

Flood Risk Management (Scotland) Act 2009:

FINAL REPORT Local Flood Risk Management Plan

North East Local Plan District

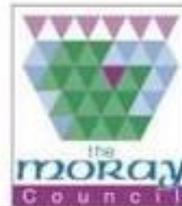
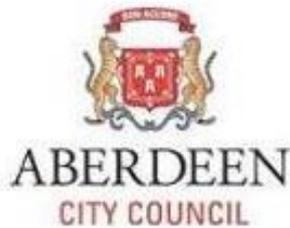


Date Published 21/12/2022



Published by: Aberdeenshire Council

In conjunction with;



Contents

Foreword	4
Background	5
Review of the plan	5
Assessment of Progress	8
Progress with LPD-wide Actions	11
Progress with PVA-specific Actions	17
(06/01) Portgordon	18
(06/02) Portsoy	23
(06/03) Banff	31
(06/04) Macduff	38
(06/05) Fraserburgh and Rosehearty	46
(06/06) Newmill	54
(06/07) Turriff	61
(06/08) Peterhead	68
(06/09) Methlick	76
(06/10) Huntly	82
(06/11) Inch	91
(06/12) Ellon	98
(06/13) Inverurie and Kintore	105
(06/14) Heugh-head	113
(06/15) Aberdeen City - Bridge of Don	120
(06/16) Aberdeen City - Denmore	131
(06/17) Westhill	140
(06/18) Aberdeen City - Deeside	149
(06/19) Peterculter	163
(06/20) Aboyne	172
(06/21) Banchory and Torphins	180
(06/22) Ballater	187
(06/23) Stonehaven	195
Roles and Responsibilities	2055
Supporting information	20808
Acknowledgments	213
Glossary	215

Foreword

This Final Report for the Local Flood Risk Management Plan (LFRMP) shows the progress made in delivering the actions to avoid and reduce the risk of flooding, to allow us to prepare and protect ourselves and our communities across the breadth of the local plan district. The report also marks the completion of Cycle 1 as we now transition into Cycle 2.

“The impacts of flooding experienced by individuals, communities and businesses can be devastating and long lasting. It is vital that we continue to reduce the risk of any such future events and improve Scotland’s ability to manage and recover from any events which do occur.”

(North East Local Flood Risk Management Plan June 2016)

The publication of this Final Report shows that the coordinated and collaborative efforts of public bodies can be brought together to deliver sustainable outcomes.

This Final Report is published by Aberdeenshire Council, as Lead Local Authority for the North East Local Plan District (LPD) - a partnership comprising 3 local authorities - Aberdeenshire Council, Aberdeen City Council and The Moray Council, together with the following Responsible Authorities: Scottish Water; SEPA; Forestry Commission Scotland; and Cairngorms National Park Authority. Input has also been received from Transport Scotland.

Individuals are the first line of defence against flooding and have responsibilities to protect themselves from flooding. Through self-help and property level protection, awareness raising and signing up to Floodline (www.floodlinescotland.org.uk), individuals, businesses and communities can and have made key contributions to the delivery of the actions in the LFRMP (the ‘Plan’).

Since the publication of the Plan in June 2016, public sector finances in Scotland have continued to be under considerable pressure. This placed an even greater responsibility on local authorities, Scottish Water, SEPA, and other responsible authorities to deliver their flood risk management responsibilities in an effective and sustainable way. During Cycle 1 we have also had to respond to the challenges of the COVID-19 pandemic.

Local authorities, Scottish Water, SEPA and other responsible authorities will continue to work collaboratively to implement the actions set out in the 2nd planning cycle to June 2028.

Background

The Final Report is a statutory requirement of the Flood Risk Management (Scotland) Act 2009 (Section 38). The Final Report presents:

- an assessment of the progress made towards implementing the North East LFRMP (the 'Plan');
- a summary of the planned actions which were not implemented, with reasons for their non-implementation; and
- a description of any other actions implemented since the plan was finalised which the lead authority considers have contributed to the achievement of the objectives.

Further details on flood risk management responsibilities in Scotland and the legal requirement for the publication of this final Report can be found in Appendix 1.

A copy of the North East Plan can be found at the following link:

<https://www.aberdeenshire.gov.uk/media/17174/north-east-local-flood-risk-management-plan-2016-2022-web-version.pdf>

Review of the plan

This section presents the review of the Plan including progress highlights, a statement on the planned actions not implemented, the significant challenges faced and the next steps to be taken forward during the 2nd planning cycle 2022 - 2028.

Progress Highlights

A selection of key progress highlights since publication of the Plan in June 2016 are noted on the first page of each PVA datasheet. This gives an indicator of the work being undertaken across the North East Local Plan District to reduce flood risk.

A summary of progress against every individual action in the Plan is further detailed too.

Significant Deviations from the Plan

The following significant deviations from the Plan are highlighted.

The Ballater Flood Protection Study was prioritised as 5th within Aberdeenshire, and was proposed to be delivered in the next planning cycle 2022 to 2027. Due to the significant flood event the Flood Protection Study for Ballater was brought forward into the 2016 – 2022 cycle.

This work has been outside the Local Flood Risk Management Plan, however, did not impact on the delivery of other actions in the Plan.

This proposal was reported to Aberdeenshire Councils Infrastructure Services Committee in May 2016.

Significant Challenges

A review of the progress to date has identified key challenges, some of which have had an impact on the delivery of actions to manage flood risk. Where these challenges have had an impact on the delivery of specific actions, this impact is detailed further in the report.

Significant weather events

The North East Local Plan District was adversely affected by significant weather events in Dec 2015 (Storm Frank) and January 2016, which had knock on impacts on the delivery of actions in the Plan from June 2016 onwards. For example, all Local Authorities and partnering agencies (SEPA) resources were deployed to dealing with the emergency events at that time; as well as the follow up activities and necessary works, which were still being delivered into financial year 2017/18. This has caused consequential delays in the planned delivery of actions, as staff resources that would have been delivering planned actions, have been delivering emergent actions.

COVID-19 Pandemic

The COVID pandemic has impacted the delivery of Cycle 1 actions including a requirement to suspend flood risk management construction works as part of the national effort to minimise the spread of the virus during the first national lockdown. The pandemic also disrupted flood risk management studies and flood modelling due to the transition to home working and the challenges of effectively consulting and engaging with flood vulnerable communities. These impacts have resulted in higher costs and programme delays.

Resources

Whilst the majority of actions have either been progressed in line with or have advanced further than set out in the Plan, the primary reason for actions not progressing as far as intended was a challenging resource environment faced by the authorities responsible for progressing individual actions.

The available human resource, with the necessary skills to manage and develop solutions to reduce flood risk, has also constrained progress. Much of this human resource pressure has arisen from the increased level of investment in flood risk management across Scotland and the wider UK, leading to challenging recruitment.

Technical Complexity

Developing an advanced understanding of how flooding occurs and the most appropriate combination of solutions to reduce flood risk is technically challenging, including the need to build complex computer models to understand how storm events, tides, watercourse geometry, topography, land use and climate change all interact to cause flooding.

This challenge has impacted progress on a number of actions which has delayed progress on subsequent actions. More appropriate technical solutions have also been identified for a number of actions, compared to the way forward envisaged when the Plan was prepared but these enhanced solutions, particularly in relation to strategic mapping and modelling, have taken longer to implement.

Cyber-attack on SEPA

On 24 December 2020, SEPA was subject to a serious and complex cyber-attack, which significantly impacted the organisation, staff, public and private partners, and the communities who rely on SEPA's services. Since the attack, SEPA has worked with Scottish Government, Police Scotland, the National Cyber Security Centre (NCSC) and the Scottish Business Resilience Centre (SBRC), to a clear recovery strategy. The incident has, however, temporarily impacted progress on a number of actions such as new flood warnings, mapping and modelling projects and some engagement activities. Many of these projects are still going ahead but the timescales for them have been adjusted.

The Next Planning Cycle

This report marks the completion of Cycle 1 and we are now transitioning into Cycle 2.

The Cycle 2 Local Flood Risk Management Plan is scheduled to be published in December 2022.

Many of the Cycle 1 actions were to undertake studies that have led to the identification of further actions to be implemented in Cycle 2 and beyond.

The North East local Flood Risk Management Plan for Cycle 2 can be accessed via the following link after the December 2022 publication date:

<https://www.aberdeenshire.gov.uk/environment/flooding/flood-risk-management-scotland-act-2009/>

Conclusions

Overall, through partnership working, by delivering the actions set out in the North East LFRMP, we have reduced flood risk and helped to inform future actions to further reduce flood risk that will be progressed during Cycle 2 and subsequent cycles.

Whilst the majority of actions have either been progressed in line with, or have advanced further than set out in the Plan, a number of actions have not progressed as far as intended, primarily due to a lack of resources.

Other actions have been delayed where they have been dependent on the results from earlier studies. Some actions have also been superseded by a change in approach that will deliver better outputs but at a later date.

A progress summary of the actions set out in the Plan is shown on the following page. Progress is shown using a traffic light system based on data collected during September 2022, where each item is marked as **Red**, **Amber** or **Green** (RAG) to describe the status of the action as follows:

Red – Action has not commenced.

Amber – Action has commenced but has not been completed.

Green – Action has been completed.

The distribution of actions by Potentially Vulnerable Area is shown in Table 4.

Further detail on specific actions can be found in the relevant Potentially Vulnerable Area section of the document.

*Note: N/A is used where there is no formal Flood Protection Scheme or flood warning scheme present.

	PVA	Flood protections scheme/work	Natural flood management works	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection	Emergency plans/respon	Planning policies
06/01 Portgordon					G		G	A		G	G			G	G	G		G	G
06/02 Portsoy								G			G			G	G	G		G	G
06/03 Banff								A		G	G			G	G	G		G	G
06/04 Macduff								A		G	G			G	G	G		G	G
06/05 Fraserburgh and Rosehearty							A	G		G	G			G	G	G		G	G
06/06 Newmill	G						G	G	G	G	G		G	G	G	G		G	G
06/07 Turriff								G		G	G			G	G	G		G	G
06/08 Peterhead				G			A	G			G			G	G	G		G	G
06/09 Methlick											G			G	G	G		G	G
06/10 Huntly	G						A	G	G	G	G			G	G	G		G	G
06/11 Inch					G			G			G			G	G	G		G	G
06/12 Ellon					G			G			G			G	G	G		G	G
06/13 Inverurie and Kintore					G		A	G		G	G			G	G	G		G	G
06/14 Heugh-head											G			G	G	G	A	G	G
06/15 Bridge of Don				G	A		A	A		G	G	G		G	G	G		G	G
06/16 Denmore					G		A	G	G		G	G		G	G	G		G	G
06/17 Westhill							A	G			G			G	G	G		G	G
06/18 Deeside				G	A		A	G	G	G	G	G	G	G	G	G		G	G
06/19 Peterculter	A					G	A	G			G	G		G	G	G		G	G
06/20 Aboyne							A	G		G	G			G	G	G		G	G
06/21 Banchory and Torphins								G		G	G			G	G	G		G	G
06/22 Ballater					G			G		G	G		G	G	G	G		G	G
06/23 Stonehaven	A			G	G		A	G	G	G	G		G	G	G	G		G	G

Progress with LPD-wide Actions

Actions applicable across the Local Plan District

Some flood risk management objectives and actions apply to all areas, whether designated as a Potentially Vulnerable Area or not.

For example, flood risk can be managed through national planning policy or as part of ongoing statutory duties discharged by local authorities.

List of councils and authorities:

Aberdeen City Council
Aberdeenshire Council
Network Rail
Scottish Environment Protection Agency
Scottish Water
The Moray Council
Transport Scotland

The Aberdeen Integrated Catchment Study (ICS) has been completed by Scottish Water. Outputs have been shared with local authorities and these will be used to inform future Surface Water Management Plans.

The Local Plan District-wide objectives and the corresponding actions are set out in the following tables.

No additional LPD wide actions have been implemented.

Progress with LDP-wide actions

This section sets out an assessment of the progress towards implementing general actions that apply across the whole of the North East LPD over all 6 years of the Plan.

Progress with LPD-wide Actions for the North East Local Plan District

Action	Status	Description	Progress	Future Actions
Flood forecasting	G	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business. For more information, please visit SEPA's website.	SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance Statement, the Scottish Flood Forecast, to provide better and earlier information to the public. A beta version of this product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been	

			published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding. The development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.	
Self help	G	Everyone is responsible for protecting themselves and their property from flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities Initiatives, and ensuring that properties and businesses are insured against flood damage.	Aberdeenshire Council continue to make PLP products available at cost price. New sandbag containers are installed across Aberdeenshire at flood prone locations for the public to help themselves to in times of flooding.	Numerous actions have been undertaken by Responsible Authorities to raise awareness and educate about Self Help actions. Local authorities, SEPA, Scottish water and other organisations will provide support to communities on request
Awareness raising	G	SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall	SEPA continued to raise awareness of flood risk through campaigning, developing education and engagement tools, creating new partnerships and improving the flood warning and forecasting service. Many of SEPA's	N/A

		<p>impact. Local authorities will be undertaking additional awareness raising activities, further details will be set out in the Local FRM Plans.</p>	<p>awareness raising activities will continue. The focus will be on promoting flood warning and forecasting service, innovation, education and engagement with partners, customers and the public.</p>	
Maintenance	G	<p>Actions taken by Local Authorities and Scottish Water to undertake clearance and repair in relation to waterbodies and maintenance of other water related assets.</p>	<p>Local Authorities have inspected waterbodies and identify clearance and repair works to reduce flood risk.</p> <p>Local Authorities inspect flood protection schemes and provide maintenance works where deemed necessary.</p> <p>Scottish Water continue to undertake risk based inspections, maintenance and repair on the public sewer network.</p>	<p>Current actions to continue.</p>
Emergency plans/response	G	<p>Actions taken by Local Authorities and SEPA to provide an emergency response to flooding.</p>	<p>The Responsible Authorities under the Civil Contingencies Act 2004 have acted in response to weather warnings received and use best available information from a number of sources to co-ordinate regional and local actions.</p> <p>Grampian Emergency Planning Unit have in place and maintain Emergency Plans for all contingencies</p>	<p>Current actions to continue.</p>

<p>Planning Policy</p>	<p>G</p>	<p>Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers’ priorities for the operation of the planning system and for the development and use of land. In terms of flood risk management, the policy supports a catchment scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided.</p>	<p>SEPA continues to exercise its planning functions with a view to reducing overall flood risk. They effectively contribute to the delivery of sustainable flood risk management and support the delivery of FRM Plans and Local FRM Plans. In line with the management actions that accord with national planning policies, they will continue to object to development at medium to high risk of flooding when it is contrary to the risk framework set out in Scottish Planning Policy.</p> <p>They will continue to engage from the start of the development plan process and encourage planning authorities to undertake a Strategic Flood Risk Assessment to inform their spatial strategy and remain committed to exercising our planning functions with a view to reducing overall flood risk. When a new national planning policy context is finalised later in 2022 via the National Planning Framework 4, they will take the same approach.</p>	<p>Local Authorities continue to consider flood risk when determining planning applications. They ensure final versions of Local Development Plans maintain robust policy to avoid new development in areas that are at risk of flooding or would increase flood risk elsewhere, and encourages the most sustainable approach to managing surface water .</p>
<p>Strategic mapping and modelling (surface water)</p>	<p>G</p>	<p>SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of</p>	<p>SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH22</p>	<p>The national surface water flooding modelling project will be completed in 2023. The outputs from this will be used</p>

		<p>flood risk. Approximately 2,100km² of improved data is currently available within this Local Plan District."</p>	<p>methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.</p>	<p>to update SEPA maps early in cycle 2 and will inform SEPA's flood risk assessments for the next flood risk management cycle.</p>
--	--	--	---	---

Progress with PVA-specific Actions

This chapter is focused on the actions being taken to manage flood risk in the Potentially Vulnerable Areas. For each Potentially Vulnerable Area, background information including a summary of flood impacts and the actions to manage flooding is presented. Additional information on flooding within each Potentially Vulnerable Area is available within the North East Flood Risk Management Strategy, available on the SEPA website here - <http://apps.sepa.org.uk/FRMStrategies/>

The background information sets the scene for the planned actions to manage flooding that have been prioritised for delivery between 2016 and 2022. The Potentially Vulnerable Area level action tables set out the flood management objective that is to be achieved, provide a description of the action, identify who will be responsible for the delivery and implementation and a timetable of when the actions will be undertaken. The Local Plan District wide actions noted in Section 4 apply to all Potentially Vulnerable Areas.

This information is provided for each of the 23 Potentially Vulnerable Areas (in cycle 1). Each Potentially Vulnerable Area has a separate sub-section with each sub-section following the same format.

The flood management objectives are the shared aims for managing flooding. Actions describe where and how flood risk will be managed. Objectives and actions have been set by SEPA and agreed by the flood risk management responsible authorities following consultation.

Many organisations, such as Scottish Water and energy companies, actively maintain and manage their own assets including the risk from flooding. Where known, these actions are described here. Scottish Natural Heritage and Historic Environment Scotland work with site owners to manage flooding where appropriate at designated environmental and/or cultural heritage sites. These actions are not detailed further in the Local Flood Risk Management Plan.

North East Local Plan District

- Portgordon (Potentially Vulnerable Area 06/01)

Local Plan District	Local authority	Main catchment
North East	Moray Council	Banff Coast



© Crown copyright and database rights 2022.
 Ordnance Survey licence no. 0100020767
 Map reproduced from North East Flood Risk Management Strategy, SEPA (December 2015)

Summary of Progress for Portgordon

There are fewer than 10 residential and non-residential properties at risk of flooding in this PVA. The Annual Average Damages are approximately £8,500. The majority of these damages are attributed to surface water flooding, however, it is recognised that wave overtopping causes flooding to a number of properties in Portgordon and Buckie.

Further information can be found in NELFRMP under PVA 06/01.

https://www.aberdeenshire.gov.uk/media/17347/pva-06_01-portgordon.pdf

Key progress:

- Since the NELFRMP was published in May 2016, a flood protection study has been undertaken for Portgordon. The findings of this study will be taken forward for consideration in the NELFRMP for Cycle 2.
- A high-level Surface Water Management Plan has been undertaken for Moray, in which Buckie is a priority area. Any actions to mitigate flooding identified in this Plan will be taken forward for consideration in Cycle 2

Overview of actions to manage flooding in Portgordon

PVA	Flood protections	Natural flood management	New flood warning	Flood protection study	Natural flood management	Surface water plan/study	Strategic mapping and	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection	Community flood action	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/01				G		G	A		G	G			G	G	G		G	G

Summary of progress of actions to manage flood risk in Portgordon (PVA 06/01)

Action	Status	Description	Start	End	Progress	Future Actions
Flood protection study	G	Flood study for Portgordon to investigate coastal flooding, including wave action.	Moray Council	2019	The flood study for Portgordon is complete.	No further action required.
Surface water plan/study	G	Surface Water Management Plan for the Portgordon/Buckie area will be developed by Moray Council.	Moray Council	2019	A high level Surface Water Management Plan was completed in 2017.	Additional investigation will be undertaken in identified hotspots.
Strategic mapping and modelling (Coastal)	A	SEPA will be seeking to develop the flood hazard mapping in the Banff to Lossiemouth area to improve understanding of the coastal flood risk. The extent and timing of the completed improvements will be dependent on detailed scoping and data availability.	2016	2021	SEPA has progressed with improved coastal flood hazard mapping from Scabster to Arbroath. This includes taking account of the impact of waves on flooding from the sea. This work also included topographical and coastal defence asset surveys,	SEPA will complete the review of results and publish updated coastal flood hazard maps to inform decision making with respect to flooding

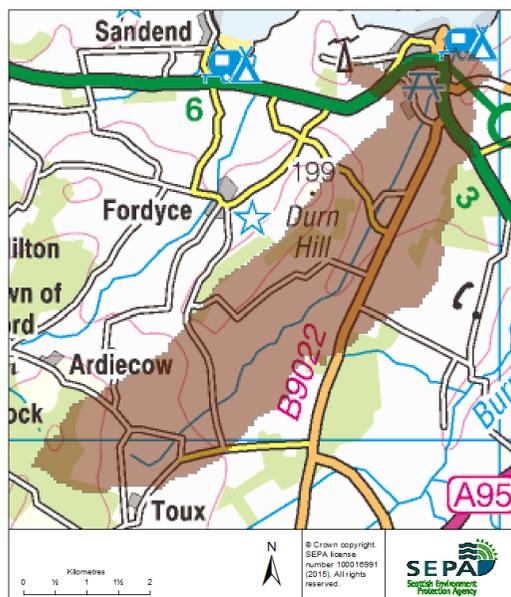
					<p>modelling of sea conditions (including water levels and waves) and the assessment of wave overtopping where required. This work built upon and extended the modelling work supporting the SEPA coastal flood warning scheme for the Moray Firth.</p> <p>Following the establishment of a coastal flood hazard map development framework and characterisation of the coastline, several projects are currently underway at this location:</p> <ul style="list-style-type: none"> • Development of a national coastal joint probability dataset; • Update to the UK design extreme sea level dataset; • Coastal modelling and mapping project for north-east Scotland. <p>These projects will collectively enable the revision of flood mapping for the coastline from Scrabster to Arbroath including the Orkney Islands.</p>	<p>from the sea. Expected completion date is late 2023.</p>
<p>Strategic mapping and modelling (Sewer)</p>	<p>G</p>	<p>Scottish Water will undertake modelling of the Buckie sewer catchment.</p>	<p>Scottish Water</p>	<p>17/3/17</p>	<p>The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority</p>	

Maintain flood warning	G	SEPA will Continue to maintain the 'Portgordon to Cullen' flood warning area which is part of the Moray Firth coastal flood warning scheme.	SEPA	Ongoing	SEPA has continued to operate the flood warning service	SEPA will continue to operate the flood warning service.
Self help	G	Everyone is responsible for protecting themselves and their property from flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities Initiatives, and ensuring that properties and businesses are insured against flood damage.	Property owners	Ongoing	SEPA continues to assist members of the public to sign up to Floodline. Moray Council has not received any requests for assistance from property owners in this area.	
Awareness raising	G	SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact. Local authorities will be undertaking additional awareness raising activities, further details will be set out in the Local FRM Plans.	Responsible Authorities	Ongoing	SEPA continues to work with others to raise awareness of flood risk and its flood warning service. It has participated in local activities including school / education and community resilience activities when able. Some planned activities notably in person joint events have been limited or delayed due to Covid 19. Moray Council has consulted with the public in relation to the Portgordon Flood Protection Study.	
Maintenance	G	Actions taken by Local Authorities and Scottish Water to undertake clearance	Moray Council,	Ongoing	Moray Council inspects flood management assets within its region	Moray Council will continue with its

		and repair in relation to waterbodies and maintenance of other water related assets.	asset / land managers		according to an inspection schedule. This schedule is reviewed annually to ensure resources are targeted at the areas at greatest risk.	programme of clearance and repair work, which is reviewed annually.
Emergency plans/response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA.	Category 1 and 2 Responders	Ongoing	SEPA continues to support emergency planning. Moray Council Emergency Planners have in place and maintain Emergency Plans for all contingencies	Moray Council's emergency plan is reviewed and updated when required.
Planning Policy	G	Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers' priorities for the operation of the planning system and for the development and use of land. In terms of flood risk management, the policy supports a catchment scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long-term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided.	Planning Authority	Ongoing	Moray Council, as a Planning Authority, ensures that new developments satisfy relevant guidance and policies on flooding and drainage.	Continue to consider flood risk when determining planning applications. Ensure final version of emerging Local Plan maintains robust policy to avoid new development in areas that are at risk of flooding or would increase flood risk elsewhere, and encourages the most sustainable approach to managing surface water.

● Portsoy (Potentially Vulnerable Area 06/02)

Local Plan District	Local authority	Main catchment
North East	Aberdeenshire Council	Banff coastal



© Crown copyright and database rights 2022.
 Ordnance Survey licence no. 0100020767
 Map reproduced from North East Flood Risk Management Strategy, SEPA (December 2015)

Summary of Progress for Portsoy

This Potentially Vulnerable Area includes the south east of Portsoy and rural areas along the Burn of Durn to the south west. It is approximately 17km².

The Burn of Durn and Soy Burn flow through the area.

There are approximately 10 residential and fewer than 10 non-residential properties at risk of flooding.

The Annual Average Damages are approximately £53,000 with the majority of these from river flooding.

Further information can be found in NELFRMP under PVA 06/02.

https://www.aberdeenshire.gov.uk/media/17346/pva-06_02-portsoy.pdf

Key progress:

- There was a significant flood event in Portsoy on 7th June 2017. This predominately effected properties in Soy Avenue and downstream of the Loch of Soy. There was also flooding from the Burn of Durn at the cemetery and the Old Sail Loft.
- Aberdeenshire Council have carried out upstream flood protection works on the Soy Burn, at the old railway embankment (next to A98 Kirk Wood).
- Improved Loch of Soy emergency maintenance procedures.
- Engagement with the Portsoy Community Council at a meeting on 6th September 2017 and raising awareness of property level protection.

Overview of actions to manage flooding in Portsoy

PVA	Flood protections scheme/works	Natural flood management	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/02							G			G			G	G	G		G	G

Summary of progress of actions to manage flood risk in Portsoy (PVA 06/02)

Action	Status	Description	Start	End	Progress	Future Actions
Strategic mapping and modelling (sewer)	G	Scottish Water will undertake further investigation and modelling in the Portsoy sewer catchment to improve knowledge and understanding of flood risk in this area.	Scottish Water	04-Jan-18	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority	
Strategic mapping and modelling (surface water)	G	SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km ² of improved data is currently available within this Local Plan District."	SEPA		SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology; this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant	The national surface water flooding modelling project will be completed in 2023. The outputs from this will be used to update SEPA maps early in cycle 2 and will inform

					change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.	SEPA's flood risk assessments for the next flood risk management cycle.
Maintenance	G	Actions taken by Local Authorities and Scottish Water to undertake clearance and repair in relation to waterbodies and maintenance of other water related assets.	Aberdeenshire Council, asset / land managers	Ongoing	<p>Local Authorities have inspected waterbodies and identify clearance and repair works to reduce flood risk.</p> <p>A publicly accessible page is available on Aberdeenshire Councils website, updated nightly, showing schedules of clearance and repair as assessments take place</p> <p>Local Authorities inspect flood protection schemes and provide maintenance works where deemed necessary.</p> <p>Scottish Water continue to undertake risk based inspections, maintenance</p>	Aberdeenshire Council will continue with its routine watercourse inspections and schedule any clearance and repair work. All information is publicly available.

					and repair on the public sewer network.
Flood forecasting	G	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business. For more information please visit SEPA’s website.	SEPA	Ongoing	SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance Statement, the Scottish Flood Forecast, to provide better and earlier information to the public. A beta version of this product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding. The development and wider roll-out of this service is being considered

					alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.	
Self help	G	Everyone is responsible for protecting themselves and their property from flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities Initiatives, and ensuring that properties and businesses are insured against flood damage.	-	Ongoing	Aberdeenshire Council continue to make PLP products available at cost price. New sandbag containers are installed across Aberdeenshire at flood prone locations for the public to help themselves to in times of flooding. SEPA continues to assist members of the public to sign up to Floodline.	Numerous actions have been undertaken by Responsible Authorities to raise awareness and educate about Self Help actions. Local authorities, SEPA, Scottish water and other organisations will provide support to communities on request.
Awareness raising	G	SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact. Local authorities will be undertaking additional awareness raising activities, further details will be set out in the Local FRM Plans.	Responsible Authorities	Ongoing	Aberdeenshire Council continue with liaising with community councils on resilience.	Awareness raising

<p>Maintenance</p>	<p>G</p>	<p>Actions taken by Local Authorities and Scottish Water to undertake clearance and repair in relation to waterbodies and maintenance of other water related assets.</p>	<p>Aberdeenshire Council, asset / land managers</p>	<p>Ongoing</p>	<p>Local Authorities have inspected waterbodies and identify clearance and repair works to reduce flood risk.</p> <p>A publicly accessible page is available on Aberdeenshire Councils website, updated nightly, showing schedules of clearance and repair as assessments take place</p> <p>Local Authorities inspect flood protection schemes and provide maintenance works where deemed necessary.</p> <p>Scottish Water continue to undertake risk based inspections, maintenance and repair on the public sewer network.</p>	<p>Aberdeenshire Council will continue with its routine watercourse inspections and schedule any clearance and repair work. All information is publicly available.</p>
<p>Emergency plans/response</p>	<p>G</p>	<p>Actions taken by Local Authorities and SEPA to provide an emergency response to flooding.</p>	<p>Category 1 and 2 Responders</p>	<p>Ongoing</p>	<p>The Responsible Authorities under the Civil Contingencies Act 2004 have acted in response to weather warnings received and use best available information from a number of sources to co-ordinate regional and local actions.</p>	<p>Grampian Emergency Planning Unit's emergency plan is reviewed and updated when required.</p>

					Grampian Emergency Planning Unit have in place and maintain Emergency Plans for all contingencies	
Planning Policy	G	<p>Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers’ priorities for the operation of the planning system and for the development and use of land. In terms of flood risk management, the policy supports a catchment scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long-term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided.</p>	Planning Authority	Ongoing	<p>Local Authorities, as Planning Authority, ensure that any new developments satisfy relevant guidance and policies on flooding and drainage.</p> <p>SEPA continues to exercise its planning functions with a view to reducing overall flood risk. They effectively contribute to the delivery of sustainable flood risk management and support the delivery of FRM Plans and Local FRM Plans. In line with the management actions that accord with national planning policies, they will continue to object to development at medium to high risk of flooding when it is contrary to the risk framework set out in Scottish Planning Policy. They will continue to engage from the start of the development plan process and encourage planning authorities to undertake a Strategic Flood Risk Assessment to inform their spatial strategy and remain committed to</p>	<p>Local Authorities continue to consider flood risk when determining planning applications. They ensure final versions of Local Development Plans maintain robust policy to avoid new development in areas that are at risk of flooding or would increase flood risk elsewhere, and encourages the most sustainable approach to managing surface water</p>

					exercising our planning functions with a view to reducing overall flood risk. When a new national planning policy context is finalised later in 2022 via the National Planning Framework 4, they will take the same approach.	
--	--	--	--	--	---	--

● **Banff (Potentially Vulnerable Area 06/03)**

Local Plan District	Local authority	Main catchment
North East	Aberdeenshire Council	Banff coastal



Summary of Progress for Banff

This Potentially Vulnerable Area covers the town of Banff. The area is on the west bank of the River Deveron and extends to the Burn of Boyndie. It is approximately 3km². The A97 and A98 pass through the area and the River Deveron is the main river. There are approximately 40 residential and 30 non-residential properties at risk of flooding. The Annual Average Damages are approximately £50,000 with the majority due to river flooding.

