology has also been used to produce the surface water flood map for Scotland. The map provides indicative flood hazard information and identifies communities at risk from surface water flooding and from small watercourses with a catchment area smaller than 10km².

Our maps are underpinned by data collected from our national network of over 700 river, loch, tidal and rainfall gauging stations through which we monitor the water environment every fifteen minutes 24/7/365. Furthermore, SEPA are custodian of the Hydrometric Archive, holding records of our water environment for the last 80+ years at some stations.

The flood maps are based on our best understanding of long-term flood risk at the time of being made. We continue to enhance our evidence base and understanding as more data becomes available and as we monitor flooding events. Our maps are reviewed every six years, with the next version due in December 2031. We have made a number of important updates to the hazard maps in recent years, including:

- February 2025 – Publication of new national flood hazard maps for surface water and small watercourses.
- November 2023 – Publication of new coastal flood hazard maps for the northeast of Scotland (John o' Groats to Arbroath including Orkney Islands) and the Outer Hebrides.
- November 2020 – Publication of 18 local updates to our river (fluvial) flood hazard maps and five local updates to our coastal flood hazard maps. Publication of new national future flood maps to show the impacts of climate change for river and coastal flood sources.

Our main route to engage communities on the current maps was via our Local Authority consultations on the products as they were developed. We considered community and wider concerns shared with us. We also consider all concerns shared with us directly and on an ongoing basis to inform our map development and improvement work.

We are currently undertaking research to understand user needs ahead of planned work to update and improve the maps, and our survey can be completed at the following link: [Flood Hazard Maps – User Needs Research - Scottish Environment Protection Agency - Citizen Space](#).

2. SEPA's engagement with local communities

Concern raised: SEPA has not involved communities in assessments and is reluctant to engage with local communities

SEPA are committed to embedding local knowledge and perspectives into flood risk management planning. SEPA's role is to work in partnership with the local authorities and other responsible authorities to identify areas at significant flood risk (Potentially Vulnerable Areas or PVAs) and to prepare the strategic flood risk management plans (FRMPs) for these areas. FRMPs set the national direction of future flood risk management helping to target investment and coordinate actions across catchments and public bodies. Local FRMPs are then produced by lead local authorities, in collaboration with other responsible authorities. They provide further detail on how actions will be implemented, how they will be funded and coordinated across organisations and with other actions.

SEPA work closely with other organisations responsible for managing flood risk to ensure adoption of a nationally consistent approach. We invite communities to contribute through public consultations, issued in accordance with the Flood Risk Management (Scotland) Act 2009. All SEPA public consultations are published on-line on our [Consultation Hub](#) and supported by engagement activities to ensure that communities can meaningfully influence decision-making. These consultations are widely promoted, and feedback is reviewed to identify changes to the draft proposals. SEPA invite all community councils to not only consider participation in consultations but also asks them to consider these consultations at meetings and publicise them on their social media as well as with relevant local flood groups. For example, the majority of responses we received to our latest consultation on PVAs came from the public – over 75%, with additional input from community councils and other stakeholders.

The next set of plans will be published in December 2027. A two-stage consultation is planned for the third cycle of FRMPs to give communities greater chance to feed in their local knowledge about flooding issues and priorities. The first phase will begin early in 2026, targeting local communities, followed by a second phase in late December 2026.

Concerns raised: SEPA FOI highlights Local Advisory Groups are not the best way to provide practical support to or engage equitably with communities. SEPA are reluctant to meet with local communities

SEPA engage with local communities through several groups, including local climate resilience groups and events, post flood collaboration, awareness raising campaigns, pre-application discussions and widely promoted public consultations. These engagement activities are attended by appropriate specialists depending on the questions being asked by local communities.

Local Advisory Groups are required under the Flood Risk Management (Scotland) Act 2009, and include membership from a range of organisations with regional presence, including responsible authorities, (e.g. local authorities and Scottish Water), NatureScot, river and fisheries trusts/boards, regional partnership groups, other environmental non-government organisations, National Farmers Union Scotland, and National Park Authorities. These groups have a specific remit and are not designed for engagement with communities on specific issues or locations.

We regularly engage with local communities as part of delivery of our Flood Forecasting and Warning Service, a fundamental component of SEPA's work, which contributes to the programme of flood risk management actions by providing timely, accurate, and actionable information that supports preparedness, response, and recovery efforts, helping to reduce the impacts of flooding on communities.

