

Flood Risk Management in Scotland: 2018  
Consultation on Potentially Vulnerable Areas  
Consultation outcome report

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# Executive summary

Flood risk management planning is a matter of both national and local importance. Our aim is to ensure that national efforts of Responsible Authorities are targeted to areas of greatest risk, and that these areas are informed by as much local knowledge of flooding as is possible.

To help direct efforts to reduce flood risk, the Scottish Environment Protection Agency (SEPA) identifies local catchments where significant risk exists now or is likely to occur in the future. These are Potentially Vulnerable Areas which require the production of flood risk management plans coordinating the activity of Responsible Authorities in reducing flood risk. Scottish Ministers formally designate Potentially Vulnerable Areas, based on the advice of SEPA and its consultation with partners and the public.

Potentially Vulnerable Areas are derived from the National Flood Risk Assessment, which is updated and published every six years. The National Flood Risk Assessment takes into account past, current and future flood risk, using recorded events, observations and computer modelling. It considers flooding from rivers, the sea and from surface water. Embedding climate change knowledge in flood risk management planning will ensure that our efforts help communities, infrastructure and way of life to adapt to climate change. Potentially Vulnerable Areas are a vital part of helping us to understand and prioritise where coordinated and planned efforts could be of most benefit.

Since 2011, when Potentially Vulnerable Areas were first identified, SEPA and our partners have been working hard to improve data and methods of flood risk assessment. As a result, we now have new information. This has resulted in changes to the Potentially Vulnerable Areas. Although it is a science and evidence-led process, feedback is important to sense check our understanding, as there may be local impacts of which we are unaware. New Potentially Vulnerable Areas have been added since 2011 due to an improved understanding of risk, or because of future risk due to climate change, or land use change. Some local catchments have been proposed for de-designation where our more recent data shows less risk than the 2011 National Flood Risk Assessment. There have been boundary adjustments to some Potentially Vulnerable Areas to better represent the distribution of risk within them. Many Potentially Vulnerable Areas remain unchanged but our understanding of the risk within them all has improved.

We consulted on the Potentially Vulnerable Areas from 1 May 2018 for a three month period to make sure we have got it right. This provided an opportunity for members of the public and our partners to provide us with feedback on the proposed changes.

As a consequence of the consultation, we have amended and added new Potentially Vulnerable Areas. The broad support we had for the Local Plan Districts, the National Flood Risk Assessment and the consultation arrangements up until 2021, means that we and our partners can proceed with confidence to the next stages of flood risk management planning.

## Purpose

This document provides an analysis of the responses received to the *Flood Risk Management in Scotland – 2018 Consultation on Potentially Vulnerable Areas*. It summarises the views we received and explains the actions we are taking in response. In addition to informing our view on Potentially Vulnerable Areas for 2021-2027, the consultation was also an important opportunity to gather views on the retention of the Local Plan Districts and future consultation arrangements for flood risk management. This document also describes how we carried out the consultation and who we consulted with.

## Summary of responses

In total we received 263 responses: 256 online responses and seven separate written responses. We are grateful to individuals and organisations for considering the proposals and providing feedback. Responses varied from detailed comments on Potentially Vulnerable Areas to others that were brief and focused on a single theme.

Compared to the first consultation on Potentially Vulnerable Areas in 2011, there has been a welcome 417% increase in the number of responses. This is likely to reflect the increased awareness the public has of flood risk management planning in Scotland as well as the strengthened partnership working between SEPA and Responsible Authorities achieved in preparation of Scotland's first Flood Risk Management Strategies in 2015.

We received general agreement from respondents on our proposals for new Potentially Vulnerable Areas. Only 13% of respondents challenged areas we are proposing for designation. Similarly, only 14% of respondents requested additional locations to be identified as Potentially Vulnerable Areas. Respondents who disagreed with our proposals generally felt that the proposed Potentially Vulnerable Areas were too broad and included areas not at flood risk. Respondents also provided suggestions for new areas that they felt should be included. Their justification for including these areas often reflected past experiences with flooding and requests were sometimes accompanied by comments asking for more action by authorities to manage flood risk.

We received a good level of support for the National Flood Risk Assessment, the retention of the 14 Local Plan Districts, and for the planned consultation arrangements for the period 2018-2021.

We also received comments on a wide range of issues that, although not directly relevant to the National Flood Risk Assessment or Potentially Vulnerable Areas, clearly illustrate areas of general concern for how flood risk is managed in Scotland. This included concerns around the use of dredging and maintenance of watercourses to manage flood risk, building on the floodplain and insurance companies using SEPA flood maps to influence premiums. These issues are also summarised in this report.

## What SEPA has done in response to the consultation?

In taking account of the views received SEPA is proposing to amend one of the Potentially Vulnerable Areas that we consulted on and identified two additional Potentially Vulnerable Areas. The new areas identified are Kirkmichael (South Ayrshire Council) and Beaully (Highlands Council) while the Potentially Vulnerable Area being amended is North Uist to include Baleshare (Comhairle nan Eilean Siar). SEPA has already undertaken a number of actions based on information and responses provided during the consultation, such as discussing these with relevant local authorities. We will continue to engage with our stakeholders and ensure working together is central to improving flood risk management in Scotland. Information provided on local flooding and other issues will be discussed with local authorities as appropriate. No changes have been made to the Local Plan District proposals or the Statement on Consultation Arrangements as a result of feedback received.

## What will happen next?

This consultation exercise has been an important part of the process for identifying Potentially Vulnerable Areas. A revised set of Potentially Vulnerable Areas, amended as appropriate using the views expressed during the consultation, will now be submitted to Scottish Ministers for approval. Following this a final set of Potentially Vulnerable Areas will be published by SEPA in December 2018, alongside the updated National Flood Risk Assessment. The Flood Risk Management (Scotland) Act 2009 requires that for each Potentially Vulnerable Area identified:

- We will produce flood hazard and flood risk maps for the area. In fact, SEPA produces maps with full national coverage, which are part of a rolling update programme;
- We, in consultation with our partners, will set objectives and identify actions to address flood risk. These will be published in SEPA's Flood Risk Management Strategies for the period 2022-2027;
- Local Flood Risk Management Plans will be produced by lead local authorities; and,
- Scottish Water will undertake an assessment of the risk of flooding from the sewerage system.

SEPA will continually engage with our stakeholders to help deliver successful flood risk management for Scotland. The National Flood Risk Assessment will now inform future Flood Risk Management Strategies which will be published in December 2021.

Potentially Vulnerable Areas will be published on SEPA's website by 22 December 2018.

The Statement of consultation arrangements will be published on SEPA's website by 22 December 2018.

# Chapter 1: Introduction

## Background

The *Flood Risk Management in Scotland: 2018 Consultation on Potentially Vulnerable Areas* opened on 1 May 2018 for three months. This document provides a summary of the consultation exercise, views expressed by respondents and the action taken by SEPA in response to those views.

The consultation process forms part of the work to review and update the 2011 National Flood Risk Assessment, as required by the Flood Risk Management (Scotland) Act 2009. Our understanding of flood risk is constantly improving and periodic reviews and updates are essential to ensure we can effectively support flood risk management in Scotland.

Effective partnership working and engagement is central to how we deliver flood risk management. This consultation on Potentially Vulnerable Areas is an example of how we can achieve successful partnership working by incorporating local knowledge and information into the identification of areas most at risk.