Further information can be found in NELFRMP under PVA 06/03.

https://www.aberdeenshire.gov.uk/media/17351/pva-06_03-banff.pdf

Key progress:

- Coastal defence repairs along Greenbank rock armour
- Emergency repairs have been carried out to several areas of coastal defences (including Scotstown seawalls)

© Crown copyright and database rights 2022.
 Ordnance Survey licence no. 0100020767
 Map reproduced from North East Flood Risk Management Strategy, SEPA (December 2015)

Overview of actions to manage flooding in Banff

PVA	Flood protections scheme/works	Natural flood management	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/03							A		G	G			G	G	G		G	G

Summary of progress of actions to manage flood risk in Banff (PVA 06/03)

Action	Status	Description	Start	End	Progress	Future Actions
Strategic mapping and modelling- Coastal	A	SEPA will be seeking to develop the flood hazard mapping in the Banff area to improve understanding of the coastal flood risk. The extent and timing of the completed improvements will be dependent on detailed scoping and data availability	SEPA	Ongoing	Coastal: SEPA has progressed with improved coastal flood hazard mapping from Scabster to Arbroath. This includes taking account of the impact of waves on flooding from the sea. This work also included topographical and coastal defence asset surveys, modelling of sea conditions (including water levels and waves) and the assessment of wave overtopping where required. This work built upon	SEPA will complete the review of results and publish updated coastal flood hazard maps to inform decision making with respect to flooding from the sea. Expected completion date is late 2023

					and extended the modelling work supporting the SEPA coastal flood warning scheme for the Moray Firth. Although this work has not been completed to the timescale described in the plan, the work that is in progress is delivering a more comprehensive update of the coastal flood hazard maps across the whole area.	
Strategic mapping and modelling – Deveron	G	The road embankment potentially provides some protection to the properties at risk. This needs to be investigated to confirm the standard of protection provided by the embankment and any residual risk. SEPA will review existing modelling for this area in partnership with Aberdeenshire Council to determine if any improvements can be made to the flood maps. SEPA will support the local authority if further work beyond a strategic scale is required.	01/01/17	31/12/18	River: Action complete. Following a screening exercise to characterise the catchment, a project to review the representation of river flood hazard for Banff has been undertaken. Whilst an improved understanding of the River Deveron through the town was achieved, no changes to the existing flood mapping were deemed necessary.	River: Action Complete, no further action required.
Strategic mapping and modelling – Sewer	G	Scottish Water will undertake modelling of the Banff sewer catchment.	Scottish Water	24/02/20	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority	

<p>Strategic mapping and modelling (surface water)</p>	<p>G</p>	<p>SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km² of improved data is currently available within this Local Plan District."</p>	<p>SEPA</p>		<p>SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.</p>	<p>The national surface water flooding modelling project will be completed in 2023. The outputs from this will be used to update SEPA maps early in cycle 2 and will inform SEPA's flood risk assessments for the next flood risk management cycle.</p>
<p>Maintain flood warning</p>	<p>G</p>	<p>SEPA will continue to maintain both the 'Banff' flood warning area which is part of the Deveron river flood warning scheme and the Portsoy to Macduff' flood warning area which is part of the Moray Firth coastal flood warning scheme</p>	<p>SEPA</p>	<p>Ongoing</p>	<p>SEPA has continued to operate the flood warning service.</p>	
<p>Flood forecasting</p>	<p>G</p>	<p>The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily,</p>	<p>SEPA</p>	<p>Ongoing</p>	<p>SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily</p>	

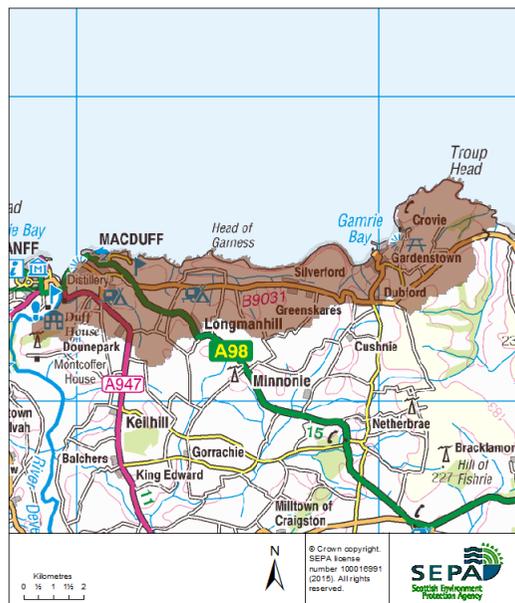
		<p>national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business. For more information, please visit SEPA's website.</p>		<p>Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance Statement, the Scottish Flood Forecast, to provide better and earlier information to the public. A beta version of this product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding. The development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.</p>	
--	--	--	--	--	--

Self help	G	Everyone is responsible for protecting themselves and their property from flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities Initiatives, and ensuring that properties and businesses are insured against flood damage.	-	Ongoing	Aberdeenshire Council continue to make PLP products available at cost price. New sandbag containers are installed across Aberdeenshire at flood prone locations for the public to help themselves to in times of flooding.	Self help
Awareness raising	G	SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact. Local authorities will be undertaking additional awareness raising activities, further details will be set out in the Local FRM Plans.	Responsible Authorities	Ongoing	Aberdeenshire Council continue with liaising with community councils on resilience.	Awareness raising
Maintenance	G	Actions taken by Local Authorities and Scottish Water to undertake clearance and repair in relation to waterbodies and maintenance of other water related assets.	Aberdeenshire Council, asset / land managers	Ongoing	Local Authorities have inspected waterbodies and identify clearance and repair works to reduce flood risk.	Maintenance

Emergency plans/response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA	Category 1 and 2 Responders	Ongoing	In response to weather warnings received the Responsible Authorities under the Civil Contingencies Act 2004 use the best available information from a number of sources to co-ordinate regional and local actions.	Emergency plans/response
Planning Policy	G	Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers' priorities for the operation of the planning system and for the development and use of land. In terms of flood risk management, the policy supports a catchmentscale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the longterm vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided.	Planning Authority	Ongoing	Local Authorities, as Planning Authority, ensure that any new developments satisfy relevant guidance and policies on flooding and drainage.	Planning Policy

● **Macduff (Potentially Vulnerable Area 06/04)**

Local Plan District	Local authority	Main catchment
North East	Aberdeenshire Council	Banff coastal



© Crown copyright and database rights 2022.
 Ordnance Survey licence no. 0100020767
 Map reproduced from North East Flood Risk Management Strategy, SEPA (December 2015)

Summary of Progress for Macduff

This Potentially Vulnerable Area is located in the Moray Firth to the east of Banff. It is approximately 36km² and extends from the River Deveron at Banff Bay to the Tore Burn east of Troup Head.

The A98 passes through the area.

The River Deveron is the main river in this area with smaller burns draining northwards into the Moray Firth.

There are approximately 40 residential and 20 non-residential properties at risk of flooding.

The Annual Average Damages are approximately £240,000 with the majority from river flooding. It is recognised however that wave overtopping contributes to coastal flooding which is not fully represented in this analysis.

Further information can be found in NELFRMP under PVA 06/04.

https://www.aberdeenshire.gov.uk/media/17344/pva-06_04-macduff.pdf

Key progress:

- Improved road drainage in Commercial Street and High Shore Macduff
- Emergency repairs have been carried out to several areas of coastal defences including areas adjacent to Union Road, High Shore, Gardenstown and Crovie
- Major landslip repairs at both Gardenstown and Crovie to improve slope drainage and stability

Overview of actions to manage flooding in Macduff

PVA	Flood protections scheme/works	Natural flood management	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/04							A		G	G			G	G	G		G	G

Summary of progress of actions to manage flood risk in Macduff (PVA 06/04)

Action	Status	Description	Start	End	Progress	Future Actions
Strategic mapping and modelling – Coastal	A	SEPA will be seeking to develop the flood hazard mapping in the Banff area to improve understanding of the coastal flood risk. The extent and timing of the completed improvements will be dependent on detailed scoping and data availability	2017	2018	SEPA has progressed with improved coastal flood hazard mapping from Scrabster to Arbroath. This includes taking account of the impact of waves on flooding from the sea. This work also included topographical and coastal defence asset surveys, modelling of sea conditions (including water levels and waves) and the assessment of wave overtopping where required. This work built upon and extended the	SEPA will complete the review of results and publish updated coastal flood hazard maps to inform decision making with respect to flooding from the sea. Expected completion date is late 2023.

					modelling work supporting the SEPA coastal flood warning scheme for the Moray Firth. Although this work has not been completed to the timescale described in the plan, the work that is in progress is delivering a more comprehensive update of the coastal flood hazard maps across the whole area.	
Strategic mapping and modelling – Sewer	G	Scottish Water will undertake modelling of the Macduff sewer catchment.	Scottish Water	24-Feb-20	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority	
Strategic mapping and modelling (surface water)	G	SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km ² of improved data is currently available within this Local Plan District.	SEPA		SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver	The national surface water flooding modelling project will be completed in 2023. The outputs from this will be used to update SEPA maps early in cycle 2 and will inform SEPA's flood risk assessments for the next flood risk management cycle.

					updated surface water flooding maps for Scotland representing the latest scientific understanding.
Maintain flood warning	G	SEPA will continue to maintain the 'Banff' flood warning area which is part of the Deveron river flood warning scheme. They will also continue to maintain the 'Gardenstown to Pennan' and 'Portsoy to Macduff' flood warning areas which are part of the Moray Firth coastal flood warning scheme.	SEPA	Ongoing	SEPA has continued to operate the flood warning service.
Flood forecasting	G	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business. For more information, please visit SEPA's website.	SEPA	Ongoing	SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance Statement, the Scottish Flood Forecast, to provide better and earlier information to the public. A beta version of this product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the

					<p>product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding. The development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.</p>	
Self help	G	<p>Everyone is responsible for protecting themselves and their property flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities initiatives, and ensuring that properties and businesses are insured against flood damage.</p>	-	Ongoing	<p>Aberdeenshire Council continue to make PLP products available at cost price. New sandbag containers are installed across Aberdeenshire at flood prone locations for the public to help themselves to in times of flooding. SEPA continues to assist members of the public to sign up to Floodline.</p>	<p>Numerous actions have been undertaken by Responsible Authorities to raise awareness and educate about Self Help actions. Local authorities, SEPA, Scottish water and other organisations will provide support to communities on request</p>

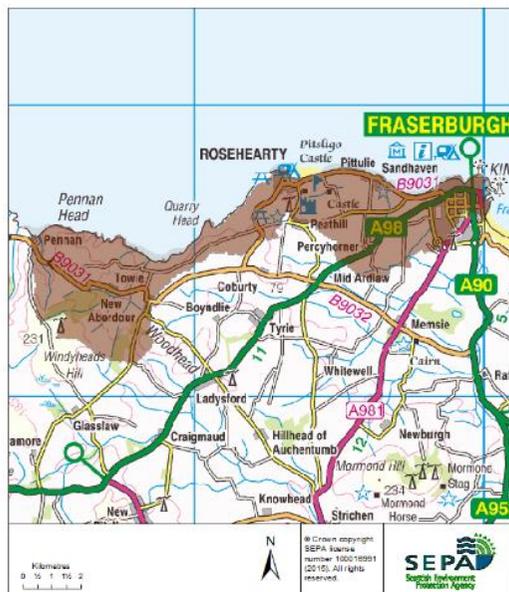
<p>Awareness raising</p>	<p>G</p>	<p>SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact. Local authorities will be undertaking additional awareness raising activities, further details will be set out in the Local FRM Plans.</p>	<p>Responsible Authorities</p>	<p>Ongoing</p>	<p>Aberdeenshire Council continue with liaising with community councils on resilience. Aberdeenshire Council advise householders directly on property level protection products and actions they can take.</p> <p>The responsible Authorities continue to work with others to raise awareness of flood risk and its flood warning service. It has participated in local activities including school / education and community resilience activities when able. Some planned activities notably in person joint events have been limited or delayed due to Covid 19</p>	
<p>Maintenance</p>	<p>G</p>	<p>Actions taken by Local Authorities and Scottish Water to undertake clearance and repair in relation to waterbodies and maintenance of other water related assets.</p>	<p>Aberdeenshire Council, asset / land managers</p>	<p>Ongoing</p>	<p>Local Authorities have inspected waterbodies and identify clearance and repair works to reduce flood risk.</p> <p>A publicly accessible page is available on Aberdeenshire Councils website, updated nightly, showing schedules of clearance and repair as assessments take place</p> <p>Local Authorities inspect flood protection schemes and provide</p>	<p>Current actions to continue.</p> <p>Aberdeenshire Council will continue with its routine watercourse inspections and schedule any clearance and repair work. All information is publicly available.</p>

					<p>maintenance works where deemed necessary.</p> <p>Scottish Water continue to undertake risk based inspections, maintenance and repair on the public sewer network.</p>	
Emergency plans/response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA	Category 1 and 2 Responders	Ongoing	<p>In response to weather warnings received the Responsible Authorities under the Civil Contingencies Act 2004 use the best available information from a number of sources to co-ordinate regional and local actions.</p> <p>Grampian Emergency Planning Unit have in place and maintain Emergency Plans for all contingencies</p>	<p>Current actions to continue.</p> <p>Emergency plans are reviewed and updated when required.</p>
Planning Policy	G	Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers' priorities for the operation of the planning system and for the development and use of land. In terms of flood risk management, the policy supports a catchment scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage	Planning Authority	Ongoing	<p>Local Authorities, as Planning Authority, ensure that any new developments satisfy relevant guidance and policies on flooding and drainage.</p> <p>SEPA continues to exercise its planning functions with a view to reducing overall flood risk. They effectively contribute to the delivery of sustainable flood risk</p>	Local Authorities continue to consider flood risk when determining planning applications. They ensure final versions of Local Development Plans maintain robust policy to avoid new development in areas that are at risk of

		<p>sustainable land management in our rural areas, and to address the long term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided.</p>		<p>management and support the delivery of FRM Plans and Local FRM Plans. In line with the management actions that accord with national planning policies, they will continue to object to development at medium to high risk of flooding when it is contrary to the risk framework set out in Scottish Planning Policy. They will continue to engage from the start of the development plan process and encourage planning authorities to undertake a Strategic Flood Risk Assessment to inform their spatial strategy and remain committed to exercising our planning functions with a view to reducing overall flood risk.</p> <p>When a new national planning policy context is finalised later in 2022 via the National Planning Framework 4, they will take the same approach.</p>	<p>flooding or would increase flood risk elsewhere, and encourages the most sustainable approach to managing surface water.</p>
--	--	---	--	---	---

● Fraserburgh and Rosehearty (Potentially Vulnerable Area 06/05)

Local Plan District	Local authority	Main catchment
North East	Aberdeenshire Council	Buchan coastal



Summary of Progress for Fraserburgh and Rosehearty

This Potentially Vulnerable Area is located in the Moray Firth from Pennan to Fraserburgh. It is approximately 37km². The main urban areas are Fraserburgh, Rosehearty, New Aberdour and Sandhaven

There are several small watercourses within the area including The Dour.

There are approximately 60 residential and 80 non-residential properties at risk of flooding.

The Annual Average Damages are approximately £84,000 with the majority from surface water flooding. It is recognised that wave overtopping contributes to coastal flooding which is not fully represented in this analysis.

Further information can be found in NELFRMP under PVA 06/05.

https://www.aberdeenshire.gov.uk/media/17343/pva-06_05-fraserburgh-and-rosehearty.pdf

Key progress:

- Improved outfall arrangements at the Kessock Burn
- Blairmore Park, Rosehearty culvert replacement

© Crown copyright and database rights 2022.
 Ordnance Survey licence no. 0100020767
 Map reproduced from North East Flood Risk Management Strategy, SEPA (December 2015)

Overview of actions to manage flooding in Fraserburgh and Rosehearty

PVA	Flood protections scheme/works	Natural flood management	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/05						A	G		G	G			G	G	G		G	G

Summary of progress of actions to manage flood risk in Fraserburgh and Rosehearty (PVA 06/05)

Action	Status	Description	Start	End	Progress	Future Actions
Surface water plan/study	A	A study to prepare Surface Water Management Plan (SWMP) to generate increased understanding of the causes, probability and consequences of surface water flooding and to evaluate options for surface water flood management.	Aberdeenshire Council	2016 - 2021	Fraserburgh and Rosehearty flood areas to be mapped and flood areas from various sources reviewed to identify areas for further investigation for discussing with Scottish Water.	Aberdeenshire Council continue to develop Surface Water Management plans in this area by reviewing historic flooding issues and collating data. The purpose of which will be to identify possible improvements to the drainage system and maintenance.

Strategic mapping and modelling (surface water)	G	SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km ² of improved data is currently available within this Local Plan District.	SEPA		SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology; this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.	The national surface water flooding modelling project will be completed in 2023. The outputs from this will be used to update SEPA maps early in cycle 2 and will inform SEPA's flood risk assessments for the next flood risk management cycle.
Strategic mapping and modelling (Sewer)	G	Scottish Water will undertake modelling of the Fraserburgh sewer catchment.	Scottish Water	22/03/18	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority	
Maintain flood warning	G	SEPA will continue to maintain both the 'Gardenstown to Pennan' and 'Rosehearty to Fraserburgh' flood warning areas which are part of the	SEPA	Ongoing	SEPA has continued to operate the flood warning service.	

		Moray Firth coastal flood warning scheme.				
Flood forecasting	G	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business. For more information, please visit SEPA’s website.	SEPA	Ongoing	SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance Statement, the Scottish Flood Forecast, to provide better and earlier information to the public. A beta version of this product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding. The development and wider roll-out of	

					<p>this service is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.</p>	
Self help	G	<p>Everyone is responsible for protecting themselves and their property from flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities Initiatives, and ensuring that properties and businesses are insured against flood damage.</p>	-	Ongoing	<p>Aberdeenshire Council continue to make PLP products available at cost price. New sandbag containers are installed across Aberdeenshire at flood prone locations for the public to help themselves to in times of flooding. SEPA continues to assist members of the public to sign up to Floodline.</p>	<p>Numerous actions have been undertaken by Responsible Authorities to raise awareness and educate about Self Help actions. Local authorities, SEPA, Scottish water and other organisations will provide support to communities on request</p>
Awareness raising	G	<p>SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact. Local authorities will be undertaking additional awareness</p>	Responsible Authorities	Ongoing	<p>Aberdeenshire Council continue with liaising with community councils on resilience. Aberdeenshire Council advise householders directly on property level protection products and actions they can take.</p>	

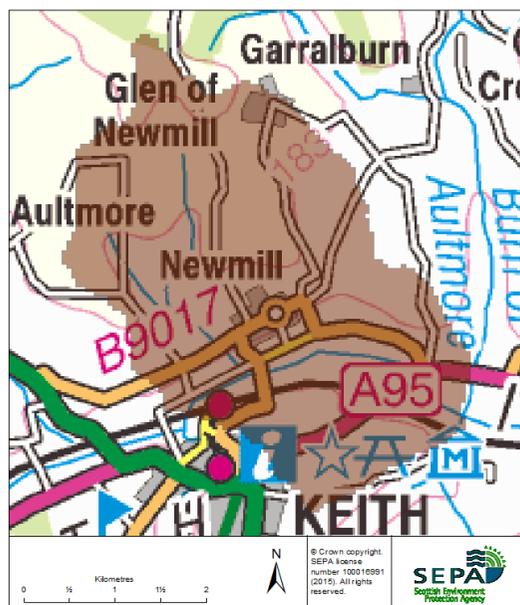
		raising activities, further details will be set out in the Local FRM Plans.			The responsible Authorities continue to work with others to raise awareness of flood risk and its flood warning service. It has participated in local activities including school / education and community resilience activities when able. Some planned activities notably in person joint events have been limited or delayed due to Covid 19	
Maintenance	G	Actions taken by Local Authorities and Scottish Water to undertake clearance and repair in relation to waterbodies and maintenance of other water related assets.	Aberdeenshire Council, asset / land managers	Ongoing	<p>Local Authorities have inspected waterbodies and identify clearance and repair works to reduce flood risk.</p> <p>A publicly accessible page is available on Aberdeenshire Councils website, updated nightly, showing schedules of clearance and repair as assessments take place</p> <p>Local Authorities inspect flood protection schemes and provide maintenance works where deemed necessary.</p> <p>Scottish Water continue to undertake risk based inspections, maintenance and repair on the public sewer network.</p>	<p>Current actions to continue.</p> <p>Aberdeenshire Council will continue with its routine watercourse inspections and schedule any clearance and repair work. All information is publicly available.</p>

<p>Emergency plans/response</p>	<p>G</p>	<p>Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA.</p>	<p>Category 1 and 2 Responders</p>	<p>Ongoing</p>	<p>In response to weather warnings received the Responsible Authorities under the Civil Contingencies Act 2004 use the best available information from a number of sources to co-ordinate regional and local actions.</p> <p>Grampian Emergency Planning Unit have in place and maintain Emergency Plans for all contingencies</p>	<p>Current actions to continue.</p> <p>Emergency plans are reviewed and updated when required.</p>
<p>Planning Policy</p>	<p>G</p>	<p>Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers' priorities for the operation of the planning system and for the development and use of land. In terms of flood risk management, the policy supports a catchment scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long term vulnerability of parts of our coasts and islands. Under this approach, new development in areas</p>	<p>Planning Authority</p>	<p>Ongoing</p>	<p>Local Authorities, as Planning Authority, ensure that any new developments satisfy relevant guidance and policies on flooding and drainage.</p> <p>SEPA continues to exercise its planning functions with a view to reducing overall flood risk. They effectively contribute to the delivery of sustainable flood risk management and support the delivery of FRM Plans and Local FRM Plans. In line with the management actions that accord with national planning policies, they will continue to object to development at medium</p>	<p>Local Authorities continue to consider flood risk when determining planning applications. They ensure final versions of Local Development Plans maintain robust policy to avoid new development in areas that are at risk of flooding or would increase flood risk elsewhere, and encourages the most sustainable approach</p>

		<p>with medium to high likelihood of flooding should be avoided.</p>		<p>to high risk of flooding when it is contrary to the risk framework set out in Scottish Planning Policy. They will continue to engage from the start of the development plan process and encourage planning authorities to undertake a Strategic Flood Risk Assessment to inform their spatial strategy and remain committed to exercising our planning functions with a view to reducing overall flood risk. When a new national planning policy context is finalised later in 2022 via the National Planning Framework 4, they will take the same approach.</p>	<p>to managing surface water.</p>
--	--	--	--	---	-----------------------------------

- **Newmill (Potentially Vulnerable Area 06/06)**

Local Plan District	Local authority	Main catchment
North East	Moray Council	River Deveron



© Crown copyright and database rights 2022.
 Ordnance Survey licence no. 0100020767
 Map reproduced from North East Flood Risk Management Strategy, SEPA (December 2015)

Summary of Progress for Newmill

There are approximately 13 residential and fewer than 10 non-residential properties at risk of flooding. The Annual Average Damages are approximately £24,000. These damages are evenly distributed between surface water and river flooding.

Since the NELFRMP was published in May 2016, a flood protection scheme for Newmill has been constructed and this scheme is now operational. This scheme provides protection from surface water runoff to eighteen properties that were previously at risk of flooding. A high level Surface Water Management Plan has been undertaken for Moray, in which Keith is a priority area. Any actions to mitigate flooding identified in this plan will be taken forward for consideration in Cycle 2.

Further information can be found in NELFRMP under PVA 06/06.

https://www.aberdeenshire.gov.uk/media/17341/pva-06_06-newmill.pdf

Key progress:

- Moray Council have continued to maintain the flood scheme including ditch clearance and sediment clearance

Overview of actions to manage flooding in Newmill

PVA	Flood protections scheme/works	Natural flood management	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/06	G					G	G	G	G	G		G	G	G	G		G	G

Summary of progress of actions to manage flood risk in Newmill (PVA 06/06)

Action	Status	Description	Start	End	Progress	Future Actions
Flood protection Scheme	G	Moray Council will construct a flood protection scheme in Newmill to address surface water flooding issues. The scheme includes a network of ditches, a cascade, flood walls and a replacement bridge.	Moray Council	2016 - 2021	The Newmill Flood Protection Scheme was completed in December 2016 and is now operational.	No further action required.
Surface water plan/study	G	Moray Council is developing a Surface Water Management Plan for the Keith/Newmill area.	Moray Council	2019	Moray Council completed a Surface Water Management Plan for Keith / Newmill in 2017.	Actions identified in the Surface Water Management Plan will be taken forward for inclusion in the LFRMP for Cycle 2.

Strategic mapping and modelling (Sewer)	G	Scottish Water will undertake modelling of the Keith sewer catchment.	Scottish Water	18-Dec-18	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority	
Strategic mapping and modelling (surface water)	G	SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km ² of improved data is currently available within this Local Plan District."	SEPA		SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.	The national surface water flooding modelling project will be completed in 2023. The outputs from this will be used to update SEPA maps early in cycle 2 and will inform SEPA's flood risk assessments for the next flood risk management cycle.
Maintain Flood Protection Scheme	G	Moray Council will continue to maintain the Newmill Flood Protection Scheme, including Phase 2, once completed.	Moray Council	Ongoing	Moray Council has continued to maintain the Newmill Flood Protection Scheme. Phase 2 was included in January 2017.	Moray Council will continue to maintain this scheme.

Maintain flood warning	G	SEPA will continue to maintain the 'Keith' flood warning area which is on the River Isla and forms part of the Deveron River flood warning scheme	SEPA	Ongoing	SEPA has continued to operate the flood warning service	
Flood forecasting	G	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business. For more information, please visit SEPA's website.	SEPA	Ongoing	SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance Statement, the Scottish Flood Forecast, to provide better and earlier information to the public. A beta version of this product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding. The	

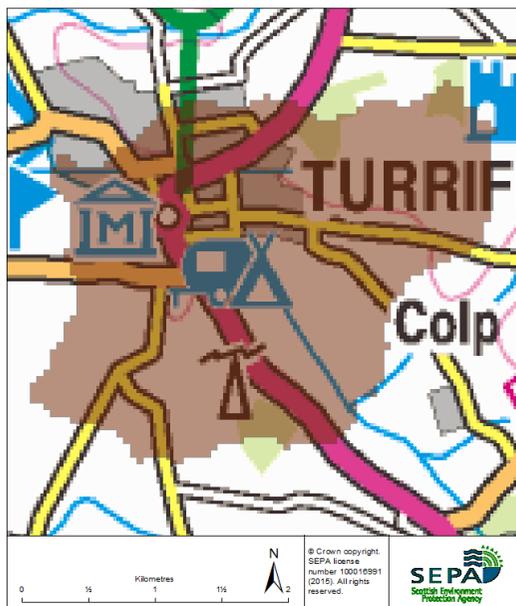
					development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.	
Community Flood Action Group	G	Newmill Community Association has worked with Moray Council, and tenants to reduce the impact of surface water flooding.	Community	Ongoing	Newmill Community Association and Moray Council worked together to keep local residents informed during the construction of the Newmill Flood Protection Scheme	Moray Council will continue to work with this group on request.
Self help	G	Everyone is responsible for protecting themselves and their property from flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities initiatives, and ensuring that properties and businesses are insured against flood damage.	Property owners	Ongoing	SEPA continues to assist members of the public to sign up to Floodline. Moray Council has not received any requests for assistance from property owners in this area.	
Awareness raising	G	Moray Council will seek opportunities to raise awareness of flood risk and actions that prepare individuals,	Responsible Authorities	Ongoing	SEPA continues to work with others to raise awareness of flood risk and its flood warning service. It has participated in local activities	Moray Council will undertake additional awareness raising

		homes and businesses as described in the Act.			including school / education and community resilience activities when able. Some planned activities notably in person joint events have been limited or delayed due to Covid 19.	activities as and when required.
Maintenance	G	Local authorities have a duty to assess watercourses and carry out clearance and repair works where such works would substantially reduce flood risk. Moray Council has a schedule of clearance and repair, which identifies routine maintenance and repairs to address areas known to be at risk of flooding.	Moray Council, asset / land managers	Ongoing	Moray Council inspects flood management assets within its region according to an inspection schedule. This schedule is reviewed annually to ensure resources are targeted at the areas at greatest risk.	Moray Council will continue with its programme of clearance and repair work, which is reviewed annually.
Emergency plans/response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA.	Category 1 and 2 Responders	Ongoing	SEPA continues to support emergency planning. Moray Council Emergency Planners have in place and maintain Emergency Plans for all contingencies	Moray Council's emergency plan is reviewed and updated when required.
Planning Policy	G	Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers' priorities for the operation of the planning system and for the development and	Planning Authority	Ongoing	Moray Council, as a Planning Authority, ensures that new developments satisfy relevant guidance and policies on flooding and drainage.	Continue to consider flood risk when determining planning applications. Ensure final version of emerging Local Plan

		use of land in terms of flood risk management.				maintains robust policy to avoid new development in areas that are at risk of flooding or would increase flood risk elsewhere, and encourages the most sustainable approach to managing surface water.
--	--	--	--	--	--	--

- Turriff (Potentially Vulnerable Area 06/07)

Local Plan District	Local authority	Main catchment
North East	Aberdeenshire Council	River Deveron



© Crown copyright and database rights 2022.
 Ordnance Survey licence no. 0100020767
 Map reproduced from North East Flood Risk Management Strategy, SEPA (December 2015)

Summary of Progress for Turriff

This Potentially Vulnerable Area includes the south and west of Turriff and surrounding rural areas. It is approximately 7km². The A947 passes through the middle of the area. The main river is the Burn of Turriff which flows into the Deveron just to the north west of the area. There are approximately 20 non-residential and fewer than 10 residential properties at risk of flooding. The Annual Average Damages are estimated to be £24,000 with the majority caused by surface water flooding.