This includes public-facing services such as Floodline (almost 42,000 customers), which offers real-time flood warnings and advice, and the Scottish Flood Forecast, which provides a daily national overview of flood risk up to three days in advance to support early decision-making. The service operates across all of Scotland through 19 regional flood alert areas and provides more detailed monitoring and forecasting within 326 local flood warning areas that focus on the communities most vulnerable to flooding. SEPA continue to increase awareness of the Floodline service through community engagement, and we have increased the number of people that subscribe to the service by 16.5% since 2022. We would encourage people to sign up to our text and email alerts through our website and follow our social media channels and encourage others in their communities to do the same.

SEPA also respond to many enquiries from the public daily coming to us through our general enquiries line and our website. We have information and advice available on flooding pages of our website on topics such as flood warnings, flood insurance, what to do before, during or after flooding.

In addition, as part of our regulatory function, SEPA meet with local communities and individuals as part of pre-application discussions. With regard to the lower Spey, since 2021, SEPA specialists (regulatory officers, geomorphologists, hydrologists and community engagement officers) have met on site on at least three occasions to discuss in-stream works related to flooding concerns raised by the petitioners and have had frequent engagement with local community groups, the community council, Moray Council and landowners over this period. SEPA have regularly provided advice to members of the Speymouth Environmental Partnership over the last four years on a range of matters, including the proposals in the CBEC report (2021) and the process for applying for an authorisation to undertake works proposed in the report (a summary of key engagement has been provided to the Cabinet Secretary for Climate Action and Energy and it has been included in [her own response to the Committee](#)).

Concern raised: SEPA nor Local authorities engage with major landowners over flood alleviation/management schemes or building flood defences.

[The Flood Risk Management \(Scotland\) Act 2009](#) assigns responsibility for developing and building flood protection schemes in Scotland to local authorities. SEPA have no responsibility to develop or build schemes. Local authorities develop

proposals for flood protection schemes for areas where the need for a scheme has been identified and where the initial investigations by the local authority show this is a feasible and sustainable option. The development of a Flood Defence scheme follows the national planning framework and procedures which requires community engagement and consultation.

When asked, SEPA have a duty to provide flood risk advice to Planning Authorities (this includes local authorities) under Section 72 of the Flood Risk Management (Scotland) Act 2009. SEPA's role is to provide technical review and advice regarding the hydrological design of the scheme, in terms of data and methods used to derive the design flows that the scheme will be based on.

As part of our regulatory role, SEPA will provide pre-application advice to landowners, communities and individuals, where appropriate, with regard to sediment management and in-stream works (see section on SEPA's role in sediment management below).

Concern raised: Only the Scottish Flood Forum provides practical advice

SEPA and the Scottish Flood Forum have separate remits for the provision of flood related advice.

The Scottish Flood Forum is an independent charitable organisation, funded in the most part by Scottish Government, whose main remit is to support individuals and communities in Scotland at risk of or with experience of flooding. Their aim is to reduce the impacts of flooding by providing immediate support and by establishing a network of community resilience groups in flood risk areas, to equip communities to cope with flooding. Unlike SEPA, they are not a regulatory authority, with their focus being on direct community level support and the promotion of resilience through the provision of practical advice.

The Scottish Flood Forum have the FloBus which can be taken to communities on request to demonstrate property level protection measures.

SEPA work closely with the Scottish Flood Forum to share knowledge and advice of community flooding issues. SEPA and the Scottish Flood Forum share information and guidance on topics like Flooding Insurance, Property Level Protection, Flood Resilience and Flood Warning to ensure a consistent voice. This includes quarterly meetings and supporting various community events that either organisation is attending or supporting.

3 and 4. SEPA's role in Flood prevention schemes

Concerns raised: Lack of instructions from SEPA on flood prevention schemes. An absence of SEPA's remit to design, build and assist communities in building flood defences. No organisation/person has the responsibility to build flood defences.

SEPA are Scotland's national flood forecasting, flood warning and strategic flood risk management authority and do not have the powers to provide instructions on flood protection schemes.

[The Flood Risk Management \(Scotland\) Act 2009](#) assigns responsibility for developing and building flood protection schemes in Scotland to local authorities. Local authorities develop proposals for flood protection schemes for areas where the need for a scheme has been identified and where the initial investigations by the local authority show this is a feasible and sustainable option.

Concern raised: SEPA hinder communities from doing flood prevention works.