## Summary of actions taken by SEPA to publish and consult on the Potentially Vulnerable Areas

To promote the launch of the consultation, we published adverts in a number of publications both in print and online including the Edinburgh Gazette, Daily Record, and The Metro. A digital campaign using social media and website platforms was also developed as well as a radio campaign broadcasting throughout Scotland. We provided all local authority flooding teams with briefing packs with access to draft article templates and social media messages which they could use to promote the consultation within their organisation and local area.

We also wrote letters to Scottish Water, Scottish Natural Heritage, the Environment Agency, Cumbria County Council, Northumberland County Council, all Category 1 and 2 Responders<sup>i</sup>, (Scottish) Members of Parliament and Members of the Scottish Parliament.

Our Flooding Communications team circulated details of the consultation in a number of SEPA publications including our bi-annual Development and Delivery newsletter, Flooding Gateway newsletter and our quarterly Local Plan District Partnership e-bulletin.

We promoted the consultation to our other partners through the National Flood Management

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<sup>i</sup>Category 1 and 2 Responders are defined as part of the Civil Contingencies Act 2004 which seeks to minimise disruption in the event of an emergency. Category 1 Responders are 'core' responders: local authorities, police, fire and rescue services, ambulance service, NHS health boards, SEPA and the Maritime and Coastguard Agency. Category 2 Responders are key co-operating responders in support of Category 1 Responders. These include gas and electricity companies, rail and air transport operators, harbour authorities, telecommunications providers, Scottish Water, the Health and Safety Executive and NHS National Services Scotland.

Group, Cross Border Advisory Group, Lead Local Authority Forum, Flood Risk Management Local Advisory Groups and Local Plan District Partnerships.

Whilst it is SEPA's statutory duty to prepare the National Flood Risk Assessment and identify Potentially Vulnerable Areas, local authorities and others have important duties to manage flood risk within them. To ensure the outputs of the assessment were a fair reflection of flood risk within their areas we invited all 32 local authorities and other Responsible Authorities to attend one-to-one workshops prior to the consultation.

## Summary of consultation questions

Theme	Consultation question
Climate change and flooding	Our future Flood Risk Management Strategies must take account of climate change. Do you think that flooding is one of the major climate change challenges Scotland will face in the future?
National Flood Risk Assessment methodology	Do you support or have any comments on the 2018 National Flood Risk Assessment?
Identification of Potentially Vulnerable Areas	Are there areas that <b>have</b> been identified as Potentially Vulnerable Areas <b>that shouldn't be</b> ?
	Are there areas that <b>have not</b> been identified as Potentially Vulnerable Areas that <b>should be</b> ?
Local Plan Districts	Local Plan Districts were consulted upon and agreed in 2011. With minor adjustments, we intend to retain the 14 Local Plan Districts. Do you support the retention of the 14 Local Plan Districts?
Consultation Arrangements	Do you agree with the consultation arrangements outlined to support the delivery of flood risk management planning in Scotland? Please provide suggestions of alternative or additional arrangements that you would like to see undertaken.

## Consultation responses and respondents

We would like to thank all organisations and individuals that participated in the consultation process<sup>ii</sup>. While the majority of responses followed the format of the online questionnaire, some respondents submitted non-standard responses (such as emails or stand-alone documents). Although not all of these addressed the consultation questions directly, wherever possible themes were identified and these have been included in the analysis.

Some respondents also provided additional information in the form of photographs, images and links to other studies. We have considered these alongside the relevant comments.

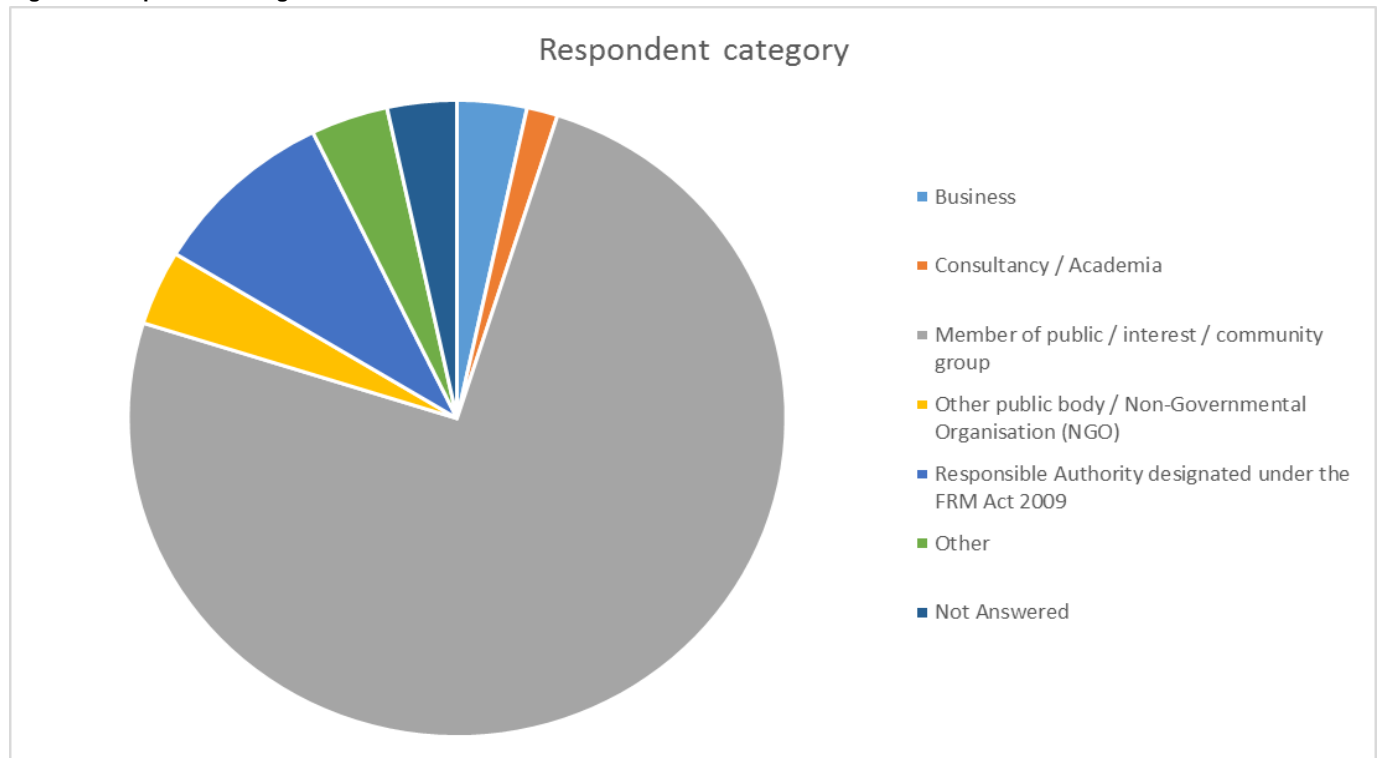
We received a total of 263 responses to the consultation. To aid analysis of responses,

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<sup>ii</sup>Unless specified, when referring to 'responses' and 'respondents', we mean both organisational and individual responses and respondents.

respondents were grouped into categories. **Figure 1** shows the breakdown of respondents by each category. These included 24 responses from Responsible Authorities, 10 from other public bodies or non-governmental organisations, 4 from consultancies and academia, 9 from business and 197 from individual members of the public or community groups. Nine respondents did not answer the question on respondent category and 10 chose the 'other' option. A full list of organisations that responded to the consultation is provided in **Annex 1**.