Further information can be found in NELFRMP under PVA 06/07.
https://www.aberdeenshire.gov.uk/media/17348/pva-06_07-turriff.pdf

Key progress:

- Improved watercourse maintenance at Turriff United Football Club
- Community Engagement with Turriff Show representatives regarding Haughs erosion issues on Burn of Turriff.

Overview of actions to manage flooding in Turriff

PVA	Flood protections scheme/works	Natural flood management	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/07							G		G	G			G	G	G		G	G

Summary of progress of actions to manage flood risk in Turriff (PVA 06/07)

Action	Status	Description	Start	End	Progress	Future Actions
Strategic mapping and modelling (Sewer)	G	Scottish Water will undertake modelling of the Turriff sewer catchment.	Scottish Water	22/12/16	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority	
Strategic mapping and modelling (surface water)	G	SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km ² of improved data is currently available within this Local Plan District."	SEPA		SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts	The national surface water flooding modelling project will be completed in 2023. The outputs from this will be used to update SEPA maps early in cycle 2 and will inform SEPA's

					compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.	flood risk assessments for the next flood risk management cycle.
Maintain flood warning	G	SEPA will continue to maintain the 'Turriff' flood warning area which is part of the Deveron river flood warning scheme.	SEPA	Ongoing	SEPA has continued to operate the flood warning service.	
Flood forecasting	G	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business. For more information, please visit SEPA's website.	SEPA	Ongoing	SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance Statement, the Scottish Flood Forecast, to provide better and earlier information to the public. A beta version of this product was	

					launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding. The development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.	
Self help	G	Everyone is responsible for protecting themselves and their property from flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities Initiatives, and ensuring	-	Ongoing	Aberdeenshire Council continue to make PLP products available at cost price. New sandbag containers are installed across Aberdeenshire at flood prone locations for the public to help themselves to in times of flooding. SEPA continues to assist members of the public to sign up to Floodline.	Numerous actions have been undertaken by Responsible Authorities to raise awareness and educate about Self Help actions. Local authorities, SEPA, Scottish water and other

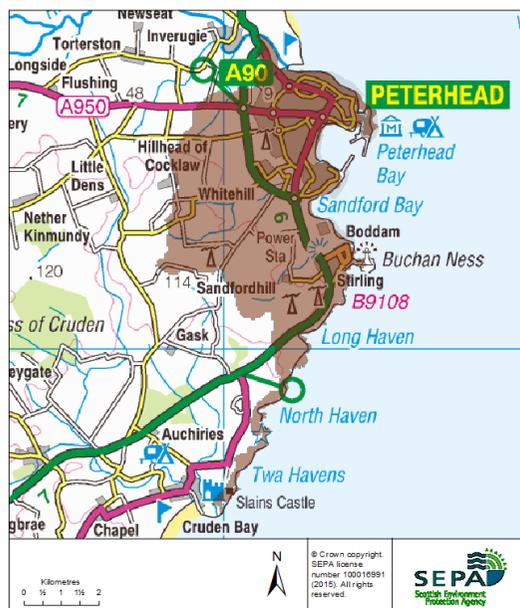
		that properties and businesses are insured against flood damage.				organisations will provide support to communities on request
Awareness raising	G	SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact. Local authorities will be undertaking additional awareness raising activities, further details will be set out in the Local FRM Plans.	Responsible Authorities	Ongoing	<p>Aberdeenshire Council continue with liaising with community councils on resilience.</p> <p>Aberdeenshire Council advise householders directly on property level protection products and actions they can take.</p> <p>The responsible Authorities continue to work with others to raise awareness of flood risk and its flood warning service. It has participated in local activities including school / education and community resilience activities when able. Some planned activities notably in person joint events have been limited or delayed due to Covid 19</p>	
Maintenance	G	Actions taken by Local Authorities and Scottish Water to undertake clearance and repair in relation to waterbodies and maintenance of other water related assets.	Aberdeenshire Council, asset / land managers	Ongoing	<p>Local Authorities have inspected waterbodies and identify clearance and repair works to reduce flood risk.</p> <p>A publicly accessible page is available on Aberdeenshire Councils</p>	<p>Current actions to continue.</p> <p>Aberdeenshire Council will continue with its routine watercourse</p>

					<p>website, updated nightly, showing schedules of clearance and repair as assessments take place</p> <p>Local Authorities inspect flood protection schemes and provide maintenance works where deemed necessary.</p> <p>Scottish Water continue to undertake risk based inspections, maintenance and repair on the public sewer network.</p>	<p>inspections and schedule any clearance and repair work. All information is publicly available.</p>
Emergency plans/response	G	<p>Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA.</p>	<p>Category 1 and 2 Responders</p>	<p>Ongoing</p>	<p>In response to weather warnings received the Responsible Authorities under the Civil Contingencies Act 2004 use the best available information from a number of sources to co-ordinate regional and local actions.</p> <p>Grampian Emergency Planning Unit have in place and maintain Emergency Plans for all contingencies</p>	<p>Current actions to continue.</p> <p>Emergency plans are reviewed and updated when required.</p>
Planning Policy	G	<p>Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers' priorities</p>	<p>Planning Authority</p>	<p>Ongoing</p>	<p>Local Authorities, as Planning Authority, ensure that any new developments satisfy relevant</p>	<p>Local Authorities continue to consider flood risk when</p>

		<p>for the operation of the planning system and for the development and use of land. In terms of flood risk management, the policy supports a catchment scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided.</p>		<p>guidance and policies on flooding and drainage. SEPA continues to exercise its planning functions with a view to reducing overall flood risk. They effectively contribute to the delivery of sustainable flood risk management and support the delivery of FRM Plans and Local FRM Plans. In line with the management actions that accord with national planning policies, they will continue to object to development at medium to high risk of flooding when it is contrary to the risk framework set out in Scottish Planning Policy. They will continue to engage from the start of the development plan process and encourage planning authorities to undertake a Strategic Flood Risk Assessment to inform their spatial strategy and remain committed to exercising our planning functions with a view to reducing overall flood risk. When a new national planning policy context is finalised later in 2022 via the National Planning Framework 4, they will take the same approach.</p>	<p>determining planning applications. They ensure final versions of Local Development Plans maintain robust policy to avoid new development in areas that are at risk of flooding or would increase flood risk elsewhere, and encourages the most sustainable approach to managing surface water.</p>
--	--	--	--	--	---

● Peterhead (Potentially Vulnerable Area 06/08)

Local Plan District	Local authority	Main catchment
North East	Aberdeenshire Council	Buchan coastal



Summary of Progress for Peterhead

This Potentially Vulnerable Area includes Peterhead, Stirling and Boddam. It is approximately 28km². The A90, A950, and A982 pass through the area. The main river in the area is the River Ugie. There are approximately 40 residential and 80 non-residential properties at risk of flooding. The Annual Average Damages are estimated to be £580,000 with the majority attributed to surface water flooding.

Further information can be found in NELFRMP under PVA 06/08.
https://www.aberdeenshire.gov.uk/media/17349/pva-06_08-peterhead.pdf

Key progress:

- SEPA has completed development of a flood forecasting model for Aberdeenshire and Angus coastline and has worked with Aberdeenshire Council to develop procedures for the new flood warning service. A new flood warning area has been introduced for Peterhead to Boddam.
- Repairs have been carried out to several areas of coastal defences including Gadle Braes and Roanheads seawalls.
- Improved maintenance of road drainage A90 at Stirling Village

© Crown copyright and database rights 2022.
 Ordnance Survey licence no. 0100020767
 Map reproduced from North East Flood Risk Management Strategy, SEPA (December 2015)

Overview of actions to manage flooding in Peterhead

PVA	Flood protections scheme/works	Natural flood management	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/08			G			A	G			G			G	G	G		G	G

Summary of progress of actions to manage flood risk in Peterhead (PVA 06/08)

Action	Status	Description	Start	End	Progress	Future Actions
New Flood Warning	G	Flood warning is required for communities at risk of coastal flooding along the Aberdeenshire coast from Peterhead to Montrose. A flood forecasting system will be required before the flood warning scheme can be developed.	01/01/17	31/12/18	SEPA has continued to operate the flood warning service since it was completed earlier in the FRM cycle.	
Surface water plan/study	A	A study to prepare Surface Water Management Plan (SWMP) to generate increased understanding of the causes, probability and consequences of surface water flooding and to evaluate	Aberdeenshire Council	Ongoing	Flood areas from various sources to be mapped and reviewed to identify areas for further investigation and discussion with Scottish Water.	Aberdeenshire Council continue to develop Surface Water Management plans in this area by reviewing historic flooding

		options for surface water flood management.				issues and collating data. The purpose of which will be to identify possible improvements to the drainage system and maintenance.
Strategic mapping and modelling (Sewer)	G	Scottish Water will undertake modelling of the Peterhead sewer catchment.	Scottish Water	22/10/18	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority	
Strategic mapping and modelling (surface water)	G	SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km ² of improved data is currently available within this Local Plan District."	SEPA		SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.	The national surface water flooding modelling project will be completed in 2023. The outputs from this will be used to update SEPA maps early in cycle 2 and will inform SEPA's flood risk assessments for the next flood risk management cycle.

Flood forecasting	G	<p>The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business. For more information, please visit SEPA’s website.</p>	SEPA	Ongoing	<p>SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance Statement, the Scottish Flood Forecast, to provide better and earlier information to the public. A beta version of this product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding. The development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges associated</p>
-------------------	---	--	------	---------	---

					with providing surface water flooding guidance.
Self help	G	Everyone is responsible for protecting themselves and their property from flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities Initiatives, and ensuring that properties and businesses are insured against flood damage.	-	Ongoing	Aberdeenshire Council continue to make PLP products available at cost price. New sandbag containers are installed across Aberdeenshire at flood prone locations for the public to help themselves to in times of flooding. SEPA continues to assist members of the public to sign up to Floodline.
Awareness raising	G	SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact. Local authorities will be undertaking additional awareness raising activities, further details will be set out in the Local FRM Plans.	Responsible Authorities	Ongoing	Aberdeenshire Council continue with liaising with community councils on resilience. Aberdeenshire Council advise householders directly on property level protection products and actions they can take. The responsible Authorities continue to work with others to raise awareness of flood risk and its flood warning service. It has participated in local activities including school / education and community resilience

					activities when able. Some planned activities notably in person joint events have been limited or delayed due to Covid 19
Maintenance	G	Actions taken by Local Authorities and Scottish Water to undertake clearance and repair in relation to waterbodies and maintenance of other water related assets.	Aberdeenshire Council, asset / land managers	Ongoing	<p>Local Authorities have inspected waterbodies and identify clearance and repair works to reduce flood risk.</p> <p>A publicly accessible page is available on Aberdeenshire Councils website, updated nightly, showing schedules of clearance and repair as assessments take place</p> <p>Local Authorities inspect flood protection schemes and provide maintenance works where deemed necessary.</p> <p>Scottish Water continue to undertake risk based inspections, maintenance and repair on the public sewer network.</p>
Emergency plans/response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA.	Category 1 and 2 Responders	Ongoing	In response to weather warnings received the Responsible Authorities under the Civil Contingencies Act 2004 use the best available information from a number of

					<p>sources to co-ordinate regional and local actions.</p> <p>Grampian Emergency Planning Unit have in place and maintain Emergency Plans for all contingencies</p>
Planning Policy	G	<p>Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers’ priorities for the operation of the planning system and for the development and use of land. In terms of flood risk management, the policy supports a catchment scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided.</p>	Planning Authority	Ongoing	<p>Local Authorities, as Planning Authority, ensure that any new developments satisfy relevant guidance and policies on flooding and drainage.</p> <p>SEPA continues to exercise its planning functions with a view to reducing overall flood risk. They effectively contribute to the delivery of sustainable flood risk management and support the delivery of FRM Plans and Local FRM Plans. In line with the management actions that accord with national planning policies, they will continue to object to development at medium to high risk of flooding when it is contrary to the risk framework set out in Scottish Planning Policy.</p> <p>They will continue to engage from the start of the development plan process and encourage planning authorities to undertake a Strategic Flood Risk Assessment to inform their spatial</p>

					strategy and remain committed to exercising our planning functions with a view to reducing overall flood risk. When a new national planning policy context is finalised later in 2022 via the National Planning Framework 4, they will take the same approach.
--	--	--	--	--	--

- **Methlick (Potentially Vulnerable Area 06/09)**

Local Plan District	Local authority	Main catchment
North East	Aberdeenshire Council	River Ythan



Summary of Progress for Methlick

This Potentially Vulnerable Area is located northeast of Inverurie and covers Methlick and the surrounding rural area. It is approximately 21km². The B9005 and B9170 roads run through the area. The main water course is the River Ythan. There are approximately 20 non-residential and fewer than 10 residential properties at risk of flooding. The Annual Average Damages are approximately £71,000. The majority of these are attributed to river flooding.

Further information can be found in NELFRMP under PVA 06/09.

https://www.aberdeenshire.gov.uk/media/17342/pva-06_09-methlick.pdf

Key progress:

- Further to a flood incident in January 2016, flood protection works at the Methlick bridge were carried out to improve flow through capacity.

© Crown copyright and database rights 2022.
 Ordnance Survey licence no. 0100020767
 Map reproduced from North East Flood Risk Management Strategy, SEPA (December 2015)

Overview of actions to manage flooding in Methlick

PVA	Flood protections	Natural flood management	New flood warning	Flood protection study	Natural flood management	Surface water plan/study	Strategic mapping and	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection	Community flood action	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/09										G			G	G	G		G	G

Summary of progress of actions to manage flood risk in Methlick (PVA 06/09)

Action	Status	Description	Start	End	Progress	Future Actions
Flood forecasting	G	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business. For more information, please visit SEPA's website.	SEPA	Ongoing	SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance Statement, the Scottish Flood Forecast, to provide better and earlier information to the public. A beta version of this	

					<p>product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding. The development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.</p>	
Self help	G	<p>Everyone is responsible for protecting themselves and their property from flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities Initiatives, and ensuring</p>	-	Ongoing	<p>Aberdeenshire Council continue to make PLP products available at cost price. New sandbag containers are installed across Aberdeenshire at flood prone locations for the public to help themselves to in times of flooding. SEPA continues to assist members of the public to sign up to Floodline.</p>	<p>Numerous actions have been undertaken by Responsible Authorities to raise awareness and educate about Self Help actions. Local authorities, SEPA, Scottish water and other organisations will</p>

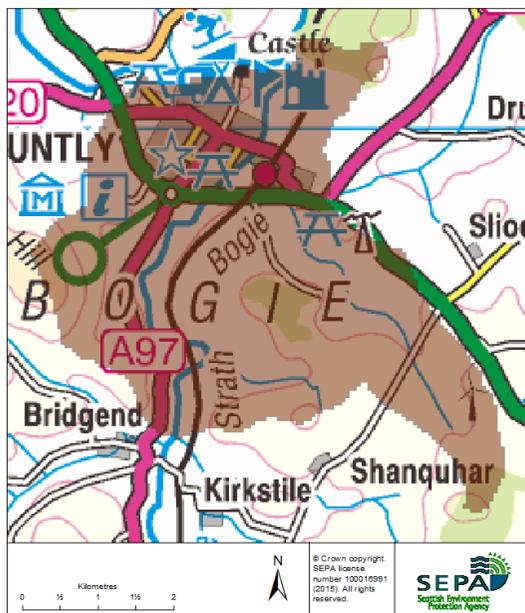
		that properties and businesses are insured against flood damage.				provide support to communities on request
Awareness raising	G	SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact. Local authorities will be undertaking additional awareness raising activities, further details will be set out in the Local FRM Plans.	Responsible Authorities	Ongoing	<p>Aberdeenshire Council continue with liaising with community councils on resilience. Aberdeenshire Council advise householders directly on property level protection products and actions they can take.</p> <p>The responsible Authorities continue to work with others to raise awareness of flood risk and its flood warning service. It has participated in local activities including school / education and community resilience activities when able. Some planned activities notably in person joint events have been limited or delayed due to Covid 19</p>	
Maintenance	G	Actions taken by Local Authorities and Scottish Water to undertake clearance and repair in relation to waterbodies and maintenance of other water related assets.	Aberdeenshire Council, asset / land managers	Ongoing	<p>Local Authorities have inspected waterbodies and identify clearance and repair works to reduce flood risk.</p> <p>A publicly accessible page is available on Aberdeenshire Councils website, updated nightly, showing</p>	<p>Current actions to continue.</p> <p>Aberdeenshire Council will continue with its routine watercourse inspections and</p>

					<p>schedules of clearance and repair as assessments take place</p> <p>Local Authorities inspect flood protection schemes and provide maintenance works where deemed necessary.</p> <p>Scottish Water continue to undertake risk based inspections, maintenance and repair on the public sewer network.</p>	<p>schedule any clearance and repair work. All information is publicly available.</p>
Emergency plans/response	G	<p>Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA.</p>	<p>Category 1 and 2 Responders</p>	<p>Ongoing</p>	<p>In response to weather warnings received the Responsible Authorities under the Civil Contingencies Act 2004 use the best available information from a number of sources to co-ordinate regional and local actions.</p> <p>Grampian Emergency Planning Unit have in place and maintain Emergency Plans for all contingencies</p>	<p>Current actions to continue.</p> <p>Emergency plans are reviewed and updated when required.</p>
Planning Policy	G	<p>Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers' priorities for the operation of the planning system and for the development and</p>	<p>Planning Authority</p>	<p>Ongoing</p>	<p>Local Authorities, as Planning Authority, ensure that any new developments satisfy relevant guidance and policies on flooding and drainage.</p>	<p>Local Authorities continue to consider flood risk when determining planning applications. They</p>

		<p>use of land. In terms of flood risk management, the policy supports a catchment scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided.</p>		<p>SEPA continues to exercise its planning functions with a view to reducing overall flood risk. They effectively contribute to the delivery of sustainable flood risk management and support the delivery of FRM Plans and Local FRM Plans. In line with the management actions that accord with national planning policies, they will continue to object to development at medium to high risk of flooding when it is contrary to the risk framework set out in Scottish Planning Policy. They will continue to engage from the start of the development plan process and encourage planning authorities to undertake a Strategic Flood Risk Assessment to inform their spatial strategy and remain committed to exercising our planning functions with a view to reducing overall flood risk. When a new national planning policy context is finalised later in 2022 via the National Planning Framework 4, they will take the same approach.</p>	<p>ensure final versions of Local Development Plans maintain robust policy to avoid new development in areas that are at risk of flooding or would increase flood risk elsewhere, and encourages the most sustainable approach to managing surface water.</p>
--	--	---	--	--	---

● **Huntly (Potentially Vulnerable Area 06/10)**

Local Plan District	Local authority	Main catchment
North East	Aberdeenshire Council	River Deveron



© Crown copyright and database rights 2022.
 Ordnance Survey licence no. 0100020767
 Map reproduced from North East Flood Risk Management Strategy, SEPA (December 2015)

Summary of Progress for Huntly

This Potentially Vulnerable Area includes Huntly and the rural area to the south. It is approximately 20km². It is approximately 68km². The A96, A97 and A920 pass through the area. The River Deveron and the River Bogie are the main rivers in this area. There are approximately 110 residential and 50 non-residential properties at risk of flooding. The Annual Average Damages are approximately £450,000 with the majority due to river flooding.

Further information can be found in NELFRMP under PVA 06/10.

https://www.aberdeenshire.gov.uk/media/17345/pva-06_10-huntly.pdf

Key progress:

- The Huntly Flood Protection Scheme designed to protect properties from both the River Deveron and Meadow Burn, was completed in October 2017.
- Continued maintenance of the Huntly Flood Scheme
- New gauge and CCTV camera installed following completion of scheme for improved monitoring

Overview of actions to manage flooding in Huntly

PVA	Flood protections scheme/works	Natural flood management	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/10	G					A	G	G	G	G			G	G	G		G	G

Summary of progress of actions to manage flood risk in Huntly (PVA 06/10)

Action	Status	Description	Start	End	Progress	Future Actions
Flood protections scheme/works	G	Flood Protection Scheme includes: - Raised defences on the right bank of the River Deveron from Arnhall Cottages to Milton Farm - Increasing the size of the culvert on the Ittingstone Burn below the A920 and constructing raised defences - Raising and strengthening the existing defences on the river Deveron between the Bridge of Gibston and the Hill of Haugh - Constructing raised defences to the east and south of the caravan park	Aberdeenshire Council	2016 - 2017	Huntly Flood Scheme completed October 2017.	Maintenance handover documents on-going. Maintenance schedule to be established and engaged. 'As built' drawings provided for Scottish Government for inclusion in SFDAD.

		<ul style="list-style-type: none"> - Replacing one undersize culvert on the Meadow Burn with a timber footbridge - Creating local storage to the west of the Meadows estate by constricting the flow in the Meadow - Various headwalls, culverts and drainage improvements 				
Surface water plan/study	A	A study to prepare Surface Water Management Plan (SWMP) to generate increased understanding of the causes, probability and consequences of surface water flooding and to evaluate options for surface water flood management.	Aberdeenshire Council	2016 - 2021	Huntly flood areas to be and flood areas from various sources reviewed to identify areas for further investigation for discussing with Scottish Water.	Aberdeenshire Council continue to develop Surface Water Management plans in this area by reviewing historic flooding issues and collating data. The purpose of which will be to identify possible improvements to the drainage system and maintenance.
Strategic mapping and modelling (Sewer)	G	Scottish Water will undertake further investigation and modelling in the Huntly sewer catchment to improve knowledge and understanding of flood risk in this area.	Scottish Water	18/3/19	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority	

<p>Strategic mapping and modelling (surface water)</p>	<p>G</p>	<p>SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km² of improved data is currently available within this Local Plan District."</p>	<p>SEPA</p>		<p>SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.</p>	<p>The national surface water flooding modelling project will be completed in 2023. The outputs from this will be used to update SEPA maps early in cycle 2 and will inform SEPA's flood risk assessments for the next flood risk management cycle.</p>
<p>Maintain flood protection scheme*</p>	<p>G</p>	<p>Assuming the Huntly Flood Protection Scheme is completed within the first six-year plan cycle 2016-2022, the following maintenance measures will be undertaken:</p> <ul style="list-style-type: none"> - General inspection and maintenance - Rock Armour - Replacement when required - Debris screens will receive routine/programmed inspections as 	<p>Aberdeenshire Council</p>	<p>2019 onwards</p>	<p>As per description and on track to deliver within agreed LFRMP timescales</p>	

		<p>well as reactive and emergency response.</p> <p>- The Reservoirs (Scotland) Act 2011 requires all reservoirs above the capacity of 10,000m³ to be included on a SEPA register. As such, inspection, maintenance and certification requirements of the Reservoirs (Scotland) Act 2011</p>				
Maintain flood warning	G	<p>SEPA will continue to maintain the 'Huntly (Bogie)' flood warning area which is on the River Bogie and the 'Milton and The Meadows' flood warning area. Both form part of the Deveron river flood warning scheme.</p>	SEPA	Ongoing	SEPA has continued to operate the flood warning service	
Flood forecasting	G	<p>The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business. For more information, please visit SEPA's website.</p>	SEPA	Ongoing	SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance Statement, the Scottish Flood Forecast, to provide better and earlier information to the public. A beta	

					version of this product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding. The development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.	
Self help	G	Everyone is responsible for protecting themselves and their property flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities initiatives, and	-	Ongoing	Aberdeenshire Council continue to make PLP products available at cost price. New sandbag containers are installed across Aberdeenshire at flood prone locations for the public to help themselves to in times of flooding. SEPA continues to assist members of the public to sign up to Floodline.	Numerous actions have been undertaken by Responsible Authorities to raise awareness and educate about Self Help actions. Local authorities, SEPA, Scottish water and other

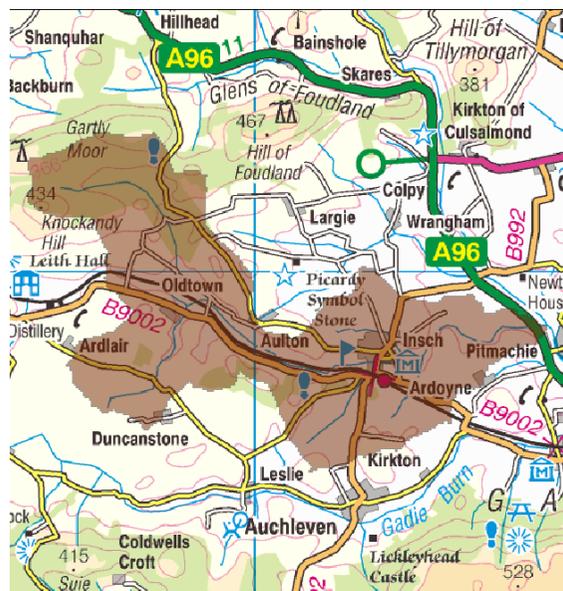
		ensuring that properties and businesses are insured against flood damage.				organisations will provide support to communities on request
Awareness raising	G	SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact. Local authorities will be undertaking additional awareness raising activities, further details will be set out in the Local FRM Plans.	Responsible Authorities	Ongoing	<p>Aberdeenshire Council continue with liaising with community councils on resilience.</p> <p>Aberdeenshire Council advise householders directly on property level protection products and actions they can take.</p> <p>The responsible Authorities continue to work with others to raise awareness of flood risk and its flood warning service. It has participated in local activities including school / education and community resilience activities when able. Some planned activities notably in person joint events have been limited or delayed due to Covid 19</p>	
Maintenance	G	Actions taken by Local Authorities and Scottish Water to undertake clearance and repair in relation to waterbodies and maintenance of other water related assets.	Aberdeenshire Council, asset / land managers	Ongoing	<p>Local Authorities have inspected waterbodies and identify clearance and repair works to reduce flood risk.</p> <p>A publicly accessible page is available on Aberdeenshire Councils website, updated nightly, showing schedules of</p>	<p>Current actions to continue.</p> <p>Aberdeenshire Council will continue with its routine watercourse</p>

					<p>clearance and repair as assessments take place</p> <p>Local Authorities inspect flood protection schemes and provide maintenance works where deemed necessary.</p> <p>Scottish Water continue to undertake risk based inspections, maintenance and repair on the public sewer network.</p>	<p>inspections and schedule any clearance and repair work. All information is publicly available.</p>
Emergency plans/response	G	<p>Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA.</p>	<p>Category 1 and 2 Responders</p>	<p>Ongoing</p>	<p>In response to weather warnings received the Responsible Authorities under the Civil Contingencies Act 2004 use the best available information from a number of sources to co-ordinate regional and local actions.</p> <p>Grampian Emergency Planning Unit have in place and maintain Emergency Plans for all contingencies</p>	<p>Current actions to continue.</p> <p>Emergency plans are reviewed and updated when required.</p>
Planning Policy	G	<p>Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers' priorities for the operation of the planning system and for the development and use of land. In terms of flood risk</p>	<p>Planning Authority</p>	<p>Ongoing</p>	<p>Local Authorities, as Planning Authority, ensure that any new developments satisfy relevant guidance and policies on flooding and drainage.</p>	<p>Local Authorities continue to consider flood risk when determining planning applications. They</p>

		<p>management, the policy supports a catchment scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided.</p>		<p>SEPA continues to exercise its planning functions with a view to reducing overall flood risk. They effectively contribute to the delivery of sustainable flood risk management and support the delivery of FRM Plans and Local FRM Plans. In line with the management actions that accord with national planning policies, they will continue to object to development at medium to high risk of flooding when it is contrary to the risk framework set out in Scottish Planning Policy. They will continue to engage from the start of the development plan process and encourage planning authorities to undertake a Strategic Flood Risk Assessment to inform their spatial strategy and remain committed to exercising our planning functions with a view to reducing overall flood risk. When a new national planning policy context is finalised later in 2022 via the National Planning Framework 4, they will take the same approach.</p>	<p>ensure final versions of Local Development Plans maintain robust policy to avoid new development in areas that are at risk of flooding or would increase flood risk elsewhere, and encourages the most sustainable approach to managing surface water.</p>
--	--	---	--	--	---

● **Insch (Potentially Vulnerable Area 06/11)**

Local Plan District	Local authority	Main catchment
North East	Aberdeenshire Council	River Don



Summary of Progress for Insch

This Potentially Vulnerable Area is based around Insch and Oldtown. It is approximately 40km². The B9002 and B992 and the Aberdeen to Inverness railway line pass through the area. The main watercourse is The Shevock which is a tributary of the River Urie. There are approximately 80 residential and 30 non-residential properties at risk of flooding. The Annual Average Damages are estimated to be £250,000 with the majority caused by river flooding.