Whilst SEPA are generally supportive of measures taken by communities to manage flood risk in their area, there is a need to fully understand the impacts which may be associated by such works to ensure there is no unintended increase in flood risk elsewhere as a result and to ensure such activities do not impact the water environment. All proposed activities are considered on a case-by-case basis.

River engineering, including instream works for flood management, is authorised by SEPA under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (otherwise known as CAR (which will become part of the Environmental Authorisations (Scotland) Regulations or EASR from November 2025)). In most cases this means the operator applies to us for either a registration or licence. SEPA have a regulatory duty under these regulations to protect the water environment from harm via proportionate regulation, based on the level of risk posed by an activity.

In the case of the Speymouth Environmental Partnership, pre-application advice has been provided on multiple occasions through site visits and emails, and SEPA have previously confirmed that proposals set out in the report by CBEC (Hamish Moir) were likely to be supported, if an application for these proposals were made. We have provided guidance on the application process and await a formal application for authorisation being submitted to our water permitting team.

Concern raised: SEPA cannot fund any flood alleviation/management scheme

Funding for flood protection schemes is the responsibility of the Scottish Government / CoSLA and local authorities.

Concern raised: SEPA and local authorities ignore locally commissioned reports from experts in flooding saying that they did not commission them. These local reports are far more detailed and give flood scheme options that local authorities and SEPA don't.

[The Flood Risk Management \(Scotland\) Act 2009](#) assigns responsibility for developing and building flood protection schemes in Scotland to local authorities. SEPA have no current powers to develop or build schemes. Local authorities develop proposals for flood protection schemes for areas where the need for a scheme has been identified and where the initial investigations by the local authority show this is a feasible and sustainable option.

When asked, SEPA have a duty to provide flood risk advice to Planning Authorities (this includes local authorities) under Section 72 of the Flood Risk Management (Scotland) Act 2009. SEPA's role is to provide technical review and advice regarding the hydrological design of the scheme, in terms of data and methods used to derive the design flows that the scheme will be based on.

Where community-led projects require SEPA authorisation, we would engage by providing pre-application advice on any locally commissioned reports from specialists, and approval for such works would be achieved through a formal application for an authorisation from SEPA.

5. SEPA's role in sediment management

Concerns raised: SEPA's role in approving the removal of sediment and gravel out of rivers

SEPA have no powers to undertake work in watercourses or require others to undertake works, including dredging.

If engineering, like dredging, is not carried out appropriately it can cause serious environmental damage. In some cases, by changing the river, it can also have unintended consequences, such as increased erosion or moving erosion and sediment deposition to new places, potentially making flooding worse.

As activities such as impoundments and engineering within the vicinity of a watercourse have the potential to impact on the water environment, they are authorised under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR). This includes activities to mitigate flood risk.

Flood risk is not a regulatory function within the licensing of activities under the CAR. SEPA will not seek to control or regulate flood risk through CAR; our regulatory duties only extend to the protection of the water environment. SEPA recognise that dredging in some specific locations can help partially reduce flood risk, and we have authorised such works through CAR.

Concern raised: In drawing up FRM Local Plans, no consideration is given to land use and its effects on water flow. One major problem ignored by SEPA and LAs is sediment transportation by rivers.

SEPA are responsible for producing strategic FRMPs, with the local FRMPs being the responsibility of lead local authorities. Within the FRMPs, SEPA consider whole river catchments when making flood risk management decisions. As part of this approach SEPA produced an assessment under Section 20 of the Flood Risk Management (Scotland) Act 2009 that considers whether techniques that restore, enhance or alter natural features and characteristics could contribute to managing flood risk. These techniques are referred to as natural flood management (NFM) and include sediment management. Based on Section 20 assessment, we recommend more detailed studies to be carried out by local authorities which further assess natural flood management potential.

Concern raised: Despite the FRM(S) Act, 2009, LAs do not remove such sediment and obstructions.

Local authorities have the power to carry out clearance and repair works. However, they only have a duty to do so where it would significantly reduce flood risk. A number of local authorities around Scotland have undertaken detailed analysis of dredging effectiveness and feasibility as a flood risk management action, with limited benefits identified.

Information on the management of watercourses for flood risk management purposes can be found in the local FRMPs published by local authorities. In Moray, specifically, there is a section on the local authority approach to assessing bodies of water and scheduling clearance and repair works.

Concern raised: SEPA and NatureScot are reluctant to approve the removal of these [sediment and obstructions].