**Figure 1. Respondent categories**



**Chapter 2** on the analysis of the responses covers the key topic areas of the consultation:

- Climate change and flooding
- National Flood Risk Assessment method
- Proposed Potentially Vulnerable Areas
- Local Plan Districts
- Flood Risk Management consultation arrangements



## Chapter 2: Analysis of responses

This section of the consultation report looks at the responses to the specific questions asked. Common additional themes identified are summarised in **Chapter 3: Other national themes**.

### Climate change and flooding

#### Consultation question:

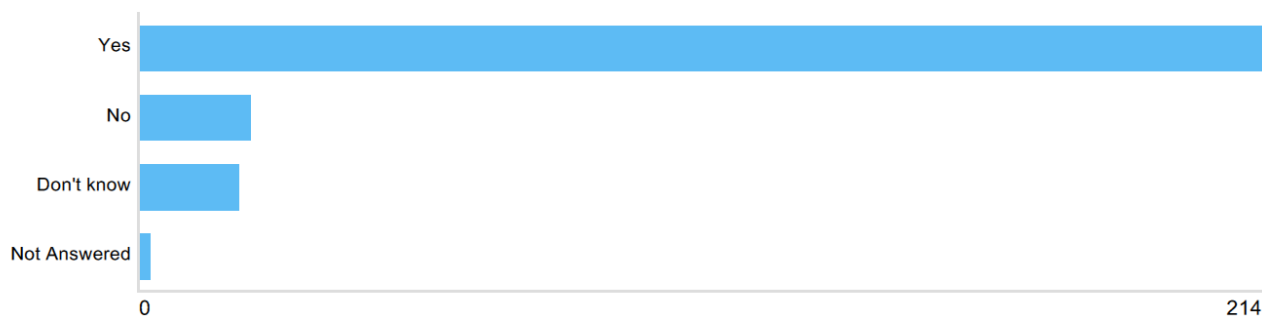
Our future Flood Risk Management Strategies must take account of climate change. Do you think that flooding is one of the major climate change challenges Scotland will face in the future?

#### Overview

There were 214 respondents (81%) who agreed that flooding is one of the major challenges Scotland will face in the future and 21 respondents who disagreed. Nineteen respondents did not express an opinion while two did not answer the question.

Of the 21 respondents who did not think that flooding was one of the major climate change challenges Scotland will face in the future, the majority were members of the public or from a community interest group. **Figure 2** summarises the responses received.

Figure 2. Answers to question on climate change and flooding



#### What you said and our response

This section explains the main themes that have been raised through this question and SEPA's response.

##### Theme 1: Flooding is a major climate change challenge

#### Summary of responses

Most respondents acknowledged that climate change would lead to more extreme weather events, increased rainfall and rising sea levels. Some respondents commented on the effect of warmer temperatures on snowmelt and the risk of flash flooding. Other respondents remarked on a trend of more frequent intense rainfall events during the summer months, increasing the risk of river and

surface water flooding. Some responses remarked on the impacts of increased flood risk in relation to the environment, historic environment and infrastructure.

Public bodies that responded to this question recognised that increased flood risk because of climate change presents a challenge for their organisations. Comments were received about the need to be better prepared for example, by using property-level resilience measures or developing adaptation plans.

Scottish Natural Heritage discussed climate change adaptation as a key component of their corporate plan and provided a link to their publication *Climate Change and Nature in Scotland*<sup>iii</sup>, while the Loch Lomond and The Trossachs National Park Authority discussed how climate change and flooding is included in their *National Park Partnership Plan*.

A few respondents believed that there was a lack of consensus on climate change trends in Scotland. In particular, a few responses highlighted the potential for increased periods of drier weather as well as wetter weather.

### **SEPA response**

Key long-term climate change trends for Scotland indicate that the weather may become more variable. Typical summers are anticipated to be warmer and drier and typical winter/autumn periods milder and wetter. Sea levels are also expected to continue to rise. We can expect to see increased frequency and intensity of extreme precipitation events, an increase in summer heatwaves, extreme temperatures and drought and a reduced occurrence of frost and snowfall.

The 2018 National Flood Risk Assessment considers the flooding impact associated with climate change using scenarios based on the UK Climate Projections 2009 (UKCP09) analysis. SEPA recognises that the impacts of climate change will depend on regional variation as well as the local characteristics of an area.

The next major update to UK climate change understanding will be UK Climate Projections 2018 (UKCP18) which are expected to be published in November 2018. When the updated climate change projections are made available, SEPA will begin work to take them into account in our flood hazard mapping which will help to inform future flood risk management activities. Understanding the impacts of climate change on flood risk will help us to inform sustainable flood risk management plans to manage both current and future flood risk.

## **Theme 2: Not just climate change which increases flood risk**

### **Summary of responses**

Many respondents believed that climate change was only one of a combination of factors increasing flood risk in Scotland and we received many comments on other trends that contribute to flood risk.

Many respondents were concerned about the potential for flooding to be exacerbated by development on the floodplain.

Other concerns included: field drains being used to remove water from agricultural land into

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<sup>iii</sup> <https://www.nature.scot/climate-change-and-nature-scotland>

watercourses, poor clearance and maintenance of watercourses and drainage systems and an increase in impermeable hard surfaces.

***SEPA response***

SEPA acknowledges that a variety of factors is likely to exacerbate the impact of flooding in the future. In addition to climate change this includes demographic change, changes in land use and other societal changes.

SEPA is a key agency in the land use planning process in Scotland and works to ensure it delivers sustainable flood risk management. This includes ensuring inappropriate development is avoided in areas at medium to high flood risk. Furthermore, we are in the process of developing a Flooding Strategy that describes these wider influences on flood risk management and how Scotland can adapt to a future with higher sea levels and where rainfall is likely to be more intense and frequent.

## National Flood Risk Assessment method

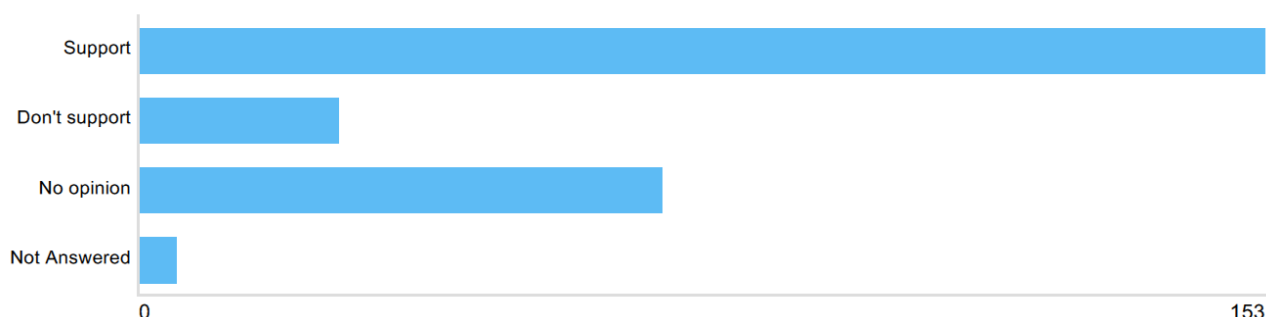
### Consultation question:

Do you support or have any comments on the 2018 National Flood Risk Assessment method?

## Overview

There were 153 respondents (58%) who expressed support for the National Flood Risk Assessment method. Twenty-seven respondents did not support the method, while 71 did not express an opinion and five did not answer the question. **Figure 3** summaries the responses received.