Further information can be found in NELFRMP under PV06/11.
https://www.aberdeenshire.gov.uk/media/17355/pva-06_11-insch.pdf

Key progress:

- Insch Flood Study completed with a preferred option identified.
- New flood warning gauge installed on the Shevock burn.

© Crown copyright and database rights 2022.
 Ordnance Survey licence no. 0100020767
 Map reproduced from North East Flood Risk Management Strategy, SEPA (December 2015)

Overview of actions to manage flooding in Insch

PVA	Flood protections scheme/works	Natural flood management	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/11				G			G			G			G	G	G		G	G

Summary of progress of actions to manage flood risk in Insch (PVA 06/11)

Action	Status	Description	Start	End	Progress	Future Actions
Flood protection study	G	To evaluate options to reduce the risk of flooding in Insch from river flooding – Valentine Burn and The Shevock	Aberdeenshire Council	2016 - 2021	Modelling and analysis – Winter 2018 Outline engineering design - Winter 2018 Stakeholder and public engagement 1 - Spring 2019 Options appraisal - Spring 2019 Stakeholder and public engagement 2 - Summer 2019	
Strategic mapping and modelling – (Sewer)	G	Scottish Water will undertake modelling of the Insch sewer catchment.	Scottish Water	31/10/19	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority	

<p>Strategic mapping and modelling (surface water)</p>	<p>G</p>	<p>SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km² of improved data is currently available within this Local Plan District."</p>	<p>SEPA</p>		<p>SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.</p>	<p>The national surface water flooding modelling project will be completed in 2023. The outputs from this will be used to update SEPA maps early in cycle 2 and will inform SEPA's flood risk assessments for the next flood risk management cycle.</p>
<p>Flood forecasting</p>	<p>G</p>	<p>The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to</p>	<p>SEPA</p>	<p>Ongoing</p>	<p>SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the</p>	

		<p>issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business. For more information, please visit SEPA’s website.</p>			<p>impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance Statement, the Scottish Flood Forecast, to provide better and earlier information to the public. A beta version of this product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding. The development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.</p>	
Self help	G	Everyone is responsible for protecting themselves and their property	-	Ongoing	Aberdeenshire Council continue to make PLP products available at	Numerous actions have been

		<p>flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities initiatives, and ensuring that properties and businesses are insured against flood damage.</p>			<p>cost price. New sandbag containers are installed across Aberdeenshire at flood prone locations for the public to help themselves to in times of flooding. SEPA continues to assist members of the public to sign up to Floodline.</p>	<p>undertaken by Responsible Authorities to raise awareness and educate about Self Help actions. Local authorities, SEPA, Scottish water and other organisations will provide support to communities on request</p>
<p>Awareness raising</p>	<p>G</p>	<p>SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact. Local authorities will be undertaking additional awareness raising activities, further details will be set out in the Local FRM Plans.</p>	<p>Responsible Authorities</p>	<p>Ongoing</p>	<p>Aberdeenshire Council continue with liaising with community councils on resilience. Aberdeenshire Council advise householders directly on property level protection products and actions they can take.</p> <p>The responsible Authorities continue to work with others to raise awareness of flood risk and its flood warning service. It has participated in local activities including school / education and community resilience activities when able. Some planned</p>	

					activities notably in person joint events have been limited or delayed due to Covid 19	
Maintenance	G	Actions taken by Local Authorities and Scottish Water to undertake clearance and repair in relation to waterbodies and maintenance of other water related assets.	Aberdeenshire Council, asset / land managers	Ongoing	<p>Local Authorities have inspected waterbodies and identify clearance and repair works to reduce flood risk.</p> <p>A publicly accessible page is available on Aberdeenshire Councils website, updated nightly, showing schedules of clearance and repair as assessments take place</p> <p>Local Authorities inspect flood protection schemes and provide maintenance works where deemed necessary.</p> <p>Scottish Water continue to undertake risk based inspections, maintenance and repair on the public sewer network.</p>	<p>Current actions to continue.</p> <p>Aberdeenshire Council will continue with its routine watercourse inspections and schedule any clearance and repair work. All information is publicly available.</p>
Emergency plans/response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA.	Category 1 and 2 Responders	Ongoing	In response to weather warnings received the Responsible Authorities under the Civil Contingencies Act 2004 use the best available information from a	<p>Current actions to continue.</p> <p>Emergency plans are reviewed and</p>

					<p>number of sources to co-ordinate regional and local actions.</p> <p>Grampian Emergency Planning Unit have in place and maintain Emergency Plans for all contingencies</p>	<p>updated when required.</p>
Planning Policy	G	<p>As a consultee on planning applications, Aberdeenshire Council's Flood & Coast Protection team will work directly with colleagues in the Planning Service to ensure that appropriate policies and measures are put in place to reduce flood risk.</p>	<p>Planning Authority</p>	<p>Ongoing</p>	<p>Aberdeenshire Council and SEPA continues to advise on planning applications.</p>	<p>Continue to consider flood risk when determining planning applications. Ensure final version of emerging 2021 Aberdeenshire Local Development Plan maintains robust policy to avoid new development in areas that are at risk of flooding or would increase flood risk elsewhere, and encourages the most sustainable approach to managing surface water.</p>

● **Ellon (Potentially Vulnerable Area 06/12)**

Local Plan District	Local authority	Main catchment
North East	Aberdeenshire Council	River Ythan



Summary of Progress for Ellon

This Potentially Vulnerable Area is centred on Ellon. It is approximately 19km². The A920, A948, B9005 and a short section of the A90 pass through the area.

The main river in the area is the Ythan, which is tidally influenced downstream of Ellon.

There are approximately 110 residential and 40 non-residential properties at risk of flooding.

The Annual Average Damages are approximately £300,000 with the majority due to river flooding.

Further information can be found in NELFRMP under PVA 06/12.

https://www.aberdeenshire.gov.uk/media/17357/pva-06_12-ellon.pdf

Key progress:

- Ellon Flood Study completed with a preferred option identified.
- Drainage investigation work in conjunction with Scottish Water around the Meiklemill area. This is ongoing.

© Crown copyright and database rights 2022.
 Ordnance Survey licence no. 0100020767
 Map reproduced from North East Flood Risk Management Strategy, SEPA (December 2015)

Overview of actions to manage flooding in Ellon

PVA	Flood protections scheme/works	Natural flood management	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/12				G			G			G			G	G	G		G	G

Summary of progress of actions to manage flood risk in Ellon (PVA 06/12)

Action	Status	Description	Start	End	Progress	Future Actions
Flood protection study	G	To evaluate options to reduce the risk of flooding in Ellon from river flooding – Broomies / Bronie Burn, Modley Burn and the River Ythan.	Aberdeenshire Council	2016 - 2019	Stakeholder and public engagement 1 – Winter 2018 Options appraisal - Spring 2019 Stakeholder and public engagement 2 - Spring 2019	
Strategic mapping and modelling (Sewer)	G	Scottish Water will undertake further investigation and modelling in the Ellon sewer catchment to improve knowledge and understanding of flood risk in this area.	Scottish Water	19/3/19	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority	

<p>Strategic mapping and modelling (surface water)</p>	<p>G</p>	<p>SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km² of improved data is currently available within this Local Plan District."</p>	<p>SEPA</p>		<p>SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.</p>	<p>The national surface water flooding modelling project will be completed in 2023. The outputs from this will be used to update SEPA maps early in cycle 2 and will inform SEPA's flood risk assessments for the next flood risk management cycle.</p>
<p>Flood forecasting</p>	<p>G</p>	<p>The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing</p>	<p>SEPA</p>	<p>Ongoing</p>	<p>SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance</p>	

		the impact of flooding on their home or business. For more information, please visit SEPA's website.			Statement, the Scottish Flood Forecast, to provide better and earlier information to the public. A beta version of this product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding. The development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.	
Self help	G	Everyone is responsible for protecting themselves and their property flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen.	-	Ongoing	Aberdeenshire Council continue to make PLP products available at cost price. New sandbag containers are installed across Aberdeenshire at flood prone locations for the public to help themselves to in times of flooding.	Aberdeenshire Council continue to make PLP products available at cost price. New sandbag containers are installed across Aberdeenshire at

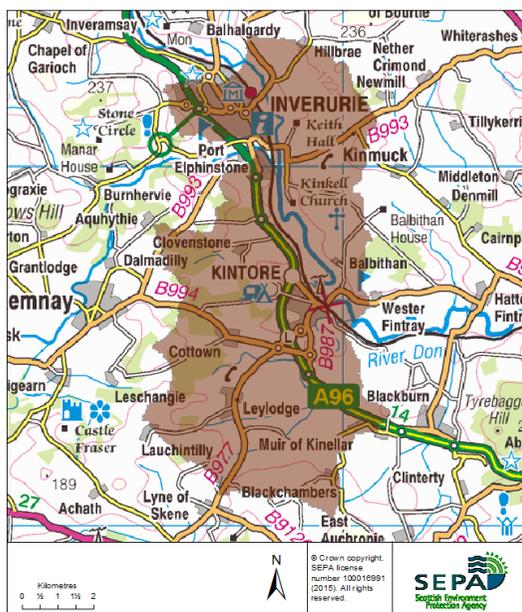
		<p>This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities initiatives, and ensuring that properties and businesses are insured against flood damage.</p>			<p>SEPA continues to assist members of the public to sign up to Floodline.</p>	<p>flood prone locations for the public to help themselves to in times of flooding. SEPA continues to assist members of the public to sign up to Floodline.</p>
<p>Awareness raising</p>	<p>G</p>	<p>SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact. Local authorities will be undertaking additional awareness raising activities, further details will be set out in the Local FRM Plans.</p>	<p>Responsible Authorities</p>	<p>Ongoing</p>	<p>Aberdeenshire Council continue with liaising with community councils on resilience. Aberdeenshire Council advise householders directly on property level protection products and actions they can take.</p> <p>The responsible Authorities continue to work with others to raise awareness of flood risk and its flood warning service. It has participated in local activities including school / education and community resilience activities when able. Some planned activities notably in person joint events have been limited or delayed due to Covid 19</p>	

Maintenance	G	Actions taken by Local Authorities and Scottish Water to undertake clearance and repair in relation to waterbodies and maintenance of other water related assets.	Aberdeenshire Council, asset / land managers	Ongoing	Local Authorities have inspected waterbodies and identify clearance and repair works to reduce flood risk. A publicly accessible page is available on Aberdeenshire Councils website, updated nightly, showing schedules of clearance and repair as assessments take place Local Authorities inspect flood protection schemes and provide maintenance works where deemed necessary. Scottish Water continue to undertake risk based inspections, maintenance and repair on the public sewer network.	Current actions to continue. Aberdeenshire Council will continue with its routine watercourse inspections and schedule any clearance and repair work. All information is publicly available.
Emergency plans/response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA.	Category 1 and 2 Responders	Ongoing	In response to weather warnings received the Responsible Authorities under the Civil Contingencies Act 2004 use the best available information from a number of sources to co-ordinate regional and local actions. Grampian Emergency Planning Unit have in place and maintain Emergency Plans for all contingencies	Current actions to continue. Emergency plans are reviewed and updated when required.
Planning Policy	G	Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers' priorities for the operation of the	Planning Authority	Ongoing	Local Authorities, as Planning Authority, ensure that any new developments satisfy relevant	Local Authorities continue to consider flood risk when determining

		<p>planning system and for the development and use of land. In terms of flood risk management, the policy supports a catchment scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided.</p>		<p>guidance and policies on flooding and drainage. SEPA continues to exercise its planning functions with a view to reducing overall flood risk. They effectively contribute to the delivery of sustainable flood risk management and support the delivery of FRM Plans and Local FRM Plans. In line with the management actions that accord with national planning policies, they will continue to object to development at medium to high risk of flooding when it is contrary to the risk framework set out in Scottish Planning Policy. They will continue to engage from the start of the development plan process and encourage planning authorities to undertake a Strategic Flood Risk Assessment to inform their spatial strategy and remain committed to exercising our planning functions with a view to reducing overall flood risk. When a new national planning policy context is finalised later in 2022 via the National Planning Framework 4, they will take the same approach.</p>	<p>planning applications. They ensure final versions of Local Development Plans maintain robust policy to avoid new development in areas that are at risk of flooding or would increase flood risk elsewhere, and encourages the most sustainable approach to managing surface water.</p>
--	--	---	--	--	---

● Inverurie and Kintore (Potentially Vulnerable Area 06/13)

Local Plan District	Local authority	Main catchment
North East	Aberdeenshire Council	River Don



© Crown copyright and database rights 2022.
 Ordnance Survey licence no. 0100020767
 Map reproduced from North East Flood Risk Management Strategy, SEPA (December 2015)

Summary of Progress for Inverurie and Kintore

This Potentially Vulnerable Area includes Inverurie and Kintore. It is approximately 60km². The A96 and the Aberdeen to Inverness railway pass through the area. The main watercourses are the River Don and the River Urie. There are several smaller watercourses including the Strath Burn which is mainly culverted through Inverurie. There are approximately 230 residential and 190 non-residential properties at risk of flooding. The Annual Average Damages are estimated to be £510,000 with the majority caused by river flooding.

Further information can be found in NELFRMP under PVA 06/13.
https://www.aberdeenshire.gov.uk/media/17360/pva-06_13-inverurie-and-kintore.pdf

Key progress:

- Inverurie and Port Elphinstone Flood Study completed with a preferred option identified
- Investigations and minor works regarding surface water management ongoing, including works on the Tuach Burn and Kingsfield Road.
- Procedural updates on flood warnings and associated closure of B977

Overview of actions to manage flooding in Inverurie and Kintore

PVA	Flood protections scheme/works	Natural flood management	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/13				G		A	G		G	G			G	G	G		G	G

Summary of progress of actions to manage flood risk in Inverurie and Kintore (PVA 06/13)

Action	Status	Description	Start	End	Progress	Future Actions
Flood protection study	G	To evaluate options to reduce the risk of flooding in Inverurie and Port Elphinstone from river flooding – River Urie and the River Don	Aberdeenshire Council	2016 - 2019	Outline engineering design - Winter 2018 Stakeholder and public engagement 1 – Spring 2019 Options appraisal - Spring 2019 Stakeholder and public engagement 2 - Summer 2019	
Surface water plan/study	A	A study to prepare Surface Water Management Plan (SWMP) to generate increased understanding of the causes, probability and consequences of surface water	Aberdeenshire Council	2016 - 2021	Inverurie and Kintore flood areas to be mapped and flood areas from various sources reviewed to identify areas for further investigation for discussing with Scottish Water	Aberdeenshire Council continue to develop Surface Water Management plans in this area by reviewing historic

		flooding and to evaluate options for surface water flood management.				flooding issues and collating data. The purpose of which will be to identify possible improvements to the drainage system and maintenance.
Strategic mapping and modelling – (Sewer)	G	Scottish Water will undertake further investigation and modelling in the Inverurie sewer catchment to improve knowledge and understanding of flood risk in this area.	Scottish Water	15/1/20	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority	
Strategic mapping and modelling - River	G	SEPA will be seeking to develop the flood hazard mapping in the Upper Don area (from Pitcaple to Kintore) to improve understanding of the flood risk. The extent and timing of the completed improvements will be dependent on detailed scoping and data availability.	01/01/2017	31/12/18	This action is complete. Updated river flood hazard mapping for this area was published on the SEPA web site in November 2020	
Strategic mapping and modelling (surface water)	G	SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km ² of	SEPA		SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and	The national surface water flooding modelling project will be completed in 2023. The outputs from this will be

		improved data is currently available within this Local Plan District."			understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.	used to update SEPA maps early in cycle 2 and will inform SEPA's flood risk assessments for the next flood risk management cycle.
Maintain flood warning	G	SEPA will continue to maintain the 'Inverurie' and 'Kintore' flood warning areas which are part of the Don river flood warning scheme	SEPA	Ongoing	SEPA has continued to operate the flood warning service	
Flood forecasting	G	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business.	SEPA	Ongoing	SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance Statement, the Scottish Flood	

		For more information, please visit SEPA’s website.			Forecast, to provide better and earlier information to the public. A beta version of this product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding. The development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.	
Self help	G	Everyone is responsible for protecting themselves and their property flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes	-	Ongoing	Aberdeenshire Council continue to make PLP products available at cost price. New sandbag containers are installed across Aberdeenshire at flood prone locations for the public to help themselves to in times of flooding.	Numerous actions have been undertaken by Responsible Authorities to raise awareness and educate about Self Help actions.

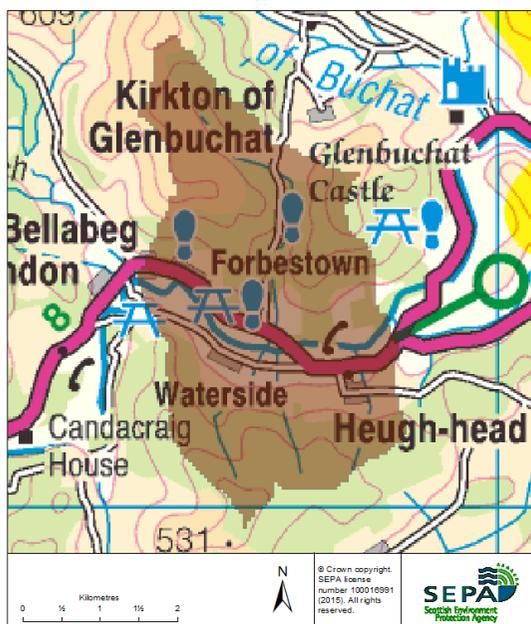
		preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities initiatives, and ensuring that properties and businesses are insured against flood damage.			SEPA continues to assist members of the public to sign up to Floodline.	Local authorities, SEPA, Scottish water and other organisations will provide support to communities on request
Awareness raising	G	SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact. Local authorities will be undertaking additional awareness raising activities, further details will be set out in the Local FRM Plans.	Responsible Authorities	Ongoing	<p>Aberdeenshire Council continue with liaising with community councils on resilience.</p> <p>Aberdeenshire Council advise householders directly on property level protection products and actions they can take.</p> <p>The responsible Authorities continue to work with others to raise awareness of flood risk and its flood warning service. It has participated in local activities including school / education and community resilience activities when able. Some planned activities notably in person joint events have been limited or delayed due to Covid 19</p>	
Maintenance	G	Actions taken by Local Authorities and Scottish Water to undertake clearance and repair in relation to	Aberdeenshire Council, asset / land managers	Ongoing	Local Authorities have inspected waterbodies and identify clearance	Current actions to continue.

		waterbodies and maintenance of other water related assets.			and repair works to reduce flood risk. A publicly accessible page is available on Aberdeenshire Councils website, updated nightly, showing schedules of clearance and repair as assessments take place Local Authorities inspect flood protection schemes and provide maintenance works where deemed necessary. Scottish Water continue to undertake risk based inspections, maintenance and repair on the public sewer network.	Aberdeenshire Council will continue with its routine watercourse inspections and schedule any clearance and repair work. All information is publicly available.
Emergency plans/response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA.	Category 1 and 2 Responders	Ongoing	In response to weather warnings received the Responsible Authorities under the Civil Contingencies Act 2004 use the best available information from a number of sources to co-ordinate regional and local actions. Grampian Emergency Planning Unit have in place and maintain Emergency Plans for all contingencies	Current actions to continue. Emergency plans are reviewed and updated when required.
Planning Policy	G	Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers' priorities for the operation of the planning	Planning Authority	Ongoing	Local Authorities, as Planning Authority, ensure that any new developments satisfy relevant	Local Authorities continue to consider flood risk when determining

		<p>system and for the development and use of land. In terms of flood risk management, the policy supports a catchment scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided.</p>		<p>guidance and policies on flooding and drainage. SEPA continues to exercise its planning functions with a view to reducing overall flood risk. They effectively contribute to the delivery of sustainable flood risk management and support the delivery of FRM Plans and Local FRM Plans. In line with the management actions that accord with national planning policies, they will continue to object to development at medium to high risk of flooding when it is contrary to the risk framework set out in Scottish Planning Policy. They will continue to engage from the start of the development plan process and encourage planning authorities to undertake a Strategic Flood Risk Assessment to inform their spatial strategy and remain committed to exercising our planning functions with a view to reducing overall flood risk. When a new national planning policy context is finalised later in 2022 via the National Planning Framework 4, they will take the same approach.</p>	<p>planning applications. They ensure final versions of Local Development Plans maintain robust policy to avoid new development in areas that are at risk of flooding or would increase flood risk elsewhere, and encourages the most sustainable approach to managing surface water.</p>
--	--	--	--	--	---

- **Heugh-head (Potentially Vulnerable Area 06/14)**

Local Plan District	Local authority	Main catchment
North East	Aberdeenshire Council	River Don



Summary of Progress for Heugh-head

This Potentially Vulnerable Area includes the villages of Heugh-head, Forbestown, Bellabeg and Waterside. It is approximately 13km² and located within the Cairngorms National Park. The main water course is the River Don. There are approximately 10 residential and 10 non-residential properties at risk of flooding. The Annual Average Damages are estimated to be £95,000 with the majority of these from river flooding.

Further information can be found in NELFRMP under PVA 06/14.
https://www.aberdeenshire.gov.uk/media/17353/pva-06_14-heugh-head.pdf

Key progress:

- Repairs to Waterside rock armour protection on the River Don

© Crown copyright and database rights 2022.
 Ordnance Survey licence no. 0100020767
 Map reproduced from North East Flood Risk Management Strategy, SEPA (December 2015)

Overview of actions to manage flooding in Heugh-head

PVA	Flood protections scheme/works	Natural flood management	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/14										G			G	G	G	A	G	G

Summary of progress of actions to manage flood risk in Heugh-head (PVA 06/14)

Action	Status	Description	Start	End	Progress	Future Actions
Flood forecasting	G	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business. For more information, please visit SEPA's website.	SEPA	Ongoing	SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance Statement, the Scottish Flood Forecast, to provide better and earlier information to the public. A beta version of this	

					product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding. The development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.	
Self help	G	Everyone is responsible for protecting themselves and their property from flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities Initiatives, and ensuring	-	Ongoing	Aberdeenshire Council continue to make PLP products available at cost price. New sandbag containers are installed across Aberdeenshire at flood prone locations for the public to help themselves to in times of flooding. SEPA continues to assist members of the public to sign up to Floodline.	Numerous actions have been undertaken by Responsible Authorities to raise awareness and educate about Self Help actions. Local authorities, SEPA, Scottish water and other

		that properties and businesses are insured against flood damage.				organisations will provide support to communities on request
Awareness raising	G	SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact. Local authorities will be undertaking additional awareness raising activities, further details will be set out in the Local FRM Plans.	Responsible Authorities	Ongoing	<p>Aberdeenshire Council continue with liaising with community councils on resilience. Aberdeenshire Council advise householders directly on property level protection products and actions they can take.</p> <p>The responsible Authorities continue to work with others to raise awareness of flood risk and its flood warning service. It has participated in local activities including school / education and community resilience activities when able. Some planned activities notably in person joint events have been limited or delayed due to Covid 19</p>	
Maintenance	G	Actions taken by Local Authorities and Scottish Water to undertake clearance and repair in relation to waterbodies and maintenance of other water related assets.	Aberdeenshire Council, asset / land managers	Ongoing	Local Authorities have inspected waterbodies and identify clearance and repair works to reduce flood risk.	<p>Current actions to continue.</p> <p>Aberdeenshire Council will continue with its routine</p>

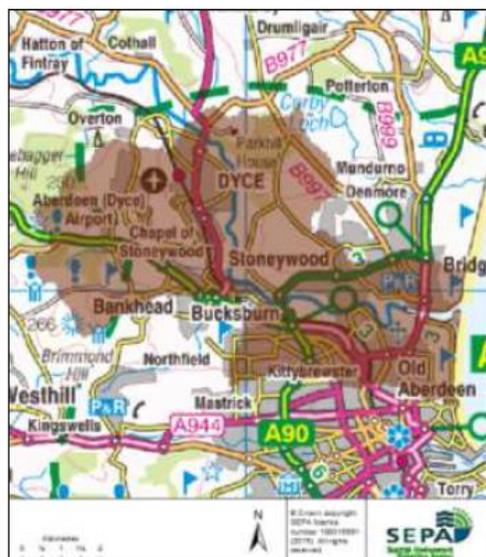
					<p>A publicly accessible page is available on Aberdeenshire Councils website, updated nightly, showing schedules of clearance and repair as assessments take place</p> <p>Local Authorities inspect flood protection schemes and provide maintenance works where deemed necessary.</p> <p>Scottish Water continue to undertake risk based inspections, maintenance and repair on the public sewer network.</p>	<p>watercourse inspections and schedule any clearance and repair work. All information is publicly available.</p>
Site protection plans	A	Site protection plans to be developed for fire station and doctor's surgery in Strathdon to reduce risk of flooding from the River Don.	Asset Managers	2016 -18	Jun 2017 - Aberdeenshire Council's emergency planning unit contacted the two sites.	LA to discuss with private owner and / or Community group about preparing an Emergency Plan with assistance provided by Grampian Emergency Planning Unit and the Scottish Flood Forum
Emergency plans/response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local	Category 1 and 2 Responders	Ongoing	In response to weather warnings received the Responsible Authorities under the Civil Contingencies Act 2004 use the best	Current actions to continue.

		authorities, the emergency services and SEPA.			<p>available information from a number of sources to co-ordinate regional and local actions.</p> <p>Grampian Emergency Planning Unit have in place and maintain Emergency Plans for all contingencies</p>	Emergency plans are reviewed and updated when required.
Planning Policy	G	<p>Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers' priorities for the operation of the planning system and for the development and use of land. In terms of flood risk management, the policy supports a catchment scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided.</p>	Planning Authority	Ongoing	<p>Local Authorities, as Planning Authority, ensure that any new developments satisfy relevant guidance and policies on flooding and drainage.</p> <p>SEPA continues to exercise its planning functions with a view to reducing overall flood risk. They effectively contribute to the delivery of sustainable flood risk management and support the delivery of FRM Plans and Local FRM Plans. In line with the management actions that accord with national planning policies, they will continue to object to development at medium to high risk of flooding when it is contrary to the risk framework set out in Scottish Planning Policy.</p>	Local Authorities continue to consider flood risk when determining planning applications. They ensure final versions of Local Development Plans and the Cairngorms National Park Plan maintain robust policy to avoid new development in areas that are at risk of flooding or would increase flood risk elsewhere, and encourages the most sustainable approach to managing surface water.

					<p>They will continue to engage from the start of the development plan process and encourage planning authorities to undertake a Strategic Flood Risk Assessment to inform their spatial strategy and remain committed to exercising our planning functions with a view to reducing overall flood risk. When a new national planning policy context is finalised later in 2022 via the National Planning Framework 4, they will take the same approach.</p>	
--	--	--	--	--	---	--

● Bridge of Don (Potentially Vulnerable Area 06/15)

Local Plan District	Local authority	Main catchment
North East	Aberdeen City Council Aberdeenshire Council	River Don Aberdeen North Coastal



© Crown copyright and database rights 2022. Ordnance Survey licence no. 0100020767
 Map reproduced from North East Flood Risk Management Strategy, SEPA (December 2015)

Summary of Progress for Aberdeen City - Bridge of Don

This Potentially Vulnerable Area covers the northern areas of the City of Aberdeen, extending along the River Don from Bridge of Don to Dyce. It is approximately 46km² and includes the airport and Aberdeen to Inverness railway line. The main river is the River Don and there are also a number of small watercourses, most of which are culverted for all or part of their route through the city. There are approximately 2,200 residential properties and 470 non-residential properties at risk of flooding. The Annual Average Damages are approximately £4.5 million with the majority caused by river flooding.

Further information can be found in NELFRMP under PVA 06/15.

https://www.aberdeenshire.gov.uk/media/17358/pva-06_15-aberdeen-city-bridge-of-don.pdf

Key progress:

- ACC has started preparing Surface Water Management Plans. For the Bridge of Don PVA, all hotspots/clusters that actions to manage flood risk are required, have been identified. Detailed reporting is being developed.
- ACC is running a 50% grant funding scheme towards property level protection.
- ACC continues to work within the current planning policy framework, ensuring the flood risk is considered throughout the planning process and give appropriate comment on planning applications.
- ACC working with the Local Resilience Partnership has undertaken a simulation exercise looking at how key agencies would respond to a flooding incident, along with holding review meetings following August 2020 flooding.