As set out above, if engineering activities like dredging are not carried out appropriately, they can cause serious environmental damage. In some cases, by changing the river, dredging can also have unintended consequences, such as increased erosion or moving erosion and sediment deposition to new places, potentially making flooding worse.

However, we have authorised such works through CAR in some specific locations when appropriate.

To approve any sediment management or dredging an application must be made for an authorisation through the CAR.

6. The accuracy of the cost of flooding

Concerns raised: The cost of flooding for each PVA is fictitious; they are calculated centrally using data from English river basins. SEPA and Local Authorities (LA) refuse to discuss flood costs calculated by communities. SEPA costings are inaccurate. In FRM Local Plans, SEPA lists the cost of flooding and other statistics as being “estimates.”

Under the Flood Risk Management (Scotland) Act, 2009, SEPA are required to undertake a Scotland wide approach to determine the potential economic impacts of flooding. This is done as part of the National Flood Risk Assessment, last published in 2018 and due to be updated in December 2025.

Our method for calculating economic figures is consistent with a national assessment using industry standards and uses data from these sources:

- SEPA’s flood hazard maps (where flooding occurs within Scotland),
- Ordnance Survey data to identify each residential and non-residential property within Scotland, and
- The Flood Hazard Research Centre’s Multicoloured Manual (MCM) and Multicoloured Handbook (MCH).

SEPA report economic impacts in terms of annual average damages (AADs). AAD represents the average annual loss, calculated over a long-term period based on the current industry standard method using data from the MCH. This dataset is used across the UK and Ireland and represents the best available data on flood damages. These values represent national economic damages, rather than the financial loss to individual properties, residential or commercial.

Concern raised: SEPA and LA ignore social, economic, and environmental costs/losses including utilities.

Through flood risk management planning process, SEPA assess flood risk to agriculture, buildings, cultural heritage, environmental designations, transport and utilities, as examples. Flooding impacts are then determined using the Flood Hazard Research Centre's Multi-Coloured Manual and Multi-Coloured Handbook which provides industry standard techniques for assessing economic flood impacts to different receptors as well as indirect impacts to health, indirect economic losses and environmental costs. This work is done as part of SEPA's National Flood Risk Assessment which was last published in 2018.

During partnership working with local authorities and utility companies, a suite of additional local information is used to assess the impact of flooding. This includes information from asset owners, including utility companies, roads and rail infrastructure and Nature Scot on designated sites.

Concern raised: In one community, experts have warned of a threat to sewage treatment works, houses, and community assets because of the movement of a river. The estimated probable cost of damage is £10 million. A SEPA representative asked if the community had considered using sandbags to prevent the projected damage.

Without the context of this example, we have unfortunately not been able to respond in detail to the concern. Flooding issues that affect sewage treatment works are discussed with Scottish Water through the flood risk management planning process. As set out above, considerations regarding the funding, development and operation of local flood defences is a matter for Local Authorities.

Concern raised: SEPA can give restricted grants to assist communities recover from flooding after the event.

SEPA do not have the powers or funding to provide grants to communities to recover from flooding after an event. Scottish Government have in the past provided financial support to individuals post flooding. As addition, the Scottish Flood Forum can provide independent advice to communities in the event of a flood.

7. Concerns over the experience of responsible authorities

Concerns raised: Communities cannot understand why SEPA consults with organisations that have no legal responsibilities for flooding, have no expertise in flood management and/or construction of flood alleviation schemes. Organisations do not have the finances to pay for such schemes.

We conduct public consultation throughout the flood risk management planning process to gain understanding of public / community views. In addition, SEPA work in collaboration with several organisations that have responsibility for flood risk management, and which have an interest in flooding nationally or locally. We also work with our partners in the response and resilience community to ensure strong coordination across our respective services. Together we are working towards reducing the overall impacts of flooding in Scotland.

The Scottish Government oversees the implementation of the Flood Risk Management (Scotland) Act 2009, which requires the production of FRMPs and local FRMPs. Scottish Ministers are responsible for setting the policy framework for how organisations collectively manage flooding in Scotland.

The distribution of Scottish Government grant funding for actions in the local FRMPs is considered by Scottish Ministers and COSLA, through the Settlement and Distribution Group.

I trust the above information is helpful, but should you wish to discuss the above matter further, please do not hesitate to contact ask@sepa.org.uk.

Data, Environment and Innovation