Figure 3. Answers to question on the National Flood Risk Assessment method



## What you said and our response

This section explains the main themes that have been raised through this question and SEPA's response.

### Theme 1: Support for the assessment

#### Summary of responses

There was strong support for the National Flood Risk Assessment method. This included support for the assessment taking account of: more influencing factors which can be locally significant, especially in rural communities; inclusion of community scale impacts; inclusion of climate change impacts and the improved representation of building footprints. There was also an acknowledgement from respondents that this has been a collaborative process which has allowed the national perspective to be translated to a local level.

#### SEPA response

SEPA welcomes the support for the National Flood Risk Assessment method. Our understanding of flood risk is constantly developing and it is not a static field of work. A periodic review is essential to ensure we effectively support flood risk management in Scotland. The Flood Risk Management (Scotland) Act 2009 requires SEPA to review and update the assessment every six years. The National Flood Risk Assessment will also be updated for the preparation of Flood Risk Management Strategies to be published in 2021.

## Theme 2: Reasons for not supporting

### **Summary of responses**

Respondents who did not support the National Flood Risk Assessment method gave the following reasons:

- Concerns that flooding issues outwith Potentially Vulnerable Areas would not be addressed;
- Concerns that the assessment does not incorporate a consideration of potential development sites;
- Concerns that flood protection schemes have not been considered;
- Concerns that there has been insufficient consideration of local knowledge;
- Concerns that the assessment focus is on larger urban settlements and misses smaller rural communities; and
- Concerns that the scale of the assessment has meant areas that have not flooded are included in Potentially Vulnerable Areas.

### **SEPA response**

#### **Concerns regarding flooding outwith a Potentially Vulnerable Area**

Potentially Vulnerable Areas identify areas of nationally significant flood risk. There will always be areas outside Potentially Vulnerable Areas that still flood and need action. Over 90% of homes and businesses at risk in Scotland are within Potentially Vulnerable Areas and Responsible Authorities are aware that flood risk management is not limited to these areas. However, locations outside of Potentially Vulnerable Areas generally do not require the coordinated multi-agency response often needed to manage flooding within Potentially Vulnerable Areas.

#### **Does not consider potential development sites**

The 2018 National Flood Risk Assessment does not deal with planned development sites as detailed in Local Development Plans. SEPA will respond to site-specific Flood Risk Assessments on a case-by-case basis to prevent development which would have a significant probability of being affected by flooding or would increase the probability of flooding elsewhere. SEPA will use the outputs of the 2018 National Flood Risk Assessment as additional information when responding to all Local Development Plans and individual planning applications.

#### **Consideration of flood protection schemes**

Our current flood hazard maps represent an undefended scenario except in areas where a more detailed study has been incorporated which includes consideration of a flood protection scheme. This means that the majority of formal flood protection schemes have been taken into account within the National Flood Risk Assessment based on current understanding of their effectiveness.

#### **Lack of local knowledge**

During the process to identify Potentially Vulnerable Areas, we held workshops with local authorities in Scotland and took proposals to local advisory groups. These workshops were an opportunity for local authority flood officers and others to contribute local knowledge to inform our decision-making process. The consultation provided an opportunity for other organisations and members of the public to comment on how our proposals could be improved. As a consequence, we feel the balance is right between taking forward a strategic national assessment and taking account of local issues.

**Inclusion of small rural settlements**

The 2018 National Flood Risk Assessment method has been amended since 2011 to more explicitly consider and represent remote and rural communities.

A wider range of community facilities were considered, representing the many services and activities which come together to allow a community to prosper. These included libraries, courts, job centres and other civic services. A community scale element has been incorporated in the assessment alongside the risk to community facilities to identify locations where the functionality of a community is compromised by the proportion of properties at risk.

**Scale of assessment**

Potentially Vulnerable Areas are local catchments within which there is significant flood risk. This does not mean that everywhere in a Potentially Vulnerable Area is at risk of flooding.

## Proposed Potentially Vulnerable Areas 2018

We asked two questions about identifying Potentially Vulnerable Areas. The first question invited respondents to tell us where they disagreed with our proposed identification of a Potentially Vulnerable Area. The second question asked respondents to identify other areas that they thought should be Potentially Vulnerable Areas.

We also gave respondents the option to comment in detail on a particular Potentially Vulnerable Area. Up to 10 specific areas could be commented on via the online consultation questionnaire. If a respondent wanted to comment on more than 10 then they were requested to contact SEPA. These comments were reviewed to determine whether the respondent supported the proposal to (de-) designate the Potentially Vulnerable Area.

### Overview

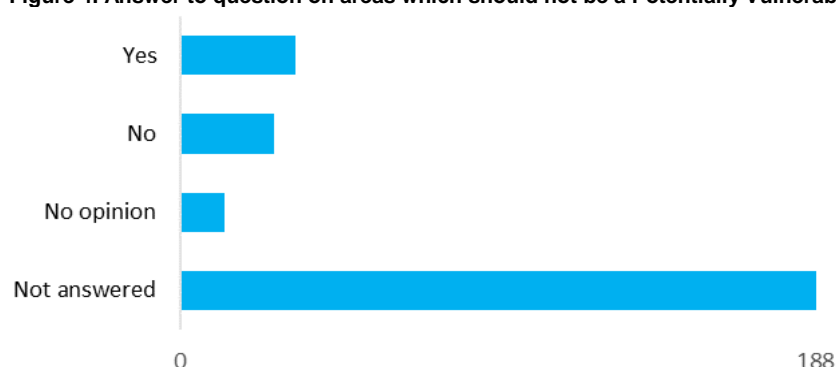
#### Consultation question:

Are there areas that **have** been identified as Potentially Vulnerable Areas **that should not** be?

There were 72 responses to this question. Thirty-four respondents (13%) identified areas that they considered should not be a Potentially Vulnerable Area. The rest of the respondents either did not challenge our proposed Potentially Vulnerable Areas or did not express an opinion.

Some respondents to this question identified areas they believed **should** be identified as potentially vulnerable. These responses were analysed under the next question. **Figure 4** provides a summary of the responses received in relation to areas that have been identified as potentially vulnerable that should not be.

Figure 4. Answer to question on areas which should not be a Potentially Vulnerable Area



### What you said and our response

This section explains the main themes that have been raised through this question and SEPA's response.

Only 13% of respondents challenged the proposed identification of Potentially Vulnerable Areas. These responses fall into two main themes which are discussed below. The rationale provided in the responses that challenged identification of Potentially Vulnerable Areas tended to question the

likely extent of flooding in the proposed area or was of the view that the scale of the area was too large and not sufficiently locally-detailed. No objections were received from Responsible Authorities.

## **Theme 1: Elevated areas within Potentially Vulnerable Areas**

### ***Summary of responses***

A number of respondents pointed out that elevated areas (for example, hills) have been included within the Potentially Vulnerable Area even though these areas are not at risk of flooding.

### ***SEPA response***

Potentially Vulnerable Areas are local catchments where flooding is considered to be nationally significant and are identified to help prioritise where further investment or coordinated action between authorities is needed to reduce flood risk. These areas are based on local catchments as it is within the context of the wider catchment that flooding can be best understood and managed. Within these catchment units there will be some areas that are not at flood risk, including areas of elevated topography.