Overview of actions to manage flooding in Bridge of Don

PVA	Flood protections scheme/works	Natural flood management	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/15			G	A		A	A		G	G	G		G	G	G		G	G

Summary of progress of actions to manage flood risk in Bridge of Don

Action	Status	Description	Start	End	Progress	Future Actions
New flood warning	G	Flood warning is required for communities at risk of coastal flooding along the Aberdeenshire coast from Peterhead to Montrose. A flood warning system will be developed and implemented. The geographical extent of specific flood warning areas will be developed as part of this process.	SEPA	2017 - 2018	SEPA has continued to operate the flood warning service since it was completed earlier in the FRM cycle.	
Flood protection study	A	The Bridge of Don Flood Protection study will look at the flood risk from	Aberdeen City Council	2016 - 2028	Glashie burn and Silverburn are mainly part of the Denmore PVA	Flood studies for other small

		<p>small watercourses and surface water in this area and define types of solutions that may be applicable to these areas to prevent or reduce the flood risk.</p>		<p>rather than Bridge of Don PVA. A joint Flood Study with Scottish water for Jesmond Drive to identify potential options to reduce surface water and sewer flooding is completed through the integrated catchment study optioneering project. The study includes the Glashieburn and the Silver Burn. Further info is within the Denmore PVA section.</p>	<p>watercourses may be included within and be part of the SWMPs. The Integrated Catchment Model results could be used to inform SWMPs. This will be assessed case by case.</p> <p>A flood study will be carried out for the River Don from Dyce to the sea. This should build on the work done by SEPA and Aberdeenshire Council. Aberdeen City Council and SEPA should work on this jointly to build an agreed hydrology for the River Don and to review the need for a Don flood warning scheme. This action has been identified in cycle 2.</p>
--	--	---	--	--	--

<p>Surface water plan/study</p>		<p>ACC are creating a surface water management plan (SWMP). The plan will assess all of the current data available with regard to flood risk from historical records of flooding/maintenance and existing flood schemes.</p>	<p>Aberdeen City Council</p>	<p>2016 - 2018</p>	<p>ACC defined 10 surface water plan areas across the city. Each of these is being done on a risk based approach, looking at the risk that surface water presents to the area. The plans look at data from various sources, including SEPA's flood maps, historic flooding and the Aberdeen Integrated Catchment Study.</p> <p>The work undertaken so far is the identification of all the hotspots/clusters within the SWMP areas that actions to manage flood risk are required. For the Bridge of Don PVA detailed reporting is being developed (Bridge of Don, Northfield to Seaton, Bucksburn and Dyce SWMPs).</p>	<p>The delay in starting these has been due to resources being unavailable and significant storm events during the last 6-7 years. When flooding occur, resources are directed away from Strategic planning to respond to the incident. SWMPs are live documents/processes therefore the development and implementation will be ongoing tasks/actions for current and future cycles.</p>
<p>Strategic mapping and modelling - River</p>	<p>A</p>	<p>SEPA will be seeking to develop the flood hazard mapping in the Green Burn (right hand tributary at Dyce) and in the Middle Don (from Kintore to Dyce) areas to improve understanding of the flood risk. The extent and timing of the completed</p>	<p>01/09/2016</p>	<p>31/12/18</p>	<p>A screening exercise to characterise the catchment and identify the data necessary to support mapping improvements has been undertaken. Within the wider PVA, improvements to the river hazard</p>	<p>Potential options for the development of river hazard mapping for the lower Don and tributaries are currently under review.</p>

		improvements will be dependent on detailed scoping and data availability.			mapping for the lower River Don were undertaken in 2015.	
Strategic mapping and modelling - Sewer	G	Scottish Water will undertake modelling of the Persley sewer catchment.	Scottish Water	01/01/16 - 31/12/19	Complete	Action Complete
Maintain flood warning	G	Continue to maintain the Aberdeen (Don) flood warning area which is part of the River Don flood warning scheme.	SEPA	Ongoing	SEPA has continued to operate the flood warning service.	SEPA will continue to operate the flood warning service.
Flood forecasting	G	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business. For more information, please visit SEPA's website.	SEPA	Ongoing	SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance Statement, the Scottish Flood Forecast, to provide better and earlier information to the public. A beta version of this product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the product, producing guidance	SEPA will continue to improve the Scottish Flood Forecasting Service (SFFS) with the Met Office, with daily flood guidance statements and flood alerts issued as required to enable communities and responders to reduce the impacts of flooding.

					at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding. The development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.	
Property level protection scheme	G	Creation of Property Level Grant Scheme.	Aberdeen City Council	2016 - 2026	ACC are running a 50% grant funding scheme towards property level protection.	ACC to continue to promote the Flood Grant scheme. It is considered to expand the Grant scheme to commercial properties during cycle 2.
Self help	G	Everyone is responsible for protecting themselves and their property from flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should	Aberdeen City Council	2016 - 2021	ACC has continued to promote its Property Level Flood Grant Scheme along with the use of social media to inform of flood risk. ACC has also used social media to undertake	ACC is looking to install a network of local gauges to allow the community to assess the risk from the small burns and

		flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities Initiatives, and ensuring that properties and businesses are insured against flood damage.			flood resilience awareness campaign.	water course which may affect their property.
Awareness raising	G	Engagement with local community following a flooding incident and regarding historic issues. Initial community engagement with both Community Council and the wider community, exploring possible options regarding SEPA and Local Authority engagement. Community engagement presentation and appropriate advice – short term strategic development.	Responsible Authorities	Ongoing	SEPA has delivered a range of awareness raising activities through campaigning, education activities and partnership delivery. We have run national and local digital and direct engagement campaigns to raise awareness of flood risk and SEPA’s flood warning service, Floodline. We publish and publicise an electronic newsletter (Flooding Gateway) four times a year which is distributed to a wide audience. We are working with Education Scotland and Scottish Government Resilience team to embed flooding awareness within the Curriculum for Excellence, and resilience partners in Safer Communities programmes. We have also developed an online tool that helps everyone share information on current flooding issues (Report-a-Flood). We have worked in	SEPA will continue to raise awareness of flood risk through campaigning, developing education and engagement tools, creating new partnerships and improving the flood warning and forecasting service. Many of our awareness raising activities currently underway will continue. Our focus will be on promoting flood warning and forecasting service, innovation, education and engagement with

					<p>partnership with local authorities, emergency services and community organisations (e.g. Neighbourhood Watch Scotland, Citizens Advice Scotland and others) to share our resources and help to promote preparedness and understanding of how we manage flood risk in Scotland. We have actively supported the Scottish Flood Forum and worked closely with UK agencies to develop joint flooding information.</p> <p>ACC has continued to promote its Property Level Flood Grant Scheme along with the use of social media to inform of flood risk. ACC has also used social media to undertake flood resilience awareness campaign.</p>	<p>partners, customers and the public.</p> <p>ACC will continue to work on raising flooding resilience awareness.</p>
Maintenance	G	ACC has a duty to assess designated water bodies and carry out clearance and repair works where such works would substantially reduce flood risk. ACC will produce schedules of clearance and repair works and make these available for public inspection.	ACC	Ongoing	<ul style="list-style-type: none"> • ACC inspects waterbodies and identifies clearance and repair works to reduce flood risk. • ACC cleans priority trash screens on a monthly basis or may additionally clean them on receipt of a flood alert or a forecast of heavy 	ACC will continue to inspect waterbodies and identify clearance and repair works to reduce flood risk.

					<p>rain depending on conditions or report from residents.</p> <ul style="list-style-type: none"> • ACC has installed signs next to priority trash screen with the location, reference number of the trash screen and the ACC hotline number for residents to notify the council in case of blockages. 	
Emergency plans/response	G	<p>Aberdeen City Council will work with all CAT 1 and CAT 2 responders to deliver the emergency response plan for Aberdeen City. Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA. Effective management of an emergency response relies on emergency plans that are prepared under the Civil Contingencies Act 2004 by Category 1 and 2 Responders. The emergency response by these organisations is coordinated through regional and local resilience partnerships.</p>	Cat 1 and 2 Responders	Ongoing	<p>ACC working with the Local Resilience Partnership has undertaken two simulation exercises looking at how key agencies would respond to a flooding incident, along with holding review meetings following the 2015/16 winter floods and August 2020 flooding.</p> <p>Roads Operations team has a response squad who provide 24/7 cover for any incidents reported by the public, including flood incidents. Flood duty officers are on a weekly rota and are on call 24/7. The flood duty officer will be contacted directly by SEPA in the event of an alert or warning. The FDO checks the forecast for weather, river levels and tides at the start of their week on duty and monitors the flood guidance statements and, when</p>	<p>ACC continue to work with the LRP to ensure strong communication lines in emergency response and ensuring appropriate resource is made available.</p>

					available, FEWS. On receipt of a flood alert or a forecast of heavy rain the FDO contacts Roads Operations and instructs them to check and clean priority 1 trash screens and gullies. The FDO also assesses the requirement to close flood gates, supply sandbags or instruct evacuations.	
Planning policies	G	Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers’ priorities for the operation of the planning system and for the development and use of land. In terms of flood risk management, the policy supports a catchment scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided.	ACC	Ongoing	ACC continues to work within the current planning policy framework, ensuring the flood risk from all sources except ground water are considered throughout the planning process and give appropriate comment on applications. SEPA exercises its planning functions with a view to reducing overall flood risk. We effectively contribute to the delivery of sustainable flood risk management, and we support the delivery of FRM Strategies and local FRM Plans. In line with the management actions that accord with national planning policies and will object to development at medium to high risk of flooding when it is contrary to the risk framework set out in Scottish	ACC will be updating its guidance to developers on the planning process and minimum requirements for planning applications to ensure that the planning process remains constant and in line with the NELFRP and Surface Water Management Plans.

					Planning Policy. SEPA will also continue to engage at the offset of the development plan process and encourage planning authorities to undertake a Strategic Flood Risk Assessment to inform their spatial strategy.	
--	--	--	--	--	--	--

● Denmore (Potentially Vulnerable Area 06/16)

Local Plan District	Local authority	Main catchment
North East	Aberdeen City Council	River Don Aberdeen North Coastal



Summary of Progress for Aberdeen City – Denmore

This Potentially Vulnerable Area is located on the northern edge of Aberdeen City. It includes the Denmore and Middleton Park areas of Aberdeen City and covers an area of approximately 5km². There are no major rivers, however the Glashieburn and Silverburn both pass through culverts in the urban areas. There are approximately 140 residential and 40 non-residential properties at risk of flooding. The Annual Average Damages are approximately £570,000 with the majority caused by river flooding.

Further information can be found in NELFRMP under PVA06/16.

https://www.aberdeenshire.gov.uk/media/17352/pva-06_16-aberdeen-city-denmore.pdf

Key progress:

- ACC has completed a joint flood study with Scottish Water for Jesmond Drive.
- ACC has continued to maintain the Glashie Burn Flood Protection Scheme.
- ACC cleans priority trash screens on a monthly basis or may additionally clean them on receipt of a flood alert or a forecast of heavy rain depending on conditions or report from residents.

© Crown copyright and database rights 2022. Ordnance Survey licence no. 0100020767

Map reproduced from North East Flood Risk Management Strategy, SEPA (December 2015)

Overview of actions to manage flooding in Aberdeen City – Denmore

PVA	Flood protections scheme/works	Natural flood management	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/16				G		A	G	G		G	G		G	G	G		G	G

Summary of progress of actions to manage flood risk in Aberdeen City – Denmore

Action	Status	Description	Start	End	Progress	Future Actions
Flood protection study	G	The Denmore flood protection studies will look at the flood risk from small watercourses and surface water in this area and define types of solutions that may be applicable these areas to prevent or reduce the flood risk.	Aberdeen City Council	2016 - 2022	A joint Jesmond Drive Flood Study with Scottish Water to identify potential options to reduce surface water and sewer flooding is completed through the integrated catchment study optioneering project. The study includes the Glashieburn and the Silver Burn. The result of the study did not identify any cost-beneficial options to reduce flood risk in this area. The Glashie Burn and local watercourses were identified to be the most significant influence to flood risk in	Further investigation into the catchment scale strategy of the Jesmond Drive area is under consideration, with the inclusion of the option developed through the study in the strategy.

					the area along with network incapacity in the surface water sewers. The study recommended that further investigation into the catchment scale strategy is carried out, with the inclusion of the option developed through the study in the strategy.	
Surface water plan/study	A	ACC are creating a surface water management plan (SWMP). The plan will assess all of the current data available with regard to flood risk from historical records of flooding, maintenance records and existing flood schemes.	Aberdeen City Council	ongoing	ACC defined 10 SWMP areas across the city. Each of these is being done on a risk-based approach, looking at the risk that surface water presents to the area. The plans look at data from various sources, including SEPA's flood maps, historic flooding data and the Aberdeen Integrated Catchment Study. The work undertaken so far is the identification of all the hotspots/clusters within the SWMP areas that actions to manage flood risk are required. For the Denmore PVA detailed reporting is being developed (Bridge of Don SWMP).	The delay in starting these has been due to resources being unavailable and significant storm events during the last 6-7 years. When flooding occur, resources are directed away from Strategic planning to respond to the incident. SWMPs are live documents/processes therefore the development and implementation will be ongoing tasks/actions for

						current and future cycles.
Strategic mapping and modelling (Sewer)	G	Scottish Water will undertake modelling of the Nigg and Persley sewer catchments.	Scottish Water	17/3/17	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority	
Maintain flood protection scheme*	G	Aberdeen City Council will continue to maintain the Glashie Burn Flood Protection Scheme (attenuation pond and culverts) which reduce the risk of flooding to Lochside Drive from the Glashie Burn.	Aberdeen City Council	Ongoing	ACC has continued to maintain the Glashie Burn Flood Protection Scheme. ACC has undertaken a large vegetation clearance to ensure the scheme will continue to be effective. ACC monitors the vegetation growth. The trash screen is cleaned on a monthly basis or may additionally on receipt of a flood alert or a forecast of heavy rain depending on conditions or report from residents.	ACC will continue to monitor and maintain the scheme on a risk based approach
Flood forecasting	G	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business.	SEPA	Ongoing	SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance Statement, the Scottish Flood	SEPA will continue to improve the Scottish Flood Forecasting Service (SFFS) with the Met Office, with daily flood guidance statements and flood alerts issued as required to enable communities and responders to reduce

		For more information, please visit SEPA's website.			Forecast, to provide better and earlier information to the public. A beta version of this product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding. The development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.	the impacts of flooding.
Property level protection scheme	G	Creation of Property Level Protection Grant Scheme.	Aberdeen City Council	2016 - 2021	ACC is running a 50% grant funding scheme towards property level protection.	ACC to continue to promote the Flood Grant Scheme. It is considered to expand the Grant scheme to commercial properties during cycle 2.

<p>Self help</p>	<p>G</p>	<p>Everyone is responsible for protecting themselves and their property from flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities Initiatives, and ensuring that properties and businesses are insured against flood damage.</p>	<p>-</p>	<p>Ongoing</p>	<p>Aberdeenshire Council continue to make PLP products available at cost price. New sandbag containers are installed across Aberdeenshire at flood prone locations for the public to help themselves to in times of flooding. SEPA continues to assist members of the public to sign up to Floodline.</p>	<p>Numerous actions have been undertaken by Responsible Authorities to raise awareness and educate about Self Help actions. Local authorities, SEPA, Scottish water and other organisations will provide support to communities on request</p>
<p>Awareness raising</p>	<p>G</p>	<p>Engagement with local community following a flood incident / historic issues. Initial community engagement with both Community Council and the wider community, exploring possible options regarding SEPA and Local Authority engagement. Community engagement presentation and appropriate advice – short term strategic development.</p>	<p>Responsible authority</p>	<p>Ongoing</p>	<p>SEPA continues to work with others to raise awareness of flood risk and its flood warning service. It has participated in local activities including school / education and community resilience activities when able. Some planned activities notably in person joint events have been limited or delayed due to Covid 19.</p>	<p>Over the remaining years of the cycle, Aberdeen City Council will continue to work on raising awareness. Following the completion of the Surface Water Management Plans, targeted awareness raising within those areas of risk will be undertaken. We will also be working with</p>

						SEPA on the launch of the Costal Flood Warning System.
Maintenance	G	ACC has a duty to assess designated water bodies and carry out clearance and repair works where such works would substantially reduce flood risk. ACC will produce schedules of clearance and repair works and make these available for public inspection	Aberdeen City Council, asset / land managers	Ongoing	<ul style="list-style-type: none"> • ACC inspects waterbodies and identify clearance and repair works to reduce flood risk • ACC cleans priority trash screens on a monthly basis or may additionally clean them on receipt of a flood alert or a forecast of heavy rain depending on conditions or report from residents. • ACC has installed signs next to priority trash screen with the location, reference number of the trash screen and the ACC hotline number for residents to notify the council in case of blockages. • ACC inspects, maintains, and undertakes clearance works to Glashieburn detention basin in Bridge of Don. 	ACC will continue to inspect waterbodies and identify clearance and repair works to reduce flood risk.
Emergency plans/response	G	Aberdeen City Council will work with all CAT 1 and CAT 2 responders to deliver the emergency response plan for Aberdeen City. Providing an emergency response to flooding is the responsibility of many organisations,	Category 1 and 2 Responders	Ongoing	ACC working with the local resilience partnership has undertaken two simulation exercises looking at how key agencies would respond to a flooding incident, along with holding review meetings following the	ACC continue to work with the LRP to ensure strong communication lines in emergency response and

		including local authorities, the emergency services and SEPA. Effective management of an emergency response relies on emergency plans that are prepared under the Civil Contingencies Act 2004 by Category 1 and 2 Responders. The emergency response by these organisations is coordinated through regional and local resilience partnerships.			2015/16 winter floods and August 2020 flooding Roads Operations team has a response squad who provide 24/7 cover for any incidents reported by the public, including flood incidents. Flood duty officers are on a weekly rota and are on call 24/7. The flood duty officer will be contacted directly by SEPA in the event of an alert or warning. The FDO checks the forecast for weather, river levels and tides at the start of their week on duty and monitors the flood guidance statements and, when available, FEWS. On receipt of a flood alert or a forecast of heavy rain the FDO contacts Roads Operations and instructs them to check and clean priority 1 trash screens and gullies. The FDO also assesses the requirement to close flood gates, supply sandbags or instruct evacuations.	ensuring appropriate resource is made available.
Planning policies	G	Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers' priorities for the operation of the planning system	Planning Authority	Ongoing	ACC continues to work within the current planning policy framework ensuring the flood risk from all sources, except ground water, are	ACC will be updating its guidance to developers on the planning process and

		<p>and for the development and use of land. In terms of flood risk management, the policy supports a catchment scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided.</p>		<p>considered thought the planning process and give appropriate comment on applications.</p> <p>SEPA exercises its planning functions with a view to reducing overall flood risk. We effectively contribute to the delivery of sustainable flood risk management, and we support the delivery of FRM Strategies and local FRM Plans. In line with the management actions that accord with national planning policies and object to development at medium to high risk of flooding when it is contrary to the risk framework set out in Scottish Planning Policy. SEPA will also continue to engage at the offset of the development plan process and encourage planning authorities to undertake a Strategic Flood Risk Assessment to inform their spatial strategy.</p>	<p>minimum requirements for planning applications to ensure that the planning process remains constant and in line with the NELFRP and Surface Water Management Plans.</p>
--	--	---	--	--	--

● Westhill (Potentially Vulnerable Area 06/17)

Local Plan District	Local authority	Main catchment
North East	Aberdeenshire Council Aberdeen City Council	River Dee (Grampian)



Summary of Progress for Westhill

This Potentially Vulnerable Area is based around Westhill. It is approximately 20km². The A944, B119, and the B979 pass through the area.

The main watercourse is the Ord Burn, which is a tributary of the River Dee.

There are approximately 90 residential and 10 non-residential properties at risk of flooding.

The Annual Average Damages are approximately £77,000 with the majority caused by surface water flooding.

Further information can be found in NELFRMP under PVA 06/17.

https://www.aberdeenshire.gov.uk/media/17350/pva-06_17-westhill.pdf

Key progress:

- Investigations and minor works regarding surface water management ongoing, including identifying works on the Denman Park ponds
- Aberdeenshire Council and Scottish Water worked in collaboration to develop the Integrated Catchment Study (Flooding issues relating to below ground sewers interacting with minor watercourses)

© Crown copyright and database rights 2022.
Ordnance Survey licence no. 0100020767
Map reproduced from North East Flood Risk Management Strategy, SEPA (December 2015)

Overview of actions to manage flooding in Westhill

PVA	Flood protections scheme/works	Natural flood management	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/17						A	G			G			G	G	G		G	G

Summary of progress of actions to manage flood risk in Westhill (PVA 06/17)

Action	Status	Description	Start	End	Progress	Future Actions
Surface water plan/study	A	A study to prepare Surface Water Management Plan (SWMP) to generate increased understanding of the causes, probability and consequences of surface water flooding and to evaluate options for surface water flood management.	Aberdeenshire Council	2016 - 2021	Westhill flood areas to be mapped and flood areas from various sources reviewed to identify areas for further investigation for discussing with Scottish Water.	Aberdeenshire Council continue to develop Surface Water Management plans in this area by reviewing historic flooding issues and collating data. The purpose of which will be to identify possible improvements to the drainage system and maintenance.
Strategic mapping and modelling	G	Scottish Water will undertake modelling of the Persley sewer catchment.	Scottish Water	17/03/17	The Scottish Water assessment of flood risk within the sewer catchment	

(Sewer)					has been completed and has been shared with the Local Authority	
Strategic mapping and modelling (surface water)	G	SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km ² of improved data is currently available within this Local Plan District."	SEPA		SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.	The national surface water flooding modelling project will be completed in 2023. The outputs from this will be used to update SEPA maps early in cycle 2 and will inform SEPA's flood risk assessments for the next flood risk management cycle.

<p>Flood forecasting</p>	<p>G</p>	<p>The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business. For more information, please visit SEPA’s website.</p>	<p>SEPA</p>	<p>Ongoing</p>	<p>SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance Statement, the Scottish Flood Forecast, to provide better and earlier information to the public. A beta version of this product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the</p>	

					transport network improve their resilience to and preparedness for flooding. The development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.	
Self help	G	Everyone is responsible for protecting themselves and their property from flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities Initiatives, and ensuring that properties and businesses	-	Ongoing	Aberdeenshire Council continue to make PLP products available at cost price. New sandbag containers are installed across Aberdeenshire at flood prone locations for the public to help themselves to in times of flooding. SEPA continues to assist members of the public to sign up to Floodline.	Numerous actions have been undertaken by Responsible Authorities to raise awareness and educate about Self Help actions. Local authorities, SEPA, Scottish water and other organisations will provide support to communities on request

		are insured against flood damage.				
Awareness raising	G	SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact. Local authorities will be undertaking additional awareness raising activities, further details will be set out in the Local FRM Plans.	Responsible Authorities	Ongoing	<p>Aberdeenshire Council continue with liaising with community councils on resilience.</p> <p>Aberdeenshire Council advise householders directly on property level protection products and actions they can take.</p> <p>The responsible Authorities continue to work with others to raise awareness of flood risk and its flood warning service. It has participated in local activities including school / education and community resilience activities when able. Some planned activities notably in person joint events have been limited or delayed due to Covid 19</p>	
Maintenance	G	Actions taken by Local Authorities and Scottish Water to undertake	Aberdeenshire Council, asset	Ongoing	Local Authorities have inspected waterbodies and	Current actions to continue.

		clearance and repair in relation to waterbodies and maintenance of other water related assets.	/ land managers		<p>identify clearance and repair works to reduce flood risk.</p> <p>A publicly accessible page is available on Aberdeenshire Councils website, updated nightly, showing schedules of clearance and repair as assessments take place</p> <p>Local Authorities inspect flood protection schemes and provide maintenance works where deemed necessary.</p> <p>Scottish Water continue to undertake risk based inspections, maintenance and repair on the public sewer network.</p>	Aberdeenshire Council will continue with its routine watercourse inspections and schedule any clearance and repair work. All information is publicly available.
Emergency plans/response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA.	Category 1 and 2 Responders	Ongoing	In response to weather warnings received the Responsible Authorities under the Civil Contingencies Act 2004 use the best available information from a number of sources to co-ordinate regional and local actions.	<p>Current actions to continue.</p> <p>Emergency plans are reviewed and updated when required.</p>

					Grampian Emergency Planning Unit have in place and maintain Emergency Plans for all contingencies.	
Planning Policy	G	<p>Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers’ priorities for the operation of the planning system and for the development and use of land. In terms of flood risk management, the policy supports a catchment scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood</p>	<p>Planning Authority</p>	<p>Ongoing</p>	<p>Local Authorities, as Planning Authority, ensure that any new developments satisfy relevant guidance and policies on flooding and drainage. SEPA continues to exercise its planning functions with a view to reducing overall flood risk. They effectively contribute to the delivery of sustainable flood risk management and support the delivery of FRM Plans and Local FRM Plans. In line with the management actions that accord with national planning policies, they will continue to object to development at medium to high risk of flooding when it is contrary to the risk framework set out in Scottish Planning Policy. They will continue to engage from the start of the development plan process</p>	<p>Local Authorities continue to consider flood risk when determining planning applications. They ensure final versions of Local Development Plans maintain robust policy to avoid new development in areas that are at risk of flooding or would increase flood risk elsewhere, and encourages the most sustainable approach to managing surface water</p>

		of flooding should be avoided.			and encourage planning authorities to undertake a Strategic Flood Risk Assessment to inform their spatial strategy and remain committed to exercising our planning functions with a view to reducing overall flood risk. When a new national planning policy context is finalised later in 2022 via the National Planning Framework 4, they will take the same approach.	
--	--	--------------------------------	--	--	--	--

● **Deeside (Potentially Vulnerable Area 06/18)**

Local Plan District	Local authority	Main catchment
North East	Aberdeen City Council	River Dee (Grampian) Aberdeen South Coastal



Summary of Progress for Deeside

This Potentially Vulnerable Area includes the centre and west of the city of Aberdeen. It is approximately 75km2 and includes the centre of Aberdeen City and several vital transport routes which pass through it.

The main river is the River Dee and there are also a number of small watercourses, most of which are culverted for all or part of their route through the city.

There are approximately 8,100 residential and 2,000 non-residential properties at risk of flooding.

The Annual Average Damages are approximately £12 million with the majority caused by river flooding.

Further information can be found in NELFRMP under PVA 06/18.

https://www.aberdeenshire.gov.uk/media/17362/pva-06_18-aberdeen-city-deeside.pdf

Key progress:

- ACC has completed a flood study for Den burn Valley.
- ACC has completed a flood study for InchGarth Road.
- ACC has completed a flood study for Footdee.
- ACC and Scottish Water will work together to identify a scheme to manage surface water flooding at Merchant Quarter.
- ACC has completed the Maidencraig flood scheme.
- ACC has installed water level gauges close to critical locations.
- ACC has built floodgates at Riverside Drive at Bridge of Dee, following the completion of a local flood study.

© Crown copyright and database rights 2022. Ordnance Survey licence no. 0100020767

Map reproduced from North East Flood Risk Management Strategy, SEPA (December 2015)

Overview of actions to manage flooding in Aberdeen City – Deeside

PVA	Flood protections scheme/works	Natural flood management	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/18			G	A		A	G	G	G	G	G	G	G	G	G		G	G

Summary of progress of actions to manage flood risk in Aberdeen City – Deeside

Action	Status	Description	Start	End	Progress	Future Actions
New flood warning	G	Flood warning is required for communities at risk of coastal flooding along the Aberdeenshire coast from Peterhead to Montrose. A flood warning system will be developed and implemented. The geographical extent of specific flood warning areas will be developed as part of this process.	2017	2018	SEPA has completed development of a flood forecasting model for Aberdeenshire and Angus coastline and has worked with Aberdeen City Council to develop procedures for the new flood warning service. A new flood warning area has been introduced for Aberdeen Coastal area.	SEPA will continue to operate the flood warning service.
Flood protection study - Footdee	G	Aberdeen City Council will undertake a flood protection study in the Footdee area of Aberdeen to improve	2019	2021	The Footdee coastal study has been completed. The study looked at the risk of wave overtopping within the area.	The study identified a preferred option, however it will be considered further as

		<p>understanding of coastal flood risk, including wave overtopping.</p>				<p>part of a wider coastal protection study. ACC commissioned a preliminary study to undertake a strategic overview of the coastal protection being undertaken by the Council along the frontage of Aberdeen between Footdee and Blackdog. The aim was to improve understanding of how the shoreline may develop in the future and identify any management needs. A detailed flood study may be required. In line with recommendations of the flood study, a shoreline management plan may be developed for Aberdeen City. There may be opportunities to</p>
--	--	---	--	--	--	--

						develop this with Aberdeenshire Council as part of a wider east coast plan. The impacts of climate change on coastal flood risk should be considered. Coastal erosion should also be considered. Linkages with the North East Grampian Marine Plan should be considered. The need for an adaptation plan should be identified.
Flood protection study - Deeside	A	Aberdeen City Council will undertake flood protection studies across the City to address risk from rivers, small watercourses and surface water. Outputs from the Aberdeen Integrated Catchment Study will be considered.	2016	2022	Inchgarth Road flood study has been completed which recommended PLP as the most viable option along with upgrading the trash screen of Cults Burn at Inchgarth Road. ACC will upgrade the trash screen. Riverside Drive Floodgate at Bridge of Dee has been built, following the completion of a local flood study.	Flood studies for other small watercourses may be included within and be part of the SWMP's. The Integrated Catchment Model results could be used to inform SWMPs.