## **Theme 2: Scale of Potentially Vulnerable Areas**

### ***Summary of responses***

We received a number of comments on the scale of Potentially Vulnerable Areas. Many respondents believed that Potentially Vulnerable Areas were too large and that not all areas within them are at risk of flooding. Some respondents identified specific areas within a Potentially Vulnerable Area that had not experienced flooding. Some respondents also expressed concern about whether being located within a Potentially Vulnerable Area would affect their home insurance premiums or the value of their property.

### ***SEPA response***

As explained above in regard to elevated areas being included within Potentially Vulnerable Areas, we have used catchment units as the basis for identifying where the potential impact of flooding is greatest. Within these catchments are areas at significant flood risk and others (for example, areas of elevated ground) that are not. However, it is within the context of catchments that flooding is often best understood and managed.

The scale of Potentially Vulnerable Areas is intentionally quite broad to enable this catchment approach to manage flooding. The Potentially Vulnerable Areas are not tools to identify individual properties at risk and we will continue to advise insurance companies against using Potentially Vulnerable Areas as a basis for influencing home insurance premiums.



### Consultation question:

Are there areas that **have not** been identified as Potentially Vulnerable Areas that **should be**?

## Overview

There were 45 responses to this question. Thirty-seven respondents (14%) suggested additional locations to be included as a Potentially Vulnerable Area. The rest of the respondents either did not think there were areas that should be a Potentially Vulnerable Area or did not express an opinion. **Figure 5** summarises the responses to the question that invited respondents to identify new Potentially Vulnerable Areas.

Figure 5. Answer to question on identifying new locations for Potentially Vulnerable Areas



## What you said and our response

This section explains the main themes that have been raised through this question and SEPA's response.

14% of respondents suggested additional areas that should be included as Potentially Vulnerable Areas. Out of those, 33 respondents were specific about the area they considered should be designated. The remaining respondents made general comments on broad areas that they believed should be designated but they did not provide sufficient information to enable us to identify the relevant catchment units.

The primary reason for respondents proposing additional locations to be designated as a Potentially Vulnerable Area is due to local knowledge or experience of flooding.

### Theme 1: Local flooding

#### Summary of responses

Most respondents answering 'yes' to this question described local flooding as having occurred in the location they wanted to see designated a Potentially Vulnerable Area. Some respondents described a particular flood event they had witnessed or gave a more general comment that they believed the area to be at flood risk. Other respondents raised issues around inadequate drainage or land development that could exacerbate flood risk. Some of the respondents provided additional

information in support of their response including photographs of flooding and links to local flood studies.

### **SEPA response**

We value the input of local knowledge into the process to identify areas of significant flood risk. The opportunity for organisations and individuals to comment on locations which they consider should be designated as Potentially Vulnerable Areas is an important step in refining the outputs of the National Flood Risk Assessment. Where reliable local information has been provided we have used it to inform our decision-making.

We have reviewed each of the additional areas suggested by respondents. Our challenge is to establish a plan-led and risk-based approach to flood risk management where the actions of Responsible Authorities and others are coordinated in areas where the potential impacts are greatest. This prioritisation inevitably means that not all areas at risk of flooding will be within Potentially Vulnerable Areas. SEPA's flood maps, which are not part of this consultation, more accurately identify locations at risk of flooding in Scotland.

We have considered the extent of flooding and the potential impacts in the locations suggested by respondents. As a consequence, and following discussion with the relevant local authorities, we have altered our original proposals with the inclusion of two new Potentially Vulnerable Areas and amendment of an existing Potentially Vulnerable Area. In the remaining areas suggested by respondents our further assessment of the potential impact of flooding does not indicate they are nationally significant. That does not mean that flooding is not a locally significant issue. We understand that flooding is a distressing experience and we emphasise that being outwith a Potentially Vulnerable Area does not preclude action to manage flood risk. There remains a duty on Responsible Authorities to reduce and raise awareness of flood risk in all areas at risk.

Where appropriate, we have passed flood event information to the relevant local authority to aid their local management of flood risk.

## **Comments made on particular Potentially Vulnerable Areas**

We received additional comments on Potentially Vulnerable Areas that did not answer either of the previous questions. These comments included:

- Support for our decision to designate or remove a Potentially Vulnerable Area.
- Information on local flood events and other issues within the Potentially Vulnerable Area (e.g. permitted development).
- Information on particular receptors at risk within the Potentially Vulnerable Area.
- Calls for more management to mitigate a particular flooding issue.
- Request from Scottish Canals to engage SEPA on where the canal network and supply reservoirs could be a source of flood risk.

These comments have been considered as part of our decision-making on individual Potentially Vulnerable Areas and, where appropriate, they have been passed to the relevant local authority.

## Local Plan Districts

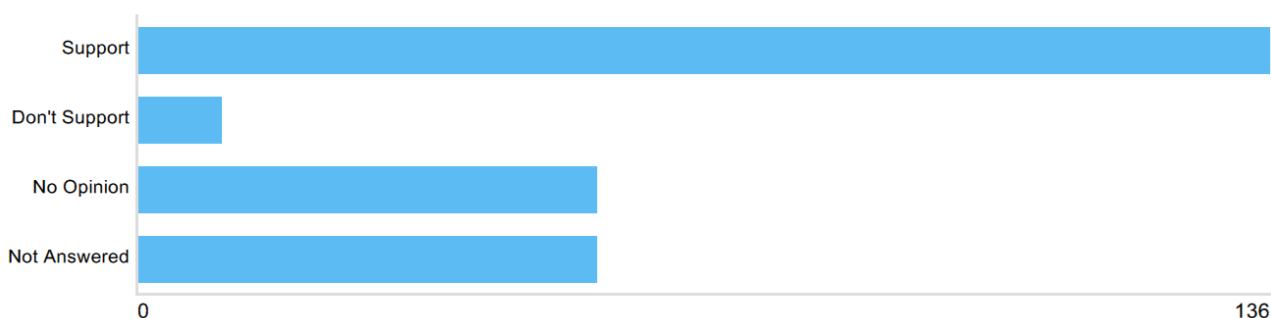
### Consultation question:

Local Plan Districts were consulted upon and agreed in 2011. With a minor adjustment, we intend to retain the 14 Local Plan Districts. Do you support the retention of the 14 Local Plan Districts?

## Overview

There were 136 respondents (52%) who expressed support for the retention of the 14 Local Plan Districts. Ten respondents did not support the retention of the 14 Local Plan Districts, while 55 did not express an opinion and 55 did not answer the question. **Figure 6** provides a summary of the responses received. Refer to **Annex 2** for a map of the Local Plan Districts.

Figure 6. Answers to question on Local Plan Districts



## What you said and our response

This section explains the main themes that have been raised through this question and SEPA's response.

### Summary of responses

The majority of respondents agreed with the retention of the 14 Local Plan Districts, with a minor boundary change at Nairn to better represent flood risk management in this area (between Local Plan District 1, Highland and Argyll, and Local Plan District 5, Findhorn, Nairn and Speyside). This minor adjustment is supported by the local authorities affected.

A small number of concerns were raised regarding the scale of the Local Plan Districts and the sharing of information within and between them. Respondents wanted to make sure that there is a clear understanding of how the delivery of actions in one area may affect another.

### SEPA response

Based on the comments received, we intend to retain the 14 Local Plan Districts, with the minor adjustment proposed for Nairn. Successful partnership working across the Local Plan Districts was a key factor in producing the Flood Risk Management Strategies and Local Flood Risk Management Plans in 2015 and 2016, respectively. Collectively, we have established a positive platform for engagement and want to continue to improve this way of working within the existing Local Plan Districts. The strong collaborative partnerships are reflected in the well-established

advisory groups (national, local and cross-border) and in the development of our knowledge and actions to reduce flood risk.