				<p>Den Burn Valley flood study has been completed along with a geomorphology appraisal study to reduce flood risk. The study did not identify any significant flooding reduction benefits, however, identifies environmental and socioeconomic impacts and benefits. SEPA may promote the works for the Denburn restoration and ACC will work with them to detailed design if required.</p> <p>Merchant Quarter flood study. The ICS Optioneering study in Cycle 1 identified a range of potential options to reduce the risk of surface water and sewer flooding in the Merchants Quarter area of Aberdeen. Due to the scale and cost of opportunities, these options were recommended to be developed in further detail in phases. In FRM Cycle 1, Scottish Water have developed detailed design of an option to reduce sewer flooding, however this did not address the residual surface water flooding. In Cycle 2, Scottish Water and Aberdeen City Council will work</p>	<p>This will be assessed case by case.</p> <p>Scottish Water and Aberdeen City Council will work together to seek opportunities to manage surface water, in order to reduce the risk of flooding at Merchant Quarter.</p>
--	--	--	--	--	---

					together to seek opportunities to manage surface water, in order to reduce the risk of flooding at Merchant Quarter. Due to the significant scale of this work, it is likely to require any improvements to be delivered in a phased manner over a number of FRM cycles.	
Surface water plan/study	A	Aberdeen City Council is developing a surface water management plan (SWMP) that addresses flood risk across the City. The plan will assess all of the current data available with regard to flood risk from historical records of flooding/ maintenance and existing flood schemes.	Aberdeen City Council	ongoing	ACC defined 10 surface water plan areas across the city. Each of these is being done on a risk-based approach, looking at the risk that surface water presents to the area. The plans look at data from various sources, including SEPA’s flood maps, historic flooding data and the Aberdeen Integrated Catchment study. The work undertaken so far is the identification of all the hotspots/clusters within the SWMP areas that actions to manage flood risk are required. For the Deeside PVA detailed reporting is being developed (Denburn Valley, Torry and Cove, Millside and Cults, Garthdee to Ferryhill SWMPs).	The delay in starting these has been due to resources being unavailable and significant storm events during the last 6-7 years. When flooding occur, resources are directed away from Strategic planning to respond to the incident. SWMPs are live documents/processes therefore the development and implementation will be ongoing tasks/actions for

						current and future cycles.
Strategic mapping and modelling	G	Scottish Water will undertake modelling of the Persley sewer catchment.	Scottish Water	17/3/17	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority	
Maintain flood protection scheme	G	Aberdeen City Council will maintain the Fraser Road Flood Protection Scheme which reduces the risk of flooding from the Gilcomston Burn, Stronsay Park Flood Protection works which prevent flooding from the Den Burn and the beach revetments.	Aberdeen City Council	Ongoing	ACC has continued to maintain the Fraser Road (Westburn Park), Stronsay and Maidencraig Flood Protection Scheme and undertaken clearance works when required. ACC maintains the sea defences/beach revetments.	ACC will continue to monitor and maintain the schemes on a risk-based approach.
Maintain flood warning	G	SEPA will continue to maintain the 'Aberdeen (Dee)' and 'Maryculter' flood warning areas which are part of the Dee river flood warning scheme.	SEPA	Ongoing	SEPA has continued to operate the flood warning service.	
Flood forecasting	G	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business.	SEPA	Ongoing	SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance	SEPA will continue and improve the Scottish Flood Forecasting Service (SFFS) with the Met Office, with daily flood guidance statements and flood alerts issued as required to enable

		For more information, please visit SEPA’s website.			Statement, the Scottish Flood Forecast, to provide better and earlier information to the public. A beta version of this product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding. The development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.	communities and responders to reduce the impacts of flooding.
Property level protection scheme	G	Creation of Property Level Grant Scheme.	2016	2026	ACC is running a 50% grant funding scheme towards property level protection.	ACC to continue to promote the Flood Grant Scheme. It is considered to expand the Grant scheme to commercial

						properties during cycle 2.
Community flood action groups	G	Aberdeen City Council will create flood action groups in the Merchant Quarter and in the Eday Court and Summerhill areas of Aberdeen.		Ongoing	Flooding risk at Eday/Summerhill has been managed and reduced, therefore group is no longer required. Merchant Quarter area has their own business community group. ACC will support Scottish Water in their engagement with the existing group.	ACC will support Scottish Water in their engagement with the existing Merchant Quarter group.
Self help	G	Everyone is responsible for protecting themselves and their property from flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities Initiatives, and ensuring that properties and businesses are insured against flood damage.	-	Ongoing	ACC has continued to promote its Property Level Flood Grant Scheme along with the use of social media to inform of flood risk. ACC has also used social media to undertake flooding resilience awareness campaign. ACC has installed local gauges to allow the community to assess the risk from the small burns and water course which may affect their property.	Numerous actions have been undertaken by Responsible Authorities to raise awareness and educate about Self Help actions. Local authorities, SEPA, Scottish water and other organisations will provide support to communities on request. ACC is looking to install additional local

						gauges to allow the community to assess the risk from the small burns and water course which may affect their property.
Awareness raising	G	ACC will be undertaking a number of community events to promote awareness of the risk of flooding and what can be done to reduce the impact of flooding. As part of this we will be looking to create flood action groups and community resilience groups with regard to flooding. These groups will help promote the risk that flooding presents as well as provide practical advice to the community they serve.	Responsible Authorities	Ongoing	SEPA has delivered a range of awareness raising activities through campaigning, education activities and partnership delivery. We have run national and local digital and direct engagement campaigns to raise awareness of flood risk and SEPA's flood warning service, Floodline. We publish and publicise an electronic newsletter (Flooding Gateway) four times a year which is distributed to a wide audience. We are working with Education Scotland and Scottish Government Resilience team to embed flooding awareness within the Curriculum for Excellence, and resilience partners in Safer Communities programmes. We have also developed an online tool that helps everyone share information on current flooding issues (Report-a-	Over the remaining years of the cycle, Aberdeen City Council will continue to work on raising awareness. Following the completion of the Surface Water Management Plans we can target awareness raising within those areas of risk. We will also be working with SEPA on the launch of the Coastal Flood Warning system and supporting all incentive around the Flood Warning System.

					<p>Flood). We have worked in partnership with local authorities, emergency services and community organisations (e.g. Neighbourhood Watch Scotland, Citizens Advice Scotland and others) to share our resources and help to promote preparedness and understanding of how we manage flood risk in Scotland. We have actively supported the Scottish Flood Forum and worked closely with UK agencies to develop joint flooding information.</p> <p>ACC has continued to promote its Property Level Flood Grant Scheme along with the use of social media to inform of flood risk. ACC has also used social media to undertake flood resilience awareness campaign.</p>	ACC will continue to work on raising flooding resilience.
Maintenance	G	ACC has a duty to assess designated water bodies and carry out clearance and repair works where such works would substantially reduce flood risk. ACC will produce schedules of clearance and repair works and make these available for public inspection.	Aberdeen City Council, asset / land managers	Ongoing	<ul style="list-style-type: none"> • ACC inspects waterbodies and identify clearance and repair works to reduce flood risk • ACC cleans priority trash screens on a monthly basis or may additionally clean them on receipt of a flood alert or a forecast of heavy 	ACC will continue to inspect waterbodies and identify clearance and repair works to reduce flood risk.

					<p>rain depending on conditions or report from residents.</p> <ul style="list-style-type: none"> • ACC has installed signs next to priority trash screen with the location, reference number of the trash screen and the ACC hotline number for residents to notify the council in case of blockages. • ACC has installed and maintains CCTV cameras in 2 critical trash screen locations to monitor flood risk. • ACC has continued to maintain the Fraser Road (Westburn Park), Stronsay and Maidenraig Flood Protection Scheme and undertaken clearance works when required. • ACC maintains the Sea defences/beach revetments. 	
Emergency plans/response	G	Aberdeen City Council will work with all CAT 1 and CAT 2 responders to deliver the emergency response plan for Aberdeen City. Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA. Effective management of an emergency response relies on	Category 1 and 2 Responders	Ongoing	ACC working with the local resilience partnership has undertaken two simulation exercises looking at how key agencies would respond to a flooding incident, along with holding review meetings following the 2015/16 winter floods and August 2020 flooding.	ACC will continue to work with the LRP to ensure strong communication lines in emergency response and ensuring appropriate resource is made available.

		<p>emergency plans that are prepared under the Civil Contingencies Act 2004 by Category 1 and 2 Responders. The emergency response by these organisations is coordinated through regional and local resilience partnerships.</p>			<p>Roads Operations team has a response squad who provide 24/7 cover for any incidents reported by the public, including flood incidents. Flood duty officers are on a weekly rota and are on call 24/7. The flood duty officer will be contacted directly by SEPA in the event of an alert or warning. The FDO checks the forecast for weather, river levels and tides at the start of their week on duty and monitors the flood guidance statements and, when available, FEWS. On receipt of a flood alert or a forecast of heavy rain the FDO contacts Roads Operations and instructs them to check and clean priority 1 trash screens and gullies. The FDO also assesses the requirement to close flood gates, supply sandbags or instruct evacuations.</p>	
Planning policies	G	<p>Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers' priorities for the operation of the planning system and for the development and use of land. In terms of flood risk management, the policy supports a</p>	<p>Planning Authority</p>	<p>Ongoing</p>	<p>ACC continues to work within the current planning policy framework ensuring the flood risk from all sources, except ground water, are considered thought the planning process and give appropriate comment on applications.</p>	<p>ACC will be updating its guidance to developers on the planning process and minimum requirements for planning applications</p>

		<p>catchment scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided.</p>			<p>SEPA exercises its planning functions with a view to reducing overall flood risk. We effectively contribute to the delivery of sustainable flood risk management, and we support the delivery of FRM Strategies and local FRM Plans. In line with the management actions that accord with national planning policies and object to development at medium to high risk of flooding when it is contrary to the risk framework set out in Scottish Planning Policy. SEPA will also continue to engage at the offset of the development plan process and encourage planning authorities to undertake a Strategic Flood Risk Assessment to inform their spatial strategy.</p>	<p>to ensure that the planning process remains constant and in line with the NELFRP and Surface Water Management Plans.</p>
--	--	---	--	--	---	---

● Peterculter (Potentially Vulnerable Area 06/19)

Local Plan District	Local authority	Main catchment
North East	Aberdeen City Council	River Dee (Grampian)



Summary of Progress for North of Peterculter

This Potentially Vulnerable Area covers the west of Peterculter and is approximately 4km². The A93, North Deeside road, passes through the area.

The main river is the Culter Burn which flows through the south west of Peterculter before discharging into the River Dee.

There are approximately 380 residential properties and 20 non-residential properties at risk of flooding. The Annual Average Damages are approximately £300,000.

Further information can be found in the LFRMP under PVA 06/19.

https://www.aberdeenshire.gov.uk/media/17354/pva-06_19-peterculter.pdf

Key progress:

- ACC has completed a flood study for Culter burn.
- ACC will consider two individual schemes, one for Paddock and one for Millside.
- ACC installed water level gauges at Culter burn.
- An app is being developed which will allow local residents to engage with the monitoring of gauging.

© Crown copyright and database rights 2022. Ordnance Survey licence no. 0100020767

Map reproduced from North East Flood Risk Management Strategy, SEPA (December 2015)

Overview of actions to manage flooding in Peterculter

PVA	Flood protections scheme/works	Natural flood management	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/19	A				G	A	G			G	G		G	G	G		G	G

Summary of progress of actions to manage flood risk in Peterculter

Action	Status	Description	Start	End	Progress	Future Actions
Flood protections scheme/works	A	Aberdeen City Council will develop and implement flood protection works in Peterculter to reduce flood risk from the Culter Burn. Focus will be on Millside Street, Millside Road, Millside Terrace and The Paddock.	Aberdeen City Council	2016 - 2028	The flood study for Peterculter has been progressing. The hydraulic model has been constructed, the river flows have been agreed with SEPA and model runs have been completed. ACC has installed water level gauges at Culter burn to help verify the model outputs. After consultation with the residents, ACC agreed to considered two separate schemes and assess the benefits of each individual scheme, one for Paddock and one for Millside.	ACC will consider the merits of splitting the works into two individual schemes, one for Paddock and one for Millside.

					The delay of the flood protections scheme was due to the inconsistency between the results of the flood study and the photographic evidence within the Paddock Area.	
Natural flood management study	G	Aberdeen City Council will undertake a natural flood management study on the Gormack and Leuchar Burns to reduce flood risk in Peterculter. This will be done in partnership with the Dee Catchment Partnership and Aberdeenshire Council.	Aberdeen City Council		Peterculter flood study considered an area for NFM, however this was found to be prohibitive due to cost and land ownership constraints. The action will not be carried forward.	
Surface water plan/study	A	Aberdeen City Council is developing a surface water management plan (SWMP) that addresses flood risk across the City. Outputs from the Aberdeen Integrated Catchment Study will inform the SWMP.	ACC	Ongoing	ACC defined 10 surface water plan areas across the city. Each of these is being done on a risk based approach looking at the risk that surface water presents to the area. The plans look at data from various source including SEPA's flood maps/Historic flooding and the Aberdeen Integrated Catchment study. The work undertaken so far is the identification of all the hotspots/clusters within the SWMP areas that actions to manage flood risk are required. For the Peterculter	The delay in starting these has been due to resources being unavailable and significant storm events during the last 6-7 years. When flooding occur, resources are directed away from Strategic planning to respond to the incident SWMPs are live documents/processe

					PVA detailed reporting is being developed (Peterculter SWMP).	s therefore the development and implementation will be ongoing tasks/actions for current and future cycles.
Strategic mapping and modelling (Sewer)	G	Scottish Water will undertake modelling of the Nigg sewer catchment.	Scottish Water	17/3/17	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority	
Flood forecasting	G	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business. For more information, please visit SEPA's website.	SEPA	Ongoing	SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance Statement, the Scottish Flood Forecast, to provide better and earlier information to the public. A beta version of this product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version	SEPA will continue and improve the Scottish Flood Forecasting Service (SFFS) with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA is currently exploring options to develop a public version of the

					of the product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding. The development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.	daily Flood Guidance Statement to provide better and earlier information to the public
Property level protection scheme	G		Aberdeen City Council	2016 - 2021	ACC are running a 50% grant funding scheme towards property level protection this is now in year 3 of a 5 year scheme	ACC to continue to promote the Flood grant scheme. It is considered to expand the Grant scheme to commercial properties during cycle 2.
Self help	G	ACC will be promoting self-help through work with the community. This will include the creation of a Flood Guard Grant Scheme to assist	-	2016 - 2026	ACC has continued to promote its Property Level Flood Grant Scheme along with the use of social media to inform of flood risk. ACC has also used social media to undertake	An app is being developed which will allow local residents to engage with the

		people with putting in Property Level Protection.			flooding resilience awareness campaign. ACC has installed a network of local gauges to allow the community to assess the risk from the small burns and water course which may affect their property	monitoring of gauging.
Awareness raising	G	SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact. Local authorities will be undertaking additional awareness raising activities, further details will be set out in the Local FRM Plans.	Responsible Authorities	Ongoing	SEPA has delivered a range of awareness raising activities through campaigning, education activities and partnership delivery. We have run national and local digital and direct engagement campaigns to raise awareness of flood risk and SEPA's flood warning service, Floodline. We publish and publicise an electronic newsletter (Flooding Gateway) four times a year which is distributed to a wide audience. We are working with Education Scotland and Scottish Government Resilience team to embed flooding awareness within the Curriculum for Excellence, and resilience partners in Safer Communities programmes. We have also developed an online tool that helps everyone share information on current flooding issues (Report-a-Flood). We have worked in	SEPA will continue to raise awareness of flood risk through campaigning, developing education and engagement tools, creating new partnerships and improving the flood warning and forecasting service. Many of our awareness raising activities currently underway will continue. Our focus will be on promoting flood warning and forecasting service, innovation, education and engagement with

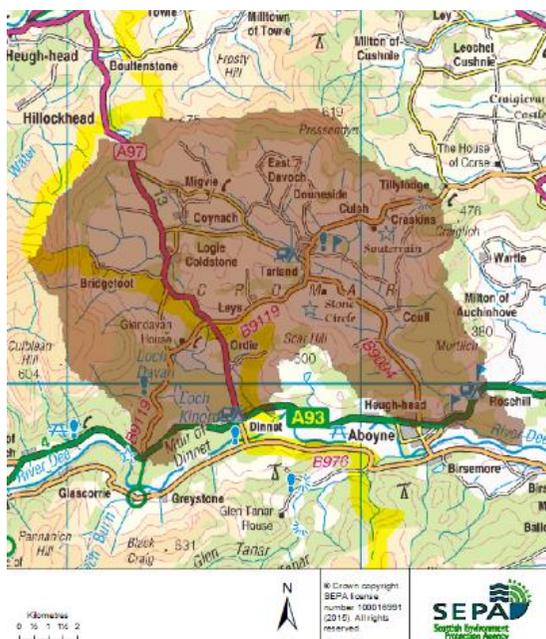
					<p>partnership with local authorities, emergency services and community organisations (e.g. Neighbourhood Watch Scotland, Citizens Advice Scotland and others) to share our resources and help to promote preparedness and understanding of how we manage flood risk in Scotland. We have actively supported the Scottish Flood Forum and worked closely with UK agencies to develop joint flooding information.</p> <p>ACC has continued to promote its Property Level Flood Grant Scheme along with the use of social media to inform of flood risk. ACC has also used social media to undertake flood resilience awareness campaign.</p>	<p>partners, customers and the public.</p> <p>ACC will continue to work on raising flooding resilience awareness.</p>
Maintenance	G	Local authorities have a duty to assess watercourses and carry out clearance and repair works where such works would substantially reduce flood risk. Aberdeen City Council will produce schedules of clearance and repair works and make these available for public inspection.	Aberdeen City Council, asset / land managers	Ongoing	ACC inspects waterbodies and identify clearance and repair works to reduce flood risk	ACC will continue to inspect waterbodies and identify clearance and repair works to reduce flood risk.

<p>Emergency plans/response</p>	<p>G</p>	<p>Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA.</p>	<p>Category 1 and 2 Responders</p>	<p>Ongoing</p>	<p>ACC working with Local resilience partnership has undertaken two simulation exercises looking at how key agencies would respond to a flooding incident along with holding review meetings following the 2015/16 winter floods and August 2020 flooding.</p> <p>Roads Operations team has a response squad who provide 24/7 cover for any incidents reported by the public, including flood incidents. Flood duty officers are on a weekly rota and are on call 24/7. The flood duty officer will be contacted directly by SEPA in the event of an alert or warning. The FDO checks the forecast for weather, river levels and tides at the start of their week on duty and monitors the flood guidance statements and, when available, FEWS. On receipt of a flood alert or a forecast of heavy rain the FDO contacts Roads Operations and instructs them to check and clean priority 1 trash screens and gullies. The FDO also assesses the requirement to close</p>	<p>ACC will continue to work with the LRP to ensure strong communications lines in emergency response and ensuring appropriate resource is made available.</p>
--	----------	---	------------------------------------	----------------	--	--

					flood gates, supply sandbags or instruct evacuations.	
Planning policies	G	<p>Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers’ priorities for the operation of the planning system and for the development and use of land. In terms of flood risk management, the policy supports a catchment scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided.</p>	<p>Planning Authority</p>	<p>Ongoing</p>	<p>ACC continue to work within the current planning policy framework ensuring the flood risk from all sources except ground water were considered thought the planning process and give appropriate comment on applications.</p> <p>SEPA exercises its planning functions with a view to reducing overall flood risk. We effectively contribute to the delivery of sustainable flood risk management, and we support the delivery of FRM Strategies and local FRM Plans. In line with the management actions that accord with national planning policies and object to development at medium to high risk of flooding when it is contrary to the risk framework set out in Scottish Planning Policy. SEPA will also continue to engage at the offset of the development plan process and encourage planning authorities to undertake a Strategic Flood Risk Assessment to inform their spatial strategy.</p>	<p>ACC will be updating its guidance to developers on the planning process and minimum requirements for planning applications to ensure that the planning process remains constant and in line with the NELFRP and Surface Water Management plans</p>

Aboyne (Potentially Vulnerable Area 06/20)

Local Plan District	Local authority	Main catchment
North East	Aberdeenshire Council	River Dee (Grampian)



© Crown copyright and database rights 2022.
 Ordnance Survey licence no. 0100020767
 Map reproduced from North East Flood Risk
 Management Strategy, SEPA (December 2015)

Summary of Progress for Aboyne

This Potentially Vulnerable Area includes Tarland and Logie Coldstone, as well as the northern part of the town of Aboyne. It is approximately 125km² and located on the eastern edge of the Cairngorms National Park. The A93 and the A97 pass through the area.

The River Dee flows just to the south of the Potentially Vulnerable Area. Several tributaries of the Dee including the Tarland Burn flow through the area.

There are approximately 60 residential and 20 non-residential properties at risk of flooding.

The Annual Average Damages are approximately £240,000 with the majority from river flooding.

Further information can be found in NELFRMP under PVA 06/20.

https://www.aberdeenshire.gov.uk/media/17361/pva-06_20-aboyne.pdf

Key progress:

- B9094 Culvert Replacement.
- Draft Surface Water Management Plan complete.
- Camera investigations and associated drain clearance in Tarland

Overview of actions to manage flooding in Aboyne

PVA	Flood protections scheme/works	Natural flood management	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/20						A	G		G	G			G	G	G		G	G

Summary of progress of actions to manage flood risk in Aboyne (PVA 06/20)

Action	Status	Description	Start	End	Progress	Future Actions
Surface water plan/study	A	A study to prepare Surface Water Management Plan (SWMP) to generate increased understanding of the causes, probability and consequences of surface water flooding and to evaluate options for surface water flood management.	Aberdeenshire Council	2018 - 2019	Aboyne flood areas to be mapped flood areas from various sources reviewed to identify areas for further investigation for discussing with Scottish Water.	Aberdeenshire Council continue to develop Surface Water Management plans in this area by reviewing historic flooding issues and collating data. The purpose of which will be to identify possible improvements to the drainage system and maintenance.

Strategic mapping and modelling (Sewer)	G	Scottish Water will undertake modelling of the Aboyne sewer catchment.	Scottish Water	21/7/17	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority	
Strategic mapping and modelling (surface water)	G	SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km ² of improved data is currently available within this Local Plan District."	SEPA		SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.	The national surface water flooding modelling project will be completed in 2023. The outputs from this will be used to update SEPA maps early in cycle 2 and will inform SEPA's flood risk assessments for the next flood risk management cycle.
Maintain flood warning	G	SEPA will continue to maintain the 'Aboyne' flood warning area which is part of the Dee river flood warning scheme.	SEPA	Ongoing	SEPA has continued to operate the flood warning service	SEPA will continue to operate the flood warning service

<p>Flood forecasting</p>	<p>G</p>	<p>The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business. For more information, please visit SEPA’s website.</p>	<p>SEPA</p>	<p>Ongoing</p>	<p>SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance Statement, the Scottish Flood Forecast, to provide better and earlier information to the public. A beta version of this product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding. The development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges</p>	
---------------------------------	-----------------	--	-------------	----------------	--	--

					associated with providing surface water flooding guidance.	
Self help	G	Everyone is responsible for protecting themselves and their property from flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities Initiatives, and ensuring that properties and businesses are insured against flood damage.	-	Ongoing	Aberdeenshire Council continue to make PLP products available at cost price. New sandbag containers are installed across Aberdeenshire at flood prone locations for the public to help themselves to in times of flooding. SEPA continues to assist members of the public to sign up to Floodline.	Numerous actions have been undertaken by Responsible Authorities to raise awareness and educate about Self Help actions. Local authorities, SEPA, Scottish water and other organisations will provide support to communities on request
Awareness raising	G	SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact. Local authorities will be undertaking additional awareness raising activities, further details will be set out in the Local FRM Plans.	Responsible Authorities	Ongoing	Aberdeenshire Council continue with liaising with community councils on resilience. Aberdeenshire Council advise householders directly on property level protection products and actions they can take. The responsible Authorities continue to work with others to raise awareness of flood risk and its flood warning service. It has participated in local activities including school /	

					education and community resilience activities when able. Some planned activities notably in person joint events have been limited or delayed due to Covid 19	
Maintenance	G	Actions taken by Local Authorities and Scottish Water to undertake clearance and repair in relation to waterbodies and maintenance of other water related assets.	Aberdeenshire Council, asset / land managers	Ongoing	Local Authorities have inspected waterbodies and identify clearance and repair works to reduce flood risk. A publicly accessible page is available on Aberdeenshire Councils website, updated nightly, showing schedules of clearance and repair as assessments take place Local Authorities inspect flood protection schemes and provide maintenance works where deemed necessary. Scottish Water continue to undertake risk based inspections, maintenance and repair on the public sewer network.	Current actions to continue. Aberdeenshire Council will continue with its routine watercourse inspections and schedule any clearance and repair work. All information is publicly available.
Emergency plans/response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local	Category 1 and 2 Responders	Ongoing	In response to weather warnings received the Responsible Authorities under the Civil Contingencies Act	Current actions to continue.

		authorities, the emergency services and SEPA.			<p>2004 use the best available information from a number of sources to co-ordinate regional and local actions.</p> <p>Grampian Emergency Planning Unit have in place and maintain Emergency Plans for all contingencies</p>	Emergency plans are reviewed and updated when required.
Planning Policy	G	<p>Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers’ priorities for the operation of the planning system and for the development and use of land. In terms of flood risk management, the policy supports a catchment scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided.</p>	Planning Authority	Ongoing	<p>Local Authorities and the Cairngorms National Park as joint Planning Authority, ensure that any new developments satisfy relevant guidance and policies on flooding and drainage.</p> <p>SEPA continues to exercise its planning functions with a view to reducing overall flood risk. They effectively contribute to the delivery of sustainable flood risk management and support the delivery of FRM Plans and Local FRM Plans. In line with the management actions that accord with national planning policies, they will continue to object to development at medium to high risk of flooding when it is</p>	Local Authorities continue to consider flood risk when determining planning applications. They ensure final versions of Local Development Plans and the Cairngorms National Park Plan maintain robust policy to avoid new development in areas that are at risk of flooding or would increase flood risk elsewhere, and encourages the most sustainable approach

				<p>contrary to the risk framework set out in Scottish Planning Policy. They will continue to engage from the start of the development plan process and encourage planning authorities to undertake a Strategic Flood Risk Assessment to inform their spatial strategy and remain committed to exercising our planning functions with a view to reducing overall flood risk. When a new national planning policy context is finalised later in 2022 via the National Planning Framework 4, they will take the same approach.</p>	<p>to managing surface water.</p>
--	--	--	--	---	-----------------------------------

● **Banchory and Torphins (Potentially Vulnerable Area 06/21)**

Local Plan District	Local authority	Main catchment
North East	Aberdeenshire Council	River Dee (Grampian)



Summary of Progress for Banchory and Torphins

This Potentially Vulnerable Area is based around Banchory and Torphins. It is approximately 97km². The A93 and A980 pass through the area.

The main rivers are the River Dee and its tributaries, the Burn of Canny and the Beltie Burn.

There are approximately 30 residential and 50 non-residential properties at risk of flooding.

The Annual Average Damages are approximately £200,000 with the majority due to surface water flooding.