Sharing information between partners is fundamental to the successful management of flooding in Scotland. SEPA will continue to fulfil a national role in helping connect partners and facilitate the sharing of relevant information across Local Plan Districts. Similarly, the continued strengthening of partnerships will be required to ensure that the implications of actions taken in one part of Scotland are understood elsewhere.

## Future Consultation Arrangements

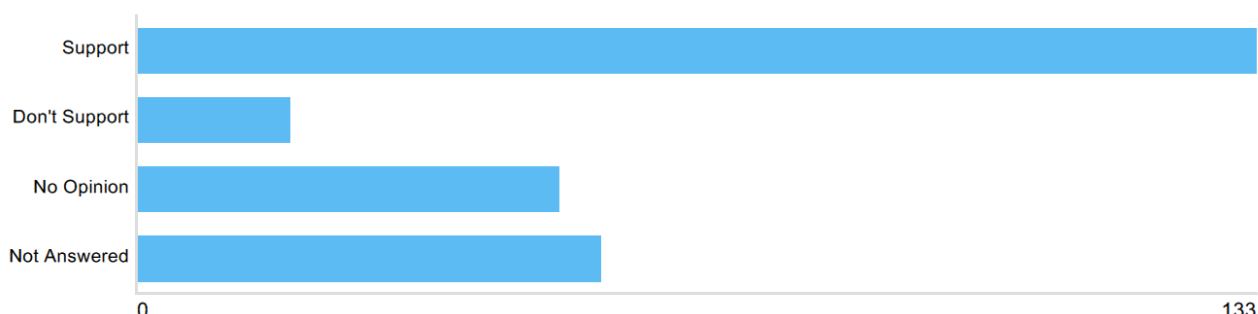
### Consultation question:

Do you agree with the consultation arrangements outlined to support the delivery of flood risk management planning in Scotland? Please provide suggestions of alternative or additional arrangements that you would like to see undertaken.

## Overview

There were 133 respondents (51%) who expressed support for the consultation arrangements. Eighteen respondents did not support the proposed arrangements, while 50 did not express an opinion and 55 did not answer the question. **Figure 7** summaries the responses received.

Figure 7. Answers to question on consultation arrangements



## What you said and our response

This section explains the main themes that have been raised through this question and SEPA's response.

### Theme 1: Collaboration

#### Summary of responses

We received unanimous support from Responsible Authorities and other public bodies on the proposed consultation arrangements. It was highlighted that the arrangements are consistent with a collaborative approach to flood risk management. Some organisations expressed their desire to remain engaged with SEPA in the flood risk management planning process.

#### SEPA response

Working together is key to flood risk management in Scotland and we will continue to collaborate with partners to improve Scotland's Flood Risk Management Strategies and Local Flood Risk Management Plans. This partnership working and engagement is one of the key successes achieved during the first flood risk management cycle (2010-2016) that must be further developed for the production of the second Flood Risk Management Strategies and Local Flood Risk Management Plans.

## **Theme 2: Method of consultation**

### ***Summary of responses***

A few respondents to this question found the current consultation/future consultation arrangements restrictive and/or inaccessible. One respondent discussed the need for alternative methods of consultation, particularly to reach people who do not have access to a computer. Another respondent felt that we should announce consultation launches on social media. There were also comments made in relation to the structure of the current consultation and the need to ensure it is aimed at the public.

### ***SEPA response***

We are greatly encouraged by the significant increase in the number of responses to this six-yearly consultation exercise. SEPA will continue its efforts to improve the awareness and accessibility of our flooding consultations to the public. Social media was used in launching this consultation on Potentially Vulnerable Areas and it will continue to form part of the future engagement and consultation arrangements for flood risk management planning.

## **Theme 3: Better engagement with the public**

### ***Summary of responses***

There was a strong desire from some community groups to be better engaged in the consultation process. There was a suggestion for SEPA to strengthen the proposed consultation arrangements by identifying methods and approaches for engagement with local communities.

### ***SEPA response***

Communication and engagement is key to effective partnership working and collaboration. Through the development of the flood risk management plans better engagement with the public will be addressed, especially how SEPA and Responsible Authorities can improve this aspect of engagement.

# Chapter 3: Other national themes

## Overview

This section outlines additional themes that were identified from the consultation responses. Although they do not directly answer the questions asked, they are reflective of the issues that concern many members of the public and we feel it is important they are summarised in this consultation report.

## What you said and our response

This section outlines the key recurring themes that were identified and our response.

### Dredging

#### ***Summary of responses***

Concerns were raised that dredging of waterways is not regularly being carried out by Responsible Authorities and therefore flood risk is potentially increasing.

#### ***SEPA response***

After a flood, dredging is often fiercely debated. Some people think dredging could have avoided or limited the flood. Others disagree. The reality depends on the location and the size of the flood in question. Under very particular conditions, in some locations, dredging can play a role in helping to reduce the occurrence and impact of flooding. The effectiveness of dredging varies greatly and, there are many circumstances where dredging will only have a localised, small and short-lived effect. There are associated impacts on river stability and downstream flooding that must be understood before any dredging is carried out. There can also be impacts on the environment and protected habitats that need to be considered. Under more extreme flooding conditions, whether a river has been dredged or not has little to no bearing on the flood extent. Other options for managing rivers should also be considered.

Local authorities have a duty to maintain and clear watercourses if included in a schedule of local works. A detailed local investigation is the most appropriate way of establishing the benefits and associated impacts of dredging. Landowners manage their rivers using guidance from SEPA to protect the natural environment. Dredging will affect the quality of the water environment and requires authorisation from SEPA.

The location of dredging is always important and it should always be considered alongside other actions to manage flood risk within the catchment.

The following guidance is available here: <https://www.sepa.org.uk/regulations/water/guidance/>

## Clearance and maintenance of waterways

### **Summary of responses**

Concerns were raised that clearance and maintenance of waterways is not regularly being carried out leading to an increasing flood risk.

### **SEPA response**

Local authorities have a duty to maintain and clear watercourses if included in a schedule of local works. Schedules of works are available from local authorities. Landowners manage their rivers using guidance from SEPA to protect the natural environment.

## Insurance

### **Summary of responses**

Concerns were raised that the Potentially Vulnerable Areas and National Flood Risk Assessment would influence insurance companies to set higher premiums.

### **SEPA response**

The Potentially Vulnerable Areas do not identify individual properties at risk of flooding – they are a tool to help SEPA identify communities that would benefit from coordinated flood risk management planning. Not all properties within Potentially Vulnerable Areas are at flood risk and similarly, some properties outside of these areas are at flood risk.

The flood maps cannot be used by the insurance industry to interpret the flood risk of individual properties and locations. This is included in the terms and conditions that all users agree to before being able to view the map. We have an established relationship with representatives of the insurance industry and they have been involved throughout the development of SEPA's flood risk management planning process.

## Development on floodplains

### **Summary of responses**

Concerns were raised that flooding in certain areas has been exacerbated by developments (commercial and residential) on the floodplain.