Further information can be found in NELFRMP under PV06/21.

https://www.aberdeenshire.gov.uk/media/17356/pva-06_21-banchory-and-torphins.pdf

Key progress:

- Easter Beltie Burn Restoration Project works completed by the Dee Catchment Partnership
- Camera investigations and associated drain clearance in Banchory

© Crown copyright and database rights 2022.
 Ordnance Survey licence no. 0100020767
 Map reproduced from North East Flood Risk Management Strategy, SEPA (December 2015)

Overview of actions to manage flooding in Banchory and Torphins

PVA	Flood protections scheme/works	Natural flood management	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/21							G		G	G			G	G	G		G	G

Summary of progress of actions to manage flood risk in Banchory and Torphins (PVA 06/21)

Action	Status	Description	Start	End	Progress	Future Actions
Strategic mapping and modelling (Sewer)	G	Scottish Water will undertake modelling of the Banchory and Torphins sewer catchment.	Scottish Water	Banchory – 25/02/19 Torphins- 26/06/18		
Strategic mapping and modelling (surface water)	G	SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km ² of improved data is currently available within this Local Plan District."	SEPA		SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and	The national surface water flooding modelling project will be completed in 2023. The outputs from this will be used to update SEPA maps early in cycle 2 and

					represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.	will inform SEPA's flood risk assessments for the next flood risk management cycle.
Maintain flood warning	G	SEPA will continue to maintain the 'Banchory' flood warning area which is part of the Dee river flood warning scheme.	SEPA	Ongoing	SEPA has continued to operate the flood warning service	
Flood forecasting	G	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or	SEPA	Ongoing	SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance Statement,	

		business. For more information, please visit SEPA’s website.			the Scottish Flood Forecast, to provide better and earlier information to the public. A beta version of this product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding. The development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.	
Self help	G	Everyone is responsible for protecting themselves and their property from flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen.	-	Ongoing	Aberdeenshire Council continue to make PLP products available at cost price. New sandbag containers are installed across Aberdeenshire at flood prone locations for the public to help themselves to in times of flooding.	Numerous actions have been undertaken by Responsible Authorities to raise awareness and

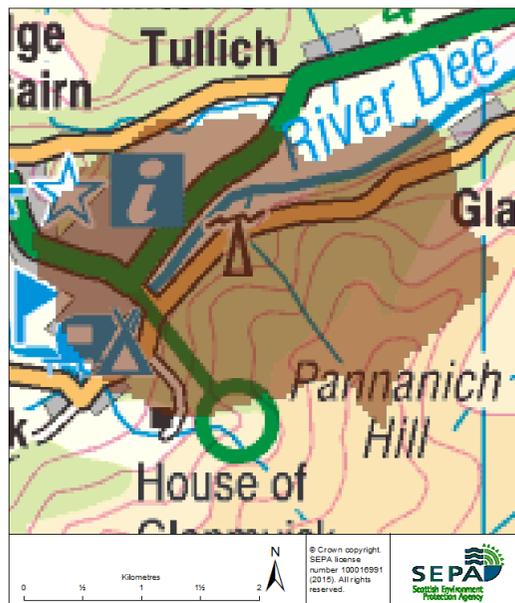
		<p>This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities Initiatives, and ensuring that properties and businesses are insured against flood damage.</p>			<p>SEPA continues to assist members of the public to sign up to Floodline.</p>	<p>educate about Self Help actions. Local authorities, SEPA, Scottish water and other organisations will provide support to communities on request</p>
<p>Awareness raising</p>	<p>G</p>	<p>SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact. Local authorities will be undertaking additional awareness raising activities, further details will be set out in the Local FRM Plans.</p>	<p>Responsible Authorities</p>	<p>Ongoing</p>	<p>Aberdeenshire Council continue with liaising with community councils on resilience. Aberdeenshire Council advise householders directly on property level protection products and actions they can take.</p> <p>The responsible Authorities continue to work with others to raise awareness of flood risk and its flood warning service. It has participated in local activities including school / education and community resilience activities when able. Some planned activities notably in person joint events have been limited or delayed due to Covid 19</p>	

Maintenance	G	Actions taken by Local Authorities and Scottish Water to undertake clearance and repair in relation to waterbodies and maintenance of other water related assets.	Aberdeenshire Council, asset / land managers	Ongoing	<p>Local Authorities have inspected waterbodies and identify clearance and repair works to reduce flood risk.</p> <p>A publicly accessible page is available on Aberdeenshire Councils website, updated nightly, showing schedules of clearance and repair as assessments take place</p> <p>Local Authorities inspect flood protection schemes and provide maintenance works where deemed necessary.</p> <p>Scottish Water continue to undertake risk based inspections, maintenance and repair on the public sewer network.</p>	<p>Current actions to continue.</p> <p>Aberdeenshire Council will continue with its routine watercourse inspections and schedule any clearance and repair work. All information is publicly available.</p>
Emergency plans/response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA.	Category 1 and 2 Responders	Ongoing	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA	<p>Current actions to continue.</p> <p>Emergency plans are reviewed and updated when required.</p>
Planning Policy	G	Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers' priorities for the operation of the planning system and for the development and	Planning Authority	Ongoing	Local Authorities, as Planning Authority, ensure that any new developments satisfy relevant guidance and policies on flooding and drainage.	Local Authorities continue to consider flood risk when determining planning applications. They

		<p>use of land. In terms of flood risk management, the policy supports a catchment scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long term vulnerability of parts of our coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided.</p>		<p>SEPA continues to exercise its planning functions with a view to reducing overall flood risk. They effectively contribute to the delivery of sustainable flood risk management and support the delivery of FRM Plans and Local FRM Plans. In line with the management actions that accord with national planning policies, they will continue to object to development at medium to high risk of flooding when it is contrary to the risk framework set out in Scottish Planning Policy. They will continue to engage from the start of the development plan process and encourage planning authorities to undertake a Strategic Flood Risk Assessment to inform their spatial strategy and remain committed to exercising our planning functions with a view to reducing overall flood risk. When a new national planning policy context is finalised later in 2022 via the National Planning Framework 4, they will take the same approach.</p>	<p>ensure final versions of Local Development Plans maintain robust policy to avoid new development in areas that are at risk of flooding or would increase flood risk elsewhere, and encourages the most sustainable approach to managing surface water</p>
--	--	---	--	--	--

- **Ballater (Potentially Vulnerable Area 06/22)**

Local Plan District	Local authority	Main catchment
North East	Aberdeenshire Council	River Dee (Grampian)



© Crown copyright and database rights 2022.
 Ordnance Survey licence no. 0100020767
 Map reproduced from North East Flood Risk
 Management Strategy, SEPA (December 2015)

Summary of Progress for Ballater

This Potentially Vulnerable Area is based around Ballater and is approximately 7km². The area is located within the Cairngorms National Park and the A93 passes through it. The main river is the River Dee, which is a Special Area of Conservation for salmon, otters and freshwater pearl mussels. There are approximately 200 residential and 40 non-residential properties at risk of flooding. The Annual Average Damages are approximately £230,000. Almost all the damages are caused by river flooding.

Further information can be found in NELFRMP under 06/22.
https://www.aberdeenshire.gov.uk/media/17359/pva-06_22-ballater.pdf

Key progress:

- The Ballater Flood Study has been completed with a preferred flood protection option identified
- Additional Ballater Flood Study looking at changes to river geomorphology and flood risk. Also assessing potential minor works options.
- Rock armour repair to eroded River Dee embankment
- Community engagement to establish flood resilience measures including Property Level Protection promotion

Overview of actions to manage flooding in Ballater

PVA	Flood protections scheme/works	Natural flood management	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/22				G			G		G	G		G	G	G	G		G	G

Summary of progress of actions to manage flood risk in Ballater (PVA 06/22)

Action	Status	Description	Start	End	Progress	Future Actions
Flood protection study	G	A flood protection study is required to consider flood protection works to reduce the risk of flooding in Ballater from the River Dee. The flood protection study should primarily focus on direct defences, relocation of properties and property level protection, but other actions may also be considered in order to develop the most sustainable range of options.	Aberdeenshire Council	2017 - 2019	Stakeholder and public engagement 2 - Winter 2018	Project completion - Spring 2019

Strategic mapping and modelling (Sewer)	G	Scottish Water will undertake modelling of the Ballater sewer catchment.	Scottish Water	02/5/18	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority	
Strategic mapping and modelling (surface water)	G	SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km ² of improved data is currently available within this Local Plan District."	SEPA		SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.	The national surface water flooding modelling project will be completed in 2023. The outputs from this will be used to update SEPA maps early in cycle 2 and will inform SEPA's flood risk assessments for the next flood risk management cycle.

Maintain flood warning	G	SEPA will continue to maintain the 'Ballater' flood warning area which is part of the Dee river flood warning scheme	SEPA	Ongoing	SEPA has continued to operate the flood warning service	
Flood forecasting	G	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business. For more information, please visit SEPA's website.	SEPA	Ongoing	SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance Statement, the Scottish Flood Forecast, to provide better and earlier information to the public. A beta version of this product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and	

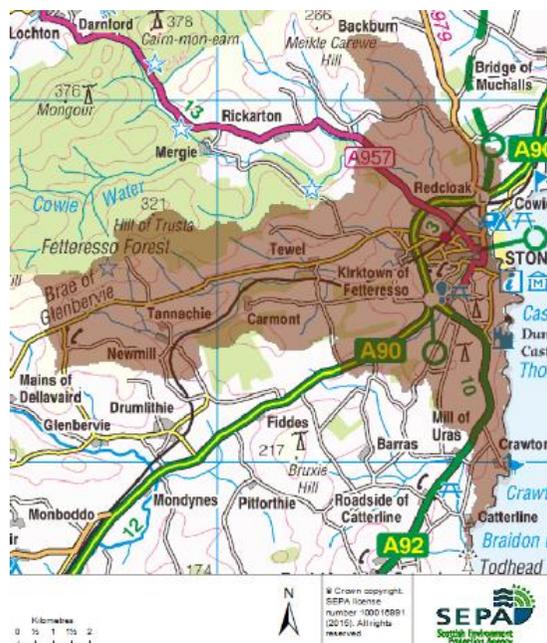
					preparedness for flooding. The development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.	
Community flood action groups	G	Aberdeenshire Council will work with the Ballater Flood Resilience Group to reduce flood risk, improve preparedness and increase resilience against flooding.	Community	Ongoing	SEPA continues to assist the Ballater flood action group as appropriate. Aberdeenshire Council will coordinate with the Group throughout this first 6 year cycle on a priority needs basis where resources allow.	
Self help	G	Everyone is responsible for protecting themselves and their property from flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities Initiatives, and ensuring that properties and businesses are insured against flood damage.	-	Ongoing	Aberdeenshire Council continue to make PLP products available at cost price. New sandbag containers are installed across Aberdeenshire at flood prone locations for the public to help themselves to in times of flooding. SEPA continues to assist members of the public to sign up to Floodline.	Numerous actions have been undertaken by Responsible Authorities to raise awareness and educate about Self Help actions. Local authorities, SEPA, Scottish water and other organisations will provide support to

						communities on request
Awareness raising	G	SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact. Local authorities will be undertaking additional awareness raising activities, further details will be set out in the Local FRM Plans.	Responsible Authorities	Ongoing	<p>Aberdeenshire Council continue with liaising with community councils on resilience.</p> <p>Aberdeenshire Council advise householders directly on property level protection products and actions they can take.</p> <p>The responsible Authorities continue to work with others to raise awareness of flood risk and its flood warning service. It has participated in local activities including school / education and community resilience activities when able. Some planned activities notably in person joint events have been limited or delayed due to Covid 19</p>	
Maintenance	G	Actions taken by Local Authorities and Scottish Water to undertake clearance and repair in relation to waterbodies and maintenance of other water related assets.	Aberdeenshire Council, asset / land managers	Ongoing	<p>Local Authorities have inspected waterbodies and identify clearance and repair works to reduce flood risk.</p> <p>A publicly accessible page is available on Aberdeenshire Councils website, updated nightly, showing</p>	<p>Current actions to continue.</p> <p>Aberdeenshire Council will continue with its routine watercourse inspections and schedule any</p>

					<p>schedules of clearance and repair as assessments take place</p> <p>Local Authorities inspect flood protection schemes and provide maintenance works where deemed necessary.</p> <p>Scottish Water continue to undertake risk based inspections, maintenance and repair on the public sewer network.</p>	clearance and repair work. All information is publicly available.
Emergency plans/response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA.	Category 1 and 2 Responders	Ongoing	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA	<p>Current actions to continue.</p> <p>Emergency plans are reviewed and updated when required.</p>
Planning Policy	G	As a consultee on planning applications, Aberdeenshire Council's Flood & Coast Protection team will work directly with colleagues in the Planning Service to ensure that appropriate policies and measures are put in place to reduce flood risk.	Planning Authority	Ongoing	Aberdeenshire Council and SEPA continues to advise on planning applications.	Local Authorities continue to consider flood risk when determining planning applications. They ensure final versions of Local Development Plans and the Cairngorms National

● Stonehaven (Potentially Vulnerable Area 06/23)

Local Plan District	Local authority	Main catchment
North East	Aberdeenshire Council	Kincardine and Angus coastal



Summary of Progress for Stonehaven

This Potentially Vulnerable Area covers Stonehaven and the surrounding rural area. It is approximately 68km².

The Aberdeen to Dundee railway line, and the A90, A957 and A92 pass through the area.

The main rivers in the area are Carron and the Cowie. Stonehaven has suffered from major flooding in recent years from the River Carron and from the sea.

There are approximately 860 residential and 240 non-residential properties at risk of flooding.

The Annual Average Damages are approximately £890,000, with the majority due to river flooding.

Further information can be found in NELFRMP under PVA 06/23.

https://www.aberdeenshire.gov.uk/media/17363/pva-06_23-stonehaven.pdf

Key progress:

- Stonehaven Flood Protection Scheme commenced 2018. Expected to be substantially complete 2023
- Investigations and minor works regarding surface water management ongoing, including works on the Arbuthnott Drain and the Mill Lade
- Aberdeenshire Council and Scottish Water worked in collaboration to develop the Integrated Catchment Study (Flooding issues relating to below ground sewers interacting with minor watercourses). This has identified a preferred option for the Farrochie Burn.
- The Stonehaven Coastal Flood Study completed and preferred option identified.
- New flood warning areas have been introduced for Stonehaven Coastal area.

© Crown copyright and database rights 2022.
 Ordnance Survey licence no. 0100020767
 Map reproduced from North East Flood Risk Management Strategy, SEPA (December 2015)

Overview of actions to manage flooding in Stonehaven

PVA	Flood protections scheme/works	Natural flood management	New flood warning	Flood protection study	Natural flood management study	Surface water plan/study	Strategic mapping and modelling	Maintain flood protection	Maintain flood warning	Flood forecasting	Property level protection scheme	Community flood action groups	Self help	Awareness raising	Maintenance	Site protection plans	Emergency plans/response	Planning policies
06/23	A		G	G		A	G	G	G	G		G	G	G	G		G	G

Summary of progress of actions to manage flood risk in Stonehaven (PVA 06/23)

Action	Status	Description	Start	End	Progress	Future Actions
Flood protections scheme/works	A	Flood Protection Scheme includes: <ul style="list-style-type: none"> – Direct flood defences on both banks of the River Carron and Glaslaw Burn – Modifications to the channel – Raising of the White and Red Bridges – Raising and relocation of the Green Bridge – Culvert replacement – Provision of pumping stations – Infilling of the parapets on Bridgefield Bridge 	Aberdeenshire Council	2016 - 2019	Aberdeenshire Council have now appointed a contractor to begin work on the Stonehaven Flood Protection Scheme.	Work is due begin on site in the early 2019 with an expected duration of 24 months.

New Flood Warning	G	A flood warning system will be developed and implemented.	01/01/2017	31/12/18	SEPA has continued to operate the flood warning service since it was completed earlier in the FRM cycle.	
Flood protection study	G	To evaluate options to reduce the risk of flooding in Stonehaven from coastal flooding.	Aberdeenshire Council	2016-2019	Topographic and structural surveys complete Summer 2018. Modelling and analysis - Autumn 2018 Outline engineering design - Winter 2018 Stakeholder and public engagement 1 - Winter 2018/19 Options appraisal - Spring 2019 Stakeholder and public engagement 2 - Spring 2019	Project completion – Autumn 2019
Surface water plan/study	A	A study to prepare Surface Water Management Plan (SWMP) to generate increased understanding of the causes, probability and consequences of surface water flooding and to evaluate options for surface water flood management.	Aberdeenshire Council	2016 - 2021	Stonehaven flood areas to be mapped and flood areas from various sources reviewed to identify areas for further investigation for discussing with Scottish Water.	Aberdeenshire Council continue to develop Surface Water Management plans in this area by reviewing historic flooding issues and collating data. The purpose of which will be to identify possible improvements to the drainage system and maintenance.

Strategic mapping and modelling (Sewer)	G	Scottish Water will undertake modelling of the Cowie sewer catchment.	Scottish Water	10/5/17	The Scottish Water assessment of flood risk within the sewer catchment has been completed and has been shared with the Local Authority	
Strategic mapping and modelling (surface water)	G	SEPA will be seeking to incorporate additional surface water hazard mapping information into the flood maps to improve understanding of flood risk. Approximately 2,100km ² of improved data is currently available within this Local Plan District."	SEPA & Scottish Water		SEPA's current Surface water hazard maps use design rainfall estimates based on FEH99 methodology, this has now been superseded by FEH22 methodology. The FEH22 dataset contains the latest science and understanding of rainfall across Scotland and represents a significant change in rainfall amounts compared to FEH99 dataset, as such it is no longer consider appropriate to deliver this action as originally intended. This action will not be taken forwards as described. A major national update of the surface water maps is underway which will deliver updated surface water flooding maps for Scotland representing the latest scientific understanding.	<p>The national surface water flooding modelling project will be completed in 2023. The outputs from this will be used to update SEPA maps early in cycle 2 and will inform SEPA's flood risk assessments for the next flood risk management cycle.</p> <p>The Optioneering phase of the Integrated Catchment Study has been completed. This has identified potential solutions to reduce surface water flood risk in priority areas within Stonehaven.</p>

Maintain flood protection scheme*	A	Assuming the Stonehaven Flood Protection Scheme is completed within the first six-year plan cycle 2016-2022, the following maintenance measures will be undertaken: – Hydraulic Flood Walls - Pressure testing / operation – Walls Surface finishes - Repointing / re-facing – Rock Armour - Replacement when required	Aberdeenshire Council	2019 onwards	Maintenance will begin once the scheme is complete
Maintain flood warning	G	SEPA will continue to maintain the 'Stonehaven' flood warning area which is on the Carron Water and is part of the Stonehaven river flood warning scheme.	SEPA	Ongoing	SEPA has continued to operate the flood warning service
Flood forecasting	G	The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 responders. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business. For more information, please visit SEPA's website.	SEPA	Ongoing	SEPA continues to improve the Scottish Flood Forecasting Service with the Met Office, with daily Flood Guidance Statements and regional Flood Alerts issued as required to enable communities and responders to reduce the impacts of flooding. SEPA in partnership with the Met Office has developed a public version of the daily Flood Guidance Statement, the Scottish Flood Forecast, to provide better and

					<p>earlier information to the public. A beta version of this product was launched in May 2022. It will be refined in the wake of user feedback. A more focussed version of the product, producing guidance at a local level, is planned for the next flood risk management cycle. Options for developing forecasts of surface water flooding have been published in 2022 to help urban areas and the transport network improve their resilience to and preparedness for flooding. The development and wider roll-out of this service is being considered alongside the technical, resource and communication challenges associated with providing surface water flooding guidance.</p>	
Community flood action groups	G	<p>Stonehaven Flood Action Group represent the local community on flood risk issues and have been involved in working with Aberdeenshire Council and SEPA in seeking and implementing solutions to flood risk. Aberdeenshire Council will work with the Stonehaven Flood Action Group to reduce flood risk,</p>	Community	Ongoing	<p>SEPA continues to engage with the Stonehaven Flood Action Group.</p> <p>Aberdeenshire Council will engage with the Group throughout this first 6 year cycle on a priority needs basis where resources allow.</p> <p>The Stonehaven Volunteer Flood Wardens inform residents in the</p>	

		improve preparedness and increase resilience against flooding.			Flood Risk Area about protecting their properties from flooding and warn residents when Aberdeenshire Council Staff believe that there is a serious risk of flooding from the River Carron. The Council provides PPE and some logistical support.	
Self help	G	Everyone is responsible for protecting themselves and their property from flooding. Property and business owners can take simple steps to reduce damage and disruption to their homes and businesses should flooding happen. This includes preparing a flood plan and flood kit, installing property level protection, signing up to Floodline and Resilient Communities Initiatives, and ensuring that properties and businesses are insured against flood damage.	-	Ongoing	Aberdeenshire Council continue to make PLP products available at cost price. New sandbag containers are installed across Aberdeenshire at flood prone locations for the public to help themselves to in times of flooding. SEPA continues to assist members of the public to sign up to Floodline.	Numerous actions have been undertaken by Responsible Authorities to raise awareness and educate about Self Help actions. Local authorities, SEPA, Scottish water and other organisations will provide support to communities on request
Awareness raising	G	SEPA and the responsible authorities have a duty to raise public awareness of flood risk. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact. Local authorities will be	Responsible Authorities	Ongoing	Aberdeenshire Council continue with liaising with community councils on resilience. Aberdeenshire Council advise householders directly on property level protection products and actions they can take.	

		undertaking additional awareness raising activities, further details will be set out in the Local FRM Plans.			The responsible Authorities continue to work with others to raise awareness of flood risk and its flood warning service. It has participated in local activities including school / education and community resilience activities when able. Some planned activities notably in person joint events have been limited or delayed due to Covid 19	
Maintenance	G	Actions taken by Local Authorities and Scottish Water to undertake clearance and repair in relation to waterbodies and maintenance of other water related assets.	Aberdeenshire Council, asset / land managers	Ongoing	<p>Local Authorities have inspected waterbodies and identify clearance and repair works to reduce flood risk.</p> <p>A publicly accessible page is available on Aberdeenshire Councils website, updated nightly, showing schedules of clearance and repair as assessments take place</p> <p>Local Authorities inspect flood protection schemes and provide maintenance works where deemed necessary.</p> <p>Scottish Water continue to undertake risk based inspections,</p>	<p>Current actions to continue.</p> <p>Aberdeenshire Council will continue with its routine watercourse inspections and schedule any clearance and repair work. All information is publicly available.</p>

					maintenance and repair on the public sewer network.	
Emergency plans/response	G	Providing an emergency response to flooding is the responsibility of many organisations, including local authorities, the emergency services and SEPA.	Category 1 and 2 Responders	Ongoing	In response to weather warnings received the Responsible Authorities under the Civil Contingencies Act 2004 use the best available information from a number of sources to co-ordinate regional and local actions. Grampian Emergency Planning Unit have in place and maintain Emergency Plans for all contingencies	Current actions to continue. Emergency plans are reviewed and updated when required.
Planning Policy	G	Scottish Planning Policy and accompanying Planning Advice Notes set out Scottish Ministers' priorities for the operation of the planning system and for the development and use of land. In terms of flood risk management, the policy supports a catchment scale approach to sustainable flood risk management and aims to build the resilience of our cities and towns, encourage sustainable land management in our rural areas, and to address the long term vulnerability of parts of our	Planning Authority	Ongoing	SEPA continues to exercise its planning functions with a view to reducing overall flood risk. They effectively contribute to the delivery of sustainable flood risk management and support the delivery of FRM Plans and Local FRM Plans. In line with the management actions that accord with national planning policies, they will continue to object to development at medium to high risk of flooding when it is contrary to the risk framework set out in Scottish Planning Policy.	Local Authorities continue to consider flood risk when determining planning applications. They ensure final versions of Local Development Plans maintain robust policy to avoid new development in areas that are at risk of flooding or would increase flood risk elsewhere, and

		<p>coasts and islands. Under this approach, new development in areas with medium to high likelihood of flooding should be avoided.</p>		<p>They will continue to engage from the start of the development plan process and encourage planning authorities to undertake a Strategic Flood Risk Assessment to inform their spatial strategy and remain committed to exercising our planning functions with a view to reducing overall flood risk. When a new national planning policy context is finalised later in 2022 via the National Planning Framework 4, they will take the same approach.</p>	<p>encourages the most sustainable approach to managing surface water</p>
--	--	--	--	---	---

Roles and Responsibilities

Individuals are the first line of defence against flooding. However, public bodies have responsibilities too and are working together to reduce the impacts of flooding in Scotland. Responsibility for flood risk management planning falls in the main to SEPA, local authorities and Scottish Water. However, individuals have a personal responsibility to protect themselves and their property.

Some of the key roles are outlined below and more information is available from the SEPA website.

Your responsibilities

Organisations and individuals have responsibilities to protect themselves from flooding. Being prepared by knowing what to do and who to contact if flooding happens can help you reduce the damage and disruption flooding can have on your life.

The first step to being prepared is to sign up to Floodline - www.floodlinescotland.org.uk - to receive messages to let you know where and when flooding is likely to happen. Other useful tools and advice on how to be prepared are available on the [Floodline](#) website including a quick guide to who to contact in the event of a flood. You can also check how your area could be affected by flooding by looking at SEPA's [flood maps - www.sepa.org.uk/environment/water/flooding/flood-maps](http://www.sepa.org.uk/environment/water/flooding/flood-maps)

Local authorities

Local authorities work together for flood risk management planning purposes through a single lead authority which has the responsibility to produce a Local Flood Risk Management Plan. Local authorities have been working collaboratively in the manner described above to develop these.

It is the responsibility of your local authority to implement its flood protection actions agreed within the Local Flood Risk Management Plan. You can help your local authority to manage flooding by not dumping material on the banks of a watercourse and by letting them know if flood defences are tampered with.

During severe flooding, local authorities will work with the emergency services and coordinate shelter for people evacuated from their homes.

The Lead Local Authority for the North East Local Plan District is **Aberdeenshire Council** Other local authorities who are responsible authorities for the North East Local Plan District are **Aberdeen City Council** and **The Moray Council**

SEPA

SEPA is Scotland's national flood forecasting, flood warning and strategic flood risk management authority. SEPA has a statutory duty to produce Scotland's Flood Risk Management Strategies. SEPA works closely with other organisations responsible for managing flood risk through a network of partnerships and stakeholder groups to ensure that a nationally consistent approach to flood risk management is adopted.

SEPA also has a responsibility to identify where in Scotland there is the potential for natural flood management techniques to be introduced. Natural flood management is the use of the natural features of the land to store and slow down the flow of water.

In running Floodline, SEPA provides live flooding information and advice on how to prepare for or cope with the impacts of flooding 24 hours a day, seven days a week. To help forecast for flooding SEPA works closely with the Met Office.

To raise awareness of flooding at a national level, SEPA runs education initiatives, community engagement programmes and an annual campaign to promote the useful advice and information available through Floodline. SEPA works in partnership with local authorities, Neighbourhood Watch Scotland, Ready Scotland and others to share resources and help to promote preparedness and understanding of how flood risk is managed.

SEPA has a statutory role in relation to the provision of flood risk advice to planning authorities. This role is expressed in Section 72 of the FRM Act, 2009. SEPA also has a duty to co-operate with planning authorities in the preparation of development plans. When consulted in relation to planning applications for development or site allocations in development plans, and where the planning authority considers there may be a risk of flooding, SEPA will provide advice. The advice provided by SEPA will be with respect to the risk of flooding and on the basis of the relevant information it holds which is suitable for planning purposes. It will also be in line with the principles and duties set out in the FRM Act. Further information about how SEPA engage in the planning system, including guidance on flood risk and planning is available on SEPA website www.sepa.org.uk/environment/land/planning

Scottish Water

Scottish Water is a responsible authority for flood risk management and is working closely with SEPA, local authorities and other responsible authorities to coordinate plans to manage flood risk.

Scottish Water has the public drainage duty and is responsible for foul drainage and the drainage of rainwater run-off from roofs and any paved ground surfaces from the boundary of properties. Additionally, Scottish Water helps to protect homes from flooding caused by sewers either overflowing or becoming blocked. Scottish Water is not responsible for private pipework or guttering within the property boundary.

National Park

The two National Park Authorities, Loch Lomond and the Trossachs National Park Authority and Cairngorms National Park, were designated as responsible authorities for flood risk management purposes in 2013. Both have worked with SEPA, local authorities and Scottish Water to help develop Flood Risk Management Strategies and Local Flood Risk Management Plans. They also fulfil an important role in land use planning, carrying out or granting permission for activities that can play a key role in managing and reducing flood risk. Cairngorms National Park Authority is a responsible authority for the North East Local Plan District.

Forestry Commission Scotland

Forestry Commission Scotland was designated in 2013 as a responsible authority for flood risk management planning purposes and has engaged in the development of the Local Flood Risk Management Plan. This reflects the widely held view that forestry can play a significant role in managing flooding.

Other organisations

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

Scottish Natural Heritage has provided general and local advice in the development of this Flood Risk Management Strategies. Flooding is seen as a natural process that can maintain the features of interest at many designated sites, so Scottish Natural Heritage helps to ensure that any changes to patterns of flooding do not adversely affect the environment. Scottish Natural Heritage also provides advice on the impact of Flood Protection Schemes and other land use development on designated sites and species.

During the preparation of the first flood risk management plans **Network Rail** and **Transport Scotland** have identified works to address flooding at a number of frequently flooded sites. Further engagement is planned with SEPA and local authorities to identify areas of future work. There is the opportunity for further works to be undertaken during the first flood risk management planning cycle although locations for these works are yet to be confirmed.

Utility companies have undertaken site specific flood risk studies for their primary assets and have management plans in place to mitigate the effects of flooding to their assets and also minimise the impacts on customers.

The **Met Office** provides a wide range of forecasts and weather warnings. SEPA and the Met Office work together through the [Scottish Flood Forecasting Service](#).

The **emergency services** provide emergency relief when flooding occurs and can coordinate evacuations. You should call the emergency services on 999 if you are concerned about your safety or the safety of others and act immediately on any advice provided.

Historic Environment Scotland considers flooding as part of their regular site assessments. As such, flooding is considered as one of the many factors which inform the development and delivery of its management and maintenance programmes.

The **Scottish Flood Forum** is a Scottish charitable organisation that provides support for those who are affected by, or are at risk of, flooding. It provides flood advice, information, awareness, education and training to individuals and communities to help reduce the risk of flooding; in partnership with the local authority, provides support during the recovery process following a flood incident and aims to support the development of resilient communities.

Supporting information

Sources of flooding described in this Plan

The Local Flood Risk Management Plan addresses the risk of flooding from rivers, the coast and surface water.

The risk of **flooding from rivers** is usually due to rainfall causing a river to rise above bank level spreading out and inundating adjacent areas.