### **SEPA response**

As an independent advisor on flood risk to the land use planning process in Scotland, SEPA has a duty to co-operate with planning authorities in the preparation of their development plans, as well as a statutory role to provide flood advice for certain development management planning applications. In providing advice to planning authorities on flood risk, our aim is to:

- Effectively contribute to sustainable flood management by:
  - ensuring development is avoided in areas at medium to high flood risk, from any source, unless it accords with the risk framework in Scottish Planning Policy;
  - exercising our planning functions with a view to reducing overall flood risk.
- Support the delivery of Flood Risk Management Strategies; and
- Promote the health and well-being of the people of Scotland by ensuring that proposed development does not place communities and businesses at unacceptable flood risk.



Further information on SEPA's role in land use planning can be found on our website: [www.sepa.org.uk](http://www.sepa.org.uk).

## Improved flood warning

### **Summary of responses**

Several responses called for an improvement in flood warning systems.

### **SEPA response**

Since our Flood Warning Strategy was published in 2012, considerable work has been undertaken to improve our flood warning services. We have improved the accessibility and uptake of public facing services such as Floodline and extended the reach and uptake of our daily flood guidance statement which is issued to all civil contingency responders in Scotland. In partnership with the Met Office, we have developed our forecasting technology and improved our understanding of flood risk. We have invested in seven new flood warning schemes including new large coastal schemes around the Moray and Solway coasts and the Firth of Forth and Tay.

In 2017 we published our *Flood Warning Development Framework (2017-2021)* which outlines, with continuing support from the Scottish Government, how we will continue to maintain, improve and broaden our service. It provides details of 14 additional flood warning schemes, new public products we plan to introduce and how we will better use our own and others' information to better understand and communicate risk.

The *Flood Warning Development Framework (2017-2021)* can be found on our website: [www.sepa.org.uk](http://www.sepa.org.uk).

## Chapter 4: Conclusions and next steps

We greatly appreciate the time and effort taken by all respondents to our consultation on the identification of Potentially Vulnerable Areas. We also welcome the significant increase in the number of respondents compared to 2011 when we previously consulted on Potentially Vulnerable Areas. The more local knowledge and detail we receive, the more confidence we have that our efforts to reduce the impacts of flooding are well-directed.

We received a good level of support for the National Flood Risk Assessment. The 2018 National Flood Risk Assessment has significantly improved upon the previous baseline of flood risk and represents the best understanding yet of flood risk in Scotland. This in no small part reflects the input from partners and the public to improve our underlying evidence.

We received general agreement from respondents on our proposals for new Potentially Vulnerable Areas. Only 13% of respondents challenged areas we are proposing for designation. Similarly, only 14% of respondents requested additional locations to be identified as Potentially Vulnerable Areas.

We have considered the extent of flooding and the potential impacts in the locations suggested by respondents. As a consequence, and following discussion with the relevant local authorities, we have altered our original proposals with the inclusion of two new Potentially Vulnerable Areas and the amendment of one Potentially Vulnerable Area. In the remaining areas suggested by respondents, our further assessment of the potential impact of flooding in these locations does not indicate they are nationally significant. That does not mean that flooding is not a locally significant issue in the areas we have not included. We understand that flooding is a distressing experience and we emphasise that being outwith a Potentially Vulnerable Area does not preclude action to manage flood risk. There remains a duty on Responsible Authorities to reduce and raise awareness of flood risk in all areas at risk.

We received good support for the retention of the 14 Local Plan Districts, as well as for the planned consultation arrangements for the period 2018-2021.

We also received comments on a wide range of issues that, although not directly relevant to the National Flood Risk Assessment or Potentially Vulnerable Areas, clearly illustrate areas of general concern for how flood risk is managed in Scotland.

The good level of engagement and the broad support for the proposals in this consultation make an important contribution as SEPA continues to work with its partners and deliver its flood risk management responsibilities.