Coastal flooding is where the risk is from the sea. Sea levels can change in response to tidal cycles or atmospheric conditions. Over the longer term sea levels and coastal flood risk may change due to climate change.

Surface water flooding happens when rainwater does not drain away through the normal drainage systems or soak into the ground, but lies on or flows over the ground instead.

There can be interactions between these sources of flooding, and the Actions set out in this Plan take this into account.

The following aspects of flooding have not been incorporated into this Plan:

Groundwater

Groundwater is generally a contributing factor to flooding rather than the primary source. It is caused by water rising up from underlying rocks or flowing from springs.

Reservoir breaches

Reservoir breaches have been assessed under separate legislation (Reservoirs (Scotland) Act 2011). Further information and maps can be found on SEPA's website.

Coastal Erosion

The Flood Risk Management Act (Scotland) 2009 does not require SEPA or responsible authorities to assess or manage coastal erosion. However, SEPA has included consideration of erosion in the Flood Risk Management Strategies by identifying areas that are likely to be susceptible to erosion and where erosion can exacerbate flood risk. As part of considering where actions might deliver multiple benefits, SEPA has looked to see where the focus of coastal flood risk management studies coincides with areas of high susceptibility to coastal erosion. Subsequent detailed studies and scheme design will need to consider how coastal erosion in these areas.

Coastal flood modelling.

The information on coastal flooding used to set objectives and identify actions is based on SEPA modelling using simplified coastal processes and flooding mechanisms at work during a storm. Wave overtopping cannot be accurately modelled at a national scale due to the importance of local factors such as prevailing wind conditions, the depth and profile of the near-shore sea bed or the influence of any existing defences or management structures. As a result, coastal flood risk may be underestimated in some areas. Conversely, in locations with wide and flat floodplains, the modelling may overestimate flood risk. To address this, in a number of locations where more detailed local models were available they have been incorporated into the development of the Flood Risk Management Strategies. Where wave overtopping has been specifically identified as a concern – but where no further detailed modelling is available – particular compensation has been made in the selection of appropriate actions to address coastal flood risk.

Commonly used terms

Below are explanatory notes for commonly used terms in flood risk management. A glossary of terms is also available.

Reference to flood risk.

During the development of the Strategy and Plan, flood risk has been assessed over a range of likelihoods. For consistency in reporting information, unless otherwise stated, all references to properties or other receptors being 'at risk of flooding' refer to a medium likelihood flood (up to a 1 in 200 chance of flooding in any given year). By exception, references will be made to high or low risk flooding, which should be taken to mean a 1 in 10 chance/likelihood or 1 in 1000 chance/likelihood of flooding in any given year respectively.

Likelihood of Flooding	Return Period	Annual Exceedance Probability (chance of event occurring in any one year)
High	10 year	10%
Medium	200 year	0.5%
Low	1000 year	0.1%

Annual Average Damages

Annual Average Damages have been used to assess the potential economic impact of flooding within an area. Depending on its size or severity each flood will cause a different amount of damage to a given area. Annual Average Damages are the theoretical average economic damages caused by flooding when considered over a very long period of time. It does not mean that damage will occur every year: in many years there will be no damages, in some years minor damages and in a few years major damages may occur.

High likelihood events, which occur more regularly, contribute proportionally more to Annual Average Damages than rarer events. Annual Average Damages incorporate economic damages to the following receptors: residential properties, non-residential properties, vehicles, emergency services, agriculture and roads. They have been calculated based on the principles set out in the Flood Hazard Research Centre Multi-Coloured Handbook (2010).

Flood risk management planning process

Flood risk management in Scotland aims to manage flooding in a sustainable way. Sustainable flood risk management considers where floods are likely to occur in the future and takes action to reduce their impact without moving the problem elsewhere. It considers all sources of flooding, whether from rivers, the sea or from surface water. It delivers actions that will meet the needs of present and future generations whilst also protecting and enhancing the environment.

The sustainable approach to managing flood risk works on a six year planning cycle, progressing through the key stages outlined below.

Identifying priority areas at significant flood risk

The first step to delivering a risk based, sustainable and plan-led approach to flood risk management was SEPA's **National Flood Risk Assessment**, which was published in 2011.

The assessment considered the likelihood of flooding from rivers, groundwater and the sea, as well as flooding caused when heavy rainfall is unable to enter drainage systems or the river network. The likelihood of flooding was examined alongside the estimated impact on people, the economy, cultural heritage and the environment. It significantly improved our understanding of the causes and consequences of flooding, and identified areas most vulnerable to floods.

Potentially Vulnerable Areas and Local Plan Districts

Based on the National Flood Risk Assessment, SEPA identified areas where flooding was considered to be nationally significant. These areas are based on catchment units as it is within the context of the wider catchment that flooding can be best understood and managed. These nationally significant catchments are referred to as **Potentially Vulnerable Areas**.

In Scotland, 243 Potentially Vulnerable Areas were identified. They are estimated to contain 92% of the total number of properties at risk.

A small number of Candidate Potentially Vulnerable Areas were identified after the National Flood Risk Assessment in light of new information that warranted further assessment and appraisal. They are included in the flood risk management planning process. The National Flood Risk Assessment will be updated to inform each subsequent planning cycle.

For flood risk management purposes, Scotland was divided into 14 Local Plan Districts. Each Local Plan District will have a Flood Risk Management Strategy and a Local Flood Risk Management Plan.

Improving the understanding of flooding

SEPA developed **flood hazard and flood risk maps** between 2012 and 2014. These maps improved the understanding of flooding and helped inform the subsequent selection of actions to manage flood risk in Potentially Vulnerable Areas. The flood hazard maps show information such as the extent of flooding, water level, as well as depth and velocity where appropriate. The flood risk maps provide detail on the impacts on people, the economy, cultural heritage and the environment.

In 2012 SEPA also developed an **assessment of the potential for natural flood management**. The assessment produced the first national source of information on where natural flood management actions would be most effective within Scotland.

Flood hazard and flood risk maps and the assessment of the potential for natural flood management can be viewed on the SEPA website www.sepa.org.uk.

Identifying objectives and selecting actions

The objectives and actions to manage flooding will provide the long-term vision and practical steps for delivering flood risk management in Scotland.

Working collaboratively with local partnerships, SEPA has agreed the objectives for addressing the main flooding impacts. Actions that could deliver these agreed objectives have been appraised for their costs and benefits to ensure the right combinations are identified and prioritised. The actions considered in the development of this strategy include structural actions (such as building floodwalls, restoring flood plains, or clearance and repair works to rivers) and non-structural actions (such as flood warning, land use planning or improving our emergency response). Structural and non-structural actions should be used together to manage flood risk effectively.

An assessment of the potential for natural flood management was used to help identify opportunities for using the land and coast to slow down and store water. Natural flood management actions were recommended in areas where they could contribute to the management of flood risk. In such instances these actions were put forward as part of flood protection or natural flood management studies.

Lead local authority

The FRM Act requires a lead local authority to be identified for each Local Plan District. The lead local authority is crucial to the successful implementation of the FRM Act and, as such, must perform several important functions over and above the general duties and powers given to local authorities elsewhere in the FRM Act.

The lead local authority, having contributed with other local authorities to the production of the Flood Risk Management Strategy, must prepare a Local Flood Risk Management Plan of co-ordinated actions to reduce flood risk within the Local Plan District. Although the lead local authority is responsible for the production of the plan, its content will be drawn from and agreed by all local authorities, other responsible authorities and SEPA within the Local Plan District.

Surface Water Management Plans

A Surface Water Management Plan (SWMP) is a best practice plan which outlines the preferred surface water management strategy in a given location. In this context surface water flooding describes flooding from sewers, drains, groundwater, and runoff from land, small water courses and ditches that occurs as a result of heavy rainfall.

A SWMP study is undertaken in consultation with key local partners who are responsible for surface water management and drainage in their area. Partners work together to understand the causes and effects of surface water flooding and agree the most cost effective way of managing surface water flood risk for the long term. The process of working together as a partnership is designed to encourage the development of innovative solutions and practices. A SWMP should establish a long-term action plan to manage surface water in an area and should influence future capital investment, drainage maintenance, public engagement and understanding, land-use planning, emergency planning and future developments.

The UK Government SWMP guidance seeks to provide a simplified overarching framework, which allows different organisations to work together and develop a shared understanding of the most suitable solutions to surface water flooding problems. The SWMP guidance has been written for local authorities to assist them as they co-ordinate and lead local flood risk management activities.

Integrated Catchment Studies

Integrated Catchment Studies (ICS) are led by Scottish Water in partnership with local authorities and SEPA. These studies will improve knowledge and understanding of the interactions between the above ground and below ground drainage network e.g. with the sewer network, watercourses and (where appropriate) the sea. This will improve the understanding of contributions these drainage networks play in local surface water flood risk. Five ICS's were undertaken in Scotland during SR10 (2010-2015), to Modelling and Flood Risk Assessment stage, which have provided a fuller understanding of the sources and mechanisms of flooding across these catchments. These studies are expected to undertake an Optioneering phase between 2015-2021. This will identify the actions to reduce flood risk

across the catchments, with the outputs feeding into the Local Authority led Surface Water Management Planning process.

Fifteen ICS's will begin in Scotland during SR15 (2015-2021). These studies will go through the Scoping and Modelling phases, which culminates in defining the sources and mechanisms of flooding in the catchment, and an understanding of the impacts of that flooding. It is expected that the ICS partnerships will remain and it is anticipated that the Optioneering phase for these studies will be initiated directly after the preceding phases.

Natural flood management assessment and mapping of artificial and natural features

The new approach to Flood Risk Management requires SEPA to consider whether techniques that restore, enhance or alter natural features and characteristics can contribute to managing flood risk. This means looking at the potential to work with natural hydrological and morphological processes.

Because the National Flood Risk Assessment provides only a strategic assessment of flood risk, further refined assessments may be required in Potentially Vulnerable Areas, including the mapping of artificial and natural features whose removal could increase flood risk.

The development of catchment characteristics and methodologies, to assess the potential for natural flood management, commenced in 2012 alongside work to identify natural flood management actions, that could contribute to the management of flood risk. The information was published in 2013. The assessment of natural flood management was a consideration in the setting of objectives and actions in the Flood Risk Management Strategies. In January 2016 SEPA published the Natural Flood Management Handbook to provide practitioners with information on how best to implement natural flood management measures.

Flood hazard and flood risk maps

The production of flood hazard and flood risk maps has improved our understanding of flooding and helped inform the selection of actions required to manage flood risk in Potentially Vulnerable Areas. Work on production of these maps began in January 2012. These maps show details of flood events for a range of probabilities and cover flooding from rivers, the sea, sewers, surface water run-off and groundwater.

A flood hazard map shows information that describes the nature of a flood, such as the extent of flooding, water level, depth and velocity where appropriate. A flood risk map provides detail on the impacts on people, the economy, cultural heritage and the environment.

Further information regarding the development of the flood maps and providing a link to the maps, is available online on the SEPA website

<http://www.sepa.org.uk/environment/water/flooding/flood-maps/>

Acknowledgments

The information described in this Annex relates to the Figures and Maps that have been generated by SEPA as part of the Flood Risk Management Strategy and have been reproduced in this Local Flood Risk Management Plan. The Clyde and Loch Lomond Local Plan District Partners gratefully acknowledge the cooperation and input that various parties have provided, including inter alia, the following organisations:

SEPA

Local authorities acknowledge the inclusion of Figures, Maps and text generated by SEPA in preparation of the Clyde and Loch Lomond Flood Risk Management Strategy. Figures and Maps produced by SEPA for the Clyde and Loch Lomond Flood Risk Management Strategy have been reproduced in the Clyde and Loch Lomond Local Flood Risk Management Plan with authorisation from SEPA under SEPA Licence number 100016991 (2015).

Ordnance Survey

These reproduced maps are based upon Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown Copyright. Any unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. © Crown copyright and database rights 2022. Ordnance Survey licence no. 0100020767

Map reproduced from North East Flood Risk Management Strategy, SEPA (December 2015)

The Centre for Ecology and Hydrology

Some features of these maps are based upon digital spatial data licensed from the Centre for Ecology and Hydrology © NERC (CEH) and third party licensors.

The Met Office

Data provided by The Met Office has been used under licence in some areas of flood risk information production. ©Crown Copyright (2015), the Met Office

The James Hutton Institute

Data provided under licence from the James Hutton Institute has been applied in production of flood risk management information. Copyright © The James Hutton Institute and third party licensors.

British Geological Survey

Flood risk information has been derived from BGS digital data under licence. British Geological Survey ©NERC

Local authorities

Lead authorities acknowledge the provision of flood models and other supporting data and information from local authorities and their collaboration in the production of flood risk management information.

Scottish Water

Local authorities acknowledge the inclusion of surface water flooding data generated by Scottish Water in preparation of flood risk information.

Report prepared by:
Jonathan Duncan
Senior Engineer
Aberdeenshire Council

Glossary

Actions - Actions describe where and how flood risk will be managed. These actions have been set by SEPA and agreed with flood risk management authorities following consultation. Selection of actions to deliver the agreed objectives has been based on a detailed assessment and comparison of economic, social and environmental criteria. The FRM Act uses the term 'measures' rather than 'actions'.

Annual Average Damages (AAD) - Depending on its size or severity, each flood will cause a different amount of damage to a flood prone area and we can calculate the cost of this damage. Annual Average Damages for an area are the average costs per year that would occur from flooding over a very long period of time. Scottish figures have been calculated based on the method set out in the Flood Hazard Research Centre's Multi-Coloured Handbook (2010).

Appraisal - Appraisal is the process of defining objectives, examining options and weighing up the costs, benefits, risks and uncertainties before a decision is made. The FRM Strategy appraisal method is designed to set objectives and identify the most sustainable combination of actions to tackle flooding from rivers, sea and surface water.

Awareness Raising - Public awareness, participation and community support are essential components of sustainable flood risk management. SEPA and the responsible authorities have a duty to raise public awareness of flood risk. This is undertaken both individually and collaboratively by a range of organisations. Improved awareness of flood risk and actions that prepare individuals, homes and businesses for flooding can reduce the overall impact.

Benefit Cost Ratio (BCR) - A benefit cost ratio summarises the overall value for money of an action or project. It is expressed as the ratio of benefits to costs (both expressed as present value monetary values). A ratio of greater than 1:1 indicates that the economic benefits associated with an action are greater than the economic costs of implementation; therefore this is taken as the threshold of economic viability. It should be acknowledged that it is not always possible to accurately estimate economic values for all elements of benefit, and BCR is just one of a number of techniques used in appraisal.

Candidate Potentially Vulnerable Area – A small number of Candidate Potentially Vulnerable Areas were identified after the National Flood Risk Assessment in light of new information that warranted further assessment and appraisal. They are included in the flood risk management planning process. The National Flood Risk Assessment will be updated to inform each subsequent planning cycle.

Catchment – The area of land drained by a drainage system – either natural or piped.

Category (CAT) 1 and 2 Responders – As defined by the Civil Contingencies Act 2004. 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.

Coastal Flooding – Flooding that results from sea level rise from a combination of high tides and stormy conditions. The term coastal flooding is used under the Flood Risk Management (Scotland) Act 2009, but in some areas it is also referred to as tidal flooding and covers areas such as estuaries and river channels that are influenced by tidal flows.

Combined Sewer - Combined sewers transport foul sewage from homes and industry as well as carrying surface water runoff from gutters, drains and some highways. Heavy or prolonged rainfall can rapidly increase the flow in a combined sewer until the amount of water exceeds sewer capacity.

Combined Sewer Overflow - Combined sewer overflows are purposely designed structures to ensure any excess water from sewerage systems is discharged in a controlled way and at a specific managed location.

Confluence - Where two or more rivers meet.

Conveyance - Conveyance is a measure of the carrying capacity of a watercourse. Increasing conveyance enables flow to pass more rapidly and reducing conveyance slows flow down. Both actions can be effective in managing flood risk depending on local conditions.

Cultural Heritage Site - Sites of particular cultural significance may be designated. The highest level of designation is a World Heritage Site. Historic Environment Scotland maintains lists of buildings of special architectural or historic interest; these buildings are referred to as 'listed buildings'.

Culvert - A pipe, channel or tunnel used for the conveyance of a watercourse or surface drainage water under a road, railway, canal or other obstacle.

Damages - Flood damages are categorised as direct or indirect i.e. as a result of the flood water itself, or subsequent knock on effects. Damage to buildings and contents caused by flood water are an example of direct damages, whilst loss of industrial production, travel disruption or stress and anxiety are indirect. Some damages can be quantified in monetary terms, and others can only be described. The potential damages avoided by implementation of a flood risk management action are commonly referred to as the benefits of that action. When comparing the effectiveness of different actions, it is useful to consider estimated damages and damages avoided across the lifespan of the action. Within the FRM Strategies, a 100 year appraisal period has been used as standard. This allows costs, damages and benefits across this time frame to be compared in present value terms. See also 'Annual Average Damages'.

Economic Impact - An assessment of the economic value of the positive and negative effects of flooding and / or the actions taken to manage floods.

Embankment – A flood embankment is an engineered earthfill structure designed to contain high river levels or protect against coastal flooding. They are commonly grass-covered, but may need additional protection against erosion by swiftly flowing water, waves or overtopping.

Emergency Plans / Response - Emergency response plans are applicable for all types of flooding. They set out the steps to be taken during flooding in order to maximise safety and minimise impacts where possible. Under the Civil Contingencies Act, Category 1 Responders have a duty to maintain emergency plans. Emergency plans may also be prepared by individuals, businesses, organisations or communities.

Environmental Impact - A change in the environment as a result of an action or activity. Impacts can be positive or negative and may vary in significance, scale and duration.

Environmental Impact Assessment (EIA) - A process which identifies the potential environmental impacts, both negative and positive, of a proposal.

Estuary - A coastal body of water usually found where a river meets the sea; the part of the river that is affected by tides.

Flood - In the terms of the FRM Act, 'flood' means a temporary covering by water, from any source, of land not normally covered by water. This does not include a flood solely from a sewerage system, as a result of normal weather or infrastructure drainage. A flood can cause significant adverse impacts on people, property and the environment.

Flood Bund - A constructed retaining wall, embankment or dyke designed to protect against flooding to a specified standard of protection.

Flood defence - Infrastructure, such as flood walls, embankments or flood storage intended to protect an area against flooding to a specified standard of protection.

Flood Extent - The area that has been affected by flooding, or is at risk of flooding from one or more sources for a particular likelihood.

Flood Frequency - The probability that a particular size/severity of flood will occur in a given year (see likelihood).

Flood Hazard - In terms of the FRM Act, hazard refers to the characteristics (extent, depth, velocity) of a flood.

Flood Hazard Map - Flood hazard maps are required by the FRM Act to show information that describes the nature of a flood in terms of the source, extent, water level or depth and, where appropriate, velocity of water. Flood hazard and risk maps are referred to collectively as flood maps and are available on the SEPA website.

Flood Prevention / Protection Scheme - A flood protection scheme, as defined by the FRM Act, is a scheme by a local authority for the management of flood risk within the

authority area. This includes defence measures (flood prevention schemes) formerly promoted under the Flood Prevention (Scotland) Act 1961.

Flood Protection Study - Flood protection studies aim to refine understanding of the hazard and risk associated with flooding in a particular area, catchment or coastline. They will involve detailed assessment of flood hazard and / or risk and may develop options for managing flood risk.

Flood Protection Works - Flood protection works can include the same flood defence measures that would make up a formal Flood Protection Scheme but without the legal process, protections and requirements that would come by delivering the works as a scheme.

Flood Risk - A measure of the combination of the likelihood of flooding occurring and the associated impacts on people, the economy and the environment.

Flood Risk Assessment - Flood Risk Assessments are detailed studies of an area where flood risk may be present. These are often used to inform planning decisions, may help to develop flood schemes and have also contributed to the National Flood Risk Assessment.

Flood Risk Management Strategy - Sets out a long-term vision for the overall reduction of flood risk. Contains a summary of flood risk in each Local Plan District, together with information on catchment characteristics and a summary of objectives and actions for Potentially Vulnerable Areas.

Flood Risk Management (Scotland) Act 2009 (FRM Act) - The flood risk management legislation for Scotland. It transposes the EC Floods Directive into Scots Law and aims to reduce the adverse consequences of flooding on communities, the environment, cultural heritage and economic activity.

Flood Risk Management Cycle - Under the FRM Act flood risk management planning is undertaken in six year cycles. The first planning cycle is 2015 – 2021. The first delivery cycle is lagged by approximately 6 months and is from 2016 - 2022.

Flood Warning Scheme - A flood warning scheme is the network of monitoring on a coastal stretch or river, which provides SEPA with the ability to issue Flood Warnings.

Floodplain - Area of land that borders a watercourse, an estuary or the sea, over which water flows in time of flood, or would naturally flow but for the presence of flood defences and other structures where they exist.

Floodplain Storage - Floodplains naturally store water during high flows. Storage can be increased through natural or man-made features to increase flood depth or slow flows in order to reduce flooding elsewhere.

Green (Blue-Green) Infrastructure - The European Commission defines green infrastructure as “the use of ecosystems, green spaces and water in strategic land use planning to deliver environmental and quality of life benefits. It includes parks, open spaces,

playing fields, woodlands, wetlands, road verges, allotments and private gardens. Green infrastructure can contribute to climate change mitigation and adaptation, natural disaster risk mitigation, protection against flooding and erosion as well as biodiversity conservation.”

Historic Environment Scotland - The new lead public body for the country’s historic environment. It brings together Historic Scotland and the Royal Commission on the Ancient and Historic Monuments of Scotland.

Habitats Regulations Appraisal - The Habitats Regulations require competent authorities to assess certain plans or projects which affect Natura sites. Any development proposal, which requires planning permission or other consent, is a 'project' which may require consideration under the Habitats Regulations.

Land Use Planning – The process undertaken by public authorities to identify, evaluate and decide on different options for the use of land, including consideration of long term economic, social and environmental objectives and the implications for different communities and interest groups.

Lead Local Authority - A local authority responsible for leading the production, consultation, publication and review of a Local Flood Risk Management Plan.

Local Development Plan – A Local Development Plan (LDP) provides the vision for how communities will grow and develop in the future. The intention is that they provide certainty for communities and investors alike about where development should take place and where it should not and the supporting infrastructure required for growth. A LDP is required for each council area across Scotland.

Local Flood Risk Management Plan - Produced by lead local authorities, these will take forward the objectives and actions set out in Flood Risk Management Strategies. They will provide detail on the funding, timeline of delivery, arrangements and co-ordination of actions at the local level during each six year FRM planning cycle.

Local Plan District - Geographical areas for the purposes of flood risk management planning. There are 14 Local Plan Districts in Scotland.

Local Plan District Partnerships - Each Local Plan District has established a local partnership comprised of local authorities, SEPA, Scottish Water and others as appropriate. These partnerships are distinct from the FRM Local Advisory Groups and they retain clear responsibility for delivery of the FRM actions set out in the Local Flood Risk Management Plans. It is the local partnership that makes decisions and supports the delivery of these plans.

Maintenance - Sections 18 and 59 of the Flood Risk Management (Scotland) Act 2009 put duties of watercourse inspection, clearance and repair on local authorities. In addition, local authorities may also be responsible for maintenance of existing flood protection schemes or defences.

National Flood Risk Assessment (NFRA) - A national analysis of flood risk from all sources of flooding which also considers climate change impacts. Completed in December 2011 this provides the information required to undertake a strategic approach to flood management that identifies areas at flood risk that require further appraisal. The NFRA will be reviewed and updated for the second cycle of FRM Planning by December 2018.

Natural Flood Management - A set of flood management techniques that aim to work with natural processes (or nature) to manage flood risk.

Non-Residential Properties - Properties that are not used for people to live in, such as shops or other public, commercial or industrial buildings.

Potentially Vulnerable Area - Catchments identified as being at risk of flooding and where the impact of flooding is sufficient to justify further assessment and appraisal. There were 243 Potentially Vulnerable Areas identified by SEPA in the National Flood Risk Assessment and these will be the focus of the first FRM planning cycle.

Property Level Protection - Property level protection includes flood gates, sandbags and other temporary barriers that can be used to prevent water from entering individual properties during a flood.

Q&S - Quality and Standards (Q&S) is the process, governing costs and outputs, through which the planning and delivery of improvements by Scottish Water to the public drinking water and sewerage services in Scotland is carried out.

Receptor - Refers to the entity that may be impacted by flooding (a person, property, infrastructure or habitat). The vulnerability of a receptor can be reduced by increasing its resilience to flooding.

Residual Risk - The risk that remains after risk management and mitigation. This may include risk due to very severe (above design standard) storms or risks from unforeseen hazards.

Resilience - The ability of an individual, community or system to recover from flooding.

Responsible Authority - Designated under the FRM (Scotland) Act 2009 and associated legislation as local authorities, Scottish Water and, from 21 December 2013, the National Park Authorities and Forestry Commission Scotland. Responsible authorities, along with SEPA and Scottish Ministers, have specific duties in relation to their flood risk related functions.

Return Period - A measure of the rarity of a flood event. It is the statistical average length of time separating flood events of a similar size.

River Basin Management Planning (RBMP) - The Water Environment and Water Services (Scotland) Act 2003 transposed the European Water Framework Directive into Scots law. The Act created the River Basin Management Planning process to achieve environmental improvements to protect and improve our water environment. It also provided the framework

for regulations to control the negative impacts of all activities likely to have an impact on the water environment.

Runoff Reduction - Actions within a catchment or sub-catchment to reduce the amount of runoff during rainfall events. This can include intercepting rainfall, storing water, diverting flows or encouraging infiltration.

Scottish Advisory and Implementation Forum for Flooding (SAIFF) - The stakeholder forum on flooding set up by the Scottish Government to ensure legislative and policy aims are met and to provide a platform for sharing expertise and developing common aspirations and approaches to reducing the impact of flooding on Scotland's communities, environment, cultural heritage and economy.

Scottish Flood Forecasting Service - SEPA operates a network of over 250 rainfall, river and coastal monitoring stations throughout Scotland that generate data 24 hours a day. The Scottish Flood Forecasting Service is a joint initiative between SEPA and the Met Office that produces daily, national flood guidance statements which are issued to Category 1 and 2 Responders. The flood guidance statements provide an assessment of the risk of flooding for a five day period allowing responders time to put preparations in place to reduce the impact of flooding. The service also provides information which allows SEPA to issue flood warnings, giving people a better chance of reducing the impact of flooding on their home or business. For more information please visit SEPA's website.

Self Help - Self help actions can be undertaken by any individuals, businesses, organisations or communities at risk of flooding. They are applicable to all sources, frequency and scales of flooding. They focus on awareness raising and understanding of flood risk.

Site Protection Plans - Site protection plans are developed to identify whether normal operation of a facility can be maintained during a flood. This may be due to existing protection or resilience of the facility or the network.

Site of Special Scientific Interest - Sites protected by law under the Nature Conservation (Scotland) Act 2004 to conserve their plants, animals and habitats, rocks and landforms.

Special Area of Conservation (SAC) - Strictly protected site designated under the European Habitats Directive. The Directive requires the establishment of a European network of protected areas which are internationally important for threatened habitats and species.

Strategic Environmental Assessment - A process for the early identification and assessment of the likely significant environmental effects, positive and negative, of activities. Often considered before actions are approved or adopted.

Strategic Flood Risk Assessment (SFRA) - A Strategic Flood Risk Assessment is designed for the purposes of specifically informing the Development Plan Process. A SFRA involves the collection, analysis and presentation of all existing and readily available flood

risk information (from any source) for the area of interest. It constitutes a strategic overview of flood risk.

Standard of protection (SoP) - All flood protection structures are designed to be effective up to a specified flood likelihood (Standard of Protection). For events beyond this standard, flooding will occur. The chosen Standard of Protection will determine the required defence height and / or capacity.

Surface Water Management Plan (SWMP) - A plan that takes an integrated approach to drainage accounting for all aspects of urban drainage systems and produces long term and sustainable actions. The aim is to ensure that during a flood the flows created can be managed in a way that will cause minimum harm to people, buildings, the environment and business.

Surface Water Plan / Study - The management of flooding from surface water sewers, drains, small watercourses and ditches that occurs, primarily in urban areas, during heavy rainfall. FRM Strategy actions in this category include: Surface Water Management Plans, Integrated Catchment Studies and assessment of flood risk from sewerage systems (FRM Act Section 16) by Scottish Water. These have been selected as appropriate for each Potentially Vulnerable Area.

Sustainable Drainage Systems (SuDS) - A set of techniques designed to slow the flow of water. They can contribute to reducing flood risk by absorbing some of the initial rainfall and then releasing it gradually, thereby reducing the flood peak and helping to mitigate downstream problems. SuDS encourage us to take account of quality, quantity and amenity / biodiversity.

Sustainable Flood Risk Management - The sustainable flood risk management approach aims to meet human needs, whilst preserving the environment so that these needs can be met not only in the present, but also for future generations. The delivery of sustainable development is generally recognised to reconcile three pillars of sustainability – environmental, social and economic.

Surface Water Flooding - Flooding that occurs when rainwater does not drain away through the normal drainage systems or soak into the ground, but lies on or flows over the ground instead.

Vulnerability - A measure of how likely someone or something is to suffer long-term damage as a result of flooding. It is a combination of the likelihood of suffering harm or damage during a flood and the ability to recover following a flood (resilience).