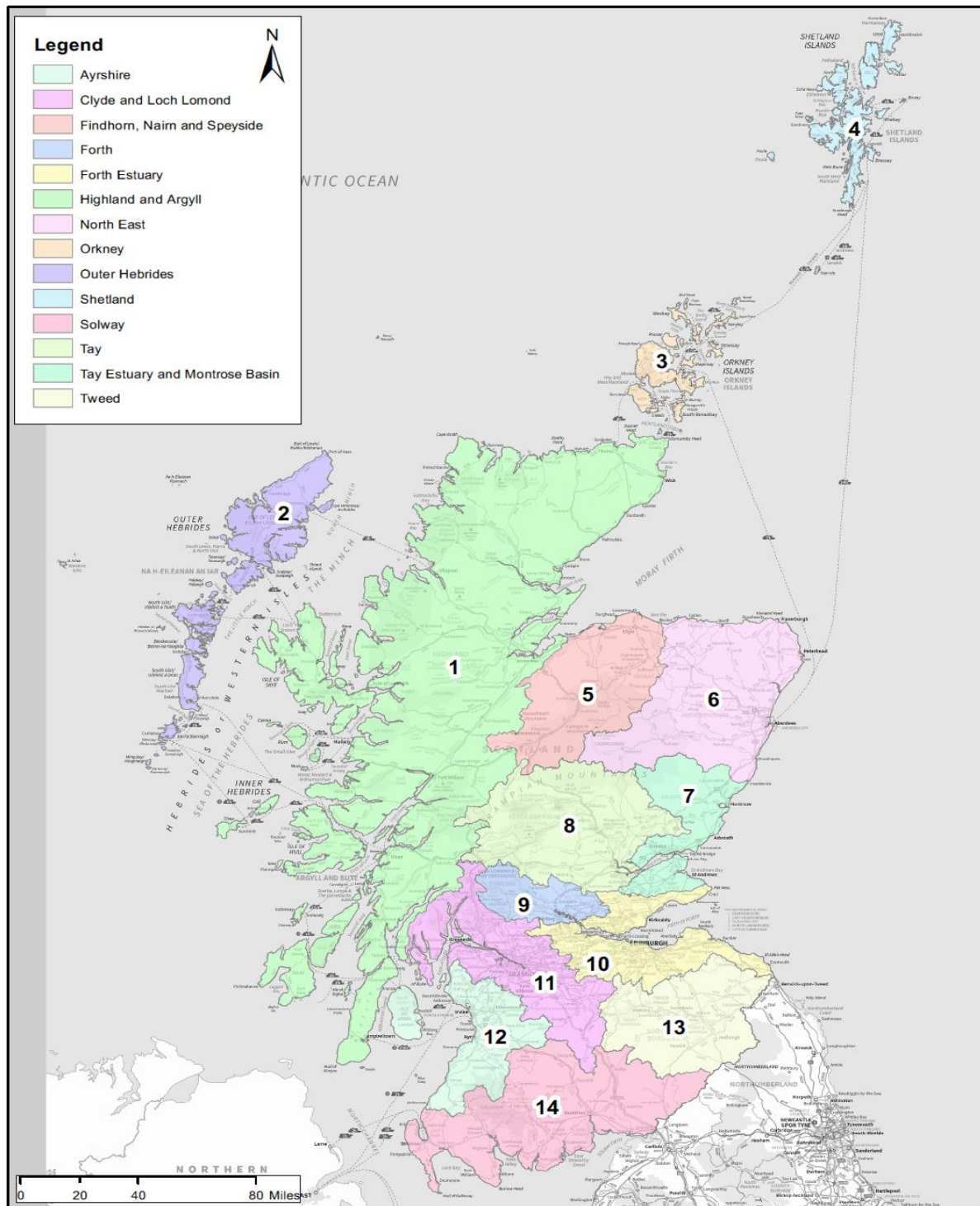
# Annex 1: List of respondents

Respondent	Respondent category
Aberdeenshire Council	Responsible authority designated under the FRM Act 2009
AECOM	Consultancy / Academia
Angus Council	Responsible authority designated under the FRM Act 2009
Association of British Insurers	Interested group
Ayrshire Roads Alliance (South Ayrshire Council)	Responsible authority designated under the FRM Act 2009
Ballater Resilience Group	Interested group
Beaully Community Council	Interested group
Bennachie Community Council	Interested group
Blair Atholl & Struan Community Council	Interested group
By Heck Preserves	Business
Clachan Catchment Project	Interested group
Clachan Village Hall Committee	Interested group
Colintraive and Glendaruel Community council	Interested group
Comhairle nan Eilean Siar	Responsible authority designated under the FRM Act 2009
Crathes Durris Drumoak Community Council	Interested group
Cumbernauld Village Community Council	Interested group
Cumbria County Council	Other public body
Dalbeattie Community Council	Community interest group
Dumfries and Galloway Council	Responsible authority designated under the FRM Act 2009
Dundee City Council	Responsible authority designated under the FRM Act 2009
East Ayrshire Council	Responsible authority designated under the FRM Act 2009
Falkirk Council	Responsible authority designated under the FRM Act 2009
Garmouth & Kingston Flood Group	Interested group
Glasgow City Council	Responsible authority designated under the FRM Act 2009
Glendale Community Council	Interested group

GoBe Consultants Ltd	Consultancy / Academia
Historic Environment Scotland	Other public body / Non-Governmental Organisation (NGO)
Kembhill Park Flood Group	Interested group
Loch Lomond & The Trossachs National Park	Responsible authority designated under the FRM Act 2009
Moray Council	Responsible authority designated under the FRM Act 2009
Nethy Bridge and Vicinity Community Council	Interested group
Newcastleton & District Community Council	Interested group
Newton Mearns Residents Flood Prevention Group	Interested group
Newtonairds Hostas & Garden	Business
Nith District Salmon Fishery Board	Interested group
Northumberland County Council (bordering authority)	Other public body
North Ayrshire Council	Responsible authority designated under the FRM Act 2009
North Lanarkshire Council	Responsible authority designated under the FRM Act 2009
Peebles Resilient Community	Interested group
Pitmedden Furniture Workshop	Business
Police Scotland	Other public body
Rosebank Community Initiative Association	Interested group
Rosehearty Community Council	Interested group
Rosemount and Mile End Community Council	Interested group
Saxe Coburg Residents Association	Interested group
Scone & District Community Council	Interested group
Scottish Borders Council	Responsible authority designated under the FRM Act 2009
Scottish Canals	Other public body
Scottish Natural Heritage	Other public body
Shetland Islands Council	Responsible authority designated under the FRM Act 2009
South Lanarkshire Council	Responsible authority designated under the FRM Act 2009
Stirling Council	Responsible authority designated under the FRM Act 2009
The Highland Council Flood Risk Management Team	Responsible authority designated under the FRM Act 2009

The Metropolitan Glasgow Strategic Drainage Partnership	Other public body
Transport Scotland	Responsible authority designated under the FRM Act 2009
Upper Tweed Community Council	Interested group
West Dunbartonshire Council	Responsible authority designated under the FRM Act 2009
West Lothian Council	Responsible authority designated under the FRM Act 2009
Whithorn and District Community Council	Interested group
Woodend Farming partnership	Business

# Annex 2: Map of Local Plan Districts

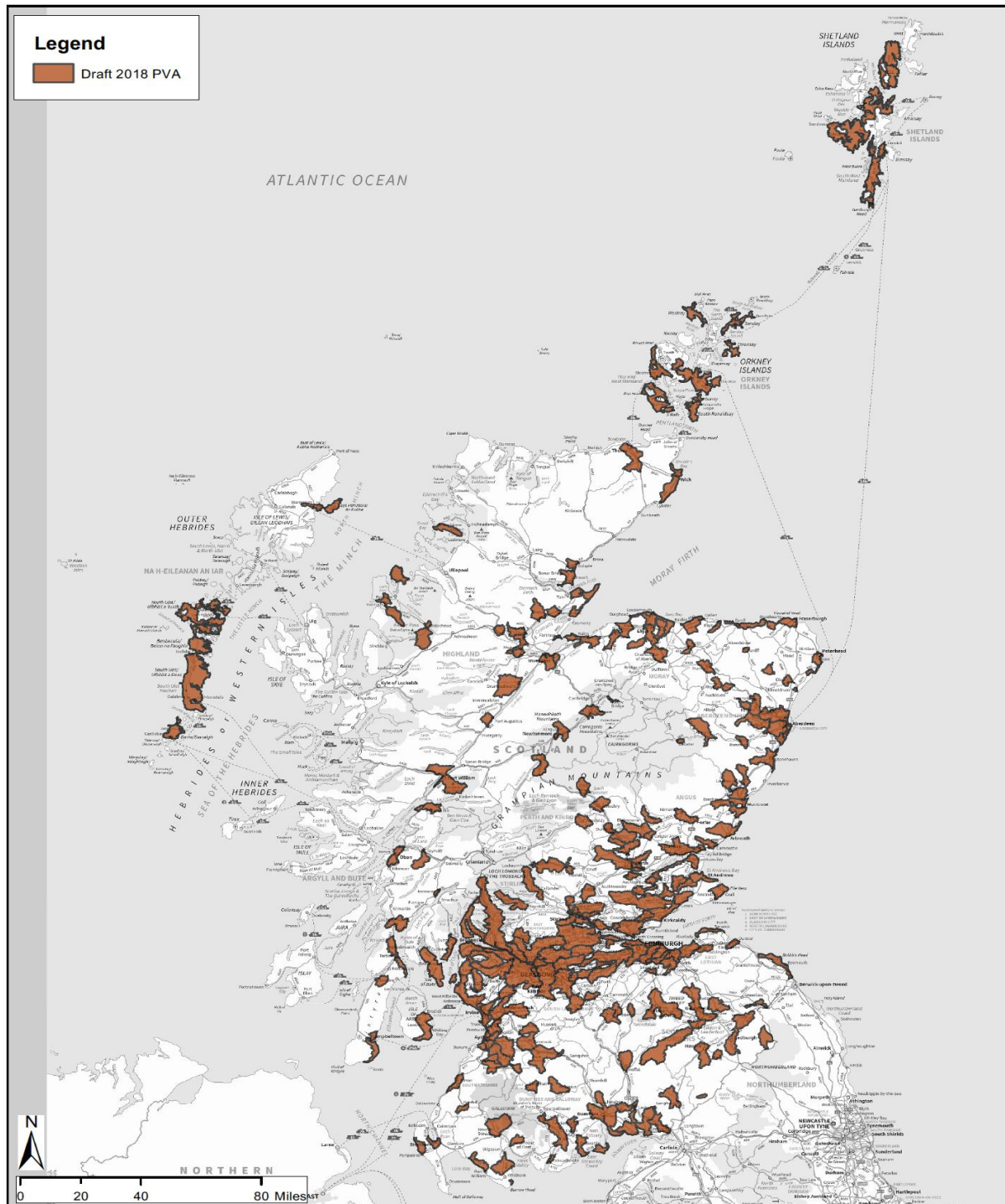


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Produced: 12/09/2018



## Annex 3: Map of Potentially Vulnerable Areas



## 2018 Potentially Vulnerable Areas

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